

PRODUCT DESCRIPTION

Shoebox fixtures are traditional die-cast aluminum housings available in three sizes, Small, Medium and Large. These fixtures are retrofitted with high-output LED light engines designed, engineered and assembled in USA, available in a wide range of wattages and lumen output. Suitable for: Corporate Campuses, Parking Lots, Recreational Facilities and a variety of other outdoor lighting applications.

FEATURES

- Energy efficient LED light engine offers high lumen output as well as high efficacy
- IP65 Rated
- Various optical type distributions available
- Various mounting options available
- 5 Year Warranty

PERFORMANCE RATINGS AND CERTIFICATIONS

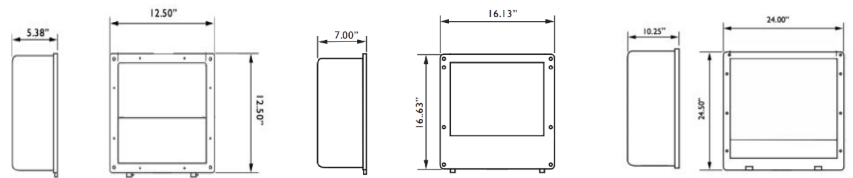
Conforms to UL 1598, UL SUB 1598C, Certified to CSA C22.2 No. 250.0 and CSA C22.2#250.13

ELECTRICAL RATINGS AND OPERATING CONDITIONS

- Voltage:** 120 - 277VAC, 480VAC (optional)
- Dimming:** 0-10V dimming
- Power Factor:** >0.9
- Total Harmonic Distortion:** < 20%
- Operating Environment:** -40°C to 50°C

WARRANTY

5 Year Standard Warranty Limited



SMALL

MEDIUM

LARGE

HOUSING SPECIFICATIONS

Material / Finish: Square box-style die-cast aluminum housing with hinged top frame and tempered glass lens, available in Bronze powder coat finish over chromate conversion coating.

Mounting options available: Slip-fitter, trunnion, arm mount, heavy-duty adjustable pole mount arm, wall mount bracket

Dimensions (L x W x H): 12.5" x 12.5" x 5.38" (SMALL); 16.63" x 16.63" x 7.00" (MEDIUM); 24.50" x 24.00" x 10.25" (LARGE)

Weight: 12.3 lbs. (SMALL), 17.6 lbs. (MEDIUM), 40.2 lbs. (LARGE)

PERFORMANCE SUMMARY

Size	Lumen Output (Wattage):
SMALL	4500 (35W), 8800 (69W), 13300 (104W)
MEDIUM	17800 (139W), 22144 (173W), 28200(221W)
LARGE	34690 (271W), 44416 (347W), 53248 (416W)

Lumens per Watt: 128

CRI-Minimum: >70

CCT: 3000K ,4000K ,5000K

Watts: 35W, 69W, 104W

Optical Distribution: 120° Beam Angle available in Type 5, Type 4, Type 3 and Type 2 distribution patterns



LED SHOEBOX LIGHTS

ORDERING MATRIX

Example:SBS-H021-35W-50K-MT-EM-SF

Product	Board Type	Watts	Color Temp	Voltage	Options	Mounting	Optical Distribution
SBS	H021 = 35W H042 = 69W H063 = 104W	35W 69W 104W	30K = 3000K 40K = 4000K 50K = 5000K CC-[specify CCT value in K] = Custom Color Temp (choose from 2700K-6500K)	MT = 120-277VAC HV= 277-480VAC	SRG1 = Surge Protection 120-277VAC SRG2 = Surge Protection 480VAC EM = Emergency Battery Backup 010V = 0-10V Dimming	SF = Slip Fitter TR = Trunnion Mount AM6 = 6" Arm Mount AM10 = 10" Arm Mount PM: Heavy-Duty Adjustable Pole Mount Arm WB: Wall Mount Bracket	T5 = Type 5 T4 = Type 4 T3 = Type 3 T2 = Type 2
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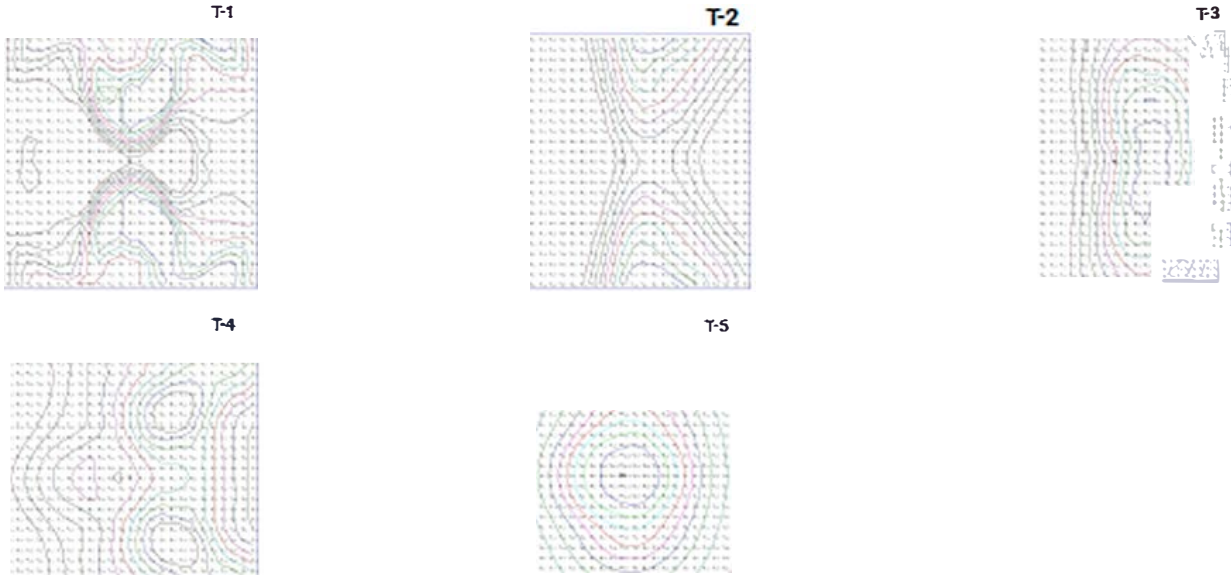
Distribution Types

Distribution

Light Engine	Drive	CCT	T1	T2	T3	T4	T5
	B	5700	n/a	n/a	4,619	4,376	4,862
HEX-42	B	5700	9,530	7,585	9,238	8,752	9,724
HEX-63	B	5700	n/a	n/a	13,857	13,127	14,586

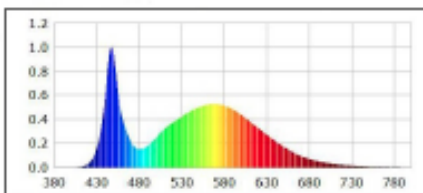
Distribution types may not be applicable to all fixture configurations

Type Distribution



IES Type Distributions are generated in an open space. Light Distribution images are mounted at 10 feet.

Optics Specifications



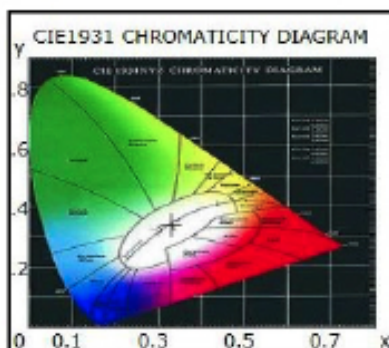
White LED Optics

High brightness, high efficiency LEDs. Standard color temperature is Cool White (5700K typical). Neutral White (4000K typical) and Warm White (3000K typical) also available. All with minimum 70 CRI. Tight bins (< +/-50 degK variability) also available - recommended for WW installations as the eye is sensitive to variations in this color range. 40deg and 80deg beam angle optional (n/a for RGBW).

RGBW Light Engine Optics

RGBW light engine also available, compatible with DMX controller. RGBW colors, to allow changing from pure white light to any hue available. Multiple channels of LEDs produce a full spectrum of light anywhere from deepest red to farthest violet. CRI greater than 75 in the 2700K - 4000K range.

Single color light engines also available. Red=630 nanometers, Green=525 nanometers. Blue=475 nanometers.



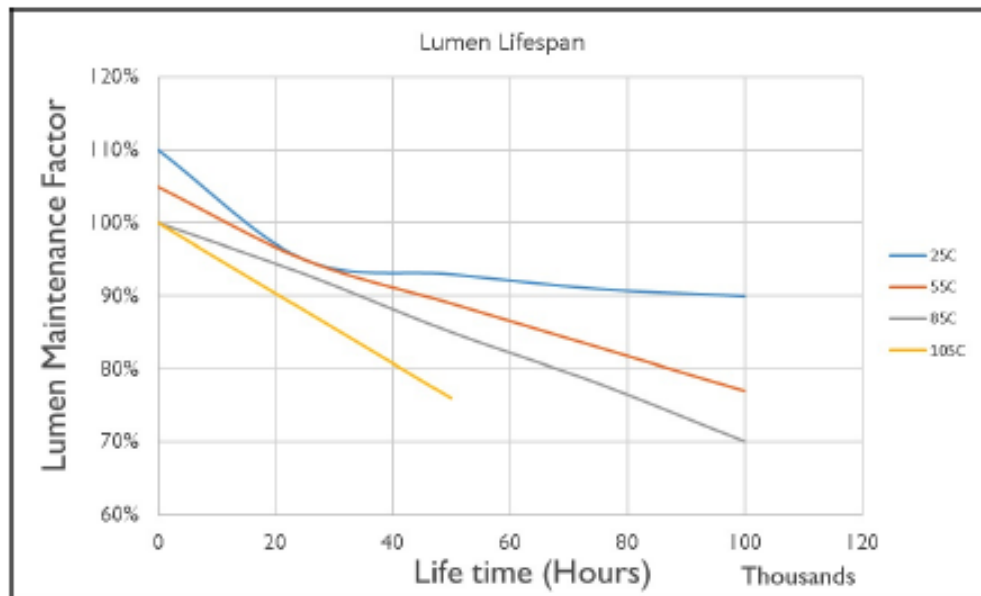
Photometric Data for White LED Light Engine

Chromaticity coordinates: $x=0.3305$ $y=0.3424$ $u(u^*)=0.2050$ $v(v^*)=0.3186$ $v^*=0.4779$
 CCT: $T_c=5700K$ ($duv=0.00156$)
 Color Ratio: $R=0.133$ $G=0.827$ $B=0.040$
 Peak Wavelength: 447.2nm
 Half Bandwidth: 19.1nm
 Dominant Wavelength: 535.2nm
 Color Purity: 0.020
 Color Render Index: $R_a=75.0$, $avgR(1\sim14)=65.6$, $avgR(1\sim15)=65.9$ $R1=74$, $R2=76$, $R3=76$, $R4=81$, $R5=75$, $R6=66$, $R7=84$, $R8=67$, $R9=0$, $R10=41$, $R11=78$, $R12=40$, $R13=73$, $R14=86$, $R15=71$

Photometric Data for RGBW LED Light Engine

Chromaticity coordinates:
 White $x = 0.3405$, $y = 0.3459$
 Green $x = 0.1687$, $y = 0.7296$
 Red $x = 0.6968$, $y = 0.3024$
 Blue $x = 0.1316$, $y = 0.0636$

Lumen Performance



Lumen Maintenance Factors (B Drive)

TJ (Junction Temp)	INITIAL LMF	25K HR PROJECTED LMF	50K HR PROJECTED LMF	75K HR PROJECTED LMF	100K HR PROJECTED LMF
25°C	1.10	0.95	0.93	0.91	0.90
55°C	1.05	0.95	0.89	0.83	0.77
85°C	1.00	0.93	0.85	0.78	0.70
105°C	1.00	0.88	0.76	N/A	N/A

Lumen Multiplier

AMBIENT TEMPERATURE	LUMEN MULTIPLIER
10°C	1.032
15°C	1.021
25°C	1.000
40°C	0.968
50°C	0.946

Each temperature has an independent initial value. In accordance with IESNA TM021011, 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). 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)