

DESCRIPTION

Low brightness 4-1/2-inch aperture reflector for use with 13W Quad tube compact fluorescent lamps. The precisely formed non-imaging reflector ensures 55° cutoff to lamp and lamp image and the one piece design eliminates light leaks at the ceiling. Standard features include low iridescent finish on all reflector colors (to eliminate "rainbowing") and venting to ensure maximum lamp life and lumen output. The fixture optics offer unparalleled performance in glare free lighting providing a smooth beam devoid of hot spots. Open downlight, lens, and open wall wash trims are interchangeable within the same housing.

SPECIFICATION FEATURES

Reflector

.050 thick aluminum in a one piece spun macrofocal parabolic contour. Available in a variety of Alzak® finishes. Positive reflector mounting pulls trim tight to ceiling.

Trim Ring Options

Self flanged or molded white trim ring. Rimless or metal trim ring available.

Socket Cap

One piece vented and finned die cast aluminum cap for maximum thermal performance.

Housing Mounting Frame

One piece precision die cast aluminum 1-1/2" deep collar accommodates varying dimensions of ceiling materials.

Universal Mounting Bracket

Accepts 1/2" EMT, C Channel, T bar fasteners, and bar hangers. Adjusts 5" vertically from above or below ceiling.

Conduit Fittings

Die cast screw tight connectors.

Junction Box

Listed for eight #12AWG (four in, four out) 90°C conductors feed through branch wiring. 1/2" and two 3/4" pry outs. Positioned to allow straight conduit runs. Access to junction box by removing reflector.

Socket

4-pin G24q1 base for C4013, fatigue free stainless steel lamp spring ensures positive lamp retention.

Catalog

Project

Comments

Prepared by

Type

Date

Electronic Ballasts

Electronic ballast provides full light output and rated lamp life. Provides flicker free and noise free operation and starting. End of lamp life protection is standard.

Labels

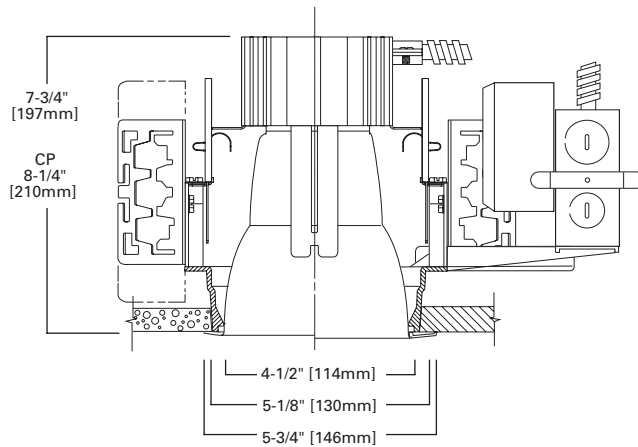
cULus listed, standard damp label.



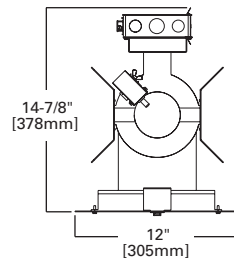
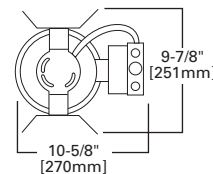
C4013 4050/4051

13W Quad
Compact Fluorescent

4-Inch Open Downlight



Top View



(with IEM Option)

| ENERGY DATA | |
|---|-----------------|
| 13W TTT 4-pin | |
| Ballast: Electronic | |
| 120V Input Watts: 16 | Line Amps: 0.13 |
| 277V Input Watts: 16 | Line Amps: 0.06 |
| Power Factor: >0.99 | THD: <10% |
| Min. Starting Temperature: -10°C (15°F) | |
| Sound Rating: Class A Standards | |

NOTES: Accessories should be ordered separately. For additional options, please consult your Cooper Lighting Representative. Alzak is a registered trademark of Aluminum Company of America.

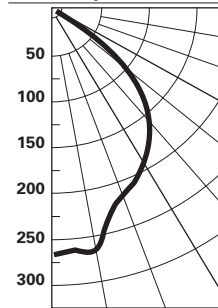
EXAMPLE: C4013E 4051H

| Housing | Wattage | Ballast | Options | Trims | Finish | Option | Accessories |
|----------------------------|-----------------------------|---|--|--|---|---|---|
| C40 =4" CF Vertical | 13 =(1) 13W DTT Lamp | E =120/277V 50/60 Hz Electronic 3E =347V 50/60 Hz Electronic | CP =Chicago Plenum EM =Emergency Module with Remote Test Switch IEM =Emergency Module with Integral Test Switch | 4051 =Self Flanged 4050 = Reflector, Molded Trim Ring, White 4051E =Reflector, Self Flanged, use with IEM option 4050E =Reflector, Molded Trim Ring, White, use with IEM option | LI =Low Iridescent Clear H =Haze WMH =Warm Haze G =Gold WH =Wheat W =Gloss White GP =Graphite GPH =Graphite Haze | WF =White painted flange (self flanged only) | HB26 =C Channel Bar Hangers, 26" Long, Pair HB50 =C Channel Bar Hangers, 50" Long, Pair TRM4 =Metal Trim Ring, Specify Finish ¹ TRR4 =Rimless Trim Ring, White FK5 =5 Amp Field Installable Fuse Kit 300V Max RMB-22 =Wood Joist Bar Hanger, 22" Long, Pair HSA4 =Slope Adapter for 4" Aperture Housings. Specify Slope |

Notes: ¹Order trim with polymer trim ring
(Consult specification sheet for ordering information and options).

PHOTOMETRICS

Candlepower Distribution



Test No. H21022
C4013 4050LI
Open Reflector
Lamp=13W DTT
Lumens=860
Spacing
Criterion=1.1
Efficiency=51.8%

Candlepower

| Deg. | CD |
|------|-----|
| 0 | 265 |
| 5 | 272 |
| 15 | 225 |
| 25 | 205 |
| 35 | 176 |
| 45 | 127 |
| 55 | 59 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |
| 90 | 0 |

Average Luminance

| Deg. | CD/SQM |
|------|--------|
| 45 | 17525 |
| 55 | 9970 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |

Cone of Light

| Distance to Illuminated Plane | Initial Nadir Footcandles | Beam Diameter |
|-------------------------------|---------------------------|---------------|
| 4'6" | 13 | 5'0" |
| 5'6" | 9 | 6'0" |
| 6'6" | 6 | 7'0" |
| 8'0" | 4 | 9'0" |
| 10'0" | 3 | 11'0" |
| 12'0" | 2 | 13'0" |

Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.

Footcandle values are initial, apply appropriate light loss factors where necessary.

Reflector Multiplier:
Haze=.95
Straw=.9
Wheat=.9

EM Multiplier (in emergency mode)
EM=.75

Zonal Lumen Summary

| Zone | Lumens | %Lamp | %Luminaire |
|--------|--------|-------|------------|
| 0-30 | 184 | 21.4 | 41.4 |
| 0-40 | 294 | 34.1 | 65.9 |
| 0-60 | 444 | 51.6 | 99.7 |
| 0-90 | 445 | 51.8 | 100.0 |
| 90-180 | 0 | 0.0 | 0.0 |
| 0-180 | 445 | 51.8 | 100.0 |

Coefficient of Utilization

| rc | 80% | | | | 70% | | | 50% | | 30% | | 10% | | 0% |
|-----|-----|----|----|----|-----|----|----|-----|----|-----|----|-----|----|----|
| rw | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | | | | | | | | | | | | | | |
| 0 | 62 | 62 | 62 | 62 | 60 | 60 | 60 | 57 | 57 | 55 | 55 | 53 | 53 | 52 |
| 1 | 58 | 57 | 55 | 54 | 56 | 54 | 53 | 53 | 52 | 52 | 50 | 50 | 49 | 48 |
| 2 | 55 | 52 | 50 | 48 | 51 | 49 | 48 | 50 | 47 | 48 | 46 | 47 | 45 | 44 |
| 3 | 52 | 48 | 45 | 43 | 47 | 45 | 43 | 46 | 42 | 45 | 41 | 43 | 41 | 40 |
| 4 | 49 | 44 | 41 | 39 | 44 | 41 | 38 | 42 | 38 | 41 | 37 | 40 | 37 | 36 |
| 5 | 46 | 41 | 37 | 35 | 40 | 37 | 34 | 39 | 34 | 38 | 34 | 37 | 34 | 33 |
| 6 | 42 | 37 | 34 | 31 | 37 | 33 | 31 | 36 | 31 | 35 | 30 | 34 | 30 | 29 |
| 7 | 39 | 34 | 30 | 27 | 33 | 30 | 27 | 33 | 27 | 32 | 27 | 31 | 27 | 26 |
| 8 | 37 | 31 | 27 | 25 | 31 | 27 | 25 | 30 | 24 | 29 | 24 | 29 | 24 | 23 |
| 9 | 34 | 28 | 24 | 22 | 28 | 24 | 22 | 27 | 22 | 27 | 22 | 26 | 22 | 21 |
| 10 | 32 | 26 | 22 | 20 | 25 | 22 | 20 | 25 | 20 | 25 | 20 | 24 | 19 | 19 |

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio

CU Data Based on 20% Effective Floor Cavity Reflectance.