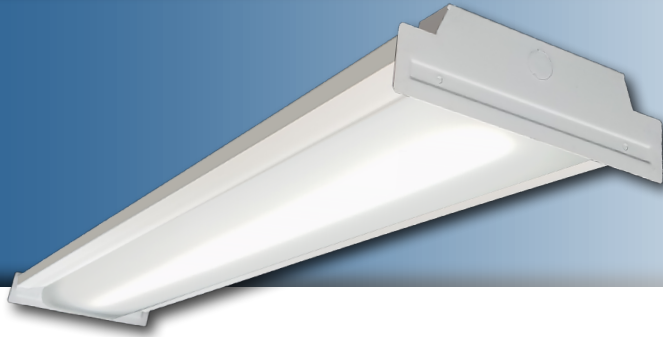


Note: This product has been discontinued and replaced with the FFR W G2.



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

LED

FFR W | LED Wrap 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
- Quick and easy lift and shift installation helps save on labor costs
- Advanced controls available

Applications:

Custom fit for 4' wrap luminaires 9" or wider. Specifications of existing fixture required to ensure proper fit. **Please see form on bottom of Page 2. This form must be completed before manufacturing can begin.**

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
- DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers) <http://designlights.org/>



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.)




Ordering Guide:

example: FFR W 4 MD UV FA 840 9.0" ZOSM

Series	Length	Output	Voltage	Shielding	CRI/CCT	Lens Width	Controls	Options
FFR W	4			FA				
FFR W	4 4' length	LW Low	UV 120-277	FA Frosted Acrylic	830 80 CRI/3000K	x.xx" Specify existing lens width	Blank No Controls ZSOL Leviton Programmable PIR Occupancy/Daylight Harvesting Sensor (On/Off/Dim) ⁽¹⁾ ZOSM Microwave Occupancy Sensor with Photocell (On/Off) ⁽²⁾ ZOSMD Microwave Occupancy Sensor with Photocell (On/Off/Dim) ⁽²⁾ ZIFS Douglas IFS Sensor with Dimming/ Occupancy/Daylight Harvesting with Newtork Capabilities ⁽³⁾ 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⁾	Blank No Options EXT10 10-Year Extended Warranty ⁽⁴⁾ SD Step Dimming LVL 0-10V Dimming Leads for Easy Field Access CC Conformal Coating BAA Buy American Act Compliant
		MD Medium	34 347V		835 80 CRI/3500K			
		HI High			840 80 CRI/4000K			
					850 80 CRI/5000K			

Controls Accessories (order separately)

 **For Leviton Programmable Sensor (OS)**
ZLS0R-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)

ZOSM
Microwave Occupancy Sensor with
Photocell (On/Off) ⁽²⁾

ZOSMD
Microwave Occupancy Sensor with
Photocell (On/Off/Dim) ⁽²⁾

ZIFS
Douglas IFS Sensor with Dimming/
Occupancy/Daylight Harvesting
with Newtork Capabilities ⁽³⁾

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⁾

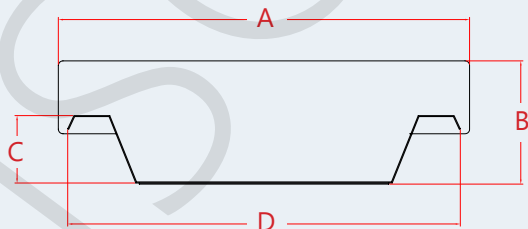
ZENLI
Enlighted IoT Micro Sensor with
Dimming/Occupancy/Daylight
Harvesting ⁽³⁾

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.

Dimensions of Existing Fixture (Required)

Please fill in the information to the right so we can ensure a proper fit for your FFR Ws. When possible, please provide a sample lens from existing wrap fixture.



- A: Length of End Cap =
- B: Height of End Cap =
- C: Depth of Fixture =
- D: Width of Fixture =
- E: Lens Length =

Performance Chart:

Catalog #	Watts	Lumens (830)	LPW (830)	Lumens (835)	LPW (835)	Lumens (840)	LPW (840)	Lumens (850)	LPW (850)
FFR W 4 LW UV FA 8xx	32	4194	133.3	4265	135.5	4406	140.0	4538	144.2
FFR W 4 MD UV FA 8xx	47	5855	126.0	5954	128.1	6151	132.4	6335	136.3
FFR W 4 HI UV FA 8xx	62	7497	121.6	7624	123.6	7876	127.7	8112	131.6

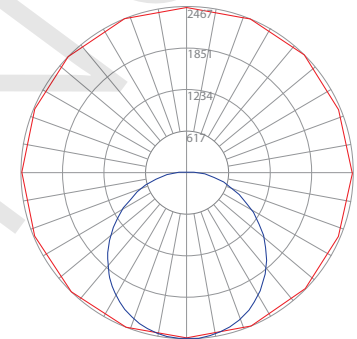
Photometric Data:

FFR W 4 HI UV FA 830

Test No.: LLIA001060-003A
 Luminaire Lumens: 7,498 lm
 Luminaire Watts: 61.7W
 Efficacy: 121.6 LPW
 Spacing Criterion (0-180): 1.22
 Spacing Criterion (90-270): 1.32

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7532	7737	8047
55	6686	7140	7746
65	5686	6424	7461
75	4380	5612	7141
85	2073	4765	6937



— Vert. Plane
 — Horiz. Cone

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	901.36	12.00
0-30	1917.43	25.60
0-40	3140.56	41.90
0-60	5547.46	74.00
0-80	7049.24	94.00
0-90	7339.83	97.90
90-120	157.69	2.10
90-130	157.69	2.10
90-150	157.69	2.10
90-180	157.69	2.10
0-180	7497.52	100.00

Coefficients Of Utilization - Zonal Cavity Method
 Effective Floor Cavity Reflectance 0.20

RC	80				70				50				30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105			
1	107	102	97	93	104	100	95	91	95	91	88	91	88	85			
2	97	88	81	75	94	86	80	74	82	77	72	79	74	70			
3	88	77	69	62	86	76	68	61	72	66	60	69	64	59			
4	81	69	59	53	78	67	59	52	64	57	51	62	55	50			
5	74	61	52	45	72	60	51	45	57	50	44	55	49	43			
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38			
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34			
8	59	45	37	31	57	45	36	31	43	36	30	42	35	30			
9	55	42	33	28	54	41	33	28	40	32	27	38	32	27			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25			

Tested in accordance with IES standards utilizing absolute photometry per LM-79-08



The FFR W 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 W 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

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 W can be equipped with an integrated Leviton high frequency microwave sensor (“ZOSM” option). The ZOSM detects motion through low density materials allowing it to be installed out of site, under the FFR W’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 W 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 W’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 W 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 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.



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			✓

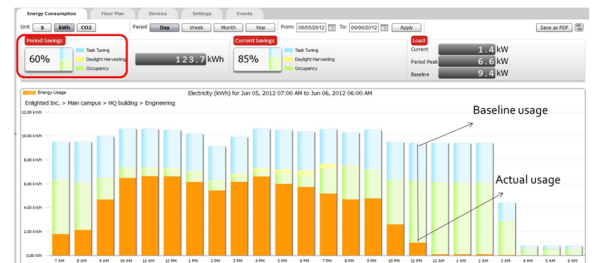
Note: Additional equipment required ZENLC and ZENLI



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



Learn more about our available advanced controls options here:

www.lumenfocus.com/controls-overview

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