T8 Series

4' Linear LED Lamp

Product Description

The Cree® linear LED T8 lamp delivers up to 2800 lumens of enhanced spectrum 90+ CRI light while achieving up to 110 lumens per watt. The innovative design allows more uplight than standard LED tubes, thereby providing a more uniform light output. The T8 lamp is available in a wide array of color temperatures and operates using existing fluorescent T8 electronic instant start, programmed/rapid start and dimmable fluorescent ballasts. The T8 lamp is easy to install and fits into linear fluorescent fixtures, making it a perfect upgrade solution where energy savings and long life are critical.

Performance Summary

- Upgrades existing T8 fluorescent lamps
- Utilizes Cree TrueWhite® Technology
- **Lamp Efficacy:** 90-110 LPW*
- **Lamp Delivered Light Output:** 1,700-2,800 lumens per LED lamp*
- **Lamp Watts:** As low as 16.5 watts*
- **CRI:** 90+
- **CCT:** 3500K, 4000K
- **Input Voltage:** 120-480 VAC, determined by fluorescent ballast
- **Rated Life:** 50,000 hours
- **Controls:** Dimmable (ballast dependent)
- **Mounting:** Linear fluorescent fixtures with dry or damp rating
- **Limited Warranty†:** 5 years
- Must order in multiples of master carton (MC) quantities; MC=10

† See www.cree.com/lighting/products/warranty for warranty terms

4' LED Lamp
MOL- 48" (1219mm)

Ordering Information

Example: LEDT8R-48-21L-40K-B1

LEDT8R-48					B1
Product	**Lamp Delivered Light Output**	**CCT**	**Voltage**	**Control**	**Packaging**
LEDT8R-48	**17L*** 16.8W, 1,700 lumens – 101 LPW **21L*** 19.5W, 2,100 lumens – 108 LPW	**35K** 3500K **40K** 4000K	**Blank** 120-480 Volt Ballast Dependent	**Blank** Dimmable	**B1** (10) Single boxed lamps in master carton (MC=10)

* See wattage vs. lumen chart for lumens by specific ballast factor (BF)

Product Specifications

CREE TRUEWHITE® TECHNOLOGY

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology is a patented approach that delivers an exclusive combination of 90+ CRI, beautiful light characteristics and lifelong color consistency, all while maintaining high luminous efficacy – a true no compromise solution.

CONSTRUCTION & MATERIALS

- Lightweight aluminum heat sink housing provides strength and durability
- Shatterproof design
- Suitable for use with shunted and non-shunted sockets

OPTICAL SYSTEM

- Specialized lens design for optimal light distribution and smooth visual effect
- Measured and designed to achieve optimal light performance in existing fluorescent troffers

ELECTRICAL SYSTEM

- Integral, high-efficiency driver to remodulate current to LEDs
- Utilizes existing fluorescent ballast
- **Power Factor:** = 0.9 nominal
- **Input Power:** Ballast dependent
- **Input Voltage:** 120-277V, 347, 480V, 50/60Hz
- **Operating Temperature Range:** -25˚C - + 45˚C (13˚F - + 113˚F)
- **Total Harmonic Distortion:** < 20%
- Not for use with T12 magnetic or electronic ballasts
- Not for use with T8 magnetic or HO ballasts
- Not for use or to be wired to "mains voltage"
- Not intended for use with emergency exit fixtures or emergency lighting

CONTROLS

- Dimmable (ballast dependent)

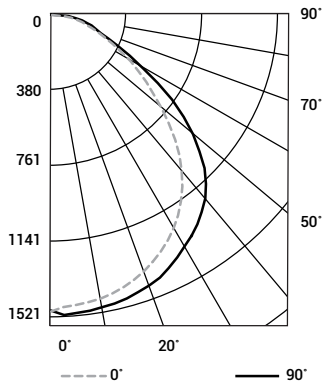
REGULATORY & VOLUNTARY QUALIFICATIONS

- UL Listed to UL 1993, UL 8750, CSA C22.2 No. 1993-12 & CSA C22.2 No. 250.13-12
- Suitable for damp locations
- Designed for indoor use
- DLC qualified when ordered with 21L. Please refer to www.designlights.org/QPL for most current information
- RoHS compliant. Consult factory for additional details

Photometry

(2) LEDT8R-48-21L-35K INSTALLED IN A 2 X 4 RECESSED TROFFER BASED ON CESTL REPORT TEST #: PL04179-001

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	109	105	101	97
2	100	92	86	81
3	92	82	74	68
4	84	73	64	58
5	78	65	57	50
6	72	59	50	44
7	67	54	45	39
8	62	49	41	35
9	58	45	37	32
10	55	42	34	29

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m²)

Vertical Angle	Horizontal Angle			
	0°	45°	90°	
45°	1,797	1,957	2,221	
55°	1,467	1,712	1,869	
65°	1,167	1,166	1,254	
75°	1,026	757	1,176	
85°	1,171	1,069	1,444	

Zonal Lumen Summary

Zone	Lumens	% Lamp	Luminaire
0-30	1,182	N/A	30.2%
0-40	1,944	N/A	49.6%
0-60	3,298	N/A	84.2%
0-90	3,918	N/A	100%
0-180	3,918	N/A	100%

Reference www.cree.com/Lighting/Products/Indoor/Lamps/T8-Series for detailed photometric data

Product Information

Product Number	UPC	Description	Lamp Type	CCT	Lamps per Master Carton	CRI	Initial Delivered Lumens	Rated Life (Hrs)
LEDT8R-48-21L-35K-B1	849665009450	Linear LED T8 Replacement Lamp	T8	3500K	10	90	2,100	50,000
LEDT8R-48-21L-40K-B1	849665009474	Linear LED T8 Replacement Lamp	T8	4000K	10	90	2,100	50,000
LEDT8R-48-17L-35K-B1	849665009375	Linear LED T8 Replacement Lamp	T8	3500K	10	90	1,700	50,000
LEDT8R-48-17L-40K-B1	849665009399	Linear LED T8 Replacement Lamp	T8	4000K	10	90	1,700	50,000

Watts vs. Lumens

LEDT8R-48-21L

		Lamp Watts	System Watts	Lamp Lumens (Bare)
Low	0.77 Ballast Factor	16.5	18.0	1,877
Normal	0.88 Ballast Factor	19.5	21.0	2,151
Normal	1.00 Ballast Factor	22.2	23.7	2,424
High	1.10 Ballast Factor	25.6	27.1	2,668
High	1.15 Ballast Factor	27.0	28.5	2,768
High	1.18 Ballast Factor	27.9	29.4	2,822

LEDT8R-48-17L

		Lamp Watts	System Watts	Lamp Lumens (Bare)
Low	0.77 Ballast Factor	16.8	18.3	1,734
Normal	0.88 Ballast Factor	19.9	21.4	1,973
Normal	1.00 Ballast Factor	23.5	25.0	2,229
High	1.10 Ballast Factor	26.7	28.2	2,421
High	1.15 Ballast Factor	28.1	29.6	2,504
High	1.18 Ballast Factor	29.1	30.6	2,555