

Specification Sheet: T8 SEP LED Nano Tubes

TECHNICAL DATA (Subject to change)

Catalog No.	Product SKU No.	BAA Options*	Rated Wattage	Lens	Base	Input Voltage (VAC)	Color Temp (K)	Rated Lumens	Rated Efficacy	CRI	Illumination Angle	Rated Life (Hours)	Operating Temp. (°F)
2-foot 8W G4 Single-End-Power LED Tube													
SEPG4-24-8-N-30	202000-411	Yes	8	Nano	G13	120-277	3000	1,100	137.5	83	312	70,000	-4 to 122
SEPG4-24-8-N-35	202000-412	Yes	8	Nano	G13	120-277	3500	1,100	138	83	312	70,000	-4 to 122
SEPG4-24-8-N-40	202000-413	Yes	8	Nano	G13	120-277	4000	1,100	138	83	312	70,000	-4 to 122
SEPG4-24-8-N-50	202000-415	Yes	8	Nano	G13	120-277	5000	1,100	138	83	312	70,000	-4 to 122
4-foot 10.5W G4 Single-End-Power LED Tube													
SEPG4-48-10.5-N-30	204001-431	Yes	10.5	Nano	G13	120-277	3000	1,700	161.9	83	312	70,000	-4 to 122
SEPG4-48-10.5-N-35	204001-432	Yes	10.5	Nano	G13	120-277	3500	1,700	162	83	312	70,000	-4 to 122
SEPG4-48-10.5-N-40	204001-433	Yes	10.5	Nano	G13	120-277	4000	1,700	162	83	312	70,000	-4 to 122
SEPG4-48-10.5-N-50	204001-435	Yes	10.5	Nano	G13	120-277	5000	1,700	162	83	312	70,000	-4 to 122
4-foot 15W G4 Single-End-Power LED Tube													
SEPG4-48-15-N-30	204002-411	Yes	15	Nano	G13	120-277	3000	2,100	140	83	312	70,000	-4 to 122
SEPG4-48-15-N-35	204002-412	Yes	15	Nano	G13	120-277	3500	2,100	140	83	312	70,000	-4 to 122
SEPG4-48-15-N-40	204002-413	Yes	15	Nano	G13	120-277	4000	2,100	140	83	312	70,000	-4 to 122
SEPG4-48-15-N-50	204002-415	Yes	15	Nano	G13	120-277	5000	2,100	140	83	312	70,000	-4 to 122

Product is DLC listed

*Note: When ordering BAA-compliant tubes, include the extension "-USA" after the SKU No., as shown in the Order Logic table

PHYSICAL DATA

Catalog No.	Product SKU No.	Product Dimensions (in.)	Product Weight (lb)
2-foot 8W G4 Single-End-Power LED Tube			
SEPG4-24-8-N-30	202000-411	24L x 1 Dia.	0.24
SEPG4-24-8-N-35	202000-412	24L x 1 Dia.	0.24
SEPG4-24-8-N-40	202000-413	24L x 1 Dia.	0.24
SEPG4-24-8-N-50	202000-415	24L x 1 Dia.	0.24
4-foot 10.5W G4 Single-End-Power LED Tube			
SEPG4-48-10.5-N-30	204001-431	48L x 1 Dia.	0.30
SEPG4-48-10.5-N-35	204001-432	48L x 1 Dia.	0.30
SEPG4-48-10.5-N-40	204001-433	48L x 1 Dia.	0.30
SEPG4-48-10.5-N-50	204001-435	48L x 1 Dia.	0.30
4-foot 15W G4 Single-End-Power LED Tube			
SEPG4-48-15-N-30	204002-411	48L x 1 Dia.	0.44
SEPG4-48-15-N-35	204002-412	48L x 1 Dia.	0.44
SEPG4-48-15-N-40	204002-413	48L x 1 Dia.	0.44
SEPG4-48-15-N-50	204002-415	48L x 1 Dia.	0.44

PROJECT: GABP
MODEL: SEP-36-12-F-40
TYPES: LED PAN STRIP KIT 3' - 1L, LED PAN STRIP KIT - 3' 2L



Specification Sheet:

T8 SEP LED PC Tubes

Specification Sheet: T8 SEP LED PC Tubes

Retrofitting Is Easy with Our Energy Efficient Led Tubes

Our lightweight, shatterproof, all-plastic T8 Single-End-Power (SEP) LED tubes can reduce your lighting energy use by as much as 60% compared to fluorescent lights and provide a superior quality of light.

Our direct-wire design installs easily to operate from 120VAC to 277VAC, requires no ballast and is backed with our industry-leading 70,000-hour rated lamp life and 10-year warranty.

See Order Logic table below for our BAA compliant products. Contact your Revolution Lighting representative for pricing or more information.

APPLICATIONS

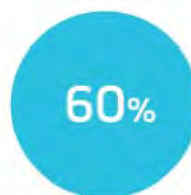
- Offices & Commercial Buildings
- Retail Settings
- Hotels
- Schools
- Hospitals
- Warehouses
- Assisted Living Facilities
- Parking Garages
- Recreation Centers
- Food Processing Centers

ILLUMINATION ANGLE



Revolution Lighting
Light Distribution

CAN DECREASE ENERGY USAGE BY



vs. Similar
Fluorescent Lamps

WARRANTY



Our Industry-Leading 10-Year
Limited Warranty Guarantees
Unsurpassed Quality

PRODUCT BENEFITS

OPERATIONAL

- Very high efficacies up to 150 lm/W
- 3X greater lamp life than fluorescent, supported by industry-leading 10-year warranty
- 70,000 hour lamp life and eliminated ballast reduce long-term maintenance costs
- Instant on, no warm-up time

SAFETY

- No glass
- Negligible light depreciation over time
- Superior light output
- UL Type B tube lamps are tested to comply with UL 1598C and UL 1993

SUSTAINABILITY

- Lack of UV or IR minimizes concerns with fading or discoloration
- Mercury-free, allowing for non-hazardous disposal
- 100% recyclable



ORDER LOGIC (Ex. SEPG4-24-8-F-30-USA or SEPG4-24-8-F-30)

Product Description	Length (in.)	Bare Lamp Wattage	Lens	CCT (K Temp)	BAA
SEPG4 = Single-End-Power Gen. 4	24 = 2 ft	8 = 8W			
SEPG4 = Single-End-Power Gen. 4	36 = 3 ft	12 = 12W	F = Frosted C = Clear	30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K	Blank = Standard (non-BAA) USA = BAA (Buy American Act)
SEPG4 = Single-End-Power Gen. 4	48 = 4 ft	15 = 15W			(Not available with BAA at this time.)
SEP = Single-End-Power	48 = 4 ft (H.O.)	12 = 12W 18 = 18W	F = Frosted		



Specification Sheet: T8 SEP LED PC Tubes

TECHNICAL DATA (Subject to change)

Catalog No.	Product SKU No.	BAA Option*	Rated Wattage	Lens**	Base	Input Voltage (VAC)	Color Temp (K)	Rated Lumens	Rated Efficacy	CRI	Illumination Angle	Rated Life (Hours)	Operating Temp. (°F)	NSF Listed
2-foot 8W G4 Single-End-Power LED Tube														
SEPG4-24-8-F-30	202002-451	Yes	8	Frosted	G13	120-277	3000	950	118	83	312	70,000	-4 to 122	•
SEPG4-24-8-F-35	202002-452	Yes	8	Frosted	G13	120-277	3500	950	119	83	312	70,000	-4 to 122	•
SEPG4-24-8-F-40	202002-453	Yes	8	Frosted	G13	120-277	4000	950	119	83	312	70,000	-4 to 122	•
SEPG4-24-8-F-50	202002-455	Yes	8	Frosted	G13	120-277	5000	950	119	83	312	70,000	-4 to 122	•
3-foot 12W G4 Single-End-Power LED Tube														
SEP-36-12-F-30	203000-451	Yes	12	Frosted	G13	120-277	3000	1,440	120	83	312	70,000	-4 to 122	•
SEP-36-12-F-35	203000-452	Yes	12	Frosted	G13	120-277	3500	1,440	120	83	312	70,000	-4 to 122	•
SEP-36-12-F-40	203000-453	Yes	12	Frosted	G13	120-277	4000	1,440	120	83	312	70,000	-4 to 122	•
SEP-36-12-F-50	203000-455	Yes	12	Frosted	G13	120-277	5000	1,440	120	83	312	70,000	-4 to 122	•
4-foot 15W G4 Single-End-Power LED Tube														
SEPG4-48-15-F-30	204003-451	Yes	15	Frosted	G13	120-277	3000	1,800	120	83	312	70,000	-4 to 122	•
SEPG4-48-15-F-35	204003-452	Yes	15	Frosted	G13	120-277	3500	1,800	120	83	312	70,000	-4 to 122	•
SEPG4-48-15-F-40	204003-453	Yes	15	Frosted	G13	120-277	4000	1,800	120	83	312	70,000	-4 to 122	•
SEPG4-48-15-F-50	204003-455	Yes	15	Frosted	G13	120-277	5000	1,800	120	83	312	70,000	-4 to 122	•
4-foot 12W H.O. Single-End-Power Tube														
SEP-48-12-F-30	204001-301	No	12	Frosted	G13	120-277	3000	1,600	133.3	86	312	70,000	-4 to 113	•
SEP-48-12-F-35	204001-302	No	12	Frosted	G13	120-277	3500	1,600	133.3	83	312	70,000	-4 to 113	•
SEP-48-12-F-40	204001-303	No	12.7	Frosted	G13	120-277	4000	1,705	134	83	312	70,000	-4 to 113	•
SEP-48-12-F-50	204001-304	No	12	Frosted	G13	120-277	5000	1,600	133.3	83	312	70,000	-4 to 113	•
4-foot 18W H.O. Single-End-Power Tube														
SEP-48-18-F-30	204003-301	No	18	Frosted	G13	120-277	3000	2,450	140	80	312	70,000	-4 to 113	•
SEP-48-18-F-35	204003-302	No	18	Frosted	G13	120-277	3500	2,600	150	80	312	70,000	-4 to 113	•
SEP-48-18-F-40	204003-303	No	18	Frosted	G13	120-277	4000	2,600	150	80	312	70,000	-4 to 113	•
SEP-48-18-F-50	204003-304	No	18	Frosted	G13	120-277	5000	2,600	150	80	312	70,000	-4 to 113	•

Product is DLC listed

*Note: When ordering BAA-compliant tubes, include the extension "-USA" after the SKU No., as shown in the Order Logic table.

**Note: Lenses also available in clear (See Order Logic lens options.)

PHYSICAL DATA

Catalog No.	Product SKU No.	Product Dimensions (in.)	Product Weight (lb)
2-foot 8W G4 Single-End-Power LED Tube			
SEPG4-24-8-F-30	202002-451	24L x 1 Dia.	0.24
SEPG4-24-8-F-35	202002-452	24L x 1 Dia.	0.24
SEPG4-24-8-F-40	202002-453	24L x 1 Dia.	0.24
SEPG4-24-8-F-50	202002-455	24L x 1 Dia.	0.24
3-foot 12W G4 Single-End-Power LED Tube			
SEP-36-12-F-30	203000-451	36L x 1 Dia.	0.33
SEP-36-12-F-35	203000-452	36L x 1 Dia.	0.33
SEP-36-12-F-40	203000-453	36L x 1 Dia.	0.33
SEP-36-12-F-50	203000-455	36L x 1 Dia.	0.33
4-foot 15W G4 Single-End-Power LED Tube			
SEPG4-48-15-F-30	204003-451	48L x 1 Dia.	0.44
SEPG4-48-15-F-35	204003-452	48L x 1 Dia.	0.44
SEPG4-48-15-F-40	204003-453	48L x 1 Dia.	0.44
SEPG4-48-15-F-50	204003-455	48L x 1 Dia.	0.44
4-foot 12W H.O. Single-End-Power Tube			
SEP-48-12-F-30	204001-301	48L x 1 Dia.	0.50
SEP-48-12-F-35	204001-302	48L x 1 Dia.	0.50
SEP-48-12-F-40	204001-303	48L x 1 Dia.	0.50
SEP-48-12-F-50	204001-304	48L x 1 Dia.	0.50
4-foot 18W H.O. Single-End-Power Tube			
SEP-48-18-F-30	204003-301	48L x 1 Dia.	0.50
SEP-48-18-F-35	204003-302	48L x 1 Dia.	0.50
SEP-48-18-F-40	204003-303	48L x 1 Dia.	0.50
SEP-48-18-F-50	204003-304	48L x 1 Dia.	0.50

PROJECT: GABP

MODEL: SEPG4-48-10.5-N-40

TYPES: TROFF24, TROFF14, TROFF24DC, TROFF24IND, TROFF244L,
TROFF242L, 3LLED, 6LLED, LED PAN STRIP KIT 4'-1L, LED PAN STRIP KIT 4'-2L,
LED PAN STRIP KIT-8', INDUST 18 KIT, 2L8 BDK,



Specification Sheet:

T8 SEP LED Nano Tubes

Indoor

Specification Sheet: T8 SEP LED Nano Tubes

Retrofitting Is Easy with Our Energy Efficient Led Tubes

Revolution Lighting's latest and most advanced T8 single-end-power LED Nano-Tube outperforms its competition. Our exclusive LED tube lamp has been integrated with our cutting-edge "Nano" lens technology to achieve superior performance and light output with as little as 8 watts. While reducing lighting energy use by up to 65%, our LED Nano-Tubes continue to outperform, enhancing light output to deliver up to 162 lumens per watt.

Designed for installation into any new or existing fixture intended for similar fluorescent lamps, our LED Nano-Tubes are direct-wire, require no ballast, and will work with any non-shunted socket at 120VAC to 277VAC. Coupled with our industry-leading 10-year warranty, and 70,000-hour rated lamp life, the T8 SEP LED Nano-Tube surpasses its competition.

See Order Logic table below for our BAA compliant products. Contact your Revolution Lighting representative for pricing or more information.

APPLICATIONS

- Offices & Commercial Buildings
- Retail Settings
- Hotels
- Schools
- Hospitals
- Warehouses
- Assisted Living Facilities
- Parking Garages
- Recreation Centers

ILLUMINATION ANGLE



Revolution Lighting
Light Distribution

CAN DECREASE ENERGY USAGE BY



vs. Similar
Fluorescent Lamps

WARRANTY



Our Industry-Leading 10-Year
Limited Warranty Guarantees
Unsurpassed Quality

PRODUCT BENEFITS

OPERATIONAL

- Very high efficacies up to 162 lm/W
- 3X greater lamp life than fluorescent, supported by industry-leading 10-year warranty
- 70,000 hour lamp life and eliminated ballast reduce long-term maintenance costs
- Instant on, no warm-up time

SAFETY

- No glass
- Advanced Nano Technology PC tube
- Negligible light depreciation over time
- Superior light output
- UL Type B tube lamps are tested to comply with UL 1598C and UL 1993

SUSTAINABILITY

- Lack of UV or IR minimizes concerns with fading or discoloration
- Mercury-free, allowing for non-hazardous disposal
- 100% recyclable



ORDER LOGIC (Ex. SEPG4-48-10.5-N-35-USA or SEPG4-48-10.5-N-35)

Product Description	Length (in.)	Bare Lamp Wattage	Lens	CCT (K Temp)	BAA
SEPG4 = Single-End-Power Gen. 4	24 = 2 ft	8		30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K	USA = BAA (Buy American Act) Blank = Standard (non-BAA)
SEPG4 = Single-End-Power Gen. 4	48 = 4 ft	10.5	N = Nano		
SEPG4 = Single-End-Power Gen. 4	48 = 4 ft	15			



Specification Sheet: T8 SEP LED Nano Tubes

TECHNICAL DATA (Subject to change)

Catalog No.	Product SKU No.	BAA Options*	Rated Wattage	Lens	Base	Input Voltage (VAC)	Color Temp (K)	Rated Lumens	Rated Efficacy	CRI	Illumination Angle	Rated Life (Hours)	Operating Temp. (°F)
2-foot 8W G4 Single-End-Power LED Tube													
SEPG4-24-8-N-30	202000-411	Yes	8	Nano	G13	120-277	3000	1,100	137.5	83	312	70,000	-4 to 122
SEPG4-24-8-N-35	202000-412	Yes	8	Nano	G13	120-277	3500	1,100	138	83	312	70,000	-4 to 122
SEPG4-24-8-N-40	202000-413	Yes	8	Nano	G13	120-277	4000	1,100	138	83	312	70,000	-4 to 122
SEPG4-24-8-N-50	202000-415	Yes	8	Nano	G13	120-277	5000	1,100	138	83	312	70,000	-4 to 122
4-foot 10.5W G4 Single-End-Power LED Tube													
SEPG4-48-10.5-N-30	204001-431	Yes	10.5	Nano	G13	120-277	3000	1,700	161.9	83	312	70,000	-4 to 122
SEPG4-48-10.5-N-35	204001-432	Yes	10.5	Nano	G13	120-277	3500	1,700	162	83	312	70,000	-4 to 122
SEPG4-48-10.5-N-40	204001-433	Yes	10.5	Nano	G13	120-277	4000	1,700	162	83	312	70,000	-4 to 122
SEPG4-48-10.5-N-50	204001-435	Yes	10.5	Nano	G13	120-277	5000	1,700	162	83	312	70,000	-4 to 122
4-foot 15W G4 Single-End-Power LED Tube													
SEPG4-48-15-N-30	204002-411	Yes	15	Nano	G13	120-277	3000	2,100	140	83	312	70,000	-4 to 122
SEPG4-48-15-N-35	204002-412	Yes	15	Nano	G13	120-277	3500	2,100	140	83	312	70,000	-4 to 122
SEPG4-48-15-N-40	204002-413	Yes	15	Nano	G13	120-277	4000	2,100	140	83	312	70,000	-4 to 122
SEPG4-48-15-N-50	204002-415	Yes	15	Nano	G13	120-277	5000	2,100	140	83	312	70,000	-4 to 122

Product is DLC listed

*Note: When ordering BAA-compliant tubes, include the extension "-USA" after the SKU No., as shown in the Order Logic table

PHYSICAL DATA

Catalog No.	Product SKU No.	Product Dimensions (in.)	Product Weight (lb)
2-foot 8W G4 Single-End-Power LED Tube			
SEPG4-24-8-N-30	202000-411	24L x 1 Dia.	0.24
SEPG4-24-8-N-35	202000-412	24L x 1 Dia.	0.24
SEPG4-24-8-N-40	202000-413	24L x 1 Dia.	0.24
SEPG4-24-8-N-50	202000-415	24L x 1 Dia.	0.24
4-foot 10.5W G4 Single-End-Power LED Tube			
SEPG4-48-10.5-N-30	204001-431	48L x 1 Dia.	0.30
SEPG4-48-10.5-N-35	204001-432	48L x 1 Dia.	0.30
SEPG4-48-10.5-N-40	204001-433	48L x 1 Dia.	0.30
SEPG4-48-10.5-N-50	204001-435	48L x 1 Dia.	0.30
4-foot 15W G4 Single-End-Power LED Tube			
SEPG4-48-15-N-30	204002-411	48L x 1 Dia.	0.44
SEPG4-48-15-N-35	204002-412	48L x 1 Dia.	0.44
SEPG4-48-15-N-40	204002-413	48L x 1 Dia.	0.44
SEPG4-48-15-N-50	204002-415	48L x 1 Dia.	0.44

Specification Sheet: Universal Harness Kit

The High Efficiency LED Tube Retrofit Solution

Universal Tombstone Set can accommodate 1-, 2-, 3-, 4-, 6-, or 8-lamp luminaires or U-bent luminaires. Universal Tombstone Set is pre-wired for single-end-powered (SEP) operation of LED tube lights and comes with wired non-shunted tombstones and matching slave sockets. Harnesses include quick-disconnect for NEC compliance.

PRODUCT SPECIFICATIONS

- G13 medium bi-pin non-shunted tombstones
- For 0.024" - 0.039" (0.6 mm - 1.0 mm) panel thickness
- Rated 660W and 600V
- Flexible snap-in shoulder for easy installation
- Quick disconnect for NEC compliance
- 23" wire lead from quick-disconnect to first tombstone
- 11" wire jumper from tombstone to tombstone (13" for U-bent)

PRODUCT FEATURES

- Designed to simplify LED tube retrofits
- Specifically made for single-end-power (SEP) wiring configurations
- Quick and easy installation
- Configurable to customer needs
- Long product life supported by industry-leading 10-year warranty

WARRANTY



Our Industry-Leading 10-Year
Limited Warranty Guarantees
Unsurpassed Quality

TECHNICAL DATA (Subject to change)

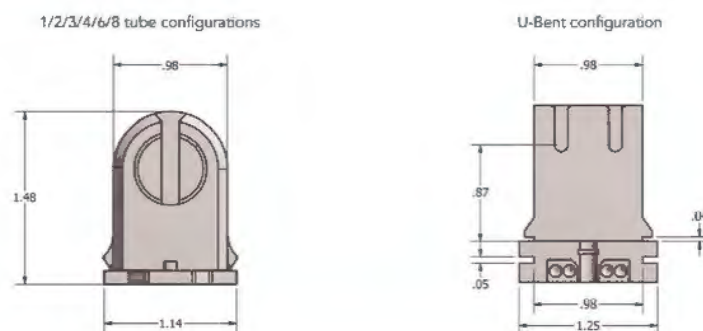
Product SKU No.	Type	Tombstone Size	LED Lamp Compatibility*	Input Voltage /Frequency	Mounting
240065	1 Lamp Harness Kit	Medium	SEP G13 Medium Bi-Pin LED Tube Lamps	120-277VAC / 50/60Hz	Snap-In
240066	2 Lamp Harness Kit	Medium	SEP G13 Medium Bi-Pin LED Tube Lamps	120-277VAC / 50/60Hz	Snap-In
240067	3 Lamp Harness Kit	Medium	SEP G13 Medium Bi-Pin LED Tube Lamps	120-277VAC / 50/60Hz	Snap-In
240068	4 Lamp Harness Kit	Medium	SEP G13 Medium Bi-Pin LED Tube Lamps	120-277VAC / 50/60Hz	Snap-In
240090	6 Lamp Harness Kit	Medium	SEP G13 Medium Bi-Pin LED Tube Lamps	120-277VAC / 50/60Hz	Snap-In
240091	8 Lamp Harness Kit	Medium	SEP G13 Medium Bi-Pin LED Tube Lamps	120-277VAC / 50/60Hz	Snap-In
240092	2-Lamp U-Bent Harness Kit	Medium	SEP G13 Medium Bi-Pin LED U-Bent Lamps	120-277VAC / 50/60Hz	End Mount

* Not compatible with ballast-ready tube lamps.

CUSTOM OPTIONS

Additional socket types and wire lengths available to meet your customer needs. Please contact your sales representative for more information.

DIAGRAMS (All dimensions in inches)



PROJECT: GABP
MODEL: UF2-46-14-F-HE-40
TYPES: RBRL14T5LED, RBRL24T5LED



Specification Sheet:

Uni-Fit G2 T5 LED Tubes

Specification Sheet: Uni-Fit G2 T5 LED Tubes

Retrofitting Is Easy with Our Energy Efficient Led Tubes

Our lightweight, shatterproof, all-plastic T5 Uni-Fit LED tubes can reduce your lighting energy use by as much as 40% compared to fluorescent lights and provide a superior quality of light.

Our plug-n-play tubes are ballast ready for easy installation without rewiring and are backed with our industry-leading 70,000 hour lamp life and 10-year warranty.

APPLICATIONS

- Offices & Commercial Buildings
- Retail Settings
- Hotels
- Schools
- Hospitals
- Warehouses
- Assisted Living Facilities
- Food Processing Centers
- Parking Garages
- Recreation Centers

ILLUMINATION ANGLE



Revolution Lighting
Light Distribution

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Fluorescent Lamps

WARRANTY



Our Industry-Leading 10-Year
Limited Warranty Guarantees
Unsurpassed Quality

PRODUCT BENEFITS

OPERATIONAL

- 3X greater lamp life than fluorescent, supported by industry-leading 10-year warranty
- 70,000-hour lamp life reduces long-term maintenance costs
- Instant on, no warm-up time

SAFETY

- No glass
- Negligible light depreciation over time
- Superior light output
- UL Type A tube lamps are tested to comply with UL 1993

SUSTAINABILITY

- Lack of UV or IR minimizes concerns with fading or discoloration
- Mercury-free, allowing for non-hazardous disposal
- 100% recyclable



ORDER LOGIC (Ex. UF2-46-27-F-HO-35)

Product Description	Length (in.)	Bare Lamp Wattage	Lens	Output	CCT (K Temp)
UF2 = Uni-Fit, G2 (Ballast-Ready)	46 = 45.25 in.	27 14	F = Frosted	HO = High Output HE = High Efficiency	30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K



Specification Sheet: Uni-Fit G2 T5 LED Tubes

TECHNICAL DATA (Subject to change.)*

Catalog No.	Product SKU No.	Rated Wattage	Lens	Base	Input Voltage	Color Temp (K)	Rated Lumens	Rated Efficacy	CRI	Illumination Angle	Rated Life (Hours)	Operating Temp. (°F)	NSF Listed
G2 Uni-Fit 27W T5 HO Tube													
UF2-46-27-F-HO-30	204321-210	31.7	Frosted	G5	T5 Ballast	3000	3,354	106	84	310	70,000	-4 to 122	•
UF2-46-27-F-HO-35	204321-211	31.7	Frosted	G5	T5 Ballast	3500	3,419	108	84	310	70,000	-4 to 122	•
UF2-46-27-F-HO-40	204321-212	31.7	Frosted	G5	T5 Ballast	4000	3,485	110	84	310	70,000	-4 to 122	•
UF2-46-27-F-HO-50	204321-213	31.7	Frosted	G5	T5 Ballast	5000	3,615	114	83	310	70,000	-4 to 122	•
G2 Uni-Fit 14W T5 HE Tube													
UF2-46-14-F-HE-30	204320-210	14	Frosted	G5	T5 Ballast	3000	1,900	136	80	310	70,000	-4 to 122	•
UF2-46-14-F-HE-35	204320-211	14	Frosted	G5	T5 Ballast	3500	1,925	138	80	310	70,000	-4 to 122	•
UF2-46-14-F-HE-40	204320-212	14	Frosted	G5	T5 Ballast	4000	1,950	139	80	310	70,000	-4 to 122	•
UF2-46-14-F-HE-50	204320-213	14	Frosted	G5	T5 Ballast	5000	2,000	143	80	310	70,000	-4 to 122	•

Product is DLC listed.

* NOTE: The above rated performance specs were obtained with standard T5 HO/HE ballasts having a ballast factor of 1.0. Ballast-performance information is provided for reference only. Actual performance will vary.

PHYSICAL DATA

Catalog No.	Product SKU No.	Product Dimensions (in.)	Product Weight (lb)
G2 Uni-Fit 27W T5 HO Tube			
UF2-46-27-F-HO-30	204321-210	45.8L x 0.71 Dia.	0.35
UF2-46-27-F-HO-35	204321-211	45.8L x 0.71 Dia.	0.35
UF2-46-27-F-HO-40	204321-212	45.8L x 0.71 Dia.	0.35
UF2-46-27-F-HO-50	204321-213	45.8L x 0.71 Dia.	0.35
G2 Uni-Fit 14W T5 HE Tube			
UF2-46-14-F-HE-30	204320-210	45.8L x 0.71 Dia.	0.35
UF2-46-14-F-HE-35	204320-211	45.8L x 0.71 Dia.	0.35
UF2-46-14-F-HE-40	204320-212	45.8L x 0.71 Dia.	0.35
UF2-46-14-F-HE-50	204320-213	45.8L x 0.71 Dia.	0.35

enhance



LED reflector lamps

GE offers LED reflector lamps for all of your recessed can and downlighting application needs in the restaurant, hospitality and property management sectors.

LOW-COST OPERATION

- For example, using only 13 watts of energy, save over \$145 in energy costs over the rated life of the lamp versus a standard 65-watt incandescent reflector based on \$0.11 per kWh
- Energy efficiency and long life mean fewer lamp replacements versus standard incandescent and halogen light sources

EXCELLENT COLOR RENDERING

- Available with a CRI of 80

COLOR TEMPERATURE

- Available in 2700K, 3000K and 5000K

LONG LIFE

- Up to 25,000 hours rated life (L70)

DIMMABLE

- Dims from 100% to 10%

ENVIRONMENTALLY CONSCIOUS

- These lamps are energy efficient, contain no lead or mercury, and are compliant with material restriction requirements of RoHS

GE QUALITY AND RELIABILITY

- 3-year limited warranty

To learn more about saving money and energy,
go to: gelighting.com/ThinkLED

When you Think LED lighting, Think GE.

ecomagination™



imagination at work

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, expressed or implied, that such performance will be obtained under end-use conditions.

GE's LED reflector lamps

Reflector Lamps

Bulb Shape	Base Type	Watts	Order Code	Description	Volts	Case Qty**	MOL (in)	Lumens Initial	CBCP	Initial Color Temp	CRI	Wattage Replacement	*Rated Life L70 (Hrs)	Dimmable	ENERGY STAR® Status	#Location Rating	Additional Information
	MED	7	38268	LED7DR20/827	120	6	3.64	470		2700	80		25,000	Yes		Damp	White
			43233	LED7DR20/830	120	6	3.64	470		3000	80		25,000	Yes		Damp	White
			38273	LED7DR20/850	120	6	3.64	500		5000	80		25,000	Yes		Damp	White
	MED	10	68160	LED10DR303/827W	120	6	5.4	700		2700	80	65W	25,000	Yes	★	Damp	Frosted, White body
			68161	LED10DR303/830W	120	6	5.4	700		3000	80	65W	25,000	Yes	★	Damp	Frosted, White body
			69107	LED10DR303/850W	120	6	5.4	700		3000	80	65W	25,000	Yes	★	Damp	Frosted, White body
			43234	LED10DR30V/827W	120	3	5.37	650		2700	80	65W	15,000	Yes		Damp	Frosted, White body
			43237	LED10DR30V/830W	120	3	5.37	650		3000	80	65W	15,000	Yes		Damp	Frosted, White body
			43241	LED10DR30V/850W	120	3	5.37	650		5000	80	65W	15,000	Yes		Damp	Frosted, White body
	MED	13	64176	LED13DBR40/827	120	6	6.3	1070		2700	80	85W	25,000	Yes	★	Damp	Frosted, White body
			14708	LED13DBR40/830	120	6	6.3	1070		3000	80	85W	25,000	Yes	★	Damp	Frosted, White body
			20445	LED13BR40/5K/TP	120	3	6.34	1070		5000	80	85W	25,000	Yes	★	Damp	Frosted, White body
			69108	LED13BR40/850	120	3	6.34	1070		5000	80	85W	25,000	Yes	★	Damp	Coming March

Get more information at

GELighting.com/ThinkLED

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, expressed or implied, that such performance will be obtained under end-use conditions.

* The life rating is based on the hours of operation the lamp will provide before reaching 70% of its original rating (L70)

** Minimum order quantity = 6

★ ENERGY STAR® status: ENERGY STAR® certified. Lamps without a "★" are not ENERGY STAR® certified.

UL 1993 Environmental Requirements for LED LAMPS

Location, damp - Exterior or interior location that is normally or periodically subject to condensation of moisture in, on, or adjacent to, electrical equipment.

and includes partially protected locations.

Location, dry - Location not normally subject to dampness, may include a location subject to temporary dampness, i.e., building under construction.

provided ventilation is adequate to prevent an accumulation of moisture.

Location, wet - Location in which water or other liquid can drip, splash, or flow on or against electrical equipment.

Notes: 1) Product descriptions ending in "TP" indicate a corded blister or clamshell package nested in a tray for shelf display. Cards also designed for hook display.



Product is compliant with material restriction requirements of RoHS



www.gelighting.com

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66636 | Rev 02/27/17

DESCRIPTION

The patented Lumark Crosstour™ MAXX LED wall pack series of luminaries provides low-profile architectural style with super bright, energy-efficient LEDs. The rugged die-cast aluminum construction, back box with secure lock hinges, stainless steel hardware along with a sealed and gasketed optical compartment make Crosstour impervious to contaminants. The Crosstour MAXX wall luminaire is ideal for wall/ surface, inverted mount for facade/canopy illumination, perimeter and site lighting. Typical applications include pedestrian walkways, building entrances, multi-use facilities, industrial facilities, perimeter parking areas, storage facilities, institutions, schools and loading docks.

SPECIFICATION FEATURES

Construction

Low-profile LED design with rugged one-piece, die-cast aluminum back box and hinged removable door. Matching housing styles incorporate both a full cutoff and refractive lens design. Full cutoff and refractive lens models are available in 58W, 81W and 102W. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes four 1/2" NPT threaded conduit entry points. The back box is secured by four lag bolts (supplied by others). External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Full cutoff models integrate an impact-resistant molded refractive prism optical lens assembly meeting requirements for Dark Sky compliance. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Solid state LED

Crosstour MAXX luminaires are thermally optimized with eight lumen packages in cool 5000K or neutral 4000K LED color temperature (CCT).

Electrical

LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 58W, 81W and 102W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C [122°F] models available in 58W and 81W models only. Crosstour MAXX luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Four half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz, 480V 60Hz, or 347V 60Hz electrical operation. 480V is compatible for use with 480V Wye systems only.

Emergency Egress

Optional integral cold weather battery emergency egress includes emergency operation test switch (available in 58W and 81W models

only), an AC-ON indicator light and a premium extended rated sealed maintenance-free nickel-metal hydride battery pack. The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Area and Site Pole Mounting

Optional extruded aluminum 6-1/2" arm features internal bolt guides for supplied twin support rods, allowing for easy positioning of the fixture during installation to pole. Supplied with round plate adapter plate. Optional tenon adapter fits 2-3/8" or 3-1/2" O.D. Tenon.

Finish

Crosstour MAXX is protected with a super TGIC carbon bronze or summit white polyester powder coat paint. Super TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

Five-year warranty.



XTOR CROSSTOUR MAXX LED

APPLICATIONS:
WALL / SURFACE
INVERTED
SITE LIGHTING



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
NOM Compliant Models
3G Vibration Tested
UL924 Listed (CBP Models)
IP66 Rated
DesignLights Consortium™ Qualified*

TECHNICAL DATA

40°C Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

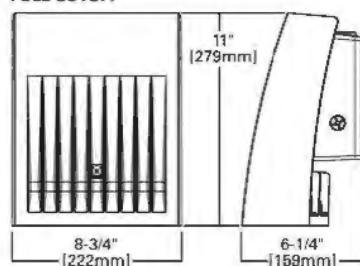
Effective Projected Area (Sq. Ft.):
XTOR6B, XTOR8B, XTOR12B=0.54
With Pole Mount Arm=0.98

SHIPPING DATA:

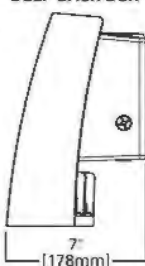
Approximate Net Weight:
12-15 lbs. [5.4-6.8 kgs.]

DIMENSIONS

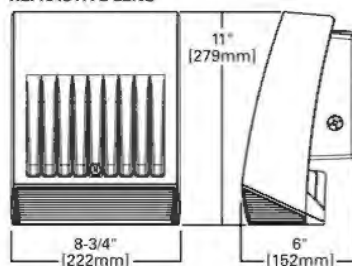
FULL CUTOFF



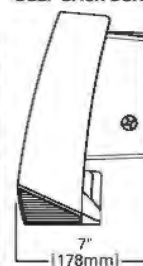
DEEP BACK BOX



REFRACTIVE LENS

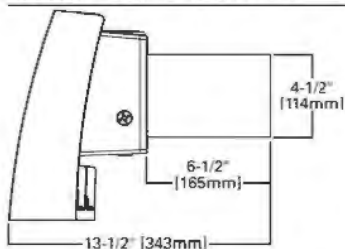


DEEP BACK BOX



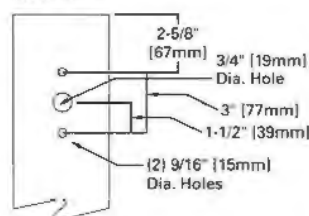
DIMENSIONS

OPTIONAL POLE MOUNT ARM

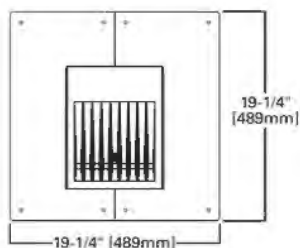


ARM DRILLING

TYPE "C"



ESCUTCHEON PLATES



POWER AND LUMENS BY FIXTURE MODEL

58W Series				
LED Information	XTOR6B	XTOR6BRL	XTOR6B-W	XTOR6BRL-W
Delivered Lumens	6,129	6,225	6,038	6,133
B.U.G. Rating	B1-U0-G1	B2-U4-G3	B1-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K
CRI (Color Rendering Index)	70	70	70	70
Power Consumption (Watts)	58W	58W	58W	58W
81W Series				
LED Information	XTOR8B	XTOR8BRL	XTOR8B-W	XTOR8BRL-W
Delivered Lumens	8,502	8,635	8,373	8,504
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K
CRI (Color Rendering Index)	70	70	70	70
Power Consumption (Watts)	81W	81W	81W	81W
102W Series				
LED Information	XTOR12B	XTOR12BRL	XTOR12B-W	XTOR12BRL-W
Delivered Lumens	12,728	13,458	12,539	13,258
B.U.G. Rating	B2-U0-G1	B2-U4-G3	B2-U0-G1	B2-U4-G3
CCT (Kelvin)	5000K	5000K	4000K	4000K
CRI (Color Rendering Index)	70	70	70	70
Power Consumption (Watts)	102W	102W	102W	102W
EGRESS Information		XTOR6B, XTOR8B and XTOR12B Full Cutoff CBP Egress LED		
Delivered Lumens		509		
B.U.G. Rating		N.A.		
CCT (Kelvin)		4000K		
CRI (Color Rendering Index)		65		
Power Consumption (Watts)		1.8W		
		XTOR6B, XTOR8B and XTOR12B Refractive Lens CBP Egress LED		
Delivered Lumens		468		
B.U.G. Rating		N.A.		
CCT (Kelvin)		4000K		
CRI (Color Rendering Index)		65		
Power Consumption (Watts)		1.8W		

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR6B Model		
25°C	> 90%	246,000
40°C	> 88%	217,000
50°C	> 88%	201,000
XTOR8B Model		
25°C	> 89%	219,000
40°C	> 87%	195,000
50°C	> 86%	181,000
XTOR12B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000

CURRENT DRAW

Voltage	Model Series				
	XTOR6B	XTOR8B	XTOR12B	XTOR6B-CBP (Fixture/Battery)	XTOR8B-CBP (Fixture/Battery)
120V	0.51	0.71	0.94	0.60/0.25	0.92/0.25
208V	0.25	0.39	0.52	--	--
240V	0.25	0.35	0.45	--	--
277V	0.22	0.31	0.39	0.36/0.21	0.50/0.21
347V	0.19	0.25	0.33		--
480V	0.14	0.19	0.24		--

Sample Number: XTOR6B-W-WT-PC1

Series	LED Kelvin Color	Housing Color	Options (Add as Suffix)
Full Cutoff XTOR6B=58W XTOR8B=81W XTOR12B=102W Refractive Lens XTOR6BRL=58W XTOR8BRL=81W XTOR12BRL=102W	[Blank] =Bright White (Standard) 5000K W =Neutral, 4000K	[Blank] =Carbon Bronze (Standard) WT =Summit White BK =Black BZ =Bronze AP =Grey GM =Graphite Metallic DP =Dark Platinum	347V =347V ^{1,2,3,4} 480V =480V ^{1,2,3,4,5} PC1 =Photocontrol 120V ⁶ PC2 =Photocontrol 208-277V ^{6,7} PMA =Pole Mount Arm (C Drilling) with Round Adapter ^{2,8} MS-L20 =Motion Sensor for ON/OFF Operation ^{1,2,9,10} MS/DIM-L20 =Motion Sensor for Dimming Operation ^{1,2,9,10,11,12,13} CBP =Cold Weather Battery Pack ^{1,2,10,14,15} HA =50°C High Ambient ¹⁶
Accessories (Order Separately)			
WG-XTORMX =Crosstour MAXX Wire Guard PB120V =Field Installed 120V Photocontrol PB277V BUTTON PC =Field Installed 208-277V Photocontrol ⁷ VA1040-XX =Single Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵ VA1041-XX =2@180° Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵ VA1042-XX =3@120° Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵ VA1043-XX =4@90° Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵ VA1044-XX =2@90° Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵ VA1045-XX =3@90° Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵ VA1046-XX =2@120° Tenon Adapter for 3-1/2" O.D. Tenon ¹⁵		VA1033-XX =Single Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ VA1034-XX =2@180° Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ VA1035-XX =3@120° Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ VA1036-XX =4@90° Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ VA1037-XX =2@90° Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ VA1038-XX =3@90° Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ VA1039-XX =2@120° Tenon Adapter for 2-3/8" O.D. Tenon ¹⁵ EWP/XTORMX =Escutcheon Wall Plate, Carbon Bronze EWP/XTORMX-WT =Escutcheon Wall Plate, Summit White FSIR-100 =Wireless Configuration Tool for Occupancy Sensor ¹³	

- NOTES:**
- Not available with HA option.
 - Deep back box is standard for 347V, 480V, CBP, PMA, MS-L20 and MS/DIM-L20.
 - Not available with CBP option.
 - Thru-branch wiring not available with HA option or with 347V.
 - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
 - Not available with MS-L20 and MS/DIM-L20 options.
 - Use PC2 with 347V or 480V option for photocontrol. Factory wired to 208-277V lead.
 - Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
 - For use in downlight orientation only. Optimal coverage at mounting heights of 9'-20'.
 - 120V or 277V only.
 - Factory set to 50% power reduction after 15-minutes of inactivity. Dimming driver included.
 - Includes integral photo sensor.
 - The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff, and more. Consult your lighting representative at Eaton for more information.
 - Operating temperatures -20°C to 25°C.
 - Replace XX with housing color.
 - Not available in XTOR12B or XTOR12BRL models.

STOCK ORDERING INFORMATION

58W Series	81W Series	102W Series
Full Cutoff		
XTOR6B=58W, 5000K, Carbon Bronze	XTOR8B=81W, 5000K, Carbon Bronze	XTOR12B=102W, 5000K, Carbon Bronze
XTOR6B-PC1=58W, 5000K, 120V PC, Carbon Bronze	XTOR8B-PC1=81W, 5000K, 120V PC, Carbon Bronze	XTOR12B-PC1=102W, 5000K, 120V PC, Carbon Bronze
XTOR6B-WT=58W, 5000K, Summit White	XTOR8B-WT=81W, 5000K, Summit White	XTOR12B-WT=102W, 5000K, Summit White
XTOR6B-W=58W, 4000K, Carbon Bronze	XTOR8B-PC2=81W, 5000K, 208-277V PC, Carbon Bronze	XTOR12B-PC2=102W, 5000K, 208-277V PC, Carbon Bronze
XTOR6B-PMA=58W, 5000K, Pole Mount Arm, Carbon Bronze	XTOR8B-PMA=81W, 5000K, Pole Mount Arm, Carbon Bronze	XTOR12B-PMA=102W, 5000K, Pole Mount Arm, Carbon Bronze
XTOR6B-W-PMA=58W, 4000K, Pole Mount Arm, Carbon Bronze	XTOR8B-W=81W, 4000K, Carbon Bronze	XTOR12B-W=102W, 4000K, Carbon Bronze
XTOR6B-PC2=58W, 5000K, 208-277V PC, Carbon Bronze	XTOR8B-W-PC1=81W, 4000K, 120V PC, Carbon Bronze	XTOR12B-W-PC1=102W, 4000K, 120V PC, Carbon Bronze
XTOR6B-W-PC2=58W, 4000K, 208-277V PC, Carbon Bronze	XTOR8B-W-PC2=81W, 4000K, 208-277V PC, Carbon Bronze	XTOR12B-W-PC2=102W, 4000K, 208-277V PC, Carbon Bronze
XTOR6B-W-PC1=58W, 4000K, 120V PC, Carbon Bronze	XTOR8B-W-PMA=81W, 4000K, Pole Mount Arm, Carbon Bronze	XTOR12B-W-PMA=102W, 4000K, Pole Mount Arm, Carbon Bronze
Refractive Lens		
XTOR6BRL=58W, 5000K, Refractive Lens, Carbon Bronze	XTOR8BRL=81W, 5000K, Refractive Lens, Carbon Bronze	XTOR12BRL=102W, 5000K, Refractive Lens, Carbon Bronze
XTOR6BRL-PC1=58W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR8BRL-PC1=81W, 5000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR12BRL-PC1=102W, 5000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR6BRL-WT=58W, 5000K, Refractive Lens, Summit White	XTOR8BRL-WT=81W, 5000K, Refractive Lens, Summit White	XTOR12BRL-WT=102W, 5000K, Refractive Lens, Summit White
XTOR6BRL-W=58W, 4000K, Refractive Lens, Carbon Bronze	XTOR8BRL-PC2=81W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR12BRL-PC2=102W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze
XTOR6BRL-PMA=58W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR8BRL-PMA=81W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR12BRL-PMA=102W, 5000K, Refractive Lens, Pole Mount Arm, Carbon Bronze
XTOR6BRL-W-PMA=58W, 4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR8BRL-W=81W, 4000K, Refractive Lens, Carbon Bronze	XTOR12BRL-W=102W, 4000K, Refractive Lens, Carbon Bronze
XTOR6BRL-PC2=58W, 5000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR8BRL-W-PC1=81W, 4000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR12BRL-W-PC1=102W, 4000K, Refractive Lens, 120V PC, Carbon Bronze
XTOR6BRL-W-PC2=58W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR8BRL-W-PC2=81W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze	XTOR12BRL-W-PC2=102W, 4000K, Refractive Lens, 208-277V PC, Carbon Bronze
XTOR6BRL-W-PC1=58W, 4000K, Refractive Lens, 120V PC, Carbon Bronze	XTOR8BRL-W-PMA=81W, 4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze	XTOR12BRL-W-PMA=102W, 4000K, Refractive Lens, Pole Mount Arm, Carbon Bronze

PROJECT: GABP

MODEL: HBF-150W-120-90-305-CW-CM-WT-PM-FL

TYPE: N150120



THE SATURN LED HIGH BAY SERIES

146 lm/w

SpecGrade's Saturn is a round low-profile High Bay LED and provides the industries highest performance and value for Return-On-Investment on indoor open area lighting applications. This luminaire is the workhorse for warehouse, production facilities, gymnasiums and large event venues. Fitted with the latest mid-power LED chips from Lumileds and powered by a high performance Meanwell driver. This product also comes with a 10-year warranty (See www.SpecGradeLED.com for details). This series has a range from 70W to 200W at an efficacy of 146 lm/w.



AVAILABLE
IN 70W, 90W, 150W,
& 200W



EXPECTED LIFE
OVER 100,000 HRS.



IES FILES
AVAILABLE AT WWW.
SPECGRADELED.COM



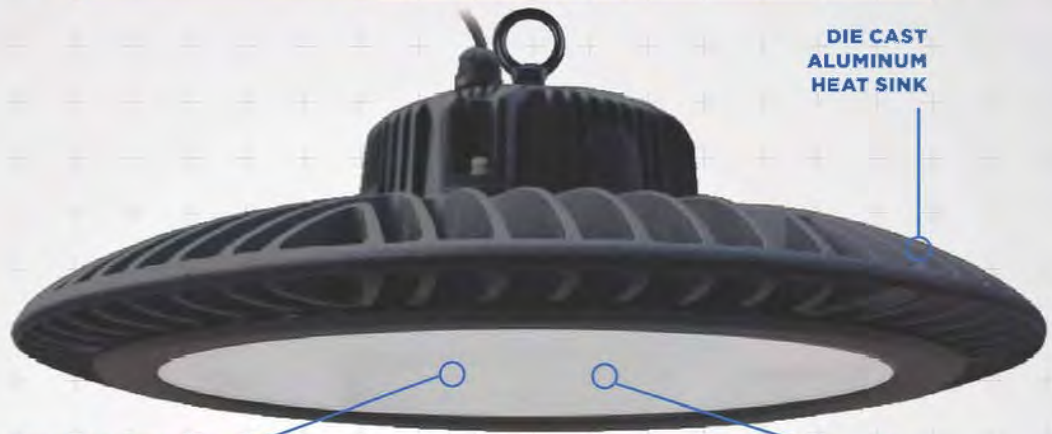
RATED IP 65



DIMMABLE
0-10V OPTIONAL

THE SATURN LED HIGH BAY

UP TO 146 lm/w



DIE CAST
ALUMINUM
HEAT SINK

LUMILEDS LUXEON-T
DELIVERS
EXCEPTIONAL
BEAM UNIFORMITY

CLEAR OR
FROSTED LENS
(OPTIONAL)

NEW!
UPLIGHT FEATURE

Uplighting feature creates a more open and pleasing environment by up-lighting areas above your application. This unique feature enhances all applications with very little additional cost.

STANDARD COLORS:
BLACK AS SHOWN
OR WHITE

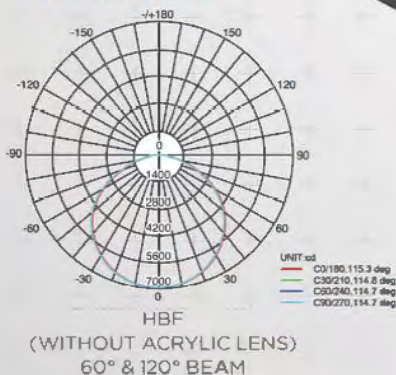
TOTAL 8W LED
BAR UPLIGHTS
(APPROX. 700 LM
/60V DC)

UPLIGHT
LIGHT COLOR
TEMPERATURE
MATCHES
DOWN LIGHT



UPLIGHT FEATURE
AUTOMATICALLY
ON WITH
DOWNLIGHT

PHOTOMETRICS



THE SATURN LED HIGH BAY

70W, 90W,
150W & 200W

**REPLACES UP TO A 500-WATT
METAL HALIDE FIXTURE**



NEW!
UPLIGHTING
FEATURE
(PATENT PENDING)

SPECIFICATIONS

Expected life: Over 100,000 hrs.
Rating: IP 65
Color Rendering Index (CRI): >70,
80 CRI (optional)
Operating temp: -40°C - 65°C
Power factor: >0.98%
Input line voltage: 90-305 VAC
347-480V (optional)
Input line frequency: 50/60 Hz
LED efficiency:
- warm white, 131 lm/w
- natural white, 141 lm/w
- cool white, 146 lm/w

MISC SPECS

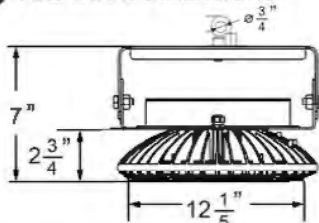
LED chips: Lumileds Luxeon-T
Driver: UL approved Meanwell
(Philips optional)
Dimmable 0-10V (optional)
Occupancy sensor: (optional)
Hanging weight:
70W & 90W: 8 lbs.,
150W & 200W: 13.5 lbs.
Nataatorium finish (optional)

MATERIALS

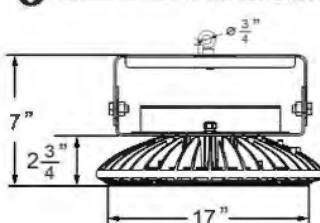
Heat sink housing:
Anodized aluminum
LED Shield: Lexan
(options: clear & frosted)
Finish: Powder coated
(standard colors black & white)
Dropped acrylic lens (optional)

HBF SURFACE MOUNT CONFIGURATION WITH 480V DRIVER

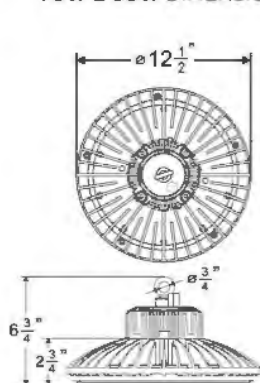
70W & 90W DIMENSIONS



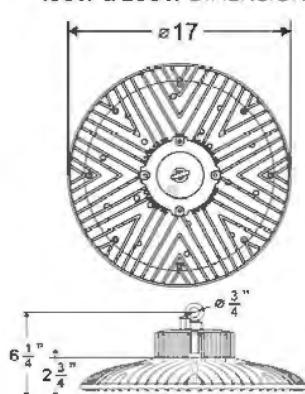
150W & 200W DIMENSIONS



(CM) CABLE MOUNT 70W & 90W DIMENSIONS



(CM) CABLE MOUNT 150W & 200W DIMENSIONS



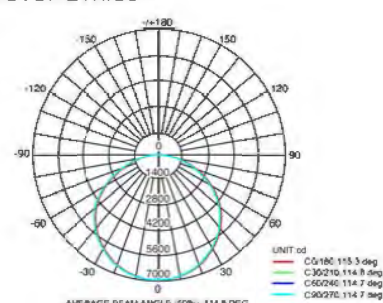
(PM) PENDENT MOUNT OPTION (DL) DROPPED ACRYLIC LENS



(OS) OCCUPANCY SENSOR OPTION



PHOTOMETRICS

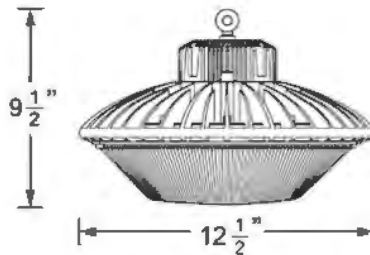


HBF WITH OPTIONAL DROPPED ACRYLIC LENS

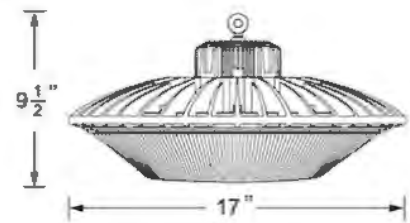
↓ **HBF CABLE MOUNT (CM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



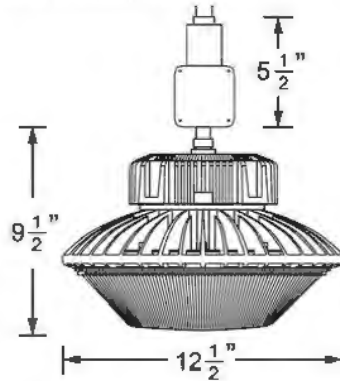
↓ **150W & 200W DIMENSIONS**



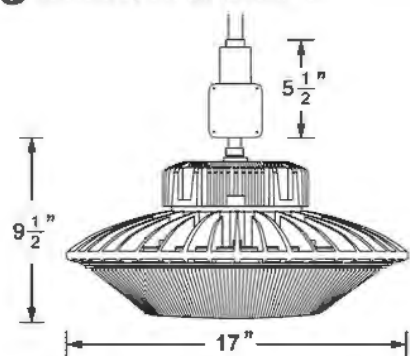
↓ **HBF PENDENT MOUNT (PM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



↓ **150W & 200W DIMENSIONS**



PRODUCT SPECIFICATIONS | ORDERING INFORMATION: THE SATURN HBF 70W, 90W, 150W, 200W

SERIES	WATTS	BEAM	INPUT VOLT.	COLOR TEMPERATURES DELIVERED LUMENS			MOUNT	FINISH	OPTIONS	LENS
				WW 3500K	NW 4100K	CW 5000K				
HBF	70W	60°	90-305V	9842 lm	10300 lm	10360 lm	CM Cable Mount	WT White (STD)	OS Occupancy Sensor WG Wire Guard DIM 0-10V Dimming UL Up Light PM Pendant SM Surface Mount	CL Clear Lens
	90W	120°	347-480V (optional)	12021 lm	12654 lm	13320 lm		BL Black (STD)		FL Frosted Lens
	150W			21310 lm	22431 lm	23612 lm		RAL Optional Finish		DL Dropped Acrylic Lens
	200W			26780 lm	28190 lm	29674 lm		NAT Natatorium Finish (optional)		
HBF	150W	120	90-305	CW			CM	WT	PM	FL

Due to continuous improvement and innovation, product appearance and specifications may change without notice. Actual performance may differ as a result of end-user environment and application.

REVIT & IES Files are located at www.SpecGradeLED.com

WW | Warm White NW | Natural White CW | Cool White



DESCRIPTION

The Night Falcon™ LED floodlight luminaire combines high-efficiency optics, superior thermal management and energy efficiency in a cost-effective solution. The compact, robust design incorporates a separate driver compartment for maximum heat dissipation to insure longevity of both the fixture and the LEDs. The Night Falcon luminaire uses precision engineered optics delivering superior uniformity and excellent illumination to the targeted application. Typical applications include area lighting for security, building facade lighting, accent and signage lighting in both commercial and industrial applications. The Night Falcon luminaire is UL/cUL listed for wet locations and is IP66 rated.

SPECIFICATION FEATURES

Construction

Heavy-duty, die cast aluminum housing, driver compartment and driver housing door. A separate driver compartment and external fins provide optimal thermal management that result in longer LED and driver life. The housing, driver compartment and optical chamber are IP66 rated. Access to the driver for maintenance is achieved with a removable driver door using pan head screws. A one-piece silicone gasket seals the door to the fixture housing. The fixture is 3G vibration rated (ANSI C136.31) to ensure durability in area and site lighting applications. Suitable for mounting within 4' (1.2m) of the ground.

Optics

The LED chamber incorporates a vacuum metalized reflector that provides high-efficiency illumination. Optics are precisely designed to shape the wide NEMA type 6H x 6V distribution, maximizing efficiency and application spacing. Clear glass tempered lens with full circumference form-in-place silicone gasket protects the optics from damage. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 5700K CCT and 3000K CCT and minimum 70 CRI are available.

Electrical

LED driver is mounted to the removable die-cast aluminum door for optimal heat sinking and ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Integral 6kV surge is standard. 10kV/10kA common- and differential- mode surge protection available as an option. 0-10V dimming driver is available to accommodate controls capability such as dimming and occupancy. Standard NEMA 3-PIN twistlock photocontrol receptacle and NEMA 7-PIN twistlock photocontrol receptacles are available as options. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. 90% lumen maintenance greater than 50,000 hours per IESNA TM-21.

Accessories

Heavy-duty steel top and side visors control glare and spill light. 1/8" thick UV stabilized vandal guard shields glass lens from impact when mounted at low levels. Easy to install wire guard features a heavy-gauge welded construction with corrosion resistant polyester powder coat finish to protect glass from projected objects.

Mounting

Mounting options include an integral die-cast aluminum slipfitter that is preset to a tilt of 45°. The knuckle base is supplied with a tooth lock adjustment that can be adjusted in 5° increments to provide flexibility in aiming the fixture from a variety of surfaces. Visual 15° adjustment indicators on the knuckle allow for 180° field rotation of the floodlight assembly. The slipfitter fits standard 2-3/8"-3" O.D. tenon. The trunnion mounting includes a 3/16" polyester powder coated galvanized steel trunnion with a 16/3 SOW cord. The trunnion mount uses an interlocking slide adjustment that is locked into place with a set screw.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is carbon bronze. Additional colors available in summit white, white, grey, bronze, black, dark platinum and graphite metallic. Consult your lighting representative at Eaton for a complete selection of standard colors.

Warranty

Five-year warranty.



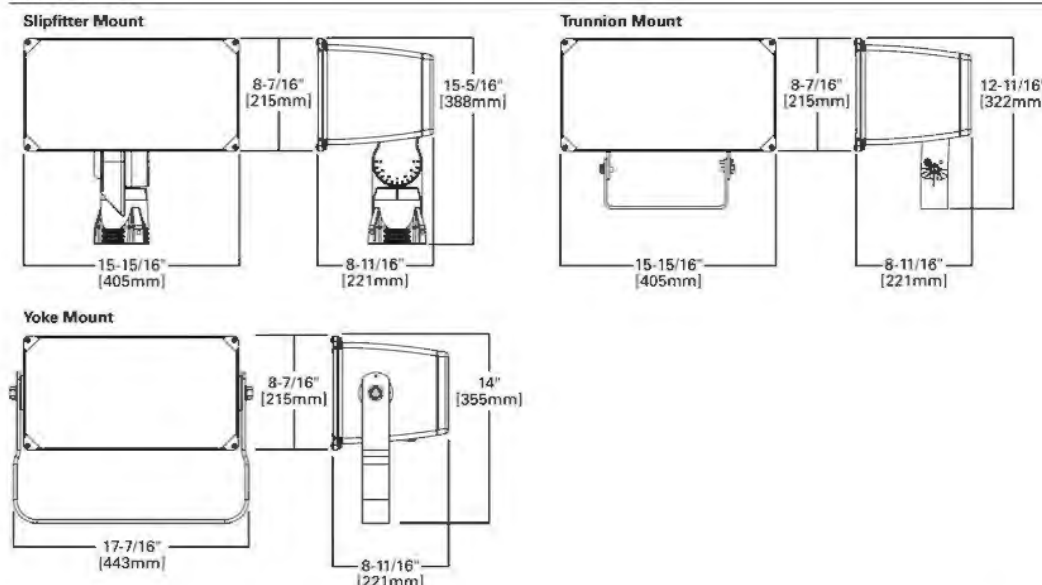
NFFLD NIGHT FALCON

Solid State LED

FLOODLIGHT



DIMENSIONS



CERTIFICATION DATA

UL/cUL Wet Location Listed
IP66 Fixture and Optical Chamber
LM79/LM80 Compliant
3G Vibration Rated
RoHS Compliant
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
> 0.9 Power Factor
< 20% Total Harmonic Distortion
120V 50/60Hz, 347V/60Hz and 480V/60Hz
-40°C Minimum Ambient Temperature Rating
+40°C Maximum Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 1.25

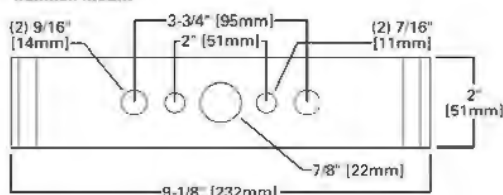
SHIPPING DATA

Approximate Net Weight:
20 lbs. (9.09 kgs.)

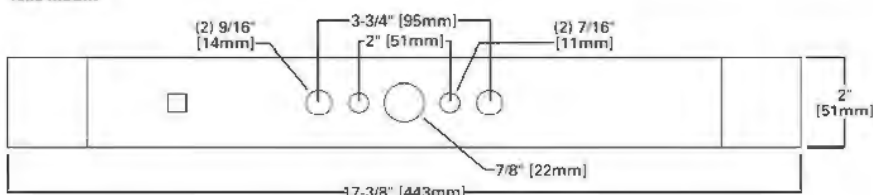


DRILLING PATTERNS

Trunnion Mount



Yoke Mount

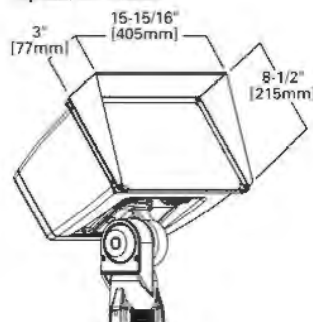


OPTIONAL INTEGRATED SENSOR

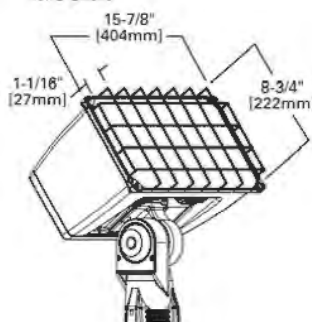


ACCESSORIES

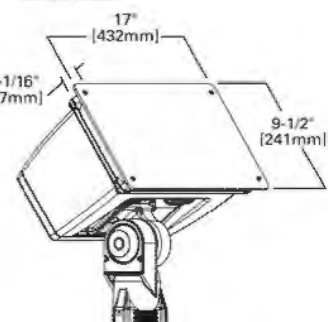
Top and Side Visors



Wire Guard



Vandal Shield



POWER AND LUMENS

A25 LED	NFFLD-A25	NFFLD-A25-7060	NFFLD-A25-7030
Delivered Lumens	9,432	9,937	9,297
CCT (Kelvin)	4000K	5700K	3000K
CRI (Color Rendering Index)	70	70	70
NEMA Distribution (H x V)	6 x 6 Wide	6 x 6 Wide	6 x 6 Wide
Power Consumption (Watts)	85W	85W	85W
A40 LED	NFFLD-A40	NFFLD-A40-7060	NFFLD-A40-7030
Delivered Lumens	14,683	15,468	14,473
CCT (Kelvin)	4000K	5700K	3000K
CRI (Color Rendering Index)	70	70	70
NEMA Distribution (H x V)	6 x 6 Wide	6 x 6 Wide	6 x 6 Wide
Power Consumption (Watts)	129W	129W	129W

CURRENT DRAW

Voltage (V)	Model Series	
	NFFLD-A25	NFFLD-A40
	Current (A)	Current (A)
120V	0.700	1.116
208V	0.410	0.646
240V	0.361	0.568
277V	0.321	0.503
347V	0.279	0.408
480V	0.192	0.299

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.03
15°C	1.02
25°C	1.00
40°C	0.97
50°C	0.96

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
NFFLD-A25		
25°C	> 93%	> 300,000
40°C	> 93%	> 295,000
50°C	> 92%	> 285,000
NFFLD-A40		
25°C	> 93%	> 290,000
40°C	> 92%	> 285,000
50°C	> 92%	> 280,000

ORDERING INFORMATION

Sample Number: NFFLD-A40-E-UNV-66-S-CB-PER

Product Family ¹	Light Engine ²	Driver ³	Voltage	Distribution	Mounting	Color
NFFLD=Night Falcon LED Floodlight	A25=9,400 Nominal Lumens A40=14,600 Nominal Lumens	E=Non-Dimming D=Dimming (0-10V)	UNV=120-277V 347=347V ⁴ 480=480V ⁴	66=NEMA 6H x6V Wide	S=Slipfitter ⁵ T=Trunnion Y=Yoke	CB=Carbon Bronze (Standard) BK=Black BZ=Bronze AP=Grey WH=White WHT=Summit White DP=Dark Platinum GM=Graphite Metallic
Options (Add as Suffix)				Accessories (Order Separately) ¹⁰		
7030=70 CRI 3000K ⁶ 7060=70 CRI 5700K ⁶ PER=NEMA 3-PIN Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁷ 10K=10kV/10kA UL 1449 Surge Protective Device HA=50°C High Ambient Temperature D10=<10% Dimming ⁷ MSP/DIM-L12=Integrated Sensor for Dimming Operation, 8' - 12' Mounting Height ^{8,9} MSP/DIM-L30=Integrated Sensor for Dimming Operation, 12' - 30' Mounting Height ^{8,9} MSP-L12=Integrated Sensor for ON OFF Operation, 8' - 12' Mounting Height ^{8,9} MSP-L30=Integrated Sensor for ON OFF Operation, 12' - 30' Mounting Height ^{8,9}				FA6J=3" O.D. Surface Mount Bracket ¹¹ OA1223=10kV, 10kA UL 1449 Surge Protective Device Replacement OA/RA1013=Photocontrol Shorting Cap OA/RA1014=NEMA Photocontrol - 120V OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V RAB-XX=Right Angle Pipe Bracket for Slipfitter SAB-XX=Steel Angle Bracket for Trunnion TYS-XX=Slipfitter Adapter for 2-3/8", 3" or 3-1/2" O.D. Tenon ¹² TS2/NFFLD-XX=Top and Side Visors ¹³ VS/NFFLD=Vandal Shield ¹³ WG/NFFLD=Wire Guard ¹³ ISHH-01=Integrated Sensor Programming Remote		

NOTES: 1. DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 2. Standard 4000K CCT and minimum 70 CRI. Consult IES file for actual lumen output. 3. Consult factory for driver surge protection values. 4. Not recommended for use with ungrounded, delta configured systems. 5. Fits 2 3/8" to 3" O.D. tenon, wire leads run through slipfitter. 6. Extended lead times apply. Use dedicated IES files for 3000K and 5700K when performing layouts. These files are published on the Night Falcon luminaire product page on the website. 7. Must order with dimming driver. 8. 0-10V dimming driver required. Integrated sensor option only available in slipfitter mounting. 9. Not available with Photocontrol. 10. Replace XX with code or designation. Additional brackets and adaptors available on the poles product page on the website. 11. Not available with tenon mount. 12. Not available with slipfitter mount. 13. Cannot combine TS2 (Top and Side Visor), VS (Vandal Shield), or WG (Wire Guard). Limited to one external guard per fixture.

STOCK ORDERING INFORMATION

Stock Sample Number: NFFLD-A40-S

Series	Light Engine	Mounting	Voltage
NFFLD=Night Falcon	A25=9,400 Nominal Lumens A40=14,600 Nominal Lumens	S=Slipfitter T=Trunnion	[BLANK]=120-277V 347=347V

NOTES: Options not available with stock products. Order accessories as separate items for field installation. Refer to standard ordering information to add options. Refer to In Stock Guide for availability. Stock fixture is 4000K, non-dimming, 120-277V or 347V, carbon bronze only.

DESCRIPTION

The patented Lumark Crosstour® LED Wall Pack Series of luminaires provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

SPECIFICATION FEATURES

Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K and 4000K CCT.

Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized

electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

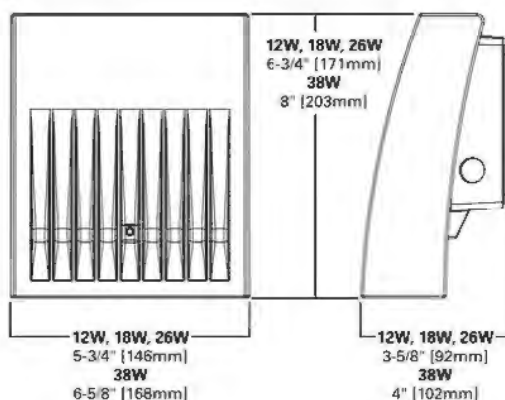
Five-year warranty.



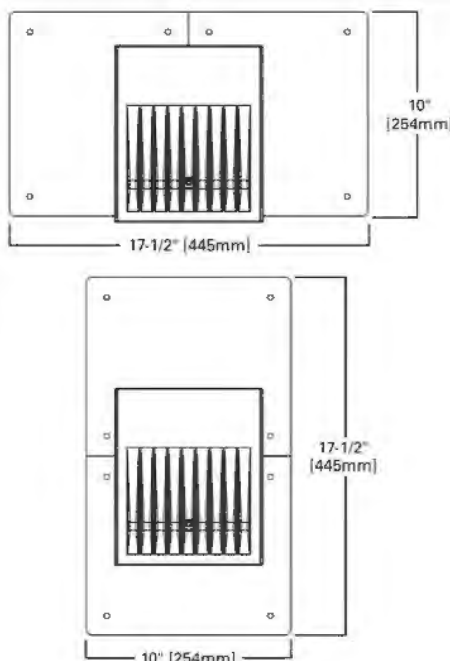
XTOR CROSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA

UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingress Protection Rated
Title 24 Compliant
DesignLights Consortium™ Qualified*

TECHNICAL DATA

40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

Effective Projected Area (Sq. Ft.):
XTOR1B, XTOR2B, XTOR3B=0.34
XTOR4B=0.45

SHIPPING DATA:

Approximate Net Weight:
3.7 - 5.25 lbs. [1.7 - 2.4 kgs.]

LUMENS - CRI/CCT TABLE

LED Information	XTOR1B	XTOR1B-W	XTOR2B	XTOR2B-W	XTOR3B	XTOR3B-W	XTOR4B	XTOR4B-W
Delivered Lumens (Wall Mount)	1,418	1,396	2,135	2,103	2,751	2,710	4,269	4,205
Delivered Lumens (With Flood Accessory Kit) ¹	1,005	990	1,495	1,472	2,099	2,068	3,166	3,121
B.U.G. Rating ²	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	5,000	4,000	5,000	4,000	5,000	4,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	18W	18W	26W	26W	38W	38W

NOTES: ¹ Includes shield and visor. ² B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1B Model		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
XTOR2B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR3B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR4B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000

CURRENT DRAW

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

ORDERING INFORMATION

Sample Number: XTOR2B-W-WT-PC1

Series	LED Kelvin Color	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
XTOR1B=Small Door, 12W XTOR2B=Small Door, 18W XTOR3B=Small Door, 26W XTOR4B=Medium Door, 38W	[Blank]=Bright White (Standard), 5000K W=Neutral White, 4000K	[Blank]=Carbon Bronze (Standard) WT=Summit White BK=Black BZ=Bronze AP=Grey GM=Graphite Metallic OP=Dark Platinum	PC1=Photocontrol 120V ¹ PC2=Photocontrol 208-277V ^{1,2} 347V=347V ³ HA=50°C High Ambient ³	WG/XTOR=Wire Guard ⁴ XTORFLD-KNC=Knuckle Floodlight Kit ⁵ XTORFLD-TRN=Trunnion Floodlight Kit ⁵ XTORFLD-KNC-WT=Knuckle Floodlight Kit, Summit White ⁵ XTORFLD-TRN-WT=Trunnion Floodlight Kit, Summit White ⁵ EWP/XTOR=Escutcheon Wall Plate, Carbon Bronze EWP/XTOR-WT=Escutcheon Wall Plate, Summit White

NOTES:

- Photocontrols are factory installed.
- Order PC2 for 347V models.
- Thru-branch wiring not available with HA option or with 347V.
- Wire guard for wall surface mount. Not for use with floodlight kit accessory.
- Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base; small and large top visors and small and large impact shields.

STOCK ORDERING INFORMATION

12W Series	18W Series	26W Series	38W Series
XTOR1B=7W, 5000K, Carbon Bronze	XTOR2B=18W, 5000K, Carbon Bronze	XTOR3B=26W, 5000K, Carbon Bronze	XTOR4B=38W, 5000K, Carbon Bronze
XTOR1B-WT=12W, 5000K, Summit White	XTOR2B-W=18W, 4000K, Carbon Bronze	XTOR3B-W=26W, 4000K, Carbon Bronze	XTOR4B-W=38W, 4000K, Carbon Bronze
XTOR1B-PC1=12W, 5000K, 120V PC, Carbon Bronze	XTOR2B-WT=18W, 5000K, Summit White	XTOR3B-WT=26W, 5000K, Summit White	XTOR4B-WT=38W, 5000K, Summit White
XTOR1B-W=12W, 4000K, Carbon Bronze	XTOR2B-PC1=18W, 5000K, 120V PC, Carbon Bronze	XTOR3B-PC1=26W, 5000K, 120V PC, Carbon Bronze	XTOR4B-PC1=38W, 5000K, 120V PC, Carbon Bronze
XTOR1B-W-PC1=12W, 4000K, 120V PC, Carbon Bronze	XTOR2B-W-PC1=18W, 4000K, 120V PC, Carbon Bronze		XTOR4B-W-PC1=38W, 4000K, 120V PC, Carbon Bronze

DESCRIPTION

The IAF Series is an energy efficient family of light duty industrials that feature premium performance and durability. The series incorporates sturdy embossed reflectors that precisely direct and effectively control light. The IAF Series can be installed using various mounting methods and numerous options and accessories are available. The series is available with both Apertured (IAF) and Closed Top (ICF) reflector combinations.

The IAF Series can be utilized in simple task and area lighting and industrial applications.

Catalog #	ICF-232-EB81-U, 8TICF-232-UNV-EB81-U	Type	N142LINDUST, N184LINDUST
Project	GABP	Date	
Comments			
Prepared by	Ameresco		

SPECIFICATION FEATURES

Construction

Nominal Channel is code gauge prime cold rolled steel. Numerous KOs for ease of installation. End plate quickly connects to channel connector. Groove for tong hanger lamp holder bracket flips in place.

Electrical*

Ballast are CBM/ETL Class "P" and positively secured by mounting bolts. UL/CUL listed. Suitable for damp locations.

Finish

Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting grade, baked white enamel finish.

Reflectors

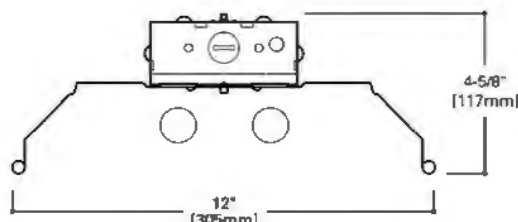
Die formed prime steel, code gauge. Formed edges for added strength. 12" width. Reflectors secured with quarter-turn fasteners. All reflectors 4' sections. Baked white enamel. Standard with 8% uplight (IAF). Closed top reflector (ICF).



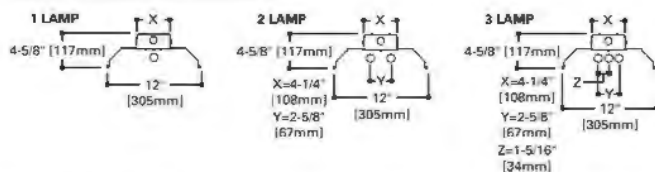
IAF, ICF
117, 217, 317,
128T8, 228T8,
328T8,
132, 232, 332

2', 4' OR 8' INDUSTRIAL
1, 2 OR 3 T8 LAMPS,

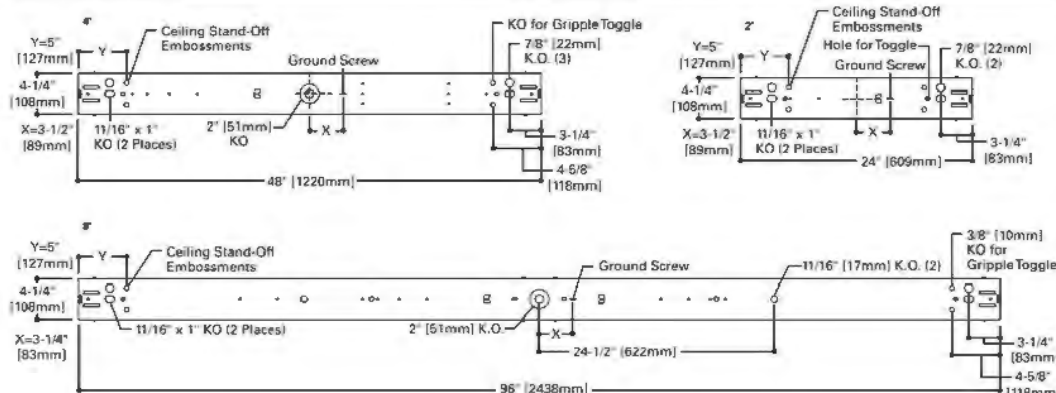
Light Duty Industrial



LAMP CONFIGURATIONS



MOUNTING DATA



ENERGY DATA

Input Watts:
HB Ballast, Normal Ballast Factor
117 (17), 217 (25), 132 (30),
228T8 (49), 232 (53),
328T8 (71), 332 (80)

Luminaire Efficacy Rating
LER = FL-80

Catalog Number: ICF-232
Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.00

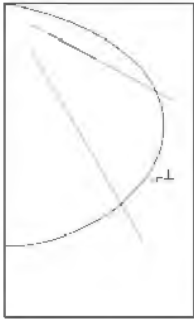
*Reference the lamp/ballast data in the
Technical Section for specific lamp/ballast
requirements.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING
TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT

Safe and convenient means of
disconnecting power.

PHOTOMETRICS


ICF-232
 High Performance
 Ballast

 Two-F32T8/35K Lamps
 2850 Lumens

 Spacing criterion:
 (H) 1.3 x mounting
 height, (L) 1.5 x
 mounting height
 Efficiency 89.2%

 Test Report:
 ICF-232.IES

LER = FL-80

 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.00

Coefficients of Utilization

Effective floor cavity reflectance										20%										30%										10%										0%									
rc	80%					70%					50%					30%					10%					0%																							
rw	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10		50	30	10		0																						
RCR																																																	
0	106	106	106	106		104	104	104	104		99	99	99		95	95	95		91	91	91		89																										
1	96	92	87	84		94	89	86	82		86	82	80		82	79	77		79	77	75		73																										
2	87	79	72	67		84	77	71	66		74	69	64		71	66	63		68	64	61		59																										
3	78	68	61	54		76	67	60	54		64	58	53		62	56	52		59	55	51		49																										
4	71	60	52	45		69	59	51	45		56	50	44		54	48	44		52	47	43		41																										
5	65	53	45	39		63	52	44	38		50	43	38		48	42	37		47	41	37		35																										
6	60	48	39	33		58	47	39	33		45	38	33		43	37	32		42	36	32		30																										
7	56	43	35	29		54	42	34	29		41	34	29		39	33	28		38	32	28		26																										
8	52	39	31	26		50	38	31	26		37	30	25		36	30	25		35	29	25		23																										
9	48	36	28	23		47	35	28	23		34	27	23		33	27	23		32	26	22		21																										
10	45	33	26	21		44	32	25	21		31	25	20		31	25	20		30	24	20		19																										

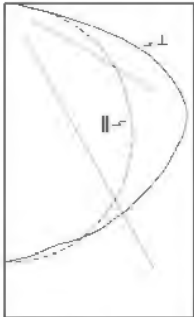
Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1155.37	20.3	22.7
0-40	1949.47	34.2	38.3
0-60	3744.86	65.7	73.7
0-90	5061.97	88.8	99.6
90-180	22.24	.4	.4
0-180	5084.21	89.2	100.0

Candela

Angle	Along H	45°	Across L
0	1433	1433	1433
10	1411	1422	1429
20	1341	1377	1412
30	1227	1312	1387
40	1076	1223	1348
50	890	1117	1247
60	673	949	1053
70	432	696	646
80	175	244	111
90	2	23	0
100	0	11	0
110	0	4	0
120	0	2	0
130	0	2	0
140	0	1	0
150	0	0	0
160	0	0	0
170	0	0	0
180	0	0	0

PHOTOMETRICS


ICF-132
 High Performance
 Ballast

 One-F32T8/35K Lamp
 3100 Lumens

 Spacing criterion:
 (H) 1.3 x mounting
 height, (L) 1.4 x
 mounting height
 Efficiency 96.9%

 Test Report:
 ICF-132.IES

LER = FL-88

 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$2.73

Coefficients of Utilization

Effective floor cavity reflectance										20%										30%										10%										0%									
rc	80%					70%					50%					30%					10%					0%																							
rw	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10		50	30	10		0																						
RCR																																																	
0	115	115	115	115	115	112	112	112	112		107	107	107		103	103	103		99	99	99		97																										
1	104	99	94	90		101	97	92	89		92	89	86		89	86	83		85	83	81		78																										
2	93	85	77	71		91	83	76	70		79	73	69		76	71	67		73	69	65		63																										
3	84	73	65	58		82	72	64	57		69	62	56		66	60	55		63	58	54		52																										
4	77	64	55	48		74	63	54	48		60	53	47		58	51	46		56	50	45		43																										
5	70	57	47	41		68	56	47	40		54	46	40		52	45	39		50	44	39		37																										
6	65	51	42	35		63	50	41	35		48	40	34		46	39	34		45	39	34		32																										
7	60	46	37	30		58	45	36	30		43	36	30		42	35	30		41	34	30		28																										
8	55	42	33	27		54	41	33	27		40	32	27		38	31	26		37	31	26		24																										
9	52	38	30	24		50	37	29	24		36	29	24		35	29	24		34	28	24		22																										
10	48	35	27	22		47	34	27	22		33	26	22		33	26	21		32	26	21		20																										

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	661.26	21.3	22.1
0-40	1109.36	35.8	37.0
0-60	2138.86	69.0	71.3
0-90	2997.95	96.7	100.0
90-180	0	0	0
0-180	2997.95	96.7	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg fcd/sm
45	4395	4950	5642
55	4330	5568	6656
65	4211	6743	7570
75	3760	7500	5692
85	1727	3455	2283

Candela

Angle	Along H	45°	Across L
0	840	840	840
5	840	835	827
10	832	818	808
15	816	797	803
20	792	781	802
25	762	766	792
30	724	743	778
35	680	714	765
40	632	683	754
45	578	651	742
50	522	622	727
55	463	594	710
60	400	564	673
65	331	530	595
70	259	460	494
75	181	361	274
80	98	175	72
85	28	56	37
90	0	0	0

ORDERING INFORMATION

SAMPLE NUMBER: ICF-232-UNV-HB81-U

Tandem Blank =2' or 4' Length ⁽¹⁾ 8T =8' Length	Series IAF =Apertured Reflector ICF =Closed Top Reflector	Number of Lamps (Not Included) 1=1 Lamp 2=2 Lamps 3=3 Lamps	Wattage 17 =17W T8 (24") 28T8 =28W T8 (48") ^(1A) 32 =32W T8 (48")	Voltage ⁽²⁾ 120V =120 Volt 277V =277 Volt 347V =347 Volt UNV =Universal Voltage 120-277 ⁽²⁾	Options GL =Single Element Fuse GM =Double Element Fuse EL4 =Emergency Installed EL8 =Emergency Installed	Ballast Type ⁽²⁾ EB8 =T8 Electronic Instant Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 EB8 /PLUS =T8 Electronic Instant Start. High Ballast Factor >1.13. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8 =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8 /PLUS =T8 Electronic Program Start. High Ballast Factor >1.13. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 HPT8 Ballast HB8 =T8 Electronic Instant Start. Low Ballast Factor .77 HB8 =T8 Electronic Instant Start. Ballast Factor .88 HB8_N =T8 Electronic Instant Start. Normal Ballast Factor 1.0 HB8_H =T8 Electronic Instant Start. High Ballast Factor 1.15-1.2 HR8_DIM =T8 Electronic Program Start Step Dimming. Ballast Factor .88 HR8_L =T8 Electronic Program Start. Low Ballast Factor .77 HR8 =T8 Electronic Program Start. Ballast Factor .88 HR8_H =T8 Electronic Program Start. High Ballast Factor 1.15-1.2	Options 6-3/18 SJT-C&P-515P =Cord & Plug (120V), (15 AMP) ⁽³⁾ 6-3/18 SJT-C&P-L715P =Cord & Plug (277V), (15 AMP) ⁽⁴⁾ PI/CPI =Plug-In Option ⁽⁵⁾ TILW =Tandem In-Line Wiring Option (Consult TILW Option Catalog Page) ⁽⁴⁾ (See options & accessories)	Packaging U =Unit Pack 4B =4 Bulk
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ACCESSORIES (Order Separately)

A-1-B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling
 (Use 2 per fixture)
GRP-SSF=Gripper Hanger (Use 2 per fixture)
SCF=Fixed Stem Set (Specify Length)
SCS=Swivel Stem Set (Specify Length)
SCA=Adjustable 48" Stem Set
AYC-Chain/Set-U=Chain Hanger Set (Use 1 set per
 fixture)
WG/ICF-4FT-U=Wire Guard
CLC-SSF=Long Channel Connector SSF
TOGGLE=Single Toggle NO. 2 (Specify Length)
Y-TOGGLE=Y Toggle NO. 2 (Specify Length)

NOTES: ⁽¹⁾Length of fixture (2' or 4') as determined by lamp wattage chosen. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾Not available when specifying emergencies, voltage must be specific. Exception EL4. ⁽⁴⁾Socket brackets left uninstalled. ⁽⁵⁾When utilizing 28W T8 lamps, HPT8 Ballast must be specified. ⁽⁶⁾Not available with HQ lamps.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
IAF-117	8 lbs.
IAF-217	8 lbs.
IAF-132	13 lbs.
IAF-232	13 lbs.
8TIAF-232	26 lbs.

DESCRIPTION

Combining value and performance in a compact, robust design, the Night Falcon low wattage LED floodlight luminaire delivers superior uniformity and excellent illumination to the targeted application. The rugged, die-cast housing is IP66 rated for exceptional durability and long term reliability. Available in several mounting configurations and weighing less than 14 pounds, this fixture provides you with design flexibility while simplifying installation. The low wattage LED floodlight can be wall, ground, or pole mounted, making it ideal for all commercial, industrial, and residential low wattage floodlighting applications.

SPECIFICATION FEATURES

Construction

Heavy-duty, die-cast aluminum housing, driver compartment and driver housing door. The housing, driver compartment and optical chamber are IP66 rated. Access to the driver for maintenance is achieved with a removable driver door using pan head screws. A one-piece silicone gasket seals the door to the fixture housing. Suitable for mounting within 4' (1.2m) of the ground.

Optics

The LED chamber incorporates a vacuum metalized reflector that provides high-efficiency illumination. Optics are precisely designed to shape the wide NEMA type 6H x 6V distribution, maximizing efficiency and application spacing. A 3H x 3V distribution is available for lighting tall, narrow surfaces. Clear glass tempered lens with full circumference form-in-place silicone gasket protects the optics from damage. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI optional. Optional 5700K CCT, 3000K CCT, 5000K CCT minimum 70 CRI are available.

Electrical

LED driver is mounted to the removable die-cast aluminum door

for optimal heat sinking and ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Integral 3kV surge is standard. 10kV MOV surge protection is available. 0-10V dimming driver is standard. Button photocontrols are available in 120V and 208-277V. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. 93% lumen maintenance greater than 50,000 hours per IESNA TM-21.

Accessories

Heavy-duty steel top and side visors control glare and spill light. 1/8" thick UV stabilized vandal guard shields glass lens from impact when mounted at low levels. Easy to install wire guard features a heavy-gauge welded construction with corrosion resistant polyester powder coat finish to protect glass from projected objects.

Mounting

Heavy-gauge steel trunnion-mount utilizes interlocking slide adjustment and is supplied with 3 feet of pre-wired SOW, wet location rated cord. Trunnion base can be lag bolted to any surface and is 3G vibration rated (ANSI C136.31). Heavy-duty, die-cast aluminum knuckle base utilizes

Catalog #	NFFLD-S-C15-D-UNV-66-T-WHT	Type
Project	GABP	NFFLDSC1566T
Comments		Date
Prepared by	Ameresco	

tooth-lock adjustment with visual 5° adjustment indicators that allow for 180° rotation of the luminaire. Knuckle fits 1/2" NPT available mounting junction box cover (supplied by others) and is secured with supplied locking nut and is 1.5G vibration rated. A die-cast aluminum slipfitter with a tooth lock adjustment that can be adjusted in 5° increments is available and is 1.5G vibration rated.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is carbon bronze. Additional colors available in summit white, white, grey, bronze, black, dark platinum and graphite metallic. Consult your lighting representative at Eaton for a complete selection of standard colors.

Warranty

Five-year warranty.



NFFLD-S NIGHT FALCON SMALL

Solid State LED

FLOODLIGHT



CERTIFICATION DATA

UL/cUL Wet Location Listed
IP66 Fixture and Optical Chamber
LM79/LM80 Compliant
1.5G Vibration Rated - Knuckle Mount
3.0G Vibration Rated - Slipfitter Mount
3.0G Vibration Rated - Trunnion Mount
RoHS Compliant
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
> 0.9 Power Factor
< 20% Total Harmonic Distortion
120V 50/60Hz, 347V/60Hz and 480V/60Hz
-40°C Min. Ambient Temperature Rating
+40°C Max. Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 0.55

SHIPPING DATA

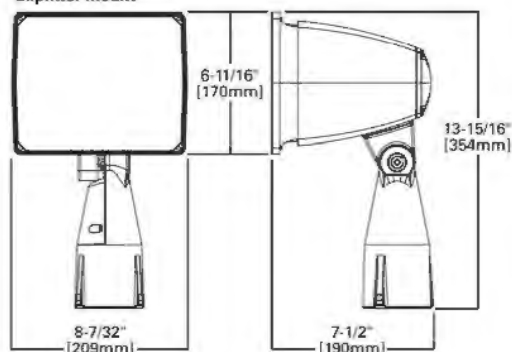
Approximate Net Weight:
13 lbs. (6 kgs.)



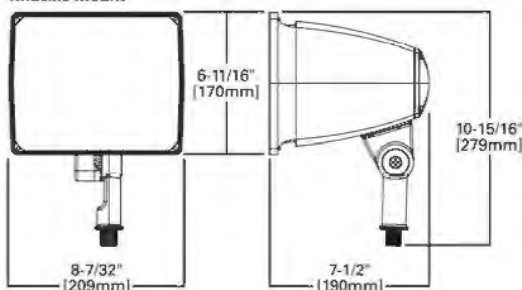
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DIMENSIONS

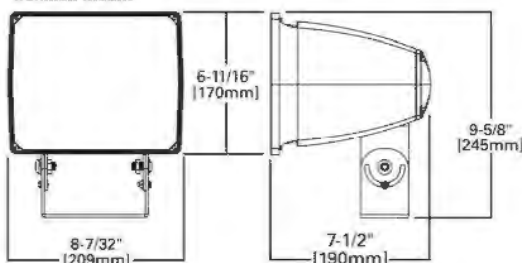
Slipfitter Mount



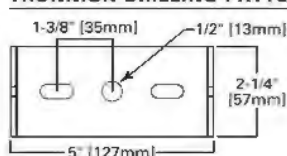
Knuckle Mount



Trunnion Mount

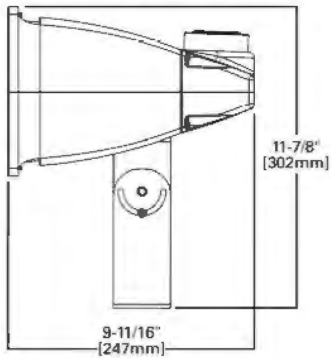


TRUNNION DRILLING PATTERN



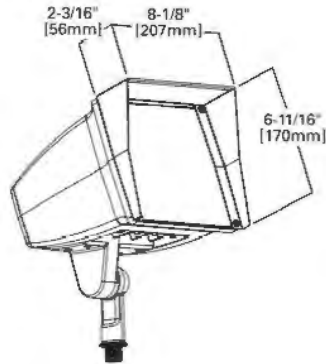
OPTION

NEMA Twistlock Photocontrol Receptacle

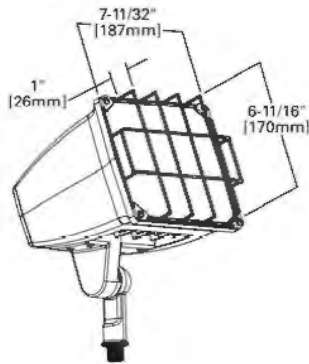


ACCESSORIES

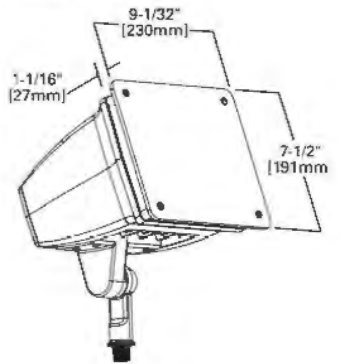
Top and Side Visors



Wire Guard



Vandal Shield



POWER AND LUMENS

	6 x 6				3 x 3			
C70 LED	NFFLD-S-C70	NFFLD-S-C70-7060	NFFLD-S-C70-7050	NFFLD-S-C70-7030	NFFLD-S-C70	NFFLD-S-C70-7060	NFFLD-S-C70-7050	NFFLD-S-C70-7030
Delivered Lumens	2,682	2,656	2,760	2,632	2,883	2,824	2,935	2,799
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	20	20	20	20	26	26	26	26
C15 LED	NFFLD-S-C15	NFFLD-S-C15-7060	NFFLD-S-C15-7050	NFFLD-S-C15-7030	NFFLD-S-C15	NFFLD-S-C15-7060	NFFLD-S-C15-7050	NFFLD-S-C15-7030
Delivered Lumens	5,797	5,741	6,066	5,785	5,499	5,386	5,596	5,337
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	51	51	51	51	52	52	52	52

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
NFFLD-S-C15-33 (3 x 3 Spot)		
25°C	> 94.74%	> 336,000
40°C	> 93.37%	> 264,000
NFFLD-S-C15-66 (6 x 6 Wide)		
25°C	> 95.53%	> 399,000
40°C	> 95.10%	> 362,000
50°C	> 94.60%	> 324,000

CURRENT DRAW

Voltage (V)	6 x 6		3 x 3	
	NFFLD-S-C70	NFFLD-S-C15	NFFLD-S-C70	NFFLD-S-C15
	Current (A)	Current (A)	Current (A)	Current (A)
120V	0.15	0.45	0.21	0.46
208V	0.09	0.25	0.13	0.26
240V	0.08	0.22	0.11	0.23
277V	0.07	0.19	0.10	0.20
347V	0.06	0.16	0.10	0.21
480V	0.05	0.13	0.07	0.22

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.03
15°C	1.02
25°C	1.00
40°C	0.97
50°C	0.96

ORDERING INFORMATION

Sample Number: NFFLD-S-C15-D-UNV-66-S-CB-PC1

Product Family ¹	Light Engine ²	Driver ³	Voltage	Distribution	Mounting	Color
NFFLD-S=Night Falcon Small	C70=2,700 Nominal Lumens C15=5,900 Nominal Lumens	D=Dimming (0-10V)	UNV=Universal 120-277V 347=347V ⁴ 480=480V ⁵ , ⁶	33=NEMA 3H x 3V ⁶ 66=NEMA 6H x 6V Wide	S=Slipfitter ⁷ T=Trunnion KNC=Knuckle	CB=Carbon Bronze (Standard) BK=Black BZ=Bronze AP=Grey WH=White WHT=Summit White DP=Dark Platinum GM=Graphite Metallic
Options (Add as Suffix)				Accessories (Order Separately) ¹³		
7030=70 CRI / 3000K ⁸ 7050=70 CRI / 5000K ⁸ 7060=70 CRI / 5700K ⁸ 10MSP=10kV MOV Surge Protection HA=50°C High Ambient Temperature ⁹ PC1=Button Type Photocontrol - 120V ¹⁰ PC2=Button Type Photocontrol - 208-277V ¹⁰ PER= 3-PIN Twistlock Photocontrol Receptacle ¹¹ PER7=7-PIN Twistlock Photocontrol Receptacle ¹¹ , ¹²				FA63=3" O.D. Surface Mount Bracket ¹⁴ RAB-XX=Right Angle Pipe Bracket for Slipfitter SAB-XX=Steel Angle Bracket for Trunnion TYS-XX=Slipfitter Adapter for 2-3/8", 3" or 3-1/2" O.D. Tenon ¹⁵ TS2LW-NFFLD-XX=Top and Side Visors ¹⁶ VSLW-NFFLD=Vandal Shield ¹⁶ WGLW-NFFLD=Wire Guard ¹⁶		

NOTES:

- DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
- Standard 4000K CCT and minimum 70 CRI. Consult IES file for actual lumen output.
- Consult factory for driver surge protection values.
- 347V only available with PC2.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Nominal lumen values are lower for the spot optic distribution see lumen table.
- Fits 2-3/8" to 3" O.D. tenon, wire leads run through slipfitter.
- Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 5700K when performing layouts. These files are published on the Night Falcon Small luminaire product page on the website.
- HA option not available with 3x3 configurations.
- Cannot order button photocontrol with C15 lumen package and 480V (PC1 or PC2).
- Requires extended back box.
- Requires 0-10V dimming driver.
- Replace XX with color designation. Additional brackets and adaptors available on the poles product page on the website.
- Not available with tenon mount.
- Not available with slipfitter mount.
- Cannot combine TS2LW (Top and Side Visor), VSLW (Vandal Shield), or WGLW (Wire Guard), limited to one external guard per fixture.

STOCK ORDERING INFORMATION

Stock Sample Number: NFFLD-S-C15-T-UNV

Series	Light Engine	Mounting	Voltage	Options (Add as Suffix)
NFFLD-S=Night Falcon Small	C70=2,700 Nominal Lumens C15=5,900 Nominal Lumens	T=Trunnion KNC=Knuckle	UNV=Universal 120-277V 347=347V	PC1=Button Type Photocontrol - 120V PC2=Button Photocontrol - 207-277V

NOTES: Options not available with stock products. Order accessories as separate items for field installation. Refer to standard ordering information to add options. Refer to In-Stock Guide for availability. Stock fixture is 4000K, dimming, 6x6 distribution, 120-277V or 347V, carbon bronze only. 347V only available with PC2.

LED Vintage Lamps



Key Features & Benefits

- Long life: up to 15,000 hours (L₇₀)
- UV and IR free
- Mercury and lead free
- RoHS compliant
- Available in 2200K
- Suitable for damp locations
- Amber glass finish
- Reduces energy consumption up to 90%
- Lasts up to 15 times longer than incandescent lamps
- No warm-up time, instant-on with full light output and stable color

Not intended for use with dimmer.



Rated up to 15,000 hours at 70% lumen maintenance, SYLVANIA LED Vintage lamps offer years of service and reduce energy and maintenance costs. SYLVANIA LED lamps are environmentally preferred products. They are RoHS compliant and contain no mercury, lead or other hazardous materials. They emit no UV or IR radiation. A CRI of 80 ensures good color definition. Available in 2200K CCT, these lamps can be used in many applications.

Product Offering

Ordering Abbreviation	Color Temperature	Typical Lumens
LED4A15	2200K	380
LED4A19	2200K	380
LED6A19	2200K	650
LED4B10	2200K	380
LED4G25	2200K	380
LED4ST	2200K	380
LED6ST	2200K	650

Application Information

Applications

- Downlights
- Pendant fixtures
- Table lamps
- Wall sconces

Application Notes

1. Operating temperature range between -20°C and +45°C (-4°F and +113°F)
2. Not for use with emergency light fixtures or exit lights
3. Use in open fixture
4. Suitable for damp locations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. For FCC Part 15 user information, please see www.sylvania.com/lcc15b.



Specification Data

Catalog # LED6ST19822VIN

Type

Project GABP

Comments

Prepared by Ameresco

6WVINLED

Ordering Information

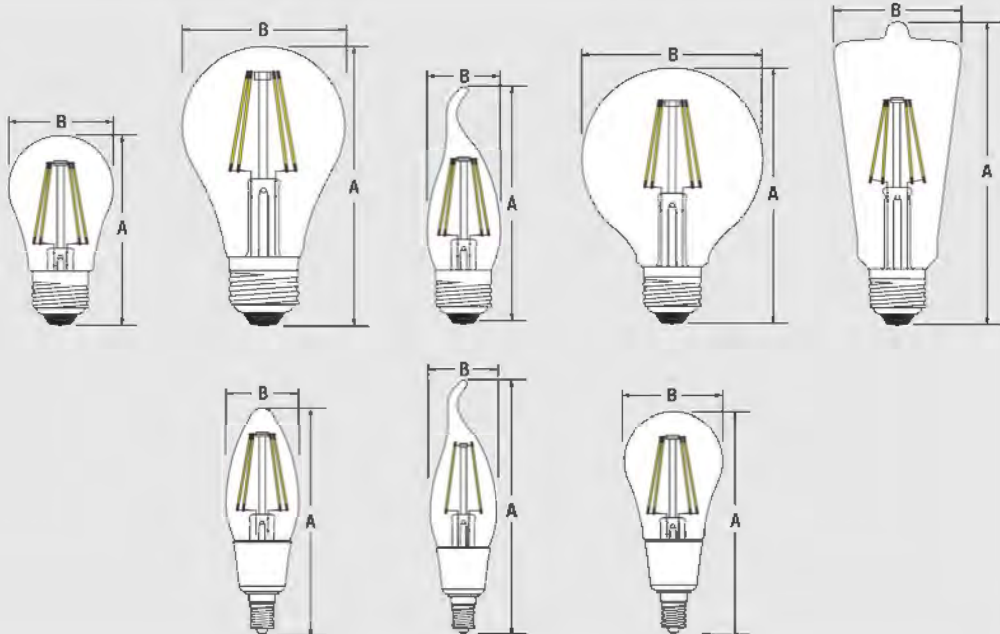
Item Number	Ordering Abbreviation	Wattage (W)	Base Type	Replaces	Input Voltage (V)	Average Rated Life (hrs.)	CCT	Typical Lumens (lm)	CRI	Bulb Finish	ENERGY STAR®
74328	LED4A15822VIN	4	Medium	40W Incandescent	120	15000	2200K	380	80	Amber	No
74336	LED4A15C822VIN	4	Candelabra	40W Incandescent	120	15000	2200K	380	80	Amber	No
77321	LED4A19822VIN	4	Medium	40W Incandescent	120	15000	2200K	380	80	Amber	No
77323	LED6A19822VIN	6	Medium	60W Incandescent	120	15000	2200K	650	80	Amber	No
79537	LED4B10BLUNT822VIN	4	Medium	40W Incandescent	120	15000	2200K	380	80	Amber	No
79539	LED4B10CBLUNT822VIN	4	Candelabra	40W Incandescent	120	15000	2200K	380	80	Amber	No
79541	LED4B10BENT822VIN	4	Medium	40W Incandescent	120	15000	2200K	380	80	Amber	No
79543	LED4B10CBENT822VIN	4	Candelabra	40W Incandescent	120	15000	2200K	380	80	Amber	No
79602	LED4G25822VIN	4	Medium	40W Incandescent	120	15000	2200K	380	80	Amber	No
74330	LED4ST19822VIN	4	Medium	40W Incandescent	120	15000	2200K	380	80	Amber	No
74332	LED6ST19822VIN	6	Medium	60W Incandescent	120	15000	2200K	650	80	Amber	No

Ordering Guide

LED	6	A19	/	8	22	VIN
LED	Wattage:	Lamp Type:		CRI	CCT	Vintage
Lamps	6	A19		8 = 80+	22 = 2200K	

Lamp Dimensions

	(A) MOL (inches)	(B) Diameter (inches)
LED4A15	3.38	1.88
LED4A19	4.13	2.36
LED6A19	4.13	2.36
LED4B10	4.33	1.37
LED4G25	4.44	3.14
LED4ST	5.43	2.28
LED6ST	5.43	2.28



Energy Savings

Basic Product Description	LED Life (hrs.)	LED Lumens	Similar Incandescent	Incandescent Life (hrs.)	Watts Saved	Energy Savings*	LED Life vs. Incandescent
LED4A15	15,000	380	40W Incandescent	1000	36	\$59	15x
LED4A19	15,000	380	40W Incandescent	1500	36	\$59	10x
LED6A19	15,000	650	60W Incandescent	1000	54	\$89	15x
LED4B10	15,000	380	40W Incandescent	1500	36	\$59	10x
LED4G25	15,000	380	40W Incandescent	1500	36	\$59	10x
LED4ST	15,000	380	40W Incandescent	1500	36	\$59	10x
LED6ST	15,000	650	60W Incandescent	1000	54	\$89	15x

*Energy savings over life of lamp calculated at \$0.11/kWh

DESCRIPTION

Combining value and performance in a compact, robust design, the Night Falcon low wattage LED floodlight luminaire delivers superior uniformity and excellent illumination to the targeted application. The rugged, die-cast housing is IP66 rated for exceptional durability and long term reliability. Available in several mounting configurations and weighing less than 14 pounds, this fixture provides you with design flexibility while simplifying installation. The low wattage LED floodlight can be wall, ground, or pole mounted, making it ideal for all commercial, industrial, and residential low wattage floodlighting applications.

SPECIFICATION FEATURES

Construction

Heavy-duty, die-cast aluminum housing, driver compartment and driver housing door. The housing, driver compartment and optical chamber are IP66 rated. Access to the driver for maintenance is achieved with a removable driver door using pan head screws. A one-piece silicone gasket seals the door to the fixture housing. Suitable for mounting within 4' (1.2m) of the ground.

Optics

The LED chamber incorporates a vacuum metalized reflector that provides high-efficiency illumination. Optics are precisely designed to shape the wide NEMA type 6H x 6V distribution, maximizing efficiency and application spacing. A 3H x 3V distribution is available for lighting tall, narrow surfaces. Clear glass tempered lens with full circumference form-in-place silicone gasket protects the optics from damage. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI optional. Optional 5700K CCT, 3000K CCT, 5000K CCT minimum 70 CRI are available.

Electrical

LED driver is mounted to the removable die-cast aluminum door

for optimal heat sinking and ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Integral 3kV surge is standard. 10kV MOV surge protection is available. 0-10V dimming driver is standard. Button photocontrols are available in 120V and 208-277V. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. 93% lumen maintenance greater than 50,000 hours per IESNA TM-21.

Accessories

Heavy-duty steel top and side visors control glare and spill light. 1/8" thick UV stabilized vandal guard shields glass lens from impact when mounted at low levels. Easy to install wire guard features a heavy-gauge welded construction with corrosion resistant polyester powder coat finish to protect glass from projected objects.

Mounting

Heavy-gauge steel trunnion-mount utilizes interlocking slide adjustment and is supplied with 3 feet of pre-wired SOW, wet location rated cord. Trunnion base can be lag bolted to any surface and is 3G vibration rated (ANSI C136.31). Heavy-duty, die-cast aluminum knuckle base utilizes

Catalog #	NFFLD-S-C70-D-UNV-33-KNC-WHT NFFLD-S-C70-D-UNV-66-KNC-WHT	Type
Project	GABP	NFFLDSC7033KNC & NFFLDSC7066KNC
Comments		Date
Prepared by	Ameresco	

tooth-lock adjustment with visual 5° adjustment indicators that allow for 180° rotation of the luminaire. Knuckle fits 1/2" NPT available mounting junction box cover (supplied by others) and is secured with supplied locking nut and is 1.5G vibration rated. A die-cast aluminum slipfitter with a tooth lock adjustment that can be adjusted in 5° increments is available and is 1.5G vibration rated.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is carbon bronze. Additional colors available in summit white, white, grey, bronze, black, dark platinum and graphite metallic. Consult your lighting representative at Eaton for a complete selection of standard colors.

Warranty

Five-year warranty.



NFFLD-S NIGHT FALCON SMALL

Solid State LED

FLOODLIGHT



CERTIFICATION DATA

UL/cUL Wet Location Listed
IP66 Fixture and Optical Chamber
LM79/LM80 Compliant
1.5G Vibration Rated - Knuckle Mount
3.0G Vibration Rated - Slipfitter Mount
3.0G Vibration Rated - Trunnion Mount
RoHS Compliant
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
> 0.9 Power Factor
> 20% Total Harmonic Distortion
120V 50/60Hz, 347V/60Hz and 480V/60Hz
-40°C Min. Ambient Temperature Rating
+40°C Max. Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 0.55

SHIPPING DATA

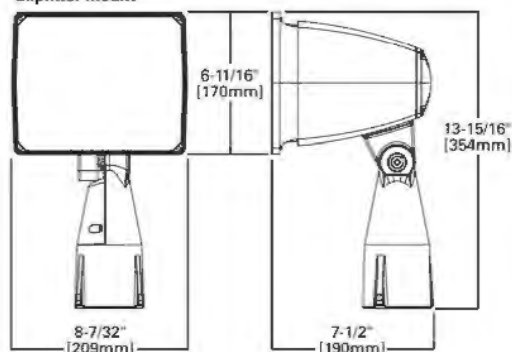
Approximate Net Weight:
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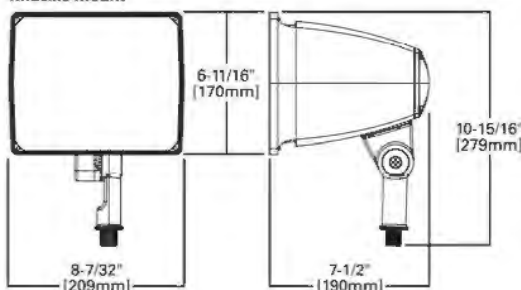
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DIMENSIONS

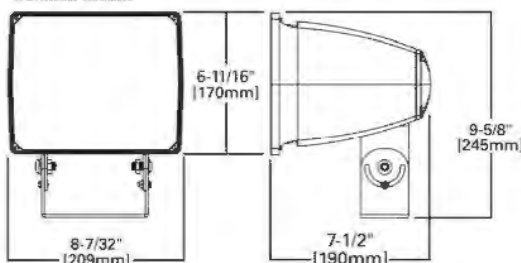
Slipfitter Mount



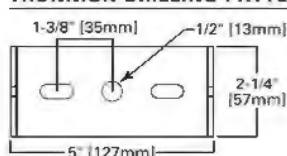
Knuckle Mount



Trunnion Mount

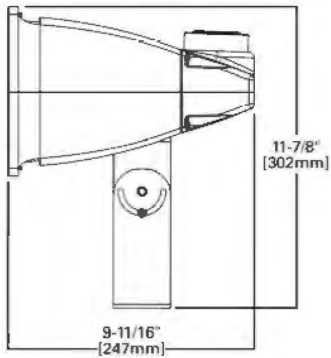


TRUNNION DRILLING PATTERN



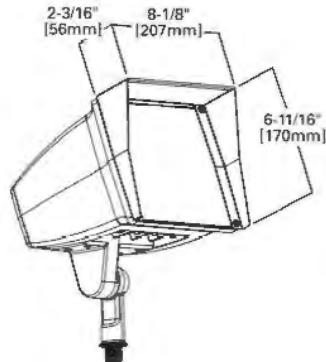
OPTION

NEMA Twistlock Photocontrol Receptacle

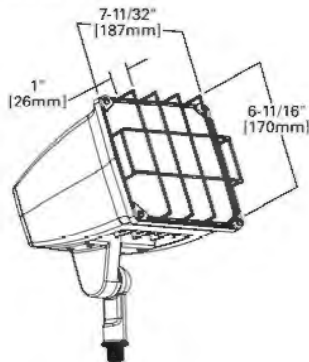


ACCESSORIES

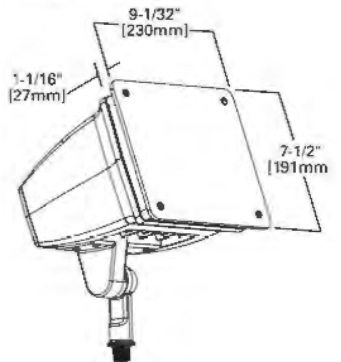
Top and Side Visors



Wire Guard



Vandal Shield



POWER AND LUMENS

	6 x 6				3 x 3			
C70 LED	NFFLD-S-C70	NFFLD-S-C70-7060	NFFLD-S-C70-7050	NFFLD-S-C70-7030	NFFLD-S-C70	NFFLD-S-C70-7060	NFFLD-S-C70-7050	NFFLD-S-C70-7030
Delivered Lumens	2,682	2,656	2,760	2,632	2,883	2,824	2,935	2,799
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	20	20	20	20	26	26	26	26
C15 LED	NFFLD-S-C15	NFFLD-S-C15-7060	NFFLD-S-C15-7050	NFFLD-S-C15-7030	NFFLD-S-C15	NFFLD-S-C15-7060	NFFLD-S-C15-7050	NFFLD-S-C15-7030
Delivered Lumens	5,797	5,741	6,066	5,785	5,499	5,386	5,596	5,337
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	51	51	51	51	52	52	52	52

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
NFFLD-S-C15-33 (3 x 3 Spot)		
25°C	> 94.74%	> 336,000
40°C	> 93.37%	> 264,000
NFFLD-S-C15-66 (6 x 6 Wide)		
25°C	> 95.53%	> 399,000
40°C	> 95.10%	> 362,000
50°C	> 94.60%	> 324,000

CURRENT DRAW

Voltage (V)	6 x 6		3 x 3	
	NFFLD-S-C70	NFFLD-S-C15	NFFLD-S-C70	NFFLD-S-C15
	Current (A)	Current (A)	Current (A)	Current (A)
120V	0.15	0.45	0.21	0.46
208V	0.09	0.25	0.13	0.26
240V	0.08	0.22	0.11	0.23
277V	0.07	0.19	0.10	0.20
347V	0.06	0.16	0.10	0.21
480V	0.05	0.13	0.07	0.22

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.03
15°C	1.02
25°C	1.00
40°C	0.97
50°C	0.96

ORDERING INFORMATION

Sample Number: NFFLD-S-C15-D-UNV-66-S-CB-PC1

Product Family ¹	Light Engine ²	Driver ³	Voltage	Distribution	Mounting	Color
NFFLD-S=Night Falcon Small	C70=2,700 Nominal Lumens C15=5,900 Nominal Lumens	D=Dimming (0-10V)	UNV=Universal 120-277V 347=347V ⁴ 480=480V ⁵ , ⁶	33=NEMA 3H x 3V ⁶ 66=NEMA 6H x 6V Wide	S=Slipfitter ⁷ T=Trunnion KNC=Knuckle	CB=Carbon Bronze (Standard) BK=Black BZ=Bronze AP=Grey WH=White WHT=Summit White DP=Dark Platinum GM=Graphite Metallic
Options (Add as Suffix)				Accessories (Order Separately) ¹³		
7030=70 CRI / 3000K ⁸ 7050=70 CRI / 5000K ⁸ 7060=70 CRI / 5700K ⁸ 10MSP=10kV MOV Surge Protection HA=50°C High Ambient Temperature ⁹ PC1=Button Type Photocontrol - 120V ¹⁰ PC2=Button Type Photocontrol - 208-277V ¹⁰ PER= 3-PIN Twistlock Photocontrol Receptacle ¹¹ PER7=7-PIN Twistlock Photocontrol Receptacle ¹¹ , ¹²				FA63=3" O.D. Surface Mount Bracket ¹⁴ RAB-XX=Right Angle Pipe Bracket for Slipfitter SAB-XX=Steel Angle Bracket for Trunnion TYS-XX=Slipfitter Adapter for 2-3/8", 3" or 3-1/2" O.D. Tenon ¹⁵ TS2LW-NFFLD-XX=Top and Side Visors ¹⁶ VSLW-NFFLD=Vandal Shield ¹⁶ WGLW-NFFLD=Wire Guard ¹⁶		

NOTES:

- DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
- Standard 4000K CCT and minimum 70 CRI. Consult IES file for actual lumen output.
- Consult factory for driver surge protection values.
- 347V only available with PC2.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Nominal lumen values are lower for the spot optic distribution see lumen table.
- Fits 2-3/8" to 3" O.D. tenon, wire leads run through slipfitter.
- Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 5700K when performing layouts. These files are published on the Night Falcon Small luminaire product page on the website.
- HA option not available with 3x3 configurations.
- Cannot order button photocontrol with C15 lumen package and 480V (PC1 or PC2).
- Requires extended back box.
- Requires 0-10V dimming driver.
- Replace XX with color designation. Additional brackets and adaptors available on the poles product page on the website.
- Not available with tenon mount.
- Not available with slipfitter mount.
- Cannot combine TS2LW (Top and Side Visor), VSLW (Vandal Shield), or WGLW (Wire Guard), limited to one external guard per fixture.

STOCK ORDERING INFORMATION

Stock Sample Number: NFFLD-S-C15-T-UNV

Series	Light Engine	Mounting	Voltage	Options (Add as Suffix)
NFFLD-S=Night Falcon Small	C70=2,700 Nominal Lumens C15=5,900 Nominal Lumens	T=Trunnion KNC=Knuckle	UNV=Universal 120-277V 347=347V	PC1=Button Type Photocontrol - 120V PC2=Button Photocontrol - 207-277V

NOTES: Options not available with stock products. Order accessories as separate items for field installation. Refer to standard ordering information to add options. Refer to In-Stock Guide for availability. Stock fixture is 4000K, dimming, 6x6 distribution, 120-277V or 347V, carbon bronze only. 347V only available with PC2.

DESCRIPTION

Combining value and performance in a compact, robust design, the Night Falcon low wattage LED floodlight luminaire delivers superior uniformity and excellent illumination to the targeted application. The rugged, die-cast housing is IP66 rated for exceptional durability and long term reliability. Available in several mounting configurations and weighing less than 14 pounds, this fixture provides you with design flexibility while simplifying installation. The low wattage LED floodlight can be wall, ground, or pole mounted, making it ideal for all commercial, industrial, and residential low wattage floodlighting applications.

SPECIFICATION FEATURES

Construction

Heavy-duty, die-cast aluminum housing, driver compartment and driver housing door. The housing, driver compartment and optical chamber are IP66 rated. Access to the driver for maintenance is achieved with a removable driver door using pan head screws. A one-piece silicone gasket seals the door to the fixture housing. Suitable for mounting within 4' (1.2m) of the ground.

Optics

The LED chamber incorporates a vacuum metalized reflector that provides high-efficiency illumination. Optics are precisely designed to shape the wide NEMA type 6H x 6V distribution, maximizing efficiency and application spacing. A 3H x 3V distribution is available for lighting tall, narrow surfaces. Clear glass tempered lens with full circumference form-in-place silicone gasket protects the optics from damage. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI optional. Optional 5700K CCT, 3000K CCT, 5000K CCT minimum 70 CRI are available.

Electrical

LED driver is mounted to the removable die-cast aluminum door

for optimal heat sinking and ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Integral 3kV surge is standard. 10kV MOV surge protection is available. 0-10V dimming driver is standard. Button photocontrols are available in 120V and 208-277V. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. 93% lumen maintenance greater than 50,000 hours per IESNA TM-21.

Accessories

Heavy-duty steel top and side visors control glare and spill light. 1/8" thick UV stabilized vandal guard shields glass lens from impact when mounted at low levels. Easy to install wire guard features a heavy-gauge welded construction with corrosion resistant polyester powder coat finish to protect glass from projected objects.

Mounting

Heavy-gauge steel trunnion-mount utilizes interlocking slide adjustment and is supplied with 3 feet of pre-wired SOW, wet location rated cord. Trunnion base can be lag bolted to any surface and is 3G vibration rated (ANSI C136.31). Heavy-duty, die-cast aluminum knuckle base utilizes

Catalog #	NFFLD-S-C70-D-UNV-66-T-WHT	Type
Project	GABP	NFFLDSC7066T
Comments		Date
Prepared by	Ameresco	

tooth-lock adjustment with visual 5° adjustment indicators that allow for 180° rotation of the luminaire. Knuckle fits 1/2" NPT available mounting junction box cover (supplied by others) and is secured with supplied locking nut and is 1.5G vibration rated. A die-cast aluminum slipfitter with a tooth lock adjustment that can be adjusted in 5° increments is available and is 1.5G vibration rated.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is carbon bronze. Additional colors available in summit white, white, grey, bronze, black, dark platinum and graphite metallic. Consult your lighting representative at Eaton for a complete selection of standard colors.

Warranty

Five-year warranty.



NFFLD-S NIGHT FALCON SMALL

Solid State LED

FLOODLIGHT



CERTIFICATION DATA

UL/cUL Wet Location Listed
IP66 Fixture and Optical Chamber
LM79/LM80 Compliant
1.5G Vibration Rated - Knuckle Mount
3.0G Vibration Rated - Slipfitter Mount
3.0G Vibration Rated - Trunnion Mount
RoHS Compliant
DesignLights Consortium™ Qualified*

ENERGY DATA

Electronic LED Driver
> 0.9 Power Factor
< 20% Total Harmonic Distortion
120V 50/60Hz, 347V/60Hz and 480V/60Hz
-40°C Min. Ambient Temperature Rating
+40°C Max. Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 0.55

SHIPPING DATA

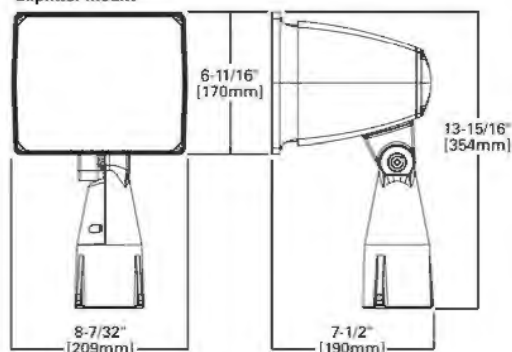
Approximate Net Weight:
13 lbs. (6 kgs.)



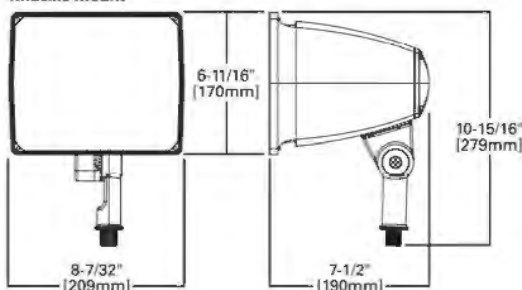
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DIMENSIONS

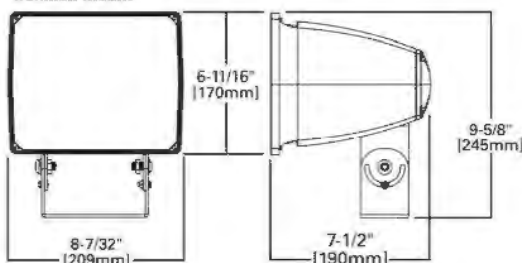
Slipfitter Mount



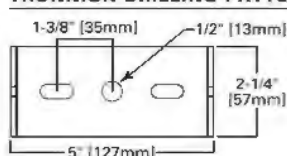
Knuckle Mount



Trunnion Mount

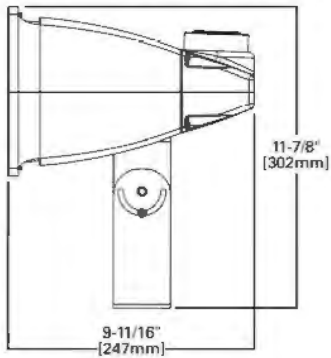


TRUNNION DRILLING PATTERN



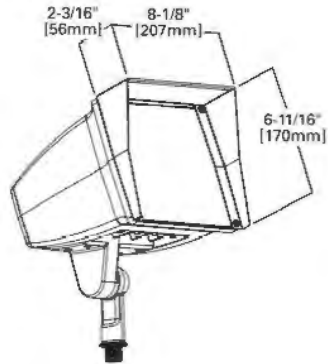
OPTION

NEMA Twistlock Photocontrol Receptacle

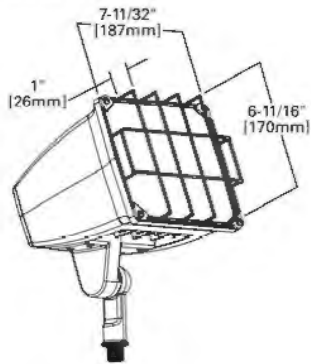


ACCESSORIES

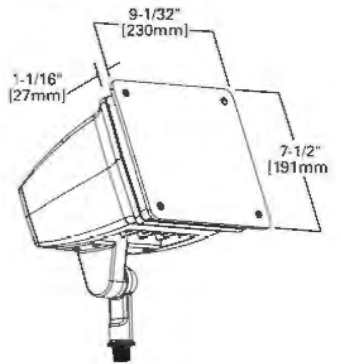
Top and Side Visors



Wire Guard



Vandal Shield



POWER AND LUMENS

	6 x 6				3 x 3			
C70 LED	NFFLD-S-C70	NFFLD-S-C70-7060	NFFLD-S-C70-7050	NFFLD-S-C70-7030	NFFLD-S-C70	NFFLD-S-C70-7060	NFFLD-S-C70-7050	NFFLD-S-C70-7030
Delivered Lumens	2,682	2,656	2,760	2,632	2,883	2,824	2,935	2,799
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	20	20	20	20	26	26	26	26
C15 LED	NFFLD-S-C15	NFFLD-S-C15-7060	NFFLD-S-C15-7050	NFFLD-S-C15-7030	NFFLD-S-C15	NFFLD-S-C15-7060	NFFLD-S-C15-7050	NFFLD-S-C15-7030
Delivered Lumens	5,797	5,741	6,066	5,785	5,499	5,386	5,596	5,337
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	51	51	51	51	52	52	52	52

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
NFFLD-S-C15-33 (3 x 3 Spot)		
25°C	> 94.74%	> 336,000
40°C	> 93.37%	> 264,000
NFFLD-S-C15-66 (6 x 6 Wide)		
25°C	> 95.53%	> 399,000
40°C	> 95.10%	> 362,000
50°C	> 94.60%	> 324,000

CURRENT DRAW

Voltage (V)	6 x 6		3 x 3	
	NFFLD-S-C70	NFFLD-S-C15	NFFLD-S-C70	NFFLD-S-C15
	Current (A)	Current (A)	Current (A)	Current (A)
120V	0.15	0.45	0.21	0.46
208V	0.09	0.25	0.13	0.26
240V	0.08	0.22	0.11	0.23
277V	0.07	0.19	0.10	0.20
347V	0.06	0.16	0.10	0.21
480V	0.05	0.13	0.07	0.22

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.03
15°C	1.02
25°C	1.00
40°C	0.97
50°C	0.96

ORDERING INFORMATION

Sample Number: NFFLD-S-C15-D-UNV-66-S-CB-PC1

Product Family ¹	Light Engine ²	Driver ³	Voltage	Distribution	Mounting	Color
NFFLD-S=Night Falcon Small	C70=2,700 Nominal Lumens C15=5,900 Nominal Lumens	D=Dimming (0-10V)	UNV=Universal 120-277V 347=347V ⁴ 480=480V ⁵ , ⁶	33=NEMA 3H x 3V ⁸ 66=NEMA 6H x 6V Wide	S=Slipfitter ⁷ T=Trunnion KNC=Knuckle	CB=Carbon Bronze (Standard) BK=Black BZ=Bronze AP=Grey WH=White WHT=Summit White DP=Dark Platinum GM=Graphite Metallic
Options (Add as Suffix)				Accessories (Order Separately) ¹³		
7030=70 CRI / 3000K ⁸ 7050=70 CRI / 5000K ⁸ 7060=70 CRI / 5700K ⁸ 10MSP=10kV MOV Surge Protection HA=50°C High Ambient Temperature ⁹ PC1=Button Type Photocontrol - 120V ¹⁰ PC2=Button Type Photocontrol - 208-277V ¹⁰ PER= 3-PIN Twistlock Photocontrol Receptacle ¹¹ PER7=7-PIN Twistlock Photocontrol Receptacle ¹¹ , ¹²				FA63=3" O.D. Surface Mount Bracket ¹⁴ RAB-XX=Right Angle Pipe Bracket for Slipfitter SAB-XX=Steel Angle Bracket for Trunnion TYS-XX=Slipfitter Adapter for 2-3/8", 3" or 3-1/2" O.D. Tenon ¹⁵ TS2LW-NFFLD-XX=Top and Side Visors ¹⁶ VSLW-NFFLD=Vandal Shield ¹⁶ WGLW-NFFLD=Wire Guard ¹⁶		

NOTES:

- DesignLights Consortium™ Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
- Standard 4000K CCT and minimum 70 CRI. Consult IES file for actual lumen output.
- Consult factory for driver surge protection values.
- 347V only available with PC2.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Nominal lumen values are lower for the spot optic distribution see lumen table.
- Fits 2-3/8" to 3" O.D. tenon, wire leads run through slipfitter.
- Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 5700K when performing layouts. These files are published on the Night Falcon Small luminaire product page on the website.
- HA option not available with 3x3 configurations.
- Cannot order button photocontrol with C15 lumen package and 480V (PC1 or PC2).
- Requires extended back box.
- Requires 0-10V dimming driver.
- Replace XX with color designation. Additional brackets and adaptors available on the poles product page on the website.
- Not available with tenon mount.
- Not available with slipfitter mount.
- Cannot combine TS2LW (Top and Side Visor), VSLW (Vandal Shield), or WGLW (Wire Guard), limited to one external guard per fixture.

STOCK ORDERING INFORMATION

Stock Sample Number: NFFLD-S-C15-T-UNV

Series	Light Engine	Mounting	Voltage	Options (Add as Suffix)
NFFLD-S=Night Falcon Small	C70=2,700 Nominal Lumens C15=5,900 Nominal Lumens	T=Trunnion KNC=Knuckle	UNV=Universal 120-277V 347=347V	PC1=Button Type Photocontrol - 120V PC2=Button Photocontrol - 207-277V

NOTES: Options not available with stock products. Order accessories as separate items for field installation. Refer to standard ordering information to add options. Refer to In-Stock Guide for availability. Stock fixture is 4000K, dimming, 6x6 distribution, 120-277V or 347V, carbon bronze only. 347V only available with PC2.

PROJECT: GABP

MODEL: HBF-90W-120-90-305-NW-CM-WT-FL

TYPE: NLEDHB90



THE SATURN LED HIGH BAY SERIES

146 lm/w

SpecGrade's Saturn is a round low-profile High Bay LED and provides the industries highest performance and value for Return-On-Investment on indoor open area lighting applications. This luminaire is the workhorse for warehouse, production facilities, gymnasiums and large event venues. Fitted with the latest mid-power LED chips from Lumileds and powered by a high performance Meanwell driver. This product also comes with a 10-year warranty (See www.SpecGradeLED.com for details). This series has a range from 70W to 200W at an efficacy of 146 lm/w.



AVAILABLE
IN 70W, 90W, 150W,
& 200W



EXPECTED LIFE
OVER 100,000 HRS.



IES FILES
AVAILABLE AT WWW.
SPECGRADELED.COM



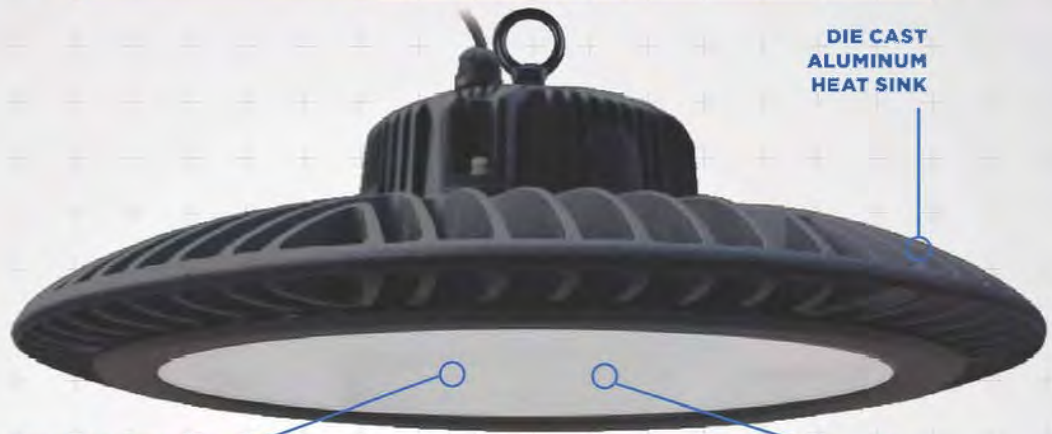
RATED IP 65



DIMMABLE
0-10V OPTIONAL

THE SATURN LED HIGH BAY

UP TO 146 lm/w



DIE CAST
ALUMINUM
HEAT SINK

LUMILEDS LUXEON-T
DELIVERS
EXCEPTIONAL
BEAM UNIFORMITY

CLEAR OR
FROSTED LENS
(OPTIONAL)

NEW!
UPLIGHT FEATURE

Uplighting feature creates a more open and pleasing environment by up-lighting areas above your application. This unique feature enhances all applications with very little additional cost.

STANDARD COLORS:
BLACK AS SHOWN
OR WHITE

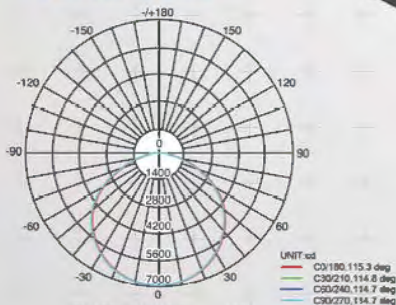
TOTAL 8W LED
BAR UPLIGHTS
(APPROX. 700 LM
/60V DC)

UPLIGHT
LIGHT COLOR
TEMPERATURE
MATCHES
DOWN LIGHT



UPLIGHT FEATURE
AUTOMATICALLY
ON WITH
DOWNLIGHT

PHOTOMETRICS



HBF

(WITHOUT ACRYLIC LENS)
60° & 120° BEAM

THE SATURN LED HIGH BAY

70W, 90W,
150W & 200W

**REPLACES UP TO A 500-WATT
METAL HALIDE FIXTURE**



NEW!
UPLIGHTING
FEATURE
(PATENT PENDING)

SPECIFICATIONS

Expected life: Over 100,000 hrs.
Rating: IP 65
Color Rendering Index (CRI): >70,
80 CRI (optional)
Operating temp: -40°C - 65°C
Power factor: >0.98%
Input line voltage: 90-305 VAC
347-480V (optional)
Input line frequency: 50/60 Hz
LED efficiency:
- warm white, 131 lm/w
- natural white, 141 lm/w
- cool white, 146 lm/w

MISC SPECS

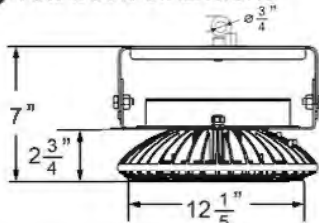
LED chips: Lumileds Luxeon-T
Driver: UL approved Meanwell
(Philips optional)
Dimmable 0-10V (optional)
Occupancy sensor: (optional)
Hanging weight:
70W & 90W: 8 lbs.,
150W & 200W: 13.5 lbs.
Nataatorium finish (optional)

MATERIALS

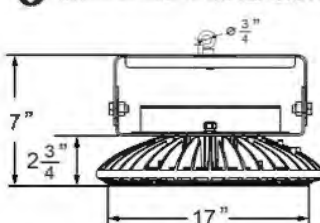
Heat sink housing:
Anodized aluminum
LED Shield: Lexan
(options: clear & frosted)
Finish: Powder coated
(standard colors black & white)
Dropped acrylic lens (optional)

HBF SURFACE MOUNT CONFIGURATION WITH 480V DRIVER

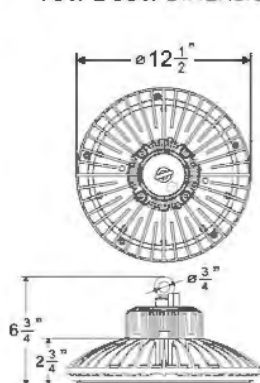
70W & 90W DIMENSIONS



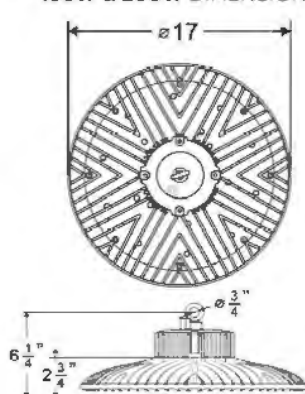
150W & 200W DIMENSIONS



(CM) CABLE MOUNT 70W & 90W DIMENSIONS



(CM) CABLE MOUNT 150W & 200W DIMENSIONS



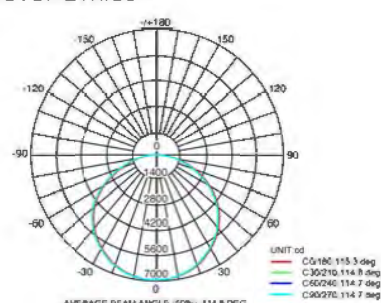
(PM) PENDENT MOUNT OPTION (DL) DROPPED ACRYLIC LENS



(OS) OCCUPANCY SENSOR OPTION



PHOTOMETRICS

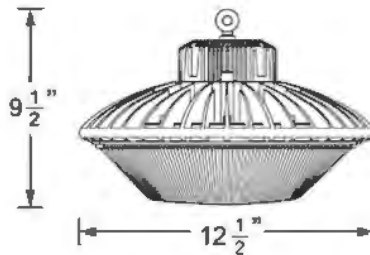


HBF WITH OPTIONAL DROPPED ACRYLIC LENS

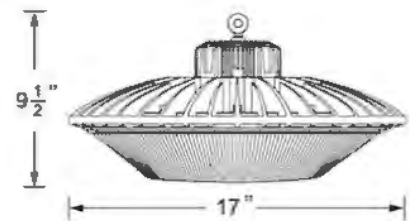
↓ **HBF CABLE MOUNT (CM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



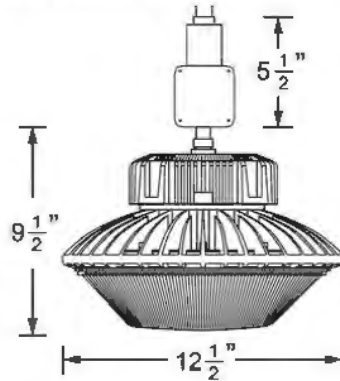
↓ **150W & 200W DIMENSIONS**



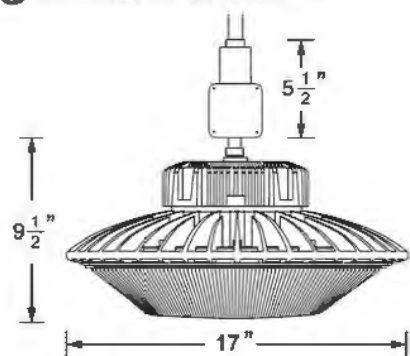
↓ **HBF PENDENT MOUNT (PM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



↓ **150W & 200W DIMENSIONS**



PRODUCT SPECIFICATIONS | ORDERING INFORMATION: THE SATURN HBF 70W, 90W, 150W, 200W

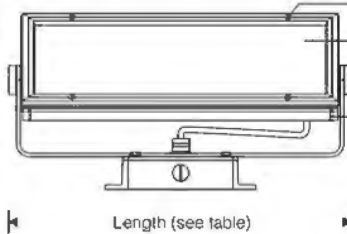
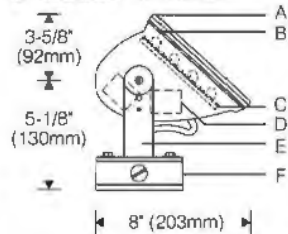
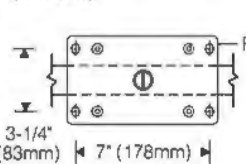
SERIES	WATTS	BEAM	INPUT VOLT.	COLOR TEMPERATURES DELIVERED LUMENS			MOUNT	FINISH	OPTIONS	LENS
				WW 3500K	NW 4100K	CW 5000K				
HBF	70W	60°	90-305V	9842 lm	10300 lm	10360 lm	CM Cable Mount	WT White (STD)	OS Occupancy Sensor WG Wire Guard DIM 0-10V Dimming UL Up Light PM Pendant SM Surface Mount	CL Clear Lens
	90W	120°	347-480V (optional)	12021 lm	12654 lm	13320 lm		BL Black (STD)		FL Frosted Lens
	150W			21310 lm	22431 lm	23612 lm		RAL Optional Finish		DL Dropped Acrylic Lens
	200W			26780 lm	28190 lm	29674 lm		NAT Nataorium Finish (optional)		
HBF	90W	120	90-305	NW			CM	WT		FL

Due to continuous improvement and innovation, product appearance and specifications may change without notice. Actual performance may differ as a result of end-user environment and application.

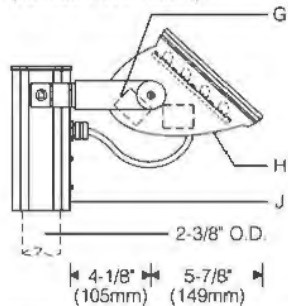
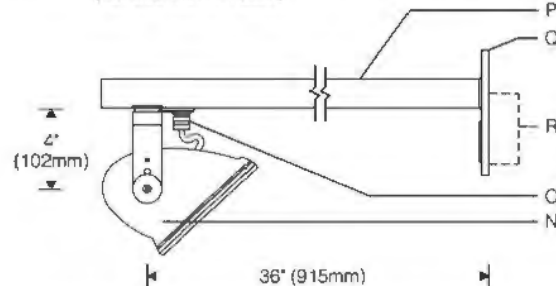
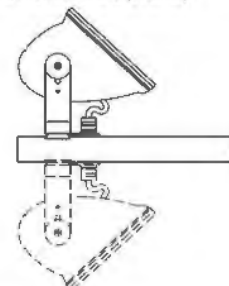
REVIT & IES Files are located at www.SpecGradeLED.com

WW | Warm White NW | Natural White CW | Cool White



S Mount 1:10 Scale**Mounting Plate**
(S Mount)

# of LEDs	Length
36	12-1/16" (306mm)
72	17-13/16" (452mm)
108	24-7/8" (632mm)

Side-Mount Slipfitter 1:10 Scale
(For use with X Mount)**Cantilever, Lighting Downward**
(For use with X Mount)**Lighting Upward** 1:12 Scale
(Upward/Downward Optional)**Specifications**

- | | | | |
|--|---|---|--|
| A Mitred extruded aluminum door frame | E Aluminum yoke | K Tamper-resistant captive door screws | O 1/2" NPT nipple |
| B Precured silicone door and lens gasket | F Surface splice box | L Micro-prismatic impact resistant tempered glass lens | P 1-1/2" aluminum arm |
| C Field serviceable light engine with fraqtir ™ asymmetric optic | G Locking set screw | M Aluminum reveal plate (black) | Q Welded aluminum mounting plate with splice access cover |
| D Integral driver | H Specular extruded aluminum housing | N Die-cast aluminum end plates | R Outlet box (by others) |
| | J Accessory extruded aluminum slipfitter | | |

Optic Assembly:

Two-piece extruded aluminum heat sink housing and light engine. Exterior heat sink anodized for maximum emissivity. Removable interior extrusion treated to maximize thermal conductivity. Precision formed asymmetric optical light bar of high temperature, water-clear acrylic. Extruded aluminum door frame with captive tamper-resistant fasteners. Clear tempered glass lens with elliptical distribution holographic diffuser; maximizes lateral distribution without disturbing asymmetric forward throw.

Finish:

Exterior surfaces – 6 stage pretreatment and electrostatically applied thermoset polyester powder coating for a durable abrasion, fade and corrosion resistant finish. Choice of semigloss colors (see ordering information). Extruded aluminum heat sink/housing plus yoke, door frame and decorative end plates are finished in color. All hardware and components – non-corrosive stainless steel or aluminum.

Mounting:

S mount provided with 1/2" NPT nipple, wet location outlet box and cover finished to match the luminaire.

X mount for use with aluminum cantilever or slipfitter accessory (ordered separately). Top or side mount slipfitter for 2-3/8" O.D. stanchion, pole (by others).

Electrical:

Use 90°C wire for supply connections. Integral electronic HPF constant current driver. For complete driver specifications, see website, reference document MA-1303.

Standard:

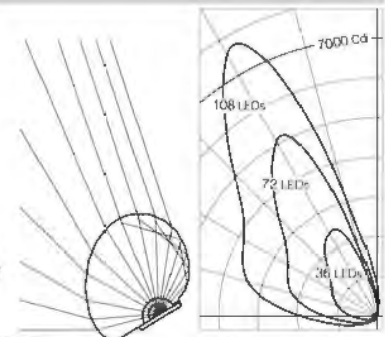
CSA certified to UL1598, UL8750, CSA C22.2 for wet locations. 5 year warranty, maximum ambient temperature 45°C (113°F).

Features

- Extruded aluminum housing, die-cast aluminum end plates; 1000 hour salt-spray test to ASTM B117-90
- Silicone gaskets – keep dirt and moisture out
- Yoke set screw – securely locks aiming
- Patented **fraqtir** optics produce asymmetric distribution

SV
3.0**Performance**

fraqtir technology uses a combination of refraction and total internal reflection, creating a distribution of light ideal for illuminating surfaces uniformly. Glare is minimized while light delivered to the target is maximized, resulting in high efficiency.



For photometric and lumen maintenance reports, visit thelightingquotient.com

L90(10k) > 60,000 hrs.
@ 25°C per TM-21

To form a Catalog Number

S 1 7 2 - 5036 - X 07 - 8 - V0 - 0 - 30 - 00

1 2 3 4 5 6 7 8 9 10

Project: GABP

Type: S1725036

1 Source

S = Solid State (LED)

2 Style

172 = Large outdoor, integral driver

3 Drive Current/Length/No. of LEDs

Solid State LED with **fraqtir** optics. Choose drive current code/number of LEDs in options below.

Lumen/Wattage Options

LAMP CODE	FIXTURE LENGTH	INPUT WATTS	LUMENS	NUMBER OF LEDs	DRIVE CURRENT
5036	12-1/16"	56W	3812	36 LEDs	500mA
5072	17-13/16"	110W	7569	72 LEDs	500mA
5108	24-7/8"	165W	11365	108 LEDs	500mA

Based on 4000K, 70+CRI. [Click here](#) for scaled performance table.

4 Mounting

S = External yoke with 1/2" NPT nipple, wet location outlet box and cover finished to match luminaire

X = External yoke for use with accessory cantilever or slipfitter (order separately)

5 Finish

02 = Semigloss white 17 = Champagne

06 = Dark bronze 18 = Copper

07 = Silver 99 = Custom RAL or computer matched color to be specified, consult sales representative.

08 = Semigloss black

6 Voltage/Driver

Electronic Driver

Electronic Dimming Driver*

B = 120-277V

M = 120-277V

*Dimming range refers to % power input, % light output will vary.

Refer to Driver Information document [MA-1303](#)

7 Option (see Accessories Section for specifications)

00 = No options

V0 = Visor option

XX = For modification not listed, include detailed description. Consult factory prior to specification.

8 Destination Requirement

0 = UL listed or CSA certified for U.S.

J = UL listed or CSA certified for Canada

9 Color Temperature

27 = 2700K, 80+ CRI 40 = 4000K, 80+ CRI

30 = 3000K, 80+ CRI 4L = 4000K, 70+ CRI

35 = 3500K, 80+ CRI

Note: Additional CCT and CRI options are available; consult factory.

10 Dimming**

00 = Non-dimming

TE = Trailing Edge Dimming 120-277V input, dimming range 100-10%, line voltage trailing edge/reverse phase/ELV dimming (controls by others)

EL = eidoLED SOLOdrive 120-277V input, dimming range 100%-0.1%, 0-10V controls by others

ED = eidoLED SOLOdrive 120-277V input, dimming range 100%-0.1%, DALI controls by others

**Dimming range refers to % power input, % light output will vary. Refer to Driver Information document [MA-1303](#)

Note: Number of drivers varies with number of LEDs, drive current and driver type.

Example

S172-5072-S-06-8-00-0-4L-00

Large outdoor 17 inch fixture, external yoke with wet location outlet box and cover. Dark bronze powder coat finish. Internal 120-277V high power factor, constant current, integral driver. 4000K/70+CRI LEDs, UL listed or CSA certified for U.S.

elliptipar from The Lighting Quotient
114 Boston Post Road, West Haven, Connecticut 06516, USA
Voice 203.931.4455 • Fax 203.931.4464 • thelightingquotient.com

Accessories

Order separately. See Accessories Section for specifications.

AC ☐ ☐ 36 ☐ = Cantilever, 36" (914mm) setback (for use with X mount unit)

0 = U.S.
J = Canada

5 Finish

L = single unit (downward or upward facing only)

ASF ☐ T10 = Top-mount slipfitter, for 2-3/8" O.D. stanchion, pole or tenon (for use with single X mount unit)

5 Finish

ASF ☐ S10 = Side-mount slipfitter, for 2-3/8" O.D. pole, stanchion or tenon (for use with single X mount unit)

5 Finish

AE ☐ V ☐ 4 ☐ 0D0 = External vertical blade baffle, black, for lengthwise shielding

2 = 25° shielding
4 = 45°

C = 12 inch fixtures
D = 17 inch fixtures
F = 24 inch fixtures

AV ☐ C ☐ 07 ☐ 0D0 = Cutoff visor

5 Finish

C = 12 inch fixtures
D = 17 inch fixtures
F = 24 inch fixtures

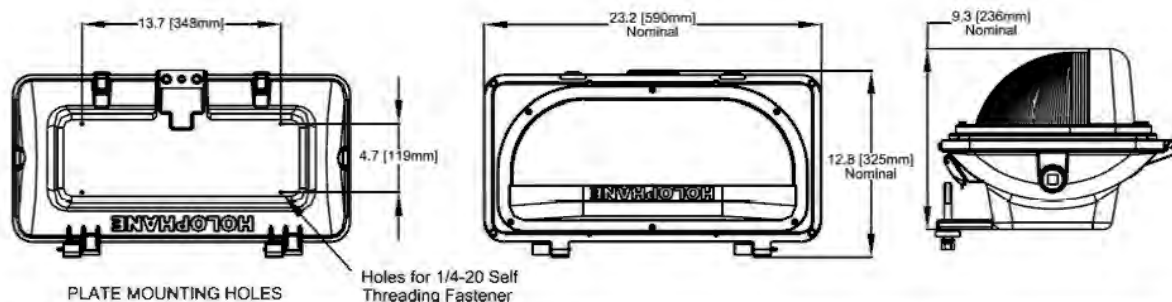
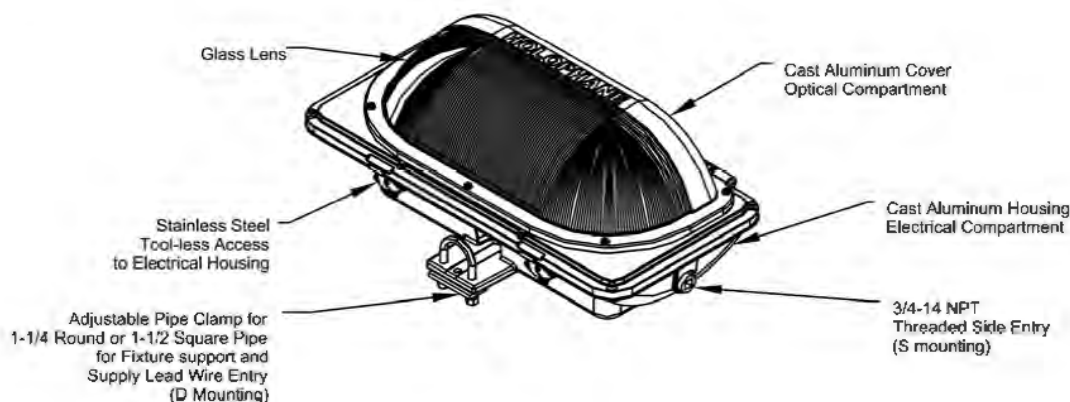
108 LEDs @ 500mA
(4000K/70+CRI) shown.



The external shapes of the housings are trademarks of Sylvan R. Shemitz Designs, LLC dba The Lighting Quotient, makers of **elliptipar**, **tambient** and **fraqtir**.

Certain products illustrated may be covered by applicable patents and patents pending. These specifications supersede all prior publications and are subject to change without notice. Copyright © 2016 Sylvan R. Shemitz Designs, LLC, all rights reserved.

MVOLT/ HVOLT Max Weight: 26.1 lbs (11.8 Kg)
 Max EPA = .67 ft² (.06 m²)
 CSA Certified to U.S. and Canadian Standards
 Ambient Rating: 40°C
 Wet Location



Customer Preferred: (Most Frequently Ordered Catalog Numbers)
 SVLED2 PNL PK3 MVOLT 50K AMT GYSD

SVLED2	Direct Distribution	Direct LED Light Output	Voltage
Series			
SVLED2 = Sign-Vue LED 2	PNL = Panel-Vue Optic SVL = Sign-Vue Optic	PK1 = 6,000 Lumens PK2 = 9,000 Lumens PK3 = 12,000 Lumens PK4 = 16,000 Lumens	MVOLT = Auto-sensing Voltage (120, 208, 240, 277v) HVOLT = Auto-sensing Voltage (347-480V) 24VDC = 24V DC ¹

Direct LED Color	Mounting Method	Color	Options
40K = 4,000 K 50K = 5,000 K	AMT = Standard pipe mount; 1.25" round, 1.5" square, with refractor up or down, with single wire access PLM = Plate style mount with four 0.224" mounting holes and two threaded conduit side entries.	BNSDP = Brown Super Durable BKSDP = Black Super Durable GYSDP = Gray Super Durable GHSDP = Graphite Super Durable WHSDP = White Super Durable	AO = Field Adjustable Output

Surge Protection
 IL = SPD Fail off with ² indicator light for MVOLT only

Accessories
 SVLEDF1FUS10 = Single Fuse Kit
 SVLEDF2FUS10 = Double Fuse Kit
 SVLEDTAB = Tenon Adapter for 1.5" NPS Pipe, Brown
 SVLEDTAG = Tenon Adapter for 1.5" NPS Pipe, Gray
 SVLEDTAH = Tenon Adapter for 1.5" NPS Pipe, Graphite
 SVLEDTAW = Tenon Adapter for 1.5" NPS Pipe, White

Notes:
 1. PK1 only.
 2. Optional SPD

Sign-Vue[®] LED II

Infrastructure
Specialty

HOLOPHANE
 LEADER IN LIGHTING SOLUTIONS
 An Acuity Brands Company
 © 2010 Acuity Brands Lighting, Inc. All Rights Reserved

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE OR THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. HOLOPHANE SHALL BE RESPONSIBLE FOR THE DESIGN AND WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED. THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

ORDER #: _____
 TYPE: _____
 DRAWN: BGW
 DATE: 9-23-15
 DWG #: LUM_SVLED2_DOT
 1 of 3

ORDERING INFORMATION:

Specifications

General Construction

Rugged door cast, high silicon-copper A413.0 aluminum alloy housing, allows for corrosion resistance and long life. "U" bolt arm mount with +0/-5 degree vertical adjustment. "U" bolt arm provides easy, secure installation and adjustability for arms 1.25 in round or 1.5 in square pipe, top or bottom mount. Also available with plate style mount with two 3/4-14 NPT threaded side entries. Stainless steel tool-less latch disengages top optical door for easy access to terminal block, surge protection module, LED drivers. Removable optical door for ease of installation. Quick disconnect connectors for ease of installation and maintenance. PCB mounted LED design focused on providing long life and substantially reducing energy and maintenance costs with L70 >100,000 hour life resulting in high lumen application efficacy for sign lighting applications.

Environmental

Luminaire design and tested to comply with ANSI C136:31 2001 for 100,000 cycles at 3.0G acceleration for normal applications.

The range of luminaire operation is -40°C to +40°C.

Optical assembly meets dust and moisture rating of IP-66, Electrical meets IP-65 per IEC 60529, ensures long component life and protection from the environment.

The luminaire is finished with polyester paint applied after a pretreatment process to ensure maximum durability.

The finish shall pass the 1000 hour salt fog test per ASTM B117 and D1654 standard.

The luminaire passed Humidity testing per IEC 60068-2-3 1987 and passed Temperature-Voltage Cycling and Condensing Humidity testing per Acuity Brands Validation Test Specification 902-00007-001

Regulatory

The luminaire is safety listed to CSA-C22.2 number 250, wet location 40°C).

The luminaire is ROHS compliant. Luminaire meets EMI compliance per FCC Title 47 CFR Part 15, Class A.

Electrical

The surge protection is tested to ANSI/IEEE62.41 specification. For the MVOLT voltage option (120-277v), the device meets 10kV, 5kA. For HVOLT voltage ratings (347 and 480V), the protection level is 6kV, 3kA. The surge protection module (SPD) protects all downstream electronics such as led drivers, transfer switch, and relays for the purpose of protecting from electrical disturbances such as nearby lightning strikes. Standard product (MVOLT) with Acuity SPD.

The luminaire is designed to conform to ANSI C82.77:2002 for Maximum Total Harmonic Distortion (THD) <20%. Inrush current complies with NEMA410:2004 table B-2 and line Fluctuations and Ramp input voltage per UL 991:2004.

The luminaire conforms to Electromagnetic compatibility tests for Electrostatic Discharge (ESD) per IEC 61000-4-2:2001, Level 4.

All drivers have (0-10 volt) dimming capability.

Optical

PCB mounted LED technology comprised of multi-cluster LEDs on single metal core board, more reliable, and light source provides better and uniform optical control. Highly engineered reflector with 90+% reflectivity provides overlapping and repeatable distribution from each LED cluster eliminating dark spots. The luminaire is available with LED color temperature of 4000K or 5000K. The minimum color rendering index (CRI) is 70 minimum.

Reference www.Holophane.com for individual photometric tests on Sign-Vue LED luminaire that are tested per LM79 guidelines. Consult factory for LM80 data as that varies per LED chip manufacturer.

WARRANTY

Limited warranty located at

www.acuitybrands.com/CustomerResources/Terms and conditions.aspx

NOTE

Specifications subject to change without notice.

Actual performance may differ as a result of end-user environment and application.

Actual wattage may differ by +/- 8% when operating at nominal input voltage +/- 10%.

Sign-Vue[®] LED II

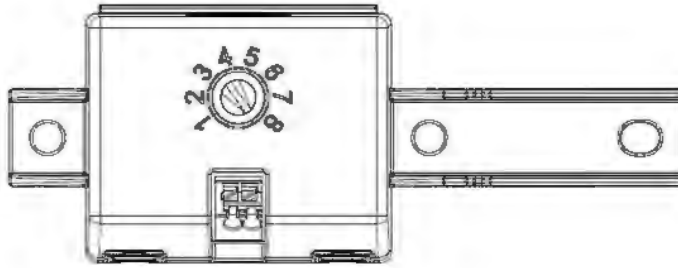
Infrastructure
Specialty


HOLOPHANE[®]
LEADER IN LIGHTING SOLUTIONS
An Acuity Brands Company
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THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE OR THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. THE CUSTOMER'S APPROVAL SHALL BE IN WRITING AND WILL BE SUPPLIED WITH EACH ORDER. ORDER TO MATCH THE POLE PROVIDED. THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

ORDER #:
TYPE:
DRAWN: BGW
DATE: 9-23-15
DWG #: LUM_SVLED2_DOT

The Field Adjustable Output (AO) module



Configuration	FAO Position	Lumens %	Wattage %
PK1, PK2, PK3, PK4 - PNL,SVL	8	100%	100%
	7	100%	100%
	6	99%	99%
	5	87%	90%
	4	74%	79%
	3	61%	68%
	2	49%	56%
	1	36%	42%

Operating Characteristics

Direct Distribution	LED Light Output	5000 K CCT			LLD @ 25C		
		Lumens	Input Watts	LPW	50K Hours	75K Hours	100K Hours
PNL	PK1	6,033	54	112	89	84	80
PNL	PK2	9,644	82	118	89	84	80
PNL	PK3	12,730	108	118	89	84	80
PNL	PK4	16,500	147	112	89	84	80
SVL	PK1	6,126	54	113	89	84	80
SVL	PK2	9,818	82	120	89	84	80
SVL	PK3	12,980	108	120	89	84	80
SVL	PK4	16,880	147	115	89	84	80

LED Driver life 100,000 hours at 25C for PK1, PK2, PK3, PK4.

Sign-Vue[®] LED II

Infrastructure
Specialty

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ORDER #:
TYPE:
DRAWN: BGW
DATE: 9-23-15
DWG #: LUM_SVLED2_DOT

PROJECT: GABP
MODEL: BC2T3/AMB/830/ND 12V 6/1
TYPE: 3WLEDT3



Philips LED
Capsule

2W (20W)

G4 base
Bright White
Non-dimmable

046677458515



The everyday LED bulb, for everywhere in your home

Philips LED bulbs offer the familiar look & feel of traditional bulbs and provide trusted performance at an affordable price.

Application areas

- Application

Long life

- Long Life

Easy to use

- Instant on

Energy efficient

- Energy savings

PHILIPS

Capsule
2W (20W) G4 base, Bright White, Non-dimmable

Specifications

Bulb characteristics

- Base: G4
- Cap/fitting: E26
- Dimmable: Non-dimmable
- Indoor/Outdoor: Indoor/Outdoor
- Shape: Capsule
- Voltage: 12 V
- Wattage: 2.0
- Wattage equivalent: 20
- Shape Code: T3

Bulb dimensions

- Height: 1.77 inch
- Width: 0.55 inch

Durability

- Average life (at 3 hrs/day): 13.7 year(s)
- Number of switch cycles: 50,000
- Lifetime of lamp: 15000 hour(s)

Light characteristics

- Color: Bright White
- Color rendering index (CRI): 80
- Color temperature: 3000 K
- Light output: 195 lumen
- Light effect/finish: Bright White

Power consumption

- Energy Star Certified: No
- Power consumption per 1000h: 0.00200 kW h

046677458515

Highlights

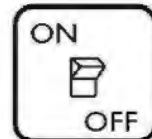
Application

Ideal for lawn stakes, walk ways, and landscape lighting applications

Energy saving

Enjoy the energy-savings of LEDs without sacrificing light quality

Instant on



INSTANT ON

Just by flipping the switch, your room is at full brightness. No slow starting or waiting.

Long Life



Reduce the hassle of replacing bulbs so often



Issue date 2017-06-09

Version: 1.0.1

12 NC: 9290 011 31833

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Specifications are subject to change without notice.
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www.philips.com

* Based on average usage of 3 hours per day



GLOBAL TECHLED

One or more of the following US patent numbers may apply: 9226356, 9171455, 9115876, 9091424, 8979304, 8246202

The World Leader in LED Retrofits

PROJECT: GABP

Simply Universal

MODEL: GTR-AR-M21-G2-HI-SV-BL-75D-SOLY-MED

TYPE: MH7BLED, LEDGTSOLM21-100



Medium E26 Base

Bolt on Yoke Mounted GTSOLM21 - G2

Base Options

Catalog #	Description
MGL	Mogul Base (E39)
MED	Medium Base (E27)
BUB	U-Bracket (No Base)

Accessories

Catalog #	Description
IP67	IP67 Rated LED Engine
GTP-SOLY-DR-BR	Driver Bracket for Yoke
GT-LSP-120	Surge Protector. 120 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-240	Surge Protector. 240 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-277	Surge Protector. 277 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-347	Surge Protector. 347 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-480	Surge Protector. 480 V 10 kA Parallel. 20kA maximum discharge current.

Typical Module Wattage Settings:

Rated Watts [W]	Rated Lumens [Lm]	Efficacy [Lm/W]
55	6000	110
45	5000	115
35	4000	120
25	3000	120

Description and Application:

The yoke retrofit kit is designed to retrofit into most HID fixtures, by using custom fabricated brackets and/or plates for easy plug and play installation. We can construct our units to offer a wide array of optics to deliver the light precisely where it is needed. Built in smart technology greatly increases life span and convenience.

Key Features:

- Life Sync
 - Module Temp Protection
 - Lumen Depreciation Maintenance
- Active Vortex Thermal Management
- Made in USA
- Standard
- 5-6-1
- 0-10VDC Dimming
 - If dimming is desired please specify when ordering

Driver:

- 120-277VAC
- or-
- 347-480VAC

Warranty:

- Warranty: Driver = 5 years
- Solstice Light Engine = 10 years

Technical:

- Operating Temperature Range:
 - 40°C to 55°C Nominal
- L70 > 150,000Hrs.
- Life Sync adjusts module to operate at max performance in any given environment
- Photometric: .ies files available
- Surge Protector: Required for ALL 347V-480V applications in order to qualify for Warranty
- Recommended for all outdoor applications



Optical Distributions:



Color Temperature Options:

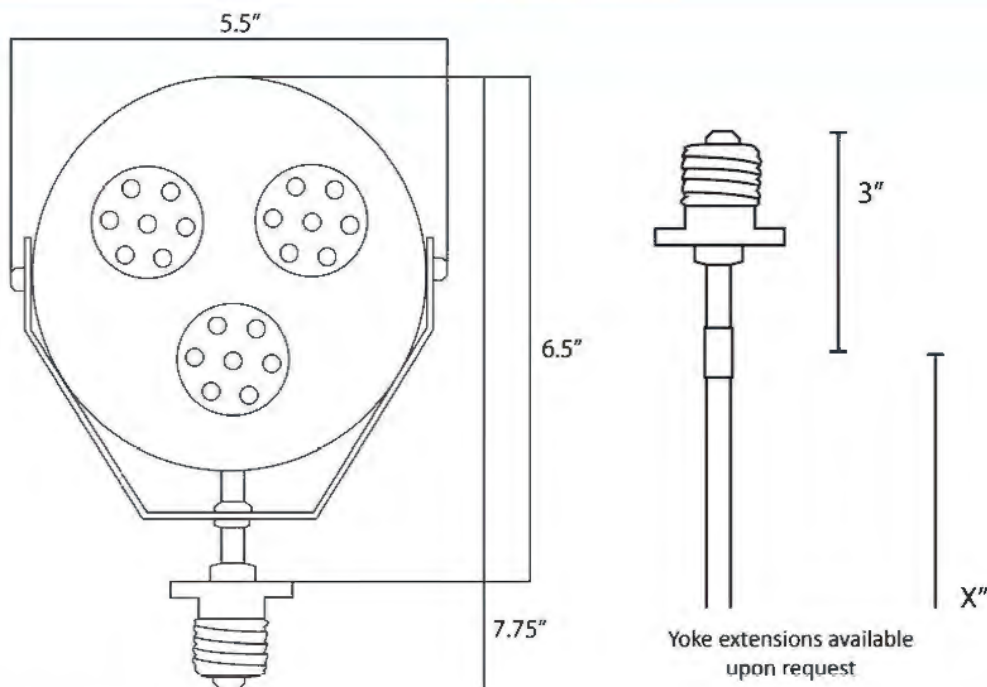


Pricing Information

M21 - G2 Yoke Retrofit

[25W-55W Screw In Yoke LED Retrofit Kit]

Details



Ordering Code Example:

GTR - AR - M21 - G2 - HI - SV - GR - NL - SOLY - MED / IP67

Retrofit	Category	Module	Wattage	Voltage	MSRP	CCT	Lens	Mounting Method	Accs	MSRP	Accs	MSRP
GTR	AR = Area/Roadway	M21 - G2	HI (55W)	SV (120V-277V)	\$324.00	GR (5000K) [70CRI]	NL = No Lens	SOLY = Yoke Mount	MGL	\$12.50	IP67 = 1xM21 - G2*	\$31.50
	HB = High Bay			HV (347V-480V)	\$371.50	BR (5000K) [80CRI]	10D = 10D Lens (\$23.00)		MED	\$0.00	GTP-60WATT-HATCH-DR-BR	\$15.00
	WP = Wall Pack			SV (120V-277V)	\$324.00	YW (4100K) [70CRI]	25D = 25D Lens (\$23.00)		BUB	\$0.00	GT-LSP-120	\$29.50
	PG = Parking Garage	M21 - G2	MH (45W)	HV (347V-480V)	\$371.50	BL (4000K) [80CRI]	50D = 50D Lens (\$23.00)				GT-LSP-240	\$29.50
	FC = Fuel Canopy			SV (120V-277V)	\$324.00	RD (3500K) [80CRI]	75D = 75D Lens (\$23.00)				GT-LSP-277	\$29.50
	PT = Post Top	M21 - G2	ML (35W)	HV (347V-480V)	\$371.50	PR (3000K) [95CRI]	360D = 360D Lens (\$23.00)				GT-LSP-347	\$29.50
	HZ = Hazardous			SV (120V-277V)	\$324.00	OR (2700K) [80CRI]	360s = 360 Square Lens (\$23.00)				GT-LSP-480	\$29.50
	BD = Bollard	M21 - G2	LO (25W)	HV (347V-480V)	\$371.50	GRO (Grow)†	T2 = Type II Lens (\$23.00)					
	TB = Tube					AMB (Amber)†	T3 = Type III Lens†					
	SI = Screw In					AQU (Aquarium)†						
	GW = Horticulture					RYB (Royal Blue)†						

* IP67 upgrade for module + fan (only NL, 10D, 25D, 50D & 75D)

† Upcharges not included in MSRP Price

** Please see previous page for Base Option information
Please see pg 5 for full accessory information and lensing costs
Please note, prices may change with quantity

DESCRIPTION

The ASYX 2.0 second generation of asymmetric lighting is designed for general ambient illumination and accenting architectural features. The luminaire allows for both forward and wide distributions as well four different color temperatures to accommodate any space. The ASYX 2.0 utilizes the patented and highly efficient AccuLED Optics™ system for industry leading performance. IP66 rated

Catalog #	ASYX-WM-S3-OD-U-W-L40-1-UNV-W-C-STD	Type
Project	GABP	ASYXS3
Comments		Date
Prepared by	Ameresco	

SPECIFICATION FEATURES

Construction

Heavy-wall die cast aluminum end caps with extruded aluminum housing. Housing fins allow for air flow and thermal management. Fixture is rated to 40°C. Weight: 35 lbs

Electrical

Standard drivers feature electronic universal voltage (120-277V/ 50-60 Hz), greater than 0.9 power factor, less than 20% harmonic distortion, and ambient temperature range of 40°C (104°F) to minimum starting temp of -30°C (-22°F). 0-10V dimming standard with DALI option available. Max amp draw @ 120V is 1.5 Amps.

LED Optics

ASYX 2.0 luminaire utilizes patented, high efficiency AccuLED Optics with specific optical distributions. Each lens is injection molded for precision, arranged and sealed onto a board substrate. LEDs are industry leading high output with 93% lumen maintenance at 60,000

hours. Offered in 80+ CRI for 2700K, 3000K, and 3500K CCT, and 70+ CRI for 4000K CCT. The ASYX 2.0 also offers +/- 90°, or 180° rotated optics.

Mounting

Die cast adjustable knuckle, bolts to housing. Fixture mounts to recessed junction box (by others) using wall plate, or surface mount box with conduit entry option. See installation instructions for mounting conditions to ensure adequate support. Fixture has continuous adjustability, 20° up to 20° down with locking mechanism, as well as upward facing or downward facing.

Finish

Fixture housing is coated using electrostatically charged polyester powder coat paint for superior protection against fade and wear. Mounting plate and all accessories to match specified color of luminaire housing. Standard colors include white, silver, black, bronze, and custom RAL

color match available.

Compliance

Components are UL recognized and luminaires are cULus listed for 40°C ambient environments, wet location listed, and RoHS compliant. IP66 Rated.

Environment

Suited for indoor, outdoor (wet location listed, IP66 rated)

Control

Standard offering is 0-10V dimming and energy saving integral sensor device available. 0-10V dimming current draw is 0.2 mA per driver. Digital Addressable Lighting Interface (DALI) driver option can be used with Fifth Light Technology.

Life and Warranty

Standard five-year limited warranty on all parts.



ASYX-WM S3

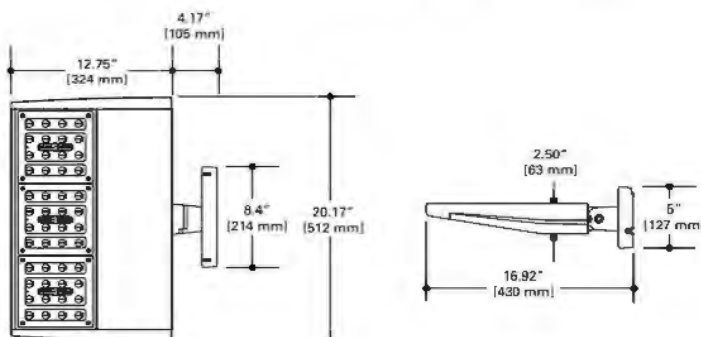
LED

Wall Mount

Asymmetric Direct
Asymmetric Indirect

CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
IP66 Rated

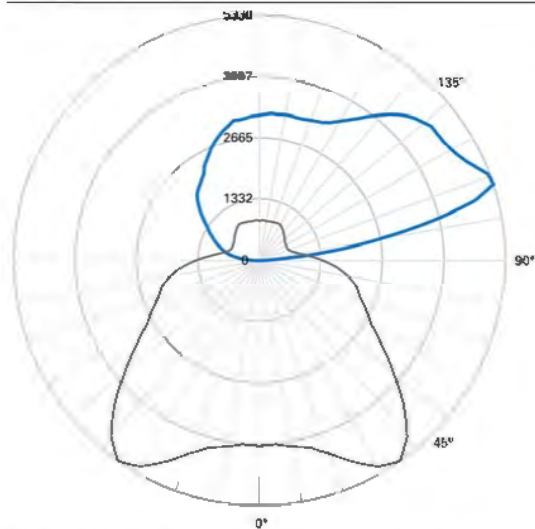
ENERGY DATA
≥0.9 Power Factor
≤20% Total Harmonic Distortion
120V - 277V 50/60 Hz
-30°C Min Temperature
40°C Max Temperature



ORDERING INFORMATION

Sample Number: ASYX-WM-S3-ID-U-F-L35-1-UNV-W-R-STD-SV-R90

Series	Mounting	Size	Light Level	Environment	Orientation	Distribution	Color Temperature				# of Circuits
ASYX - Asymmetric LED Luminaire	WM - Wall Mount	S - Small	3 - 3 Light Squares (see Color Temp for CCT, lumen output, and wattage)	ID - Indoor OD - Outdoor	U - Uplight D - Downlight	F - Forward Throw	L27 - 11695 lumens	158 watts	forward throw	1	
						L30 - 12768 lumens	158 watts	forward throw			
						L35 - 12909 lumens	158 watts	forward throw			
						L40 - 14568 lumens	158 watts	forward throw			
							L27 - 11837 lumens	158 watts	wide throw		
							L30 - 12451 lumens	158 watts	wide throw		
							L35 - 13066 lumens	158 watts	wide throw		
							L40 - 14745 lumens	158 watts	wide throw		
Input Voltage	Finish	Surface Type		Driver Options	Integral Control (Optional)	Optical Orientation (Optional)	Options (Optional)		Accessories (Optional)		
UNV	W - White S - Silver B - Black Z - Bronze C - Custom Color	R - Mounting Plate C - Surface Canopy		STD - Standard 0-10V SLT - Fifth Light DALI	SV - Integral Occupancy Sensor/ Daylight Sensor	R90 - Optics Rotated 90° right from standard L90 - Optics Rotated 90° left from standard 180 - Optics Rotated 180° from standard	RM - Rigid Fixed Knuckle		FSIR-100 - Remote control for mini sensor (order separately and per group of fixtures. Order only with SV option)		

Vertical Distribution
through peak candelaHorizontal Distribution
through peak candela

FILE NAME: ASYX-S-3-F-X-X-L40-1-STD-UNV

LAMP: 4000K

LUMENS: 14568

INPUT WATTS: 157.6 W

EFFICACY: 92.4 LPW

TEST REPORT: P166564

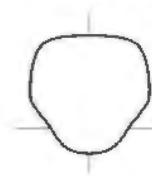
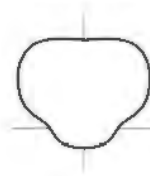
ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
90°-100°	465.5	3.2
100°-110°	1957.8	13.44
110°-120°	2665.6	18.3
120°-130°	2616.7	17.96
130°-140°	2367.9	16.25
140°-150°	1907.4	13.09
150°-160°	1406.6	9.66
160°-170°	880.6	6.04
170°-180°	299.8	2.06
0°-180°	14568	100

LUMEN MAINTENANCE

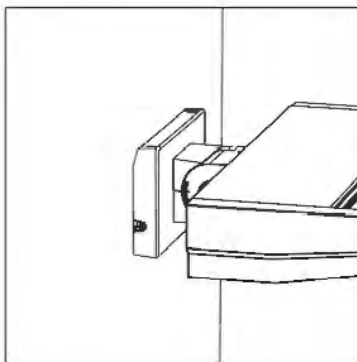
Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L90 (Hours)
25°C	> 96%	130,000
35°C	> 93%	91,000
40°C	> 95%	117,000

DISTRIBUTION

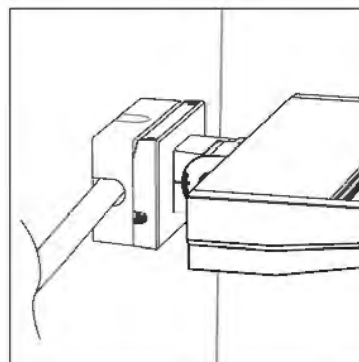
F - Forward Throw
DistributionW - Wide Throw
Distribution

MOUNTING

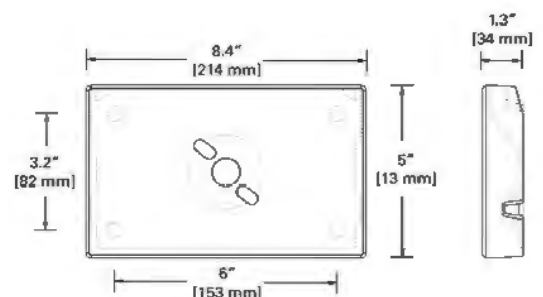
R - Recessed junction box option:
8.4" x 5" wall plate mounts to
standard junction box.



C - Conduit Entry option:
Surface metal box fits over
standard junction box with
conduit entry option on all sides.



Mounting Plate

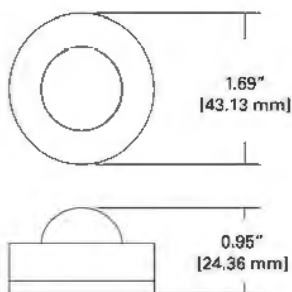
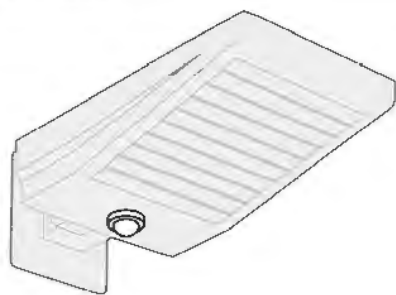


REFERENCE

ASYX 2.0 SUMMARY TABLE

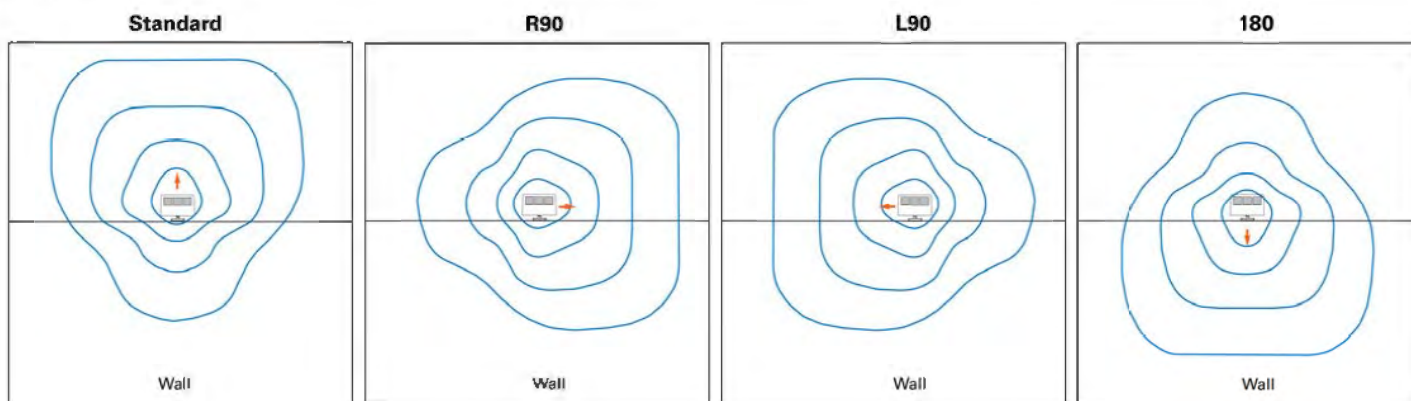
PRODUCT NAME:	SL	S1	S2	S3	S4	L3	L4	L5	L6
NUMBER OF LIGHT SQUARES:	1	1	2	3	4	3	4	5	6
LUMENS:	2970	4797	9812	14745	19761	15304	19929	25565	30162
WATTAGE:	27.5	55	107	158	214	158	214	268	319
LPW:	108	87	92	93	92	97	93	95	95
HID EQUIVALENT:	39W	70W	150W	250W	320W	250W	320W	400W	2 x 250W

Note: Based on 4000K, Wide Throw Distribution



SV - The integral sensor is a fully integrated sensor with no additional wiring or special installation required. Passive infrared occupancy detection is the technology used and the light sensor uses a closed-loop daylight harvester with day, twilight and night settings. Energy Saver setting dims to a lower light level when unoccupied. An infrared receiver is used for programming with a remote control. Indicator light is used for occupancy status and programming confirmation. Integral sensor only controls one fixture unit.

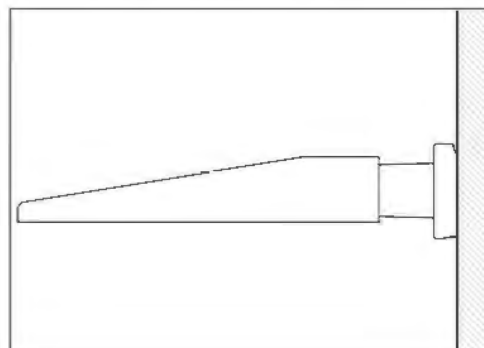
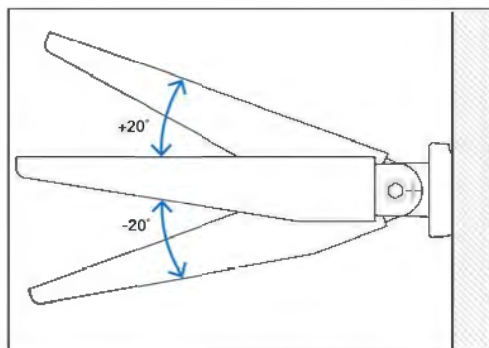
OPTIC ORIENTATION



AIMING

The ASYX 2.0 features +/-20° adjustable aiming as standard

RM - Optional rigid knuckle mount for downward facing, fixed applications. Available in standard optic orientation only.



TECHNICAL NOTES

CYL8

8" Integrated LED Indoor and Outdoor Cylinders

Type **CYL8640**

Project **GABP**

Specifications/Features

Specification grade 8" diameter aluminum housing for indoor and outdoor applications.

Four mounting options available: ceiling, flexible cable, pendant, or wall mount. Wall mount option is available in an up light, down light, or an up/down light version.

Driver canopy for flexible cable option is 16 gauge steel.

Ceiling, pendant, Up/down, wall mount down light, and wall mount uplight versions are available in either dry/damp (indoor) or wet (outdoor) location types. Flexible Cable version is only available in dry/damp location type.

Wet location type cylinders feature a silicone sealed clear glass lens in a gasketed die-cast trim ring to ensure unit is watertight. Available in matte white, matte black, matte silver, and satin bronze finishes. Black flexible cable with black or bronze cylinders, white with white and gray with silver.

Optical system employs either a clear or platinum reflector. Wall Wash and Pencil Beam optic accessories are also available on select models.

Mounting

Pendant mount cylinders feature a sloped ceiling canopy (includes canopy and stem, ordered separately). Stem thread: 1/4-18NPS.

Ceiling and Pendant cylinders provide a hang support for hands-free wiring.

Pendant mount max length is 8'6". Consult factory for longer lengths.

Wall mount cylinders employ a bracket that provides support for hands-free wiring.

Flexible cable mount cylinders come with 120" of field adjustable cable.

Lamp/Electrical

Light engine consists of a high output multi-chip LED array arranged into a single LED package, enabling precise optical control without requiring lensing to diffuse multiple LED sources. Excellent fixture-to-fixture color consistency within a 3-step MacAdam Ellipse tolerance.

System designed and rated for 50,000 hours at 70% lumen maintenance.

UL8750 and Class 2 compliant: RoHS compliant, U.S. only.

Output over voltage, over current and short circuit protected.

Flexible cable cylinder utilizes 18/3 SJTOW cable.

Dimming

All CL8 cylinders are available for non-dimming and dimming applications.

Warranty

This complete fixture is covered by ConTech's full five (5) year replacement guarantee after date of purchase.

Labels/Usage

cCSAus Certified for use in the U.S. and Canada.

Ceiling, Pendant, Up/down, and Wall mount models available as Damp/Dry or Wet location models. Flexible Cable mount only available as Damp/Dry location model.

Wet location models must be installed per specific product installation instructions and all appropriate National Electrical Codes.

Energy Star Certified for all mounting options except the Up/Down Wall Mount, Pencil Beam or Wall Wash trims.

Assembled in the U.S.A



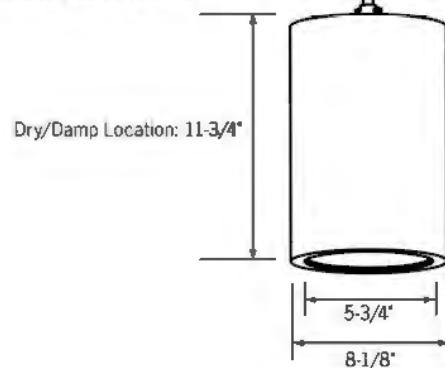
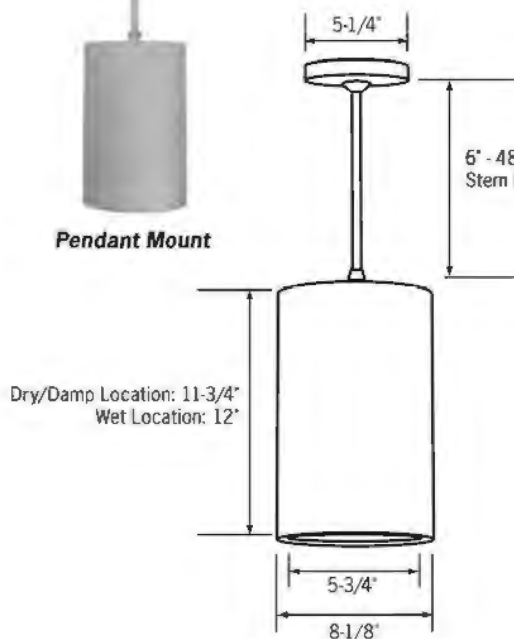
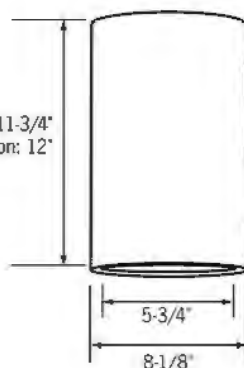
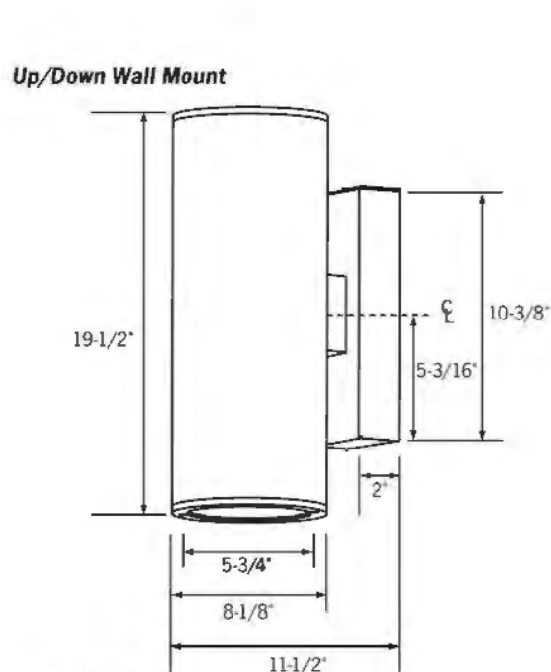
Wall Mount
All model dimensions on page 2

	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
Input Wattage (W)	10	14	20	28	37	43
Input Current (A) 120/277	.08/.04	.12/.06	.17/.08	.23/.11	.31/.14	.36/.17
Input Voltage						
Dimming (Triac, ELV, 0-10V)	120V AC, 50/60Hz					
	277V AC, 50/60Hz					
Lutron HiLume® Dimming	120V AC, 50/60Hz					
Lutron Eco-System® Dimming	120V AC, 50/60Hz					
	277V AC, 50/60Hz					
eldoLED ECODrive/SOLOdrive	120V AC, 50/60Hz					
	277V AC, 50/60Hz					
Color Temp	2700K/3000K/3500K/4000K					
CRI Standard/High	83 (80min) / 90+					
Driver						
Power Factor	> 0.90					
THD	< 20%					
Dimming						
Triac, ELV, 0-10V	10-100%					
Lutron®	1-100%					
eldoLED ECODrive	1-100%					
eldoLED SOLOdrive	0.1-100%					

CYL8

8" Integrated LED Indoor and Outdoor Cylinders

Dimensions



CYL8

8" Integrated LED Indoor and Outdoor Cylinders

Type **CYL8640**

Project **GABP**

Ordering Information

Example Order: **CYL8127KMVD4WXMCLR** - **BZ** **CSK12-BZ**

Fixture	LED Series	Color Temp	Driver/Dimming	Mounting	Mounting Location	Beam ¹	Reflector	Finish
CYL8	6	40K	MVD	FC		W	CLR	P
CYL8	1 - 10W, 1000lm 2 - 14W, 1400lm 3 - 20W, 2000lm 4 - 28W, 2600lm 5 - 37W, 3200lm 6 - 43W, 3600lm	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K 27KC - 2700K, 90+ CRI 30KC - 3000K, 90+ CRI 35KC - 3500K, 90+ CRI 40KC - 4000K, 90+ CRI	MVD - 120V-277V TRIAC, ELV, 0-10V Dimming 12D3 - Lutron HiLume 1% 2-Wire LED Driver (120V Forward Phase Only) MVD4 - Lutron HiLume 1% EcoSystem LED Driver with Soft-on, Fade-to-Black MVD6 - eldoLED ECODrive, 0-10V, 1% Dimming MVD7 - eldoLED ECODrive, DALI, 1% Dimming MVD8 - eldoLED SOLODrive, 0-10V, 0.1% Dimming MVD9 - eldoLED SOLODrive, DALI, 0.1% Dimming MDMX - eldoLED POWERdrive, DMX <1% Dimming	C - Ceiling Mount FC¹ - Flexible Cable P - Pendant Mount W - Down Light Wall Mount U - Up Light Wall Mount UD² - Up/Down Wall Mount TFC³ - Track Mount	- Interior Dry/Damp (Leave Blank) X - Exterior/Wet	N - Narrow M - Medium W - Wide WW⁵ - Wall Wash PB⁶ - Pencil Beam	CLR - Clear PL - Platinum	B - Matte Black BZ - Satin Bronze P - Matte White S - Matte Silver

Stem Kit - Pendant Mount Only

CSK6-(B,BZ,P,S) - 6" Stem Kit
CSK12-(B,BZ,P,S) - 12" Stem Kit
CSK18-(B,BZ,P,S) - 18" Stem Kit
CSK24-(B,BZ,P,S) - 24" Stem Kit
CSK30-(B,BZ,P,S) - 30" Stem Kit
CSK36-(B,BZ,P,S) - 36" Stem Kit
CSK48-(B,BZ,P,S) - 48" Stem Kit

DRIVER AVAILABILITY MATRIX

Driver ⁴ :	MVD 120V-277V TRIAC, ELV	12D3 Lutron HiLume	MVD4 Lutron EcoSystem	MVD6 eldoLED ECODrive	MVD7 eldoLED ECODrive	MVD8 eldoLED SOLODrive	MVD9 eldoLED SOLODrive	MDMX eldoLED POWERdrive
Mounting								
C	All Series	All Series	All Series	All Series	All Series	All Series	All Series	All Series
FC	All Series	All Series	All Series	Thru Series 5	Thru Series 5	Thru Series 5	Thru Series 5	N/A
P	All Series	All Series	All Series	All Series	All Series	All Series	All Series	All Series
W	All Series	All Series	All Series	All Series	All Series	All Series	All Series	All Series
U	All Series	All Series	All Series	All Series	All Series	All Series	All Series	All Series
U/D	All Series	All Series	All Series	Thru Series 5	Thru Series 5	Thru Series 5	Thru Series 5	N/A
TFC	All Series	N/A	N/A	N/A	N/A	N/A	N/A	N/A

⁴Due to driver size, not all mounting options are compatible with all driver options

¹ Flexible Cable versions are only available in dry/damp location type
² Consult factory when different beams, color temperatures, or lumen packages are required in a single Up/Down cylinder.
³ Track Mount option only available with MVD Driver Option wired to 120V; TRIAC/ELV dimming capable. Bronze (BZ) finish comes with black track adapter.
⁴ For clear reflector only; leave blank for platinum reflector
⁵ Wall Wash (WW) and Pencil Beam (PB) valid on all models except Up/Down cylinder with series 5 or 6 LED module (leave reflector designation blank).
⁶ Pencil Beam (PB) optic limited to exterior mount ("X") location style.

CYL8

8" Integrated LED Indoor and Outdoor Cylinders

Type **CYL8640**

Project **GABP**

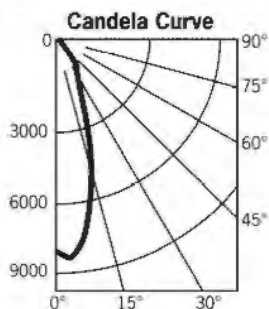
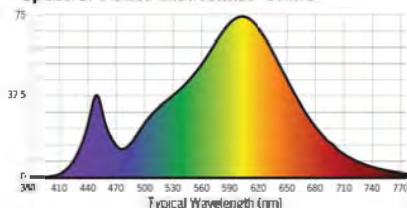
Photometrics

CCT	STD CRI	HIGH CRI	SERIES 1	SERIES 2	SERIES 3	SERIES 4	SERIES 5	WHT/PL REFLECTORS
2700K	0.94	0.70	0.29	0.39	0.53	0.73	0.90	1.0
3000K	N/A	0.75	0.29	0.39	0.53	0.73	0.90	1.0
3500K	1.0	0.81	0.29	0.39	0.53	0.73	0.90	1.0
4000K	1.0	0.87	0.29	0.39	0.53	0.73	0.90	1.0

CYL8630KMVDNCLR

Designed for 50,000 Hour Lamp Life*; LM-63 Test No. 85531

Light Output (Fixture Delivered Lumens): 3544
Total Watts@120V: 43.0
Lumens Per Watt: 82.4
Color Rendering Index (CRI)¹: 83
Color Temperature (CCT)²: 3603K
Spectral Power Distribution Chart³



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	8149	
5	8114	731
15	4969	1336
25	1863	898
35	1073	530
45	35	28
55	15	14
65	6	6
75	2	2
85	0	0
95	0	0

Intensity Distribution

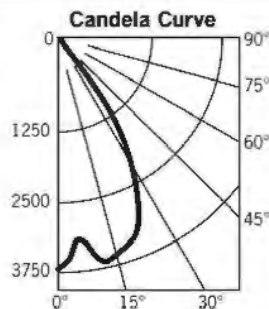
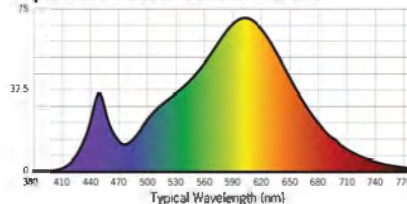
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	226.4	3.4
8'	127.3	4.6
10'	81.5	5.7
12'	56.6	6.9
14'	41.6	8.0
16'	31.8	9.1

Beam Distribution: 34°
Spacing Criteria: 0.56

CYL8630KMVDCMCLR

Designed for 50,000 Hour Lamp Life*; LM-63 Test No. 85912

Light Output (Fixture Delivered Lumens): 3539
Total Watts@120V: 43.3
Lumens Per Watt: 81.7
Color Rendering Index (CRI)¹: 82
Color Temperature (CCT)²: 3088K
Spectral Power Distribution Chart³



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	3647	
5	3210	320
15	3537	994
25	2954	1328
35	1389	761
45	95	76
55	43	39
65	15	16
75	4	5
85	1	1
95	0	0

Intensity Distribution

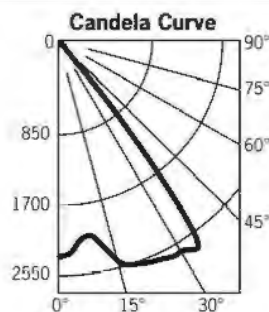
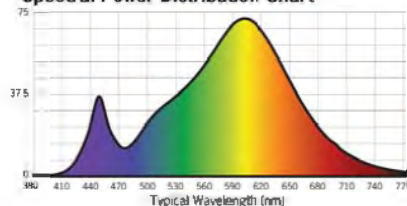
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	101.3	6.2
8'	57.0	8.3
10'	36.5	10.4
12'	25.3	12.5
14'	18.6	14.6
16'	14.2	16.7

Beam Distribution: 66°
Spacing Criteria: 0.95

CYL8630KMVDCWCLR

Designed for 50,000 Hour Lamp Life*; LM-63 Test No. 85700

Light Output (Fixture Delivered Lumens): 3521
Total Watts@120V: 44.0
Lumens Per Watt: 80.0
Color Rendering Index (CRI)¹: 82
Color Temperature (CCT)²: 3075K
Spectral Power Distribution Chart³



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	2330	
5	2183	208
15	2469	691
25	2596	1203
35	2475	1235
45	114	118
55	49	44
65	16	17
75	4	5
85	1	1
95	0	0

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	64.7	8.6
8'	36.4	11.5
10'	23.3	14.4
12'	16.2	17.3
14'	11.9	20.1
16'	9.1	23.0

Beam Distribution: 75°
Spacing Criteria: 1.11

1. Accuracy of rendering colors
2. Color appearance of light source
3. Colors present within the light source

*Dependent on surrounding temperatures

CYL8

8" Integrated LED Indoor and Outdoor Cylinders

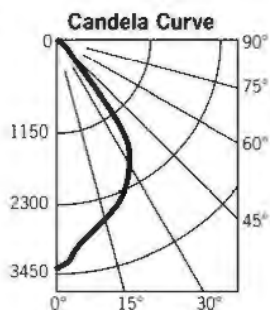
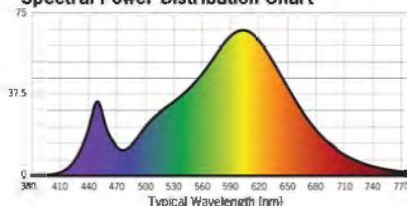
Photometrics

CCT	STD CRI	HIGH CRI	SERIES 1	SERIES 2	SERIES 3	SERIES 4	SERIES 5	WHT/PL REFLECTORS
2700K	0.94	0.70	0.29	0.39	0.53	0.73	0.90	1.0
3000K	N/A	0.75	0.29	0.39	0.53	0.73	0.90	1.0
3500K	1.0	0.81	0.29	0.39	0.53	0.73	0.90	1.0
4000K	1.0	0.87	0.29	0.39	0.53	0.73	0.90	1.0

CYL8630KMVDCPL

Designed for 50,000 Hour Lamp Life*; LM-63 Test No. 86084

Light Output (Fixture Delivered Lumens): 3304
Total Watts@120V: 43.2
Lumens Per Watt: 76.5
Color Rendering Index (CRI)¹: 82
Color Temperature (CCT)²: 3030K
Spectral Power Distribution Chart³



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	3359	
5	3092	289
15	2708	764
25	2346	1073
35	1612	852
45	244	194
55	95	88
65	31	32
75	9	10
85	1	2
95	0	

Intensity Distribution

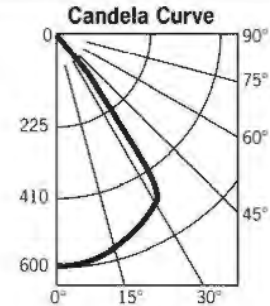
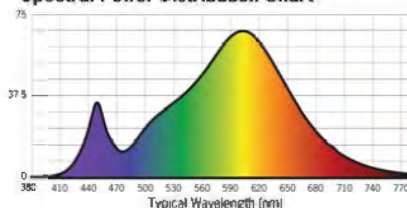
DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	93.3	5.8
8'	52.5	7.7
10'	33.6	9.7
12'	23.3	11.6
14'	17.1	13.6
16'	13.1	15.5

Beam Distribution: 69°
Spacing Criteria: 0.97

CYL8630KMVDCXPB

Designed for 50,000 Hour Lamp Life*; LM-63 Test No. G16122102

Light Output (Fixture Delivered Lumens): 95
Total Watts@120V: 42.3
Lumens Per Watt: 2.2
Color Rendering Index (CRI)¹: 82
Color Temperature (CCT)²: 3030K
Spectral Power Distribution Chart³



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	614	
5	601	51
15	575	103
25	530	92
35	267	54
45	2	1
55	1	1
65	0	0
75	0	0
85	0	0
95	0	

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6'	17.1	6.6 x 0.9
8'	9.6	8.8 x 1.2
10'	6.1	11.0 x 1.5
12'	4.3	13.2 x 1.7
14'	3.1	15.4 x 2.0
16'	2.4	17.6 x 2.4

1. Accuracy of rendering colors
2. Color appearance of light source
3. Colors present within the light source

*Dependent on surrounding temperatures

DESCRIPTION

The ASYX 2.0 second generation of asymmetric lighting is designed for general ambient illumination and accenting architectural features. The luminaire allows for both forward and wide distributions as well four different color temperatures to accommodate any space. The ASYX 2.0 utilizes the patented and highly efficient AccuLED Optics™ system for industry leading performance. IP66 rated

Catalog #	ASYX-WM-S2-OD-U-W-L40-1-UNV-W-C-STD	Type
Project	GABP	ASYXS2
Comments		Date
Prepared by	Ameresco	

SPECIFICATION FEATURES

Construction

Heavy-wall die cast aluminum end caps with extruded aluminum housing. Housing fins allow for air flow and thermal management. Fixture is rated to 40°C. Weight: 18 lbs

Electrical

Standard drivers feature electronic universal voltage (120-277V/ 50-60 Hz), greater than 0.9 power factor, less than 20% harmonic distortion, and ambient temperature range of 40°C (104°F) to minimum starting temp of -30°C (-22°F). 0-10V dimming standard with DALI option available. Max amp draw @ 120V is 1.5 Amps.

LED Optics

ASYX 2.0 luminaire utilizes patented, high efficiency AccuLED Optics with specific optical distributions. Each lens is injection molded for precision, arranged and sealed onto a board substrate. LEDs are industry leading high output with 93% lumen maintenance at 60,000

hours. Offered in 80+ CRI for 2700K, 3000K, and 3500K CCT, and 70+ CRI for 4000K CCT. The ASYX 2.0 also offers +/- 90°, or 180° rotated optics.

Mounting

Die cast adjustable knuckle, bolts to housing. Fixture mounts to recessed junction box (by others) using wall plate, or surface mount box with conduit entry option. See installation instructions for mounting conditions to ensure adequate support. Fixture has continuous adjustability, 20° up to 20° down with locking mechanism, as well as upward facing or downward facing.

Finish

Fixture housing is coated using electrostatically charged polyester powder coat paint for superior protection against fade and wear. Mounting plate and all accessories to match specified color of luminaire housing. Standard colors include white, silver, black, bronze, and custom RAL

color match available.

Compliance

Components are UL recognized and luminaires are cULus listed for 40°C ambient environments, wet location listed, and RoHS compliant. IP66 Rated.

Environment

Suited for indoor, outdoor (wet location listed, IP66 rated)

Control

Standard offering is 0-10V dimming and energy saving integral sensor device available. 0-10V dimming current draw is 0.2 mA per driver. Digital Addressable Lighting Interface (DALI) driver option can be used with Fifth Light Technology.

Life and Warranty

Standard five-year limited warranty on all parts.



ASYX-WM S2

LED

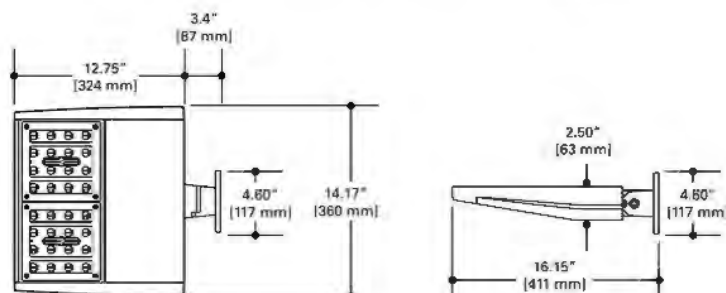
Wall Mount

Asymmetric Direct
Asymmetric Indirect

CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
IP66 Rated

ENERGY DATA
>0.9 Power Factor
<20% Total Harmonic Distortion
120V - 277V 50/60 Hz
-30°C Min Temperature
40°C Max Temperature

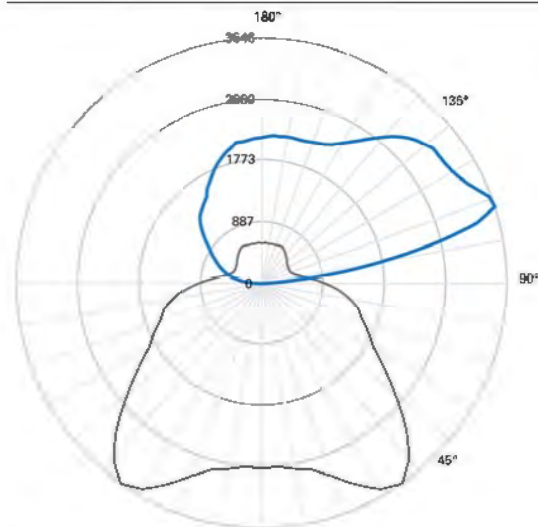
powered by
fifthlight
technology



ORDERING INFORMATION

Sample Number: ASYX-WM-S2-ID-U-F-L35-1-UNV-W-R-STD-SV-R90

Series		Mounting	Size	Light Level	Environment	Orientation	Distribution	Color Temperature				# of Circuits
ASYX - Asymmetric LED Luminaire		WM - Wall Mount	S - Small	2 - 2 Light Squares (see Color Temp for CCT, lumen output, and wattage)	ID - Indoor OD - Outdoor	U - Uplight D - Downlight	F - Forward Throw	L27 - 7782 lumens	107 watts	forward throw	1	
							L30 - 8186 lumens	107 watts	forward throw			
							L35 - 8590 lumens	107 watts	forward throw			
							L40 - 9694 lumens	107 watts	forward throw			
							W - Wide Throw	L27 - 7877 lumens	107 watts	wide throw		
								L30 - 8285 lumens	107 watts	wide throw		
								L35 - 8694 lumens	107 watts	wide throw		
								L40 - 9812 lumens	107 watts	wide throw		
Input Voltage	Finish	Surface Type		Driver Options	Integral Control (Optional)		Optical Orientation (Optional)		Options (Optional)		Accessories (Optional)	
UNV	W - White S - Silver B - Black Z - Bronze C - Custom Color	R - Mounting Plate C - Surface Canopy		STD - Standard 0-10V SLT - Fifth Light DALI	SV - Integral Occupancy Sensor/ Daylight Sensor		R90 - Optics Rotated 90° right from standard L90 - Optics Rotated 90° left from standard 180 - Optics Rotated 180° from standard		RM - Rigid Fixed Knuckle		FSIR-100 - Remote control for mini sensor (order separately and per group of fixtures. Order only with SV option)	

Vertical Distribution
through peak candelaHorizontal Distribution
through peak candela

FILE NAME: ASYX-S-2-F-X-X-L40-1-STD-UNV

LAMP: 4000K LEDs

LUMENS: 9693.9

INPUT WATTS: 106.7 W

EFFICACY: 90.9 LPW

TEST REPORT: P166563

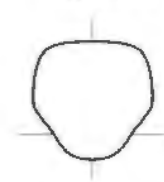
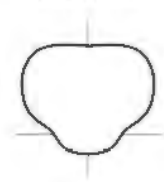
ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
90°-100°	309.8	3.2
100°-110°	1302.8	13.44
110°-120°	1773.7	18.3
120°-130°	1741.2	17.96
130°-140°	1575.74	16.25
140°-150°	1269.2	13.09
150°-160°	936	9.66
160°-170°	585.9	6.04
170°-180°	199.5	2.06
0°-180°	9693.9	100

LUMEN MAINTENANCE

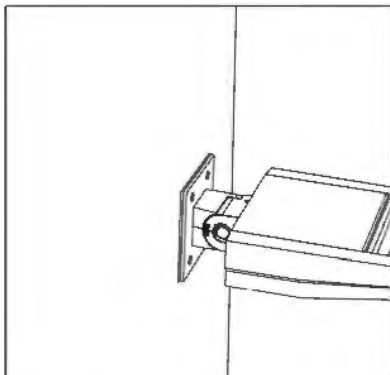
Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L90 (Hours)
25°C	> 96%	130,000
35°C	> 93%	91,000
40°C	> 95%	117,000

DISTRIBUTION

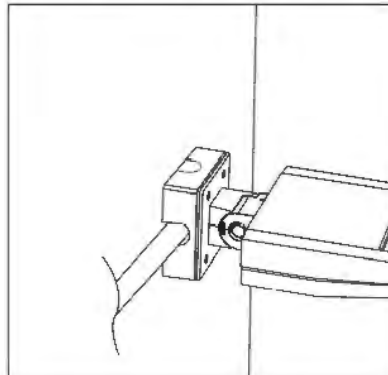
F - Forward Throw
DistributionW - Wide Throw
Distribution

MOUNTING

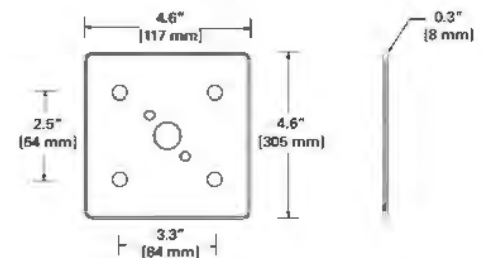
R - Recessed junction box option:
8.4" x 5" wall plate mounts to
standard junction box.



C - Conduit Entry option:
Surface metal box fits over
standard junction box with
conduit entry option on all sides.



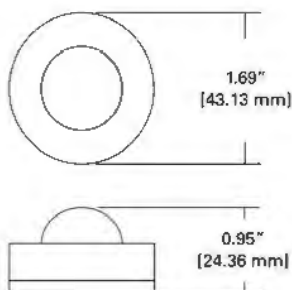
Mounting Plate



REFERENCE

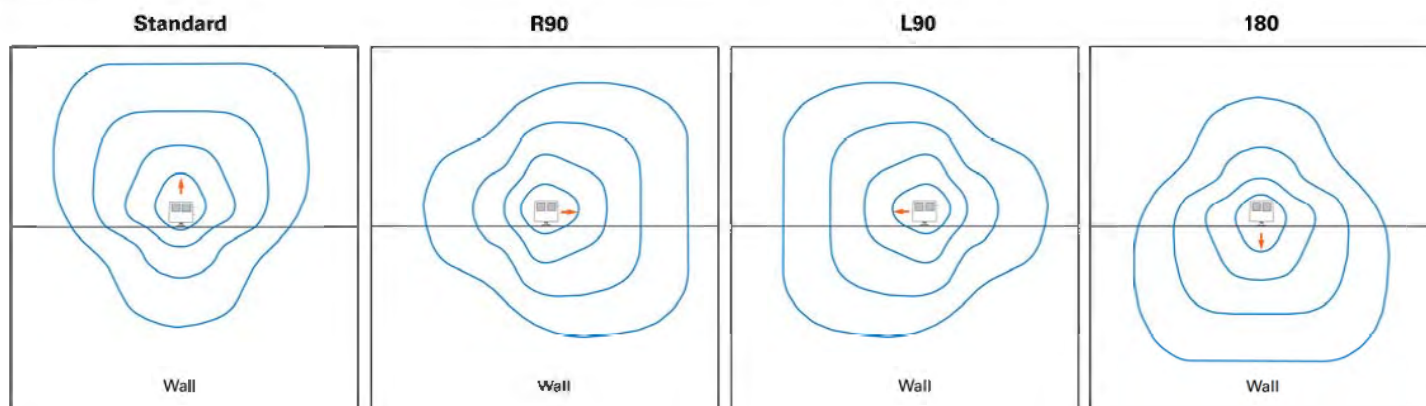
ASYX 2.0 SUMMARY TABLE

PRODUCT NAME:	SL	S1	S2	S3	S4	L3	L4	L5	L6
NUMBER OF LIGHT SQUARES:	1	1	2	3	4	3	4	5	6
LUMENS:	2970	4797	9812	14745	19761	15304	19929	25565	30162
WATTAGE:	27.5	55	107	158	214	158	214	268	319
LPW:	108	87	92	93	92	97	93	95	95
HID EQUIVALENT:	39W	70W	150W	250W	320W	250W	320W	400W	2 x 250W



SV - The integral sensor is a fully integrated sensor with no additional wiring or special installation required. Passive infrared occupancy detection is the technology used and the light sensor uses a closed-loop day-light harvester with day, twilight and night settings. Energy Saver setting dims to a lower light level when unoccupied. An infrared receiver is used for programming with a remote control. Indicator light is used for occupancy status and programming confirmation. Integral sensor only controls one fixture unit.

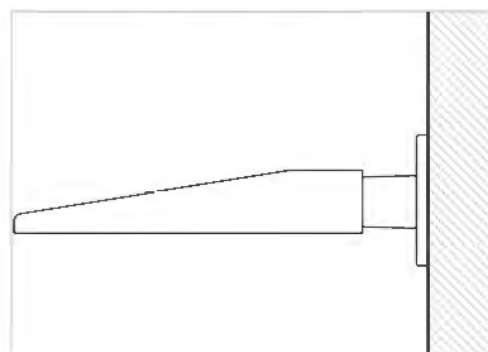
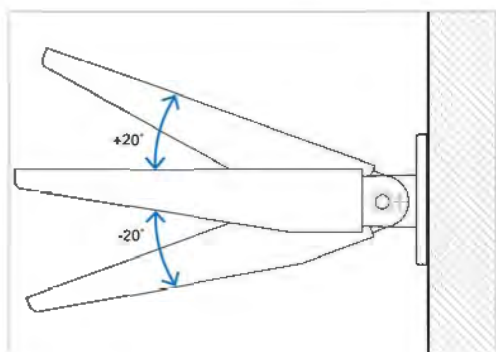
OPTIC ORIENTATION



AIMING

The ASYX 2.0 features $\pm 20^\circ$ adjustable aiming as standard.

RM - Optional rigid knuckle mount for downward facing, fixed applications. Available in standard optic orientation only.



TECHNICAL NOTES



GLOBAL TECHLED

Simply Universal

One or more of the following US patent numbers may apply: 9226356, 9171455, 9115876, 9091424, 8979304, 8246202

The World Leader in LED Retrofits

PROJECT: GABP

MODEL: GTR-AR-M21-G2-ML-SV-BL-75D-SOLY-MED

TYPE: MH7ALED, LEDGTSOLM2150



Medium E26 Base

Bolt on Yoke Mounted GTSOLM21 - G2

Base Options

Catalog #	Description
MGL	Mogul Base (E39)
MED	Medium Base (E27)
BUB	U-Bracket (No Base)

Accessories

Catalog #	Description
IP67	IP67 Rated LED Engine
GTP-SOLY-DR-BR	Driver Bracket for Yoke
GT-LSP-120	Surge Protector. 120 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-240	Surge Protector. 240 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-277	Surge Protector. 277 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-347	Surge Protector. 347 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-480	Surge Protector. 480 V 10 kA Parallel. 20kA maximum discharge current.

Typical Module Wattage Settings:

Rated Watts [W]	Rated Lumens [Lm]	Efficacy [Lm/W]
55	6000	110
45	5000	115
35	4000	120
25	3000	120

Description and Application:

The yoke retrofit kit is designed to retrofit into most HID fixtures, by using custom fabricated brackets and/or plates for easy plug and play installation. We can construct our units to offer a wide array of optics to deliver the light precisely where it is needed. Built in smart technology greatly increases life span and convenience.

Key Features:

- Life Sync
 - Module Temp Protection
 - Lumen Depreciation Maintenance
- Active Vortex Thermal Management
- Made in USA
- Standard
- 5-6-1
- 0-10VDC Dimming
 - If dimming is desired please specify when ordering

Driver:

- 120-277VAC
- or-
- 347-480VAC

Warranty:

- Warranty: Driver = 5 years
- Solstice Light Engine = 10 years

Technical:

- Operating Temperature Range:
 - 40°C to 55°C Nominal
- L70 > 150,000Hrs.
- Life Sync adjusts module to operate at max performance in any given environment
- Photometric: .ies files available
- Surge Protector: Required for ALL 347V-480V applications in order to qualify for Warranty
- Recommended for all outdoor applications



Optical Distributions:



Color Temperature Options:

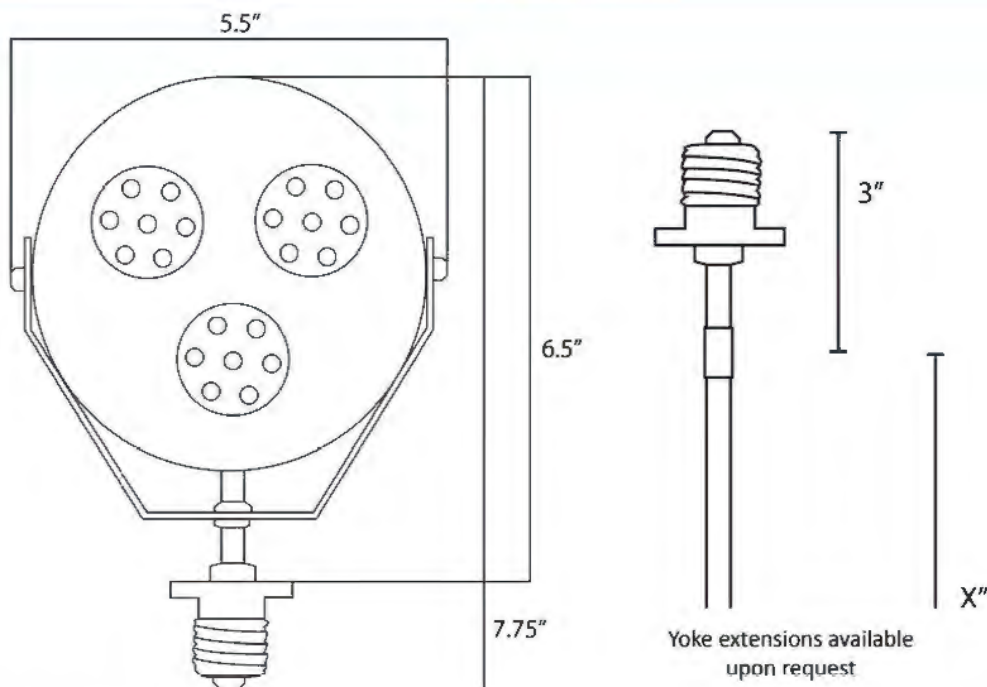


Pricing Information

M21 - G2 Yoke Retrofit

[25W-55W Screw In Yoke LED Retrofit Kit]

Details



Ordering Code Example:

GTR - AR - M21 - G2 - HI - SV - GR - NL - SOLY - MED / IP67

Retrofit	Category	Module	Wattage	Voltage	MSRP	CCT	Lens	Mounting Method	Accs	MSRP	Accs	MSRP
GTR	AR = Area/Roadway	M21 - G2	HI (55W)	SV (120V-277V)	\$324.00	GR (5000K) [70CRI]	NL = No Lens	SOLY = Yoke Mount	MGL	\$12.50	IP67 = 1xM21 - G2*	\$31.50
	HB = High Bay			HV (347V-480V)	\$371.50	BR (5000K) [80CRI]	10D = 10D Lens (\$23.00)		MED	\$0.00	GTP-60WATT-HATCH-DR-BR	\$15.00
	WP = Wall Pack			SV (120V-277V)	\$324.00	YW (4100K) [70CRI]	25D = 25D Lens (\$23.00)		BUB	\$0.00	GT-LSP-120	\$29.50
	PG = Parking Garage	M21 - G2	MH (45W)	HV (347V-480V)	\$371.50	BL (4000K) [80CRI]	50D = 50D Lens (\$23.00)				GT-LSP-240	\$29.50
	FC = Fuel Canopy			SV (120V-277V)	\$324.00	RD (3500K) [80CRI]	75D = 75D Lens (\$23.00)				GT-LSP-277	\$29.50
	PT = Post Top	M21 - G2	ML (35W)	HV (347V-480V)	\$371.50	PR (3000K) [95CRI]	360D = 360D Lens (\$23.00)				GT-LSP-347	\$29.50
	HZ = Hazardous			SV (120V-277V)	\$324.00	OR (2700K) [80CRI]	360s = 360 Square Lens (\$23.00)				GT-LSP-480	\$29.50
	BD = Bollard	M21 - G2	LO (25W)	HV (347V-480V)	\$371.50	GRO (Grow)†	T2 = Type II Lens (\$23.00)					
	TB = Tube					AMB (Amber)†	T3 = Type III Lens†					
	SI = Screw In					AQU (Aquarium)†						
	GW = Horticulture					RYB (Royal Blue)†						

* IP67 upgrade for module + fan (only NL, 10D, 25D, 50D & 75D)

† Upcharges not included in MSRP Price

** Please see previous page for Base Option information
Please see pg 5 for full accessory information and lensing costs
Please note, prices may change with quantity



Economical low-profile 13W LED floodlight delivers a wide 6H X 6V beam distribution and replaces 75 Watt halogen BR30.

Color: Bronze

Weight: 1.3 lbs

Project: GABP

Type: RABLES13N

Prepared By: Ameresco

Date:

Driver Info

Type: Constant
 120V: 0.11A
 208V: N/A
 240V: N/A
 277V: N/A
 Input Watts: 13W
 Efficiency: N/A

LED Info

Watts: 13W
 Color Temp: 4000K
 Color Accuracy: 83 CRI
 L70 Lifespan: 60000
 Lumens: 1,138
 Efficacy: 87 LPW

Technical Specifications

Listings

UL Listing:

Suitable for wet locations. Suitable for mounting within 4 feet of the ground.

ENERGY STAR® V2.0:

This product is ENERGY STAR® Version 2.0 Certified.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

Electrical

Driver:

120V driver, 50/60/ Hz, 0.11A, 114mA

THD:

12% at 120V

Power Factor:

99.3% at 120V

Optical

NEMA Type:

6H x 6V Beam Spread

Construction

Cold Weather Starting:

Minimum starting temperature is -40° F (-40° C)

Maximum Ambient Temperature:

Suitable for use in 104° F (40°C) ambient temperatures

IP Rating:

Ingress Protection rating of IP66 for dust and water

Housing:

Precision die-cast aluminum housing, lens frame and mounting arm

Reflector:

Vacuum-metalized polycarbonate

Lens:

Diffused glass for smooth, even light distribution

Mounting:

Heavy-duty mounting arm with "O" ring seal, wire seal plug & stainless steel screw

Gaskets:

High-temperature silicone gaskets

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Green Technology:

Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

LED Characteristics

LEDs:

Long-life, high-efficiency surface mounting LEDs

Color Uniformity:

RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Other

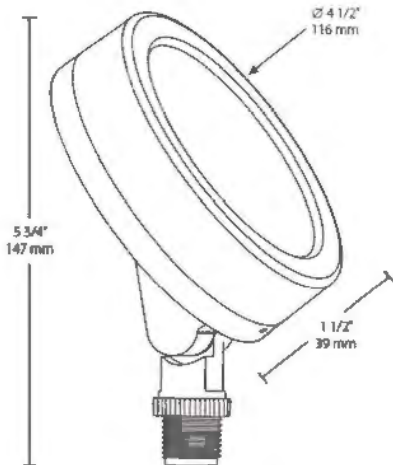
Equivalency:

Equivalent to 75W halogen BR30 wide flood.

5 Yr Limited Warranty:

Fixture operation and paint finish are covered for a period of 5 years.

Dimensions



Features

- Equivalent to 75W halogen BR30 wide flood
- Wide 6H x 6V distribution
- Diffused lens for smooth, even light distribution
- Energy Star® certified
- Very low profile
- Adjustable knuckle
- 60,000-Hour LED lifespan

Ordering Matrix

Family	Watts	Color Temp	Finish
LES	13	N	
	13 = 13W	Blank = 5000K (Cool) N = 4000K (Neutral) Y = 3000K (Warm)	Blank = Bronze B = Black VG = Verde Green W = White



PROJECT: GABP

MODEL: GTR-AR-M21-G2-LO-SV-BL-75D-SOLY-MED

TYPE: LEDGTSOLM2125



Medium E26 Base

Bolt on Yoke Mounted GTSOLM21 - G2

Base Options

Catalog #	Description
MGL	Mogul Base (E39)
MED	Medium Base (E27)
BUB	U-Bracket (No Base)

Accessories

Catalog #	Description
IP67	IP67 Rated LED Engine
GTP-SOLY-DR-BR	Driver Bracket for Yoke
GT-LSP-120	Surge Protector. 120 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-240	Surge Protector. 240 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-277	Surge Protector. 277 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-347	Surge Protector. 347 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-480	Surge Protector. 480 V 10 kA Parallel. 20kA maximum discharge current.

Typical Module Wattage Settings:

Rated Watts [W]	Rated Lumens [Lm]	Efficacy [Lm/W]
55	6000	110
45	5000	115
35	4000	120
25	3000	120

Description and Application:

The yoke retrofit kit is designed to retrofit into most HID fixtures, by using custom fabricated brackets and/or plates for easy plug and play installation. We can construct our units to offer a wide array of optics to deliver the light precisely where it is needed. Built in smart technology greatly increases life span and convenience.

Key Features:

- Life Sync
 - Module Temp Protection
 - Lumen Depreciation Maintenance
- Active Vortex Thermal Management
- Made in USA
- Standard
- 5-6-1
- 0-10VDC Dimming
 - If dimming is desired please specify when ordering

Driver:

- 120-277VAC
- or-
- 347-480VAC

Warranty:

- Warranty: Driver = 5 years
- Solstice Light Engine = 10 years

Technical:

- Operating Temperature Range:
 - 40°C to 55°C Nominal
- L70 > 150,000Hrs.
- Life Sync adjusts module to operate at max performance in any given environment
- Photometric: .ies files available
- Surge Protector: Required for ALL 347V-480V applications in order to qualify for Warranty
- Recommended for all outdoor applications



Optical Distributions:



Color Temperature Options:

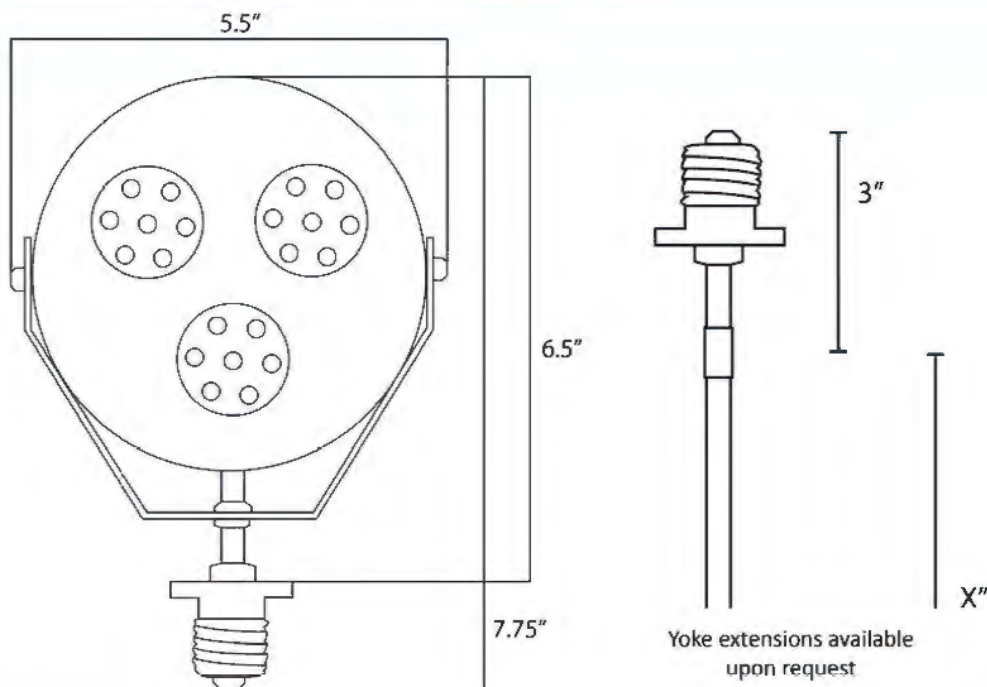


Pricing Information

M21 - G2 Yoke Retrofit

[25W-55W Screw In Yoke LED Retrofit Kit]

Details



Ordering Code Example:

GTR - AR - M21 - G2 - HI - SV - GR - NL - SOLY - MED / IP67

Retrofit	Category	Module	Wattage	Voltage	MSRP	CCT	Lens	Mounting Method	Accs	MSRP	Accs	MSRP
GTR	AR = Area/Roadway	M21 - G2	HI (55W)	SV (120V-277V)	\$324.00	GR (5000K) [70CRI]	NL = No Lens	SOLY = Yoke Mount	MGL	\$12.50	IP67 = 1xM21 - G2*	\$31.50
	HB = High Bay			HV (347V-480V)	\$371.50	BR (5000K) [80CRI]	10D = 10D Lens (\$23.00)		MED	\$0.00	GTP-60WATT-HATCH-DR-BR	\$15.00
	WP = Wall Pack			SV (120V-277V)	\$324.00	YW (4100K) [70CRI]	25D = 25D Lens (\$23.00)		BUB	\$0.00	GT-LSP-120	\$29.50
	PG = Parking Garage	M21 - G2	MH (45W)	HV (347V-480V)	\$371.50	BL (4000K) [80CRI]	50D = 50D Lens (\$23.00)				GT-LSP-240	\$29.50
	FC = Fuel Canopy			SV (120V-277V)	\$324.00	RD (3500K) [80CRI]	75D = 75D Lens (\$23.00)				GT-LSP-277	\$29.50
	PT = Post Top	M21 - G2	ML (35W)	HV (347V-480V)	\$371.50	PR (3000K) [95CRI]	360D = 360D Lens (\$23.00)				GT-LSP-347	\$29.50
	HZ = Hazardous			SV (120V-277V)	\$324.00	OR (2700K) [80CRI]	360s = 360 Square Lens (\$23.00)				GT-LSP-480	\$29.50
	BD = Bollard	M21 - G2	LO (25W)	HV (347V-480V)	\$371.50	GRO (Grow)†	T2 = Type II Lens (\$23.00)					
	TB = Tube					AMB (Amber)†	T3 = Type III Lens†					
	SI = Screw In					AQU (Aquarium)†						
	GW = Horticulture					RYB (Royal Blue)†						

* IP67 upgrade for module + fan (only NL, 10D, 25D, 50D & 75D)

† Upcharges not included in MSRP Price

** Please see previous page for Base Option information
Please see pg 5 for full accessory information and lensing costs
Please note, prices may change with quantity



GLOBAL TECHLED

Simply Universal

One or more of the following US patent numbers may apply: 9226356, 9171455, 9115876, 9091424, 8979304, 8246202

The World Leader in LED Retrofits

PROJECT: GABP

MODEL: GTR-AR-M21-G2-ML-SV-BL-75D-SOLY-MED

TYPE: MH7ALED, LEDGTSOLM2150



Medium E26 Base

Bolt on Yoke Mounted GTSOLM21 - G2

Base Options

Catalog #	Description
MGL	Mogul Base (E39)
MED	Medium Base (E27)
BUB	U-Bracket (No Base)

Accessories

Catalog #	Description
IP67	IP67 Rated LED Engine
GTP-SOLY-DR-BR	Driver Bracket for Yoke
GT-LSP-120	Surge Protector. 120 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-240	Surge Protector. 240 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-277	Surge Protector. 277 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-347	Surge Protector. 347 V 10 kA Parallel. 20kA maximum discharge current.
GT-LSP-480	Surge Protector. 480 V 10 kA Parallel. 20kA maximum discharge current.

Typical Module Wattage Settings:

Rated Watts [W]	Rated Lumens [Lm]	Efficacy [Lm/W]
55	6000	110
45	5000	115
35	4000	120
25	3000	120

Description and Application:

The yoke retrofit kit is designed to retrofit into most HID fixtures, by using custom fabricated brackets and/or plates for easy plug and play installation. We can construct our units to offer a wide array of optics to deliver the light precisely where it is needed. Built in smart technology greatly increases life span and convenience.

Key Features:

- Life Sync
 - Module Temp Protection
 - Lumen Depreciation Maintenance
- Active Vortex Thermal Management
- Made in USA
- Standard
- 5-6-1
- 0-10VDC Dimming
 - If dimming is desired please specify when ordering

Driver:

- 120-277VAC
- or-
- 347-480VAC

Warranty:

- Warranty: Driver = 5 years
- Solstice Light Engine = 10 years

Technical:

- Operating Temperature Range:
 - 40°C to 55°C Nominal
- L70 > 150,000Hrs.
- Life Sync adjusts module to operate at max performance in any given environment
- Photometric: .ies files available
- Surge Protector: Required for ALL 347V-480V applications in order to qualify for Warranty
- Recommended for all outdoor applications



Optical Distributions:



Color Temperature Options:

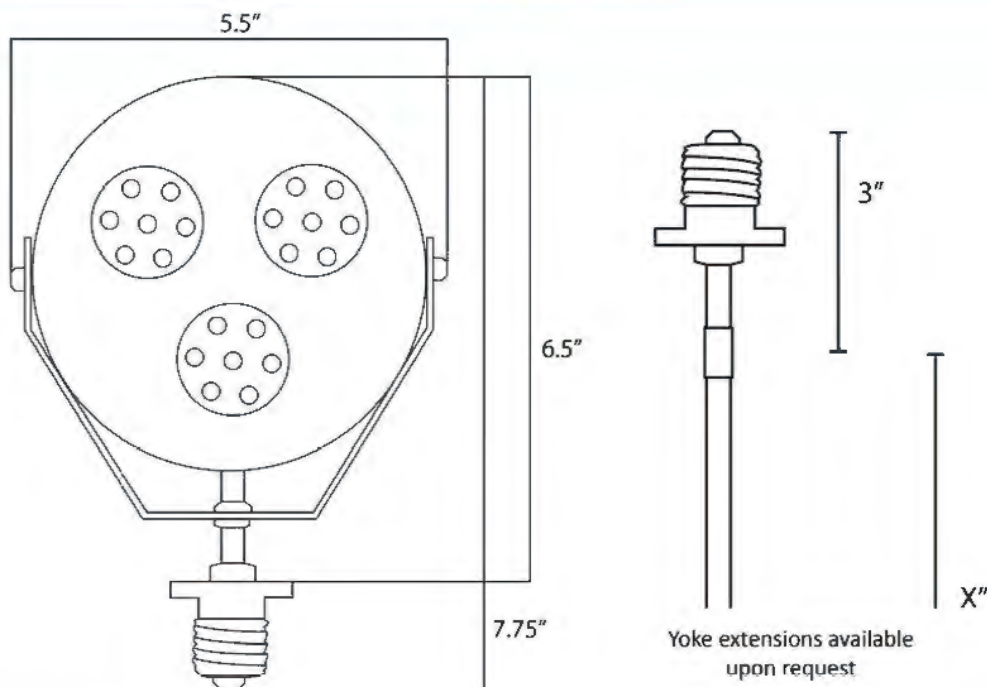


Pricing Information

M21 - G2 Yoke Retrofit

[25W-55W Screw In Yoke LED Retrofit Kit]

Details



Ordering Code Example:

GTR - AR - M21 - G2 - HI - SV - GR - NL - SOLY - MED / IP67

Retrofit	Category	Module	Wattage	Voltage	MSRP	CCT	Lens	Mounting Method	Accs	MSRP	Accs	MSRP
GTR	AR = Area/Roadway	M21 - G2	HI (55W)	SV (120V-277V)	\$324.00	GR (5000K) [70CRI]	NL = No Lens	SOLY = Yoke Mount	MGL	\$12.50	IP67 = 1xM21 - G2*	\$31.50
	HB = High Bay			HV (347V-480V)	\$371.50	BR (5000K) [80CRI]	10D = 10D Lens (\$23.00)		MED	\$0.00	GTP-60WATT-HATCH-DR-BR	\$15.00
	WP = Wall Pack			SV (120V-277V)	\$324.00	YW (4100K) [70CRI]	25D = 25D Lens (\$23.00)		BUB	\$0.00	GT-LSP-120	\$29.50
	PG = Parking Garage	M21 - G2	MH (45W)	HV (347V-480V)	\$371.50	BL (4000K) [80CRI]	50D = 50D Lens (\$23.00)				GT-LSP-240	\$29.50
	FC = Fuel Canopy			SV (120V-277V)	\$324.00	RD (3500K) [80CRI]	75D = 75D Lens (\$23.00)				GT-LSP-277	\$29.50
	PT = Post Top	M21 - G2	ML (35W)	HV (347V-480V)	\$371.50	PR (3000K) [95CRI]	360D = 360D Lens (\$23.00)				GT-LSP-347	\$29.50
	HZ = Hazardous			SV (120V-277V)	\$324.00	OR (2700K) [80CRI]	360s = 360 Square Lens (\$23.00)				GT-LSP-480	\$29.50
	BD = Bollard	M21 - G2	LO (25W)	HV (347V-480V)	\$371.50	GRO (Grow)†	T2 = Type II Lens (\$23.00)					
	TB = Tube					AMB (Amber)†	T3 = Type III Lens†					
	SI = Screw In					AQU (Aquarium)†						
	GW = Horticulture					RYB (Royal Blue)†						

* IP67 upgrade for module + fan (only NL, 10D, 25D, 50D & 75D)

† Upcharges not included in MSRP Price

** Please see previous page for Base Option information
Please see pg 5 for full accessory information and lensing costs
Please note, prices may change with quantity

Illuminate



Application illustration only, subject lamps not used in photo.



LED A-Line general purpose lamps

GE offers dimmable LED A-Line lamps as excellent replacements for standard 25-watt, 40-watt, 60-watt, 75-watt and 100-watt incandescent lamps.

LOW-COST OPERATION

- For example, a 100-watt incandescent replacement lamp using 13 watts of energy and producing 800 lumens can save over \$129 in energy costs over the rated life of the lamp versus a standard 840 lumen, 60-watt incandescent A19 based on \$0.11 per kWh
- Energy efficiency and long life mean fewer lamp replacements versus standard incandescent or halogen light sources

EXCELLENT COLOR RENDERING

- Available with a CRI of 78 - 80

COLOR TEMPERATURE

- Halogen-like color
- Available in 2400K, 2700K, 3000K, 4000K and 5000K

LONG LIFE

- Up to 25,000 hours rated life (L70)

DIMMABLE

- Dims from 100% to as low as 10%

ENVIRONMENTALLY CONSCIOUS

- These lamps are energy efficient, contain no lead or mercury, and are compliant with material restriction requirements of RoHS

GE QUALITY AND RELIABILITY

- 3-year limited warranty

To learn more about saving money and energy, go to: <http://products.currentbyge.com>.

ecomagination™

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, expressed or implied, that such performance will be obtained under end-use conditions.

current
powered by GE



LED A-Line general purpose lamps

A-Line Lamps

Bulb Shape	Base Type	Watts	Order Code	Description	Volts	Cose Qty	MOL (In)	Lumens Initial	CBCP	Initial Color Temp	CRI	Wattage Replacement	*Rated Life L70 (Hrs)	Dimmable	ENERGY STAR® Status	#Location Rating	Additional Information		
A-15																			
	MED	4	34038	LED4DA15-W3/827	120	6	3.5	300		2700	80	40W	15,000	Yes		Damp	White		
			34051	LED4DA15-C3/827	120	6	3.5	300		2700	80	40W	15,000	Yes		Damp	Clear		
A-19																			
	MED	6	69115	LED6DA19/827	120	6	4.4	480		2700	80	40W	15,000	Yes	★	Damp	White, Omnidirectional		
			69118	LED6DA19/830	120	6	4.4	480		3000	80	40W	15,000	Yes	★	Damp	White, Omnidirectional		
			69132	LED6DA19/840	120	6	4.4	480		4000	80	40W	15,000	Yes	★	Damp	White, Omnidirectional		
			69144	LED6DA19/850	120	6	4.4	480		5000	80	40W	15,000	Yes	★	Damp	White, Omnidirectional		
	MED	7	95928	LED7DAV3/5K	120	6	4.6	500		5000	80	40W	25,000	Yes		Damp	White, Semi-Omni		
			34238	LED7DA19/824	120	6	4.44	450		2400	80	40W	25000	Yes		Damp	White		
		10	69117	LED10DA19/827	120	6	4.4	800		2700	80	60W	15,000	Yes	★	Damp	White, Omnidirectional		
			69119	LED10DA19/830	120	6	4.4	800		3000	80	60W	15,000	Yes	★	Damp	White, Omnidirectional		
			69133	LED10DA19/840	120	6	4.4	800		4000	80	60W	15,000	Yes	★	Damp	White, Omnidirectional		
			69146	LED10DA19/850	120	6	4.4	800		5000	80	60W	15,000	Yes	★	Damp	White, Omnidirectional		
			GU24	11	29268	LED11DA19/824	120	6	4.44	800		2400	80	60W	25,000	Yes		Damp	White, Omnidirectional
			74357	LED11DA19827GU24	120	6	4.4	800		2700	80	60W	25,000	Yes		Damp	White, Omnidirectional		
A-21																			
	MED	12	76037	LED12DA19/827	120	6	5.16	1100		2700	80	75W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			76041	LED12DA21/830	120	6	5.16	1100		3000	80	75W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			76045	LED12DA21/840	120	6	5.16	1100		4000	80	75W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			76102	LED12DA21/850	120	6	5.16	1100		5000	80	75W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
	MED	12	73404	LED12DA21/850FE	120	6	5.31	1100		5000	80	75W	25,000	Yes		Enclosed	White, Enclosed, Omni		
			73384	LED12DA21/830FE	120	6	5.31	1100		3000	80	75W	25,000	Yes		Enclosed	White, Enclosed, Omni		
		15	76038	LED15DA21/827	120	6	5.16	1600		2700	80	100W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			76043	LED15DA21/830	120	6	5.16	1600		3000	80	100W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			76060	LED15DA21/840	120	6	5.16	1600		4000	80	100W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			76117	LED15DA21/850	120	6	5.16	1600		5000	80	100W	15,000	Yes	★	Damp	White, Omni, ES 2.0		
			GU24	16	92498	LED16DA21827GU24	120	6	5.43	1600		2700	80	100W	25,000	Yes		Damp	White, Omnidirectional
			MED	16	73376	LED16A30/100/827	120	6	5.31	360/1400/900		2700	80	30/70/100	25,000	-	★	Damp	White, 3-Way
			92118	LED16A30/100/5KB	120	3	5.31	360/1400/900		5000	80	30/70/100	25,000	-	★	Damp	White, 3-Way		
			73378	LED22A50/150/827	120	6	5.31	700/2155/1600		2700	80	50/100/150	25,000	-	★	Damp	White, 3-Way		
			92120	LED22A50/150/5KB	120	3	5.31	700/2155/1600		5000	80	50/100/150	25,000	-	★	Damp	White, 3-Way		

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, expressed or implied, that such performance will be obtained under end-use conditions.

* The life rating is based on the hours of operation the lamp will provide before reaching 70% of its original rating (L70)

** Minimum order quantity = 6

★ ENERGY STAR® status: ENERGY STAR® certified. Lamps without a ★ are not ENERGY STAR® certified.

UL 1993 Environmental Requirements for LED LAMPS

Location, damp - Exterior or interior location that is normally or periodically subject to condensation of moisture in, on, or adjacent to, electrical equipment, and includes partially protected locations.

Location, dry - Location not normally subject to dampness, may include a location subject to temporary dampness, i.e., building under construction, provided ventilation is adequate to prevent an accumulation of moisture.

Location, wet - Location in which water or other liquid can drip, splash, or flow on or against electrical equipment.

Notes: 1) Product descriptions ending in "/TP" indicate a carded blister or clamshell package nested in a tray for shelf display. Cards also designed for hook display.



Product is compliant with material restriction requirements of RoHS

ENERGY STAR® is a registered U.S. mark

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<http://products.currentbyge.com>

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63563 (Rev 06/27/17)



spotlight



The energy-efficient radiance of GE's LED PAR30 short and long neck lamps is not just something you see, it's something you feel.

LED Commercial PAR30 short and long neck lamps

For efficient, long-lasting options for traditional downlight applications, GE's dimmable 12-watt LED PAR30 lamps are the perfect solution.

LOW-COST OPERATION:

- For example, using only 12 watts of energy, save over \$201 in energy costs over the rated life of a lamp versus a standard 85-watt halogen lamp based on \$0.11 per kWh
- Energy efficiency and long life mean fewer lamp replacements versus standard incandescent and halogen light sources

EXCELLENT COLOR RENDERING

- Available with a CRI of 80 - 84

COLOR TEMPERATURE

- Halogen-like color
- Available in 2700K and 3000K

LONG LIFE

- Up to 25,000 hours rated life (L70)

DIMMABLE

- Dims from 100% to 10%

BEAM PATTERNS

- Available in 35° beam pattern

ENVIRONMENTALLY CONSCIOUS

- These lamps are energy efficient and contain no lead or mercury

GE QUALITY AND RELIABILITY

- 3-year limited warranty

To learn more about saving money and energy, go to: gelighting.com/ThinkLED

When you Think LED lighting, Think GE.

ecomagination™



imagination at work

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LED PAR30 short and long neck lamps

Directional Lamps (PAR)

Bulb Shape	Base Type	Watts	Order Code	Description	Volts	Case Qty**	MOL (in)	Lumens Initial	CBCP	Initial Color Temp	CRI	Wattage Replacement	*Rated Life L70 (Hrs)	Dimmable	ENERGY STAR® Status	#Location Rating	Additional Information
Compact PAR30																	
PAR30	MED	12	98755	LED12DP303W83035	120	6	3.66	950	2600	3000	80	75W	25,000	Yes	★	Damp	Flood, 35° beam, White, STIR



Compact PAR30 Long Neck																	
PAR30L	MED	12	98811	LED12DP3L3W83035	120	6	4.61	950	2600	3000	80	75W	25,000	Yes	★	Damp	Accent, 35° beam, White, STIR



Get more information at
GELighting.com/ThinkLED

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, expressed or implied, that such performance will be obtained under end-use conditions.

* The life rating is based on the hours of operation the lamp will provide before reaching 70% of its original rating (L70)

** Minimum order quantity = 6

★ ENERGY STAR® status: ENERGY STAR® certified. Lamps without a ★ are not ENERGY STAR® certified.

UL 1993 Environmental Requirements for LED LAMPS

Location, damp - Exterior or interior location that is normally or periodically subject to condensation of moisture in, on, or adjacent to, electrical equipment and includes partially protected locations

Location, dry - Location not normally subject to dampness, may include a location subject to temporary dampness, i.e., building under construction

Location, wet - Location in which water or other liquid can drip, splash, or flow on or against electrical equipment

Notes: 1) Product descriptions ending in "7TP" indicate a carded blister or clamshell package nested in a tray for shelf display. Cards also designed for hook display.
2) LED A19 Locking device works on PC: 85791, 85792, 89898, 62182, 89899 and 89900.



Product is compliant with material restriction requirements of RoHS

ENERGY STAR® and the ENERGY STAR® logo are registered U.S. marks



www.gelighting.com

GE and the GE Monogram are trademarks of the General Electric Company. All other trademarks are the property of their respective owners. Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions. GE Lighting and GE Lighting Solutions, LLC are businesses of the General Electric Company. © 2015 GE.

76221 (Rev 03/01/17)

Solais Lighting | LR20 LED Lamp

PROJECT: GABP
MODEL: LR20/25/30K/750/WH
TYPES: 11W LED PAR 20,
12W LED PAR 20

Solais LED PAR20 Lamp Replacement

Product Description: The Solais active LED PAR20 lamp replacement has the high light output, light weight and full dimming capabilities of halogen incandescent sources – resulting in a high-performance product perfect for commercial, museum, retail and hospitality applications.

Performance Summary: Fully dimmable | Halogen PAR form factor (ANSI compliant) | Lightest LED lamps on the market – no metal heat sink | Certified to UL Standard 1993 | RoHS-compliant | Contain no lead or mercury | Dry location rating

Application: Designed for use in track and recessed fixtures (including IC rated housing)

Voltage: 120v Standard

CCT: 2700K, 3000K, 3500K*, 4000K*

Dimmable: Yes - Visit solais.com/dimming.php for compatibility list

Life: 50,000 Hours (L70)

Power Factor: .92

Base Type: E26, GU24*

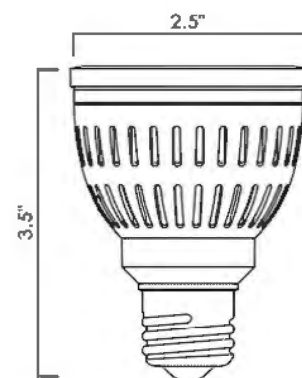
Weight (oz.): 4



Product Code	Power (Watts)	Beam Angle	CCT (K)	Lumen Output	CBCP (cd)	CRI	ENERGY STAR®
LR20/25/30K/850/_	12	25°	3000	850	4300	85	
LR20/40/30K/850/_	12	40°	3000	850	1700	85	
LR20/25/27K/800/_	12	25°	2700	800	4050	85	
LR20/40/27K/800/_	12	40°	2700	800	1600	85	
LR20/25/30K/750/_	11	25°	3000	750	3825	85	
LR20/40/30K/750/_	11	40°	3000	750	1500	85	
LR20/25/27K/675/_	11	25°	2700	675	3425	85	
LR20/40/27K/675/_	11	40°	2700	675	1350	85	

Housing Color: White (WH), Silver (SL), and Black (BK)

Lamp Images



Beam Angles

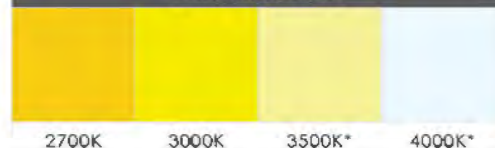


25°



40°

Color Temperature



2700K

3000K

3500K*

4000K*

Housing Colors



White

Silver

Black

Ordering Information

Example: LR20/15/30k/1600/SL/SN

Form Factor (PAR20)	Beam Spread	CCT / Lumens	Housing Color
LR20	25	27K / 675	WH - White
	40	27K / 800	SL - Silver
		30K / 750	BK - Black
		30K / 850	
		35K* / 790	
		35K* / 850	
		40K* / 790	
		40K* / 850	

* Made to Order

Solais Lighting | LR20 LED Lamp

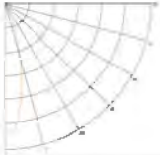
LUXIANCE[®]
powered by SOLAIS

Luxiance utilizes active cooling to remove heat from the LED system - allowing Solais LED lamps to operate cooler, resulting in superior life, light output, and performance.

THEROTTLE[™]
powered by SOLAIS

Thermal Throttle – In the event that Solais LEDs become overheated, they will dim themselves to protect your technology investments.

25° (Narrow Flood) | 850 lumens

Candela Distribution	Degree	Candela	0° Aiming Angle Horizontal Footcandles		
	0	4300	Distance to Floor	Beam Diameter	Avg. Beam Illuminance on Floors (FC)
	5	3736	6'	2.3'	92
	15	1059	8'	3.1'	52
	25	105	10'	3.9'	33
	35	34	12'	4.7'	23
	45	24	14'	5.5'	17

Multipliers are as follows: 800 lumens: 0.94 | 750 lumens: 0.89 | 675 lumens: 0.80

40° (Wide Flood) | 850 lumens

Candela Distribution	Degree	Candela	0° Aiming Angle Horizontal Footcandles		
	0	1700	Distance to Floor	Beam Diameter	Avg. Beam Illuminance on Floors (FC)
	5	1681	6'	4.4'	41
	15	1384	8'	5.8'	23
	25	556	10'	7.3'	15
	35	216	12'	8.7'	10
	45	84	14'	10.2'	7

Multipliers are as follows: 800 lumens: 0.94 | 750 lumens: 0.88 | 675 lumens: 0.79

LIMITED WARRANTY: Solais Lighting warrants that our lamps and fixtures will operate for a period of five (5) years from the date of purchase or 25,000 hours, whichever comes first, when used in accordance with package and lamp directions. If your Solais product does not last for the warranty period, please send your name and address, the product you are returning, register receipts and proof of purchase to the address listed on our website. This limited warranty does not cover products subject to misuse, electrical current fluctuation, accident, neglect, or acts of God. THIS REPLACEMENT OR REPAIR IS THE SOLE WARRANTY OBLIGATION OF SOLAIS AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES EXCLUDED.

For complete warranty terms and conditions, please see: www.solais.com/warranty

WARNING: Not for use in fully enclosed luminaires. Risk of electric shock. Use in an indoor, dry location only. This device is not intended for use with emergency exit fixtures or emergency exit lights. May not be compatible with all dimmers; please visit solais.com/dimming for up-to-date dimmer compatibility information.

NOTES: This device complies with Part 15 of the FCC Rule. This product may cause interference with other devices. If interference occurs, change the locations of the products involved. Compatible on 120v systems.



Bullet shape die cast aluminum flood with 26 Watt LED Light Engine. Comes with flood reflector installed.

Color: White

Weight: 4.8 lbs

Project: GABP

Type: 2HBLED26YW

Prepared By: Ameresco

Date:

Driver Info

Type: Constant Current
120V: 0.24A
208V: 0.15A
240V: 0.13A
277V: 0.11A
Input Watts: 27W
Efficiency: 96%

LED Info

Watts: 26W
Color Temp: 3000K
Color Accuracy: 81 CRI
L70 Lifespan: 100000
Lumens: 2,023
Efficacy: 75 LPW

Technical Specifications

Listings

UL Listing:

Suitable for wet locations. Suitable for ground mounting.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

Electrical

Driver:

Constant Current, 700mA, 120-277V with 4kV surge protection, 120V: 0.24A, 208V: 0.15A, 240V: 0.13A, 277V: 0.11A, 50/60Hz, THD < 20%, Power Factor: 99%

THD:

6.2% at 120V, 11.8% at 277V

Optical

NEMA Type:

NEMA Beam Spread of 5H x 5V

LED Characteristics

LEDs:

Multi-chip, high-output, long-life LEDs

Color Stability:

RAB LEDs exceed industry standards for chromatic stability.

Color Uniformity:

RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Construction

Cold Weather Starting:

Minimum starting temperature is -40° F (-40° C)

Thermal Management:

Superior heat sinking with external Air-Flow fins

Housing:

Precision die-cast aluminum housing, lens frame and mounting arm

Reflector:

Semi-specular, vacuum-metalized polycarbonate

Mounting:

Heavy-duty mounting arm with "O" ring seal & stainless steel screws.

Gaskets:

High-temperature silicone gaskets

Finish:

Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Green Technology:

Mercury and UV free. RoHS compliant components. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

Other

California Title 24:

HBLED26 comply with 2013 California Title 24 building and electrical codes as a commercial outdoor non-pole-mounted fixture ≤ 30 Watts when used with a photosensor control. Select catalog number PCS900 (120V) or PCS1900/277 (277V) to order a photosensor.

Country of Origin:

Designed by RAB in New Jersey and assembled in the USA by RAB's IBEW Local 3 workers.

Buy American Act Compliant:

This product is a COTS item manufactured in the United States, and is compliant with the Buy American Act.

Recovery Act (ARRA) Compliant:

This product complies with the 52.225-21 "Required Use of American Iron, Steel, and Manufactured Goods-- Buy American Act-- Construction Materials (October 2010).

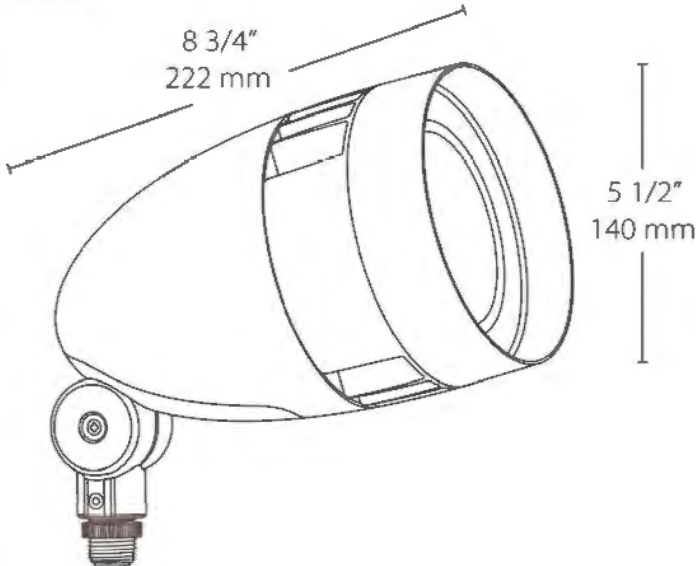
GSA Schedule:

Suitable in accordance with FAR Subpart 25.4.

HBLED26YW



Dimensions



Features

- 80% energy savings vs. PAR floods
- Mount on junction box or on RAB Mighty Post
- Patent-pending Air-Flow technology
- 5-year warranty

Ordering Matrix

Family	Watts	Finish	Dimming	Voltage
HBLED	26 = 26W	A = Bronze B = Black VG = Verde Green W = White	Blank = No Dimming /D10 = Dimmable	Blank = 120-277V /480 = 480V

PROJECT: GABP

MODEL: HBF-90W-120-90-305-CW-CM-WT-PM-FL

TYPE: N90120



THE SATURN LED HIGH BAY SERIES

146 lm/w

SpecGrade's Saturn is a round low-profile High Bay LED and provides the industries highest performance and value for Return-On-Investment on indoor open area lighting applications. This luminaire is the workhorse for warehouse, production facilities, gymnasiums and large event venues. Fitted with the latest mid-power LED chips from Lumileds and powered by a high performance Meanwell driver. This product also comes with a 10-year warranty (See www.SpecGradeLED.com for details). This series has a range from 70W to 200W at an efficacy of 146 lm/w.



AVAILABLE
IN 70W, 90W, 150W,
& 200W



EXPECTED LIFE
OVER 100,000 HRS.



IES FILES
AVAILABLE AT WWW.
SPECGRADELED.COM



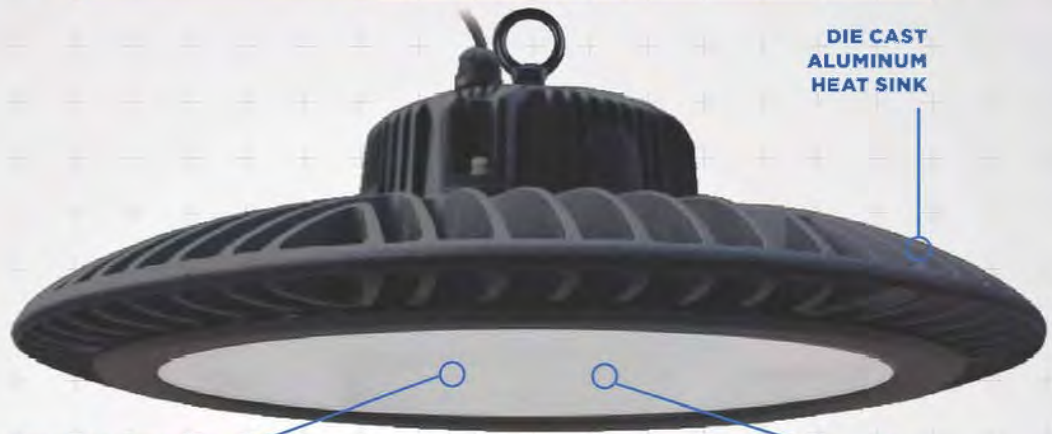
RATED IP 65



DIMMABLE
0-10V OPTIONAL

THE SATURN LED HIGH BAY

UP TO 146 lm/w



DIE CAST
ALUMINUM
HEAT SINK

LUMILEDS LUXEON-T
DELIVERS
EXCEPTIONAL
BEAM UNIFORMITY

CLEAR OR
FROSTED LENS
(OPTIONAL)

NEW!
UPLIGHT FEATURE

Uplighting feature creates a more open and pleasing environment by up-lighting areas above your application. This unique feature enhances all applications with very little additional cost.

STANDARD COLORS:
BLACK AS SHOWN
OR WHITE

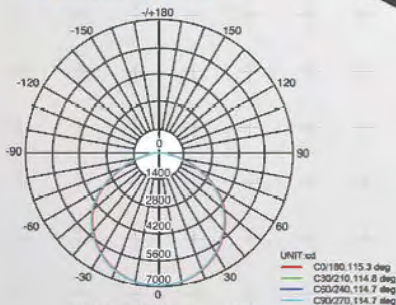
TOTAL 8W LED
BAR UPLIGHTS
(APPROX. 700 LM
/60V DC)

UPLIGHT
LIGHT COLOR
TEMPERATURE
MATCHES
DOWN LIGHT



UPLIGHT FEATURE
AUTOMATICALLY
ON WITH
DOWNLIGHT

PHOTOMETRICS



HBF
(WITHOUT ACRYLIC LENS)
60° & 120° BEAM

THE SATURN LED HIGH BAY

70W, 90W,
150W & 200W

**REPLACES UP TO A 500-WATT
METAL HALIDE FIXTURE**



NEW!
UPLIGHTING
FEATURE
(PATENT PENDING)

SPECIFICATIONS

Expected life: Over 100,000 hrs.
Rating: IP 65
Color Rendering Index (CRI): >70,
80 CRI (optional)
Operating temp: -40°C - 65°C
Power factor: >0.98%
Input line voltage: 90-305 VAC
347-480V (optional)
Input line frequency: 50/60 Hz
LED efficiency:
- warm white, 131 lm/w
- natural white, 141 lm/w
- cool white, 146 lm/w

MISC SPECS

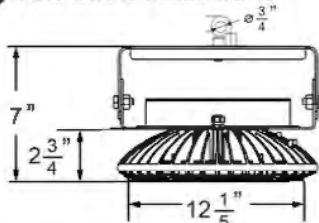
LED chips: Lumileds Luxeon-T
Driver: UL approved Meanwell
(Philips optional)
Dimmable 0-10V (optional)
Occupancy sensor: (optional)
Hanging weight:
70W & 90W: 8 lbs.,
150W & 200W: 13.5 lbs.
Nataatorium finish (optional)

MATERIALS

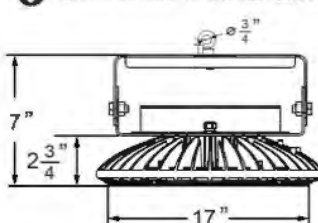
Heat sink housing:
Anodized aluminum
LED Shield: Lexan
(options: clear & frosted)
Finish: Powder coated
(standard colors black & white)
Dropped acrylic lens (optional)

HBF SURFACE MOUNT CONFIGURATION WITH 480V DRIVER

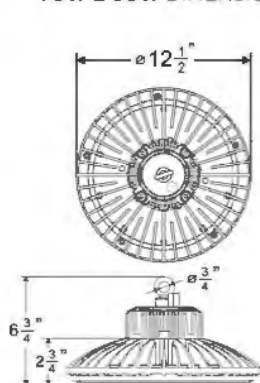
70W & 90W DIMENSIONS



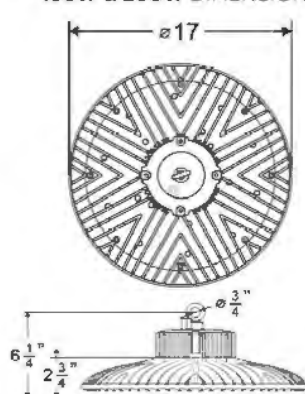
150W & 200W DIMENSIONS



(CM) CABLE MOUNT 70W & 90W DIMENSIONS



(CM) CABLE MOUNT 150W & 200W DIMENSIONS



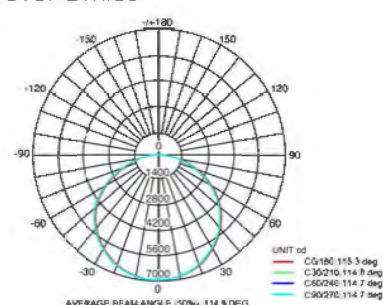
(PM) PENDENT MOUNT OPTION (DL) DROPPED ACRYLIC LENS



(OS) OCCUPANCY SENSOR OPTION



PHOTOMETRICS

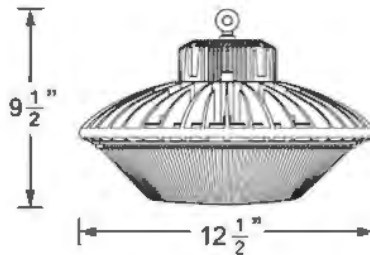


HBF WITH OPTIONAL DROPPED ACRYLIC LENS

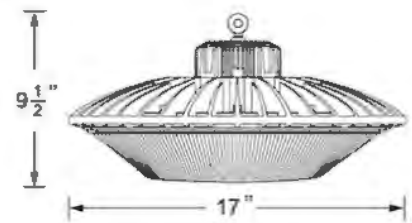
↓ **HBF CABLE MOUNT (CM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



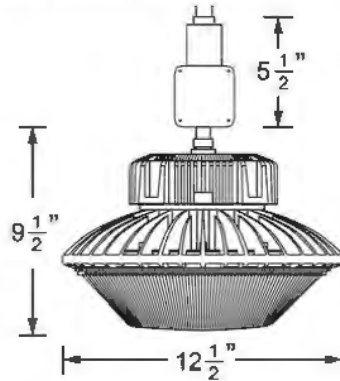
↓ **150W & 200W DIMENSIONS**



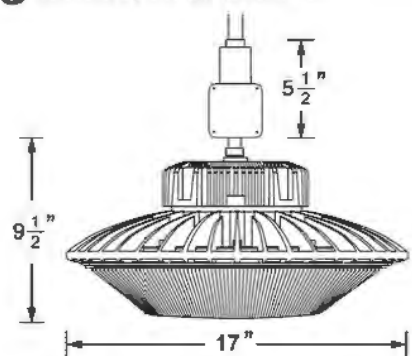
↓ **HBF PENDENT MOUNT (PM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



↓ **150W & 200W DIMENSIONS**



PRODUCT SPECIFICATIONS | ORDERING INFORMATION: THE SATURN HBF 70W, 90W, 150W, 200W

SERIES	WATTS	BEAM	INPUT VOLT.	COLOR TEMPERATURES DELIVERED LUMENS			MOUNT	FINISH	OPTIONS	LENS
				WW 3500K	NW 4100K	CW 5000K				
HBF	70W	60°	90-305V	9842 lm	10300 lm	10360 lm	CM Cable Mount	WT White (STD)	OS Occupancy Sensor WG Wire Guard DIM 0-10V Dimming UL Up Light PM Pendant SM Surface Mount	CL Clear Lens
	90W	120°	347-480V (optional)	12021 lm	12654 lm	13320 lm		BL Black (STD)		FL Frosted Lens
	150W			21310 lm	22431 lm	23612 lm		RAL Optional Finish		DL Dropped Acrylic Lens
	200W			26780 lm	28190 lm	29674 lm		NAT Natorium Finish (optional)		
HBF	90W	120	90-305	CW			CM	WT	PM	FL

Due to continuous improvement and innovation, product appearance and specifications may change without notice. Actual performance may differ as a result of end-user environment and application.

REVIT & IES Files are located at www.SpecGradeLED.com

WW | Warm White NW | Natural White CW | Cool White



PROJECT: GABP

MODEL: HBF-90W-120-90-305-CW-CM-WT-PM-WG-FL

TYPE: N90120WG



THE SATURN LED HIGH BAY SERIES

146 lm/w

SpecGrade's Saturn is a round low-profile High Bay LED and provides the industries highest performance and value for Return-On-Investment on indoor open area lighting applications. This luminaire is the workhorse for warehouse, production facilities, gymnasiums and large event venues. Fitted with the latest mid-power LED chips from Lumileds and powered by a high performance Meanwell driver. This product also comes with a 10-year warranty (See www.SpecGradeLED.com for details). This series has a range from 70W to 200W at an efficacy of 146 lm/w.



AVAILABLE
IN 70W, 90W, 150W,
& 200W



EXPECTED LIFE
OVER 100,000 HRS.



IES FILES
AVAILABLE AT WWW.
SPECGRADELED.COM



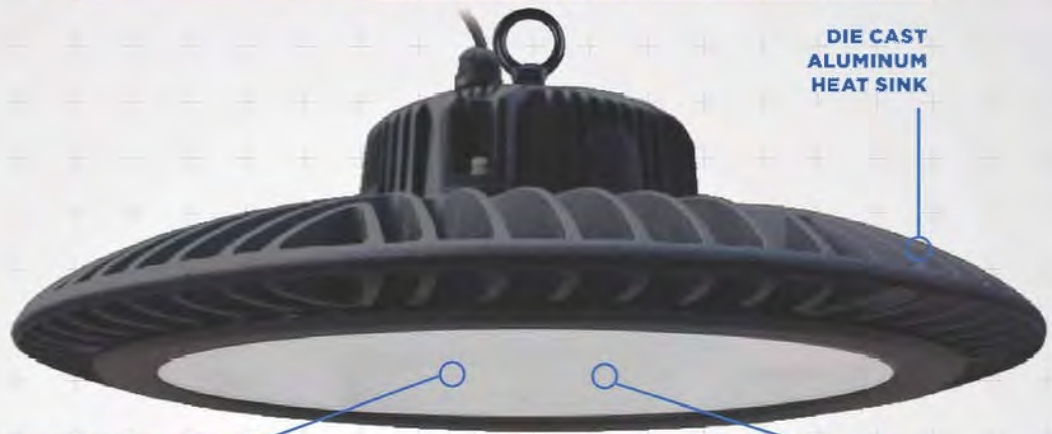
RATED IP 65



DIMMABLE
0-10V OPTIONAL

THE SATURN LED HIGH BAY

UP TO 146 lm/w



DIE CAST
ALUMINUM
HEAT SINK

LUMILEDS LUXEON-T
DELIVERS
EXCEPTIONAL
BEAM UNIFORMITY

CLEAR OR
FROSTED LENS
(OPTIONAL)

NEW!
UPLIGHT FEATURE

Uplighting feature creates a more open and pleasing environment by up-lighting areas above your application. This unique feature enhances all applications with very little additional cost.

STANDARD COLORS:
BLACK AS SHOWN
OR WHITE

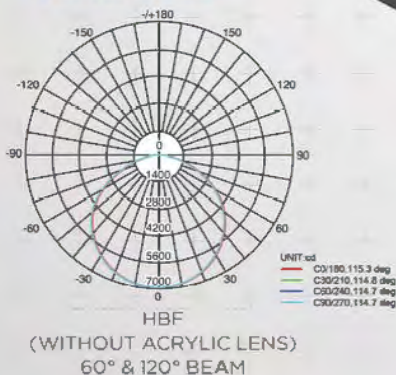
TOTAL 8W LED
BAR UPLIGHTS
(APPROX. 700 LM
/60V DC)

UPLIGHT
LIGHT COLOR
TEMPERATURE
MATCHES
DOWN LIGHT



UPLIGHT FEATURE
AUTOMATICALLY
ON WITH
DOWNLIGHT

PHOTOMETRICS



THE SATURN LED HIGH BAY

70W, 90W,
150W & 200W

REPLACES UP TO A 500-WATT
METAL HALIDE FIXTURE



NEW!
UPLIGHTING
FEATURE
(PATENT PENDING)

SPECIFICATIONS

Expected life: Over 100,000 hrs.
Rating: IP 65
Color Rendering Index (CRI): >70,
80 CRI (optional)
Operating temp: -40°C - 65°C
Power factor: >0.98%
Input line voltage: 90-305 VAC
347-480V (optional)
Input line frequency: 50/60 Hz
LED efficiency:
- warm white, 131 lm/w
- natural white, 141 lm/w
- cool white, 146 lm/w

MISC SPECS

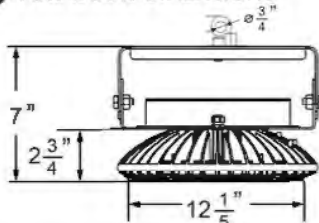
LED chips: Lumileds Luxeon-T
Driver: UL approved Meanwell
(Philips optional)
Dimmable 0-10V (optional)
Occupancy sensor: (optional)
Hanging weight:
70W & 90W: 8 lbs.,
150W & 200W: 13.5 lbs.
Nataatorium finish (optional)

MATERIALS

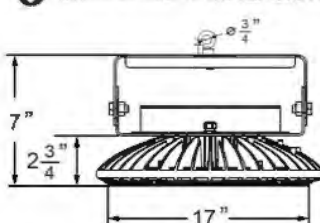
Heat sink housing:
Anodized aluminum
LED Shield: Lexan
(options: clear & frosted)
Finish: Powder coated
(standard colors black & white)
Dropped acrylic lens (optional)

HBF SURFACE MOUNT CONFIGURATION WITH 480V DRIVER

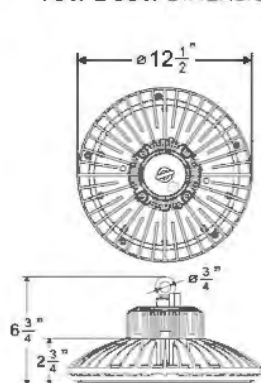
70W & 90W DIMENSIONS



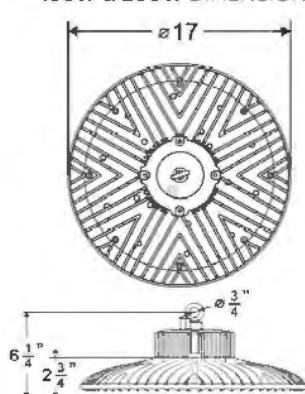
150W & 200W DIMENSIONS



(CM) CABLE MOUNT 70W & 90W DIMENSIONS



(CM) CABLE MOUNT 150W & 200W DIMENSIONS



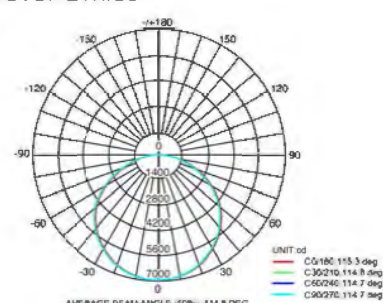
(PM) PENDENT MOUNT OPTION (DL) DROPPED ACRYLIC LENS



(OS) OCCUPANCY SENSOR OPTION



PHOTOMETRICS

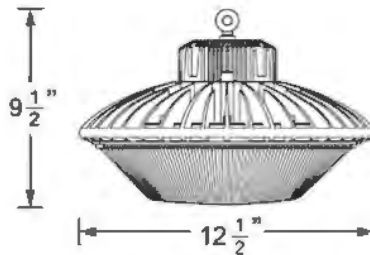


HBF WITH OPTIONAL DROPPED ACRYLIC LENS

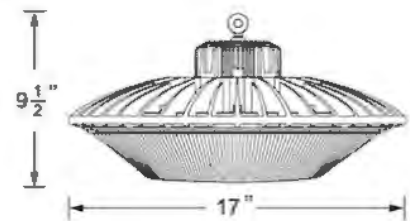
↓ **HBF CABLE MOUNT (CM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



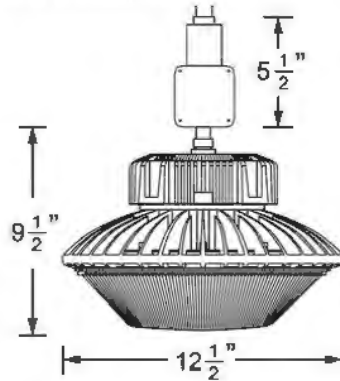
↓ **150W & 200W DIMENSIONS**



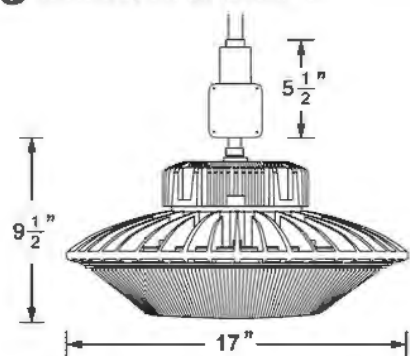
↓ **HBF PENDENT MOUNT (PM)**
(SHOWN: 120-277V)



↓ **70W & 90W DIMENSIONS**



↓ **150W & 200W DIMENSIONS**



PRODUCT SPECIFICATIONS | ORDERING INFORMATION: THE SATURN HBF 70W, 90W, 150W, 200W

SERIES	WATTS	BEAM	INPUT VOLT.	COLOR TEMPERATURES DELIVERED LUMENS			MOUNT	FINISH	OPTIONS	LENS
				WW 3500K	NW 4100K	CW 5000K				
HBF	70W	60°	90-305V	9842 lm	10300 lm	10360 lm	CM Cable Mount	WT White (STD)	OS Occupancy Sensor WG Wire Guard DIM 0-10V Dimming UL Up Light PM Pendant SM Surface Mount	CL Clear Lens
	90W	120°	347-480V (optional)	12021 lm	12654 lm	13320 lm		BL Black (STD)		FL Frosted Lens
	150W			21310 lm	22431 lm	23612 lm		RAL Optional Finish		DL Dropped Acrylic Lens
	200W			26780 lm	28190 lm	29674 lm		NAT Natorium Finish (optional)		
HBF	90W	120	90-305	CW			CM	WT	PM / WG	FL

Due to continuous improvement and innovation, product appearance and specifications may change without notice. Actual performance may differ as a result of end-user environment and application.

REVIT & IES Files are located at www.SpecGradeLED.com

WW | Warm White NW | Natural White CW | Cool White



DESCRIPTION

The TopTier™ parking garage, canopy and low-bay luminaire is an innovative solution that delivers an unparalleled combination of performance and visual comfort. The patented WaveStream™ optical technology blocks the line of sight from the LED light sources to the observer, while extracting the maximum amount of light on task. This approach results in a high level of uniformity and vertical footcandles that enhances safety in the application environment. The TopTier luminaire is UL/cUL listed for wet locations, IP66 and 3G vibration rated.

Catalog #	TT-C5-LED-E1-CQ-7050	Type
Project	GABP	MH16LEDTT
Comments	Home Bullpen	Date
Prepared by	Ameresco	

SPECIFICATION FEATURES

Construction

One-piece, low copper die-cast aluminum housing provides a clean and symmetric housing. Formed aluminum top is sloped to prevent bird nesting. Metal electrical tray allows for easy electrical access for field servicing.

Optics

Unique optical distributions are accomplished using various combinations of reflective backing plates and WaveStream optical technology. The optical Waveguide is manufactured using precision injection molded acrylic. The optics contain features that form a repeatable and redundant pattern to direct light in a precisely prescribed distribution. The drive lane distribution is specifically designed for locations with one direction of travel to optimally direct light in the same direction of travel for maximum glare control. For additional glare control and visual comfort with the Wide distribution, specify the SG option which adds a Solite® glass lens that works in combination with the Waveguide lens and reflective backing plate.

Offered standard in 4000K (+/- 275K) CCT, optional 3000K, 5000K and 6000K. Minimum 70 CRI. Optional uplight feature provides a dedicated light engine (17W) to maintain consistent output across fixtures and reduces cave effect. Nominal uplight output is 800 lumens and ranges from 10%-30% total light output depending on the lumen package.

Electrical

LED driver(s) are mounted to metal electrical tray for optimal thermal performance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming driver(s), specify 5LTD for Fifth Light DALI driver(s). Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. Greater than 90% lumen maintenance expected at 60,000 hours, based off LM-80 test data and TM-21. Suitable for ambient temperature applications from -40°C (-40°F) to 40°C (104°F). For 50°C (122°F) applications, specify the HA high ambient option. IP66 rated against the ingress of dust and water.

Mounting

Standard fixture mounts to a square or octagonal 4" surface or recessed j-box via heavy-gauge quick mount bracket. Optional mounting methods include trunnion mount and wall mount. With the addition of a field supplied wet location j-box, the luminaire can be pendant mounted using the factory supplied decorative pendant mount kit or a suitable field supplied pendant.

Finish

Housing finished in white super durable TGIC polyester powder coat paint with 2.5 mil nominal thickness for superior protection against fade and wear. Optional colors include black, bronze, grey, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.



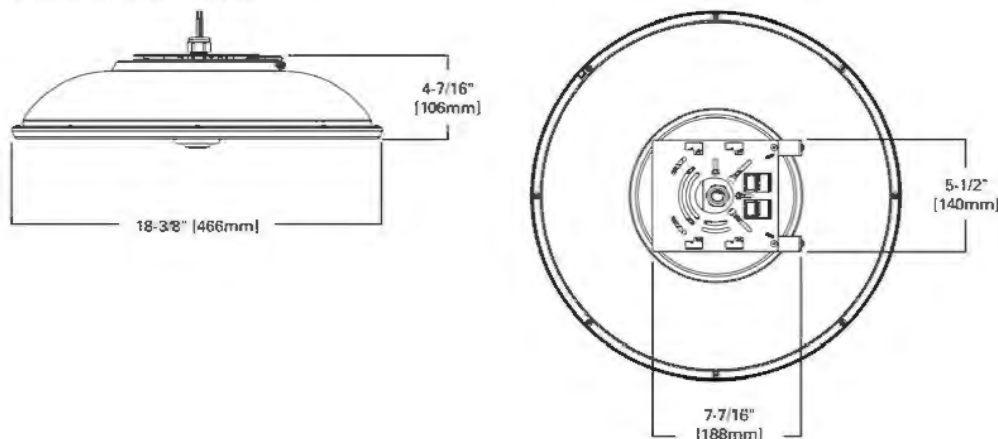
TT TOPTIER LED

Solid State LED

PARKING GARAGE/
CANOPY/
LOW-BAY LUMINAIRE

DIMENSIONS

SURFACE OR PENDANT MOUNT



powered by
fifthlight
Technology



CERTIFICATION DATA

UL/cUL Wet Location Listed
3G Vibration Rated
LM79 / LM80 Compliant
IP66 Rated
ISO 9001
DesignLights Consortium™ Qualified*

ENERGY DATA

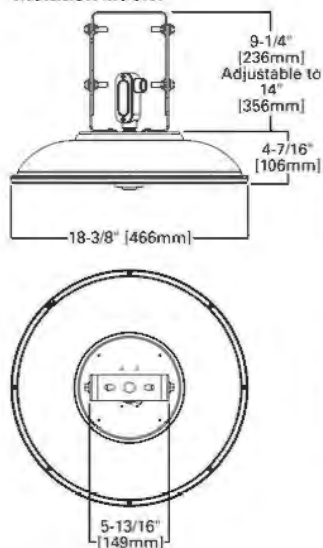
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz,
480V/60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

SHIPPING DATA

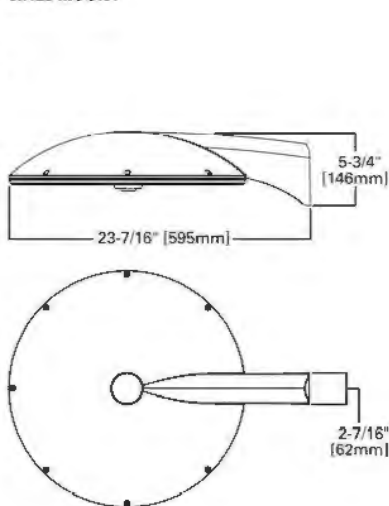
Approximate Net Weight:
16 lbs. (7.2 kgs.)

ADDITIONAL MOUNTING OPTIONS

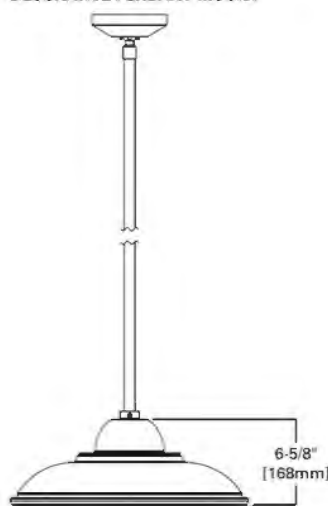
TRUNNION MOUNT



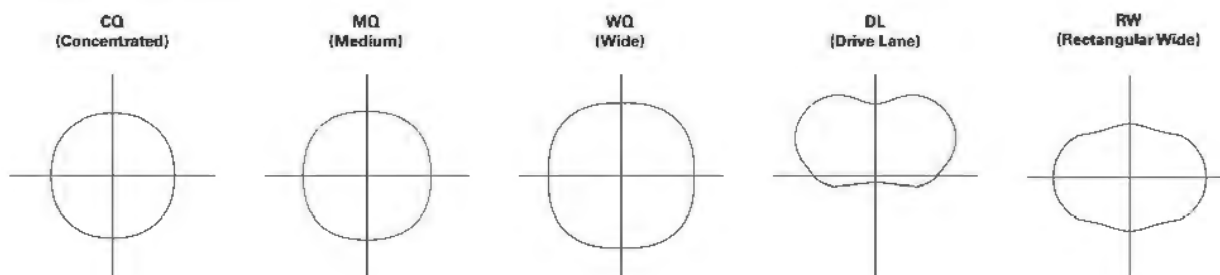
WALL MOUNT



DECORATIVE PENDANT MOUNT



OPTICAL DISTRIBUTIONS



LUMEN MAINTENANCE

Ambient Temperature	Lumen Maintenance				
	25,000 Hours	50,000 Hours	60,000 Hours TM-21 Rating	100,000 Hours	Theoretical L70 (Hours) Per TM-21 Data
C1 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 96%	> 94%	> 94%	> 93%	> 500,000
50°C	> 95%	> 94%	> 93%	> 93%	> 400,000
C2 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 95%	> 94%	> 93%	> 91%	> 500,000
50°C	> 95%	> 93%	> 92%	> 90%	> 400,000
C3 Lumen Package					
25°C	> 96%	> 93%	> 93%	> 89%	> 300,000
40°C	> 95%	> 91%	> 90%	> 85%	> 240,000
50°C	> 95%	> 90%	> 89%	> 83%	> 200,000
C4 Lumen Package					
25°C	> 96%	> 95%	> 95%	> 93%	> 500,000
40°C	> 95%	> 92%	> 92%	> 88%	> 300,000
50°C	> 94%	> 91%	> 90%	> 85%	> 250,000
C5 Lumen Package					
25°C	> 96%	> 93%	> 92%	> 88%	> 300,000
40°C	> 94%	> 90%	> 89%	> 83%	> 200,000
C6 Lumen Package					
25°C	> 95%	> 92%	> 90%	> 86%	> 250,000
40°C	> 95%	> 92%	> 91%	> 86%	> 250,000

POWER AND LUMENS

Lumen Package			C1	C2	C3	C4	C5	C6
Power (Wattage)			28	34	45	58	77	108
Current @ 120V (A)			0.26	0.31	0.41	0.52	0.69	0.95
Current @ 277V (A)			0.13	0.14	0.19	0.24	0.30	0.41
3000K CCT	Lumens	CQ Concentrated	3,293	3,997	5,256	5,486	7,107	9,084
	Lumens per Watt		118	118	117	95	92	84
	BUG Rating		B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1
	Lumens	MQ Medium	3,357	4,074	5,357	5,591	7,243	9,259
	Lumens per Watt		120	120	119	96	94	86
	BUG Rating		B2-U0-G1	B2-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2
	Lumens	WQ Wide	3,101	3,764	4,949	5,165	6,691	8,554
	Lumens per Watt		111	111	110	89	87	79
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3
	Lumens	RW Rectangular Wide	2,726	3,308	4,350	4,540	5,882	7,519
	Lumens per Watt		97	97	97	78	76	70
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3
	Lumens	DL Drive Lane Type 4	2,440	2,938	4,152	--	--	--
	Lumens per Watt		73	71	62	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--
4000K CCT	Lumens	CQ Concentrated	3,848	4,670	6,141	7,273	9,423	12,046
	Lumens per Watt		137	137	136	126	123	111
	BUG Rating		B2-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens	MQ Medium	3,922	4,760	6,259	7,413	9,604	12,277
	Lumens per Watt		140	140	139	128	125	114
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	WQ Wide	3,623	4,397	5,782	6,848	8,872	11,342
	Lumens per Watt		129	129	128	118	115	105
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3
	Lumens	RW Rectangular Wide	3,185	3,865	5,082	6,019	7,799	9,969
	Lumens per Watt		114	114	113	104	101	92
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	DL Drive Lane Type 4	3,235	3,895	5,506	--	--	--
	Lumens per Watt		98	95	83	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--
5000K CCT	Lumens	CQ Concentrated	3,645	4,424	5,817	7,204	9,334	11,932
	Lumens per Watt		130	130	130	124	121	110
	BUG Rating		B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens	MQ Medium	3,716	4,509	5,929	7,343	9,513	12,161
	Lumens per Watt		133	133	132	127	124	113
	BUG Rating		B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	WQ Wide	3,433	4,166	5,478	6,783	8,788	11,235
	Lumens per Watt		123	123	122	117	114	104
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	RW Rectangular Wide	3,017	3,662	4,815	5,962	7,725	9,875
	Lumens per Watt		108	108	107	103	100	91
	BUG Rating		B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3
	Lumens	DL Drive Lane Type 4	3,205	3,858	5,454	--	--	--
	Lumens per Watt		96	93	82	--	--	--
	BUG Rating		B1-U0-G2	B1-U0-G2	B2-U0-G3	--	--	--

NOTE: Nominal data with 70 CRI for 4000K and 5000K, 80 CRI for 3000K. Wattage values not valid for drive lane optic. For configurations that include the drive lane optic, glass, up light or occupancy sensor options refer to the specific IES files for wattage, BUG rating and lumen output data.

CONTROL OPTIONS

0-10V

This fixture is offered standard with 0-10V dimming driver(s). External 0-10V dimming wire leads are provided for use with a lighting control panel or other control methods except when PER7, 5LTD, MS/DIM or LWR is specified.

Photocontrol (P, R and PER7)

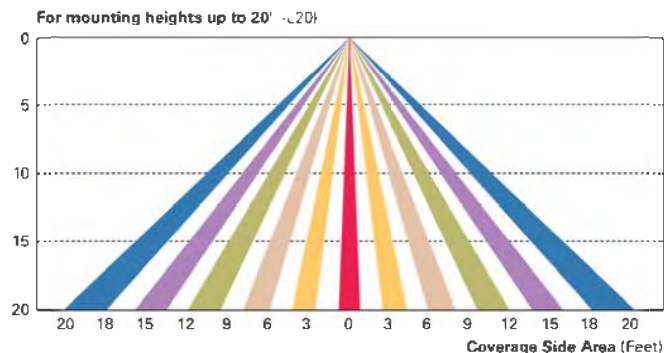
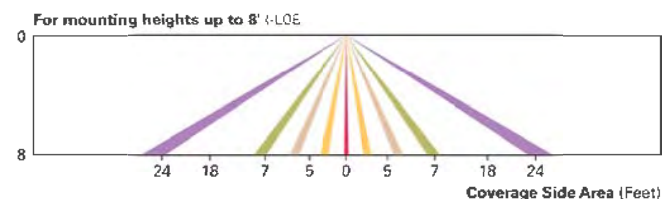
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes.

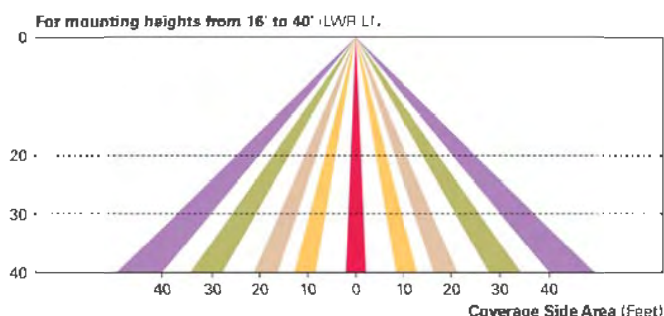
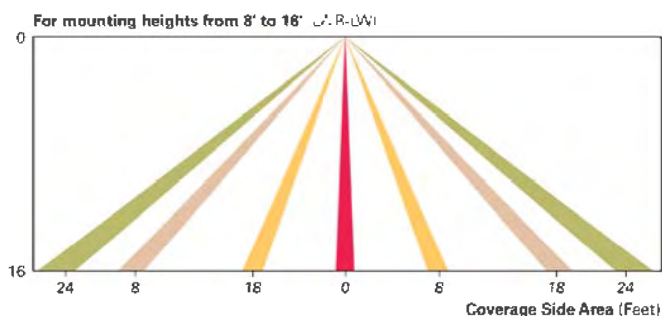
These occupancy sensors include an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting. The factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 8'-40'.

**LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)**

The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.



ORDERING INFORMATION

Sample Number: TT-C2-LED-E1-WQ-AP

Product Family	Lumen Package	Lamp Type	Voltage	Distribution	Mounting	Color
TT=TopTier ¹	C1=Nominal 3,500 Lumens C2=Nominal 4,500 Lumens C3=Nominal 6,000 Lumens C4=Nominal 7,500 Lumens C5=Nominal 9,500 Lumens C6=Nominal 12,000 Lumens	LED=Solid State Light Emitting Diodes	E1=Electrical (120-277V) 347=347V 480=480V ²	CQ=Concentrated MQ=Medium WQ=Wide RW=Rectangular Wide DL=Drive Lane / Type 4 ³	[BLANK]=Surface or Pendant Mount TMB=Trunnion Mount with Connection Box WM=Wall Mount DPM=Decorative Pendant Mount ⁴	[BLANK]=White AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic
Options (Add as Suffix)				Accessories (Order Separately)		
8030 =80 CRI 3000K 7060 =70 CRI 6000K 7050 =70 CRI 5000K UPL =Uplight ^{5, 6} 30L =30" Wire Leads ⁷ HA =50°C High Ambient ⁸ CG =Clear Glass ⁹ SG =Solite® Glass ¹⁰ TR =Tamper Resistant Hardware X =Driver Surge Protection Only SLTD =Fifth Light DALI Drivers ^{2, 11} IBP =Integral Battery Pack ¹² ICP =Integral Cold Weather Battery Pack ¹² MS/DIM-L08 =Dimming Occupancy Sensor (<9' Mounting) ^{13, 14} MS/DIM-L20 =Dimming Occupancy Sensor (9' - 20' Mounting) ^{13, 14} LWR-LW =LumaWatt Wireless Sensor, Wide Lens 8' - 16' Mounting Height ^{14, 15} LWR-LN =LumaWatt Wireless Sensor, Narrow Lens 16' - 40' Mounting Height ^{14, 15}				FSIR-100 =Wireless Configuration Tool for Occupancy Sensor MA1252 = Replacement 10kV Circuit Module TT/WG =Wire Guard TT/BG-XX =Bird Guard ^{16, 17} DPMS36-XX =36" Pendant Mount Stem ¹⁸ DPMS48-XX =48" Pendant Mount Stem ¹⁸ DPMS96-XX =96" Pendant Mount Stem ¹⁸		

- NOTES:**
- DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Mode's for details.
 - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
 - C1-C3 lumen packages only.
 - Order stem kit accessory.
 - Extended lead times apply.
 - Additional 17W. Provides 800 nominal lumens. Available in 3000K and 4000K with the C1-C4 lumen packages at a 25°C maximum ambient temperature. Not available with 347, 480, TMB, WM, HA, SLTD, IBP or ICP.
 - Not available with TMB or DPM mounting.
 - HA not available with C5 and C6 lumen packages or SLTD, IBP and ICP options.
 - Not available with CQ.
 - Standard with CQ option available with WQ only.
 - Replace E1 with specific voltage (120, 208, 240, 277V available). Not available with C6 lumen package, HA, IBP, ICP or sensor options. Multiply published IES file by .95 when used with the C5 lumen package.
 - Replace E1 with specific voltage (120V and 277V available). 0°C minimum with IBP, -20°C minimum with ICP, 25°C maximum ambient temperature. Not available with WM, DPM, SLTD or HA.
 - The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
 - Includes integral photocell.
 - LumaWatt wireless sensors are factory installed only requiring network components in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
 - Specify color in place of XX.
 - Designed for use with pendant mounting only.

DESCRIPTION

Recessed 8-inch shallow lens LED downlight is available in multiple lumens and optical distribution combinations. Choose between 3000K, 3500K and 4000K CCT in the field with seleCCTable™ technology. Use to retrofit most nominal 7-inch, 8-inch, and 9-inch open frames and for international new construction where local codes permit. Coordinated recessed and surface mount versions are also available. Use for general area lighting where high efficiency and long life are required.

SPECIFICATION FEATURES

MECHANICAL

Frame

Die formed galvanized steel frame pre-assembles to LED module providing one-piece construction for ease of retrofit / installation. UL listed or classified for use WITH Cooper/Eaton and other manufacture's housings. See Housing Compatibility Chart or consult installation instructions for specific housing types.

OPTICAL

LED Module

Self-flanged aluminum housing maximizes thermal performance. LED array uses a plurality of mid-power surface mount LED packages delivering high flux and excellent efficiency. Switch selectable 3000K, 3500K or 4000K CCT reduces ordering complexity and provides flexibility in the field. Color point accuracy within 3 SDCM and 80 CRI minimum provides color quality and uniformity. Passive thermal management achieves L70 at 50,000 hours. Integral connector allows quick connection to frame/ housing flex.

Shielding

Field interchangeable lenses available in either medium or wide distributions. Optional field installed wall wash optic provides 360° rotation, allowing for the housing to be installed in any orientation.

Retention

Module retained with two mouse trap springs holding the flange tightly to the finished ceiling surface.

ELECTRICAL

Junction Box

(3) 1/2" and (2) 3/4" trade size pry outs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

Driver

Integral UNV 120 - 277V 50/60 Hz constant current driver provides noise free operation. Continuous, flicker-free dimming from 100% to 1% using 0 -10V analog control.

Emergency Option

Available with Sure-Lites EBPLED 7 or 14 watt emergency battery pack with remote test switch / charge indicator light. Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting.

COMPLIANCE

- cULus listed/certified, wet location labeled for covered ceilings.
- IP55 rated
- IC rated to 2000 lumens
- Thermally protected for 3000 and 4000 lumen versions. Insulation must be kept 3" from top and sides.
- Airtight per ASTM-E283
- Optional City of Chicago environmental air (CCEA) marking for plenum applications.
- EMI/RFI emissions per FCC 47CFR Part 18 non-consumer limits.
- Contains no mercury or lead and RoHS compliant.
- Photometric testing in accordance with IES LM-79-08 and TM-30-15.
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.
- Can be used to comply with California Title 24 Non-Residential Lighting Controls requirements as a LED Luminaire.
- ENERGY STAR® Certified. See energystar.gov website for current information.

WARRANTY

Limited 5-year warranty, see website for details.
www.eaton.com/lighting/legal

Catalog #	PR8R15D010 With PR8M12MDMMS	Type
Project	GABP	F4LED
Comments		Date
Prepared by	Ameresco	



PR8R10
PR8R15
PR8R20
PR8R30
PR8R40

PR8M12
PR8M34

1000, 1500, 2000,
3000 & 4000
Lumen Series

8-Inch Shallow Lens
LED Recessed
Downlight Retrofit

Medium, Wide &
Wall Wash Distribution

seleCCTable™



Lumens	1000 Series	
Input Voltage	120V	277V
Input Current	0.09A	0.04A
Input Power	10.5W	11.2W
Lumens	1500 Series	
Input Voltage	120V	277V
Input Current	0.125A	0.06A
Input Power	15W	15.5W

Lumens	2000 Series	
Input Voltage	120V	277V
Input Current	0.18A	0.08A
Input Power	22W	22.5W
Lumens	3000 Series	
Input Voltage	120V	277V
Input Current	0.24A	0.10A
Input Power	28.5W	28.5W

Lumens	4000 Series	
Input Voltage	120V	277V
Input Current	0.36A	0.16A
Input Power	43.5W	43W
THD: ≤ 20%		
PF: ≥ 0.90		
T Ambient -30 - +40°C		
Sound Rating ≤ 22dba		

ORDERING INFORMATION

FRAME SAMPLE NUMBER: PR8R40D010

A complete luminaire consists of a frame and LED module, order separately.

Frame	Lumens	Driver	Options ^{1,2}
PR8R = 8" aperture LED downlight frame PR8RCP = 8" aperture LED downlight frame, CCEA listed for City of Chicago plenum requirements	10 = 1,000 lumens (nominal) 15 = 1,500 lumens (nominal) 20 = 2,000 lumens (nominal) 30 = 3,000 lumens (nominal) 40 = 4,000 lumens (nominal)	D010 = 120-277V 50/60Hz, 0-10V 100% to 1% dimming	REM7 = 7W emergency battery pack with remote test switch and charge indicator light REM14 = 14W emergency battery pack with remote test switch and charge indicator light

MODULE SAMPLE NUMBER: PR8M34MDMW

A complete luminaire consists of a frame and LED module, order separately.

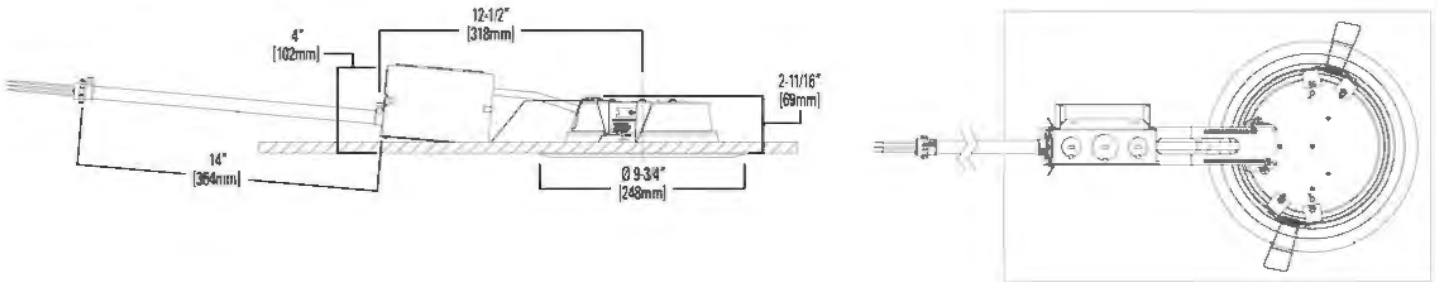
LED Module	Shielding	Flange Finish
PR8M12 = Downlight LED module for PR8 series, provides 1000, 1500 or 2000 lumens (nominal) depending on connected frame type PR8M34 = Downlight LED module for PR8 series, provides 3000 or 4000 lumens (nominal) depending on connected frame type	MD = Medium distribution plastic lens WD = Wide distribution plastic lens	MW = Matte White MB = Matte Black MMS = Matte Metallic Silver

Accessories

PR8WW = Field Installed wall wash optic for PR8M12 and PR8M34 modules
PR8MD = Replacement 8" medium distribution lens for PR8M12 and PR8M34 modules
PR8WD = Replacement 8" wide distribution lens for PR8M12 and PR8M34 modules
PR8TC = Specular clear trim insert for PR8M12 and PR8M34 modules
PR8TH = Semi-specular clear trim insert for PR8M12 and PR8M34 modules
ABR10P = Oversize trim ring for max 10" ceiling opening - 11.3" flange
PORLWTPD1 = LumaWatt Pro Wireless Sensor Kit (0-10V only)

Notes: 1. REM not available with CP version.
2. REM UL qualified for US only (not Canada).

DIMENSIONS



HOUSING COMPATIBILITY

Manufacturer	Series	Nom. Size	Housing Aperture	Housing Catalog #	Ceiling Aperture	Retrofit Kit	Oversize Trim Ring
Cooper	PDS	7	7.625	PD7	7.7" MIN 9" MAX	PR8R	None
Cooper	Portfolio	7	7.700	C7, CLW7, HD7, MD7			
Juno	Indy Performance Series (Elate)	8	7.813	A8, C8, M8			
Juno		8	7.813	CH8 and CV8			
Juno		8	8.188	MX8 and TC908			
Lithonia	Gotham	8	8.438	AF-8 and LG-8			
Lithonia	Gotham	8	8.563	GRSF			
Philips	Omega	8	8.563	OM8			
Lithonia	Commercial	8	8.563	LF8, LP8			
Cooper/Eaton	Portfolio	8	8.730	C8			
Philips	Lightolier Calculite	8	8.750	S8			
Philips	Capri	8	8.875	CM8			
Cooper/Eaton	PDS	8	8.875	PD8			
Juno		9	8.938	C9H			
Juno	Indy Performance Series (Elate)	9	9.000	C9 and M9			
Philips	Capri	10	9.625	CM10	9" MIN 10.3" MAX	PR8R	ABR10 (accessory)
Philips	Omega	10	9.813	OM10 and S10			
Juno	Indy Performance Series (Elate)	10	9.875	M10			
Cooper/Eaton	Portfolio	9	10.000	C9			
Lithonia	Gotham	10	10.125	GRSF			
Lithonia	Gotham	10	10.125	AF, LGF, LGH, AH, A			
Lithonia	Gotham	10	10.250	GRSH			

LUMEN TABLES

1000 Lumen, 10.5W	3000K		3500K		4000K	
	Lumens	LPW	Lumens	LPW	Lumens	LPW
Medium Distribution Lens, Matte White Trim	1176	112	1326	126	1245	119
Medium Distribution Lens, Matte Black Trim	1072	102	1209	115	1134	108
Medium Distribution Lens, Matte Metallic Silver Trim	1137	108	1282	122	1203	115
Wide Distribution Lens, Matte White Trim	1172	112	1322	126	1240	118
Wide Distribution Lens, Matte Black Trim	1063	101	1198	114	1125	107
Wide Distribution Lens, Matte Metallic Silver Trim	1126	107	1270	121	1192	114
Wall Wash Optic, Matte White Trim	996	95	1130	108	1061	101

1500 Lumen, 15W	3000K		3500K		4000K	
	Lumens	LPW	Lumens	LPW	Lumens	LPW
Medium Distribution Lens, Matte White Trim	1597	106	1800	120	1690	113
Medium Distribution Lens, Matte Black Trim	1455	97	1641	109	1540	103
Medium Distribution Lens, Matte Metallic Silver Trim	1543	103	1740	116	1633	109
Wide Distribution Lens, Matte White Trim	1591	106	1794	120	1684	112
Wide Distribution Lens, Matte Black Trim	1443	96	1627	108	1527	102
Wide Distribution Lens, Matte Metallic Silver Trim	1529	102	1724	115	1618	108
Wall Wash Optic, Matte White Trim	1349	90	1534	102	1440	96

2000 Lumen, 22W	3000K		3500K		4000K	
	Lumens	LPW	Lumens	LPW	Lumens	LPW
Medium Distribution Lens, Matte White Trim	2186	99	2465	112	2313	105
Medium Distribution Lens, Matte Black Trim	1992	91	2246	102	2108	96
Medium Distribution Lens, Matte Metallic Silver Trim	2113	96	2382	108	2236	102
Wide Distribution Lens, Matte White Trim	2179	99	2456	112	2305	105
Wide Distribution Lens, Matte Black Trim	1975	90	2227	101	2090	95
Wide Distribution Lens, Matte Metallic Silver Trim	2093	95	2360	107	2215	101
Wall Wash Optic, Matte White Trim	1847	84	2100	95	1971	90

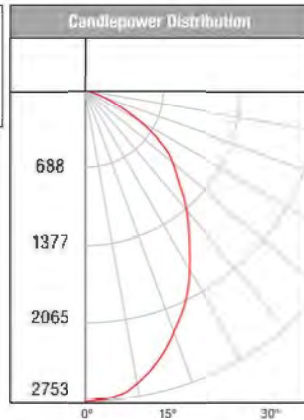
3000 Lumen, 28.5W	3000K		3500K		4000K	
	Lumens	LPW	Lumens	LPW	Lumens	LPW
Medium Distribution Lens, Matte White Trim	3217	113	3630	127	3376	118
Medium Distribution Lens, Matte Black Trim	2917	102	3292	116	3062	107
Medium Distribution Lens, Matte Metallic Silver Trim	3092	108	3488	122	3244	114
Wide Distribution Lens, Matte White Trim	3200	112	3610	127	3358	118
Wide Distribution Lens, Matte Black Trim	2901	102	3274	115	3045	107
Wide Distribution Lens, Matte Metallic Silver Trim	3075	108	3469	122	3227	113
Wall Wash Optic, Matte White Trim	2702	95	3053	107	2840	100

4000 Lumen, 43.5W	3000K		3500K		4000K	
	Lumens	LPW	Lumens	LPW	Lumens	LPW
Medium Distribution Lens, Matte White Trim	4397	101	4961	114	4614	106
Medium Distribution Lens, Matte Black Trim	3987	92	4498	103	4184	96
Medium Distribution Lens, Matte Metallic Silver Trim	4225	97	4767	110	4433	102
Wide Distribution Lens, Matte White Trim	4372	101	4933	113	4588	105
Wide Distribution Lens, Matte Black Trim	3965	91	4473	103	4161	96
Wide Distribution Lens, Matte Metallic Silver Trim	4201	97	4740	109	4409	101
Wall Wash Optic, Matte White Trim	3698	85	4172	96	3880	89

MEDIUM DISTRIBUTION PHOTOMETRY

PR8R40D010 - PR8M34MDMW - 3500K
Spacing Criteria = 1.04
Lumens per Watt = 114 Lm/W
Test No. P210425
Test Model: PR8R40D010-PR8M34MDMW-3500K

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	1909	38.5
0-40	2911	58.7
0-60	4540	91.5
0-90	4961	100



Candela Distribution	
Degrees Vertical	Candela
0°	2753
5°	2737
10°	2642
20°	2281
30°	1838
40°	1388
50°	1011
60°	553
70°	168
80°	13
90°	0

Luminance	
(Average Candela/M²)	
Degree	Avg. 0° Luminance
45	51175
55	43697
65	24049
75	8495
85	0

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5	91	5.6	5.6
7	56.2	7.2	7.2
8	43	8.2	8.2
9	34	9.2	9.2
10	27.5	10.2	10.2
12	19.1	12.4	12.4

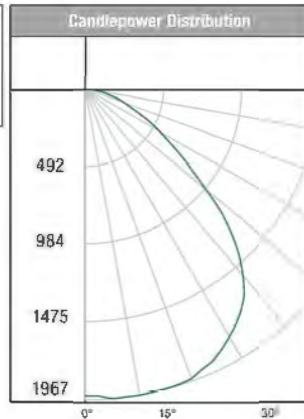
Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

*CBCP

WIDE DISTRIBUTION PHOTOMETRY

PR8R40D010 - PR8M34WDMW - 3500K
Spacing Criteria = 1.37
Lumens per Watt = 113.4 Lm/W
Test No. P210455
Test Model: PR8R40D010-PR8M34WDMW-3500K

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	1617	32.8
0-40	2681	54.3
0-60	4340	88
0-90	4933	100



Candela Distribution	
Degrees Vertical	Candela
0°	1941
5°	1966
10°	1967
20°	1952
30°	1813
40°	1544
50°	991
60°	539
70°	262
80°	72
90°	0

Luminance	
(Average Candela/M²)	
Degree	Avg. 0° Luminance
45	56914
55	39531
65	27449
75	18527
85	13480

Cone of Light Footcandles			
Distance to Illuminated Plane	Initial Nadir Footcandles	Beam (ft.)	
		L Length	W Width
5.5'	64.3	7.4	7.4
7'	39.7	9.4	9.4
8'	30.4	10.8	10.8
9'	24	12.2	12.2
10'	19.4	13.6	13.6
12'	13.5	16.2	16.2

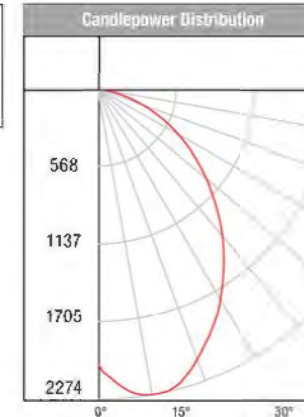
Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
Footcandle values are initial, apply appropriate light loss factors where necessary.

*CBCP

WALL WASH PHOTOMETRY

PR8R40D010 - PR8M34WW - 3500K
Spacing Criteria = 0.99
Lumens per Watt = 95.9 Lm/W
Test No. P210485
Test Model: PR8R40D010-PR8M34WW-3500K

Zonal Lumen Summary		
Zone	Lumens	% Fixture
0-30	1427	34.2
0-40	2210	53
0-60	3546	85
0-90	4172	100



Candela Distribution	
Degrees Vertical	Candela
0°	2009
5°	2199
10°	2274
20°	2107
30°	1776
40°	1406
50°	1024
60°	681
70°	345
80°	72
90°	0

Luminance	
(Average Candela/M²)	
Degree	Avg. 0° Luminance
45	52789
55	45584
65	37270
75	21422
85	6156

Specifications and dimensions subject to change without notice.

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P. 770-486-4800
www.eaton.com/lighting

Single Unit Footcandles							
2.5' from wall (distance from fixture along wall)							
1	51.9	37.7	17.1	6.8	2.8	1.2	0.6
2	74.3	60.1	34.4	17.2	8.3	4.1	2.1
3	59.3	51.2	34.3	20.1	11.3	6.4	3.6
4	40.5	36.4	27.4	18.3	11.5	7.1	4.4
5	27.2	25.1	20.2	14.8	10.3	6.9	4.6
6	18.5	17.4	14.8	11.5	8.6	6.2	4.4
7	12.9	12.3	10.8	8.9	7	5.3	3.9
8	9.3	8.9	8	6.8	5.6	4.4	3.5
9	6.9	6.6	6	5.3	4.5	3.7	3
10	5.2	5	4.6	4.1	3.6	3.1	2.5

Multiple Unit Footcandles			
2.5' from wall (spacing between fixtures)			
1	58.6	52.6	58.6
2	91.5	94	91.5
3	79.5	86	79.5
4	58.8	64.4	58.8
5	42	45.8	42
6	30	32.4	30
7	21.8	23.2	21.8
8	16.1	17	16.1
9	12.1	12.7	12.1
10	9.3	9.7	9.3

Multiple Unit Footcandles			
2.5' from wall (spacing between fixtures)			
1	54.7	34.1	54.7
2	82.7	68.8	82.7
3	70.6	68.6	70.6
4	52	54.7	52
5	37.5	40.5	37.5
6	27	29.5	27
7	19.9	21.6	19.9
8	14.9	16	14.9
9	11.3	12.1	11.3
10	8.7	9.3	8.7