



# CLEAN ROOM LED

## FGR210 (1X4) SERIES

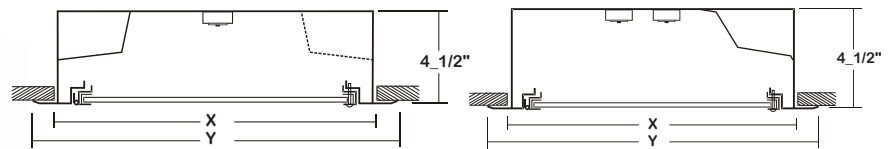
CLASS 100 TRIM FLANGE CLEAN ROOM LUMINAIRE

DATE	
JOB	

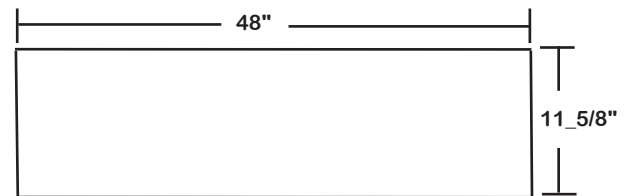
WWW.LALIGHTING.COM  
626-454-8300

### CLASS 100 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"



### 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

- Wet location available (UL listed with sprinkler test)
- 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)
- Tunable white available (2700K-6500K)

### SPECIFICATIONS

#### CONSTRUCTION

- Class 100 / ISO Class 5 equivalent
- 22 ga. cold rolled steel welded housing
- All parts fitted and sealed, no unused holes or knockouts
- 20 ga. cold rolled steel door frame secured by full length stainless steel piano hinge and 2 stainless steel captive screws
- Door frame and lens sealed with closed cell 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)  $\geq 0.9$
- Total Harmonic Distortion (THD)  $\leq 20\%$

#### LISTING

- UL USA and Canada listed / suitable for damp locations

#### WARRANTY

- 5-year limited warranty



**Los Angeles Lighting Mfg. Co.**  
Headquarters  
10141 Olney Street  
El Monte, CA 91731  
Made in the USA

Contact Us  
T: 626-454-8300  
F: 626-454-8399  
www.lalighting.com



Due to continued product improvements and enhancements, Los Angeles Lighting Manufacturing Company reserves the right to alter specifications, dimensions, data, and/or materials without notice. Please visit our website to view the most current information.

**MADE IN THE U.S.A.**

Revised 02-017-20

**WARNING**

ORDERING INFORMATION

EXAMPLE: FCR210-2-4L-FSW-PA2-BPL1.5-DRDM-UNV-1/840

SERIES	LED LUMEN PACKAGE	EFFICACY	NOMINAL LENGTH	FINISH	DOOR FRAME	OPTICAL	MECHANICAL	ELECTRICAL	DRIVER	VOLTAGE	# OF LED ROW	CRI / CCT
<b>FCR210</b>			<b>4L</b>		<b>FSW</b>				<b>DRDM</b>	<b>UNV</b>		
<b>FCR210</b> Class 100 Trim Flange Clean Room LED Luminaire	<b>2</b> Nom. 2000 Lumens <b>4</b> Nom. 4000 Lumens <b>6</b> Nom. 6000 Lumens <b>8</b> Nom. 8000 Lumens <b>12</b> Nom. 12000 Lumens  <b>*Additional Lumen Packages Available</b>	<b>(Blank)</b> Standard  <b>HE</b> High Efficacy (Only 2000 / 4000 / 6000 / 12000 lumens Systems)	<b>4L</b> 1' x 4'	<b>AMF</b> Antimicrobial Finished Housing and Door Frame  <b>*Leave Blank if Not Specified</b>	<b>FSW</b> Flat Steel White Enamel Door Frame  See <a href="#">DOOR FRAME for Options</a>	<b>PA2</b> Clear Prismatic Acrylic 0.125 Nominal  <b>DRP8</b> High Impact Clear Prismatic Acrylic 0.187 Nominal  <b>FPA2</b> Frosted Prismatic Acrylic 0.125 Nominal  See <a href="#">OPTICAL OPTIONS for Options</a>	<b>WL</b> Wet Location  <b>TP</b> Tamper Proof Screws (Hex Socket with Post)  <b>*Leave Blank if Not Specified</b>  <a href="#">Additional Mechanical Options</a>	<b>BPL1.5</b> Emergency Battery Pack, Nom. 1500 lm  See <a href="#">BATTERY PACK OPTIONS for Options</a>  <b>WLC(LED RU)</b> Wireless Control  See <a href="#">SENSOR OPTIONS for Options</a>  <b>*Leave Blank if Not Specified</b>  <a href="#">Additional Electrical Options</a>	<b>DRDM</b> 0-10V Dimming Driver  See <a href="#">DRIVER OPTIONS for Options</a>	<b>UNV</b> 120V-277V  See <a href="#">DRIVER OPTIONS for Options</a>	<b>1</b> One LED Row (Only 2000 / 4000 / 6000 / 8000 lumens Systems)  <b>2</b> Two LED Rows (Only 12000 lumens System)	<b>830</b> 80+CRI / 3000K Color Temp.  <b>835</b> 80+CRI / 3500K Color Temp.  <b>840</b> 80+CRI / 4000K Color Temp.  <b>850</b> 80+CRI / 5000K Color Temp.  <b>*Additional Color Temp. Available</b>

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 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	<a href="#">LA-T3173-1</a>
	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](#)



**Los Angeles Lighting Mfg. Co.**  
Headquarters  
10141 Olney Street  
El Monte, CA 91731  
Made in the USA  
  
Contact Us  
T: 626-454-8300  
F: 626-454-8399  
www.lalighting.com



Due to continued product improvements and enhancements, Los Angeles Lighting Manufacturing Company reserves the right to alter specifications, dimensions, data, and/or materials without notice. Please visit our website to view the most current information.

**MADE IN THE U.S.A.**

Revised 02-17-20

**WARNING**

**SENSOR OPTIONS**



**CONTROLS AND SENSORS**

**WLC(LEDRU) - 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**

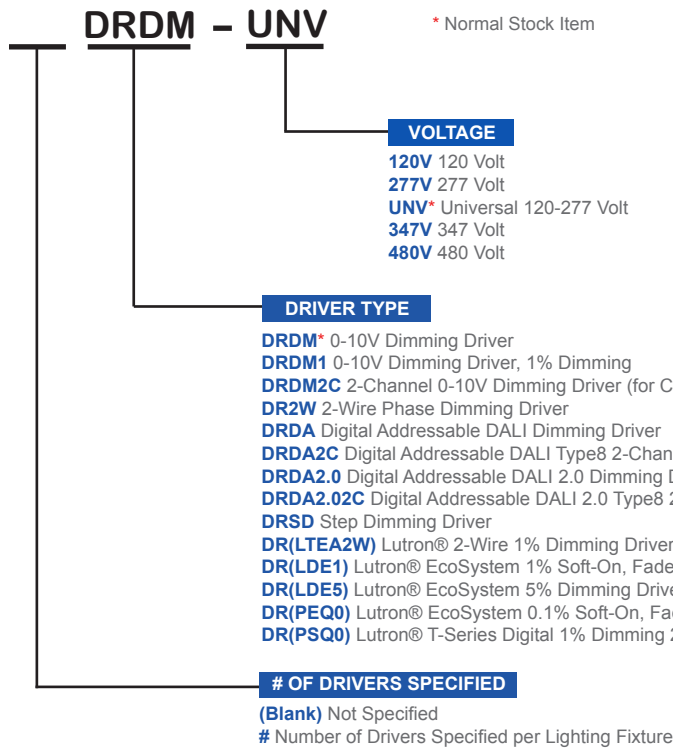
- Wireless ceiling mounted occupancy sensor
- Solar powered - no batteries needed (coin battery operated in low light conditions)
- PIR motion sensor with 360 degree viewing angle lens (34' diameter)
- Mounting height: 7-10 feet

**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

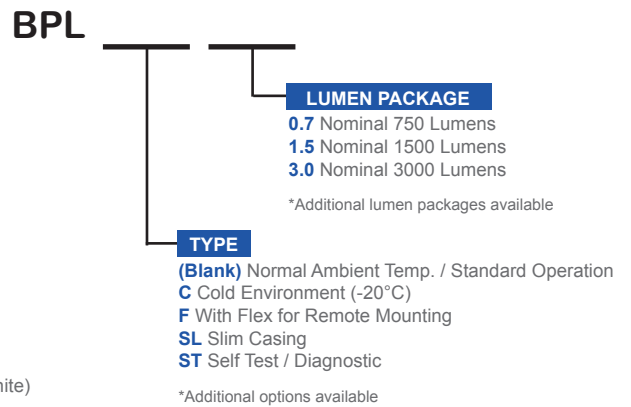
**DRIVER OPTIONS**

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



**BATTERY PACK OPTIONS**

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



**Los Angeles Lighting Mfg. Co.**  
 Headquarters  
 10141 Olney Street  
 El Monte, CA 91731  
 Made in the USA

Contact Us  
 T: 626-454-8300  
 F: 626-454-8399  
 www.lalighting.com



Due to continued product improvements and enhancements, Los Angeles Lighting Manufacturing Company reserves the right to alter specifications, dimensions, data, and/or materials without notice. Please visit our website to view the most current information.

**MADE IN THE U.S.A.**

Revised 02-17-20

**WARNING**

**OPTICAL OPTIONS**

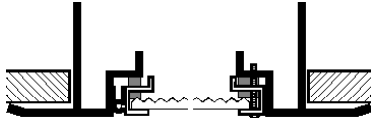
**STANDARD LENSES FOR FCR210**

<b>PA2</b>	Clear Prismatic Acrylic, Nom. 0.125 OA Thickness, Female Prisms 3/16 Square Base
<b>DRP8</b>	High Impact Clear Prismatic Acrylic, Nom. 0.187 OA Thickness, Female Prisms 3/16 Square Base
<b>FPA2</b>	Frosted Prismatic Acrylic, Nom. 0.125 OA Thickness

[CLICK HERE FOR FULL OPTICAL OPTIONS LIST](#)

**DOOR FRAME**

**CROSS SECTION**



**FEATURES**

- Full Length Stainless Steel Piano Hinge
- Inverted Lens
- Two 10-24 Stainless Steel Captive Machine Screws
- Sealed with Closed Cell Neoprene Gasket

**FS W**

**FINISHES**

- W** White Enamel
- B** Black Enamel

**STYLES**

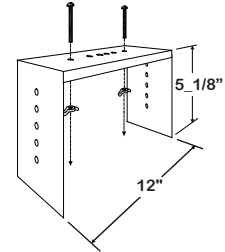
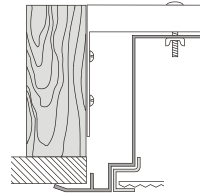
- FS** Flat Steel

**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.



**Los Angeles Lighting Mfg. Co.**  
 Headquarters  
 10141 Olney Street  
 El Monte, CA 91731  
 Made in the USA

Contact Us  
 T: 626-454-8300  
 F: 626-454-8399  
 www.lalighting.com



Due to continued product improvements and enhancements, Los Angeles Lighting Manufacturing Company reserves the right to alter specifications, dimensions, data, and/or materials without notice. Please visit our website to view the most current information.

**MADE IN THE U.S.A.**

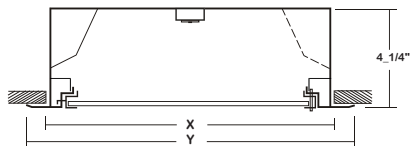
Revised 02-17-20

**WARNING**

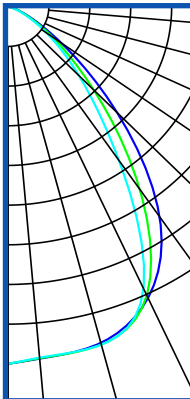
# PHOTOMETRIC DATA - FCR210 SERIES

## FCR210-4-4L-FSW-PA2-1DRDM-UNV-1/840

TEST NO. = LA-T3173-1  
 LED TYPE = 48 LED MODULE  
 NO. OF MODULE = 2  
 SYSTEM WATT (W) = 33.1  
 CRI ≥ 80  
 L70(Hrs.) ≥ 50,000  
 PHOTOMETRY TYPE = C



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



### CANDLEPOWER

ANGLE	END	45	CROSS
0	1782	1782	1782
5	1763	1761	1758
15	1736	1745	1746
25	1603	1589	1551
35	1279	1111	936
45	747	587	486
55	316	264	230
65	107	95	82
75	29	27	24
85	5	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	% FIXTURE
0-30	1395	32.5	47.6
0-40	2092	48.8	71.5
0-60	2800	65.3	95.7
0-90	2925	68.3	100.0
90-120	.02	0.0	0.0
90-150	.02	0.0	0.0
90-180	.02	0.0	0.0
0-180	2926	68.3	100.00

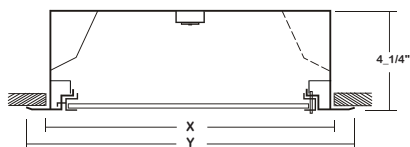
Luminaire Output = 2926 lumens  
 Luminaire Efficacy = 88.4 lm/W

### SPACING CRITERION

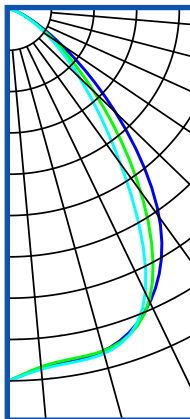
ALONG	ACROSS
1.19	1.09

## FCR210-6-4L-FSW-PA2-1DRDM-UNV-1/840

TEST NO. = LA-T3310-2  
 LED TYPE = 48 LED MODULE  
 NO. OF MODULE = 2  
 SYSTEM WATT (W) = 51.2  
 CRI ≥ 80  
 L70(Hrs.) ≥ 50,000  
 PHOTOMETRY TYPE = C



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



### CANDLEPOWER

ANGLE	END	45	CROSS
0	2690	2690	2690
5	2608	2598	2617
15	2562	2560	2582
25	2341	2329	2266
35	1839	1611	1365
45	1061	842	699
55	447.7	377.2	330.7
65	151.6	136.1	119.1
75	41.1	38.8	35.1
85	5.42	4.62	3.55
90	0.08	0.14	0.08
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	% FIXTURE
0-30	2048	33.45	48.23
0-40	3058	49.93	71.99
0-60	4069	64.44	95.78
0-90	4248	69.36	100.0
90-120	0.03	0.00	0.00
90-150	0.03	0.00	0.00
90-180	0.03	0.00	0.00
0-180	4248	69.36	100.00

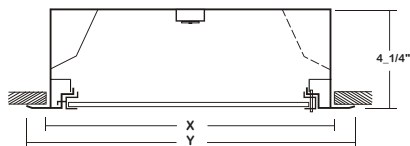
Luminaire Output = 4247.8 lumens  
 Luminaire Efficacy = 82.96 lm/W

### SPACING CRITERION

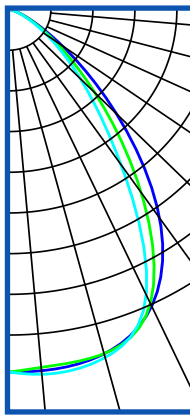
ALONG	ACROSS
1.15	1.07

## FCR210-8-4L-FSW-PA2-1DRDM-UNV-1/840

TEST NO. = LA-T3311-2  
 LED TYPE = 48 LED MODULE  
 NO. OF MODULE = 2  
 SYSTEM WATT (W) = 52.5  
 CRI ≥ 80  
 L70(Hrs.) ≥ 50,000  
 PHOTOMETRY TYPE = C



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



### CANDLEPOWER

ANGLE	END	45	CROSS
0	3439	3439	3439
5	3439	3407	3474
15	3382	3379	3417
25	3105	3077	2987
35	2414	2119	1796
45	1397	1118	931
55	594.8	500.2	435.6
65	199.8	179.7	158.3
75	56.84	51.17	46.26
85	7.44	5.91	4.37
90	0.28	0.17	0.06
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	% FIXTURE
0-30	2705	33.45	48.24
0-40	4032	49.86	71.89
0-60	5372	66.41	95.77
0-90	5609	69.35	100.0
90-120	0.05	0.00	0.00
90-150	0.05	0.00	0.00
90-180	0.05	0.00	0.00
0-180	5609	69.35	100.00

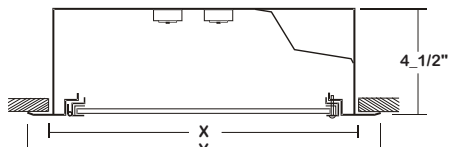
Luminaire Output = 5608.8 lumens  
 Luminaire Efficacy = 106.83 lm/W

### SPACING CRITERION

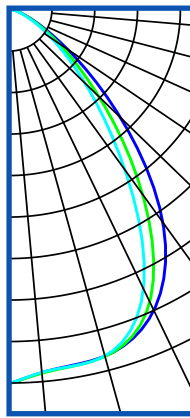
ALONG	ACROSS
1.18	1.09

## FCR210-12-4L-FSW-PA2-DRDM-UNV-2/835

TEST NO. = LA-T3485-1  
 LED TYPE = 48 LED MODULE  
 NO. OF MODULE = 4  
 SYSTEM WATT (W) = 100.7  
 CRI ≥ 80  
 L70(Hrs.) ≥ 50,000  
 PHOTOMETRY TYPE = C



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



### CANDLEPOWER

ANGLE	END	45	CROSS
0	5028	5028	5028
5	4897	4908	4895
15	4820	4825	4815
25	4438	4303	4097
35	3436	2961	2550
45	1961	1564	1308
55	829	702	598
65	278	252	218
75	78	71	64
85	11	8	6
90	0	0	0
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	% FIXTURE
0-30	3819	32	48
0-40	5689	48	72
0-60	7563	64	96
0-90	7893	67	100
90-120	0	0	0
90-150	0	0	0
90-180	0	0	0
0-180	7893	67	100

Luminaire Output = 7893 lumens  
 Luminaire Efficacy = 78.4 lm/W  
 Luminaire Efficiency = 66.91%

### SPACING CRITERION

ALONG	ACROSS
1.17	1.05



**LOS ANGELES LIGHTING MFG. CO.**

10141 OLNEY ST. / EL MONTE, CA 91731

TEL 626-454-8300 | FAX 626-454-8399 |

[www.lalighting.com](http://www.lalighting.com)