

# ZR Series

## ZR14™ 1' x 4' LED Troffer

### Product Description

The ZR14™ LED troffer delivers 4000 lumens of superior 90 CRI light quality and is perfect for both new construction and renovation. Powered by Cree TrueWhite® Technology, the slim and lightweight ZR14™ LED troffer boasts an efficacious 90 LPW performance along with 0-10V dimming to meet local energy codes. The ZR14™ LED troffer embodies a breakthrough in balancing energy savings, visual comfort and initial cost.

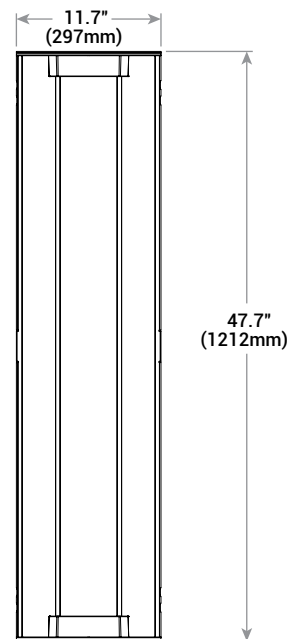
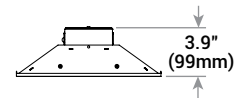
### Performance Summary

Utilizes Cree TrueWhite® Technology
<b>Efficacy:</b> 90 LPW
<b>Initial Delivered Lumens:</b> 4,000 lumens
<b>Input Power:</b> 44 watts
<b>CRI:</b> 90 CRI
<b>CCT:</b> 3500K, 4000K
<b>Input Voltage:</b> 120-277 VAC or 347 VAC
<b>Limited Warranty*:</b> 10 years
<b>Controls:</b> 0-10V dimming to 5%
<b>Mounting:</b> Recessed*

\*See [www.cree.com/lighting/products/warranty](http://www.cree.com/lighting/products/warranty) for warranty terms

### Accessories

Field-Installed	
Drywall Grid Adapter <a href="#">DGA-14WHT</a>	6' Flexible Power Whip <a href="#">PW-18/4-06-9T-SS</a>
Surface Mount Kit <a href="#">SMK ZR14</a>	
- Not for use with EB14	



### Ordering Information

Example: ZR14-40L-35K-10V

ZR14	40L			10V	
Product	Initial Delivered Lumens	CCT	Voltage	Control	Options
ZR14	40L 44W, 4,000 Lumens - 90 LPW	35K 3500K 40K 4000K	Blank 120-277 Volt 34 347 Volt	10V 0-10V Dimming 5%	<a href="#">EB14_Emergency Backup</a> - 1,400 lumens - Available on US versions only

\* Acceptable for use with standard 9/16 T-Bar or larger when installed per installation instructions. Consult factory for non-standard grid applications



# ZR14™ 1' x 4' LED Troffer

## 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

- Durable cold rolled steel housing provides strength and uniformity
- Ultra-thin 4.9" (124mm) luminaire height and lightweight design effectively target a broad range of plenum spaces and allow for easy installations
- Luminaire is pre-painted for enhanced smooth finish
- Includes t-bar clips and holes for mounting support wires (by others)
- Luminaire sides and ends are hemmed in for safe, easy handling

### OPTICAL SYSTEM

- Unique luminaire design creates perfect balance of both horizontal and vertical illumination
- Optimized smooth lens eliminates pixelation and delivers a low-glare, diffused light distribution

### ELECTRICAL SYSTEM

- Cree born components including highly efficacious Cree® LED chips along with an integral high-efficiency Cree® driver
- **Power Factor:** = 0.9 nominal
- **Input Power:** Stays constant over life
- **Input Voltage:** 120-277V or 347V, 50/60Hz
- **Operating Temperature Range:** 0°C - + 35°C (32°F - + 95°F)
- **Total Harmonic Distortion:** <20%

### CONTROLS

- Continuous dimming to 5% with 0-10V DC control protocol
- For use with Class 2 dimming systems only. Reference [www.creelink.com/exLink.asp?70982140Z58R34I26620963](http://www.creelink.com/exLink.asp?70982140Z58R34I26620963) for recommended dimming controls and wiring diagrams

### REGULATORY & VOLUNTARY QUALIFICATIONS

- UL924 (EB option)
- cULus listed
- Suitable for damp locations
- Designed for indoor use and covered outdoor applications
- DLC qualified. Please refer to [www.designlights.org/QPL](http://www.designlights.org/QPL) for most current information
- RoHS compliant. Consult factory for additional details
- Meets FCC Part 15 standards for conducted and radiated emissions

## Application Reference

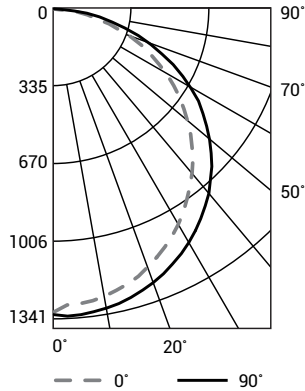
Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average fc
8 x 8	4000	44	90	0.66	56
8 x 10				0.55	46
10 x 10				0.44	37
10 x 12				0.35	30

9' ceiling; 80/50/20 reflectances; 2.5' workplane, open room. LLF: 1.0 Initial Open Space: 50' x 40' x 10'

## Photometry

### ZR14-40L-35K BASED ON CESTL REPORT TEST #: PL02842

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	108	103	99	95
2	98	90	83	77
3	89	78	70	63
4	82	69	60	53
5	75	62	52	46
6	69	55	46	40
7	64	50	41	35
8	60	46	37	31
9	56	42	34	28
10	52	39	31	25

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m²)				
	Horizontal Angle			
	0°	45°	90°	
Vertical Angle	45°	3,680	3,971	4,159
	55°	3,559	3,947	4,187
	65°	3,362	3,876	4,097
	75°	2,923	3,554	3,747
	85°	2,105	2,836	3,067
	90°			

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	1,034	N/A	25.9%
0-40	1,702	N/A	42.7%
0-60	3,068	N/A	76.9%
0-90	3,990	N/A	100%
0-180	3,990	N/A	100%

Reference [lighting.cree.com/products/indoor/troffers/zr-series](http://lighting.cree.com/products/indoor/troffers/zr-series) for detailed photometric data

Recommended ZR Series Lumen Maintenance Factors (LMF) <sup>1</sup>					
Ambient	Initial LMF	25K hr Projected <sup>2</sup> LMF	50K hr Projected <sup>2</sup> LMF	75K hr Projected <sup>2</sup> LMF	100K hr Calculated <sup>3</sup> LMF
0°C (32°F)	1.05	0.99	0.95	0.91	0.87
5°C (41°F)	1.04	0.98	0.94	0.90	0.86
10°C (50°F)	1.03	0.97	0.93	0.89	0.85
15°C (59°F)	1.02	0.96	0.92	0.88	0.84
20°C (68°F)	1.01	0.95	0.91	0.87	0.83
25°C (77°F)	1.00	0.95	0.90	0.86	0.83
30°C (86°F)	0.99	0.94	0.89	0.86	0.82
35°C (95°F)	0.98	0.93	0.89	0.85	0.81

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

