Ohio | Public Utilities Commission

Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

Case No.: 17-2449-EL-EEC

Mercantile Customer: **Valley Asphalt**

Electric Utility: **Duke Energy**

Program Title or Description: **LED Lighting Upgrade**

Rule 4901:1-39-05(F), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's existing demand reduction, demand response, and energy efficiency programs for integration with the electric utility's programs. The following application form is to be used by mercantile customers, either individually or jointly with their electric utility, to apply for commitment of such programs in accordance with the Commission's pilot program established in Case No. 10-834-EL-POR

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the electric utility's energy efficiency and demand reduction (EEDR) rider will be automatically approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies the application prior to that time. Completed applications requesting the exemption from the EEDR rider (Option 2) will also qualify for the 60-day automatic approval so long as the exemption period does not exceed 24 months. Rider exemptions for periods of more than 24 months will be reviewed by the Commission Staff and are only approved up the issuance of a Commission order.

Complete a separate application for each customer program. Projects undertaken by a customer as a single program at a single location or at various locations within the same service territory should be submitted together as a single program filing, when possible. Check all boxes that are applicable to your program. For each box checked, be sure to complete all subparts of the question, and provide all requested additional information. Submittal of incomplete applications may result in a suspension of the automatic approval process or denial of the application.

Any confidential or trade secret information may be submitted to Staff on disc or via email at ee-pdr@puc.state.oh.us.

Section 1: Mercantile Customer Information

Name: **Valley Asphalt Corp**

Principal address: **11641 Mosteller Rd**
Cincinnati, OH 45241

Address of facility for which this energy efficiency program applies:

11641 Mosteller Rd
Cincinnati, OH 45241

Name and telephone number for responses to questions:

Andrew Taylor, (317) 838-2096

Electricity use by the customer (check the box(es) that apply):

- ✓ The customer uses more than seven hundred thousand kilowatt hours per year at the above facility. (**Refer to Appendix A for documentation**.)
- □ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.)

Section 2: Application Information

A) The customer is filing this application (choose which applies):

- □ Individually, without electric utility participation.
- ✓ **Jointly with the electric utility.**

B) The electric utility is: **Duke Energy**

C) The customer is offering to commit (check any that apply):

- □ Energy savings from the customer's energy efficiency program. (Complete Sections 3, 5, 6, and 7.)
- □ Capacity savings from the customer's demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)
- ✓ **Both the energy savings and the capacity savings from the customer's energy efficiency program. (Complete all sections of the Application.)**

Section 3: Energy Efficiency Programs

A) The customer's energy efficiency program involves (check those that apply):

✓ Early replacement of fully functioning equipment with new equipment. (Provide the date on which the customer replaced fully functioning equipment, and the date on which the customer would have replaced such equipment if it had not been replaced early. Please include a brief explanation for how the customer determined this future replacement date (or, if not known, please explain why this is not known)).

T5 fluorescent lighting was upgraded to LEDs in May 2017.

□ Installation of new equipment to replace equipment that needed to be replaced The customer installed new equipment on the following date(s): _____.

□ Installation of new equipment for new construction or facility expansion. The customer installed new equipment on the following date(s): _____.

□ Behavioral or operational improvement.

B) Energy savings achieved/to be achieved by the energy efficiency program:

1) If you checked the box indicating that the project involves the early replacement of fully functioning equipment replaced with new equipment, then calculate the annual savings [(kWh used by the original equipment) – (kWh used by new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: 61,453 kWh
Refer to Appendix B for calculations and supporting document

2) If you checked the box indicating that the customer installed new equipment to replace equipment that needed to be replaced, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by the higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: _____kWh

Please describe any less efficient new equipment that was rejected in favor of the more efficient new equipment.

3) If you checked the box indicating that the project involves equipment for new construction or facility expansion, then calculate the annual savings [(kWh used by less efficient new equipment) – (kWh used by higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: _____kWh

Please describe the less efficient new equipment that was rejected in favor of the more efficient new equipment.

4) If you checked the box indicating that the project involves behavioral or operational improvements, provide a description of how the annual savings were determined.

Annual savings: _____kWh

Section 4: Demand Reduction/Demand Response Programs

A) The customer's program involves (check the one that applies):

✓ **Coincident peak-demand savings from the customer's energy efficiency program.**

□ Actual peak-demand reduction. (Attach a description and documentation of the peak-demand reduction.)

□ Potential peak-demand reduction (check the one that applies):

□ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a tariff of a regional transmission organization (RTO) approved by the Federal Energy Regulatory Commission.

□ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a program that is equivalent to an RTO program, which has been approved by the Public Utilities Commission of Ohio.

B) On what date did the customer initiate its demand reduction program?

Lighting was upgraded in May 2017.

C) What is the peak demand reduction achieved or capable of being achieved (show calculations through which this was determined):

10.1 kW
Refer to Appendix B for calculations and supporting documentation.

Section 5: Request for Cash Rebate Reasonable Arrangement (Option 1) or Exemption from Rider (Option 2)

Under this section, check the box that applies and fill in all blanks relating to that choice.

Note: If Option 2 is selected, the application will not qualify for the 60-day automatic approval. All applications, however, will be considered on a timely basis by the Commission.

A) The customer is applying for:

✓ **Option 1: A cash rebate reasonable arrangement.**

OR

□ Option 2: An exemption from the energy efficiency cost recovery mechanism implemented by the electric utility.

OR

□ Commitment payment

B) The value of the option that the customer is seeking is:

Option 1: A cash rebate reasonable arrangement, which is the lesser of (show both amounts):

✓ A cash rebate of **$2,664. Refer to Appendix C for documentation.** (Rebate shall not exceed 50% project cost.

Option 2: An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider.

□ An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for ____ months (not to exceed 24 months). (Attach calculations showing how this time period was determined.)

OR

□ A commitment payment valued at no more than $_____. (Attach documentation and

calculations showing how this payment amount was determined.)

OR

□ Ongoing exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for an initial period of 24 months because this program is part of the customer's ongoing efficiency program. (Attach documentation that establishes the ongoing nature of the program.) In order to continue the exemption beyond the initial 24 month period, the customer will need to provide a future application establishing additional energy savings and the continuance of the organization's energy efficiency program.)

Section 6: Cost Effectiveness

The program is cost effective because it has a benefit/cost ratio greater than 1 using the (choose which applies):

□ Total Resource Cost (TRC) Test. The calculated TRC value is: _____ (Continue to Subsection 1, then skip Subsection 2)

✓ Utility Cost Test (UCT) . The calculated UCT value is **17.26** (Skip to Subsection 2.) **Refer to Appendix D for calculations and supporting documents.**

Subsection 1: TRC Test Used (please fill in all blanks).

The TRC value of the program is calculated by dividing the value of our avoided supply costs (generation capacity, energy, and any transmission or distribution) by the sum of our program overhead and installation costs and any incremental measure costs paid by either the customer or the electric utility.

The electric utility's avoided supply costs were _____.

Our program costs were _____.

The incremental measure costs were _____.

Subsection 2: UCT Used (please fill in all blanks).

We calculated the UCT value of our program by dividing the value of our avoided supply costs (capacity and energy) by the costs to our electric utility (including administrative costs and incentives paid or rider exemption costs) to obtain our commitment.

Our avoided supply costs were **$67,032.**

The utility's program costs were **$1,220.**

The utility's incentive costs/rebate costs were **$2,664.**

Refer to Appendix D for calculations and supporting documents.

Section 7: Additional Information

Please attach the following supporting documentation to this application:

Narrative description of the program including, but not limited to, make, model, and year of any installed and replaced equipment.

A copy of the formal declaration or agreement that commits the program or measure to the electric utility, including:

1) any confidentiality requirements associated with the agreement;
2) a description of any consequences of noncompliance with the terms of the commitment;
3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;
4) permission by the customer to the electric utility and Commission staff and consultants to measure and verify energy savings and/or peak-demand reductions resulting from your program; and,
5) a commitment by the customer to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

Refer to Offer Letter following this application

A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. Additionally, identify and explain all deviations from any program measurement and verification guidelines that may be published by the Commission.

70803733 01		
VALLEY ASPHALT CORP		
11641 MOSTELLER RDMISC: REAR		
CINCINNATI, OH 45241		
Date	Days	Actual KWH
6/27/2017	32	31,520
5/26/2017	29	30,880
4/27/2017	30	35,280
3/28/2017	29	38,880
2/27/2017	31	41,440
1/27/2017	30	40,320
12/28/2016	35	49,600
11/23/2016	29	44,000
10/25/2016	29	38,880
9/26/2016	32	44,320
8/25/2016	29	44,880
7/27/2016	30	43,360
Total		**483,360**

Appendix B - Valley Asphalt Energy Savings Achieved

	Baseline Used			Post Project Actual				Savings	
	Description	Annual kWh	Summer Coincident kW	Description	Annual kWh	Summer Coincident kW	Hours of Operation	Annual kWh	Summer Coincident kW
ECM - 1	(36) 4'6LT5HO Fixtures	75,576	12.6	(36) 146w LED Fixtures	31,458	5.3	5,981	44,118	7.4
ECM - 2	(18) 4'6LT5HO Fixtures	37,788	6.3	(18) 221w LED Fixtures	23,771	4.0	5,981	14,017	2.4

Notes: Energy consumption baseline, demand baseline and post project energy consumption basis are outlined in the following pages.

After consideration of line losses, total energy savings are **61,453 kWh** and **10.1 summer coincident kW**. These values may also reflect minor DSMore modeling software rounding error.

Appendix C -Cash Rebate Calculation

Valley Asphalt LED Lighting Upgrade

Measure	Quantity	Cash Rebate Rate	Cash Rebate
Replaced (36) 4'6LT5HO w/ (36) 146w LED Fixtures	36	50% of incentive that would be offered by the Smart $aver Custom program	**$2,016**
Replaced (18) 4'6LT5HO w/ (18) 221w LED Fixtures	18	50% of incentive that would be offered by the Smart $aver Custom program	**$648**
			$2,664

Appendix D -UCT Value

Valley Asphalt LED Lighting Upgrade

Measure	Total Avoided Cost	Program Cost	Incentive	Quantity	Measure UCT
Replaced (36) 4'6LT5HO w/ (36) 146w LED Fixtures	$1,413	$26	$56	36	**17.29**
Replaced (18) 4'6LT5HO w/ (18) 221w LED Fixtures	$898	$16	$36	18	**17.14**
Totals	**$2,311**	**$42**	**$92**	**54**	

Total Avoided Supply Costs	$67,032
Total Program Costs	$1,220
Total Incentive	$2,664

Aggregate Application UCT ***17.26***

DUKE ENERGY®

Smart $aver® Incentive Program
phone: 866.380.9580
fax: 980.373.9755
customprocessing@duke-energy-energyefficiency.com

8/16/2017

Dale Abbott
VALLEY ASPHALT CORP - 7080373301
11641 MOSTELLER RD
CINCINNATI OH 45241-1520

Subject: Your Application for a Duke Energy Mercantile Self-Direct Rebate CMO17-0000128058

Dear Dale Abbott,

Thank you for your Duke Energy Mercantile Self Direct rebate application. As noted in the Energy Conservation Measure (ECM) chart on page 2, a total rebate of $2,664.00 has been proposed for your projects completed in the 2017 calendar years. **All Self Direct Rebates are contingent upon approval by the Public Utilities Commission of Ohio (PUCO).**

At your earliest convenience, please indicate if you accept this rebate by:
- providing your signature on Page 2
- completing the PUCO-required affidavit on Page 3

Please return the documents to my attention via fax at 513.629.5572 or email to customprocessing@duke-energy-energyefficiency.com. Upon receipt, Duke Energy will submit the necessary documentation to PUCO. Following PUCO's approval, Duke Energy will remit payment.

We value your business and look forward to working with you on this and future energy efficiency projects. We hope you will consider our Smart $aver® incentives, when applicable. Please contact me if you have any questions.

Sincerely,

Andrew Taylor
Program Manager
Custom Incentives

cc: Deanna Bowden
Jerry Hafertepen

Please indicate your response to this rebate offer within 30 days of receipt.

☑ Rebate is accepted. ☐ Rebate is declined.

By accepting this rebate, VALLEY ASPHALT CORP - 7080373301 affirms its intention to commit and integrate the energy efficiency projects listed on the following pages into Duke Energy's peak demand reduction, demand response and/or energy efficiency programs.

Additionally, VALLEY ASPHALT CORP - 7080373301 also agrees to serve as joint applicant in any future filings necessary to secure approval of this arrangement as required by PUCO and to comply with any information and reporting requirements imposed by rule or as part of that approval.

Finally, VALLEY ASPHALT CORP - 7080373301 affirms that all application information submitted to Duke Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.

If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects? ☑ Yes ☐ No

Dale Abbott	Dale Abbott	9/15/17
Customer Signature	Printed Name	Date

Shop Superintendent

Proposed Rebate Amounts

Measure ID	Energy Conservation Measure	Proposed Rebate Amount
ECM-1	Replaced (36) 4'6LT5HO w/ (36) 146w LED fixtures.	$56.00 per Lamp/Fixture X 36
ECM-2	Replaced (18) 4'6LT5HO w/ (18) 221w LED fixtures.	$36.00 per Lamp/Fixture X 18
	Total	**$2,664.00**

Ohio | Public Utilities Commission

(Mercantile Customers Only)

Application to Commit
Energy Efficiency/Peak Demand Reduction Programs

Case No.: ___-___-EL-EEC 17-2449-EL-EEC

State of Ohio :

Dale Abbott, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

Valley Asphalt Co.

[INSERT CUSTOMER OR EDU COMPANY NAME AND ANY APPLICABLE NAME(S) DOING BUSINESS AS]

2. I have personally examined all the information contained in the foregoing application, including any exhibits and attachments. Based upon my examination and inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

3. I am aware offines and penalties which may be imposed under Ohio Revised Code Sections 2921.11, 2921.31, 4903.02, 4903.03, and 4903.99 for submitting false information.

Dale Abbott - Shop Superintendent

SIGNATURE OF AFFIANT & TITLE

Sworn and subscribed before me this 18th DAY day of September, MONTH 2017 YEAR

Deborah Lynne Lear

SIGNATURE OF OFFICIAL ADMINISTERING OATH

Deborah Lynne Lear A/R Supervisor

PRINT NAME AND TITLE

My commission expires on 6/1/19 DATE

NOTARY PUBLIC STATE OF OHIO

DEBORAH LYNNE LEAR
Notary Public, State of Ohio
My Commission Expires
June 1, 2019

Smart $aver® Incentive Program
phone: 866.380.9580
fax: 980.373.9755
customprocessing@duke-energy-energyefficiency.com

8/16/2017

Dale Abbott
VALLEY ASPHALT CORP - 7080373301
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We value your business and look forward to working with you on this and future energy efficiency projects. We hope you will consider our Smart $aver® incentives, when applicable. Please contact me if you have any questions.

Sincerely,

Andrew Taylor
Program Manager
Custom Incentives

cc: Deanna Bowden
Jerry Hafertepen

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If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects? ☐ Yes ☐ No

Customer Signature	Printed Name	Date

Proposed Rebate Amounts

Measure ID	Energy Conservation Measure	Proposed Rebate Amount
ECM-1	Replaced (36) 4'6LT5HO w/ (36) 146w LED fixtures.	$56.00 per Lamp/Fixture X 36
ECM-2	Replaced (18) 4'6LT5HO w/ (18) 221w LED fixtures.	$36.00 per Lamp/Fixture X 18
	Total	**$2,664.00**

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

Ohio Mercantile Self Direct Program

Application Guide and Cover Sheet

Questions? Call 866.380.9580 or visit duke-energy.com.

Email this form along with completed Mercantile Self Direct Prescriptive or Custom applications, proof of payment, energy savings calculations and spec sheets to SelfDirect@Duke-Energy.com. You may also fax to 513.629.5572.

Mercantile customers, defined as using at least 700,000 kilowatt-hours (kWh) annually or having an account in multiple locations are eligible for the Mercantile Self Direct program. Indicate which applies:

- ☐ a single Duke Energy Ohio account with 700,000 kWh annual usage
- ☑ an account with multiple locations

Please list Duke Energy account numbers below (attach listing of multiple accounts and/or billing history for other utilities as required):

Account Number	Annual Usage	Account Number	Annual Usage
7080-3733-01-3	595,200 KWh	2460-0675-01-6	897,016

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart $aver® Custom Incentive. Self Direct rebates are applicable to Prescriptive measures that were installed more than 90 days prior to submission to Duke Energy and have not previously received a Duke Energy Prescriptive rebate.

Self Direct program rules allow for, though do not require, certain projects that are Prescriptive in nature under the Smart $aver program to be evaluated using the Custom process in the Self Direct program. Use the list on page two as a guide to determine which Self Direct program best fits your project(s). Apply for Self Direct projects using the appropriate application forms in conjunction with this cover sheet.

Self Direct program rules also allow for behaviorally based and/or no cost and low cost projects to receive rebates.

Please check each box to indicate completion/inclusion of the following program requirements:

☑ All sections of appropriate application(s) are completed	☑ Proof of payment.*	☑ Manufacturer's Spec sheets	☑ Energy model/calculations and detailed inputs for Custom applications

*If a single payment record is intended to demonstrate the costs of both Prescriptive and Custom projects, please include an additional document with an estimated breakout of costs for each Prescriptive and Custom energy conservation measure.

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

1. Contact Information (Required)

Duke Energy Customer Contact Information[1]					
Company Name (as it appears on your bill)	Valley Asphalt Corp				
Address	11641 Mosteller Rd				
City	Cincinnati	State	OH	ZIP Code	45241
Project Contact	Dale Abbott				
Office Phone	513-326-3616	Mobile Phone	513-646-2424		
Email Address	Dale.Abbott@JRJnet.com				

Equipment Vendor / Contractor / Architect / Engineer Contact Information					
Company Name	Hafertepen Electric				
Address	4588 California Rd				
City	Okeana	State	OH	ZIP Code	45053
Project Contact	Jerry Hafertepen				
Office Phone	513-367-1622	Mobile Phone	513-616-3907		
Email Address	JHAFERTEPEN@GMAIL.COM				

Who is the primary point of contact for technical questions?[2]	Dale Abbott

Payment Information					
If an incentive is awarded, who should receive payment?[3] ☑ Customer ☐ Vendor* (customer or customer's agent[4] must sign below) *If the payee is the vendor, they must issue a credit in the amount of the incentive to the customer on the invoice and include it with the payment request.					
Tax ID Number for Payee (provide W-9)					
Mailing Address for Payee (if different from above)					
Street					
City		State		ZIP Code	

[1] Provided customer information should match the Duke Energy customer of record and W-9 form provided with this application. If the customer entity is a business affiliate of the Duke Energy customer of record, documentation must be provided that demonstrates the business affiliation.

[2] Note that if the vendor is the primary point of contact, the customer will still be copied on all application correspondence. If the customer does not wish to be copied, the customer must provide a signed letter of authorization on customer letterhead indicating an entity is acting as an agent for the customer. Duke Energy does not act as an agent.

[3] If payment is to be made to an entity other than the Duke Energy account holder or the vendor, a payment waiver is required and will be provided for customer signature.

[4] If an outside agent is acting on behalf of the Duke Energy customer of record, a letter of authorization on customer letterhead and signed by an authorized employee of the customer must be provided.

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

2. Project Information (Required)

A. Please indicate project type:
- ☐ New construction
- ☐ Expansion at an existing facility (existing Duke Energy account number)
- ☐ Replacing equipment due to equipment failure
- ☐ Replacing equipment that is estimated to have remaining useful life of two years or less
- ☑ Replacing equipment that is estimated to have remaining useful life of more than two years
- ☐ Behavioral, operational and/or procedural programs/projects

B. Please describe your project, or attach a detailed project description that describes the project.
54 of 4 foot T5 fluorescent 6 bulb 324 watt high bay lights were removed.
Replace with 54 LED lights with motion & daylight sensors:
36 of RAB Mfg RAIL150W/D10/WS2 and
18 of RAB Mfg RAIL225NW/D10/WS4

C. When did you start and complete implementation?
Start date 5/2017 (mm/yyyy) End date 5/2017 (mm/yyyy) 5/8/2017 to 5/12/2017

D. Are you also applying for Self Direct Prescriptive rebates and, if so, which one(s)[5]?
yes

E. Please indicate which worksheet(s) you are submitting for this application (check all that apply):
- ☑ Lighting
- ☐ Variable Frequency Drive (VFD)
- ☐ Compressed Air
- ☐ Energy Management System (EMS)
- ☐ General (for projects not easily submitted using one of the above worksheets)

F. List all assumptions about the baseline and proposed equipment energy use and operation schedule, or attach a document listing that information. Attach specification sheets for all proposed new equipment.

G. Attach a supplier or contractor invoice(s) and/or other equivalent information documenting the Implementation Cost for each project listed in your application.
Does the Implementation Cost include any internal labor[6]? high bay lights $21,971
If yes, please specify which costs are internal labor. man lift rental 460
labor to install 4,150
$ 26,581

[5] If your project involves some equipment that is eligible for prescriptive rebates and some equipment that is likely eligible for custom rebates, and if it is feasible to separate the equipment for the energy analysis, then the equipment will be evaluated separately. If it is not feasible to separate the equipment for analysis, then the equipment will be evaluated together in the custom application.
[6] Internal labor costs cannot be counted in the Incremental Project Cost for purposes of analysis.

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

3. Attestation, Terms and Conditions, and Signature (Required)

Attestation

By signing below, I agree to the following:

I, **(INSERT NAME)** Dale Abbott, do hereby consent to Duke Energy Ohio, Inc. disclosing my Duke Energy Ohio, Inc. Account Number and Federal Tax ID Number to its subcontractors solely for the purpose of administering Duke Energy Ohio's Mercantile Self Direct Program. I understand that such subcontractors are contractually bound to otherwise maintain my Duke Energy Ohio Inc. Account Number and Federal Tax ID Number in the strictest of confidence.

I have read and agree to the below Terms and Conditions of the Duke Energy Ohio's Mercantile Self Direct Program.

I certify that I meet the eligibility requirements of the Duke Energy Ohio's Mercantile Self Direct Program, as applicable, and that all information provided within my application is correct to the best of my knowledge.

I certify that the taxpayer identification number provided in my application is current and correct. I am not subject to backup withholding because: (a) I am exempt from backup withholding; or (b) I have not been notified by the IRS that I am subject to backup withholding as a result of a failure to report all interest or dividends; or (c) the IRS has notified me that I am no longer subject to backup withholding. I am a U.S. citizen (includes a U.S. resident alien).

Instructions/Terms/Conditions

Note: Please keep for your records

1. Energy service companies or contractors may assist in preparing the application, but an authorized representative of the customer must sign this application to be eligible to participate in the Mercantile Self Direct Program. Completion of this application does not guarantee the approval of a Self Direct Custom Rebate.

2. Once all documentation requested in this application is received by *Duke Energy Ohio, Inc.,* and any follow-up information requested by *Duke Energy* is received, the rebate amount for each Energy Conservation Measure (ECM) will be communicated to the customer. The rebate amount will be based on ECM energy savings and ECM incremental installation cost.

3. All rebates require approval by the Public Utilities Commission of Ohio (PUCO). *Duke Energy Ohio, Inc.* will submit an application for rebate on the customer's behalf upon customer attestation to program terms, conditions and requirements as outlined in the rebate offer letter and upon customer completion of attestation documents required by the Public Utilities Commission of Ohio.

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

16. Disclaimers: *Duke Energy Ohio, Inc.*
    a. does not endorse any particular manufacturer, product or system design within the program;
    b. will not be responsible for any tax liability imposed on the customer as a result of the payment of rebates;
    c. does not expressly or implicitly warrant the performance of installed equipment (contact your contractor for details regarding equipment warranties);
    d. is not responsible for the proper disposal/recycling of any waste generated or obsolete or old equipment as a result of this project;
    e. is not liable for any damage caused by the installation of the equipment nor for any damage caused by the malfunction of the installed equipment; and
    f. reserves the right to change or discontinue this program at any time. The acceptance of program applications is determined solely by *Duke Energy Ohio, Inc.*

CUSTOMER SIGNATURE REQUIRED

By signing below, I certify that I have read and agree to the above Mercantile Self Direct Attestation and Terms and Conditions.

Customer Signature	Dale Abbott		
Print Name	Dale Abbott	Date	7/12/17

TRADE ALLY SIGNATURE (REQUIRED ONLY IF TRADE ALLY IS PAYEE)

By signing below, I certify that I have read and agree to the above Mercantile Self Direct Attestation and Terms and Conditions.

Trade Ally Signature			
Print Name		Date	

CUSTOMER – AUTHORIZATION TO DESIGNATE TRADE ALLY AS PAYEE

If an incentive is awarded and the customer would like to authorize payment to the trade ally, the customer must sign below to allow release of their incentive to the trade ally.

Required: Final invoice from trade ally to customer must show the incentive credited to the customer. If the itemized invoice does not reflect a deduction of the incentive amount, the payee will be changed to the customer.

Customer Signature			
Print Name		Date	

The Lighting Worksheet is part 2 of the application. Do not submit this file without submitting a completed Part1 Custom Application document file, which can be found at www.duke-energy.com.

Before you complete this application, please note the following important criteria:
- Submitting this application does not guarantee an Rebate will be approved.
- Rebates are based on electricity conservation only.
- Electric demand and/or energy reductions must be well documented with auditable calculations.
- Incomplete applications will not be reviewed; all fields are required.

Refer to the complete list of Instructions and Disclaimers, found in the Mercantile Self Direct Custom Application Part 1 document.

Please enter your information and data into the cells that are shaded.
Cells in white are locked and cannot be written over.

Duke Energy Customer Contact Information (Match the information in Application Part 1):

Name	Dale Abbott
Company	Valley Asphalt Corp

Equipment Vendor / Project Engineer Contact Information

Name	Jerry Hafertepen
Company	Hafertepen Electric Company Inc.

Before proceeding with the custom application, please verify that your project is not on the Self-Direct Prescriptive application.
The prescriptive Rebate applications can be found at:
http://www.duke-energy.com/ohio-large-business/smart-saver/mercantile-self-direct.asp
Prescriptive rebate amounts are pre-approved.

Please enter your information and data into the cells that are shaded.
Cells in white are locked and cannot be written over.

List of Sites (Required)

Project/ Site (see note 1)	Site Name	Electric Account Number(s) (see note 2)	Site Address	Area (sq ft)	Location within Facility	Location Type	Indoor or Outdoor?
Example	*Distribution Center*	*12345678 01*	*Example: 123 Main Street, Anywhere USA 12345*	*1000*	*Warehouse*	*Industrial*	*Indoor*
1	Corp. Headquarters	7080-3733-01-3	11641 Mosteller Rd, Cincinnati, OH 45241	11,900	Rear Shop	Industrial	Indoor
2	Corp. Headquarters	7080-3733-01-3	11641 Mosteller Rd, Cincinnati, OH 45241	11,900	Rear Shop	Industrial	Indoor
3							
4							
5							
6							
7							
8							
9							
10							
11							
12	Corp. Headquarters	7080-3733-01-3	11641 Mosteller Rd, Cincinnati, OH 45241	11,900	Rear Shop	Industrial	Indoor
13							
14							
15							
16							
17							
18							
19							
20							

If your application involves more than 20 lighting projects, please check here and use multiple worksheets. ☐

1 Project/Site
You can write over the default project/site number with a store #, building identifier, or other reference that distinguishes one project/location from another.

2 Electric Account Number(s)
If there are multiple meters at a site, only include the Duke Energy account numbers that pertain to the project.
Currently active account number(s) are required for an existing facility. For new construction, write in "new construction."

		Hours of Use (see note 3)								Controls (see note 5)			
		Weekday		Saturday		Sunday				Existing		Proposed	
Project/ Site	24 x 7	Start Hour	End Hour	Start Hour	End Hour	Start Hour	End Hour	Weeks of Use In Year (see note 4)	Total Annual Hours of Use	Type of Control	Hours Reduction	Type of Control	Description
Example	*No*	*8:00 AM*	*7:00 PM*	*10:00 AM*	*6:00 PM*	*1:00 PM*	*6:00 PM*	*52*	*3,536*	*None*	*0%*	*Occupancy*	*Applying for Prescriptive Rebate*
1	No	6:00:00 AM	2:30:00 AM	6:00:00 AM	9:30:00 PM			52	5,981	None	0%	Daylight	
2	No	6:00:00 AM	2:30:00 AM	6:00:00 AM	9:30:00 PM			52	5,981	None	0%	Daylight	
3													
4													
5		THE EXCEL SHEET WONT CALCULATE BOTH THE REDUCTION IN WATTAGE AS WELL AS THE REDUCTION IN OPERATING HOURS											
6		NOTE 5:											
7		DESCRIPTION OF NEW CONTROLS, ASSUMPTIONS, AND CALCULATIONS TO SUPPORT ESTIMATED REDUCTION IN HOURS:											
8		NEW DAYLIGHT HARVESTING CONTROLS REDUCE THE HOURS OF LIGHTING OPERATION											
9		LIGHTING DOESN'T RUN DURING THE 14 HOURS OF DAYLIGHT											
10													
11		NEW DAYLIGHT HARVESTING LIGHTS HOURS OF OPERATION:											*CONTROLS ARE PART OF THE LIGHT*
12	No	8:00:00 PM	2:30:00 AM	8:00:00 PM	9:30:00 PM			52	1,753				*FIXTURES & LIGHT FIXTURE COST.*
13		ANNUAL HOURS THAT EXISTING LIGHTING OPERATED: 5,981											*APPLYING FOR CUSTOM REBATE*
14		MINUS ANNUAL HOURS OPERATED WITH DAYLIGHT HARVESTING: - 1,753											
15		ANNUAL HOURS OF LIGHTING OPERATION SAVED: = 4,228											
16													
17		TO SUPPORT THESE CALCULATIONS I HAVE INCLUDED 3-28-17 TO 4-27-17 DUKE BILL WITH OLD LIGHTING											
18		AND 5-26-17 TO 6-27-17 BILL WITH NEW LIGHTING											
19		(4-27-17 TO 5-26-17 BILL WAS NOT SUPPLIED AS PART OF THE PERIOD WAS ON OLD LIGHTING, & PART OF THE PERIOD ON NEW LIGHTING)											
20		TO FURTHER SUPPORT THIS JUNE 2016 WAS 43,900 kWh VS JUNE 2017 31,500 kWh											

3 Hours of Use
For unoccupied times, leave applicable cells blank.

4 Weeks of Use In Year
If the lighting fixtures are not in use 52 weeks during the year (for example, during holiday or summer break), provide an explanation of when they are not expected to be in use and why:

10 Saturdays per year not in use. Last 2 in December, all January & February.

5 Controls
Please attach more description of existing and/or new controls if more space is needed. If sufficient description is not provided, then controls portion of project will not be evaluated. Attach assumptions and calculations to support estimated reduction in hours that result from the controls.
New occupancy sensors should be applied for through the prescriptive application unless ineligible for prescriptive.
New or upgraded EMS/building controls require a separate application part 2. Without the separate application, EMS portion of the project will not be evaluated for an Rebate.

	Existing Fixture(s)								
Project/ Site	Existing Fixture Installation Year (see note 6)	Fixture Type	Fixture Manufacturer (see note 6)	Fixture Model Number (see note 6)	Lamps per Fixture	Fixture Size	Fixture Input Power (watts) (see note 7)	Quantity of Fixtures	Total Demand (kW)
Example	*1995*	*High Pressure Sodium*	*Manufacturer*	*Model #*	*1*		*190*	*175*	*33*
1	2010	T5 Fluorescent	Columbia Light	Versa Bay	6	324 Watt	361	36	13
2	2010	T5 Fluorescent	Columbia Light	Versa Bay	6	324 Watt	361	18	6
3									
4									
5									
6									
7									
8									
9									
10									
11									
12								54	
13									
14									
15									
16									
17									
18									
19									
20									
Application Total								**108**	**19**

6 Information on Existing Fixture(s)
Optional - please provide as much information as you can.
For new construction projects, provide information on the light fixture(s) that would meet the building code in your location.

7 Fixture Input Power (watts)
Provide actual input power (in watts), not nominal power rating. For example, a 400 watt (nominal) metal halide fixture has a typical input power of approximately 459 watts.

DUKE ENERGY.

	New Fixture(s)										Projected Savings			
Project/ Site	Fixture Type	Fixture Manufacturer (see note 8)	Fixture Model Number (see note 8)	Warranty of Proposed Fixtures (years)	Lamps per Fixture	Fixture Input Power (watts) (see note 9)	Quantity of Fixtures	Total Demand (kW)	Lumen Output per Fixture	Lumen/ Sq Ft	Demand (kW)	Annual Energy (kWh)	Other Annual Savings $ (see note 10)	Incremental Project Cost $ (see note 11)
Example	*T8 Fluorescent*	*Manufacturer*	*Model #*	*5.0*	*1.0*	*78*	*225*	*18*		*0*		*55,515*	*$1,265*	*$29,215*
1	LED	RAB Mfg	RAIL150W/D1	5.0	1.0	149	36	5	17,963	54	8	45,647		$16,821
2	LED	RAB Mfg	RAIL225NW/D	5.0	1.0	223	18	4	23,559	36	2	14,857		$9,760
3														
4														
5														
6														
7														
8														
9														
10														
11														
12	DAYLIGHT SENSOR	RAB Mfg	WATT SAVER-	WS2 & WS4						0				
13														
14														
15														
16														
17														
18														
19														
20														
Application Total							54	9			10	60,504	$0	$26,581

Average Electric Rate $/kWh $0.047 **Estimated Annual Electric Savings** $2,844 **Project Simple Electric Payback** (see note 12) 9.3 **years**

8 Fixture Manufacturer and Model Number
Attach a scanned copy of a spec sheet for each fixture that includes the input power (watts), lumen output and other relevant information.
For eligible LED fixtures, refer to the FAQs for Custom Rebates found at www.duke-energy.com and attach required documents if necessary.

9 Fixture Input Power (watts)
Provide actual input power (in watts), not nominal power rating. For example, a 400 watt (nominal) metal halide fixture has a typical input power of approximately 459 watts.

10 Other Annual Savings $
Optional. Estimate other annual savings in addition to electric (for example operations/maintenance savings).

11 Incremental Project Cost $
Vendor invoices detailing costs of the project are always required.
For new construction projects, a formal proposal is also required with the projected costs for the light fixture(s) that would meet the building code in your location.

12 Project Simple Electric Payback
If the simple electric payback is less than 1 year, the rebate structure is affected. Double check average electric rate for correct payback.

HAFERTEPEN ELECTRIC CO., INC.

COMPLETE ELECTRICAL SERVICE
RESIDENTIAL • COMMERCIAL

JERRELL HAFERTEPEN

5/1/2017					
			EQUIPMENT		
MAKE	MODEL NUMBER	QUAN	MANUFACTURER	COST	TOTAL
RAB	RDLED6R20D-80N-S-W	30	RAB LIGHTING	$105.33	$3,159.90
RAB	RDLED6R26D-80N-S-W	4	RAB LIGHTING	$104.32	$417.28
RAB	GUS450NW/D10	9	RAB LIGHTING	$98.73	$888.57
RAB	GUS436NW/D10	12	RAB LIGHTING	$98.73	$1,184.76
RAB	✳ RAIL150W/D10/WS2	36	RAB LIGHTING	$381.45	$13,732.20
	includes Occupancy & Daylight Sensors				
RAB	✳ RAIL225W/D10/WS4	18	RAB LIGHTING	$457.74	$8,239.32
	includes Occupancy & Daylight Sensors				
			total for high bays		$21,971.00
RAB	TRLED2X4-37N/D10	11	RAB LIGHTING	$91.05	$1,001.55
RAB	WSREM - PROGRAMMER	1	RAB LIGHTING	$132.89	$132.89
COMPASS	CCRRC	2	COMPASS - LIFE	$61.93	$123.86
	LED EXIT LIGHT		SAFETY PRODUCTS		
			DIV. OF HUBBELL		
				TOTAL	$28,880.33

4588 CALIFORNIA ROAD • OKEANA, OHIO 45053 • (513) 367-1622

JUN 2 1 2017

Hafertepen
Electric Company Inc.

Complete Electrical Service • Voice/Data • Residential & Commercial

INVOICE

INVOICE #17-0040
June 20 - 2017
Due DATE: UPON RECEIPT

4588 California Road, Okeana, OH 45053
Phone 513.367.1622 Fax 513.367.1632

TO:
Valley Asphalt
11641 Mosteller Road
Cincinnati, OH 45241

Description		TOTAL
Labor to replace lighting in shop 83hr		
WO 240768 **JRJ\ABBOTTD - 06/22/17**		
	ABBOTT **JRJ\MALZAHNJ - 06/23/17**	
TOTAL DUE:	$	4,150.00

Monthly Service charge of 2% added to past due accounts

Ohio CAT

11330 Mosteller Rd., Sharonville, OH 45241
CINCINNATI (888) 736-8440

Rental Invoice

Invoice RR0200039332

MAY 30 2017

Invoice Amount: $1,430.00
Invoice Date: 05/25/2017
Date Out: 05/08/2017 Mon 08:00 AM
Billed From: 05/08/2017 Mon 08:00 AM
Billed Thru: 06/05/2017 Mon 08:00 AM
Reference #: G56842-01

Jobsite: SHARONVILLE
Contact: DALE ABBOTT
Phone: 513-646-2424
VALLEY ASPHALT
MOSTELLER ROAD
SHARONVILLE, OH 45241

Customer: 2920280
Bill to: VALLEY ASPHALT CORP
11641 MOSTELLER RD
CINCINNATI, OH 45241-1520

Written By: IRS CYCLE PGM
Sales Rep: T.J. PERKINS
PO #: 0198

Signed By:
Order By: DALE ABBOTT

Terms Code: 2

QTY	DESCRIPTION	DAY	WEEK	4WEEK	TOTALS
Rental Items					
1	JLG INDUSTRIES INC MODEL E450AJ ID NO: R81755 SERIAL NO: 0300196560 HRS OUT: 241.0	$190	$460	$1,295	1,295.00*
			Rental Subtotal:		**1,295.00**
Miscellaneous Items					
1	DELIVERY FREIGHT				135.00

WO 240768
JRJ\ABBOTTD - 06/06/17

Billed for 4 weeks from 5/8/2017 8:00 AM thru 6/5/2017 8:00 AM

Manlift rental 1 week
to install high bay lights $460

Please Remit Payment To:
Ohio CAT
Box 774439 4439 Solutions Center
Chicago, IL 60677-4004

Invoice Total ~~1,430.00~~

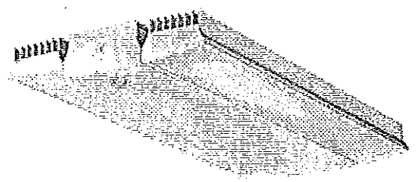
PLEASE SHOW OUR INVOICE NUMBER ON YOUR CHECK

NOTE: Rent does NOT Apply to Purchase

PLEASE PAY FROM THIS INVOICE

RAIL225NW/D10/WS4

RAB LIGHTING



LED High Bay fixture ideal for large indoor spaces, including warehouses, gymnasiums and distribution centers that require mounting heights from 15 to 50 feet. An integrated motion/photo sensor option provides multi-level lighting control. Available in 95, 150, 185 and 225 Watt versions with equivalencies from 200 to 400 Watt metal halide fixtures.

Color: White

Weight: 23.2 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	225W
120V:	1.92A	Color Temp:	4000K
208V:	1.12A	Color Accuracy:	84 CRI
240V:	0.97A	L70 Lifespan:	100000
277V:	0.84A	Lumens:	23,543
Input Watts:	223W	Efficacy:	106 LPW
Efficiency:	N/A		

Technical Specifications

Listings

UL Listing:

Suitable for damp locations

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.

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.
DLC Product Code: PGJG1ZFY

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

LEDs:

Long-life, high-efficiency surface mounting LEDs

Color Stability:

LED Color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

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.

Electrical

Drivers:

Two Drivers, 4-Channel, Class 2, Constant Current, 100-240/277VAC, 50-60Hz, 2.1A@100VAC Class 2, Constant Current, 100-277VAC, 50-60Hz, 4kV, 0.9A

THD:

4.6% at 120V, 10.1% at 277V

Power Factor:

99.8% at 120V, 94.7% at 277V

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

Construction

Ambient Temperature:

Suitable for use 12 hours a day, 5 days a week in 50°C. Suitable for 24/7 use in ambient temperatures up to 30°C. For questions related to fixture operation in high ambient temperatures, contact RAB tech support at 888-722-1000.

Housing:

Extruded aluminum

Lens:

High-transmittance polystyrene

Reflector:

Specular, high-reflectance aluminum with 95% reflectivity

Mounting:

V hooks (chain by others)

Gaskets:

High temperature silicone gaskets.

Finish:

Formulated for high-durability and long lasting color.

Green Technology:

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

Recommended Mounting Height:

Up to 50 ft.

Other

Equivalency:

Equivalent to 400W Metal Halide fixtures at 40' mounting height.

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

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.

RAIL225NW/D10/WS4

Technical Specifications (continued)

Other

California Title 24:

RAIL models with integrated multi-level motion sensor (/WS2 or /WS4) comply with 2013 California Title 24 building and electrical codes as commercial indoor fixtures for corridors, stairwells, warehouses and covered parking garages.

Sensor Specifications

Operating Voltage:

120V or 277V

Power Consumption:

1W

0-10V Sinking Current:

50mA

Adjustable High and Low Modes:

High: 0-10V; Low: off, 0-9.8V

Adjustable Time Delay:

Amount of time in high mode with no motion before switching to low mode: 5 min., 1 -30 min.

Adjustable Cut Off Delay:

Time in which the fixture will remain on low mode with no motion before turning off and waiting for new motion to turn on: None, 1 -60 min., 1 -5 hrs.

Adjustable Sensitivy:

None, low, medium, maximum

Adjustable Setpoint:

None, 1 to 250 fc, auto

Adustable Ramp Up and Fade Down Times:

1 to 60 sec.

Operating Temperature:

-40°F to 167°F (-40°C to +75°C)

Operating Humidity:

20% to 90% noncondensing

Relay Life Rating:

200,000 cycles (120/277VAC), 50,000 cycles (230VAC)

IP Rating:

Ingress Protection rating of IP66 for dust and water

UL Listing:

Suitable for Wet Locations as factory installed.

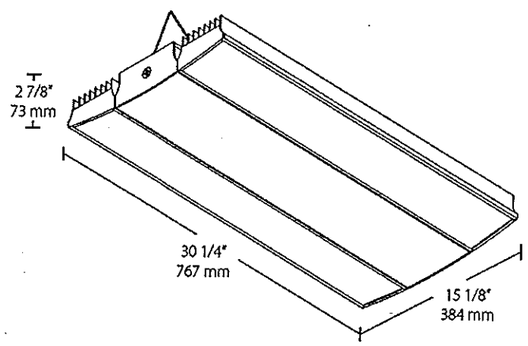
Handheld Wireless Configuration Tool:

Adjust settings using handheld wireless configuration tool. Only available with 0-10V dimming driver options.

Multi Level Motion Sensor:

60 ft. diameter coverage from 40 ft. height.

Dimensions



Features

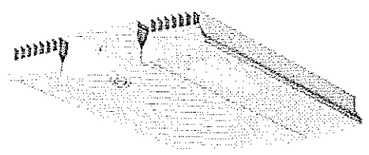
- Ideal for large spaces
- Ultra-high efficacy
- Up to 60% less energy usage than equivalent metal halide fixtures
- 100,000 hour lifespan, virtually maintenance free operation
- Integrated motion/photo sensor for multilevel lighting control

Ordering Matrix

Family	Mount	Watts	Color Temp	Finish	Voltage	Dimming	Sensor
RAIL							
	Blank = V Hooks **P** = Pendant or Surface	**95** = 95W **150** = 150W **185** = 185W **225** = 225W	**Blank** = 5000K (Cool) **YN** = 3500K (Warm Neutral) **N** = 4000K (Neutral)	**W** = White	**Blank** = 120-277V **/480** = 480V	**Blank** = No Dimming **/D10** = Dimmable	**/WS2** = Multi-Level Motion Sensor (Only available for 120-277V with /D10 for 95W & 150W) **/WS4** = Multi-Level Motion Sensor (Only available for 120-277V with /D10 for 185W & 225W)

RAIL150W/D10/WS2

RAB LIGHTING



LED High Bay fixture ideal for large indoor spaces, including warehouses, gymnasiums and distribution centers that require mounting heights from 15 to 50 feet. An integrated motion/photo sensor option provides multi-level lighting control. Available in 95, 150, 185 and 225 Watt versions with equivalencies from 200 to 400 Watt metal halide fixtures.

Color: White

Weight: 18.4 lbs

Project:	Type:
Prepared By:	Date:

Driver Info		LED Info	
Type:	Constant Current	Watts:	150W
120V:	1.30A	Color Temp:	5000K
208V:	0.75A	Color Accuracy:	75 CRI
240V:	0.65A	L70 Lifespan:	100000
277V:	0.56A	Lumens:	18,144
Input Watts:	152W	Efficacy:	119 LPW
Efficiency:	98%		

Technical Specifications

Listings

UL Listing:

Suitable for damp locations

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.

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities.

LED Characteristics

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

LEDs:

Long-life, high-efficiency surface mount LEDs

Color Stability:

LED Color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.

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.

Electrical

Drivers:

Two Drivers, Class 2, Constant Current, 100-277VAC, 50-60Hz, 4kV, 0.9A

THD:

5.2% at 120V, 10.6% at 277V

Power Factor:

99.6% at 120V, 94.1% at 277V

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

Construction

Ambient Temperature:

Suitable for use 12 hours a day, 5 days a week in 50°C. Suitable for 24/7 use in ambient temperatures up to 30°C. For questions related to fixture operation in high ambient temperatures, contact RAB tech support at 888-722-1000.

Housing:

Extruded aluminum

Lens:

High-transmittance polystyrene

Reflector:

Specular, high-reflectance aluminum with 95% reflectivity

Mounting:

V hooks (chain by others)

Gaskets:

High temperature silicone gaskets.

Finish:

Formulated for high-durability and long lasting color.

Green Technology:

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

Recommended Mounting Height:

Up to 30 ft.

Other

Equivalency:

Equivalent to 400W Metal Halide fixture at 35' mounting height, typical storage warehouse environment.

Warranty:

RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish.

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.

RAIL150W/D10/WS2

Technical Specifications (continued)

Other

California Title 24:

RAIL models with integrated multi-level motion sensor (/WS2 or /WS4) comply with 2013 California Title 24 building and electrical codes as commercial indoor fixtures for corridors, stairwells, warehouses and covered parking garages.

Sensor Specifications

Operating Voltage:

120V or 277V

Power Consumption:

1W

0-10V Sinking Current:

50mA

Adjustable High and Low Modes:

High: 0-10V; Low: off, 0-9.8V

Adjustable Time Delay:

Amount of time in high mode with no motion before switching to low mode: 5 min., 1 -30 min.

Adjustable Cut Off Delay:

Time in which the fixture will remain on low mode with no motion before turning off and waiting for new motion to turn on: None, 1 -60 min., 1 -5 hrs.

Adjustable Sensitivy:

None, low, medium, maximum

Adjustable Setpoint:

None, 1 to 250 fc, auto

Adustable Ramp Up and Fade Down Times:

1 to 60 sec.

Operating Temperature:

-40°F to 167°F (-40°C to +75°C)

Operating Humidity:

20% to 90% noncondensing

Relay Life Rating:

200,000 cycles (120/277VAC), 50,000 cycles (230VAC)

IP Rating:

Ingress Protection rating of IP66 for dust and water

UL Listing:

Suitable for Wet Locations as factory installed.

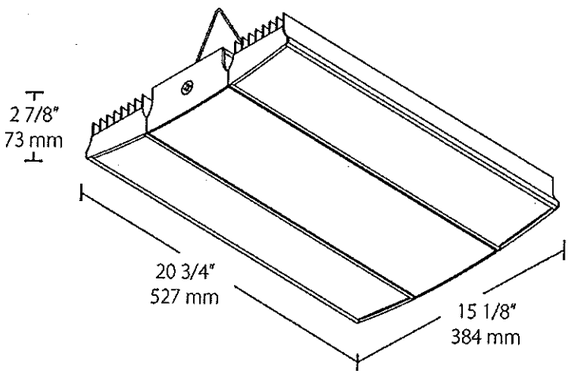
Handheld Wireless Configuration Tool:

Adjust settings using handheld wireless configuration tool. Only available with 0-10V dimming driver options.

Multi Level Motion Sensor:

40 ft. diameter coverage from 20 ft. height.

Dimensions



Features

- Ideal for large spaces
- Ultra-high efficacy
- Up to 60% less energy usage than equivalent metal halide fixtures
- 100,000 hour lifespan, virtually maintenance free operation
- Integrated motion/photo sensor for multilevel lighting control

Ordering Matrix

Family	Mount	Watts	Color Temp	Finish	Voltage	Dimming	Sensor
RAIL							
	Blank = V Hooks **P** = Pendant or Surface	**95** = 95W **150** = 150W **185** = 185W **225** = 225W	**Blank** = 5000K (Cool) **YN** = 3500K (Warm Neutral) **N** = 4000K (Neutral)	**W** = White	**Blank** = 120-277V **/480** = 480V	**Blank** = No Dimming **/D10** = Dimmable	**/WS2** = Multi-Level Motion Sensor (Only available for 120-277V with /D10 for 95W & 150W) **/WS4** = Multi-Level Motion Sensor (Only available for 120-277V with /D10 for 185W & 225W)

URL: **http://dis.puc.state.oh.us/DocumentRecord.aspx?DocID=5e1dec4b-9e1c-4b39-89b6-36ceb09ec2e0**
Date & Time: 12/1/2017 at 13:43:43.3085759 EST
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Summary: Application Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)-Valley Asphalt, LED Lighting Upgrade electronically filed by Carys Cochern on behalf of Duke Energy
Confirmation Number: 98b90829-9ab0-4bc8-81eb-300d5a23a735
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