

# CXB Series

LED Low-Bay/High-Bay Luminaire

## Product Description

The CXB Series LED Low-Bay/High-Bay luminaire delivers 18,000 median and 24,000 median lumens with illumination performance to allow one-for-one replacement of 250W and 400W HID luminaires and multi-lamp fluorescent low-bay and high-bay fixtures. With exceptional rated lifetimes, zero restrike time and a compact lightweight construction, the CXB Series is a direct replacement for incumbent HID and fluorescent light sources that provides additional benefits of energy savings and significantly reduced relamp maintenance costs. The CXB Series is offered with reflector choices of aluminum, clear and white acrylic with optional bottom lenses – making it ideal for a variety of applications.

**Applications:** Grocery, gymnasium (aluminum reflector), industrial, retail and warehouse spaces

## Performance Summary

|   |
|---|
| <b>Delivered Light Output:</b> 18,000 or 24,000 median lumens |
| <b>Input Power:</b> 160 or 240 watts                          |
| <b>CRI:</b> 80  |
| <b>CCT:</b> 4000K (+/- 300K), 5000K (+/- 500K)                |
| <b>Input Voltage:</b> 120-277 VAC, 347-480 VAC                |
| <b>Limited Warranty*:</b> 10 years on luminaire               |
| <b>Mounting:</b> J-Box, pendant, hook, cord & plug            |
| <b>Weight:</b> Maximum 14 lbs (6.4kg)                         |
| <b>Dimming:</b> 0-10V standard                                |

## Accessories

| Reflector  |   |
|--|---|
| <b>Wire Guards</b><br>WG-A<br>- 16" (406mm) Wire Guard for Aluminum Reflector<br>WG-AP<br>- 16" (406mm) Wire Guard for Acrylic Reflector | <b>Lenses</b><br>DL16<br>- 16" (406mm) Acrylic Clear Prismatic Drop Lens for Acrylic Reflector<br>CL16<br>- 16" (406mm) Acrylic Clear Conical Bottom Lens for Acrylic Reflector |
| Light Engine   |   |
| <b>Galvanized Safety Cables</b><br>SC-5<br>- 5.0' (1.5m) Cable   | SC-10<br>- 10.0' (3.0m) Cable   |

## Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:

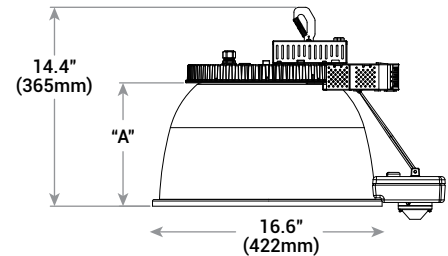
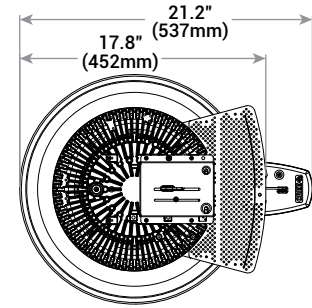
Example: Reflector: CXBA16N + Light Engine: CXB A HC H 40K 8-UL 10V L715P

| Reflector (Light Engine must be ordered separately)   |   |
|---|---|
| <b>CXBA16N</b><br>- 16" (406mm) Aluminum<br><b>WG-A</b><br>- Accessory recommended for use in gymnasium applications<br><b>CXBP16</b><br>- 16" (406mm) Clear Acrylic<br>- Acrylic reflector is not impact resistant nor intended for use unprotected in a gymnasium | <b>CXBW16</b><br>- 16" (406mm) White Acrylic<br>- Acrylic reflector is not impact resistant nor intended for use unprotected in a gymnasium |

| Light Engine (Reflector must be ordered separately) |         |   |  |                              |             |   |                                  |   |  |
|---|---------|---|--|------------------------------|-------------|---|----------------------------------|---|--|
| Product   | Version | Mounting                                    | Lumen Output   | Color Temp                   | CRI         | – | Voltage                          | Controls                                  | Factory-Installed NEMA® Plug (HC Mount Only)   |
| CXB   | A       | HC<br>Hook & Cord<br>JP<br>J-Box or Pendant | M<br>160W, 18,000 Median Lumens - 113 LPW<br>H<br>240W, 24,000 Median Lumens - 100 LPW | 40K<br>4000K<br>50K<br>5000K | 8<br>80 CRI | – | UL<br>120-277V<br>UH<br>347-480V | 10V<br>0-10V Dimming<br>ML<br>Multi-Level | 515P<br>15 amp 120V Straight Blade Plug<br>L515P<br>15 amp 120V Twist Lock Plug<br>L615P<br>15 amp 240V Twist Lock Plug<br>L715P<br>15 amp 277V Twist Lock Plug<br>L2420P<br>20 amp 347V Twist Lock Plug<br>L820P<br>20 amp 480V Twist Lock Plug |

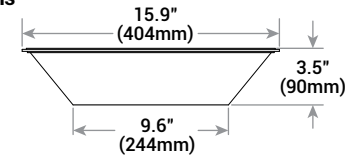
\* See www.cree.com/lighting/products/warranty for warranty terms

## Aluminum Reflector w/Hook & Cord Mount with ML Option

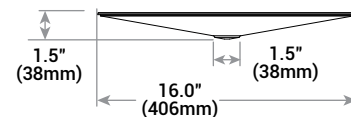


| Reflector                | "A" Height   |
|--------------------------|--------------|
| CXBA16N (Aluminum)       | 9.0" (229mm) |
| CXBP16 (Clear Prismatic) | 8.5" (216mm) |
| CXBW16 (White Acrylic)   | 8.5" (216mm) |

## Drop Lens



## Clear Conical Lens



**Product Specifications**

**CONSTRUCTION & MATERIALS**

- Die cast aluminum heatsink
- Low-profile, lightweight design provides ease of installation
- Mounting choices of direct J-Box/pendant and hook, cord & plug
- JP mount mounts directly over existing 4" (102mm) single gang square, rectangular and octagonal junction boxes for direct mount
- JP mount has provision to accept ¾ IP pendant (by others)
- HC mount is provided with spring lock hook for mounting and factory installed 6' (1.8m) 16/3 AWG power cord and NEMA® plug
- Factory calibrated to hang straight

**OPTICAL SYSTEM**

- 16" (406mm) Anodized matte aluminum reflector
- 16" (406mm) Clear acrylic reflector
- 16" (406mm) White acrylic reflector
- LED system delivers proper uniformity & spacing

**ELECTRICAL SYSTEM**

- Integral, high-efficiency driver and power supply
  - **Input Voltage:** 120–277V or 347–480V 50/60Hz
  - **Power Factor:** > 0.9
  - **Total Harmonic Distortion:** < 20%
  - **Source Current:** 0.15mA
  - **Operating Temperature Range:** 0°C - +50°C (32°F - +122°F) for 18,000 median lumen package; 0°C - +40°C (32°F - +104°F) for 24,000 median lumen package
- WARNING:** Exceeding maximum operating temperature may result in thermal foldback

**REGULATORY & VOLUNTARY QUALIFICATIONS**

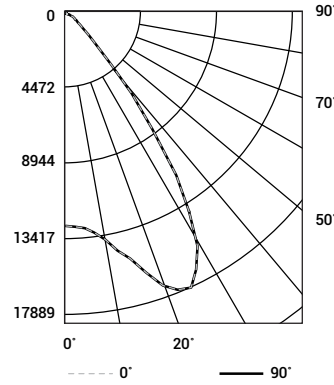
- cULus listed
- Suitable for damp locations
- DLC qualified. Please refer to <http://www.designlights.org/QPL> for most current information
- IP54 rated driver
- IP65 rated LED optics
- Meets FCC Part 15 standards for conducted and radiated emissions

| Reflector Uplight Illumination Performance           |              |
|--|--------------|
| Reflector  | % of Uplight |
| CXBA16N (Aluminum)                                   | 0%           |
| CXBP16 (Clear Acrylic)                               | 1%           |
| CXBP16 + CL16 (Clear Acrylic w/ Conical Bottom Lens) | 5%           |
| CXBP16 + DL16 (Clear Acrylic w/ Drop Bottom Lens)    | 6%           |
| CXBW16 (White Acrylic)                               | 16%          |
| CXBW16 + CL16 (White Acrylic w/ Conical Bottom Lens) | 20%          |
| CXBW16 + DL16 (White Acrylic w/ Drop Bottom Lens)    | 19%          |

**Photometry**

**CXBP16/CXBA\*\*H40K8 BASED ON CESTL REPORT TEST #: PL04029-001**

Fixture photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%.



| Coefficients Of Utilization - Zonal Cavity Method |     |     |     |     |
|---|-----|-----|-----|-----|
| RC %:   | 80  |     |     |     |
| RW %:   | 70  | 50  | 30  | 10  |
| RCR: 0  | 119 | 119 | 119 | 119 |
| 1   | 112 | 109 | 106 | 103 |
| 2   | 105 | 100 | 95  | 91  |
| 3   | 99  | 91  | 86  | 81  |
| 4   | 93  | 84  | 78  | 73  |
| 5   | 87  | 77  | 71  | 66  |
| 6   | 82  | 72  | 65  | 60  |
| 7   | 77  | 66  | 59  | 55  |
| 8   | 73  | 62  | 55  | 50  |
| 9   | 68  | 57  | 51  | 46  |
| 10  | 65  | 54  | 47  | 43  |

Effective Floor Cavity Reflectance: 20%

| Average Luminance Table (cd/m <sup>2</sup> ) |                  |        |        |  |
|--|------------------|--------|--------|--|
| Vertical Angle                               | Horizontal Angle |        |        |  |
|  | 0°               | 45°    | 90°    |  |
| 45°  | 20,315           | 20,315 | 20,315 |  |
| 55°  | 6,999            | 6,999  | 6,999  |  |
| 65°  | 4,486            | 4,486  | 4,486  |  |
| 75°  | 2,346            | 2,346  | 2,346  |  |
| 85°  | 660              | 660    | 660    |  |

| Zonal Lumen Summary |        |        |           |
|---------------------|--------|--------|-----------|
| Zone                | Lumens | % Lamp | Luminaire |
| 0-30                | 13,590 | N/A    | 54.7%     |
| 0-40                | 20,547 | N/A    | 82.7%     |
| 0-60                | 23,667 | N/A    | 95.3%     |
| 0-90                | 24,553 | N/A    | 98.8%     |
| 0-180               | 24,842 | N/A    | 100%      |

Reference [www.cree.com/Lighting/Products/Indoor/High-Low-Bay/CXB-Series](http://www.cree.com/Lighting/Products/Indoor/High-Low-Bay/CXB-Series) for detailed photometric data

| CXB Series Lumen Maintenance <sup>1</sup> |             |                                   |                                   |                                    |                                     |
|---|-------------|-----------------------------------|-----------------------------------|------------------------------------|-------------------------------------|
| Ambient                                   | Initial LMF | 25K hr Projected <sup>2</sup> LMF | 50K hr Projected <sup>2</sup> LMF | 75K hr Calculated <sup>3</sup> LMF | 100K hr Calculated <sup>3</sup> LMF |
| 0°C (32°F)                                | 1.05        | 0.98                              | 0.93                              | 0.88                               | 0.83                                |
| 5°C (41°F)                                | 1.04        | 0.97                              | 0.92                              | 0.87                               | 0.82                                |
| 10°C (50°F)                               | 1.03        | 0.96                              | 0.91                              | 0.86                               | 0.81                                |
| 15°C (59°F)                               | 1.02        | 0.95                              | 0.90                              | 0.85                               | 0.81                                |
| 20°C (68°F)                               | 1.01        | 0.95                              | 0.89                              | 0.84                               | 0.80                                |
| 25°C (77°F)                               | 1.00        | 0.94                              | 0.88                              | 0.84                               | 0.79                                |
| 30°C (86°F)                               | 0.99        | 0.93                              | 0.88                              | 0.83                               | 0.78                                |
| 35°C (95°F)                               | 0.98        | 0.92                              | 0.87                              | 0.82                               | 0.77                                |
| 40°C (104°F)                              | 0.97        | 0.91                              | 0.86                              | 0.81                               | 0.77                                |
| 45°C (113°F)                              | 0.96        | 0.90                              | 0.85                              | 0.80                               | 0.76                                |
| 50°C (122°F)                              | 0.95        | 0.89                              | 0.84                              | 0.79                               | 0.75                                |

<sup>1</sup> Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing  
<sup>2</sup> In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)  
<sup>3</sup> In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip)

