

FEATURES

The CB-LED is a highly efficient LED luminaire ideal for large interior spaces with high mounting heights that require uniform general illumination. Designed as a replacement for conventional linear fluorescent and HID high bays found in manufacturing facilities, gymnasiums, warehouses, and many other locations.

| | |
|-------------------|---|
| LUMENS | 13000, 18000, 26000, 30000, 38000, 45000, 58000 |
| CCT | 40K, 50K |
| CRI | 85+ Standard |
| COLOR QUALITY | 3 Step MacAdam Ellipse |
| SIZE | 1'X 2', 1'X 4', 18'X 2', 18'X 4' |
| MOUNTING | Suspended |
| DISTRIBUTION | Wide (WD) |
| DIMMING | 0-10V Flicker Free 1% Dimming Standard (DIM10) |
| EMERGENCY | 10W - Up to 1000L Output (Bodine BSL310) 20W - Up to 2000L Output (Bodine BSL20) |
| LIFETIME | L70 at 50,000 Hours |
| PHOTOMETRIC TESTS | In Accordance with IES LM79-08, LM80 and TM-30, TM-21 |

| NOMINAL LUMENS | DELIVERED LUMENS | WATTAGE |
|----------------|------------------|---------|
| 58000 | 58000 | 440 W |
| 45000 | 45000 | 329 W |
| 38000 | 38540 | 276 W |
| 30000 | 29100 | 215 W |
| 26000 | 23626 | 185 W |
| 18000 | 17584 | 139 W |
| 13000 | 12946 | 91 W |

Based on 4000K, 85+ CRI. Actual wattage may vary +/- 5%

WD: WIDE
Candlepower Distribution Curve



OPTICAL SYSTEM

The luminaire provides a Wide (W) distribution with different shielding options and ships standard with a frosted acrylic lens to protect the LED light engines from dust and damage. The LED optic reflector is made of 95% reflective MIRO-5 aluminum material, engineered to optimize performance for 93% total fixture efficiency. The individual angled channels of the reflector help reduce the glare of high angle light emitted by the diodes.

MAINTENANCE

The LED engines and driver can be accessed through the bottom by removing the lamp shields. Angled sides and vents prevent dust from settling inside and near the LED components, resulting in low-maintenance. The LED engines and drivers are removeable and upgradeable even after luminaire installation. Luminaire can be regularly and safely wiped down to ensure optimal performance.

CONSTRUCTION

Body made from heavy-duty 18-gauge cold rolled steel, post-painted with white finish and engineered for maximum strength and extended life. All corners interlock for added structural strength, with sides and corners uniformly turned in and hemmed to remove sharp edges for safe handling and easy installation. Luminaire is supplied with multiple wiring entrances for easy daisy chain, continuous row mounting, or to add power packs, whips, or other accessories in the field.

OPTIONS

Luminaires can be shipped pre-installed with whips, modular wiring systems, daylight harvesting controls, occupancy sensors, and/or power packs for individual or room control applications.

DRIVER ELECTRICAL INFORMATION

Powered by high-quality constant-current power LED drivers which are rated for 50 to 60Hz at 120/277V input. Available in 347V., produce less than 20% THD, and have a power factor of .90 to 1.00.

DIMMING & DRIVER INFORMATION

DIM10 - Flicker Free 1% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277 or 347V.

WARRANTY

Five-year warranty for parts and components. (Labor not included)

LISTING

c-UL-us - Listed for Feed Through Wiring.

Example: **CB2-LED-13000L-DIM10-MVOLT-WD-40K-85**

| | | | | | | | | | |
|---|-------------|---|---|----------------|---------------|--------------------------------|------------|--------------------------------|--|
| CB2 | LED | | | | | | | | |
| SERIES | TYPE | LUMENS | DIMMING | VOLTAGE | OPTICS | CCT | CRI | EMERGENCY | |
| CB2-Oracle LED High Bay Series | LED | 13000L - (13000 lumens) 18000L - (18000 lumens) 26000L - (26000 lumens) 30000L - (30000 lumens) 38000L - (38000 lumens) 45000L - (45000 lumens) 58000L - (58000 lumens) | DIM10* - DIM10-MVOLT *Consult factory for other dimming options | MVOLT | WD - WIDE | 40K - (4000K) 50K - (5000K) | 85 | 0-EMG-LED-10W 0-EMG-LED-20W | |
| OTHER OPTIONS | | | | | | | | | |
| VHCH - V-Hook with chain kit MS - Motion Sensor MSPH - High/Low Motion Sensor with Photocell GSS - Gripple Suspension System CB2-LED-13000L-WG-WH - WireGuard for 13000L CB2-LED-26000L-WG-WH - WireGuard for 26000L | | | | | | | | | |

*Warranty is contingent on the correct application and installation of fixture. Maximum ambient temperature is 50°C

CB2-LED-13000L-DIM10-MVOLT-WD-40K-85

TEST NO.: **EL111831**

INPUT WATTS: **91.3**

LUMENS: **12946**

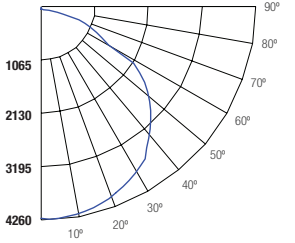
CRI: **85**

EFFICACY: **142**

CCT: **4000K**

SPACING CRITERIA: **1.46**

Candle Power Distribution (Candelas)



| Cone of Light | | | |
|--------------------|-------------------|------------------|----------------------------|
| Beam Diameter (ft) | Beam Area (sq ft) | Beam Area (sq m) | Beam Area (sq ft) / Lumens |
| 2 | 1059 | 6.7 | 6.8 |
| 4 | 265 | 13.3 | 13.7 |
| 6 | 118 | 20 | 20.5 |
| 8 | 66.2 | 26.7 | 27.3 |
| 10 | 42.4 | 33.3 | 34.2 |
| 12 | 29.4 | 40 | 41 |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

| Zone | Lumens | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 1567.14 | 12.10 | 12.10 |
| 0-30 | 3375.79 | 26.10 | 26.10 |
| 0-40 | 5630.34 | 43.50 | 43.50 |
| 0-60 | 10267.44 | 79.30 | 79.30 |
| 0-80 | 12658.54 | 97.80 | 97.80 |
| 0-90 | 12811.37 | 99.00 | 99.00 |

Luminance (Average candela/M²)

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45 | 12073 | 12260 | 11593 |
| 55 | 12114 | 11944 | 11478 |
| 65 | 8797 | 11538 | 10841 |
| 75 | 8434 | 7994 | 9374 |
| 85 | 1564 | 3236 | 6040 |

Lumens Per Zone

| Zone | Lumens |
|-------|---------|
| 0-10 | 401.92 |
| 10-20 | 1165.23 |
| 20-30 | 1808.64 |
| 30-40 | 2254.55 |
| 40-50 | 2406.08 |
| 50-60 | 2231.03 |
| 60-70 | 1582.49 |
| 70-80 | 808.61 |
| 80-90 | 152.83 |

Candela Tabulation

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|----------|---|---|---|---|---|---|---|---|
| 0 | 4236.289 | | | | | | | | |
| 5 | 4252.930 | | | | | | | | |
| 15 | 4165.150 | | | | | | | | |
| 25 | 3970.300 | | | | | | | | |
| 35 | 3706.830 | | | | | | | | |
| 45 | 3175.440 | | | | | | | | |
| 55 | 2584.400 | | | | | | | | |
| 65 | 1382.920 | | | | | | | | |
| 75 | 811.980 | | | | | | | | |
| 85 | 50.710 | | | | | | | | |
| 90 | 16.920 | | | | | | | | |

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

| ROOM CAVITY RATIO | RC | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 10% | | | | 0% | | | |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|--|
| | | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0% | | |
| 0 | 119 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 | 99 | 99 | 99 | 99 | |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 89 | 87 | 89 | 87 | 86 | 83 | 83 | 83 | 83 | 83 | |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 78 | 75 | 72 | 69 | 72 | 69 | 68 | 68 | 68 | 68 | |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 64 | 60 | 58 | 60 | 58 | 58 | 58 | 58 | 58 | |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 61 | 56 | 52 | 50 | 52 | 50 | 50 | 50 | 50 | 50 | |
| 5 | 76 | 63 | 54 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 49 | 45 | 43 | 45 | 43 | 43 | 43 | 43 | 43 | |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 37 | 39 | 37 | 37 | 37 | 37 | 37 | |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | |
| 9 | 56 | 42 | 34 | 29 | 54 | 42 | 34 | 28 | 41 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 25 | 35 | 30 | 25 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

CB2-LED-18000L-DIM10-MVOLT-WD-40K-85

TEST NO.: **EL101838**

INPUT WATTS: **139.5**

LUMENS: **17584**

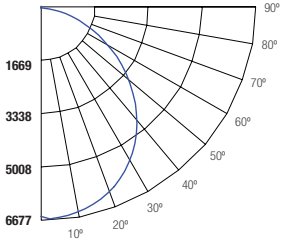
CRI: **85**

EFFICACY: **126**

CCT: **4000K**

SPACING CRITERIA: **1.36**

Candle Power Distribution (Candelas)



| Cone of Light | | | |
|--------------------|-------------------|------------------|----------------------------|
| Beam Diameter (ft) | Beam Area (sq ft) | Beam Area (sq m) | Beam Area (sq ft) / Lumens |
| 2 | 1651 | 5.3 | 5 |
| 4 | 413 | 10.6 | 10.1 |
| 6 | 183 | 15.8 | 15.1 |
| 8 | 103 | 21.1 | 20.2 |
| 10 | 66 | 26.4 | 25.2 |
| 12 | 45.9 | 31.7 | 30.2 |

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

| Zone | Lumens | %Lamp | %Fixt |
|------|----------|-------|-------|
| 0-20 | 2413.44 | 13.70 | 13.70 |
| 0-30 | 5116.82 | 29.10 | 29.10 |
| 0-40 | 8324.98 | 47.40 | 47.30 |
| 0-60 | 14231.91 | 81.00 | 80.90 |
| 0-80 | 17139.81 | 97.50 | 97.50 |
| 0-90 | 17398.08 | 99.00 | 98.90 |

Luminance (Average candela/M²)

| Angle in Degrees | Average 0° | Average 45° | Average 90° |
|------------------|------------|-------------|-------------|
| 45 | 21620 | 21227 | 20903 |
| 55 | 19686 | 19069 | 18554 |
| 65 | 17262 | 16372 | 15706 |
| 75 | 14258 | 13113 | 12358 |
| 85 | 10574 | 8691 | 7441 |

Lumens Per Zone

| Zone | Lumens |
|-------|---------|
| 0-10 | 624.33 |
| 10-20 | 1789.12 |
| 20-30 | 2703.38 |
| 30-40 | 3208.16 |
| 40-50 | 3200.01 |
| 50-60 | 2706.93 |
| 60-70 | 1902.41 |
| 70-80 | 1005.48 |
| 80-90 | 258.28 |

Candela Tabulation

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----|----------|---|---|---|---|---|---|---|---|
| 0 | 6603.288 | | | | | | | | |
| 5 | 6656.740 | | | | | | | | |
| 15 | 6433.010 | | | | | | | | |
| 25 | 5965.680 | | | | | | | | |
| 35 | 5234.230 | | | | | | | | |
| 45 | 4264.730 | | | | | | | | |
| 55 | 3149.990 | | | | | | | | |
| 65 | 2035.190 | | | | | | | | |
| 75 | 1029.490 | | | | | | | | |
| 85 | 257.100 | | | | | | | | |
| 90 | 36.230 | | | | | | | | |

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

| ROOM CAVITY RATIO | RC | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 10% | | | | 0% | | | |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|--|
| | | RW | 70% | 50% | 30% | 10% | 70% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0% | | |
| 0 | 119 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 | 99 | 99 | 99 | 99 | |
| 1 | 109 | 104 | 100 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 | 86 | 84 | 84 | 84 | 84 | 84 | |
| 2 | 100 | 92 | 85 | 79 | 97 | 90 | 84 | 78 | 86 | 81 | 76 | 82 | 78 | 75 | 79 | 76 | 73 | 71 | 73 | 71 | 71 | 71 | 71 | 71 | |
| 3 | 91 | 81 | 73 | 67 | 88 | 79 | 72 | 66 | 76 | 70 | 65 | 73 | 68 | 63 | 70 | 66 | 62 | 60 | 62 | 60 | 60 | 60 | 60 | 60 | |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 51 | 52 | 50 | 50 | 50 | 50 | 50 | |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 44 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 34 | 45 | 38 | 33 | 43 | 37 | 33 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | |
| 9 | 57 | 44 | 36 | 31 | 56 | 44 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 27 | 37 | 31 | 27 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | |

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

CB2-LED-26000L-DIM10-MVOLT-WD-40K-85

TEST NO.: **EL101837**

INPUT WATTS: **185.4**

LUMENS: **23626**