

SPEC SHEET

Commercial High Bay (CH2)

LED HIGH BAY



Linmore LED
ULTRALINK
CONTROLS REIMAGINED



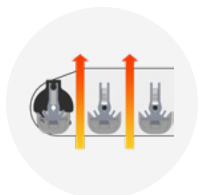
KEY FEATURES

- 6,000 to 37,000 lumens
- Up to 173 LPW
- New compact design
- Up to 55°C ambient³
- Guaranteed light levels for 10 years
- Dimmable 0-10V (standard)
- 6KV surge protection (10KV & 20KV optional)



Guaranteed Performance

Performance of the light fixture is guaranteed for 10 years, including lumen output (L70), color temperature, and LED driver.



Superior Thermal Design

Vertical extruded aluminum heat sinks with ample separation for maximum heat dissipation and airflow through the fixture.



Controls and IoT Ready

Optional integrated controls systems available including basic on/off, dimming and Bluetooth® advanced wireless controls.

FEATURES & SPECIFICATIONS

CONSTRUCTION

- **Extruded Aluminum Heat Sinks:** provide optimal thermal management by decreasing LED junction temperature, ensuring longer life and higher efficacy. LED boards attached to the heat sink using a high quality thermally conductive adhesive rather than screws or rivets. This ensures good contact between PCB and heat sinks for excellent thermal conductivity.
- **LED Boards:** FR4 PCB is used to limit stress on solder joints by matching coefficient of thermal expansion between the LED and the PCB more closely.
- **Power Supply Access:** Wireway cover allows easy access and quick wiring. Hole accepting 3/4" stem (not centered) and also 1/2" KO near top end of wire way. If center stem mount is required, select STEM in mounting options.
- **Wire Guards:** Optional factory-installed wire guards for the fixture.

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 and EMB2):** EMB produces ~2700 lumens for a minimum of 90 minutes. EMB2 produces ~4300 lumens for a minimum of 90 minutes. EMB has 15 watts output, EMB2 has 25 watts output. Factory installation only, not able to be field installed. Available in LV.^{3,6,10,12}

OPERATION

- **Environment:** Dry/Damp, for interior applications (IP4X). Dust-resistant LED modules.
- **Ambient Range Operation:** -40°C up to 45°C (-40°F up to 113°F).³ CH20S-A1-20K-4MS operating ambient range 40°C up to 55°C, (-40°F up to 131°F).

OPTICS

- **CCT:** 3500K, 4000K and 5000K standard, other CCT available (extended lead time).²
- **CRI:** 80+ standard, 85 typical.
- **Lenses:** UV stable polycarbonate⁸ Clear, Aisle and Narrow or acrylic (PMMA) Frosted available.²
- **Field-replaceable lenses:** Clear, Frosted, Aisle, and Narrow.



MOUNTING

- **Mounting:** Fixture is cable ready (CRM). Other options are STEM (comes with a 3/4" opening in the center of the STEM box), HOOK and surface mount (with optional MBR). MBR reduces ambient range by 5°C when mounted flush to junction box.

CONTROLS²⁴

- **Dimming²⁰:** 0-10V standard. Dimming range 100% to 10%.
- **Occupancy Sensors:** PIR and Microwave occupancy sensors, On/Off/Dim. Available options: Wattstopper and IR-TEC (factory installed) and EZ-Connect™ Twist Lock System for field installation, (requires adding an EZ-Connect™ Receptacle, see Controls).
- **Networked Lighting Controls:** UltraLink Wireless Controls with Bluetooth® NLC Mesh technology. Available as factory installed and as EZ-Connect™ Twist Lock System for field installation, (requires adding an EZ-Connect™ Receptacle, see Controls).

WARRANTY

- **10 Year Performance Warranty:** Fixture is guaranteed for 10 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

- Conforms to ETL listed (UL 1598:2018 Ed.4).
- RoHS compliant.
- DesignLights™ Consortium
- EMI: Title 47 CFR 15 Class A and ICES-005.
- CSA C22.2#250.0:2018 Ed.4.



TECHNICAL SPECS

Nominal Lumens	Frame Size ⁵	5000K - CRI80 - Clear Lens			5000K - CRI80 - Frosted Lens			5000K - CRI80 - Narrow Lens		
		Lumens ^{1,2}	Watts	Efficacy	Lumens ^{1,2}	Watts	Efficacy	Lumens ^{1,2}	Watts	Efficacy
6K	2MS	5,676	35	164	5,509	35	159	5,500	35	160
9K	2MS	8,672	55	158	8,418	55	153	8,480	55	154
13K	4MS	12,898	78	165	12,520	78	160	12,613	78	161
15K	4MS	15,612	96	163	15,155	96	158	15,266	96	159
17K	4MS	17,421	106	164	16,911	106	159	17,036	106	160
20K	4MS	20,117	125	162	19,586	124	157	19,730	125	158
25K	6MS	25,313	150	168	24,571	150	163	24,752	150	165
28K	6MS	28,256	170	166	27,428	170	161	27,630	170	163
31K	8MS	30,784	178	173	29,822	178	168	30,102	178	169
33K	8MS	33,406	196	171	32,427	196	166	32,666	196	167
37K	8MS	37,147	223	167	36,058	223	162	36,325	223	163

Typical lumen output (±10%) at 277V (LV) under 25°C ambient temperature.

Lumen Multipliers

Allows to calculate the actual lumen output for your application. Apply each multiplier to the lumens of the shaded table.

LUMENS VS AMBIENT TEMP ³			COLOR TEMP ²		COLOR RENDERING		LIGHT DISTRIBUTION	
C°	F°	Multiplier	CCT	Multiplier	CRI	Multiplier	Lens	Multiplier
25	77	1.000	5000	1.000	80	1.000	CL	1.000
35	95	0.995	4000	0.990	90	0.860	FR	0.970
45	113	0.995	3500	0.990			AL	0.970
55	131	0.990					NW	0.980

Example: How to calculate the actual lumen output of the model 33K at these conditions: 45°C ambient temp, 4000K, CRI80, Frosted Lens.

- 1) Find the lumens from the shaded column.
2) Apply all the corresponding multipliers.

33,406

x

0.995

x

0.990

x

1.000

x

0.970

=

31,919

Nominal lumens

Temp.

CCT

CRI

Lens

Actual lumens

LUMEN MAINTENANCE

All fixtures come with our Standard Warranty, covering **L70 light levels for 10 years**. That's 87,600 hours of guaranteed life based on a 24/7 operation.





Ambient Temp.		Lumen Maintenance in Hours ¹			Lumen Maintenance Factor ¹			Reported Life (6X) ¹	
C°	F°	L90	L80	L70	50Khrs	75Khrs	100Khrs	Tested Time	Extrapolated
25	77	51K	111K	180K	0.90	0.86	0.82	13,000 hrs	> 78,000 hrs
30	86	51K	111K	180K	0.90	0.86	0.82	LEDs tested for 13,000 hrs based on LM-80. Extrapolating as per TM-21: 13,000 hrs x 6 = 78,000 hrs of reported life.	
35	95	47K	107K	174K	0.90	0.85	0.82		
40	104	45K	102K	167K	0.89	0.85	0.81		
45	113	44K	99K	161K	0.89	0.84	0.80		

All values calculated in accordance to IESNA standards, per TM-21.

ORDERING

SERIES MODEL - COMPLIANCE - LUMENS - SIZE	COLOR TEMP	CRI	LENS	VOLTAGE	MOUNTING
CH20S-A1-06K-2MS CH20S-A1-09K-2MS CH20S-A1-13K-4MS CH20S-A1-15K-4MS CH20S-A1-17K-4MS CH20S-A1-20K-4MS ⁹ CH20S-A1-25K-6MS CH20S-A1-28K-6MS CH20S-A1-31K-8MS CH20S-A1-33K-8MS CH20S-A1-37K-8MS ¹⁸	50 5000K 40 4000K 35¹⁰ 3500K Other CCT available upon request	80 80+ CRI (standard) 90^{6,22,23} 90+ CRI	CL Clear lens FR Frosted lens AL Aisle lens NW Narrow lens	LV 120-277V HV¹⁶ 347-480V	CRM⁶ Cable-ready (standard) for suspension mounting or 3/4" stem mount MBR^{3,6} Factory installed mounting box and bracket for surface mount applications - adds 1 1/2" to fixture height STEM⁶ Factory installed mounting box and bracket for stem mount applications - adds 1 1/2" to fixture height HOOK⁶ Field installed mounting kit, includes hook and one leveling Y-cable Plate⁶ and Hanger⁶ mount also available, sold and packaged separately, see Accessories, order as CRM. Other mounting options available, contact factory.

CONTROLS ^{6,14,16,24}				CORDS & PLUGS ^{6,9}		OPTIONS ⁶	DIMMING
EZ-CONNECT RECEPTACLE (for field installed controls)							
EZ10 Adds an EZ-Connect Receptacle with Twist Lock System to the fixture for field installed EZ-Connect Controls. EZ-Connect Controls are sold separately as accessories and must be ordered as a separate line item.		EZ-CONNECT BASIC CONTROLS See Page 6 	EZ-CONNECT ULTRALINK WIRELESS CONTROLS ^{10,17,20} See Page 7 	6' 18AWG cord with the following CW Cord, 15A, 3-wire, no plug DW Dimming cord, 15A, 5-wire, no plug C515 Cord, 15A, straight plug 120V (5-15P) CL515 Cord, 15A, locking plug 120V (L5-15P) CL715 Cord, 15A, locking plug 277V (L7-15P) CL720 Cord, 20A, locking plug 277V (L7-20P) CL2420 Cord, 20A, locking plug 347V (L24-20P) CL820 Cord, 20A, locking plug 480V (L8-20P) WINSTA¹⁰ 12" 18/3 cord whip with WINSTA MIDI 770-104 female connector. For fixtures with corresponding WINSTA male connector	10' 18AWG cord with the following 10CW Cord, 15A, 3-wire, no plug 15' 18AWG CORD WITH THE FOLLOWING 15CW Cord, 15A, 3-wire, no plug 15DW Dimming cord, 15A, 5-wire, no plug 15C515 Cord, 15A, straight plug 120V (5-15P) 15CL515 Cord, 15A, locking plug 120V (L5-15P) 15CL715 Cord, 15A, locking plug 277V (L7-15P) 15CL720 Cord, 20A, locking plug 277V (L7-20P) 15CL2420 Cord, 20A, locking plug 347V (L24-20P) 15CL820 Cord, 20A, locking plug 480V (L8-20P) Other cord options available, contact factory	EMB^{3,6,10,12} Emergency battery back-up, LV only. Adds 1.25" to fixture height EMB2^{3,10,12} High lumen emergency battery back-up. LV Only. Adds 1.25" to fixture height SRG6OFF^{10,13,17} Fixture installed 20kA surge suppression device, fails to OFF SRG^{16,17} Fixture installed 10kA surge protector fails to ON QDC Driver Quick Disconnect BOX Individual box packaging available CTRLR^{4,10,11} Control Ready 5-wire harness (factory installed) WG¹⁰ Fixture Wire Guard CTOPEND Cord mounted on top edge of wireway	10V 0-10V
FACTORY INSTALLED							
BASIC CONTROLS ^{19,21}			ULTRALINK WIRELESS CONTROLS ^{10,17,20}				
LINMORE LED	IR-TEC	WATTSTOPPER					
LOCCDIM12 (LV) PIR Occupancy and Daylight Sensor, On/Off/Dim, 12' Max Mounting Height, IP66. LV only.	TOCCWD (LV)⁴ OCC sensor, w/photocell, wide distribution, LV only, up to 27' mounting height	OCC8 (HV ONLY) OCC sensor, on/off, w/ photocell, 8' mounting height		ULTRA UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller			
LOCCDIM40 (LV) PIR Occupancy and Daylight Sensor, On/Off/Dim, 20' to 40' Mounting Height, IP66. LV only.	TOCCNW (LV)⁴ OCC sensor, w/photocell, narrow distribution, LV only, up to 49' mounting height	OCC30 (HV ONLY) OCC sensor, on/off, w/photocell, up to 30' mounting height		ULTRAHGA UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller with Long Range Antenna			
	TOCCAL (LV)⁴ OCC sensor, w/photocell, aisle distribution, LV only, up to 40' mounting height	OCC40 (HV ONLY) OCC sensor, on/off, w/photocell, up to 40' mounting height		ULTRAPIR20 UltraLink Bluetooth NLC Wireless Fixture Controller with PIR Occupancy Sensor, 8' to 20' Mounting Height			
	TOCCDIMWD (LV/HV)^{7,18} OCC sensor, dimmable w/ photocell, wide distribution, all LV, some HV see footnote 18, up to 27' mounting height	OCCDIM8 (LV/HV)⁷ OCC sensor, dimmable, w/photocell, 8' mounting height, programmable via remote		ULTRAPIR40 UltraLink Bluetooth NLC Wireless Fixture Controller with PIR Occupancy Sensor, 20' to 40' Mounting Height			
	TOCCDIMNW (LV/HV)^{7,18} OCC sensor, dimmable w/ photocell, narrow distribution, all LV, some HV see footnote 18, up to 49' mounting height	OCCDIM30 (LV/HV)⁷ OCC sensor, dimmable, w/photocell, 30' mounting height, programmable via remote					
	TOCCDIM40 (LV/HV)⁷ OCC sensor, dimmable, w/photocell, 40' mounting height, programmable via remote	OCCDIM40 (LV/HV)⁷ OCC sensor, dimmable, w/photocell, 40' mounting height, programmable via remote					
	TOCCDIMAL (LV/HV)^{7,18} OCC sensor, dimmable w/ photocell, aisle distribution, all LV, some HV see footnote 18, up to 40' mounting height						

ORDERING EXAMPLES

Standard: CH20S-A1-17K-4MS-50-80-FR-LV-CRM-10V
With Options: CH20S-A1-17K-4MS-50-80-FR-LV-CRM-**ULTRA-CW-EMB**-10V
DLC: CH20S-A1-17K-4MS-40-80-FR-[LV, HV]-[ALL MOUNTING OPTIONS]-[ALL OCCUPANCY SENSORS]-[ALL CORDS]-[ALL OPTIONS]-10V

ACCESSORIES

Must be ordered separately. Packaged separately.





FIXTURE ACCESSORIES ⁶		
Part Number	Type	Description
SAFETYCABLE	Safety Kit	Kit includes (1) 10 ft. aircraft cable with single snap hook, L-bracket, screw and nut. For use with HOOK, MBR, PLATE MOUNT or stem mounting options.
CABLEKIT	Cable Kit	Kit includes (2) 10 ft. aircraft "Y" cables and (2) snap hooks.
HANGER	Hanger Mounting Option	Kit includes (2) wire V hangers. Order fixture with CRM mounting option.
PLATE	Plate Mounting Option	Kit includes (1) hanging plate with mounting hole for 3/4" conduit and (4) 5 ft. aircraft cables and snap hooks. Order fixture with CRM option.
SWG	Occupancy Sensor Wire Guard	Wire guard for occupancy sensors, field install. Shipped in separate box.
	Power Supply Replacement	Power supply replacement available upon request. Contact factory for details.

BASIC CONTROLS ^{6,10,18}		
Part Number	Type	Description
TOCCDIMPROG ^{7,15}	IR-TEC Wireless Programmer for Dimmable Occupancy Sensors	Handheld wireless programmer for setup TOCCDIMXX dimmable occupancy sensors. Required with TOCCDIM20 and TOCCDIM40 selection.
OCCDIMPROG	Wattstopper Wireless Programmer for Dimmable Occupancy Sensor(s)	Handheld wireless programmer for setup OCCDIMXX dimmable occupancy sensors. Required with OCCDIM8, OCCDIM20 and OCCDIM40 selection.

EZ-CONNECT™ BASIC CONTROLS

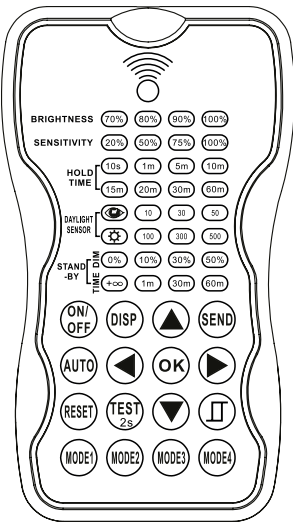
Controls are field installed, must be ordered as a new line item and will ship in a separate box.

BASIC SENSORS²⁴

	Part Number	Description
	PC-WH-EZ10	Photocell, White Color, EZ-Connect Twist Lock System, Plug & Play, Field installed.
	PIR-WH-EZ10	PIR Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, Plug & Play, On/Off/Dim, 40' Max Mounting Height, IP65. Field installed.
	MW-WH-EZ10	Microwave Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, Plug & Play, On/Off/Dim, 40' Max Mounting Height, IP65. Field installed.
	SEN-PROG	Infrared Remote Programmer for Occupancy Sensors. Required to change default settings, modes of operation, and detection sensitivity for all EZ10 basic sensors.



DEFAULT SETTINGS

For PIR and MW Sensors: Sensitivity=100%, Hold time=5min, Daylight sensor=disabled, Stand-by dim level=30%, Stand-by time=60min.



INFRARED REMOTE PROGRAMMER

Required to change default settings, modes of operation, and sensitivity.

Brightness	Light output during occupancy (70%, 80%, 90%, 100%).		Daylight harvesting function. Selects the current surrounding lux value as the daylight threshold.
Sensitivity	Detection area of the sensor (20%, 50%, 75%, 100%).		Daylight sensor disabled. All motion detected turns on the light, no matter how bright the natural light is.
Hold Time	Time the sensor waits to turn off or dim the light after the area is vacated.	Stand-by Dim	Light output during vacancy (0%, 10%, 30%, 50%).
Daylight Sensor	Daylight sensor status and daylight threshold values in lux.	Stand-by Time	Time the sensor keeps the light at stand-by dim level after the hold time has elapsed.

Scene Modes

The remote comes with four pre-programmed modes. These can be used as is, or adjusted with different parameters and saved over an existing mode.

Scene	Application	Brightness	Sensitivity	Hold Time	Stand-by Dim	Stand-by Time	Daylight Sensor
MODE 1	Indoor	100%	75%	5min	30%	30min	Disabled
MODE 2	Indoor	100%	75%	1min	30%	+∞	Disabled
MODE 3	Indoor	100%	75%	5min	30%	30min	30lux
MODE 4	Outdoor	100%	75%	1min	30%	+∞	30lux/300lux

EZ-CONNECT™ ULTRALINK BLUETOOTH CONTROLS







Controls are field installed, must be ordered as a new line item and will ship in a separate box.

ULTRALINK CONTROLLERS / SENSORS²⁴

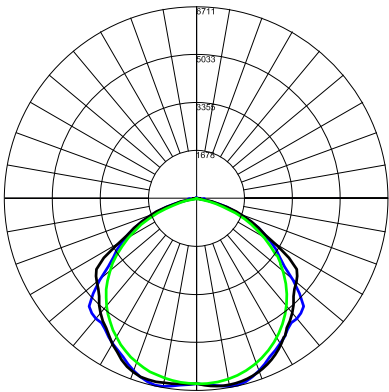
	Part Number	Description
	ULTRA-WH-EZ10	UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller, White Color, EZ-Connect Twist Lock System, IP65, Silvair Firmware. Field installed.
	ULTRAHGA-CL-EZ10	UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller with Long Range Antenna, Clear Color, EZ-Connect Twist Lock System, IP65, Silvair Firmware. Field installed.
	ULTRAPIR-WH-EZ10	UltraLink Bluetooth NLC Wireless Fixture Controller with PIR Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, 40' Max Mounting Height, IP65, Silvair Firmware. Field installed.
	ULTRAMW-WH-EZ10	UltraLink Bluetooth NLC Wireless Fixture Controller with Microwave Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, 40' Max Mounting Height, IP65, Silvair Firmware. Field installed.
	SEN-PROG	Infrared Remote Programmer for Occupancy Sensors. Only required for EZ10 UltraLink sensors to change detection sensitivity.

ULTRALINK ACCESSORIES

	Part Number	Description
	ULTRAGATEWAY	UltraLink Bluetooth NLC Wireless Gateway, required for Advanced Features and Time-Based Events. One gateway can control up to 200 fixtures, allowing for energy monitoring, people tracking, and scheduling. Interior installation only.
	ULTRAGATEWAY-EXT	UltraLink Bluetooth NLC Wireless Exterior Rated Gateway Box with Long Range Antenna, includes ULTRAGATEWAY. 120-277V Power Supply required.
	ULTRATIME-BAT	UltraLink Bluetooth NLC Time-Keeping Battery Backup includes an Outdoor Rated Enclosure, a Long Range Antenna and a Backup Battery. For use to keep time during a power outage and for in-node scheduling.
	ULTRADASH	UltraLink Dashboards for Energy, Occupancy Heat Mapping, and Energy Heat Mapping. Gateway (ULTRAGATEWAY) required, sold separately.

CLEAR

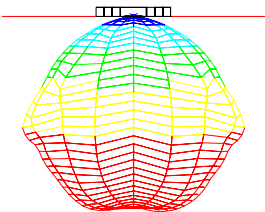
Polar Graph



Zonal Lumen Summary

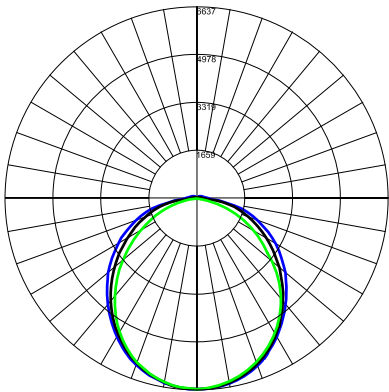
CH20S-A1-20K4MS-40-80-CL			
Zone	Lumens	% Lamp	% Fixt.
0-30	5,302.46	26.40	26.40
0-40	8,800.28	43.70	43.70
0-60	16,000.25	79.50	79.50
0-90	19,840.73	98.60	98.60
0-180	20,116.98	100.00	100.00
Total luminaire efficiency = 100.00%			

Light Intensity



FROSTED

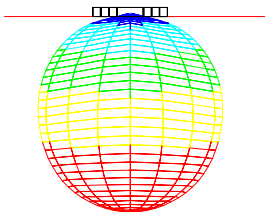
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Zonal Lumen Summary

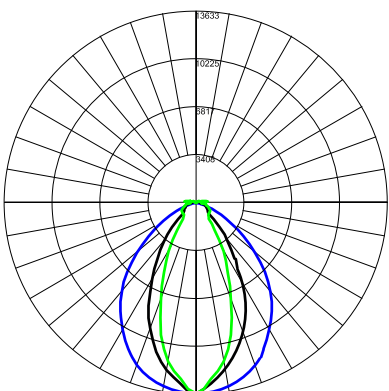
CH20S-A1-20K4MS-40-80-FR			
Zone	Lumens	% Lamp	% Fixt.
0-30	5,096.06	26.10	26.10
0-40	8,278.58	42.40	42.40
0-60	14,438.44	74.00	74.00
0-90	18,910.90	96.90	96.90
0-180	19,514.43	100.00	100.00
Total luminaire efficiency = 100.00%			

Light Intensity



NARROW

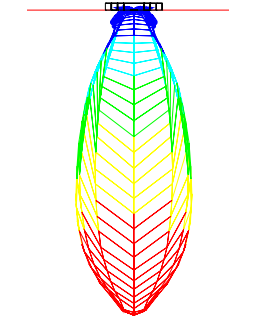
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Zonal Lumen Summary

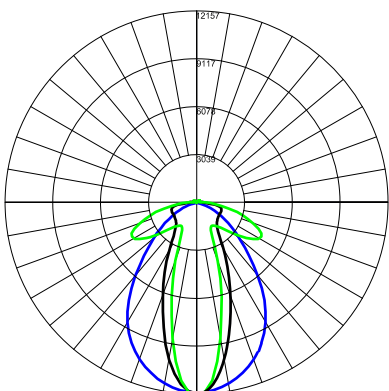
CH20S-A1-20K4MS-40-80-NW			
Zone	Lumens	% Lamp	% Fixt.
0-30	8,090.40	41.00	41.00
0-40	11,474.24	58.20	58.20
0-60	15,997.12	81.10	81.10
0-90	18,668.61	94.70	94.70
0-180	19,714.75	100.00	100.00
Total luminaire efficiency = 100.00%			

Light Intensity



AISLE

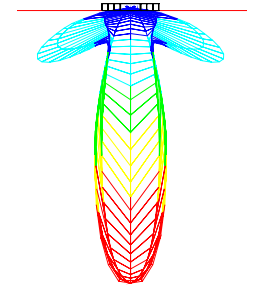
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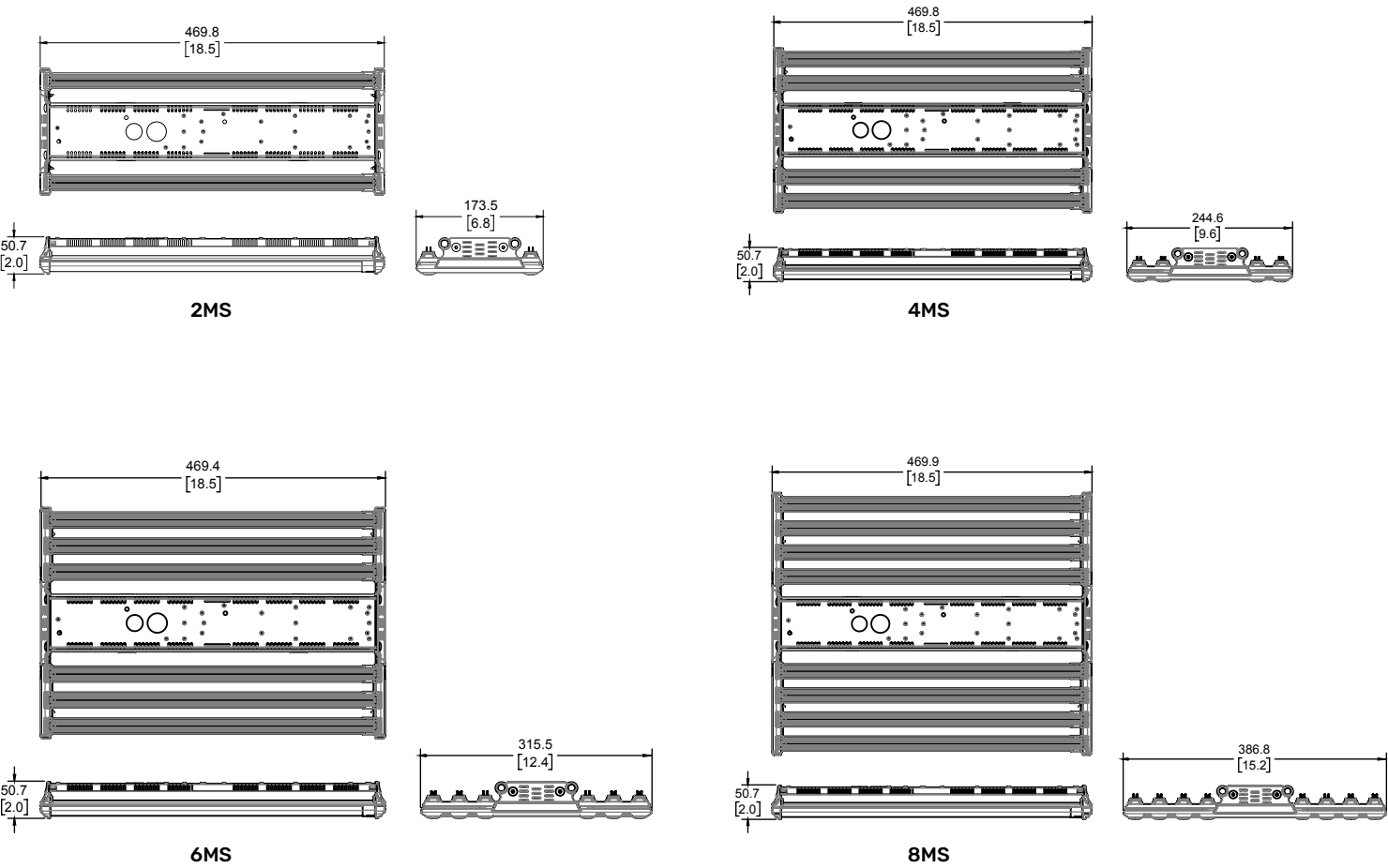
Zonal Lumen Summary

CH20S-A1-20K4MS-40-80-AL			
Zone	Lumens	% Lamp	% Fixt.
0-30	5,947.13	30.50	30.50
0-40	8,274.55	42.40	42.40
0-60	12,889.66	66.10	66.10
0-90	18,344.27	94.00	94.00
0-180	19,513.06	100.00	100.00
Total luminaire efficiency = 100.00%			

Light Intensity



DIMENSIONS & DRAWINGS



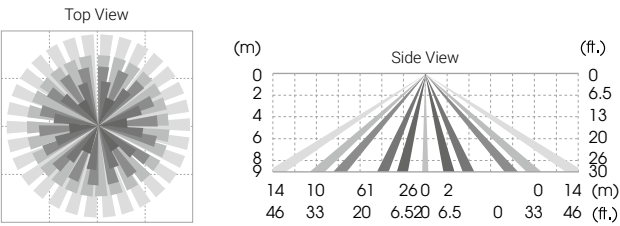
DIMENSIONS ¹²				
Size	Length (in)	Width (in)	Height (in)	Weight (lb)
2MS	18.5	6.8	2.0	~4
4MS	18.5	9.6	2.0	~5.5
6MS	18.5	12.4	2.0	~7.5
8MS	18.5	15.2	2.0	~9

MBR, STEM and EMB mounting options adds 1 1/2" to fixture height. Weights are approximate and vary by model, if weight is a concern, please contact factory.

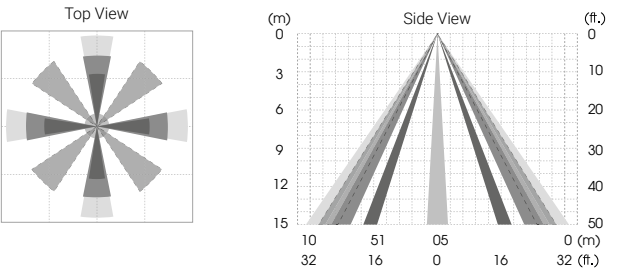
OCCUPANCY SENSORS

IR-TEC

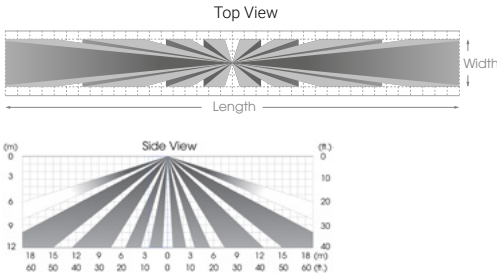
TOCCWD / TOCCDIMWD



TOCCNW / TOCCDIMNW

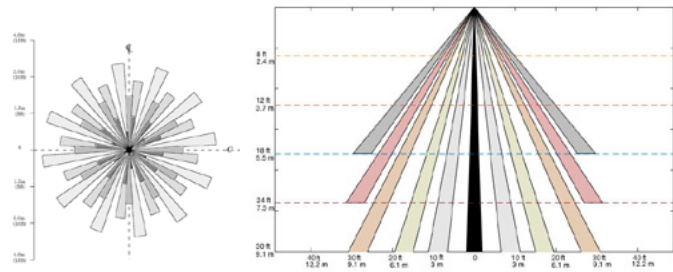


TOCCAL / TOCCDIMAL

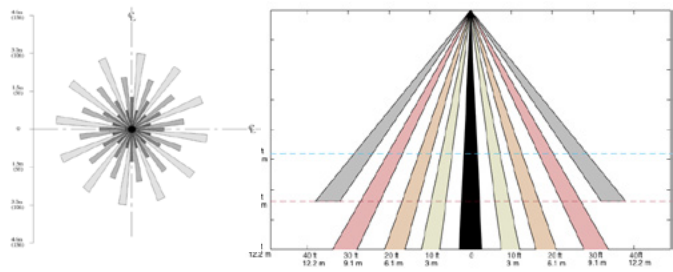


ULTRALINK

ULTRAPIR20

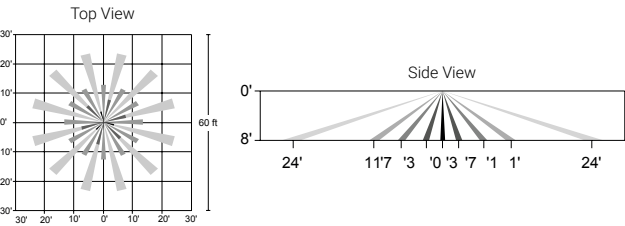


ULTRAPIR40

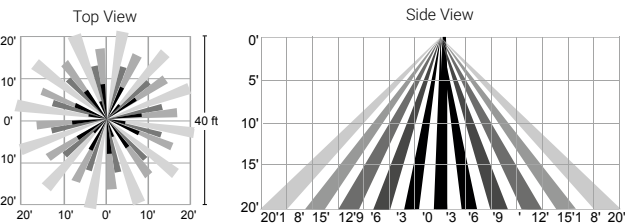


WATTSTOPPER

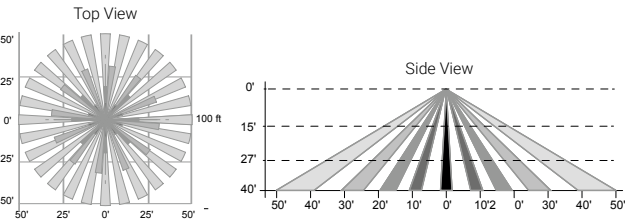
OCC8 / OCCDIM8



OCC30 / OCCDIM30



OCC40 / OCCDIM40



FOOTNOTES

1. 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.
2. Typical ($\pm 10\%$) at 277V (LV), 25°C (77°F), 5000K, Clear Lens, CRI 80+. Lumen Multipliers: 5000K = 1.00; 4000K = 0.99; 3500K = 0.99; Frosted Lens = 0.97; Aisle Lens = 0.97; Narrow Lens = 0.98; 80+ CRI = 1.00; 90+ CRI = 0.86.
3. MBR, max. temp 5°C less, typical. EMB fixtures 32°F to 113°F (0°C to 45°C). EMB or EMB2, when mounted to the ceiling, EMB max. ambient 35°C. EMB factory installation only, not able to be field installed. Temperatures below -20°C have limited switch cycles, consult factory. CH20S-A1-20K-4MS operating ambient range -40°C up to 55°C, (-40°F up to 131°F). All other CH20S are rated for -40°C up to 45°C, (-40°F up to 113°F).
4. 122-277V Only.
5. Optional CABLEKIT ordered separately. See ACCESSORIES.
6. Optional add-on. See price list for pricing.
7. Wireless programmer required for final field setup. See ACCESSORIES.
8. Clear, Narrow and Aisle Lens only.
9. All cords are 18/3 AWG and 600V. DW and 15DW are 18/5 and 600V.
10. Consult factory for orders requiring 3500K CCT, EMB, EMB2, UltraLink, CTRLR, SRGOFF, WINSTA, WG, CACS and CACSMC. They may have extended lead times.
11. CTRLR includes 5 wires, capped off inside of fixture for use with customer supplied field installed controls.
12. 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.
13. 20kA surge suppression device in which, when triggered, the fixture will fail in the "Off" mode (fixture will not illuminate).
14. Optional commissioning available. Priced separately. Contact factory.
15. SRG (10kA protection) is a standard option for all LV fixtures and it is included on all HV fixtures.
16. Linmore LED recommends all controls and sensors should have optional SRG or SRGOFF added. They are not protected by the internal surge suppression provided by the driver.
17. UltraLink controls require commissioning in the field via iOS app, contact factory. UltraLink not available on CH20S-A1-33K-8MS and CH20S-A1-37K-8MS. UltraLink available in LV (120-277V) ONLY for CH20S-A1-06K-2MS and CH20S-A1-09K-2MS.
18. TOCCDIMxx available in HV (347-480V) on the following fixtures: CH20S-13K-4MS, CH20S-15K-4MS, CH20S-17K-4MS, CH20S-20K-4MS, CH20S-25K-6MS, CH20S-28K-6MS, CH20S-31K-8MS.
19. Not for use in dusty environments.
20. When using UltraLink or when adding an EZ-Connect receptacle, drivers are 0-10V dimming, DIM to OFF via the Aux output. Without these, the fixture is 0-10V dimming only.
21. Sensor settings from factory:
OCCxx - If no movement for 15 mins, OFF (WS Factory Settings).
TOCCxx - If no movement for 10 mins, OFF (IR-Tec Factory Settings).
All OCCDIMxx use the OCCDIMPROG (FSR-100) remote for configuration. See Accessories.
TOCCDIMxx - If no movement for 10 mins, dim to 30%. If no movement for 10 mins, OFF. TOCCDIMPROG (SRP-280) requires remote for configuration. See Accessories. (IR-Tec Factory Settings).
22. Not DLC certified.
23. Extended lead time may apply.
24. The performance of sensors and lenses is influenced by various factors beyond Linmore LED's control, including but not limited to environmental conditions, user settings, and proper maintenance. While we provide detailed specifications and guidelines to help optimize performance, we cannot guarantee or be held liable for the performance of sensors or lenses under any particular circumstance(s). Customers are advised to test the products in their specific application environments to ensure suitability for their intended use and are responsible for all sensor and lens selections.

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All specifications are subject to change without notice. Please visit linmoreled.com for latest information. All values are typical or design values and series averages. Actual performance may differ as a result of end-user environments and applications. Consult Linmore LED with specific inquiries. Copyright © 2024, Linmore LED Labs, Inc. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Linmore LED.

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