

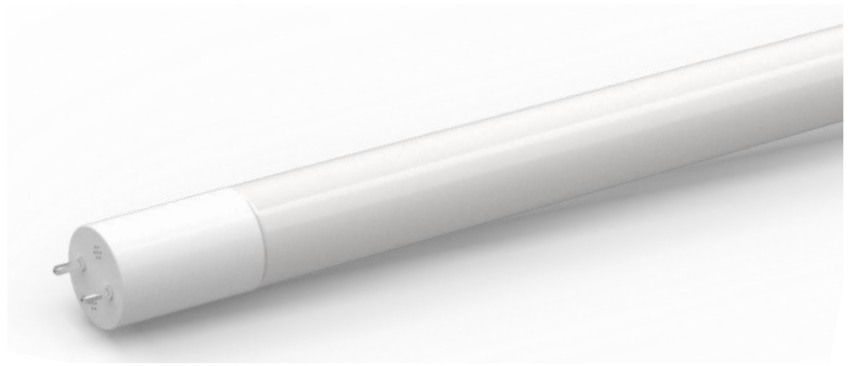
APPLICATIONS

The CBDEB (dual-ended bypass, which is hot on both ends) Series of LED T8 lamps replace conventional fluorescent lamps in existing luminaires. Offering significant energy-efficiency and lifetime improvements over fluorescent lamps, CBDEB Series lamps are installed by bypassing existing fluorescent ballasts, and hard-wiring tombstone lamp-holders directly to incoming AC power leads. Dual-ended bypass lamps eliminate the need to replace shunted tombstone lamp-holders in existing fluorescent luminaires with instant-start ballasts.

FEATURES

- Available in 3500k (warm/neutral white), 4000k (neutral white) and 5000k (cool white) color temperatures (except CBDEB8-43, which is available in 5000k only).*
- Long-life LEDs provide up to 90,000 hours of operation with at least 70% of initial lumens output (L70).**
- Models provide 1,100 to 5,500 lumens per lamp, and 121 to 129 lumens per watt (LPW).*
- Uniform illumination with no visible LED pixilation
- Universal 120-277 AC voltage (50-60Hz) is standard
- Power factor > 0.90.
- Total harmonic distortion < 20%
- Color rendering index ≥ 80.
- Full glass housing inhibits yellowing and distortion
- Easy installation in existing fluorescent luminaires. Bypass models connect directly to incoming AC power leads.

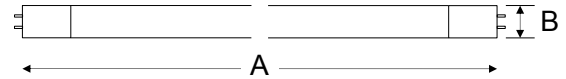
* contact factory for other color temperatures and lumen packages.
 **L70 hours are IES TM-21-11 calculated hours.



WARRANTY/LISTING

- cULus listed for dry and damp locations in ambient temperatures from -20°C to 45°C (-4°F to 113°F).
- DLC standard approved (except 3- & 8-foot models, which are not eligible under the DLC linear replacement lamps category).
- Complies with RoHS (Restriction on Hazardous Substances) requirements.
- Complies with FCC Part 15 class B.
- CBDEB8-43 has standard PET (polyethylene terephthalate) polyester coating for shatter-proof performance.
- 5-year warranty of all electronics and housing.
- Other models are available as shatter-proof (NSF certified) by special order.

DIMENSIONS



	A (Length)	B (Diameter)
2 Foot	23 1/8"	1"
3 Foot	35 1/8"	1"
4 Foot	47 1/8"	1"
8 Foot	93 1/8"	1"

Note: 8-foot lamps are single pin.

STANDARD



PRODUCT PARAMETER

Model	Watts	Color Temperature	Lumens	DLC Listed	Case Quantity	Options	Notes
CBDEB2-935	9	35 = 3500k	1,100	Yes	25	CEMBTUB-20 = Emergency battery backup. Constant power emergency driver for internal driver tubes 20W (order separate)	
CBDEB2-940	9	40 = 4000k	1,150	Yes	25		
CBDEB2-950	9	50 = 5000k	1,150	Yes	25		
CBDEB3-1235	12	35 = 3500k	1,500	No	25		
CBDEB3-1240	12	40 = 4000k	1,500	No	25		
CBDEB3-1250	12	50 = 5000k	1,500	No	25		
CBDEB4-1435	14	35 = 3500k	1,700	Yes	25		
CBDEB4-1440	14	40 = 4000k	1,800	Yes	25		
CBDEB4-1450	14	50 = 5000k	1,800	Yes	25		
CBDEB4-1735	17	35 = 3500k	2,100	Yes	25		
CBDEB4-1740	17	40 = 4000k	2,200	Yes	25		
CBDEB4-1750	17	50 = 5000k	2,200	Yes	25		
CBDEB8-4350	43	50 = 5000k	5,500	No	10		

ELECTRICAL DATA

Model	Color Temperature	CRI ¹	Lamp Lumens	Lamp Watts	Lumens/Watt	Input Voltage ²	Input Current (A)			Power Factor	THD ³	L ₇₀ Hours ⁴
							120V	240V	277V			
CBDEB2-935	3500k	> 80	1,100	9	122	120-277	0.08	0.04	0.03	> 90%	< 20%	90,000
CBDEB2-940	4000k	> 80	1,150	9	128	120-277	0.08	0.04	0.03	> 90%	< 20%	90,000
CBDEB2-950	5000k	> 80	1,150	9	128	120-277	0.08	0.04	0.03	> 90%	< 20%	90,000
CBDEB3-1235	3500k	> 80	1,500	12	125	120-277	0.10	0.05	0.04	> 90%	< 20%	90,000
CBDEB3-1240	4000k	> 80	1,500	12	125	120-277	0.10	0.05	0.04	> 90%	< 20%	90,000
CBDEB3-1250	5000k	> 80	1,500	12	125	120-277	0.10	0.05	0.04	> 90%	< 20%	90,000
CBDEB4-1435	3500k	> 80	1,700	14	121	120-277	0.12	0.06	0.05	> 90%	< 20%	90,000
CBDEB4-1440	4000k	> 80	1,800	14	129	120-277	0.12	0.06	0.05	> 90%	< 20%	90,000
CBDEB4-1450	5000k	> 80	1,800	14	129	120-277	0.12	0.06	0.05	> 90%	< 20%	90,000
CBDEB4-1735	3500k	> 80	2,100	17	124	120-277	0.14	0.07	0.06	> 90%	< 20%	90,000
CBDEB4-1740	4000k	> 80	2,200	17	129	120-277	0.14	0.07	0.06	> 90%	< 20%	90,000
CBDEB4-1750	5000k	> 80	2,200	17	129	120-277	0.14	0.07	0.06	> 90%	< 20%	90,000
CBDEB8-4350	5000k	> 80	5,500	43	128	120-277	0.36	0.18	0.16	> 90%	< 20%	63,000

¹ Color rendering index.

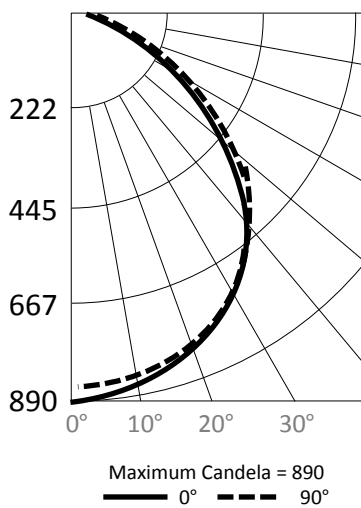
² All 50-60Hz.

³ Total harmonic distortion.

⁴ L₇₀ refers to the number of hours at which lumen output declines to 70% of the initial level. L₇₀ hours are IES TM-21-11 calculated hours.

PHOTOMETRIC DATA

CBDEB4-1750 (2,200 Lumens)



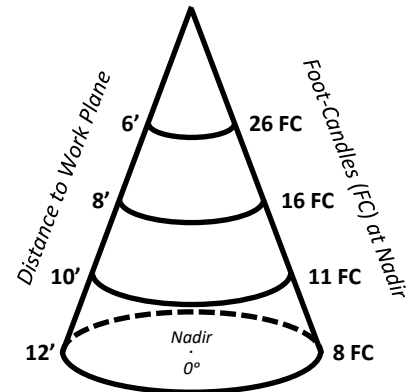
Candlepower Summary

	0°	90°
0°	890	890
10°	876	876
20°	829	831
30°	744	750
40°	613	636
50°	442	481
60°	272	280
70°	155	156
80°	77	90
90°	2	2

Zonal Lumen Summary

Zone	Lumens	% Fixture
0° - 10°	84	3.8%
0° - 20°	325	14.8%
0° - 30°	687	31.2%
0° - 40°	1,113	50.6%
0° - 50°	1,526	69.4%
0° - 60°	1,846	83.9%
0° - 70°	2,044	92.9%
0° - 80°	2,159	98.2%
0° - 90°	2,200	100.0%
90° - 180°	0	0.0%
0° - 180°	2,200	100.0%

Cone of Light



INSTALLATION

