# Carisma 2" Linear Direct/Indirect LED



PROJECT:



#### **Features**

Carisma Pendant is part of a family of architectural linear luminaires that offer excellent performance, quality, visuals and value. A sleek edge-to-edge lens design results in an elegant aesthetic with clean lines. Carisma's patent pending design includes an integrated optical system that minimizes optical losses, allowing for industry-leading efficacy that meets the stringent requirements for DLC Listing (DLC Listing pending). A tailored end cap design and Amerlux's trusted catch-and-latch mechanism prevents all light leakage.

The Carisma Pendant offers luminaires with 2" wide apertures, delivering seamless lighting as discrete individual fixtures, continuous rows or patterns. Carisma can be specified to the nearest 1/8" and is available in pendant, surface, wall and recessed mounted options, providing designers with the versatility to light up a space with their Carisma.

#### **Product Overview**

Type: Direct/Indirect distribution with Pendant or Wall Mounting

Performance lens down/Batwing lens up

Wattage: 5W/ft, 10W/ft (or specify both direct & indirect wattage each

between 3W/ft and 10W/ft)

Color Temp: 2700K\*, 3000K, 3500K, 4000K (\* 90+ CRI only)

CRI: 80+ or 90+

Dimming (wired): 0-10V, 1% dimming (standard)

Lutron Hi-lume® EcoSystem, 1% dim, fade to off

DALI dimming, 1% dim

Dimming (wireless): Enlighted Sensor

Lutron Athena (integral wireless RF node)

#### TYPE:

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

#### **Performance Chart**

Wattage Per Foot	Delivered Lumens Direct	LPW	Delivered Lumens Indirect	LPW	Color Temp	CRI
5/5	2519	126.8	2624	142.0	3500K	+08
10/10	4755	122.8	4979	135.6	3500K	80+

Data is based on 3500K-80 IES files available on website

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

#### Runs

Individual Runs: 2' - 8' (specify in 1' increments)

Continuous Runs: >8' (specify to the nearest foot)

Custom: Made to measure lengths available (specify to nearest 1/8" of field dimensions). Requires approval drawings. Added cost & lead time.

#### **Electrical Data**

		4'		4'		8	•
Wattage Per Foot		System Watts	Amps	System Watts	Amps		
5/5	120V	38.3	0.32	78.4	0.65		
0/0	277V	37.3	0.15	78.3	0.30		
10/10	120V	75.4	0.63	154.9	1.30		
10/10	277V	75.4	0.29	152.0	0.56		

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

#### **Standard Patterns**

"L_"	""	"Ш"	""	""	Wall to Ceiling	Custom
Yes	Yes	Yes	Yes	Yes	No	No







Linear Direct/Indirect LED



PROJECT: TYPE:

#### **Ordering Information**

CAR2-DI						٠٠	120/277		_••_		_•
1	2	3	4	5	6	7	8	9	10	11	12

- 1 Model CAR2-DI
- Optics (select 1 for direct & 1 for indirect)

  Direct:
  - PL performance lens

Indirect:

BAT - batwing lens

- Mounting
  - ASW04 through ceiling tile or gyp board, white, 4'\*
  - ASW10 through ceiling tile or gyp board, white, 10'
  - ASW20 through ceiling tile or gyp board, white, 20'
  - ASB04 through ceiling tile or gyp board, black, 4'\*
  - ASB10 through ceiling tile or gyp board, black, 10'
  - ASB20 through ceiling tile or gyp board, black, 20'
  - ASW04T over ceiling tee, white, 4'\*
  - ASW10T over ceiling tee, white, 10'
  - ASW20T over ceiling tee, white, 20'
  - ASBO4T over ceiling tee, black, 4'\*
  - ASB10T over ceiling tee, black, 10'
  - ASB20T over ceiling tee, black, 20'
  - WM wall mount
  - \* 4' (xxx04) is standard length, other lengths are additional charge
- <u>Circuiting</u>
  - 1 single circuit, direct & indirect are on the same circuit
  - 2 dual circuit, direct & indirect controlled independently

Note: 3' & below lengths must use single circuit.

<u>Wattage</u> (per foot, direct/indirect)

Standard: 5/5

10/10

5/10

10/5

Optional: Specify both direct & indirect wattage, each between 3 & 10 W/fr

Note: If specifying different wattage for direct and for indirect, then must specify dual circuit.

6 Color Temp

 80+ CRI:
 90+ CRI:

 30 - 3000K-80+
 279 - 2700K-90+

 35 - 3500K-80+
 309 - 3000K-90+

 40 - 4000K-80+
 359 - 3500K-90+

 409 - 4000K-90+

Finish

HW - high reflectance matte white

BT - black texture

ST - silver texture

For other RAL color, consult factory

- 8 <u>Voltage</u> 120/277
- 9 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		

Configuration

IND1 - individual fixture, 2' to 8' in 1' increments

CON - continuous run > than 8', specify to nearest foot

CUS - custom made to measure lengths (specify to nearest 1/8" of 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

11 Drivers/Controls

Wired - Static White:

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

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

DALI - DALI Dimming 120-277VAC, 1% dim

Wireless - Static White:

**ENLS-SR** - Enlighted sensor, energy metering (not available on 2' & 3' lengths)

**ENLS-010** - Enlighted sensor with controller unit (not available on 2' & 3' lengths)

**AWNR-WH-SR** - Lutron Athena wireless node, RF only, white, D4i/DALI-2

AWNR-BL-SR - Lutron Athena wireless node, RF only, black, D4i/DALI-2

**AWNR-WH-010** - Lutron Athena wireless node, RF only, white, O-10V

**AWNR-BL-010** - Lutron Athena wireless node, RF only, black, O-10V

AWNR-OCC-WH-SR - Lutron Athena wireless node, Occupancy & Daylight sensor, white, D4i/DALI-2

**AWNR-OCC-BL-SR** - Lutron Athena wireless node, Occupancy & Daylight sensor, black, D4i/DALI-2

Options/Accessories

**EMC-PF<sup>2</sup>** - emergency circuit requires power feed located in last fixture section (for other locations consult factory)

PF<sup>2</sup> - Extra power feed for additional circuiting

**EMB\*** - emergency battery pack (not available for lengths under 4')

<sup>1 -</sup> Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.

<sup>2 -</sup> Not available with IND (individual) configuration.

Linear Direct/Indirect LED



### PROJECT: TYPE:

#### **Specifications**

#### Construction

Extruded aluminum housing and reflector. Die-cast end caps match fixture body finish.

Weight: 2.5 lbs/ft (may vary based on configurations and accessories)

#### Optical

#### Direct:

All Direct 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.

#### Indirect:

Extruded acrylic lens with a maximum length of 4'.

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

#### LED

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:** 80+ 90+

**R9:** 16 @ ORI 83; **R9:** >50 @ ORI 92

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

\* Available in 90+ CRI only

#### Electrical

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

- 1 Single Circuit, direct & indirect are on the same circuit
- 2 Dual Circuits, direct & indirect controlled independently

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

 $\label{lem:optional Wattages: 3W/ft, 4W/ft, 6W/ft, 7W/ft, 8W/ft, 9W/ft. (3W \& 4W have a minium length of 4'). For other wattages consult factory.}$ 

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

#### Straights:

 $\mbox{IND}$  - Individual fixtures are made of single standard lengths of  $2~\mbox{ft}$  to  $8~\mbox{ft}$  (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. 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.

#### Patterns:

**PXX**- Standard Patterns consist of  $90^{\circ}$  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'

 $\mbox{A'-B'-PR}$  - Rectangle - (4) 90° Corners joining 4 segments. Specify overall segments: A' & B'

 $\mbox{A'-B'-C'-PU}$  - 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.

#### Mounting

The Carisma Direct/Indirect is intended for pendant or wall mounting. For even lighting on ceiling, Amerlux suggests 18" minimum distance from top of fixture to ceiling when pendant mounted.

**Pendant Mount-ASWxx** - Direct/Indirect pendant mounted in center of ceiling tile or gypsum board ceiling (standard) i.e. ASWxx. Or if canopy is installed on a grid Tee runner add, **T** i.e. ASWxxT.

Cable is stranded stainless steel wire. All fittings are protected against rust and corrosion. Canopies are  $5'' \times 1/4''$  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 4', 10' or 20', and mounting condition, in center of ceiling tile and in gypsum board ceiling (standard) i.e. ASWxx. Or if canopy is installed on a grid Tee runner add,  $\bf T$  i.e. ASWxxT

**Wall Mount-WM** - Direct/Indirect wall mounted using steel cleat bracket attached to fixture housing and wall bracket with set screws. Two bracket assemblies are used for each length. A third center bracket may be recommended. J-box required at feed locations.

Please note: Single Circuit is standard, the direct & indirect are on the same circuit. For Dual Circuits, direct & indirect are controlled independently.

#### 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 EM: 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 DLC Listing pending

#### Warranty

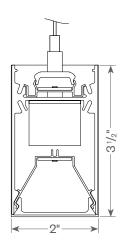
Amerlux's 5 year limited warranty. Please consult Amerlux website for details.

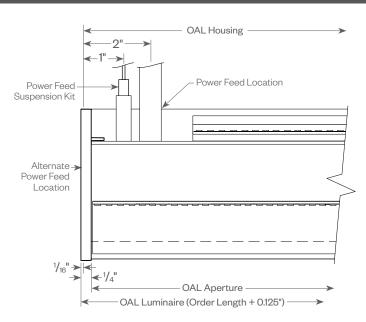
Linear Direct/Indirect LED



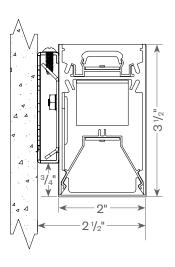
PROJECT: TYPE:

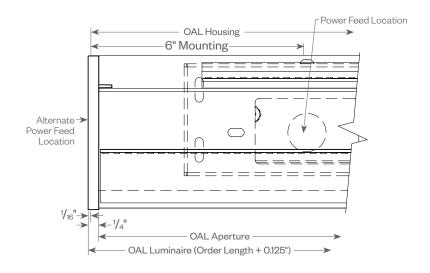
#### **Pendant**





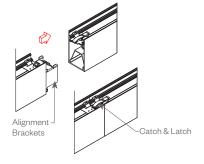
#### **Wall Mount**





#### **TOOLLESS JOINING**

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



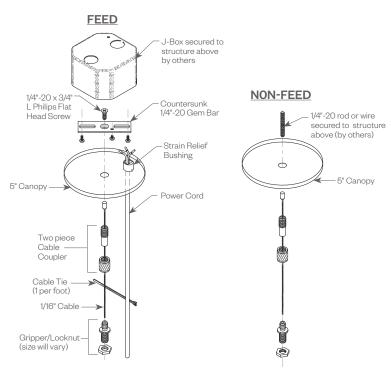
Linear Direct/Indirect LED



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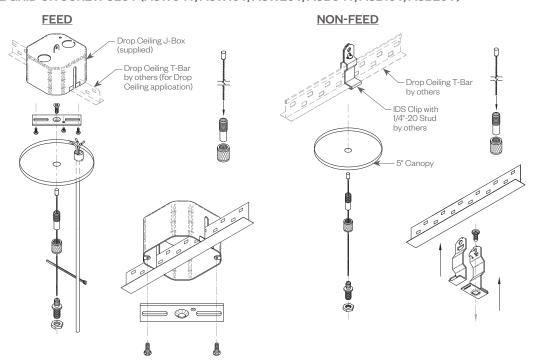
#### **CABLE KIT SUSPENSION OPTIONS:**

CEILING OR GYPSUM BOARD (ASW04, ASW10, ASW20, ASB04, ASB10, ASB20)



Cat#	Length	Cord/Canopy	Application
ASW04	4'	white/white	ceiling tile/gypsum
ASW10	10'	white/white	ceiling tile/gypsum
ASW20	20'	white/white	ceiling tile/gypsum
ASB04	4'	black/black	ceiling tile/gypsum
ASB10	10'	black/black	ceiling tile/gypsum
ASB20	20'	black/black	ceiling tile/gypsum
ASW04T	4'	white/white	ceiling tee
ASW10T	10'	white/white	ceiling tee
ASW20T	20'	white/white	ceiling tee
ASB04T	4'	black/black	ceiling tee
ASB10T	10'	black/black	ceiling tee
ASB20T	20'	black/black	ceiling tee

#### TEE GRID OR SCREW SLOT (ASW04T, ASW10T, ASW20T, ASB04T, ASB10T, ASB20T)



Linear Direct/Indirect LED



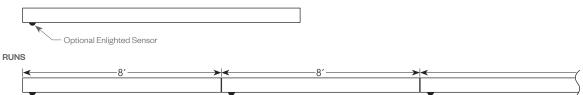
PROJECT: TYPE:

#### **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.

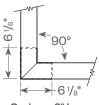
#### INDIVIDUAL (MIN 3' LENGTH)



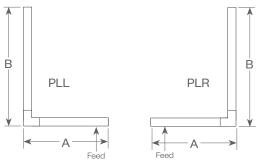
#### **CARISMA 2" PATTERNS:**

#### Standard Patterns

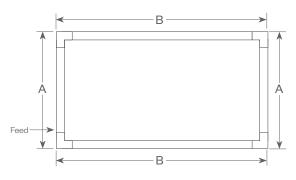
All corners are standard 90°, standard length legs.
Use standard lengths: 4' min to 8' in 1 foot increments.
Continuous runs must be the same length in pairs for closed configuration.



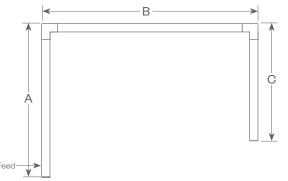
Carisma 2" Lens Mitered Lens



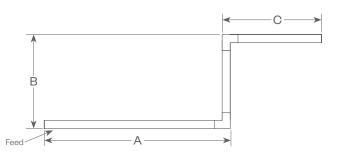
PLL - L Left, (2) straights + (1) 90° corner, leg right
PLR - L Right, (2) straights + (1) 90° corner, leg left
Provide overall lengths: A' & B'
Nomenclature: A-B-PLL
A-B-PLR



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

Linear Direct/Indirect LED



**PROJECT:** 

#### FIXTURE DATA:

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

Wattage:	ЗW	4W	5W	6W	7W	8W	9W	10W
Factor:	0.59	0.78	1.0	1.20	1.40	1.60	1.79	1.98

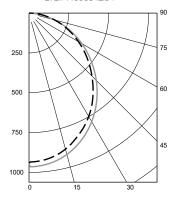
CCT-CRI:	3000K-80	3500K-80	4000K-80	2700K-90	3000K-90	3500K-90	4000K-90
Factor:	0.97	1.0	1.02	0.90	0.92	0.92	0.94

#### CARISMA 2" DIRECT/INDIRECT PERFORMANCE LENS 5W/5W 3500K 4FT

Total Watts: 38 Total Lumens: 5,148 Source: 384 White LED's

#### DIRECT

LTL# 14656342.04



#### **ZONAL LUMEN SUMMARY**

Zone	Lumens	%Fixt
0-40	1154	45.8
0-60	1990	79.0
0-90	2519	100.0
90-180	0	0.0

Efficacy (lumens/watt) = 126.8 lm/W

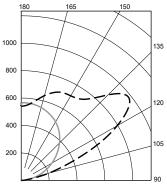
#### COFFEIGIENTS OF LITH IZATION

COEFFIC	COEFFICIENTS OF UTILIZATION									
RC		8	80							
RW	70	50	30	10						
RCR										
0	119	119	119	119						
1	109	104	100	96						
2	99	91	84	78						
3	90	80	71	65						
4	83	71	62	55						
5	76	63	54	48						
6	70	57	48	42						
7	65	52	43	37						
8	61	47	39	33						
9	57	43	35	30						
10	53	40	32	27						

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

# LTL#14626025.02

INDIRECT



#### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	0	0
0-60	0	0
0-90	0	0
90-180	2624	100.0

Efficacy (lumens/watt) = 142.0 lm/W

#### COEFFICIENTS OF UTILIZATION

COLITIOLETTIC CT CTILILATION								
RC		8	0					
RW	70	50	30	10				
RCR								
0	95	95	95	95				
1	87	83	79	76				
2	79	72	66	62				
3	72	63	57	51				
4	65	56	48	43				
5	60	49	42	36				
6	55	44	36	31				
7	50	39	32	27				
8	47	35	28	23				
9	43	32	25	20				
10	40	29	22	18				

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

Linear Direct/Indirect LED



PROJECT: TYPE:

#### **FIXTURE DATA:**

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

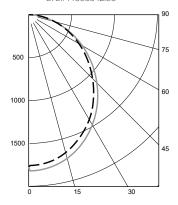
,	Wattage:	ЗW	4W	5W	6W	7W	8W	9W	10W
	Factor:	0.30	0.39	0.50	0.61	0.71	0.81	0.91	1.0

CCT-CRI:	3000K-80	3500K-80	4000K-80	2700K-90	3000K-90	3500K-90	4000K-90
Factor:	0.97	1.0	1.02	0.90	0.92	0.92	0.94

#### CARISMA 2" DIRECT/INDIRECT PERFORMANCE LENS 10W/10W 3500K 4FT

Total Watts: 76 Total Lumens: 9,734 Source: 384 White LED's

#### **DIRECT** LTL#14656342.03



#### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	2177	45.8
0-60	3754	78.9
0-90	4755	100.0
90-180	0	0.0

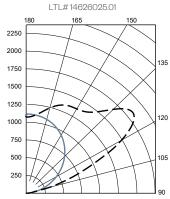
Efficacy (lumens/watt) = 122.8 lm/W

#### COEFFICIENTS OF UTILIZATION

RC		80		
RW	70	50	30	10
RCR				
0	119	119	119	119
1	109	104	100	96
2	99	91	84	78
3	90	80	71	65
4	83	71	62	55
5	76	63	54	48
6	70	57	48	42
7	65	52	43	37
8	61	47	39	33
9	57	43	35	30
10	53	40	32	27
N.L. ( N.Z.)		0/ 0: 11		

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

### INDIRECT



#### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-40	0	0
0-60	0	0
0-90	0	0
90-180	4979	100.0

Efficacy (lumens/watt) = 135.6 lm/W

#### COEFFICIENTS OF UTILIZATION

RC		8	0	
RW	70	50	30	10
RCR				
0	95	95	95	95
1	87	83	79	76
2	79	72	66	62
3	72	63	57	51
4	65	56	48	43
5	60	49	42	36
6	55	44	36	31
7	50	39	32	27
8	47	35	28	23
9	43	32	25	20
10	40	29	22	18

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

Linear Direct/Indirect LED



PROJECT: TYPE:

#### DIMMING COMPATIBILITY:

Amerlux® Carisma 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:

- 120VAC or 277VAC\*
- · 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<sup>†</sup>:

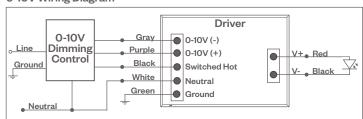
#### Wall Box

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

#### Center System

Lutron Grafixk Eye with GRX-TV1 Interface

#### 0-10V Wiring Diagram



#### **LUTRON HI-LUME ECOSYSTEM DIMMING**

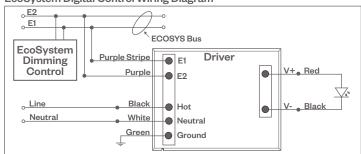
Integrates into Lutron EcoSystem building management

#### Notes:

- 120VAC or 277VAC\*
- Dims down to 1% light output
- · EcoSystem Control
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

#### HILUME-H-ECO

#### EcoSystem Digital Control Wiring Diagram



#### Compatible Dimmers†:

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

#### 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.

Linear Direct/Indirect LED



**PROJECT:** 

#### DIMMING COMPATIBILITY:

Amerlux® Carisma 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

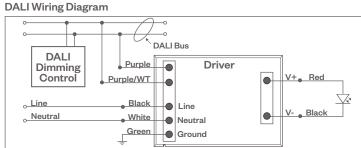
#### Compatible Dimmers<sup>†</sup>:

Wall Box

Leviton CD250 Controller

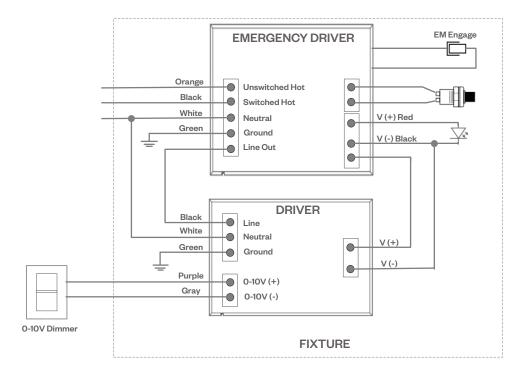
#### Center System

Dynalite Fifth Light



#### EMERGENCY FIXTURE WITH BUILT-IN BATTERY PACK (EMB) WIRING:

Note: EMB not available on lengths under 4'.



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