HHSL2

Applications

The HARRIS HHSL2 is an innovative high bay for new construction or retrofit. The low profile design offers energy savings, low maintenance, and control options for low or high bay settings in industrial, commercial, and retail applications.

Project Name:	
Catalog Number:	
Type:	
Note:	
Date:	

HHSL2224LUNVFD850LAFGPF
[Lens Option Shown]

Construction & Design

- Narrow lightweight 2' and 4' aluminum body allows for optimal thermal management and ease of handling during installation
- Available with five different light distribution types: No lens, acrylic frosted general lens, acrylic frosted narrow lens, acrylic glare reduction lens, and acrylic clear focus lens

Additional Options

- Field installed or factory installed Battery Back Up available in 10w or 20w
- Field installed precision fit fixture wireguard available for 2' and 4' fixture lengths
- Rigid and suspended mounting options
- Single or bulk pack available
- More available, see factory and field installed fixture options

Electrical

- Available in 120v-277v, 347v and 480v
- Standard 0-10v dimming driver
- 6kV/3kA surge protection standard, 20kV/10kA surge protection available
- Power Factor > .90*
- Total Harmonic Distortion < 20%*

*Note: Varies based on option

Control and Sensor Options

- Field or factory installed control and sensor options
- Manual Programming Sensors
- Remote Programming Sensors
- Remote Programming Sensors with Zoning
- Onsite Network Programming
- Internet/Cloud Based Network Programming

Lumen Maintenance

See lumen maintenance table on page 2

Fixture Certifications & Listings

- Buy American Act Compliant
- UL/cUL Listed
- UL/cUL Listed for Damp Locations
- DesignLights Consortium™ Standard qualified luminaire
- DesignLights Consortium™ Premium qualified luminaire
- Visit the DLC QPL for listed models

Patent Information

Orion is serious about intellectual property. This product may be covered by one or more patents.

Warranty

See Orion's Product Limited Warranty for more details and information

Performance Information, 277v, 5000K, ≥80 CRI[1]

Nominal Lumen Code	Wattage	No Lens (DLC Standard)		LAFG (DLC Standard)		LAGR (DLC Premium)		LAFN (DLC Standard)		LACF (DLC Premium)		Input Current
		Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	
2'												
09L	49w	8,887lm	180	8,287lm	168	8,102lm*	164	8,169lm	165	8,194lm*	166	0.18A
12L	68w	12,326lm	181	11,492lm	169	11,236lm	165	11,329lm	167	11,364lm	167	0.25A
15L	89w	15,326lm	171	14,290lm	160	13,971lm	156	14,086lm	158	14,130lm	158	0.32A
18L	123w	20,685lm	168	19,287lm	157	18,857lm	153	19,013lm	154	19,072lm	155	0.44A
24L	136w	24,449lm	179	22,796lm	167	22,288lm	163	22,472lm	165	22,542lm	165	0.49A
30L	174w	30,571lm	176	28,359lm	163	28,093lm	161	27,902lm**	160	28,870lm*	160	0.63A
4'												
30L	180w	30,853lm	172	28,768lm	160	28,126lm	156	28,359lm	158	28,447lm	158	0.65A
36L	207w	36,224lm	175	33,775lm	163	33,022lm	160	33,295lm	161	33,399lm	161	0.75A
40L	244w	41,246lm	169	38,458lm	158	37,600lm	154	37,911lm	155	38,029lm	156	0.88A
48L	277w	48,123lm	176	44,870lm	164	43,869lm	160	44,232lm	161	44,369lm	162	1.00A
60L	383w	66,942lm	178	62,418lm	166	61,025lm	162	61,530lm	163	61,721lm	164	1.38A
72L	416w	78,796lm	185	73,470lm	173	71,769lm	169	72,425lm	170	72,651lm	171	1.50A

*These products are DLC standard   **These products are DLC premium   Lumen Multipliers: 4000K = 0.98, 3500K = 0.97

Lumen Maintenance with No Lens[2]

Fixture Size	Nominal Lumen Code	Nominal Lumens	Operating Temperature	Calculated Lumen Maintenance		
				L70	L80	L90
2'	09L	9,000	25°C	238,000	149,000	71,000
			55°C	204,000	128,000	61,000
2'	12L	12,000	25°C	238,000	149,000	71,000
			55°C	188,000	118,000	56,000
2'	15L	15,000	25°C	238,000	149,000	71,000
			55°C	166,000	104,000	50,000
2'	18L	18,000	25°C	186,000	117,000	56,000
			55°C	159,000	100,000	48,000
2'	24L	24,000	25°C	238,000	149,000	71,000
			55°C	168,000	105,000	50,000
2'/4'	30L	30,000	25°C	203,000	127,000	61,000
			55°C	151,000	94,000	44,000
4'	36L	36,000	25°C	238,000	149,000	71,000
			55°C	173,000	108,000	52,000
4'	40L	40,000	25°C	186,000	117,000	56,000
			55°C	154,000	97,000	46,000
4'	48L	48,000	25°C	238,000	149,000	71,000
			55°C	174,000	109,000	52,000
4'	60L	60,000	25°C	216,000	135,000	65,000
			50°C	158,000	99,000	47,000
4'	72L	72,000	25°C	219,000	136,000	62,000
			50°C	202,000	125,000	56,000

Additional Specification Information

[1] Actual performance may vary by up to ±10% of values listed; facility factors and fixture options can affect performance values

[2] Calculated hours based on TM-21 projections and components used at the time of testing. Warranty is not associated with Calculated Lumen Maintenance

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Ordering Information Example (NOTE: No dashes or spaces unless noted below)

HHSL2224LUNVFD850LAFGHWTSLV40SP

Ordering Information (Enter Selected Catalog Number Below)

Series	Fixture Size	Nominal Lumen Code[3]	Voltage	Fixture Type	CRI; Color Temp	Lens Options	Power Connection	Fixture Options	Factory Installed Control Options	Packaging Options

Series	Fixture Size	Nominal Lumen Code[3]	Voltage	Fixture Type	CRI; Color Temp	Lens Options	Power Connection	Fixture Options	Factory Installed Control Options	Packaging Options
HHSL2= HARRIS LED High Bay Star Line, Gen 2	**2**= 2' **4**= 4'	**2'** **09L**= 9,000lm **12L**= 12,000lm **15L**= 15,000lm **18L**= 18,000lm **24L**= 24,000lm **30L**= 30,000lm **4'** **30L**= 30,000lm **36L**= 36,000lm **40L**= 40,000lm **48L**= 48,000lm **60L**= 60,000lm[6] **72L**= 72,000lm[6]	**UNV**= 120v-277v **347**= 347v **480**= 480v	**FD**= Full Dimming	**835**= 80CRI; 3500K[7] **840**= 80CRI; 4000K **850**= 80CRI; 5000K	**(Blank)**= No Lens **LAFG**= Lens, Acrylic Frosted General Distribution **LAFN**= Lens, Acrylic Frosted 50° Narrow Aisle Distribution **LACF**= Lens, Acrylic Clear 35° Focus Distribution **LAGR**= Lens, Acrylic Frosted 90° Glare Reduction * **72L** lumen package comes with 6 lenses standard. **24L, 30L 2', 48L** and **60L** lumen packages come with 4 lenses standard, all other lumen packages come with 2 lenses standard. View images on page 5.	**(See Page 4 for part numbers and descriptions)**	**(Blank)**= No Option **TS**= Additional 20kV/10kA Surge Protection **BB10**= Battery Back Up, 10w[4,5,6] **BB20**= Battery Back Up, 20w[4,5,6] **OE**= Orange End Panels	**(See Page 4 for part numbers and descriptions)**	**(Blank)**= Bulk Pack **SP**= Single Pack

Additional Specification Information

[3] For actual lumens see performance table

[4] Fixture with Battery Back Up cannot be used with **PF** or **ML** power connections

[5] Multiply 10w or 20w by the lumens per watt (LPW) of the fixture to calculate lumen output in emergency mode

[6] 60L/72L I lumen package is not available with a field installed battery back up option. The **60L/72L** lumen package comes with the battery back up installed internally within the driver channel

[7] Special order. Contact your Orion representative for lead times. Not DLC Listed.

HHSL2

Power Connection Ordering Information

Power Connection Options
HW= Hardwire (includes dimming leads)[8]
ML= Mate-N-Lok connector (requires purchase of Mate-N-Lok power cord - sold separately)[8]
PF= Platform connector (requires purchase of platform power cord - sold separately)
PFD= Platform connector (includes dimming leads, requires purchase of platform cord - sold separately)

Or build a cord below:

Whip Length	Whip Color	Whip Type	Plug Option* (Plug Only Available for Non-Dimming Cords)	Plug Amperage* (Select Amperage only if plug is selected)	Voltage (Select Voltage only if plug is selected)
06= 6' whip	**W**= White	**(Blank)**= Non-dimming 3 leads (18/3)	**(Blank)**= No plug	**15**= 15 amps	**1**= 120v
11= 11' whip	**B**= Black	**D**= Dimming 5 leads (18/5)	**TL**= TwistLock plug	**20**= 20 amps	**2**= 277v
		EM= Emergency 4 leads (18/4)**	**SB**= Straight blade plug		**4**= 480v

* If a sensor will be specified, please specify a power connection without dimming leads
**If a plug is required for an emergency whip type (EM), please contact the factory.

Sensor and Controls Ordering Information

Factory Installed Control Options[9]

(Blank)=
No Control Options

Integrated in Fixture Body:

VL40B=
Keilton: PIR Occupancy Sensor, Daylight Harvesting, High and Low End Trim, 0-10V Dimming, IR Remote Programmable[11]

VBM40B=
Keilton Bluetooth Mesh Network: Wireless Fixture Controller, PIR Occupancy Sensor, HIGH/LOW/OFF, 0-10v Dimming, Daylight Harvesting, High End Trim, Luminare Level Lighting Control, Wireless Zones, Time-of-Day Scheduling, Keilton Mobile App Programmable

WSxxB=
Wattstopper PIR Occupancy Sensor, HIGH/LOW/OFF, 0-10V Dimming, Switching Photosensor, IR Remote Programmable, 360° [10, 11]

EN2=
Enlighted Connected Lighting Sensor: Network Lighting Control Component, PIR Occupancy Sensor, Daylight Harvesting, High End Trim, Dimming Modes, Luminaire Level Lighting Control, Wireless Zones, Modified IEEE 802.15.4.1, BLE Radio, Temperature Sensor, Scene Control, Demand Response, Data Collection, BMS Integration, Cloud Access

EN3=
Enlighted IoT:
All Features of **EN2** - PLUS access to Apps: Space Management, Asset Tracking, and Contact Tracing Apps

End Mounted:

LV40=
Leviton OSFHU: PIR Occupancy Sensor, ON/OFF, Manual Programmable, 20 & 40 ft. Lenses

LD40=
Leviton HB011: PIR Occupancy Sensor, Daylight Harvesting, 0-10V Dimming Modes, Manual Programmable, 20 & 40 ft. Lenses[12]

WBxx=
Wattstopper FSP-3x1: PIR Occupancy Sensor, Daylight Harvesting, High and Low End Trim, 0-10V Dimming, Bluetooth Mobile App Programmable[10]

Additional Specification Information

[8] **ML** (Mate-N-Lok) or **HW** (Hardwire) fixture option is not available with OEMS1 style sensors

[9] For more information about these options go to our controls landing page

[10] "**xx**" in part number is a place holder for lens height of sensor. Either "20" or "40" can be included at end of part number to replace the "xx" placeholder

[11] Requires remote for commissioning and/or modifying settings. See accessories table

[12] Not compatible with **480** (480v) fixture models

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Accessories (Factory Installed)

Sensor
(ENx)

Sensor
(WSxxB)

Sensor
(WBxx)

Sensor
(VL40B)

Sensor
(LV40/LD40)

Sensor
(VBM40B)

Orange End Cap
(OE)

No Lens Option

Battery Back Up
(BBxx)

Lumen Packages that Come with 2 Lenses Standard
(09L/12L/15L/18L/30L/36L/40L)

Lumen Package that Come with 4 Lenses Standard
(24L/30L/48L/60L LAFG)

Lumen Package that Come with 6 Lenses Standard
(72L)

Physical Information

Nominal Lumen Code	Length	Width	Depth	Weight[13]
09L/12L/15L/18L/24L/30L	23.75"	15.00"	3.16"	6.00-11.00lbs.
30L/36L/40L/48L	45.75"	15.00"	3.16"	11.00-17.00lbs.
60L	45.75"	17.20"	3.16"	13.00-19.50lbs.
72L	45.75"	23.73"	3.16"	17.00-26.00lbs.

Ambient Operating Temperatures[14]

Nominal Lumen Code	Standard Operating Range	With Battery Back Up
09L/12L/15L/18L/24L/30L/36L/40L/48L	-20ºC to 55ºC (-4ºF to 131ºF)	0ºC to 55ºC (32ºF to 131ºF)
60L/72L	-20ºC to 50ºC (-4ºF to 122ºF)	0ºC to 50ºC (32ºF to 122ºF)

Sensor Type	Operating Range
ENx	0ºC to 50ºC (32ºF to 122ºF)
WSxxB	0ºC to 55ºC (32ºFto 131ºF)
VL40B	0ºC to 55ºC (32ºF to 131ºF)
VBM40B	0ºC to 55ºC (32ºF to 131ºF)
LV40	0ºC to 55ºC (32ºF to 131ºF)
LD40	0ºC to 50ºC (32ºF to 122ºF)
WBxx	0ºC to 55ºC (32ºF to 131ºF)

Additional Specification Information

[13] Weight will vary based on option selection

[14] Ambient operating range when suspended 12" from the ceiling

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Accessories (Field Installed)

Suspended Mounting Options	
ECAB19	19" Cables with Snap Hooks (2 Required per Fixture)
ECAB31	31" Cables with Snap Hooks (2 Required per Fixture)
HW-FC008	Hanging cable, Set of Two: Adjustable 180", Loop, Y-Fit with Snap Hooks (1 Set per Fixture)
LED-HHSL-PMR01-KIT[15]	Pendant Mounting Bracket Kit for **UNV** HHSL2 Style Fixtures, Galvanized Steel (Available for Hardwired [**HW**] models only)
LED-HHSL-PMR01-KIT-480[15]	Pendant Mounting Bracket Kit for **347/480** HHSL2 Style Fixtures, Galvanized Steel (Available for Hardwired [**HW**] models only)
LED-HHSL-HL-PMR01-KIT	Pendant Mounting Bracket Kit for **UNV 60L/72L** HHSL2 Style Fixtures, Galvanized Steel (Available for Hardwired [**HW**] models only)
LED-HHSL-HL-PMR01-KIT-480	Pendant Mounting Bracket Kit for **347/480 60L/72L** HHSL2 Style Fixtures, Galvanized Steel (Available for Hardwired [**HW**] models only)

Rigid Mounting Option	
H131SET	Rigid/Flush and Threaded Rod Mounting Bracket Set (Raw Galvanized Steel-also available in white, add **-W** to the end of the part number)

Battery Back Up Options[4,6]*	
LSLH-UNV-BBxx-KIT	Field Installed Battery Back Up Kit for LSLH and HHSL **UNV HW** (120v-277v hardwired) fixtures
LSLH-347-BBxx-KIT	Field Installed Battery Back Up Kit for LSLH and HHSL **347 HW** (347v hardwired) fixtures
LSLH-480-BBxx-KIT	Field Installed Battery Back Up Kit for LSLH and HHSL **480 HW** (480v hardwired) fixtures

*To order 10w battery back up kit, change "**xx**" to "**10**". To order 20w battery back up change "**xx**" to "**20**". Example: LSLH-UNV-BB10-KIT

Wireguard Options*[17]	
LED-HHSL-WG01-KIT	Field Installed Wireguard Kit for **09L/12L/15L/18L/24L/30L** 2' Fixtures without an End Mounted Sensor, Bulk Pack
LED-HHSL-WG02-KIT	Field Installed Wireguard Kit for **30L/36L/40L/48L** 4' Fixtures without an End Mounted Sensor, Bulk Pack
LED-HHSL-WG03-KIT	Field Installed Wireguard Kit for **09L/12L/15L/18L/24L/30L** 2' Fixtures with an End Mounted Sensor, Bulk Pack
LED-HHSL-WG04-KIT	Field Installed Wireguard Kit for **30L/36L/40L/48L** 4' Fixtures with an End Mounted Sensor, Bulk Pack

*Add **"-SP"** at the end of the Wireguard Options order logic for Single Pack.

Remote Required for Commissioning	
RM51	Vealite Keilton Sensor IR Remote Controller
FSIR-100	Hand-Held Sensor Configuration Tool Required for Adjusting Default Factory Settings, Including Hi/Low/Off Modes and Sensitivity/Time Delay/Cut Off (Ordered Separately-To Be Used with **OEMS1360P/OEMS1368P** or embedded **WSxxB**)

Keilton Ecosystem Accessories	

All accessories can be commissioned and controlled via the Keilton app as they are part of the same ecosystem as the VBM40B Keilton sensors. For more information on the Keilton Ecosystem, please visit this link.

CR01-ETC	Real Time Clock USB Dongle (Keeps Keilton devices schedules in sync in case of power loss - 1 per zone)

End Mounted Sensor Options[8, 16] *	
OEMS1300P	End Mounted On/Off Only Sensor, 120v-277v, Normal Temp/Dry, High Bay, Low Bay & Aisle Lenses, 4-Pin Platform Input, 4-Pin Platform Output (**LV40**)
OEMS1330P	End Mounted On/Off Only Sensor, 120v-277v, Cold Temp/Damp, High Bay, Low Bay & Aisle Lenses, 4-Pin Platform Input, 4-Pin Output (**LV40**)
OEMS1370P	End Mounted On/Off Only Sensor, 480v, Normal Temp/Dry, High Bay, Low Bay & Aisle Lenses, 5-Pin Platform Input, 5-Pin Platform Output (**LV40**)
OEMS1360P[11]	Plug 'N Play End Mounted Remote Programmable On/Dim/Off & Ambient Sensor, 120v-277v, Cold & Normal Temp, 20'-40' Lens, 4-Pin Platform Input, 5-Pin Platform Output (Requires FSIR-100 Sensor Configuration Tool - Not Included) (**WSxxB**)
OEMS1368P[11]	Plug 'N Play End Mounted Remote Programmable On/Dim/Off & Ambient Sensor, 347v/480v, Cold & Normal Temp, 20'-40' Lens, 5-Pin Platform Input, 5-Pin Platform Output (Requires FSIR-100 Sensor Configuration Tool - Not Included) (**WSxxB**)
OEMS1380P	Plug 'N Play End Mounted Bluetooth App Programmable On/Dim/Off & Ambient Sensor, 120v-277v, Cold & Normal Temp, 20'-40' Lens, 4-Pin Platform Input, 5-Pin Platform Output (**WBxx**)

Additional Specification Information

[4] Fixture with Battery Back Up cannot be used with **PF** or **ML** power connections

[6] **60L** and **72L** lumen package is not available with a field installed battery back up option. The **60L** and **72L** lumen package comes with the battery back up installed internally within the driver channel

[8] **ML** (Mate-N-Lok) or **HW** (Hardwire) fixture option is not available with OEMS1 style sensors
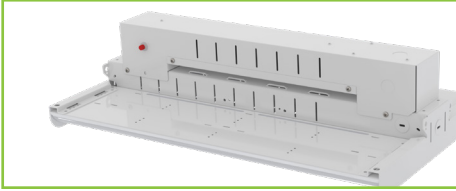
[11] Requires remote for commissioning and/or modifying settings. See accessories table
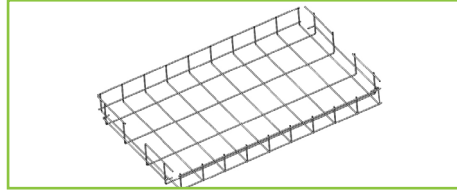
[15] Not available with battery back up option

[16] All Sensors come standard with a Raw Aluminum housing finish. Dark Gray and White housings are available. For Dark Gray add "**-DG**". For a White Housing add "**-WH**" at the end of the sensor part number

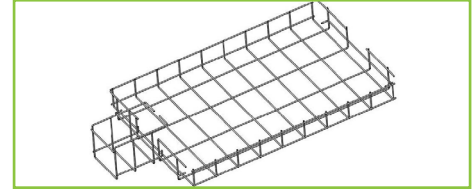[17] **60L/72L** lumen packages are not available with wireguard option

Accessories (Field Installed)

**Battery Back Up
(LSLH-xxx-BBxx-KIT)**
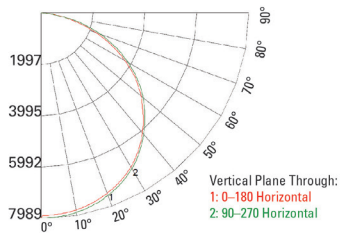

**Fixture Wireguard
(LED-HHSL-WG0x-KIT)**

**Fixture Wireguard with End Mounted Sensor Wireguard
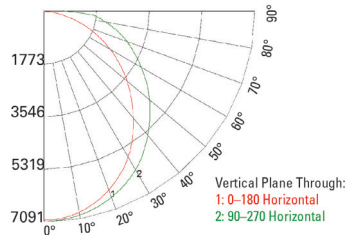(LED-HHSL-WG0x-KIT)**

Photometrics

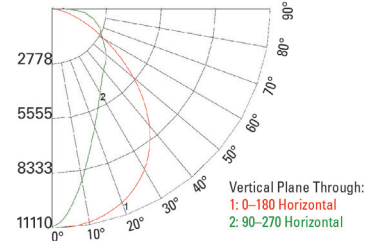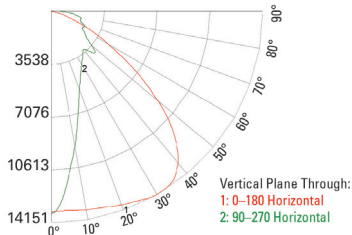Visit orionlighting.com to obtain all .IES files

24L 850

24L 850 LAFG

24L 850 LAFN

24L 850 LACF

24L 850 LAGR

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