

DESCRIPTION

GC8 is a premium grade specification lensed troffer series. This innovative, high quality luminaire is dedicated to the latest T8 lamp and micro electronic ballast technology for optimal performance and energy efficiency. The GC8 is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GC8 series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Micro ballast cover*** reduces ballast shadow for superior lens brightness uniformity and is easily removed without tools. Die formed captive lampholder brackets fully enclose lampholder wiring permitting easy lampholder replacement. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Ample KOs are provided for continuous row wiring. Endplates have integral Grid-lock feature for safety and convenience.

Electrical

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Rotor-lock lampholders ensure positive lamp retention. UL/CUL listed. Suitable for damp locations.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing and ballast cover finished with new 90% reflective white enamel for superior performance. "PAF" Painted After Fabrication option also available.

Hinging/Latching

Positive spring loaded steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Acrylic prismatic lens. Standard #12 pattern. Numerous additional shielding options available.

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.



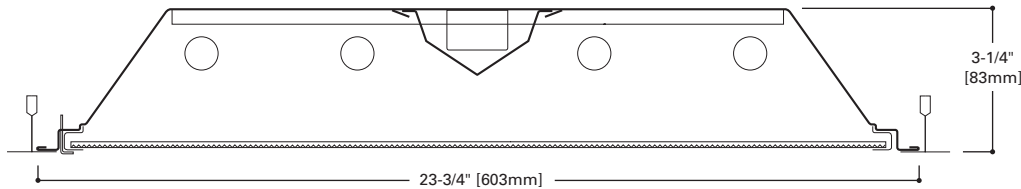
2GC8

217

417

2' X 2' TROFFER
2 OR 4 LAMPS

Specification T8 Troffer



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
217 (36), 417 (63)

HB Ballast & STD Lamps
217 (31), 417 (59)

Luminaire Efficacy Rating
LER = FL-63
Catalog Number: 2GC8-217A

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.81

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

**Consult Pre Sales Technical Support.

***Full sized ballast cover for biaxial lamps and emergency option may apply.

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

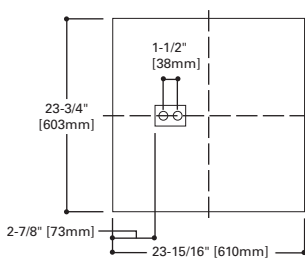
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power.

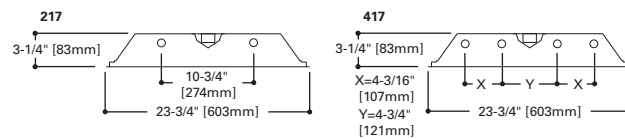


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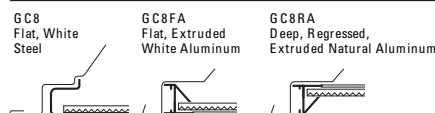
MOUNTING DATA



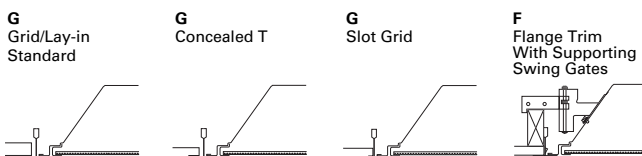
LAMP CONFIGURATIONS



DOOR FRAMES



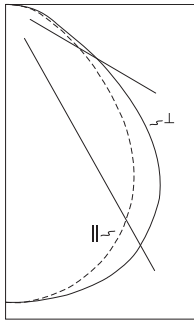
CEILING COMPATIBILITY



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G
Flange	F

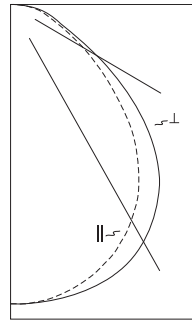
(Verify compatibility/ consult factory.)

PHOTOMETRICS



2GC8-217A
 Electronic Ballast
 (2) F17/SPX35 T8 lamps
 1350 lumens
 Spacing criterion:
 (||) 1.2 x mounting height,
 (⊥) 1.4 x mounting height
 Efficiency 78%
 Test Report:
 2GC8217A.IES
 LER = FL-63
 Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.81

Candela			
Angle	Along	45°	Across ⊥
0	828	828	828
5	827	825	829
10	815	817	826
15	795	805	821
20	766	787	812
25	727	761	794
30	678	724	762
35	621	675	720
40	550	609	669
45	469	520	595
50	378	429	496
55	300	335	384
60	229	241	284
65	174	160	197
70	129	107	148
75	100	84	116
80	73	70	84
85	38	40	43
90	0	0	0



2GC8-417A
 Electronic Ballast
 (4) F17/SPX35 T8 lamps
 1350 lumens
 Spacing criterion:
 (||) 1.2 x mounting height,
 (⊥) 1.3 x mounting height
 Efficiency 75.2%
 Test Report:
 2GC8417A.IES
 LER = FL-64
 Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$3.75

Candela			
Angle	Along	45°	Across ⊥
0	1633	1633	1633
5	1629	1626	1633
10	1604	1611	1627
15	1562	1584	1612
20	1503	1545	1587
25	1428	1488	1544
30	1334	1410	1473
35	1220	1305	1378
40	1076	1188	1266
45	917	999	1110
50	736	816	919
55	578	636	718
60	442	455	522
65	329	300	375
70	246	203	283
75	192	160	224
80	141	134	164
85	78	80	81
90	0	0	0

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	0
RCR																		
0	93	93	93	93	91	91	91	91	87	87	87	83	83	83	80	80	80	78
1	85	82	79	76	83	80	77	75	77	75	72	74	72	70	71	70	68	67
2	78	72	67	63	76	71	66	62	68	64	61	66	62	60	63	61	58	57
3	72	64	58	53	70	63	57	53	61	56	52	58	54	51	57	53	50	49
4	66	57	51	46	64	56	50	45	54	49	45	53	48	44	51	47	44	42
5	61	51	45	40	59	51	44	40	49	43	39	47	43	39	46	42	38	37
6	56	47	40	35	55	46	39	35	44	39	35	43	38	34	42	37	34	32
7	52	42	36	31	51	42	35	31	41	35	31	39	34	31	38	34	30	29
8	49	39	32	28	48	38	32	28	37	32	28	36	31	27	35	31	27	26
9	46	36	29	25	45	35	29	25	34	29	25	33	28	25	33	28	25	23
10	43	33	27	23	42	32	27	23	32	26	23	31	26	23	30	26	23	21

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	0
RCR																		
0	89	89	89	89	87	87	87	87	84	84	84	80	80	80	77	77	77	75
1	82	79	76	73	80	77	75	72	74	72	70	71	69	68	69	67	66	64
2	75	70	65	61	74	68	64	60	66	62	59	63	60	57	61	58	56	55
3	69	62	56	52	67	61	55	51	59	54	50	56	53	49	55	51	49	47
4	64	55	49	44	62	54	49	44	52	47	43	51	46	43	49	45	42	41
5	59	50	43	39	57	49	43	38	47	42	38	46	41	38	45	40	37	36
6	55	45	39	34	53	44	38	34	43	38	34	42	37	33	41	36	33	31
7	51	41	35	30	49	40	34	30	39	34	30	38	33	30	37	33	29	28
8	47	37	31	27	46	37	31	27	36	31	27	35	30	27	34	30	27	25
9	44	34	29	24	43	34	28	24	33	28	24	32	28	24	32	27	24	23
10	42	32	26	22	41	31	26	22	31	26	22	30	25	22	29	25	22	21

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	657	24.3	31.2
0-40	1076	39.9	51.1
0-60	1785	66.1	84.8
0-90	2106	78.0	100.0
0-180	2106	78.0	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2330	2584	2956
55	1838	2052	2352
65	1447	1330	1638
75	1358	1140	1575
85	1532	1613	1733

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1287	23.8	31.7
0-40	2098	38.9	51.7
0-60	3446	63.8	84.9
0-90	4058	75.2	100.0
0-180	4058	75.2	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4556	4964	5515
55	3541	3896	4398
65	2735	2494	3118
75	2606	2172	3041
85	3144	3225	3265

ORDERING INFORMATION

SAMPLE NUMBER: 2GC8-217A-UNV-EB81-U

<p>Rating ⁽⁴⁾ Blank= Standard ATW-SW4= Chicago Rated</p> <p>Width 2=2' Width</p> <p>Trim Type G=Grid/Lay-in (Standard)⁽¹⁾ G=Concealed T G=Slot Grid F=Flange Trim</p> <p>Series C8=Specification T8 Troffer</p> <p>Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum</p>	<p>Number of Lamps 2 or 4 Lamps (Not included)</p> <p>Wattage (Length) 17=17W T8 (24")</p> <p>Shielding A=#12 Acrylic Pattern A125=#12 Acrylic Pattern (.125" Thickness) A19/156=#19 Acrylic Pattern (.156" Thickness) PB1S=1/2" x 1/2" x 1/2" Silver Parabolic Louver (Styrene)</p> <p>Option – Aluminum Flange Trim ⁽⁶⁾ Blank=SW (Single White) Type Color 'S' Single 'N' Natural 'R' In Row 'W' White 'E' End of Row</p> <p>Voltage ⁽²⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277⁽³⁾</p> <p>Options GL=Single Element Fuse GM=Double Element Fuse Lamps=Lamps Installed Flex=Flex Installed EL=Emergency Installed</p>	<p>Ballast Type EB8 =T8 Electronic Start. Total Harmonic Distortion < 10%</p> <p>EB8 /PLUS= T8 Electronic Start. Total Harmonic Distortion < 10%. High Ballast Factor > 1.15.</p> <p>ER8 = T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%</p> <p>High Performance T8 Ballasts HB8 =T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Standard Ballast Factor .86 – .88</p> <p>HB8_L=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Low Ballast Factor .77 – .82</p> <p>HB8_N=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. Normal Ballast Factor 1.0</p> <p>HB8_H=T8 Electronic Instant Start. Total Harmonic Distortion < 10%. High Ballast Factor 1.15 – 1.20</p> <p>HR8 =T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Standard Ballast Factor .86 – .88</p> <p>HR8_DIM=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Step Dimming. Ballast Factor .88</p> <p>HR8_L=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. Low Ballast Factor .71 – .79</p> <p>HR8_H=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10%. High Ballast Factor 1.15 – 1.20</p> <p>0-10V Dimming Ballasts ⁽⁷⁾ 5LTV8 =T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ⁽¹⁰⁾</p> <p>5LTVS8 =T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ^{(8), (9)}</p> <p>Fifth Light DALI Ballasts ⁽⁸⁾ 5LT8 =T8 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0</p> <p>Number of Ballasts 1=1 Ballast 2=2 Ballasts 3=3 Ballasts</p>	<p>Options FR=Fire Rated Label REP=Riveted End Plates PAF=Painted After Fabrication</p> <p>Packaging U=Unit Pack PAL=Job Pack, out of carton PALC=Job Pack, in carton</p>
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NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽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⁾Specify row configuration, type in catalog number when ordering complete fixture. ⁽⁶⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Controls, visit www.coopercontrol.com. ⁽⁷⁾0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. ⁽⁸⁾Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps. ⁽⁹⁾Specification Grade 0-10V ballast not offered in 3 or 4-lamp versions. ⁽¹⁰⁾Standard 0-10V ballast not offered in 3 or 4-lamp versions

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹⁾
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
Aluminum	Blank=Single R=In Row E=End Row	U=Unit Pack

SHIPPING INFORMATION

Catalog No.	Wt.
2GC8-217A	10 lbs.
2GC8-417A	10 lbs.

