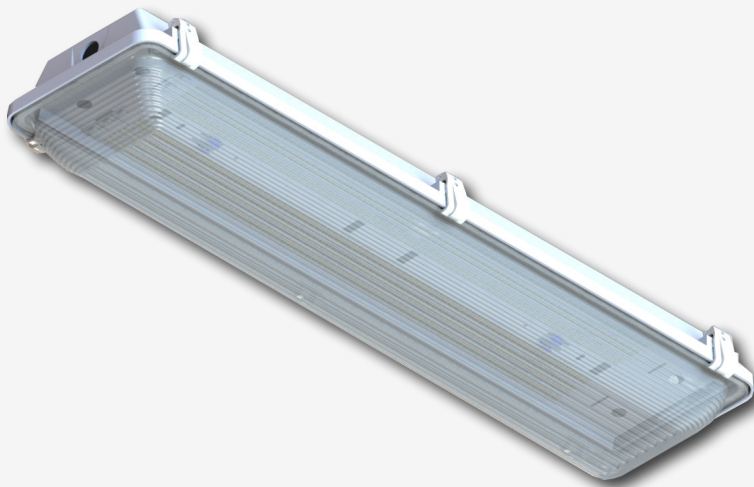


PROJECT NAME		DATE	
CAT. NUMBER			
NOTES			

SPEC SHEET

Hosedown 2.0 (HD2)

VAPOR TIGHT LED FIXTURE



Guaranteed Performance

Performance of the light fixture is guaranteed for 5 years, including lumen output (L70), color temperature, and LED driver.



IP Rated

IP65, IP66, IP67 and IP69K rated. Meets NSF Splash Zone 2 and NSF/ANSI STD2. Handles high pressure water up to 1500psi.



Hazardous Location Options

Simultaneous use in: Hazloc Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III.

KEY FEATURES

- 6,000 to 30,000 lumens
- Up to 168 LPW
- New compact design
- Up to 40°C ambient
- Guaranteed light levels for 5 years
- Dimmable 0-10V (standard)
- 6KV surge protection (10KV optional)

TECHNICAL SPECS

HOUSING	LUMEN OUTPUT ²	EFFICACY	WATTS	PART NUMBER	AVAILABLE LENSES
2N 2' Narrow	5,882	142	42	HD20S-A1-06K-2N-xx-xx-BC	Clear (CL), Clear Ribbed (BC), Frosted (FR), Frosted Ribbed (BF)
	12,065	158	76	HD20S-A1-12K-2N-xx-xx-BC	
4N 4' Narrow	6,021	149	40	HD20S-A1-06K-4N-xx-xx-CL	Clear (CL), Clear Ribbed (BC), Frosted (FR), Frosted Ribbed (BF)
	12,112	147	83	HD20S-A1-12K-4N-xx-xx-CL	
	24,419	168	146	HD20S-A1-24K-4N-xx-xx-CL	
2W 2' Wide	18,275	163	112	HD20S-A1-18K-2W-xx-xx-CL	Clear (CL), Frosted (FR)
	24,355	163	149	HD20S-A1-24K-2W-xx-xx-CL	
	30,782	163	189	HD20S-A1-30K-2W-xx-xx-CL	

² Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Clear Lens, CRI 80+. Lumen Multipliers: 3500K = 0.93; Frosted Lens = 0.98; Clear Ribbed Lens (BC) = 0.95; Frosted Ribbed Lens (BF) = 0.94

Lumen Multipliers

Allows to calculate the actual lumen output for your application.

LUMENS VS AMBIENT TEMP			COLOR TEMP ²		COLOR RENDERING		LIGHT DISTRIBUTION	
C°	F°	Multiplier	CCT	Multiplier	CRI	Multiplier	Lens	Multiplier
35	95	0.99	5000	1.000	80	1.000	CL	1.000
40	104	0.98	4000	1.000			FR	0.980
			3500	0.930			BC	0.950
							BF	0.940

Example: How to calculate the actual lumen output of the model 12K at these conditions: 40°C ambient temp, 3500K, CRI80, Frosted Lens.

$$\begin{array}{ccccccccccc}
 12,112 & \times & 0.98 & \times & 0.93 & \times & 1.000 & \times & 0.980 & = & 10,818 \\
 \text{Lumens} & & \text{Temp.} & & \text{CCT} & & \text{CRI} & & \text{Lens} & & \text{Actual lumens}
 \end{array}$$

LUMEN MAINTENANCE

All fixtures come with our Standard Warranty, covering **L70 light levels for 5 years**. That's 43,800 hours of guaranteed life based on a 24/7 operation.



Ambient Temp.		Lumen Maintenance in Hours			Lumen Maintenance Factor			Reported Life (6X)	
C°	F°	L90	L80	L70	50Khrs	75Khrs	100Khrs	Tested Time	Extrapolated
25	77	73K	149K	235K	93	90	86	9,000 hrs	> 54,000 hrs
30	86	69K	141K	222K	93	89	86	LEDs tested for 13,000 hrs based on LM-80.	
35	95	65K	133K	210K	92	88	85	Extrapolating as per TM-21: 13,000 hrs x 6 = 78,000 hrs of reported life.	
40	104	61K	126K	199K	92	88	84		

All values calculated in accordance to IESNA standards, per TM-21.LM-79, LM 80 tests and reports are performed in accordance to IESNA standards, per TM-21. Lumen maintenance in hours (L70 via TM-21) based on 24/7 operation.

ORDERING

SERIES MODEL - COMPLIANCE - LUMENS - SIZE	COLOR TEMP	CRI	LENS	VOLTAGE	MOUNTING
HD20S-A1-06K-2N ^{13,14} HD20S-A1-06K-4N ¹⁴ HD20S-A1-12K-2N ^{13,14} HD20S-A1-12K-4N ¹⁴ HD20S-A1-24K-4N ¹⁴ HD20S-A1-18K-2W ¹⁴ HD20S-A1-24K-2W HD20S-A1-30K-2W ¹⁵	35¹⁴ 3500K 40 4000K 50 5000K Other CCT available upon request	80 80+ CRI (Standard) Other CRI available upon request ⁷	CL Clear lens FR Frosted lens BC⁹ Clear Ribbed Lens, 2N and 4N housings only BF⁹ Frosted Ribbed Lens, 2N and 4N housings only	LV 120-277V HV¹⁷ 347-480V	Narrow Body Housing, 2N and 4N Only MLT^{3,5,9} Multi Mount Bracket is stainless steel and includes hangers and ability to flush mount, cable mount or accept threaded 1/4" rod. 2N and 4N only. Wide Body Housing 2W Only CRM^{5,10} Cable-ready (standard) 2W only Other mounting options available. Please see Accessories.

BLUETOOTH® CONTROLS ^{4,15,18,19,20}	CORD & PLUG - NO CORD/PLUG (STANDARD) ^{4,8}	OPTIONS ⁴	DIMMING	
ULTRALINK ULTRA Linmore UltraLink Bluetooth mesh Controls installed ULTRAMW Linmore UltraLink Bluetooth mesh Controls installed with microwave sensor ULTRAHGA Linmore UltraLink Bluetooth mesh Controls installed with High-Gain antenna Contact factory. UltraLink requires commissioning in the field via iOS app.	6' 18AWG cord with the following CW^{4,7} Cord, 15A, no plug 15' 18AWG CORD WITH THE FOLLOWING 15CW^{4,7} Cord, 15A, no plug 15DW^{4,7} Dimming cord, 15A, 5-wire, no plug 15CL515^{4,7} Cord, 15A, locking plug 120V (L5-15P) 15CL715^{4,7} Cord, 15A, locking plug 277V (L7-15P) 15CL720^{4,7} Cord, 20A, locking plug 277V (L7-20P) 15CL2420^{4,7} Cord, 20A, locking plug 347V (L24-20P) 15CL820^{4,7} Cord, 20A, locking plug 480V (L8-20P)	6', 10' or 15' 18AWG food-grade cord with the following CWF^{4,7} Food Grade, yellow cord, 15A, no plug 10CWF^{4,7} Food Grade, yellow cord, 15A, no plug 15CWF^{4,7} Food Grade, yellow cord, 15A, no plug 15EWF^{4,7} Food Grade, yellow cord, 15A, 4 wire for EMB, no plug 15CL715F^{4,7} Food Grade, yellow cord, 15A, locking plug 277V (L7-15P) 15CL720F^{4,7} Food Grade, yellow cord, 20A, locking plug Other cord options available, contact factory	EMB^{14,6,8,15} Emergency battery back-up. LV only. QDC⁴ Driver Quick Disconnect SRG⁴ Fixture installed Surge Protector, 10kA WPSLV⁴ Waterproof sleeve WPPLG^{4,12} Waterproof plug end for cords. Plug option selected is waterproof. LNT^{4,10} Lens Tether SSLCH⁴ Stainless steel latches, priced per chassis HZLOC^{15,16} C1D2 and C2D2 PC Chosen Lens made from Polycarbonate CTRLR^{4,6,15} Control Ready 5-wire harness (factory installed)	10V 0-10V Interface (standard)
OCCUPANCY SENSORS - NO OCC SENSOR (STANDARD) MWOCC^{4,13,16,17} Microwave Occupancy Sensor, with photocell, 10-20' mounting height DOCC^{4,13,16,17,18} High Frequency Doppler Occupancy Sensor, with ambient light sensing, 10-30' mounting height HV units with MWOCC and DOCC have a High Voltage Transformer installed. HV sensors only available on 4N and 2W housings. Units are set to 75% sensitivity, 10-minute delay from the factory.				

ORDERING EXAMPLES

Standard: HD20S-A1-12K-2N-50-80-BF-LV-MLT-10V

With Options: HD20S-A1-12K-2N-50-80-BF-LV-MLT-MWOCC-15CL715-WPPLG-SSLCH-10V

ACCESSORIES

Must be ordered separately. Packaged separately.

FIXTURE ACCESSORIES

Part Number	Type	Description
FM2WSS	Flush Mount Bracket (2W only) ¹⁰	Flush mounting bracket for 2W body only, stainless steel.
VHOOK2WSS	Hanger (2W only) ¹⁰	2W body only. Kit includes two stainless steel V hangers. Order fixture with CRM mounting option.
PENDSS	Rigid Pendant Mount (2W only) ¹⁰	Rigid Pendant Mount (2W only). Rigid Mounting Bracket for pendant mount. Consists of two brackets. One PENDSS needed per fixture for mounting.
45M	45° Angle Mount (2N, 4N only)	45 Degree Mounting Bracket, 1 Pair (2N and 4N housings only).
CABLEKIT	Cable Kit	Kit includes two, 10ft. aircraft "Y" cables and snap hooks (one pair).
CABLEKIT2P	Cable Kit 2P ⁹	Kit includes two, 10ft. aircraft straight cables. For use with 2N and 4N fixtures only. Can be used with 2W, provided V Hangers are also purchased (sold separately).
CABLEKITSS	Stainless Steel Cable Kit	Kit includes two, 10ft. aircraft "Y" cables and snap hooks (one pair). Stainless steel.
CABLEKIT2PSS	Stainless Steel Cable Kit 2P ⁹	Kit includes two, 10ft. aircraft straight cables. For use with 2N and 4N fixtures only. Can be used with 2W, provided V Hangers are also purchased (sold separately). Stainless steel.
PLATESS	Stainless Steel Plate Mount	Includes stainless steel plate and 4 stainless steel cables for stem mounting.
	Power Supply Replacement	Power supply replacement available upon request. Contact factory for details.

LIGHTING CONTROLS^{4,18,19,20}

Part Number	Type	Description
ULTRAGATEWAY	UltraLink Bluetooth® Gateway	Optional wireless gateway for use with UltraLink. Needed for energy monitoring, scheduling, astronomical clock and heat mapping.
ULTRASR	UltraLink Bluetooth® Switch	Bluetooth Wireless, self-powered Dimming Wall Switch, Single Rocker, On/Off/Dim, for use with UltraLink
ULTRADR	UltraLink Bluetooth® Switch	Bluetooth Wireless, self-powered Dimming Wall Switch, Double Rocker, On/Off/Dim/ Scenes, for use with UltraLink
ULTRAFACT	UltraLink Bluetooth® Service	UltraLink Factory Activation, Zone Identification on Packaging. For use with all Bluetooth Ready Fixtures / Systems
ULTRADESIGN	UltraLink Bluetooth® Service	UltraLink System Design Services
ULTRADASH	UltraLink Bluetooth® Service	Dashboards for Energy, Occupancy Heat Mapping, and Energy Heat Mapping. Gateway (ULTRAGATEWAY) required, Sold Separately
ULTRATIME	UltraLink Bluetooth® Accessory	Battery Backup Bluetooth Node, includes outdoor rated enclosure and long range antenna. For use to keep time during a power outage and for in node scheduling

FEATURES & SPECIFICATIONS

CONSTRUCTION

- **Housing:** UL 94 5VA fiberglass housing (will not melt or burn). Weatherability (f1) rated. Suitable for outdoor use with respect to exposure to ultraviolet light, water exposure and immersion in accordance with UL 746. Capable of handling high pressure water up to 1500psi.
- **Latches:** Fixtures come standard with plastic latches. Stainless Steel latches available as an option (SSLCH).

ELECTRICAL

- **Power Input:** 120-277V or 347-480 (50/60Hz), typical, depending on model.
- **Power Factor:** Greater than 0.9 (0.96–0.99 typical).
- **Total Harmonic Distortion:** Less than 20%, 10% typical.
- **Surge Protection:** Standard is 6kV for drivers. Additional surge protection is available. All HV orders will have 10kV SRG automatically added (contact sales for questions).
- **Emergency Battery Backup (EMB):** EMB produces ~2000 lumens for a minimum of 90 minutes. EMB has 16 watts output. EMB fixtures 0°C to 45°C (32°F to 122°F). Not to exceed ambient of fixture.¹⁵

OPERATION

- **Environment:** Wet, high pressure hosedown, interior or exterior applications. HazLoc Class I, Division 2 available. Suitable for simultaneous use in: Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III.
- **Ambient Range Operation:** -40°C to 40°C (-40°F to 104°F) for xxK-2N, 18K-2W, 24K-2W and xxK-4N-40°C to 35°C (-40°F to 95°F) for 30K-2W.¹

OPTICS

- **CCT:** 3500K¹⁴, 4000K and 5000K standard, other CCT available (extended lead time).
- **CRI:** 80 standard, other CRI available (extended lead time).
- **Lenses:** UV stabilized acrylic, Clear, Frosted, Clear Ribbed and Frosted Ribbed (depending on model). Polycarbonate lens options available as an option (PC).

MOUNTING

- **Mounting:** Cable Ready, Surface and Threaded 1/4" Rod mounting options. Surface mounting reduces ambient range by 5°C for HD20S-A1-18K-2W when mounted flush to a surface and reduces 10°C for HD20S-A1-12K-2N, HD20S-A1-12K-4N, HD20S-A1-24K-2W, HD20S-A1-30K-2W. Cable kit sold separately. MBR for 2W body sold separately.

CONTROLS

- **Dimming:** 0-10V standard. Dimming range 100% to 10%.
- **Occupancy Sensors:** Optional - factory installed microwave sensors for motion and daylight harvesting.
- **UltraLink Bluetooth® Controls:** Advanced wireless controls available. Requires commissioning in the field, contact factory.

WARRANTY

- **5 Year Performance Warranty:** Performance of the light fixture is guaranteed for 5 years, including lumen maintenance (L70), color temperature, and LED driver. "Defective" is considered if ten percent (10%) or more of the LEDs, per product, are non-operating LEDs, total lumen depreciation exceeds 30% (L70), or color temperature has shifted more than 500° Kelvin within the warranty period. See terms and conditions at <https://linmoreled.com/warranty>

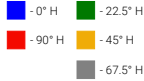
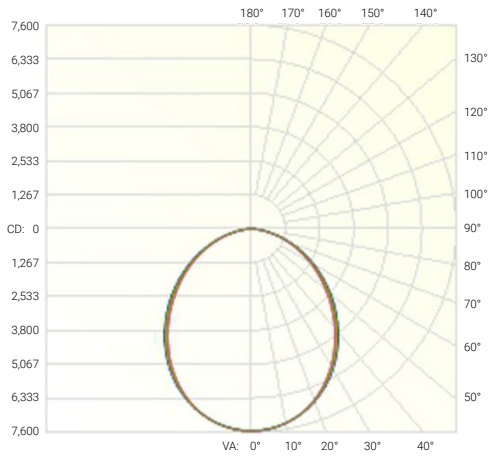
LISTINGS & CERTIFICATIONS

- ETL listed (UL 1598), CSA 22.2 .
- Suitable for wet location. Covered ceiling not required to maintain wet location listing or IP ratings.
- NSF/ANSI STD2.
- IP65, IP66, IP67 and IP69K rated.
- Rated and certified to meet NSF Splash Zone 2.
- NEMA 4X rated.
- IK07 rated.
- EMI: Title 47 CFR 15 Class A, ICES-005.
- RoHS compliant.
- LM-79, LM 80 and TM-21 tests and reports are performed in accordance to IESNA standards, per TM-21.
- DesignLights™ Consortium Listed¹⁴.



FROSTED

Polar Graph



Zonal Lumen Summary

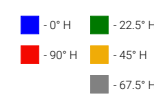
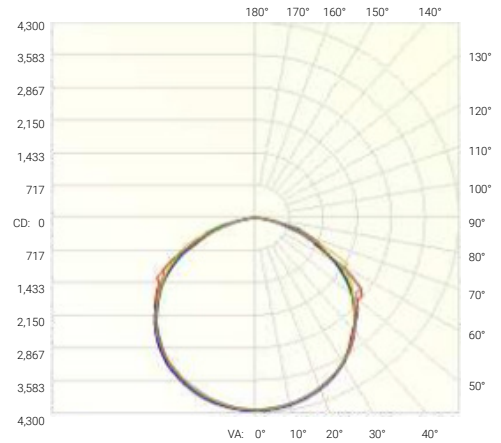
HD20S-Ax-24K-4N-40-80-FR-LV-[xxx]-10V

Zone	Lumens	% Lamp	% Fixt.
0-30	6141.7	25.9	25.9
0-40	10089.0	42.5	42.5
0-60	17862.4	75.3	75.3
60-90	5374.1	22.7	22.7
0-90	23236.5	98.0	98.0
90-180	482.7	2.0	2.0
0-180	23719.2	100.0	100.0

Total luminaire efficiency = 100.00%

CLEAR RIBBED

Polar Graph



Zonal Lumen Summary

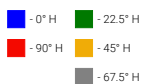
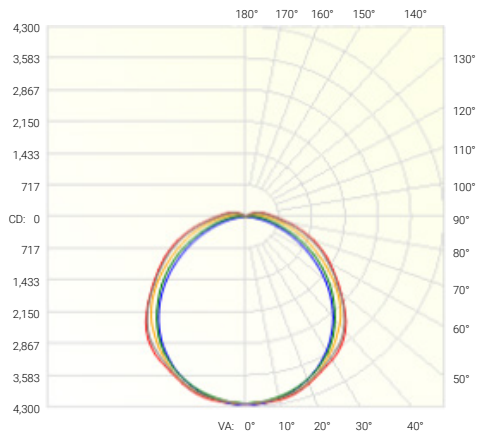
HD20S-Ax-12K-4N-40-80-BC-LV-[xxx]-10V

Zone	Lumens	% Lamp	% Fixt.
0-30	2609.5	23.6	23.6
0-40	4407.7	39.9	39.9
0-60	8123.0	73.4	73.4
60-90	2463.8	22.3	22.3
0-90	10586.8	95.7	95.7
90-180	472.7	4.3	4.3
0-180	11059.5	100.0	100.0

Total luminaire efficiency = 100.00%

CLEAR

Polar Graph



Zonal Lumen Summary

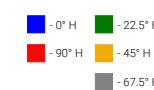
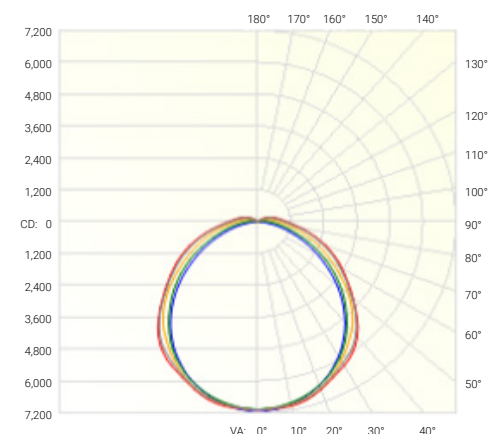
HD20S-Ax-12K-4N-40-80-CL-LV-[xxx]-10V

Zone	Lumens	% Lamp	% Fixt.
0-30	3329.8	26.5	26.5
0-40	5506.1	43.9	43.9
0-60	9973.5	79.4	79.4
60-90	2554.7	20.3	20.3
0-90	12528.2	99.8	99.8
90-180	27.8	0.2	0.2
0-180	12556.0	100.0	100.0

Total luminaire efficiency = 100.00%

FROSTED RIBBED

Polar Graph



Zonal Lumen Summary

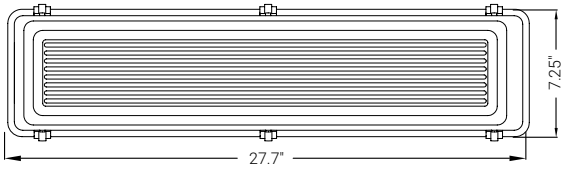
HD20S-Ax-24K-4N-40-80-BF-LV-[xxx]-10V

Zone	Lumens	% Lamp	% Fixt.
0-30	5532.1	24.5	24.5
0-40	9098.1	40.2	40.2
0-60	16066.4	71.0	71.0
60-90	5376.3	23.8	23.8
0-90	21442.8	94.8	94.8
90-180	1180.1	5.2	5.2
0-180	22622.8	100.0	100.0

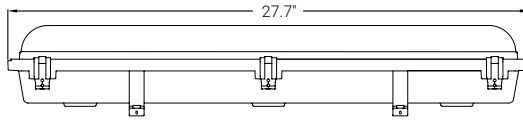
Total luminaire efficiency = 100.00%

DIMENSIONS & DRAWINGS

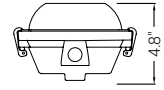
2N



TOP VIEW

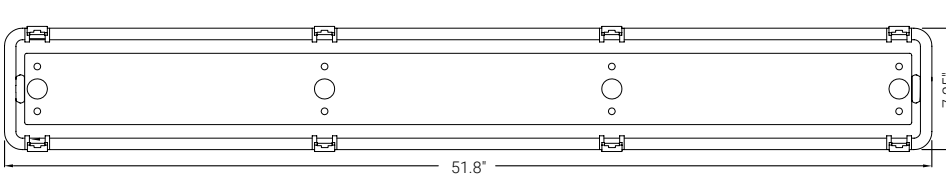


SIDE VIEW - FROSTED

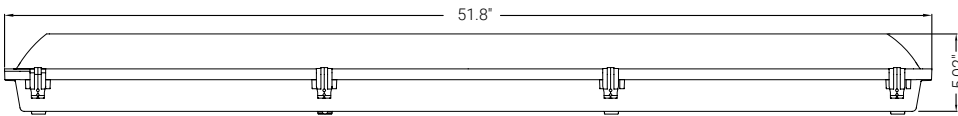


END VIEW - FROSTED

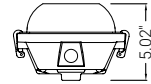
4N



TOP VIEW

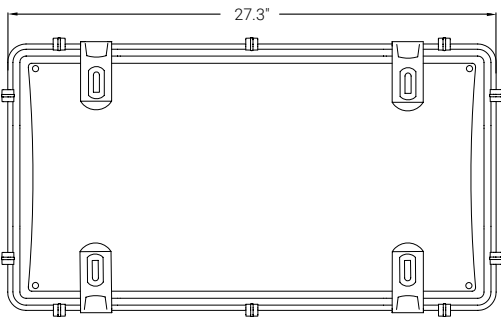


SIDE VIEW - FROSTED

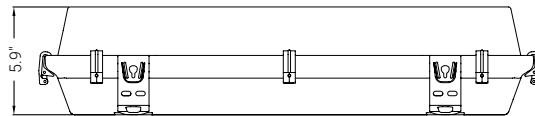


END VIEW - FROSTED

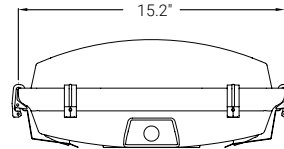
2W



TOP VIEW



SIDE VIEW



END VIEW

DIMENSIONS

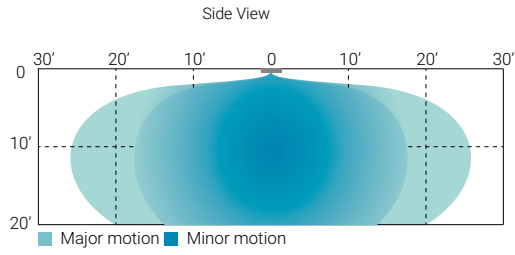
Size	Length (in)	Width (in)	Height (in)	Weight (lb)
2N	27.7	7.25	4.8	~9
4N	51.8	7.25	5.02	~14
2W	27.3	15.2	5.9	~17

Weights are approximate and vary by model, if weight is a concern, please contact factory.

OCCUPANCY SENSORS

IR-TEC

DOCC

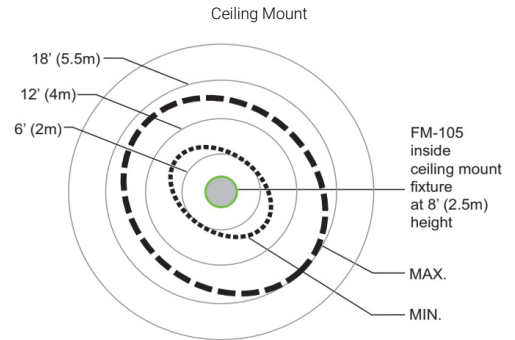


Mounting Height	10'	20'
Coverage (sq. ft.)*	2,000	1,200

*Sensitivity 100%

WATTSTOPPER

MWOCC



FOOTNOTES

1. EMB fixture operating temperature is 32°F to 122°F (0°C to 45°C). Not to exceed Max Ambient of fixture. Limited switch cycles under -20°C. We recommend not turning units off if used in continual -20°C to -40°C environment, dim to 10% if needed.
2. Typical ($\pm 10\%$) at 277V (LV), 25°C, 4000K/5000K, Clear Lens, CRI 80+. Lumen Multipliers: 3500K = 0.93 ; Frosted Lens = 0.98 ; Clear Ribbed Lens (BC) = 0.95 ; Frosted Ribbed Lens (BF) = 0.94
3. Threaded rod and/or cables not included. Optional CABLEKIT2P available.
4. Optional add-on. See price list for pricing.
5. Optional CABLEKIT ordered separately. See ACCESSORIES.
6. 120-277V only.
7. All cords are 18/3 AWG and 600V. Food Grade Cords 18/3 AWG (18/4 for 15EWF), SEOW/SOOW, 600V and yellow. Food grade cords have waterproof plugs.
8. Consult factory for orders requiring EMB. 12K and 6K lumen version only available in 4N chassis.
9. 2N and 4N Housing only.
10. 2W Housing only.
11. Dimensions listed are for the fixture only. See dimensional drawings for measurements with mounting hardware. Weights are approximate and vary by model, if weight is a concern, please contact factory. Weight changes when battery backup is added.
12. WPPLG not available for L-820 configuration.
13. High Voltage (347-480V) applications using sensors will utilize a High Voltage Step Down Transformer (HVT). The transformer and LV drivers allow optional sensor use in HV (347-480V) applications. Increases wattage ~8%. Units using the HVT are not DLC listed. When used with 24K-2W and 30K-2W, max ambient is 35°C (95°F). The sensor will be set from the factory at 75% sensitivity and a 10-minute delay. Not available on 2N frame.
14. Fixtures not DLC listed:
 - All 3500K CCT models and fixtures below:
HD20S-A1-06K-2N-40-80-BC-[xxx]-10V
HD20S-A1-06K-2N-40-80-BF-[xxx]-10V
HD20S-A1-06K-2N-50-80-BC-[xxx]-10V
HD20S-A1-06K-2N-50-80-BF-[xxx]-10V
HD20S-A1-06K-4N-40-80-BC-[xxx]-10V
HD20S-A1-06K-4N-40-80-BF-[xxx]-10V
HD20S-A1-06K-4N-40-80-CL-[xxx]-10V
HD20S-A1-06K-4N-40-80-FR-[xxx]-10V
HD20S-A1-06K-4N-50-80-BC-[xxx]-10V
HD20S-A1-06K-4N-50-80-BF-[xxx]-10V
HD20S-A1-06K-4N-50-80-CL-[xxx]-10V
HD20S-A1-06K-4N-50-80-FR-[xxx]-10V
HD20S-A1-12K-2N-40-80-BF-[xxx]-10V
HD20S-A1-12K-4N-40-80-BC-[xxx]-10V
HD20S-A1-12K-4N-40-80-CL-[xxx]-10V
HD20S-A1-12K-4N-50-80-BC-[xxx]-10V
HD20S-A1-12K-4N-50-80-CL-[xxx]-10V
HD20S-A1-12K-4N-50-80-FR-[xxx]-10V
HD20S-A1-18K-2W-40-80-CL-[xxx]-10V
HD20S-A1-18K-2W-40-80-FR-[xxx]-10V
HD20S-A1-18K-2W-50-80-CL-[xxx]-10V
HD20S-A1-18K-2W-50-80-FR-[xxx]-10V
HD20S-A1-24K-4N-40-80-BF-[xxx]-10V
15. EMB not available on HD20S-A1-30K-2W and 2N models. EMB and/or lighting controls not available with HZLOC.
16. C1D2 and C2D2 ratings as follows:
Class I, Division 2, Groups A, B, C, D
Class II, Division 2, Groups F, G; Class III
T5, -25°C to 40°C (-13°F to 104°F) for 18K-2W, xxK-2N and xxK-4N
T5, -25°C to 35°C (-13°F to 95°F) for 24K-2W and 30K-2W.
EMB and/or lighting controls not available with C1D2 or C2D2.
17. SRG (10kA protection) is standard option on all HV fixtures.
18. Extended lead time.
19. UltraLink controls require commissioning in the field via its iOS app, contact factory.
20. When using UltraLink, drivers are 0-10V dimming, DIM to OFF via the Aux output. Without controls, the fixture is 0-10V dimming only.

Linmore LED Labs, Inc.

2360 S Orange Ave, Fresno, CA 93725

559 485 6010 | info@linmoreled.com | linmoreled.com



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Updated: 2023.03.09