Fail-Safe

DESCRIPTION

The Fail-Safe CFR is designed for use in horizontal or non-laminar air flow clean rooms. The enclosed and gasketed housing protect against infiltration of airborne bacteria. The extruded aluminum inset door and the hole-free design of the housing prevent air exchange between the fixture and plenum, allowing relamping without contamination of the clean areas. UL/cUL listed for wet locations, and manufactured in accordance with U.S.D.A., F.D.A., N.S.F. and Federal Standard 209E.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Application
The CFR is suitable for use in I.E.S. Class 100, 1,000, 10,000 and 100,000 clean room environments. Applications include clean rooms, technical and biomedical labs, food processing/testing centers and pharmaceutical labs.

Fasteners
Machine screws secure through captive cagenuts in housing and are spaced to compress gasketing on all sides.

Housing
Die-formed, 20 ga. CRS with tightly butted and spot welded, sealed end caps. Contains no holes that would allow air passage. Standard white high reflectance polyester powder coat finish. Gloss: 85%; Reflectance: 93%; Hardness: 2H; Salt Spray: 500 Hours.

Finish
High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%. 1000 hour salt spray test.

Hinge
Two braided, stainless steel cables on one side of door provide hinging.

Door
Fully gasketed, rigid extruded aluminum, inset door with baked white polyester powder coat and mitered corners.

Gasket
White, closed cell, Flexiseal(TM) gasketing surrounds perimeter of lens to seal lens to door frame and around perimeter of door to seal door to housing.

Access
A gasketed access plate on top of the housing with two flattened, 7/8" diameter knockouts allows connection of vapor tight conduit fitting. Optional, above ceiling, top access door for luminaire maintenance is available and ideal for food processing and cleanroom applications.

Lens
Lens is clear Pattern 12 acrylic with prisms positioned inside fixture and smooth surface on the outside for easy cleaning.

Lamps
(By Others)

Lens Retention
Unique, Particulock(TM) lens retention system utilizes continuous, 18 ga. media clampdowns to sandwich gasketing and integrate lens and door frame for even environmental seal.

Ballast
Electronic Class P, CBM/ETL ballast.

Labels
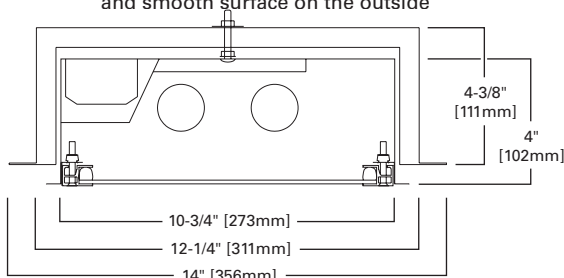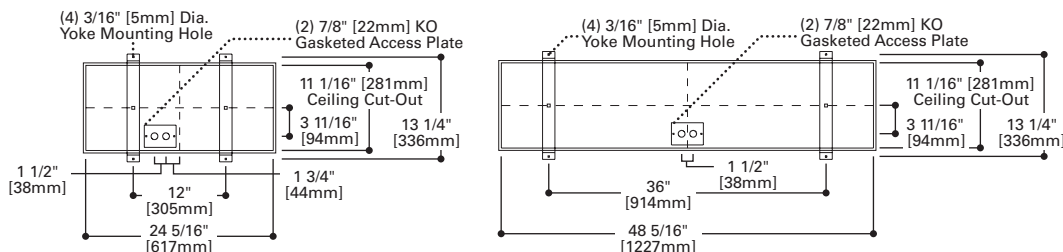UL/cUL listed for wet location under covered ceiling.

CFR12

1x2
1x4
Cleanroom

RECESSED FLANGE
Inset Flat door

4-3/8" [111mm]
4" [102mm]
10-3/4" [273mm]
12-1/4" [311mm]
14" [356mm]

MOUNTING DIMENSIONS

(4) 3/16" [5mm] Dia. Yoke Mounting Hole
(2) 7/8" [22mm] KO Gasketed Access Plate
11 1/16" [281mm] Ceiling Cut-Out
3 11/16" [94mm]
13 1/4" [336mm]
1 1/2" [38mm]
12" [305mm]
1 3/4" [44mm]
24 5/16" [617mm]

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48 5/16" [1227mm]
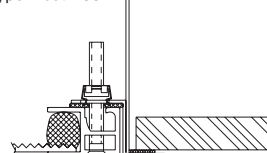
DOOR FRAME

Flange Type-Inset Door

ENERGY DATA

Input Watts:

STD Ballasts & STD Lamps
(1) 40W Biaxial Fluorescent: 45W
(2) 40W Biaxial Fluorescent: 82W

ES Ballasts & STD Lamps
(1) 17W T8 Fluorescent: 23W
(2) 17W T8 Fluorescent: 45W
(3) 17W T8 Fluorescent: 68W
(1) 32W T8 Fluorescent: 37W
(2) 32W T8 Fluorescent: 71W
(3) 32W T8 Fluorescent: 108W

Electronic Ballast
Consult Cooper Lighting Representative

FT・N
Powering Business Worldwide

ORDERING INFORMATION

SAMPLE NUMBER: CFR-12-332-277-IK12-EB81-GLR

Product Family	Grid Size	Lamp Type	Voltage	Lens Type [4]	Ballast	Inset Door/Finish Options	Options
CFR	**12**						

CFR=Fluorescent Flange Recessed

12= 12" (3 lamp max.)

2' Fixture Length

T5 Fluorescent
114=(1) 14W Lamps
214=(2) 14W Lamps
314=(3) 14W Lamps
124=(1) 24W Lamps
224=(2) 24W Lamps

T8 Fluorescent
117=(1) 17W Lamps
217=(2) 17W Lamps
317=(3) 17W Lamps

Biaxial Fluorescent
140BX=(1) 40W Lamps
240BX=(2) 40W Lamps

4' Fixture Length

T5 Fluorescent
128=(1) 28W Lamps
228=(2) 28W Lamps
328=(3) 28W Lamps
154=(1) 54W Lamps
254=(2) 54W Lamps

T8 Fluorescent
132=(1) 32W Lamps
232=(2) 32W Lamps
332=(3) 32W Lamps

120=120V
277=277V
347=347V
UNV=120V-277V

IK12=Pattern 12 Prismatic Acrylic, 0.110" thick
IP12=Pattern 12 Prismatic Polycarbonate, 0.110" thick
KSH25= Linear Ribbed Acrylic, 0.115" thick [1]
93=Prismatic Tempered Glass, 0.156" thick

Electronic Ballasts [2]

EB51= (1) Ballast for use with T5 Lamp
EB52=(2) Ballasts for use with T5 Lamp
EB81= (1) Ballast for use with T8 Lamp
EB82=(2) Ballasts for use with T8 Lamp
EBX1=EB1 Ballast for use with Biaxial Lamp
EBX2=(2) Ballast for use with Biaxial Lamps

Blank=Extruded Aluminum Door, white powdercoat paint
ALX=Extruded Alumium Door/Clear anodized finish

EL4=EM Pack, T8, BX
EL5=EM Pack, T5, T5HO
GLR=Fuse and Holder
RIF=Radio Frequency Interference Filter
TAD=Top Access Door [3]
AM=Anti-microbial matte white finish [5]

Housing Options
ALH=Die formed Aluminum, powder coat painted white
SHN=Stainless Steel, Brushed finish
SHP=Stainless Steel, powder coat painted white

NOTES:
1 The KSH25 provides improved visual performance and wide angle distribution. This lens has an integral prism pattern designed so that prisms face the lamp cavity and still supply superior photometrics. Highly recommended for all high-tech manufacturing environments.
2 For specific electronic ballast, specify brand and catalog number.
3 Contact your Cooper Lighting Representative for dimensional details.
4 Refer to Lens Ordering Guide for additional lens choices.
5 AM not available with ALX anodized finish.