Evoke® 2.9" HP

2.9" Square Downlight

amerlux
A Delta Group Company

Downlight

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 Downlight
Wattage:	11, 18, 20
Lumen Output:	1,100 max; 54.4 Lm/W (spot optic)
CBCP:	9,764 max (spot optic)
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 (120/277VAC) - 5% Dim
	Lutron Hi-lume® H Series/EcoSystem - 1% dim with soft on, fade to black, 120/277VAC
	0-10V (120/277VAC) - 1% Dim
	DALI dimming - 1% Dim

PROJECT:

TYPE:

Downlight Trimless

Fixture Type

Round/Square	New Construction	Trim	Trimless
Yes	Yes	Yes	Yes

See separate spec sheet for Round trim fixture

Performance Chart

Watts	Delivered Lumens	LPW	CBCP	Color Temp
11	605	55	5,370	3000K-83
18*	990	55	8,788	3000K-83
20*	1,100	54.4	9,764	3000K-83

Data is based on 3000K-83 IES files available on website
Data is Spot optic. See page 5 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

CSA c us

5 year limited warranty
AMERLUX LED

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PROJECT: **TYPE:**

Housing/Frame Ordering Information

_____._____._____._____._____._____

[1]   **[2]**   **[3]**   **[4]**   **[5]**   **[6]**

[1] Model
For New Construction
E2.9SD-HP-NC-A17† (New Construction)
E2.9SD-HP-CP-A17† (Chicago Plenum (CCEA) housing)
E2.9SD-HP-IC-A17† (Insulated Ceiling/Air Tight, 11W only)

[2] Style
T - trimmed
TL - trimless (not available for use with Grid ceiling)

[3] Wattage
11
18 (not available for use with IC housing)
20 (not available for use with IC housing)

[4] Voltage
120
277
120/277 (for use with IC housing only)

[5] Ceiling Mounting
GB - gyb board, 5/8" deep collar
GRID - grid, 1" deep collar (not availble for use with trimless option)
For other ceiling type, consult factory

[6] Driver (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

E2.9SD-HP-A17_____._____._____._____._____._____

[1]   **[2]**   **[3]**   **[4]**   **[5]**   **[6]**

[1] Model
E2.9SD-HP-A17†

[2] Style
T - trimmed
TL - trimless (not available for use with Grid ceiling)

[3] Finish

Trimmed	Trimless
MBW - matte black, white flange	**MB** - matte black
MWW - matte white, white flange	**MW** - matte white
SLVW - matte silver, white flange	**SLV** - matte silver

[4] Beam Spreads
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° x 10°

[5] Color Temp

83 CRI	90+ CRI	
27 - 2700K-83	**229** - 2200K-90+	**CRISP** - CrispWhite (18W max)
30 - 3000K-83	**279** - 2700K-90+	**3CLA** - 3K Class A
35 - 3500K-83	**309** - 3000K-90+	
40 - 4000K-83	**359** - 3500K-90+	
	409 - 4000K-90+	

[6] Options/Accessories
WET - wet location (not available for use with trimless option)

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† 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.

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PROJECT: **TYPE:**

Specifications

Application

Retail and commercial ambient and task 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

Die-cast aluminum seamless reflector
Painted finishes include matte white and optical matte black with matte white flange
Wet location option adds clear glass lens and silicone flange gasket

Optical

Beam spreads: Spot, 15º; Narrow Flood, 20º; Medium Flood, 24º; Flood, 28º; Wide Flood, 45º; Very Wide Flood, 60º; Linear Spread, 60º x 10º

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, 129/277VAC 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 6-7 for more dimming information

Finish

Wet paint

Mounting

For Trimmed fixture:
For use in T-grid or sheetrock ceilings, 5/8" - 1" standard

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
Wet location (optional)
IC/AT (insulated ceiling) rated, 11W only, optional

Warranty

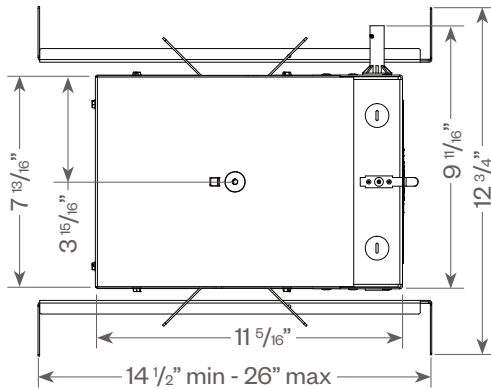5 year limited warranty
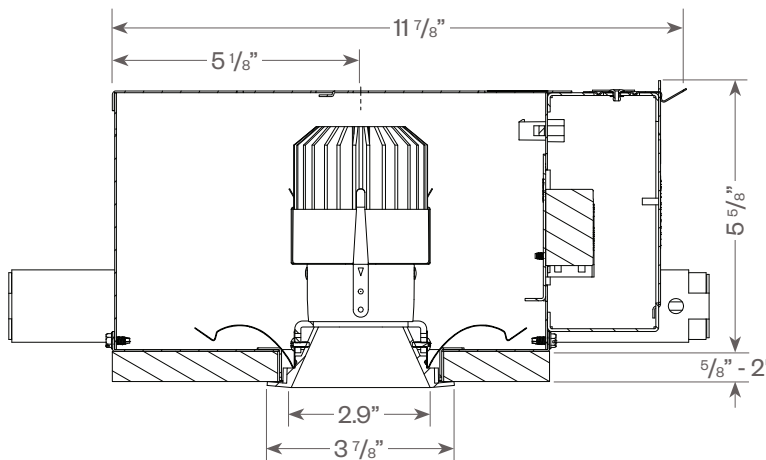
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PROJECT: **TYPE:**

Evoke HP Square Downlight:

7 ¹³/₁₆"
3 ¹⁵/₁₆"
9 ¹¹/₁₆"
12 ³/₄"
11 ⁵/₁₆"
14 ¹/₂" min - 26" max

Trimmed

11 ⁷/₈"
5 ¹/₈"
5 ⁵/₈"
⁵/₈" - 2"
2.9"
3 ⁷/₈"

Ceiling cut out: 3 ⁷/₁₆"

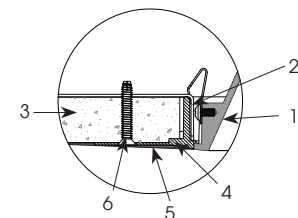## Trimless

11 ⁷/₈"
5 ¹/₈"
5 ⁵/₈"
⁵/₈"
2.9"
3 ¹/₄"
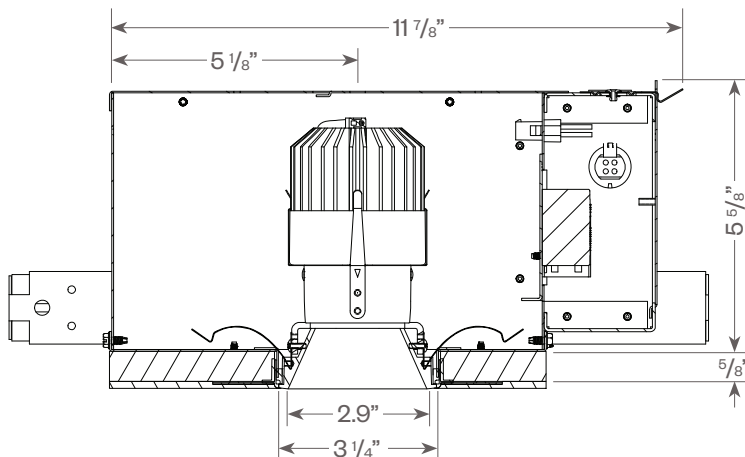
Ceiling cut out: 4 ¹/₁₆"

Plaster Frame Installation Detail
(for trimless fixture only)

3
2
1
6
5
4

1. Reflector Trim
2. Aperture plate
3. Ceiling ⅝"
4. Cast Aluminum Plaster Frame
5. Plaster Skim Coat (by others)
6. 6-32 Type F Thread Cutting Screw

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PROJECT: **TYPE:**

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

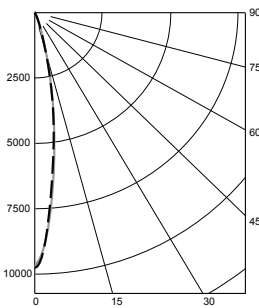**MULTIPLYING FACTORS:** (Multiplying Factor is based on 3000K-83 120V IES file on website)

Wattage:	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, 15º
LTL #1178277
Lumens: 1,100

Candelas at Nadir

Deg	Candela
0	9764
5	7059
15	1462
25	189
35	9
45	2

Narrow Flood (NF) Distribution, 20º
LTL#1178278
Lumens: 1,013
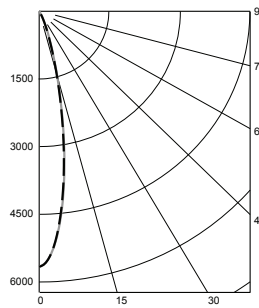
Candelas at Nadir

Deg	Candela
0	5663
5	4861
15	1589
25	274
35	17
45	3

Flood (FL) Distribution, 28º
LTL # 1178280
Lumens: 973
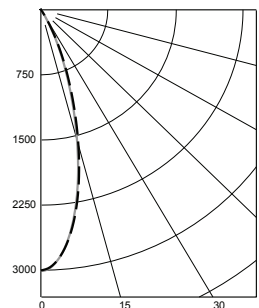
Candelas at Nadir

Deg	Candela
0	3004
5	2802
15	1568
25	457
35	31
45	5

Wide Flood (WF) Distribution, 45º
LTL # 1178281
Lumens: 916
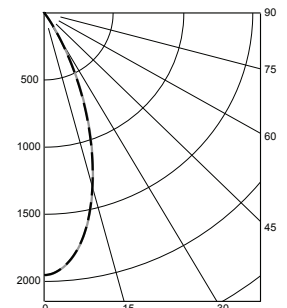
Candelas at Nadir

Deg	Candela
0	1953
5	1877
15	1341
25	592
35	75
45	8

Application Data:

0º Aiming Angle Horizontal Footcandles

Spot

D	FC	L	W
5.0'	237	1.9	1.9
7.5'	130	2.6	2.6
10.0'	81	3.3	3.2
12.5'	54	3.9	3.8

Narrow Flood

D	FC	L	W
5.0'	168	2.3	2.3
7.5'	87	3.1	3.1
10.0'	52	3.9	3.9
12.5'	34	4.9	4.8

Flood

D	FC	L	W
5.0'	102	2.9	2.9
7.5'	49	4.0	4.1
10.0'	29	5.3	5.5
12.5'	19	6.6	6.8

Wide Flood

D	FC	L	W
5.0'	70	3.4	3.4
7.5'	33	5.0	4.9
10.0'	19	6.6	6.6
12.5'	12	8.1	8.2
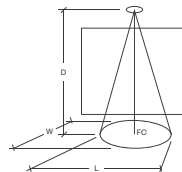
Notes and Definitions:

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.

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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:
- 120VAC or 277VAC*
- 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
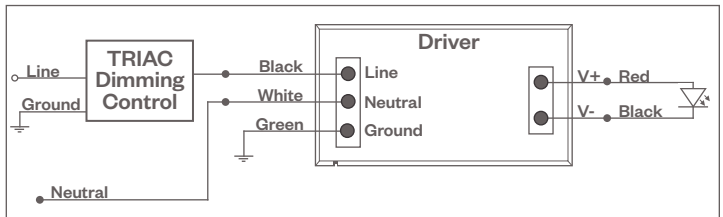
Compatible Dimmers†:

| 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:
- 120VAC or 277VAC*
- 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
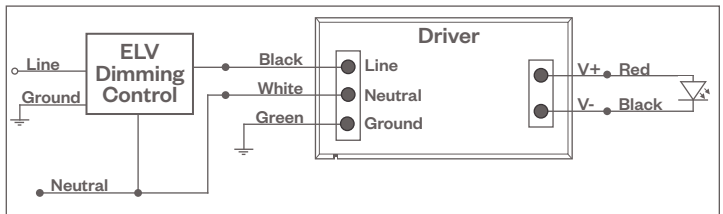
Compatible Dimmers†:

| 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:
- 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!

0-10V Wiring Diagram
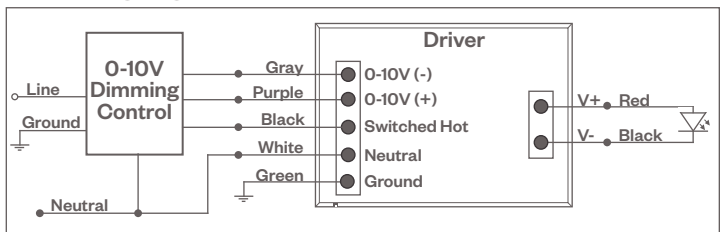
Compatible Dimmers†:

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

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.

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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.

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

Integrates into Lutron EcoSystem building management

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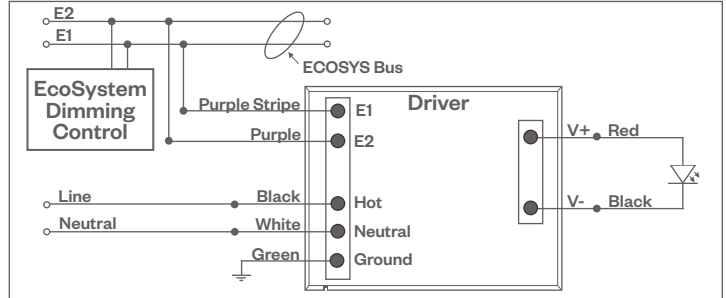- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

HILUME-H-ECO, HILUME-5-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	

DALI DIMMING (-DALI OPTION)

Digital control protocol allows individual fixture control

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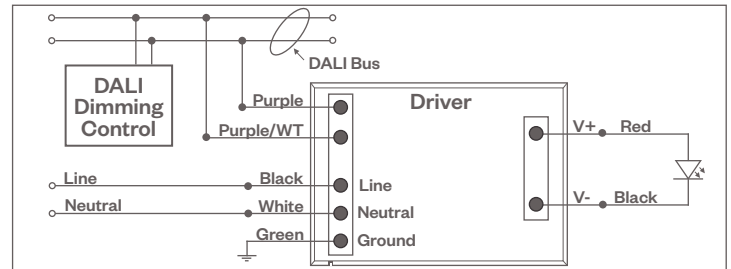- Dims down to 1% light output in most cases

DALI Wiring Diagram

Compatible Dimmers†:

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

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.