



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

LED

WVL 2F | LED Vaportight High Bay

Features:

- High performance LED technology
- 0-10V dimming drivers standard on all models except WVL 2 F MD UV
- Multiple hanging options, including surface, chain, and aircraft cable, for easy installation
- Pre-wired 6' single circuit cord comes standard. Other cord options available
- Durable materials and craftsmanship allows the WVL F to withstand some of the harshest environments

Applications:

- Most industrial, retail, and recreational low bay and high bay applications
- Warehouse
 - Manufacturing Facility
 - Food Processing
 - Freezer

Ambient Operating Temp.:

- -30°C to 35°C

Predicted L70 Lifetime:

- ≥99,000 hrs (calculated)
- >72,000 hrs (reported)
- 77% lumen maintenance @ 72,000 hrs (based on LM-80, TM-21 and in-situ laboratory testing)

CAUTION: Due to high pressure washdown requirements, fixture minimum mounting height is 14 feet above the floor. Lens system should never be removed by anyone but a factory-approved trained technician using torque wrenches.

Construction:

- UL 5VA fiberglass housing (will not melt or burn)
- Clear polycarbonate lens
- Pre-painted aluminum board trays
- Stainless steel mounting hardware

Certifications:

- UL 1598 listed for US and Canada, suitable for wet locations
- IP66
- NEMA 4X
- NSF
- PSI 1500
- RoHS
- DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers) <http://designlights.org/>



ALTOR



Ordering Guide:

example: WVL 2 F HI UV CFP 840 RBS C6

Series	Length	Profile	Output	Voltage	Shielding	CRI/CCT	Hanging	Controls	Cords	Options
WVL	2	F								
WVL	2 2'	F Flat Bottom	LW Low	UV 120-277	CFP Clear Flat Polycarbonate	835 80 CRI/3500K	Blank V-Hook (For Chain or Cable Mount)	Blank No Controls	C6 6' Single Circuit Cord (Comes Standard)	Blank No Options
			MD Medium	34 347V	CFPP Heavier Gauge Clear Flat Polycarbonate	840 80 CRI/4000K	RBS Rigid Mounting Beam - Stainless Steel	ZOS Occupancy Sensor (On/Off)	C6(LVL) C6 With Integrated Dimming Leads	P(NEMA) Plug (Specify NEMA configuration)
			HI High	48 480V		850 80 CRI/5000K	RBZ Rigid Mounting Beam - Zinc Plated	Z221BL_ Wattstopper Programmable Photo/ Motion Multi-Voltage Sensor (high/low/off) ⁽¹⁾	C10 10' Single Circuit Cord	F Fuse
						FCM Flexible Ceiling Mount	Z321BL_ Wattstopper Bluetooth- enabled Programmable Photo/Motion Multi- Voltage Sensor (high/low/off) ⁽¹⁾	C10(LVL) C10 With Integrated Dimming Leads	SDT(480V) 480V To 277V Step Down Transformer	
						QC 10' Quick Hang Cable Kit	ZOSMD 0-10V Dimming Microwave Occupancy Sensor	D6 6' Dual Circuit Cord	BAA Buy American Act Compliant	
						QC20 20' Quick Hang Cable Kit	HUB Hub For Pendant Mounting (Stem Not Included)	D10 10' Dual Circuit Cord		
						SC Safety Cable	ZPC Photocell			
							ZIFC Douglas IFC Controller With Network Capabilities ⁽²⁾			
							ZFMS Douglas FMS Sensor with Dimming/Occupancy/ Daylight Harvesting with Network Capabilities ⁽³⁾			
							ZENLO Enlighted Ruggedized Sensor with Dimming/ Occupancy/Daylight Harvesting and Enlighted One System ⁽⁴⁾			
							ZENLC Enlighted Ruggedized Sensor with Dimming/ Occupancy/Daylight Harvesting and Enlighted Connected System ⁽⁴⁾			
							ZENLI Enlighted Ruggedized Sensor with Dimming/ Occupancy/Daylight Harvesting and Enlighted IoT System ⁽⁴⁾			

Notes

- ⁽¹⁾ " " = lens type. See Page 3 for lens descriptions.
- ⁽²⁾ IFC controller - see Page 3 for more details.
- ⁽³⁾ Max ceiling height for Douglas FMS sensor: 40 feet. See Page 5 for more details on advanced controls.
- ⁽⁴⁾ Max ceiling height for Enlighted Ruggedized sensor 50 feet. See Page 5 for more details on advanced controls.

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)



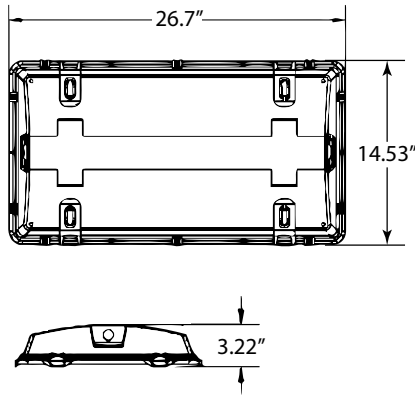
Performance Chart:

Catalog #	Lumens	Watts	LPW
WVL 2 F LW UV CFP 835	8241	63.3	130.2
WVL 2 F MD UV CFP 835	11996	102.4	117.1
WVL 2 F HI UV CFP 835	15735	126.7	124.2

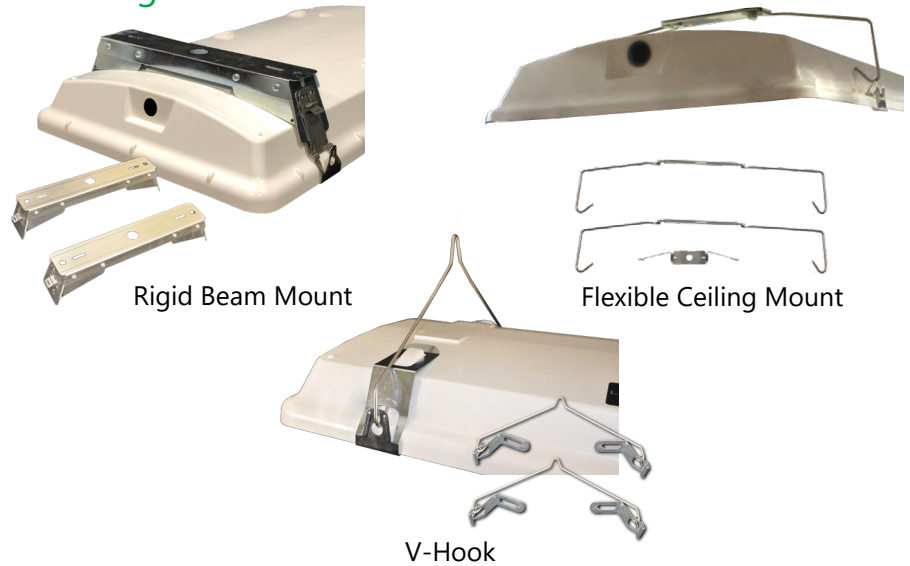
Catalog #	Lumens	Watts	LPW
WVL 2 F LW UV CFP 840	8496	63.3	134.2
WVL 2 F MD UV CFP 840	12367	102.4	120.8
WVL 2 F HI UV CFP 840	16222	126.7	128.0

Catalog #	Lumens	Watts	LPW
WVL 2 F LW UV CFP 850	8751	63.3	138.2
WVL 2 F MD UV CFP 850	12738	102.4	124.4
WVL 2 F HI UV CFP 850	16709	126.7	131.9

Schematic:



Mounting:



Dimming Sensors (Z221B/Z321B)

- The Wattstopper FSP sensor provides multi-level control based on motion and/or daylight contribution
- Rated for cold locations
- Parameters for Bluetooth-enabled Z321B adjustable via phone app - iOS or Android
- Parameters for Z221B adjustable via wireless configuration tool (FSIR-100 - sold separately)
- Three lenses available, tailored for the ideal detection area and mounting height:
 - L2: 360° lens, maximum coverage 48', diameter from 8' height
 - L3: 360° lens, maximum coverage 40', diameter from 20' height
 - L7: 360° lens, maximum coverage 100', diameter from 40' height



1) The Wattstopper FSP sensor. 2) The phone app interface for the Z321B. 3) The FSIR-100 wireless configuration tool.

Douglas Lighting Controls, Inc.: Intelligent Fixture Controller (IFC)

The WVL can be equipped with the Douglas Bluetooth Intelligent Fixture Controller (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
- Listed for emergency control when used on dedicated emergency power bus

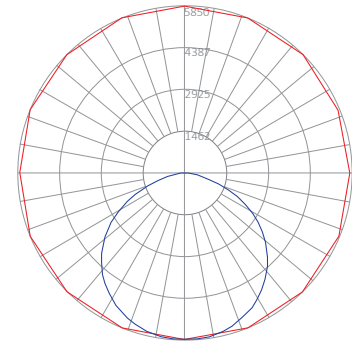


Photometric Data:

WVL 2F HI UV CFP 850

Test No.: LLIA000703-001-R02
 Luminaire Lumens: 16,709 lm
 Luminaire Watts: 126.7W
 Efficacy: 131.9 LPW
 Spacing Criterion (0-180): 1.30
 Spacing Criterion (90-270): 1.30

Luminance Data (cd/sq.m)			
Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	23053	23163	23274
55	22248	22189	22504
65	19846	19656	19947
75	13710	13175	13643
85	2778	2196	1733



— 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	105	101	97	107	103	99	96	98	95	93	94	92	90		
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75		
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63		
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54		
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47		
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41		
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36		
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32		
9	57	43	35	30	55	43	35	29	42	34	29	40	34	29		
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26		

Zonal Lumen Summary

Zone	Lumens	%Fixt
0-20	2148.17	12.90
0-30	4597.11	27.50
0-40	7598.39	45.50
0-60	13607.81	81.40
0-80	16606.43	99.40
0-90	16708.90	100.00
90-120	0.00	0.00
90-130	0.00	0.00
90-150	0.00	0.00
90-180	0.00	0.00
0-180	16708.90	100.00

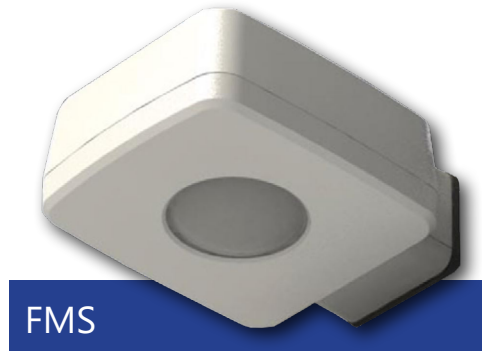
Tested in accordance with IES standards utilizing absolute photometry per LM-79-08



Douglas Lighting Controls, Inc.: High bay sensors

The WVL can be equipped with the Douglas FMS sensor, which is designed for high bay applications.

With a max sensor height up to 40 feet, the FMS is ideal for applications like warehouses and manufacturing facilities. It can be installed for on/off control or bi-level light functionality. The daylight sensor provides additional savings by dimming the lights to work with the amount of natural available daylight.



- Configuration from the floor via smartphone app
- Bluetooth mesh network is created between devices for control over a group of Douglas sensors
- Occupancy and daylight sensing
- IP65-rated
- 0-10V dimming
- 150 feet clear line of site, 50 feet through standard walls (distances may vary based on location and environment)

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 IP65-rated Ruggedized Sensor is an all-in-one unit: task tuning, high-end trimming, daylight harvesting, and occupancy/vacancy detection. Max installation height is 50 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.



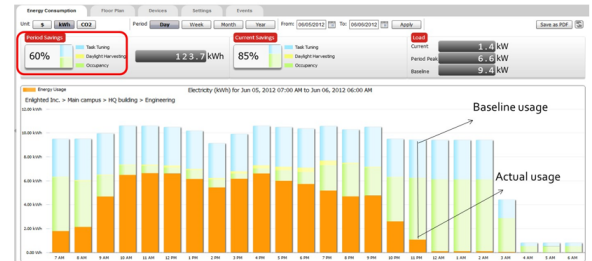
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
Where & Space Applications			✓
Location & Occupancy APIs & Beacons			✓
Future App & API Ready			✓

Note: Additional equipment required for 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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