

DESCRIPTION

GC8IC 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 GC8IC is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GC8IC Series features efficiency, quality and performance. The GC8IC is designed for installations when the housing will be in direct contact with insulation.

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 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. Heavy endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. KO's 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 Listed Type IC Recessed Luminaire (Rated for direct contact with insulation). Suitable for damp locations.

Finish

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

Hinging/Latching

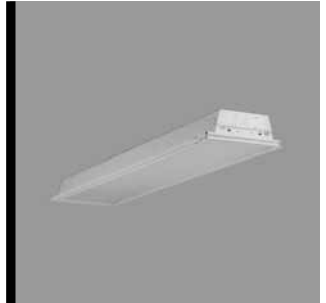
Positive Cam latch with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

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 100% virgin 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.



GC8IC
228T8
232

1' X 4' TROFFER
2 LAMP

Specification T8 Troffer

For Use In Insulated
Ceilings



ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
 232 (61)
HB Ballast & STD Lamps
 228T8 (48)
ER Ballast & STD Lamps
 232 (71)

Luminaire Efficacy Rating

LER = FL-58

Catalog Number: GC8IC-232A

Yearly Cost of 1000 lumens,
 3000 hrs at .08 KWH = \$4.15

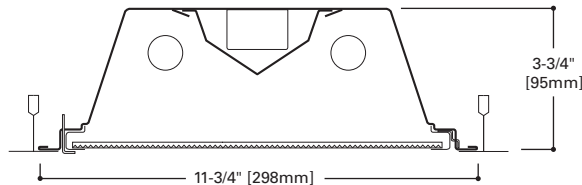
*Standard G (Grid) Type Fixtures can be field converted by adding trim kits. See Compatibility Section or Consult Factory.

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

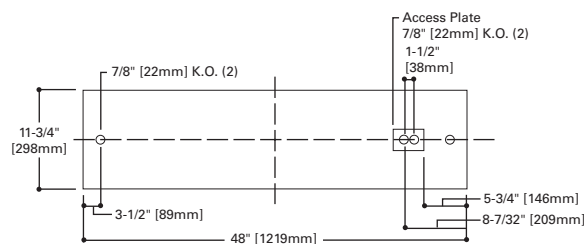
***Full sized ballast cover for emergency option.

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

LINEAR DISCONNECT
 Safe and convenient means of
 disconnecting power.



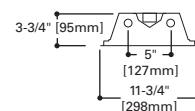
MOUNTING DATA



DOOR FRAMES



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G
Grid/Lay-in
Standard

G
Concealed T

G
Slot Grid

F
Flange Trim
With Supporting
Swing Gates

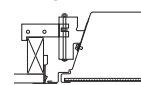
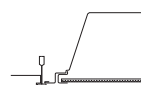
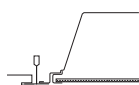
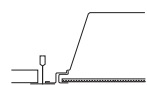
**Ceiling
Type**

**Trim
Type**

Exposed Grid
Concealed T
Slot Grid
Flange

G
G
G
F

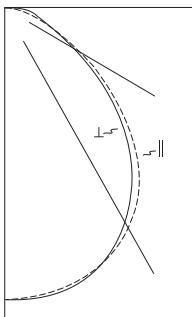
(Verify compatibility/ consult factory.)



COOPER LIGHTING

ADF100882

PHOTOMETRICS



GC81C-232A
 Electronic Ballast
 (2) FO32/35K lamps
 2800 lumens

Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.2 x
 mounting height
 Efficiency 71.6%

Test Report:
 GC81C232A.IES

LER = FL-58

Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$4.15

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%				70%				20%									
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	85	85	85	85	83	83	83	83	80	80	80	76	76	76	73	73	73	72
1	79	76	74	71	77	75	72	70	72	70	68	69	67	66	66	65	64	62
2	73	68	64	61	71	67	63	60	64	61	58	62	59	57	60	58	56	54
3	68	61	56	52	66	60	56	52	58	54	51	56	53	50	55	52	49	48
4	63	55	50	45	61	54	49	45	53	48	45	51	47	44	49	46	43	42
5	58	50	44	39	56	49	43	39	47	43	39	46	42	38	45	41	38	37
6	54	45	39	35	52	44	39	35	43	38	34	42	37	34	41	37	34	32
7	50	41	35	31	48	40	35	31	39	34	30	38	34	30	37	33	30	29
8	46	37	31	27	45	36	31	27	35	30	27	34	30	27	34	29	26	25
9	42	33	27	24	41	33	27	23	32	27	23	31	27	23	30	26	23	22
10	39	30	25	21	38	30	24	21	29	24	21	28	24	21	28	24	21	19

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1380	24.6	34.4
0-40	2196	39.2	54.8
0-60	3452	61.6	86.1
0-90	4011	71.6	100.0
0-180	4011	71.6	100.0

Typical VCP Percentages

Room Size (Ft.)	Height Along		Height Across	
	8.5'	10.0'	8.5'	10.0'
20 x 20	60	64	60	65
30 x 30	52	57	51	56
30 x 60	43	46	40	44
60 x 30	54	59	54	58
60 x 60	44	47	41	45

Candlepower

Angle	Along H	45°	Across ⊥
0	1782	1782	1782
5	1768	1778	1779
10	1745	1759	1763
15	1707	1724	1728
20	1651	1668	1662
25	1574	1582	1559
30	1471	1463	1419
35	1343	1312	1258
40	1186	1133	1100
45	1002	943	931
50	813	760	749
55	633	579	549
60	475	401	401
65	348	261	305
70	253	175	245
75	193	140	212
80	140	117	156
85	75	65	84
90	0	0	0

ORDERING INFORMATION

SAMPLE NUMBER: GC81C-232A-120V-EB81-U

Width
Blank=1' Width

Trim Type
G=Grid/Lay-in (Standard)⁽¹⁾
G=Concealed T
G=Slot Grid
F=Flange Trim
C=Modular Trim

Series
C8=Specification T8 Troffer

Type
IC=IC Rated

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

Number of Lamps
2=2Lamps
(Not included)

Wattage
28T8=28W T8 (48")⁽⁴⁾
32=32W T8 (48")

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" Thick)
PB1S=1/2" x 1/2" x 1/2" Silver Parabolic Louver (Styrene)

Voltage⁽²⁾
120V=120 Volt
277V=277 Volt
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%

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 < 0%.
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⁽⁶⁾

5LTV8_=T8 0-10V Program Rapid Start.
Total Harmonic Distortion < 10%.
Ballast Factor 0.87⁽⁸⁾

5LTVS8_=T8 0-10V Spec Grade Program Rapid Start.
Total Harmonic Distortion < 10%.
Ballast Factor 0.87⁽⁷⁾

Fifth Light DALI Ballasts⁽⁵⁾

5LT8_=T8 DALI Program Rapid Start.
Total Harmonic Distortion < 10%.
Ballast Factor 1.0

Number of Ballasts

1=1 Ballast
2=2 Ballasts
3=3 Ballasts

Options
RLS=Rotor Lock Socket (T8 Lamp only)
REP=Riveted End Plate
PAF=Painted After Fabrication

Packaging
U=Unit Pack
PAL=Job Pack, out of carton
PALC=Job Pack, in carton

ACCESSORIES

EQ-CLIP-U=T-BAR Safety Earthquake Clips⁽¹¹⁾

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⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Controls, visit www.coopercontrol.com. ⁽⁶⁾0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. ⁽⁷⁾Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps. ⁽⁸⁾Standard 0-10V ballast not available for 28W T8 lamps.

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

SHIPPING INFORMATION

Catalog No.	Wt.
GC81C-232A	19 lbs