

CR14™

1' x 4' Architectural LED Troffer

Product Description

The CR14™ Architectural LED High Efficiency (HE) troffer delivers up to 125 lumens per watt of exceptional 90 CRI light at 4000 lumens. This breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology with a unique thermal management design. The CR14 (HD) option delivers enhanced spectrum 80+ CRI color quality. The CR14 product family is available in warm, neutral, cool, or daylight color temperatures and has step, 0-10V, or Lutron EcoSystem® Enabled dimming options. Its compact, lightweight design makes the CR14 perfect for use in commercial new construction or renovated spaces.

Performance Summary

Utilizes Cree TrueWhite® Technology (90 CRI) or available in 80+ CRI
Active Color Management
Room-Side Heat Sink
Assembled in the US & Mexico
Efficacy: 90-125 LPW
Delivered Light Output: 2200, 3100, 4000, 5000 lumens
Input Power: 22-50 watts
CRI: 90 CRI (Cree TrueWhite® Technology), 80+ CRI
CCT: 3000K, 3500K, 4000K, 5000K
Input Voltage: 120-277 VAC or 347 VAC*
Limited Warranty*: 10 years
Lifetime: Designed to last from 50,000 hours (HD), 75,000 hours (Standard TW), and 100,000 hours (HE TW)
Controls: Step Level to 50%, 0-10V Dimming or Lutron EcoSystem Enabled to 5% ¹
Mounting: Recessed

*40L 100 LPW 10V types only - other types require addition of a 347 accessory kit

Housings & Accessories

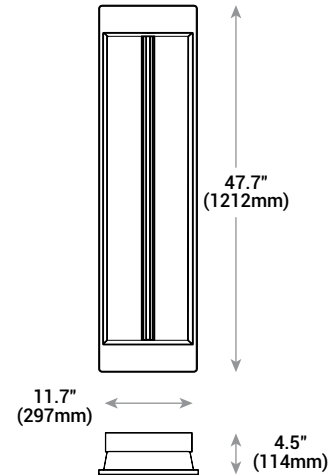
Accessories			
CPLCR Chicago Plenum Field Kit	CR-347V 347 Volt	PW-18/4-06-9T/SS-CR Power Whip	AC5-72-PD8-JB Adjustable Cable
CPLCR-EM Chicago Plenum Field Kit-Emergency	CR-347V-SD Step Dimming to 50%	AC5-18/4-72-PD8-JB Adjustable Cable	EJBCR-5PK Expanded size junction box for through wiring (5 pack)
	SMK-14 Surface Mount Kit		

Ordering Information

Example: CR14-40L-35K-S

Product	Lumen Output	Color Temp	Voltage	Control	Options
CR14	22L 22 W 2200 lumens – 100 LPW 31L 34W 3100 lumens – 90 LPW 40L 40W 4000 lumens – 100 LPW 40L HE¹ 30.5W 4000 lumens – 125 LPW (30K) 32W 4000 lumens – 120 LPW (35K) 33W 4000 lumens – 115 LPW (40K) 34.5W 4000 lumens – 110 LPW (50K) 50L 50W 5000 lumens – 100 LPW	30K 3000 Kelvin 35K 3500 Kelvin 40K 4000 Kelvin 50K 5000 Kelvin	Blank 120-277 Volt (Standard) 34V⁶ 347 Volt (Optional)	S Step Dimming to 50% 10V 0-10V Dimming to 5% LES Lutron EcoSystem® Enabled to 5%	HD⁷ CRI 80+ (44W 4000 lumens - 90 LPW) EB14^{2,4} Emergency Backup - 1400 lumens EB14 SMK^{2,3,5} Emergency Backup with surface mount kit - 1400 lumens

1. Reference www.cree.com/lighting for recommended dimming control options. 2. Not available in 50L. Not available in LES types except 40L LES type. 3. Not available with EB14 option. Use EB14 SMK. 4. EB14 not for use with SMK Kits 5. Includes surface mount kit accessory (SMK-CR24). 6. 347V integrated option only available on 40L 100 LPW 10V fixtures. Wattage increases to 42W and fixture height increases by 1.4" over standard 120-277V fixtures. 7. HD only available in 40L.
¹See www.cree.com/lighting/products/warranty for warranty terms



NOTE: Use of Expanded Junction Box will expand the depth to 6.42" and Emergency Backup will expand the depth to 6.05". Use of 347V will increase fixture height by 1.4"



Rev. Date: V2 07/03/2014



Product Specifications

CREE TRUEWHITE® TECHNOLOGY OPTION

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

CREE LED TECHNOLOGY

Cree's total systems approach to product development is a comprehensive engineering philosophy that combines the most advanced LED sources, driver technologies, optics and forms. The result is highly-reliable luminaire solutions for both indoor and outdoor applications that reduce energy use, extend lifetimes, and maximize illumination performance and quality.

ROOM-SIDE HEAT SINK

An innovative thermal management system designed to maximize cooling effectiveness by integrating a unique room-side heat sink into the diffusing lens. This breakthrough design creates a pleasing architectural aesthetic while conducting heat away from LEDs in a temperature-controlled environment. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

LUMEN MAINTENANCE FACTORS

- Reference www.cree.com/lighting for detailed lumen maintenance factors

CONSTRUCTION & MATERIALS

- Durable 20-gauge steel housing with standard troffer access plate for electrical installation
- Field replaceable light engine integrates LEDs, driver, power supply, thermal management, and optical mixing components
- One-piece lower reflector finished with a textured high reflectance white polyester powder coating creates a comfortable visual transition from the lens to the ceiling plane
- Provided t-bar clips and holes for mounting support wires enable recessed or suspended installation
- Individual fixtures may be mounted end to end for a continuous row of illumination

NOTE: Reference www.cree.com/lighting for detailed instructions on field replacement of the light engine

OPTICAL SYSTEM

- Unique combination of reflective and refractive optical components achieves a uniform, comfortable appearance while eliminating pixelation and color fringing
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces. This increases the perception of spaciousness
- Diffusing lens integrated with upward-facing LED strip eliminates direct view of LEDs while lower reflector balances brightness of lens with the ceiling to create a low-glare high angle appearance

ELECTRICAL SYSTEM

- Integral, high-efficiency driver and power supply.
- **Power Factor:** = 0.9 nominal
- **Input Power:** Stays constant over life.
- **Input Voltage:** 120-277V, 347V- 50/60Hz
- **Battery Backup:** Consult factory.
- **Temperature Rating:** Designed to operate in temperatures 0-35 C and below room side and plenum side.
- **Total Harmonic Distortion:** < 20%

CONTROLS

- Step dimming to 50% comes standard*
- Optional continuous dimming to 5% with 0-10V DC control protocol*
- Optional Lutron EcoSystem® Enabled option allows seamless integration with Lutron EcoSystem controls*

REGULATORY & VOLUNTARY QUALIFICATIONS

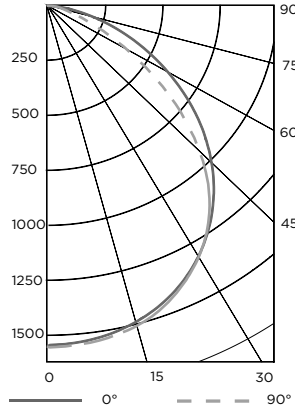
- UL924 (EB14 option)
- cULus Listed
- DLC qualified**
- Suitable for damp locations
- Designed for Indoor use

*Reference www.cree.com/lighting for recommended dimming controls and wiring diagrams
 **Please refer to DLC QPL list for most current information

Photometry

CR14-4000L based on LTL Report test #: 24294

Fixture 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 fixture efficiency of 100%



Average Luminance Table (cd/m2)

Horizontal Angle	0°	45°	90°
0°	5407	5407	5407
45°	5015	5002	4673
55°	4589	4315	3572
65°	3933	3122	2247
75°	3039	1690	1282
85°	1727	1249	1321

Coefficients Of Utilization

RCC %:	80			
RW %:	70	50	30	0
RCR: 0	119	119	119	119
1	110	106	102	73
2	101	93	87	82
3	92	82	75	69
4	85	74	65	59
5	78	66	57	51
6	72	60	51	45
7	67	54	46	40
8	63	49	41	36
9	58	45	37	32
10	55	42	34	29

Effective Floor Cavity Reflectance: 20%

Zonal Lumen Summary

Zone	Lumens	% Lamp	Luminaire
0-30	1220	N/A	30.8%
0-40	1995	N/A	50.4%
0-60	3385	N/A	85.5%
0-90	3959	N/A	100%

Reference www.cree.com/lighting for detailed photometric data

Application Reference

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average fc
8 x 8	2200L	22W	100	0.35	30
	4000L	40W	100	0.69	54
	4000L	30.5W	125	0.56	54
	5000L	50W	100	0.78	68
8 x 10	2200L	22W	100	0.28	25
	4000L	40W	100	0.55	45
	4000L	30.5W	125	0.45	45
10 x 10	5000L	50W	100	0.62	57
	2200L	22W	100	0.22	21
	4000L	40W	100	0.44	38
10 x 12	4000L	30.5W	125	0.36	38
	2200L	22W	100	0.19	17
	4000L	40W	100	0.37	30
10 x 12	4000L	30.5W	125	0.30	30
	5000L	50W	100	0.42	38

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

