

Hornet[®] HP

Recessed Multiples



Features

Hornet High Power (HP) Multiples perform beautifully, punching through higher ambient light with strong output making them perfect for retail applications. For a clean ceiling aesthetic or when track is not an option, Hornet HP Multiples are ideal for delivering great performance, energy efficiency, and maximum control over where and how you want to place light.

Product Overview

Type:	Recessed Multiple, Accent & Display
Wattage:	11, 16, 18
Lumen Output:	1,369 max; 76 Lm/W (spot optic)
CBCP:	12,215 max (spot optic)
Color Temp:	2200K, 2700K, 3000K, 3500K, 4000K, CRISP
CRI:	83 typ. (2700K, 3000K, 3500K, 4000K) 90+ typ. (2200K, 2700K, 3000K, 3500K, 4000K) CrispWhite (16W 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 (120/277VAC) - 1% Dim



PROJECT:

TYPE:



2 Light



3 Light



4 Light (Trimless version shown)

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

Fixture Type

# of Heads	New Construction	Remodeler	Trim	Trimless
1	Yes	No	Yes	Yes
2	Yes	No	Yes	Yes
3	Yes	No	Yes	Yes
4	Yes	No	Yes	Yes

See separate spec sheet for Semi-Recessed or Remodeler versions.

Performance Chart

Watts	Delivered Lumens	LPW	CBCP	Color Temp
11	972	88	8,673	3000K-83
16	1,205	75	10,749	3000K-83
18	1,369	76	12,215	3000K-83

Data is based on 3000K-83, 120V IES files available on website

Data is "per head" and based on Spot optic

See page 10 for other beam spreads



PROJECT:

TYPE:

Frame Ordering Information

HORNET-HP-R/SR-NC-FRAME					
1	2	3	4	5	6
1 <u>Model</u> HORNET-HP-R/SR-NC-FRAME (new construction)				4 <u>Voltage</u> 120 277	
2 <u>Style</u> T - trimmed TL - trimless				5 <u>Driver</u> (for non-dimming select LE/TE option) LE/TE - TRIAC/ELV dimming, 5% dim (standard) 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 - EldoLED; 1% dim	
3 <u># of Heads</u> 1 2 3 4				6 <u>Options/Accessories</u> EM - emergency battery pack, available on 2, 3 or 4 light - powers only 1 head of the the total fixture	

Trim Ordering Information

HORNET-HP-R-NC-TRIM										
1	2	3	4	5	6	7	8	9	10	
1 <u>Model</u> HORNET-HP-R-NC-TRIM (new construction)							8 <u>Color Temp</u> 83 CRI: 27 - 2700K-83 30 - 3000K-83 35 - 3500K-83 40 - 4000K-83 90+ CRI: 229 - 2200K-90+ 279 - 2700K-90+ 309 - 3000K-90+ 359 - 3500K-90+ 409 - 4000K-90+ CRISP - CrispWhite (16W max) 3CLA - 3K Class A			
2 <u>Style</u> T - trimmed TL - trimless							9 <u>Driver</u> (for non-dimming select LE/TE option) LE/TE - TRIAC/ELV dimming, 5% dim (standard) 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 - EldoLED; 1% dim			
3 <u># of Heads</u> 1 2 3 4							10 <u>Options/Accessories</u> SNAH - snoot accessory holder, 1" length, matte black interior, exterior finish matches fixture finish, accepts cross blade plus 2 additional forms of media AH - accessory holder, finish matches fixture finish, accepts 2 forms of media HEX - hexcell louver, 1/8" x 1/8" (requires SNAH or AH) CB - cross blade, matte black finish (requires SNAH) SOL - solite lens (requires AH or SNAH) EM - emergency battery pack, available on 2, 3 or 4 light - powers only 1 head of the total fixture			
4 <u>Wattage</u> 11 16 18										
5 <u>Finish</u> (for housing, head & trim) WT - white texture BT - black texture ST - silver texture <i>Other finishes, consult factory</i>										
6 <u>Voltage</u> 120-277										
7 <u>Beam Spreads</u> 1LT 2LT 3LT 4LT SP SP SP SP (spot 15°) NF NF NF NF (narrow flood 22°) MFL MFL MFL MFL (medium flood 25°) FL FL FL FL (flood 28°) WF WF WF WF (wide flood 45°) VWF VWF VWF VWF (very wide flood 60°) LS LS LS LS (linear spread lens 60°x10°)										

PROJECT:

TYPE:

Specifications

Application

Retail, commercial and hospitality accent and display lighting

Construction

- Stamped steel mounting frame with integral mounting bars
- Thermally protected (adds 2W to total fixture wattage)
- Steel driver housing
- Steel upper housing and laser cut trim ring
- Steel plaster frame (trimless only)
- Complete die-cast optical head construction
- No exposed wiring

Optical

- Tilt: 0-35°x35° (R), 0-20°x40° (RTLX)
- Rotation: 360°+
- Beam Spreads: Spot, 15°; Narrow Flood, 22°; Medium Flood, 25°; Flood, 28°; Wide Flood, 45°; Very Wide Flood, 60°; Linear Spread, 60° x 10°

LED

- Color Temp Options: 2200K, 2700K, 3000K, 3500K, 4000K, CRISP
- CRI: 83 typ. (2700K, 3000K, 3500K, 4000K) 90+ typ. (2200K, 2700K, 3000K, 3500K, 4000K)
- CrispWhite* LED available, 16W 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, 16, 18
- Electronic constant current LED driver, 120/277VAC input
- 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
- 0-10V, Lutron and DALI systems also available
- See pages 11-12 for more dimming information

Finish

- Powder coat paint
- Consult Factory for custom finishes

Mounting

- For use in T-Grid or GB ceilings; max ceiling thickness 1"
- Adjustable hanger bars included (14 1/2" - 25" std.) (32"-48" Adjustable hanger bars available)
- Consult Factory for thicker ceilings

Certifications

- OSA listed to UL standards. Suitable for damp locations
- Indoor use only

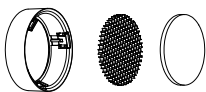
Warranty

- 5 year limited warranty

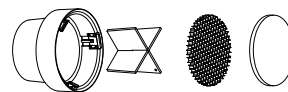
Emergency Battery Pack (EM)

- Powers single head of 2, 3 or 4 light multiple at 5.1 watts (approx. 400 Lm) for 90 minutes. Not available on 1 light multiple

Accessories (diagrams show installation order)



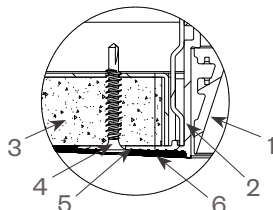
Accessory holder, hexcell louver, solite lens



Snoot accessory holder, cross blade, hexcell louver, solite lens

Plaster Frame Installation Detail (for trimless fixture only)

1. Recessed extruded housing
2. Aperture plate
3. Ceiling 5/8"
4. Drywall screw (by others)
5. Plaster frame
6. Plaster skim coat (by others)



PROJECT:

TYPE:

Electrical Data

1 Light

	1 x 11W		1 x 16W		1 x 18W	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	11	0.09	16	0.13	18	0.15
277V	11	0.04	16	0.06	18	0.07

Electronic constant current LED driver

2 Light

	2 x 11W		2 x 16W		2 x 18W	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	22	0.18	32	0.27	36	0.30
277V	22	0.08	32	0.12	36	0.13

Electronic constant current LED driver

3 Light

	3 x 11W		3 x 16W		3 x 18W	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	33	0.28	48	0.40	54	0.45
277V	33	0.12	48	0.17	54	0.19

Electronic constant current LED driver

4 Light

	4 x 11W		4 x 16W		4 x 18W	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	44	0.37	64	0.53	72	0.60
277V	44	0.16	64	0.23	72	0.26

Electronic constant current LED driver

Hornet[®] HP

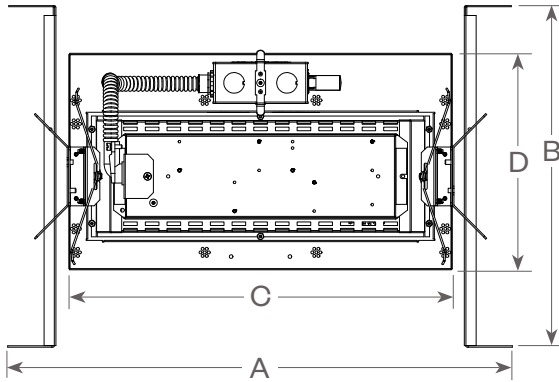
Recessed Multiples



PROJECT:

TYPE:

Hornet HP Multiples: Recessed

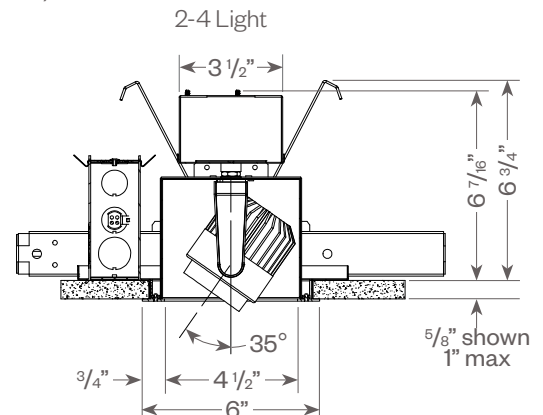
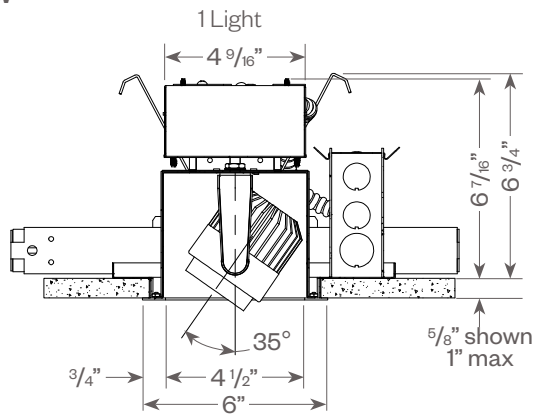


	1 Light	2 Light	3 Light	4 Light
A	12 1/8"	17"	21 1/2"	26"
B	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"
C	7 1/8"	11 13/16"	16 5/16"	20 13/16"
D	9 1/8"	9 1/8"	9 1/8"	9 1/8"

Ceiling cut out: 1 Light - 5 9/16" x 5 9/16"
 2 Light - 5 9/16" x 10 5/16"
 3 Light - 5 9/16" x 14 13/16"
 4 Light - 5 9/16" x 19 5/16"

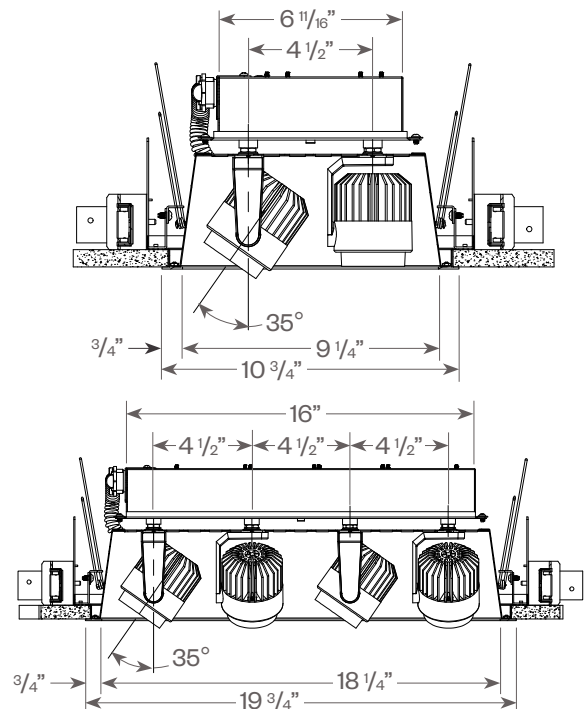
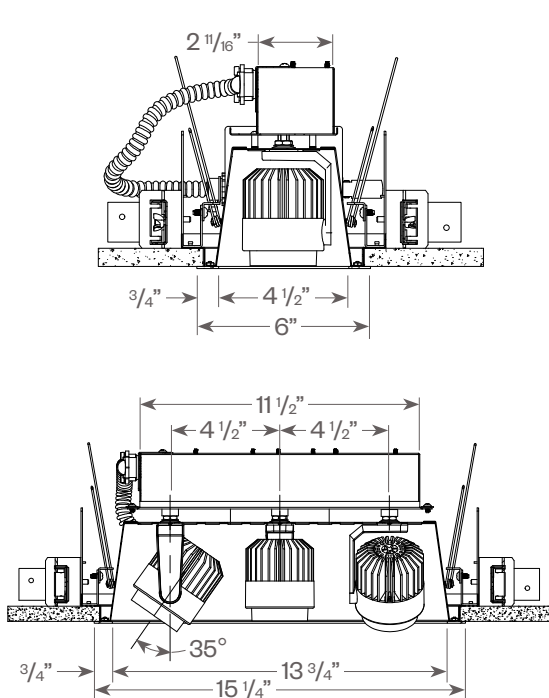
End View

Standard Driver (ELV/TRIAC)



Side View

Standard Driver (ELV/TRIAC)



Hornet[®] HP

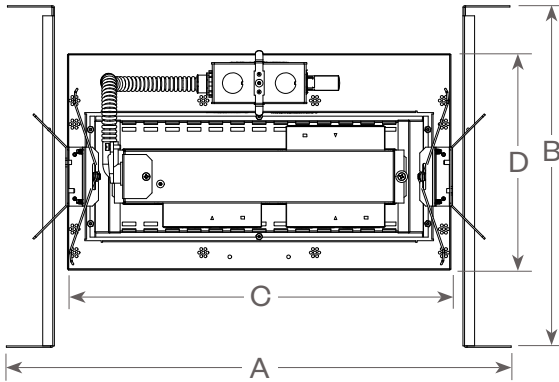
Recessed Multiples



PROJECT:

TYPE:

Hornet HP Multiples: Recessed

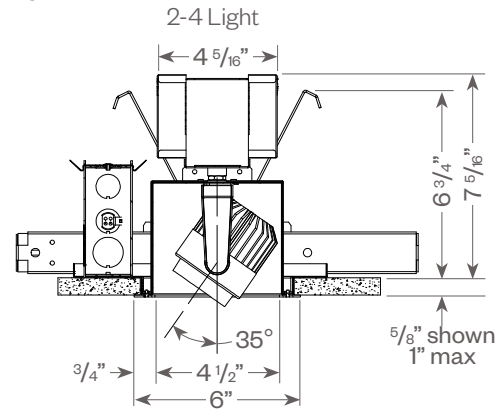
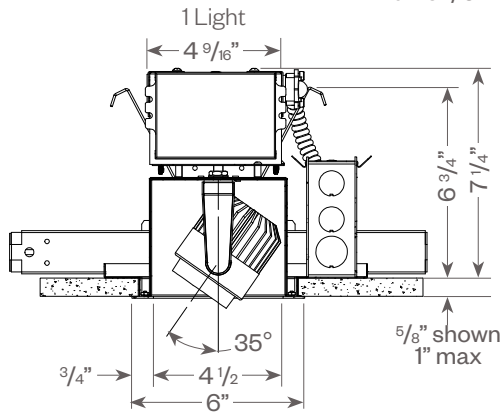


	1 Light	2 Light	3 Light	4 Light
A	12 1/8"	17"	21 1/2"	26"
B	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"
C	7 1/8"	11 13/16"	16 5/16"	20 13/16"
D	9 1/8"	9 1/8"	9 1/8"	9 1/8"

Ceiling cut out: 1 Light - 5 9/16" x 5 9/16"
 2 Light - 5 9/16" x 10 5/16"
 3 Light - 5 9/16" x 14 13/16"
 4 Light - 5 9/16" x 19 5/16"

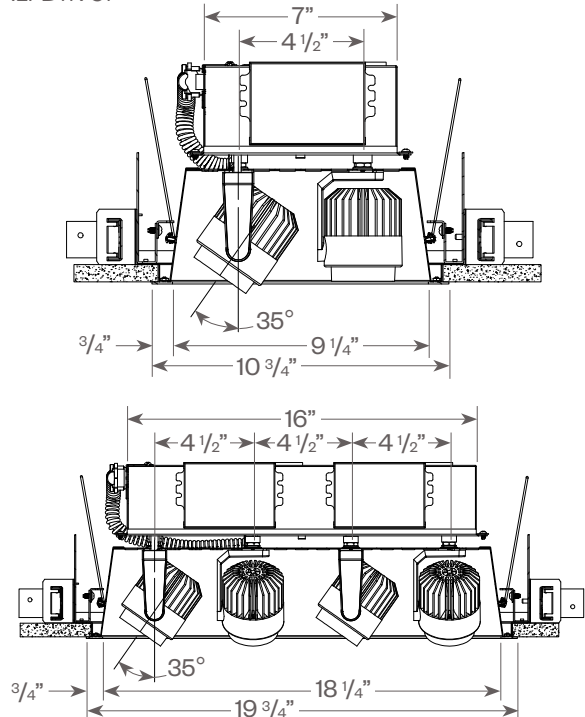
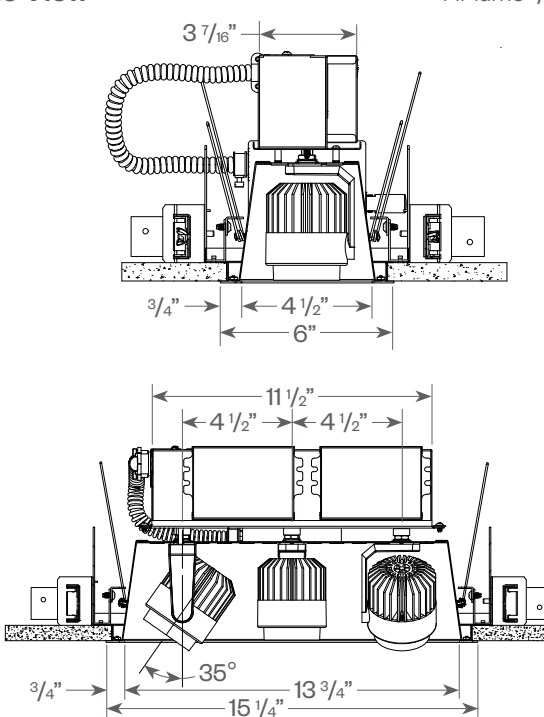
End View

Hi-lume[®]/0-10V/DALI Driver



Side View

Hi-lume[®]/0-10V/DALI Driver



Hornet[®] HP

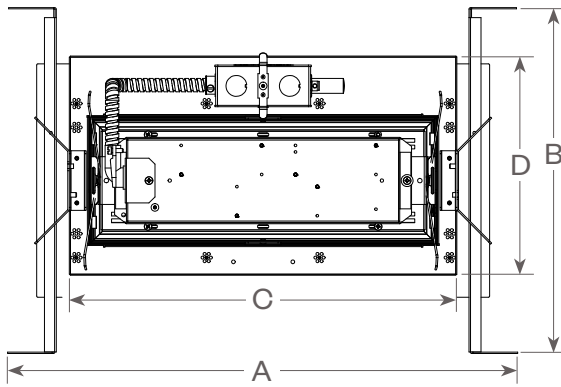
Recessed Multiples



PROJECT:

TYPE:

Hornet HP Multiples: Recessed Trimless

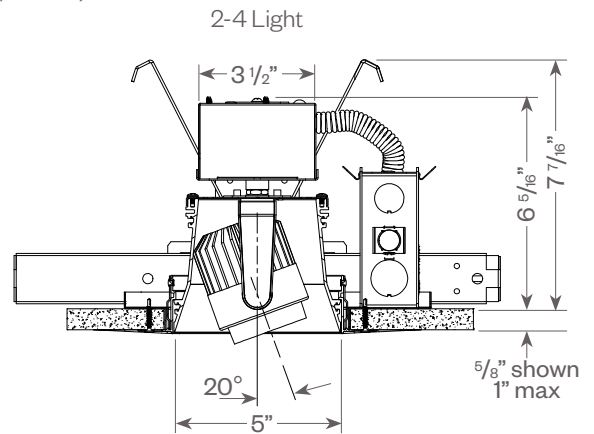
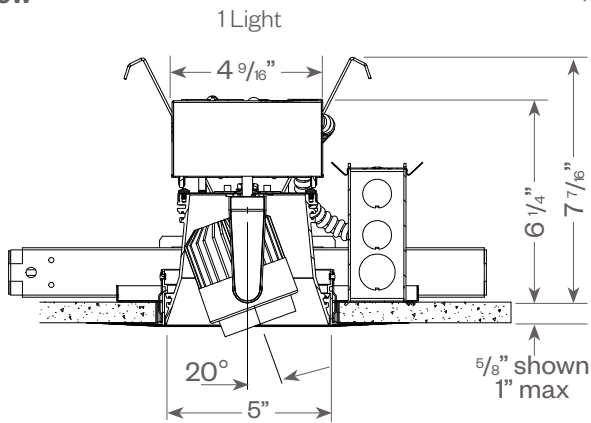


	1 Light	2 Light	3 Light	4 Light
A	12 1/8"	17"	21 1/2"	26"
B	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"
C	7 1/8"	11 13/16"	16 5/16"	20 13/16"
D	9 1/8"	9 1/8"	9 1/8"	9 1/8"

Ceiling cut out: 1 Light - 5 9/16" x 5 9/16"
 2 Light - 5 9/16" x 10 5/16"
 3 Light - 5 9/16" x 14 13/16"
 4 Light - 5 9/16" x 19 5/16"

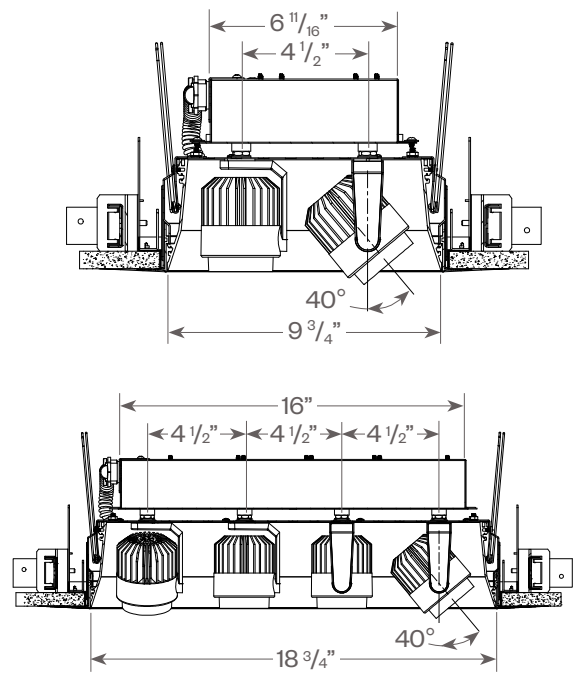
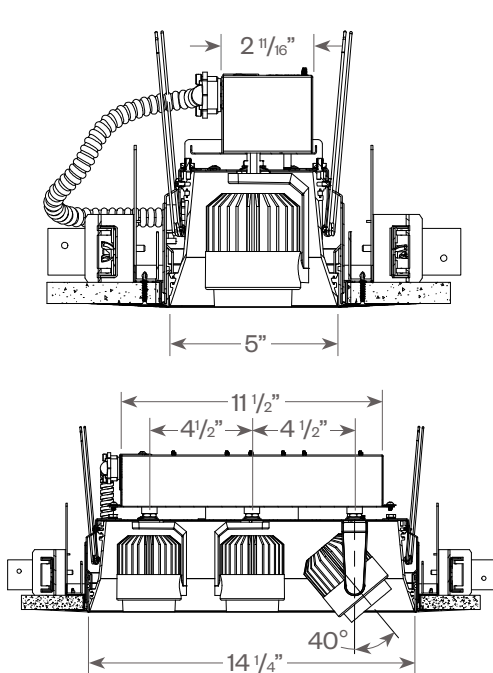
End View

Standard Driver (ELV/TRIAC)



Side View

Standard Driver (ELV/TRIAC)



Hornet[®] HP

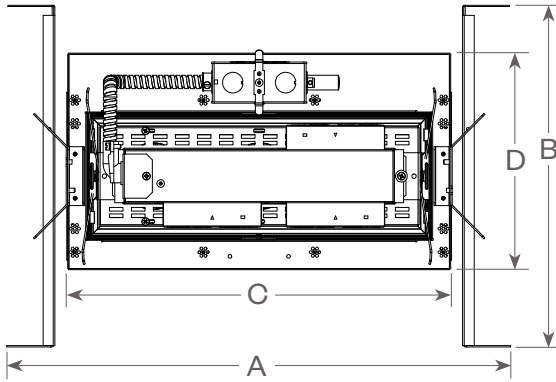
Recessed Multiples



PROJECT:

TYPE:

Hornet HP Multiples: Recessed Trimless

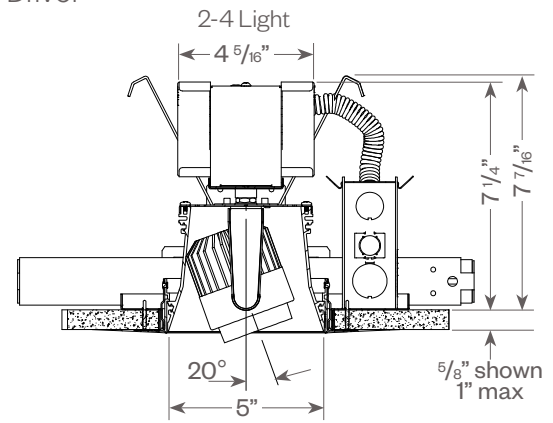
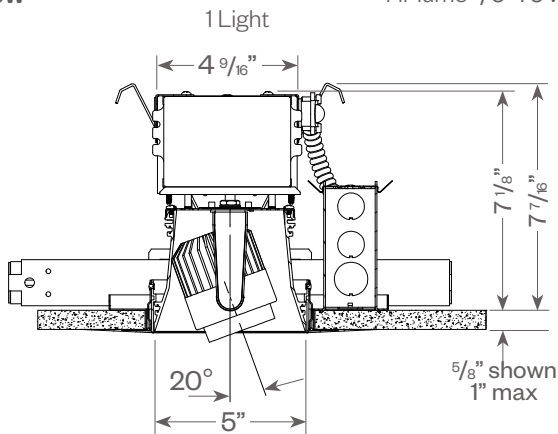


	1 Light	2 Light	3 Light	4 Light
A	12 1/8"	17"	21 1/2"	26"
B	14 1/2"	14 1/2"	14 1/2"	14 1/2"
	max 25"	max 25"	max 25"	max 25"
C	7 1/8"	11 13/16"	16 5/16"	20 13/16"
D	9 1/8"	9 1/8"	9 1/8"	9 1/8"

Ceiling cut out: 1 Light - 5 9/16" x 5 9/16"
 2 Light - 5 9/16" x 10 5/16"
 3 Light - 5 9/16" x 14 13/16"
 4 Light - 5 9/16" x 19 5/16"

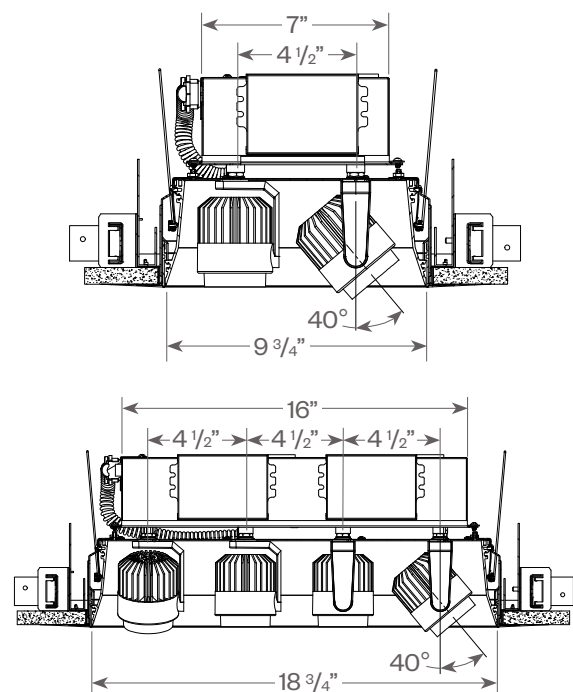
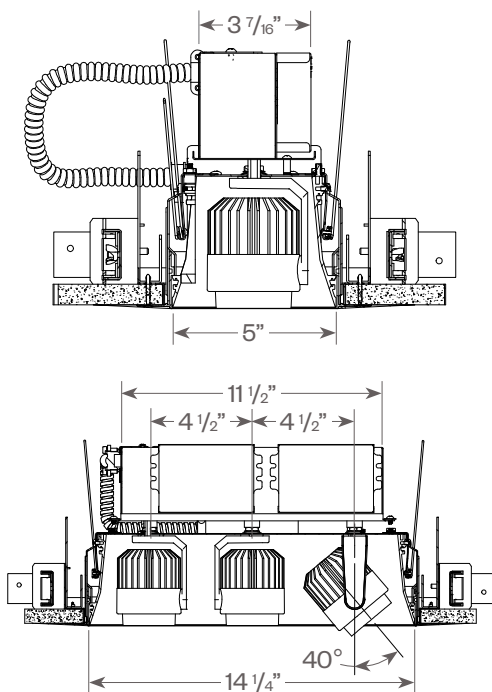
End View

Hi-lume[®]/0-10V/DALI Driver



Side View

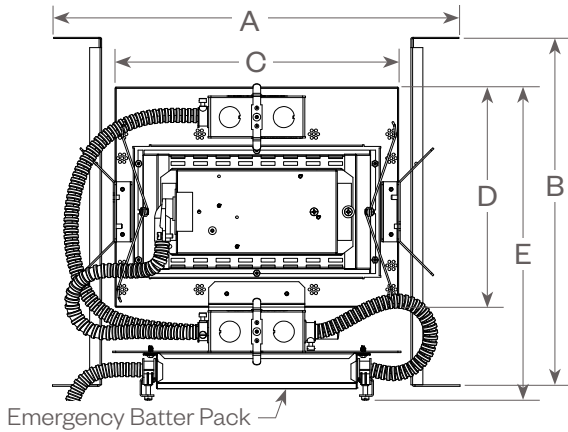
Hi-lume[®]/0-10V/DALI Driver



PROJECT:

TYPE:

Hornet HP Multiples: Recessed with Emergency Battery Pack (2-4 light only)

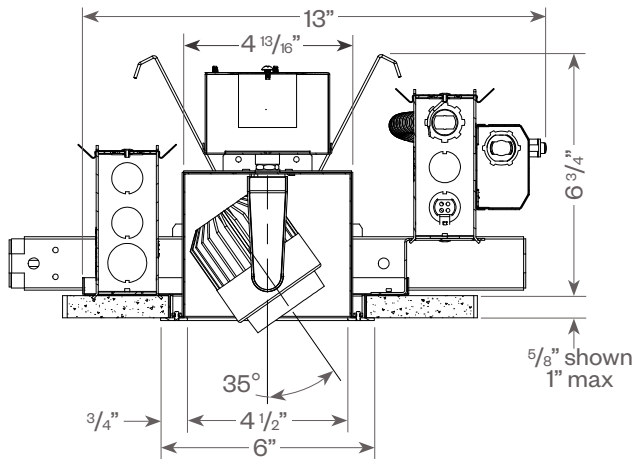


	2 Light	3 Light	4 Light
A	17"	21 1/2"	26"
B	14 1/2" max 25"	14 1/2" max 25"	14 1/2" max 25"
C	11 13/16"	16 5/16"	20 13/16"
D	9 1/8"	9 1/8"	9 1/8"
E	13	13	13

Ceiling cut out: 2 Light - 5 9/16" x 10 5/16"
 3 Light - 5 9/16" x 14 13/16"
 4 Light - 5 9/16" x 19 5/16"

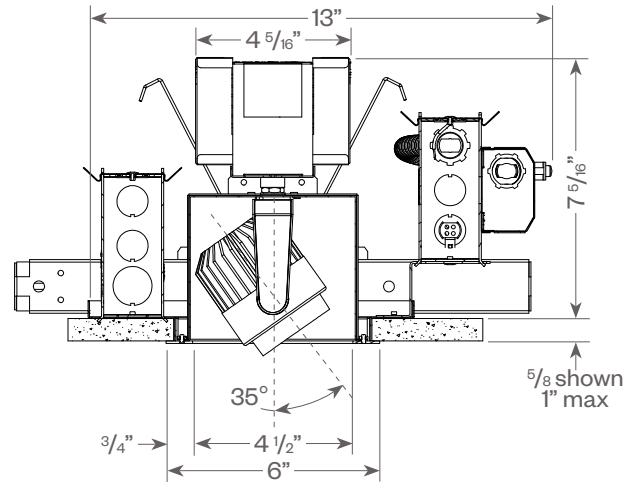
End View

Standard Driver (ELV/TRIAC)
2-4 Light

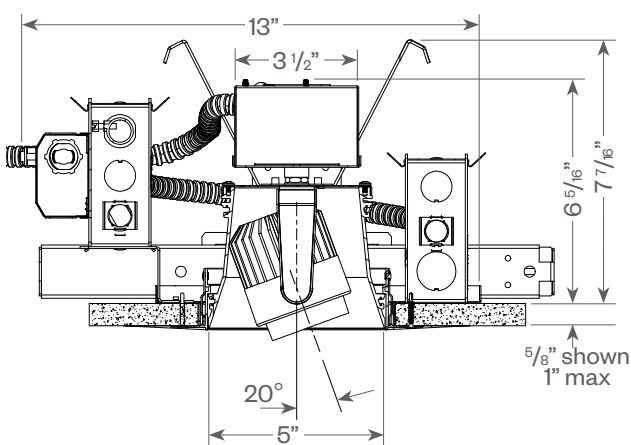


Trimmed

Hi-lume[®]/0-10V/DALI Driver
2-4 Light

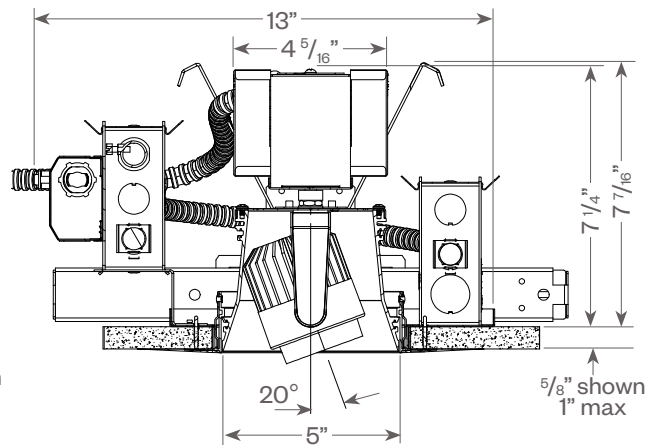


Standard Driver (ELV/TRIAC)
2-4 Light



Trimless

Hi-lume[®]/0-10V/DALI Driver
2-4 Light



Hornet[®] HP

Recessed Multiples



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)

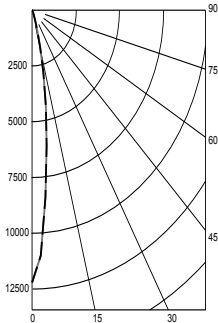
Wattage:	11W	16W	18W
Factor:	0.71	0.88	1.0

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

18W LED, 3000K-83 (Note: Data is per head)

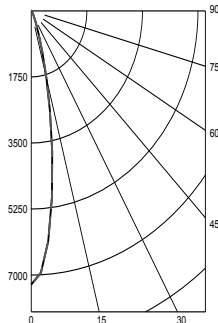
Spot (SP) Distribution, 15°
LTL #855377
Lumens: 1,369



Candelas at Nadir

Deg	Candela
0	12215
5	8436
15	1705
25	204
35	77
45	26

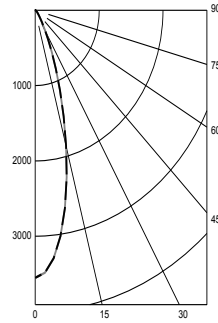
Narrow Flood (NF) Distribution, 22°
LTL #860527
Lumens: 1,307



Candelas at Nadir

Deg	Candela
0	7252
5	6128
15	1841
25	309
35	93
45	41

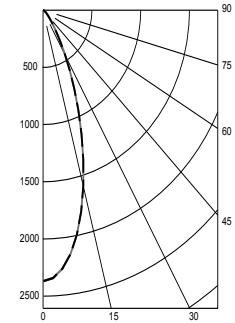
Flood (FL) Distribution, 28°
LTL # 860528
Lumens: 1,285



Candelas at Nadir

Deg	Candela
0	3551
5	3304
15	1861
25	612
35	156
45	57

Wide Flood (WF) Distribution, 45°
LTL # 860529
Lumens: 1,278



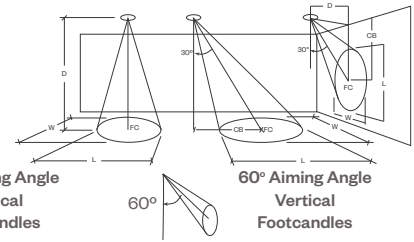
Candelas at Nadir

Deg	Candela
0	2369
5	2268
15	1592
25	754
35	251
45	82

Application Data:

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.



	0° Aiming Angle Horizontal Footcandles				30° Aiming Angle Horizontal Footcandles					30° Aiming Angle Vertical Footcandles					60° Aiming Angle Vertical Footcandles				
	D	FC	L	W	D	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
Spot	5.0'	484	1.4	1.4	5.0'	313	1.8	1.5	3.0	3.0'	178	3.0	1.6	5.0	3.0'	630	1.6	1.1	2.0
	7.5'	216	2.0	2.0	7.5'	136	2.8	2.4	4.0	4.0'	105	3.8	2.1	6.0	4.0'	450	1.6	1.3	2.0
	10.0'	122	2.7	2.7	10.0'	76	3.7	3.2	6.0	5.0'	67	4.8	2.7	8.0	5.0'	298	2.0	1.6	3.0
	12.5'	78	3.4	3.4	12.5'	46	4.8	4.2	7.0	6.0'	47	5.9	3.2	9.0	6.0'	200	2.4	1.9	3.0
Narrow Flood	5.0'	289	1.7	1.7	5.0'	187	2.4	2.1	3.0	3.0'	127	3.3	1.8	4.0	3.0'	422	1.9	1.3	2.0
	7.5'	129	2.8	2.8	7.5'	86	3.5	3.1	4.0	4.0'	70	4.4	2.7	6.0	4.0'	298	1.9	1.5	2.0
	10.0'	73	3.6	3.6	10.0'	47	4.7	4.1	5.0	5.0'	47	5.3	3.2	7.0	5.0'	181	2.5	2.1	3.0
	12.5'	47	4.5	4.5	12.5'	31	5.8	5.2	7.0	6.0'	32	6.7	3.9	8.0	6.0'	133	2.8	2.5	3.0
Flood	5.0'	142	2.7	2.7	5.0'	92	3.4	3.1	3.0	3.0'	75	3.8	2.7	4.0	3.0'	232	2.3	1.7	2.0
	7.5'	63	3.9	3.9	7.5'	43	4.9	4.4	4.0	4.0'	44	4.9	3.3	5.0	4.0'	154	2.7	2.4	2.0
	10.0'	36	5.2	5.2	10.0'	25	6.4	5.8	5.0	5.0'	29	6.1	4.1	6.0	5.0'	95	3.4	3.0	2.0
	12.5'	23	6.5	6.5	12.5'	16	8.0	7.2	6.0	6.0'	20	7.4	5.1	7.0	6.0'	69	3.8	3.5	3.0
Wide Flood	5.0'	96	3.2	3.2	5.0'	67	3.9	3.4	2.0	3.0'	63	3.7	2.8	3.0	3.0'	180	2.4	2.0	1.0
	7.5'	42	4.8	4.8	7.5'	30	5.7	5.3	3.0	4.0'	36	4.9	3.7	4.0	4.0'	105	3.2	2.9	2.0
	10.0'	24	6.4	6.4	10.0'	17	7.6	7.1	4.0	5.0'	23	6.1	4.8	5.0	5.0'	69	3.8	3.5	2.0
	12.5'	15	8.0	8.0	12.5'	11	9.6	8.9	5.0	6.0'	16	7.5	5.7	6.0	6.0'	47	4.7	4.3	3.0

PROJECT:

TYPE:

DIMMING COMPATIBILITY:

Amerlux[®] Hornet 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 ---

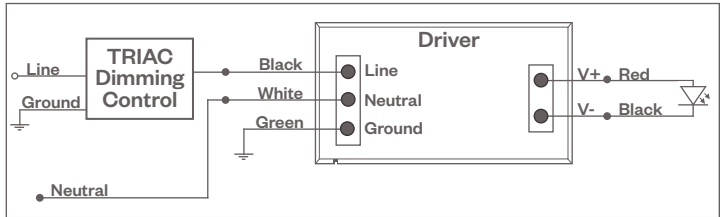
TRIAC (Forward Phase) DIMMING (Standard)

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 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"		

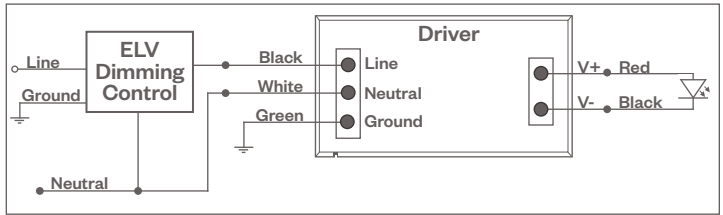
ELV - Electronic Low Voltage (Reverse Phase) DIMMING (Standard)

Utilizes specialized "ELV" dimmers.

Notes:

- 120VAC or 277VAC*
- Dims down to 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"		

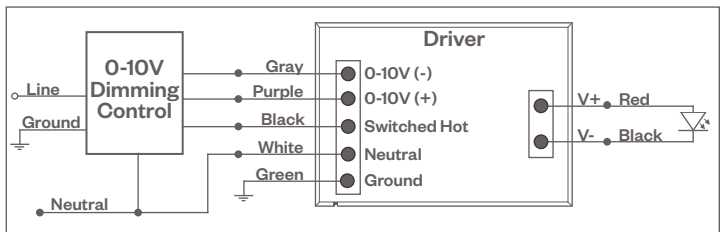
0-10V - DIMMING (-0-10V Option)

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.

PROJECT:

TYPE:

DIMMING COMPATIBILITY:

Amerlux[®] Hornet 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 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!

Compatible Dimmers†:

Lutron ECO System

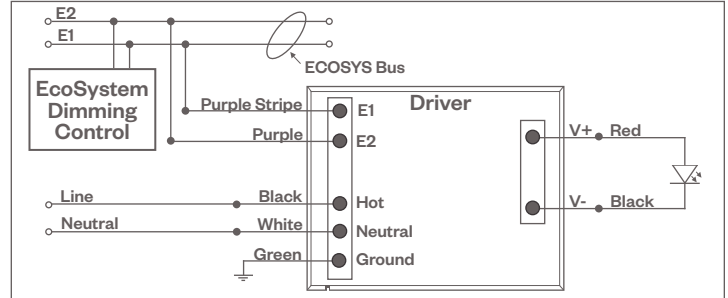
Pow Pak Dimming Modules
Energi Savr Node
Grafik Eye QS/Homeworks
QS Control Unit
Quantum Hub
Homeworks QS/My Room

Central System

Lutron EcoSystem compatible controls

HILUME-H-ECO, HILUME-5-ECO

EcoSystem Digital Control Wiring Diagram



DALI DIMMING (-DALI OPTION)

Digital control protocol allows individual fixture control

Notes:

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

Compatible Dimmers†:

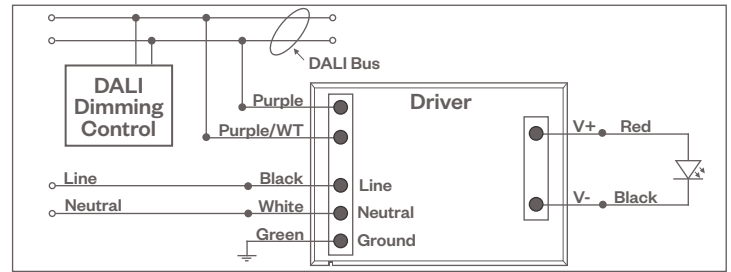
Wall Box (3-Wire Fluorescent)

Leviton CD250 Controller

Central System

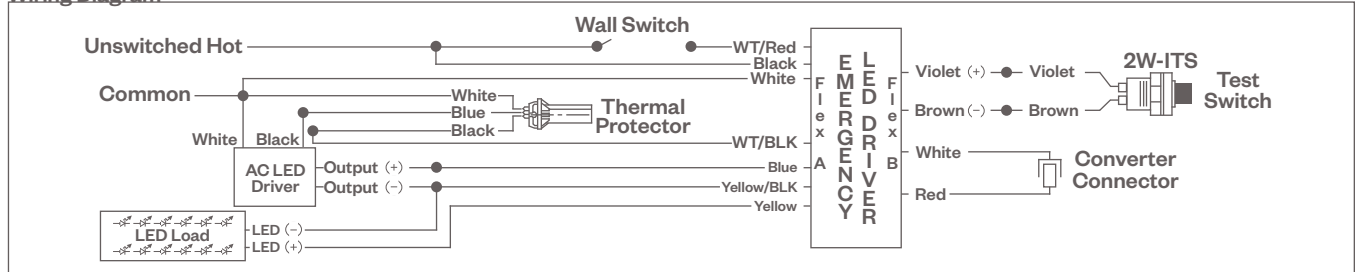
Dynalite
Fifth Light

DALI Wiring Diagram



EMERGENCY DIMMING (-EM OPTION)

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.