

# 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>Initial Delivered Lumens:</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 or 347-480 VAC
<b>Limited Warranty<sup>1</sup>:</b> 10 years on luminaire
<b>Mounting:</b> J-Box, pendant, hook, cord & plug
<b>Weight:</b> Maximum 14 lbs. (6.4kg)
<b>Controls:</b> 0-10V dimming to 10% or Multi-Level Occupancy/Daylight Sensing

<sup>1</sup> See <http://lighting.cree.com/warranty> for warranty terms

## Accessories

Reflector		
<b>Wire Guards</b>	<b>Lenses</b>	
WG-A - 16" (406mm) Wire Guard for Aluminum Reflector	DL16 - 16" (406mm) Acrylic Clear Prismatic Drop Lens for Acrylic Reflector	
WG-AP - 16" (406mm) Wire Guard for Acrylic Reflector	CL16 - 16" (406mm) Acrylic Clear Conical Bottom Lens for Acrylic Reflector	
Light Engine		
<b>Galvanized Safety Cables</b>	SC-10	
SC-5 - 5.0' (1.5m) Cable	- 10.0' (3.0m) Cable	
Field-Installed NEMA® Plug		
<b>AP-515P</b> - 15 amp 120V Straight Blade Plug	<b>AP-L615P</b> - 15 amp 240V Twist Lock Plug	<b>AP-L2420P</b> 20 amp 347V Twist Lock Plug
<b>AP-L515P</b> - 15 amp 120V Twist Lock Plug	<b>AP-L715P</b> 15 amp 277V Twist Lock Plug	<b>AP-L820P</b> 20 amp 480V Twist Lock Plug

## Ordering Information

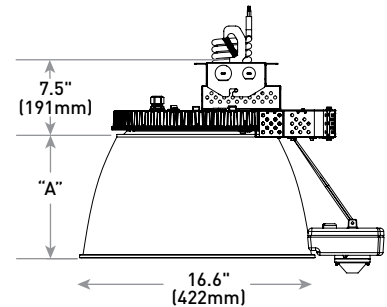
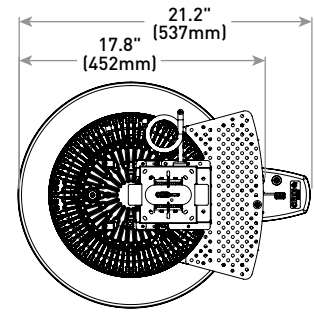
Fully assembled luminaire is composed of two components that must be ordered separately:

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

Reflector (Light Engine must be ordered separately)
<b>CXBA16N (Single Pack)</b> <b>CXBA16N-MP (Multi-Pack)</b> - 16" (406mm) Aluminum - WG-A accessory recommended for use in gymnasium applications - Single pack ships as one reflector per box - Multi-pack ships up to 10 reflectors per box <b>CXBP16 (Single Pack)</b> <b>CXBP16-MP (Multi-Pack)</b> - 16" (406mm) Clear Acrylic - Acrylic reflector is not impact resistant nor intended for use unprotected in a gymnasium - Single pack ships as one reflector per box - Multi-pack ships up to 10 reflectors per box
<b>CXBW16 (Single Pack)</b> <b>CXBW16-MP (Multi-Pack)</b> - 16" (406mm) White Acrylic - Acrylic reflector is not impact resistant nor intended for use unprotected in a gymnasium - Single pack ships as one reflector per box - Multi-pack ships up to 10 reflectors per box

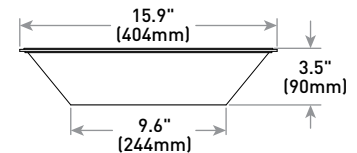
Light Engine (Reflector must be ordered separately)							
CXB	A	UV			8		
Product	Version	Mounting	Initial Delivered Lumens	CCT	CRI	Voltage	Controls
CXB	A	UV Universal Mount: hook and cord with 6ft whip, adaptor plate for J-box and pendant	<b>M</b> 160W, 18,000 Median Lumens - 113 LPW <b>H</b> 240W, 24,000 Median Lumens - 100 LPW	<b>40K</b> 4000K <b>50K</b> 5000K	<b>8</b> 80 CRI	<b>UL</b> 120-277V <b>UH</b> 347-480V	<b>10V</b> 0-10V Dimming <b>ML</b> Multi-Level

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

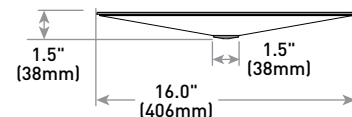


Reflector	"A" Height
CXBA16N (Aluminum)	9.0" (229mm)
CXBP16 (Clear Prismatic)	8.5" (216mm)
CXBW16 (White Acrylic)	8.5" (216mm)

## Drop Lens



## Clear Conical Lens



Rev. Date: V5 05/20/2016



US: [lighting.cree.com/lighting](http://lighting.cree.com/lighting)

T (800) 236-6800 F (262) 504-5415

Canada: [www.cree.com/canada](http://www.cree.com/canada)

T (800) 473-1234 F (800) 890-7507

## Product Specifications

### CONSTRUCTION & MATERIALS

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

### 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
- **Input Voltage:** 120-277V or 347-480V 50/60Hz
- **Power Factor:** > 0.9
- **Total Harmonic Distortion:** < 20%
- **10V 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
- Not intended for use in environments containing airborne corrosive agents such as chemical solvents, cleaners, or cutting fluids
- DLC qualified. Please refer to [www.designlights.org/QPL](http://www.designlights.org/QPL) for most current information
- IP54 rated driver
- IP65 rated LED optics
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- RoHS compliant. Consult factory for additional details

Electrical Data*								
Initial Delivered Lumens	CCT	System Watts 120-480V	Total Current					
			120V	208V	240V	277V	347V	480V
M	All	160	1.30	0.95	0.82	0.60	0.47	0.34
H	All	240	2.00	1.42	1.23	0.90	0.70	0.51

\* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-480V +/-10%

Recommended CXB Series Lumen Maintenance <sup>1</sup>							
Ambient	Initial Delivered Lumens	Reflector	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)	M, H	All	1.05	0.97	0.91	0.85	0.80
5°C (41°F)	M, H	All	1.04	0.96	0.90	0.84	0.79
10°C (50°F)	M, H	All	1.03	0.95	0.89	0.84	0.78
15°C (59°F)	M, H	All	1.02	0.94	0.88	0.83	0.78
20°C (68°F)	M, H	All	1.01	0.93	0.87	0.82	0.77
25°C (77°F)	M, H	All	1.00	0.92	0.87	0.81	0.76
30°C (86°F)	M, H	All	0.99	0.91	0.86	0.80	0.75
35°C (95°F)	M, H	All	0.98	0.90	0.85	0.80	0.75
40°C (104°F)	M, H	Aluminum	0.97	0.90	0.84	0.79	0.74
	H	Clear & White Prismatic	0.97	0.80 <sup>3</sup>	0.68 <sup>3</sup>	0.57 <sup>3</sup>	0.48 <sup>3</sup>
45°C (113°F)	M	All	0.96	0.89	0.83	0.78	0.73
50°C (122°F)	M	All	0.95	0.88	0.82	0.77	0.72

<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 (IDUT) i.e. the packaged LED chip

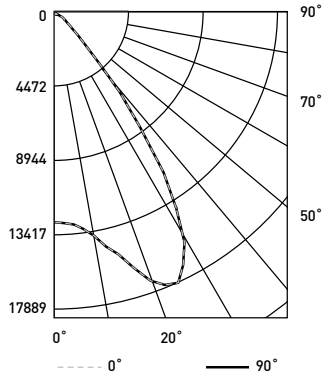
<sup>3</sup> In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (IDUT) i.e. the packaged LED chip

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/CXB-A\*\*-H-40K-8 BASED ON CESTL REPORT TEST #: PL04029-001**

Luminaire 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 luminaire 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

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%

Effective Floor Cavity Reflectance: 20%

Reference <http://lighting.cree.com/products/indoor/high-bay-low-bay/cxb-series> for detailed photometric data