LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FS Series

2FSL4

2' x 4'
LED

FEATURES & SPECIFICATIONS

INTENDED USE — The FS Series recessed LED luminaire combines modern aesthetics and performance in a general lighting product that enables the transformation from fluorescent to LED. The high efficacy light engine delivers long life and excellent color to ensure a quality lighting installation. Integrated controls options provide for design flexibility and optimum energy savings. Multiple lumen packages and driver options provide solutions for all your lighting applications. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.

CONSTRUCTION — Rugged, one-piece cold-rolled steel coated polyester, painted after fabrication. The satin white lens provides excellent shielding and wide distribution. End plates include integral T-bar clips. Fixture may be mounted and wired in continuous rows. Total fixture height is only 4-3/8".

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior illumination for extended service life. 80% LED lumen maintenance at 60,000 hours (L80/60,000). The LEDs have a CRI of 82.

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight®controls make each luminaire addressable, allowing them to digitally communicate with other nLight enabled controls such as dimmers, switches, and nLight AIR RIO. Simply connect all the nLight enabled control devices and the FSLED luminaires using standard Cat-5 cabling, or the nLight AIR wireless network. Unique plug-and-play convenience allows devices and luminaires to automatically discover each other and self-commission.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Step-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

Driver disconnect provided where required to comply with US and Canadian codes.

Integrated Sensor (nLight Wired Networking): This sensor is nLight-enabled, meaning it has the ability to communicate over an nLight network. When wired, using CAT-5 cabling, with other nLight-enabled sensors, power packs, or WallPods, an nLight control zone is created. Once linked to a Gateway, directly or via a Bridge, the zone becomes capable of remote status monitoring and control via SensorView software. See page 2 for the nLight sensor options.

Integrated Smart Sensor (nLight Air Wireless Platform): The RES7 sensor is nLight AIR enabled, meaning it has the ability to communicate over the wireless nLight control platform. It is both a digital PIR occupancy sensor/automatic dimming photocell. It pairs to other luminaires and wall switches through our mobile app CL**AIR**ITY+, which allows for simple sensor adjustment. See page 4 for more details on the Integrated Smart Sensor.

INSTALLATION — Unique grid interfacing arrangement provides mounting into standard 1" and 9/16" tee bar or screw slot grids. 9/16" allows fixture trim to hang level with architectural ceiling tiles. Drywall ceiling adaptors available. Suitable for damp location.

LISTINGS — CSA certified to meet US and Canadian standards. IC rated. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

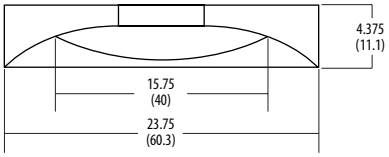
Stock Configurations
2FSL4 40L EZ1 LP835
2FSL4 40L EZ1 LP840

DIMENSIONS

All dimensions are inches (centimeters) unless otherwise specified.

Specifications

Length: 47.75 (121.3)
Width: 23.75 (60.3)
Depth: 4.375 (11.1)



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

2FSL4 LED Recessed Lighting 2'x4'

A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: 2FSL4 40L GZ10 LP835

2FSL4					
Series	**Air function**	**Lumens**[1]	**Lens**	**Voltage**	**Driver**	**Color temperature**
2FSL4 2X4 FSL	(blank) Static H Heat removal	30L 3000 40L 4000 48L 4800 60L 6000 72L 7200 85L 8500 100L 10000[2] 120L 12000[2]	(blank) Satin white	(blank) MVOLT 347 347[3]	EZ1 eldoLED dims to 1%, 0-10V EZB eldoLED dims to black, 0-10V GZ1 Dims to 1% (0-10V dimming)[4] GZ10 Dims to 10% (0-10V dimming)[4] EDB eldoLED DALI[5] SLD Step-level dimming[5,6] EOHN On/Off (non-dim)	LP830 3000 K LP835 3500 K LP840 4000 K LP850 5000 K

Controls	
(blank)	No controls
N80	nlight® with 80% lumen management
N80EMG	nlight® with 80% lumen management. For use with generator supply EM power.
N100	nlight® without lumen management
N100EMG	nlight® without lumen management. For use with generator supply EM power.
NLTAIR2 RIO	nlight® AIR radio module without sensors[7]

Options	
BDP	Disconnect Plug
EL7L	700 lumen battery pack (Noncompliant with CA T20)
EL14L	1400 lumen battery pack (Noncompliant with CA T20)
E10WLCP	EM Self-Diagnostic battery pack, 10W Constant Power, Certified in CA Title 20 MAEDBS
CP	Chicago plenum[11]
BGTD	Bodine Generator Transfer Device[8,9]
PWS1836	6' prewire, 3/8" diameter, 18-gauge, 1-circuit
PWS1846	6' prewire, 3/8" diameter, 18-gauge, 2-circuit
NPLT	Narrow pallet
GLR	Fast-blowing fuse[10]
GMF	Slow-blowing fuse[10]

Accessories: *Order as separate catalog number.*	
2FS4 F916	Trim to adjust fixture mounting flush with 9/16" T-bar; for 2x4 fixture
DGA24 FS/VT	Drywall ceiling adaptor , unit installation
2X4SMKSHP PAF	Surface Mount Troffer Kit Post Paint
RK8BDP 2P U	Disconnect Plug (BDP), 2 Pole, Package of 1
RK8BDP 3P U	Disconnect Plug (BDP), 3 Pole, Package of 1
RK8BDP 2P J10	Disconnect Plug (BDP), 2 Pole, Package of 10
RK8BDP 2P J40	Disconnect Plug (BDP), 2 Pole, Package of 40

Notes
1. Approximate lumen output.
2. Not available with SLD, EL7L, and EL14L.
3. Consult factory for availability. Not available with SLD, EL7L, EL14L or E10WLCP.
4. GZ1, GZ10 drivers not available with any Controls options.
5. Not available with N80, N80EMG, N100 or N100EMG.
6. When using prewire option, use PWS1846.
7. RIO available with EZ1 and EZB drivers only. Not available with 72L, 85L, 100L and 120L lumen options. See UL924 Sequence of Operation chart at bottom of page. When combined with the EZ1 option, can be used as a normal power sensing device for nLight AIR devices and luminaires with EM emergency options.
8. Not available with SLD.
9. Must specify voltage. Requires BSE labeling.
10. Must specify voltage. 120 or 277, with GLR and GMF fusing.
11. Not available with N80, N80EMG, N100, N100EMG, PWS1836 or PWS1846.

BSE Labeling Options	
BSE10	Drivers load transfer relay installed per manufacturer's instructions. Voltage, BGTD and BSE10 called out.
BSE14	One voltage fixture with driver load control relay supplied with one prewire (PWS option). Prewire wired for normal circuit, the control relay for emergency circuit left unconnected. Voltage, BGTD, BSE14 and prewire called out, in the description.

*For configurations with Reloc or two voltages an RFA modification is required

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CL**AIR**ITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.

Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter/ 2-hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A	10W	90	1200	Title 20, Self Diagnostic
ILBLP CP15 HE SD A	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic

All the above are UL 924 Listed products that are certified for field install external/remote to the fixture.
*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.
Delivered emergency illumination of CP10 models outperforms legacy 1400 lumen fluorescent emergency ballasts.
Please contact us at productsupportemergency@acuitybrands.com for any Emergency Battery related questions.

COMMERCIAL INDOOR: One Lithonia Way Conyers, GA 30012 Phone: 800-705-SERV (7378) TechSupport-Lighting@Acuitybrands.com www.lithonia.com

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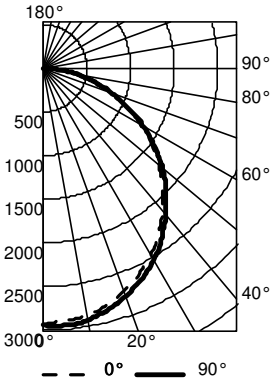
2FSL4 LED Recessed Lighting 2'x4'

Performance Data			
Lumen package	**Lumens**	**Input watts**	**LPW**
2FSL4 30L LP830	2949	23.0	128
2FSL4 30L LP835	3000	23.0	130
2FSL4 30L LP840	3051	23.0	133
2FSL4 30L LP850	3051	23.0	133
2FSL4 40L LP830	3949	31.7	124
2FSL4 40L LP835	4017	31.7	127
2FSL4 40L LP840	4086	31.7	129
2FSL4 40L LP850	4086	31.7	129
2FSL4 48L LP830	4813	38.5	125
2FSL4 48L LP835	4896	38.5	127
2FSL4 48L LP840	4979	38.5	129
2FSL4 48L LP850	4979	38.5	129
2FSL4 60L LP830	5936	46.0	129
2FSL4 60L LP835	6038	46.0	131
2FSL4 60L LP840	6141	46.0	133
2FSL4 60L LP850	6141	46.0	133
2FSL4 72L LP830	7180	57.3	125
2FSL4 72L LP835	7303	57.3	127
2FSL4 72L LP840	7427	57.3	130
2FSL4 72L LP850	7427	57.3	130
2FSL4 85L LP830	8505	68.2	125
2FSL4 85L LP835	8652	68.2	127
2FSL4 85L LP840	8799	68.2	129
2FSL4 85L LP850	8799	68.2	129
2FSL4 100L LP830	10028	81.4	123
2FSL4 100L LP835	10201	81.4	125
2FSL4 100L LP840	10374	81.4	127
2FSL4 100L LP850	10374	81.4	127
2FSL4 120L LP830	12671	103.4	123
2FSL4 120L LP835	12890	103.4	125
2FSL4 120L LP840	13108	103.4	127
2FSL4 120L LP850	13108	103.4	127

How to Estimate Delivered Lumens in Emergency Mode
Use the formula below to estimate the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = Ouput power of emergency driver. P = 10W for E10WLCP option.
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet. LPW = Lumen per watt rating of the luminaire. LPW information available in Performance Data section.

PHOTOMETRICS

2FSL4 85L LP835, 8652 delivered lumens.



CP Summary

	0°	90
0°	2942	2942
5°	2911	2953
15°	2808	2865
25°	2599	2665
35°	2304	2367
45°	1938	1987
55°	1512	1555
65°	1055	1081
75°	606	615
85°	172	189
90	6	6

Coefficients of Utilization

	pf				20%								
	pc		80%			70%			50%		
	pw	70%	50%	30%	50%	30%	10%	50%	30%	10%
RCR	0	119	119	119	116	116	116	111	111	111
	1	108	103	99	101	97	93	97	93	90
	2	98	90	83	88	81	76	84	79	74
	3	89	79	70	77	69	63	74	67	62
	4	82	70	61	68	60	53	66	58	53
	5	75	62	53	61	52	46	59	51	45
	6	69	56	47	55	46	40	53	45	40
	7	64	51	42	50	41	35	48	41	35
	8	60	46	38	45	37	31	44	37	31
	9	56	42	34	42	34	28	41	33	28
	10	52	39	31	39	31	26	37	30	26

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	2299	26.6	26.6
0° - 40°	3766	43.5	43.5
0° - 60°	6681	77.2	77.2
0° - 90°	8646	99.9	99.9
90° - 120°	4	0.0	0.0
90° - 130°	5	0.1	0.1
90° - 150°	5	0.1	0.1
90° - 180°	6	0.1	0.1
0° - 180°	8652	100.0	100.0

COMMERCIAL INDOOR: One Lithonia Way Conyers, GA 30012 Phone: 800-705-SERV (7378) TechSupport-Lighting@Acuitybrands.com www.lithonia.com

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MOUNTING DATA

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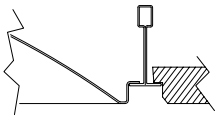

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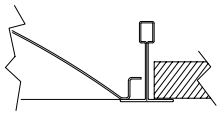
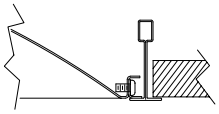
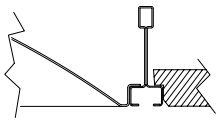


9/16
with accessory 2FS4 F916



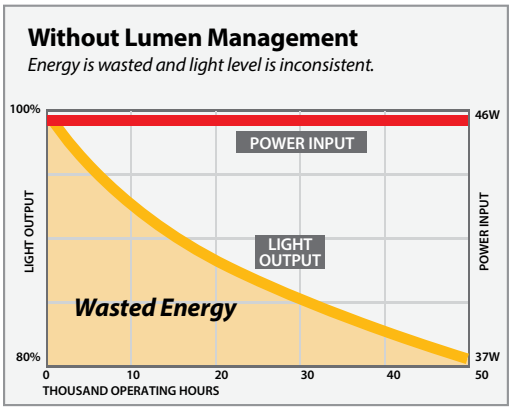
SS

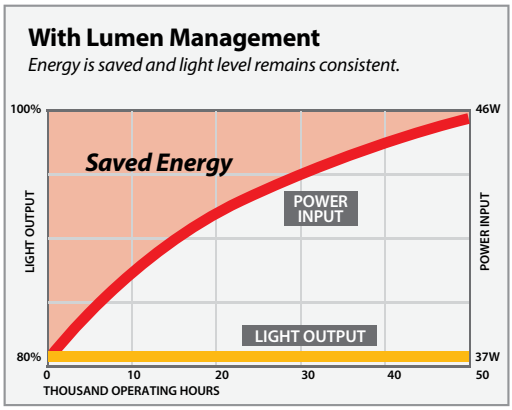


nLight® Control Accessories: *Order as separate catalog number. Visit www.sensorswitch.com/nLight for complete listing of nLight controls.*			
WallPod stations	**Model number**	**Occupancy sensors**	**Model number**
On/Off	nPODM [color]	Small motion 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Large motion 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX [color]	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model number**	Wall Switch w/ Raise/Lower (PIR / dual tech)	nWSX LV DX / nWSX PDT LV DX
On/Off & Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model number**
		10', CAT5 10FT	CAT5 10FT J1
		15', CAT5 15FT	CAT5 15FT J1

Constant Lumen Management

Enabled by the embedded nLight control, the FSL actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.





Notes

With nlight 80% lumen management input watts start at 37 and gradually increasing to 46 at 50,000 hrs when using 48L system.