

## NC-831 / NC-836 / NC-838

### 8" Sapphire I Comfort Dim LED Reflectors

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

#### 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, 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;

L20 = 1831lm / 25W; L30 = 2505lm / 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:** 79° Flood

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

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

#### COMPATIBLE FRAME-IN'S

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

#### CATALOG NO. DESCRIPTION

|          |                                        |
|----------|----------------------------------------|
| NCAH-830 | 8" Universal New Construction Frame-In |
| NCHR-834 | 8" Remodel Frame-In                    |

#### DECO GLASS OPTIONS

NC-838 is compatible with up to two decorative glass options, sold separately. Each glass includes mounting hardware (NRA-203).

**NTG-8B/167** 8" Tempered Blue Glass with 6-5/8" Open Center

**NTG-8B/80** 8" Tempered Blue Glass with 3-1/8" Open Center

**NTG-8CF** 8" Tempered Clear Glass with Frosted Center

**NTG-8FC** 8" Tempered Frosted Glass with Clear Center

**NTG-8HC** 8" Tempered Clear Glass with Frosted Center and 3-1/8" Open Center

#### 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-838 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-831 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



#### Type

#### Project

#### Catalog No.

#### Notes

#### PRODUCT IMAGES & DIMENSIONS



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

| Reflector Type                 | Lumens / Wattage          | Color Temp.                           | Reflector / Flange Finish                    | Optional Emergency                                      |
|--------------------------------|---------------------------|---------------------------------------|----------------------------------------------|---------------------------------------------------------|
| <b>NC-831</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             |
| <b>NC-836</b> = Wall Wash      | <b>L20</b> = 2000lm / 25W |                                       | <b>BWSF</b> = Black / White                  | (Compatible with NC-831 only, must specify on frame-in) |
| <b>NC-838</b> = Deco Glass*    | <b>L30</b> = 3000lm / 37W |                                       | <b>CSF</b> = Specular Clear / Self Flanged † |                                                         |
|                                |                           |                                       | <b>DSF</b> = Clear Diffused / Self Flanged   |                                                         |
|                                |                           |                                       | <b>DWSF</b> = Clear Diffused / White         |                                                         |
|                                |                           |                                       | <b>HSF</b> = Haze / Self Flanged             |                                                         |
|                                |                           |                                       | <b>HWSF</b> = Haze / White                   |                                                         |
|                                |                           |                                       | <b>WSF</b> = White / Self Flanged            |                                                         |
| † Not available with wall wash |                           |                                       |                                              |                                                         |

#### \* Deco Glass Option

**NTG-8B/167** Tempered Blue Glass with 6-5/8" Open Center

**NTG-8B/80** Tempered Blue Glass with 3-1/8" Open Center

**NTG-8CF** Tempered Clear Glass with Frosted Center

**NTG-8FC** Tempered Frosted Glass with Clear Center

**NTG-8HC** Tempered Clear Glass with Frosted Center and 3-1/8" Open Center

Example: **NC-831L20C30WSF** = 8" Sapphire I Open Reflector, 2000lm / 25W LED, Comfort Dim (2700K-1800K), White / Self Flange Finish

## NCAH-830

### 8" 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; L20 = 2000lm / 25W; L30 = 3000lm / 37W

**Dimming:** ELV or 0-10V dimming

[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-831 | 8" Open Reflector             |
| NC-836 | 8" Wall Wash Reflector        |
| NC-838 | 8" Decorative Glass Reflector |

#### Emergency LED Driver (BSL17C-C2)

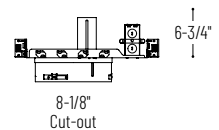
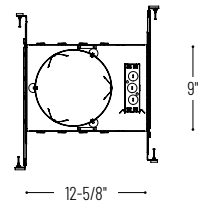
- Up to 7.5W emergency illumination with LEDs.
- Illumination Time: 90min
- Voltage: 120/277 VAC, 60Hz
- Output Voltage: 15.0-50.0 VDC
- Available with remote or integral test switch, must specify

#### 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



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

| Lumens / Wattage                                                       | LED Module             | Driver                                                                                                                   | Optional Emergency                                                                                                                 |
|------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>NCAH-830/85</b> = 850lm / 11W                                       | <b>C</b> = Comfort Dim | <b>LE1</b> = 120V Input; ELV dimming<br><b>LE2</b> = 277V Input; 0-10V dimming<br><b>LE4</b> = 120V Input; 0-10V dimming | <b>EM</b> = Emergency Pack w/ Remote Test Switch<br><b>EMI</b> = Emergency Pack w/ Integral Test Switch, must specify on reflector |
| <b>NCAH-830/20</b> = 2000lm / 25W<br><b>NCAH-830/30</b> = 3000lm / 37W | <b>C</b> = Comfort Dim | <b>LE1</b> = 120V Input; 0-10V dimming<br><b>LE2</b> = 277V Input; 0-10V dimming<br><b>LE4</b> = 120V Input; ELV dimming | <b>EM</b> = Emergency Pack w/ Remote Test Switch<br><b>EMI</b> = Emergency Pack w/ Integral Test Switch, must specify on reflector |

Example: **NCAH-830/20CLE1EM** = 8" Sapphire I Universal New Construction Frame-In, 2000lm / 25W, 120V Input, Emergency with Remote Test Switch

## NCHR-834

### 8" 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; **L20** = 2000lm / 25W; **L30** = 3000lm / 37W

**Dimming:** ELV or 0-10V dimming

[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-831 | 8" Open Reflector             |
| NC-836 | 8" Wall Wash Reflector        |
| NC-838 | 8" Decorative Glass Reflector |

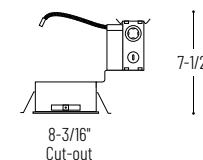
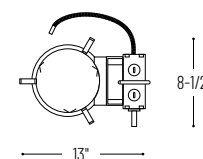
**Emergency:** Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-BSL17C-C2U.

#### 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



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

| Lumens / Wattage                                                       | LED Module             | Driver                                                                                                                   |
|------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>NCHR-834/85</b> = 850lm / 11W                                       | <b>C</b> = Comfort Dim | <b>LE1</b> = 120V Input; ELV dimming<br><b>LE2</b> = 277V Input; 0-10V dimming<br><b>LE4</b> = 120V Input; 0-10V dimming |
| <b>NCHR-834/20</b> = 2000lm / 25W<br><b>NCHR-834/30</b> = 3000lm / 37W | <b>C</b> = Comfort Dim | <b>LE1</b> = 120V Input; 0-10V dimming<br><b>LE2</b> = 277V Input; 0-10V dimming<br><b>LE4</b> = 120V Input; ELV dimming |

#### Optional Accessories

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

Example: **NCHR-834/20CLE1** = 8" Sapphire I Remodel Frame-In, 2000lm / 25W, 120V Input

# PHOTOMETRICS

## 8" Sapphire | Comfort Dim Series

Type

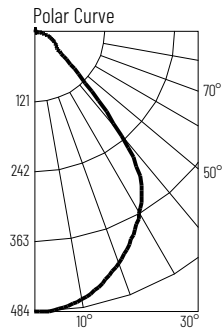
Project

Catalog No.

Notes

### Test Information

Test Number: NTR11435  
Part Number: NC-831L85CDWSF  
Lumens: 761lm  
Wattage: 10.63W  
Efficacy: 72lpw  
CCT / CRI: 2700K / 90 CRI  
Beam Spread: 79°  
Spacing Criteria (0°-180°): 1.14  
Spacing Criteria (90°-270°): 1.16



### Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 4'                      | 30.2fc      | 6'-7"         |
| 6'                      | 13.4fc      | 9'-11"        |
| 8'                      | 7.5fc       | 13'-2"        |
| 10'                     | 4.8fc       | 16'-7"        |
| 12'                     | 3.4fc       | 19'-11"       |

### Zonal Lumen Summary

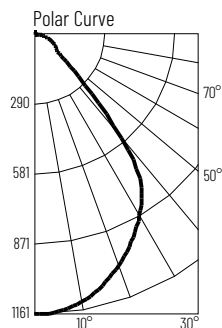
| Zone   | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30   | 356    | 46.8        |
| 0-40   | 552    | 72.6        |
| 0-60   | 691    | 90.9        |
| 0-90   | 754    | 99.1        |
| 90-180 | 7      | 0.9         |
| 0-180  | 761    | 100         |

### Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0               | 483     |
| 5               | 480     |
| 15              | 452     |
| 25              | 399     |
| 35              | 328     |
| 45              | 110     |

### Test Information

Test Number: NTR11432  
Part Number: NC-831L20CDWSF  
Lumens: 1831lm  
Wattage: 25.98W  
Efficacy: 70lpw  
CCT / CRI: 2700K / 90 CRI  
Beam Spread: 79°  
Spacing Criteria (0°-180°): 1.14  
Spacing Criteria (90°-270°): 1.14



### Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 4'                      | 72.6fc      | 6'-7"         |
| 6'                      | 32.3fc      | 9'-11"        |
| 8'                      | 18.1fc      | 13'-4"        |
| 10'                     | 11.6fc      | 16'-7"        |
| 12'                     | 8.1fc       | 19'-11"       |

### Zonal Lumen Summary

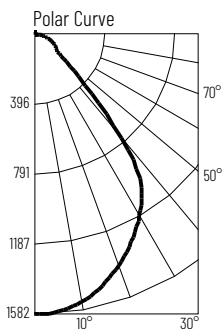
| Zone   | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30   | 346    | 46.2        |
| 0-40   | 1312   | 71.7        |
| 0-60   | 1660   | 90.7        |
| 0-90   | 1812   | 99          |
| 90-180 | 19     | 1           |
| 0-180  | 1831   | 100         |

### Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0               | 1161    |
| 5               | 1152    |
| 15              | 1076    |
| 25              | 944     |
| 35              | 768     |
| 45              | 301     |

### Test Information

Test Number: NTR11433  
Part Number: NC-831L30CDWSF  
Lumens: 2505lm  
Wattage: 34.83W  
Efficacy: 72lpw  
CCT / CRI: 2700K / 90 CRI  
Beam Spread: 79°  
Spacing Criteria (0°-180°): 1.14  
Spacing Criteria (90°-270°): 1.14



### Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6'                      | 43.9fc      | 9'-11"        |
| 9'                      | 19.5fc      | 14'-11"       |
| 12'                     | 11fc        | 19'-11"       |
| 15'                     | 7fc         | 24'-10"       |
| 18'                     | 4.9fc       | 29'-10"       |

### Zonal Lumen Summary

| Zone   | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30   | 1159   | 46.3        |
| 0-40   | 1798   | 71.7        |
| 0-60   | 2271   | 90.6        |
| 0-90   | 2477   | 98.9        |
| 90-180 | 28     | 1.1         |
| 0-180  | 2505   | 100         |

### Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0               | 1582    |
| 5               | 1573    |
| 15              | 1474    |
| 25              | 1296    |
| 35              | 1056    |
| 45              | 406     |