



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



# 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
- Buy American Act compliant (All base luminaires are BAA compliant. Addition of options may change eligibility. Contact factory for details.)

## 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 <u>www.LumenFocus.com</u> for complete warranty terms and conditions
- 10 year warranty option available on specific models
   (Not available on all models Certain condition

(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 EM10

							схаттріс.	NCL OZ Z IVID OV I N 340	4.23 ZOSIVID LIVITO
Series	Version	Length	Output	Voltage	Shielding	CRI/CCT	Channel Width	Controls	Options
RCL	<b>G</b> 2	2							
RCL	<b>G2</b> Gen 2	<b>2</b> 2'	LW Low ML Medium Low MD Medium	UV 120-277 <b>34</b> 347V	Blank No Lenses FR Frosted Acrylic Diffusers	930 90 CRI/3000K 935 90 CRI/3500K 940 90 CRI/4000K	X.XX" Specify Channel Width (in inches)  VAR  Variable - Adjusts to fit channel widths from 4.00" to 5.00"	Blank No Controls  ZSOL Leviton Intellect Solo Programmable PIR/Daylight Harvesting Sensor <sup>(1)</sup> ZOSMD	Blank No Options  EXT10 10-Year Extended Warranty <sup>(4)</sup> EM6
			HI High  VH Very High  SH Super High			<b>950</b> 90 CRI/5000K		Microwave Occupancy Sensor with Photocell (On/Off/Dim) <sup>(2)</sup> ZSLFC2 Keystone SmartLoop Wireless Bluetooth Mesh Occupancy/ Daylight Harvesting Smart Sensor <sup>(1)</sup> ZLDS	EM10 10W Emergency Pack <sup>(5)</sup> EM14 14W Emergency Pack <sup>(5)</sup> CC Conformal Coating
(2) 120-277V (3) See page (4) Not availa Consult f. (5) 120-277V emergence of the lum	4 for more only. See p only. See p only. See p only only only only only only only only	age 4 for n details. nodels. Cer les represe ambient. To ltiply EM wa talled in.	Leviton Intellect DALI Sensor with Dimming/Occupancy/ Daylight Harvesting with Newtork Capabilities <sup>(3)</sup> ZL7S  Leviton Intellect 0-10V Sensor with Dimming/Occupancy/ Daylight Harvesting with Newtork Capabilities <sup>(3)</sup> ZLDC  Leviton Intellect DALI Fixture Controller with Newtork Capabilities <sup>(3)</sup>	LVL 0-10V Dimming Leads for Easy Field Access BAA Buy American Act Compliant					

# Accessories (order separately)

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

# Controls Accessories (order separately)



#### For Leviton Intellect Solo Controls

ZLSOR-RA1 Wireless IR Programming Tool (For ZSOL)



#### For Keystone SmartLoop Controls

KTSL-WS1-B-SG/G2 5-Button Bluetooth Wireless Wall Switch KTSL-TK1-USB

USB Time Keeper



#### For Leviton Intellect Networked Controls

DRKDN-U1W 1-Button Wireless Wall Controller DRKDN-U2W 2-Button Wireless Wall Controller DRKDN-U2W 4-Button Wireless Wall Controller DRKDN-U8W 8-Button Wireless Wall Controller



#### For Enlighted Controls

WS-2-00 Enlighted Remote Control Wall





ZL7C Leviton Intellect 0-10V Fixture

Controller with Newtork Capabilities(3)

**ZENLC** Enlighted Connected Micro Sensor with Dimming/Occupancy/ Daylight Harvesting<sup>(3)</sup>

**ZENLI** 

Enlighted IoT Micro Sensor with

Dimming/Occupancy/Daylight Harvesting<sup>(3)</sup>

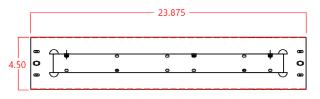




# Performance Chart:

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

### Schematic:









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	Туре	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
ZSLFC2	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling, LLLC (Keystone TechSmartLoop)	Wireless Bluetooth Mesh, Programmable via Keystone SmartLoop App for iOS or Android
ZLxS	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLLC (GreenMAX DRC)	Wireless Zigbee 2.4 GHz Mesh, Programmable via GreenMAX DRC app. for iOS or Android along with DRKDN-UxW Wall Controller (sold separately)
ZLxC	Controller, No Sensors	High/Low/Off, High-End Trim, Grouping, Scheduling, Demand Response*, BMS Integration*, LLLC (GreenMAX DRC)	Wireless Zigbee 2.4 GHz Mesh, Programmable via GreenMAX DRC app. for iOS or Android along with DRKDN-UxW Wall Controller (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

# Keystone SmartLoop Wireless Control System

The SmartLoop wireless lighting control system by Keystone is a Bluetooth mesh lighting control system that allows you to set up and manage your lighting ecosystem quickly and easily. It's powerful enough to run a space with multiple lighting zones, but simple enough to program in minutes with your smartphone – perfect for warehouses, offices, schools, and auditoriums, whether new construction or retrofit.

- Wireless Bluetooth 2.4 GHz mesh network
- Supports up to 100 devices on a single region, with unlimited regions
- Independent per-fixture control: Occupancy, Daylight Harvesting, Task Tuning, Grouping, Scene Setting, Scheduling
- Commissioned via SmartLoop mobile app for iPhone and Android



### ZSLFC2

- Low voltage individual fixture controller for SmartLoop system
- Integrated daylight and PIR motion sensors
   Up to 16' mounting height. 16' radius at 16' height.
- Works with 0-10V dim-to-off drivers with 12V aux. power

# **SmartLoop Accessories**

- Bluetooth Wireless Wall Switch:
  - KTSL-WS1-B-SG/G2
  - Battery Powered: 2x CR2032
  - 5 Button: Power Toggle, Dimming, Automatic Sensor/Preset Level Operation, Scene Activation



USB Time Keeper:

#### KTSL-TK1-USB

- Relays time to system components after a power loss
- Powered by standard USB charging port
- Internal CR1220 battery backup



# Microwave Occupancy Sensor (ZOSMD)

The Leviton OSM3D-DDW (or equivalent) detects motion through low density materials using high frequency electromagnetic waves. This means it can sit

discretely behind the RCL G2's frosted lens. The ZOSMD features automatic switching based on motion and ambient light level. ZOSMD option adds step-dimming functionality - standby dimming level 10% / 20% / 30% / 50%.

Max mounting height for ZOSMD 40 feet.



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.





<sup>\*</sup> Additional equipment required. Contact LumenFocus representative for details



# **GreenMAX DRC Wireless Networked Control System**

#### with Leviton Intellect Sensors & Controllers

The GreenMAX DRC Wireless Keypad Room Controllers are used as the brain of the system, managing the fixture integrated Leviton Intellect sensors & controllers. Wirelessly commission, configure, control, monitor and provision the GreenMAX DRC system using the GreenMAX DRC App and an Android or iOS smart device.

- Occupancy/Vacancy Sensing
- Multi-Level Lighting, Partial-On, Partial-Off
- Daylight Harvesting
- Task Tuning
- Scheduling
- Grouping
- Demand Response
- BMS Integration
- ZigBee 2.4 GHz Wireless Mesh Network
- Up to 75' between devices
- \* DRKDN-UxW room controller required for full functionality and programming of Intellect sensors & controllers





- PIR Occupancy Sensor
- Daylight Sensor
- 0-10V or DALI
- Up to 20' mounting height



- Wireless fixture controller, no sensor
- 0-10V or DALI



- 1-, 2-, 4-, and 8-button configurations
- Line voltage powered: 120-277V
- Max capacity: 60 devices
- Programmable: On/Off/Raise/Lower/ Toggle/Scene
- Use any Android or iOS device for configuration using the GreenMAX DRC App

## 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 Connected ("ZENLC") offers many features, including motion and switch groups, daylight harvesting, energy reporting, and more. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Enlighted Connected can be fully upgraded to the next tier in the future. So if you start with ZENLC but want to add the functionality of the ZENLI option, you can.



Enlighted Capabilities*	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		✓

### 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



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# Photometric Data:

### **RCL G2 2 SH UV 950**

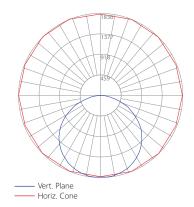
Test No.: LLIA001735-012A Luminaire Lumens: 5,516 lm Luminaire Watts: 37.3W Efficacy: 147.8 LPW Spacing Criterion (0-180): 1.30 Spacing Criterion (90-270): 1.32

Luminance Data (cd/sq.m) Angle In Degrees Average 90-Deg Average Average 0-Deg 45-Deg 45 26197 25361 25281 55 65 75 25667 24107 24530 22269 24031 21675 17040 20356 17428 85 11213 7741 7259

# 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



Zonal Lumen Summary												
Lumens	%Fixt											
674.90	12.20											
1445.02	26.20											
2391.81	43.40											
4324.81	78.40											
5425.51	98.40											
5515.51	100.00											
0.51	0.00											
0.51	0.00											
0.51	0.00											
0.51	0.00											
5516.02	100.00											
	Lumens 674.90 1445.02 2391.81 4324.81 5425.51 5515.51 0.51 0.51 0.51											

#### **RCL G2 2 SH UV FR 950**

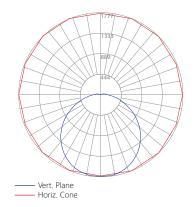
Test No.: LLIA001735-014 Luminaire Lumens: 5,219 lm Luminaire Watts: 37.3W Efficacy: 140.1 LPW Spacing Criterion (0-180): 1.24 Spacing Criterion (90-270): 1.28 Luminance Data (cd/sq.m)

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

#### 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



n Summary	
Lumens	%Fixt
650.53	12.50
1383.00	26.50
2263.42	43.40
3961.89	75.90
4933.95	94.50
5123.07	98.20
95.78	1.80
95.78	1.80
95.78	1.80
95.78	1.80
5218.86	100.00
	Lumens 650.53 1383.00 2263.42 3961.89 4933.95 5123.07 95.78 95.78 95.78 95.78

