

# NC-631 / NC-636 / NC-638

6" Sapphire I Comfort Dim LED Reflectors

Source: 11W to 37W LED  
850lm to 3000lm

Type
Project
Catalog No.
Notes

## PRODUCT DESCRIPTION

The Sapphire Series is an architectural grade LED downlight. The Sapphire Series features deep cone reflectors and dimmable LEDs. The reflectors have been designed for the high efficiency (LPW) while providing low aperture brightness. The Sapphire Series is proudly assembled in the USA.

Cree Comfort Dim technology with the highest performing commercially available LEDs and mixes in complementary light from red and unsaturated yellow LEDs to create beautiful, warm, white light. This patented approach enables precise color management to preserve reliable high color consistency over the life of the product.

## FEATURES

- Cree Comfort Dim Technology
- Deep cone reflectors, wall wash and deco glass
- 850lm, 1250lm, 2000lm and 3000lm LED packages
- Gradually warms the color temperature from 2700K to 1800K when dimmed
- 10-year limited warranty
- ENERGY STAR certified
- cULus Listed for Wet Locations

## ELECTRICAL

**Delivered Lumens / Wattage:** **L85** = 769lm / 11W; **L12** = 984lm / 16W; **L20** = 1838lm / 25W ; **L30** = 2453lm / 37W

(Delivered lumens will vary depending on reflector and finish)

**Comfort Dim:** Comfort Dim color tunes the temperature from a bright 2700K, to a romantic and comfortable 1800K on a gradual, even curve.

**CRI:** 90+ CRI

**Beam Spread:** 74° Flood

**Operating Temp.:** 0°C to 45°C ambient temperature

**Lifetime:** 36,300 hours @ L70

## COMPATIBLE FRAME-INS

Reflector is only compatible with respective Sapphire I series frames manufactured by Nora Lighting.

CATALOG NO.	DESCRIPTION
NCAH-630	6" Universal New Construction Frame-In
NCHR-634	6" Remodel Frame-In

## SPECIFICATION

**Reflector:** Deep cone self flanged reflector spun from 0.050 high grade aluminum provides even illumination and visual comfort. The deep cone reflectors provide 55+ degree cut-off. NC-638 includes 3 studs mounted in the flange for attaching decorative glass. Decorative glass will reduce the amount of usable light by 10 to 30%, depending on the selected glass.

**Reflector Assembly:** The reflector assembly includes the LED optical package and heat sink mounted on top. Reflector assembly easily wires to dedicated frame with lockable quick connect.

**Emergency:** NC-631 is compatible with integral emergency test switch, must specify.

## LABELS AND LISTINGS

- cULus Listed for Wet Location when used with compatible frame-in
- ENERGY STAR certified
- [10-Year Limited Warranty](#)
- RoHS Compliant



## PRODUCT IMAGES



**NC-631**  
Open Reflector

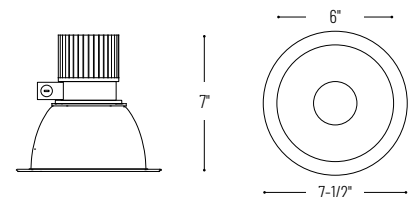


**NC-636**  
Wall Wash Reflector



**NC-638**  
Decorative Glass Reflector  
(Specify glass separately)

## PRODUCT DIMENSIONS



## 6" Sapphire I Comfort Dim LED Reflectors - Dedicated Frame-In Required

Reflector Type	Lumens / Wattage	Color Temp.	Reflector / Flange Finish	Optional Emergency
<b>NC-631</b> = Open Reflector	<b>L85</b> = 850lm / 11W	<b>CD</b> = Comfort Dim (2700K-1800K)	<b>BSF</b> = Black / Self Flanged	<b>EMI</b> = Integral emergency test switch (Compatible with NC-631 only, must specify on frame-in)
<b>NC-636</b> = Wall Wash	<b>L12</b> = 1250lm / 16W		<b>BWSF</b> = Black / White Flange	
<b>NC-638</b> = Deco Glass*	<b>L20</b> = 2000lm / 25W		<b>DBSF</b> = Clear Diffused / Black Flange	
	<b>L30</b> = 3000lm / 37W		<b>DSF</b> = Clear Diffused / Self Flanged	
			<b>DWSF</b> = Clear Diffused / White Flange	
			<b>HBSF</b> = Haze / Black Flange	
			<b>HSF</b> = Haze / Self Flanged	
			<b>HWSF</b> = Haze / White Flange	
			<b>WSF</b> = White / Self Flanged	

Example: **NC-631L20CDWSF** = 6" Sapphire I Open Reflector, 2000lm / 25W LED, Comfort Dim (2700K-1800K), White / Self Flange Finish

# NCAH-630

## 6" Sapphire I Comfort Dim New Construction Frame-In

Source: 11W to 37W LED  
850lm to 3000lm

Type
Project
Catalog No.
Notes

### PRODUCT DESCRIPTION

Architectural grade LED downlights featuring deep cone reflectors. The Sapphire series is available in 4", 6" or 8" apertures and also in new construction or remodel frame-ins.

### CONSTRUCTION

**Plaster Frame:** Architectural quality 0.050 galvanized steel ring riveted to 0.064 steel junction box and driver tray. Plaster frame opening includes (3) "butterfly" spring clips to hold reflector assembly in place.

**Mounting:** Frame-in includes two adjustable bar hangers and universal brackets that accept flat bar hangers, C-Channel (ordered separately) or rigid 1/2" conduit. Adjustable hanger bars with captive nails, alignment foot, T-Bar slot are included on frame. Frame-in includes an adjustable deep ceiling collar that accommodates ceiling thickness from 1/2" to 2".

**Minimum Clearances:** Frames require a minimum of 3" from thermal insulation and 1/2" from adjacent building component.

**Junction Box:** Plaster frame integrated 29 cubic inch 0.064" thick galvanized steel, with seven 1/2" knockouts, four pryouts, and snap on cover. Electrical connections are made through a single junction box door. Green wire provided for installations with ground wire fed through PVC pipe conduit. Junction box connects to reflector assembly with lockable quick connect.

**Thermal Protector:** External thermal device is located on the junction box.

**Driver:** Isolated driver separates the primary side from the secondary side.

### ELECTRICAL

**Input Voltage:** 120V or 277V

**Operating Temp.:** 0°C to 45°C ambient temperature

**Lumens / Wattage:** L85 = 850lm / 11W; L12 = 1250lm / 16W; L20 = 2000lm / 25W; L30 = 3000lm / 37W

**Dimming:** ELV or 0-10V dimming, must specify

[Click Here](#) or check complete dimmer list at [www.NoraLighting.com](http://www.NoraLighting.com) in the "Compatibility" page under "Resources" tab.

### COMPATIBLE REFLECTORS

CATALOG NO.	DESCRIPTION
NC-631	6" Open Reflector
NC-636	6" Wall Wash Reflector
NC-638	6" Decorative Glass Reflector

### Emergency LED Driver (BSL17C-C2)

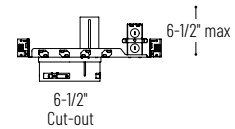
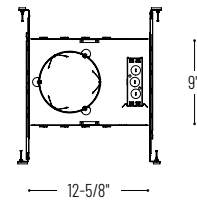
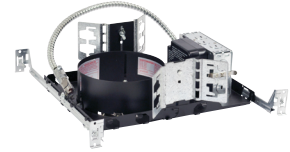
- Up to 7.5W emergency illumination with LEDs.
- Illumination Time: 90min
- Voltage: 120/277 VAC, 60Hz
- Output Voltage: 15.0-50.0 VDC
- Available with remote or integral test switch, must specify

### LABELS AND LISTINGS

- cULus Listed for Damp Location (Wet Location when used with compatible reflector)
- [10-Year Limited Warranty](#)
- RoHS Compliant
- Emergency LED Driver meets Title 20 CEC efficiency standards



### PRODUCT IMAGES AND DIMENSIONS



## 6" Sapphire I Comfort Dim New Construction Frame-In - Compatible with Sapphire I Comfort Dim Reflectors

Lumens / Wattage	LED Module	Driver	Emergency
<b>NCAH-630/85</b> = 850lm / 11W	<b>C</b> = Comfort Dim	<b>LE1</b> = 120V Input; ELV (850-1250lm) / 0-10V (2000-3000lm)	<b>EM</b> - Emergency Pack w/ Remote Test Switch
<b>NCAH-630/12</b> = 1250lm / 16W		<b>LE2</b> = 277V Input; 0-10V dimming	<b>EMI</b> - Emergency Pack w/ Integral Test Switch, must specify on reflector
<b>NCAH-630/20</b> = 2000lm / 25W		<b>LE4</b> = 120V Input; ELV (2000-3000lm) / 0-10V (850-1250lm)	
<b>NCAH-630/30</b> = 3000lm / 37W			

Example: **NCAH-630/12CLEIEM** = 6" Sapphire I Comfort Dim Universal New Construction Frame-In, 1250lm / 16W, 120V Input, Emergency with Remote Test Switch

# NCHR-634

## 6" Sapphire I Comfort Dim Remodel Frame-In

Source: 11W to 37W LED  
850lm to 3000lm

Type
Project
Catalog No.
Notes

### PRODUCT DESCRIPTION

Architectural grade LED downlights featuring deep cone reflectors. The Sapphire series is available in 4", 6" or 8" apertures and also in new construction or remodel frame-ins.

### CONSTRUCTION

**Plaster Frame:** Architectural quality 0.050 galvanized steel ring riveted to 0.064 steel junction box and driver tray. Plaster frame opening includes (3) "butterfly" spring clips to hold reflector assembly in place.

**Mounting:** Designed for installation in existing ceilings. Three high tension tempered steel springs secure remodel housings evenly to the ceiling; hole cutout template provided for convenience. Remodel frame-in accommodates ceiling thickness from 1/2" to 1-1/4".

**Minimum Clearances:** Frames require a minimum of 3" from thermal insulation and 1/2" from adjacent building component.

**Junction Box:** Plaster frame integrated 29 cubic inch 0.064" thick galvanized steel, with seven 1/2" knockouts, four pryouts, and snap on cover. Electrical connections are made through a single junction box door. Green wire provided for installations with ground wire fed through PVC pipe conduit. Junction box connects to reflector assembly with lockable quick connect.

**Thermal Protector:** External thermal device is located on the junction box.

**Driver:** Isolated driver separates the primary side from the secondary side.

### ELECTRICAL

**Input Voltage:** 120V or 277V

**Operating Temp.:** 0°C to 45°C ambient temperature

**Lumens / Wattage:** L85 = 850lm / 11W; L12 = 1250lm / 16W; L20 = 2000lm / 25W; L30 = 3000lm / 37W

**Dimming:** ELV or 0-10V dimming, must specify

[Click Here](#) or check complete dimmer list at [www.NoraLighting.com](http://www.NoraLighting.com) in the "Compatibility" page under "Resources" tab.

### COMPATIBLE REFLECTORS

CATALOG NO.	DESCRIPTION
NC-631	6" Open Reflector
NC-636	6" Wall Wash Reflector
NC-638	6" Decorative Glass Reflector

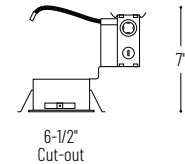
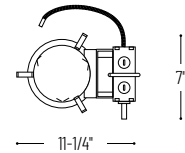
**Emergency:** Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-BSL17C-C2U.

### LABELS AND LISTINGS

- cULus Listed for Damp Location (Wet Location when used with compatible reflector)
- [10-Year Limited Warranty](#)
- RoHS Compliant
- Emergency LED Driver meets Title 20 CEC efficiency standards



### PRODUCT IMAGES AND DIMENSIONS



### 6" Sapphire I Comfort Dim Remodel Frame-In - Compatible with Sapphire I Comfort Dim Reflectors

Lumens / Wattage	LED Module	Driver
<b>NCHR-634/85</b> = 850lm / 11W	<b>C</b> = Comfort Dim	<b>LE1</b> = 120V Input; ELV (850-1250lm) / 0-10V (2000-3000lm)
<b>NCHR-634/12</b> = 1250lm / 16W		<b>LE2</b> = 277V Input; 0-10V dimming
<b>NCHR-634/20</b> = 2000lm / 25W		<b>LE4</b> = 120V Input; ELV (2000-3000lm) / 0-10V (850-1250lm)
<b>NCHR-634/30</b> = 3000lm / 37W		

### Optional Accessories

Description
<b>NEPK-BSL17C-C2U</b> = Remote Emergency Battery w/Test Switch

Example: **NCHR-634/12CLE1** = 6" Sapphire I Remodel Frame-In, 1250lm / 16W, 120V Input

# PHOTOMETRICS

## 6" Sapphire I Comfort Dim Series

Type

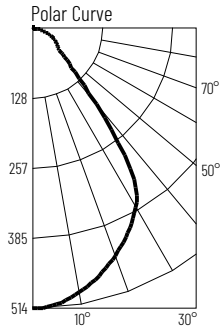
Project

Catalog No.

Notes

### Test Information

Test Number: NTR11431  
 Part Number: NC-631L85CDWSF  
 Lumens: 769lm  
 Wattage: 10.74W  
 Efficacy: 72lpw  
 CCT / CRI: 2700K / 90 CRI  
 Beam Spread: 74°  
 Spacing Criteria (0°-180°): 1.12  
 Spacing Criteria (90°-270°): 1.12



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	32.1fc	6'-1"
6'	14.3fc	9'-1"
8'	8fc	12'-1"
10'	5.1fc	15'-2"
12'	3.6fc	18'-2"

### Zonal Lumen Summary

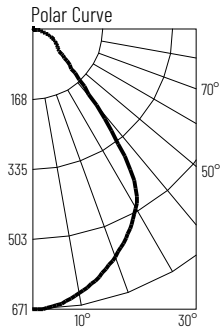
Zone	Lumens	% Luminaire
0-30	371	48.2
0-40	557	72.4
0-60	691	89.8
0-90	764	99.3
90-180	5	0.7
0-180	769	100

### Candela Table

Vertical Angles	Candela
0	514
5	508
15	470
25	414
35	313
45	101

### Test Information

Test Number: NTR11428  
 Part Number: NC-631L12CDWSF  
 Lumens: 984lm  
 Wattage: 15.53W  
 Efficacy: 63lpw  
 CCT / CRI: 2700K / 90 CRI  
 Beam Spread: 74°  
 Spacing Criteria (0°-180°): 1.1  
 Spacing Criteria (90°-270°): 1.1



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	41.9fc	6'
6'	18.6fc	9'
8'	10.5fc	12'
10'	6.7fc	15'
12'	4.7fc	18'

### Zonal Lumen Summary

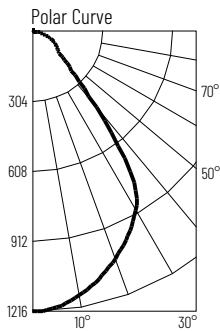
Zone	Lumens	% Luminaire
0-30	480	48.7
0-40	715	72.6
0-60	884	89.8
0-90	977	99.3
90-180	7	0.7
0-180	984	100

### Candela Table

Vertical Angles	Candela
0	671
5	663
15	612
25	533
35	393
45	128

### Test Information

Test Number: NTR11429  
 Part Number: NC-631L20CDWSF  
 Lumens: 1838lm  
 Wattage: 26.01W  
 Efficacy: 71lpw  
 CCT / CRI: 2700K / 90 CRI  
 Beam Spread: 75°  
 Spacing Criteria (0°-180°): 1.12  
 Spacing Criteria (90°-270°): 1.12



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	76fc	6'-1"
6'	33.8fc	9'-1"
8'	19fc	12'-2"
10'	12.2fc	15'-2"
12'	8.5fc	18'-4"

### Zonal Lumen Summary

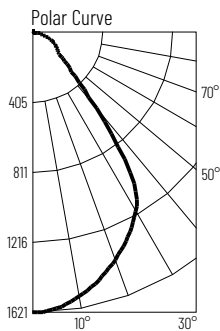
Zone	Lumens	% Luminaire
0-30	876	47.6
0-40	1318	71.7
0-60	1650	89.7
0-90	1823	99.2
90-180	15	0.8
0-180	1838	100

### Candela Table

Vertical Angles	Candela
0	1216
5	1205
15	1114
25	976
35	741
45	257

### Test Information

Test Number: NTR11430  
 Part Number: NC-631L30CDWSF  
 Lumens: 2453lm  
 Wattage: 36.14W  
 Efficacy: 68lpw  
 CCT / CRI: 2700K / 90 CRI  
 Beam Spread: 75°  
 Spacing Criteria (0°-180°): 1.12  
 Spacing Criteria (90°-270°): 1.12



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	45fc	9'-1"
9'	20fc	13'-8"
12'	11.3fc	18'-2"
15'	7.2fc	22'-10"
18'	5fc	27'-5"

### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1171	47.7
0-40	1760	71.7
0-60	2199	89.6
0-90	2430	99.1
90-180	22.5	0.9
0-180	2453	100

### Candela Table

Vertical Angles	Candela
0	1621
5	1606
15	1489
25	1306
35	987
45	341