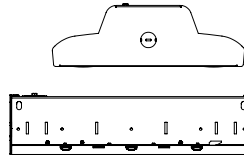


FEATURES

- Industrial design delivers a small, lightweight fixture for ease of installation
- Electrical architecture delivers industry leading efficiencies (up to 201 LPW) that translate into lowest life cycle cost
- Designed for unconditioned spaces through a 55°C ambient temperature rating and a -30°C rating for refrigerated spaces
- Wide lumen range (up to 60K) to accommodate various ceiling heights, fixture spacings, and specifications
- Optical distribution choices deliver the right amount of light to the right location for your design requirements (horiz., vert., max/min)
- Integrated sensor options for code compliance, grouping of fixtures, increased energy savings, and connection to NX Lighting Controls systems
- Optimized bulk packaging to minimize job site space requirements and ease waste removal
- Uplight options available to illuminate ceiling and eliminate potential cave effect.



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Fixture housing is a combination of steel and aluminum for exceptional durability and heat dissipation
- Fixture design provides easy access to electrical components by removal of bottom channel cover
- Robust white powder coating prevents chipping and/or flaking while providing protection in more demanding environments
- Access plate mounted on back of fixture providing easy access to make wiring connections
- Knockouts on both ends of fixture for electrical connection options

OPTICS

- Diffuse optic options, plus wide, narrow, and aisle light distributions to meet any application requirement
- Field changeable lens for maintenance and flexibility

INSTALLATION

- Mounting options include Chain/Cable mount, Surface mount, and Pendant mount

ELECTRICAL

- Light engine utilizing metal clad boards with high efficacy (up to 201 LPW), long life LEDs protect the fixtures lumen maintenance

ELECTRICAL (CONTINUED)

- Driver options include 3kV standard surge protection in 120–277V input or 6kV standard surge protection in 347–480V input
- Power Factor >0.9 and THD <20 converts power efficiently and effectively into light
- Driver options for fixed light output or 0-10V dimming down to 10% is available to customize light levels

CONTROLS

- Integration of sensors (NX and Third Party) accomplished through knockout in bottom middle of fixture which eliminates fixture potentially blocking sensor
- High-end trim, occupancy and ambient light detection with dimming available
- NX Lighting Controls provides options for standalone and networked integrated sensor with wire or wireless connectivity featuring functionality including networkable, standalone grouping, scheduling, occupancy, daylight harvesting, dimming, ON/OFF control for NX system deployments
- NX Connect is a standalone wireless deployment for room based applications using wireless enabled and battery operated devices featuring functionality including standalone grouping, occupancy, daylight harvesting, dimming and ON/OFF control

ECHELĂN



SERVICE PROGRAM



Typical Dimensions and Weights				
Sizes	Length (in)	Width (in)	Height (in)	Weight (lbs)
1	13.75	10.88	3.46	10.0
2	27.30	10.88	3.60	20.0
3	27.30	15.58	3.60	22.0

*Size dependent on Lumen code. See dimensions page.

CONTROLS (CONTINUED)

- DLC 5.1 LLC: Integrated/embedded networked lighting controls, luminaire-level lighting control (LLC)

CERTIFICATIONS

- All luminaires are built to UL1598 standard
- Damp location labeling is standard
- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC® website for specific product qualifications at www.designlights.org
- UL/cUL Listed
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 09/01/2022

WARRANTY

- 5 year warranty
- See [HLI Solutions Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	9,000–60,000
Wattage Range	49-380
Efficacy Range (LPW)	up to 201
Reported Life (Hours)	L93 / 60,000

ORDERING GUIDE

= Service Program
Limit of 400 luminaires

Example: ECH1-840-L24-CW-ED-U-ST

CATALOG #

ECH1						
Model	CRI/CCT	Lumen Output	Optics	Driver	Voltage	Mounting
ECH1 High Performance High Bay	740 4000K 70 CRI	L09 9,000 lm	CW No Lens (120°)	ED 0-10V Dimming	U ⁶ 120-277V	ST Standard
	750 5000K 70 CRI	L12 12,000 lm	DW ⁹ Diffuse Optic Wide (120°)	E Fixed Output	120 120V	SM Surface Mount
	830 3000K 80 CRI	L15 15,000 lm	DN ⁹ Diffuse Optic Narrow (55°)		277 277V	PM Pendant Mount
	835 3500K 80 CRI	L18 18,000 lm	DA ⁹ Diffuse Optic Aisle (30°)		347 347V	
	840 4000K 80 CRI	L24 24,000 lm			480 480V	
	850 5000K 80 CRI	L30 30,000 lm				
	935 3500K 90 CRI	L36 36,000 lm				
	940 4000K 90 CRI	L48 48,000 lm				
		L60 60,000 lm				

Integrated Sensors (Leave Blank If None Needed)	
<u>NX Networked – Wireless</u>	
NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor ^{15, 16}
NXWHM	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ^{15, 16}
<u>NX Networked – Wired</u>	
NXE	NX Wired Dual RJ45 SmartPORTS, without Sensor ^{15, 16}
NXEHM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ^{15, 16, 17}
<u>NX Connect® – Wireless</u>	
NXCHM ⁹	NX Connect NXC-WHS20 Wireless High Bay Occupancy & Photocell Sensor ¹⁹
<u>Third Party Sensors</u>	
OS	On/Off Sensor 360° high mount sensor ⁷
OCS	On/ Off Occupancy/ Daylight Sensor 360° high mount sensor ⁷
ODS	Dimming Occupancy Sensor 360° high mount sensor ⁷
<u>Current Controls Standalone Options</u>	
WSPD360	Integral WSPDEMUNV PIR Occupancy Sensor with photocell and 360° Lens ²⁰
WSPDA	Integral WSPDEMUNV PIR Occupancy Sensor with Automatic Dimming Photocell and Aisle Lens ²⁰
WSPDBT360	Bluetooth® Programmable, WSPDBEMUNV PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens ²¹
WSPDBTA	Bluetooth® Programmable, WSPDBEMUNV PIR Occupancy Sensor with Automatic Dimming Photocell and Aisle Lens ²¹
OS1360	On/Off WASP2 Occupancy/Daylight Sensor, 1-relay, 360 lens ²²
OS1A	On/Off WASP2 Occupancy/Daylight Sensor, 1-relay, Aisle lens ²²

Options (Leave Blank If None Needed)	
PI	Packaged Individually
ELL20	Emergency Battery Pack (EM Pack), 20 watt ¹
DTS	Dimming Bypass Module ²
<u>Cord Options</u>	
F3C006	6', 3 conductor cord
F3C012	12', 3 conductor cord
F4C006	6', 4 conductor cord (for ELL20 option)
F4C012	12', 4 conductor cord (for ELL20 option)
F5C006	6', 5 conductor cord (Line + dimming)
F5C012	12', 5 conductor cord (Line + dimming)
<u>Flexible Metal Conduit Options</u>	
C00388	6', 3 wire flexible metal conduit ¹⁸
C00488	6', 4 wire flexible metal conduit ¹⁸
C00588	6', 5 wire flexible metal conduit ¹⁸
<u>Cord with Plug Options (See NEMA Table Below)</u>	
C6TL15	6' Cord with 15A TL Plug (Only available when specifying discrete voltage codes 120 or 277) ³
C6TL20	6' Cord with 20A TL Plug (Only available when specifying discrete voltage code 120, 277, 347 or 480) ⁴
C6P151	6' Cord with 15A straight blade plug (Only available when specifying discrete voltage code 120, 277 or 347) ⁵
<u>Specialty Modular Cord Sets</u>	
LE	ACS-MC Flex + 10ft 2EA 10-LW 277/480 # 16AWG ¹⁴
NE	ACS-MC Flex + 10ft 2EA 12-LW 277/480 # 16AWG ¹⁴
<u>Uplight (nominal lumens)</u> ^{10, 11, 12, 13}	
U1	1000 lumens
U2	2000 lumens
U3	3000 lumens
U4	4000 lumens

Notes:

- ELL20 with 347/480V not available with mounting options SM and PM.
- DTS not available with 347/480V.
- Only available with 120V or 277V
- Only available with 120V, 277V, 347V or 480V
- Only available with 120V, 277V or 347V
- Cords/Plugs and Third Party Sensors not available with the U voltage code option
- Third party sensor are programmable and sensors are typically side mounted.
- NX Connect devices can be customized with the NX Connect app, available on the Apple® App Store. NX Connect sensors are typically bottom mounted.
- DW is polycarbonate, DN and DA are acrylic
- ST mounting option only
- For 347/480V contact factory
- Only available up to 48,000 lumens
- Uplight max ambient temperature = +40°C
- Only available with 277V or 480V

Contact manufacturer for lead time on Options

NX In-Fixture Control Options:

- NXWE and NXEHM cannot be used with surface mount versions
- NX is not available with ESD, LUTH, or DALI driver options
- NX combined with Spectrasync is not available in 347V
- For NX control and Flex Wire together, consult factory
- NXC-WHS20 sensor comes with the High Lens as standard. Low and Medium lenses can be ordered separately and field changed

Current Controls Standalone Options

- WSPD360/A sensor option uses dimming WASP End Mount Sensor
- WSPDBT360/A sensor option uses Bluetooth® Dimming WASP End Mount Sensor
- OS1360/A Sensor option uses WASP2 Sensor

NEMA PLUG TYPE TABLE

Voltage	TL15 15A Twist Lock	TL20 20A Twist Lock	P151 15A Straight
120V	L5-15P	L5-20P	5-15P
277V	L7-15P	L7-20P	7-15P
347V	N/A	L24-20P	24-15P
480V	N/A	L8-20P	N/A

ACCESSORY ORDERING GUIDE

MOUNTING AND ACCESSORIES			
Mounting Options	Description	Configurable Order Logic Code	Accessories
<input type="checkbox"/> Standard Chain/Cable Mount	Available on all fixture configurations (chain not included). Y-Cable w/hook can be ordered as an accessory.	ST = Standard (No chain or mounting hardware included)	n/a
<input type="checkbox"/> Surface Mount (optional)	Available on all fixture configurations. Attaches to structural member in ceiling. (Hardware not included.)	SM = Surface Mount	SKU: 93165274 Description: 1/2" Surface Mounting Kit NOTE: Kit included two (2) brackets.
<input type="checkbox"/> Pendant Mount (optional)	Available on all fixture configurations. Attaches to 3/4" threaded conduit. (conduit not included).	PM = 3/4" Pendant Mount Kit	SKU: 93165273 Description: 3/4" Pendant Mounting Kit
<input type="checkbox"/> Y-Cable w/hook (optional)	Use with Standard Mounting Option only. Order separately. Priced per pair. 5 ft., 10 ft., 15 ft., 20 ft. lengths available	n/a	5' Y Cable/Hook: 93302310 10' Y Cable/Hook: 93302311 15' Y Cable/Hook: 93306699 20' Y Cable/Hook: 93306750
<input type="checkbox"/> V-Clips w/ chains (optional)	Use with Standard Mounting Option only. Order separately. Priced per pair. 3 ft. length chains included.	n/a	93146133



WIRE GUARDS		
	Description	Ordering SKU
<input type="checkbox"/>	ECH-Size 1 WIRE GUARD WHT-5PK	93306751
<input type="checkbox"/>	ECH-Size 2 WIRE GUARD WHT-5PK	93306752
<input type="checkbox"/>	ECH-Size 3 WIRE GUARD WHT-5PK	93306753

Each pack contains wire guards that cover 5 fixtures of the size indicated

CONTROLS



NX WIRELESS

The NX Wireless platform provides solutions for both indoor and outdoor applications. It is the ideal solution for both new and retrofit applications with wireless options for radio or enabled sensors. NX enabled luminaires take the complexity out of installation while

providing simple code compliance. NX sensors come integrated with both PIR occupancy sensing technologies and daylight sensing.



NX WIRED

NX Wired options are ideal for indoor spaces and allow for plug and play CAT5 connections between luminaires. NX wired luminaires can also be paired with integral NX sensors, NX wired room devices or NX wireless devices for hybrid deployments



NX CONNECT

The NX Connect system is a complete standalone wireless solution for small to medium retrofit applications. It delivers basic energy code compliance with reduced complexity and labor costs. Enabled luminaires pair with the NX Connect battery-operated wall stations (maximum of 40 devices per Group) using mobile App.

Control Option Ordering Logic & Description			Control Option Functionality										Control Option Components	
			Default Settings	Networkable	Standalone Grouping	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming	Sensor Height		
NX Wireless	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	-	✓	✓	✓	-	-	✓	✓	✓	-		NXRM2-H
	NXWHM	NX Networked Wireless Enabled Integral NXSMP2-HMO Wireless High Bay Occupancy & Photocell Sensor	See Below	✓	✓	✓	✓	✓	✓	✓	✓	Max: 45ft		NXSMP2-HMO
NX Wired	NXE	NX Wired Dual RJ45 SmartPORTS, without Sensor	-	✓	✓	✓	-	-	✓	✓	✓**	-		NXDSP
	NXEHM	NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming	See Below	✓	✓	✓	✓	✓	✓	✓	✓	Max: 45ft		NXDSP NXSMP2-HMO
NX Connect	NXCHM	NX Connect NXC-WHS20 Wireless High Bay Occupancy & Photocell Sensor	See Below	-	✓	-	✓	✓	✓	✓	✓*	Low Max: 8ft Med. Max: 20ft High Max: 40ft		NXC-WHS20

* Requires use of NX Connect App available for download from Apple app store

** Requires NXBTC, order separately

DEFAULT SETTINGS

NX Wireless & Wired	Occupancy Sensor	Enabled
	Occupancy Sensor Sensitivity	7 Minutes
	Occupancy Sensor Timeout	15 Minutes
	Occupied Dim Level	100%
	Unoccupied Dim Level	0% (OFF)
	Daylight Sensor	Disabled
	Bluetooth	Enabled
	2.4GHz Wireless Mesh	Off
	Passcode Factory Passcode: HubbN3TI	Enabled

NX Connect	Settling/Dwell Time	5 sec
	Hold Time	15 min
	Group Hold Time	15 min
	Grace Time	0 sec
	Strategy	-
	Occupancy Sensitivity	5 (highest)
	Occupancy Indicator	1 (enabled)
	Partial Off/Standby	0%
	Background Level	10%
	Task Level	100%
	Daylight Harvesting	1 (enabled)
	Low Ambient Output	250% (of fixtures light output)
	High Ambient Output	OFF

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

Name	Description	Minimum Value	Maximum Value	Default Values for Cat Logic Choice		
				OS	OCS	ODS
Occupancy Time Delay (1 Pole)	The length of time the sensor will keep the lights controlled by relay 1 on at full bright after it last detects occupancy, assuming Minimum On Time has been met.	30 sec	30 min	10 min	10 min	10 min
Occupancy Time Delay (2 Pole)	The length of time the sensor will keep the lights controlled by relay 2 on after it last detects last occupancy, assuming Minimum On Time has been met.	N/A	30 min	10 min	10 min	10 min
Photocell Set-Point	The target light level (at the sensor) that is to be maintained.	Auto	64fc	N/A	N/A	4fc
Sunlight Discount Factor	Value used to improve the tracking for accuracy of a sensor with a photocell during periods of high daylight. Decreasing the value will lower the controlled level of the lights.	x/1	x/10	N/A	N/A	x/1
Dimming Range Max (High Trim)	The maximum output level of a sensor with dimming.	Off	10 VDC	N/A	10 VDC	10 VDC
Dimming Range Low (Low Trim)	The minimum output level to which the photocell will dim the lights.	Off	10 VDC	N/A	1 VDC	1 VDC
Dual Zone Photocell %	Relative value of photocell set-point that is used to control relay 2.	110%	200%	N/A	N/A	150%
Dim to Off Occupancy Time Delay	After Occupancy Time Delay has expired, this setting specifies the amount of time lights are held at minimum dim before turning off.	0 sec	Never Off	0 sec	0 sec	0 sec

APP INFORMATION

NX Lighting Controls offers two NX Apps for their systems

NX LIGHTING CONTROLS APP



The NX Lighting Controls App is a free to use mobile application for programming both an NX Lighting Controls System or Standalone Bluetooth Sensors. The mobile app allows you to configure devices, discover and setup wireless enabled luminaires and program your NX system settings. The NX Lighting Controls app also provides access to IntelliSCOPE for real time occupancy data to accurately adjust your occupancy sensors in real time ensuring accurate detection every time. The NX Lighting Controls App is available for download on both Apple iOS and Android devices.

NX CONNECT APP



The NX Connect mobile App is a free to use mobile application for programming a NX Connect System. The mobile App allows you to discover, configure and share your NX Connect system. The NX Connect also hosts a number of advanced features to help a contractor install a program a NX Connect System efficiently and quickly. The NX Connect is available only on Apple iOS devices and is free to download.

FIELD CHANGEABLE NX-WHS20 SENSOR ACCESSORIES



Ordering Sku	Ordering Cat# Logic	Description
93134999	NX- WHS20_LOW_LENS_KIT_10	Low Lens: 2.5m (8ft) - 10pk
93135001	NX- WHS20_MED_LENS_KIT_10	Med Lens: 6m (20ft) - 10pk
93135003	NX- WHS20_HIGH_LENS_KIT_10	High Lens: 12m (40ft) - 10pk
93134985	NX- WHS20_SNAP_AISLE_MASK_KIT_10	Snap on Aisle Mask

NOTE: See below for NX-WHS20 coverage patterns

SENSOR PLACEMENT

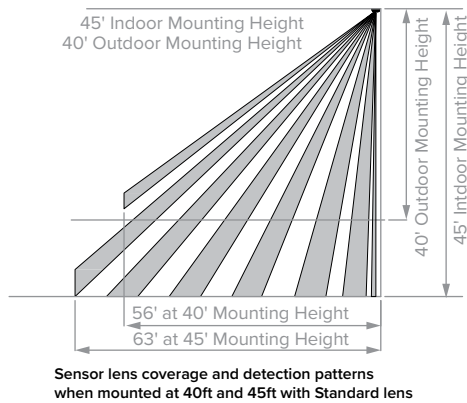
NXWHM AND NXEHM (NXSMP2-HMO SENSOR)



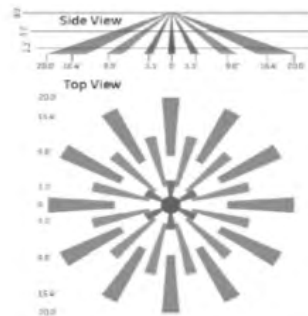
* Third party sensors are side mounted

NX SENSOR COVERAGE PATTERNS

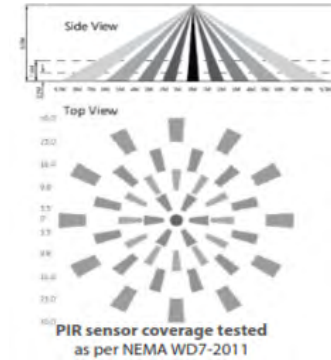
NXWHM (NXSMP2-HMO SENSOR)



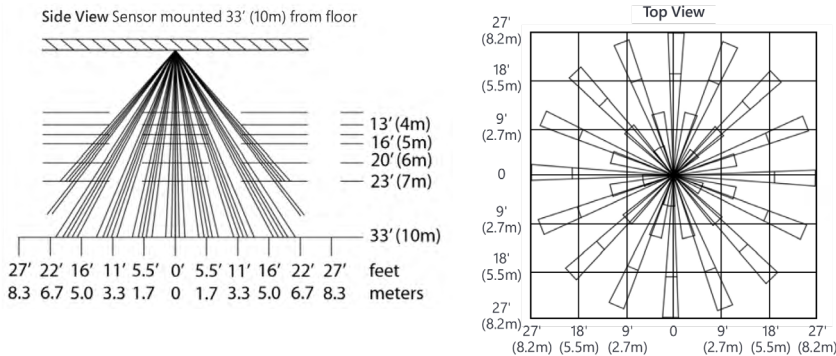
NXCHM (NXC-WHS20 SENSOR) LOW LENS: 2.5M (8FT) 20ft Radius/40ft Diameter



NXCHM (NXC-WHS20 SENSOR) MED LENS: 6M (20FT) 30ft Radius/60ft Diameter



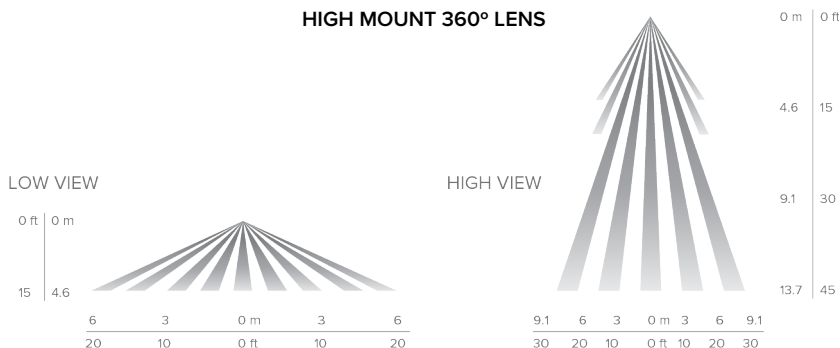
NXCHM (NXC-WHS20 SENSOR) HIGH LENS: 12.2M (40FT) 27ft Radius/54ft Diameter



THIRD PARTY SENSORS

OS, OCS, ODS (THIRD PARTY)

HIGH MOUNT 360° LENS



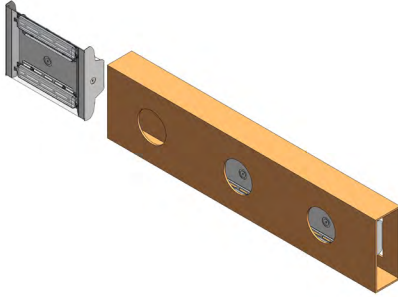
DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PACKAGING/SHIPPING INFO

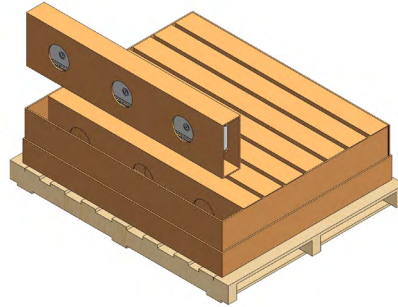
JOB PACKAGING IS STANDARD

Note: Orders less than 14 fixtures are typically sent packaged Individually

SLEEVE



LAYER



PALLET



JOB PACK DETAILS

Size	Fixtures per Sleeve	Sleeves per Layer	Layers per Pallet
1	3	8	3
2	1	8	3
3	1	8	3

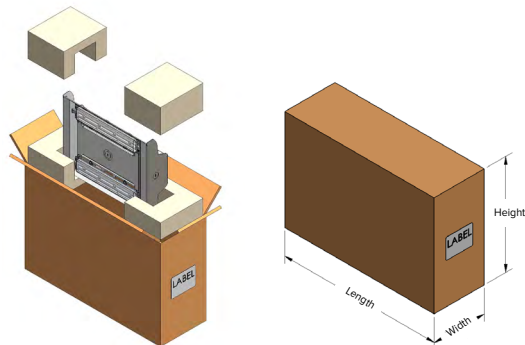
JOB PACK PALLET QTYS

Size	Pallet Dimensions		
	Standard Fixture Qty	L (in) x W(in)	H (in)
1	72	52 x 42	39.0
2	24	52 x 42	39.0
3	24	52 x 42	54.0

JOB PACK PALLET QTYS FOR FIXTURES W/ OPTIONS

Fixture Options					
Cord	EL Pack	Bottom Sensor	Bottom Mt Sensor & Cord	Side Mt Sensor	Side Mt Sensor & Cord
63	48	72	63	48	48
21	21	24	21	24	21
21	21	24	21	24	21

PACKAGED INDIVIDUALLY: OPTION SELECTION PI

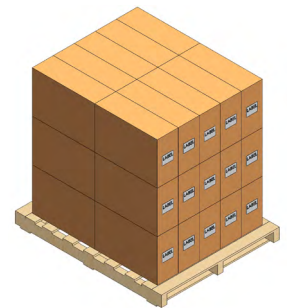


Packaged Individually Box Dimensions

Size	Length (in)	Width (in)	Height (in)
1	22.3	7.5	15.0
2	36.5	7.5	15.0
3	39.0	9.5	22.0

Packaged Individually Pallet Qty & Dimensions

Size	Qty	L (in) x W (in)	Height (in)
1	30	52 x 42	49.0
2	20	52 x 42	48.0
3	6	52 x 42	44.5



Note: Packaged Individually dimensions do not change if sensor, cord, or EMBB option is added to fixture

DELIVERED LUMENS

DELIVERED LUMENS AND ELECTRICAL CHARACTERISTICS FOR ECH1								
Ordering Code			Delivered Lumens	120-277V		347/480V		Body
CRI/CCT	Lumen	Optic		Watts	LPW	Watts	LPW	
740 750	L09	DW	9,100	49	186	51	178	Size 1
	L12		12,100	66	183	68	178	
	L15		15,100	85	178	86	176	
	L18		18,200	106	172	104	175	
	L24		24,000	147	163	144	167	
	L30		30,000	168	179	170	176	Size 2
	L36		36,400	212	172	209	174	
	L48		48,000	294	163	289	166	
	L60		60,300	343	176	336	179	Size 3
830	L09	DW	8,500	53	160	56	152	Size 1
	L12		11,400	72	158	74	154	
	L15		14,300	94	152	93	154	
	L18		17,200	116	148	114	151	
	L24		22,600	164	138	161	140	
	L30		28,300	186	152	185	153	Size 2
	L36		34,300	232	148	229	150	
	L48		45,200	328	138	322	140	
	L60		56,700	380	149	372	152	Size 3
835	L09	DW	8,800	53	166	56	157	Size 1
	L12		11,900	72	165	74	161	
	L15		14,800	94	157	93	159	
	L18		17,800	116	153	114	156	
	L24		23,500	164	143	161	146	
	L30		29,300	186	158	185	158	Size 2
	L36		35,600	232	153	229	155	
	L48		46,900	328	143	322	146	
	L60		58,800	380	155	372	158	Size 3
840 850	L09	DW	9,100	53	172	56	163	Size 1
	L12		12,100	72	168	74	164	
	L15		15,100	94	161	93	162	
	L18		18,200	116	157	114	160	
	L24		24,000	164	146	161	149	
	L30		30,000	186	161	185	162	Size 2
	L36		36,400	232	157	229	159	
	L48		48,000	328	146	322	149	
	L60		60,300	380	159	372	162	Size 3
935	L09	DW	7,900	53	149	56	141	Size 1
	L12		10,600	72	147	74	143	
	L15		13,200	94	140	93	142	
	L18		15,900	116	137	114	139	
	L24		21,000	164	128	161	130	
	L30		26,200	186	141	185	142	Size 2
	L36		31,800	232	137	229	139	
	L48		41,900	328	128	322	130	
	L60		52,600	380	138	372	141	Size 3
940	L09	DW	8,100	53	153	56	145	Size 1
	L12		10,900	72	151	74	147	
	L15		13,500	94	144	93	145	
	L18		16,300	116	141	114	143	
	L24		21,500	164	131	161	134	
	L30		26,900	186	145	185	145	Size 2
	L36		32,600	232	141	229	142	
	L48		43,000	328	131	322	134	
	L60		53,900	380	142	372	145	Size 3

DELIVERED LUMENS (CONTINUED)

LUMEN OUTPUT MULTIPLIER FOR OPTIC ORDERING CODE		
Optic Ordering Code	Optic Description	Lumen Output Multiplier
CW	No Lens (120°)	108%
DW	Diffuse Optic Wide (120°)	100%
DN	Diffuse Optic Narrow (55°)	101%
DA	Diffuse Optic Aisle (30°)	102%

$$\text{Delivered Lumens (in Table on Previous Page)} \times \text{Lumen Output Multiplier} = \text{Delivered Lumens for fixture with CW, DN, or DA Lens}$$

PROJECTED LUMEN MAINTENANCE

Operating Hours	10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000	100,000
Lumen Maintenance Factor	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90

AMBIENT TEMPERATURE RATINGS

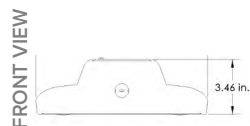
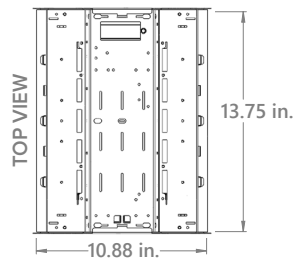
Lumen Code	L09	L12	L15	L18	L24	L30	L36	L48	L60
Max Ambient	55°C	55°C	55°C	55°C	55°C	55°C	55°C	55°C	55°C
Min Ambient	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C

DIMENSIONS

ECH SIZE 1

L09, L12, L15, L18 & L24 LUMEN OUTPUT

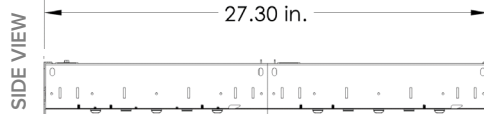
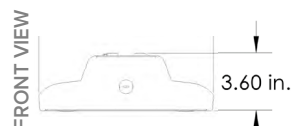
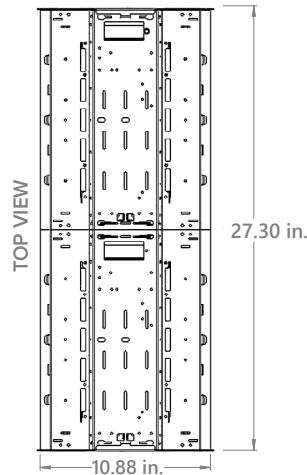
Max Weight: 10 lbs



ECH SIZE 2

L30, L36 & L48 LUMEN OUTPUT

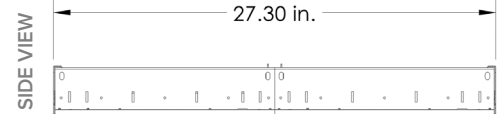
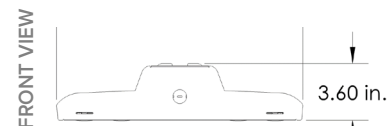
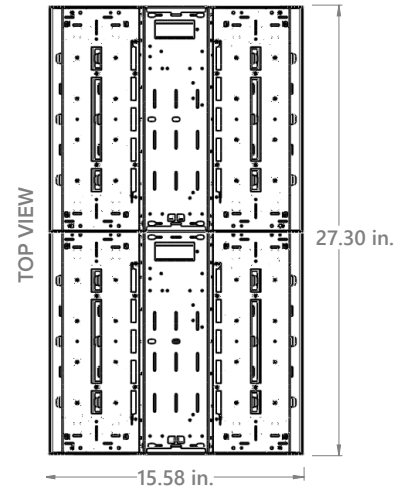
Max Weight: 20 lbs



ECH SIZE 3

L60 LUMEN OUTPUT

Max Weight: 22 lbs

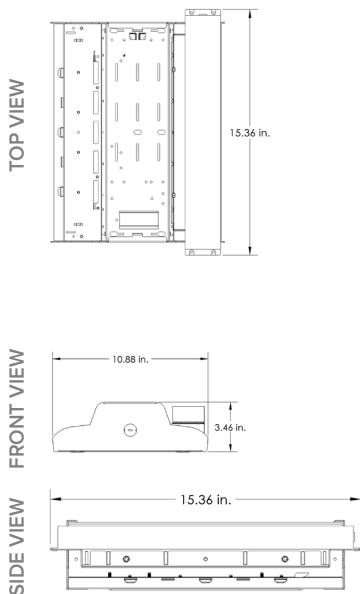


EMERGENCY BATTERY INFORMATION

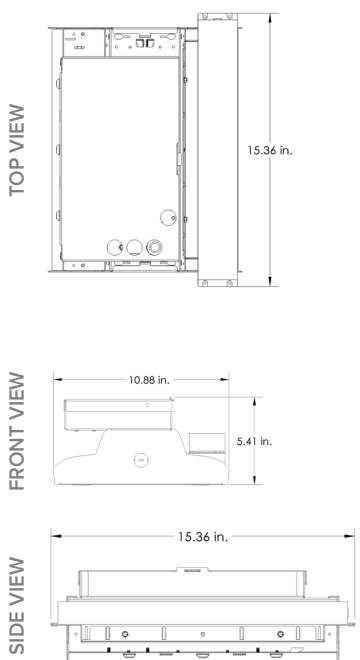
Lumens in Emergency Mode = LPW of Fixture x EM Pack Wattage (20 watts)

ECH SIZE 1

L09, L12, L15, L18 & L24 LUMEN OUTPUT
VOLTAGE: U, 120V, & 277V

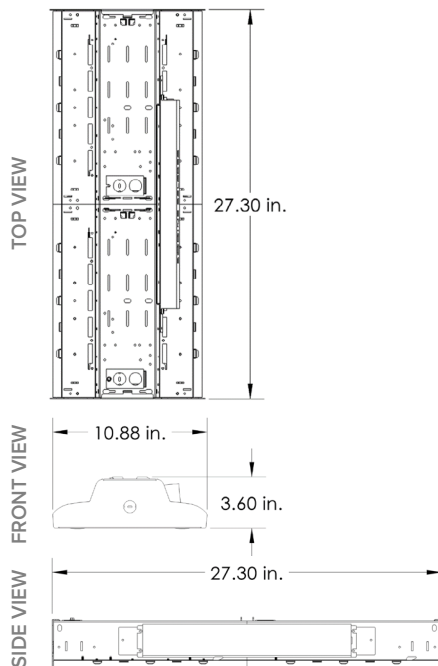


VOLTAGE: 347V & 480V

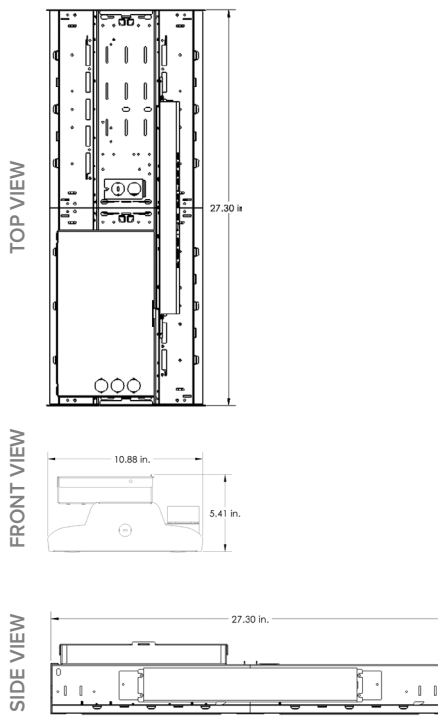


ECH SIZE 2

L30, L36 & L48 LUMEN OUTPUT
VOLTAGE: U, 120V, & 277V

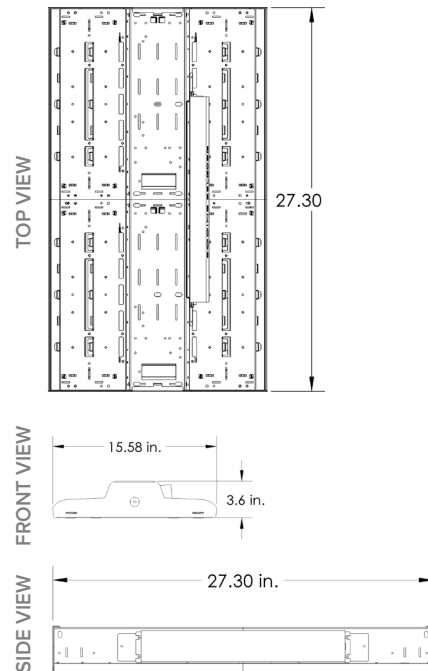


VOLTAGE: 347V & 480V

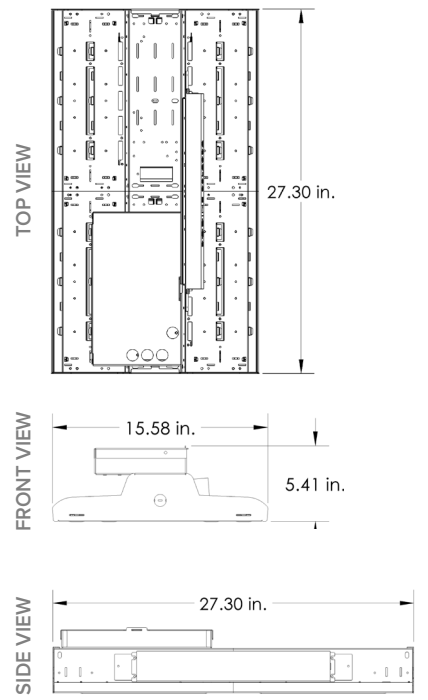


ECH SIZE 3

L60 LUMEN OUTPUT
VOLTAGE: U, 120V, & 277V



VOLTAGE: 347V & 480V



PHOTOMETRY

ECH1-840-L24-DW-EDU-U4

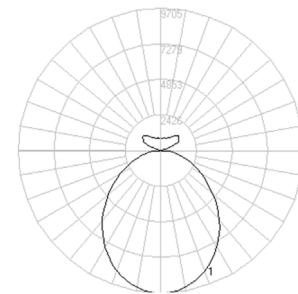
LUMINAIRE DATA

Description	LED Highbay; 24,000 Lumens; Diffuse Optic Wide; Uplight
Delivered Lumens	24,001
Watts	164
Efficacy	146
Spacing Criterion	0°= 1.20 90 = 1.18

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	7319	30.3
0-40	11697	48.5
0-60	19467	80.9
0-90	23943	99.8
0-180	24001	100

POLAR GRAPH



90-270 deg plane

ECH1-840-L24-DN-EDU

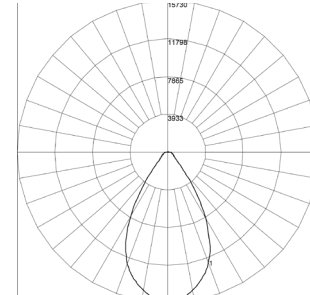
LUMINAIRE DATA

Description	LED Highbay; 24,000 Lumens; Diffuse Optic Narrow
Delivered Lumens	24,240
Watts	164
Efficacy	148
Spacing Criterion	0°= 1.36 90°= .94

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	11280	46.5
0-40	16767	69.2
0-60	22365	92.3
0-90	24153	99.6
0-180	24240	100

POLAR GRAPH



Maximum Candela = 15730 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (90 - 270)

ECH1-840-L24-DA-EDU

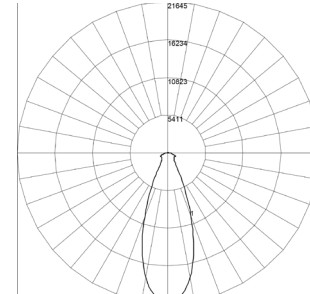
LUMINAIRE DATA

Description	LED Highbay; 24,000 Lumens; Diffuse Optic Aisle
Delivered Lumens	24,480
Watts	164
Efficacy	149
Spacing Criterion	0°= 1.32 90°= .62

ZONAL LUMEN SUMMARY

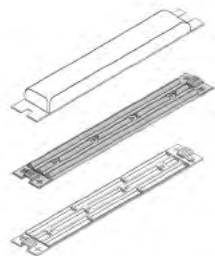
Zone	Lumens	% Luminaire
0-30	12337	50.4
0-40	16790	68.6
0-60	22082	90.2
0-90	24367	99.5
0-180	24480	100

POLAR GRAPH



Maximum Candela = 21845 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (90 - 270)

REPLACEMENT PARTS



REPLACEMENT LENSES & OPTICS

Ordering SKU	Ordering Cat# Logic	Fixture Optic Ordering Code	Description
93164585	ECH-WIDE DIFFUSED LENS KIT	DW	Diffuse Optic Wide (120°)
93164587	ECH-DN OPTIC KIT	DN	Diffuse Optic Narrow (55°)ractors in kit
93164588	ECH-DA OPTIC KIT	DA	Diffuse Optic Aisle (30°)

Body Size and number of lenses required:
Size 1 = 2 lens = 1 kit
Size 2 = 4 lens = 2 kits
Size 3 = 8 lens = 4 kits