Project		Catalog #		Type	
Prepared by		**Notes**		**Date**	

Metalux

VHB

LED High Bay Luminaire

Typical Applications
• Industrial • Commercial Manufacturing • Gymnasium

Interactive Menu

Product Certification

c(UL)us LISTED   DLC PREMIUM   DLC LISTED   RoHS COMPLIANT   ISO SYSTEMS CERTIFIED

Product Features

MWS MODULAR WIRING SYSTEM **CLICK HERE**   Connected Systems   damp location   Rapid Response **CLICK HERE**
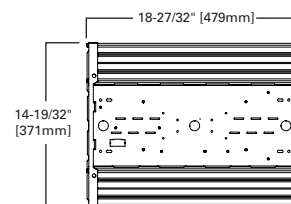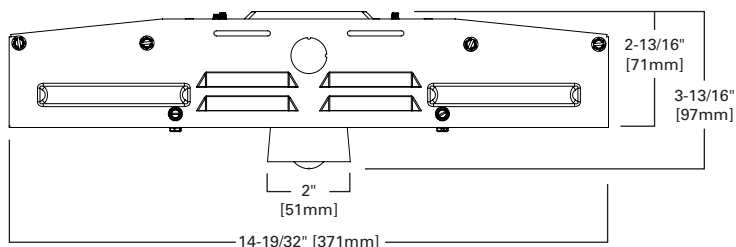
LINEAR DISCONNECT
Safe and convenient means of
disconnecting power

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

Dimensional and Mounting Details

2-13/16" [71mm]
3-13/16" [97mm]
2" [51mm]
14-19/32" [371mm]

18-27/32" [479mm]
14-19/32" [371mm]

COOPER Lighting Solutions

Order Information

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

Series	LED Lumen Output	Ambient	Distribution	Shielding	Voltage	CRI/CCT
Series [10]	**LED Lumen Output**	**Ambient**	**Distribution**	**Shielding**	**Voltage** [1]	**CRI/CCT**
VHB=LED High Bay	**9**=9,000 Lumens **12**=12,000 Lumens **15**=15,000 Lumens **18**=18,000 Lumens **24**=24,000 Lumens	**[Blank]**=Standard 45℃ **HA**=Highy Ambient 55℃ [14]	**N**=Narrow (Aisle) **W**=Wide (General)	**[Blank]**=High Impact Polycarbonate Lens	**UNV**=Universal Voltage 120-277 **UNC**=Universal Voltage 347/480 [13]	**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 (10) DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.		**Notes** (14) Emergency Battery Pack available up to 50° C Ambient only.			**Notes** (1) Voltage must be specified when ordering accessory cord and plug. (13) Y-toggle mounting is required when combining UNC, 347V, 480V with a sensor.	

Options	Driver Type	Options	Motion Sensors	Packaging	Accessories
Options	**Driver Type**	**Options**	**Motions Sensors**	**Packaging**	**Accessories (order separately)**
Emergency **EL20W-REM**=20-watt, 120V-277V emergency battery pack remote mounted [4]	**CD**=0-10V Dimming Driver **5LTD**=Fifth Light DALI (not available in 24,000 lumens)	**MP**=Modular Power Receptacle (used for all Cord or Cord and Plug options) [7] **PAF**=Painted After Fabrication **GRY**=Gray **BLK**=Gloss Black **MBK**=Matte Black	**MS**=360° or 180° Motion Sensor Installed, (specify voltage) [6], [13] **SVPD3**=Integrated occupancy and daylight dimming sensor, 1200 sq. ft. coverage [6], [12], [13] **LWR**=LumaWatt Wireless Sensor system [6], [13] **ZW-SWPD3**=Integrated Wavelinx Wireless Sensor, 1200 sq ft. coverage **ZW**=WaveLinx Wireless Ready (does not include sensor)	**U**=Unit Pack **PALC**=Job Pack, in carton	**VHB-SPM**=Single Point Mount Adapter Kit [2], [3], [8] **LOOP-10**=Ten Foot Loop Hanger, #2 Cable [9] **LOOP-30**=Thirty Foot Loop Hanger, #2 Cable [9] **FL-1**=Fixture Loop [11] **SHK**=Fixture Hook [11] **Y-TOGGLE**=Y Mounting Toggle, #2 Cable (Specify 10' or 30") (order two per fixture) [13] **HBAYC-CHAIN/SET/U**=(2) V-Hook Hangers, 36" Chain Sets w/S-Hooks **VHB-WG**=Field Installable, Wireguard for VHB [5] **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 (4) EL20EM-REM requires remote mount only.		**Notes** (7) Requires use of MC or MPC cord accessories.	**Notes** (6) When ordering MS, SVPD3, or LWR option, specify as UNV (for 120 or 277V), or 347V, or 480V. (12) SVPD3 sensor rated for -25°C to 55°C ambient. (13) Y-toggle mounting is required when installing the VHB 24K lumen combined with UNC, 347V, 480V, and a motion sensor.		**Notes** (2) Fixture cannot be surfaced mounted and must be a minimum of 18 inches below ceiling surface. (3) Single point mounting requires counterbalance weight which is included in the VHB-SPM kit. (5) Wireguard option is field installable only. (8) Rigid mount not for use in gymnasiums. (9) The accessory Loop Hanger shall be utilized only as a secondary safety and not the primary means of mounting. (11) Must be used in conjunction with VHB-SPM accessory for proper attachment to fixture. (13) Y-toggle mounting is required when installing the VHB when combining a sensor with UNC, 347V, or 480V.

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
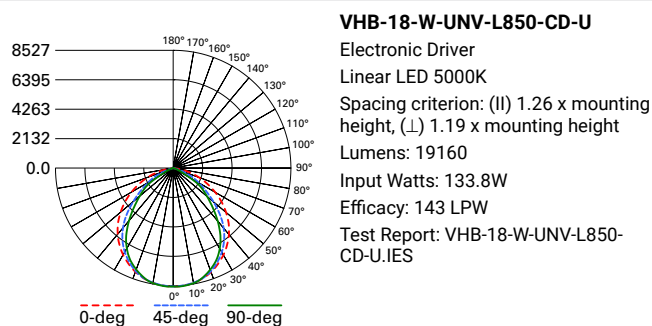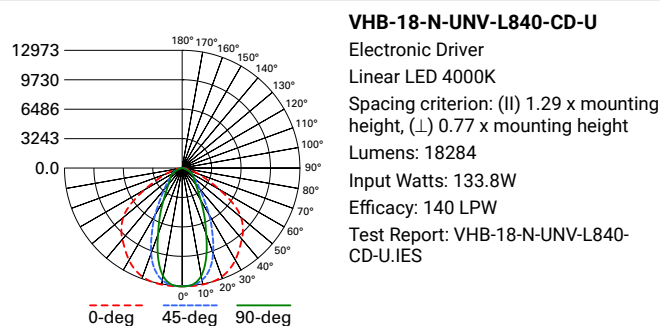- Single-point mounting is also available with SPM adapter kit

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

COOPER Lighting Solutions

Photometric Data

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

12973
9730
6486
3243
0.0

0-deg   45-deg   90-deg

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

8527
6395
4263
2132
0.0

0-deg   45-deg   90-deg

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
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

COOPER Lighting Solutions

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

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.

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*.

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

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
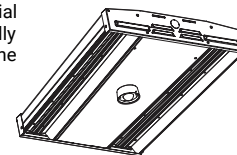
Control Systems

- WaveLinx
- DLVP
- LumaWatt Pro
- iLumin Plus
- VividTune

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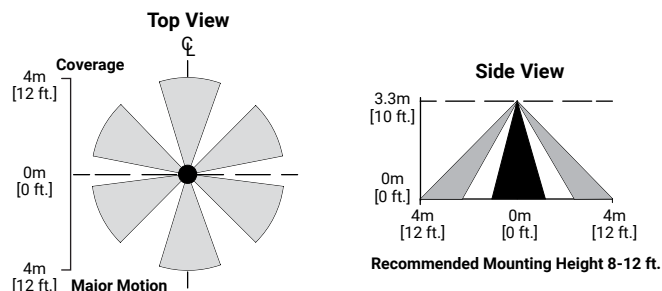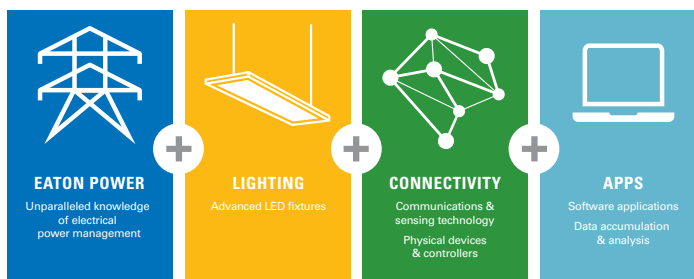
Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the VHB delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

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.

We make connections work

EATON POWER
Unparalleled knowledge of electrical power management

LIGHTING
Advanced LED fixtures

CONNECTIVITY
Communications & sensing technology
Physical devices & controllers

APPS
Software applications
Data accumulation & analysis

Top View

Coverage

Major Motion

Side View

Recommended Mounting Height 8-12 ft.

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

Systems comparison chart

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

Connected Systems CLICK HERE

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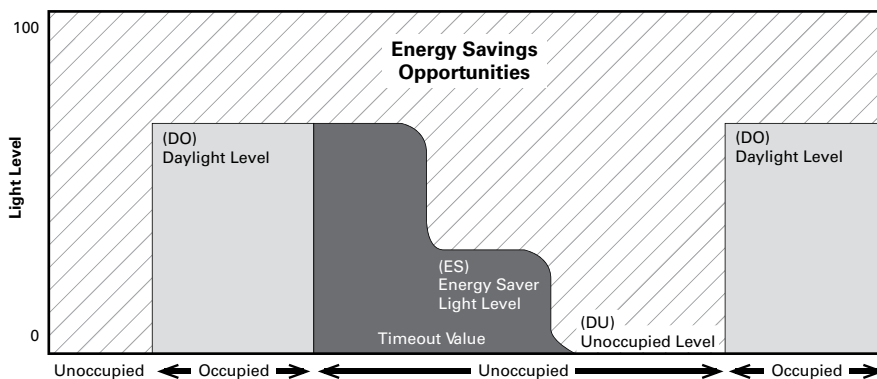
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

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.
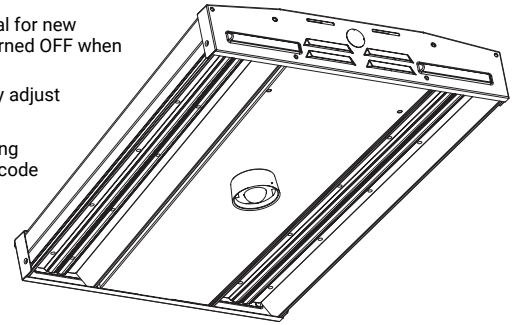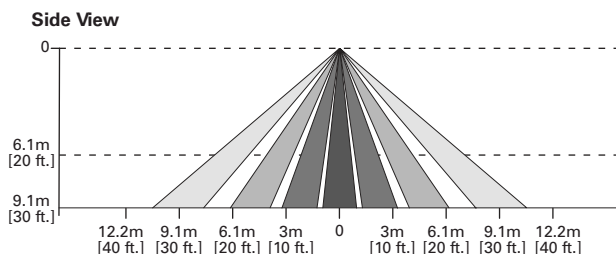
How it works:

- 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.

Energy Savings Opportunities

Light Level: 100 / 0

(DO) Daylight Level

(ES) Energy Saver Light Level

Timeout Value

(DU) Unoccupied Level

(DO) Daylight Level

Unoccupied ← Occupied → ← Unoccupied → ← Occupied →

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

SVPD3 Coverage Pattern

Side View

0 / 6.1m [20 ft.] / 9.1m [30 ft.]

12.2m [40 ft.] / 9.1m [30 ft.] / 6.1m [20 ft.] / 3m [10 ft.] / 0 / 3m [10 ft.] / 6.1m [20 ft.] / 9.1m [30 ft.] / 12.2m [40 ft.]

Optional Remote Controls

ISHH-01 Remote

ISHH-02 Remote

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