

COOPER LIGHTING SOLUTIONS - METALUX®

DESCRIPTION

The GR8 is a T8-dedicated lensed troffer designed to offer premium performance in a low profile housing. T8 dedication and optimized lamp to lens spacing provides the best in energy efficiency and optical control. The GR8's shallow, low profile housing is compatible with even highly restrictive plenums. Luminaires are compatible with today's popular ceiling systems.

The GR8 offers great performance and great quality. The GR8IC is designed for insulations when the housing will be in direct contact with installation.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Low profile recessed housing is die formed of code gauge prime cold rolled steel with full length stiffeners and mechanical endplate attachment for added strength. Ballast cover is easily removed without tools. Die formed captive lampholder bracket fully encloses lampholder wiring for easy lampholder replacement. Ample KOs are provided for continuous row wiring. Built-in grid-lock feature for safety and convenience.

Electrical**

Ballasts are CBM/ETL Class "P" and are positively secured. Pressure lock lampholders. UL Listed Type IC Recessed Luminaire (Rated for direct contact with insulation). Suitable for damp locations.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Lighting grade baked white enamel finish with premium reflectance for high efficiency.

Hinging/Latching

Positive cam action steel latches and integral safety hinges provide secure, high quality door fit and allow hinging and latching from either side.

Frame/Shielding

Heavy gauge flat steel door is die formed with reinforced mitered corners. Housing and door frame assemblies incorporate full length and width mechanical light traps. Light stabilized, acrylic prismatic lens.

Controls

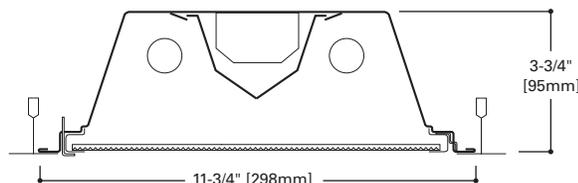
Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Lighting Solutions(www.cooperlighting.com) to maximize energy savings.



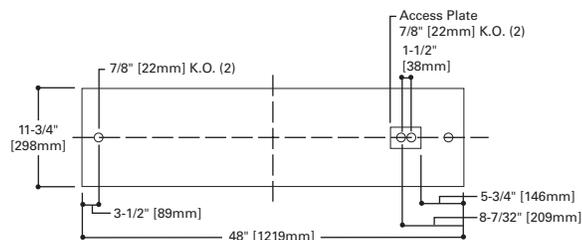
GR8IC
228T8
232

1' X 4' TROFFER
2 LAMP

General Purpose
T8 Commercial Troffer
For Use In Insulated Ceilings



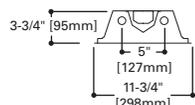
MOUNTING DATA



DOOR FRAMES



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G Grid/Lay-in Standard	G Concealed T	G Slot Grid	F Flange Trim With Supporting Swing Gates	Ceiling Type	Trim Type
				Exposed Grid	G
				Concealed T	G
				Slot Grid	G
				Flange	G***

(Verify compatibility/ consult factory.)

*Standard G (Grid) Type Fixtures can be field converted by adding trim kits. See Compatibility Section or Consult Factory.

**Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

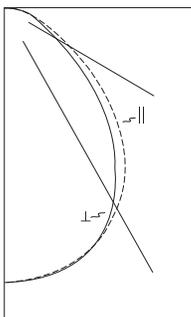
***Order FCS-14W-U Flange Kit for installation in drywall ceiling. See options and accessories compatibility section.

LINEAR DISCONNECT

Safe and convenient means of disconnecting power.



PHOTOMETRICS



GR81C-232A
 Electronic Ballast
 F32T8/35K lamps
 2800 lumens

Spacing criterion:
 (||) 1.2 x mounting
 height, (⊥) 1.2 x
 mounting height

Efficiency 68.2%

Test Report:
 GR8232A.IES

LER = FL-58

Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$4.14

Coefficients of Utilization

rc	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
	rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																								
0	81	81	81	81	79	79	79	79	76	76	76	73	73	73	70	70	70	68						
1	75	73	70	68	74	71	69	67	68	66	65	66	64	63	63	62	61	60						
2	70	65	61	58	68	64	60	57	61	58	56	59	57	55	57	55	53	52						
3	65	59	54	50	63	58	53	50	56	52	49	54	51	48	52	49	47	46						
4	60	53	47	43	58	52	47	43	50	46	43	49	45	42	47	44	42	40						
5	55	47	42	38	54	47	41	38	45	41	37	44	40	37	43	39	36	35						
6	51	43	37	33	50	42	37	33	41	36	33	40	36	33	39	35	32	31						
7	47	39	33	29	46	38	33	29	37	33	29	36	32	29	35	32	29	27						
8	44	35	30	26	43	35	29	26	34	29	26	33	29	25	32	28	25	24						
9	40	32	26	23	39	31	26	22	30	26	22	30	25	22	29	25	22	21						
10	38	29	24	20	37	28	23	20	28	23	20	27	23	20	27	23	20	19						

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1322	23.6	34.6
0-40	2104	37.6	55.1
0-60	3301	58.9	86.4
0-90	3821	68.2	100.0
0-180	3821	68.2	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	61	64	62	67
30 x 30	54	58	54	59
30 x 60	45	48	44	47
60 x 30	56	60	57	61
60 x 60	46	49	45	48

Candlepower

Angle	Along	45°	Across ⊥
0	1704	1704	1704
5	1695	1701	1699
10	1674	1683	1685
15	1637	1650	1652
20	1583	1597	1595
25	1511	1519	1496
30	1418	1405	1357
35	1300	1260	1199
40	1158	1089	1030
45	988	902	854
50	795	718	677
55	619	550	508
60	462	393	369
65	332	264	272
70	235	175	211
75	167	129	172
80	123	107	132
85	65	60	72
90	0	0	0

ORDERING INFORMATION

SAMPLE NUMBER: GR81C-232A-120V-EB81-U

Width Blank= 1' Width	Number of Lamps 2=2 Lamps (Not included)	Options GL=Single Element Fuse GM=Double Element Fuse Flex=Flex Installed EL=Emergency Installed ⁽⁸⁾	Ballast Type EB8_ =T8 Electronic Start. Total Harmonic Distortion < 10% EB8_/PLUS = T8 Electronic Start. Total Harmonic Distortion < 10%. High Ballast Factor > 1.15. ER8_ = T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% High Performance T8 Ballasts HB8_ =T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Standard Ballast Factor .86 – .88 HB8_L =T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Low Ballast Factor .77 – .82 HB8_N =T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Normal Ballast Factor 1.0 HB8_H =T8 Electronic Instant Start. Total Harmonic Distortion < 10%. High Ballast Factor 1.15 – 1.20 HR8_T8 =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Standard Ballast Factor .86 – .88 HR8_DIM =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Step Dimming. Ballast Factor .88 HR8_L =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Low Ballast Factor .71 – .79 HR8_H =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. High Ballast Factor 1.15 – 1.20 0-10V Dimming Ballasts ⁽⁶⁾ 5LTV8_ =T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 5LTVS8_ =T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ⁽⁷⁾ Fifth Light DALI Ballasts ⁽⁶⁾ 5LT8_ =T8 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0	Packaging U=Unit Pack PAL=Job Pack, out of carton PALC=Job Pack, in carton Accessories EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾ FCS-14W-U=Field Insatllted Flange Kit
Trim Type G=Grid/Lay-in (Standard)	Wattage 28T8=28W T8 (48") ⁽⁴⁾ 32=32W T8 (48")			
Series R8=General Purpose T8 Commercial Troffer ⁽¹⁾	Shielding A=#12 Acrylic Pattern A125=#12 Pattern Acrylic (.125" Thick)			
Type IC=IC Rated	Voltage ⁽²⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277			

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽³⁾Not available when specifying emergencies, voltage must be specific. ⁽⁴⁾When utilizing 28W T8 lamps, HPT8 ballast must be specified. ⁽⁵⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Lighting Solutions, visit www.cooperlighting.com. ⁽⁶⁾0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. ⁽⁷⁾Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps. (9) Please specify required voltage, 120V or 277V.

For complete product data, reference the Fluorescent Specification binder. Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.

SHIPPING INFORMATION

Catalog No.	Wt.
GR81C-232A	19 lbs.