

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. KOs 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. 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

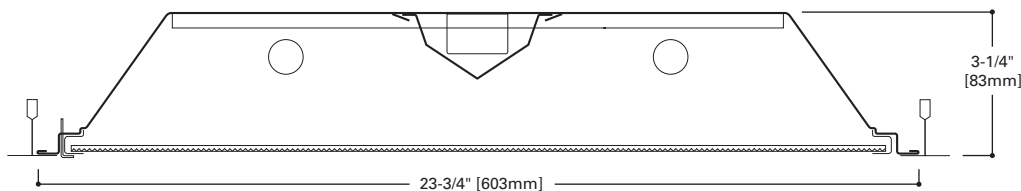
Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Light stabilized, acrylic prismatic lens. Standard #12 pattern. Numerous additional shielding options available.



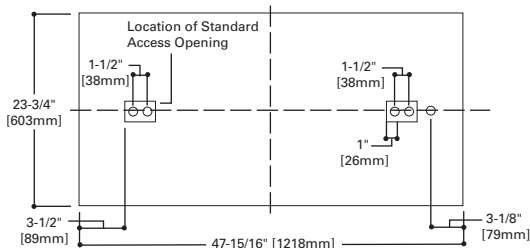
2GC8
228T8
232
428T8
432

2' X 4' TROFFER
2 OR 4 LAMP

Specification T8 Troffer



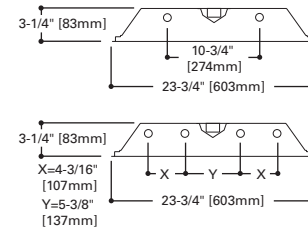
MOUNTING DATA



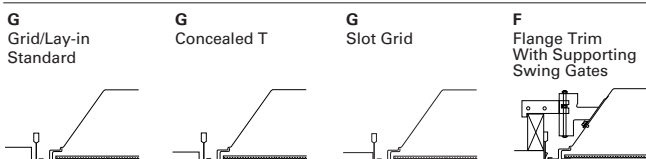
DOOR FRAMES



LAMP CONFIGURATIONS



CEILING COMPATIBILITY



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

(Verify compatibility/ consult factory.)

COOPER LIGHTING

ENERGY DATA

Input Watts:
HB Ballast & STD Lamps
228T8 (48), 232 (53)
428T8 (96), 432 (107)

Luminaire Efficacy Rating
LER = FL-80
Catalog Number: 2GC8-232A

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.00

*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

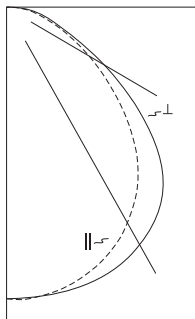
LINEAR DISCONNECT

Safe and convenient means of disconnecting power.



ADF091407

PHOTOMETRICS

**2GC8-232A**

Electronic Ballast

(2) F032/35K

T8 lamps

3100 lumens

Spacing criterion:

(H) 1.2 x mounting

height, (L) 1.4 x

mounting height

Efficiency 84.7%

Test Report:

2GC8-232A.IES

LER = FL-80

Yearly Cost of 1000

lumens, 3000 hrs at

.08 KWH = \$3.00

Candela

Angle	Along H	45°	Across L
0	1963	1963	1963
5	1966	1957	1962
10	1940	1941	1956
15	1895	1914	1944
20	1834	1876	1924
25	1753	1820	1883
30	1646	1741	1822
35	1525	1640	1745
40	1373	1502	1635
45	1186	1323	1463
50	986	1131	1235
55	795	917	974
60	623	677	734
65	471	460	528
70	347	295	383
75	247	198	288
80	175	151	212
85	93	92	118
90	7	16	23

Coefficients of Utilization

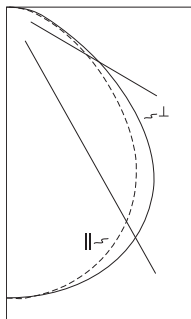
Effective floor cavity reflectance																20%					
rc rw RCR	80%				70%				50%				30%				10%				0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	101	101	101	101	99	99	99	99	94	94	94	90	90	90	86	86	86	85			
1	93	89	85	82	90	87	84	81	83	81	78	80	78	76	77	75	74	72			
2	85	78	73	68	83	77	71	67	74	69	66	71	67	64	68	65	63	61			
3	78	69	63	57	76	68	62	57	65	60	56	63	59	55	61	57	54	52			
4	71	62	54	49	69	60	54	49	58	53	48	56	51	47	55	50	47	45			
5	66	55	48	42	64	54	47	42	52	46	42	51	45	41	49	45	41	39			
6	61	50	42	37	59	49	42	37	48	41	37	46	41	36	45	40	36	34			
7	56	45	38	33	55	45	38	33	43	37	33	42	37	32	41	36	32	30			
8	53	41	34	29	51	41	34	29	40	34	29	39	33	29	38	33	29	27			
9	49	38	31	27	48	37	31	26	37	31	26	36	30	26	35	30	26	25			
10	46	35	28	24	45	35	28	24	34	28	24	33	28	24	32	27	24	22			

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1565	25.2	29.8
0-40	2585	41.7	49.2
0-60	4403	71.0	83.8
0-90	5254	84.7	100.0
0-180	5254	84.7	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2690	3001	3319
55	2223	2564	2724
65	1788	1746	2004
75	1531	1227	1785
85	1712	1693	2172

**2GC8-432A**

Electronic Ballast

(4) F032/35K

T8 lamps

3100 lumens

Spacing criterion:

(H) 1.2 x mounting

height, (L) 1.3 x

mounting height

Efficiency 81.6%

Test Report:

2GC8-432A.IES

LER = FL-85

Yearly Cost of 1000

lumens, 3000 hrs at

.08 KWH = \$2.82

Candela

Angle	Along H	45°	Across L
0	3892	3892	3892
5	3891	3875	3885
10	3838	3839	3865
15	3750	3777	3826
20	3626	3687	3758
25	3460	3561	3654
30	3256	3388	3510
35	3001	3164	3321
40	2700	2878	3071
45	2329	2520	2728
50	1924	2136	2295
55	1543	1724	1825
60	1203	1288	1386
65	907	877	1004
70	669	563	729
75	472	378	547
80	335	287	405
85	182	175	228
90	15	32	48

Coefficients of Utilization

Effective floor cavity reflectance																		20%			
rc	80%				70%				50%				30%				10%				0%
	rw	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
RCR																					
0	97	97	97	97	95	95	95	95	91	91	91	87	87	87	83	83	83	82			
1	89	86	82	79	87	84	81	78	80	78	76	77	75	73	74	73	71	69			
2	82	75	70	66	80	74	69	65	71	67	63	68	65	62	66	63	61	59			
3	75	67	60	55	73	65	60	55	63	58	54	61	57	53	59	55	52	50			
4	69	59	53	47	67	58	52	47	56	51	46	55	50	46	53	49	45	43			
5	64	53	46	41	62	53	46	41	51	45	40	49	44	40	48	43	40	38			
6	59	48	41	36	57	47	41	36	46	40	36	45	39	35	43	39	35	33			
7	55	44	37	32	53	43	37	32	42	36	32	41	35	31	40	35	31	30			
8	51	40	33	29	50	40	33	29	38	33	28	37	32	28	36	32	28	27			
9	48	37	30	26	46	36	30	26	35	30	26	35	29	26	34	29	25	24			
10	45	34	28	23	44	34	28	23	33	27	23	32	27	23	31	27	23	22			

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	3075	24.8	30.4
0-40	5048	40.7	49.9
0-60	8502	68.6	84.0
0-90	10124	81.6	100.0
0-180	10124	81.6	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	5283	5716	6188
55	4315	4821	5104
65	3442	3329	3811
75	2925	2343	3390
85	3349	3221	4196

ORDERING INFORMATION

SAMPLE NUMBER: 2GC8-232A-UNV-HB81-U

Rating⁽⁵⁾ Blank = Standard ATW-SW4 = Chicago Rated	Number of Lamps⁽²⁾ 2 or 4 Lamps (Not included)	Voltage⁽³⁾ 347V =347 Volt UNV =Universal Voltage 120-277 ⁽⁴⁾	Options GL =Single Element Fuse GM =Double Element Fuse Lamps =Lamps Installed Flex =Flex Installed EL =Emergency Installed	Options FR =Fire Rated Label REP =Riveted EndPlates PAF =Painted After Fabrication	Packaging U =Unit Pack PAL =Palletized Uncartoned Fixtures PALC =Palletized Fixtures In Carton
Width 2=2' Width	Wattage (Length) 28T8 =28W T8 (48") 32 =32W T8 (48")	Ballast Type⁽³⁾ EB8 = T8 Electronic Instant Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 EB8 /PLUS = T8 Electronic Instant Start. High Ballast Factor >1.13. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8 = T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2			
Trim Type G =Grid/Lay-in (Standard) ⁽¹⁾ G =Concealed T G =Slot Grid F =Flange Trim	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)	ACCESSORIES EQ-CLIP-U =T-BAR Safety Earthquake Clips ⁽¹⁾ FCTKA-24W-U =Field Installed Flange Kit			
Series C8 =Specification T8 Troffer	Option – Aluminum Flange Trim⁽⁶⁾ Blank =SW (Single White) Type Color 'S' Single 'N' Natural 'R' In Row 'W' White 'E' End of Row	FCTK A - 24 R W - U Trim Kit 22=2' x 2' N=Natural Field 24=2' x 4' W=White Convertible Blank=Single Aluminum R=In Row E=End Row U=Unit Pack			
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					
High Performance T8 Ballast (HPT8) HB8_L =T8 Electronic Instant Start. Low Ballast Factor .77 HB8 =T8 Electronic Instant Start. Ballast Factor .88 HB8_N =T8 Electronic Instant Start. Normal Ballast Factor 1.0 HB8_H =T8 Electronic Instant Start. High Ballast Factor 1.15-1.2 HR8_DIM =T8 Electronic Program Start Step Dimming. Ballast Factor .88 HR8_L =T8 Electronic Program Start. Low Ballast Factor .77 HR8 =T8 Electronic Program Start. Ballast Factor .88 HR8_H =T8 Electronic Program Start. High Ballast Factor 1.15-1.2					

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. ⁽²⁾Standard off-center ballast on 3-lamp fixtures. ⁽³⁾Products also available in non-US voltages and frequencies for international markets. ⁽⁴⁾Not available when specifying emergencies, voltage must be specific. ⁽⁵⁾For NYC rated product, see separate specification sheets. ⁽⁶⁾Specify row configuration, type in catalog number when ordering complete fixture.

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

SHIPPING INFORMATION

Catalog No.	Wt.
2GC8-228T8A	20 lbs.
2GC8-232A	20 lbs.
2GC8-428T8A	20 lbs.
2GC8-432A	20 lbs.