

Linea® 1.5" Mini

Linear Direct, Remote Driver

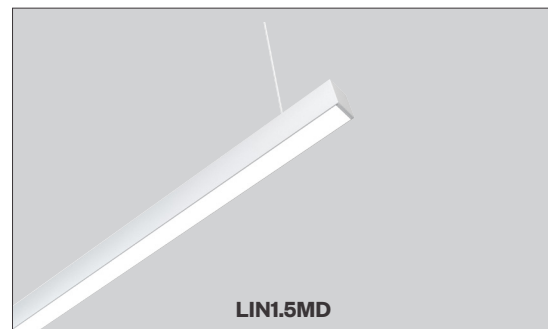


PROJECT:

TYPE:

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: Cable Suspended or Surface Mounted, Direct, Remote Driver
Wattage: 5W/ft, 10W/ft (*other wattages available see p2*)
Color Temp: 2700K, 3000K, 3500K, 4000K
CRI: 83 or 90+ typ.
Dimming: 0-10V, 1% dimming (*standard*)
Lutron LDE1 Hi-lume® 1% Dim Soft-On/Fade-to-Black
DALI dimming, 1% dim

Certifications



Fixture Summary

Performance Data

Wattage per Foot	Delivered Lumens	LPW	Color Temp	CRI
5	1920	105.2	3500K	83
10	3691	101.1	3500K	83

Data is based on 3500K-83 120V IES files available on website.

Data is based on 4' fixture with Performance lens.

Runs

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

Continuous Runs: Available (*whole foot standard*).

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

Requires approval drawings. Added cost & lead time.

Electrical Data

Wattage per Foot	Voltage	4'		8'	
		System Watts	Amps	System Watts	Amps
5	120V	18.2	0.15	36.5	0.30
	277V	18.2	0.07	36.5	0.13
10	120V	36.5	0.30	73.0	0.61
	277V	36.5	0.13	73.0	0.26

Electronic multi-volt (120-277VAC), 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

Linear Direct, Remote Driver



PROJECT:

TYPE:

Ordering Information

LIN1.5MD-A17										120/277		
1	2	3	4	5	6	7	8	9	10			
Model LIN1.5MD-A17+ <i>(Mini Direct, remote driver)</i>		Optics PL performance lens <i>(standard)</i> SLDW straight blade louver, white aluminum, solid blades w/overlay SLDB straight blade louver, black, solid blades w/overlay SLDS straight blade louver, silver, solid blades w/overlay ASY asymmetric lens GRZ grazer lens <i>(suggest cove installation, see pg 4)</i> DRP1 1" drop lens			Mounting Pendant Mount <i>(mini cable suspension)</i> 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'			Wattage (per foot) Standard 5 5W/ft 10 10W/ft Optional 3* 3W/ft 4* 4W/ft 6 6W/ft 7 7W/ft 8 8W/ft 9 9W/ft <i>* 4' min. length required</i>				
Color Temp 83 CRI 27 2700K-83 30 3000K-83 35 3500K-83 40 4000K-83 90+ CRI 279 2700K-90+ 309 3000K-90+ 359 3500K-90+ 409 4000K-90+		Finish HW high reflectance matte white BT black texture ST silver texture <i>For other RAL color, consult factory</i>			Voltage 120/277		Length X X Length A Length B Length C - all patterns - all patterns - PU - IND - PR (2 lengths of 2) - PZ - CON - CUS					
Configuration IND ¹ 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 <u>Standard Patterns</u> <i>(see pg 6 for details)</i> 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 shape, (4) straight lengths + (4) 90° corners PZ Z shape, (3) straight lengths + (2) 90° corners <i>For custom patterns, submit an EDR on amerlux.com</i>					Drivers/Controls 0-10V 1% analogue dimming, 120-277VAC, dim to off when selected with wireless dimming control HILUME-H-ECO Lutron LDE1 Hi-lume® 1% dim Soft-On/Fade-to-Black DALI DALI dimming 120-277VAC, 1% dim							

* 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.

¹ Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.

Linea® 1.5" Mini

Linear Direct, Remote Driver



PROJECT:

TYPE:

Specifications

Application

Open office plan, conference rooms, corridors or any indoor space where the higher light levels of a direct ambient lighting system are required. Remote location of the driver allows for a small housing with the full power of Linea 1.5 Direct.

Construction

One piece extruded aluminum housing is (1 1/2" wide X 1 7/8" 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.

SLDx - Straight blade Louver Direct has 0.5" high blades 0.493" on center with overlay. Available in (**W**) white aluminum (*light gray; appears white when lit*), (**B**) black or (**S**) silver.

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

GRZ - Grazer lens for highlighting wall surfaces. Suggest surface mounting and cove installation to avoid high angle brightness. No overlay is used to enhance grazing performance. (see page 4)

DRP1 - 1" Drop lens with illuminated end caps.

LED

Amerlux's boards and patented connectors with industry recognized LEDs chips enables excellent thermal management and allows Amerlux to offer a 5 year warranty. Our LED binning is within 3 MacAdam ellipse. LED boards are easily replaced in the field with just a Philips screw driver.

Color Temperature Options: 2700K, 3000K, 3500K, 4000K

CRI: 83 typical, 90+ typical

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 power cord ready to be connected to J-Box (by others) over cable canopy. Amerlux recommends a maximum of 25' between the fixture and the remote driver box. Consult factory with job specific electrical spec if more than 15' is required. Feeds are added as required by specified wattage and driver maximums.

See page 4 for wiring illustration

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).

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. 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*) 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. 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 7 for layouts.

For custom patterns submit an EDR on amerlux.com.

Mounting

LIN1.5MD-A17....MASW10 - Mini Direct pendant mount is only 1.5" wide x 1.875" high. The remote driver box is 19 3/4" long and can be located up to 15' from fixture with a 0-10V driver or Lutron driver. 15' of low voltage plenum rated cable supplied (10' off fixture/5' off box). (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.

LIN1.5MD-A17....SM - Direct Surface Mounted - Housing needs to be attached to solid structure above. Mounting holes are pre-drilled at factory. Some fixture disassembly and reassembly required. Mounting hardware by others.

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.

Linear Direct, Remote Driver

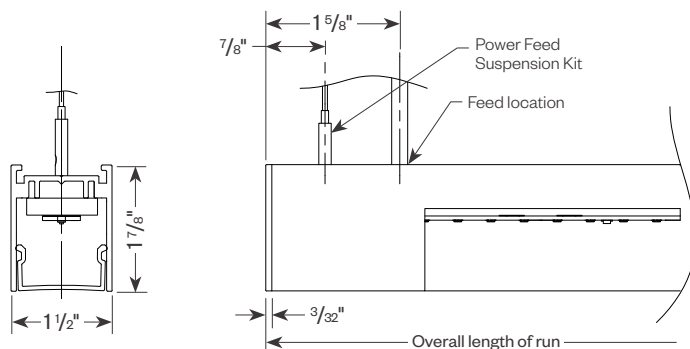


PROJECT:

TYPE:

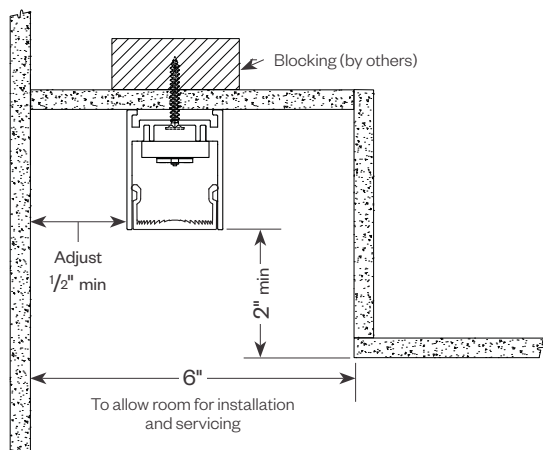
Product Details

Pendant

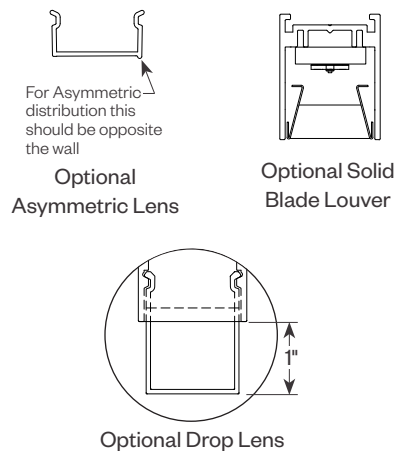


Surface Mount - Grazer

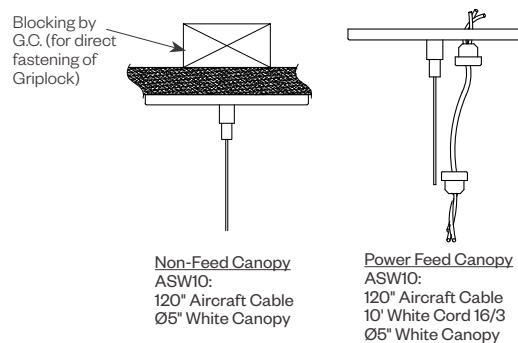
The Grazer Lens for the Linea 1.5 Mini Direct was created to provide an effective and low cost wall grazing lighting tool. A cove or valance is recommended to block direct glare at mid to high angles. Surface mounting requires the housing to be attached to the structure above. Some fixture disassembly and reassembly required.



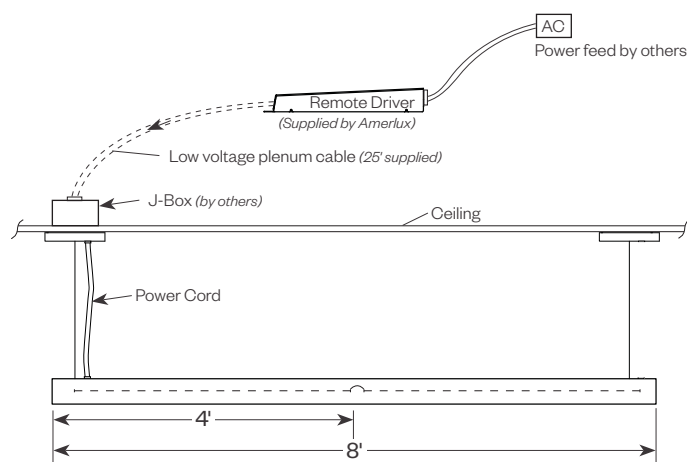
Optional Louver/Drop Lens



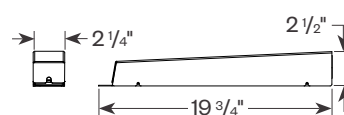
Suspension Detail



Remote Driver



Remote Driver Box



Delta Intelligent Building Technologies

178 Bauer Drive, Oakland, NJ 07436 • P: 973-882-5010 F: 973-882-2605 • amerlux.com
Amerlux reserves the right to change details that do not affect overall function and performance.

Linea® 1.5" Mini

Linear Direct, Remote Driver



PROJECT:

TYPE:

Cable Kit Suspension - Ceiling or Gypsum Board (MASW10, MASW10SF, MASB10, MASB10SF)

FEED

J-Box secured to structure above by others

1/4"-20 x 3/4" Stud

Countersunk 1/4"-20 Gem Bar

5" Canopy

Strain Relief Bushing

1 mm Cable

Cable Coupler

Power Cord 22/2

Cable Tie (1 per foot)

Mini Cable Gripper

NON-FEED

1/4"-20 x 3/4" Stud

1 mm Cable

Cable Coupler

Mini Cable Gripper

Cat#	Length	Cord/Canopy	Application
MASW10	10'	white/white	ceiling tile/gypsum
MASW10SF	10'	silver foil/white	ceiling tile/gypsum
MASB10	10'	black/black	ceiling tile/gypsum
MASB10SF	10'	silver foil/black	ceiling tile/gypsum
MASW10T	10'	white/white	ceiling tee
MASW10SFT	10'	silver foil/white	ceiling tee
MASB10T	10'	black/black	ceiling tee
MASB10SFT	10'	silver foil/black	ceiling tee

Tee Grid or Screw Slot (MASW10T, MASW10SFT, MASB10T, MASB10SFT)

FEED

J-Box secured to structure above by others

Drop Ceiling T-Bar by others (for Drop Ceiling application)

1/4"-20 x 3/4" Stud

Countersunk 1/4"-20 Gem Bar

5" Canopy

Strain Relief Bushing

1 mm Cable

Cable Coupler

Power Cord 22/2

Cable Tie (1 per foot)

Mini Cable Gripper

NON-FEED

IDS Clip with 1/4"-20 Stud by others

Drop Ceiling T-Bar by others (for Drop Ceiling application)

5" Canopy

1 mm Cable

Cable Coupler

Mini Cable Gripper

Linea® 1.5" Mini

Linear Direct, Remote Driver



PROJECT:

TYPE:

Linea 1.5" Mini Patterns

Standard Patterns

All corners are standard 90°, standard length legs.

Use standard lengths: 4' min to 8' in 1 foot increments.

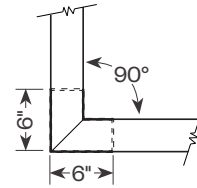
Continuous runs must be the same length in pairs for closed configuration.

Custom Patterns

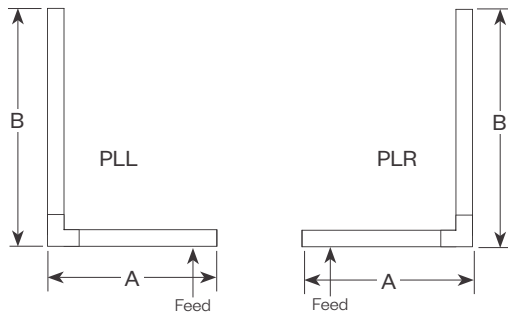
Please provide drawings of your configuration.

Made to Measure: +/- 1/8", consult factory.

PC - custom pattern, please provide drawings and consult factory.



Linea 1.5 Mini Lens
Mitered Lens

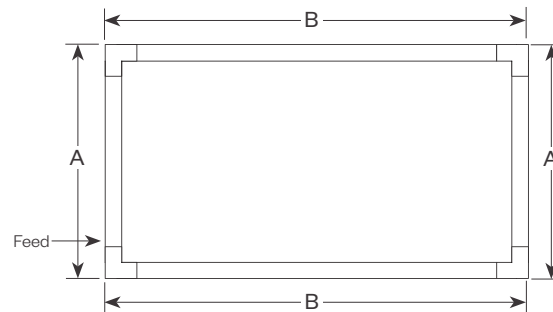


PLL - L Left, (2) straights + (1) 90° corner, leg right

PLR - L Right, (2) straights + (1) 90° corner, leg left

Provide overall lengths: A' & B'

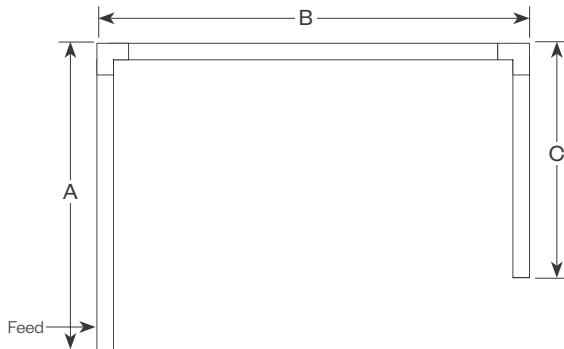
Nomenclature: A-B-PLL A-B-PLR



PR - Closed Rectangle, (4) straight lengths + (4) 90° corners

Provide overall lengths: A' & B'

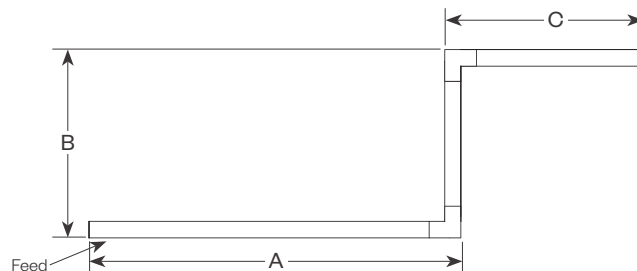
Nomenclature: A-B-PR



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

Linear Direct, Remote Driver



PROJECT:

TYPE:

Performance Data

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

Wattage:	3W	4W	5W	6W	7W	8W	9W	10W
Factor:	0.31	0.42	0.53	0.63	0.72	0.81	0.90	1.0

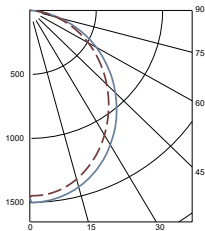
CCT Factors:				
CRI	2700K	3000K	3500K	4000K
83	0.92	0.97	1.0	1.02
90	0.81	0.84	0.86	0.89

	Louver	
Finish:	SLV	BLK
Factor:	1.0	0.65

LINEA 1.5" PERFORMANCE LENS 10W 3500K 4FT

Total Watts: 37 Total Lumens: 3691

Source: 96 White LED's



LTL# 14664757.01

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1759	47.7
0-60	2984	80.8
0-90	3691	100.00
90-180	0	0.00

Efficacy = 101.1 Lumens/Watt

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

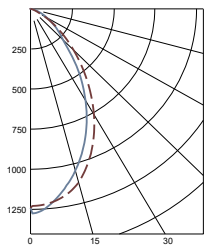
RC	70	50	30	10
RW				
ROR				
0	119	119	119	119
1	109	105	100	97
2	100	92	85	79
3	91	81	73	66
4	83	72	63	57
5	77	64	55	49
6	71	58	49	43
7	66	53	44	38
8	62	48	40	34
9	58	44	36	31
10	54	41	33	28

Note: Values are expressed as percent of total lumen output delivered to the task surface.

LINEA 1.5" STRAIGHT BLADE LOUVER (SLV) 10W 3500K 4FT

Total Watts: 37 Total Lumens: 1584

Source: 96 White LED's



LTL# 14664757.05

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1129	71.3
0-60	1502	94.8
0-90	1584	100.00
90-180	0	0.00

Efficacy = 43.5 lumens/Watt

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC	70	50	30	10
RW				
ROR				
0	119	119	119	119
1	112	109	106	103
2	105	99	94	89
3	98	90	84	79
4	91	82	75	70
5	86	75	68	63
6	80	70	62	57
7	75	64	57	52
8	71	60	53	48
9	67	56	49	44
10	63	52	45	41

Note: Values are expressed as percent of total lumen output delivered to the task surface.



Linea® 1.5" Mini

Linear Direct, Remote Driver



PROJECT:

TYPE:

Performance Data

Multiplying Factors: (Multiplying Factor is based on 3500K-80 120V IES file on website)

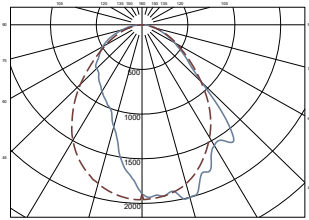
Wattage:	3W	4W	5W	6W	7W	8W	9W	10W
Factor:	0.31	0.42	0.53	0.63	0.72	0.81	0.90	1.0

CCT Factors:				
CRI	2700K	3000K	3500K	4000K
83	0.92	0.97	1.0	1.02
90	0.81	0.84	0.86	0.89

LINEA 1.5" ASYMMETRIC LENS 10W 3500K 4FT

Total Watts: 37 Total Lumens: 4046

Source: 96 White LED's



LTL# 14664757.02

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	2048	50.6
0-60	3358	83.0
0-90	4046	100.00
90-180	0	0.00

Efficacy = 110.8 Lumens /Watt

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

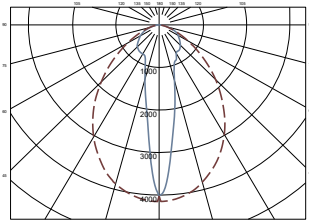
RC	80			
RW	70	50	30	10
RCR				
0	119	119	119	119
1	110	105	101	97
2	100	92	86	81
3	92	82	74	68
4	85	73	65	58
5	78	66	57	51
6	72	60	51	45
7	67	54	46	40
8	63	50	41	36
9	59	46	38	32
10	55	42	35	30

Note: Values are expressed as percent of total lumen output delivered to the task surface.

LINEA 1.5" GRAZER LENS 10W 3500K 4FT

Total Watts: 37 Total Lumens: 4065

Source: 96 White LED's



LTL# 14664757.04

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	2219	54.6
0-60	3418	84.1
0-90	4065	100.00
90-180	0	0.00

Efficacy = 111.3 Lumens /Watt

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

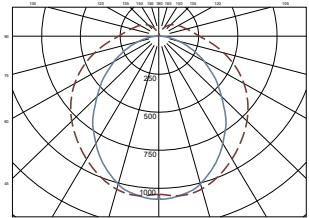
RC	80			
RW	70	50	30	10
RCR				
0	119	119	119	119
1	110	106	102	98
2	101	94	88	82
3	93	84	76	70
4	86	75	67	61
5	80	68	60	54
6	75	62	54	48
7	70	57	49	44
8	65	53	45	40
9	62	49	42	36
10	58	46	39	34

Note: Values are expressed as percent of total lumen output delivered to the task surface.

LINEA 1.5" DROP LENS 10W 3500K 4FT

Total Watts: 37 Total Lumens: 4014

Source: 96 White LED's



LTL# 14664757.03

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1339	33.4
0-60	2397	59.7
0-90	3427	85.4
90-180	588	14.6

Efficacy = 109.9 Lumens /Watt

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC	80			
RW	70	50	30	10
RCR				
0	116	116	116	116
1	103	98	93	88
2	93	84	77	70
3	85	73	65	58
4	77	65	55	48
5	71	58	48	41
6	65	52	42	36
7	60	47	38	32
8	56	43	34	28
9	52	39	31	25
10	49	36	28	23

Note: Values are expressed as percent of total lumen output delivered to the task surface.

Linea® 1.5" Mini

Linear Direct, Remote Driver



PROJECT:

TYPE:

Static White - 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 ---

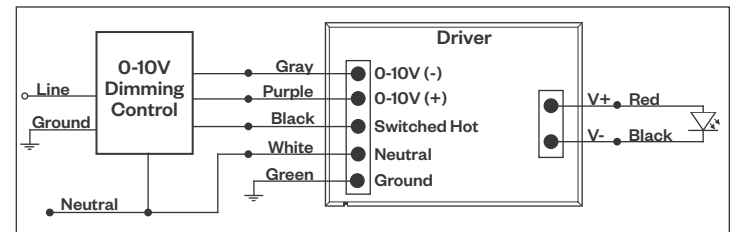
0-10V - DIMMING (Standard)

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			Central System
Lutron:	Wattstopper:	Leviton:	Lutron Grafik Eye with GRX-TV1 Interface
Diva - DVSTV	ADF-120277	Renoir II	
Maestro - MS-Z101			
Nova-T - NTSTV-DV			

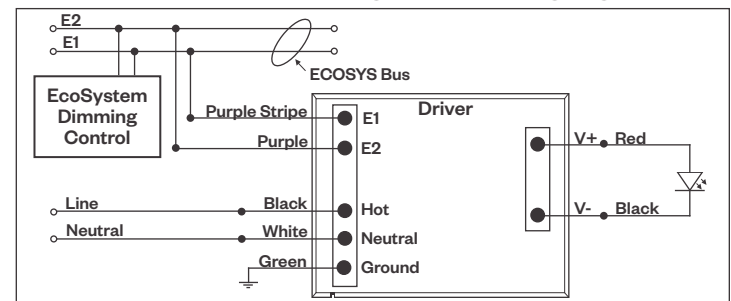
LUTRON LDE1 DIMMING

Integrates into Lutron EcoSystem building management

Notes:

- 120VAC or 277VAC*
- Dims down to 1% Soft-On/Fade-to-Black
- EcoSystem Control
- Consult Dimming manufacturer for installation instructions - **DO NOT SHARE NEUTRALS!**

LDE1 (HILUME-H-ECO) EcoSystem Digital Control Wiring Diagram



Compatible Dimmers*:

Lutron ECO System	Central System
Pow Pak Dimming Modules	Lutron EcoSystem compatible controls
Energj Savr Node	
Grafik Eye QS/Homeworks	
QS Control Unit	
Quantum Hub	
Homeworks QS/My Room	

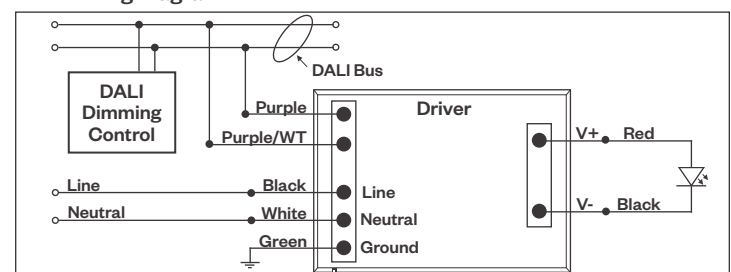
DALI - DALI DIMMING 120V-277V

Digital control protocol allows individual fixture control

Notes:

- 120VAC - 277VAC*
- Dims down to 1% light output in most cases

DALI Wiring Diagram



Notes:

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

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