



# **Features**

Cylindrix® III Recessed LED, the best combination of optical and thermal performance, aesthetics and visual comfort in an recessed accent. Features a deeply recessed single LED light source for enhanced visual comfort and control, integrated heat sink and high performance interchangeable reflector optics (for 15°/25°/40° beam spreads only). A 10° beam spread is also available but not interchangeable with the other beam options. Available in 1, 2 or 3 light configurations.



# **Product Overview**

Type: Recessed Multiple, Accent & Display

Wattage: 16W, 19W, 23W, 27W, 31W
Color Temp: 2700K, 3000K, 3500K, 4000K

CRI: 83 typ. or 90+ typ.

CrispWhite & Class A LEDs available TRIAC & ELV, 5% Dim, 120/277VAC

Lutron LDE1 Hi-lume® 1% Soft-On/Fade-to-Black, 120/277VAC

0-10V, 1% Dim, 120/277VAC DALI, 1% Dim, 120/277VAC



### **Certifications**





# **Fixture Summary**

# Fixture Type

Dimming:

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

See seperate spec sheet for Semi-Recessed version.

# **Performance Data**

Watts	Delivered Lumens	LPW	СВСР	Color Temp-CRI
16	1,700	106.3	6,921	3000K-83
19	2,018	119.3	8,332	3000K-83
23	2,440	106.1	9,934	3000K-83
27	2,880	106.7	11,726	3000K-83
31	3306	100.4	13,460	3000K-83

Data is based on 3000K-83120V IES files available on website.

Data is "per head" and based on Flood Optic. See pg 7 for other beam spreads.





Recessed Multiples

# **Ordering Information - Frame**

### C3R/SR-NC-FRAME

**PROJECT:** 

2

Model Style # of Heads Voltage C3R/SR-NC-FRAME (new construction) 120 T trimmed TL trimless 2 277 3

5 Driver (for non-dimming select LE/TE otpion)

**LE/TE** TRIAC/ELV dimming, 5% dim HILUME-H-ECO Lutron LDE1 Hi-lume® 1% dim Soft-On/Fade-to-Black

**0-10V** 0-10V dimming, 1% dim DALI EldoLED, 1% dim

# **Options/Accessories**

EM\* emergency battery pack, available on 2, 3 or 4 light - powers only 1 head of the total fixure

\* If this option is selected, you must also select EM option in the Trim Ordering section.

HB49 - hanger bars from min 29" to max 49" Note: 14 ½" - 25" hanger bars are included as standard. Choose HB49 option above for larger mounting spaces only.

TYPE:

### **Ordering Information - Trim**

	C3R-NC-TR	RIM	_•	•	_•	120-277	_•				•	• <u></u>				·		
	1		2	3	4	5 6		7				8		9			10	
1	Model				2	Style	3	# of Heads		4	Wattage	•	5	Fini	<b>sh</b> (for h	ousing, h	nead & trin	n)
	C3R-NC-T	RIM	(new con	struction)		T trimmed TL trimless		1 2 3			16 19 23 27 31			BT I	white te plack te silver te r finishes	xture kture	t factory	
6	Voltage	7	Beam	Spread				8	3	Color	Temp							
	120-277		1LT NSP* SP FL WF	2LT NSP* SP FL WF	3LT NSP* SP FL WF	(narrow spot, 10°) (spot, 15°) (flood 25°) (wide flood 40°)				<b>30</b> 30 <b>35</b> 35	00K-83 000K-83 000K-83	90+ CRI 279 2700 309 300 359 350 409 400	OK-9	90+ 90+		<b>P</b> † Cris <sub>k</sub> † 3000	oWhite OK Class	A

**Driver** (for non-dimming select LE/TE otpion)

LS

LE/TE TRIAC/ELV dimming, 5% dim HILUME-H-ECO Lutron LDE1 Hi-lume® 1% dim Soft-On/Fade-to-Black

LS

LS

\*Based on availability, lead times may vary, consult factory.

**0-10V** 0-10V dimming, 1% dim DALI EldoLED, 1% dim

### **Options/Accessories**

(linear spread 60°x10°)

(standard front door accepts up to 1 accessory)

SN34 snoot 3/4" length, exterior finish matches fixture finish, accepts up to 2 accessories

† Not available for use with NSP beam spread

SN15 snoot 1-1/2" length, exterior finish matches fixture finish, accepts up to 2 accessories

**HEX** hexcell louver

CB cross blade, matte black finish (requires snoot)

**CL** clear glass lens

**SOL** solite beam softening lens

EM\* emergency battery pack, available on 2, 3 or 4 light - powers only 1 head of the total fixure

\* If this option is selected, you must also select EM option in the Frame Ordering section.





# **Specifications**

### Application

Retail and commercial accent and display lighting

#### Construction

Formed 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

Passive cooled

### Optical

Tilt: 0-45°x45° (*Trimmed*), 0-25°x45° (*Trimless*)

Rotation: 360°+

Beam Spreads: Narrow Spot, 10°; Spot, 15°; Flood, 25°;

Wide Flood, 40°; Linear Spread Lens, 60° x 10°

# LED

Color Temp Options: 2700K, 3000K, 3500K, 4000K, CRISP, Class A

CRI: 83 typ. or 90+ typ.

CrispWhite\* and Class A\*\* LEDs available

R9 Values: 11 (83 CRI), 55 (90+ CRI) Binning: 3 MacAdam (SDOM)

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: 16, 19, 23, 27, 31

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*) or Trailing Edge (*ELV, Reverse Phase*) autosensing driver dims down to 5% on most dimming systems. 0-10V, Lutron & DALI systems also available

See pages 8-10 for more dimming information

### Finish

Powder coat paint

Consult Factory for custom finishes

#### Mounting

Hanger Bars:

Adjustable hanger bars included (14 1/2" - 25" std.)

Optional **HB49** - hanger bars from min 29" to max 49" available

Trimmed:

For use in T-Grid or GB ceilings; max ceiling thickness 1"

Trimless:

For use in GB ceilings; max ceiling thickness 5/8"

Consult Factory for thicker ceilings

### Certifications

CSA 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





# **Electrical Data**

NOTE: System Watts includes an additional 2W for thermal protector power consumption.

# 1Light

	1 x 16W	1 x 16W 1 x 19W		1 x 23W		1 x 27W		1 x 31W		
Voltage	System Watts	Amps	System Watts	Amps	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	18	0.15	21	0.18	25	0.21	29	0.24	33	0.28
277V	18	0.06	21	0.08	25	0.09	29	0.10	33	0.12

Electronic constant current LED driver

# 2 Light

	2 x 16W		2 x 19W		2 x 23W		2 x 27W		2 x 31W	
Voltage	System Watts	Amps								
120V	36	0.30	42	0.35	50	0.42	58	0.48	66	0.55
277V	36	0.13	42	0.15	50	0.18	58	0.21	66	0.24

Electronic constant current LED driver

# 3 Light

	3 x 16W		3 x 19W		3 x 23W		3 x 27W		3 x 31W	
Voltage	System Watts	Amps								
120V	54	0.45	63	0.53	75	0.63	87	0.73	99	0.83
277V	54	0.19	63	0.23	75	0.27	87	0.31	99	0.36

Electronic constant current LED driver

# **Accessories**



Clear lens, Solite lens, Hexcell louver (fits in front door)



Snoot, 3/4" deep



Snoot, 11/2" deep



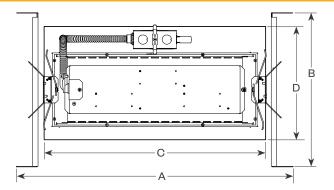
Linear spread lens, Hexcell louver, Cross blade (requires snoot)







# **Product Details - Recessed Trimmed**

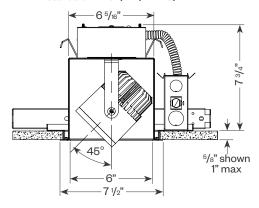


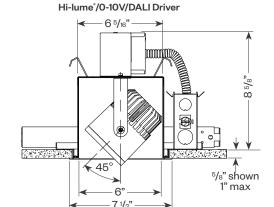
	1Light	2 Light	3 Light
Α	13 3/4"	20 1/4"	25 <sup>15</sup> / <sub>16</sub> "
В	14 1/2"	14 1/2"	14 1/2"
Ь	max 25"	max 25"	max 25"
С	8 9/16"	15 1/16"	20 13/16"
D	10 11/16"	10 11/16"	10 11/16"

**Ceiling cut out:** 1 Light - 7 1/8" x 7 1/8" 2 Light - 7 1/8" x 13 5/8" 3 Light - 7 1/8" x 19 5/16"

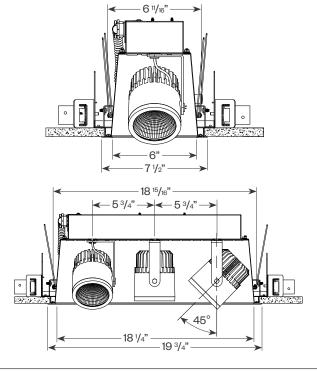
# **End View**

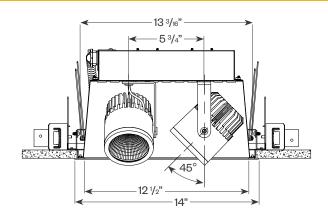
# Standard Driver (ELV/TRIAC)





### Side View





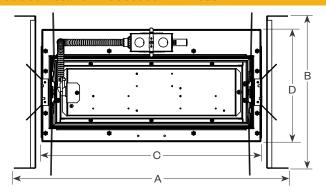


**Recessed Multiples** 



PROJECT: TYPE:

# **Product Details - Recessed Trimless**

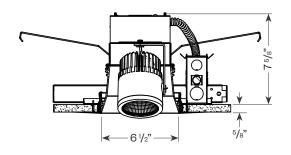


	1 Light	2 Light	3 Light
Α	13 3/4"	20 1/4"	25 15/16"
В	14 ½" max 25"	14 ½" max 25"	14 ½" max 25"
С	8 9/16"	15 1/16"	20 13/16"
D	10 11/16"	10 11/16"	10 11/16"

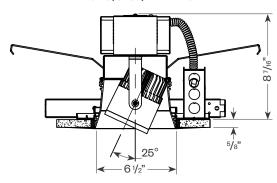
**Ceiling cut out:** 1 Light - 7 1/8" x 7 1/8" 2 Light - 7 1/8" x 13 5/8" 3 Light - 7 1/8" x 19 5/16"

**End View** 

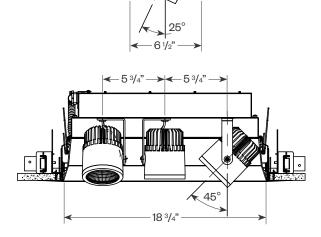
# Standard Driver (ELV/TRIAC)

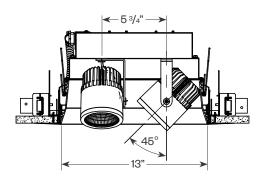


### Hi-lume\*/0-10V/DALI Driver



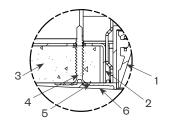
### Side View





# Plaster Frame Installation Detail (for trimless fixture only)

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









# Performance Data (per head)

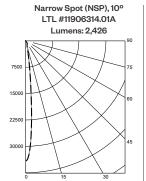
Multiplying Factors: (Multiplying Factor is based on 3000K-83 120V IES file on website)

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

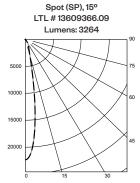
CCT:	2700K-90+	3000K-90+	3500K-90+	4000K-90+	CRISP	3CLA
Factor:	0.83	0.86	0.90	0.93	0.65	0.70

Wattage:	16W	19W	23W	27W	31W
Factor:	0.51	0.61	0.74	0.87	1.0

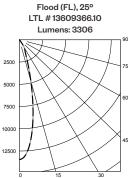
### 31W LED, 3000K-83



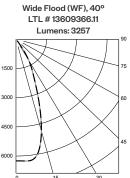




Candelas at Nadir						
Deg	Candela					
0	22340					
5	17770					
15	3015					
25	1305					
35	383					
45	27					



Candelas at Nadir						
Deg	Candela					
0	13460					
5	11970					
15	4475					
25	1407					
35	378					
45	28					



,	15	30
	Cande	elas at Nadir
	Deg	Candela
	0	6252
	5	6280
	15	4839
	25	2030
	35	442
	45	33

# **Application Data** (per head)

# Notes and Definitions:

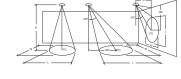
Beam spread is to 50% center beam candlepower (CBCP).

**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.



		- 1	Aiming A Horizon ootcand	tal		30	•		ning An izontal candle		3	00		ning An rtical candles		6	000	\	iming A /ertical otcandle	
	D	FC	L	W		D	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
≥ ⊾	5.0'	1367	1.1	1.1		5.0'	839	1.3	1.1	3.0	3.0'	508	2.0	1.1	5.0	3.0'	1553	1.1	1.0	2.0
ARRO' SPOT	7.5'	608	1.3	1.3		7.5'	384	1.9	1.4	4.0	4.0'	261	2.9	1.4	7.0	4.0'	1131	1.2	1.1	2.0
NARROW	10.0'	342	1.7	1.7	1	10.0'	211	2.5	2.1	6.0	5.0'	186	3.3	1.6	8.0	5.0'	846	1.2	1.1	3.0
2	12.5'	219	2.3	2.3	1	12.5'	143	3.0	2.7	7.0	6.0'	128	4.0	2.1	10.0	6.0'	503	2.0	1.3	3.0
	D	FC	L	W		D	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
_	5.0'	894	1.3	1.3		5.0'	559	2.1	1.5	3.0	3.0'	338	3.1	1.5	5.0	3.0'	1275	1.4	1.1	2.0
SPOT	7.5'	398	2.2	2.2		7.5'	265	2.8	2.5	4.0	4.0'	212	3.8	2.0	6.0	4.0'	903	1.6	1.2	2.0
S	10.0'	224	2.9	2.9	1	10.0'	145	3.9	3.3	5.0	5.0'	132	4.8	2.7	7.0	5.0'	561	2.1	1.5	3.0
	12.5'	144	3.6	3.6	1	12.5'	95	4.7	4.2	7.0	6.0'	95	5.6	3.1	9.0	6.0'	402	2.3	1.8	3.0
	D	FC	L	W		D	FC	L	W	СВ	D	FC	L	W	CB	D	FC	L	W	CB
۵	5.0'	539	2.0	2.0		5.0'	338	2.8	2.5	3.0	3.0'	259	3.5	2.0	4.0	3.0'	814	2.1	1.4	2.0
FLOOD	7.5'	240	3.1	3.1		7.5'	162	3.8	3.5	4.0	4.0'	143	4.6	2.9	5.0	4.0'	573	2.1	1.7	2.0
긒	10.0'	135	4.0	4.0	1	10.0'	92	5.1	4.5	5.0	5.0'	92	5.7	3.5	7.0	5.0'	340	2.8	2.5	3.0
	12.5'	87	5.1	5.1	1	12.5'	58	6.5	5.7	6.0	6.0'	65	7.0	4.2	8.0	6.0'	255	3.1	2.8	3.0
	D	FC	L	W		D	FC	L	W	CB	D	FC	L	W	CB	D	FC	L	W	CB
шО	5.0'	284	3.3	3.3		5.0'	222	3.6	3.2	2.0	3.0'	191	3.2	2.7	3.0	3.0'	550	2.3	1.8	1.0
WIDE	7.5'	121	5.0	5.0		7.5'	95	5.4	5.1	3.0	4.0'	108	4.2	3.6	4.0	4.0'	283	3.3	3.1	2.0
ΑŢ	10.0'	67	6.6	6.6	1	10.0'	53	7.4	6.8	4.0	5.0'	69	5.5	4.6	5.0	5.0'	201	3.8	3.4	2.0
	12.5'	43	8.3	8.3	1	12.5'	34	9.2	8.6	5.0	6.0'	48	6.5	5.4	6.0	6.0'	138	4.6	4.3	2.0





# **Dimming Compatibility**

Amerlux® Cylindrix® 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

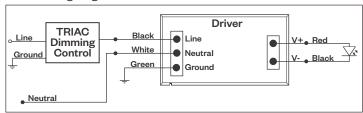
Utilizes standard TRIAC dimmers that are in wide use in installations across the US. Best for retrofit applications where TRIAC dimmers are installed.

#### 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

Compatible Dimmers <sup>†</sup> :	
Wall Box (TRIAC 120VAC)	Central System
Lutron "Diva"	Lutron "GP" Panel
Lutron "Nova-T"	Lutron Grafik Eye QS
Lutron "Maestro"	
Lutron "Skylark"	

### TRIAC Wiring Diagram



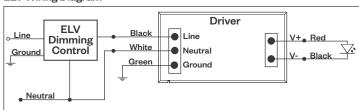
# ELV - Electronic Low Voltage (Reverse Phase) Dimming

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 per dimming manufacturer

# **ELV Wiring Diagram**



Compatible Dimmers <sup>†</sup> :								
Wall Box (ELV 120VAC)	Wall Box (ELV 277VAC)	Central System						
Lutron "Diva"	Leviton Revoir II AWSMT-E	Lutron "GP" Panel with PHPM-PA 120/277VAC						
Lutron "Nova-T"		Lutron Grafik Eye QS with PHPM-PA 120/277VAC						
Lutron "Maestro"								
Lutron "Skylark"								
Leviton "Surslide"								
Leviton "Vizio"								

#### 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.





# **Dimming Compatibility** (continued)

Amerlux\* Cylindrix\* 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

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 Diagr	Gray Purple Black White Green	Driver  0-10V (-) 0-10V (+) Switched Hot Neutral Ground	V+ Red V- Black
Neutral	<u> -</u>	eround	

Compatible Dimmers <sup>†</sup> :		
Wall Box		Central System
Lutron "Diva" - DVSTV	Leviton Renoir II 0-10V	Lutron Grafik Eye with GRX-TVI Interface

#### **Lutron LDE1 Dimming**

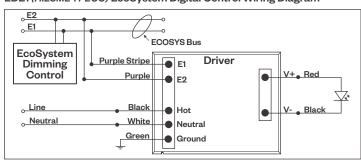
Integrates into Lutron EcoSystem building management

#### Notes:

- 120VAC or 277VAC\*
- · Dims down to 1% Soft-On/Fade-to-Black
- EcoSystem Control
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

Compatible Dimmers <sup>†</sup> :	
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	

### LDE1 (HILUME-H-ECO) EcoSystem Digital Control Wiring Diagram



### **DALI Dimming**

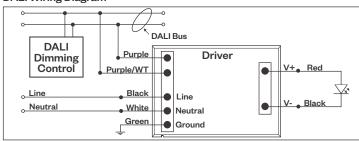
Digital control protocol allows individual fixture control

#### Notes:

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

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

### DALI 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.





# **Emergency Dimming**

Wiring Diagram

