

DESCRIPTION

The GC Series features a 4-3/4" 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

4-3/4" deep, para-contoured housing, die formed, 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

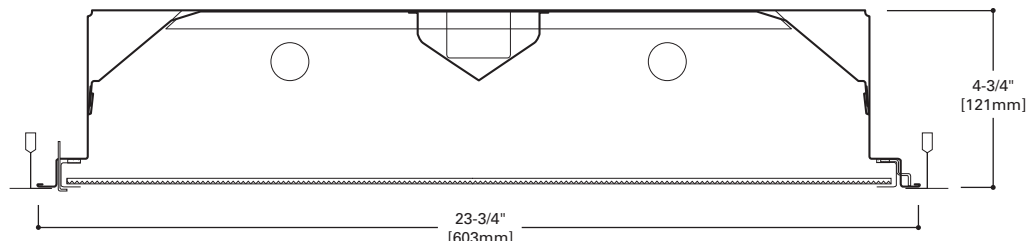
Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energysaving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls (www.coopercontrol.com) to maximize energy savings.



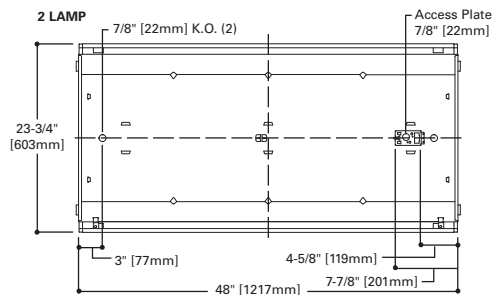
2GC
228T8
232
428T8
432

2' X 4' TROFFER
2 OR 4 T8 LAMPS

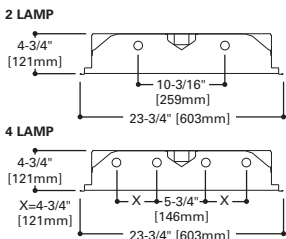
Specification Deep Troffer



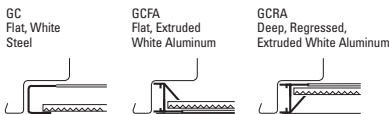
MOUNTING DATA



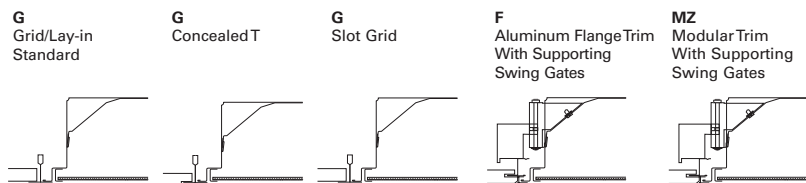
LAMP CONFIGURATIONS



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.)

ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
 228T8 (48), 232 (55)
 428T8 (93), 432 (113)
Luminaire Efficacy Rating
 LER = FL-66
Catalog Number: 2GC-232A
Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.64

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

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

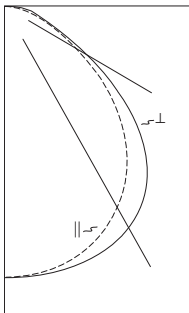
LINEAR DISCONNECT

Safe and convenient means of disconnecting power.



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PHOTOMETRICS



2GC-232A
 Electronic Ballast
 F32T8/35K Lamps
 2800 Lumens

Spacing criterion:
 (II) 1.3 x mounting
 height, (L) 1.4 x
 mounting height
 Efficiency 79.4%

Test Report:
 2GC232A.IES

LER = FL-66

Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.64

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%				70%				20%				0%					
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	95	95	95	95	92	92	92	92	88	88	88	84	84	84	81	81	81	79
1	87	84	81	78	85	82	80	77	79	77	75	76	74	72	73	72	70	69
2	81	75	70	66	79	73	69	65	71	67	64	68	65	62	66	63	61	59
3	74	67	61	56	72	66	60	56	63	59	55	61	57	54	59	56	53	52
4	68	60	53	49	67	59	53	48	57	52	48	55	51	47	53	50	46	45
5	63	53	47	42	61	52	46	41	51	45	41	49	44	41	48	43	40	38
6	58	48	41	36	56	47	41	36	46	40	36	44	39	35	43	39	35	34
7	53	43	36	32	52	42	36	32	41	35	31	40	35	31	39	34	31	29
8	49	39	32	27	48	38	32	27	37	31	27	36	31	27	35	30	27	25
9	45	35	28	24	44	34	28	24	33	27	23	32	27	23	32	27	23	22
10	42	31	25	21	41	31	25	21	30	25	21	29	24	21	29	24	21	19

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1328	23.7	29.9
0-40	2203	39.3	49.5
0-60	3742	66.8	84.1
0-90	4447	79.4	100.0
0-180	4447	79.4	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	72	75	69	73
30 x 30	68	70	65	68
30 x 60	62	64	57	60
60 x 30	70	73	69	71
60 x 60	62	64	58	61

Candela

Angle	Along II	45°	Across L
0	1656	1656	1656
5	1647	1655	1663
10	1627	1644	1660
15	1595	1623	1649
20	1545	1590	1633
25	1481	1546	1604
30	1400	1486	1557
35	1299	1405	1493
40	1171	1294	1395
45	1013	1138	1245
50	835	954	1031
55	667	764	799
60	520	579	597
65	393	412	428
70	281	269	298
75	191	173	221
80	126	126	165
85	66	77	94
90	0	0	0

ORDERING INFORMATION

SAMPLE NUMBER: 2GC-232A-UNV-EB81-U

<p>Rating Blank= Standard NY=New York City Rated ATW-SW4= Chicago Rated</p>		<p>Number of Lamps 2=2 Lamps 4=4 Lamps</p>				<p>Options RLS=Rotor Lock Socket (T8 Lamp only) 20GA/REP=20 Gauge Housing w/Riveted End Plate PAF=Painted After Fabrication</p>
<p>Width 2=2' Width</p>						<p>Packaging U=Unit Pack PAL=Palletized Uncartoned Fixtures PALC=Palletized Fixtures in Carton</p>
<p>Trim Type G=Grid/Lay-in (Standard)⁽¹⁾ G=Concealed T⁽⁷⁾ G=Slot Grid⁽⁷⁾ F=Aluminum Flange Trim⁽⁶⁾ MZ=Modular Trim EMZ=Modular Trim (Extended Swing Arm)</p>		<p>Shielding A=#12 Acrylic Pattern 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) PB1S=1/2" x 1/2" x 1/2" Silver Parabolic Louver (Styrene)</p>				<p>ACCESSORIES EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹⁾</p>
<p>Series C=Specification Deep Troffer</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>Door Frame 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")</p>		<p>Voltage⁽²⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277⁽³⁾</p>			<p>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⁽¹⁰⁾ 5LTV8_=T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87^{(13), (14)} 5LTVS8_=T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87^{(11), (12)} Fifth Light DALI Ballasts⁽⁸⁾ 5LT8_=T8 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0</p>	
		<p>Options GL=Single Element Fuse GM=Double Element Fuse Flex=Flex Installed (Reference Flex ordering information) EL=Emergency Installed⁽⁵⁾</p>		<p style="border: 1px solid red; padding: 5px; display: inline-block;">(2)ICN2P23N</p>		
		<p>Lamps Installed Blank=No Lamps Installed L8835=T8 Lamp, 28W and 32W, 3500K⁽⁴⁾ L8841=T8 Lamp, 28W and 32W, 4100K⁽⁴⁾ L8835HL=T8 Lamp, 32W, 3500K, 3100 Lumens L8841HL=T8 Lamp, 32W, 4100K, 3100 Lumens</p>			<p>Number of Ballasts 1=1 Ballast 2=2 Ballasts 3=3 Ballasts</p>	

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⁾Fixtures equipped with "EL" option may require a 5-1/2" housing depth. If installing in field, must use low profile battery pack. ⁽⁶⁾Specify row configuration, type in catalog number when ordering complete fixture. ⁽⁷⁾Louver is recessed by 5/16" in Concealed T or Slot Grid. ⁽⁸⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Controls, visit www.coopercontrol.com ⁽⁹⁾Ballast Factor is 0.88 for 4 lamp 32W T8 fixtures. ⁽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 offered in 3 or 4-lamp versions. ⁽¹³⁾Standard 0-10V ballast not available for 28W T8 lamps ⁽¹⁴⁾Voltage must be specified for Standard 0-10V 32W 3 and 4-lamp ballast. 4-lamp ballast versions must be 277V.

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.

SHIPPING DATA

Catalog No.	Wt.
2GC-232A	29 lbs.
2GC-228T8A	29 lbs.
2GC-428T8A	32 lbs.
2GC-432A	32 lbs.