



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



NVL G2 4 | LED Vaportight

Features:

- High performance LED technology
- 90+ CRI standard
- 0-10V dimming drivers standard
- DALI drivers available
- Field replaceable LED boards & drivers
- Multiple hanging options, including surface, chain, and aircraft cable, for easy installation
- Durable materials and craftsmanship allows the NVL to withstand some of the harshest environments
- Buy American Act compliant (*All base luminaires are BAA compliant. Addition of options may change eligibility. Contact factory for details.*)

Applications:

Most industrial, retail, and recreational low bay and high bay applications

- Warehouse/Manufacturing Facility
- Food Processing
- Gymnasium
- Car Wash
- Cold/Frozen Storage (*cold temperature rules apply. Refer to warranty document at www.lumenfocus.com/support for details*)

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 LM-80, TM-21 and in-situ laboratory testing*)

Warranty:

- 5 year limited system warranty - see www.LumenFocus.com for complete warranty terms and conditions

Construction:

- UL 5VA fiberglass housing (will not melt or burn)
- Impact resistant acrylic and UV stabilized polycarbonate lenses
- Pre-painted cold rolled steel board trays
- Acetal copolymer secure locking plastic latches (stainless steel latches optional)
- Stainless steel mounting hardware

Certifications:

- UL 1598 listed for US and Canada, suitable for wet locations
- DesignLights Consortium qualified on specific configurations (refer to DLC qualified products list for exact model numbers) <http://designlights.org/>
- IP65
- IP66
- IP67
- NEMA 4X
- NSF
- PSI 1500
- RoHS



Ambient Operating Temp.:

- -30°C to 25°C for SH output
- -30°C to 30°C for VH output
- -30°C to 35°C for HI output
- -30°C to 40°C for VL, LW, MD output



Ordering Guide:

example: NVL G2 4 HI UV FSA 940 QC

Series	Length	Output	Voltage	Shielding	CRI/CCT	Hanging	Controls	Options
NVL G2	4							
NVL G2 NVL Gen 2	4 4'	VL Very Low	UV 120-277	CRP Clear Ribbed Polycarbonate	930 90 CRI/3000K	Blank Surface Mounting Bracket (Comes Standard)	Blank No Controls	Blank No Options
		LW Low	34 347V	FRP Frosted Ribbed Polycarbonate	935 90 CRI/3500K	SMBB Mounting Bracket Bail (For Chain or Cable Mounting)	ZOS Occupancy Sensor (On/Off) ⁽¹⁾	C6 6' Single Circuit Cord
		MD Medium		CSP Clear Shallow Polycarbonate	940 90 CRI/4000K		ZOSMD Microwave Photo/Motion Sensor With Step-Dimming (High/Low/Off) ⁽¹⁾	C6(LVL) C6 With Integrated Dimming Leads
		HI High		FSP Frosted Shallow Polycarbonate	950 90 CRI/5000K	QC Bracket Bail with 10' Quick Hang Cable Kit	ZOFD1 Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping (120-277V) ⁽¹⁾	C10 10' Single Circuit Cord
		VH Very High		CRA Clear Ribbed Acrylic		QC20 Bracket Bail with 20' Quick Hang Cable Kit	ZOFD1 Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping (120-277V) ⁽¹⁾	C10(LVL) C10 With Integrated Dimming Leads
		SH Super High		FRA Frosted Ribbed Acrylic		SM45 45° Surface Mount Bracket	ZOFDU Leviton Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Sensor with Grouping, Scheduling (120-480V) ⁽¹⁾	D6 6' Dual Circuit Cord
				CSA Clear Shallow Acrylic			Z221BL_ Wattstopper Programmable Photo/Motion Multi-Voltage Sensor (high/low/off) ⁽²⁾	D10 10' Dual Circuit Cord
		FSA Frosted Shallow Acrylic			Z321BL_ Wattstopper Bluetooth-enabled Programmable Dimming/Occupancy/Daylight Harvesting Multi-Voltage Sensor ⁽²⁾	P(NEMA) Plug (Specify NEMA configuration)		
		CDA Clear Deep Acrylic			ZPC Photocell	EM1 Emergency Pack - Up To 8W ⁽⁴⁾		
		FDA Frosted Deep Acrylic			ZENLO Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted One System ⁽³⁾	EM1C Emergency Pack - Up To 14W ⁽⁵⁾		
					ZENLC Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted Connected System ⁽³⁾	EM2 Emergency Pack - Up To 16W ⁽⁶⁾		
					ZENLI Enlighted Ruggedized Sensor with Dimming/Occupancy/Daylight Harvesting and Enlighted IoT System ⁽³⁾	SSL Stainless Steel Latches		
						F Fuse		
						SDT(480V) 480V To 277V Step Down Transformer		
						LVL 0-10V Dimming Leads for Easy Field Access		
						BAA Buy American Act Compliant		

Notes

- ⁽¹⁾ Max mounting height 40'. See Page 4 for more details
- ⁽²⁾ " _ " = lens type. Max mounting height 40'. See Page 4 for more details.
- ⁽³⁾ Max mounting height 50'. See Page 5 for more details on advanced controls.
- ⁽⁴⁾ EM1 - 120-277V / 10°C-50°C ambient.
- ⁽⁵⁾ EM1C - 120-277V / -20°C-50°C ambient. Adds 30W to system wattage.
- ⁽⁶⁾ EM2 - 120-277V / 0°C-50°C ambient.

Controls Accessories (order separately)

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 WattStopper Controls
 FSIR-100 Wireless IR Programming Tool (For Z221Lx)



Performance Chart:

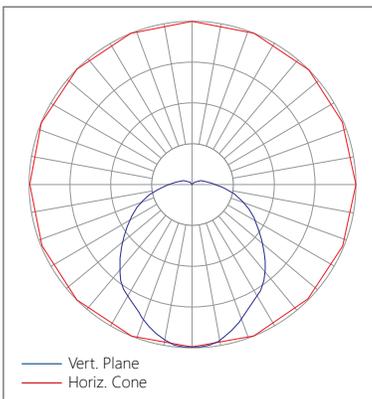
Catalog #	Watts	Lumens (930)	LPW (930)	Lumens (935)	LPW (935)	Lumens (940)	LPW (940)	Lumens (950)	LPW (950)
NVL G2 4 VL UV FRA 9xx	16.1	2028.5	126.0	2037.1	126.5	2085.5	129.6	2085.5	129.6
NVL G2 4 LW UV FRA 9xx	29.3	3947.9	134.9	3964.5	135.5	4058.7	138.7	4058.7	138.7
NVL G2 4 MD UV FRA 9xx	44.2	5803.5	131.4	5827.9	132.0	5966.4	135.1	5966.4	135.1
NVL G2 4 HI UV FRA 9xx	58.4	7738.3	132.6	7770.9	133.1	7955.5	136.3	7955.5	136.3
NVL G2 4 VH UV FRA 9xx	71.6	9620.7	134.4	9661.2	135.0	9890.7	138.2	9890.7	138.2
NVL G2 4 SH UV FRA 9xx	88.3	11482.6	130.0	11531.0	130.6	11804.8	133.7	11804.8	133.7

Lumen Adjustment Factors:

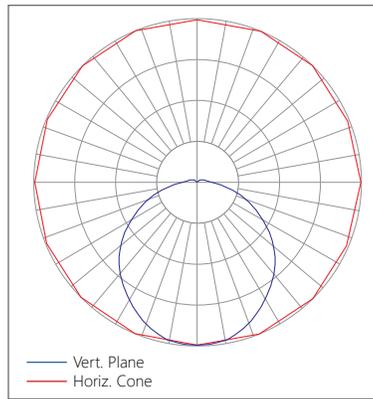
FDA: 1.045 FSA: 1.039 CDA: 1.053 CRA: 1.051 CSA: 1.058

Photometric Data:

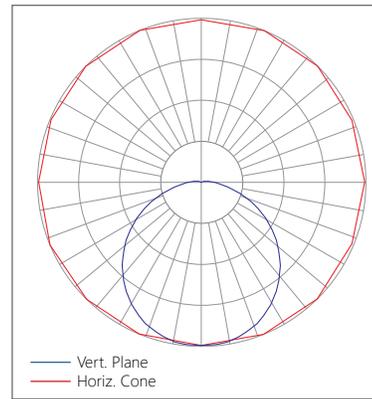
Relative Luminous Intensity with FRA lens



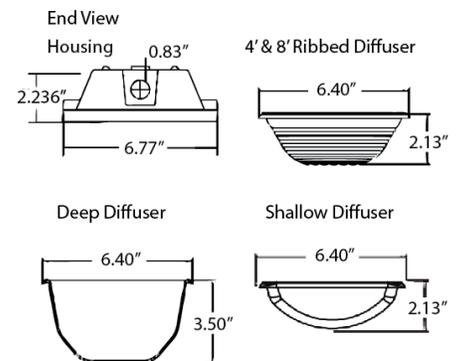
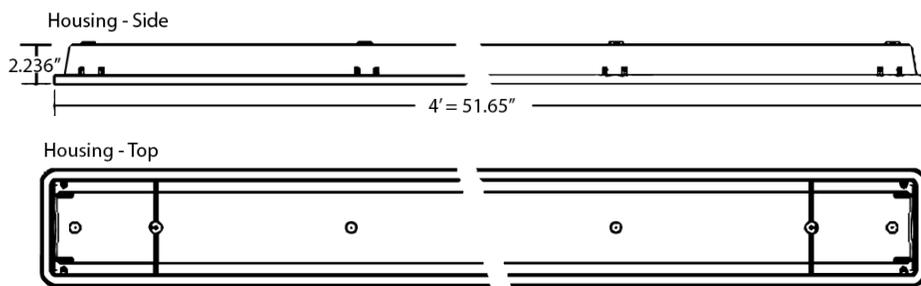
Relative Luminous Intensity with FDA lens



Relative Luminous Intensity with FSA lens



Schematic:



The NVL 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
ZOS	Motion (PIR)	On/Off	Wired
ZOSMD	Motion (Microwave), Photosensor	On/Low/Off	Wired 1-10V
ZOFD1	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZOFDU	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim, Grouping, Scheduling	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
Z221BLx	Motion (PIR), Photosensor	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via IR remote (sold separately)
Z321BLx	Motion (PIR), Daylight Harvesting	High/Low/Off, High-End Trim	Wired 0-10V, Programmable via Bluetooth App (iOS, Android)
ZPC	Photosensor	On/Off	Wired
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

On/Off Occupancy Sensor (ZOS)

The Leviton OSFHL-CTW (or equivalent) is an end mounted PIR On/Off motion sensor. It comes with two interchangeable lenses: Low Bay (8-25' heights), High Bay (20-40' heights), as well as an aisle mask.



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 NVL's lens. The high frequency waves offer less interference and false tripping than traditional sensing technology for reliable occupancy applications. The ZOSMD features automatic switching or dimming based on motion. The ZOSMD option adds step-dimming functionality - standby dimming level 10% / 20% / 30% / 50%. Max mounting height is 40 feet.



Programmable Dimming Sensors:

ZOFDx Sensors



The ZOFDx option includes four sensor lenses that can easily be installed or swapped out in the field. From left: the high bay lens (20'-40' mounting), the high bay lens with aisleway mask, the low bay lens (8'-20' mounting), and the low bay lens with aisleway mask.

- Leviton Smart IP66 passive infrared (PIR) sensors
- Features mesh grouping (16 devices per group), occupancy sensing, daylight harvesting, scheduling (for ZOSFDU only), single-level switching
- Comes pre-installed on the end cap
- Rated for cold locations
- Configurable through the Leviton Smart Sensor App using a smartphone or other Bluetooth-enabled iOS or Android device

Z221B/Z321B Sensors

- 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.



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.



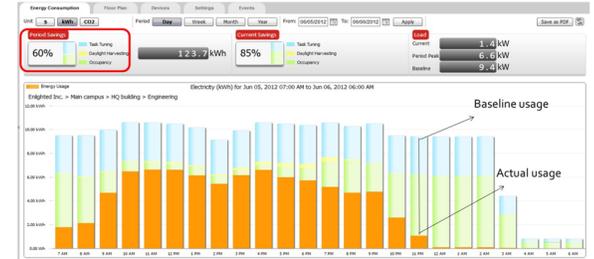
Enlighted Capabilities*	Enlighted One (ZENLO)	Enlighted Connected (ZENLC)	Enlighted IoT (ZENLI)
Motion and Switch Groups	✓	✓	✓
Daylight Harvesting	✓	✓	✓
Schedule Lighting		✓	✓
Energy Reporting & Optimization		✓	✓
Environment Data & Lighting Controls API		✓	✓
Building Management System Integration		✓	✓
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

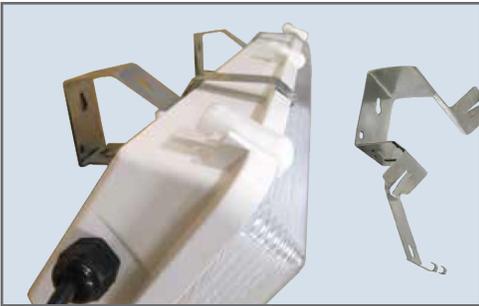
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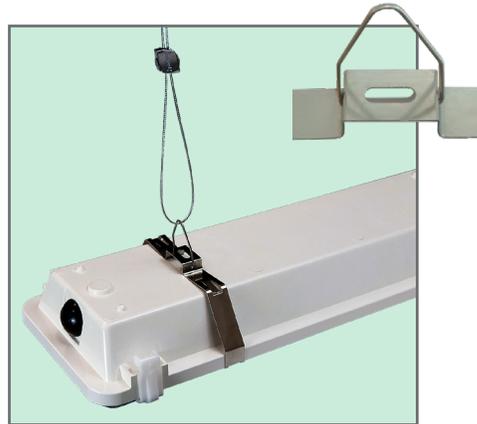
Mounting:



SM Surface Mount Bracket (comes standard)



SM45 45° Surface Mount Bracket



SMBB Surface Mount with Bracket Bail - for chain or cable mounting. (Shown with QC)

