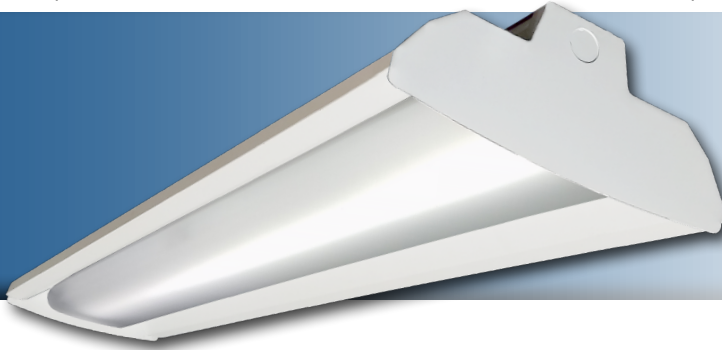


Note: This product has been discontinued and replaced with the FFR P G2.



Project: _____
 Location: _____
 Cat. #: _____
 Type: _____
 Quantity: _____

LED

FFR P | LED Industrial Retrofit Kit

Features:

- High performance LED technology
- 0-10V dimming drivers standard
- Field replaceable LED boards and drivers
- Frosted diffuser optimized to balance efficiency and aesthetics
- Available in 4-foot and 8-foot variations, and a wide variety of lumen outputs for maximum flexibility
- Quick and easy installation helps save on labor costs
- Advanced controls available

Applications:

Custom fit for 4' or 8' industrial-style louvered luminaires. Specifications of existing fixture required to ensure proper fit.

Predicted L70 Lifetime:

- Up to 189,000 hrs (calculated)
- For BAA compliant configurations - up to 189,000 hrs (calculated)

(L70 information for specific configurations available upon request)

Ambient Operating Temp:

- -30°C to 40°C

Construction:

- Precision brake formed from cold rolled steel
- Frosted acrylic diffuser
- Matte white finish

Certifications:

- UL 1598 listed for US and Canada, suitable for damp locations

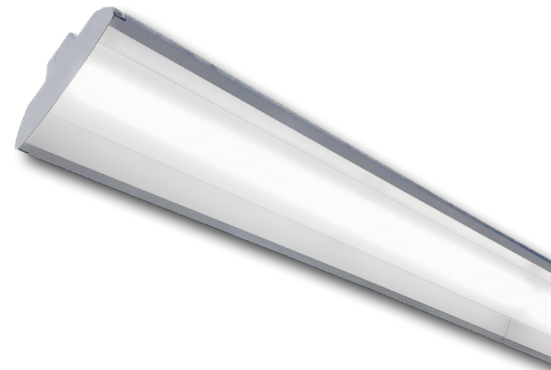


Warranty:

- 5 year limited system warranty - see www.LumenFocus.com for complete warranty terms and conditions
- 10 year warranty option available on specific models
(Not available on all models. Certain conditions apply. Consult factory or sales representative for details.)



10 YEAR
 EXTENDED
 WARRANTY
 AVAILABLE ON
 CERTAIN MODELS



FORMFOCUS



Ordering Guide:

example: FFR P 4 MD UV FA 835 ZSOL BAA

Series	Length	Output	Performance	Voltage	Shielding	CRI/CCT	Controls	Options
FFR P					FA			
FFR P	4 4'	VL Very Low	Blank Standard	UV 120-277	FA Frosted Acrylic	830 80 CRI/3000K	Blank No Controls	Blank No Options
	8 8'	LW Low	Blank Standard	34 347V		835 80 CRI/3500K	ZSOL Leviton Programmable PIR Occupancy/Daylight Harvesting Sensor (On/Off/Dim) ⁽¹⁾	EXT10 10-Year Extended Warranty ⁽⁴⁾
		MD Medium	HE High Efficiency ⁽⁵⁾			840 80 CRI/4000K	ZOSM Microwave Occupancy Sensor with Photocell (On/Off) ⁽²⁾	LVL 0-10V Dimming Leads for Easy Field Access
		HI High				850 80 CRI/5000K	ZOSMD Microwave Occupancy Sensor with Photocell (On/Off/Dim) ⁽²⁾	BAA Buy American Act Compliant
		VH Very High					ZIFS Douglas IFS Sensor with Dimming/ Occupancy/Daylight Harvesting with Newtork Capabilities ⁽³⁾	
		SH Super High					ZIFC Douglas IFC Controller with Newtork Capabilities ⁽³⁾	
						ZENLO Enlighted One Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽³⁾		
						ZENLC Enlighted Connected Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽³⁾		
							ZENLI Enlighted IoT Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽³⁾	

Notes

⁽¹⁾ See page 4 for more details.

⁽²⁾ 120-277V only. See page 4 for more details.

⁽³⁾ See page 5 for more details.

⁽⁴⁾ Not available on all models. Certain conditions apply. Consult factory or sales representative for details.

⁽⁵⁾ Not available on 'VL' models

Controls Accessories (order separately)

Notes

⁽¹⁾ See page 4 for more details.

⁽²⁾ 120-277V only. See page 4 for more details.

⁽³⁾ See page 5 for more details.

⁽⁴⁾ Not available on all models. Certain conditions apply.
Consult factory or sales representative for details.

⁽⁵⁾ Not available on 'VL' models

Controls Accessories (order separately)



For Leviton Programmable Sensor (OS)
ZLSOR-RA1 IR Programming Remote



For Douglas Controls
BT-DMSW-U-A Bluetooth 1 Zone Dimmer
BT-4BTSW-U-A Bluetooth 4-Button Wall Station
BT-8BTSW-U-A Bluetooth 8-Button Wall Station



For Enlighted Controls
WS-2-00 Enlighted Remote Control Wall Switch
(for Enlighted Connected & IoT)
WS-2-00-IL Enlighted Remote Control Wall Switch
(for Enlighted One)

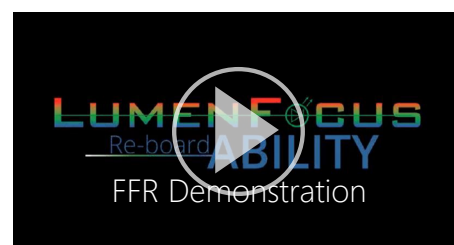
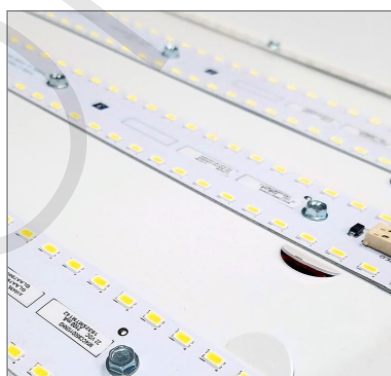


Performance Chart:

Catalog #	Watts	Lumens (830)	LPW (830)	Lumens (835)	LPW (835)	Lumens (840)	LPW (840)	Lumens (850)	LPW (850)
FFR P 4 VL UV FA 8xx	18	2523	140.2	2565	142.5	2650	147.2	2730	151.7
FFR P 4 LW UV FA 8xx	29	3805	131.2	3869	133.4	3997	137.8	4117	142.0
FFR P 4 MD UV FA 8xx	34	4319	127.0	4392	129.2	4537	133.4	4673	137.4
FFR P 4 HI UV FA 8xx	39	4958	127.1	5042	129.3	5208	133.6	5365	137.6
FFR P 4 VH UV FA 8xx	48	5846	121.8	5945	123.8	6141	127.9	6325	131.8
FFR P 4 SH UV FA 8xx	63	7760	123.2	7890	125.2	8151	129.4	8395	133.3
FFR P 8 VL UV FA 8xx	35	5091	145.5	5176	147.9	5348	152.8	5508	157.4
FFR P 8 LW UV FA 8xx	57	7721	135.5	7851	137.7	8110	142.3	8354	146.6
FFR P 8 MD UV FA 8xx	65	8670	133.4	8816	135.6	9107	140.1	9381	144.3
FFR P 8 HI UV FA 8xx	74	9618	130.0	9779	132.2	10102	136.5	10406	140.6
FFR P 8 VH UV FA 8xx	86	11474	133.4	11667	135.7	12053	140.1	12414	144.4
FFR P 8 SH UV FA 8xx	128	15706	122.7	15970	124.8	16498	128.9	16993	132.8
FFR P 4 LW HE UV FA 8xx	27	3756	139.1	3819	141.4	3945	146.1	4063	150.5
FFR P 4 MD HE UV FA 8xx	32	4367	136.5	4440	138.8	4587	143.3	4725	147.6
FFR P 4 HI HE UV FA 8xx	36	4840	134.4	4921	136.7	5084	141.2	5236	145.4
FFR P 4 VH HE UV FA 8xx	43	5795	134.8	5892	137.0	6087	141.6	6270	145.8
FFR P 4 SH HE UV FA 8xx	60	7624	127.1	7752	129.2	8009	133.5	8249	137.5
FFR P 8 LW HE UV FA 8xx	54	7726	143.1	7856	145.5	8116	150.3	8359	154.8
FFR P 8 MD HE UV FA 8xx	60	8486	141.4	8629	143.8	8914	148.6	9182	153.0
FFR P 8 HI HE UV FA 8xx	70	9829	140.4	9994	142.8	10324	147.5	10634	151.9
FFR P 8 VH HE UV FA 8xx	86	11725	136.3	11922	138.6	12316	143.2	12686	147.5
FFR P 8 SH HE UV FA 8xx	120	15426	128.5	15685	130.7	16203	135.0	16689	139.1

LUMENFOCUS Re-boardABILITY

The FFR P features field replaceable boards and drivers. This allows you to upgrade to more efficient technology in the future. Or, in the rare event of a failure, you can rapidly replace defective components. Re-boardABILITY helps to ensure you won't get stuck with an obsolete light fixture. [Learn more about Re-boardABILITY here.](#)



[Click here for a video demonstration of the re-boarding process on a FFR.](#)

Note: Exact time varies depending on the model.



ZSOL option: Leviton Intellect Solo Sensor

The FFR P can be equipped with an integrated Leviton Intellect Solo Sensor ("ZSOL" option). This is a 0-10V dimming Passive Infrared (PIR) occupancy and daylight harvesting sensor.

Other features:

- Partial-on
- Partial-off
- 8' to 10' mounting height
- IP20 rated
- Detection angle: 120 degrees
- IR remote available for programming sensor from the floor (sold separately)
- Can be used to comply with IECC, ASHRAE 90.1 and 2019 Title 24, Part 6 dimming, occupancy/vacancy sensing and daylight harvesting requirements.



ZOSM option: Leviton High Frequency Microwave Sensor

The FFR P can be equipped with an integrated Leviton high frequency microwave sensor ("ZOSM" option). The OSM detects motion through low density materials allowing it to be installed out of site, under the FFR P's frosted lens. The high frequency waves offer less interference and false tripping than traditional sensing technology for reliable occupancy applications. The integrated daylighting sensor detects natural light and turns lights ON or keeps lights OFF in response to available natural light or the daylight set point when motion is detected.

Features:

- Automatic switching based on motion and ambient light level
- Designed to detect movement behind low-density fixture materials or behind objects made of plastic or glass
- up to 32' mounting height
- Detection Zone: 52' diameter x 32' Height Max
- IP20 rated
- 120-277V



ZOSMD option: Leviton 0-10V High Frequency Microwave Sensor

The FFR P can be equipped with an integrated Leviton 0-10V dimming high frequency microwave sensor ("ZOSMD" option). The ZOSMD detects motion through low density materials allowing it to be installed out of site, under the FFR P's frosted lens. The high frequency waves offer less interference and false tripping than traditional sensing technology for reliable occupancy applications. The integrated daylighting sensor detects natural light and turns lights ON or keeps lights OFF in response to available natural light or the daylight set point when motion is detected.

Features:

- Automatic switching or dimming based on motion
- Ambient light override
- Designed to detect movement behind low-density fixture materials or behind objects made of plastic or glass
- up to 49' mounting height
- Detection Zone: 52' diameter x 49' Height Max
- Standby Dimming Level: 10% / 20% / 30% / 50%
- IP20 rated
- 120-277V



Douglas Lighting Controls, Inc.: Cloud-based controls

The FFR P can be equipped with the Douglas Bluetooth Intelligent Fixture Sensor (IFS) as well as the Intelligent Fixture Controller.

IFS



- Occupancy, vacancy, partial-on and partial-off
- Occupancy timeout adjustable from 5 to 90 minutes
- Primary and secondary daylight harvesting
- Up to 16.4' (5m) mounting height

IFC



- Listed for emergency control when used on dedicated emergency power bus
- Same occupancy and daylight controls as the IFS when networked with one or more IFS sensors

Available with both IFS and IFC:

- 0-10V dimming with dim-to-off
- Bluetooth beacon for digital ceiling, IoT and location service strategies
- 150-foot clear line of sight, 50 feet through standard walls
- May be used with dual-channel, tunable white LED drivers providing auxiliary power and dim-to-off capability
- Commissioning through Douglas Lighting Controls, Inc. app from Apple app store
- **Note:** Additional equipment required for IoT capabilities

CheckLight® Energy Management System

Douglas controls can be integrated with the CheckLight® Energy Management system. This system can help you uncover energy conversion opportunities, create conservation strategies, analyze lighting load inefficiencies, and make configuration changes from anywhere with Douglas' user-friendly interface. You can get measurements, reports, and control your system from a web-based application.

CheckLight® has the capability to look at different facilities within a portfolio and use data benchmarks to compare building performances.

- Find energy conservation opportunities
- Create energy saving strategies
- Analyze load inefficiencies
- Optimize energy management

Enlighted: All-in-one sensors, upgradeable systems

Enlighted's SMART Micro Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. Max installation height is 15 feet.

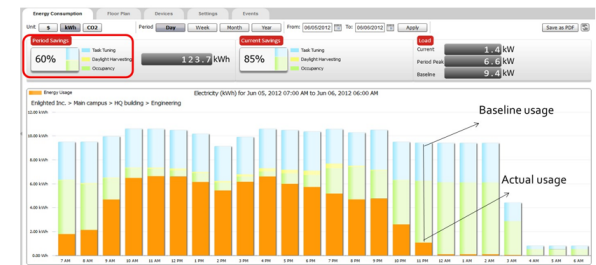
Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if you start with Enlighted One but want to add energy reporting or building management systems integration in the future, you can.



Real-time data analytics

Enlighted's control units compile data in real-time, which can be viewed via the Energy Manager. The Energy Manager is part of the Enlighted Connected and Enlighted IoT configurations.

- Real-time measurements and verification of energy savings
- Space analytics - data can be compiled into motion trails and heat maps
- Analyze traffic density and congestion in a space



Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
Where & Space Applications			✓
Location & Occupancy APIs & Beacons			✓
Future App & API Ready			✓

Note: Additional equipment required ZENLC and ZENLI

Learn more about our available advanced controls options here:

www.lumenfocus.com/controls-overview

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