CR24™ RECESSED TROFFER

CREE TRUE WHITE TECHNOLOGY

PRODUCT DESCRIPTION

The CR24™ troffer design is compact and efficient for spaces requiring high efficiency, high quality general purpose lighting. Powered by Cree TrueWhite® Technology, the CR24 troffer delivers high efficacy and world class CRI.

Ideal applications include office spaces, major retail stores, education, government, healthcare, and hospitality. Anywhere bright, beautiful, uniform light is required for general purpose lighting. Its high performance is coupled with affordability, making it the best solution for any lay-in project.

PERFORMANCE SUMMARY

The CR24 troffer is designed to deliver an optimal amount of light with typical luminaire spacing.

Utilizes Cree TrueWhite® Technology

Room-Side Heat Sink

Made in US

Efficacy: 90-110 LPW

Delivered Light Output: 2200, 4000, 5000 Lumens

Input Power: 22, 36, 44, 50 Watts

CRI: 90

CCT: 3500K, 4000K

Input Voltage: 120-277 VAC

Standard Warranty: 5 Years

Standard Lifetime: Designed to last minimum 50,000 hours

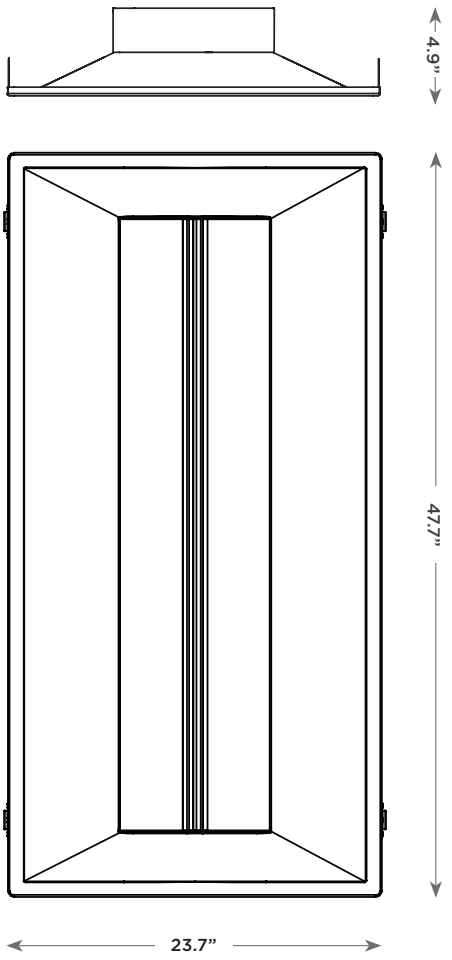
Dimming: Step Level to 50%

Mounting: Recessed

Dimensions: L **47.7”** x W **23.7”** x H **4.9”**

Weight: max 20lbs.

CR24
2’x4’ Troffer



UPGRADES & ACCESSORIES (SOLD SEPARATELY)

DGA-24: Drywall grid adaptors

SMK-24: Surface Mount*

ORDERING INFORMATION

Example: CR24-40L-35K-S

CR24				S	

Product Series & Size	Lumen Output	Color Temperature	Voltage	Control	Options
CR24 2’x4’	**22L** 22W 2200 Lumen - 100 LPW **40L** 44W 4000 Lumen - 90 LPW **40L HE** 36W 4000 Lumen - 110 LPW **50L** 50W 5000 Lumen - 100 LPW	**35K** 3500 Kelvin **40K** 4000 Kelvin	**Blank** 120 -277 Volt (Standard)	**S** Step Dimming to 50% **10V** 0-10V Dimming to 5%*	**CP** Chicago Plenum* **EB** Emergency Backup*

*Target Availability: Late 2011

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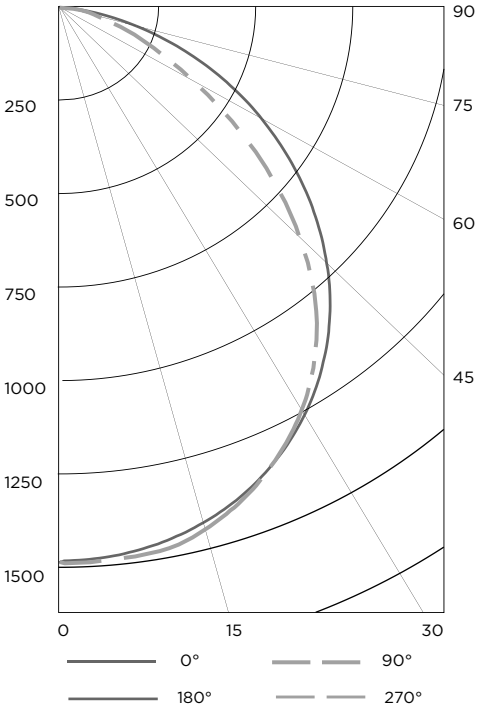
PHOTOMETRY

CR24

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%.



Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1,115	27.9%	27.9%
0-40	1,835	45.9%	45.9%
0-60	3,245	81.1%	81.1%
60-90	755	18.9%	18.9%
70-100	264	6.6%	6.6%
90-120	0	0%	0%
0-90	4,000	100%	100%
90-180	0	0%	0%
0-180	4,000	100%	100%

Average Luminance Table (cd/m2)

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

Candela Table

	0°	22.5°	45°	67.5°	90°	Lumens
0°	1422	1422	1422	1422	1422	33.9
5°	1408	1411	1418	1421	1421	100.7
10°	1391	1395	1401	1405	1406	164.5
15°	1361	1366	1375	1382	1382	223.3
20°	1320	1326	1337	1346	1349	275.0
25°	1264	1272	1289	1301	1303	317.8
30°	1195	1206	1229	1243	1246	350.0
35°	1113	1129	1157	1174	1177	370.0
40°	1020	1038	1073	1092	1093	376.4
45°	914	939	979	995	995	368.9
50°	800	829	874	890	891	348.5
55°	678	711	757	778	778	315.6
60°	553	588	638	662	659	273.2
65°	430	465	522	534	520	218.6
70°	308	342	397	381	361	152.6
75°	195	229	254	212	189	83.8
80°	99	127	108	69	52	25.3
85°	24	30	5	4	4	1.8
90°	0	0	0	0	0	0

Coefficients Of Utilization

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1
1	1.09	1.05	1.01	0.97	1.07	1.03	0.99	0.86	0.98	0.95	0.92	0.94	0.92	0.9	0.91	0.89	0.87	0.85
2	1	0.92	0.85	0.79	0.97	0.9	0.84	0.72	0.86	0.81	0.77	0.83	0.79	0.75	0.8	0.76	0.73	0.71
3	0.91	0.8	0.72	0.66	0.88	0.79	0.71	0.62	0.76	0.7	0.64	0.73	0.68	0.63	0.71	0.66	0.62	0.6
4	0.83	0.71	0.63	0.56	0.81	0.7	0.62	0.53	0.67	0.6	0.55	0.65	0.59	0.54	0.63	0.58	0.53	0.51
5	0.76	0.64	0.55	0.48	0.74	0.63	0.54	0.46	0.6	0.53	0.47	0.58	0.52	0.47	0.57	0.51	0.46	0.44
6	0.71	0.57	0.48	0.42	0.69	0.56	0.48	0.41	0.55	0.47	0.41	0.53	0.46	0.41	0.51	0.45	0.41	0.39
7	0.65	0.52	0.43	0.37	0.64	0.51	0.43	0.36	0.5	0.42	0.37	0.48	0.41	0.36	0.47	0.41	0.36	0.34
8	0.61	0.47	0.39	0.33	0.59	0.47	0.39	0.32	0.45	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.32	0.3
9	0.57	0.43	0.35	0.3	0.55	0.43	0.35	0.29	0.42	0.34	0.29	0.41	0.34	0.29	0.4	0.34	0.29	0.27
10	0.53	0.4	0.32	0.27	0.52	0.4	0.32	0.26	0.39	0.32	0.27	0.38	0.31	0.27	0.37	0.31	0.26	0.25

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PRODUCT SPECIFICATIONS

Cree TrueWhite® Technology

A revolutionary new way to generate white light with LEDs, this technology delivers high efficiency with beautiful color characteristics by mixing the light from unsaturated yellow and red LEDs. Active color management maintains superior color consistency over time and temperature. Every fixture is tuned as a complete system to the optimal color point before shipment, ensuring fixture-to-fixture color consistency.

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 the LEDs in a temperature controlled environment. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

Optical System

Proprietary optical system utilizes a unique combination of reflective and refractive optical components to achieve a uniform, comfortable appearance. Pixelation, color fringing, and direct view of unshielded LEDs are eliminated. Lower reflector finished with a textured high reflectance white polyester powder coating creates a comfortable visual transition from the diffuser to the ceiling plane. Optimal distribution of light balances the delivery of high illuminance levels to horizontal surfaces with an ideal amount of light to vertical surfaces.

Electrical System

Integral, high efficiency driver and power supply.

Nominal Power Factor = 0.9

Dimming: Step Dimming to 50%

Battery Backup: Consult factory

Temperature Rating: Designed to operate in temperatures 35°C and below room side and plenum side.

Input Power: Stays constant over life

Regulatory & Voluntary Qualifications

Suitable for damp locations.

UL Listed

cUL (Consult Factory)

Lifetime

Standard Options: Designed to last minimum 50,000 hours. (5 Year Warranty)

High Efficacy Option: Designed to last a minimum 75,000 hours. (7 Year Warranty)

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. Optional 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.

APPLICATION REFERENCE

Open Space - Sample Applications

Grid Spacing	Size	Performance				
		Lumens	Wattage	LPW	w/ft2	Actual fc
8x8	2x4	2200L	22W	100	0.35	30
		4000L	44W	90	0.69	55
		4000L	36W	110	0.56	55
		5000L	50W	100	0.78	69
8x10	2x4	2200L	22W	100	0.28	25
		4000L	44W	90	0.55	46
		4000L	36W	110	0.45	46
		5000L	50W	100	0.62	58
10 x 10	2x4	2200L	22W	100	0.22	21
		4000L	44W	90	0.44	39
		4000L	36W	110	0.36	39
		5000L	50W	100	0.50	49
10 x 12	2x4	2200L	22W	100	0.19	17
		4000L	44W	90	0.37	31
		4000L	36W	110	0.30	31
		5000L	50W	100	0.42	39

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

Corridor - Sample Applications

Corridor Spacing	Size	Performance			
		Lumens	Wattage	LPW	Actual fc
8' on center	2x4	2200L	22W	100	19
		4000L	44W	90	34
		4000L	36W	110	34
		5000L	50W	100	43
10' on center	2x4	2200L	22W	100	15
		4000L	44W	90	28
		4000L	36W	110	28
		5000L	50W	100	35
12' on center	2x4	2200L	22W	100	13
		4000L	44W	90	23
		4000L	36W	110	23
		5000L	50W	100	29
14' on center	2x4	2200L	22W	100	11
		4000L	44W	90	20
		4000L	36W	110	20
		5000L	50W	100	25

10' ceiling: 80/50/20 reflectances; light levels on the ground
LLF: 1.0 Initial
Corridor: 6' wide x 100' long

*Target Availability: Late 2011

Cree LED Lighting Morrisville NC 27560 USA

CreeLEDLighting.com P 1.919.287.7700 F 1.919.407.5451

CREE® LED Lighting