

# NC2-431 / NC2-436 / NC2-438

## 4" Sapphire II LED Reflectors

Source: 15W to 30W LED  
900lm to 2500lm

Type
Project
Catalog No.
Notes

### PRODUCT DESCRIPTION

The Sapphire II COB Series is an architectural grade LED high lumen downlight. The Sapphire II uses the latest COB technology by Cree®. The COB allows for better optic control offering 3 beam spreads. Beam spreads focus the light down to the work plane from high ceiling applications. The reflectors have been designed for the high efficiency (LPW) while providing low aperture brightness. The Sapphire II COB Series is proudly assembled in the USA.

### FEATURES

- Cree® COB technology
- Shatter resistant lens
- Specifiable beam spreads
- 4" deep cone reflectors, wall wash and deco glass
- 900lm, 1500lm and 2500lm LED packages
- 2700K, 3000K, 3500K and 4000K @ 90+ CRI
- 5-year limited warranty
- cULus listed for wet locations
- ENERGY STAR certified

### ELECTRICAL

**Lumens / Wattage:** L09 = 900lm / 15W; L15 = 1500lm / 18W; L25 = 2500lm / 30W

**Color Temperature:** 2700K, 3000K, 3500K, 4000K

**CRI:** 90+CRI

**Beam Spread:** (S) 38° Spot, (M) 59° Narrow Flood, (F) 73° Flood

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

**Lifetime:** 60,000 hours @ L70

### COMPATIBLE FRAME-INS

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

CATALOG NO.	DESCRIPTION
NCAH2-430	4" Universal New Construction Frame-In
NCHR2-434	4" 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. NC2-438 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:** NC2-431 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
- [5-Year Limited Warranty](#)
- RoHS Compliant



### PRODUCT IMAGES



**NC2-431**  
Open Reflector

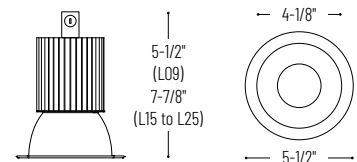


**NC2-436**  
Wall Wash Reflector



**NC2-438**  
Decorative Glass Reflector  
(Specify glass separately)

### PRODUCT DIMENSIONS



### 4" Sapphire II LED Reflectors - Dedicated Frame-In Required

Reflector Type	Lumens / Wattage	Color Temp.	Beam Spread	Reflector / Flange Finish	Optional Emergency
<b>NC2-431</b> = Open Reflector	<b>L09</b> = 900lm / 15W	<b>27</b> = 2700K	<b>S</b> = Spot	<b>BSF</b> = Black / Self Flanged	<b>EMI</b> = Integral emergency test switch (Compatible with NC2-431 only, must specify on frame-in)
<b>NC2-436</b> = Wall Wash	<b>L15</b> = 1500lm / 18W	<b>30</b> = 3000K	<b>M</b> = Narrow Flood	<b>BWSF</b> = Black / White	
<b>NC2-438</b> = Deco Glass*	<b>L25</b> = 2500lm / 30W	<b>35</b> = 3500K	<b>F</b> = Flood	<b>DSF</b> = Clear Diffused / Self Flanged	
		<b>40</b> = 4000K		<b>DWSF</b> = Clear Diffused / White	
				<b>HSF</b> = Haze / Self Flanged	
				<b>HWSF</b> = Haze / White	
				<b>WSF</b> = White / Self Flanged	

#### \*Deco Glass Option

**NTG-4SPH-CF** Tempered Clear Glass with Frosted Center

**NTG-4SPH-FC** Tempered Blue Glass with Clear Center

**NTG-4SPH-HC** Tempered Clear Glass with Frosted Center and 3-1/8" Open Center

Example: **NC2-431L1503WSF** = 4" Sapphire II LED Open Reflector, 1500lm / 18W LED, 3000K, Spot Beam Spread, White / Self Flange Finish

# NCAH2-430

## 4" Sapphire II New Construction Frame-In

Source: 15W to 30W LED  
900lm to 2500lm

Type

Project

Catalog No.

Notes

### PRODUCT DESCRIPTION

The Sapphire II COB Series is an architectural grade LED high lumen downlight. The Sapphire II uses the latest COB technology by Cree®. The COB allows for better optic control offering 3 beam spreads. Beam spreads focus the light down to the work plane from high ceiling applications.

### 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:** LE3: External thermal device is located on the junction box; LE6: Thermally protected driver

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

### ELECTRICAL

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

**Lumens / Wattage:** L09 = 900lm / 15W; L15 = 1500lm / 18W; L25 = 2500lm / 30W

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

**Dimming:** Triac, 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

NC2-431	4" Open Reflector
NC2-436	4" Wall Wash Reflector
NC2-438	4" Decorative Glass Reflector

### Emergency LED Driver (BSL17C-C2)

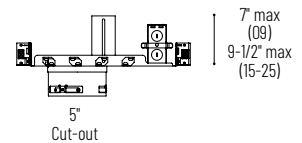
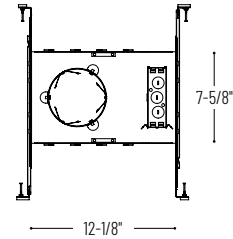
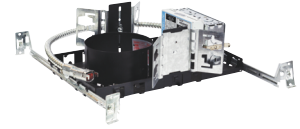
- Up to 7.5W emergency illumination with LEDs.
- Illumination Time: 90min
- Voltage: 120/277 VAC, 60Hz
- Output Voltage: 15.0-50.0 VDC
- Available with remote or integral test switch, must specify

### LABELS AND LISTINGS

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



### PRODUCT IMAGES AND DIMENSIONS



## 4" Sapphire II New Construction Frame-In - Compatible with Sapphire II Reflectors

Lumens / Wattage	Driver	Optional Emergency
NCAH2-430/09 = 900lm / 15W	LE3 = 120V Input; Triac/ELV/0-10V dimming	EM = Emergency Pack w/ Remote Test Switch
NCAH2-430/15 = 1500lm / 18W	LE6 = 120-277V Input; 0-10V dimming	EMI = Emergency Pack w/ Integral Test Switch, must specify on reflector
NCAH2-430/25 = 2500lm / 30W		

Example: NCAH2-430/15LE6EM = 4" Sapphire II Universal New Construction Frame-In, 1500lm / 18W, 120-277V Input, Emergency with Remote Test Switch

# NCHR2-434

## 4" Sapphire II Remodel Frame-In

Source: 15W to 30W LED  
900lm to 2500lm

Type
Project
Catalog No.
Notes

### PRODUCT DESCRIPTION

The Sapphire II COB Series is an architectural grade LED high lumen downlight. The Sapphire II uses the latest COB technology by Cree®. The COB allows for better optic control offering 3 beam spreads. Beam spreads focus the light down to the work plane from high ceiling applications.

### CONSTRUCTION

**Plaster Frame:** Architectural quality 0.050 galvanized steel ring riveted to 0.064 steel junction box and driver tray. Remodel 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:** LE3: External thermal device is located on the junction box; LE6: Thermally protected driver

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

### ELECTRICAL

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

**Lumens / Wattage:** L09 = 900lm / 15W; L15 = 1500lm / 18W; L25 = 2500lm / 30W

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

**Dimming:** Triac, 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
NC2-431	4" Open Reflector
NC2-436	4" Wall Wash Reflector
NC2-438	4" Decorative Glass Reflector

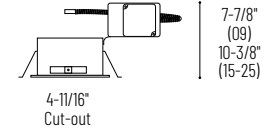
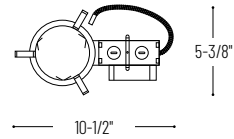
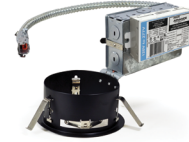
**Emergency:** Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-BSL17C-C2U.

### LABELS AND LISTINGS

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



### PRODUCT IMAGES AND DIMENSIONS



### 4" Sapphire II Remodel Frame-In - Compatible with Sapphire II Reflectors

Lumens / Wattage	Driver
NCHR2-434/09 = 900lm / 15W	LE3 = 120V Input; Triac/ELV/0-10V dimming
NCHR2-434/15 = 1500lm / 18W	LE6 = 120-277V Input; 0-10V dimming
NCHR2-434/25 = 2500lm / 30W	

### Optional Accessories

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

Example: NCHR2-434/15LE6 = 4" Sapphire II Remodel Frame-In, 1500lm / 18W, 120-277V Input

# PHOTOMETRICS

## 4" Sapphire II Series

Type

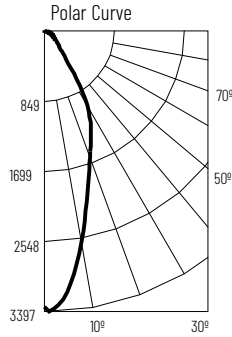
Project

Catalog No.

Notes

### Test Information

Test Number: 727461  
 Part Number: NC2-431L2540SWSF  
 Beam Spread: Spot  
 Lumens: 2389lm  
 Wattage: 29.3W  
 Efficacy: 81lpw  
 CCT / CRI: 4000K / 90 CRI  
 Spacing Criteria (0°-180): 0.6  
 Spacing Criteria (90°-270): 0.6



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	209fc	2'-10"
6'	92.8fc	4'-2"
8'	52.2fc	5'-7"
10'	33.4fc	7'
12'	23.2fc	8'-5"

### Zonal Lumen Summary

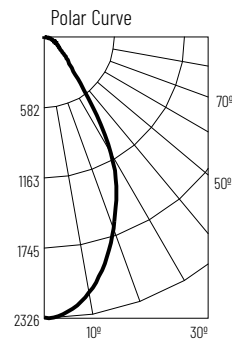
Zone	Lumens	% Luminaire
0-30	1450	60.7
0-40	1847	77.3
0-60	2181	91.3
0-90	2369	99.2
90-180	20	0.8
0-180	2389	100

### Candela Table

Vertical Angles	Candela
0	3340
5	3152
15	2018
25	1340
35	621
45	251

### Test Information

Test Number: 727477  
 Part Number: NC2-431L2540MWSF  
 Beam Spread: Narrow Flood  
 Lumens: 2412lm  
 Wattage: 29.3W  
 Efficacy: 82lpw  
 CCT / CRI: 4000K / 90 CRI  
 Spacing Criteria (0°-180): 0.88  
 Spacing Criteria (90°-270): 0.88



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	145fc	4'-6"
6'	64.5fc	6'-8"
8'	36.3fc	8'-11"
10'	23.2fc	11'-2"
12'	16.1fc	13'-5"

### Zonal Lumen Summary

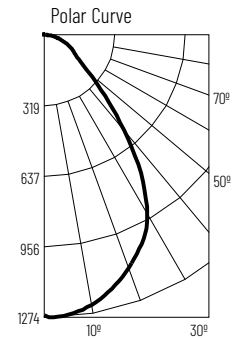
Zone	Lumens	% Luminaire
0-30	1394	57.8
0-40	1831	75.9
0-60	2199	91.2
0-90	2392	99.2
90-180	20	0.8
0-180	2412	100

### Candela Table

Vertical Angles	Candela
0	2321
5	2281
15	1935
25	1418
35	693
45	286

### Test Information

Test Number: 727489  
 Part Number: NC2-431L2540FWSF  
 Part Number: Flood  
 Lumens: 1998lm  
 Wattage: 29.5W  
 Efficacy: 68lpw  
 CCT / CRI: 4000K / 90 CRI  
 Spacing Criteria (0°-180): 1.16  
 Spacing Criteria (90°-270): 1.14



### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	79fc	5'-11"
6'	35.1fc	8'-11"
8'	19.7fc	11'-10"
10'	12.6fc	14'-10"
12'	8.8fc	17'-8"

### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	905	45.3
0-40	1334	66.7
0-60	1763	88.2
0-90	1973	98.7
90-180	25	1.3
0-180	1998	100

### Candela Table

Vertical Angles	Candela
0	1264
5	1264
15	1197
25	1060
35	797
45	412

### Lumen Output Multipliers

Color Temperature: 2700K (0.84), 3000K (0.93), 3500K (0.95), 4000K (1.00)  
 Lumen Package: L09 (0.47), L15 (0.63), L25 (1.00)