

Evoke® 2.9" HP

2.9" Square Adjustables



Features

Evoke 2.9 LED fixtures are now available with a higher performance LED module providing 11W, 18W or 20W of lighting power. Featuring the fit, finish and attention to detail of the existing Evoke® line, bringing true performance and control in a fixed downlight, adjustable, wall washer and pinhole. Everything you desire from a small aperture recessed downlight with lumen delivery, energy efficiency, dimming control and color consistency is now a reality in Evoke.

Product Overview

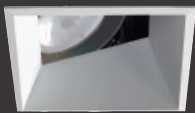
Type:	Recessed Square Adjustable
Wattage:	11, 18, 20
Lumen Output:	1,154 max; 59 Lm/W (spot optic, 25° tilt)
CBCP:	10,839 (spot optic, 25° tilt)
Color Temp:	2200K, 2700K, 3000K, 3500K, 4000K
CRI:	83 typ. (2700K, 3000K, 3500K, 4000K) 90+ typ. (2200K, 2700K, 3000K, 3500K, 4000K) CrispWhite (18W max) & 3K Class A available
Dimming:	TRIAC & ELV (120V/277V) - 5% Dim Lutron Hi-lume® H Series/EcoSystem - 1% dim with soft on, fade to black, 120V/277V 0-10V (120V/277V) - 1% Dim DALI dimming - 1% Dim



Adjustable/Adjustable Shower

PROJECT:

TYPE:



Adjustable Trimless



Pinhole Adjustable

Fixture Type

Round/Square	New Construction	Trim	Trimless
Yes	Yes	Yes	Yes

See separate spec sheets for Round trim fixtures

Shower trim not available in trimless

Performance Chart

Watts	Delivered Lumens	LPW	CBCP	Color Temp
11	635	57.7	5,961	3000K-83
18*	1,039	57.7	9,755	3000K-83
20*	1,154	59	10,839	3000K-83

Data is based on 3000K-83 IES files available on website

Data is Spot optic, 25° tilt. See pages 6-7 for other beam spreads

*2W thermal protector included on 18W & 20W

Electrical Data

	11W		18W*		20W*	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	11	0.09	18	0.15	20	0.17
277V	11	0.04	18	0.06	20	0.07

Electronic constant current LED driver

*2W thermal protector included on 18W & 20W



Evolve[®] 2.9" HP

2.9" Square Adjustables



PROJECT:

TYPE:

Housing/Frame Ordering Information

1	2	3	4	5	6	7	8
1 <u>Model</u> For New Construction E2.9SA-HP-NC-A17* (New Construction) E2.9SA-HP-CP-A17* (Chicago Plenum (CCEA) housing) E2.9SA-HP-IC-A17* (Insulated Ceiling/air tight, 11W only)	2 <u>Style</u> T - trimmed TL - trimless (not available for use with Grid ceiling)	3 <u>Wattage</u> 11 18 (not available for use with IC housing) 20 (not available for use with IC housing)	4 <u>Voltage</u> 120 277 120/277 (for use with IC housing only)	5 <u>Ceiling Mounting</u> GB - gyb board, 5/8" deep collar GRID - grid, 1" deep collar (not available for use with trimless option) <i>For other, consult factory</i>	6 <u>Beam Spreads</u> For SA Trim: SP - spot, 15° NF - narrow flood, 20° MFL - medium flood, 24° FL - flood, 28° WF - wide flood, 45° VWF - very wide flood, 60° LS - linear spread, 60°x10° For SPA/SASHW Trims: SP - spot, 15° NF - narrow flood, 20° MFL - medium flood, 24° FL - flood, 28° WF - wide flood, 45°	7 <u>Color Temp</u> 83 CRI 90+ CRI 27 - 2700K-83 229 - 2200K-90+ CRISP - CrispWhite 30 - 3000K-83 279 - 2700K-90+ (18W max) 35 - 3500K-83 309 - 3000K-90+ 3CLA - 3K Class A 40 - 4000K-83 359 - 3500K-90+ 409 - 4000K-90+	8 <u>Driver</u> (for non-dimming, select LE/TE option) LE/TE - TRIAC/ELV dimming HILUME-H-ECO - Lutron Hi-lume [®] H Series, EcoSystem, 1% dim with soft on, fade to black 0-10V - 0-10V dimming, 1% dim DALI - DALI dimming, 1% dim

Trim Ordering Information

1	2	3
1 <u>Model</u> E2.9SA-HP-A17* (Adjustable) E2.9SPA-HP-A17* (Pinhole Adjustable) E2.9SASHW-HP-A17* (Adjustable Shower, not available for use with trimless option)	2 <u>Style</u> T - trimmed TL - trimless (not available for use with Grid ceiling and/or not available for use with Shower trim)	3 <u>Finish</u> For SA/SASHW Trims (Trimmed): MBW - matte black, white flange MWW - matte white, white flange SLVW - matte silver, white flange For SA/SASHW Trims (Trimless): MB - matte black MW - matte white SLV - matte silver For SPA Trim (Trimmed & Trimless): <u>Faceplate with black baffle</u> MW - matte white

* 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.

Evolve[®] 2.9" HP

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PROJECT:

TYPE:

Specifications

Application

Retail and commercial accent and display lighting

Housing Construction

20 ga. steel painted matte black
Formed aperture plate with 5/8" lip (GB-standard)
Cast aluminum plaster frame with perforated face (for trimless option)
Integral adjustable locking mounting bars
Thermally protected

Reflector Trim Construction

Spring steel mounting clips
For Adjustable & Adjustable Shower Trim:
Die-cast aluminum seamless reflector
Painted finishes include matte white and optical matte black with matte white flange
Adjustable Shower Trim also contains a clear glass lens and silicone flange gasket
For Pinhole Trim:
Die-cast aluminum faceplate painted matte white
Die-cast knife-edge baffle painted matte black

Optical

Cam adjustment mechanism provides lockable 0-40° tilt (0-35° tilt for SPA trim); 360° rotation
Beam spreads: Spot, 15°; Narrow Flood, 20°; Medium Flood, 24°; Flood, 28°; Wide Flood, 45°; Very Wide Flood, 60°; Linear Spread, 60° x 10°

LED

Color Temp Options:
2200K, 2700K, 3000K, 3500K, 4000K
CRI: 83 typ. (2700K, 3000K, 3500K, 4000K)
90+ typ. (2200K, 2700K, 3000K, 3500K, 4000K)
CrispWhite* LED available, 18W max
Class A** 3000K (high CRI, high gamut)
R9 Values: 11 (83 CRI), 55 (92 CRI)
Binning: 3 MacAdam (SDCM)
Life: 50,000+ hrs, > 70% of initial lumens at 50,000 hrs

**CrispWhite: CrispWhite Technology delivers the warmth of colors expected from a high 90 CRI solution but also creates the natural crisp white color that is pleasing to the eye. It creates the most impactful lighting ever available, by revealing the richest whites and vibrant colors that pop.*

***Class A LED: Class A LED's have a CRI > 80 and a GAI > 80. CRI defines color "Naturalness" and GAI defines color "Saturation." Both being high delivers rich colors and pure whites.*

Electrical

Wattage: 11, 18, 20
Electronic constant current LED driver, 120V or 277V input (voltage specific TP on 18W & 20W)
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.

Drivers

LE/TE - Leading Edge, TRIAC, forward phase/Trailing Edge, ELV, reverse phase (standard)
0-10V, Lutron and DALI systems also available
See pages 8-9 for more dimming information

Finish

Wet paint

Mounting

For SA Trimmed fixture:
For use in T-rid or sheetrock ceilings, 5/8" - 1" standard
For SPA/SASHW Trimmed fixture:
GRID: 1" deep aperture collar
GB (gyp board): 5/8" deep aperture collar
Extra thick ceiling ring available for ceilings over 1" thick, consult factory
Note: Tilt adjustment reduced to 30° (15° for Pinhole trim) in ceilings 1-1/4" thick
For Trimless fixture:
For use in sheetrock ceilings, ceiling thickness 5/8"
Consult factory for other ceiling thicknesses or for use in millwork ceilings

Certifications

CSA damp as tested to UL 1598 standards
Damp location
IC/AT (insulated ceiling/air tight) rated, 11W only, optional

Warranty

5 year limited warranty

Evoke® 2.9" HP

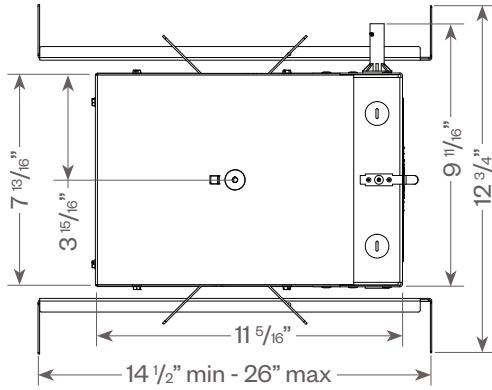
2.9" Square Adjustables



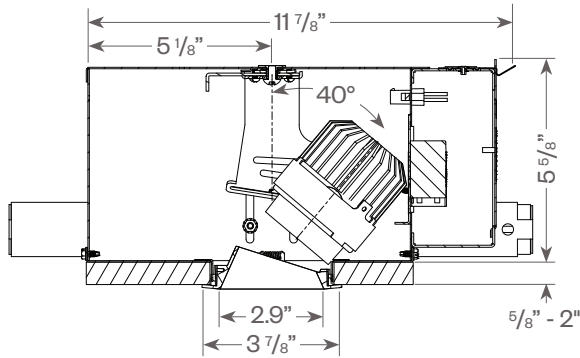
PROJECT:

TYPE:

Evoke HP Square Adjustables:

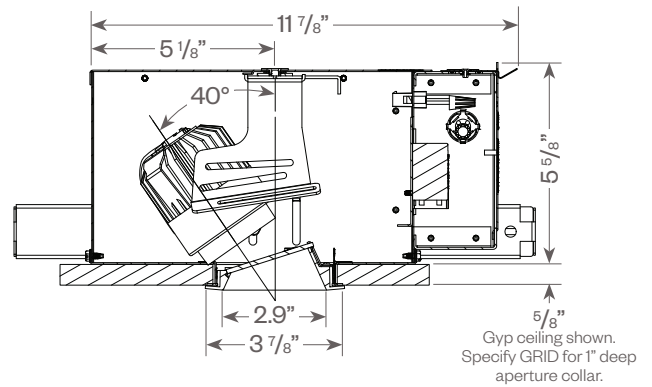


Adjustable



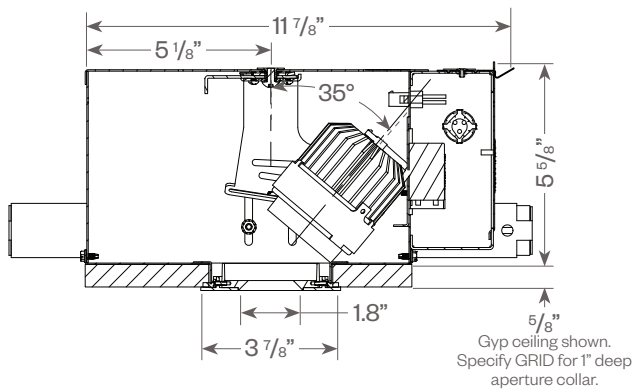
Ceiling cut out: 3 7/16"

Adjustable Shower



Ceiling cut out: 3 7/16"

Pinhole Adjustable



Ceiling cut out: 3 7/16"

Evoke® 2.9" HP

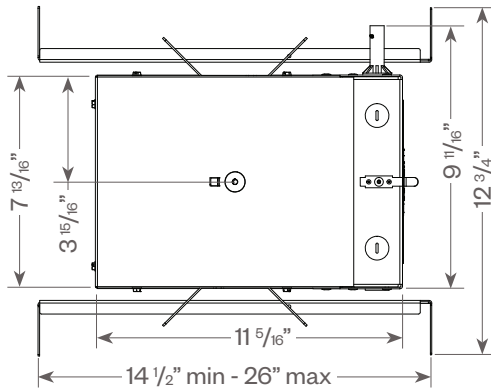
2.9" Square Adjustables



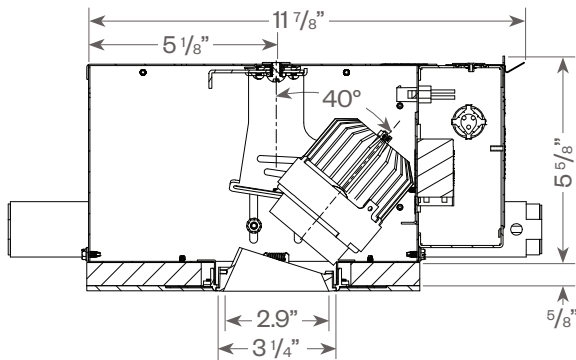
PROJECT:

TYPE:

Evoke HP Square Adjustables Trimless:

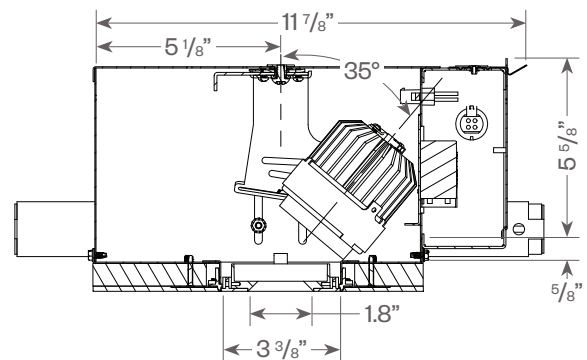


Adjustable Trimless



Ceiling cut out: 4 1/16"

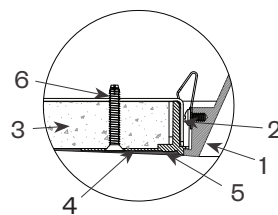
Pinhole Adjustable Trimless



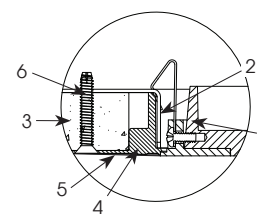
Ceiling cut out: 4 1/16"

Plaster Frame Installation Detail (for trimless fixture only)

1. Reflector Trim
2. Aperture plate
3. Ceiling 5/8"
4. Cast Aluminum Plaster Frame
5. Plaster Skim Coat (by others)
6. 6-32 Type F Thread Cutting Screw



Adjustable



Pinhole

PROJECT:

TYPE:

Evoke HP Square Adjustable:

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

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

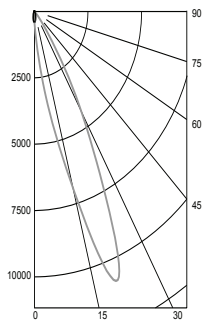
Wattage:	11W	18W	20W
Factor:	0.55	0.9	1.0

CCT:	2700K-83	3000K-83	3500K-83	4000K-83
Factor:	0.96	1.0	1.02	1.04

CCT:	2200K-90+	2700K-90+	3000K-90+	3500K-90+	4000K-90+	CRISP	3CLA
Factor:	0.71	0.80	0.83	0.87	0.90	0.65	0.75

20W LED, 3000K

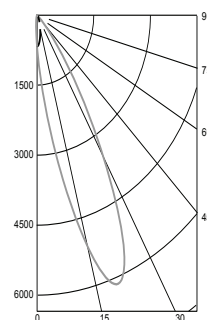
Spot (SP) Distribution, 15°
LTL #1178270
Lumens:



Candelas at Nadir

Deg	Candela
0	412
5	1283
15	6819
20	10760
25	8143
35	1819
45	163

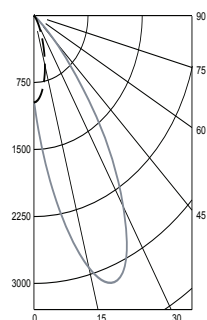
Narrow Flood (NF) Distribution, 20°
LTL#1178271
Lumens:



Candelas at Nadir

Deg	Candela
0	675
5	1602
15	5104
20	6138
25	5402
35	1823
45	242

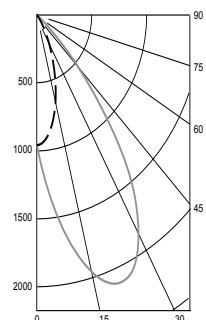
Flood (FL) Distribution, 28°
LTL # 1178273
Lumens:



Candelas at Nadir

Deg	Candela
0	976
5	1593
15	2922
20	3182
25	3004
35	1769
45	440

Wide Flood (WF) Distribution, 45°
LTL # 1178274
Lumens:

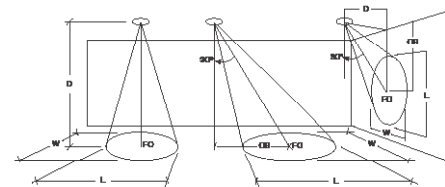


Candelas at Nadir

Deg	Candela
0	959
5	1324
15	1960
20	2104
25	2073
35	1519
45	512

Application Data:

	20° Aiming Angle Horizontal Footcandles					20° Aiming Angle Vertical Footcandles				
	D	FC	L	W	CB	D	FC	L	W	CB
Spot	5.0'	340	1.7	1.4	2.0	3.0'	56	5.1	2.5	6.5
	7.5'	151	2.4	2.0	3.0	4.0'	34	6.6	3.1	8.5
	10.0'	85	3.2	2.8	4.0	5.0'	22	8.3	3.7	10.5
	12.5'	55	4.0	3.5	5.0	6.0'	16	10.2	4.3	12.5
Narrow Flood	5.0'	195	2.2	1.9	2.0	3.0'	41	5.1	2.8	5.5
	7.5'	87	3.2	2.8	3.0	4.0'	25	6.7	3.5	7.5
	10.0'	50	4.3	3.8	3.0	5.0'	17	8.3	4.2	9.5
	12.5'	33	5.1	4.8	4.0	6.0'	12	10.5	5.0	11.5
Flood	5.0'	102	3.0	2.8	2.0	3.0'	32	4.7	3.2	4.5
	7.5'	47	4.4	4.0	2.0	4.0'	19	6.1	4.1	6.5
	10.0'	27	5.7	5.3	3.0	5.0'	13	7.6	5.0	7.5
	12.5'	17	7.2	6.7	4.0	6.0'	9	9.2	6.0	8.5
Wide Flood	5.0'	68	3.7	3.3	2.0	3.0'	28	4.2	3.4	4.5
	7.5'	32	5.3	5.0	2.0	4.0'	17	5.3	4.4	5.5
	10.0'	18	7.0	6.7	3.0	5.0'	11	6.5	5.3	6.5
	12.5'	12	8.8	8.3	4.0	6.0'	8	8.0	6.4	8.5



Notes and Definitions:

Beam spread is to 50% center beam candlepower (CBCP).

D=Distance to floor or wall.

FC=Footcandles on floor or wall at center beam aiming location.

L=Effective Visual Beam length in feet (50% of maximum footcandle level).

W=Effective Visual Beam width in feet (50% of maximum footcandle level).

CB=Distance across or down to center beam location.

Evoke[®] 2.9" HP

2.9" Square Adjustables



PROJECT:

TYPE:

Evoke HP Square Pinhole Adjustable:

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

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

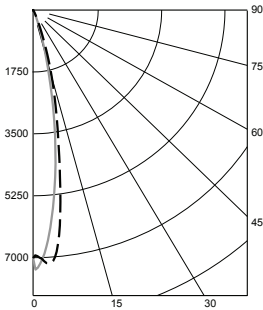
Wattage:	11W	18W	20W
Factor:	0.55	0.9	1.0

CCT:	2700K-83	3000K-83	3500K-83	4000K-83
Factor:	0.96	1.0	1.02	1.04

CCT:	2200K-90+	2700K-90+	3000K-90+	3500K-90+	4000K-90+	CRISP	3CLA
Factor:	0.71	0.80	0.83	0.87	0.90	0.65	0.75

20W LED, 3000K

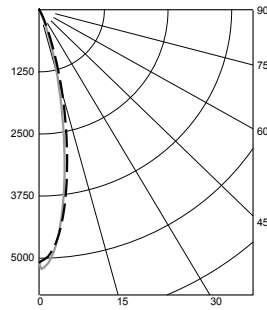
Spot (SP) Distribution, 15°
LTL #1178270
Lumens: 1154



Candelas at Nadir

Deg	Candela
0	7011
5	5770
15	1178
25	97
35	10
45	2

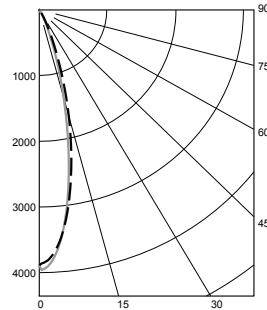
Narrow Flood (NF) Distribution, 20°
LTL #1178271
Lumens: 1074



Candelas at Nadir

Deg	Candela
0	5097
5	4472
15	1346
25	157
35	16
45	3

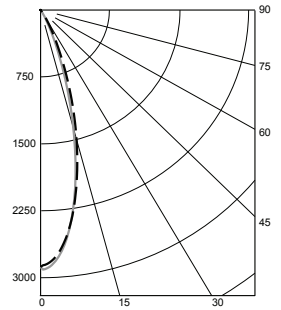
Flood (FL) Distribution, 28°
LTL # 1178273
Lumens: 1047



Candelas at Nadir

Deg	Candela
0	3887
5	3554
15	1434
25	237
35	21
45	3

Wide Flood (WF) Distribution, 45°
LTL # 1178274
Lumens: 1004



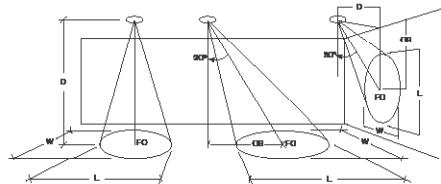
Candelas at Nadir

Deg	Candela
0	2879
5	2701
15	1386
25	288
35	22
45	3

Application Data:

0° Aiming Angle Horizontal Footcandles

	D	FC	L	W
Spot	5.0'	211	1.9	2.3
	7.5'	111	2.7	3.1
	10.0'	66	3.4	4.0
	12.5'	43	4.1	5.0
Narrow Flood	5.0'	156	2.2	2.4
	7.5'	80	3.0	3.3
	10.0'	47	3.8	4.3
	12.5'	31	4.8	5.3
Medium Flood	5.0'	125	2.5	2.6
	7.5'	62	3.4	3.7
	10.0'	37	4.5	4.8
	12.5'	24	5.5	5.9
Flood	5.0'	97	2.8	2.9
	7.5'	47	3.8	4.0
	10.0'	27	5.1	5.4
	12.5'	18	6.3	6.7



Notes and Definitions:

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L=Effective Visual Beam length in feet (50% of maximum footcandle level).

W=Effective Visual Beam width in feet (50% of maximum footcandle level).

CB=Distance across or down to center beam location.

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PROJECT:

TYPE:

DIMMING COMPATIBILITY:

Amerlux® Evoke 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 ---

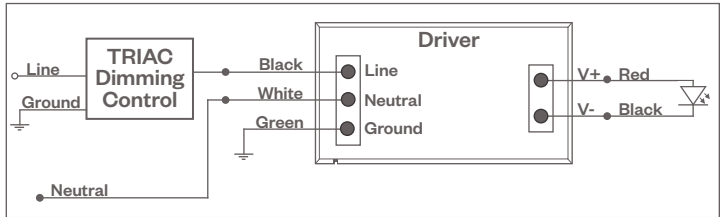
TRIAC (Forward Phase) DIMMING (Standard)

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 or 277V*
- Dims down to less than 5% light output (most cases)
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!
- Must meet dimmer Minimum Load Requirements per dimming manufacturer

TRIAC Wiring Diagram



Compatible Dimmers†:

Wall Box (Incandescent Style, Wattage as required)		Central System
Lutron "Diva"	Lutron "Vareo"	Lutron "GP" Panel
Lutron "Nova-T"	Lutron "Skylark"	Lutron Grafik Eye QS
Lutron "Maestro"		

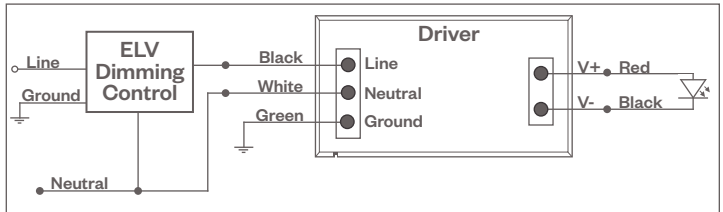
ELV - Electronic Low Voltage (Reverse Phase) DIMMING (Standard)

Utilizes specialized "ELV" dimmers.

Notes:

- 120V or 277V*
- Dims down to less than 5% light output (most cases)
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!
- Must meet dimmer Minimum Load Requirements

ELV Wiring Diagram



Compatible Dimmers†:

Wall Box (ELV Style)		Central System
Lutron "Diva"	Leviton "Surslide"	Lutron "GP" Panel with PHPM-PA Interface
Lutron "Nova-T"	Leviton "Vizio"	Lutron Grafik Eye QS with PHPM-PA Interface
Lutron "Maestro"		
Lutron "Vareo"		
Lutron "Skylark"		

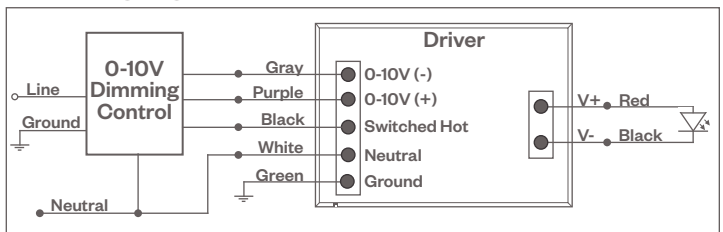
0-10V - DIMMING (-0-10V Option)

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 "Diva" - DVTV with PP-120H Interface	Lutron Grafik Eye with GRX-TVI Interface
Leviton Renoir II 0-10V	

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.

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TYPE:

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LUTRON H-SERIES / ECOSYSTEM (-HILUME-H-ECO Option)

Integrates into Lutron EcoSystem building management

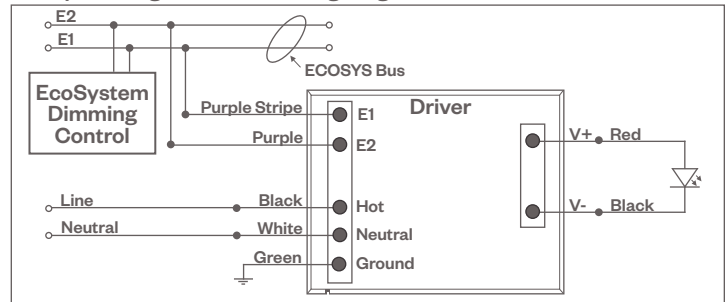
Notes:

- 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	Central System
Lutron "Diva"	Lutron EcoSystem compatible controls
Lutron "Nova-T"	
Lutron "Maestro"	
Lutron "Vareo"	

**HILUME-H-ECO, HILUME-5-ECO
EcoSystem Digital Control Wiring Diagram**



DALI DIMMING (-DALI OPTION)

Digital control protocol allows individual fixture control

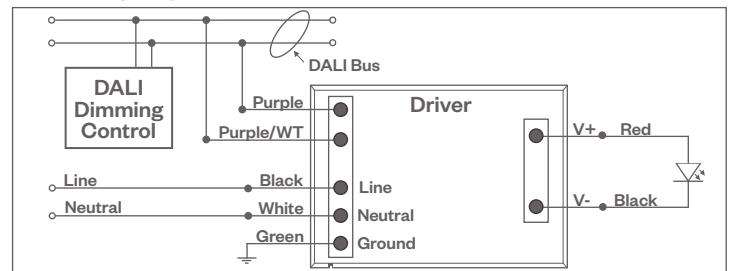
Notes:

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

Compatible Dimmers†:

Wall Box (3-Wire Fluorescent)	Central System
Leviton CD250 Controller	Dynalite
	Fifth Light

DALI 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.