

Linea® 3.5"

Linear Direct

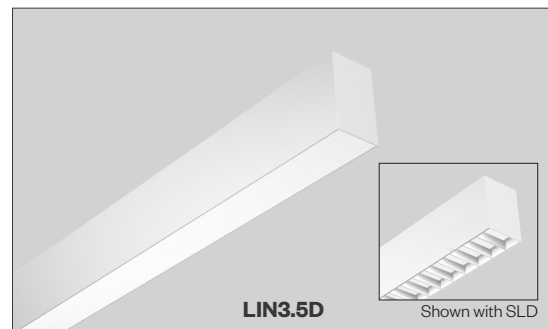


PROJECT:

TYPE:

Features

The Linea® 3.5" Direct LED ambient system is a small-scale 3.5" extruded profile that provides well-controlled ambient lighting. Engineered around the latest LED, in a choice of 5W/ft or 10W/ft LED boards. Excellent for commercial and retail ambient applications. Downlight component available with acrylic lens or parabolic louver options.



Product Overview

Type:	Cable Suspended, Wall or Surface Mounted Linear, Direct	
Wattage:	5W/ft, 10W/ft (other wattages available see p2)	
Color Temp:	2700K, 3000K, 3500K, 4000K; Tunable White (2700K-5700K)	
CRI:	83 or 90+ typ. (2700K, 3000K, 3500K, 4000K) 90+ (Tunable White)	
Dimming (wired):	<u>Static White</u>	<u>Tunable White</u>
	0-10V, 1% dimming (standard)	0-10V TW, 1% dimming
	Lutron LDE1 Hi-lume® 1% Dim	DALI DT8, 1% digital dimming
	Soft-On/Fade-to-Black	
Dimming (wireless):	DALI dimming, 1% dim	
	Enlighted Sensor	Enlighted Sensor TW
	Lutron Athena (integral wireless RF node)	Lutron Athena TW (integral wireless RF node)

Certifications



Fixture Summary

Performance Data

Wattage per Foot	Delivered Lumens	LPW	Color Temp	CRI
5	2343	121.3	3500K	83
10	4401	115.1	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	19.3	0.16	38.6	0.32
	277V	19.3	0.07	38.6	0.14
10	120V	38	0.32	76.5	0.64
	277V	38	0.14	76.5	0.28

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.

PROJECT:

TYPE:

Ordering Information

LIN3.5D-A16 120/277												
1	2	3	4	5	6	7	8	9	10	11		
1	Model		2	Optics		3	Mounting		4	Wattage (per foot)		
	LIN3.5D-A16*			PL performance lens (standard) DL designer lens 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			Pendant Mount (aircraft cable suspension) 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'			Wall Mount WM wall mount Surface Mount SM surface mount		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 * 4' min. length required
5	Color Temp		6	Finish		7	Voltage	8	Length			
	Static White 27 2700K-83 279 2700K-90+ 30 3000K-83 309 3000K-90+ 35 3500K-83 359 3500K-90+ 40 4000K-83 409 4000K-90+ Tunable White TW9-2757 tunable white, 90CRI (2700K-5700K)			HW high reflectance matte white BT black texture ST silver texture For other RAL color, consult factory			120/277		-----X-----X----- Length A Length B Length C - all patterns - all patterns - PU - IND - PR (2 lengths of 2) - PZ - CON - CUS			
9	Configuration					10	Drivers/Controls					
	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 Standard Patterns (see pg 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 shape, (4) straight lengths + (4) 90° corners PZ Z shape, (3) straight lengths + (2) 90° corners For custom patterns, submit an EDR on amerlux.com.						Wired - Static White O-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 Wired - Tunable White O-10V-TW 1% dimming, multi-volt (120V-277V) constant current DALI-DT8 1% digital dimming, CCT control per DALI DT8 (120V-277V) constant current Wireless - Static White ENLS-SR Enlighted sensor, energy metering ENLS-O10 Enlighted sensor with controller unit AWN-R-WH-SR Lutron Athena wireless node, RF only, white, D4i/DALI-2 AWN-R-BL-SR Lutron Athena wireless node, RF only, black, D4i/DALI-2 AWN-R-WH-O10 Lutron Athena wireless node, RF only, white, 0-10V AWN-R-BL-O10 Lutron Athena wireless node, RF only, black, 0-10V AWN-R-OCC-WH-SR Lutron Athena wireless node, Occupancy & Daylight sensor, white, D4i/DALI-2 AWN-R-OCC-BL-SR Lutron Athena wireless node, Occupancy & Daylight sensor, black, D4i/DALI-2 Wireless - Tunable White ENLS-SR-TW Enlighted sensor, energy metering AWN-R-WH-SR-TW Lutron Athena wireless node, RF only, white, D4i/DALI-2 AWN-R-BL-SR-TW Lutron Athena wireless node, RF only, black, D4i/DALI-2 AWN-R-OCC-WH-SR-TW Lutron Athena wireless node, Occupancy & Daylight sensor, white, D4i/DALI-2 AWN-R-OCC-BL-SR-TW Lutron Athena wireless node, Occupancy & Daylight sensor, black, D4i/DALI-2					
11	Options/Accessories											
	EMC-PF ² emergency circuit requires power feed located in last fixture section (for other locations consult factory) PF ² Extra power feed for additional circuiting EMB emergency battery pack (not available for lengths under 4')											

* 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.

² Not available with IND (individual) configuration.

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.

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

All lenses are snap-in, extruded acrylic, with a maximum length of 8'. Amerlux proprietary acrylic lens provides excellent transmission while effectively concealing source image.

PL - Performance Lens provides high efficiency with controlled lens surface brightness (*standard*).

DL - Designer Lens provides flat even glow on lens. Best when lens is in direct view.

SLDx - Straight blade Louver Direct has 0.5" high blades 0.81" on center with overlay. Available in (**W**) white aluminum (*light gray, appears white when lit*), (**B**) black or (**S**) silver.

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.

	Static White	Tunable White
CCT:	2700K, 3000K, 3500K, 4000K	2700K-5700K
CRI:	83 or 90+ typical	90+ (<i>92 typ</i>)
R9:	16 @ CRI 83; >50 @ CRI 90+	>50

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. **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 and over voltage damage is not covered under warranty.

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.

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.

A'-B'-PLL - L Left - (*1*) 90° Corner (*2*) segments. Specify overall segments: A' & B'

A'-B'-PLR - L Right - (*1*) 90° Corner (*2*) segments. Specify overall segments: A' & B'

A'-B'-PR - Rectangle - (*4*) 90° Corners joining (*4*) segments. Specify overall segments: A' & B'

A'-B'-C'-PU - U shape - (*2*) 90° Corners joining (*3*) segments. Specify overall segments: A', B', & C'

A'-B'-C'-PZ - Z shape - (*2*) 90° Corners joining (*3*) segments. Specify overall segments: A', B', & C'

See page 6 for layouts.

For custom patterns, submit an EDR on amerlux.com.

Mounting

The Linea 3.5 Direct is intended to be pendant, wall, or surface mounted in continuous rows. Standard or custom patterns available.

LIN3.5D-A16...ASW10 - Direct pendant 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. All fittings are protected against rust and corrosion. Canopies are 5" x 1/4" die formed painted steel.

Adjustment mechanism allows for infinite height adjustment. Amerlux commends the required feed and non-feed suspensions based upon length and electrical options. Options include: color of canopy and power cord (*black or white*), length 10' or 20', and mounting condition, in center of ceiling tile and in gypsum board ceiling (*standard*) i.e. ASW10. Or if canopy is installed on a grid Tee runner add, **T** i.e. ASW10T

LIN3.5D-A16...WM - Direct Wall Mount 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..

LIN3.5D-A16...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.

Options

EMB - Emergency battery pack - 10W output power, 90 min of illumination time, up to 1300 lm of initial light output. Illuminated test-switch/charging indicator light is provided. Wattage consumption by EMB: 2.5W/ft (*4ft fixture*), 1.66W/ft (*6ft fixture*), 1.25W/ft (*8ft fixture*). Request can be made to light up 4ft section on 8ft unit.

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® 3.5"

Linear Direct

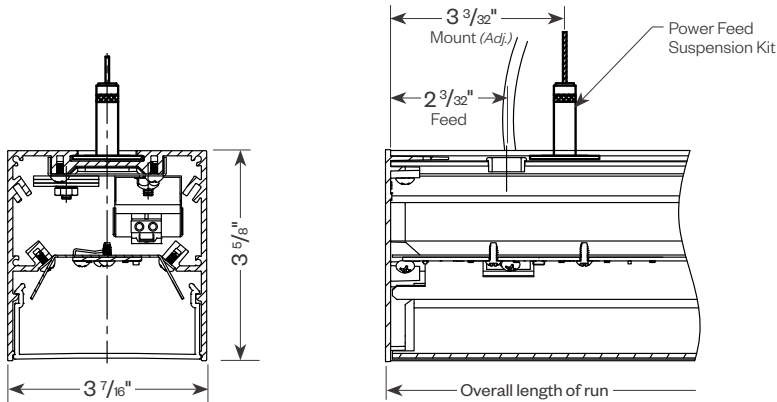


PROJECT:

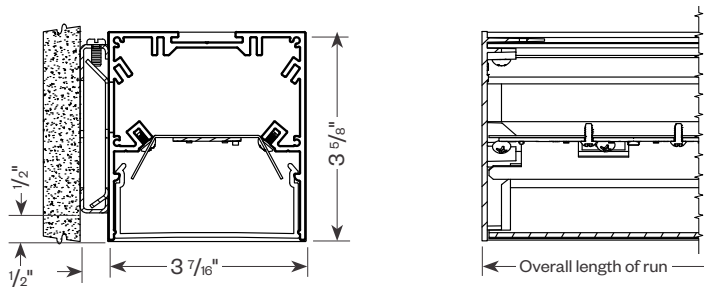
TYPE:

Product Details

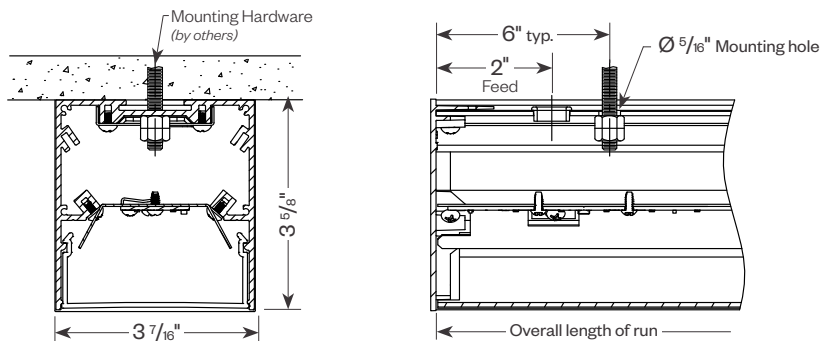
Pendant



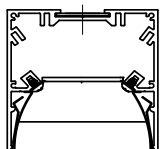
Wall Mount



Surface Mount



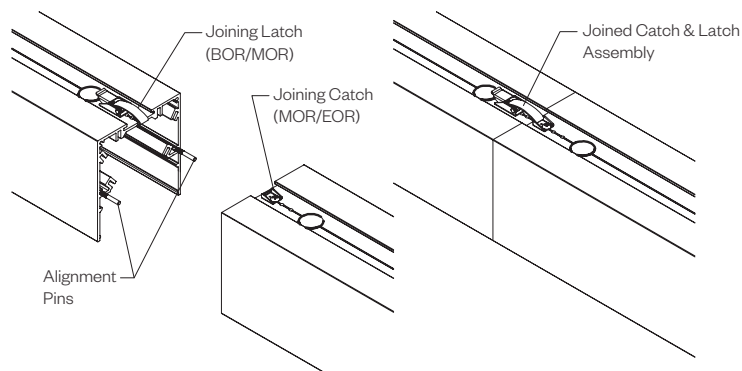
Optional Louver



Optional Louver

Tool-less Joining

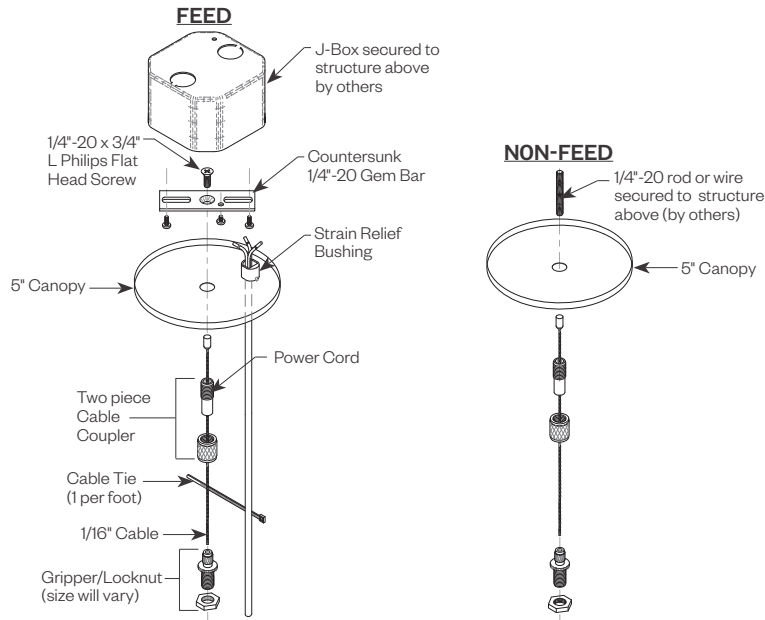
Align fixture via alignment pins & secure fixture with catch & latch system



PROJECT:

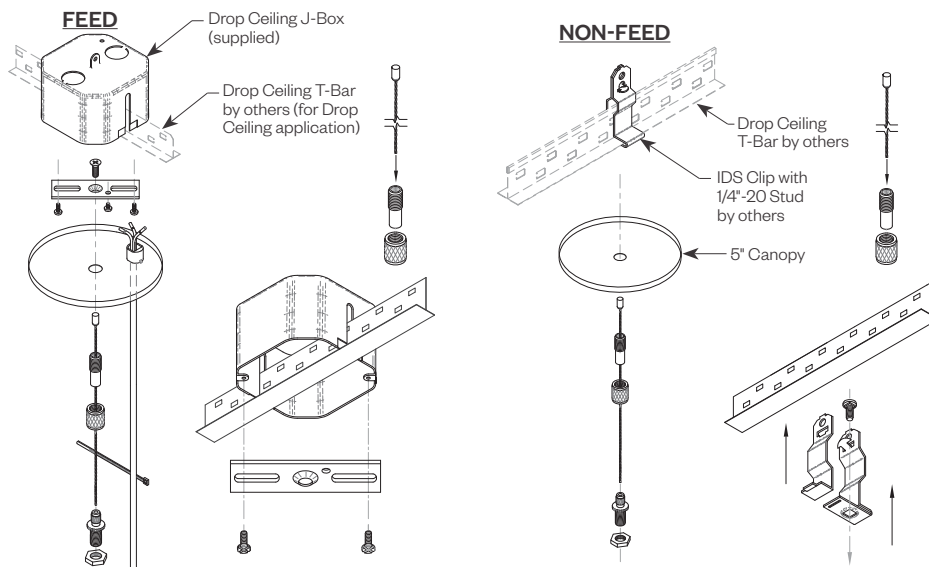
TYPE:

Cable Kit Suspension - 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)



PROJECT:

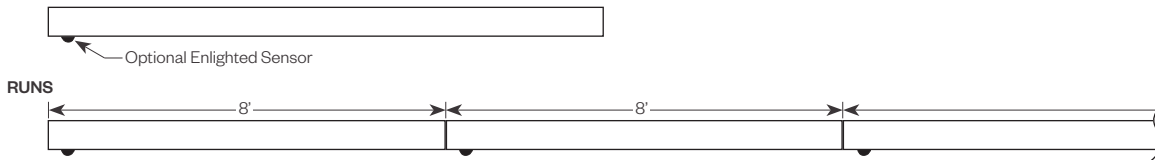
TYPE:

Optional Sensor/RF Node

Amerlux® has partnered with control companies to create building environments that are safer, and smarter, than ever before. At the heart of our partnership is intelligent RF nodes and Smart Sensor, the most advanced digital wireless communication and sensors available today. Integrated into Amerlux products.

Minimum run length is 3' for wireless sensor and RF node.

INDIVIDUAL (MIN 3' LENGTH)



Linea 3.5" Patterns

Standard Patterns

All corners are standard 90°, standard length legs.

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

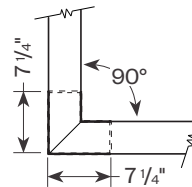
Continuous runs must be the same length in pairs for closed configuration.

Custom Patterns

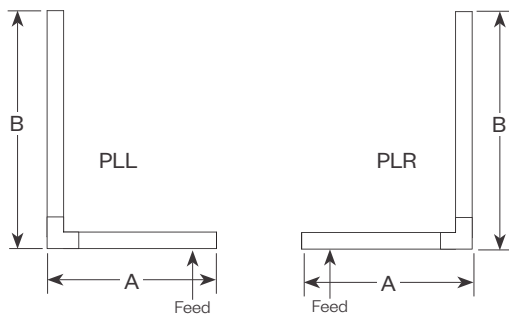
Please provide drawings of your configuration.

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

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



Linea 3.5 Lens
Mitered Lens

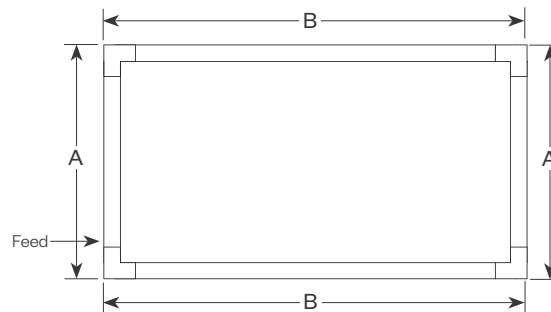


PLL - L Left, (2) straights + (1) 90° corner, leg right

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

Provide overall lengths: A' & B'

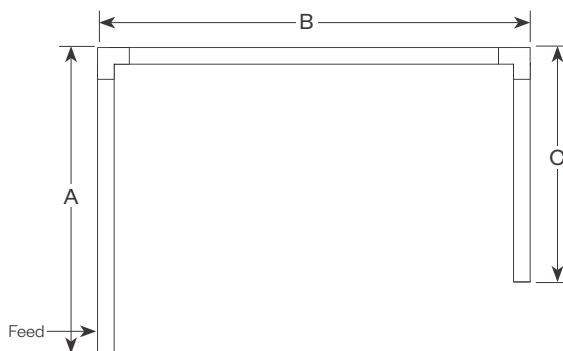
Nomenclature: A-B-PLL A-B-PLR



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

Provide overall lengths: A' & B'

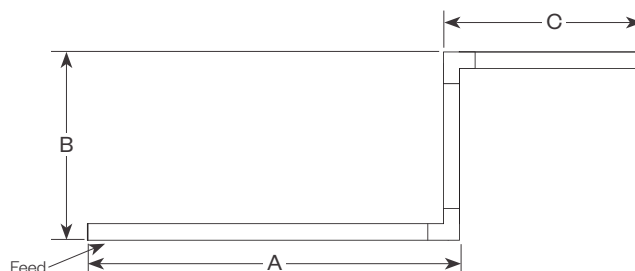
Nomenclature: A-B-PR



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

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

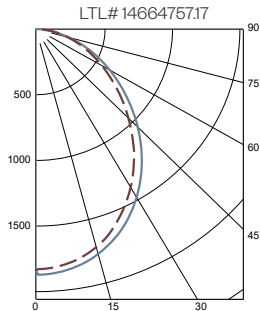
CCT Factors:					TW9
CRI	2700K	3000K	3500K	4000K	(@3500K)
83	0.92	0.97	1.0	1.02	-
90	0.81	0.84	0.86	0.89	0.86

Louver		
Finish:	SLV	BLK
Factor:	1.0	0.65

LINEA 3.5" PERFORMANCE LENS 10W 3500K 4FT

Total Watts: 38; Total Lumens: 4401

Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	2174	49.4
0-60	3585	81.4
0-90	4401	100.0
90-180	0	0.0

Luminaire Efficacy = 115.1 lm/W

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

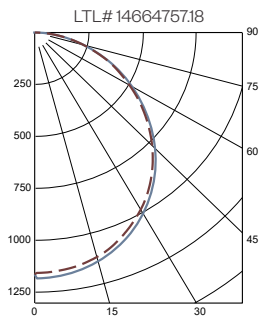
RC	80			
RW	70	50	30	10
RORV				
0	119	119	119	119
1	109	105	100	97
2	100	92	85	80
3	91	81	73	67
4	84	72	64	57
5	77	65	56	50
6	72	59	50	44
7	67	53	45	39
8	62	49	41	35
9	58	45	37	32
10	55	42	34	29

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

LINEA 3.5" DESIGNER LENS 10W 3500K 4FT

Total Watts: 38; Total Lumens: 3383

Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1489	44.0
0-60	2630	77.7
0-90	3383	100.0
90-180	0	0.0

Luminaire Efficacy = 88.5 lm/W

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

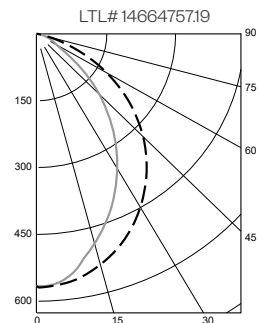
RC	80			
RW	70	50	30	10
ROR				
0	119	119	119	119
1	108	104	99	95
2	98	90	83	77
3	90	79	71	64
4	82	70	61	54
5	75	62	53	46
6	70	56	47	40
7	64	51	42	36
8	60	46	38	32
9	56	43	34	29
10	53	39	31	26

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

LINEA 3.5" STRAIGHT BLADE LOUVER 10W 3500K 4FT

Total Watts: 38 Total Lumens: 2038

Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1188	58.3
0-60	1835	90.0
0-90	2038	100.0
90-180	0	0.0

Luminaire Efficacy = 53.3 lm/W

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC	80			
RW	70	50	30	10
ROR				
0	119	119	119	119
1	111	107	103	100
2	102	95	90	85
3	95	86	79	73
4	88	78	69	63
5	81	70	62	56
6	75	63	55	50
7	70	58	50	45
8	66	53	46	40
9	62	49	42	37
10	58	46	38	34

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



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 ---

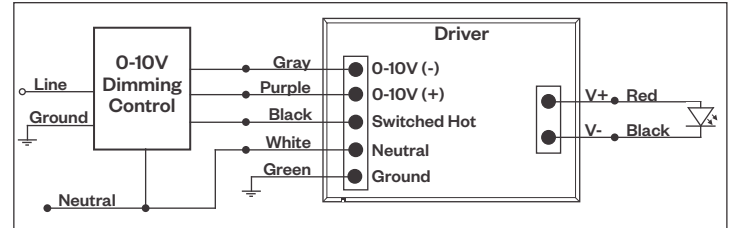
0-10V - DIMMING (Standard)

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 Grafixk 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

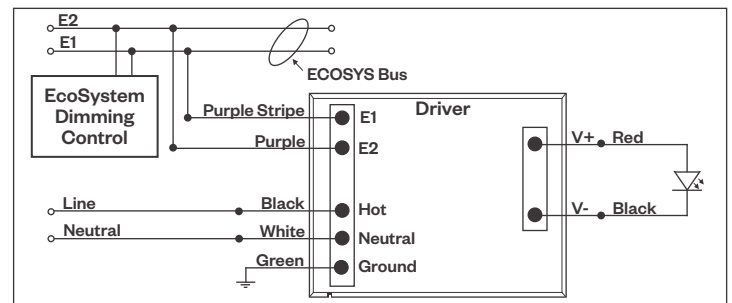
Notes:

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

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	

LDE1 (HILUME-H-ECO) EcoSystem Digital Control 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.

PROJECT:

TYPE:

Static White - Dimming Compatibility *(continued)*

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 ---

DALI - DALI DIMMING 120V-277V

Digital control protocol allows individual fixture control

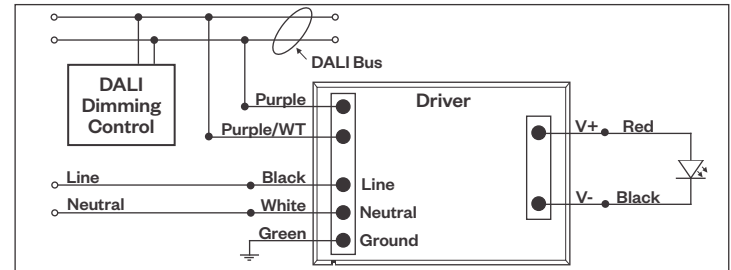
Notes:

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

Compatible Dimmers*:

Wall Box	Central System
Leviton CD250 Controller	Dynalite
	Fifth Light

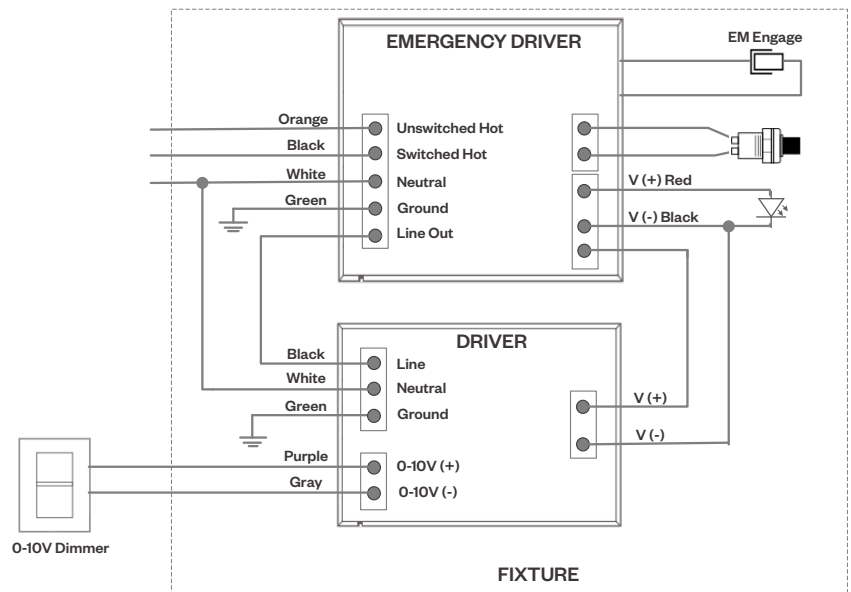
DALI Wiring Diagram



Emergency Fixture with Built-In Battery Pack

Emergency fixture with built-in battery pack (*EMB*) wiring:

Note: *EMB* not available on lengths under 4'.



Notes:

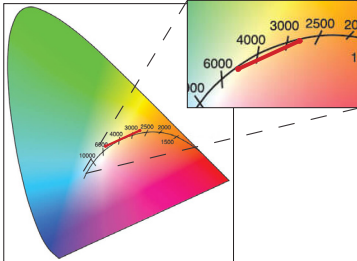
* Driver is 277VAC dimmable with appropriate dimmer (*by others*). All provided wiring diagrams show 120VAC wiring colors and method. Please refer to 277VAC dimmer installation instructions for 277VAC wiring diagrams.

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

PROJECT:

TYPE:

Tunable White



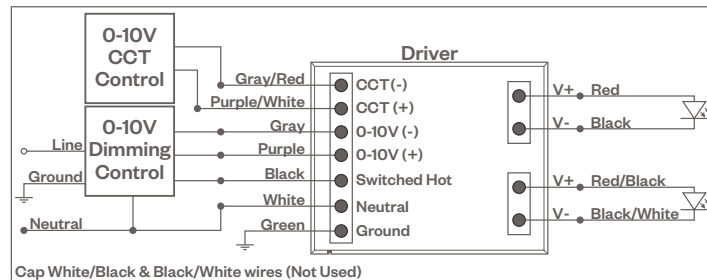
Tunable White range from 2700K-5700K, 90 CRI.
See wiring diagrams below.

Tunable White - Dimming Compatibility

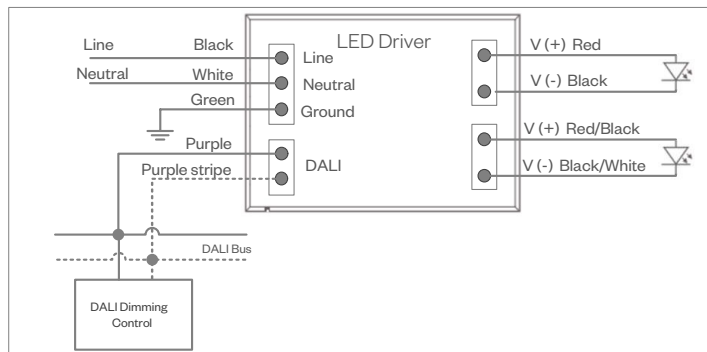
Amerlux® Linea® fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (*Dimmer, Fixture Quantity, Voltage,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

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

0-10V Wiring Diagram



DALI DT8 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.