

# AR22™

2'x2' Architectural LED Troffer

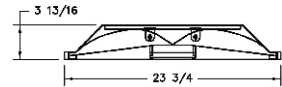
## Product Description

The AR22™ architectural LED troffer delivers up to 3200 lumens of exceptional 90+ CRI light while achieving 100 lumens per watt. This breakthrough performance is achieved by combining the high efficacy and high-quality light of Cree TrueWhite® Technology with a unique optical design. The AR22™ troffer is fully-luminous, is available in neutral or cool color temperatures, and has step, 0-10V or Lutron EcoSystem® Enabled dimming options. Its sleek, lightweight design makes the AR22™ troffer perfect for use in commercial new construction or renovated spaces.

## Performance Summary

Utilizes Cree TrueWhite® Technology
Active Color Management
Assembled in the U.S.
<b>Efficacy:</b> 100 LPW
<b>Delivered Light Output:</b> 3200 lumens
<b>Input Power:</b> 32 watts
<b>CRI:</b> 90
<b>CCT:</b> 3500K, 4000K
<b>Input Voltage:</b> 120-277 VAC
<b>Limited Warranty:</b> 10-years†
<b>Lifetime:</b> Designed to last 75,000 hours
<b>Controls:</b> Step level to 50%, 0-10V dimming or Lutron EcoSystem® Enabled to 5%
<b>Mounting:</b> Recessed

AR22™



## Ordering Information

Example: AR22-32L-35K-S

AR22	Lumen Output		Color Temp	Voltage	Control	Options
AR22	<b>32L</b> 32W	3200 lumens - 100 LPW	<b>35K</b> 3500K <b>40K</b> 4000K	<b>Blank</b> 120-277 Volt (Standard)	<b>S</b> Step dimming to 50% <b>10V</b> 0-10V dimming to 5% <b>LES</b> Lutron EcoSystem® Enabled to 5%	<b>EB14</b> <sup>2</sup> Emergency Backup - 1400 lumens

1. Reference [www.cree.com/lighting](http://www.cree.com/lighting) for recommended dimming control options. 2. Not available with LES option. Suggested MSRP for the adder over the standard AR 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.

**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.

**LUMEN MAINTENANCE FACTORS**

- Reference [www.cree.com/lighting](http://www.cree.com/lighting) for detailed lumen maintenance factors.

**CONSTRUCTION & MATERIALS**

- Durable cold rolled steel housing provides strength and uniformity. Heavy-duty ends attach to housing with interlocking tabs.
- Quick access plate for convenient power connection.
- Steel-hinged door frames in flush steel, gasketed to prevent light leakage.
- All metal parts pretreated with a phosphate bonding process and post-painted with high temperature baked white enamel for superior quality and versatility.

**OPTICAL SYSTEM**

- Utilizing highly-diffused performance optics for soft, glare-free light.
- Channeled inner reflector and high-performance lens optics work together to optimize light distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces. This fully-luminous effect helps to eliminate distractions in the ceiling.
- Room-side access lens.

**ELECTRICAL SYSTEM**

- Integral, high-efficiency driver and power supply.
- **Power Factor** = 0.9 nominal
- **Input Power:** Stays constant over life.
- **Input Voltage:** 120V-277V, 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.

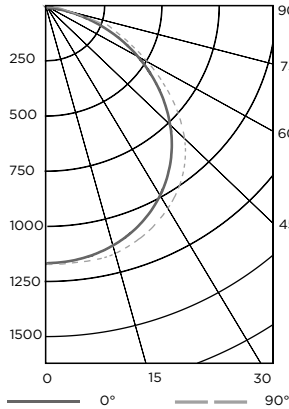
\*Reference [www.cree.com/lighting](http://www.cree.com/lighting) for recommended dimming controls and wiring diagrams.

\*\*Target DLC Completion Date - Fall 2013. Does not apply to LES models.

**Photometry**

**AR22-3200L PHOTOMETRY BASED ON DTC REPORT TEST #: 12606-G-1**  
(All test values have been prorated from 12606-G-1 to represent the intended lumen package)

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	105	101	098
2	100	092	086	080
3	092	082	074	067
4	084	072	064	058
5	077	065	056	050
6	072	059	050	044
7	066	053	045	039
8	062	049	040	035
9	058	045	037	031
10	054	041	033	028

Effective Floor Cavity Reflectance: 20%

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

Vertical Angle	Horizontal Angle		
	0°	45°	90°
0°	1229	1229	1229
45°	780	785	774
55°	571	565	548
65°	361	345	329
75°	171	155	142
85°	29	25	22

**Zonal Lumen Summary**

Zone	Lumens	Luminaire
0-30	956	29.8%
0-40	1,559	48.7%
0-60	2,663	83.1%
0-90	3,203	100%
0-180	3,203	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	3200L	32W	100	0.55	44
8 x 10	3200L	32W	100	0.44	37
10 x 10	3200L	32W	100	0.35	31
10 x 12	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'.

