

DESCRIPTION

The GC Series features a deep para-contoured fixture housing, high reflectivity and optimum lamp to lens spacing. The series produces total uniformity of light in the luminous area and is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The specification luminaire is designed to offer maximum efficiency and performance for today's unique interior specifications. The GC Series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Deep, para-contoured housing, die formed code gauge, prime cold rolled steel. Die embossed housing has full length die formed stiffeners for added strength. Deep "V" ballast/ wireway cover easily removed without tools. Die formed captive lampholder bracket fully encloses lampholder wiring permitting easy lampholder replacement. Heavy 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. Pressure lock lampholders. UL/CUL listed. Suitable for damp locations.**

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting grade, baked white enamel finish.

Hinging/Latching

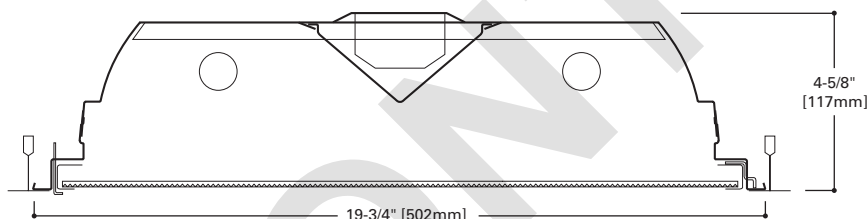
Positive Cam latch with baked enamel finish. Safety-lock T-hinges allow hinging and latching either side.

Frame/Shielding

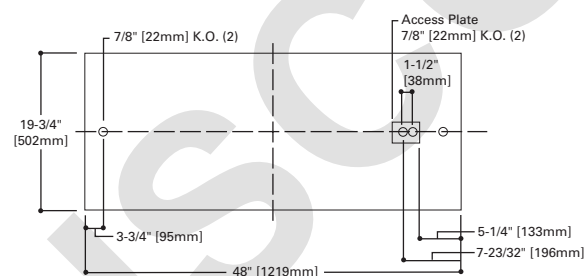
Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Positive light seals. Light stabilized 100% virgin acrylic prismatic shielding. Standard #12 pattern. Optional shielding available.

Controls

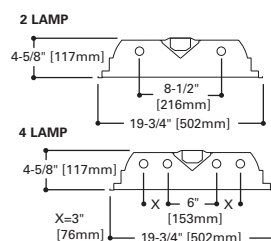
Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energysaving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls (www.coopercontrol.com) to maximize energy savings.



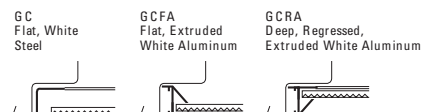
MOUNTING DATA



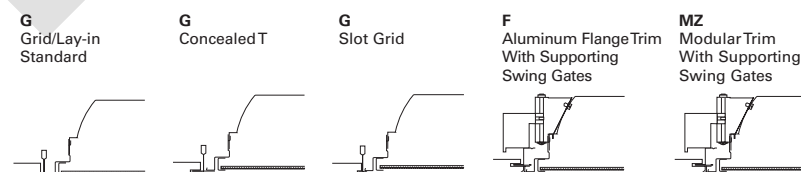
LAMP CONFIGURATIONS



DOOR FRAMES



CEILING COMPATIBILITY



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G
Flange	F
Concealed "T" or "Z"	MZ
Metal Pan	MZ

(Verify compatibility/ consult Pre Sales Technical Support.)



GC2048
228T8
232
428T8
432

20" X 48" TROFFER
2 OR 4 LAMPS

Specification Deep Troffer



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
228T8 (48)
232 (55)
428T8 (93)
432 (113)

Luminaire Efficacy Rating

LER = FL-65

Catalog Number: GC2048-232A

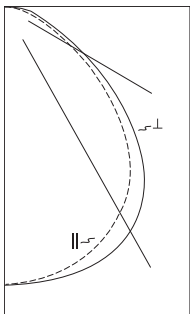
Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.69

*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.
**Consult Pre Sales Technical Support.

LINEAR DISCONNECT

Designed to provide safe and convenient means of disconnecting power

PHOTOMETRICS

**GC2048-232A**

Electronic Ballast

F32T8/35K Lamps

2800 Lumens

Spacing criterion:
(H) 1.2 x mounting
height, (L) 1.3 x
mounting height

Efficiency 76.6%

Test Report:

GC2048232A.IES

LER = FL-65

Yearly Cost of 1000
lumens, 3000 hrs at
.08 KWH = \$3.69

Coefficients of Utilization

Effective floor cavity reflectance										20%											
rc	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	91	91	91	91	89	89	89	89	85	85	85	81	81	81	78	78	78	77			
1	84	81	78	76	82	79	77	75	76	74	72	73	72	70	71	69	68	66			
2	78	72	68	64	76	71	67	63	68	65	62	66	63	60	64	61	59	58			
3	72	65	59	55	70	64	59	54	61	57	54	59	56	53	58	54	52	50			
4	66	58	52	48	65	57	52	47	55	50	47	54	49	46	52	48	45	44			
5	61	52	46	41	60	51	45	41	50	44	40	48	44	40	47	43	40	38			
6	56	47	41	36	55	46	40	36	45	40	35	44	39	35	42	38	35	33			
7	52	42	36	32	51	42	36	31	41	35	31	39	35	31	38	34	31	29			
8	48	38	32	27	47	38	32	27	37	31	27	36	31	27	35	30	27	25			
9	44	34	28	24	43	34	28	24	33	27	24	32	27	24	31	27	23	22			
10	41	31	25	21	40	31	25	21	30	25	21	29	24	21	29	24	21	19			

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1359	24.3	31.7
0-40	2223	39.7	51.9
0-60	3644	65.1	85.0
0-90	4287	76.6	100.0
0-180	4287	76.6	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	71	75	69	73
30 x 30	64	68	62	66
30 x 60	55	59	52	55
60 x 30	66	70	65	69
60 x 60	56	59	53	56

Candela

Angle	Along H	45°	Across L
0	1710	1710	1710
5	1701	1707	1716
10	1681	1694	1711
15	1647	1670	1695
20	1595	1630	1667
25	1522	1573	1622
30	1426	1497	1549
35	1306	1391	1448
40	1164	1247	1312
45	995	1073	1124
50	806	879	917
55	637	678	717
60	493	481	515
65	369	315	367
70	268	206	284
75	200	158	233
80	151	135	179
85	82	79	98
90	0	0	0

ORDERING INFORMATION

SAMPLE NUMBER: GC2048-232A-UNV-EB81-U

Rating Blank = Standard NY =New York City Rated ATW-SW4 = Chicago Rated	Width 2048 =20" Width x 48" Length	Voltage ⁽³⁾ 120V =120 Volt 277V =277 Volt 347V =347 Volt UNV =Universal Voltage 120-277 ⁽⁴⁾	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 __=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 ⁽⁸⁾ 5LTV8 __=T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ^{(11), (12)} 5LTVS8 __=T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 ^{(9), (10)} 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								
Trim Type G =Grid/Lay-in – Standard ⁽¹⁾ G =Concealed T G =Slot Grid F =Aluminum Flange Trim ⁽⁵⁾ MZ =Modular Trim EMZ =Modular Trim (Extended Swing Arm)	Number of Lamps 2 or 4 lamps	Options GL =Single Element Fuse GM =Double Element Fuse Flex =Flex Installed (Reference Flex ordering information) EL =Emergency Installed ⁽¹³⁾	Options PAF =Painted After Fabrication 20GA/REP =20 Gauge Riveted Endplates. For use in New York City. RLS =Rotor-Lock Socket (T8 Lamps Only) (See options & accessories)	ACCESSORIES EQ-CLIP-U =T-BAR Safety Earthquake Clips ⁽¹⁾								
Series C =Specification Deep Troffer	Wattage (Length) 28T8 =28W T8 (48") ⁽²⁾ 32 =32W T8 (48") ⁽⁷⁾	Shielding A =#12 Pattern Acrylic A125 =#12 Pattern Acrylic (.125" Thickness) A19/156 =#19 Pattern Acrylic (.156" Thickness) DA =Dropped Dish Matte White Acrylic IMA48 =Injection Molded Acrylic (.150" Thickness)	Option – Aluminum Flange Trim ⁽⁵⁾ Blank =SW (Single White) <table border="1"> <thead> <tr> <th>Type</th> <th>Color</th> </tr> </thead> <tbody> <tr> <td>'S' Single</td> <td>'N' Natural</td> </tr> <tr> <td>'R' In Row</td> <td>'W' White</td> </tr> <tr> <td>'E' End of Row</td> <td></td> </tr> </tbody> </table>	Type	Color	'S' Single	'N' Natural	'R' In Row	'W' White	'E' End of Row		
Type	Color											
'S' Single	'N' Natural											
'R' In Row	'W' White											
'E' End of Row												
Doorframes Standard =Flat White Steel Door (Leave Blank) FA =Flush White Extruded Aluminum c/w Spring Latch RA =Regressed White Extruded Aluminum (3/8") FAN =Flush Natural Anodized Extruded Aluminum RAN =Regressed Natural Anodized Extruded Aluminum (3/8") FAB =Flush Black Extruded Aluminum RAB =Regressed Black Extruded Aluminum (3/8")												

NOTES:

⁽¹⁾ An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture.

⁽²⁾ When utilizing 28W T8 lamps, HPT8 Ballast must be specified. 32W lamps are 90 CRI only.

⁽³⁾ Products also available in non-US voltages and frequencies for international markets.

⁽⁴⁾ Not available when specifying emergencies, voltage must be specific.

⁽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⁾ Ballast Factor is 0.88 for 4 lamp 32W T8 fixtures.

⁽⁸⁾ 0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system.

⁽⁹⁾ Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps.

⁽¹⁰⁾ Specification Grade 0-10V ballast not offered in 3 or 4-lamp versions.

⁽¹¹⁾ Standard 0-10V ballast not available for 28W T8 lamps.

⁽¹²⁾ Voltage must be specified for Standard 0-10V 32W 3 and 4-lamp ballast. 4-lamp ballast versions must be 277V.

⁽¹³⁾ Please specify required voltage, 120V or 277V.

Specifications & dimensions subject to changewithout notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.

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

SHIPPING DATA

Catalog No.	Wt.
GC2048-228T8A	29 lbs.
GC2048-232A	29 lbs.
GC2048-428T8A	32 lbs.
GC2048-432A	32 lbs.