

Linea® 1.5"

Linear Direct/Indirect LED



Features

Linea drives your design scenario, seamlessly. Streamlined and flexible, these architectural LED pendants provide the freedom to create truly dynamic spaces. A synthesis of aesthetics, performance and energy efficiency, the Linea family delivers on its promises. Our tiny new Linea 1.5" pendant proves when it comes to lighting, less really is more. Linea. The power of disciplined design.

Product Overview

Type:	Direct/Indirect Lens, Louver Down/Batwing, Clear lens up
Wattage:	5W/ft, 10W/ft (other wattages available see p2)
Lumen Output:	3,991 max; 95.0 Lm/W (5W/5W, 4ft fixture)
Color Temp:	2700K, 3000K, 3500K, 4000K
CRI:	83 typ. (2700K, 3000K, 3500K, 4000K)
Dimming:	0-10V, 1% dimming (standard) Lutron Hi-lume® 2 wire (120V only) Lutron Hi-lume® EcoSystem, 1% dim, fade to off Lutron Hi-lume® 5 Series DALI dimming, 0.1% dim

*International version available, see website for spec sheet.

PROJECT:

TYPE:

Fixture Summary *(see following pages for more information)*

Performance Chart

Wattage Per Foot	Delivered Lumens	LPW	Color Temp
10	3991	95	3500K-83
20	6984	87.3	3500K-83

Data is based on 3500K-83 IES files available on website

Data is based on 4' fixture with Performance Lens direct & Batwing Lens indirect

Runs

Individual Runs: 2' - 8' *(whole foot standard)*

Continuous Runs: Available *(whole foot standard)*

Custom: Made to measure available (nearest 1/8" of field dimensions).

Requires approval drawings. Added cost & lead time.

Electrical Data

Wattage Per Foot		4'		8'	
		System Watts	Amps	System Watts	Amps
10	120V	38	0.32	74	0.62
	277V	42.6	0.16	76	0.28
20	120V	80	0.66	160	1.32
	277V	80	0.30	160	0.60

Electronic multi-volt (120V-277V), constant current LED driver

Standard Patterns

					Wall to Ceiling	Custom*
Yes	Yes	Yes	Yes	Yes	No	Yes

*Submit drawing, consult factory



Linea[®] 1.5" Direct/Indirect

Linear Direct/Indirect LED



PROJECT:

TYPE:

Ordering Information



- 1** **Model**
LIN1.5DI-A16[†]
- 2** **Optics** (select 1 from each list)
Direct:
PL - performance lens (standard)
SLDW - straight blade louver (wh) solid blades w/overlay
SLDB - straight blade louver (blk) solid blades w/overlay
SLDS - straight blade louver (slv) solid blades w/overlay
SLDPW - straight blade louver (wh) perf blades w/overlay
SLDPB - straight blade louver (blk) perf blades w/overlay
SLDPS - straight blade louver (slv) perf blades w/overlay
ASY - asymmetric lens
Indirect:
BAT - batwing uplight (standard)
UC - upper clear lens cover
- 3** **Mounting**
ASW10 - through ceiling tile or gyp board, white, 10'
ASW20 - through ceiling tile or gyp board, white, 20'
ASB10 - through ceiling tile or gyp board, black, 10'
ASB20 - through ceiling tile or gyp board, black, 20'
ASW10T - over ceiling tee, white, 10'
ASW20T - over ceiling tee, white, 20'
ASB10T - over ceiling tee, black, 10'
ASB20T - over ceiling tee, black, 20'
WM - wall mount
- 4** **Circuiting**
1 - single circuit
2 - up/down switch separately
- 5** **Wattage** (per foot, down/up)
5/5
10/10
5/10
10/5
Consult factory for other wattage options
Note: 3' units must use same wattage for D/I components
- 6** **Color Temp**
83 CRI:
27 - 2700K-83
30 - 3000K-83
35 - 3500K-83
40 - 4000K-83
92 CRI optional, consult factory
- 7** **Finish**
HW - high reflectance matte white
BT - black texture
ST - silver texture
For other RAL color, consult factory
- 8** **Voltage**
120/277
- 9** **Length**
----- x ----- x -----
(Length A) (Length B) (Length C)
Length A (used for) | Length B (used for) | Length C (used for)
- all patterns | - all patterns | - PU
- IND | - PR - 2 lengths | - PZ
- CON | | |
 | of 2 | |
- CUS
- 10** **Configuration**
IND¹ - individual fixture, 2' to 8' in 1' increments
CON - continuous run > than 8', specify to nearest foot
CUS - custom made to measure, +/- 1/8" of customer supplied field dimensions
Standard Patterns (see page 6 for details):
PLL - L left, (2) straights + (1) 90° corner, leg right
PLR - L right, (2) straights + (1) 90° corner, leg left
PU - U shape, (3) straight lengths + (2) 90° corners
PR - Rectangle, (4) straight lengths + (4) 90° corners
PZ - Z shape, (3) straight lengths + (2) 90° corners
Custom Patterns:
PC - please provide drawings and consult factory
- 11** **Drivers**
O-10V - 1% electronic dimming, multi-volt (120V-277V) constant current driver (standard).
HILUME-A-LTE - Lutron "A" Series, 1% dim, 2-wire, 120V only
HILUME-H-ECO - Lutron "H" Series, 1% dim, fade to off, EcoSystem
HILUME-5-ECO - Lutron "5" Series, EcoSystem
DALI - DALI Dimming 120V-277V, 0.1% dim
- 12** **Options/Accessories**
ENLS - Enlighted Sensor (0-10V driver only and not available on 2' & 3' lengths, can only be used on one circuit)
EMC-PF² - emergency circuit requires power feed located in last fixture section (for other locations consult factory)
PF² - Extra power feed for additional circuiting

1 - Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.
2 - Not available with IND (individual) configuration.
[†] The "A" refers to the sequential revision in a year and "XX" refers to the year of update. Updates coincide with improved performance while not changing the overall fixture aesthetic and are reflected in the published performance data. Please contact your Amerlux representative for explanations of changes.

Linea® 1.5" Direct/Indirect

Linear Direct/Indirect LED



PROJECT:

TYPE:

Specifications

Application

Open office plan, conference rooms, corridors or any indoor retail space where an exciting combination of direct and indirect ambient lighting is desired.

Construction

One piece extruded aluminum housing. Die-cast End Plates match fixture body finish. Die-formed, cold-rolled steel internal components are protected against rust and corrosion.

Optical

Direct:

All lenses are snap-in, extruded acrylic, with a maximum length of 8'. Fixtures shipped with lenses installed. Amerlux's proprietary acrylic lens provides excellent transmission while effectively concealing source image. All louvers are retained with spring clips attached to louver side rails, for good fit and retention.

PL - Performance Lens provides high efficiency with greater lens surface brightness.

SLD or SLDP - Straight blade Louver Direct has 1/2" high blades 1/2" on center with overlay. Solid (SLD) or optional Perforated (SLDP) blades.

ASY - Asymmetric 20° throw lens is backed high diffusion film that eliminates striations.

Indirect:

Extruded acrylic lens with a maximum length of 8'.

BAT - Batwing upright lens spreads light directly above fixture. 18" minimum distance between ceiling plane and top of fixture suggested.

UC - Upper Clear lens cover.

LED

Amerlux's boards and patented connector design with brand name LEDs enables Amerlux fixtures to have excellent thermal management and offer a 5 year warranty. Our LED binning is within 3 MacAdam ellipse. Boards are configured for maximum flexibility resulting in even illumination no matter the fixture layout. LED boards are easily replaced in the field with just a Phillips screw driver.

Color Temperature Options:

2700K, 3000K, 3500K, 4000K

CRI: 83 typical, 92 optional - consult factory

R9: 16 @ CRI 83

R9: >50 @ CRI 92

Life: 50,000+ hr., > 70% of initial lumens (L70)

Electrical

Wiring: Individual and "Beginning of Run" (BOR) fixtures are prewired with power cord. All configurations have quick connect power harnesses for row connections.

1 - 1 Circuit, direct & indirect same circuit

2 - 2 Circuits, direct & indirect switch separately (power feed at both ends).

Standard Wattage: 5W/ft, 10W/ft.

Optional Wattages: 3W/ft, 4W/ft, 6W/ft, 7W/ft, 8W/ft, 9W/ft. (3W & 4W have a minimum length of 4'). For other wattages consult factory

Emergency circuit via remote inverter or auxiliary emergency power supply (by others).

This product complies with IEEE C62.41 for surge endurance up to 2.5KV. Amerlux® recommends using additional surge protection with this unit (supplied by others), surge damage is not covered under warranty.

ENLS - Enlighted Sensor (0-10V driver only, not available in 2' & 3' lengths, and can only be used on one circuit)

EMC-PF - Emergency circuit requires power feed to be located in last fixture section for continuous runs. For other locations consult factory. Not available for individual (IND) configuration.

PF - Extra power feed for additional circuiting. Not available for individual (IND) configuration.

Drivers

0-10V - 1% electronic dimming, multi-volt (120V-277V) constant current driver (standard). Cap leads for non-dim applications.

Optional Drivers:

HILUME-A-LTE - Lutron "A" Series, 1% dim, 2-wire, 120V only

HILUME-H-ECO - Lutron "H" Series, 1% dim, fade to off, EcoSystem

HILUME-5-ECO - Lutron "5" Series, EcoSystem

DALI - DALI Dimming 120V-277V, 0.1% dim

Finish

All painted surfaces are premium powder coated baked on for maximum durability and color stability.

HW - High reflective matte White

BT - Black Texture

ST - Silver Texture

For special paint colors supply RAL and/or actual paint chip for factory consultation.

Configurations/Lengths

IND - Individuals are stand alone fixtures made of single lengths of 2' to 8' (in 1' increments). They are supplied with matching painted End Caps and the required mounting hardware. Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.

CON - Continuous runs are longer than 8', specified to the nearest whole foot. Continuous runs less than 16' are made of 2 lengths. Continuous runs longer than 16' start with a 8' Beginning of Row (BoR) wired with a power feed and fitted with an End Cap. The majority of the runs are made up of 8' Middle of Run (MoR) lengths. End of Run (EoR) units are made up of 2' to 8' units to the nearest whole foot or a combination of a last 4' MoR and a 5', 6' or 7' EoR. Runs longer than 60' may require a second power feed. Factory installed pins and splines simplify fixture alignment. Lengths are quickly joined with "catch and latch" mechanisms or screws and sturdy brackets. Quick connectors simplify field wiring.

CUS - Custom made to measure runs are made to nearest 1/8" of customer supplied field measurements. They can be a single custom length or runs configured as described above only EoR's are 2' to 8' cut to the nearest 1/8" exact length or a combination of a last 4' MoR with an EoR cut to exact length to the nearest 1/8".

PXX - Standard patterns consist of 90° corners with standard lengths (3' to 8' in 1' increments) or custom lengths. Depending upon complexity of the pattern, drawings may be required. When ordering please give overall lengths.

See page 6 for layouts.

PC - Custom patterns use standard or custom lengths, 90° or other corner angles with some limitations. Please provide drawings and consult factory.

Mounting

The Linea 1.5 Direct/Indirect is intended to be pendant or wall mounted in continuous rows. For indirect lighting Amerlux suggests 18" min from top of fixture to ceiling. Standard or custom patterns available.

LIN1.5DI-A16....ASW10 - Direct/Indirect installed in center of ceiling tile or gypsum board ceiling, (standard) i.e. ASW10. Or if canopy is installed on a grid Tee runner add, **T** i.e. ASW10T.

Cable Suspension: Cable is stranded stainless steel wire supplied with cable gripper and 5"x .250" steel die formed canopy. All components are protected against rust and corrosion. Power feeds are 16 gauge 3 or 5 conductor SJT cord supplies in same color as canopy. Amerlux supplies the required feed and non-feed suspension kits based upon length, electrical options and customer requirements. Suspension kit options include: color, length and mounting condition.

Please note: 1 Circuit is standard, the direct & indirect are on the same circuit. 2 Circuits, direct & indirect switched separately with power feeds at both ends.

LIN1.5DI-A16.... WM - Wall Mounted using steel cleat bracket attached to fixture housing and wall bracket with set screws. Two bracket assemblies are used for each length under 8'. A third center bracket may be recommended. J box required at feed locations.

Certifications

Approved to UL standards for damp locations as tested by CSA
Intended for indoor use only

Warranty

Amerlux's 5 year limited warranty. Please consult Amerlux website for details.

Linea[®] 1.5" Direct/Indirect

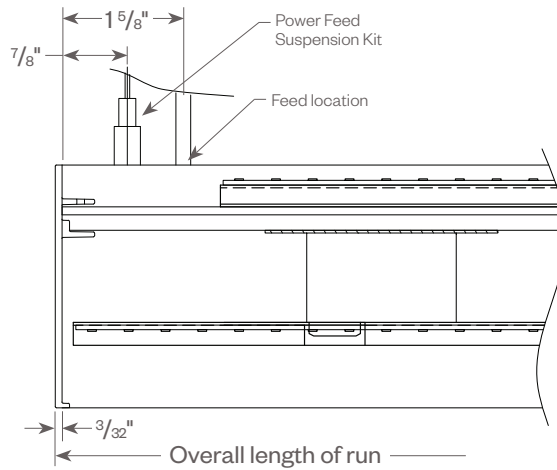
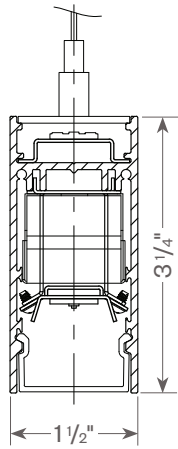
Linear Direct/Indirect LED



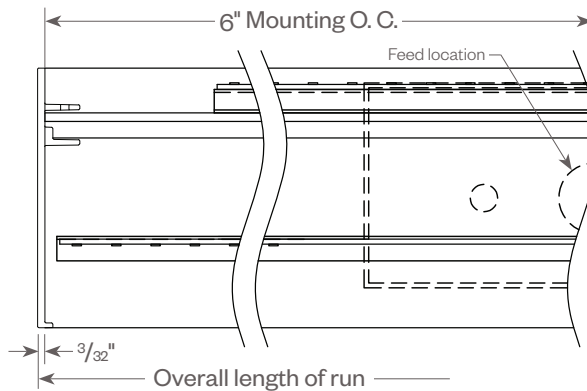
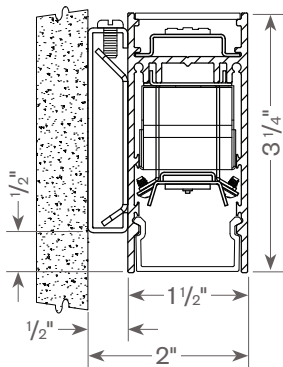
PROJECT:

TYPE:

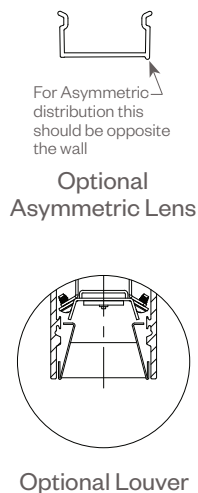
LINEA 1.5" DIRECT/INDIRECT



LINEA 1.5" DIRECT/INDIRECT WALL MOUNT



OPTIONAL LENS/LOUVER

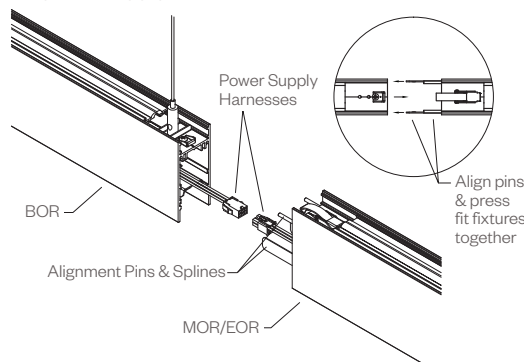


TOOLLESS JOINING

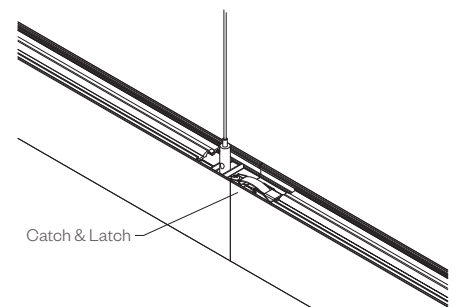
Line up the two housings by using the alignment pins & splines. Secure them together by using the Catch & Latch System on the top on the extrusion.

Connect Power

Connect power to previous tray via power supply harness.



Secure Fixtures/Joint



Linea[®] 1.5" Direct/Indirect

Linear Direct/Indirect LED

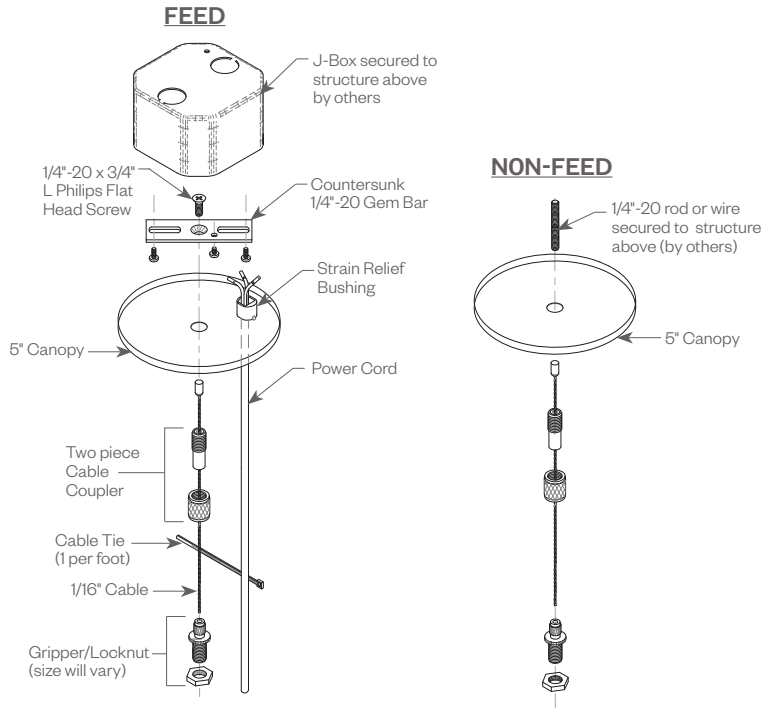


PROJECT:

TYPE:

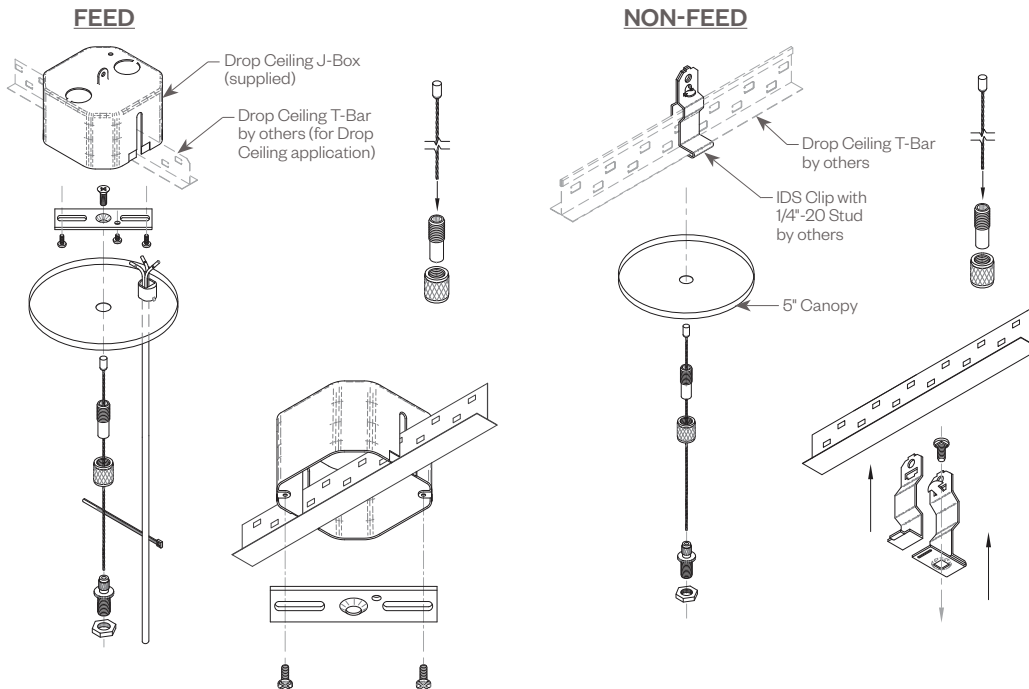
CABLE KIT SUSPENSION OPTIONS:

CEILING OR GYPSUM BOARD (ASW10, ASW20, ASB10, ASB20)



Cat#	Length	Cord/Canopy	Application
ASW10	10'	white/white	ceiling tile/gypsum
ASW20	20'	white/white	ceiling tile/gypsum
ASB10	10'	black/black	ceiling tile/gypsum
ASB20	20'	black/black	ceiling tile/gypsum
ASW10T	10'	white/white	ceiling tee
ASW20T	20'	white/white	ceiling tee
ASB10T	10'	black/black	ceiling tee
ASB20T	20'	black/black	ceiling tee

TEE GRID OR SCREW SLOT (ASW10T, ASW20T, ASB10T, ASB20T)



Linea[®] 1.5" Direct/Indirect

Linear Direct/Indirect LED



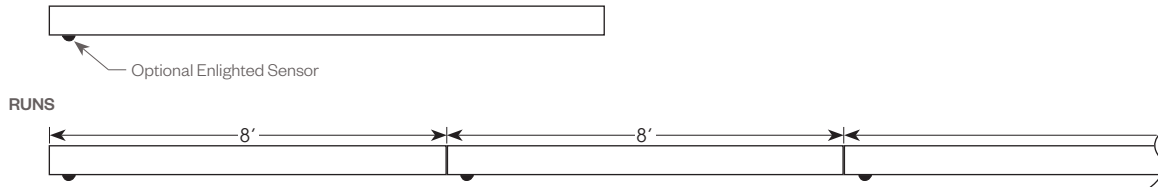
PROJECT:

TYPE:

OPTIONAL ENLIGHTENED SENSOR:

Amerlux[®] and Enlighted have partnered to create building environments that are safer, and smarter, than ever before. At the heart of our partnership is Enlighted's Smart Sensor, the most advanced digital sensor available today. Integrated into Amerlux products, the sensor seamlessly collects and communicates dense data on building security, occupancy, performance, environmental conditions, ambient light levels, temperature, and energy consumption. This intelligence provides building managers with unprecedented guidance on cost savings and site-planning efficiencies. Enlighted Sensor (ENLS) is available with 0-10V driver only. Minimum run length is 4'. Enlighted power pack is provided with ENLS option.

4 FT OR 8 FT



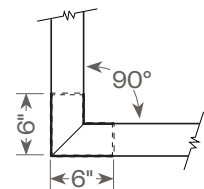
LINEA 1.5" PATTERNS:

Standard Patterns

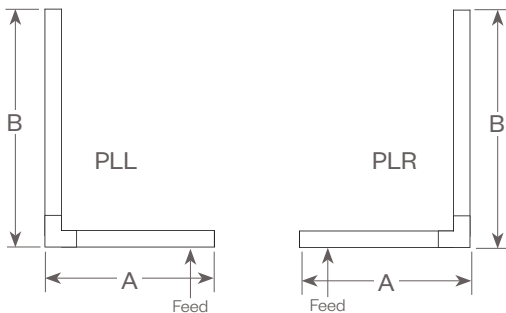
All corners are standard 90°, standard length legs.
 Use standard lengths: 4' min to 8' in 1 foot increments.
 Continuous runs must be the same length in pairs for closed configuration.

Custom Patterns

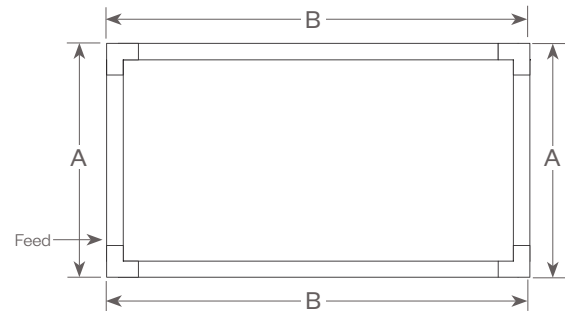
Please provide drawings of your configuration.
 Made to Measure: +/- 1/8", consult factory.
 PC - custom pattern, please provide drawings and consult factory



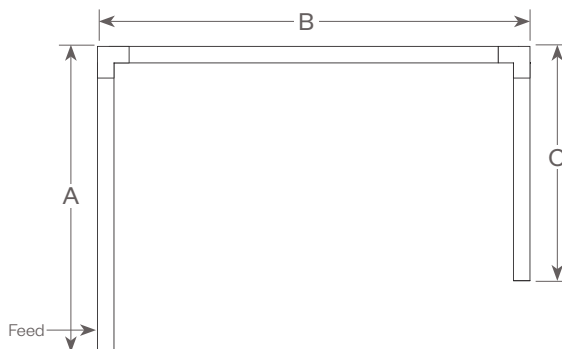
Linea 1.5 Lens
Mitered Lens



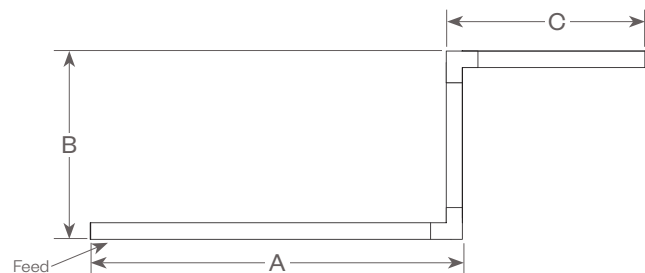
PLL - L Left, (2) straights + (1) 90° corner, leg right
PLR - L Right, (2) straights + (1) 90° corner, leg left
 Provide overall lengths: A' & B'
 Nomenclature: A-B-PLL A-B-PLR



PR - Closed Rectangle, (4) straight lengths + (4) 90° corners
 Provide overall lengths: A' & B'
 Nomenclature: A-B-PR



PU - Open U, (3) straight lengths + (2) 90° corners
 Provide overall lengths: A', B' & C'
 Nomenclature: A-B-C-PU



PZ - Open Z, (3) straight lengths + (2) 90° corners
 Provide overall lengths: A', B' & C'
 Nomenclature: A-B-C-PZ

Linea[®] 1.5" Direct/Indirect

Linear Direct/Indirect LED



PROJECT:

TYPE:

FIXTURE DATA: (Complete photometric data (.ies format) available upon request)

MULTIPLYING FACTORS: (Multiplying Factor is based on 3500K-83 120V IES file on website)

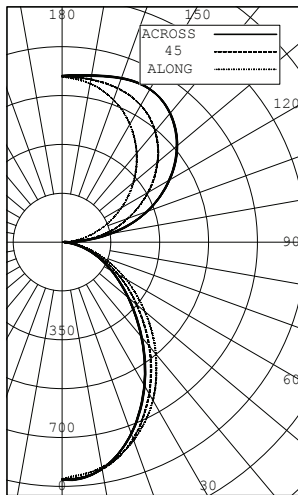
Wattage:	3W	4W	5W	6W	7W	8W	9W	10W
Factor:	0.63	0.82	1.0	1.17	1.34	1.50	1.64	1.75

CCT:	2700K-83	3000K-83	3500K-83	4000K-83
Factor:	0.87	0.93	1.0	1.08

LINEA 1.5" DI PERFORMANCE LENS DIRECT/BATWING LENS INDIRECT 5W UP/5W DWN 3500K 4FT

Total Watts: 42
Total Lumens: 3,991
Source: 184 White LED's

LTL# 695283



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	620	15.53
0-40	966	24.21
0-60	1546	38.72
0-90	1857	46.54
40-90	891	22.31
60-90	312	7.82
90-180	2134	53.46
0-180	3991	100.00

Efficacy = 95.0 Lumens /Watt

COEFFICIENTS OF UTILIZATION

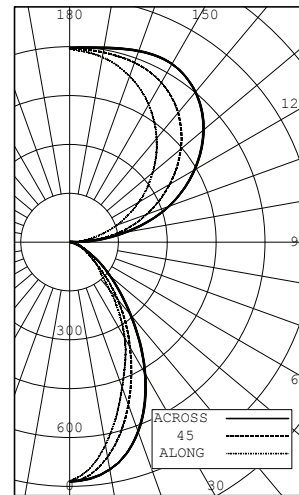
Effective Floor Cavity Reflectance 20%

RC	80			
RW	70	50	30	10
RCR				
0	1.06	1.06	1.06	1.06
1	0.98	0.94	0.90	0.87
2	0.89	0.83	0.77	0.72
3	0.82	0.73	0.67	0.61
4	0.76	0.66	0.58	0.53
5	0.70	0.58	0.51	0.45
6	0.64	0.53	0.45	0.40
7	0.59	0.47	0.40	0.35
8	0.55	0.43	0.36	0.30
9	0.51	0.39	0.32	0.27
10	0.47	0.36	0.29	0.24

LINEA 1.5" DI STRAIGHT BLADE LOUVER DIRECT/BATWING LENS INDIRECT 5W UP/5W DWN 3500K 4FT

Total Watts: 42
Total Lumens: 3,060
Source: 184 White LED's

LTL# 695284



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	448	14.64
0-40	639	20.90
0-60	853	27.88
0-90	930	30.40
40-90	291	9.50
60-90	77	2.51
90-180	2130	69.60
0-180	3060	100.00

Efficacy = 72.8 Lumens /Watt

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC	80			
RW	70	50	30	10
RCR				
0	1.02	1.02	1.02	1.02
1	0.94	0.91	0.87	0.84
2	0.87	0.80	0.75	0.70
3	0.80	0.72	0.66	0.60
4	0.74	0.65	0.58	0.52
5	0.68	0.57	0.51	0.46
6	0.63	0.53	0.45	0.40
7	0.59	0.48	0.40	0.36
8	0.55	0.43	0.36	0.32
9	0.51	0.40	0.33	0.28
10	0.47	0.36	0.30	0.25

Linea[®] 1.5" Direct/Indirect

Linear Direct/Indirect LED



PROJECT:

TYPE:

DIMMING COMPATIBILITY:

Amerlux[®] Linea fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---

0-10V - DIMMING (Standard)

Integrates into a variety of building management and daylighting controls

Notes:

- 120V or 277V*
- Dims down to 1% light output
- Requires interface to turn off power to driver
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

Compatible Dimmers†:

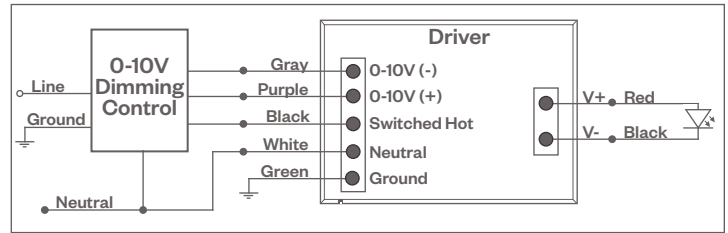
Wall Box

Lutron:	Wattstopper:	Leviton:
Diva - DVSTV	ADF-120277	Renoir II
Maestro - MS-Z101		
Nova-T - NTSTV-DV		

Center System

Lutron Grafik Eye with GRX-TV1 Interface

0-10V Wiring Diagram



LUTRON HI-LUME DIMMING

Integrates into Lutron EcoSystem building management

Notes:

- 120V or 277V*
- Dims down to less than 5% light output
- EcoSystem Control
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

Compatible Dimmers†:

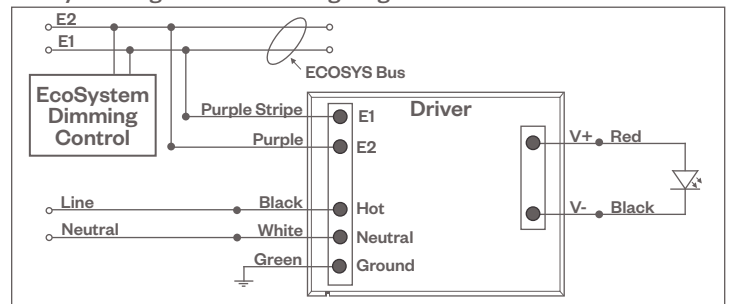
Wall Box

Lutron:
Diva
Maestro
Nova-T
Vareo

Center System

Lutron EcoSystem compatible controls

**HILUME-H-ECO, HILUME-5-ECO
EcoSystem Digital Control Wiring Diagram**



Notes:

* Driver is 277V dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120V wiring colors and method.

Please refer to 277V dimmer installation instructions for 277V wiring diagrams.

† The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.

Linea[®] 1.5" Direct/Indirect

Linear Direct/Indirect LED



PROJECT:

TYPE:

DIMMING COMPATIBILITY:

Amerlux[®] Linea fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---

LUTRON HILUME-A-LTE DIMMING

Utilizes "Standard" incandescent dimmers that are in wide use in installations across the US. Best for retrofit applications where TRIAC dimmers are installed.

Notes:

- 120V only
- Dims down to less than 1% light output (most cases)
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!
- Must meet dimmer Minimum Load Requirements per dimming manufacturer

Compatible Dimmers[†]:

Wall Box (Incandescent Style, Wattage as required)

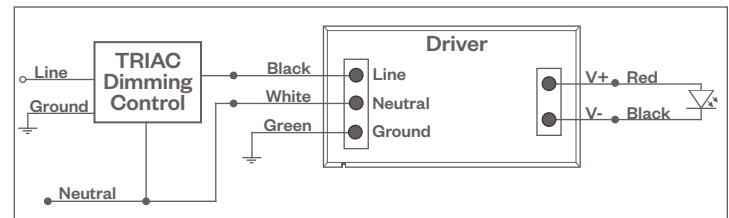
Lutron:

- Diva
- Maestro
- Nova-T
- Vareo
- Skylark

Center System

- Lutron "GP" Panel
- Lutron Grafik Eye QS

Lutron HILUME-A-LTE Wiring Diagram



DALI - DALI DIMMING 120V-277V

Digital control protocol allows individual fixture control

Notes:

- 120V - 277V*
- Dims down to 0.1% light output in most cases

Compatible Dimmers[†]:

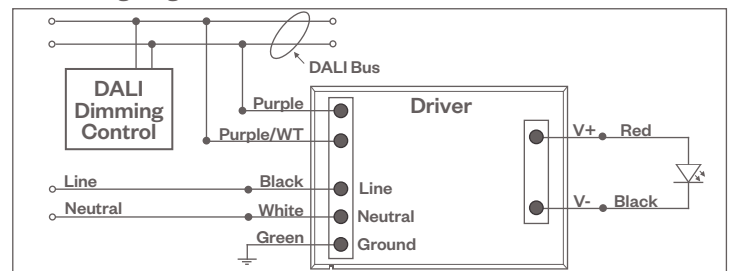
Wall Box

Leviton CD250 Controller

Center System

- Dynalite
- Fifth Light

DALI Wiring Diagram



Notes:

* Driver is 277V dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120V wiring colors and method. Please refer to 277V dimmer installation instructions for 277V wiring diagrams.

† The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.