

CR14™

295mm x 1195mm Architectural LED Troffer

Product Description

The CR14™ architectural LED troffer delivers up to 5000 lumens of exceptional 90+ CRI light while achieving 90-110 lumens per watt. This breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology with a unique thermal management approach. The CR14 is available in warm or cool color temperatures and has both 1-10V and DALI dimming options. Its compact, lightweight design easily accommodates recessed, surface mount, or suspended installations, making the CR14 perfect for use in commercial new construction or retrofit applications.

Performance Summary

Utilizes Cree TrueWhite® Technology

Active Color Management

Room-Side Heat Sink

Efficacy: 90-110 LPW

Delivered Light Output: 2200, 4000, 5000 lumens

Input Power: 22-50 watts

CRI: 90

CCT: 3000K, 4000K

Input Voltage: 220-240 VAC

Warranty: 5 years†

Lifetime: Designed to last 50,000 hours standard or 75,000 hours with HE option

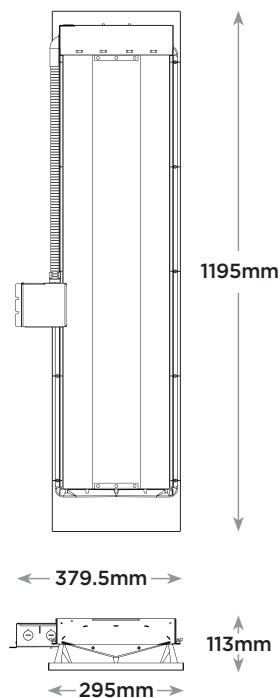
Dimming: 1-10V or DALI Dimming to 5%

Mounting: Recessed

Dimensions: L 1195mm x W 295mm x H 113mm

Weight: max 10 Kg

CR14



Ordering Information

Example: CR14-40L-40K-23

CR14					
Product	Lumen Output	Color Temperature	Control	Voltage	Options
CR14	22L 22W 2200 lumens - 100 LPW 40L 44W 4000 lumens - 90 LPW 40L HE* 36W 4000 lumens - 110 LPW (30K) 38W 4000 lumens - 105 LPW (40K) 50L 50W 5000 lumens - 100 LPW	30K 3000 Kelvin 40K 4000 Kelvin	Blank Non-dimming ADIM 1-10V Dimming to 5% DALI** DALI Dimming to 5%	23 220-240 Volt (Standard)	BLANK CE/CB certified CP CCC certified

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

*3000K HE model is 36W (110 LPW), 4000K HE model is 38W (105 LPW).

**DALI only available in 40L types.



Rev. Date 02/27/2013



Product Specifications

CREE TRUEWHITE® TECHNOLOGY

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology mixes the light from the highest performing red and unsaturated yellow LEDs. This patented approach 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.

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:** 220-240V, 50/60Hz
- Dimming:** Dimmable to 5% with Analog 1-10V or DALI control protocols. Reference www.cree.com/lighting for recommended dimming controls.
- Temperature Rating:** Designed to operate in temperatures 35 C and below room side and plenum side.
- Total Harmonic Distortion:** < 20%

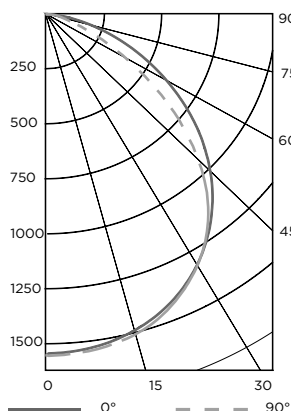
REGULATORY & VOLUNTARY QUALIFICATIONS

- CE certified.
- CCC certified.
- IP23

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%.



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%

Average Luminance
Table (cd/m²)

Vertical Angle	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

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 (m)	Lumens	Wattage	LPW	w/m ²	Actual Lux
2.4 x 2.4	2200L	22W	100	3.76	330
	4000L	44W	90	7.42	590
	4000L	36W	110	6.02	590
	5000L	50W	100	8.39	740
2.4 x 3.0	2200L	22W	100	3.01	270
	4000L	44W	90	5.91	490
	4000L	36W	110	4.84	490
	5000L	50W	100	6.67	620
3.0 x 3.0	2200L	22W	100	2.37	230
	4000L	44W	90	4.73	415
	4000L	36W	110	3.87	415
	5000L	50W	100	5.38	525
3.0 x 3.6	2200L	22W	100	2.04	185
	4000L	44W	90	3.98	330
	4000L	36W	110	3.23	330
	5000L	50W	100	4.52	415

3m ceiling; 80/50/20 reflectances; 0.75m workplane, open room. LLF: 1.0 Initial.
Open Space: 15m x 12m x 3m