

DESCRIPTION

The Fail-Safe FMR Series combines maximum security construction features with energy saving technology. This recessed luminaire is designed for applications utilizing solid ceiling plaster or drywall construction. Luminaire utilizes a one-piece overlapping door frame, security lensing and tamper resistant fasteners to maximize impact resistance and prevent contraband concealment and unauthorized fixture penetration. U.L. listed and C.S.A. certified for wet locations.

The FMR Series is ideal for confinement/security applications. Suitable for use in inmate cells, psychiatric wards, secure corridors and general population areas.

SPECIFICATION FEATURES

A ... Lens

Choice of prismatic acrylic, prismatic polycarbonate or prismatic tempered glass on fixture side, clear polycarbonate or clear tempered glass on environmental side.

B ... Fasteners

Stainless steel tamper-resistant TORX® screws with center pin reject are standard. Allen-head screws with center pin reject are optional.

C ... Housing

Die-formed 12 ga.-18 ga. CRS body with welded corners to form a one-piece housing which prevents contraband concealment and unauthorized fixture penetration. Standard white high reflectance polyester powder coat finish.

C ... Housing Cont.

Gloss: 85%; Reflectance: 93%; Hardness: 2H; Salt Spray: 500 Hours.

D ... Lamps

(By Others)

E ... Lens Retention

Lens secured by thru-studs and vertically adjustable internal CRS hold-downs.

F ... Hinge

Continuous, concealed piano hinge (1/4" diameter knuckle) with welded pin end to prevent removal.

G ... Door

One-piece, CRS door frame with die-formed edges and tightly closed corners increases rigidity (gauge to match housing).

H ... Ballast

Standard Class P, CBM/ETL ballast.

I ... Light Mask

Polyurethane gasketing surrounds door frame and prevents light leaks.

J ... Mounting Channels

16 ga., galvanized steel mounting channels.

K ... Mounting Yoke Assembly

16 ga., galvanized steel plaster frame assembly (see options).

Labels

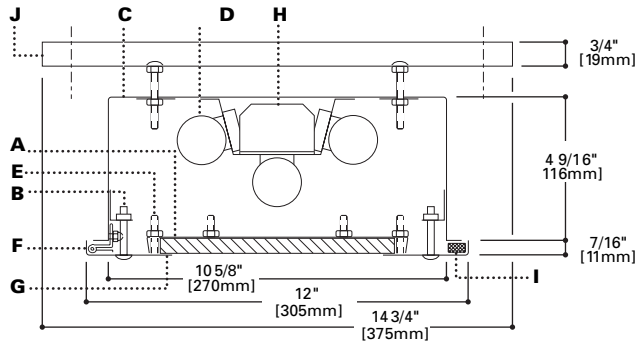
U.L. listed, C.S.A. certified, standard wet label.



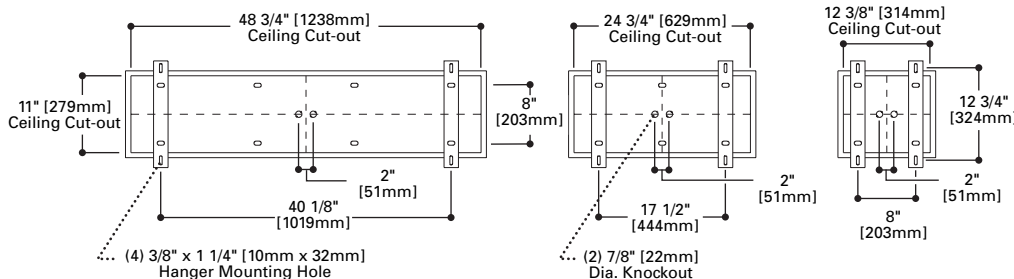
FMR12

13W - 120W
Fluorescent

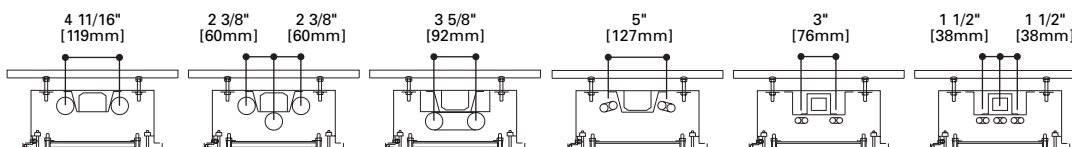
MAXIMUM SECURITY
RECESSED FLANGED
LUMINAIRE



MOUNTING DIMENSIONS



LAMP CONFIGURATIONS



ENERGY DATA

Input Watts:

STD Ballasts & STD Lamps

- (1) 13W Twin Tube: 17W
- (2) 13W Twin Tube: 34W
- (3) 13W Twin Tube: 51W
- (1) 20W T12 Fluorescent: 32W
- (2) 20W T12 Fluorescents: 53W
- (3) 20W T12 Fluorescents: 85W
- (1) 40W Biaxial Fluorescent: 45W
- (2) 40W Biaxial Fluorescents: 82W

ES Ballasts & STD Lamps

- (1) 17W T8 Fluorescent: 23W
- (2) 17W T8 Fluorescents: 45W
- (3) 17W T8 Fluorescents: 68W
- (1) 32W T8 Fluorescent: 37W
- (2) 32W T8 Fluorescents: 71W
- (3) 32W T8 Fluorescents: 108W
- (1) 40W T12 Fluorescent: 50W
- (2) 40W T12 Fluorescents: 86W
- (3) 40W T12 Fluorescents: 136W
- (1) 40W U-Lamp: 50W

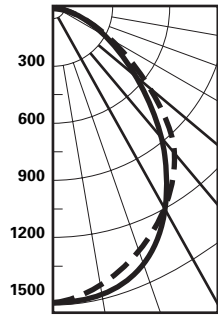
ES Ballasts & ES Lamps

- (1) 40W T12 Fluorescent: 44W
- (2) 40W T12 Fluorescents: 76W
- (3) 40W T12 Fluorescents: 120W
- (1) 40W U-Lamp: 44W

Electronic Ballast Data
Consult Cooper Lighting Representative

TORX® is a registered trademark
of Camcar Division of Textron Inc.

Candlepower Distribution



Test No. 5919
FMR12-X-240
 Lamp=(2) F40T12RS/
 WW
 Lumens=3200
 Spacing Criteria
 $\perp=1.2$ $\parallel=1.2$
 Efficiency=49.1%



Candlepower

Deg.	\perp	\parallel
0	1495	1495
5	1459	1473
15	1386	1458
25	1221	1303
35	1131	1111
45	779	720
55	417	388
65	230	238
75	136	142
85	37	36
90	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1120	17.5	35.7
0-40	1823	28.5	58.1
0-60	2779	43.4	88.5
0-90	3140	49.1	100.0
90-180	0	0.0	0.0
0-180	3140	49.1	100.0

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	58	58	58	58	57	57	57	55	55	52	52	50	50	49
1	54	53	51	49	51	50	48	49	47	48	46	46	44	43
2	51	47	45	42	46	44	42	45	41	43	40	42	39	38
3	47	43	39	37	42	39	36	41	36	39	35	38	35	34
4	44	39	35	32	38	34	32	37	31	36	31	35	31	30
5	40	35	31	28	34	31	28	33	28	32	27	31	27	26
6	37	31	26	25	31	27	25	30	24	29	24	29	24	23
7	35	29	25	22	28	24	22	27	22	27	22	26	21	21
8	32	26	22	19	25	22	19	25	19	24	19	24	19	18
9	29	23	19	17	23	19	17	22	17	22	17	21	17	16
10	27	21	17	15	21	17	15	20	15	20	15	20	15	14

rc=Ceiling reflectance, rw=W all reflectance, RCR=Room cavity ratio
 CU Data Based on 20% Effective Floor Cavity Reflectance.

ORDERING INFORMATION

SAMPLE NUMBER: FMR-D12-340-120-80/86-LE3-GLR

Product Family	Housing	Fixture Width	Lamp Type	Voltage	Lens Type	Ballast	Options
FMR			1' Nom. Length Compact Fluorescents 113=(1) 13W Lamp 126=(1) 26W Lamp 213=(2) 13W Lamps 226=(2) 26W Lamps 313=(3) 13W Lamps 2' Nom. Length T8 Fluorescents 117=(1) 17W Lamp 217=(2) 17W Lamps 317=(3) 17W Lamps T12 Fluorescents² 120=(1) 20W Lamp 220=(2) 20W Lamps 320=(3) 20W Lamps Biaxial Fluorescents 140BX=(1) 40W Lamp 240BX=(2) 40W Lamps T8 U-Lamp 1U6T8=32W Lamp 1U15/8=31W Lamp 2U15/8=(2) 31W Lamps 4' Nom. Length T8 Fluorescents 132=(1) 32W Lamp 232=(2) 32W Lamps 332=(3) 32W Lamps T12 Fluorescents 140=(1) 40W Lamp 240=(2) 40W Lamps 340=(3) 40W Lamps	120=120V 277=277V	Inner Layer (Optional) 90=.005 UV Absorbing Overlay Fixture Side 80=.125 Prismatic Acrylic 81=.156 Prismatic Polycarbonate 82=.187 Prismatic Polycarbonate 93=.156 Prismatic Tempered Glass Environmental Side 84=.125 Clear Polycarbonate 85=.187 Clear Polycarbonate 86=.250 Clear Polycarbonate 87=.375 Clear Polycarbonate 88=.500 Clear Polycarbonate 94=.187 Clear Tempered Glass 96=.250 Clear Tempered Glass 97=.375 Clear Tempered Glass 98=.500 Clear Tempered Glass	Blank=Magnetic Ballast (Standard) ³ LEOC8=T8 Energy Saving Ballast LE3=40W T12 Energy Saving Ballast Electronic Ballast¹ EBT1=(1) Ballast for use with Compact Fluorescent Lamp EBT2=(2) Ballasts for use with Compact Fluorescent Lamp EB81=(1) Ballast for use with T8 Lamp EB82=(2) Ballasts for use with T8 Lamp EB21=(1) Ballast for use with T12 Lamp ² EB22=(2) Ballasts for use with T12 Lamp ² EBX1=(1) Ballast for use with Biaxial Lamp EBX2=(2) Ballasts for use with Biaxial Lamp	EBP=Emergency Battery Pack FNL=Fluorescent Night Light (Lamp by others.) LNL= LED Night Light (50,000 hrs.) provided by Cooper GLR=Fuse and Holder ISH=Internal Security Hinge (doubles the number of fasteners) RIF=Radio Interference Filter SPK=Speaker Housing Compartment (extends housing) Auto Control Modules ACM/FNL=for FNL On/Off Switches SP5=Security Push Button TCS=Touch Control System ⁴ Stainless Steel Door SSN=Natural Brushed Finish SSP=Polyester Powder Coat Finish Fasteners SF3=Allen-Head (center pin reject)
S=12 ga. (Ultimax) X=14 ga. (Maximum) D=16 ga. (Medium) N=18 ga. (Minimum)					/		
12=12" Wide							
							Accessories
							9306=Allen-Head Wrench MF12-2FT=Plaster Frame and Yoke Assembly MF12-4FT=Plaster Frame and Yoke Assembly VRSD=TORX®-Head Vandal Resistant Screwdriver

Notes:
 For additional options consult Cooper Lighting Representative. Specifications and Dimensions subject to change without notice.
 Electronic ballast may cause interference with other electronic devices. If interference occurs, move the device away from the product or plug/connect into a different circuit/outlet.
¹For specific electronic ballast specify brand and catalog number. ²Electronic ballast not available for F20T12 lamps. ³For use with Compact Fluorescent, Biaxial, and 20W T12 lamps. ⁴For additional information about the TCS option see Fail-Safe spec sheet for TCS Touch Control System (ADC030025) or pages 1106 and 1107 in the 4th Edition of the Cooper Lighting Buyer's Guide.

Specifications and Dimensions subject to change without notice.

Fail-Safe • Customer First Center • 1121 Highway 74 South • Peachtree City, GA 30269 • TEL 770.486.4800 • FAX 770.486.4801

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