

# CR22™

2'x2' Architectural LED Troffer

## Product Description

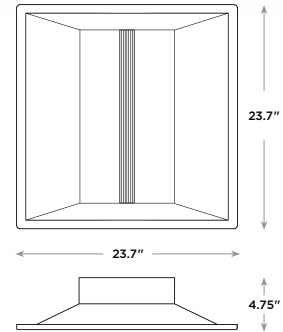
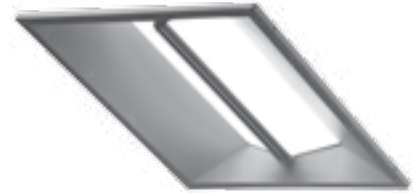
The CR22 Architectural LED troffer delivers up to 100 lumens per watt of exceptional 90 CRI light at both 2000 and 3200 lumen levels. This breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology with a unique thermal management design. The CR22 (HD) option delivers enhanced spectrum 80+ CRI color quality. The CR22 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 CR22 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
<b>Efficacy:</b> 90-100 LPW
<b>Delivered Light Output:</b> 2000, 3200 lumens
<b>Input Power:</b> 22-35 watts
<b>CRI:</b> 90 CRI (Cree TrueWhite® Technology), 80+ CRI
<b>CCT:</b> 3000K, 3500K, 4000K, 5000K
<b>Input Voltage:</b> 120-277 VAC or 347 VAC*
<b>Warranty*:</b> 10 Years
<b>Lifetime:</b> Designed to last from 50,000 hours (HD), 75,000 hours (Standard TW), and 100,000 hours (HE TW)
<b>Controls:</b> Step Level to 50%, 0-10V Dimming or Lutron EcoSystem® Enabled to 5%
<b>Mounting:</b> Recessed

\*32L-100 LPW 10V types only- other types require addition of a 347 accessory kit

CR22™



NOTE: Use of Expanded Junction Box will expand the depth to 6.67" and Emergency Backup will expand the depth to 6.30". Use of 347V will increase fixture height by 1.4".

## Housings & Accessories

Accessories			
<b>CPLCR</b> Chicago Plenum Field Kit	<b>CR-347V</b> 347 Volt	<b>PW-18/4-06-9T/SS-CR</b> Power Whip	<b>AC5-72-PD8-JB</b> Adjustable Cable
<b>CPLCR-EM</b> Chicago Plenum Field Kit-Emergency	<b>CR-347V-SD</b> Step Dimming to 50%	<b>AC5-18/4-72-PD8-JB</b> Adjustable Cable	<b>EJBCR-5PK</b> Expanded size junction box for through wiring (5 pack)
	<b>SMK-CR22</b> Surface Mount Kit		

## Ordering Information

Example: CR22-20L-35K-S



For full list of Cree Quick Ship products visit [www.cree.com/lighting/quickship](http://www.cree.com/lighting/quickship)

Product	Lumen Output	Color Temp	Voltage	Control	Options
CR22	<b>20L</b> 22W 2000 lumens - 90 LPW  <b>32L</b> 32W 3200 lumens - 100 LPW	<b>30K</b> 3000 Kelvin  <b>35K</b> 3500 Kelvin  <b>40K</b> 4000 Kelvin  <b>50K</b> 5000 Kelvin	<b>Blank</b> 120-277 Volt (Standard)  <b>34<sup>6</sup></b> 347 Volt (Optional)	<b>S</b> Step Dimming to 50%  <b>10V</b> 0-10V Dimming to 5%  <b>LES</b> Lutron EcoSystem® Enabled to 5%	<b>HD<sup>7</sup></b> CRI 80+ (35W 3200 lumens - 90 LPW)  <b>EB14<sup>2,4</sup></b> Emergency Backup - 1400 lumens  <b>EB14 SMK<sup>2,3,5</sup></b> Emergency Backup with surface mount kit - 1400 lumens

1. Reference [www.cree.com/lighting](http://www.cree.com/lighting) for recommended dimming control options. 2. Not available in LES types except 32L 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 32L 100 LPW 10V fixtures. Wattage increases to 33.5W and fixture height increases by 1.4" over standard 120-277V fixtures. 7. HD only available in 32L. Suggested MSRP for the adder over the standard CR Series fixture for the Lutron EcoSystem® Enabled feature is \$49. \*See [www.cree.com/lighting/products/warranty](http://www.cree.com/lighting/products/warranty) for warranty terms.

Rev. Date: 01/22/2014

**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: 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.\*

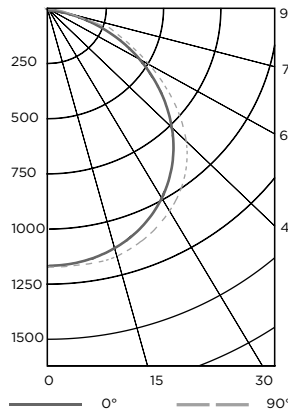
**REGULATORY & VOLUNTARY QUALIFICATIONS**

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

\*Reference [www.cree.com/lighting](http://www.cree.com/lighting) for recommended dimming controls and wiring diagrams.  
 \*\*Please refer to DLC QPL list for most current information.

**Photometry**

CR22 BASED ON LTL REPORT TEST #: 24292



**Coefficients Of Utilization**

RCC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	110	105	101	98
2	100	92	85	80
3	91	81	73	67
4	84	72	63	57
5	77	64	55	49
6	71	58	49	43
7	66	52	44	38
8	61	48	39	33
9	57	44	36	30
10	53	40	32	27

Effective Floor Cavity Reflectance: 20%

**Average Luminance Table (cd/m2)**

		Horizontal Angle		
		0°	45°	90°
Vertical Angle	0°	3864	3864	3864
	45°	3575	3864	3972
	55°	3164	3656	3758
	65°	2498	3133	3347
	75°	1620	2348	2051
	85°	366	252	168

**Zonal Lumen Summary**

Zone	Lumens	% Lamp	Luminaire
0-30	923	N/A	28.1%
0-40	1527	N/A	46.5%
0-60	2704	N/A	82.5%
0-90	3280	N/A	100%

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

**Application Reference**

Open Space					
Spacing	Lumens	Wattage	LPW	w/ft²	Average fc
8 x 8	2000L	22W	90	0.35	28
	3200L	32W	100	0.55	44
8 x 10	2000L	22W	90	0.28	23
	3200L	32W	100	0.44	37
10 x 10	2000L	22W	90	0.22	20
	3200L	32W	100	0.35	31
10 x 12	2000L	22W	90	0.19	16
	3200L	32W	100	0.29	25

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

