

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

LED

RCL 4 | LED Channel Retrofit Kit

Features:

- High performance LED technology
- 0-10V dimming drivers standard
- 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 L70 Lifetime:

- Up to 189,000 hrs (calculated)
(L70 information for specific configurations available upon request)
- For BAA compliant configurations - up to 189,000 hrs (calculated)

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 4 MD UV FR 840 4.25" ZOSMD EM1

Series	Length	Output	Voltage	Shielding	CRI/CCT	Channel Width	Controls	Options
RCL	4							
RCL	4 4'	LW Low	UV 120-277	Blank No Lenses	835 80 CRI/3500K	x.xx" Specify Channel Width (in inches) VAR Variable - Adjusts to fit channel widths from 4.00" to 5.00"	Blank No Controls ZOSMD Microwave Occupancy Sensor with Photocell (On/Off/Dim) ⁽¹⁾ ZIFS Douglas IFS Sensor with Dimming/ Occupancy/Daylight Harvesting with Newtork Capabilities ⁽²⁾ ZIFC Douglas IFC Controller with Newtork Capabilities ⁽³⁾ ZENLO Enlighted One Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽⁴⁾ ZENLC Enlighted Connected Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽⁴⁾ ZENLI Enlighted IoT Micro Sensor with Dimming/Occupancy/Daylight Harvesting ⁽⁴⁾	Blank No Options EXT10 10-Year Extended Warranty ⁽⁵⁾ EM1 Emergency Pack - Up to 8W ⁽⁶⁾ EM2 Emergency Pack - Up to 16W ⁽⁶⁾ CC Conformal Coating LVL 0-10V Dimming Leads for Easy Field Access BAA Buy American Act Compliant
		MD Medium		FR Frosted Acrylic Diffusers	840 80 CRI/4000K			
		MH Medium High			850 80 CRI/5000K			
		HI High						
		VH Very High						

Notes

- ⁽¹⁾ 120-277V only. Max mounting height 49'. See page 5 for more details.
⁽²⁾ Max mounting height 16.4'. See page 6 for more details.
⁽³⁾ See page 6 for more details.
⁽⁴⁾ Max mounting height 15'. See page 6 for more details.
⁽⁵⁾ Not available on all models. Certain conditions apply.
Consult factory or sales representative for details.
⁽⁶⁾ 120-277V only / 0°C-50°C ambient.

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

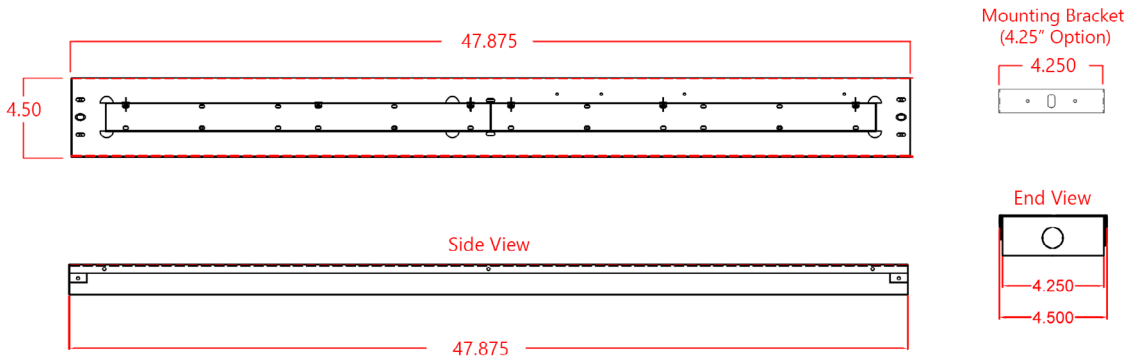


For Enlighted Controls

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



Schematic:

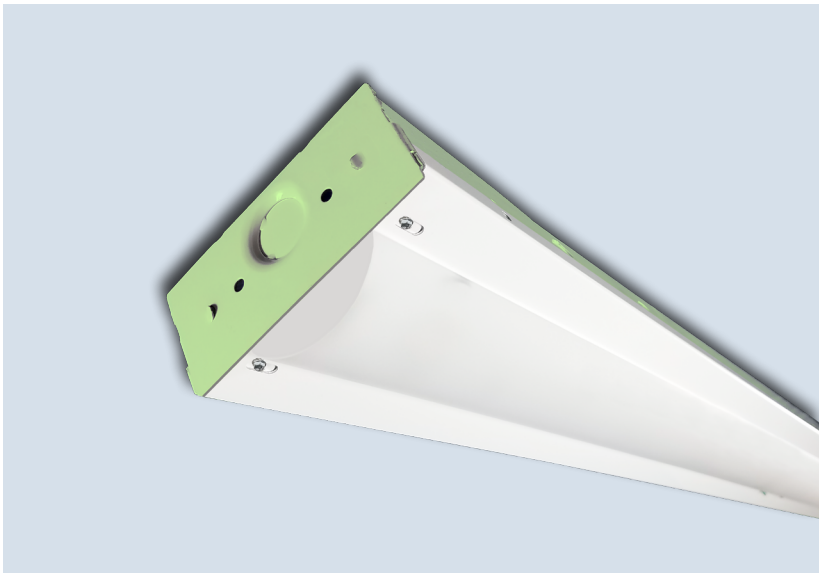


Performance Chart:

Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW	Catalog #	Lumens	Watts	LPW
RCL 4 LW UV 835	2305	18	128.0	RCL 4 LW UV 840	2376	18	132.0	RCL 4 LW UV 850	2447	18	136.0
RCL 4 MD UV 835	3832	32	119.7	RCL 4 MD UV 840	3950	32	123.4	RCL 4 MD UV 850	4069	32	127.1
RCL 4 MH UV 835	4829	36	134.1	RCL 4 MH UV 840	4978	36	138.3	RCL 4 MH UV 850	5128	36	142.4
RCL 4 HI UV 835	6705	46	145.8	RCL 4 HI UV 840	6913	46	150.3	RCL 4 HI UV 850	7120	46	154.8
RCL 4 VH UV 835	8901	68	130.9	RCL 4 VH UV 840	9177	68	134.9	RCL 4 VH UV 850	9452	68	139.0
RCL 4 LW UV FR 835	2212	18	122.9	RCL 4 LW UV FR 840	2280	18	126.7	RCL 4 LW UV FR 850	2349	18	130.5
RCL 4 MD UV FR 835	3640	32	115.5	RCL 4 MD UV FR 840	3752	32	119.1	RCL 4 MD UV FR 850	3865	32	122.7
RCL 4 MH UV FR 835	4635	36	128.7	RCL 4 MH UV FR 840	4778	36	132.7	RCL 4 MH UV FR 850	4921	36	136.7
RCL 4 HI UV FR 835	6436	46	139.9	RCL 4 HI UV FR 840	6635	46	144.2	RCL 4 HI UV FR 850	6834	46	148.6
RCL 4 VH UV FR 835	8543	68	125.6	RCL 4 VH UV FR 840	8807	68	129.5	RCL 4 VH UV FR 850	9071	68	133.4

LUMENFOCUS
Re-boardABILITY

The RCL 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.](#)

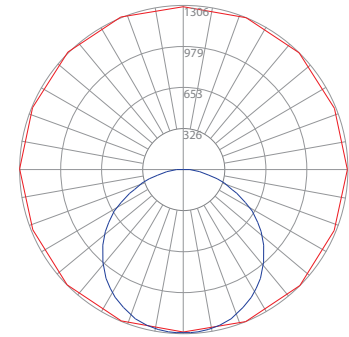


Photometric Data:

RCL 4 MD UV 835

Test No.: LLIA000584-016
 Luminaire Lumens: 3,832 lm
 Luminaire Watts: 32.0W
 Efficacy: 119.7 LPW
 Spacing Criterion (0-180): 1.30
 Spacing Criterion (90-270): 1.28

Luminance Data (cd/sq.m)			
Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9235	9059	8867
55	8996	8731	8490
65	8454	8006	7741
75	7075	6525	6317
85	3661	3475	3231



— Vert. Plane
 — Horiz. Cone

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	80	75	82	77	73
3	90	79	71	64		87	78	70	64	75	68	63	72	66	62
4	82	70	61	54		80	69	60	54	66	59	53	64	58	52
5	75	62	53	47		73	61	53	46	59	52	46	57	51	45
6	70	56	47	41		68	55	47	40	53	46	40	52	45	40
7	65	51	42	36		63	50	42	36	48	41	35	47	40	35
8	60	46	38	32		58	46	37	32	44	37	32	43	36	31
9	56	42	34	29		55	42	34	29	41	33	28	40	33	28
10	53	39	31	26		51	39	31	26	38	31	26	37	30	26

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

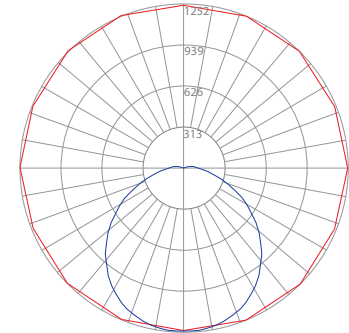
Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	477.46	12.50
0-30	1019.39	26.60
0-40	1681.25	43.90
0-60	3014.67	78.70
0-80	3768.32	98.30
0-90	3831.59	100.00
90-120	0.41	0.00
90-130	0.41	0.00
90-150	0.41	0.00
90-180	0.41	0.00
0-180	3832.00	100.00

RCL 4 MD UV FR 835

Test No.: LLIA000614-009
 Luminaire Lumens: 3,683 lm
 Luminaire Watts: 31.5W
 Efficacy: 116.9 LPW
 Spacing Criterion (0-180): 1.26
 Spacing Criterion (90-270): 1.28

Luminance Data (cd/sq.m)			
Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7819	7539	7456
55	6856	6841	6847
65	5573	5936	6015
75	4180	5033	4992
85	3378	4593	4238



— Vert. Plane
 — Horiz. Cone

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	62	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	39	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	31	44	36	31	42	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

Zone	Lumens	%Fixt
0-20	457.01	12.40
0-30	972.24	26.40
0-40	1591.93	43.20
0-60	2792.60	75.80
0-80	3480.09	94.50
0-90	3611.53	98.10
90-120	71.49	1.90
90-130	71.50	1.90
90-150	71.50	1.90
90-180	71.50	1.90
0-180	3683.03	100.00

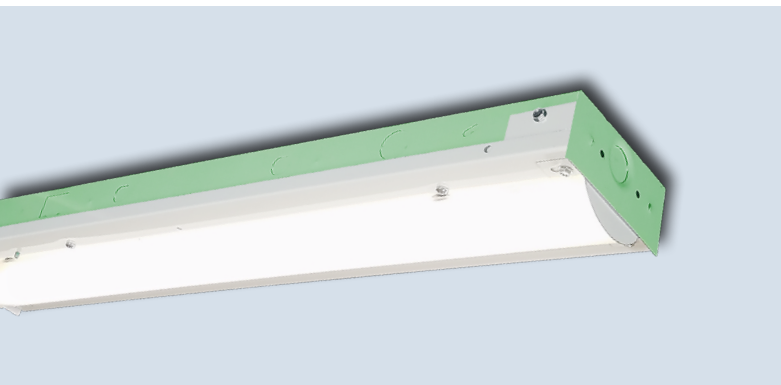


ZOSMD option: **Leviton 0-10V High Frequency Microwave Sensor**

The RCL 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 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 RCL 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.

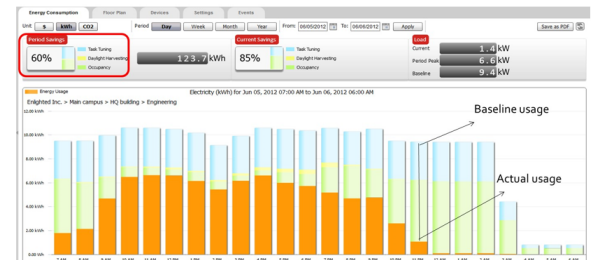
Enlighted sensors come standard with the Enlighted One system (the "ZENLO" option). Enlighted Connected ("ZENLC") offers even more options. The Enlighted IoT ("ZENLI") option allows the full implementation of Enlighted's services. Each system can be fully upgraded to the next tier in the future. So if 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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