

R1 LA Series

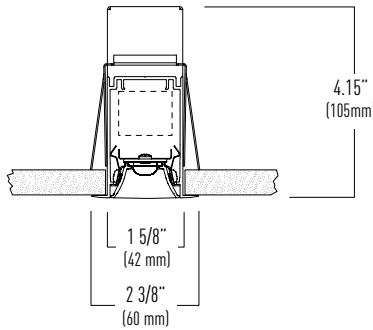
LF1

Flange Recessed
DIRECT
 Light Distribution



The LA Series is a low profile linear lighting system outfitted with precision discrete LED optics. The optical system is designed to focus direct light into specific areas of a space creating dramatic contrast without introducing high angle glare with its baffle design.

- **Extruded aluminum housing**
- **Discrete optical system offers three beam patterns: 35°, 50°, 80°**
- **Configure into linear rows or complex patterns**
- **Tool free installation with engineered spring latch design**
- **Intelligent wireless technology inside from premier connected lighting partners**
- **Available in 3 standard paint finishes**



Nominal Individual Fixture Lengths*

2' (609 mm)	16 Cells
3' (914 mm)	24 Cells
4' (1219 mm)	32 Cells
5' (1524 mm)	40 Cells
6' (1828 mm)	48 Cells
7' (2133 mm)	56 Cells
8' (2438 mm)	64 Cells

*See next page for dimensions and mounting details

ORDERING INFORMATION / Example: LF1-35B-03-L35-U-D-11-B-6-WLX

LF1	DIRECT OPTICS	LUMENS / DOWN ¹	CRI/ CCT	VOLTAGE	DRIVER	CIRCUITING / EMERGENCY OPTIONS ²																		
LF1 - Recessed linear LED luminaire with 1/2" flange for inaccessible ceilings	35B -35° spot black baffle 35W -35° spot white baffle 50B -50° flood black baffle 50W -50° flood black baffle 80B -80° wide flood black baffle 80W -80° wide flood white baffle	03 - 300 lm/ft 05 - 500 lm/ft 08 - 800 lm/ft	L30 - 80 CRI, 3000K L35 - 80 CRI, 3500K L40 - 80 CRI, 4000K H30 - 90 CRI, 3000K H35 - 90 CRI, 3500K H40 - 90 CRI, 4000K	U - Universal 1 - 120V 2 - 277V	Dimming 0-10V D - Dim to 1% (Standard) DO - Dim to 1%, Fade to Off DO2 - Eldoled Solodrive, Dim to 0% LUTRON - See options on page 2 DALI Dimming ELE - Eldoled Ecodrive, Dim to 1% ELS - Eldoled Solodrive, Dim to 0%	<table border="1"> <tr> <th>Qty of Power Circuits</th> <th>Qty of Control Circuits</th> <th>Options</th> </tr> <tr> <td>1 - 1 Circuit</td> <td>1 - 1 Circuit</td> <td>B6 - 6 Watt Battery Pack</td> </tr> <tr> <td>2 - 2 Circuits</td> <td>2 - 2 Circuits</td> <td>B10 - 10 Watt Battery Pack</td> </tr> <tr> <td></td> <td></td> <td>CEC - CEC Compliant (10 Watt Battery Pack)</td> </tr> <tr> <td></td> <td></td> <td>GTD - Generator Transfer Device (120V or 277V)</td> </tr> <tr> <td></td> <td></td> <td>EM - Dedicated Emergency Circuit</td> </tr> </table>	Qty of Power Circuits	Qty of Control Circuits	Options	1 - 1 Circuit	1 - 1 Circuit	B6 - 6 Watt Battery Pack	2 - 2 Circuits	2 - 2 Circuits	B10 - 10 Watt Battery Pack			CEC - CEC Compliant (10 Watt Battery Pack)			GTD - Generator Transfer Device (120V or 277V)			EM - Dedicated Emergency Circuit
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FIXTURE FINISH	LINEAR ROWS	OPTIONS
W -White Painted Finish S -Silver Painted Finish B -Black Painted Finish CC -Custom Color	2 - 24" 3 - 36" 4 - 48" 5 - 60" 6 - 72" 7 - 84" 8 - 96" XX - Specify continuous run lengths in 1' increments	WLX - Wavelinx (Cooper Lighting Solutions) integral sensor NX - NX (Hubbel) integral sensor NLT - nLight (Acuity Brands) integral sensor LV -Vive (Lutron) integral sensor ENL -Enlighted integral sensor

NOTES:
 1. Nominal lumen output for 3500K, 80 CRI
 2. Battery pack and emergency circuit requires a minimum fixture length of 4'

PHOTOMETRICS

Report #: ITL94686 3500K / 80 CRI 500 lumens per ft 80° optic / White Baffle			Report #: ITL94685 3500K / 80 CRI 500 lumens per ft 50° optic / White Baffle			Report #: ITL94684 3500K / 80 CRI 500 lumens per ft 35° optic / White Baffle			
Light Level	Lumens per ft	Watts per ft	Lumens per watt	Lumens per ft	Watts per ft	Lumens per watt	Lumens per ft	Watts per ft	Lumens per watt
03	300	2.52	119	300	2.50	120	300	2.56	117
05	500	4.05	124	500	4.02	124	500	4.12	121
08	800	6.72	119	800	6.67	120	800	6.84	117
Max luminance* 28186 cd/m²			Max luminance 2149 cd/m²			Max luminance 13313 cd/m²			
Max UGR*: 15.5			Max UGR: 7.0			Max UGR: 13.9			

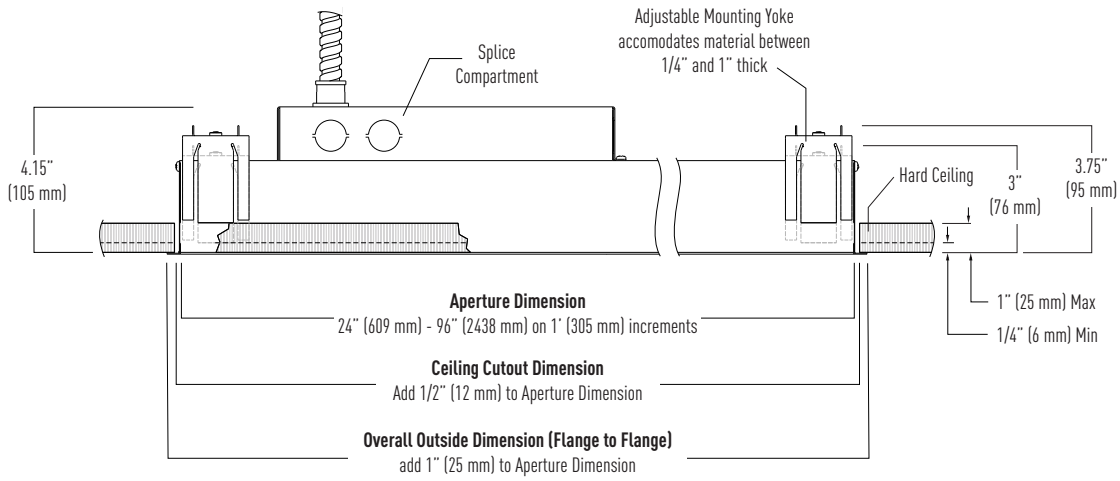
*UGR and luminance values are from light level (08) 800 lumens per ft

DRIVER INFORMATION

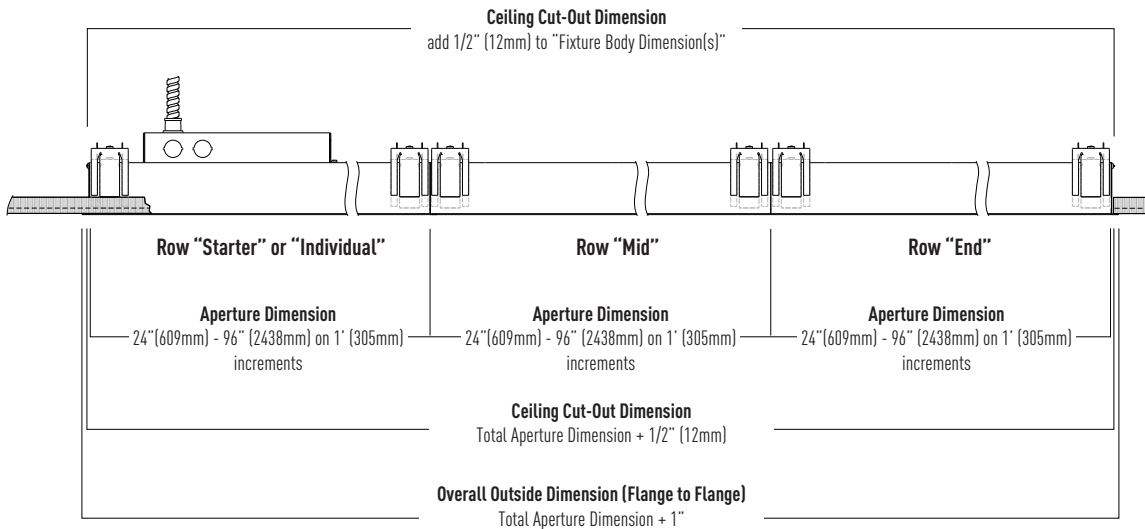
NULITE CAT#	DRIVER MANUFACTURER / SERIES	DIMMING / CONTROL PROTOCOL	DIM RANGE	NOTES/ DESCRIPTION
D	Signify Xitanium, Osram OTI	0-10v	100% - 1%	Standard Nulite driver, base fixture price
D0	Signify Xitanium, Osram OTI	0-10v	100% - 1% (Steps from 1% to 0% or OFF)	Standard Nulite driver, base fixture price
D02	Eldoled Solodrive	0-10v	100% - 0%	Logarithmic Dimming Curve
L11	Lutron Hi-Lume Premier (PE00E) Max lumen package 03	0-10v	100% - 0.1%	Hi-Lume Premier 0.1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology
L15	Lutron Hi-Lume Series (LDE1)	0-10v	100% - 1%	Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology
ELE	Eldoled Ecodrive	DALI	100% - 1%	Logarithmic Dimming Curve
ELS	Eldoled Solodrive	DALI	100% - 0%	Logarithmic Dimming Curve

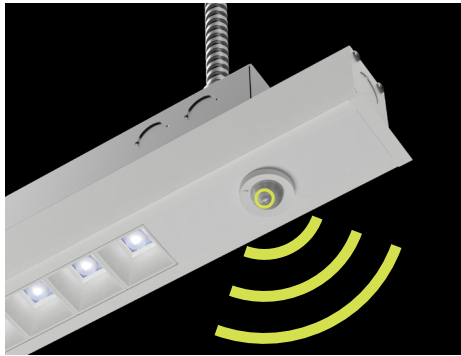
CEILING MOUNTING DETAILS

Inaccessible Ceilings (Sheet Rock Typical)



ROW LAYOUT DETAILS





OEM Connected Lighting Partners

Nulite has formed strategic partnerships with premier OEM suppliers of smart lighting control platforms. Nulite's focus is primarily on embedded fixture level smart sensors and power supplies ensuring system operability and code compliance.

Benefits of an OEM Supplier

- Factory trained and certified to assemble and test product operability prior to shipment
- Authorized to purchase components, inventory on hand for shorter lead times compared to non-partners
- UL listed as an entire fixture assembly

Wavelinx (WLX)

Cooper Lighting Solutions

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Integral Fixture Sensors

Item Description	OEM Part #
Wavelinx Ambient Integrated Sensor, 8-15ft (2.4-4.6m)	OEM-WAA
Wavelinx Industrial Mount Sensor, White, up to 40ft (4.5 - 12.2m)	OEM-SWPD3-WH
Wavelinx Outdoor Fixture	OEM-SWPD5-WH/BK/BZ

Integral Sensor Options						Nulite Compatible Product Lines														
0-10v Dimming Control	DAI Dimming Control	IP rated (Outdoor)	Wireless Control	Daylight Harvesting	Occupancy Sensing	LA Series	Regolo 1	Regolo 2	Regolo 4	Regolo 6	RZ4	RXT	Pixie	Sottile	Tavo	Sero	Oub	Bounce	INT	
●			●	●	●	●	●	●	●	●										
●		●	●	●	●															●
●	●	●	●	●	●							●								

Additional Notes:

- Nulite is OEM certified and authorized to purchase and install Wavelinx components into their luminaires. All products are fully tested at the Nulite factory and each product ships with UL compliance.
- **Ordering Example:** Nulite Catalog #: LP13-D-35B-05-03-L35-D-1-1-WH-T1-W-048-8-WLX (OEM-WAA). This catalog designation merely identifies luminaires that require Wavelinx compatible integral fixture sensors. Additional hardware such as power packs and wiring harnesses are often required to operate sensors and offer compatibility to the overall control system. Nulite will coordinate with Wavelinx on these items and build into the price accordingly.
- Nulite's standard 0-10v LED drivers are Signify Xitanium Series, and Osram Optotronic Series

nLight (NL)

Acuity Brands

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Integral Fixture Sensors

Item Description	OEM Part #
Indoor Embedded 360° Motion Sensor	MSD PDT 7**
Fixture embedded smartsensor	RES7
Passive infrared occupancy sensor	nES7
Dimming Photocell	nES ADCX
nLight AIR Outdoor 360° Embedded Motion Sensor	rMSOD
Fixture embedded smartsensor for challenging environments	rSBG
nLight AIR Fixture Mount Sensor	rLSXR

Integral Sensor Options						Nulite Compatible Product Lines															
0-10v Dimming Control	DAI Dimming Control	0-10v LEDcode*	DAI LEDcode*	IP rated (Outdoor)	Wireless Control	Daylight Harvesting	Occupancy Sensing	LA Series	Regolo 1	Regolo 2	Regolo 4	Regolo 6	RZ4	RXT	Pixie	Sottile	Tavo	Sero	Oub	Bounce	INT
●						●	●	●	●	●	●	●									
●		●			●	●	●	●	●	●	●	●									
●					●	●	●	●	●	●	●	●									
●		●			●	●	●							●							
●		●		●	●	●	●							●							●
●				●	●	●	●														●

Additional Notes:

- Nulite is authorized to purchase and install nLight components into their luminaires. All products are fully tested at the Nulite factory and each product ships with UL compliance.
- **Ordering Example:** Nulite Catalog #: LP13-D-35B-05-03-L35-D-1-1-WH-T1-W-048-8-NL (RES7). This catalog designation merely identifies luminaires that require NX compatible integral fixture sensors. Additional hardware such as power packs and wiring harnesses are often required to operate sensors and offer compatibility to the overall control system. Nulite will coordinate with nLight on these items and build into the price accordingly.
- *Proprietary Acuity Brands LEDcode drivers are required for nLight system programming and operation.
- **The MSD PDT 7 is Nulite's standard wired integral fixture sensor

OEM Connected Lighting Partners

NX (NX)
Distributed Intelligence
Hubbell

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Integral Fixture Sensors

Item Description	OEM Part #	Integral Sensor Options						Nulite Compatible Product Lines														
		0-10v Dimming Control	DALI Dimming Control	IP rated (Outdoor)	Wireless Control	Daylight Harvesting	Occupancy Sensing	LA Series	Regolo 1	Regolo 2	Regolo 4	Regolo 6	RZ4	RXT	Pixie	Sottile	Tavo	Sero	Qub	Bounce	INT	
HubbNET Radio Module	NXRM-H	●			●			●	●	●	●	●										
Low Mount Indoor Sensor Module	NXSM-P-LMI	●			●	●	●	●	●	●	●	●										
OMNI Indoor/Outdoor Sensor Module	NXSM-P-OMNI-0	●		●	●	●	●							●								
Slide Mount Indoor Sensor Module	NSXM-P-SMI	●			●	●	●	●	●	●	●	●										
Low Mount Indoor/Outdoor Sensor Module	NXSM-P-LMO	●		●	●	●	●							●								●
Low Mount Indoor/Outdoor Sensor Module, Aisle Lens	NXSM-P-LMO-4	●		●	●	●	●							●								●
High Mount Indoor/Outdoor Sensor Module	NXSM-P-HMO	●		●	●	●	●															●
High Mount Indoor/Outdoor Sensor Module, Aisle Lens	NXSM-P-HMO-4	●		●	●	●	●															●

Additional Notes:

- Nulite is an OEM certified nX partner and authorized to purchase and install NX components into their luminaires. All products are fully tested at the Nulite factory and each product ships with UL compliance.
- Ordering Example:** Nulite Catalog #: LP13-D-35B-05-03-L35-D-1-1-WH-T1-W-048-8-NX (NXRM-H). This catalog designation merely identifies luminaires that require NX compatible integral fixture sensors. Additional hardware such as power packs and wiring harnesses are often required to operate sensors and offer compatibility to the overall control system. Nulite will coordinate with the Hubbell on these items and build into the price accordingly.
- Nulite's standard 0-10v LED drivers are Signify Xitanium Series, and Osram Optotronic Series

Enlighted (Enl)
A Siemens Company

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Integral Fixture Sensors

Item Description	OEM Part #	Integral Sensor Options						Nulite Compatible Product Lines														
		0-10v Dimming Control	DALI Dimming Control	IP rated (Outdoor)	Wireless Control	Daylight Harvesting	Occupancy Sensing	LA Series	Regolo 1	Regolo 2	Regolo 4	Regolo 6	RZ4	RXT	Pixie	Sottile	Tavo	Sero	Qub	Bounce	INT	
MicroSensor, 2-wire Adaptor	KIT-SU-5E-D-*		●		●	●	●	●	●	●	●	●										
High Bay Sensor, 2-wire	SU-5S-2W-H-*		●		●	●	●															●
Ruggedized High Bay, 2-wire, White	SU-5S-2W-HRW-*		●	●	●	●	●															●
Ruggedized Low Bay, 2-wire, White	SU-5S-2W-LRW-*		●	●	●	●	●							●								

Additional Notes:

- Nulite is OEM certified and authorized to purchase and install Enlighted components into their luminaires. All products are fully tested at the factory and each product ships with UL compliance.
- Ordering Example:** Nulite Catalog #: LP13-D-35B-05-03-L35-D-1-1-WH-T1-W-048-8-ENL(KIT-SU-5E-D-*). This catalog designation merely identifies luminaires that require Enlighted compatible integral fixture sensors. Additional hardware such as power packs and wiring harnesses are often often required to operate sensors and offer compatibility to the overall control system. Nulite will coordinate with the Enlighted on these items and build into the price accordingly.
- Standard eldoLED Solodrive DALI drivers with integral power supply will be supplied with Enlighted enabled luminaires

Vive (LV)
Lutron

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Integral Fixture Sensors

Item Description	OEM Part #	Integral Sensor Options						Nulite Compatible Product Lines														
		0-10v Dimming Control	DALI Dimming Control	IP rated (Outdoor)	Wireless Control	Daylight Harvesting	Occupancy Sensing	LA Series	Regolo 1	Regolo 2	Regolo 4	Regolo 6	RZ4	RXT	Pixie	Sottile	Tavo	Sero	Qub	Bounce	INT	
Vive Integral Fixture Control with Sensor	DFCSJ-OEM-OCC		●		●	●	●	●	●	●	●	●										
Vive Integral Fixture Control (RF only)	DFCSJ-OEM-RF		●		●			●	●	●	●	●										

Additional Notes:

- Nulite is OEM certified and authorized to purchase and install Lutron components into their luminaires. All products are fully tested at the Nulite factory and each product ships with UL compliance.
- Ordering Example:** Nulite Catalog #: LP13-D-35B-05-03-L35-D-1-1-WH-T1-W-048-8-LV(DFCSJ-OEM-OCC). This catalog designation merely identifies luminaires that require Lutron compatible integral fixture sensors. Additional hardware such as power packs and wiring harnesses are often often required to operate sensors and offer compatibility to the overall control system. Nulite will coordinate with the Lutron on these items and build into the price accordingly.
- Standard eldoLED Solodrive DALI drivers with integral power supply will be supplied with Enlighted enabled luminaires
- Recommended drivers for DFCSJ-OEM-OCC: Lutron Ecosystem, Osram Dexas DALI drivers, or Signify Xitanium DALI drivers

PRODUCT SPECIFICATIONS AND INFORMATION

HOUSING CONSTRUCTION

Fixture body is constructed of powder coat painted extruded aluminum and formed sheet metal steel end plates. Captive joining mechanism is a combination die formed sheet metal and zinc plated spring steel. All hardware is stainless steel.

LED DISCRETE OPTICAL ASSEMBLY

Replaceable one-piece optical assembly is comprised of an LED PCBA having high power LEDs coupled to clear acrylic TIR optics (35°, 50° or 80° beam patterns) and injection molded plastic baffle assembly available in black or white. Square optical light cells are 1.5" x 1.5". The sheet metal optical assembly is connected to power via quick wire disconnects. Max length of optical assembly is 4' and minimum length is 1'. Available CCT's are 3000K, 3500K, and 4000K. Also available CRI's are 80 or 90.

STANDARD DIMMING LED DRIVERS

Standard constant current integral electronic 0-10v dimming input. Two standard driver options are available. Option **D** dims to 1% and option **DO** dims to 0% or OFF (the final 1 percent is a "step"). Both options are the same price and representative of the base fixture price. Options **D** and **DO** ship with 5 wires (Line Voltage- Black and White wires, Low Voltage- Purple and Pink wires, Ground- Green wire)

DALI DRIVERS

Standard constant current DALI drivers available in either a dim to 1% (**ELE**) or dim to 0% (**ELS**). DALI fixtures ship with 5 wires (Line Voltage- Black and White wires, Low Voltage- Purple and Pink wires, Ground- Green wire)

LIGHT OUTPUT

Standard factory programmed light outputs are available in **(03)** 300 lumens per foot, **(05)** 500 lumens per foot, and **(08)** 800 lumens per foot. Light outputs are nominal refer to .ies file at www.nulite-lighting.com for detailed lumen output and energy consumption data.

CIRCUITING

Each luminaire may have up to 2 line voltage (Power) circuits and 2 low voltage (control) circuits. Two power circuits are required for independent control of uplight and downlight in bi-direct luminaires, and low voltage control circuits are for independent dimming of each circuit.

Examples:

- **"1-1"**- 1 power circuit (Line Voltage) and 1 control circuit (Low Voltage) > 5 wires total (1 Black Wire "Hot", 1 White Wire "Neutral", 1 Green Wire "Ground", and 2 low voltage control wires, 1 Pink wire and 1 purple wire)
- **"2-2"**- 2 power circuits (Line Voltage) and 1 control circuit (Low Voltage) > 9 wires total (2 Black Wires "Hot", 2 White Wires "Neutral", 1 Green Wire "Ground", and 4 low voltage control wires, 2 Pink wires and 2 purple wires)

BATTERY PACKS

Recyclable Ni-Cad battery pack, battery run time is 90 minutes. Recharge time of 24 hours. 6W or 10W battery packs are available. To calculate Battery Lumen Output, multiply luminaire efficacy by battery wattage. (example: 120 lms/watt **(120) x B10 Battery Wattage (10) = 1200** lumens of egress illumination for 90 minutes.) Battery option not available in fixtures less than 4', and other limitations apply, consult factory. Entire "direct" fixture housing is energized by battery for lengths up to 5'. Half of direct fixture is energized by battery for 6' - 8' housing lengths. Emergency or night light circuit available (requires additional power circuit). Battery fixtures ship with an additional orange "constant hot" wire.

LUMEN MAINTENANCE

90% of initial light output (L90) at 100,000+ hours, 70% of initial light output (L70) at 200,000+ hours.

GENERATOR TRANSFER DEVICES

The GTD emergency lighting control device senses the loss of normal power and switches the AC driver input power connection to an unswitched, generator (or central inverter) supplied lighting circuit. GTD fixtures ship with 3 additional wires (orange wire "constant hot", black-red wire "generator hot", white-red wire "generator neutral").

FIXTURE FINISHES

Standard finish is powder coat painted white (**W**), black (**B**) or silver (**S**). Consult factory for custom (**CC**) RAL colors price and availability.

INSTALLATION AND MOUNTING

The "Flange" recessed option is designed to install into sheet rock ceilings and the rough cut of the sheet rock will be concealed with the 1/2" flange of the luminaire. Refer to installation instructions at www.nulite-lighting.com for detailed installation instructions.

FIXTURE LENGTHS - LINEAR ROWS

Standard fixture lengths for individual or continuous row mounting are available in exact 1'(305mm) increments from 2' (610mm) to 8' (2438mm). Consult factory for custom lengths, limitations apply.

STANDARD PATTERN LAYOUTS

The LA series may be configured into geometric patterns. Mitered housings may be configured into corners, X-intersections, T-Intersections and 120 degree "Y" patterns. Standard mitered angles of 45°, 60°, 90°, 120°, and 135° can be utilized to create an unlimited array of designs and layouts. Consult factory for custom angles. The submittal drawing (shop drawing) furnished by Nulite will adequately detail these configurations and sign-off is required to initiate production.

WARRANTY

5-year limited warranty on LED and driver from date of shipment. Refer to the full warranty details on www.nulite-lighting.com/products/184.

WEIGHT

1.5 lbs/ft

APPROVALS

ETL listed, conforms to UL Standard 1598 / 8750 and CSA Standard C22.2, indoor dry/damp locations.

TESTING PROTOCOLS AND DATA

All of Nulite's LED components have been tested under **LM-80** guidelines insuring 6000 hours of luminous flux data. Additionally Nulite can supply **LM-79** data on all luminaires. This data includes luminous flux, electrical power, efficiency, chromaticity as well as the diffusion of luminous intensity.