



CLEAN ROOM LED

FCR710 (1X4) SERIES

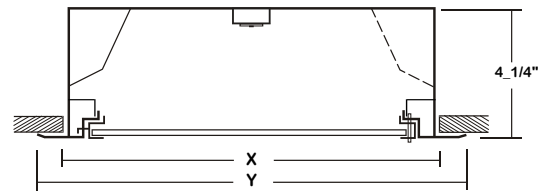
CLASS 1000/10000 TRIM FLANGE CLEAN ROOM LUMINAIRE

DATE	
JOB	

WWW.LALIGHTING.COM
626-454-8300

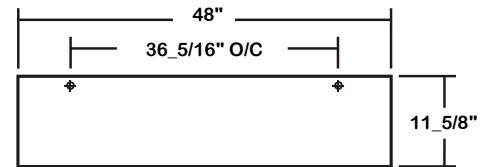
CLASS 1000/10000 RECESSED MOUNTED LED LUMINAIRE

DIMENSIONS



Ceiling Opening: X - 12_1/2" x 48_1/2"
Overall Width By Length: Y - 13_5/8" x 50"

⌀ 7/8" K.O.



APPLICATIONS

- Clean Room, Sealed Ceiling Areas, Commercial

FEATURES

- 0-10V dimming driver standard (See *DRIVER OPTIONS* for other dimming types)
- Supports California Title 24 compliance

OPTIONS

- Full customization available upon request
- Additional lumen packages and color temperatures available
- Controls and sensors available (See *SENSOR OPTIONS* for controls and sensors)
- Wireless control options available (See *SENSOR OPTIONS* for wireless controls)
- Variety of lenses available (See *OPTICAL OPTIONS* for lenses)
- Emergency battery pack available (See *BATTERY PACK OPTIONS* for battery pack options)
- Antimicrobial finished housing and door frame available
- Tamper proof screws available
- Hanger yokes available (See *ACCESSORIES* for details)

SPECIFICATIONS

CONSTRUCTION

- Class 1000/10000 / ISO Class 6 equivalent / ISO Class 7 equivalent
- 22 ga. cold rolled steel welded housing
- All parts fitted and sealed
- 20 ga. cold rolled steel door frame secured by T-hinges and positive spring loaded latches
- Door frame sealed with neoprene gasket

FINISH

- Baked white powder coated finish / welded and painted after fabrication / minimum reflectance 90%

OPTICAL

- Inverted clear prismatic acrylic lens (nominal 0.125) standard

ELECTRICAL

- High efficiency drivers coupled with long-life LEDs
- Service life greater than 50,000 hours (L70)
- Universal voltage 120V through 277V (347V / 480V available)
- Power Factor (PF) ≥ 0.9
- Total Harmonic Distortion (THD) ≤ 20%

LISTING

- UL USA and Canada listed / suitable for damp locations

WARRANTY

- 5-year limited warranty



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Revised 08-06-18

ORDERING INFORMATION

EXAMPLE: FCR710-4-4L-FSW-PA2-TP-BPL10-1DRDM-UNV-1/840

SERIES	LED LUMEN PACKAGE	EFFICACY	NOMINAL LENGTH	FINISH	DOOR FRAME	OPTICAL	MECHANICAL	ELECTRICAL	DRIVER	VOLTAGE	# OF LED ROW	CRI / CCT
FCR710			4L		FSW				1DRDM	UNV		
FCR710 Class 1000 / 10000 Trim Flange Clean Room LED Luminaire	2 Nom. 2000 Lumens 4 Nom. 4000 Lumens 6 Nom. 6000 Lumens 8 Nom. 8000 Lumens 12 Nom. 12000 Lumens *Additional Lumen Packages Available	(Blank) Standard HE High Efficacy (Only 2000 / 4000 / 6000 / 12000 lumens Systems)	4L 1' x 4'	AMF Antimicrobial Finished Housing and Door Frame *Leave Blank if Not Specified	FSW Flat Steel White Enamel Door Frame See DOOR FRAME for Options	PA2 Clear Prismatic Acrylic 0.125 Nominal FPA2 Frosted Prismatic Acrylic 0.125 Nominal See OPTICAL OPTIONS for Options	TP Tamper Proof Screws (Hex Socket with Post) *Leave Blank if Not Specified <i>Additional Mechanical Options</i>	BPL10 Emergency Battery Pack, Constant 10W Nom. 1500 lm See BATTERY PACK OPTIONS for Options MSxx Motion Sensor WLC(LED RU) Wireless Control See SENSOR OPTIONS for Options *Leave Blank if Not Specified <i>Additional Electrical Options</i>	1DRDM 0-10V One Dimming Driver See DRIVER OPTIONS for Options	UNV 120V-277V See DRIVER OPTIONS for Options	1 One LED Row (Only 2000 / 4000 / 6000 / 8000 lumens Systems) 2 Two LED Rows (Only 12000 lumens System)	830 80+CRI / 3000K Color Temp. 835 80+CRI / 3500K Color Temp. 840 80+CRI / 4000K Color Temp. 850 80+CRI / 5000K Color Temp. *Additional Color Temp. Available

SYSTEM DATA

THESE ARE THE MOST POPULAR LUMEN PACKAGES. PLEASE CONSULT FACTORY FOR ADDITIONAL SYSTEM DATA.

NOMINAL SIZE	LED LUMEN PACKAGE	OPTICAL OPTION	CRI / CCT	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	FLUORESCENT / CFL EQUIVALENT	IES FILES
1' x 4'	2000 lm	PA2	840	2036 lm	15.7 W	129.5 lm/W	1-F32T8	*
	2000HE lm	PA2	840	1932 lm	12.7 W	152.2 lm/W	1-F32T8	*
	4000 lm	PA2	840	2926 lm	33.1 W	88.4 lm/W	2-F32T8, 1-F54T5HO	LA-T3173-3
	4000HE lm	PA2	840	3845 lm	25.9 W	148.3 lm/W	2-F32T8, 1-F54T5HO	*
	6000 lm	PA2	840	5559 lm	52.3 W	106.2 lm/W	3-F32T8	*
	6000HE lm	PA2	840	5705 lm	39.6 W	143.9 lm/W	3-F32T8	*
	8000 lm	PA2	840	7509 lm	53.8 W	139.6 lm/W	4-F32T8, 2-F54T5HO	*
	12000 lm	PA2	840	11081 lm	104.6 W	105.9 lm/W	6-F32T8, 3-F54T5HO	*
	12000HE lm	PA2	840	11371 lm	79.3 W	143.5 lm/W	6-F32T8, 3-F54T5HO	*

NOTE:
System data above is based on 120V input voltage.
Actual performance may differ as a result of end-user environment and application.
This fixture has been tested and listed in accordance with UL Standards. L.A. Lighting certifies that it will operate safely when installed properly, and within an ambient temperature range from -20°C to 35°C.

Additional lumen packages and color temperatures available.

PERFORMANCE DATA

[VIEW PHOTOMETRICS](#)



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SENSOR OPTIONS

HIGH FREQUENCY - INTERNALLY MOUNTED BEHIND FIXTURE LENS

MSHPC - Motion Sensor High Frequency (Microwave) with Photocell Option

- Super high frequency motion sensor (also known as microwave sensor) which detects movement when installed behind low density fixture materials, such as polycarbonate, acrylic and glass diffusers
- Holds lights OFF when sufficient daylight is present regardless of motion detection
- Selectable sensitivity and detection area
- Universal Voltage (120V-277V)
- Photocell is disabled by default

MSH - Motion Sensor High Frequency (Microwave)

- Super high frequency motion sensor (also known as microwave sensor) which detects movement when installed behind low density fixture materials, such as polycarbonate, acrylic and glass diffusers
- Turns light ON/OFF based on motion detection
- Universal Voltage (120V-277V)



CONTROLS AND SENSORS

WLC(LED RU) - EnOcean® LED Relay Zone Controller

- Supports a single LED fixture or multiple daisy chained LED fixtures
- Module installed inside lighting fixture

ESRPU-W-EO - EnOcean® Rocker Switch – Single – Surface Mount

- Wireless single rocker switch with mounting plate
- No batteries needed

ESDRPU-W-EO - EnOcean® Rocker Switch – Double – Surface Mount

- Wireless double rocker switch with mounting plate
- No batteries needed

S3054-N30 - EnOcean® Navigan NWC 300U – Commissioning Tool

- Navigan Wireless Commissioner is used to configure EnOcean controllers & sensors
- It can be used to define link tables, change parameters/settings, and to edit & store projects
- Configuration settings can be saved and cloned to enable quick configuration
- Connectivity is through the NWC 300U USB Stick

EOSWU-W-EO - EnOcean® Occupancy Sensor – Wall Mount

- Wireless wall mounted occupancy sensor
- Solar powered - no batteries needed (coin battery operated in low light conditions)
- PIR motion sensor with both wide angle (50') and long range (100') options
- Mounting height: 6-8 feet

EOSCU-W-EO - EnOcean® Occupancy Sensor – Ceiling Mount

- Wireless ceiling mounted occupancy sensor
- Solar powered - no batteries needed (coin battery operated in low light conditions)
- PIR motion sensor with 360 degree viewing angle lens (34' diameter)
- Mounting height: 7-10 feet

EOSCU-W-EO - EnOcean® Light Level Sensor

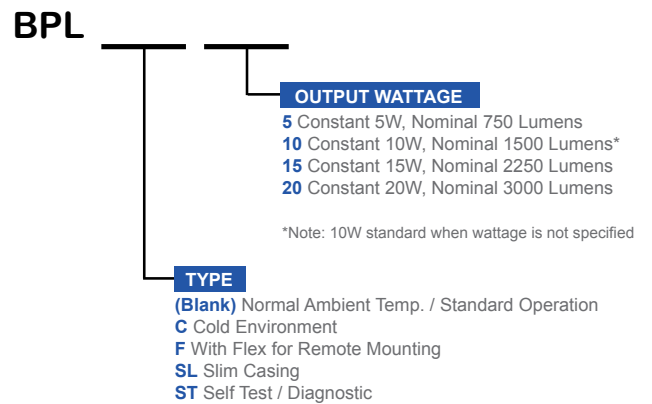
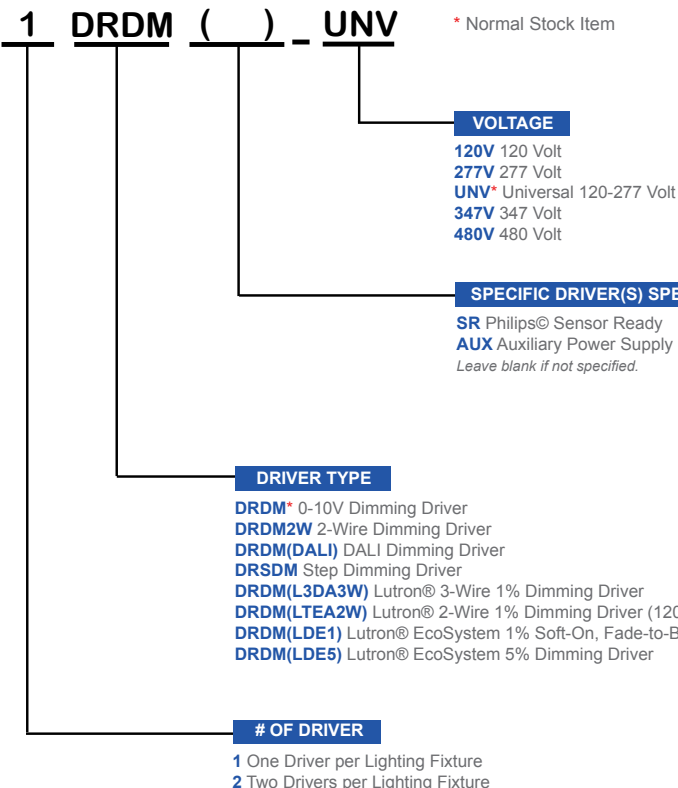
- Light Level sensor that measures and reports the level of available natural light
- Solar powered - no batteries needed (coin battery operated in low light conditions)
- Enables implementation of daylight harvesting control systems
- Mounting position: At the ceiling, close to ambient light source

DRIVER OPTIONS

PLEASE CONSULT FACTORY TO SEE IF YOUR SELECTED DRIVER OPTION WORKS WITH THIS FIXTURE.

BATTERY PACK OPTIONS

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OPTICAL OPTIONS

STANDARD LENSES FOR FCR710

PA2	Clear Prismatic Acrylic, Nom. 0.125 OA Thickness, Female Prisms 3/16 Square Base
FPA2	Frosted Prismatic Acrylic, Nom. 0.125 OA Thickness

ADDITIONAL AVAILABLE LENSES

(Not all optics suitable for fixture. Please consult factory to ensure selected optical option suits fixture. Please consult factory regarding any optical options not shown)

EXTRUDED PRISMATIC PATTERNS

PA	Clear Prismatic Acrylic, No Thickness Specified, Female Prisms 3/16 Square Base
PA3	Clear Prismatic Acrylic, Min. 0.125 OA Thickness, Female Prisms 3/16 Square Base
PA8	Clear Prismatic Acrylic, Nom. 0.187 OA Thickness, Female Prisms 3/16 Square Base
P15	Clear Prismatic Acrylic, Nom. 0.200 OA Thickness, Female Prisms 3/8 Square Base
P195	Clear Prismatic Acrylic, Nom. 0.150 OA Thickness, Male Conical Prisms 3/16 Square Base
P198	Clear Prismatic Acrylic, Nom. 0.187 OA Thickness, Male Conical Prisms 3/16 Square Base
PWA2	White Prismatic Acrylic, Nom. 0.125 OA Thickness, Female Prisms 3/16 Square Base
P3E	3E Batwing Pattern Lens
P195RF	Clear Prismatic Acrylic, 19 Shunts Radio Frequencies To Ground, Nom. 0.150 OA Thickness
PA2UV	Clear Prismatic Acrylic, UV Blocking, Nom. 0.125 OA Thickness

FLAT DIFFUSERS

FWA	Flat White Acrylic, No Thickness Specified, Stippled Finish	FWA2	Flat White Acrylic, Nom. 0.125 Thickness, Stippled Finish
FFA	Frosted Flat Acrylic, No Thickness Specified	FFA2	Frosted Flat Acrylic, Nom. 0.125 Thickness
CA8	Clear Acrylic, Nom. 0.187 OA Thickness	CA	Clear Acrylic, No Thickness Specified
		CA2	Clear Acrylic, Nom. 0.125 OA Thickness

HIGH IMPACT

VL25	Clear Polycarbonate, Nom. 0.125 Thickness with 0.125 Clear Prismatic Acrylic Overlay
VL37	Clear Polycarbonate, Nom. 0.250 Thickness with 0.125 Clear Prismatic Acrylic Overlay
CPC2	Clear Polycarbonate, Nom. 0.125 OA Thickness
CPC8	Clear Polycarbonate, Nom. 0.187 OA Thickness
PPC8	Clear Prismatic Polycarbonate, Nom. 0.187 OA Thickness, Female Prisms 3/16 Square Base
DRP3	High Impact Clear Prismatic Acrylic, Min. 0.125 OA Thickness, Female Prisms 3/16 Square Base
DRP2	High Impact Clear Prismatic Acrylic, Nom. 0.125 OA Thickness, Female Prisms 3/16 Square Base
DRP8	High Impact Clear Prismatic Acrylic, Nom. 0.187 OA Thickness, Female Prisms 3/16 Square Base
PPC2	Clear Prismatic Polycarbonate, Nom. 0.125 OA Thickness, Female Prisms 3/16 Square Base



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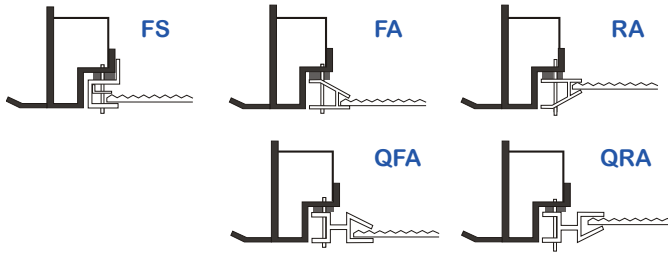
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DOOR FRAME

CROSS SECTION



FEATURES

- Inverted Lens
- T-Hinges with Positive Spring Loaded Latches
- Sealed with Neoprene Gasket
- Light Stop Covers Installed
- Internal Frame Rail

FS W

FINISHES

- W** White Enamel
- B** Black Enamel
- N** Natural Anodized Aluminum
(Only FA / RA / QFA / QRA styles)

STYLES

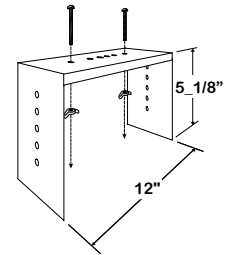
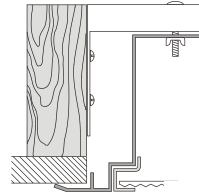
- FS** Flat Steel (with internal frame rail)
- FA** Flat Extruded Aluminum
- RA** 5/8" Regressed Extruded Aluminum
- QFA** Flat Extruded Aluminum-Black Reveal
- QRA** 1/2" Regressed Extruded Aluminum-Black Reveal

ACCESSORIES

HS-12

- Hanger Yokes
- Compatible with all types of recessed flanged fixtures
- 1/4 - 20 x 3" machine screws locate into knockout on back of fixture housing
- Two (2) per fixture

Note: Must drill own holes. Caulking compound should be used to seal the holes.



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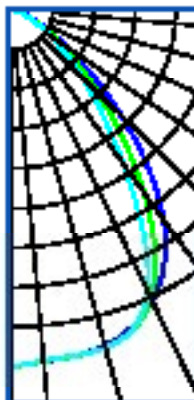
PHOTOMETRIC DATA - FCR710 SERIES

FCR710-4-4L-PA2-1DRDM-UNV-1/840

TEST NO.=LA-TS173-3
 LED TYPE=48 LED MODULE
 NO. OF MODULE=2
 SYSTEM WATT (W)=33.1
 CRI ≥ 80
 L70(Hrs.) ≥ 60,000
 PHOTOMETRY TYPE=C



1x4
 Ceiling Opening: X - 12.10" x 48.12"
 Overall Width by Length: Y - 12.50" x 50"



CANDLEPOWER

ANGLE	END	45	CROSS
0	1782	1782	1782
5	1763	1761	1768
10	1738	1735	1748
20	1603	1599	1581
35	1279	1111	938
45	747	587	488
55	318	264	230
65	107	95	82
75	29	27	24
85	8	4	3
90	0	0	1
95	0	0	0
115	0	0	0
125	0	0	0
135	0	0	0
145	0	0	0
155	0	0	0
165	0	0	0
175	0	0	0
180	0	0	0

ZONAL LUMEN SUMMARY

DEGREES	LUMENS	% LAMP	% FOOTC
0-30	1398	32.8	47.6
0-60	2092	63.8	71.8
0-90	2800	85.3	98.7
0-90	2928	88.3	100.0
90-120	.02	0.0	0.0
90-180	.02	0.0	0.0
90-180	.02	0.0	0.0
0-180	2928	88.3	100.00

Luminaire Output= 2928 lumens

Luminaire Efficiency = 88.4 lm/W

SPACING CRITERION

ALONG	CROSS
1.19	1.09



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