

Linea® 1.5" Mini Direct/Indirect Linear, Remote Driver



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, Remote Driver Lens, Louver Down/Batwing, Clear lens up
Wattage:	5W/ft, 10W/ft (other wattages available see p2)
Lumen Output:	3,991 Lm; 95.0 Lm/W (10W, 4ft fixture)
Color Temp:	2700K, 3000K, 3500K, 4000K
CRI:	83 typ. (2700K, 3000K, 3500K, 4000K)
Dimming:	0-10V, 1% dimming (standard) Lutron Hi-lume® 3 wire, 1% dim Lutron Hi-lume® EcoSystem, 1% dim 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" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver



PROJECT:

TYPE:

Ordering Information



- 1** Model
LIN1.5MDI-A17[†] (Mini Direct/Indirect, remote driver)
- 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 (backed by high diffusion film)
Indirect:
BAT - batwing uplight (standard)
UC - upper clear lens cover
- 3** Mounting (Mini Cable Suspension)
MASW10 - through ceiling tile or gyp board, white, 10'
MASW10SF - through ceiling tile or gyp board, silver foil cord, white canopy, 10'
MASB10 - through ceiling tile or gyp board, black, 10'
MASB10SF - through ceiling tile or gyp board, silver foil cord, black canopy, 10'
MASW10T - over ceiling tee, white, 10'
MASW10SFT - over ceiling tee, silver foil cord, white canopy, 10'
MASB10T - over ceiling tee, black, 10'
MASB10SFT - over ceiling tee, silver foil cord, black canopy, 10'
- 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 (for other RAL colors, consult factory)
HW - high reflectance matte white
BT - black texture
ST - silver texture
- 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 of 2	- PZ	
- CON			
- 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
0-10V - 1% electronic dimming, multi-volt (120V-277V) constant current driver (standard).
HILUME-A-DH - Lutron "A" Series, 1% dim, 3-wire (Dim Hot)
HILUME-A-ECO - Lutron "A" Series, 1% dim, EcoSystem
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

1 - Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.
[†] 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" Mini Direct/Indirect

Linea® 1.5" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver



PROJECT:

TYPE:

Specifications

Application

Private offices, 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 is (1 1/2" wide X 2.125" high). Die-cast End Caps match fixture body finish. Painted die-formed, cold-rolled steel internal components are protected against rust and corrosion.

Optical

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:

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 (Lambertian distribution).

LED

Amerlux's boards and patented connector design with brand name LEDs enables Amerlux fixtures to have excellent thermal management and offer a 10 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

Remote Driver Wiring:

Driver is supplied installed in remote driver box, (one driver per box), with 5' of low voltage plenum rated cable. Fixture supplied with 18/2 SJT power cord ready to be connected to J-Box (by others) over cable canopy. Amerlux recommends a maximum of 30' between the fixture and the remote driver box. Consult factory with job specific electrical spec if more than 30' is required. Feeds are added as required by specified wattage and driver maximums. **See page 4 for wiring illustration**

1 or 2 Circuiting

1- 1 Circuit, direct & indirect same circuit

2- 2 Circuits, direct & indirect switch separately. Low voltage power feeds 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.

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.

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

Drivers

0-10V - 1% electronic dimming, multi-volt (120V-277V) constant current driver (standard).

Optional drivers available. For details see pages 8-9

Finish

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

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.

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 Run (BoR) fitted with an End Cap. The body of the runs is made up of as many 8' Middle of Run (MoR) lengths as required. End of Run (EoR) units are either made up of a 2' to 8' units to the nearest whole foot or a combination of a last 4' MoR and a 5', 6' or 7' EoR. Factory installed pins and splines make fixture alignment easy. 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 $\pm 1/8"$.

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 corners angles with some limitations. Please provide drawings and consult factory.

Mounting

LIN1.5M-DI-A16....MASW10 - Mini Indirect Direct pendant is only 1.5" wide X 2.125" high. The remote driver box is 15" long and can be located up to 30' from fixture with a 0-10V driver, 15' for Lutron drivers. 30' of low voltage plenum rated cable supplied. (see page 4)

Mini Cable Suspension:

Thinner cable, smaller gripper and cable coupler are all scaled down to match the reduced size of the LIN1.5 Mini series. 5" diameter by 0.25" canopy is used for both feed and non-feed Mini Cable Kits. Low Voltage power feeds are 22 gauge 2 conductor SJT cords supplied in same color as canopy or with optional silver foil clear jacketed cords. 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.

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" Mini Direct Indirect

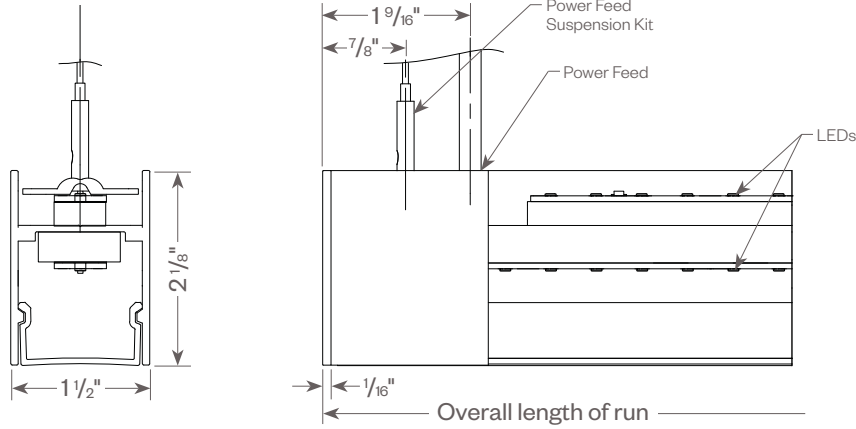
Linear Mini Direct/Indirect, Remote Driver



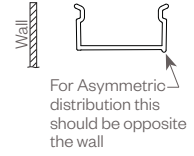
PROJECT:

TYPE:

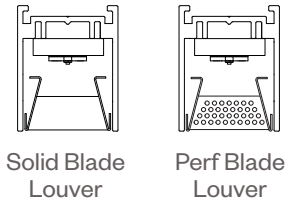
LINEA 1.5" MINI DIRECT/INDIRECT



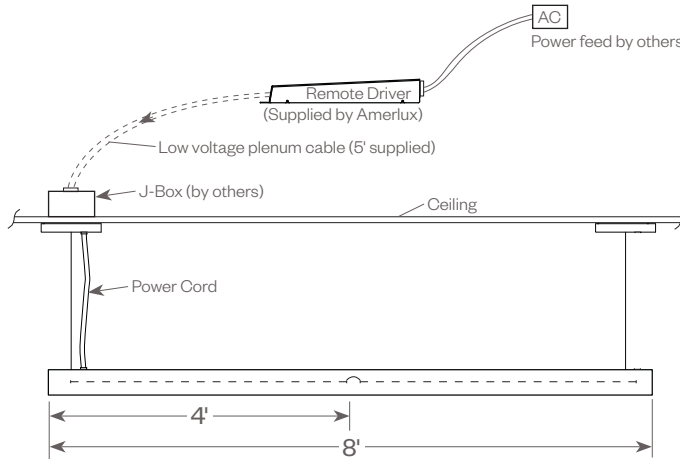
OPTIONAL LENS/LOUVER



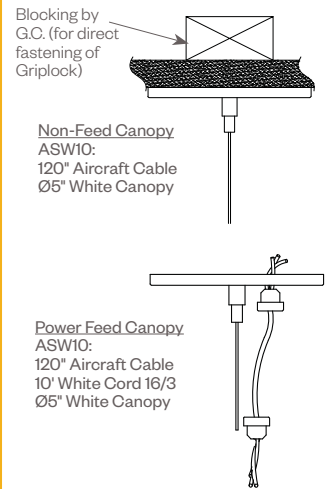
Optional Asymmetric Lens



5W/FT REMOTE

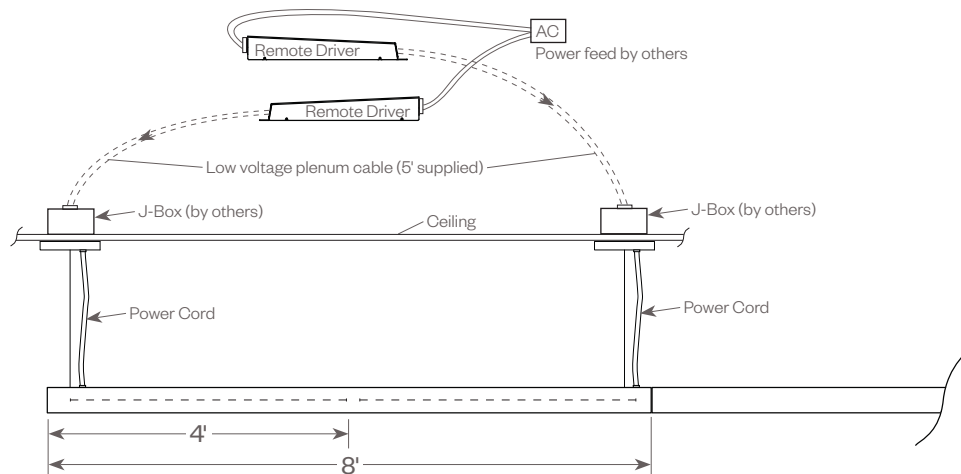


SUSPENSION DETAIL

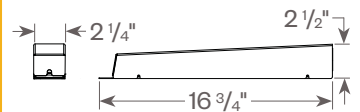


10W/FT REMOTE

Note: Driver required for every 4'. Remote drivers can be installed up to 30' max from fixture.



REMOTE DRIVER BOX



Linea® 1.5" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver

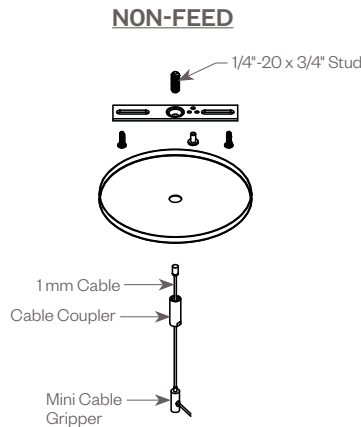
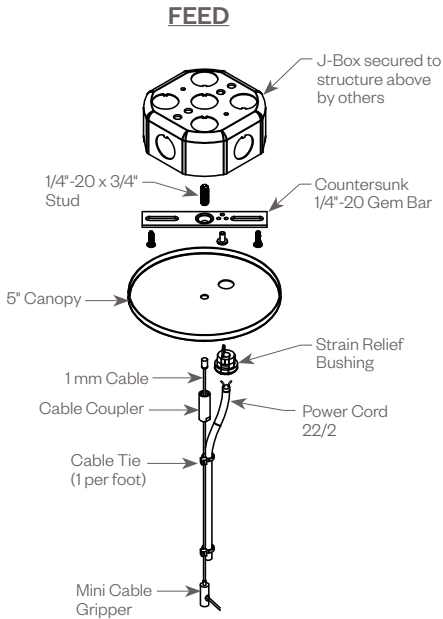


PROJECT:

TYPE:

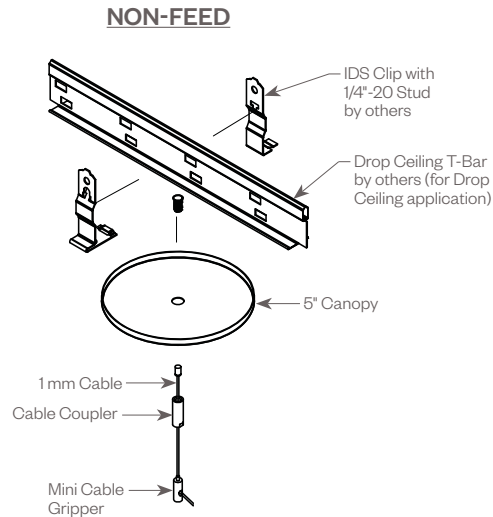
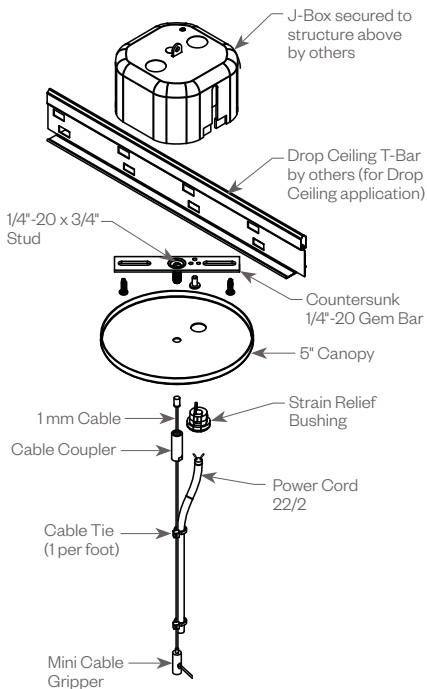
MINI CABLE KIT SUSPENSION OPTIONS:

CEILING OR GYPSUM BOARD (MASW10, MASB10)



Cat#	Length	Cord/Canopy	Application
MASW10	10'	white/white	ceiling tile/gypsum
MASB10	10'	black/black	ceiling tile/gypsum
MASW10T	10'	white/white	ceiling tee
MASB10T	10'	black/black	ceiling tee

TEE GRID OR SCREW SLOT (MASW10T, MASB10T)



Linea[®] 1.5" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver



PROJECT:

TYPE:

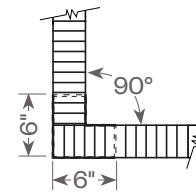
LINEA 1.5" PATTERNS:

Standard Patterns

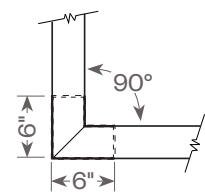
- All corners are standard 90°, standard length legs.
- Use standard lengths: 4' min to 8' in 1 foot increments.
- Continuous runs must be the same length in pairs for closed configuration.

Custom Patterns

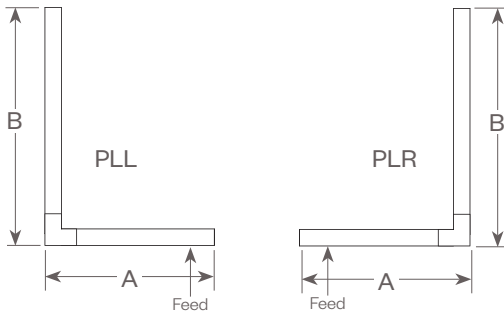
- Please provide drawings of your configuration.
- Made to Measure: +/- 1/8", consult factory.
- PC - custom pattern, please provide drawings and consult factory



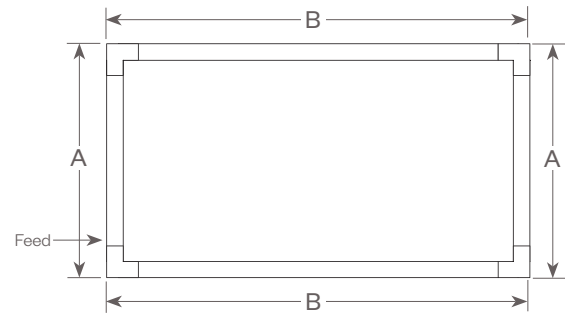
Linea 1.5 SLD
Butt Joint-Straight
Blade Louver



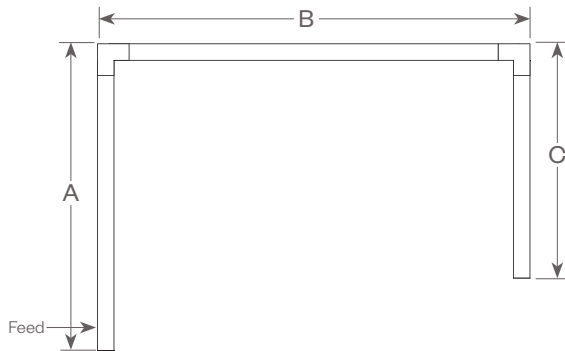
Linea 1.5 Lens
Mitered Lens



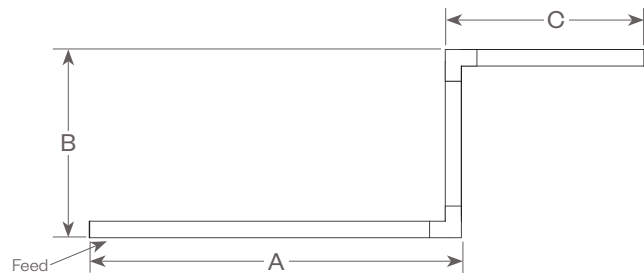
PLL - L Left, (2) straights + (1) 90° corner, leg right
PLR - L Right, (2) straights + (1) 90° corner, leg left
 Provide overall lengths: A' & B'
 Nomenclature: A-B-PLL A-B-PLR



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" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver



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)

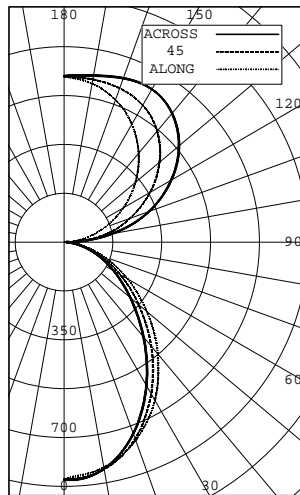
Wattage:	3W	4W	5W	6W	7W	8W	9W	10W
Factor:	0.63	0.82	1.0	1.17	1.34	1.50	1.64	1.75

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

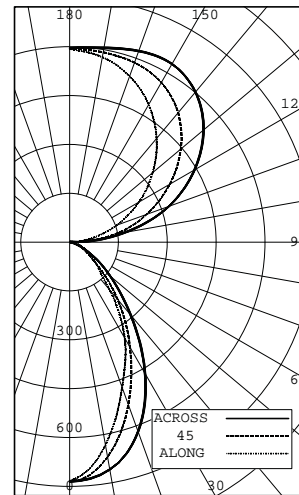
Effective Floor Cavity Reflectance 20%

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" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver



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 ---

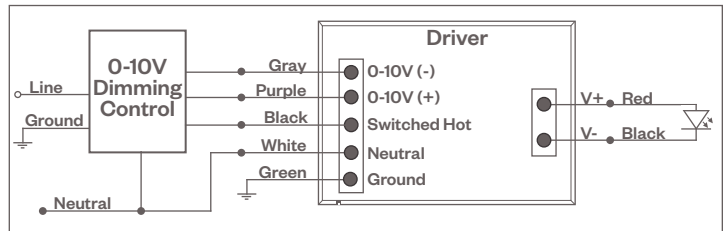
0-10V - DIMMING (Standard)

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!

0-10V Wiring Diagram



Compatible Dimmers

Wall Box

Lutron "Diva" - DDTV with PP-120H Interface

Leviton Renoir II 0-10v

Central System

Lutron Grafik Eye with GRX-TV1 Interface

LUTRON HI-LUME DIMMING

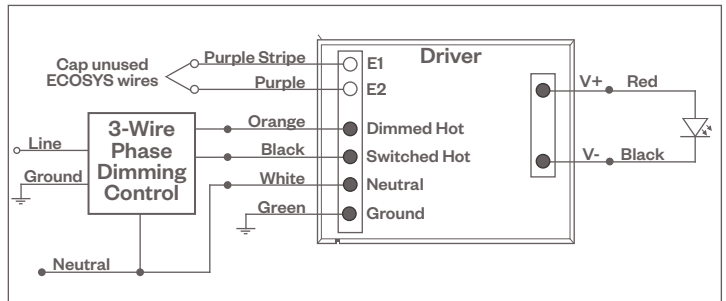
Integrates into Lutron EcoSystem building management

Notes:

- 120V or 277V*
- Dims down to less than 5% light output
- May use 3-Wire or EcoSystem Control
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

HILUME-A-DH

3-Wire Wiring Diagram



Compatible Dimmers

Wall Box (3-Wire Fluorescent)

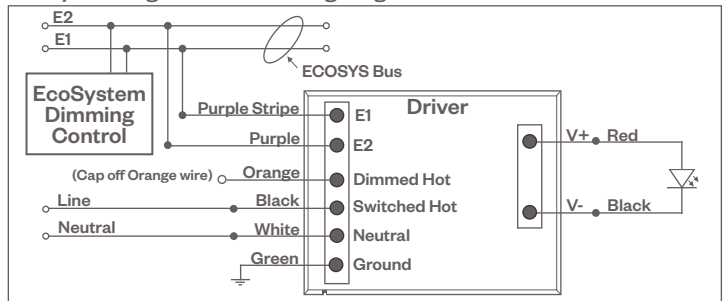
DIVA
Maestro
Nova T
Vareo

Central System

Lutron EcoSystem compatible controls

HILUME-A-ECO, 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.

Linea® 1.5" Mini Direct Indirect

Linear Mini Direct/Indirect, Remote Driver



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.

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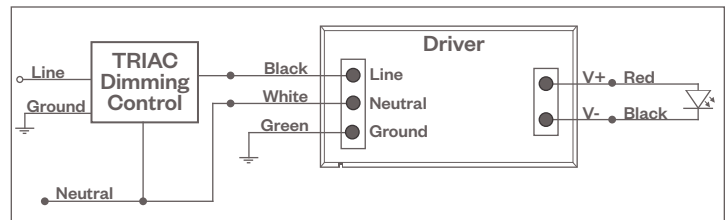
LUTRON HILUME-A-LTE DIMMING

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

Lutron HILUME-A-LTE Wiring Diagram



Compatible Dimmers

Wall Box (Incandescent Style, Wattage as required)

Lutron "Diva"	Lutron "Vareo"
Lutron "Nova-T"	Lutron "Skylark"
Lutron "Maestro"	

Central System

Lutron "GP" Panel
Lutron Grafik Eye QS

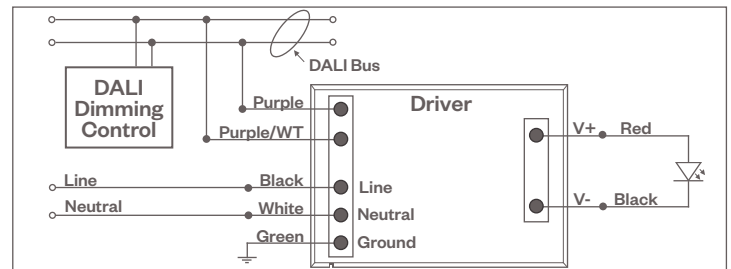
DALI - DALI DIMMING 120V-277V

Digital control protocol allows individual fixture control

Notes:

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

DALI Wiring Diagram



Compatible Dimmers

Wall Box (3-Wire Fluorescent)

Leviton CD250 Controller

Central System

Dynalite
Fifth Light

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.