

# CR24™

595mm x 1195mm Architectural LED Troffer

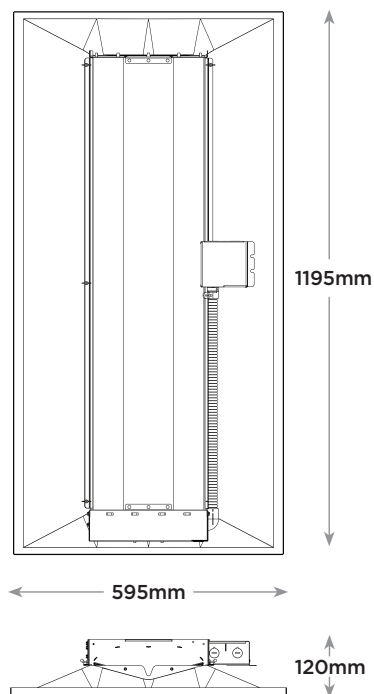
## Product Description

The CR24™ 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 CR24 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 CR24 perfect for use in commercial new construction or retrofit applications.

## Performance Summary

Utilizes Cree TrueWhite® Technology
Active Color Management
Room-Side Heat Sink
<b>Efficacy:</b> 90-110 LPW
<b>Delivered Light Output:</b> 2200, 4000, 5000 lumens
<b>Input Power:</b> 22-50 watts
<b>CRI:</b> 90
<b>CCT:</b> 3000K, 4000K
<b>Input Voltage:</b> 220-240 VAC
<b>Warranty:</b> 5 years †
<b>Lifetime:</b> Designed to last 50,000 hours standard or 75,000 hours with HE option
<b>Dimming:</b> 1-10V or DALI Dimming to 5%*
<b>Mounting:</b> Recessed
<b>Dimensions:</b> L 1195mm x W 595mm x H 120mm
<b>Weight:</b> max 10Kg

CR24



## Ordering Information

Example: CR24-40L-40K-23

CR24					
Product	Lumen Output	Color Temperature	Control	Voltage	Options
CR24	<b>22L</b> 22W 2200 lumens - 100 LPW <b>40L</b> 44W 4000 lumens - 90 LPW <b>40L HE**</b> 36W 4000 lumens - 110 LPW (30K) 38W 4000 lumens - 105 LPW (40K) <b>50L</b> 50W 5000 lumens - 100 LPW	<b>30K</b> 3000 Kelvin <b>40K</b> 4000 Kelvin	<b>Blank</b> Non-dimming <b>ADIM</b> 1-10V Dimming to 5% <b>DALI***</b> DALI Dimming to 5%	<b>23</b> 220-240 Volt (Standard)	<b>BLANK</b> CE/CB certified <b>CP</b> CCC certified

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

\* Reference [www.cree.com/lighting](http://www.cree.com/lighting) for recommended dimming control options.

\*\*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](http://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](http://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](http://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%

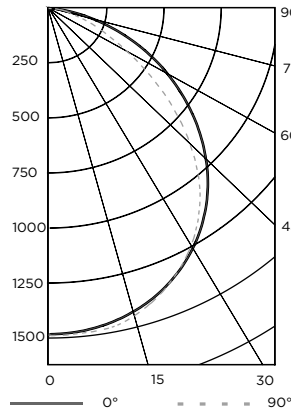
### REGULATORY & VOLUNTARY QUALIFICATIONS

- CE certified.
- CCC certified.
- IP23

## Photometry

### CR24-4000L BASED ON LTL REPORT TEST #: 22421

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	109	105	101	97
2	100	92	85	79
3	91	80	72	66
4	83	71	63	56
5	76	64	55	48
6	71	57	48	42
7	65	52	43	37
8	61	47	39	33
9	57	43	35	30
10	53	40	32	27

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m2)

Horizontal Angle		0°	45°	90°
Vertical Angle	0°	2174	2174	2174
	45°	1976	2116	2152
	55°	1807	2018	2074
	65°	1553	1889	1879
	75°	1149	1501	1119
	85°	424	62	62

### Zonal Lumen Summary

Zone	Lumens	% Lamp	Luminaire
0-30	1115	27.9%	27.9%
0-40	1835	45.9%	45.9%
0-60	3245	81.1%	81.1%
0-90	4000	100%	100%

Reference [www.cree.com/lighting](http://www.cree.com/lighting) for detailed photometric data.

## Application Reference

Open Space					
Spacing (m)	Lumens	Wattage	LPW	w/m²	Actual Lux
2.4 x 2.4	2200L	22W	100	3.76	330
	4000L	44W	90	7.42	600
	4000L	36W	110	6.02	600
	5000L	50W	100	8.39	750
2.4 x 3.0	2200L	22W	100	3.01	275
	4000L	44W	90	5.91	500
	4000L	36W	110	4.84	500
	5000L	50W	100	6.67	635
3.0 x 3.0	2200L	22W	100	2.37	230
	4000L	44W	90	4.73	425
	4000L	36W	110	3.87	425
	5000L	50W	100	5.38	535
3.0 x 3.6	2200L	22W	100	2.04	185
	4000L	44W	90	3.98	340
	4000L	36W	110	3.23	340
	5000L	50W	100	4.52	425

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

