Project		Catalog #		Type	
Prepared by		Notes		Date	



Metalux

VHB

LED High Bay Luminaire

Typical Applications
• Industrial • Commercial Manufacturing • Gymnasium

Interactive Menu

- Order Information page 2
- Photometric Data page 3
- Control Systems page 5
- Integrated Sensors page 6
- Product Warranty

Product Certification

Product Features

MWS MODULAR WIRING SYSTEM CLICK HERE

Connected Systems

damp location

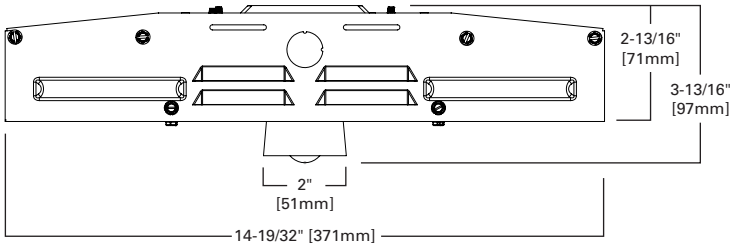
Rapid Response CLICK HERE

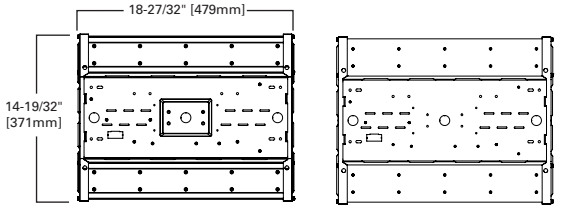
LINEAR DISCONNECT
Safe and convenient means of disconnecting power

Top Product Features

- Compact, lightweight design for ease of installation
- High Impact Polycarbonate optical lens
- 5 lumen packages available (9,000, 12,000, 15,000, 18,000 and 24,000)
- High-Performance efficacy up to 147 lm/W
- Occupancy and daylight sensor for added savings
- Options to meet Buy American and other domestic preference requirements

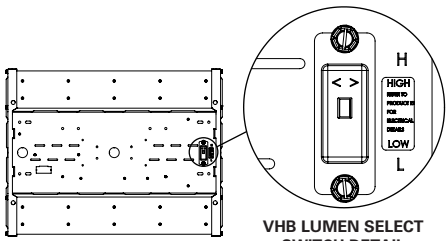
Dimensional and Mounting Details





TOP VIEW
TANGENT EDGES VISIBLE

TOP VIEW
TANGENT EDGES NOT VISIBLE



VHB LUMEN SELECT
SWITCH DETAIL

Order Information

SAMPLE ORDER NUMBER: **VHB-12-HA-W-UNV-L840-CD-U** Includes V Hangers for rapid installation

Domestic Preferences	Series	LED Lumen Output	Ambient	Distribution	Shielding	Voltage	CRI/CCT
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**VHB**=LED High Bay	**9**=9,000 Lumens **12**=12,000 Lumens **15**=15,000 Lumens **18**=18,000 Lumens **24**=24,000 Lumens **1215**= Lumen Select 12000,15000 (3) **1824**=Lumen select 18,000, 24000 (3)	**[Blank]**=Standard 45ºC **HA**=Highy Ambient 55ºC (4)	**N**=Narrow (Aisle) **W**=Wide (General)	**[Blank]**=High Impact Polycarbonate Lens	**UNV**=Universal Voltage 120-277 **UNC**=Universal Voltage 347/480 (6)	**L735**=70 CRI, 3500K **L740**=70 CRI, 4000K **L750**=70 CRI, 5000K **L835**=80 CRI, 3500K **L840**=80 CRI, 4000K **L850**=80 CRI, 5000K **L935**=90 CRI, 3500K **L940**=90 CRI, 4000K **L950**=90 CRI, 5000K
Notes (1) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	**Notes** (2) DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.	**Notes** (3) 18% lower lumen output when connected to wall controller for dimming.	**Notes** (4) Emergency Battery Pack available up to 50° C Ambient only.			**Notes** (5) Voltage must be specified when ordering accessory cord and plug. (6) Y-toggle mounting is required when combining UNC, 347V, 480V with a sensor.	

Options	Driver Type	Options	Motion Sensors	Packaging	Accessories
Emergency **EL20W-REM**=20-watt, 120V-277V emergency battery pack remote mounted (7)	**CD**=0-10V Dimming Driver **5LTD**=Fifth Light DALI (not available in 24,000 lumens or lumen select)	**MP**=Modular Power Receptacle (used for all Cord or Cord and Plug options) (8) **PAF**=Painted After Fabrication **GRY**=Gray **BLK**=Gloss Black **MBK**=Matte Black	**MS**=360° or 180° Motion Sensor Installed, (specify voltage) (9), (10) **SVPD3**=Integrated occupancy and daylight dimming sensor, 1200 sq. ft. coverage (9), (10), (11) **LWR**=Enlighted Wireless Sensor system (9), (10) **ZW-SWPD3**=Integrated Wavelinx Wireless Sensor, 1200 sq ft. coverage **WLS4**=WaveLinx Lite Wireless Integrated Sensor, 15'–40' Mounting Height	**U**=Unit Pack **PALC**=Job Pack, in carton	**VHB-SPM**=Single Point Mount Adapter Kit (12), (13), (15) **LOOP-10**=Ten Foot Loop Hanger, #2 Cable (16) **LOOP-30**=Thirty Foot Loop Hanger, #2 Cable (16) **FL-1**=Fixture Loop (17) **SHK**=Fixture Hook (17) **Y-TOGGLE**=Y Mounting Toggle, #2 Cable (Specify 10' or 30") (order two per fixture) (18) **HBAYC-CHAIN/SET/U**=(2) V-Hook Hangers, 36" Chain Sets w/S-Hooks **VHB-WG**=Field Installable, Wireguard for VHB (14) **MPC3**=3' Modular Power Cord & Plug (Specify Voltage) **MC6**=6' Modular Power Cord **MPC6**=6' Modular Power Cord & Plug (Specify Voltage) **ISHH-01**=Programming Remote for Integrated Sensor **ISHH-02**=Personal Control Remote for Integrated Sensor **SWPD3**=WaveLinx Sensor (for field installation into WaveLinx enabled fixture)
Notes (7) EL20EM-REM requires remote mount only.		**Notes** (8) Requires use of MC or MPC cord accessories.	**Notes** (9) When ordering MS, SVPD3, or LWR option, specify as UNV (for 120 or 277V), or 347V, or 480V. (10) Y-toggle mounting is required when installing the VHB 24K lumen combined with UNC, 347V, 480V, and a motion sensor. (11) SVPD3 sensor rated for -25°C to 55°C ambient.		**Notes** (12) Fixture cannot be surfaced mounted and must be a minimum of 18 inches below ceiling surface. (13) Single point mounting requires counterbalance weight which is included in the VHB-SPM kit. (14) Wireguard option is field installable only. (15) Rigid mount not for use in gymnasiums. (16) The accessory Loop Hanger shall be utilized only as a secondary safety and not the primary means of mounting. (17) Must be used in conjunction with VHB-SPM accessory for proper attachment to fixture. (18) Y-toggle mounting is required when installing the VHB when combining a sensor with UNC, 347V, or 480V. (19) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

Product Specifications

Construction

- Durable CRS and extruded aluminum housing provides added protection for LED components and optimal performance
- Compact 15in x 18in low-profile design for a less obtrusive installation

Electrical

- Long-life LED system coupled with electrical driver to deliver optimal performance
- LED's available in 3500K, 4000K and 5000K with a CRI ≥ 80
- cULus listed
- Electronic drivers are available for 120-277V, 347V and 480V applications
- Standard 0-10V dimming
- Or, specify the Digital Addressable Lighting Interface (DALI) drivers for use with Fifth Light controls

Finish

- White enamel finish preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor to protect against contaminants and oxidation

Optics

- Precision designed, high-impact polycarbonate optics deliver even illumination
- Narrow and wide distribution ensures superior performance to key areas within an application

Options

- Integral Occupancy Sensor available and provides 1200 sq. ft. of coverage in a maximum mounting height of 30'

Mounting

- The VHB LED series is ideally suited for suspension mounting with standard V Hangers (included) and optional chain set, or cable mounting
- Single-point mounting is also available with SPM adapter kit

Compliance

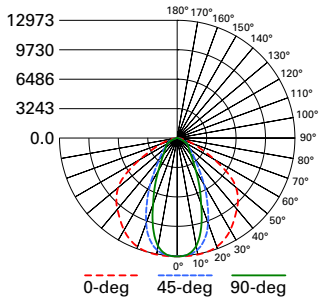
- Luminaires are cULus listed for damp locations -40°C to 55°C ambient environments with 0-10V drivers (see chart)
- RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium (refer to www.designlights.org)

Warranty

- Five-year warranty

Photometric Data

View IES files



VHB-18-N-UNV-L840-CD-U

Electronic Driver

Linear LED 4000K

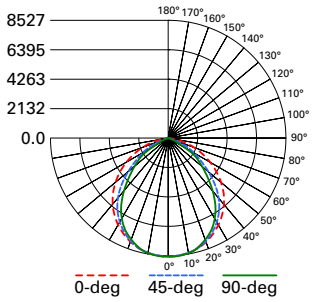
Spacing criterion: (II) 1.29 x mounting height, (⊥) 0.77 x mounting height

Lumens: 18284

Input Watts: 133.8W

Efficacy: 140 LPW

Test Report: VHB-18-N-UNV-L840-CD-U.IES



VHB-18-W-UNV-L850-CD-U

Electronic Driver

Linear LED 5000K

Spacing criterion: (II) 1.26 x mounting height, (⊥) 1.19 x mounting height

Lumens: 19160

Input Watts: 133.8W

Efficacy: 143 LPW

Test Report: VHB-18-W-UNV-L850-CD-U.IES

Energy and Performance Data by Catalog Number

Catalog Number	Description	Delivered Lumens		Watts		Efficacy (lm/W)	
Narrow							
VHB-9-N-UNV-L835-CD-U	Value High Bay, 9K Lumen, Narrow Dist, 120-277V, 3500K, Dim	8842		64.6		137	
VHB-9-N-UNV-L840-CD-U	Value High Bay, 9K Lumen, Narrow Dist, 120-277V, 4000K, Dim	9016		64.6		140	
VHB-9-N-UNV-L850-CD-U	Value High Bay, 9K Lumen, Narrow Dist, 120-277V, 5000K, Dim	9264		64.6		143	
VHB-12-N-UNV-L835-CD-U	Value High Bay, 12K Lumen, Narrow Dist, 120-277V, 3500K, Dim	11953		87.0		137	
VHB-12-N-UNV-L840-CD-U	Value High Bay, 12K Lumen, Narrow Dist, 120-277V, 4000K, Dim	12188		87.0		140	
VHB-12-N-UNV-L850-CD-U	Value High Bay, 12K Lumen, Narrow Dist, 120-277V, 5000K, Dim	12524		87.0		144	
VHB-15-N-UNV-L835-CD-U	Value High Bay, 15K Lumen, Narrow Dist, 120-277V, 3500K, Dim	14824		111.6		133	
VHB-15-N-UNV-L840-CD-U	Value High Bay, 15K Lumen, Narrow Dist, 120-277V, 4000K, Dim	15117		111.6		135	
VHB-15-N-UNV-L850-CD-U	Value High Bay, 15K Lumen, Narrow Dist, 120-277V, 5000K, Dim	15533		111.6		139	
VHB-18-N-UNV-L835-CD-U	Value High Bay, 18K Lumen, Narrow Dist, 120-277V, 3500K, Dim	17931		133.8		134	
VHB-18-N-UNV-L840-CD-U	Value High Bay, 18K Lumen, Narrow Dist, 120-277V, 4000K, Dim	18284		133.8		137	
VHB-18-N-UNV-L850-CD-U	Value High Bay, 18K Lumen, Narrow Dist, 120-277V, 5000K, Dim	18787		133.8		140	
VHB-24-N-UNV-L835-CD-U	Value High Bay, 24K Lumen, Narrow Dist, 120-277V, 3500K, Dim	22172		174.1		127	
VHB-24-N-UNV-L840-CD-U	Value High Bay, 24K Lumen, Narrow Dist, 120-277V, 4000K, Dim	22608		174.1		130	
VHB-24-N-UNV-L850-CD-U	Value High Bay, 24K Lumen, Narrow Dist, 120-277V, 5000K, Dim	23231		174.1		133	
Narrow, Lumen Select		**Level 1 Lumen**	**Level 2 Lumen**	**Level 1 Watt**	**Level 2 Watt**	**Level 1 Efficacy**	**Level 2 Efficacy**
VHB-1215-N-UNV-L835-CD-U	Value High Bay, 12K/15K Lumen Select, Narrow Dist, 120-277V, 3500K, Dim	11771	15357	80.6	109.9	146.	139.7
VHB-1215-N-UNV-L840-CD-U	Value High Bay, 12K/15K Lumen Select, Narrow Dist, 120-277V, 4000K, Dim	12011	15670	80.6	109.9	149	142.6
VHB-1215-N-UNV-L850-CD-U	Value High Bay, 12K/15K Lumen Select, Narrow Dist, 120-277V, 5000K, Dim	12011	15670	80.6	109.9	149	142.6
VHB-1824-N-UNV-L835-CD-U	Value High Bay, 18K/24K Lumen Select, Narrow Dist, 120-277V, 3500K, Dim	18040	21887	125.5	158.3	143	138.3
VHB-1824-N-UNV-L840-CD-U	Value High Bay, 18K/24K Lumen Select, Narrow Dist, 120-277V, 4000K, Dim	18408	22334	125.5	158.3	146	141.1
VHB-1824-N-UNV-L850-CD-U	Value High Bay, 18K/24K Lumen Select, Narrow Dist, 120-277V, 5000K, Dim	18408	22334	125.5	158.3	146	141.1
Wide							
VHB-9-W-UNV-L835-CD-U	Value High Bay, 9K Lumen, Wide Dist, 120-277V, 3500K, Dim	9018		64.6		140	
VHB-9-W-UNV-L840-CD-U	Value High Bay, 9K Lumen, Wide Dist, 120-277V, 4000K, Dim	9195		64.6		142	
VHB-9-W-UNV-L850-CD-U	Value High Bay, 9K Lumen, Wide Dist, 120-277V, 5000K, Dim	9448		64.6		146	
VHB-12-W-UNV-L835-CD-U	Value High Bay, 12K Lumen, Wide Dist, 120-277V, 3500K, Dim	12191		87.0		140	
VHB-12-W-UNV-L840-CD-U	Value High Bay, 12K Lumen, Wide Dist, 120-277V, 4000K, Dim	12430		87.0		143	
VHB-12-W-UNV-L850-CD-U	Value High Bay, 12K Lumen, Wide Dist, 120-277V, 5000K, Dim	12773		87.0		147	
VHB-15-W-UNV-L835-CD-U	Value High Bay, 15K Lumen, Wide Dist, 120-277V, 3500K, Dim	15120		111.6		135	
VHB-15-W-UNV-L840-CD-U	Value High Bay, 15K Lumen, Wide Dist, 120-277V, 4000K, Dim	15417		111.6		138	
VHB-15-W-UNV-L850-CD-U	Value High Bay, 15K Lumen, Wide Dist, 120-277V, 5000K, Dim	15841		111.6		142	
VHB-18-W-UNV-L835-CD-U	Value High Bay, 18K Lumen, Wide Dist, 120-277V, 3500K, Dim	18287		133.8		137	
VHB-18-W-UNV-L840-CD-U	Value High Bay, 18K Lumen, Wide Dist, 120-277V, 4000K, Dim	18647		133.8		139	
VHB-18-W-UNV-L850-CD-U	Value High Bay, 18K Lumen, Wide Dist, 120-277V, 5000K, Dim	19160		133.8		143	
VHB-24-W-UNV-L835-CD-U	Value High Bay, 24K Lumen, Wide Dist, 120-277V, 3500K, Dim	22613		174.1		130	
VHB-24-W-UNV-L840-CD-U	Value High Bay, 24K Lumen, Wide Dist, 120-277V, 4000K, Dim	23057		174.1		132	
VHB-24-W-UNV-L850-CD-U	Value High Bay, 24K Lumen, Wide Dist, 120-277V, 5000K, Dim	23692		174.1		136	
Wide, Lumen Select		**Level 1 Lumen**	**Level 2 Lumen**	**Level 1 Watt**	**Level 2 Watt**	**Level 1 Efficacy**	**Level 2 Efficacy**
VHB-1215-W-UNV-L835-CD-U	Value High Bay, 12K/15K Lumen Select, Wide Dist, 120-277V, 3500K, Dim	12004	15661	80.6	109.9	149	142
VHB-1215-W-UNV-L840-CD-U	Value High Bay, 12K/15K Lumen Select, Wide Dist, 120-277V, 4000K, Dim	12249	15980	80.6	109.9	152	145
VHB-1215-W-UNV-L850-CD-U	Value High Bay, 12K/15K Lumen Select, Wide Dist, 120-277V, 5000K, Dim	12249	15980	80.6	109.9	152	145
VHB-1824-W-UNV-L835-CD-U	Value High Bay, 18K/24K Lumen Select, Wide Dist, 120-277V, 3500K, Dim	18397	22321	125.5	158.3	146	141
VHB-1824-W-UNV-L840-CD-U	Value High Bay, 18K/24K Lumen Select, Wide Dist, 120-277V, 4000K, Dim	18772	22776	125.5	158.3	149	144
VHB-1824-W-UNV-L850-CD-U	Value High Bay, 18K/24K Lumen Select, Wide Dist, 120-277V, 5000K, Dim	18772	22776	125.5	158.3	149	144

Energy and Performance Data

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
50°C	> 85%	> 152,000

Ambient Ratings

Lumen Package	Ambient Rating	EM Battery (Remote)
VHB-9	40°C	40°C
VHB-12	40°C	40°C
VHB-15	40°C	40°C
VHB-18	40°C	40°C
VHB-24	40°C	40°C
VHB-1215	40°C	40°C
VHB-1824	40°C	40°C

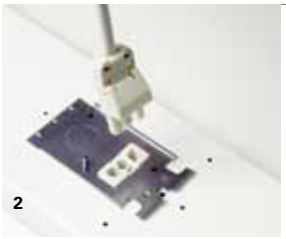
Shipping Data

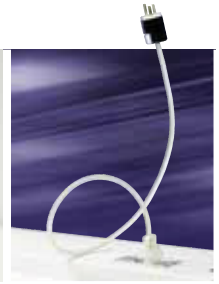
Catalog No.	Wt.
VHB-9	13 lbs.
VHB-12	13 lbs.
VHB-15	13 lbs.
VHB-18	13 lbs.
VHB-24	13 lbs.
VHB-1215	13 lbs.
VHB-1824	13 lbs.

Modular F-Bay Power Supply Option

Cooper Lighting's F-Bay Modular Power Supply option is available for use with all F-Bay products. The modular power supply allows external fixture access for safe and easy servicing. There is no need to remove lamps or reflectors to disconnect fixture power with F-Bay Modular Power Supply. Access to the individual fixture's power supply allows servicing without turning off all the fixtures, disrupting occupants. F-Bay Modular Power Supply is a time saver in installation – ***simply plug & power***.







1. Modular Power Supply Receptacle supplied mounted into fixture Access Plate
2. Modular Power Cord & Plugs in 120, 277, 347, & 480V configurations for easy plug & power into existing supply

No internal fixture access required for installation or disconnecting power

Code Compliance

- UL/cUL Certified for Make/Break under load (UL2549)
- Meets NEC requirements for ballast disconnect (NEC 410.73G)
- Allows for addition of Occupancy Sensor without hard connections
- Receptacles complete with insulating/dust cap

Control Systems

- WaveLinx Wireless
- WaveLinx Wired
- WaveLinx Lite
- DLVP
- iLumin Plus

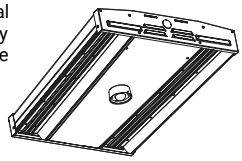
Connected Systems CLICK HERE

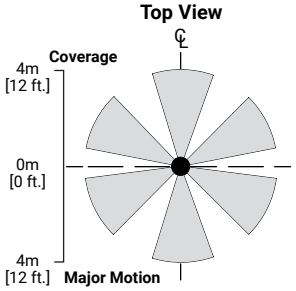
The VHB with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The VHB delivers superior lighting with integrated occupancy and daylighting controls.

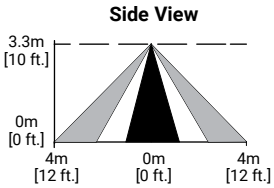
Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the VHB delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

The integral sensor can be offered in both standalone (SVPD3) and networked (SWPD3) for application versatility.







Recommended Mounting Height 8-12 ft.

Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended.

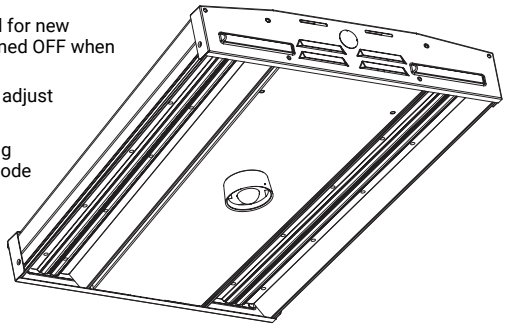
Systems comparison chart

Cooper Lighting Solutions provides many lighting system solutions designed to satisfy code requirements and meet the unique needs of any project.

	Distributed Low-Voltage Power System	WaveLinx	Enlighted
Space type	**Interior**	**Interior/Outdoor**	**Any**
Stand-alone or Network	**Stand-alone**	**Both**	**Network**
Need-based feature progression			
Basic compliance only	●	●	●
Occupancy sensing	●	●	●
Daylight harvesting	●	●	●
Zone control	●	●	●
Scheduling	●	●	●
0-10V dimming	●	●	●
Individual fixture control	●	●	●
Retrofit+Building Integration	●	●	●
Total wireless connectivity		●	●
A/V integration		●	●
BMS integration		●	●
UI options (touchscreen, apps, etc.)		●	●
Enterprise level building integration		●	●
Facility management & tools		●	●
Floor plan & reporting tools			●
Value-added services			●
Asset tracking			●
API integration		●	●
Analytics/higher problem solving			●

Integrated Sensor

The VHB with SVPD3 Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The VHB delivers superior lighting with integrated occupancy and daylighting controls.



Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the VHB delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

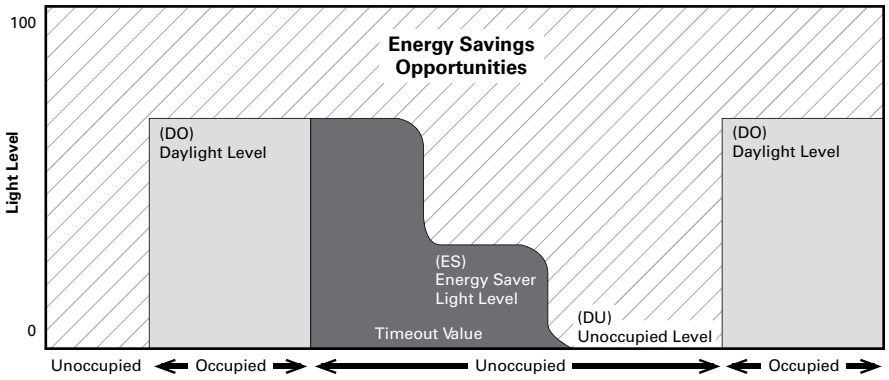
The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The VHB with SVPD3 Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

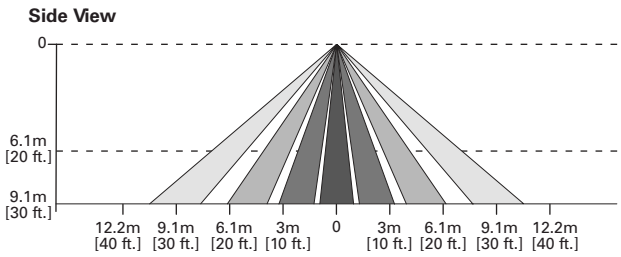
How it works:

- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



Default daylight harvesting set using 36,000 lumen unit at 30 ft. mounting height, 20 ft. spacing for 50 footcandles.

SVPD3 Coverage Pattern



Optional Remote Controls



ISHH-01 Remote



ISHH-02 Remote

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Specifications and dimensions subject to change without notice.