

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

LED

RCL G2 2 | LED Channel 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 available to help minimize glare and improve aesthetics
- A wide variety of lumen packages and lengths allows for flexibility in design and helps maximize energy savings
- Saves on installation cost, material cost, and waste
- Advanced controls available

Applications:

Suitable for most commercial, industrial and institutional applications

- Office
- Retail
- Warehouse
- Coves
- Valences

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 heavy gauge cold rolled steel
- Highly durable, highly reflective 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/>



Ambient Operating Temp.:

- -30°C to 40°C

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: RCL G2 2 MD UV FR 940 4.25" ZOSMD EM1

Series	Version	Length	Output	Voltage	Shielding	CRI/CCT	Channel Width	Controls	Options
RCL	G2	2							
RCL	G2 Gen 2	2 2'	LW Low	UV 120-277	Blank No Lenses	930 90 CRI/3000K	x.xx" Specify Channel Width (in inches) VAR Variable - Adjusts to fit channel widths from 4.00" to 5.00"	Blank No Controls	Blank No Options
			ML Medium Low	34 347V	FR Frosted Acrylic Diffusers	935 90 CRI/3500K		ZSOL Leviton Intellect Solo PIR Sensor ⁽¹⁾	EXT10 10-Year Extended Warranty ⁽⁶⁾
			MD Medium			940 90 CRI/4000K		ZOSMD Microwave Occupancy Sensor with Photocell (On/Off/Dim) ⁽²⁾	EM1 Emergency Pack - Up to 8W ⁽⁷⁾
			HI High			950 90 CRI/5000K		ZIFS Douglas IFS Sensor with Dimming/Occupancy/Daylight Harvesting with Newtork Capabilities ⁽³⁾	EM2 Emergency Pack - Up to 16W ⁽⁷⁾
			VH Very High					ZIFC Douglas IFC Controller with Newtork Capabilities ⁽⁴⁾	CC Conformal Coating
			SH Super High					ZENLO Enlighted One Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽⁵⁾	LVL 0-10V Dimming Leads for Easy Field Access
								ZENLC Enlighted Connected Micro Sensor with Dimming/Occupancy/ Daylight Harvesting ⁽⁵⁾	BAA Buy American Act Compliant
								ZENLI Enlighted IoT Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽⁵⁾	

Notes

- ⁽¹⁾ Max mounting height 10'. See Page 4 for more details.
⁽²⁾ 120-277V only. Max mounting height 40'. See page 4 for more details.
⁽³⁾ Max mounting height 16.4'. See page 5 for more details.
⁽⁴⁾ See page 5 for more details.
⁽⁵⁾ Max mounting height 15'. See page 5 for more details.
⁽⁶⁾ Not available on all models. Certain conditions apply.
Consult factory or sales representative for details.
⁽⁷⁾ 120-277V only / 0°C-50°C ambient.w

Accessories (order separately)

STD(480V) 480V to 277V Step Down Transformer

Controls Accessories (order separately)



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



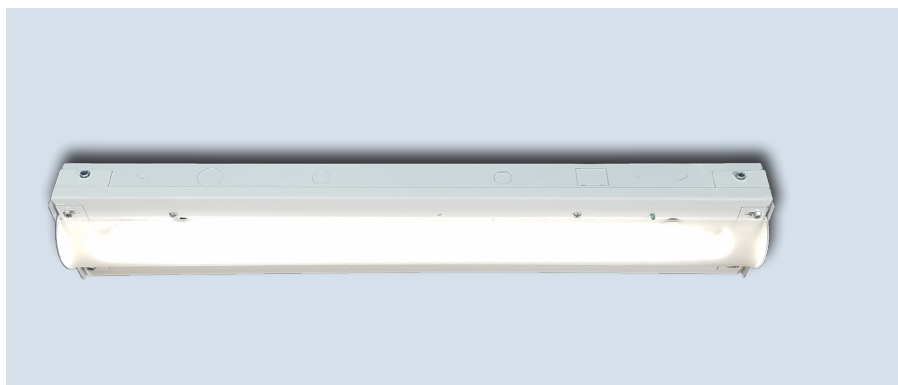
For Enlighted Controls

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

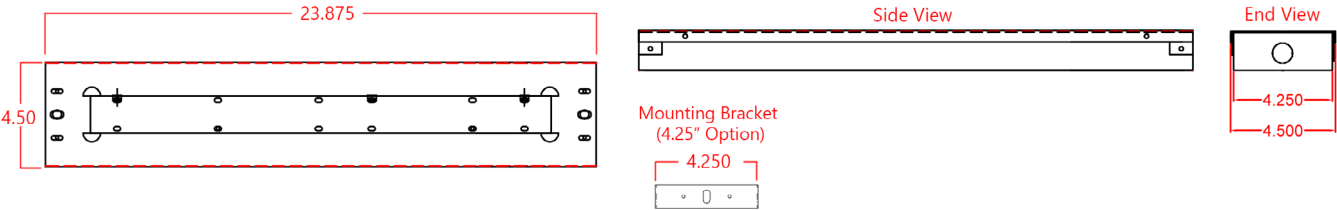


For Leviton Intellect Solo Controls

ZLSOR-RA1 Wireless IR Programming Tool
(For ZSOL)

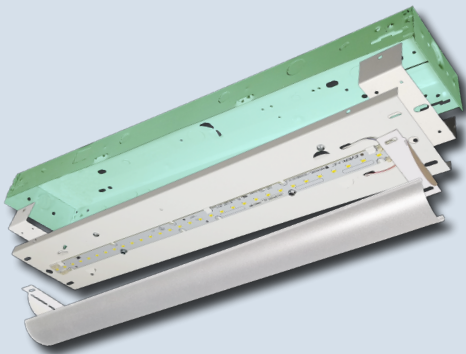


Schematic:



Performance Chart:

Catalog #	Watts	Lumens (930)	LPW (930)	Lumens (935)	LPW (935)	Lumens (940)	LPW (940)	Lumens (950)	LPW (950)
RCL G2 2 LW UV FR 9xx	8.5	1050.9	123.5	1055.3	124.0	1080.4	127.0	1080.4	127.0
RCL G2 2 ML UV FR 9xx	12.1	1561.9	129.1	1568.5	129.6	1605.8	132.7	1605.8	132.7
RCL G2 2 MD UV FR 9xx	16.0	2032.9	127.4	2041.5	128.0	2089.9	131.0	2089.9	131.0
RCL G2 2 HI UV FR 9xx	22.6	3092.9	137.1	3105.9	137.7	3179.7	141.0	3179.7	141.0
RCL G2 2 VH UV FR 9xx	29.1	4056.3	139.6	4073.4	140.2	4170.2	143.5	4170.2	143.5
RCL G2 2 SH UV FR 9xx	37.3	5076.3	136.2	5097.6	136.8	5218.7	140.1	5218.7	140.1
RCL G2 2 LW UV 9xx	8.5	1110.8	130.5	1115.4	131.1	1141.9	134.2	1141.9	134.2
RCL G2 2 ML UV 9xx	12.1	1650.9	136.5	1657.9	137.0	1697.3	140.3	1697.3	140.3
RCL G2 2 MD UV 9xx	16.0	2148.7	134.7	2157.7	135.3	2209.0	138.5	2209.0	138.5
RCL G2 2 HI UV 9xx	22.6	3269.0	145.0	3282.8	145.6	3360.8	149.0	3360.8	149.0
RCL G2 2 VH UV 9xx	29.1	4287.4	147.6	4305.5	148.2	4407.7	151.7	4407.7	151.7
RCL G2 2 SH UV 9xx	37.3	5365.4	143.8	5388.0	144.4	5516.0	147.8	5516.0	147.8



LUMENFOCUS
Re-boardABILITY

The RCL 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.](#)



Controls Summary:

Control Code	Type	Capabilities	Communication
ZSOL	Motion (PIR), Daylight Harvesting	High/Low/Off	Wired 0-10V, Programmable via IR remote (sold separately)
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

Leviton Intellect Solo Dimming Sensor (ZSOL)

The RCL 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 RCL 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 RCL'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
- Wide Detection Zone: up to 52' diameter
- Standby Dimming Level: 10% / 20% / 30% / 50%
- IP20 rated
- 120-277V



Universal Douglas: Cloud-based controls

The RCL 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.

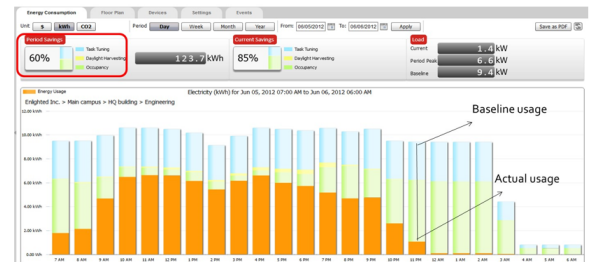
Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if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



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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Photometric Data:

RCL G2 2 SH UV 950

Test No.: LLIA001735-012A

Luminaire Lumens: 5,516 lm

Luminaire Watts: 37.3W

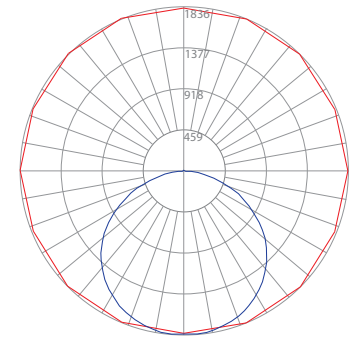
Efficacy: 147.8 LPW

Spacing Criterion (0-180): 1.30

Spacing Criterion (90-270): 1.32

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	26197	25361	25281
55	25667	24530	24031
65	24107	22269	21675
75	20356	17428	17040
85	11213	7741	7259



— Vert. Plane
— Horiz. Cone

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	674.90	12.20
0-30	1445.02	26.20
0-40	2391.81	43.40
0-60	4324.81	78.40
0-80	5425.51	98.40
0-90	5515.51	100.00
90-120	0.51	0.00
90-130	0.51	0.00
90-150	0.51	0.00
90-180	0.51	0.00
0-180	5516.02	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
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45
6	69	56	47	40	67	55	46	40	53	45	40	51	45	39
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25

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

RCL G2 2 SH UV FR 950

Test No.: LLIA001735-014

Luminaire Lumens: 5,219 lm

Luminaire Watts: 37.3W

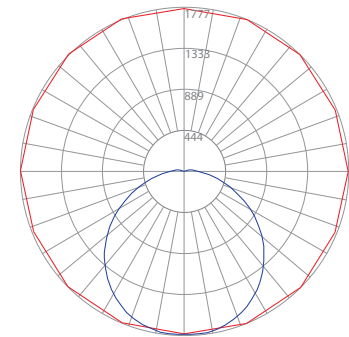
Efficacy: 140.1 LPW

Spacing Criterion (0-180): 1.24

Spacing Criterion (90-270): 1.28

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	21651	21091	21287
55	18581	19027	19553
65	14656	16516	17296
75	10407	13966	14715
85	5463	12715	13022



— Vert. Plane
— Horiz. Cone

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	650.53	12.50
0-30	1383.00	26.50
0-40	2263.42	43.40
0-60	3961.89	75.90
0-80	4933.95	94.50
0-90	5123.07	98.20
90-120	95.78	1.80
90-130	95.78	1.80
90-150	95.78	1.80
90-180	95.78	1.80
0-180	5218.86	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
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105
1	108	103	98	94	105	100	96	92	95	92	89	91	88	86
2	98	89	82	76	95	87	81	75	83	78	73	80	75	71
3	89	78	70	63	86	77	69	63	73	67	61	70	65	60
4	82	69	60	54	79	68	60	53	65	58	52	63	56	51
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39
7	64	51	42	36	62	50	41	35	48	40	35	46	40	35
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31
9	56	42	34	29	54	42	34	28	40	33	28	39	33	28
10	52	39	31	26	51	38	31	26	37	30	26	36	30	25

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

