

NCR3-81 / NCR3-88

8" Sapphire III High Lumen Retrofit Downlight

Source: 13W to 60W

900lm to 5500lm

PRODUCT DESCRIPTION

Sapphire III COB retrofit luminaires are an architectural grade LED high lumen replacement. Using existing commercial or architectural frame-ins, replace old light source and reflectors with the latest LED technology. Each luminaire includes a junction box and dimmable driver. The Sapphire III utilizes Signify® Fortimo COB LED technology for better optic control with three specified 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. Sapphire III luminaires are a perfect solution for lobbies, corridors, offices and conference rooms.

FEATURES

- Retrofit existing architectural or commercial frame-ins
- Over 80% energy savings when compared to incandescent
- Signify® Fortimo COB LED technology
- Specifiable beam spreads
- 2700K, 3000K, 3500K and 4000K @ 90+ CRI
- 5-year limited warranty

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. NCR3-88 includes three 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 is connected to junction box and dimmable driver. Junction box easily wires to input voltage with wire nuts (included). Luminaire accommodates ceiling thickness from 3/8" to 1-1/2".

Decorative Glass: NCR3-88 is compatible with up to two decorative glass options (ordered separately). Each glass includes mounting hardware (NRA-203).

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

COMPATIBLE FRAME-INS

Reflector assembly is compatible with 8" Commercial and Architectural Frame-Ins.

Emergency: Luminaire is compatible with [NEPK-07LEDUNV](#) (ordered separately). Remote mounted battery operates luminaire for 90 minute emergency operation with a fully charged battery.

LABELS AND LISTINGS

- Assembled in USA with domestic and foreign components
- cULus classified for Wet Location
- [5-Year Limited Warranty](#)
- ENERGY STAR certified (Black and Specular Clear finish are not certified)
- RoHS Compliant
- FCC Compliant



ELECTRICAL	L1	L2	L3	L4	L5	L6
Input Voltage	120VAC or 120-277VAC		120VAC or 277VAC			
Input Power	13W max.	18W max.	26W max.	38W max.	46W max.	60W max.
Delivered Lumens	900lm	1500lm	2500lm	3500lm	4500lm	5500lm
Color Temperature	2700K, 3000K, 3500K or 4000K					
Color Rendering Index	90+ CRI					
Beam Spread	38° Spot, 57° Narrow Flood or 78° Flood					
Dimming	Triac/ELV or 0-10V					
Operating Temperature	0°C to 40°C	0°C to 40°C	0°C to 35°C	0°C to 35°C	0°C to 25°C	0°C to 25°C
Lifetime	50,000 hours @ L70					

Type

Project

Catalog No.

Notes

PRODUCT IMAGES & DIMENSIONS



NCR3-81

Open Reflector



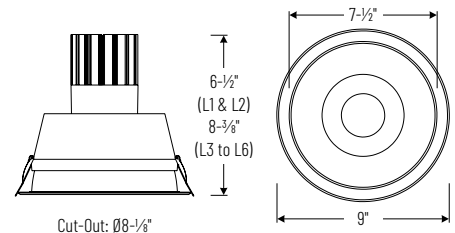
NCR3-88

Decorative Glass Reflector
(Specify glass separately)



NTG-8

8" Decorative Glass



8" Sapphire III Retrofit Reflectors

Reflector Type	Lumens / Wattage	CCT	Beam Spread	Input Voltage / Dimming Type	Reflector / Flange Finish
■ NCR3-81 = Open Reflector	■ L1 = 900lm / 13W	■ 27 = 2700K	■ S = Spot	■ P01 = 120V input; Phase Dimming (Triac/ELV)	■ BB = Specular Black Reflector / Specular Black Flange
■ NCR3-88 = Deco Glass*	■ L2 = 1500lm / 18W	■ 30 = 3000K	■ N = Narrow Flood	■ C12 = 120-277V input; 0-10V Dimming	■ BMPW = Specular Black Reflector / White Flange
	■ L3 = 2500lm / 26W	■ 35 = 3500K	■ F = Flood	■ P01 = 120V input; Phase Dimming (Triac/ELV)	■ CC = Specular Clear Reflector / Specular Clear Flange
	■ L4 = 3500lm / 38W	■ 40 = 4000K		■ C01 = 120V input; 0-10V Dimming	■ DD = Clear Diffused Reflector / Clear Diffused Flange
	■ L5 = 4500lm / 46W			■ C02 = 277V input; 0-10V Dimming	■ DMPW = Clear Diffused Reflector / White Flange
	■ L6 = 5500lm / 60W				■ HZ = Haze Reflector / Haze Flange
					■ HZMPW = Haze Reflector / White Flange
					■ MPW = White Reflector / White Flange

* Decorative Glass Option

- **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

Example: **NCR3-81L635NC02MPW** = 8" Sapphire III Retrofit Reflector, 5500lm / 60W, 3500K, Narrow Flood Beam Spread, 277V input; 0-10V dimming, White Reflector / White Flange

PHOTOMETRICS

8" Sapphire III High Lumen Retrofit Downlight

5500lm / 60W

Type

Project

Catalog No.

Notes

Test Information

Test Number: NTR2368R1

Part Number: NCR3-81L640SC01MPW

Beam Spread: 38° Spot

Lumens: 5778lm

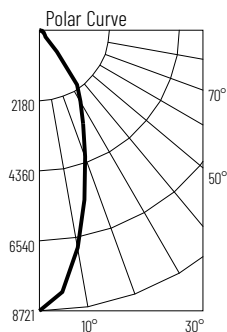
Wattage: 56.66W

Efficacy: 102lpw

CCT / CRI: 4000K / 90 CRI

Spacing Criteria (0°-180°): 0.62

Spacing Criteria (90°-270°): 0.62



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
8'	136fc	5'-7"
12'	60.6fc	8'-5"
16'	34.1fc	11'-2"
20'	21.8fc	14'
24'	15.1fc	16'-10"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3776	65.4
0-40	4971	86
0-60	5506	95.3
0-90	5778	100
90-180	0	0
0-180	5778	100

Candela Table

Vertical Angles	Candela
0	8721
5	8166
15	5452
25	3212
35	2073
45	284

Test Information

Test Number: NTR2369R1

Part Number: NCR3-81L640NC01MPW

Beam Spread: 57° Narrow Flood

Lumens: 5818lm

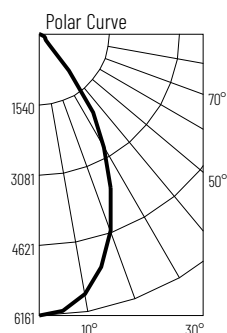
Wattage: 56.7W

Efficacy: 103lpw

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
8'	96.3fc	8'-8"
12'	42.8fc	13'-1"
16'	24.1fc	17'-6"
20'	15.4fc	21'-11"
24'	10.7fc	26'-2"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3735	64.2
0-40	5017	86.2
0-60	5552	95.4
0-90	5818	100
90-180	0	0
0-180	5784	100

Candela Table

Vertical Angles	Candela
0	6161
5	6074
15	5281
25	3712
35	2079
45	327

Test Information

Test Number: NTR2370R1

Part Number: NCR3-81L640FC01MPW

Beam Spread: 78° Flood

Lumens: 5140lm

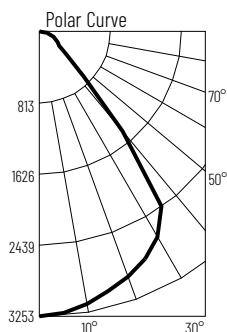
Wattage: 56.29W

Efficacy: 91lpw

CCT / CRI: 4000K / 90 CRI

Spacing Criteria (0°-180°): 1.24

Spacing Criteria (90°-270°): 1.22



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
8'	50.8fc	13'-1"
12'	22.6fc	19'-7"
16'	12.7fc	26'-1"
20'	8.1fc	32'-7"
24'	5.7fc	39'-2"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	2479	48.2
0-40	3867	75.2
0-60	4749	92.4
0-90	5140	100
90-180	0	0
0-180	5140	100

Candela Table

Vertical Angles	Candela
0	3253
5	3226
15	3070
25	2864
35	2439
45	722

Lumen Output Multipliers

Lumen Package: L1 (0.18), L2 (0.25), L3 (0.47), L4 (0.67), L5 (0.8), L6 (1.00)

Color Temperature: 2700K (0.5), 3000K (0.91), 3500K (0.97), 4000K (1.00)

Reflector Finish: Specular Black (0.68), Specular Clear (1.06), Diffused (1.08), Haze (0.96), Matte Powder White (1.00)