LinmoreLED®
ULTRA PERFORMANCE LIGHTING

SPEC SHEET

Linear 2.0 (LR2)

LED LINEAR FIXTURES AND RETROFIT KITS

BUY AMERICAN ACT COMPLIANT

DLC LISTED — EXPECTED RE-LISTING BY 10/31/22

Bluetooth Ready

cETLus LISTED Intertek

TRUSTED NLB NATIONAL LIGHTING BUREAU WARRANTY

KEY FEATURES

- 3,000 to 12,000 lumens
- Up to 151 LPW
- Continuous row
- Retrofit Kit option
- Guaranteed light levels for 5 years
- Dimmable 0-10V (standard)
- 2kV surge protection (up to 10kV optional)
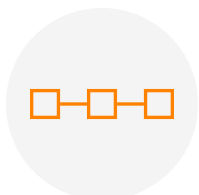
5 YEAR PERFORMANCE **WARRANTY** **L70**

Guaranteed Performance

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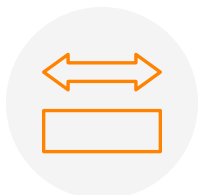
Universal Retrofit Kit

Options include a standalone fixture, a retrofit kit for standard linear back boxes and a Retro Multi Width Kit designed for multiple widths.

Continuous Row

Easily create an uninterrupted line of light by connecting multiple LR2 fixtures using included joiner pieces.

TECHNICAL SPECS

NOMINAL LUMENS	LENGTH	LUMEN OUTPUT[1]	EFFICACY	WATTS	PART NUMBER
3,000	4'	3,184	149	21	LR20S-A1-03K-04-40-80-FR
4,000	4'	4,532	139	33	LR20S-A1-04K-04-40-80-FR
6,000	8'	6,276	146	43	LR20S-A1-06K-08-40-80-FR
8,000	8'	8,186	148	55	LR20S-A1-08K-08-40-80-FR
9,000	12'	9,304	151	62	LR20S-A1-09K-12-40-80-FR
12,000	12'	12,488	150	83	LR20S-A1-12K-12-40-80-FR

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		
C°	F°	Multiplier
35	95	0.99
40	104	0.98
45	113	0.98

COLOR TEMP[1]	
CCT	Multiplier
5000	1.000
4000	0.990
3500	0.990

COLOR RENDERING	
CRI	Multiplier
80	1.000

LIGHT DISTRIBUTION	
Lens	Multiplier
FR	0.970
NL	1.08

Example: How to calculate the actual lumen output of the model 8K 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.

8,186	x	0.98	x	0.990	x	1.000	x	0.970	=	7,704
Lumens		Temp.		CCT		CRI		Lens		Actual lumens

LUMEN MAINTENANCE

5 YEAR
PERFORMANCE
WARRANTY
L70

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	95	196	309	95	92	90	9,000 hrs	> 54,000 hrs
30	86	95	196	309	95	92	90		
35	95	95	196	309	95	92	90	LEDs tested for 13,000 hrs based on LM-80.	
40	104	93	189	298	95	92	90	Extrapolating as per TM-21:	
45	113	87	178	281	95	92	89	13,000 hrs x 6 = 78,000 hrs of reported life.	

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[4]	CRI	LENS	VOLTAGE	MOUNTING
4' LONG LR20S-A1-03K-04 LR20S-A1-04K-04 **8' LONG** LR20S-A1-06K-08 LR20S-A1-08K-08 **12' LONG** LR20S-A1-09K-12 LR20S-A1-12K-12	**50** 5000K **40** 4000K **35**[6] 3500K Other CCT available upon request	**80** (standard) Other CRI available upon request	**FR** Frosted lens **NL** No lens	**LV** 120-277V	**FXT**[4, 7] Stand-alone fixture **RTR** 4 3/8" Retrofit Kit, utilizes existing housing and wiring **RMW** Retro Multi Width Kit (3.25" to 5.25"), utilizes existing housing and wiring

CONTROLS	CORDS & PLUGS		OPTIONS[4]	DIMMING
OCCDIM8[3,5,10] Programmable Wattstopper OCC sensor, dimmable, w/photocell, 8' mounting height **TOCC20**[3,10] IR-TEC OCC sensor, on/off, w/photocell, 8' to 20' mounting height **OCCDIM20**[3,5,10] Wattstopper OCC sensor, dimmable, w/photocell, up to 20' mounting height **DOCC**[3,10,11] High frequency doppler OCC sensor, w/ ambient light sensing, 10-20' mounting height	**6' 18AWG cord with the following** **CW**[3] Cord, 15A, 3-wire, no plug **DW**[3] Dimming cord, 15A, 5-wire, no plug **C515**[3] Cord, 15A, straight plug 120V (5–15P)	**15' 18AWG cord with the following** **15CW**[3] Cord, 15A, no plug **15DW**[3] Dimming cord, 15A, 5-wire, no plug **15C515**[3] Cord, 15A, straight plug 120V (5–15P) Other cord options available, contact factory	**EMB**[3,8,9] Emergency battery back-up. Adds 1.25" to fixture height **SRG**[3] Fixture installed surge protector fails to ON **QDC**[3] Driver Quick Disconnect **BOX**[3] Individual box packaging available	**10V** 0–10V

ORDERING EXAMPLES

Standard: LR20S-A1-04K-04-40-80-FR-LV-FXT-10V

With **Options:** LR20S-A1-04K-04-40-80-FR-LV-FXT-**EMB**-**QDC**-10V

ACCESSORIES

Must be ordered separately. Packaged separately.

FIXTURE ACCESSORIES		
Part Number	**Type**	**Description**
SAFETYCABLE	Safety Kit	Kit includes (1) 5 ft. aircraft cable with single snap hook, L-bracket, screw and nut. For use with all mounting options.
VHANGERKIT	V-Hanger	Kit includes 2 wire V-hangers, enough to hang one 4' fixture. Order fixture with FXT mounting option.
HANGERKIT	Hanger	Kit includes 2 cable and toggle hangers. Order fixture with FXT mounting option.[7]
OCCDIMPROG	Wireless Programmer for Dimmable Occupancy Sensor(s)	Hand-held wireless programmer for setup OCCDIMXX dimmable occupancy sensors. Required with OCCDIM8 selection.
SPLINT	Splint	13.5" Brace, used to firm up the joint between two, 4' sections. Extended lead time.
	Power Supply Replacement	Power supply replacement available upon request. Contact factory for details.

FEATURES & SPECIFICATIONS

CONSTRUCTION

• **Steel housing**

• **Length:** Fixtures are all 4' sections. Available for order in 4', 8' and 12' lengths. 8' and 12' versions are attached with included bracket(s). Each fixture has 1 driver to maximize efficiency and value.

ELECTRICAL

• **Power Input:** 120-277V (50/60Hz).

• **Power Factor:** >0.9 (0.96–0.99 typical).

• **Total Harmonic Distortion:** <20%, 10% typical.

• **Surge Protection:** Minimum 2kV (standard). Additional surge protection up to 10kV is available.

• **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. Available on stand-alone fixture (FXT) only.[9]

OPERATION

• **Environment:** Dry/Damp, for interior applications.

• **Ambient Range Operation:** -25°C up to 45°C (-13°F up to 113°F). For 08K-08, ambient range is -25°C up to 40°C (-13°F up to 104°F).

OPTICS

• **CCT:** 3500K, 4000K and 5000K standard, other CCT available (extended lead time).

• **CRI:** 80 standard, other CRI available (extended lead time).

• **Lenses:** Frosted acrylic (standard). No Lens option available (recommended for indirect lighting only).

MOUNTING

• **Mounting:** All suitable for continuous row.

   Stand-alone Fixture (FXT): Cable Mount or Surface Mount (standard).

   RetroFit Kit (RTR): For standard back boxes. 4 3/8" wide. Utilizes existing housing, (no mounting kits available).

   Retro Multi Width Kit (RMW): For any back box from 3.25" to 5.25" in width. Utilizes existing housing.

CONTROLS

• **Dimming:** 0-10V standard. Dimming range 100% to 10%.

• **Occupancy and Dimming Occupancy Sensors:** Optional - factory installed photocell sensors. IR-TEC and Wattstopper standard, other options available upon request.

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
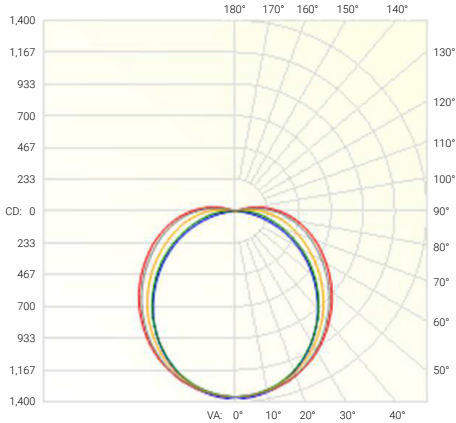
LISTINGS & CERTIFICATIONS

• ETL listed (UL 1598).

• RoHS compliant.

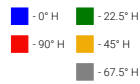• CAN/CSA C22.2 No. 250.13.

LIGHT DISTRIBUTION

FROSTED

Polar Graph
LR20S-Ax-04K-04-40-80-FR-LV

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixt.
0-30	1055.4	23.4	23.4
0-40	1727.0	38.3	38.3
0-60	3090.0	68.6	68.6
60-90	1246.9	27.7	27.7
0-90	4337.0	96.2	96.2
90-180	170.6	3.8	3.8
0-180	4507.6	100.0	100.0
Total luminaire efficiency = 100.00%			

- **■ - 0° H**
- **■ - 90° H**
- **■ - 22.5° H**
- **■ - 45° H**
- **■ - 67.5° H**

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OCCUPANCY SENSORS

IR-TEC

TOCC20

Top View

Side View

DOCC

Side View

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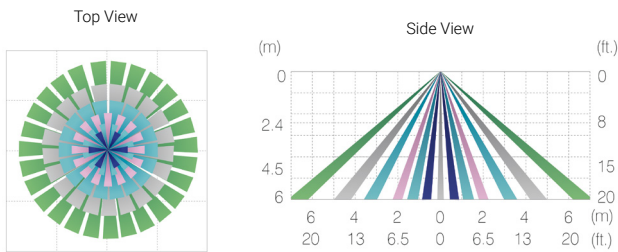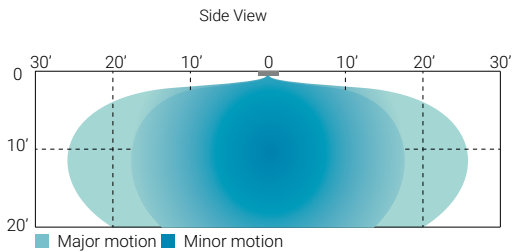
Mounting Height	10'	20'
Coverage (sq. ft.)*	2,000	1,200

*Sensitivity 100%

Wattstopper

OCC8 / OCCDIM8

Top View

Side View
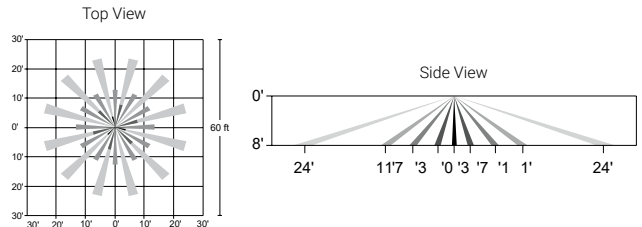
OCC20 / OCCDIM20
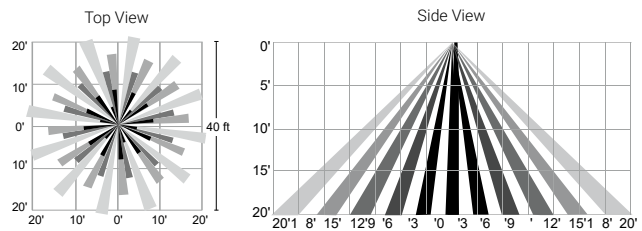
Top View

Side View

DIMENSIONS & DRAWINGS

4' Stand-alone Fixture (FXT)
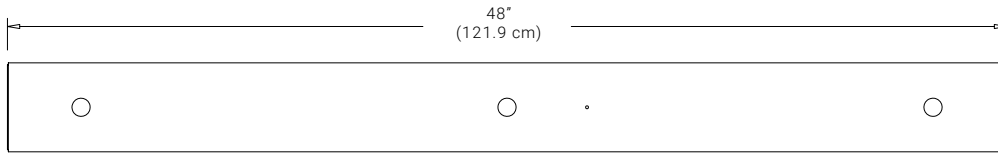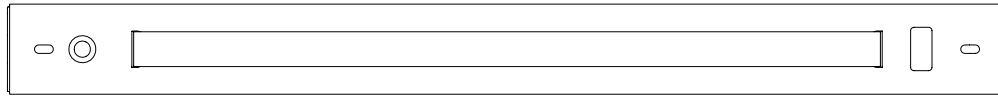
48"
(121.9 cm)

BOTTOM VIEW

TOP VIEW

SIDE VIEW

4.4"
(11.1 cm)

2.6"
(6.6 cm)

END VIEW

4' Retrofit Kit (RTR)

47.8"
(121.6 cm)

BOTTOM VIEW

TOP VIEW

SIDE VIEW

4.3"
(11 cm)

1.8"
(4.7 cm)
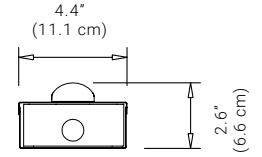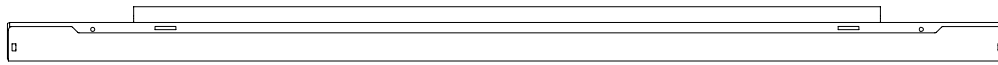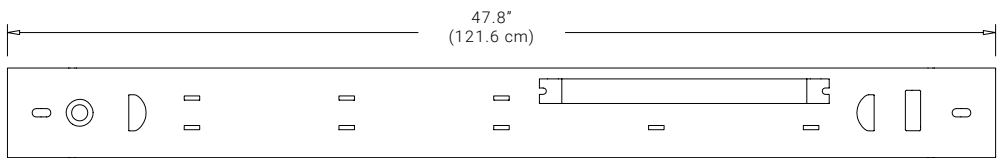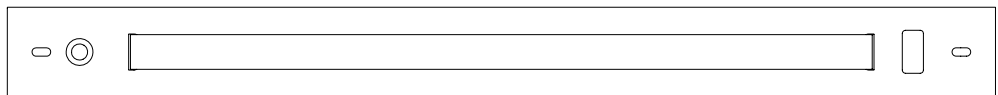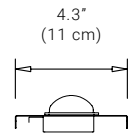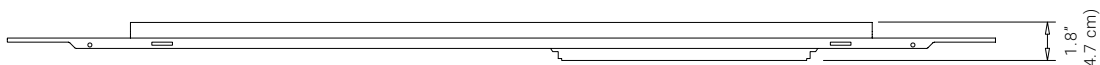
END VIEW

4' Retro Multi Width Kit (RMW)

47.8"
(121.6 cm)
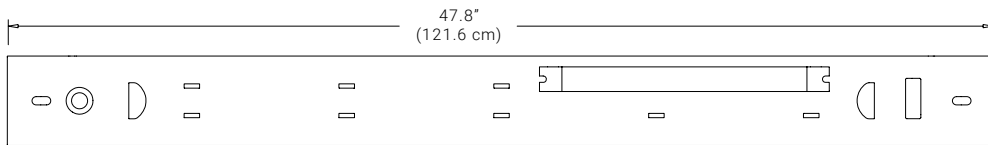
BOTTOM VIEW
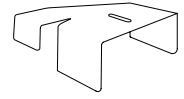
BRACKET ISO VIEW

TOP VIEW

5.8"
(15 cm)

END VIEW

1.8"
(4.7 cm)
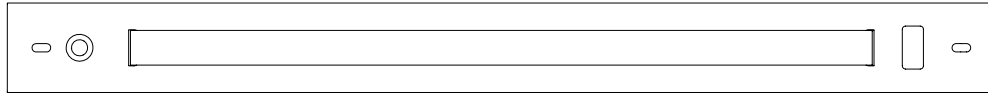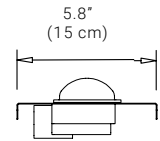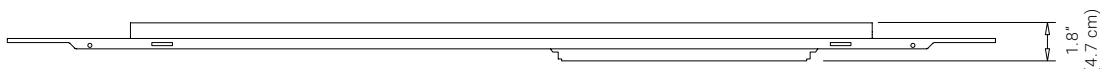
SIDE VIEW

DIMENSIONS[2]					
	Model	Length (in)	Width (in)	Height (in)	Weight (lb)
4'	**FXT**	48.0	4.4	2.6	4.9
	RTR	47.8	4.3	1.8	2.3
	RMW	47.8	5.8	1.8	2.4
8'	**FXT**	96.0	4.4	2.6	8.8
	RTR	95.6	4.3	1.8	3.6
	RMW	95.6	5.8	1.8	3.7
12'	**FXT**	144.0	4.4	2.6	13.7
	RTR	143.4	4.3	1.8	6.9
	RMW	143.4	5.8	1.8	7.2

FOOTNOTES

1. Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Frosted Lens, CRI 80+. Lumen Multipliers: No Lens = 1.08 ; 3500K = 0.93.

2. 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.

3. Optional add-on. See price list for pricing.

4. Optional CABLEKIT ordered separately. See ACCESSORIES.

5. Wireless programmer required for final field setup. See ACCESSORIES.

6. 3500K not DLC listed.

7. Cable mounting full fixtures requires the additional support for 8' and 12' lengths. 4' requires 1 HANGERKIT (2-y cables), 8' and 12' require 2 each HANGERKIT(4-y cables, total).

8. Available on stand-alone (FXT) only.

9. If AC input wiring passes through fixture housings in continuous run installations, max ambient on all fixtures containing a factory installed battery backup system is 40°C

10. Settings for Sensors from Factory:
    OCC (LV and HV) - If no movement for 15 mins, OFF
    TOCC - If no movement for 10 mins, OFF
    OCCDIM - If no movement for 5 mins, dim to 10%, if no movement for 60 mins, OFF
    DOCC - The sensor will be set from the factory at 75% sensitivity and a 10-minute delay.

11. Extended lead time.