Project: _____

Location: _____

Cat. #: _____

Type: _____

Quantity: _____

LED

FFR W G2 | LED Wrap Retrofit Kit

Features:
• High performance LED technology
• 90+ CRI standard
• 0-10V dimming drivers standard
• DALI drivers available
• 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 Lifetime:
• L70: 129,000 hrs (calculated)
• L80: 81,000 hrs (calculated)
• L90: 39,000 hrs (reported)
• 85% lumen maintenance @ 60,000 hrs
(based on LM80 and insitu laboratory testing)

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.)

MADE IN USA
USING DOMESTIC AND FOREIGN COMPONENTS

10 YEAR EXTENDED WARRANTY
AVAILABLE ON CERTAIN MODELS

90+ CRI

FORMFØCUS

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Ordering Guide:

example: FFR W G2 4 MD UV FA 940 9.0" ZOSM

Series	Length	Output	Voltage	Shielding	CRI/CCT	Lens Width	Controls	Options
FFR W G2	4			FA				
FFR W G2 FFR W Gen 2	**4** 4' length	**SL** Super Low **VL** Very Low **LW** Low **MD** Medium **HI** High **VH** Very High **SH** Super High	**UV** 120-277 **34** 347V	**FA** Frosted Acrylic	**930** 90 CRI/3000K **935** 90 CRI/3500K **940** 90 CRI/4000K **950** 90 CRI/5000K	**x.xx"** Specify existing lens width	**Blank** No Controls **ZSOL** Leviton Programmable PIR Occupancy/Daylight Harvesting Sensor (On/Off/Dim)[1] **ZOSMD** Microwave Daylight/Motion Sensor With Step-Dimming (High/Low/Off)[2] **ZIFS** Douglas IFS Sensor with Dimming/ Occupancy/Daylight Harvesting with Network Capabilities[3] **ZIFC** Douglas IFC Controller with Network 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

Controls Accessories *(order separately)*

For Leviton Programmable Sensor (ZSOL)
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)

Notes

[1] See page 4 for more details.
[2] Max mounting height 40'. 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.
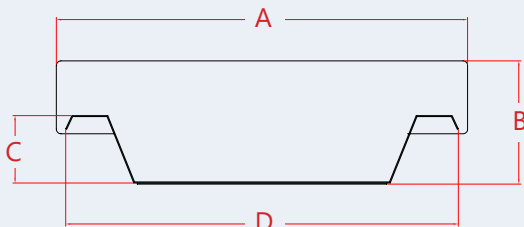
A: Length of End Cap =
B: Height of End Cap =
C: Depth of Fixture =
D: Width of Fixture =
E: Lens Length =

Performance Chart:

Catalog #	Watts	Lumens (830)	LPW (830)	Lumens (835)	LPW (835)	Lumens (840)	LPW (840)	Lumens (850)	LPW (850)
FFR W G2 4 SL UV FA 9xx	15.1	2012.7	132.9	2021.1	133.5	2069.2	136.6	2069.2	136.6
FFR W G2 4 VL UV FA 9xx	21.9	3030.3	138.6	3043.0	139.1	3115.3	142.4	3115.3	142.4
FFR W G2 4 LW UV FA 9xx	28.4	3964.3	139.7	3981.0	140.3	4075.6	143.6	4075.6	143.6
FFR W G2 4 MD UV FA 9xx	35.6	4944.2	138.8	4965.0	139.4	5083.0	142.7	5083.0	142.7
FFR W G2 4 HI UV FA 9xx	43.5	5947.2	136.8	5972.3	137.4	6114.1	140.6	6114.1	140.6
FFR W G2 4 VH UV FA 9xx	56.8	7865.0	138.4	7898.2	139.0	8085.8	142.3	8085.8	142.3
FFR W G2 4 SH UV FA 9xx	73.9	9817.6	132.9	9859.0	133.4	10093.2	136.6	10093.2	136.6

Photometric Data:

Relative Luminous Intensity

Vert. Plane
Horiz. Cone
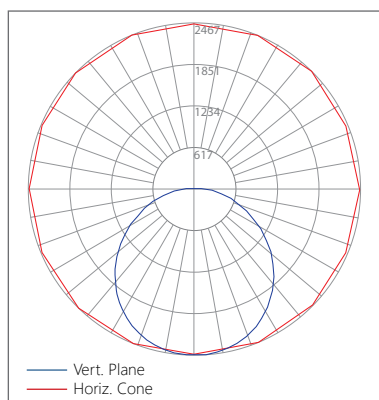
LumenFocus Re-boardABILITY

The FFR W G2 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.
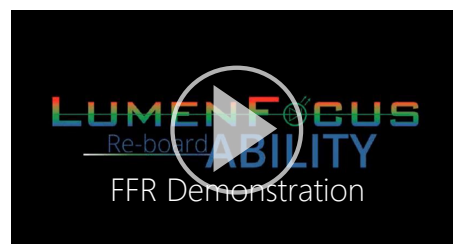
FFR Demonstration

Click here for a video demonstration of the re-boarding process on a FFR.
Note: Exact time varies depending on the model.

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Controls Summary:

Control Code	Type	Capabilities	Communication
ZSOL	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via IR remote (sold separately) or via dip switches on sensor
ZOSMD	Motion (Microwave), Photosensor	On/Low/Off	Wired 1-10V
ZIFS	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, LLLC (Douglas Lighting Controls-Dialog)*	Wireless Bluetooth Mesh, Programmable via iOS App or Douglas Dialog Software
ZIFC	Controller, No Sensors	High/Low/Off, High-End Trim, Grouping, LLLC (Douglas Lighting Controls-Dialog)*	Wireless Bluetooth Mesh, Programmable via iOS App or Douglas Dialog Software
ZENLO	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Upgradable to Connected (ZENLC) or IoT (ZENLI)	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted Room Controller WS-2-00-IL (sold separately)
ZENLC	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, Upgradable to IoT (ZENLI), LLLC (Enlighted IoT)*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software
ZENLI	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling*, Energy Monitoring*, BMS Integration*, LLLC (Enlighted IoT)*, Space - Building Utilization*, Where - Real Time Location Services*	Wireless Bluetooth Low Energy Mesh, Programmable via Enlighted IoT Software

LLLC = Luminaire Level Lighting Control
* Additional equipment required. Contact LumenFocus representative for details

ZSOL option: **Leviton Intellect Solo Sensor**

The FFR W G2 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.
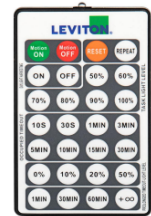
ZOSMD option: **Leviton 0-10V High Frequency Microwave Sensor**

The FFR W G2 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 40' mounting height
- Detection Zone: 52' diameter x 40' Height Max
- Standby Dimming Level: 10% / 20% / 30% / 50%
- IP20 rated
- 120-277V

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Universal Douglas: Cloud-based controls

The FFR W G2 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.
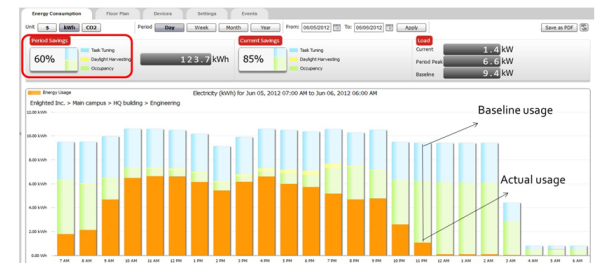
Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if you start with Enlighted One but want to add energy reporting or building management systems integration in the future, you can.

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 & Beaconing			✓
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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