

Linea® 3.5"

Linear Direct LED



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 Direct
Wattage:	5W/ft, 10W/ft (other wattages available see p2)
Lumen Output:	4,021 max; 100.3 Lm/W (10W, 4ft fixture)
Color Temp:	2700K, 3000K, 3500K, 4000K
CRI:	83 typ. (2700K, 3000K, 3500K, 4000K)
Dimming:	0-10V, 1% dim (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

PROJECT:

TYPE:

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

Performance Chart

Wattage Per Foot	Delivered Lumens	LPW	Color Temp
5	2,166	108.4	3500K
10	4,021	100.3	3500K

*Data is based on 3500K-83 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 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
5	120V	22.3	0.18	41.9	0.35
	277V	22.9	0.09	41.6	0.16
10	120V	42.1	0.35	84.2	0.70
	277V	41.5	0.15	83.0	0.30

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[®] 3.5" Direct

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PROJECT:

TYPE:

Ordering Information



1 Model
LIN3.5D-A16[†]

2 Optics
PL - performance lens (standard)
DL - designer lens
SLDW - straight blade louver (white) direct with overlay
SLDB - straight blade louver (black) direct with overlay
SLDS - straight blade louver (silver) direct with overlay

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
SM - surface mount

4 Wattage (per foot)
Standard:
5 - 5W/ft
10 - 10W/ft
Optional:
3 - 3W/ft (4' minimum length required)
4 - 4W/ft (4' minimum length required)
6 - 6W/ft
7 - 7W/ft
8 - 8W/ft
9 - 9W/ft

5 Color Temp
83 CRI:
27 - 2700K-83
30 - 3000K-83
35 - 3500K-83
40 - 4000K-83
92 CRI optional, consult factory

6 Finish
HW - high reflectance matte white
BT - black texture
ST - silver texture
For other RAL color, consult factory

7 Voltage
120/277

8 Length

(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		

9 Configuration
IND[†] - 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 7 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

10 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

11 Options/Accessories
ENLS - Enlighted Sensor (0-10v driver only and not available on 2' & 3' lengths)
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[®] 3.5" Direct

Linear Direct LED



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's 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 or constant view.

Straight Blade Louver, aluminum, has 3/4" high blades, 1-1/2" on center.

SLDW - White (standard)

SLDB - Black

SLDS - 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 what 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.

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.

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

CON - Continuous runs, > 8', specified to nearest whole foot length in 1' increments. Runs made from standard lengths have End Caps at the beginning and end of run. Runs > 60' may require second power feed. Each Housing has factory installed alignment pins. Mating fixtures are easily aligned and joined with "catch and latch" mechanism out of sight, on top of the Housing. Wiring is made fast and positive with molded quick connectors.

CUS - Custom made to measure runs are made to nearest 1/8" of customer supplied field measurements or drawings. Custom lengths use the same hardware for hairline joining.

PXX - Standard Patterns consist of 90° corners with standard lengths (4' to 8' in 1' increments), continuous runs or made to measure lengths. Depending upon complexity of the pattern drawings may be required from the Customer. If 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.

PC - Custom Patterns may use standard lengths, Made To Measure, 90° or other corners (some limitations). Please provide drawing and consult factory.

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. If mounting on a Tee grid 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 recommends 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 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.

LIN3.5D-A16...SM - Direct Surface Mounted - Housing needs to be attached to solid structure above. 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.

Linea[®] 3.5" Direct

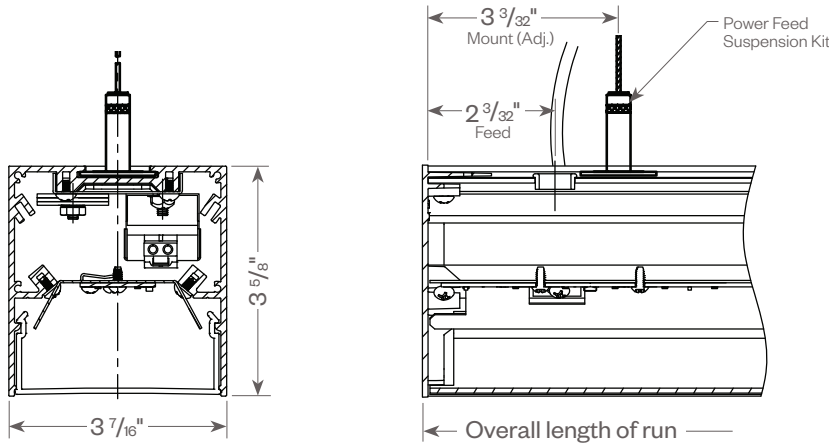
Linear Direct LED



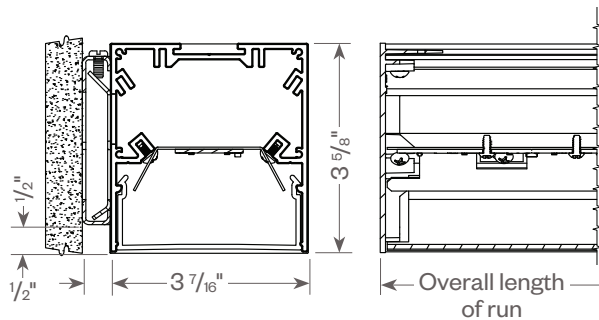
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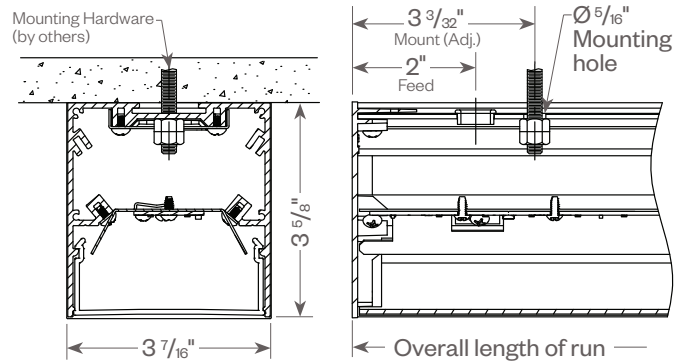
LINEA 3.5" DIRECT



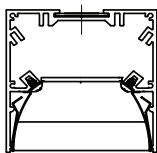
LINEA 3.5" DIRECT WALL MOUNT



LINEA 3.5" DIRECT SURFACE MOUNT

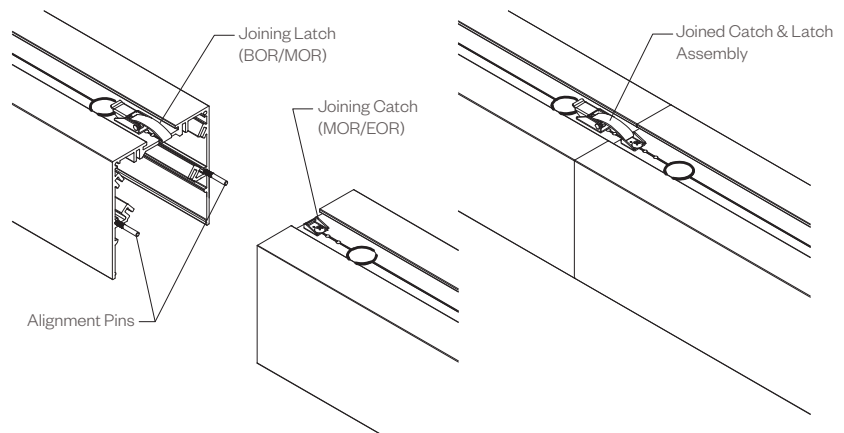


OPTIONAL LOUVER



TOOLLESS JOINING

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



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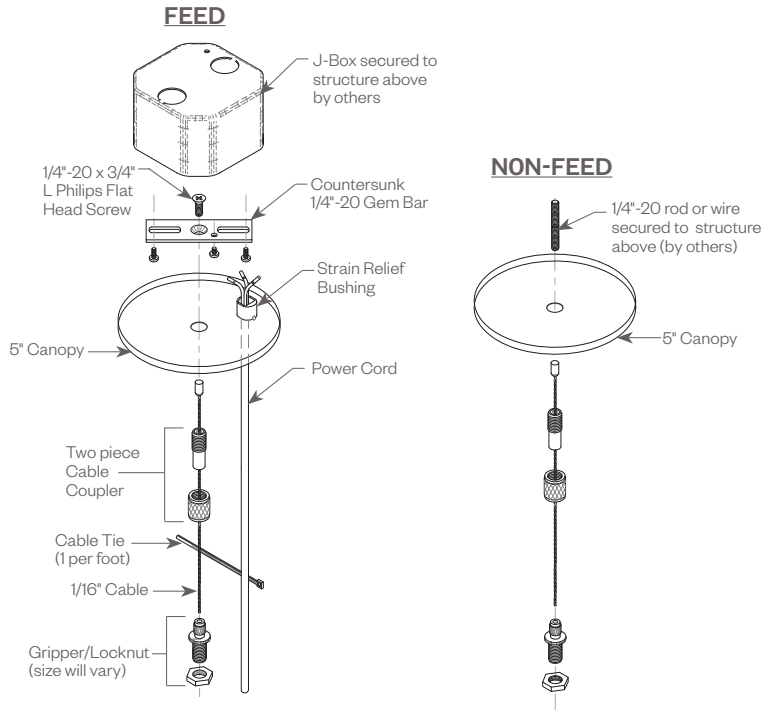


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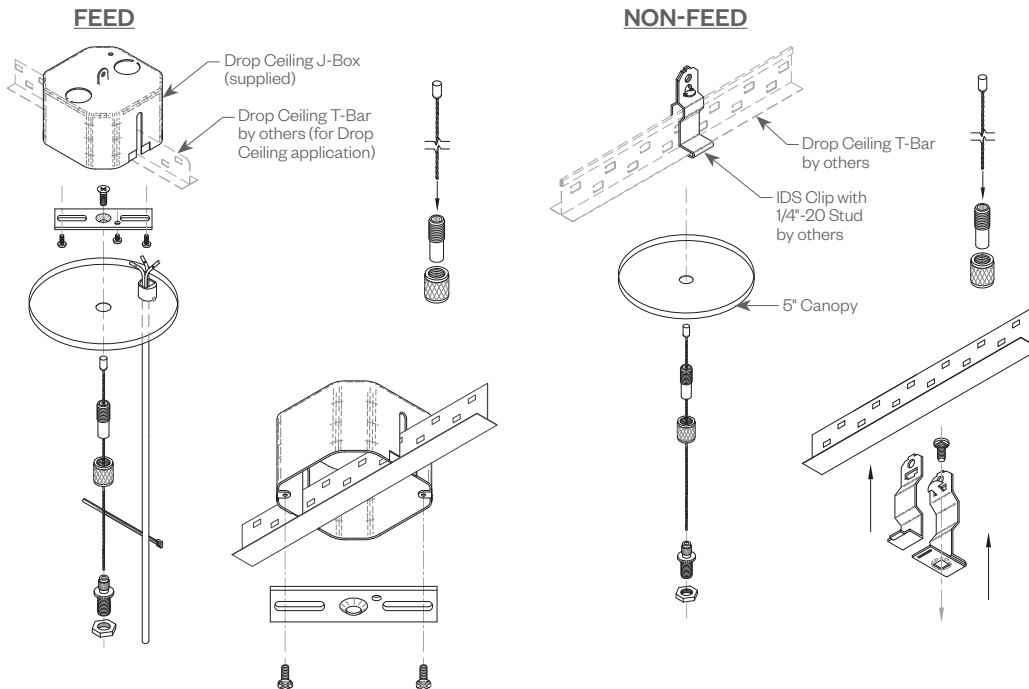
CABLE KIT SUSPENSION OPTIONS:

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)



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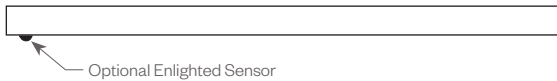
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TYPE:

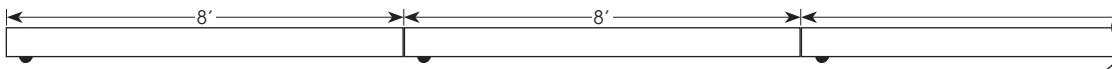
OPTIONAL ENLIGHTENED SENSOR:

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



RUNS



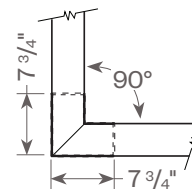
LINEA 3.5" PATTERNS:

Standard Patterns

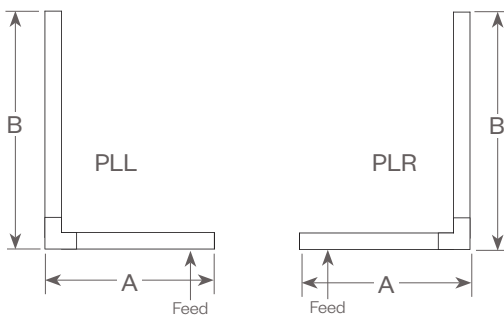
All corners are standard 90°, standard length legs.
 Use standard lengths: 4' min to 8' in 1 foot increments.
 Continuous runs must be the same length in pairs for closed configuration.

Custom Patterns

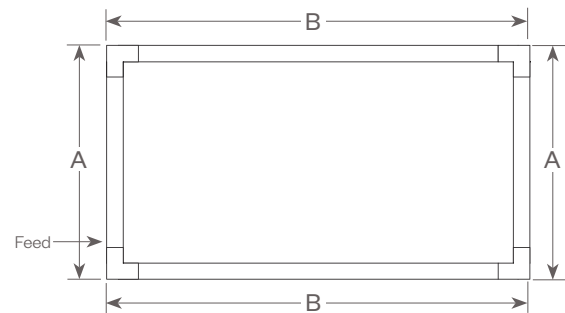
Please provide drawings of your configuration.
 Made to Measure: +/- 1/8", consult factory.
 PC - custom pattern, please provide drawings and consult factory



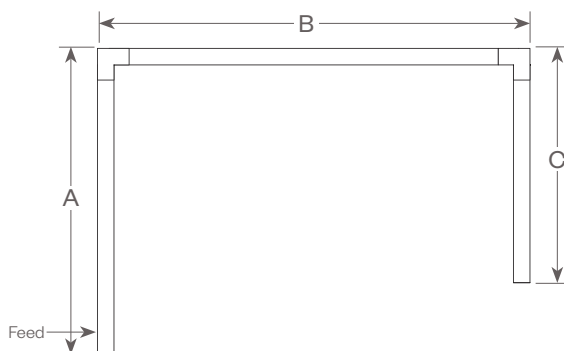
Linea 3.5 Lens
Mitered Lens



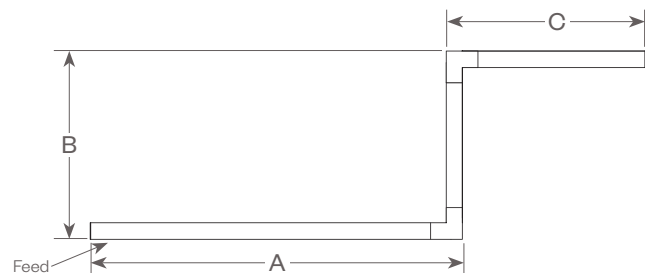
PLL - L Left, (2) straights + (1) 90° corner, leg right
PLR - L Right, (2) straights + (1) 90° corner, leg left
 Provide overall lengths: A' & B'
 Nomenclature: A-B-PLL A-B-PLR



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

Linea[®] 3.5" Direct

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PROJECT:

TYPE:

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

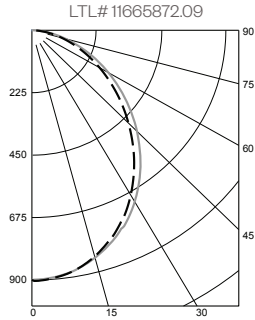
MULTIPLYING FACTORS: (Multiplying Factor is based on 3000K-83 120V IES file on website)

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

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

LINEA 3.5" PERFORMANCE LENS 5W 3500K 4FT

Total Watts: 20
Total Lumens: 2,166
Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1070	49.4
0-60	1775	81.9
0-90	2166	100.0
90-180	0	0.0

Luminaire Efficacy = 108.4 lm/w

COEFFICIENTS OF UTILIZATION

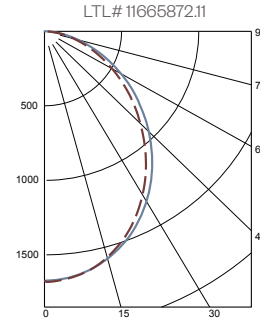
Effective Floor Cavity Reflectance 20%

RC	80			
	70	50	30	10
RW				
RCR				
0	2518	2518	2518	2518
1	2308	2219	2138	2065
2	2106	1951	1821	1710
3	1927	1726	1569	1442
4	1770	1540	1368	1236
5	1633	1384	1207	1074
6	1513	1253	1075	946
7	1407	1141	966	841
8	1313	1046	874	755
9	1230	963	797	683
10	1156	892	731	622

Note: Values expressed as Lumens delivered to the task surface.

LINEA 3.5" PERFORMANCE LENS 10W 3500K 4FT

Total Watts: 40
Total Lumens: 4,021
Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1984	49.3
0-60	3292	81.9
0-90	4021	100.0
90-180	0	0.0

Luminaire Efficacy = 100.3 lm/w

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC	80			
	70	50	30	10
RW				
RCR				
0	4675	4675	4675	4675
1	4285	4119	3969	3834
2	3910	3621	3379	3173
3	3576	3203	2911	2675
4	3285	2857	2539	2293
5	3031	2568	2239	1993
6	2808	2325	1995	1755
7	2611	2118	1792	1561
8	2437	1941	1622	1401
9	2283	1788	1479	1267
10	2145	1655	1356	1155

Note: Values expressed as Lumens delivered to the task surface.

Linea[®] 3.5" Direct

Linear Direct LED



PROJECT:

TYPE:

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

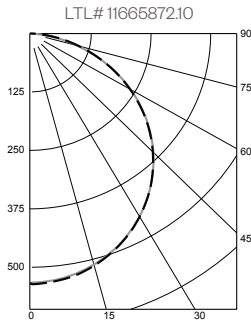
MULTIPLYING FACTORS: (Multiplying Factor is based on 3000K-83 120V IES file on website)

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

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

LINEA 3.5" DESIGNER LENS 5W 3500K 4FT

Total Watts: 20
Total Lumens: 1,540
Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	679	44.1
0-60	1207	78.4
0-90	1541	100.0
90-180	0	0.0

Luminaire Efficacy = 77.1 lm/w

COEFFICIENTS OF UTILIZATION

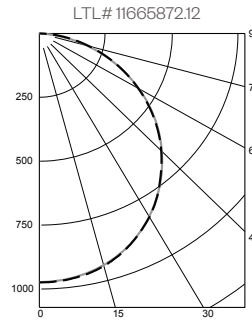
Effective Floor Cavity Reflectance 20%

RC	80			
	70	50	30	10
RW				
RCR				
0	1791	1791	1791	1791
1	1631	1563	1502	1447
2	1478	1361	1263	1179
3	1345	1194	1076	980
4	1229	1057	929	830
5	1130	945	813	715
6	1043	851	719	624
7	968	772	642	550
8	901	704	578	491
9	842	647	525	441
10	790	597	479	400

Note: Values expressed as Lumens delivered to the task surface.

LINEA 3.5" DESIGNER LENS 10W 3500K 4FT

Total Watts: 40
Total Lumens: 2,819
Source: 128 White LED's



ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	1247	44.2
0-60	2207	78.3
0-90	2819	100.0
90-180	0	0.0

Luminaire Efficacy = 70.4 lm/w

COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC	80			
	70	50	30	10
RW				
RCR				
0	3278	3278	3278	3278
1	2983	2860	2748	2646
2	2705	2490	2310	2158
3	2461	2185	1969	1795
4	2250	1936	1702	1521
5	2069	1730	1489	1309
6	1910	1558	1317	1142
7	1772	1413	1177	1009
8	1650	1291	1060	899
9	1543	1185	962	809
10	1448	1094	879	733

Note: Values expressed as Lumens delivered to the task surface.

Linea[®] 3.5" Direct

Linear Direct 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†:

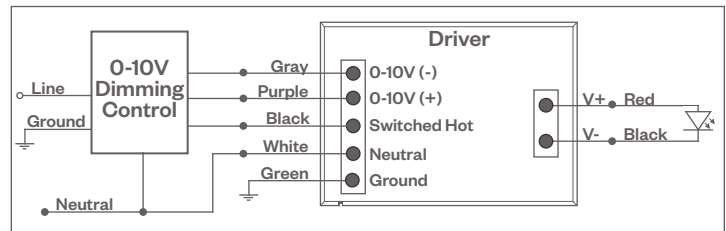
Wall Box

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

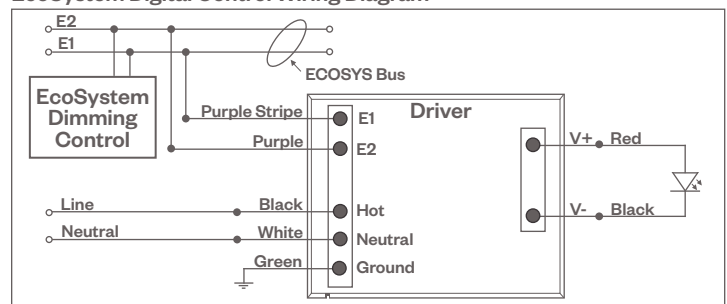
Lutron:
Diva
Maestro
Nova-T
Vareo

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[®] 3.5" Direct

Linear Direct 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)

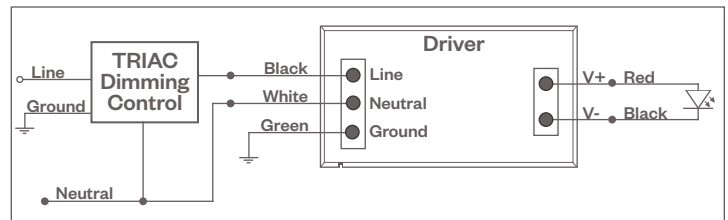
Lutron:

- 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[†]:

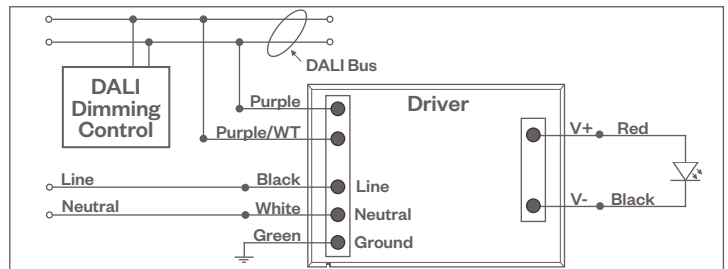
Wall Box

Leviton CD250 Controller

Center System

- Dynalite
- Fifth Light

DALI Wiring Diagram



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