

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.

SPECIFICATION FEATURES

Construction

Unitized low profile recessed housing is die formed of code gauge prime cold rolled steel with full length stiffeners and unibody endplate for added strength. Ballast cover is easily removed without tools. Die formed captive lampholder bracket fully encloses lampholder wiring for easy lampholder replacement. Ample KO's are provided for continuous row wiring. Built-in 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 Type IC Recessed Luminaire for direct contact with insulation. Suitable for damp locations.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Lighting grade baked white enamel finish with premium reflectance for high efficiency.

Hinging/Latching

Positive spring loaded steel latches and safety lock T-hinges provide secure, high quality door fit and allow hinging and latching from either side.

| | | |
|--------------------|--|-------------|
| Catalog # | | Type |
| Project | | |
| Comments | | Date |
| Prepared by | | |

Frame/Shielding

Heavy gauge flat steel door is die formed with reinforced mitered corners. Housing and door frame assemblies incorporate full width mechanical light traps. Light stabilized, acrylic prismatic lens.

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 Lighting Solutions (www.cooperlighting.com) to maximize energy savings.

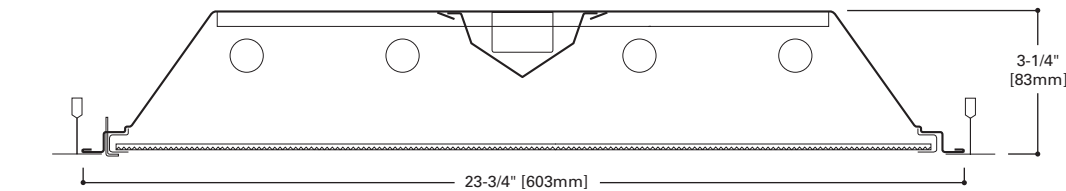


2GC8IC
217
2U1-5/8
2U6T8
317
417

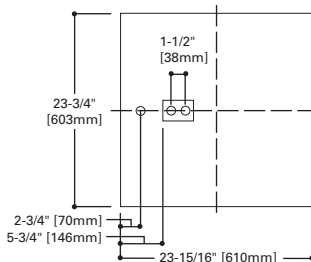
2' X 2' TROFFER
2, 3 OR 4 LAMPS

Specification T8 Troffer

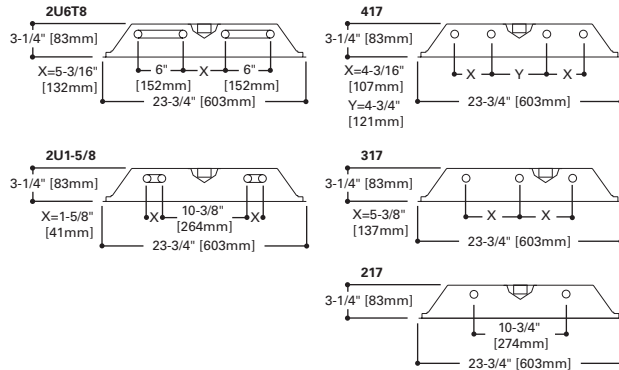
FOR USE IN INSULATED
CEILINGS



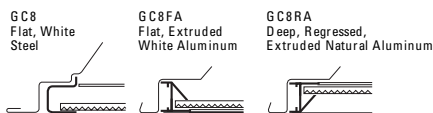
MOUNTING DATA



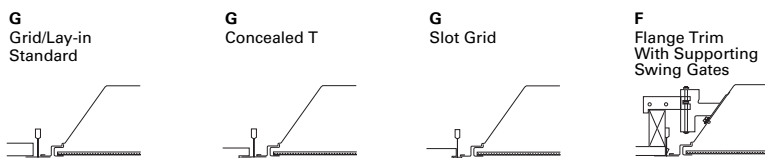
LAMP CONFIGURATIONS



DOOR FRAMES



CEILING COMPATIBILITY



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

(Verify compatibility/ consult factory.)

ENERGY DATA

Input Watts:
EB Ballast & STD Lamps
 217 (36) , 2U1-5/8 (61), 2U6T8 (61)
 317 (52), 417 (63)
HB Ballast & STD Lamps
 217 (31) , 417 (59)

Luminaire Efficacy Rating
LER = FL-55

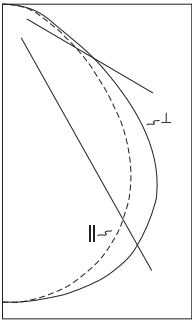
Catalog Number: 2GC8IC-217A
 Yearly Cost of 1000 lumens,
 3000 hrs at .08 KWH = \$4.36

*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.

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



PHOTOMETRICS



2GC81C-217A
 Electronic Ballast
 (2) F17/SPX35 T8
 lamps
 1350 lumens
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.4 x
 mounting height
 Efficiency 78%
 Test Report:
 2GC81C217A.IES
 LER = FL-63
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.81

| Candela | | | |
|---------|---------|-----|----------|
| Angle | Along H | 45° | Across L |
| 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 |

Coefficients of Utilization

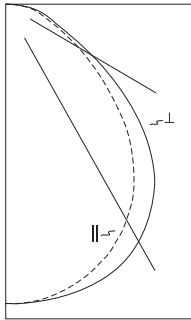
| rc | Effective floor cavity reflectance | | | | | | | | | | | | | | | | | | | | | | | |
|-----|------------------------------------|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|----|----|----|---|
| | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 10% | | | | 0% | | | |
| rw | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 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 | | | | | |

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 |



2GC81C-417A
 Electronic Ballast
 (4) F17/SPX35 T8
 lamps
 1350 lumens
 Spacing criterion:
 (H) 1.2 x mounting
 height, (L) 1.3 x
 mounting height
 Efficiency 75.2%
 Test Report:
 2GC81C417A.IES
 LER = FL-64
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.75

| Candela | | | |
|---------|---------|------|----------|
| Angle | Along H | 45° | Across L |
| 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 | 1168 | 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 | 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 | 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: 2GC81C-2U6T8A-UNV-EB81-U

| | | | |
|---|---|--|---|
| <p>Rating Blank= Standard ATW-SW4= Chicago Rated</p> | <p>Number of Lamps^{(2), (5)} 2, 3 or 4 Lamps (Not included)</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%</p> | <p>Options REP=Riveted End Plate PAF=Painted After Fabrication (see options & accessories)</p> |
| <p>Width 2-2' Width</p> | <p>Wattage 17=17W T8 (24") U6T8=32W (24")^{(5), (8)} U1-5/8=31W T8 (24")^{(5), (7)}</p> | <p>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</p> | <p>Packaging U=Unit Pack PAL=Job Pack, out of carton PALC=Job Pack, in carton</p> |
| <p>Trim Type G=Grid/Lay-in (Standard)⁽¹⁾ G=Concealed T G=Slot Grid F=Flange Trim</p> | <p>Shielding A=#12 Acrylic Pattern A125=#12 Acrylic Pattern (.125" Thickness) A19/156=#19 Acrylic Pattern (.156" Thickness)</p> | <p>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</p> | |
| <p>Series C8=Specification T8 Troffer</p> | <p>Options GL=Single Element Fuse GM=Double Element Fuse Lamps=Lamps Installed Flex=Flex Installed EL=Emergency Installed⁽¹³⁾</p> | <p>0-10V Dimming Ballasts⁽⁹⁾ 5LTV8_=T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87⁽¹²⁾ 5LTVS8_=T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87^{(10), (11)}</p> | |
| <p>Door Frame Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum 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>Volume⁽³⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277⁽⁴⁾</p> | <p>Fifth Light DALI Ballasts⁽⁶⁾ 5LT8_=T8 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0</p> | |
| <p>Type IC=C Rated</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. ⁽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⁾2 lamps maximum for U6T8 and U1-5/8. ⁽⁶⁾For a complete listing of Fifthlight Technology products and other solutions from Cooper Lighting Solutions, visit www.cooperlighting.com. ⁽⁷⁾Fifthlight ballast option not available. ⁽⁸⁾Ballast Factor is 0.88 for 4 lamp 32W T8 fixtures. ⁽⁹⁾0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. ⁽¹⁰⁾Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps. ⁽¹¹⁾Specification Grade 0-10V ballast not offered in 3 or 4-lamp versions. ⁽¹²⁾Standard 0-10V ballast not offered in 3 or 4-lamp versions. ⁽¹³⁾Please specify required voltage, 120V or 277V.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions 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**

| | | |
|---|--|------------------------------|
| <p>Trim Kit Field Convertible</p> | <p>22=2' x 2' 24=2' x 4'</p> | <p>N=Natural W=White</p> |
| <p>Aluminum</p> | <p>Blank=Single R=In Row E=End Row</p> | <p>U=Unit Pack</p> |

SHIPPING DATA

| Catalog No. | Wt. |
|-----------------|---------|
| 2GC81C-2U6T8 | 12 lbs. |
| 2GC81C-2U1-5/8A | 12 lbs. |
| 2GC81C-317A | 10 lbs. |
| 2GC81C-217A | 10 lbs. |
| 2GC81C-417A | 10 lbs. |

