

CR14™

Architectural LED Troffer

Product Description

The CR14™ architectural LED troffer delivers up to 4000 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 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, 3100, 4000 lumens
Input Power: 22-50 watts
CRI: 90
CCT: 3000K, 4000K
Input Voltage: 220-240 VAC, 50Hz
Warranty: 10 years*
Lifetime: Designed to last 75,000 hours
Dimming: 1-10V or DALI (Contact ADLT)
Mounting: Recessed
Dimensions: L 1195mm x W 295mm x H 113mm
Weight: max 10 Kg

Accessories

- Plaster Recess Trim
- Surface Mount Enclosure
- Clean Room Enclosure

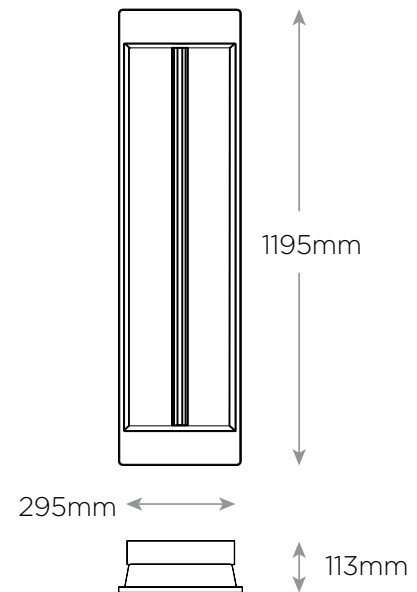
Ordering Information

Example: CR14-40L-40K-23

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

* Reference www.cree.com/lighting for recommended dimming control options. † See www.cree.com/lighting/products/warranty for warranty terms.

CR14



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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 (contact ADLT). 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%

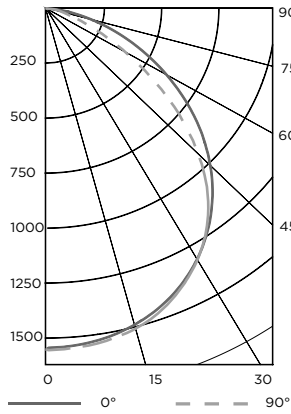
REGULATORY & VOLUNTARY QUALIFICATIONS

- RCM Compliant
- ROHS Compliant

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)

		Horizontal Angle		
		0°	45°	90°
Vertical Angle	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.

Recommended CR Series Lumen Maintenance Factors (LMF) ¹						
Ambient	Initial Delivered Lumens	Initial LMF	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF
0°C	22L, 31L, 40L,	1.05	1.04	1.04	1.04	1.04
5°C	22L, 31L, 40L,	1.04	1.03	1.03	1.03	1.03
10°C	22L, 31L, 40L	1.03	1.02	1.02	1.02	1.02
15°C	22L, 31L, 40L	1.02	1.01	1.01	1.01	1.01
20°C	22L, 31L, 40L	1.01	1.00	1.00	1.00	1.00
25°C	22L, 31L, 40L	1.00	0.99	0.99	0.99	0.99
30°C	22L, 31L, 40L	0.99	0.98	0.98	0.98	0.98
35°C	22L, 31L, 40L	0.98	0.97	0.97	0.97	0.97
40°C	22L, 31L, 40L	0.97	0.96	0.96	0.96	0.96

¹ Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
² In accordance with IESNA TM-21-II, 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
³ In accordance with IESNA TM-21-II, 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