TO: Board of Adjustment

FROM: Robin Crowther, Planning and Zoning Director

MEETING DATE: December 14, 2016

SUBJECT: Discussion and action regarding a request for a Variance (16-1) to approve LED lighting at 500 South Navajo Drive, 101 El Mirage, and 1801 North Navajo Drive

ATTACHMENTS: Site Plan showing lighting locations Photographs of lighting fixtures Existing and proposed lighting fixtures

APPLICANT: Page Unified School District

REQUEST: Page Unified School District is requesting a variance to permit LED dark sky compliant lighting that is not currently permitted by the Zoning Ordinance.

INTRODUCTION: Page Unified School District is upgrading the interior and exterior lighting at Page High School, Page Middle School, Desert View Intermediate, Lake View Primary and Page USD District Office. They would like to replace the present lighting with LED lighting that is more efficient.

In the current Zoning Ordinance, the only permitted lighting is sodium pressure lighting. The ordinance does specify that all lighting fixtures must be fully shielded and direct light down.

The City Council and the Planning and Zoning Commission have had meetings and presentations to educate them on the different types of lighting along with the benefits and possible negative impacts they produce. In these meetings, Dark Sky lighting has been the focus. Much of the discussion has been about the kelvin temperature of LED lights and what level is best for optimal dark skies. One presentation stated anything 3000 kelvin temperature or less is preferred, while there has also been discussion that 2700 kelvin would be better, however the presentations suggest both meet dark sky requirements.
BACKGROUND: In December 2015, the Hampton Inn requested a variance for their hotel lighting which included LED lighting. The Board of Adjustment at the time approved it.

ZONING: 3.3.4 One-Family Residential District, R1-7

This district is intended to provide a single-family dwelling unit environment while providing a more dense urban development, with complementary services such as churches, schools and professional offices with a Conditional Use Permit. Single Family homes in this district shall not include manufactured or mobile homes.

CODE OF ORDINANCES:

7.4 LIGHTING

7.4.1 Purpose

These regulations are intended to establish standards that ensure minimal light pollution, reduce glare, increase energy conservation, while providing for night safety, utility, security and productivity.

7.4.2 Applicability

These regulations shall apply to all outdoor lighting including, but not limited to, search, spot, or floodlights for: buildings and structures, recreational areas, parking lot lighting, landscape lighting, other outdoor lighting

7.4.3 Non-Residential Lighting

The following standards apply to the lighting of all outdoor facilities except Public or Private Athletic/Arena Recreation Facilities.

A. The height of any light fixture or illumination source shall not exceed 20 feet.

B. All lighting sources shall be hooded or shielded so that they are not visible from any adjacent or nearby lot or real property.

C. Lights or illuminating units shall not direct light, either directly or through a reflecting device, upon any adjacent or nearby real property.

D. Lighting fixtures shall be sodium pressure and fully shielded to prevent the formation of an urban light cloud.

Recreational lighting exempted from the above standards shall meet the following:
E. All metal halide/quartz fixtures shall be filtered by glass, acrylic or translucent enclosures.

F. No lighting of 150 watts or greater shall be used after 11:00 p.m. without a Temporary Use Permit.

7.5.3. A Security, Landscaping or other Lighting

All other outdoor lights shall be shielded and directed according to the following schedule:

<table>
<thead>
<tr>
<th>Wattage of Light Source</th>
<th>Shielding Required</th>
<th>Directed Downward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 100</td>
<td>Yes-Full</td>
<td>Yes</td>
</tr>
<tr>
<td>100-175</td>
<td>Yes-Full</td>
<td>Yes</td>
</tr>
<tr>
<td>Over 175</td>
<td>Yes-Full</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Fully shielded means outdoor light fixtures constructed so that no light rays are emitted by the installed fixture at angles above the horizontal plane.

7.4.4 Residential Lighting

All exterior lighting shall be limited to 100 watts unless filtered, shielded or screened to minimize any light impact onto adjoining property.

7.4.5 Other pole-mounted lighting (parking, walkways, etc.)

All lights mounted on poles eight feet or greater in height shall be directed down. The light source shall be shielded so that it will not be visible from any adjacent or nearby real property.

7.4.6 Searchlights

The operation of searchlights shall be allowed subject to the following conditions:

A. During the months of May through October, searchlights shall be operated only between the hours of 6:00 a.m. and 11:00 p.m.;

B. During the months of November through April, searchlights shall be operated only between the hours of 7:00 a.m. and 10:00 p.m.; and Searchlights shall not be operated on residentially zone properties except for grand openings or new developments.
**FINDINGS:**

The following is the review criteria for approval of a Variance.

### 2.3 VARIANCE REVIEW PROCEDURES AND REQUIREMENTS

#### 2.3.1 Purpose

Because of special circumstances applicable to a property, including its size, shape, topography, location or surroundings, there may be instances in which the strict application of the Zoning Ordinance will deprive the property of privileges enjoyed by other properties in the same zoning district. To ensure a fair application of this Ordinance, a Variance from the standards imposed may be granted by the Board of Adjustment.

#### 2.3.2 Review Criteria

A Variance shall not be granted unless the Board determines that:

- **A.** Special conditions and circumstances exist which are peculiar to the land, structure, or building involved, and which are not applicable to other lands, structures, or buildings in the same Zoning District. (This finding has not necessarily been met except the school district’s present lighting is not dark sky compliant and the City is working on a lighting code update that would eliminate the need for this variance).

- **B.** A literal interpretation of this Ordinance would deprive the appellant of rights commonly enjoyed by other properties in the same Zoning District. (A lighting variance was granted in the past year. The lighting ordinance is outdated and not current with improved lighting technology which can still be dark sky compliant).

- **C.** The alleged hardship caused by literal interpretation of the provisions of this Ordinance includes more than personal inconvenience and financial hardship, and is not the result of actions by the appellant. (The current lighting at the school was more than likely put in many years ago through no choice of the current administration).

- **D.** Granting the Variance will not confer upon the appellant any special privilege that is denied by this Ordinance to other lands, structures, or buildings in the same Zoning District. (Any property owner can request a variance and a lighting variance was granted a year ago).
E. Granting the Variance will not interfere with or substantially injure the appropriate use of adjacent conforming properties in the same zoning district. (Granting the variance should improve lighting for adjacent properties as the fixtures will come into dark sky compliance).

F. The reasons set forth in the appeal justify the granting of the Variance, and the Variance is the minimum Variance that will make possible the reasonable use of the land, building or structure. (The variance would be based on information that the City Council, P&Z Commission, and staff have received concerning dark sky compliance which seems to be a conservative approach to lighting standards).

G. Granting the Variance will be in harmony with the general purpose and intent of this Ordinance and will not be injurious to the neighborhood, or otherwise detrimental to the public welfare. (Granting the variance would be in line with an Ordinance update that is in progress and more dark sky compliant. Presentations have shown dark sky compliant lighting to be safer for visibility in the night.

RECOMMENDATION:

If it is the intent of City Council to approve a LED dark sky compliant lighting Ordinance per the information that has been presented to the City, then staff recommends approval of the Variance (16-1) for the Page Unified School District for LED dark sky compliant lighting (3000 kelvin temperature or less with all wall packs and height of poles having shielded lighting so the light shines down and does not break the horizontal plane or trespass from the property line).
APPLICATION FORM

APPLICATION TYPE (Mark all that apply):

- Site Plan Review
- Preliminary Plat
- Final Plat
- Conditional Use Permit
- Rezone
- Variance
- Other

PROJECT LOCATION
Assessor’s Parcel Number: 800-490-01A
Street Address (if any):

PROPERTY OWNER
Name: Page Unified School District 248
Address: 500 South Navajo Dr
Phone(s): 928-604-4100
Email:

DEVELOPER
Name: Midstate Energy
Contact: Robert Coy
Address: 1850 E. Edmiston Dr, Phoenix, AZ 85084
Phone(s): 602-828-6571
Email: scoy@midstate-energy.com

REPRESENTATIVE
Name: Kris Swatski
Address: 500 South Navajo Dr
Phone(s): 602-608-4174 c, 406-381-1398
Email: kswatski@pageud.kl2.az.us
Property Owner’s Signature: Date:
APPLICATION FORM

APPLICATION TYPE (Mark all that apply):

- Site Plan Review
- Preliminary Plat
- Final Plat
- Conditional Use Permit
- Rezone
- Variance
- Other

PROJECT LOCATION
Assessor’s Parcel Number: 801-11-005

Street Address (if any): LAKE VIEW
1801 N. NAVARO

PROPERTY OWNER
Name: Page Unified School District #8
Address: 500 South Navajo Dr
Phone(s): 928-604-4100
Email: ____________________________

DEVELOPER
Name: Midstate Energy
Contact: Robert Coy
Address: 1850 E. Entertainment Dr. Phoenix, AZ 85034
Phone(s): 602-828-6571
Email: scoy@midstate-energy.com

REPRESENTATIVE
Name: Kris Swatski
Address: 500 South Navajo Dr
Phone(s): 6-928-608-4174 c- 406-381-1378
Email: kswatski@pageud.k12.az.us
Property Owner’s Signature: ____________________________ Date: 11-22-16
APPLICATION FORM

APPLICATION TYPE (Mark all that apply):

- Site Plan Review
- Preliminary Plat
- Final Plat
- Conditional Use Permit
- Rezone
- Variance
- Other

PROJECT LOCATION

Assessor's Parcel Number: 800-330-06C

Street Address (if any): Page MS
101 El Mirage

PROPERTY OWNER

Name: Page Unified School District

Address: 500 South Navajo Dr

Phone(s): 928-604-4100

Email:

DEVELOPER

Name: Midsate Energy
Contact: Robert Coy

Address: 1850 E. Piestewa Dr Phoenix, AZ 85034

Phone(s): 602-828-6571

Email: scoy@midsate-energy.com

REPRESENTATIVE

Name: Kris Swatski

Address: 500 South Navajo Dr

Phone(s): 928-608-4174 c. 406-381-1898

Email: kswatski@pageu1d.k12.az.us

Property Owner's Signature: Date:

Signature: 11-26-16
Robin Crowther  
Planning and Zoning Director  
City Hall – City of Page  
697 Vista Ave  
PO Box 1180  
Page, AZ 86040  
928-645-4210

Subject: Variance to Dark Ordinance by the City of Page

Dear Mrs. Crowther,

Please consider this letter as our formal request to receive a variance to the current Dark Sky Standard required by the City of Page for exterior fixtures. The current standard/requirement of the statute section 7.4.3 Non Residential Lighting part D state that lighting fixtures shall be sodium pressure.

In August of 2016 Midstate Energy LLC. has been hired to complete an interior and exterior lighting upgrade with Page Unified School District #8, which includes the following locations:

- Page High School
- Page Middle School
- Desert View Intermediate
- Lake View Primary
- Page USD District Office

The objective of the program is to reduce energy and operational cost for the school district. The proposed lighting retrofit will also improve the quality of exterior light thus improving safety conditions on the campus noted. The exterior retrofit will result in a cost savings for the school district $28,987 year. This savings can be used by the school district to meet other essential needs.

Page USD has in place a high energy consuming exterior lighting system, that is inefficient and a contributing factor to “night glow”. In addition, the current system is failing and requires constant attention from district staff. Some of the issues with the current system include:

- Fixtures that consist of most forward throw luminaires utilizing metal halide, high pressure sodium and low pressure sodium lamps.
Midstate Energy LLC is proposing to offer an LED lighting package that is over 50% more energy efficient while also meeting the dark sky requirements mandated by the International Dark-Sky Association. All of the proposed exterior LED luminaires would have the Dark Sky Fixture Seal of Approval issued by the International Dark-Sky Association. All would have a 3000 Kelvin temperature or less in compliance with Dark Sky to minimize the blue light emissions. All would by full cut-off and/or fully shielded luminaires to prevent any up-light that causes “night-glow” and with the LED pinpoint optic technology, the light would be directed only to the specific areas on the ground that require illumination.

In summary, this project provides for Page USD to achieve a substantial amount of energy savings, lowering their monthly utility cost. This project would also bring all of their exterior lighting up to requirements mandated by the International Dark-Sky Association, providing 3000K or lower color temperatures, providing full cut-off / shielded luminaries and greatly reducing the levels of current light pollution.

Included with this letter are site plans labeled with locations of each type of current and proposed luminaires as well as pictures of current luminaires, product specification sheets and variance application.

Please direct any question to the number and email below and we look forward to receiving your formal reply to our request.

Regrds,

Robert Coy
Lighting Designer
A-Shape LED

19W Philips LED A21 2700K E26 DIM

Philips A-shape Dimmable LED lamps are the smart LED alternative to standard incandescents. The unique lamp design provides omi-directional light with excellent dimming performance.

Product data

- **General Information**
  - Cap-Base: E26
  - Bulb Shape: A21 (A21)
  - Nominal Lifetime (Nom): 25000 h
  - Switching Cycle: 50000X
  - Technical Type: 19-100W

- **Light Technical**
  - Color Code: 827 (CCT of 2700K)
  - Luminous Flux (Nom): 1680 lm
  - Luminous Flux (Rated) (Nom): 1680 lm
  - Color Designation: Warm White (WW)
  - Correlated Color Temperature (Nom): 2700 K
  - Luminous Efficacy (rated) (Nom): 88.42 lm/W
  - Color Consistency: <6
  - Color Rendering Index (Nom): 80
  - LLMF At End Of Nominal Lifetime (Nom): 70 %

- **Operating and Electrical**
  - Input Frequency: 50 to 60 Hz
  - Power (Rated) (Nom): 19 W
  - Lamp Current (Nom): 195 mA
  - Wattage Equivalent: 100 W

- **Controls and Dimming**
  - Dimmable: Yes

- **Mechanical and Housing**
  - Dimensions (Height x Width x Depth): NaN x NaN x NaN mm (NaN x NaN x NaN in)

- **Approval and Application**
  - Suitable For Accent Lighting: No
  - Energy Efficiency Label (EEL): A
  - Energy Consumption kWh/1000 h: 19 kWh

- **Product Data**
  - Order product name: 19W Philips LED A21 2700K E26 DIM
  - EAN/UPC - Product: 046677432218
  - Order code: 929000259604
  - Numerator - Quantity Per Pack: 1
  - Numerator - Packs per outer box: 6
  - Material Nr. (12NC): 929000259604
  - Net Weight (Piece): 0.224 kg

PHILIPS
A-Shape LED

Dimensional drawing

```
<table>
<thead>
<tr>
<th>Product</th>
<th>D</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>19W Philips LED A21 2700K E26 DIM</td>
<td>60 mm</td>
<td>125 mm</td>
</tr>
</tbody>
</table>
```

Photometric data

© 2016 Philips Lighting Holding B.V.
All rights reserved.

Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

www.philips.com/lighting

2016, March 4
data subject to change
LED 6” COMMERCIAL RECESSED RETROFIT DOWNLIGHT
RR6 SERIES

PRODUCT DESCRIPTION:
The commercial-grade LED Recessed Downlight Retrofit is supplied with a quick connect-case and conduit to make an easy connection to an existing recessed fixture frame junction box.

FEATURES:
• Universal voltage (120-277)
• Mounts into existing recessed frame
• Supplied with optional retaining clips if existing frame does not have adequate friction springs to secure reflector
• cETL listed for damp location use
• CRI: > 80
• PF: > .9
• A wide variety of CCTs available: 3000K and 4000K come standard; 2700K and 5000K by special order
• Five year limited warranty
• Dimmable to 5% (120v only)

CONSTRUCTION:
• Supplied with a heavy gauge anodized aluminum reflector in a haze finish
• External driver for easy retrofit and maintenance
• Power supply features integral thermal protection
• Optional extended trim rings available to conceal imperfections in drywall openings

MODEL SELECTION (Full list of order codes at pp. 3)

<table>
<thead>
<tr>
<th>RR</th>
<th>6</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>FAMILY</th>
<th>SIZE</th>
<th>WATTAGE (NOMINAL)</th>
<th>CCT</th>
<th>TRIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR6</td>
<td>6&quot;</td>
<td>15W</td>
<td>3000K</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23W</td>
<td>4000K</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*V2 only pertains to the 15W product

COMPATIBLE DIMMERS:

<table>
<thead>
<tr>
<th>MAKE</th>
<th>DIMMER MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutron</td>
<td>CTCL-153PD*</td>
</tr>
<tr>
<td>Lutron</td>
<td>DVC1-153PL*</td>
</tr>
<tr>
<td>Lutron</td>
<td>CTEV-303P</td>
</tr>
<tr>
<td>Lutron</td>
<td>LGCL-153PL*</td>
</tr>
<tr>
<td>Leviton</td>
<td>iP:10</td>
</tr>
</tbody>
</table>

* Dimming control should be adjusted to 5% minimum light output level in order to avoid flickering. Please consult dimming control instruction manual for specific procedure.
## SPECIFICATIONS:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SPECIFICATION</th>
<th>RR61530W/V2</th>
<th>RR61540W/V2</th>
<th>RR62330W</th>
<th>RR62340W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL PERFORMANCE</strong></td>
<td>Power Consumption (W)</td>
<td>14.0</td>
<td>14.0</td>
<td>23.0</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>Lumens Delivered (lm)</td>
<td>825</td>
<td>910</td>
<td>1725</td>
<td>1790</td>
</tr>
<tr>
<td></td>
<td>Efficacy (lm/W)</td>
<td>59</td>
<td>65</td>
<td>75</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Color Temperature</td>
<td>3000K</td>
<td>4000K</td>
<td>3000K</td>
<td>4000K</td>
</tr>
<tr>
<td></td>
<td>L70 Lifetime (hours)</td>
<td>50,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRI</td>
<td>&gt; 80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Color Consistency</td>
<td>Proprietary binning for uniform color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td>Power Factor</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Input Voltage</td>
<td>120-277V standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PHYSICAL</strong></td>
<td>Weight</td>
<td>2.4 lbs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mounting</td>
<td>Mounts into existing recessed frame</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operating Temperature</td>
<td>0° – 104° F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humidity</td>
<td>23% - 65% RH, non-condensing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CERTIFICATION</strong></td>
<td>Certification</td>
<td>FCC, LM-79, LM-80, ETL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Material Usage</td>
<td>RoHS compliant; no mercury</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environment</td>
<td>Indoor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warranty</td>
<td>5 years</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SPECIFICATION</th>
<th>RR63030W</th>
<th>RR63040W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL PERFORMANCE</strong></td>
<td>Power Consumption (W)</td>
<td>30.3</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>Lumens Delivered (lm)</td>
<td>2220</td>
<td>2525</td>
</tr>
<tr>
<td></td>
<td>Efficacy (lm/W)</td>
<td>75</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Color Temperature</td>
<td>3000K</td>
<td>4000K</td>
</tr>
<tr>
<td></td>
<td>L70 Lifetime (hours)</td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CRI</td>
<td>&gt; 80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Color Consistency</td>
<td>Proprietary binning for uniform color</td>
<td></td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td>Power Factor</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Input Voltage</td>
<td>120-277V standard</td>
<td></td>
</tr>
<tr>
<td><strong>PHYSICAL</strong></td>
<td>Weight</td>
<td>2.4 lbs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mounting</td>
<td>Mounts into existing recessed frame</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operating Temperature</td>
<td>0° – 104° F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humidity</td>
<td>20% - 65% RH, non-condensing</td>
<td></td>
</tr>
<tr>
<td><strong>CERTIFICATION</strong></td>
<td>Certification</td>
<td>FCC, LM-79, LM-80, ETL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Material Usage</td>
<td>RoHS compliant; no mercury</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environment</td>
<td>Indoor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warranty</td>
<td>5 years</td>
<td></td>
</tr>
</tbody>
</table>
ORDERING:

<table>
<thead>
<tr>
<th>ORDER CODE</th>
<th>MODEL</th>
<th>WATTAGE</th>
<th>CCT</th>
<th>VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>101646</td>
<td>RR61530WV2</td>
<td>15</td>
<td>3000K</td>
<td></td>
</tr>
<tr>
<td>101647</td>
<td>RR61540WV2</td>
<td>15</td>
<td>4000K</td>
<td></td>
</tr>
<tr>
<td>74039</td>
<td>RR62330W</td>
<td>23</td>
<td>3000K</td>
<td>120-277V</td>
</tr>
<tr>
<td>74040</td>
<td>RR62340W</td>
<td>23</td>
<td>4000K</td>
<td></td>
</tr>
<tr>
<td>74041</td>
<td>RR63030W</td>
<td>30</td>
<td>3000K</td>
<td></td>
</tr>
<tr>
<td>74042</td>
<td>RR63040W</td>
<td>30</td>
<td>4000K</td>
<td></td>
</tr>
</tbody>
</table>

*Please contact your MaxLite representative to order products that don’t have order codes listed here.

PRODUCT FEATURES:

OVERALL DIMENSIONS

PRODUCT FEATURES

EXTERNAL DRIVER

RETAINING CLIPS

Retaining clips are supplied for situations where the existing recessed frame does not have pre-installed clips to secure the reflector.
**LED 8” COMMERCIAL RECESSED RETROFIT DOWNDLIGHT**

**RR8 SERIES**

**PRODUCT DESCRIPTION:**
The commercial-grade LED Recessed Downlight Retrofit is supplied with a quick connect-case and conduit to make an easy connection to an existing recessed fixture frame junction box.

**FEATURES:**
- Universal voltage (120-277)
- Mounts into existing recessed frame
- Supplied with optional retaining clips if existing frame does not have adequate friction springs to secure reflector
- cETL listed for damp location use
- CRI: > 80
- PF: > .9
- A wide variety of CCTs available: 3000K and 4000K come standard; 2700K and 5000K by special order
- Five year limited warranty
- Dimmable to 5% (120v only)

**CONSTRUCTION:**
- Supplied with a heavy gauge anodized aluminum reflector in a haze finish
- External driver for easy retrofit and maintenance
- Power supply features integral thermal protection
- Optional extended trim rings available to conceal imperfections in drywall openings

### MODEL SELECTION (Full list of codes on pg. 3)

<table>
<thead>
<tr>
<th>FAMILY</th>
<th>SIZE</th>
<th>WATTAGE (NOMINAL)</th>
<th>CCT</th>
<th>TRIM</th>
<th>W</th>
<th>/V2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR</td>
<td>8</td>
<td>15W</td>
<td>27=</td>
<td>W</td>
<td>/V2*</td>
<td></td>
</tr>
<tr>
<td>RR=</td>
<td>3&quot;</td>
<td>23W</td>
<td>30=</td>
<td>W</td>
<td>/V2*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30W</td>
<td>40=</td>
<td>W</td>
<td>/V2*</td>
<td></td>
</tr>
</tbody>
</table>

"V2 only pertains to the 15W product"

### ACCESSORIES

<table>
<thead>
<tr>
<th>ORDER CODE</th>
<th>MODEL NUMBER</th>
<th>DESCRIPTION</th>
<th>ACCESSORIES IMAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>72821</td>
<td>RR8-XWHTRING</td>
<td>.8” White trim ring</td>
<td>![Image of .8” White trim ring]</td>
</tr>
<tr>
<td>74083</td>
<td>RR8-BNTRING</td>
<td>8” Brushed nickel trim ring</td>
<td>![Image of 8” Brushed nickel trim ring]</td>
</tr>
</tbody>
</table>

### COMPATIBLE DIMMERS:

<table>
<thead>
<tr>
<th>MAKE</th>
<th>DIMMER MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutron</td>
<td>CTCL-153PD*</td>
</tr>
<tr>
<td>Lutron</td>
<td>DVCL-153PL*</td>
</tr>
<tr>
<td>Lutron</td>
<td>CTELV-303P</td>
</tr>
<tr>
<td>Lutron</td>
<td>LGCL-153PL*</td>
</tr>
<tr>
<td>Leviton</td>
<td>IPR10</td>
</tr>
</tbody>
</table>

* Dimming control should be adjusted to 5% minimum light output level in order to avoid flickering. Please consult dimming control Instruction manual for specific procedure.
### SPECIFICATIONS:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SPECIFICATION</th>
<th>RR81527W/V2</th>
<th>RR81530W/V2</th>
<th>RR81540W/V2</th>
<th>RR82330W</th>
<th>RR82340W</th>
<th>RR83030W</th>
<th>RR83040W</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DETAILS</td>
<td>DETAILS</td>
<td>DETAILS</td>
<td>DETAILS</td>
<td>DETAILS</td>
<td>DETAILS</td>
<td>DETAILS</td>
</tr>
<tr>
<td><strong>GENERAL PERFORMANCE</strong></td>
<td></td>
<td>14.0</td>
<td>14.0</td>
<td>14.0</td>
<td>23.0</td>
<td>23.0</td>
<td>30.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Power Consumption (W)</td>
<td>850</td>
<td>875</td>
<td>920</td>
<td>1670</td>
<td>1750</td>
<td>2220</td>
<td>2510</td>
<td></td>
</tr>
<tr>
<td>Lumens Delivered (lm)</td>
<td>62</td>
<td>63</td>
<td>66</td>
<td>73</td>
<td>78</td>
<td>74</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Efficacy (lm/W)</td>
<td>2700K</td>
<td>3000K</td>
<td>4000K</td>
<td>3000K</td>
<td>4000K</td>
<td>3000K</td>
<td>4000K</td>
<td></td>
</tr>
<tr>
<td>Color Temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L70 Lifetime (hours)</td>
<td>50,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt; 80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color Consistency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Proprietary algorithm for uniform color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Voltage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120-277V standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PHYSICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.25 lbs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mounts into existing recessed frame</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0°F - 104°F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20% - 85% RH, non-condensing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CERTIFICATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Energy Star, FCC, LM-79, LM-80, ETL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material Usage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RoHS compliant, no mercury</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Indoor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 years</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ORDERING:

<table>
<thead>
<tr>
<th>ORDER CODE</th>
<th>MODEL</th>
<th>WATTAGE</th>
<th>CCT</th>
<th>VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>101648</td>
<td>RR81527W/V2</td>
<td>15</td>
<td>2700K</td>
<td>120-277V</td>
</tr>
<tr>
<td>101649</td>
<td>RR81530W/V2</td>
<td>15</td>
<td>3000K</td>
<td></td>
</tr>
<tr>
<td>101650</td>
<td>RR81540W/V2</td>
<td>15</td>
<td>4000K</td>
<td></td>
</tr>
<tr>
<td>74035</td>
<td>RR82330W</td>
<td>23</td>
<td>3000K</td>
<td></td>
</tr>
<tr>
<td>74036</td>
<td>RR82340W</td>
<td>20</td>
<td>4000K</td>
<td></td>
</tr>
<tr>
<td>74037</td>
<td>RR83030W</td>
<td>30</td>
<td>3000K</td>
<td></td>
</tr>
<tr>
<td>74038</td>
<td>RR83040W</td>
<td>30</td>
<td>4000K</td>
<td></td>
</tr>
</tbody>
</table>

*Please contact your MaxLite representative to order products that don't have order codes listed here.
PRODUCT FEATURES:

<table>
<thead>
<tr>
<th>REFLECTOR</th>
<th>STANDARD TRIM RING</th>
<th>OPTIONAL EXTENDED TRIM RING</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.93&quot;</td>
<td>7.8&quot;</td>
<td>7.8&quot;</td>
</tr>
<tr>
<td>5.56&quot;</td>
<td>9.4&quot;</td>
<td>10.4&quot;</td>
</tr>
<tr>
<td>.27&quot;</td>
<td>.27&quot;</td>
<td></td>
</tr>
</tbody>
</table>

OVERALL DIMENSIONS

<table>
<thead>
<tr>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.79&quot;</td>
</tr>
<tr>
<td>5.1&quot;</td>
</tr>
<tr>
<td>3.24&quot;</td>
</tr>
<tr>
<td>3.75&quot;</td>
</tr>
<tr>
<td>5.1&quot;</td>
</tr>
<tr>
<td>45.23&quot;</td>
</tr>
<tr>
<td>1.16&quot;</td>
</tr>
<tr>
<td>6.7&quot;</td>
</tr>
</tbody>
</table>

PRODUCT FEATURES

EXTERNAL DRIVER

RETAINING CLIPS

Retaining clips are supplied for situations where the existing recessed frame does not have pre-installed clips to secure the reflector.
LED InstantFit Lamps

8.5PL-C/T LED/26H-3000 IF 4P 10/1

Philips LED T8 InstantFit Lamps are an ideal energy saving choice for existing linear fluorescent fixtures.

**Product data**

**• General Information**
- Main Application: Industrial
- Nominal Lifetime (Nom): 40000 h
- Switching Cycle 85OL70: 5000X 40000

**• Light, Technical**
- Color Code: 830 [CCT of 3000K]
- Beam Angle (Nom): 120°
- Luminous Flux (Rated) (Nom): 900 lm
- Rated Beam Angle: 120°
- Correlated Color Temperature (Nom): 3000 K
- Color Consistency: <6
- Color Rendering Index (Nom): 82
- LLMF At End Of Nominal Lifetime (Nom): 70 %

**• Operating and Electrical**
- Input Frequency (Nom): 50 to 60 Hz
- Power (Rated): 8.5 W
- Starting Time (Max): 0.5 s
- Warm Up Time To 60% Light (Nom): instant full light
- Power Factor (Min): 0.9
- Voltage (Nom): 120-277 V

**• Temperature**
- T-Ambient (Max): 35 °C
- T-Ambient (Min): -20 °C
- T-Storage (Max): 65 °C
- T-Storage (Min): -40 °C
- T-Case Maximum (Nom): 67 °C

**• Controls and Dimming**
- Dimmable: No

**• Mechanical and Housing**
- Product Length: 100 mm
- Dimensions (Height x Width x Depth): NaN x NaN x NaN mm (NaN x NaN x NaN in)

**• Approval and Application**
- Energy Saving Product: Yes
- Suitable For Accent Lighting: No
- Energy Efficiency: A+
- Label (EEL): Approval Marks
- CE marking
- UL certificate
- RoHS compliance
- KEMA Keur certificate
- Energy Consumption kWh/1000 h: 10.5 kWh

**• Product Data**
- Order product name: 8.5PL-C/T LED/26H-3000 IF 4P 10/1
- EAN/UPC - Product: 046677458379
- Order code: 929001180804
LED InstantFit Lamps

Warnings and Safety

- Philips LED T8 InstantFit lamps will only operate properly on compatible instant-start ballasts. Please refer to the Philips LED T8

Dimensional drawing

![LED tube 100mm 8.5W](image)

**Photometric data**

![Photometric plot](image)

Material Nr. (12NC) 929001180804

Net Weight (Piece) 0.080 kg

InstantFit Installation Guide, which can be obtained through your local Philips Sales Representative, or visit www.philips.com/iled

---

2016, May 31
data subject to change
Philips A-shape Dimmable LED lamps are the smart LED alternative to standard incandescents. The unique lamp design provides omi-directional light with excellent dimming performance.
ALED3T150Y

Specification grade area lights available with IES Type III distribution. For use for roadway, general parking and other area lighting applications where a larger pool of lighting is required. Replaces up to 1000W HID fixtures. Patent pending thermal management system. 5 Year Warranty.

| Color: Bronze | Weight: 32.0 lbs |

<table>
<thead>
<tr>
<th>Project:</th>
<th>Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared By:</td>
<td>Date:</td>
</tr>
<tr>
<td>Driver Info</td>
<td>LED Info</td>
</tr>
<tr>
<td>Type:</td>
<td>Watts: 150W</td>
</tr>
<tr>
<td>120V:</td>
<td>Color Temp: 3000K</td>
</tr>
<tr>
<td>0.31A</td>
<td>Color Accuracy: 81 CRI</td>
</tr>
<tr>
<td>208V:</td>
<td>L70 Lifespan: 100000</td>
</tr>
<tr>
<td>0.80A</td>
<td>Lumens: 10,345</td>
</tr>
<tr>
<td>240V:</td>
<td>Efficacy: 67 LPW</td>
</tr>
<tr>
<td>0.69A</td>
<td>Input Watts: 154W</td>
</tr>
<tr>
<td>277V:</td>
<td>Efficiency: 98%</td>
</tr>
</tbody>
</table>
**Technical Specifications**

**Listings**
- **UL Listing:** Suitable for wet locations.

**IESNA LM-79 & LM-80 Testing:**
RAB LED luminaries have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have been received the Department of Energy/Lighting Facts label.

**Dark Sky Approved:**
The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

**LED Characteristics**
- **Lifespan:** 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.
- **LEDs:** Multi-chip, high-output, long-life LEDs
- **Color Consistency:** 3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.
- **Color Stability:** LED color temperature is warranted 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 C78.377-2011.

**Construction**
- **IES Classification:** The Type III distribution is ideal for roadway, general parking and other area lighting applications where a larger pool of lighting is required. It is intended to be located near the side of the area, allowing the light to project outward and fill the area.

**Effective Projected Area:**
- **EPA = 0.75**

**Ambient Temperature:** Suitable for use in 40°C (104°F) ambient temperatures

**Cold Weather Starting:** The minimum starting temperature is -40°C/-40°F

**Thermal Management:** Superior thermal management with external Air-Flow fins.

**Housing:**
- Die-cast aluminum housing, lens frame and mounting arm.

**Mounting:**
- Heavy-duty mounting arm with "O" ring seal & stainless steel screws

**IP Rating:**
- Ingress Protection rating of IP66 for dust and water.

**Reflector:**
- Specular vacuum-metalized polycarbonate

**Gaskets:**
- High-temperature silicone gaskets

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

**Green Technology:**
- Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

**For use on LEED Buildings:**
- IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

**Electrical**
- **Drivers:** Two Drivers, Constant Current, Class 2, 2000mA, 100-277V, 50-60Hz, Power Factor 99%
- **THD:** 6.6% at 120V, 11.5% at 277V
- **Surge Protection:** 4kV

**Optical**
- **Replacement:** The ALED150 replaces 400W Metal Halide Area Lights.

**BUG Rating:**
- B1 U0 G2
Technical Specifications (continued)

Other

California Title 24:
See ALED3T150/D10, ALED3T150/BLS, ALED3T160/PCS, ALED3T150/PCS2, or ALED3T150/PCT for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.

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.

Dimensions

Features

66% energy cost savings vs. HID
100,000-hour LED lifespan
Type III distribution
5-year warranty

Ordering Matrix

<table>
<thead>
<tr>
<th>Family</th>
<th>Distribution</th>
<th>Watts</th>
<th>Mount</th>
<th>Color Temp</th>
<th>Finish</th>
<th>Voltage</th>
<th>Photocell</th>
<th>Dimming</th>
<th>Bi-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2T = Type II</td>
<td>360 = 360W</td>
<td>= Arm</td>
<td>= 5000K (Cool)</td>
<td>= Bronze</td>
<td>= 120-277V</td>
<td>= No Photocell</td>
<td>= No Dimming</td>
<td>= No Bi-Level</td>
<td></td>
</tr>
<tr>
<td>3T = Type III</td>
<td>260 = 260W</td>
<td>= Siplifter</td>
<td>= 3000K (Warm)</td>
<td>= White</td>
<td>= 480V</td>
<td>= IPC 120V Button</td>
<td>= /D10 = Dimmable</td>
<td>= /BL = Bi-Level</td>
<td></td>
</tr>
<tr>
<td>4T = Type IV</td>
<td>150 = 150W</td>
<td>= Type IV</td>
<td>= 4000K (Neutral)</td>
<td>= Gray</td>
<td>= 480V</td>
<td>= IPC2 277V Button</td>
<td>= IPCS 277V Swivel</td>
<td>= /PCT 120-277V Twistlock</td>
<td></td>
</tr>
<tr>
<td></td>
<td>125 = 125W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>= IPCS4 480V Swivel</td>
<td>= /PCT4 = 480V Twistlock</td>
<td></td>
</tr>
</tbody>
</table>
### Technical Specifications

#### Listings
- UL Listing:
  Suitable for wet locations as a downlight.

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

#### Dark Sky Approved:
- The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

#### 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: P00001787

#### LED Characteristics
- **Lifespan:** 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.
- **LEDs:** Multi-chip, high-output, long-life LEDs
- **Color Consistency:**
  - 3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixure color.
- **Color Stability:**
  - LED color temperature is warrantied to shift no more than 200K in CCT over a 5 year period.
- **Color Uniformity:**

#### Construction
- **IES Classification:**
  - The Type III distribution is ideal for roadway, general parking and other area lighting applications where a larger pool of lighting is required. It is intended to be located near the side of the area, allowing the light to project outward and fill the area.
- **IP Rating:** Ingress Protection rating of IP66 for dust and water.
- **Ambient Temperature:** Suitable for use in 40° C ambient temperatures.
- **Cold Weather Starting:** The minimum starting temperature is -40° C/-40° F
- **Thermal Management:** Superior patent pending thermal management design with external Air-Flow fins provides maximum operational life, even in high ambient temperature environments.
- **Effective Projected Area:**
  - EPA = 0.75
- **Housing:** Die cast aluminum housing, lens frame and mounting arm.
- **Mounting:** Heavy-duty mounting arm with "O" ring seal & stainless steel screws.
- **Reflector:** Specular vacuum-metallized polycarbonate

#### Gaskets:
- High temperature silicone gaskets

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

#### Green Technology:
- Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

#### Electrical
- **Driver:** Constant Current, Class 2, 1400mA, 100-277V, 50-60Hz, 0.8A, Power Factor 99%
- **THD:** 7.0% at 120V, 7.2% at 277V
- **Surge Protection:** 6kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2

#### Other
- **Equivalency:**
  - ALED™ 50W replaces 200W metal halide
  - California Title 24:
    - See ALED3T50PC, ELED3T50PCS or ALED3T50PCT for a 2013 California Title 24 compliant model.
ALED3T50Y

Technical Specifications (continued)

Other
Patents:
The ALED™ design is protected by patents pending in the U.S., Canada, China, Taiwan and Mexico.

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)."

Trade Agreements Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:
Suitable in accordance with FAR Subpart 23.4.

Optical

BUG Rating:
B0 U0 G1

Features
56% energy cost savings vs. HID
100,000-hour LED lifespan
Type III distribution
5-year warranty

Dimensions

Ordering Matrix

<table>
<thead>
<tr>
<th>Family</th>
<th>Distribution</th>
<th>Watts</th>
<th>Mount</th>
<th>Color Temp</th>
<th>Finish</th>
<th>Voltage</th>
<th>Photocell</th>
<th>Dimming</th>
<th>Sensor</th>
<th>Bi-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALED</td>
<td>2T = Type II</td>
<td>50 W</td>
<td>Arm</td>
<td>5000K</td>
<td>= 120-277V</td>
<td>= No Photocell</td>
<td>= No Dimming</td>
<td>= No Bi-Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3T = Type III</td>
<td>50 W</td>
<td>SF</td>
<td>3000K (Warm)</td>
<td></td>
<td></td>
<td>/PC = 120 V</td>
<td>/D10 = Dimmable</td>
<td>/BL = Bi-Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4T = Type IV</td>
<td>50 W</td>
<td>Slipfitter</td>
<td>4000K (Neutral)</td>
<td></td>
<td></td>
<td>/PC2 = 277V</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

/WS2 = Multi-Level Motion Sensor (Only available for 120-277V with /D10 for 50W)
High output LED pole top area light with IES type V square distribution. Wide and uniform 360 degree pattern ideal for large outdoor areas such as parking lots, corporate parks, and retail settings.

Color: Bronze  Weight: 35.5 lbs

Technical Specifications

Listings
- UL Listing: Suitable for wet locations.
- 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: PKUMUMB9
- Dark Sky Approved: The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.
- 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.
- LED Characteristics
  - LEDs: Long-life, high-efficiency surface mount LEDs
  - Lifespan: 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.
  - Color Consistency: 7-step MacAdam Ellipse binning to achieve consistent fixture-to(fixture color.
  - Color Stability: LED color temperature is warranted to shift no more than 200K in CCT over a 5 year period.

Electrical
- Driver: Constant Current, Class 2 with 4kV surge protection, 120-277VAC, 50/60 Hz, 120V: 1.26A, 208V: 0.778A, 240V: 0.673A, 277V: 0.574A
- THD: 7.1% at 120V, 14.2% at 277V
- Power Factor: 99.6% at 120V, 92.9% at 277V
- Dimming Driver: Driver includes dimming control for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

Optical
- BUG Rating: B4 U1 G3
- Optics: Square, Type V distribution

Construction
- Cold Weather Starting: Minimum starting temperature is -40°F / -40°C
- Ambient Temperature: Suitable for use in 40°F (104°F) ambient temperatures
- Thermal Management: Superior thermal management with external air-flow fins

For use on LEED Buildings:
IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.

Effective Projected Area:
EPA = 0.7

Housing:
Precision die-cast aluminum

Lens:
Clear polycarbonate

Reflector:
Vacuum-metallized polycarbonate

Gaskets:
High-temperature silicone

Mounting:
Tenon for 2 3/8" or 3" OD post or pole-top adaptor

Finish:
Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color; and contains no VOC or toxic heavy metals.
### Technical Specifications (continued)

**Construction**
- **Green Technology:** Mercury and UV free, and RoHS compliant.
- **Other:**
  - **Replacement:** 150 Watt ALED5S replaces 250 Watt Pulse MH / 400 Watt Probe VH.
- **Patents:** The designs of the ALED5S are protected by patents pending in US, Canada, China, Taiwan and Mexico.

**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).*

**Trade Agreements Act Compliant:**
- This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

**GSA Schedule:**
- Suitable in accordance with FAR Subpart 25.4.

### Dimensions

![Dimensions Diagram]

### Features
- Precision optics deliver uniform, optimal light distribution
- Perfect for parking lots and pathways
- 100,000-Hour LED lifespan

### Ordering Matrix

<table>
<thead>
<tr>
<th>Family</th>
<th>Distribution</th>
<th>Shape</th>
<th>Watts</th>
<th>Color Temp</th>
<th>Finish</th>
<th>Voltage</th>
<th>Dimming</th>
<th>Bi-Level</th>
<th>Photocell</th>
<th>Pin</th>
<th>Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALED</td>
<td>5</td>
<td>S</td>
<td>150</td>
<td>Y</td>
<td>/D10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **5 = Type V**
- **S = Square**
- **78 = 78W**
- **150 = 150W**
- **5000K (Cool)**
- **4000K (Neutral)**
- **3000K (Warm)**
- **Bronze**
- **White**
- **No Dimming**
- **Dimmable**
- **No Bi-Level**
- **No Bi-Level**
- **No Pin**
- **No Photocell**
- **/PCT = 120-277V**
- **/D10 = 120-277V**
- **/BL = Bi-Level**
- **/PR = 5 Pin Receptacle**
- **/PR = 5 Pin Receptacle**
- **/WS2 = Multi-Level Motion Sensor**

---

Need help? Tech help line: (888) RAB-1000 Email: sales@rabweb.com Website: www.rabweb.com

Copyright © 2014 RAB Lighting Inc. All Rights Reserved  Note: Specifications are subject to change at any time without notice.
Low-maintenance, high-efficiency LED retrofit fixture installs on standard junction boxes.

Color: White
Weight: 1.0 lbs

Technical Specifications

Listings
UL Listing:
Suitable for damp locations. Recommended for indoor use only.

IESNA LM-79 & LM-80 Testing:
RAB LED luminaries 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.

LED Characteristics

LEDs:
120V long-life LEDs with integrated driver technology and TRIAC and ELV dimming down to 5%. Power Factor 95.2%, 3 kV surge protection

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

Color Consistency:
3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

Color Stability:
LED color temperature is warranted 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 C78.377-2011.

Electrical

THD:
14% at 120V

Construction

Housing:
Precision die-cast aluminum construction

Mounting:
Simple slide-n-lock mounting bracket mounts to 3 1/2" and 4" round or octagon boxes with mounting screws 2 3/4" and 3 1/2" on center

Driver Info

<table>
<thead>
<tr>
<th>Type</th>
<th>Constant Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>120V:</td>
<td>0.08A</td>
</tr>
<tr>
<td>208V:</td>
<td>N/A</td>
</tr>
<tr>
<td>240V:</td>
<td>N/A</td>
</tr>
<tr>
<td>277V:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Input Watts: 9W
Efficiency: 98%

LED Info

<table>
<thead>
<tr>
<th>Watts</th>
<th>Color Temp</th>
<th>Color Accuracy</th>
<th>L70 Lifespan</th>
<th>Lumens</th>
<th>Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>9W</td>
<td>3000K</td>
<td>84 CRI</td>
<td>100000</td>
<td>*37</td>
<td>81 LPW</td>
</tr>
</tbody>
</table>

Lens:
Vandal resistant polycarbonate diffusion lens

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

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

Other

Equivalency:
SKEET 6W LED is equivalent to 60W incandescent, replaces up to 100W incandescent

California Title 24:
SK9RYW complies with 2013 California Title 24 building and electrical codes as a commercial indoor fixture for general spaces when used with a vacancy sensor and compatible TRIAC or ELV dimming control. Select a vacancy sensor using catalog number LVS600. Dimming control provided by others.
Dimensions

5"  129 mm

1 1/4"  31.8 mm

Features

- Contemporary low-profile design
- Mounts flush to ceilings or walls
- Replaces up to 100W incandescent
- Vandal-resistant diffusion lens provides smooth light with no glare
- 100,000-Hour LED Lifespan, 5-year Warranty

Ordering Matrix

<table>
<thead>
<tr>
<th>Family</th>
<th>Watts</th>
<th>Shape</th>
<th>Color Temp</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK</td>
<td>9 = 9W</td>
<td>R = Round</td>
<td>YY = 2700K (Residential Warm) Y = 3000K (Warm) YN = 3500K (Warm Neutral)</td>
<td>W = White</td>
</tr>
</tbody>
</table>
12, 18 and 26 Watt SLIM wallpacks are ultra efficient and deliver impressive light distribution with a compact low-profile design that's super easy to install as a downlight or uplight.

Color: Bronze  Weight: 4.5 lbs

---

**Technical Specifications**

**Listings**

**UL Listing:**
Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground.

**ADA Compliant:**
SLIM™ is ADA Compliant.

**Dark Sky Approved:**
The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.

**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.

**Construction**

**IP Rating:**
Ingress Protection rating of IP66 for dust and water.

**Cold Weather Starting:**
The minimum starting temperature is -40°C/-40°F

**Ambient Temperature:**
Suitable for use in 40°C (104°F) ambient temperatures

**Thermal Management:**
Superior heat sinking with internal Air-Flow fins.

**Housing:**
Precision die-cast aluminum housing.

**Mounting:**
Heavy-duty mounting bracket with hinged housing for easy installation.

**Recommended Mounting Height:**
Up to 14 ft.

**Lens:**
Tempered glass lens.

**Reflector:**
Specular thermoplastic.

**Gaskets:**
High-temperature silicone

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

**Green Technology:**
Mercury and UV free, and RoHS compliant.

---

**LED Characteristics**

**LED:**
Multi-chip, long-life LED.

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

**Driver Info**

<table>
<thead>
<tr>
<th>Type</th>
<th>Constant Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>120V:</td>
<td>0.18A</td>
</tr>
<tr>
<td>208V:</td>
<td>0.09A</td>
</tr>
<tr>
<td>240V:</td>
<td>0.09A</td>
</tr>
<tr>
<td>277V:</td>
<td>0.08A</td>
</tr>
<tr>
<td>Input Watts:</td>
<td>20W</td>
</tr>
<tr>
<td>Efficiency:</td>
<td>90%</td>
</tr>
</tbody>
</table>

**LED Info**

<table>
<thead>
<tr>
<th>Watts: 18W</th>
<th>3000K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Temp:</td>
<td>82 CRI</td>
</tr>
<tr>
<td>Color Accuracy:</td>
<td>100000</td>
</tr>
<tr>
<td>L70 Lifespan:</td>
<td>1,711</td>
</tr>
<tr>
<td>Lumens:</td>
<td>85 LPW</td>
</tr>
</tbody>
</table>

**Color Consistency:**
3-step MacAdam Ellipse binning to achieve consistent fixture-to fixture color.

**Color Stability:**
LED color temperature is warranted 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 for the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2011.

---

**Electrical**

**Driver:**
Constant Current, Class 2, 100-277V, 50/60 Hz, 4KV surge protection, 500mA, 100-240VAC 0.3-0.15 Amps, 277VAC 0.15 Amp, Power Factor 99%.

**THD:**
10.8% at 120V

**Other**

---

**HID Replacement Range:**
The SLIM18 can be used to replace 100W MH based on delivered lumens.

**California Title 24:**
SLIM18 complies with 2013 California Title 24 building and electrical codes as a residential outdoor fixture. See SLIM18/IPC for a model that complies as a commercial outdoor non-pole-mounted fixture _e__30 Watts.

**Patents:**
The design of the SLIM™ is protected by patents in U.S. Pat D681,864, and pending patents in Canada, China, Taiwan and Mexico.

---

Need help? Tech help line: (888) RAB-1006 Email: sales@rabweb.com Website: www.rabweb.com

Copyright © 2014 RAB Lighting Inc. All Rights Reserved  Note: Specifications are subject to change at any time without notice
Technical Specifications (continued)

Optical

BUG Rating:
B1 U0 G0

Features

- Full cutoff, fully shielded LED wallpack
- Can be used as a downlight or uplight
- Contractor friendly features for easy installation
- 100,000-hour LED Life
- 5-Year Warranty

Dimensions

![Diagram of SLIM18Y dimensions]

Ordering Matrix

<table>
<thead>
<tr>
<th>Family</th>
<th>Watts</th>
<th>Color Temp</th>
<th>Finish</th>
<th>Photocell</th>
<th>Dimming</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLIM</td>
<td>26 W</td>
<td>5000K (Cool)</td>
<td>Bronze</td>
<td>No Photocell</td>
<td>No Dimming</td>
</tr>
<tr>
<td></td>
<td>18 W</td>
<td>3000K (Warm)</td>
<td>White</td>
<td>/PC = 120V Button</td>
<td>/D10 = Dimmable</td>
</tr>
<tr>
<td></td>
<td>12 W</td>
<td>4000K (Neutral)</td>
<td></td>
<td>/PC2 = 277V Button</td>
<td></td>
</tr>
</tbody>
</table>
VANLED20Y

Technical Specifications

**Listings**
- UL Listing: Suitable for wet 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: PQSQJZJN

**Electrical**
- Driver: Class 2, Constant Current, 100-277V, 50-60Hz, 500mA
- THD: 6.1% at 120V, 10.1% at 277V

**Ambient Temperature:**
Suitable for use in 40°C (104°F) ambient temperatures

**Cold Weather Starting:**
Minimum starting temperature is -40°F/-40°C

**Housing:**
Die-cast aluminum housing and lens frame with (4) 1/2" NPS side conduit entries and weatherproof rear wire plug and access plate

**Mounting:**
Ceiling mount to recessed junction with knockout template or directly to ceiling surface, utilizing side conduit entry points.

**IP Rating:**
Ingress Protection rating of IP66 for dust and water.

**Lens:**
Vandal-resistant polycarbonate textured opaque for low glare drop lens

**Reflector:**
Semi-specular, vacuum-metalized polycarbonate

**Gaskets:**
High-temperature silicone gaskets

**Finish:**
- Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.
- Green Technology: Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

**LED Characteristics**
- LEDS: Discreet LEDs on PCB board
- Color Stability: RAB LEDs exceed industry standards for chromatic stability.

**Driver Info**
- Type: Constant Current
- 120V: 0.30A
- 208V: 0.20A
- 240V: 0.17A
- 277V: 0.15A
- Input Watts: 22W
- Efficiency: 93%

**LED Info**
- Watts: 20W
- Color Temp: 3000K
- Color Accuracy: 71 CRI
- L70 Lifespan: 100000
- Lumens: 2255
- Efficacy: 105 LPW

**Other**
- 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. See our full warranty.
- 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.
- Trade Agreements Act Compliant: This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.
- GSA Schedule: Suitable in accordance with FAR Subpart 25.4
- California Title 24: See VANLED20/PCS, VANLED20/PCS2 or VANLED20MS for a 2013 California Title 24 compliant model.
- Replacement: The VANLED 20W replaces up to 70W Metal Halide.
**Dimensions**

- 12" (305 mm)
- 4 3/4" (121 mm)

**Features**
- Fits the footprint of older canopy lights
- Vandal resistant and UV resistant lens
- Ultra-high efficiency
- Clean, contemporary, low-profile design
- Available with drop lens or flat lens
- IP66 rated, keeps dust, bugs and water out
- Photo and motion sensor options available

**Ordering Matrix**

<table>
<thead>
<tr>
<th>Family</th>
<th>Watts</th>
<th>Color Temp</th>
<th>Lens</th>
<th>Finish</th>
<th>Voltage</th>
<th>Dimming</th>
</tr>
</thead>
<tbody>
<tr>
<td>VANLED</td>
<td>10 = 10W</td>
<td>= 5000K (Cool)</td>
<td>= Drop lens</td>
<td>= Bronze</td>
<td>= 120-277V</td>
<td>= No Dimming</td>
</tr>
<tr>
<td></td>
<td>20 = 20W</td>
<td>Y = 3000K (Warm)</td>
<td>F = Flat lens</td>
<td>W = White</td>
<td>/480 = 480V (10W &amp; 20W not available)</td>
<td>/D10 = Dimmable (10W &amp; 20W not available)</td>
</tr>
<tr>
<td></td>
<td>40 = 40W</td>
<td>N = 4000K (Neutral)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>52 = 52W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>65 = 65W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>75 = 75W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ultra high output, high efficiency 150 Watt LED wellpack. Patent Pending airflow technology ensures long LED and driver lifespan. 5 Year Warranty.

**Technical Specifications**

<table>
<thead>
<tr>
<th>Listings</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL Listing:</td>
</tr>
<tr>
<td>Suitable for wet locations.</td>
</tr>
<tr>
<td>IESNA LM-79 &amp; LM-80 Testing:</td>
</tr>
<tr>
<td>RAB LED luminaries have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have been received the Department of Energy &quot;Lighting Facts&quot; label.</td>
</tr>
<tr>
<td>Dark Sky Approved:</td>
</tr>
<tr>
<td>The International Dark Sky Association has approved this product as a full cutoff, fully shielded luminaire.</td>
</tr>
<tr>
<td>DLC Listed:</td>
</tr>
<tr>
<td>This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: P0000174B</td>
</tr>
<tr>
<td>LED Characteristics</td>
</tr>
<tr>
<td>Lifespan: 100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.</td>
</tr>
<tr>
<td>LEDs: Multi-chip, high-output, long-life LEDs</td>
</tr>
<tr>
<td>Color Consistency: 3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.</td>
</tr>
<tr>
<td>Color Stability: LED color temperature is warranted to shift no more than 200K in CCT over a 5 year period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES Classification: The Type II distribution is ideal for wide walkways, on ramps and entrance roadways, bike paths and other long and narrow lighting applications. This type is meant for lighting larger areas and usually is located near the roadside. This type of lighting is commonly found on smaller side streets or jogging paths.</td>
</tr>
<tr>
<td>IP Rating: Ingress Protection rating of IP66 for dust and water.</td>
</tr>
<tr>
<td>Ambient Temperature: Suitable for use in 40°C (104°F) ambient temperatures</td>
</tr>
<tr>
<td>Cold Weather Starting: The minimum starting temperature is -40°C/-40°F</td>
</tr>
<tr>
<td>Thermal Management: Superior thermal management with external Air-Flow fins.</td>
</tr>
<tr>
<td>Housing: Die-cast aluminum housing, lens frame and mounting arm</td>
</tr>
<tr>
<td>Mounting: Heavy-duty mounting arm with “O” ring seal &amp; stainless steel screws</td>
</tr>
<tr>
<td>Reflectors: Specular vacuum-metallized polycarbonate</td>
</tr>
<tr>
<td>Gaskets: High-temperature silicone gaskets</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finish:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contains no VOC or toxic heavy metals.</td>
</tr>
<tr>
<td>Green Technology: Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.</td>
</tr>
<tr>
<td>For use on LEED Buildings: IDA Dark Sky Approval means that this fixture can be used to achieve LEED Credits for Light Pollution Reduction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drivers: Two Drivers, Constant Current, Class 2, 2000mA, 100-277V, 50-60Hz, Power Factor 99%</td>
</tr>
<tr>
<td>THD: 5.8% at 120V, 11.3% at 277V</td>
</tr>
<tr>
<td>其他: California Title 24: See WPLEDT2150/D10 or WPLEDT2150/BL for a 2013 California Title 24 compliant product. Any additional component requirements will be listed in the Title 24 section under technical specifications on the product page.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>Patents: The design of WPLED150 is protected by patents pending in US, Canada, China, Taiwan and Mexico.</td>
</tr>
</tbody>
</table>

---

Need help? Tech help line: (888) RAB-1808 Email: sales@rabweb.com Website: www.rabweb.com
Copyright © 2014 RAB Lighting Inc. All Rights Reserved  Note: Specifications are subject to change at any time without notice
Technical Specifications (continued)

Other

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)."

Trade Agreements Act Compliant:
This product is a COTS item manufactured in the United States, and is compliant with the Trade Agreements Act.

GSA Schedule:
Suitable in accordance with FAR Subpart 25.4.

Optical

BUG Rating:
B2 U0 G2

Features

High output, high efficiency LED
Maintains 70% of initial lumens at 100,000 hours
Weatherproof high temperature silicone gaskets
Superior heat sinking with die cast aluminum housing and external fins
100 up to 277 Volts
5-year warranty

Ordering Matrix

<table>
<thead>
<tr>
<th>Family</th>
<th>Distribution</th>
<th>Watts</th>
<th>Color Temp</th>
<th>Mount</th>
<th>Finish</th>
<th>Photocell</th>
<th>Dimming</th>
<th>Sensor</th>
<th>Bi-Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPLED</td>
<td></td>
<td>150W</td>
<td>5000K (Cool)</td>
<td>Standard</td>
<td>Bronze</td>
<td>No Photocell</td>
<td>No Dimming</td>
<td>WS4 = Multi-Level Motion Sensor (Only available for 120-277V with /D10 for 150W)</td>
<td>No Bi-Level</td>
</tr>
<tr>
<td></td>
<td>2T</td>
<td></td>
<td>Y = 3000K (Warm)</td>
<td>F = Flat</td>
<td>W = White</td>
<td>/PC = 120V Button</td>
<td>/D10 = Dimmable</td>
<td>/PC = 120V Button</td>
<td>/BL = Bi-Level</td>
</tr>
<tr>
<td></td>
<td>3T</td>
<td></td>
<td>N = 4000K (Neutral)</td>
<td></td>
<td></td>
<td>/PC = 277 Swivel</td>
<td></td>
<td>/PC = 277 Swivel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>/PC = 120-277F Swivel Twistlock</td>
<td></td>
</tr>
</tbody>
</table>
Lake View Elementary School
1801 N Navajo Dr
Page, AZ 86040
Page Middle School
El Mirage St
Page, AZ 86040
(1) EXISTING: RANCH POLE 3L 150W HPS
(2) EXISTING: WALL PACK 150W HPS

(10) EXISTING: POLE 3L 150W HPS
(20) PROPOSED: RAB-26 POLE (2 EACH)

(4) EXISTING: POLE DRUM TOP 250W HPS
(1) EXISTING: WALL PACK TRIPLE TUBE CFL 65W T4

(27) EXISTING: 10" RND CAN 100W MERC YAP H38
(6) 14" RND CEILING CANOPY 2L 13W CFL SI

(1) PROPOSED: RAB ALED55
(1) PROPOSED: SLIM18
(1) PROPOSED: SLIM18
(1) PROPOSED: WPLED2T150
(6) PROPOSED: 2L A19 LED

Desert View Intermediate
462 Lake Powell BLVD
Page, AZ 86040