

DESCRIPTION

The Fail-Safe FUS Series combines maximum security construction features with energy saving technology. This surface mounted luminaire utilizes a one piece clamshell housing, security lensing and tamper resistant fasteners to maximize impact resistance and prevent contraband concealment and unauthorized fixture penetration. For ceiling mount. U.L. listed and C.S.A. certified for damp locations.

The FUS 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

(To be specified.) Choice of prismatic acrylic, prismatic polycarbonate or prismatic tempered glass on fixture side, clear polycarbonate or clear tempered glass on environmental side. See Lens Options.

B ... Fasteners

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

C ... Housing

Clamshell design combines die-formed 12 ga., 14 ga. or 16 ga. CRS body with continuous welded and ground ends to form a

Housing Cont.

one-piece, seamless, doorless housing which maximizes impact resistance and prevents contraband concealment and unauthorized fixture penetration. Standard white high reflectance polyester powder coat finish. 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

Internal Security Hinge leaves no exposed parts for weapon fabrication and facilitates maintenance.

G ... Backplate

Die-formed CRS backplate forms an irretrievable blade trap to prevent contraband concealment (gauge to match housing.)

H ... Ballast

Standard Class P, CBM/ETL ballast.

Labels

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

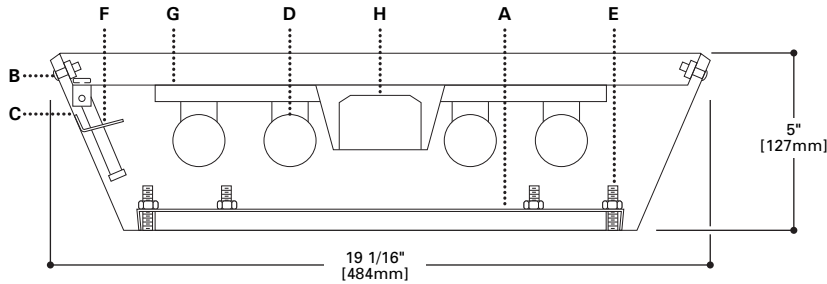
Catalog #		Type
Project		
Comments		Date
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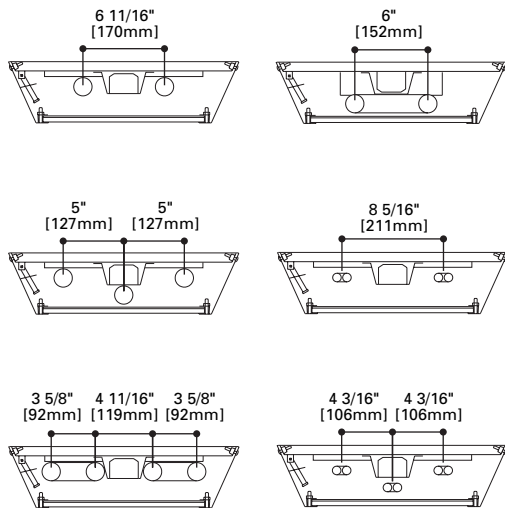
FUS16

34W - 160W
Fluorescent

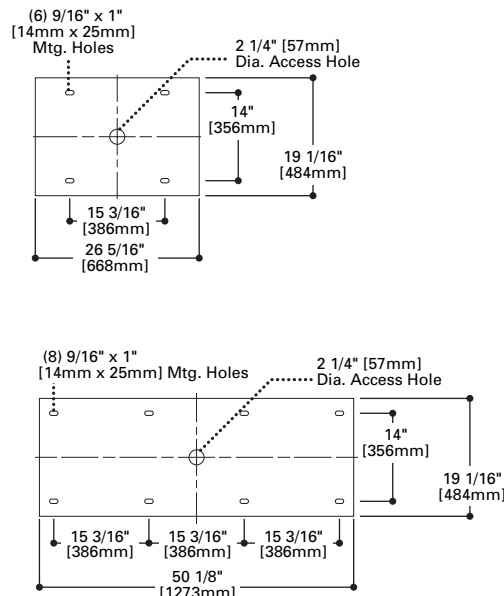
ULTIMAX SURFACE
LUMINAIRE



LAMP CONFIGURATIONS



MOUNTING DIMENSIONS



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ENERGY DATA

Input Watts:

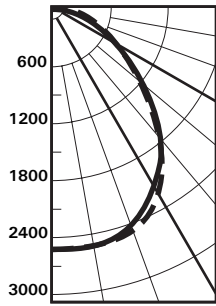
STD Ballasts & STD Lamps
 (2) 20W T12 Fluorescents: 53W
 (3) 20W T12 Fluorescents: 85W
 (4) 20W T12 Fluorescents: 106W
 (2) 40W Biaxial Fluorescents: 82W
 (3) 40W Biaxial Fluorescents: 127W

ES Ballasts & STD Lamps
 (2) 17W T8 Fluorescents: 45W
 (3) 17W T8 Fluorescents: 68W
 (4) 17W T8 Fluorescents: 90W
 (2) 32W T8 Fluorescents: 71W
 (3) 32W T8 Fluorescents: 102W
 (4) 32W T8 Fluorescents: 148W
 (2) 40W T12 Fluorescents: 86W
 (3) 40W T12 Fluorescents: 136W
 (4) 40W T12 Fluorescents: 172W
 (1) 40W U-Lamp: 50W
 (2) 40W U-Lamps: 86W

ES Ballasts & ES Lamps
 (2) 40W T12 Fluorescents: 76W
 (3) 40W T12 Fluorescents: 120W
 (4) 40W T12 Fluorescents: 152W
 (1) 40W U-Lamp: 44W
 (2) 40W U-Lamps: 76W

Electronic Ballast Data
Consult Factory

Candlepower Distribution



Test No. ITL32268
FUS-S16-340
 Lamp=(3) F40LW/MMII
 Lumens=3450
 Spacing Criteria
 $\perp=1.3$ $\parallel=1.3$
 Efficiency=56.1%



Candlepower

Deg.	⊥	∥
0	2512	2512
5	2498	2517
15	2455	2434
25	2341	2255
35	2073	1949
45	1527	1461
55	899	908
65	416	454
75	172	184
85	28	29
90	0	0

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1989	19.2	34.3
0-40	3260	31.5	56.2
0-60	5175	50.0	89.2
0-90	5801	56.1	100.0
90-180	0	0.0	0.0
0-180	5801	56.1	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	67	67	67	67	65	65	65	62	62	60	60	57	57	56
1	62	60	58	57	59	57	56	57	54	54	52	53	51	50
2	58	54	51	48	53	50	48	51	47	49	46	48	45	44
3	54	49	45	42	48	44	42	46	41	45	40	43	40	38
4	50	44	40	37	43	39	36	42	36	41	35	39	35	34
5	46	39	35	32	39	35	32	38	31	37	31	36	31	30
6	42	36	31	28	35	31	28	34	28	33	27	32	27	26
7	39	32	28	25	32	28	24	31	24	30	24	29	24	23
8	36	29	25	21	29	24	21	28	21	27	21	27	21	20
9	33	26	22	19	26	22	19	25	19	25	18	24	18	17
10	31	24	19	17	23	19	17	23	16	22	16	22	16	15

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

ORDERING INFORMATION

SAMPLE NUMBER: FUS-S16-340-120-82/96-LE3-TCS

Product Family	Steel Gauge	Fixture Width	Lamp Type	Voltage ³	Lens Type	Ballast	Options
FUS=Ultimax Surface Luminaire	S=12 ga. (Ultimax) X=14 ga. (Maximum) D=16 ga. (Medium) N=18 ga. (Minimum)	16=16" Wide	2' Nom. Length T8 Fluorescents 217=(2) 17W Lamps 317=(3) 17W Lamps 417=(4) 17W Lamps T12 Fluorescents² 220=(2) 20W Lamps 320=(3) 20W Lamps 420=(4) 20W Lamps Biaxial Fluorescents 240BX=(2) 40W Lamps 340BX=(3) 40W Lamps T8 U-Lamp 2U6T8=(2) 32W Lamps 2U15/8=(2) 31W Lamps 3U15/8=(3) 31W Lamps 4' Nom. Length T8 Fluorescents 232=(2) 32W Lamps 332=(3) 32W Lamps 432=(4) 32W Lamps T12 Fluorescents 240=(2) 40W Lamps 340=(3) 40W Lamps 440=(4) 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) ⁴ 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	CPH =Continuous Concealed Piano Hinge 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 RIF =Radio Interference Filter SPK =Speaker Housing Compartment (extends housing) WL =Wet Label Auto Control Modules ACM/FNL =for FNL On/Off Switches TCS =Touch Control System ⁵ Stainless Steel Housing SSN =Natural Brushed Finish SSP =Polyester Powder Coat Finish Fasteners SF3 =Allen-Head (center pin reject)
							Accessories 9306 =Allen-Head Wrench 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. ³Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Lighting Representative for availability and ordering information. ⁴For use with Compact Fluorescent, Biaxial, and 20W T12 lamps. ⁵For 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.