



Legal Department

April 3, 2017

Chairman Asim Z. Haque  
Public Utilities Commission of Ohio  
180 East Broad Street  
Columbus, OH 43215-3793

Re: **In the Matter of the Application of** )  
**Select Comfort Retail Corp.** )  
**and Ohio Power Company** ) **Case No. 17-0486-EL-EEC**  
**for Approval of a Special Arrangement** )  
**Agreement with a Mercantile Customer** )

**Ryan Aguiar**  
Fellow  
Regulatory Services  
(614) 716-2931 (T)  
(614) 716-2950 (F)  
Ecmiller1@aep.com

Dear Chairman Haque,

Attached please find the Joint Application of Ohio Power Company (AEP Ohio) and the above-referenced mercantile customer for approval of a Special Arrangement of the commitment of energy efficiency/peak demand reduction (EE/PDR) resources toward compliance with the statutory benchmarks for 2017 (hereinafter "Joint Application").

Amended Substitute Senate Bill 221, codified at R.C. 4928.66, sets forth EE/PDR benchmarks that electric distribution utilities are required to meet or exceed. The statute allows utilities to include EE/PDR resources committed by mercantile customers for integration into the utilities' programs to be counted toward compliance with a utility's EE/PDR benchmarks. The statute also enables the Commission to approve special arrangements for mercantile customers that commit EE/PDR resources to be counted toward compliance with EE/PDR benchmarks.

The Commission's Order in Case No. 10-834-EL-EEC established a streamlined process to expedite review of these special arrangements by developing a sample application process for parties to follow for consideration of such programs implemented during the prior three calendar years. The attached Joint Application and affidavit conforms with AEP Ohio's version of the streamlined sample application. As requested by Commission Staff, any confidential information referenced in the Joint Application has been provided confidentially to Commission Staff for filing in Commission Docket 10-1599-EL-EEC and subject to the confidentially protections of R.C. 4901.16 and OAC 4901-1-24(E). AEP Ohio respectfully requests that the Commission treat the two cases as associated dockets and that any confidential information provided to Staff for filing in connection with the Joint Application be subject to the protective order requested in Docket 10-1599-EL-EEC.

Cordially,

/s/ Ryan Aguiar  
Ryan Aguiar

Attachments



**Case No.:** 17-0486-EL-EEC

Mercantile Customer: SELECT COMFORT RETAIL CORP

Electric Utility: Ohio Power

Program Title or Description: AEP Ohio Business Incentives for Energy Efficiency: Self Direct Program

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](mailto:ee-pdr@puc.state.oh.us).

## Section 1: Company Information

Name: SELECT COMFORT RETAIL CORP

Principal address: 301 Plainfield Rd. Suite 310, Syracuse, Ny 13212

Address of facility for which this energy efficiency program applies: 3960 Stelzer Rd, Columbus, Oh 43219-3046

Name and telephone number for responses to questions:

Linda Andrews, Select Comfort Retail Corp, (855) 926-7543

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

- ☐ The customer uses more than seven hundred thousand kilowatt hours per year at our facility. (Please attach documentation.)

See Confidential and Proprietary Attachment 4 – Calculation of Rider Exemption and UCT which provides the facility consumption for the last three years, benchmark kWh, and the last 12 months usage.

- ☒ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.) When checked, see Attachment 6 – Supporting Documentation for a listing of the customer's name and service addresses of other accounts in the AEP Ohio service territory.

## Section 2: Application Information

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

- ☐ Individually, on our own.
- ☒ Jointly with our electric utility.

B) Our electric utility is: Ohio Power Company

The application to participate in the electric utility energy efficiency program is "Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application."

C) The customer is offering to commit (choose which applies):

- ☐ Energy savings from our 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 demand reduction 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 (choose whichever applies):

- ☒ Early replacement of fully functioning equipment with new equipment. (Provide the date on which the customer replaced fully functioning equipment, 11/20/2015 and the date on which the customer would have replaced your equipment if you had not replaced it 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)).

The remaining life of the equipment varies and is not known with certainty. The future replacement date is unknown and has historically been at the end of equipment life. Replacement was completed early to achieve energy savings and to reduce future maintenance costs.

- ☐ 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 your energy efficiency program:

- 1) If you checked the box indicating that your 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:

Unit Quantity (watts) = Existing (watts x units) - Installed (watts x units)

kWh Reduction (Annual Savings) = Unit Quantity x (Deemed kWh/Unit)

Annual savings: 13,945 kWh

See Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation for annual energy savings calculations and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

- 2) If you checked the box indicating that you 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 the less efficient new equipment that you rejected in favor of the more efficient new equipment.

- 3) If you checked the box indicating that your 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 you 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.

## 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):

➤ Choose one or more of the following 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?

The coincident peak-demand savings are permanent installations that reduce demand through energy efficiency and were installed on the date specified in Section 3 A above.

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

Unit Quantity (watts) = Existing (watts x units) – Installed (watts x units)

KW Demand Reduction = Unit Quantity (watts) x (Deemed KW/Unit (watts))

4.2 kW

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for peak demand reduction calculation, and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.

## **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 cost recovery mechanism implemented by the electric utility.

OR

☐ Commitment payment

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

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

☐ A cash rebate of \$\_\_\_\_\_. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

OR

☒ A cash rebate valued at no more than 50% of the total project cost, which is equal to \$ 873.36. (Attach documentation and calculations showing how this payment amount was determined.)

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for incentive calculations for this mercantile program.

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 an ongoing efficiency program that is practiced by our organization. (Attach documentation that establishes your organization's ongoing efficiency program. In order to continue the exemption beyond the initial 24 month period your organization 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: 5.50 (Skip to Subsection 2.)

### 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 utility's 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 \$ 5,264.35

The utility's program costs were \$ 83.67

The utility's incentive costs/rebate costs were \$ 873.36.

## Section 7: Additional Information

Please attach the following supporting documentation to this application:

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

See Attachment 1 - Self Direct Project Overview and Commitment for a description of the project. See Attachment 6 - Supporting Documentation, for the specifications of the replacement equipment 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed. Due to the length of time since the equipment replacement, the make, model and year of the replaced equipment is not available.

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

- 1) any confidentiality requirements associated with the agreement;

See Attachment 2 - Self Direct Program Project Blank Application including Rules and Requirements. All confidentiality requirements are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.)

- 2) a description of any consequences of noncompliance with the terms of the commitment;

See Attachment 2 - Self Direct Program Project Blank Application including Rules and Requirements. All consequences of noncompliance are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.

- 3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;

None required because the resources committed are permanent installations that reduce demand through increased efficiency during the Company's peak summer demand period generally defined as May through September and do not require specific coordination and communication to provide demand reduction capabilities to the Company.

- 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,

See Attachment 2 – Self Direct Program Blank Application including Rules and Requirements granting such permission pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 – Self Direct Program Project Completed Application.

- 5) a commitment by you to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

See Attachment 1 - Self Direct Project Overview and Commitment for the commitment to comply with any information and compliance reporting requirements imposed by rule or as part of the approval of this arrangement by the Public Utilities Commission of Ohio.

- 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.

The Company applies the same methodologies, protocols, and practices to Self Direct Program retrospective projects that are screened and submitted for approval as it does to prospective projects submitted through its Prescriptive and Custom Programs. The Commission has not published a technical reference manual for use by the Company so deviations can not be identified. The project submitted is a prescriptive project and energy savings are determined as described in Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation, and 10-1599-EL-EEC for the work papers that provide all methodologies, protocols, and practices used in this application for prescriptive measures, as needed.



# Public Utilities Commission

Project # 16-19565  
Docket # 17-0486

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

Case No.: 17-0486-EL-EEC

State of Ohio :

Rizwan Syed, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

DNV GL Energy Services USA Inc. agent of Ohio Power

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.

[Signature] Energy Engineer  
Signature of Affiant & Title

Sworn and subscribed before me this 16<sup>th</sup> day of March, 2017 Month/Year

[Signature]  
Signature of official administering oath

Dawn G. Irving / Notary  
Print Name and Title

My commission expires on 9-3-2019



DAWN G IRVING  
NOTARY PUBLIC  
STATE OF OHIO  
Comm. Expires  
September 03, 2019



### Self Direct Project Overview & Commitment

The Public Utility Commission of Ohio (PUCO) will soon review your application for participation in AEP Ohio's Energy Efficiency/Peak Demand Response program. Based on your submitted project, please select by initialing one of the two options below, sign and fax to 877-607-0740.

Customer Name	SELECT COMFORT RETAIL CORP		
Project Number	AEP-16-19565		
Customer Premise Address	3960 STELZER RD, COLUMBUS, OH 43219-3046		
Customer Mailing Address	301 Plainfield Rd. Suite 310, Syracuse, NY 13212		
Date Received	10/31/2016		
Project Installation Date	11/20/2015		
Annual kWh Reduction	13,945		
Total Project Cost	\$17,091.23		
Unadjusted Energy Efficiency Credit (EEC) Calculation	\$1,164.49		
Simple Payback (yrs)	11.4		
Utility Cost Test (UCT) for EEC	5.50		
Utility Cost Test (UCT) for Exemption	0.14		
<i>Please Choose One Option Below and Initial</i>			
Self Direct EEC: 75%	\$873.36	<input checked="" type="checkbox"/>	Initial: <u>CSM</u>
EE/PDR Rider Exemption	12 Months (with possible extension up to N/A months after PUCO Approval)	<input type="checkbox"/>	Initial: N/A

*Note: This is a one time selection. By selecting EEC, the customer will receive payment in the amount stated above. Selection of EE/PDR rider exemption, will result in the customer not being eligible to participate in any other energy efficiency programs offered by AEP Ohio during the period of exemption. In addition, the term of EE/PDR rider exemption is subject to ongoing review for compliance and could be changed by the PUCO.*

If EEC has been selected, will the Energy Efficiency Funds selected help you move forward with other energy efficiency projects?

☒ YES ☐ NO

*Note: Exemptions for periods beyond 24 months are subject to look-back or true-up adjustments every year to ensure that the exemption accurately reflects the EEDR savings. Applicants must file for renewal for any exemption beyond 12 months.*

#### Project Overview:

The Self Direct (Prescriptive and Custom) project that the above has completed and applied is as follows.

Replaced (42) 35W Halogen lamp with (42) 16W LED  
Replaced (39) 75W Halogen lamp with (39) 24W LED  
Replaced (7) 75W Halogen lamp with (7) 12W LED  
Replaced (4) 4-lamp, 4-foot T8 with (4) 88W LED

The documentation that was included with the application proved that the energy measures applied for were purchased and installed.

*By signing this document, the Mercantile customer affirms its intention to commit and integrate the above listed energy efficiency resources into the utility's peak demand reduction, demand response, and energy efficiency programs. By signing, the Mercantile customer also agrees to serve as a joint applicant in any filings necessary to secure approval of this arrangement by the Public Utilities Commission of Ohio, and comply with any information and compliance reporting requirements imposed by rule or as part of that approval.*

Ohio Power Company

*John F. Will*  
Title: Manager  
Date: 2/23/2017

SELECT COMFORT RETAIL CORP

By: *Carlyle A. Mock*  
Title: Customer Advocate  
Date: 2/23/2017



## APPLICATION GUIDELINES

All 2016 AEP Ohio Business Incentives Program projects must be completed and Final Applications received no later than October 28, 2016, in order to qualify for incentives identified in this application.

### Step 1: Verify Eligibility

- ✓ Customer must have a valid AEP Ohio account.
- ✓ Equipment/measure must be installed at facilities served by the AEP Ohio account.
- ✓ Project must produce permanent reduction in electrical energy use (kWh).
- ✓ All installed equipment must meet or exceed the specifications in the application.
- ✓ Please see the **Terms and Conditions for Self-Direct** or **Terms and Conditions** for all other programs for program eligibility and requirements.

### Step 2: Complete Applicant Information

- ✓ All fields in customer and project information sections must be completed.
- ✓ Solution Provider/contractor information must be completed if project is not self-performed.

### Step 3: Complete the Incentive Worksheet(s)

- ✓ Find and read specifications related to the project.
- ✓ Ensure new equipment/measure meets or exceeds the specifications.
- ✓ Choose the incentive category on the worksheet based on the installed equipment and specifications.
- ✓ Complete all fields (fixture description, operating hours, etc.) on the related worksheet.

### Step 4: Sign Customer Agreement

- ✓ Read the Terms and Conditions before signing and submitting the application.
- ✓ Sign Pre-Approval Agreement and submit the application to reserve funds.
- ✓ Sign Final Application Agreement and submit the application after the project is completed.
- ✓ Complete Third Party Payment Release Authorization ONLY if incentive payment is to be paid to an entity other than AEP Ohio customer listed on the Applicant Information page.

### Step 5: Submit Pre-Approval Application<sup>1</sup> (For Self-Direct applications, skip to Step 7)

- ✓ Submitting a Pre-Approval Application to determine

qualification and reserve program funds for a project is strongly recommended.

- ✓ All custom measures require pre-approval.
- ✓ Complete all fields for Pre-Approval Agreement section.
- ✓ **Pre-Approval Application must be submitted with:**
  - **Proposed scope of work (type and quantity of old and new equipment must be listed)**
  - **Specification sheets for all proposed equipment**
  - **W-9 form**
- ✓ Submit application via email, fax or mail.
- ✓ During the application review, an inspection may be required; the team will contact applicants requiring an inspection for scheduling.

### Step 6: Complete Project

- ✓ New equipment must be installed and operational to submit a Final Application.

### Step 7: Submit Final Application

- ✓ Submit a Final Application.
- ✓ Use the same application used during pre-approval (if applicable).
  - Change Application Type to Final Application
- ✓ Complete all fields for Final Application Agreement section.
- ✓ Update the application if there are any changes (customer contact, incentive measure, equipment, etc.).
- ✓ **Final Application must be submitted with:**
  - **Dated and itemized material invoice**
  - **External labor invoice (if applicable)**
  - **If Pre-Approval Application was not submitted, include the documents listed on Step 5**
- ✓ Submit application via email, fax or mail.
- ✓ During the application review, an inspection may be required; the team will contact applicants requiring an inspection for scheduling.

*Additional steps are required for Self-Direct applications after application submission. Please see the Self-Direct Terms and Conditions for details.*

### AEP Ohio Business Incentives Program

5777 Frantz Road, Dublin, OH 43017

Phone: (877) 607-0739 | Fax: (877) 607-0740

aepohioincentives@dnvgl.com

Visit our website at [AEPohio.com/solutions](http://AEPohio.com/solutions)

<sup>1</sup>A Pre-Approval Application is not a guarantee of an incentive; the actual incentive will be based on the energy savings and equipment installed as determined in the Final Application. Funds are reserved for 90 days, unless an applicant is granted an extension. The program team reserves the right to contact the customer before the reservation expiration date to ensure that the project is moving forward. If the project is not underway, the reservation may be cancelled. Reserved funds are not transferable to other projects, facilities and/or customers. A waiting list will be established when funds become fully subscribed.



## CHECKLIST

### PRE-APPROVAL APPLICATION

#### Required Attachments

- ☐ Completed Applicant Information form
- ☐ Completed Incentives Requested section of Application form
- ☐ Signed Customer Agreement form
- ☐ Equipment specifications
- ☐ Proposed scope of work (required on Custom projects and recommended for all projects)
- ☐ W-9 (required for LLC, individual, partnership, property management companies)

#### Applicable Incentive Worksheets

Please complete worksheets for checked boxes.

- ☐ Lighting
- ☐ HVAC
- ☐ Motors & Drives
- ☐ Compressed Air
- ☐ Refrigeration/Food Service
- ☐ Agriculture & Miscellaneous
- ☐ Transformer
- ☐ UPS
- ☐ Custom

Application date \_\_\_\_\_  
Estimated incremental project cost \_\_\_\_\_  
Expected completion date \_\_\_\_\_

Incomplete applications will delay processing and reservation of funds.

### FINAL APPLICATION

#### Required Attachments

- ☐ Completed Applicant Information form
- ☐ Completed and signed Final Payment Agreement and Customer Agreement forms
- ☐ Completed Third-Party Payment Release
- ☐ Authorization section (optional)
- ☐ Itemized invoices
- ☐ Equipment specifications<sup>1</sup>
- ☐ Updated scope of work<sup>1</sup>
- ☐ W-9<sup>1</sup> (required for LLC, individual, partnership, property management companies)

#### Incentive Worksheets

Please complete worksheets for checked boxes.

- ☐ Lighting
- ☐ HVAC
- ☐ Motors & Drives
- ☐ Compressed Air
- ☐ Refrigeration/Food Service
- ☐ Agriculture & Miscellaneous
- ☐ Transformer
- ☐ UPS
- ☐ Custom

Application date \_\_\_\_\_  
Final incremental project cost \_\_\_\_\_  
Final completion date \_\_\_\_\_

Incomplete applications will delay processing and incentive payment.

<sup>1</sup>If submitted with a pre-application, required only if project changed.

### Revised Submittal

Please complete below if this is a revised submittal.

Submittal date \_\_\_\_\_

AEP Project Number (if known) AEP - \_ \_ - \_ \_ \_ \_ \_

### AEP Ohio Business Incentives Program

5777 Frantz Road, Dublin, OH 43017  
Phone: (877) 607-0739 | Fax: (877) 607-0740  
aepohioincentives@dnvgl.com  
Visit our website at [AEPohio.com/solutions](http://AEPohio.com/solutions)





## APPLICANT INFORMATION

AEP Application Number AEP - \_\_ - \_ \_ \_ \_ \_

Application Type (Select One)

### Customer Information

Business Name \_\_\_\_\_

Name as It Appears on Utility Bill \_\_\_\_\_

AEP Ohio Account Number\* at Project Site \_\_\_\_\_ Multiple AEP Ohio Account Numbers for this Project? (Select One)

Taxpayer ID \_\_\_\_ - \_\_\_\_\_ W-9 Tax Status (Select One)

Contact Name \_\_\_\_\_ Contact Title \_\_\_\_\_

**Mailing Address** - where check will be sent

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State OH Zip \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Contact Email \_\_\_\_\_

How Did You Hear About the Program? (Select One) \_\_\_\_\_ AEP OH Energy Advisor \_\_\_\_\_

### Project Information

Project Name (if applicable) \_\_\_\_\_

☐ Check if mailing address and project site address are the same.

Project Site Address \_\_\_\_\_ City \_\_\_\_\_ State OH Zip \_\_\_\_\_

Building Type (Select One) \_\_\_\_\_ Shift (Select One) \_\_\_\_\_

Annual Operating Hours \_\_\_\_\_ Building Area (sq. ft.) \_\_\_\_\_

Construction Type (Select One)

Does the facility have a data center? (Select One)

\*Please only enter the first eleven digits of the account number.



## APPLICANT INFORMATION

### Solution Provider/Contractor Information (If project is not self-performed by customer)

Contracting Company Name \_\_\_\_\_

Contact Name \_\_\_\_\_ Title of Contact \_\_\_\_\_

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State OH Zip \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Contact Email \_\_\_\_\_

Who should we contact with questions about the application? ☐ Customer ☐ Contractor

### Primary Contact Information

Contact Name \_\_\_\_\_ Title of Contact \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Contact Email \_\_\_\_\_

## INCENTIVE SUMMARY TABLE (THIS TABLE SELF-POPULATES FROM WORKSHEETS)

Incentive Category	Applied for Incentives	Applicable Self- Direct Incentives
Lighting		
HVAC		
Motors		
Motor Rewind		
Drives		
Compressed Air		
Refrigeration/Food Service		
Agriculture		
Miscellaneous		
Custom		
NC Lighting (SD Only)		
Total		

AEP Application Number AEP - \_ \_ - \_ \_ \_ \_ \_



## CUSTOMER AGREEMENT

### Pre-Approval Agreement

By signing this document, I agree to program requirements outlined in the measure specifications, Terms and Conditions, and Final Application Agreement. As an eligible customer, I verify the information is correct and request consideration for participation under this program. Furthermore, I concur that I meet all eligibility criteria in order to receive payment under this program.

[Link to Prescriptive/Custom Terms and Conditions and Final Application Agreement.](#)

Estimated Completion Date

Estimated Project Cost

Total Incentive Requested<sup>1</sup>

Date

AEP Ohio Customer Signature

Print Name

### Final Application Agreement

By signing this document, I agree to program requirements outlined in the measure specifications, Terms and Conditions for the applicable program and Final Application Agreement. As an eligible customer, I verify the information is correct and request consideration for participation under this program. Furthermore, I concur that I meet all eligibility criteria in order to receive payment under this program.

[Link to Prescriptive/Custom Terms and Conditions, and Final Application Agreement](#)

[Link to Self-Direct Terms and Conditions, and Final Application Agreement](#)

Project Completion Year (Select One)

Self-Direct

Project Completion Date

Total Project Cost \$ 0.00

Date

Total Applied for Incentive

Total Requested Incentive<sup>1</sup>

Total Self-Direct Requested Incentive<sup>2</sup>

Print Name

AEP Ohio Customer Signature

**SUBMIT VIA EMAIL**

**PRINT APPLICATION**

<sup>1</sup>Incentives are capped at 50% of the project cost and total incentives are capped at \$25,000.

<sup>2</sup>Self-Direct incentives are 75% of Total Requested Incentive, after 50% of the project cost cap and tiering is applied.

AEP Application Number AEP - \_ \_ - \_ \_ \_ \_ \_



## THIRD PARTY PAYMENT

### Third Party Payment Release Authorization (Optional, NOT APPLICABLE TO Self-Direct)

Complete this section **ONLY** if incentive payment is to be paid to an entity other than the AEP Ohio customer.

**Make checks payable to:** Company/Individual \_\_\_\_\_

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ State OH Zip \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_

Taxpayer ID of 3rd Party \_\_\_\_\_ - \_\_\_\_\_ W-9 Tax Status \_\_\_\_\_

By signing this document, I authorize the payment of the incentive to the third party named above and understand that I will not receive the incentive payment from AEP Ohio. I also understand that my release of the payment to a third party does not exempt me from the program requirements outlined in the measure specifications, Terms and Conditions, and Final Application Agreement.

**Print Name**

**Date**

**Customer Signature (AEP Ohio Customer)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Energy Star

APPROVED

indy™

J7.1.3G3

## ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- Lumen packages comparable to 26W, 32W, 42W CFL and 2x26W CFL with energy savings up to 35%
- Superior-quality white LED light output using Chip on Board technology
- No harmful ultraviolet or infrared wavelengths
- No lead or mercury

## PRODUCT SPECIFICATIONS

## Optics

**Reflector/Lens:** Computer-optimized parabolic reflector with frosted convex lens regressed into cone provides uniform distribution with no striations • Concealed LED array provides superior aesthetic appeal both on and off

**Finishes:** Low iridescent specular, semi-specular and satin Alzak® finishes available with integral flange of same finish • See reflector options for other colors and finishes

**Baffle:** White or black painted deep multi-groove aluminum baffle insert with integral white painted flange and frosted convex glass lens

## Electrical

**LED Light Engine:** Compact light source delivers uniform illumination without pixilation, enabling excellent beam control • Consistent fixture-to-fixture color temperature within 3 SDCM • Replaceable PC board with quick connector mounts directly to heat sink • CRI> 80 standard, 90 & 97 CRI available, see options for compatibility • Light engine mounts directly to heat sink and is easily replaceable • Cast aluminum heat sink integrated directly with housing provides superior thermal management to ensure the long life of LED

**LED Driver:** Power factor >0.9 • Easily replaceable from above or below the ceiling • Dimmable via 0-10V protocol, increasing efficiency up to 30% while dimming • For a list of compatible dimmers, see [LED-DIM](#).

**Life:** Rated for 60,000 hours at 70% lumen maintenance • Available with optional Lumen Depreciation Indicator (LDI)

**Emergency Battery Pack (Optional) output:** Provides a minimum of 600 (BR), or 1100 (HBR) lumens for a minimum duration of 90 minutes

## Mechanical

**Housing:** Low profile, universal housing design installs in suspended grid, plaster or drywall • Integral cast aluminum heat sink conducts heat away from LED light engine • Driver accessible from above and below ceiling and can be upgraded to accommodate future technology improvements.

**Mounting Frame:** Heavy gauge steel lower housing ring accommodates ceilings up to 2" thick • For thicker ceilings, consult factory

**Mounting Bracket:** Mounting brackets have 3" vertical adjustment and accepts most commercial bar hangers, including our proprietary Tru-Lock bar hangers • Our one-piece Tru-Lock bar hangers have integral T-bar locking screws and alignment notches for locating and locking fixture in the center or 1/4 tile increments

**Junction Box:** Over size 4" x 6" galvanized steel junction box with (6) 1/2" (2) 3/4" knockouts facilitate quick wiring • Junction box rated for four (4) No. 12 AWG 90° C branch circuit conductors (2-in, 2-out)

## Labels and Listings

- UL and cUL listed for feed through and damp locations • RoHS compliant • UL spacing requirement for 4000 lumen: minimum of 4' between fixture centers, 3" overhead clearance, 2' from fixture center to side wall
- EMI complies with FCC 47, Part 15, Class A • ENERGY STAR® Qualified, see back page for designated products • I.B.E.W. Union made • ARRA Compliant

**Warranty:** 5 years when used in accordance with manufacturing guidelines.  
Product specifications subject to change without notice.

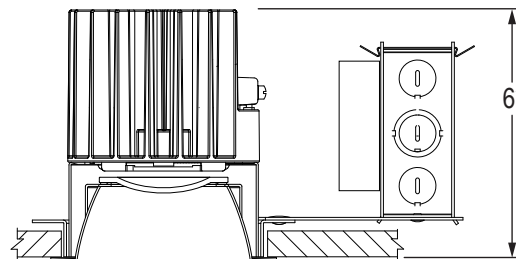
## BEAM SPREAD

TRIM	DEGREE
L400P-CL	65°
L400P-CQ	65°
L400P-CS	70°
L400B-B	76°

800 TO 4000 LUMEN 4" LED  
DOWNLIGHT  
PARABOLIC LENSED APERTURE  
L4 SERIES

Type	Cat. No.
Project: _____	
Notes: _____	

## DIMENSIONS

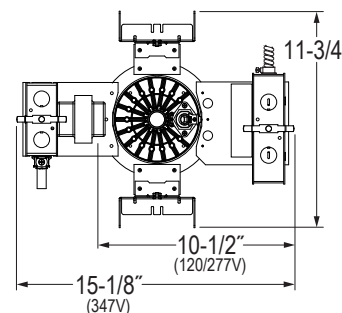


Ceiling Cutout

4-1/4" Dia.

4-3/4" Dia.

5-1/2" Dia.



## ORDERING INFORMATION: Rough-in, reflector and accessories each ordered separately.

Example: L4-1335U-G3-LDI

ROUGH-IN	LIGHT ENGINE LUMENS	CCT	VOLTAGE	GENERATION	OPTIONS
L4	08 800 lm 13 1300 lm 15 1500 lm 17 1700 lm 23 2300 lm 28 2800 lm 33 3300 lm 40 4000 lm	27 2700 30 3000 35 3500 40 4000	U Universal 1 120V 2 277V 3 347V	G3	90 90 CRI 97 97 CRI (2700 & 3000 CCT only) F Fuse and Fuse Holder CP Chicago Plenum + BR Emergency Battery Pack w/ Remote Test Switch + HBR High Lumen Emergency Battery Pack w/ Remote Test Switch + PD Driver compatible with 3-wire fluorescent controls & Lutron Programmable Dimming EcoSystem® + FDL Forward Phase Dimming Lutron Driver - 120V only (2-wire dimming, neutral wire required) LDI Lumen Depreciation Indicator (Cannot be used w/ BR or HBR options) FD Phase Cut Dimming, Forward and Reverse, (800-4000 lumen only) - 120V only DMX DMX/RDM Driver DALI DALI Dimming Driver NL nLight Dimming Pack Controls (0-10V only) (Not compatible with CP option)

- Only 800, 1300 & 1500 lumen fixtures are universal voltage (120/277V)
- ◆ Not Available for 4000 Lumens
- + Not Available for 347V or CP

6/16 Rev.3

Example: L400P-CQ-WH

CONE	COLOR	FINISH	OPTIONS
L400P Parabolic Cone L400B Baffle	C Clear G Gold W White PT Pewter BZ Bronze B Black W White	Low Iridescent Alzak Finishes: L Specular S Satin *Q Semi-Specular (*Clear only) Blank for White & Baffle	WH White Flange WET Wet Location Listing

Example: HB-TL

ACCESSORIES
HB-TL 25" Tru-Lock grid ceiling bar hangers, Pair HB-52 52" C-Channel Bar Hangers, Pair HB-28 28" C-Channel Bar Hangers, Pair LB-27 27" Linear Bar Hangers, Pair SCA4-* Sloped Ceiling adapter * Angle must be specified when ordering; Available in 5°, 10°, 15°, 20°, 25°, 30° Example: SCA4-20



1300 South Wolf Rd • Des Plaines, Illinois 60018  
PHONE 800-367-5866 • FAX 888-708-6578  
[www.junolightinggroup.com](http://www.junolightinggroup.com)



**J7.1.3G3**  
**800 TO 4000 LUMEN 4" LED**  
**DOWNLIGHT**  
PARABOLIC LENSED APERTURE  
**L4 SERIES**

ENGINEERING DATA: 347 Volt available, consult factory

VOLTAGE	120								277							
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	800	1300	1500	1700	2300	2800	3300	4000
CCT	2700K/3000K/3500K/4000K								2700K/3000K/3500K/4000K							
INPUT CURRENT	0.064	0.102	0.12	0.134	0.184	0.233	0.273	0.356	0.032	0.05	0.058	0.064	0.087	0.105	0.127	0.16
INPUT WATTAGE	7.7W	12.2W	14.4W	16.1W	22.1W	27.8W	32.6W	43.0W	8.2W	12.5W	14.6W	16.3W	22.3W	27.5W	33.0W	42.3W
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	6.67	4.30	4.01	3.68	5.59	5.70	4.16	3.93	11.15	10.45	10.99	11.11	10.06	8.38	8.48	7.98
POWER FACTOR	0.991	0.993	0.993	0.995	0.994	0.995	0.997	0.998	0.915	0.889	0.903	0.911	0.921	0.942	0.935	0.955

DELIVERED LUMENS/LUMENS PER WATT (4K 80CRI)																
	L4-0840U		L4-1340U		L4-1540U		L4-17401		L4-23401		L4-28401		L4-33401		L4-40401	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
L400P-CL	648	86.4	1063	85.1	1229	84.7	1378	74.9	1821	75.6	2191	73.5	2518	72.8	3056	68.1
L400P-CQ	602	80.3	989	79.1	1142	78.8	1281	69.6	1693	70.3	2037	68.4	2341	67.7	2841	63.3
L400P-CS	607	80.9	996	79.7	1151	79.3	1291	70.2	1706	70.8	2052	68.9	2358	68.2	2862	63.7

**ENERGY STAR® Qualified**

PRODUCT#	FIXTURE CONFIGURATIONS = ENERGY STAR
 <b>Universal Voltage (120V-277V), 80 CRI</b> L4-(XX)(YY)U-G3 ▲ L400P-(CC)(F)	Lumen Package: XX = 08*, 13*, 15, 17 CCT: YY = 27, 30, 35, 40 Voltage: Universal Voltage (120V-277V) CRI: 80 Reflector Color: CC = C Reflector Finish: F = L, S, Q
 <b>120V/277V, 80 CRI</b> L4-(XX)(YY)(Z)-G3 ▲ L400P-(CC)(F)	Lumen Package: XX = 23, 28, 33, 40 CCT: YY = 27, 30, 35, 40 Voltage: Z = 1, 2 CRI: 80 Reflector Color: CC = C Reflector Finish: F = L, S, Q

▲ PD and FDL options are not ENERGY STAR® Certified.

\* Indicated lumen packages are not ENERGY STAR® Certified with -DMX or -DALI options when used with 277 volts.

Energy Star

APPROVED

indy™

J7.1.4G3

## ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- Lumen packages suitable for ceiling heights ranging from 8' to in excess of 100'
- Efficacies up to 87 lm/w
- Superior-quality white LED light output using Chip on Board technology
- No harmful ultraviolet or infrared wavelengths
- No lead or mercury

## PRODUCT SPECIFICATIONS

## Optics

**Cone/Lens:** Computer-optimized parabolic reflector with frosted convex lens regressed into cone provides uniform distribution with no striations • Concealed LED array provides superior aesthetic appeal both on and off

**Finishes:** Low iridescent specular, semi-specular and satin Alzak® finishes available with integral flange of same finish • See reflector options for other colors and finishes

**Baffle:** White or black painted deep multi-groove aluminum baffle insert with integral white painted flange and frosted convex glass lens

## Electrical

**LED Light Engine:** Compact light source delivers uniform illumination without pixilation, enabling excellent beam control • Consistent fixture-to-fixture color temperature within 3 SDCM • Replaceable light engine with quick connector mounts directly to heat sink and is easily replaceable • CRI> 80 standard, 90 & 97 CRI available, see options for compatibility

**Passive Cooling:** Cast aluminum heat sink integrated directly with housing provides superior thermal management to ensure the long life of LED

**LED Driver:** Power factor >0.9 • Easily replaceable from above or below the ceiling

**Dimming:** Dimmable via 0-10V protocol standard • Optional drivers available for use with Lutron EcoSystem, 2-wire dimmers DMX, or DALI • For a list of compatible dimmers, see [LED-DIM](#).

**Life:** Rated for 60,000 hours at 70% lumen maintenance • Available with optional Lumen Depreciation Indicator (LDI)

**Emergency Battery Pack (Optional) output:** Provides a minimum of 600 (BR), or 1100 (HBR) lumens for a minimum duration of 90 minutes

## Mechanical

**Housing:** Low profile, universal housing design installs in suspended grid, plaster or drywall • Integral heat sink conducts heat away from LED light engine • Driver is accessible from above and below ceiling and can be upgraded to accommodate future technology improvements.

**Mounting Frame:** Heavy gauge steel lower housing ring accommodates ceilings up to 2" thick • For thicker ceilings; consult factory

**Mounting Bracket:** Mounting brackets have 3" vertical adjustment and accepts most commercial bar hangers, including our proprietary Tru-Lock bar hangers • Our one-piece Tru-Lock bar hangers have integral T-bar locking screws and alignment notches for locating and locking fixture in the center or 1/4" tile increments

**Junction Box:** Over size 4" x 6" galvanized steel junction box with (6) 1/2" (2) 3/4" knockouts facilitate quick wiring • Junction box rated for four (4) No. 12 AWG 90° C branch circuit conductors (2-in, 2-out)

## Labels and Listings

• UL and cUL listed for feed through and damp locations • RoHS compliant • UL spacing requirement for 4000 lumen and above: minimum of 4' between fixture centers, 3" overhead clearance, 2' from fixture center to side wall • EMI complies with FCC 47, Part 15, Class A • ENERGY STAR® Qualified, see back page for designated products • I.B.E.W. Union made • ARRA Compliant

**Warranty:** 5 years when used in accordance with manufacturing guidelines.

Product specifications subject to change without notice.

## ORDERING INFORMATION: Rough-in, reflector and accessories each ordered separately.

Example: L6-40352-G3-LDI

ROUGH-IN	LIGHT ENGINE LUMENS	CCT	VOLTAGE	GENERATION	OPTIONS
<b>L6</b>				<b>G3</b>	
08	800 lm	27	2700	■ U	90
13	1300 lm	30	3000	1 120V	97
15	1500 lm	35	3500	2 277V	F
17	1700 lm	40	4000	3 347V	CP
23	2300 lm				+ BR
28	2800 lm				+ HBR
33	3300 lm				
40	4000 lm				◆ PD
45	4500 lm				
50	5000 lm				◆ FDL
55	5500 lm				
60	6000 lm				LDI
65	6500 lm				FD
70	7000 lm				DMX
75	7500 lm				DALI
80	8000 lm				NL
85	8500 lm				
90	9000 lm				

■ Only 800, 1300, 1500 & 1700 lumen fixtures are universal voltage (120/277V)

◆ Not Available for 4000 Lumens and up

+ Not Available for 347V or CP

Example: L600P-PTS-WH

CONE	COLOR	FINISH	OPTIONS
<b>L600P</b>	<b>C</b>	<b>L</b>	<b>WH</b>
Parabolic	Clear	Specular	White
<b>L600B</b>	<b>G</b>	<b>S</b>	<b>WET</b>
Baffle	Gold	Satin	Wet Location
	<b>WT</b>	* Q Semi-Specular	Listing
	Wheat	(*Clear only)	
	<b>PT</b>	Blank for White & Baffle	
	Pewter		
	<b>BZ</b>		
	Bronze		
	<b>B</b>		
	Black		
	<b>W</b>		
	White		

Example: HB-TL

ACCESSORIES
<b>HB-TL</b> 25" Tru-Lock grid ceiling bar hangers, Pair
<b>HB-52</b> 52" C-Channel Bar Hangers, Pair
<b>HB-28</b> 28" C-Channel Bar Hangers, Pair
<b>LB-27</b> 27" Linear Bar Hangers, Pair
<b>SCA6</b> * Sloped Ceiling adapter
* Angle must be specified when ordering; Available in 5°, 10°, 15°, 20°, 25°, 30°
Example: SCA6-20

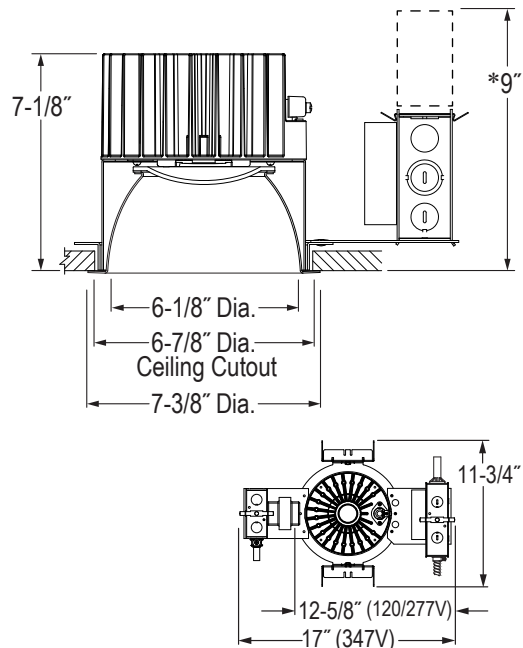


800 TO 9000 LUMEN 6" LED  
DOWNLIGHT  
PARABOLIC LENSED APERTURE  
L6 SERIES

Type	Cat. No.
Project: _____	
Notes: _____	

## DIMENSIONS

\*6000 - 9000 Lumens



1300 South Wolf Rd • Des Plaines, Illinois 60018  
PHONE 800-367-5866 • FAX 888-708-6578  
[www.junolightinggroup.com](http://www.junolightinggroup.com)



**J7.1.4G3**  
**800 TO 9000 LUMEN 6" LED**  
**DOWNLIGHT**  
PARABOLIC LENSED APERTURE  
**L6 SERIES**

ENGINEERING DATA: 347 Volt available, consult factory

VOLTAGE	120																	
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000
CCT	2700K/3000K/3500K/4000K																	
INPUT CURRENT	0.064	0.102	0.12	0.151	0.202	0.250	0.290	0.375	0.358	0.383	0.426	0.457	0.501	0.553	0.604	0.645	0.694	0.769
INPUT WATTAGE	7.7W	12.2W	14.4W	18.1W	24.1W	29.8W	34.6W	45.0W	42.3W	45.3W	50.4W	54.7W	59.9W	66.2W	72.2W	77.1W	82.9W	92.0W
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	6.67	4.30	4.01	3.68	5.59	5.70	4.16	3.93	14.00	13.26	14.48	4.61	4.66	3.97	4.24	3.81	3.74	3.53
POWER FACTOR	0.991	0.993	0.993	0.995	0.994	0.995	0.997	0.998	0.996	0.996	0.996	0.996	0.996	0.997	0.996	0.996	0.996	0.996
VOLTAGE	277																	
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000
CCT	2700K/3000K/3500K/4000K																	
INPUT CURRENT	0.032	0.050	0.058	0.073	0.095	0.113	0.135	0.168	0.177	0.192	0.204	0.220	0.222	0.251	0.288	0.306	0.334	0.345
INPUT WATTAGE	8.2W	12.5W	14.6W	18.3W	24.3W	29.5W	35.0W	44.3W	42.8W	45.9W	50.8W	54.8W	61.1W	63.4W	72.7W	77.0W	83.7W	88.9W
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	11.15	10.45	10.99	11.11	10.06	8.38	8.48	7.98	21.91	19.95	21.30	22.02	23.02	21.97	20.07	19.57	17.10	14.74
POWER FACTOR	0.915	0.889	0.903	0.911	0.921	0.942	0.935	0.955	0.874	0.864	0.898	0.900	0.994	0.910	0.912	0.908	0.904	0.906

DELIVERED LUMENS/LUMENS PER WATT (4K 80CRI)																		
	L6-0840U		L6-1340U		L6-1540U		L6-17401		L6-23401		L6-28401		L6-33401		L6-40401		L6-45401	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
L600P-CL	657	87.7	1079	86.3	1247	86.0	1399	76.0	1848	76.7	2223	74.6	2555	73.9	3101	69.1	3497	84.3
L600P-CQ	633	84.5	1040	83.2	1201	82.8	1348	73.2	1781	73.9	2142	71.9	2462	71.2	2988	66.5	3381	81.5
L600P-CS	576	76.8	945	75.6	1092	75.3	1225	66.6	1619	67.2	1947	65.3	2238	64.7	2716	60.5	3140	75.7
	L6-50401		L6-55401		L6-60401		L6-65401		L6-70401		L6-75401		L6-80401		L6-85401		L6-90401	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
L600P-CL	3806	83.1	4254	81.2	4386	80.3	4807	81.3	5268	79.3	5571	77.7	5834	76.9	6216	75.5	6585	72.0
L600P-CQ	3680	80.4	4113	78.5	4240	77.7	4648	78.6	5094	76.7	5386	75.1	5641	74.3	6010	73.0	6367	69.6
L600P-CS	3418	74.6	3820	72.9	3939	72.1	4317	73.0	4731	71.3	5003	69.8	5240	69.0	5583	67.8	5914	64.6

**ENERGY STAR® Qualified**

PRODUCT#	FIXTURE CONFIGURATIONS = ENERGY STAR
 <b>Universal Voltage (120V-277V), 80 CRI</b> L6-(XX)(YY)U-G3 ▲ L600P-(CC)(F)	Lumen Package: XX = 08*, 13*, 15, 17 CCT: YY = 27, 30, 35, 40 Voltage: Universal Voltage (120V-277V) CRI: 80 Reflector Color: CC = C Reflector Finish: F = L, S, Q
 <b>120V/277V, 80 CRI</b> L6-(XX)(YY)(Z)-G3 ▲ L600P-(CC)(F)	Lumen Package: XX = 23, 28, 33, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90 CCT: YY = 27, 30, 35, 40 Voltage: Z = 1, 2 CRI: 80 Reflector Color: CC = C Reflector Finish: F = L, S, Q

▲ PD and FDL options are not ENERGY STAR® Certified.

\* Indicated lumen packages are not ENERGY STAR® Certified with -DMX or -DALI options when used with 277 volts.



DLC Listed

APPROVED

# LS Series

LS8™ LED Surface Ambient Luminaire – 8'

## Product Description

The LS8™ surface ambient luminaire delivers up to 100 lumens per watt of Cree TrueWhite® Technology 90+ CRI illumination. The 8' (2438mm) luminaire is available with up to 10,000 lumens in 3500K, 4000K and 5000K color temperatures. The LS Series features sleek and compact architectural design with flexible lumen packages, color temperatures and standard 0-10V dimming. Flexible mounting of the LS Series allows for individual mount or continuous row applications for surface mount, suspended mount, pendant mount and cove installations.

**Applications:** Surface ambient applications for new construction and upgrade

## Performance Summary

Utilizes Cree TrueWhite® Technology

**Delivered Light Output:** 8,000-10,000 lumens

**Input Power:** 88-100 watts

**Efficacy:** 89-100 LPW

**CRI:** 90+ CRI

**CCT:** 3500K, 4000K, 5000K

**Input Voltage:** 120-277, 347 VAC, 60Hz

**Limited Warranty:** 10 years on luminaire

**Dimensions:** L 96.0" (2438mm) x W 2.5" (64mm) x H 3.0" (77mm)

**Weight:** 10 lbs. (4.5kg)

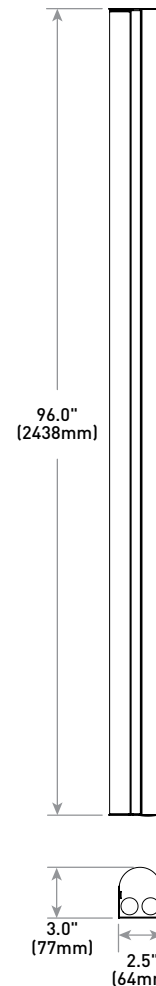
**Dimming:** 0-10V dimming to 5%\*

\* See <http://lighting.cree.com/warranty> for warranty terms

\* Reference <http://lighting.cree.com/products/indoor/surface-ambient/ls-series> for recommended wiring dimming controls and wiring diagrams

## Reflectors & Accessories

Field-Installed		
<b>Reflectors</b> - Refer to reflector spec sheet <b>Solid</b> LS8-SR - Pair of reflectors <b>Apertured</b> LS8-AR - Pair of reflectors <b>Joint Aligner</b> LS-RJ - Top housing aligner for continuous rows LS-RFLJ - Reflector aligner for continuous row	<b>Adjustable Cable Support Kits for T-Bar Applications</b> AC5-48-Q14B-TB - Includes 5.0" (127mm) Canopy, 48.0" (1219mm) Adjustable Cable, Q14B Gripper and T-Bar Clip <b>Continuous Row Through Wiring Kit</b> LS8TWK - Includes (3) #12AWG 102.0" (2591mm) Wires for Line (black), Neutral (white), Ground (green), (2) #18AWG 102.0" (2591mm) Wires for 0-10V dimming (purple, gray) and (10) Wire Nuts	<b>Adjustable Cable Support Kits w/ Power Feeds</b> AC5-12/3-48-Q14B-JB - Non-dimming applications - Includes 5.0" (127mm) Cable Canopy, 48" (1219mm) #12/3 SJT Cord, Q14B Gripper and J-Box Strap AC5-18/5-48-Q14B-JB - Dimming applications - Includes 5.0" (127mm) Cable Canopy, 48.0" (1219mm) #18/5 SJT Cord, Q14B Gripper and J-Box Strap AC5-18/2-48-Q14B-JB - For use with AC5-12/3-48-Q14B-JB for selective luminaire dimming control in row mounted luminaires - Includes 5.0" (127mm) Cable Canopy, 48.0" (1219mm) #18/2 SVT Cord, Q14B Gripper and J-Box Strap



## Ordering Information

Example: LS8-80L-35K-10V

LS8			10V		
Product	Initial Delivered Lumens	CCT	Control	Voltage	Options
LS8	80L 88W, 8000 lumens - 91 LPW (120-277V) 96W, 8000 lumens - 89 LPW (347V) 100L 100W, 10000 lumens - 100 LPW	35K 3500K 40K 4000K 50K 5000K	10V* 0-10V dimming to 5%	Blank 120-277 Volt 34 347 Volts -Available with 80L only	EB14Emergency Backup - Minimum 90 minutes - 1400 lumens - 120-277V only - Available in US only



Rev. Date: V3 07/28/2016



**APPROVED**

**D1.3.38A**

DLC Listed

**TRAC-MASTER®**  
Avant Garde  
**16W CONIX® II LED**  
**T261LG2**

**PERFORMANCE DATA<sup>1</sup>:**

Catalog Number	Voltage	Input Watts (Typical)	Lumens	Efficacy (LPW)	Rated Life (Hours)
<b>T261LG2-27S</b>	120V	15.8	933	59	50,000
<b>T261LG2-27N</b>	120V	15.8	934	59	50,000
<b>T261LG2-27F</b>	120V	15.8	924	59	50,000
<b>T261LG2-27W</b>	120V	15.8	890	56	50,000
<b>T261LG2-3S</b>	120V	15.8	1036	66	50,000
<b>T261LG2-3N</b>	120V	15.8	1038	66	50,000
<b>T261LG2-3F</b>	120V	15.8	1027	65	50,000
<b>T261LG2-3W</b>	120V	15.8	989	63	50,000
<b>T261LG2-3HCS</b>	120V	15.8	881	56	50,000
<b>T261LG2-3HCN</b>	120V	15.8	882	56	50,000
<b>T261LG2-3HCF</b>	120V	15.8	873	55	50,000
<b>T261LG2-3HCW</b>	120V	15.8	841	53	50,000
<b>T261LG2-35S</b>	120V	15.8	1057	67	50,000
<b>T261LG2-35N</b>	120V	15.8	1058	67	50,000
<b>T261LG2-35F</b>	120V	15.8	1048	66	50,000
<b>T261LG2-35W</b>	120V	15.8	1009	64	50,000
<b>T261LG2-4S</b>	120V	15.8	1078	68	50,000
<b>T261LG2-4N</b>	120V	15.8	1079	68	50,000
<b>T261LG2-4F</b>	120V	15.8	1068	68	50,000
<b>T261LG2-4W</b>	120V	15.8	1029	65	50,000

<sup>1</sup> Performance data, including Rated Life, is based on measurements of an individual fixture operating in a 25°C ambient.

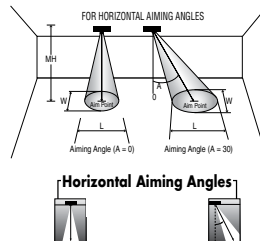
**ELECTRICAL DATA**

Input Voltage	120V
Input Current (max.)	0.15A
Power Factor	>0.90
T.H.D.	<20%

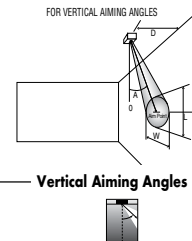
**CBCP** • Centerbeam candlepower

**FC** • Footcandles at beam center (aim point)





In vertical aiming applications, aim point (X) is determined by dividing distance from the wall (D) by the tangent of the desired aim angle (A) (0.5774 for 30°, 1.0 for 45°, 1.732 for 60°).



**Horizontal Aiming Angles**



**Vertical Aiming Angles**

Lamp	Beam Type	Beam Spread°	Rated Life	CBCP	0°				30°			30°					45°				60°				
					MH	FC	L	W	FC	L	W	D	FC	X	L	W	FC	X	L	W	D	FC	X	L	W
Conix II 16W LED, 3000K Spot	S	14° 	50000	12446	6	346	1.5	1.5	225	2.0	1.7	3	173	5.2	3.2	1.5	489	3.0	1.5	1.1	6	225	3.5	2.0	1.7
					8	194	2.0	2.0	126	2.7	2.3	4	97	6.9	4.2	2.0	275	4.0	2.0	1.4	8	126	4.6	2.7	2.3
					10	124	2.5	2.5	81	3.4	2.9	5	62	8.7	5.3	2.5	176	5.0	2.5	1.8	10	81	5.8	3.4	2.9
					12	86	3.0	3.0	56	4.0	3.5	6	43	10.4	6.3	3.0	122	6.0	3.1	2.1	12	56	6.9	4.0	3.5
					14	63	3.5	3.5	41	4.7	4.1	7	32	12.1	7.4	3.5	90	7.0	3.6	2.5	14	41	8.1	4.7	4.1
Conix II 16W LED, 3000K Narrow Flood	N	26° 	50000	4728	4	296	1.8	1.8	192	2.5	2.1	2	148	3.5	4.3	1.8	418	2.0	1.9	1.3	4	192	2.3	2.5	2.1
					6	131	2.7	2.7	85	3.7	3.1	3	66	5.2	6.5	2.7	186	3.0	2.9	1.9	6	85	3.5	3.7	3.1
					8	74	3.6	3.6	48	4.9	4.2	4	37	6.9	8.6	3.6	104	4.0	3.8	2.6	8	48	4.6	4.9	4.2
					10	47	4.5	4.5	31	6.2	5.2	5	24	8.7	10.8	4.5	67	5.0	4.8	3.2	10	31	5.8	6.2	5.2
					12	33	5.5	5.5	21	7.4	6.3	6	16	10.4	12.9	5.5	46	6.0	5.7	3.9	12	21	6.9	7.4	6.3
Conix II 16W LED, 3000K Flood	F	40° 	50000	2153	4	135	2.9	2.9	87	4.0	3.3	1	269	1.7	4.7	1.4	761	1.0	1.6	1.0	3	155	1.7	3.0	2.5
					5	86	3.6	3.6	56	5.0	4.1	2	67	3.5	9.4	2.9	190	2.0	3.3	2.0	4	87	2.3	4.0	3.3
					6	60	4.3	4.3	39	6.0	5.0	3	30	5.2	14.1	4.3	85	3.0	4.9	3.0	5	56	2.9	5.0	4.1
					7	44	5.0	5.0	29	7.0	5.8	4	17	6.9	18.7	5.7	48	4.0	6.6	4.1	6	39	3.5	6.0	5.0
					8	34	5.7	5.7	22	8.0	6.6	5	11	8.7	23.4	7.2	30	5.0	8.2	5.1	7	29	4.0	7.0	5.8
Conix II 16W LED, 3000K Wide Flood	W	48° 	50000	1388	2	347	1.8	1.8	225	2.5	2.1	1	174	1.7	8.9	1.8	491	1.0	2.2	1.3	2	225	1.2	2.5	2.1
					3	154	2.7	2.7	100	3.8	3.1	1.5	77	2.6	13.3	2.7	218	1.5	3.3	1.9	3	100	1.7	3.8	3.1
					4	87	3.6	3.6	56	5.1	4.1	2.0	43	3.5	17.7	3.6	123	2.0	4.5	2.5	4	56	2.3	5.1	4.1
					5	56	4.5	4.5	36	6.4	5.2	2.5	28	4.3	22.2	4.5	79	2.5	5.6	3.2	5	36	2.9	6.4	5.2
					6	39	5.4	5.4	25	7.6	6.2	3.0	19	5.2	**	5.4	55	3.0	6.7	3.8	6	25	3.5	7.6	6.2

For 2700K fixtures, use 0.90 multiplier; for 3000HC fixtures, use 0.85 multiplier; for 3500K fixtures, use 1.02 multiplier; for 4000K fixtures, use 1.04 multiplier.

\*\*Due to steep aiming angle, length of beam extends beyond 25'.



**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**4/6/2017 11:24:43 AM**

**in**

**Case No(s). 17-0486-EL-EEC**

Summary: Application Select Comfort Retail Corp. and Ohio Power Company for approval of a special arrangement agreement with a mercantile customer electronically filed by Mr. Ryan F. M. Aguiar on behalf of Ohio Power Company