

COOPER LIGHTING - 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 series is an excellent choice for commercial offices, schools, hospitals, retail merchandising and many other applications.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Unitized low profile recessed housing is die formed of code gauge prime cold rolled steel with full length stiffeners and unibody endplate 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 by mounting bolts. Rotor-lock T8 lampholders. Biaxial models use 2G11 base lampholders with double-edge wiping action pressure-lock contacts and horizontally oriented lamp support clips. UL/CUL listed. 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 spring loaded steel latches and safety lock T-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 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 Controls (www.coopercontrol.com) to maximize energy savings.



2GR8
2U6T8, 2BX40
2U1-5/8
217, 417

2' X 2' TROFFER
2 OR 4 LAMPS

General Purpose
T8 Commercial Troffer



ENERGY DATA

Input Watts:

EB Ballast & STD Lamps

217 (36) , 2U1-5/8 (61), 2U6T8 (61)
417 (63) , 2BX40 (71)

ES Ballast & STD Lamps

217 (45) , 2U1-5/8 (71), 2U6T8 (71)
417 (90), 2BX40 (77)

Luminaire Efficacy Rating

LER = FL-73

Catalog Number: 2GR8-2U6T8A

Yearly Cost of 1000 lumens, 3000
hrs at .08 KWH = \$3.29

*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.

***When ordering Flange Kit for installation in drywall ceilings, see options and accessories compatibility section and ordering logic.

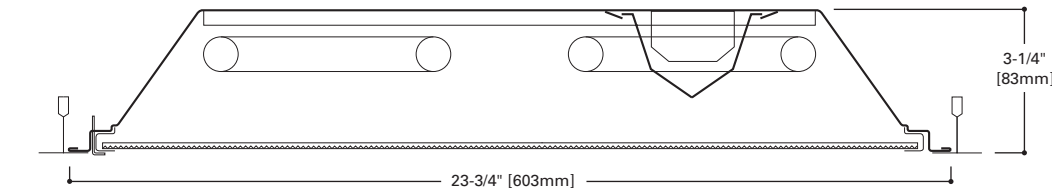
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT

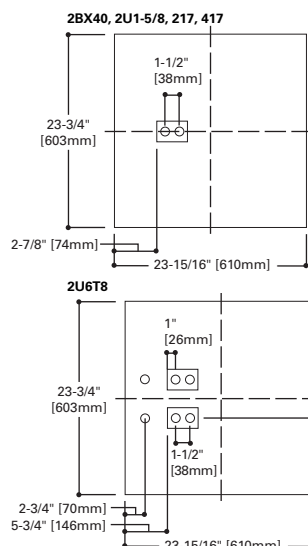
Safe and convenient means of disconnecting power.



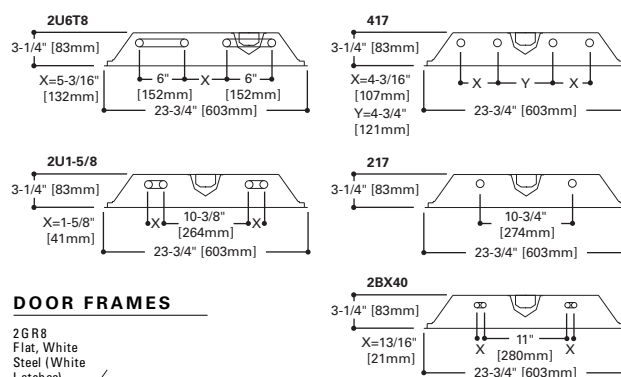
ADF012705



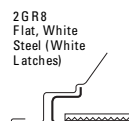
MOUNTING DATA



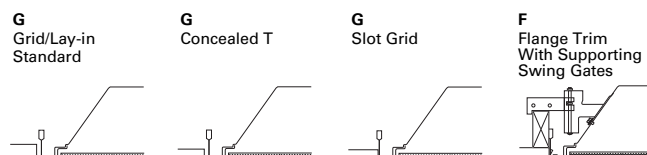
LAMP CONFIGURATIONS



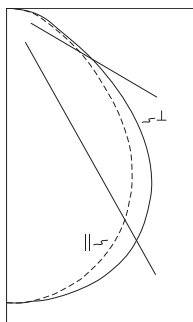
DOOR FRAMES



CEILING COMPATIBILITY



COOPER LIGHTING



2GR8-2U6T8A
Electronic Ballast
(2) 31W U6T8 lamps
2850 lumens
Spacing criterion:
(H) 1.2 x mounting
height, (L) 1.3 x
mounting height
Efficiency 77.1%
Test Report:
2GR82U6T8A.IES
LER = FL-73
Yearly Cost of 1000
lumens, 3000 hrs at
.08 KWH = \$3.29

Candela				
Angle	Along H	45°	Across L	
0	1775	1775	1775	
5	1771	1769	1773	
10	1742	1749	1768	
15	1696	1717	1749	
20	1629	1672	1719	
25	1547	1607	1670	
30	1443	1522	1591	
35	1317	1406	1486	
40	1171	1264	1363	
45	996	1075	1195	
50	805	877	993	
55	638	688	780	
60	491	495	574	
65	361	330	406	
70	271	224	307	
75	210	175	245	
80	153	146	179	
85	82	86	90	
90	0	0	0	

Coefficients of Utilization

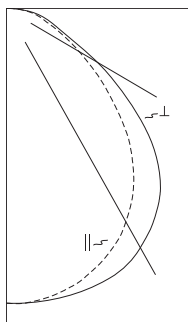
Effective floor cavity reflectance 20%												
rc	80%				70%				50%			
	70	50	30	10	70	50	30	10	50	30	10	0
RCR												
0	92	92	92	92	90	90	90	90	86	86	86	77
1	84	81	78	75	82	79	77	74	76	74	72	66
2	77	72	67	63	75	70	66	62	67	64	60	56
3	71	63	58	53	69	62	57	52	60	55	51	48
4	65	57	50	45	64	56	50	45	54	49	45	42
5	60	51	44	40	59	50	44	39	49	43	39	37
6	56	46	40	35	55	45	39	35	44	39	34	32
7	52	42	36	31	51	41	35	31	40	35	30	29
8	49	38	32	28	47	38	32	28	37	31	27	26
9	45	35	29	25	44	35	29	25	34	29	25	23
10	43	33	27	23	42	32	27	23	32	26	23	21

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1394	24.5	31.7
0-40	2269	39.8	51.6
0-60	3729	65.4	84.8
0-90	4398	77.1	100.0
0-180	4398	77.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3789	4090	4546
55	2992	3227	3658
65	2298	2100	2584
75	2183	1819	2546
85	2531	2654	2778



2GR8-217A
Electronic Ballast
(2) F32T8 lamps
1350 lumens
Spacing criterion:
(H) 1.2 x mounting
height, (L) 1.4 x
mounting height
Efficiency 75.1%
Test Report:
2GR8-217A.IES
LER = FL-60
Yearly Cost of 1000
lumens, 3000 hrs at
.08 KWH = \$4.00

Candela				
Angle	Along H	45°	Across L	
0	795	795	795	
5	794	792	796	
10	782	785	794	
15	763	774	790	
20	734	756	781	
25	699	731	765	
30	652	697	734	
35	597	648	695	
40	528	586	646	
45	449	503	574	
50	363	413	478	
55	287	325	371	
60	220	235	273	
65	165	155	189	
70	123	104	143	
75	96	81	112	
80	70	68	82	
85	38	39	40	
90	0	0	0	

Coefficients of Utilization

Effective floor cavity reflectance 20%												
rc	80%				70%				50%			
	70	50	30	10	70	50	30	10	50	30	10	0
RCR												
0	89	89	89	89	87	87	87	87	83	83	83	75
1	82	79	76	73	80	77	74	72	74	72	70	64
2	75	70	65	61	73	68	64	60	66	62	59	54
3	69	62	56	51	67	61	55	51	58	54	50	47
4	64	55	49	44	62	54	48	44	52	47	43	40
5	59	49	43	38	57	49	43	38	47	42	38	35
6	54	45	38	34	53	44	38	34	43	37	33	31
7	50	41	34	30	49	40	34	30	39	34	30	28
8	47	37	31	27	46	37	31	27	36	30	27	25
9	44	34	28	24	43	34	28	24	33	28	24	22
10	41	32	26	22	40	31	26	22	30	25	22	20

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	631	23.4	31.1
0-40	1035	38.3	51.0
0-60	1718	63.6	84.7
0-90	2027	75.1	100.0
0-180	2027	75.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2231	2499	2852
55	1758	1991	2273
65	1372	1289	1571
75	1303	1100	1520
85	1532	1572	1613

ORDERING INFORMATION

SAMPLE NUMBER: 2GR8-2U6T8A-UNV-EB81-U

Rating⁽⁴⁾ Blank = Standard ATW-SW4 = Chicago Rated	Number of Lamps 2=2 Lamps 4=4 Lamps ⁽⁵⁾ (Not included)	Voltage⁽²⁾ 347V =347 Volt UNV =Universal Voltage 120-277 ⁽³⁾	Options GL =Single Element Fuse GM =Double Element Fuse Lamps =Lamps Installed Flex =Flex Installed EL =Emergency Installed	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% EB5 _ =T5 Biax Electronic Instant Start. Total Harmonic Distortion < 20% ⁽⁶⁾ TEB5 _ =T5 Biax Electronic Instant Start. Total Harmonic Distortion < 10% ⁽⁶⁾ ER5 _ = T5 Biax 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 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⁽¹⁰⁾ 5LTV8 _ =T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ^{(14), (15)} 5LTVS8 _ =T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ^{(11), (12), (13)} Fifth Light DALI Ballasts⁽⁹⁾ 5LT8 _ =T8 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0 5LT5B _ = T5 Biax DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0	Options FR =Fire Label	Packaging U =Unit Pack
---	---	--	--	--	---	---

ACCESSORIES			
EQ-CLIP-U =T-BAR Safety Earthquake Clips ⁽¹¹⁾ FCTKA-22W-U =Field Installed Flange Kit			

FCTK	A	-	24	R	W	-	U
Trim Kit Field Convertible			22=2' x 2' 24=2' x 4'		N=Natural W=White		U=Unit Pack
Aluminum					Blank=Single R=In Row E=End Row		

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⁾For NYC rated product, see separate specification sheets. ⁽⁵⁾4-Lamp configuration only available in 17W. ⁽⁶⁾Not available in UNV voltages. Must specify voltage. ⁽⁷⁾Ballast Factor is 0.88 for 4 lamp 32W T8 fixtures. ⁽⁸⁾Fifthlight ballast option not available. ⁽⁹⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Controls, visit www.coopercontrol.com. ⁽¹⁰⁾0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. ⁽¹¹⁾Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps. ⁽¹²⁾Specification Grade 0-10V ballast not available for Biax lamps. ⁽¹³⁾Specification Grade 0-10V ballast not offered in 3 or 4-lamp versions. ⁽¹⁴⁾Standard 0-10V ballast not available for Biax lamps. ⁽¹⁵⁾Standard 0-10V ballast not offered in 3 or 4-lamp versions

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

Number of Ballasts 1=1 Ballast 2=2 Ballasts 3=3 Ballasts
--

SHIPPING INFORMATION

Catalog No.	Wt.
2GR8-217A	12 lbs.
2GR8-417A	12 lbs.
2GR8-2U6T8A	12 lbs.
2GR8-2U1-5/8A	12 lbs.
2GR8-2BX40A	15 lbs.