

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

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



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
- 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 & 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.
- Available with NX Connect® integrated controls

ECHELÄN



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.

CERTIFICATIONS

- All luminaires are built to UL1598 standard
- Damp location labeling is standard
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC® website for specific product qualifications at www.designlights.org
- 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

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ORDERING GUIDE

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

CATALOG #

ECH1					
Model	CRI/CCT	Lumen Output	Optics	Driver	Voltage
ECH1	740 4000K 70 CRI	L09 9,000 lm	CW No Lens (120°)	ED 0-10V Dimming	U⁶ 120-277V
High Performance High Bay	750 5000K 70 CRI	L12 12,000 lm	DW⁹ Diffuse Optic Wide (120°)	E Fixed Output	120 120V
	830 3000K 80 CRI	L15 15,000 lm	DN⁹ Diffuse Optic Narrow (55°)		277 277V
	835 3500K 80 CRI	L18 18,000 lm	DA⁹ 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			

Mounting	Integrated Sensors (Leave Blank If None Needed)	Options (Leave Blank If None Needed)
ST Standard SM Surface Mount PM Pendant Mount	NX Connect[®] Wireless NXCHM⁸ NX Connect NXC-WHS20 Wireless High Bay Occupancy & Photocell Sensor Third Party Sensors OS⁷ On/Off Sensor 360° high mount sensor OCS⁷ On/ Off Occupancy/ Daylight Sensor 360° high mount sensor ODS⁷ Dimming Occupancy Sensor 360° high mount sensor	PI Packaged Individually ELL20¹ Emergency Battery Pack (EM Pack), 20 watt DTS² Dimming Bypass Module Cord Options 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) Flexible Metal Conduit Options C00388 6', 3 wire flexible metal conduit C00488 6', 4 wire flexible metal conduit C00588 6', 5 wire flexible metal conduit Cord with Plug Options (See NEMA Table Below) C6TL15³ 6' Cord with 15A TL Plug (Only available when specifying discrete voltage codes 120 or 277) C6TL20⁴ 6' Cord with 20A TL Plug (Only available when specifying discrete voltage code 120, 277, 347 or 480) C6P151⁵ 6' Cord with 15A straight blade plug (Only available when specifying discrete voltage code 120, 277 or 347)

Notes:

- ELL20 and 347/480V not available with mounting 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

Contact manufacturer for lead time on Options

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

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ACCESSORY ORDERING GUIDE

MOUNTING AND ACCESSORIES			
	Mounting Options	Order Logic Code	Aftermarket Order Logic
<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)	Not Applicable
<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: ½" Surface Mounting Kit NOTE: Kit included two (2) brackets.
<input type="checkbox"/>	Pendant Mount (optional) Available on all fixture configurations. Attaches to ¾" threaded conduit. (conduit not included).	PM = ¾" Pendant Mount Kit	SKU: 93165273 Description: ¾" 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.		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.		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



FIELD CHANGEABLE NX-WHS20 SENSOR ACCESSORIES			
	Description	Ordering Cat# Logic	Ordering Sku
<input type="checkbox"/>	Low Lens: 2.5m (8ft) - 10pk	NX LOW LENS KIT	93134999
<input type="checkbox"/>	Med Lens: 6m (20ft) - 10pk	NX MED LENS KIT	93135001
<input type="checkbox"/>	High Lens: 12m (40ft) - 10pk	NX HIGH LENS KIT	93135003
<input type="checkbox"/>	Snap on Aisle Mask - 10pk	NX SNAP AISLE MASK KIT	93134985

NOTE: See NX-WHS20 spec sheet for Occupancy Detection Patterns

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	
	L36		36,400	212	172	209	174	Size 2
	L48		48,000	294	163	289	166	Size 3
	L60		60,300	343	176	336	179	
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	
	L36		34,300	232	148	229	150	Size 2
	L48		45,200	328	138	322	140	Size 3
	L60		56,700	380	149	372	152	
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	
	L36		35,600	232	153	229	155	Size 2
	L48		46,900	328	143	322	146	Size 3
	L60		58,800	380	155	372	158	
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	
	L36		36,400	232	157	229	159	Size 2
	L48		48,000	328	146	322	149	Size 3
	L60		60,300	380	159	372	162	
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	
	L36		31,800	232	137	229	139	Size 2
	L48		41,900	328	128	322	130	Size 3
	L60		52,600	380	138	372	141	
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	
	L36		32,600	232	141	229	142	Size 2
	L48		43,000	328	131	322	134	Size 3
	L60		53,900	380	142	372	145	

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%

Delivered Lumens (in Table on Previous Page) × Lumen Output Multiplier = 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

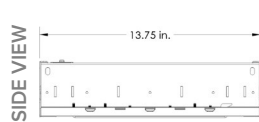
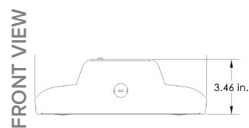
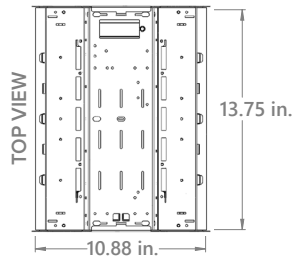
Lumen Code	L09	L12	L15	L18	L24	L30	L36	L48	L60
Max Ambient	55°C	55°C	55°C	55°C	55°C	55°C	55°C	55°C	55°C
Min Ambient	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C	-30°C

DIMENSIONS

ECH SIZE 1

L09, L12, L15, L18 & L24 LUMEN OUTPUT

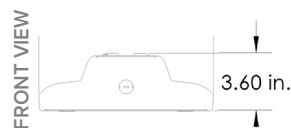
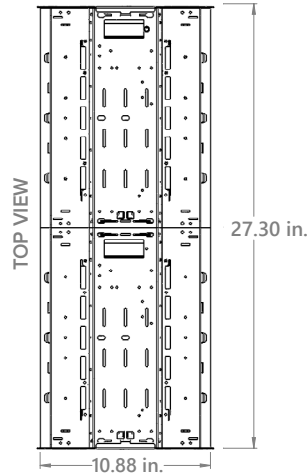
Max Weight: 10 lbs



ECH SIZE 2

L30, L36 & L48 LUMEN OUTPUT

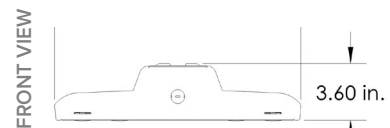
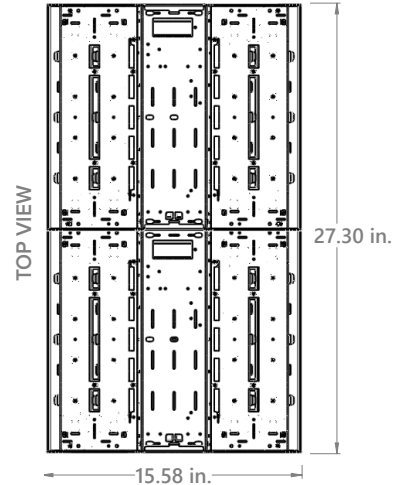
Max Weight: 20 lbs



ECH SIZE 3

L60 LUMEN OUTPUT

Max Weight: 22 lbs

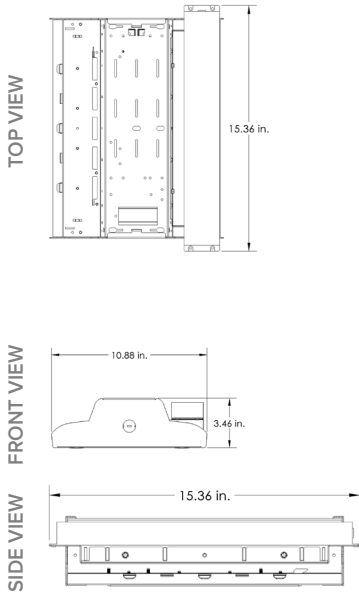


EMERGENCY BATTERY INFORMATION

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

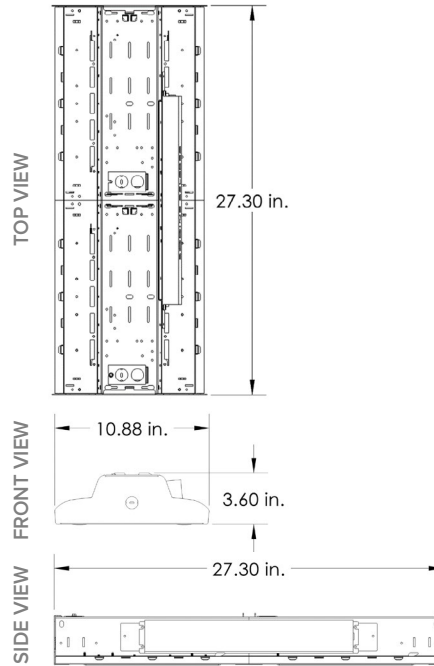
ECH SIZE 1

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



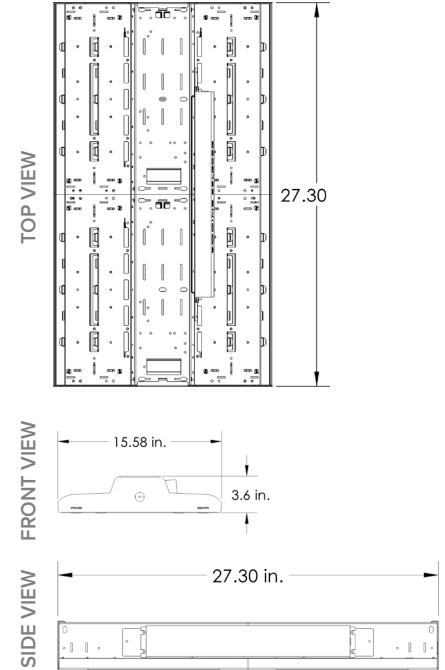
ECH SIZE 2

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

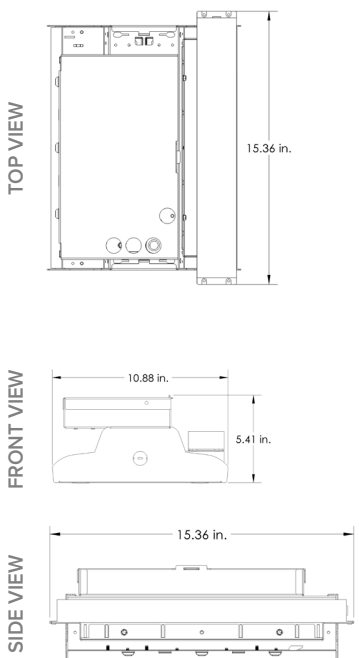


ECH SIZE 3

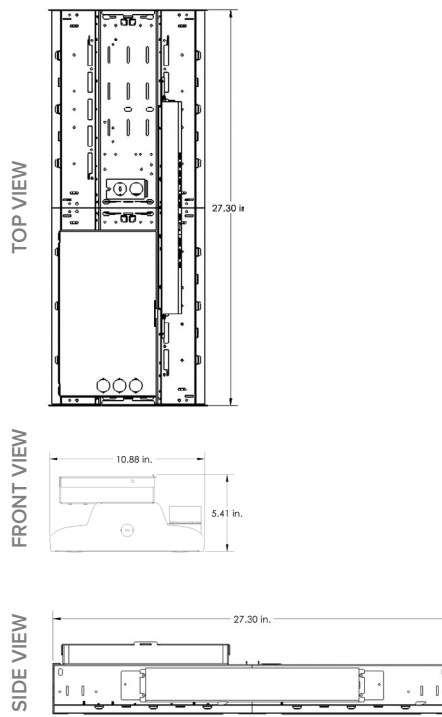
L60 LUMEN OUTPUT
VOLTAGE: U, 120V, & 277V



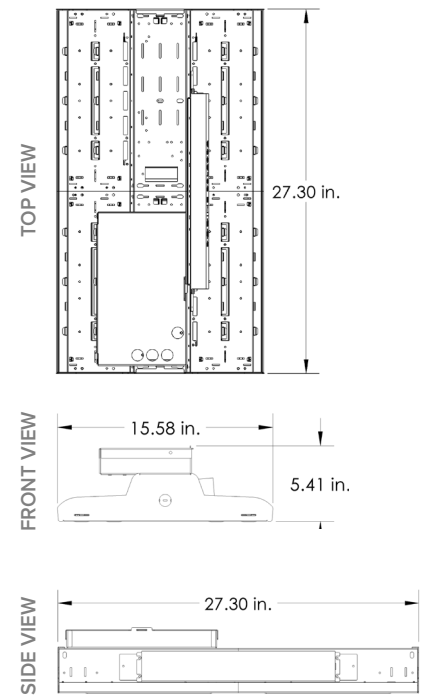
VOLTAGE: 347V & 480V



VOLTAGE: 347V & 480V



VOLTAGE: 347V & 480V



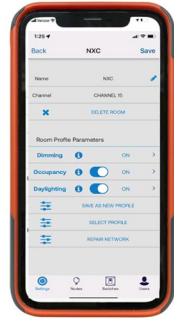
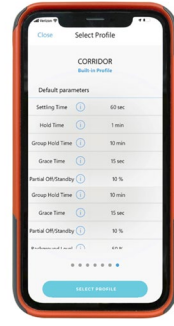
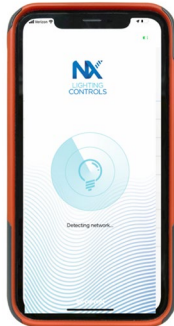
INTEGRATED SENSORS

NX CONNECT WIRELESS

CONTROLS CODE: NXCHM

APP INFORMATION

NX Connect devices can be customized with the NX Connect app that is available for free download on the Apple® Store.



Connect Fixtures in rooms to operate together with the same rules

Establish and save room profiles/rules

Change sensor default settings

Add switches and other accessories to the rooms

ECH SIZE 1

L09, L12, L15, L18 & L24 LUMEN OUTPUT



ECH SIZE 2

L30, L36 & L48 LUMEN OUTPUT



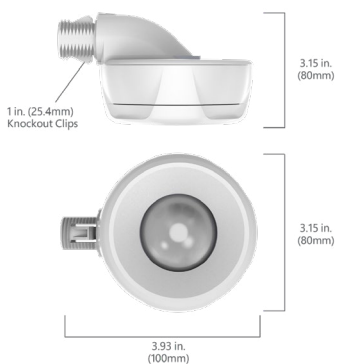
ECH SIZE 3

L60 LUMEN OUTPUT

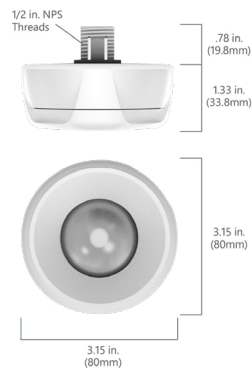


SENSOR DIMENSIONS

SIDE MOUNT NX-WHS20



BOTTOM MOUNT NX-WHS20

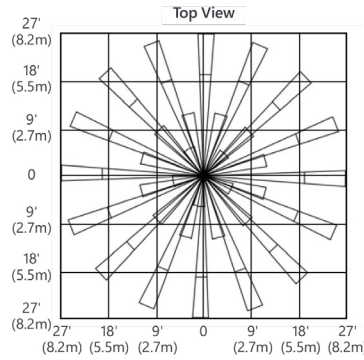
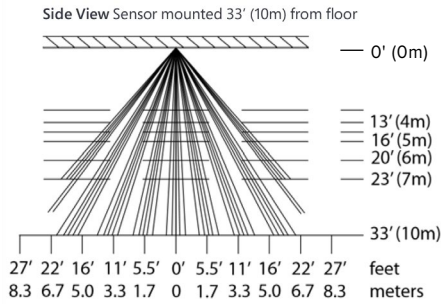


INTEGRATED SENSORS (CONTINUED)

COVERAGE PATTERN

HIGH LENS: 33FT (10M)

27ft Radius/54ft Diameter



Note: high lens comes standard. Low (8 ft) and medium lens (20 ft) can be ordered separately and field changed.

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 NX-WHS20 spec sheet for Occupancy Detection Patterns

NX CONNECT WIRELESS SENSOR SETTINGS

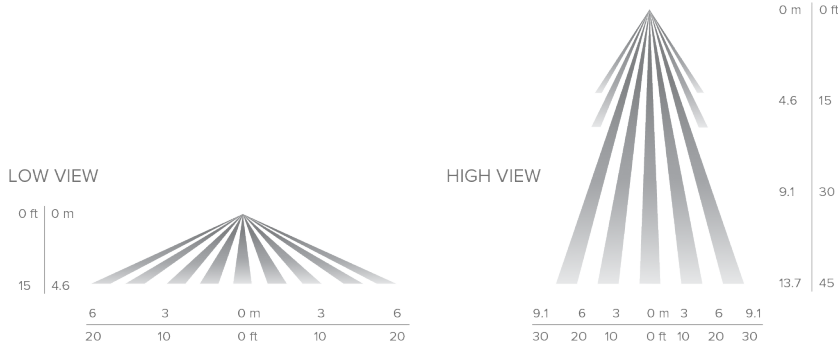
Name	Description	Minimum Value	Maximum Value	Default Value
Settling Time	The time (measured in sec) that occupancy must be detected for a fixture to transition from Background state to Task state	0 sec	300 sec	5 sec
Hold Time	The time (measured in minutes) that occupancy must NOT be detected for a fixture to transition from Task state back to Background state.	0 min	60 min	15 min
Group Hold Time	The time (measured in minutes) That any fixture in a room or zone of fixtures must NOT detect occupancy for the entire of fixtures to transition from Background state to Standby state.	0 min	60 min	15 min
Grace Time	Set to 0 for Automatic-Detection mode. Otherwise, the room is programmed to operate in Vacancy-Detection Mode, and the fixture will transition from the Standby state to the OFF state if the occupancy is NOT detected within the Grace Time (measured in seconds).	0 sec	30 sec	0 sec
Partial Off/Standby	The output power level in Standby state - in percentage of the full power.	0%	100%	0%
Background Level	The output power level in Background state - in percentage of the full power.	0%	100%	10%
Task Level	The output pwer level in Task state - in percentage of the full power.	0%	100%	100%
Daylight Harvesting	This parameter enables the Daylight Harvesting functionality.	0 (disabled)	1(enabled)	1(enabled)
Low Ambient Output	The light level above which daylight harvesting dimming will start, given as a percentage of the fixture's own light output.	10%	500%	250%
High Ambient Output	The light level above which daylight haverversting dimming will start, given as a percentage of the fixture's own light output.	0 (off)	1 (min dimming)	0 (off)
Occupancy Sensitivity	The sensitivity of the motion sensor between 1 (lowest) and 5 (highest).	0 (disabled)	5 (highest)	5 (highest)
Occupancy Indicator	This parameter switches between Indicator OFF (0) Indicator ON (1) mode.	0 (disabled)	1(enabled)	1(enabled)

INTEGRATED SENSORS (CONTINUED)

THIRD PARTY SENSORS

Coverage pattern

HIGH MOUNT 360° LENS



Note: 45' max mounting height.

THIRD PARTY SENSOR SETTINGS

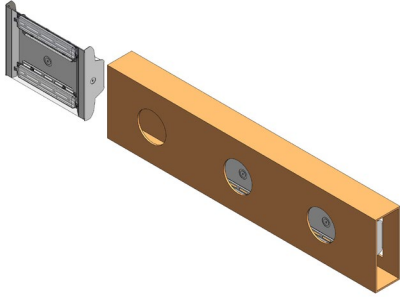
Name	Description	Minimum Value	Maximum Value	Default Values for Cat Logic Choice		
				OS	OCS	ODS
Occupancy Time Delay (1 Pole)	The length of time the sensor will keep the lights controlled by relay 1 on at full bright after it last detects occupancy, assuming Minimum On Time has been met.	30 sec	30 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

PACKAGING/SHIPPING INFO

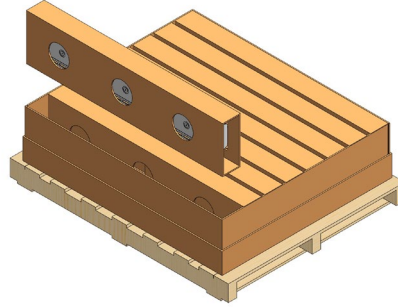
JOB PACKAGING IS STANDARD

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

SLEEVE



LAYER



PALLET

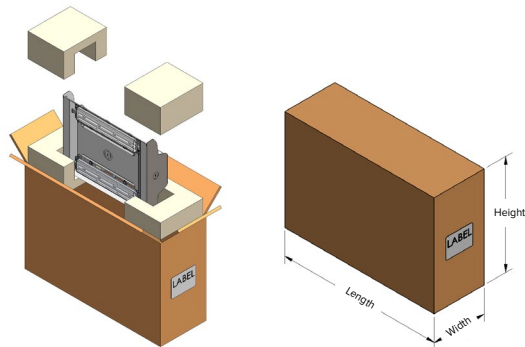


JOB PACK DETAILS			
Size	Fixtures per Sleeve	Sleeves per Layer	Layers per Pallet
1	3	8	3
2	1	8	3
3	1	8	3

JOB PACK PALLET QTYS			
Size	Standard Fixture Qty	Pallet Dimensions	
		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

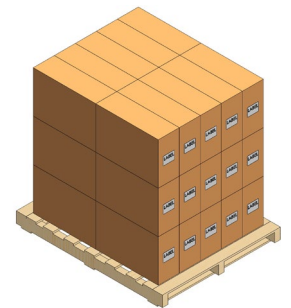
JOB PACK PALLET QTYS FOR FIXTURES W/ OPTIONS					
Cord	EL Pack	Bottom Sensor	Fixture Options		
			Bottom Mt Sensor & Cord	Side Mt Sensor	Side Mt Sensor & Cord
63	48	72	63	48	48
21	21	24	21	24	21
21	21	24	21	24	21

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

PHOTOMETRY

ECH1-840-L24-DW-EDU

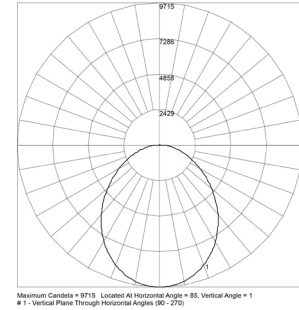
LUMINAIRE DATA

Description	LED Highbay; 24,000 Lumens; Diffuse Optic Wide	
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



ECH1-840-L24-DN-EDU

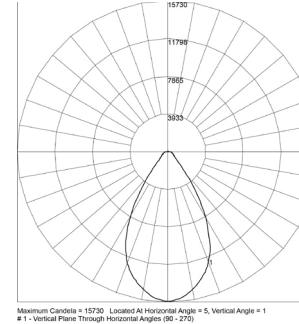
LUMINAIRE DATA

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



ECH1-840-L24-DA-EDU

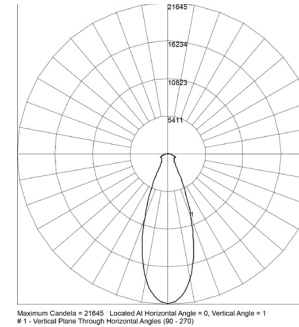
LUMINAIRE DATA

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

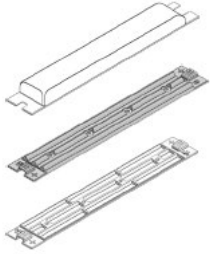


DATE: _____ | LOCATION: _____

TYPE: _____ | PROJECT: _____

CATALOG #: _____

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°) reflectors 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