

Project		Catalog #		Type	
Prepared by		Notes		Date	



Fail-Safe

FMS | LD4 LED

Confinement/Correctional Surface-mount LED
1x1, 1x2, 1x4, 2x2 and 2x4

Typical Applications

Confinement • Security • Inmate Cells • Psychiatric Wards • Secure Corridors

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Product Certification



Product Feature

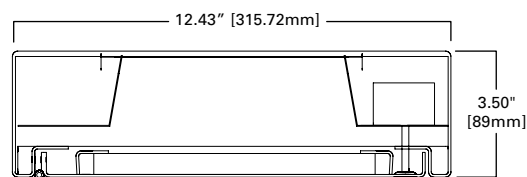


Top Product Features

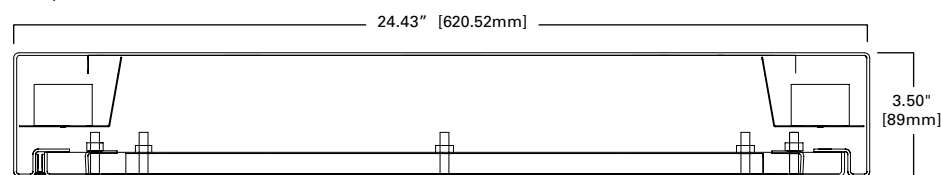
- Shallow depth of 3 1/2" for use with multiple ceiling heights
- Welded and ground housing for superior strength and aesthetics
- Die-formed 12- to 18-gauge steel one-piece housing
- Up to 1/2" thick clear polycarbonate or 3/8" thick clear tempered glass for maximum protection
- 3000K, 3500K, 4000K and 5000K CCT; 80 CRI minimum
- Options to meet Buy American Act requirements

Dimensional and Mounting Details

1' x 1', 1' x 2', 1' x 4'



2' x 2', 2' x 4'



additional product diagrams

Order Information

SAMPLE ORDER NUMBER: **FMS-X24-4-LD4-4STD-40-UNV-80/86-EDC1** or
FMS-S12-2-LD4-2HI-50-277-82/87-EDC1-EL10W

Domestic Preferences	Product Family	Door	Width	Length	LED	No. of LED	Illumination Level	Color Temp.	Voltage
Domestic Preferences ⁽¹⁾	Product Family	Door	Width	Length	LED	No. of LED	Illumination Level	Color Temp.	Voltage
[Blank] =Standard BAA =Buy American Act	FMS	S =12 ga. (Ultimax) X =14 ga. (Maximum) D =16 ga. (Medium) N =18 ga. (Minimum)	24 =24" Wide 12 =12" Wide	1 =1' Length (1' x 1' only) 2 =2' Length 4 =4' Length	LD4 =LED	1 =(1) LED Module 2 =(2) LED Modules 3 =(3) LED Modules (24" width only) 4 =(4) LED Modules (24" width only)	STD =Standard LO =Low HI =High	30 =3000K 35 =3500K 40 =4000K 50 =5000K	UNV =120V-277V 120 =120V 277 =277V 347 =347V ⁽⁶⁾
Notes ⁽¹⁾ Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.									Notes ⁽⁶⁾ 347 emergencies are not available. GLR option not available in 347

Inner Lens	Outer Lens	Electronic Driver	No. of Circuits	Options	Accessories
Inner Lens	Outer Lens	Electronic Driver	No. of Circuits	Options	Accessories ⁽⁷⁾
Fixture Side 80 =0.125 Prismatic Acrylic 81 =0.156 Prismatic Polycarbonate 82 =0.187 Prismatic Polycarbonate	Environment Side 84 =0.125 Clear Polycarbonate 85 =0.187 Clear Polycarbonate 86 =0.250 Clear Polycarbonate 87 =0.375 Clear Polycarbonate 88 =0.500 Clear Polycarbonate 94 =0.187 Clear Tempered Glass 96 =0.250 Clear Tempered Glass 97 =0.375 Clear Tempered Glass	EDC =Electronic Driver, Non-Dimming EDD =Electronic Driver, 0-10V Dimming, 10% ED1D =Electronic Driver, 0-10V Dimming, 1%	1 =1 Circuit 2 =2 Circuits 3 =3 Circuits 4 =4 Circuits	EL7W =Emergency Battery Pack, 7W Output ^{(2), (3), (6)} EL10W =Emergency Battery Pack, 10W Output ^{(2), (3), (6)} EL14W =Emergency Battery Pack, 14W Output ^{(2), (3), (6)} LLNL =Linear LED Night Light, Dimmable ^{(4), (5)} GLR =Fuse and Holder ⁽⁶⁾ WL =Wet Location Under Covered Ceiling Stainless Steel Fixture SSN =Natural Brushed Finish SSP =Polyester Powder Coat Finish Fasteners SF3 =Allen-Head (center pin reject)	9306 =Allen-Head Wrench VRSD =T20 Center Pin Tamperproof TORX® - head screwdriver Notes ⁽⁷⁾ Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
				Notes ⁽²⁾ Not available 1' x 1' or 1' x 2'. ⁽³⁾ Emergency options are not available in 4HL. ⁽⁴⁾ LLNL not available in 1' x 1', 2-module LED cross section or 1' x 2', 2-module LED cross section. ⁽⁵⁾ Nominal 600 delivered lumens. ⁽⁶⁾ 347 emergencies are not available. GLR option not available in 347.	

Product Specifications

Application

- Confinement/correctional luminaire suitable for use in:
 - Inmate cells
 - Psychiatric wards
 - Secure corridors
 - General population areas
- Ideal surface-mount solution when a full door frame is desired

Housing

- Die-formed 12-, 14-, 16 or 18-gauge CRS body construction
- One-piece, seamless housing
- Continuous welded and ground ends
- Maximum impact resistance and prevention of unauthorized fixture penetration
- High gloss, electrostatically applied, White powder coat finish
- Average minimum reflectance 92%

Fasteners and Hinge

- Stainless steel tamper-resistant T20 TORX® screws with center pin reject standard
- Allen head screws with center pin reject optional
- Continuous, stainless steel piano hinge (1/4" diameter knuckle) with welded pin end, preventing removal

Door and Light Mask

- One-piece, CRS door frame with die-formed edges
- Tightly closed corners increase rigidity
- Door gauge matches housing
- Black fixture gasket prevents light leaks

Lens and Lens Retention

- Choice of prismatic acrylic, prismatic polycarbonate on fixture side
- Clear polycarbonate or clear tempered glass on environmental side (see lens options)
- Lens secured by thru-studs
- Vertically adjustable internal CRS hold-downs

LEDs

- Available in 3000K, 3500K, 4000K and 5000K; 80 CRI minimum
- Choice of Standard, Low or High illumination levels
- Projected life is 50,000 hours at 70% lumen maintenance

Electrical

- Electronic driver 120-277V, dimming driver standard
- 0-10V dimming down to 1% or 10%
- Non-dimming available

Compliance

- cULus listed for damp locations
- Wet location listed under covered ceiling optional

Warranty

- Five-year warranty on LEDs and electrical, consult website for details. www.cooperlighting.com/legal

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Nominal Input Watts/Delivered Lumens

 [View IES files](#)

*CRI: 80; CCT: 4000				80/84 Shielding	
Fixture Size	# Modules	Level	Nominal Input Watts	Nominal Delivered Lumens	LPW
1' x 1'	1	LO	5.85	642	109.7
	1	STD	8.325	859	103.2
	1	HI	10.8	1054	97.6
	2	LO	11.7	1284	109.7
	2	STD	16.65	1719	103.2
	2	HI	21.6	2108	97.6
1' x 2'	1	LO	11.7	1244	106.3
	1	STD	16.65	1666	100.1
	1	HI	21.6	2044	94.6
	2	LO	23.4	2488	106.3
	2	STD	33.3	3332	100.1
	2	HI	43.2	4087	94.6
1' x 4'	1	LO	23.4	2709	115.8
	1	STD	33.3	3628	108.9
	1	HI	43.2	4450	103
	2	LO	46.8	5418	115.8
	2	STD	66.6	7256	108.9
	2	HI	86.4	8900	103
2' x 2'	1	LO	11.7	1591	136
	1	STD	16.65	2131	128
	1	HI	21.6	2614	121
	2	LO	23.4	3183	136
	2	STD	33.3	4263	128
	2	HI	43.2	5228	121
	3	LO	35.1	4774	136
	3	STD	49.95	6394	128
	3	HI	64.8	7843	121
	4	LO	46.8	6366	136
	4	STD	66.6	8525	128
	4	HI	86.4	10457	121
2' x 4'	1	LO	23.4	3183	136
	1	STD	33.3	4263	128
	1	HI	43.2	5228	121
	2	LO	46.8	6366	136
	2	STD	66.6	8525	128
	2	HI	86.4	10457	121
	3	LO	70.2	9549	136
	3	STD	99.9	12788	128
	3	HI	129.6	15685	121
	4	LO	93.6	12732	136
	4	STD	133.2	17050	128
	4	HI	172.8	20913	121

Lumen Calculator

CCT	Multiplier
2000	0.673
2700	0.893
3000	0.943
3500	0.99
4000	1
5000	1.017

Lens Multiplier Table

	Lens	Multiplier
Fixture Side	80	1
	81	0.95
	82	0.93
Environment Side	84	1
	85	0.981
	86	0.969
	87	0.938
	88	0.844
	94	1
	96	0.991
97	0.956	

Nominal input wattage values include LED voltage, drive current, and typical driver efficiency. Refer to LM79 data/photometric files for exact delivered lumen values and input wattage. Values in table are nominal values only.

Dimensional and Mounting Details

