

NC2-631 / NC2-636 / NC2-638

6" Sapphire II LED Reflectors

Source: 16W to 60W LED
900lm to 4500lm

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
- 6" deep cone reflectors, wall wash and deco glass
- 900lm, 1500lm, 2500lm, 3500lm, and 4500lm 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 / 16W; **L15** = 1500lm / 18W; **L25** = 2500lm / 28W;
L35 = 3500lm / 46W; **L45** = 4500lm / 60W

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

Color Rendering Index: 90+ CRI

Beam Spread: (S) 45° Spot, (M) 64° Narrow Flood, (F) 79° Flood

Operating Temperature: 0°C to 45°C

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

| | |
|---------------------------|--|
| NCAH2-630 | 6" Universal New Construction Frame-In |
| NCHR2-634 | 6" Remodel Frame-In |

DECO GLASS OPTIONS

NC2-638 is compatible with up to two decorative glass options, sold separately. Each glass includes mounting hardware (NRA-203).

NTG-6B/120 6" Tempered Blue Glass with 4-3/4" Open Center

NTG-6B/80 6" Tempered Blue Glass with 3-1/8" Open Center

NTG-6CF 6" Tempered Clear Glass with Frosted Center

NTG-6FC 6" Tempered Frosted Glass with Clear Center

NTG-6HC 6" 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. NC2-638 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.

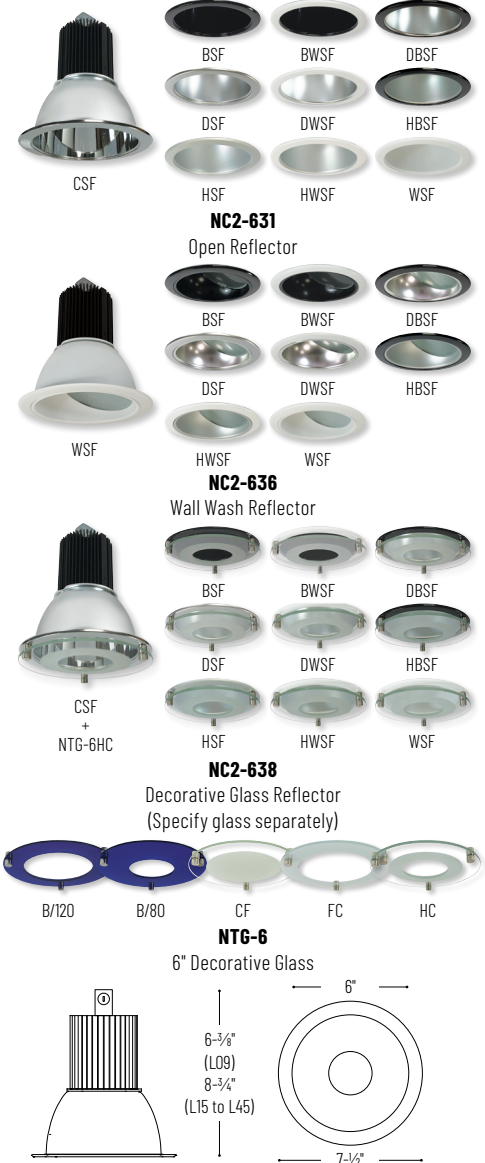
Emergency: NC2-631 is compatible with integral emergency test switch, must specify.

LABELS AND LISTINGS

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



PRODUCT IMAGES & DIMENSIONS



6" Sapphire II LED Reflectors - Dedicated Frame-In Required

| Reflector Type | Lumens / Wattage | Color Temp. | Beam Spread | Reflector / Flange Finish | Optional Emergency |
|--|---------------------------|-------------------|-------------------------|---|---|
| NC2-631 = Open Reflector | L09 = 900lm / 16W | 27 = 2700K | S = Spot | BSF = Black / Self Flanged | EMI = Integral emergency test switch (Compatible with NC2-631 only, must specify on frame-in) |
| NC2-636 = Wall Wash ¹ | L15 = 1500lm / 18W | 30 = 3000K | M = Narrow Flood | BWSF = Black / White Flange | |
| NC2-638 = Deco Glass ¹ | L25 = 2500lm / 28W | 35 = 3500K | F = Flood | CSF = Specular Clear / Self Flanged [†] | |
| | L35 = 3500lm / 46W | 40 = 4000K | | DBSF = Clear Diffused / Black Flange | |
| | L45 = 4500lm / 60W | | | DSF = Clear Diffused / Self Flanged | |
| | | | | DWSF = Clear Diffused / White Flange | |
| | | | | HBSF = Haze / Black Flange | |
| | | | | HSF = Haze / Self Flanged | |
| | | | | HWSF = Haze / White Flange | |
| | | | | WSF = White / Self Flanged | |

* Deco Glass Options:

| | |
|-------------------|---|
| NTG-6B/120 | Tempered Blue Glass with 4-3/4" Open Center |
| NTG-6B/80 | Tempered Blue Glass with 3-1/8" Open Center |
| NTG-6CF | Tempered Clear Glass with Frosted Center |
| NTG-6FC | Tempered Clear Glass with Clear Center |
| NTG-6HC | Tempered Clear Glass with Frosted Center and 3-1/8" Open Center |

Example: **NC2-631L2530WSF** = 6" Sapphire II Open Reflector, 2500lm / 28W LED, 3000K, Spot Beam Spread, White / Self Flange Finish

NCAH2-630

6" Sapphire II New Construction Frame-In

Source: 16W to 60W LED
900lm to 4500lm

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 2-1/2".

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

Operating Temperature: 0°C to 45°C

Lumens / Wattage: L09 = 900lm / 16W; L15 = 1500lm / 18W; L25 = 2500lm / 28W; L35 = 3500lm / 46W; L45 = 4500lm / 60W

Dimming: Triac, ELV or 0-10V dimming

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

COMPATIBLE REFLECTORS

CATALOG NO. DESCRIPTION

| | |
|-------------------------|-------------------------------|
| NC2-631 | 6" Open Reflector |
| NC2-636 | 6" Wall Wash Reflector |
| NC2-638 | 6" Decorative Glass Reflector |

Emergency LED Driver

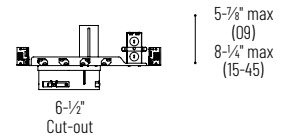
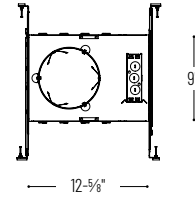
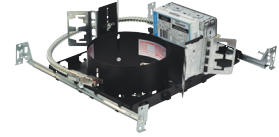
- Up to 7W emergency illumination with LEDs.
- Illumination Time: 90min
- Voltage: 120-277VAC, 50/60Hz
- Output Voltage: 10-60 VDC
- Available with remote or integral test switch, must specify

LABELS AND LISTINGS

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



PRODUCT IMAGES AND DIMENSIONS



6" Sapphire II New Construction Frame-In - Compatible with Sapphire II Reflectors

| Lumens / Wattage | Driver | Optional Emergency |
|------------------------------------|--|--|
| NCAH2-630/09 = 900lm / 16W | LE3 = 120V Input; Triac/ELV/0-10V dimming | EM = Emergency Pack w/ Remote Test Switch |
| NCAH2-630/15 = 1500lm / 18W | LE6 = 120-277V Input; 0-10V dimming | EMI = Emergency Pack w/ Integral Test Switch, must specify on reflector |
| NCAH2-630/25 = 2500lm / 28W | | |
| NCAH2-630/35 = 3500lm / 46W | | |
| NCAH2-630/45 = 4500lm / 60W | | |

Example: **NCAH2-630/25LE6EM** = 6" Sapphire II Universal New Construction Frame-In, 2500lm / 28W, 120-277V Input, Emergency with Remote Test Switch

NCHR2-634

6" Sapphire II Remodel Frame-In

Source: 16W to 60W LED
900lm to 4500lm

| |
|-------------|
| 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 / 16W; L15 = 1500lm / 18W; L25 = 2500lm / 28W; L35 = 3500lm / 46W; L45 = 4500lm / 60W

Operating Temperature: 0°C to 45°C

Dimming: Triac, ELV or 0-10V dimming

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

COMPATIBLE REFLECTORS

| CATALOG NO. | DESCRIPTION |
|-------------------------|-------------------------------|
| NC2-631 | 6" Open Reflector |
| NC2-636 | 6" Wall Wash Reflector |
| NC2-638 | 6" Decorative Glass Reflector |

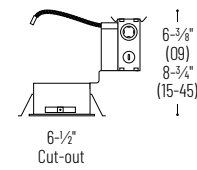
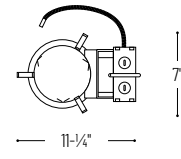
Emergency: Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-07LEDUNV.

LABELS AND LISTINGS

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



PRODUCT IMAGES AND DIMENSIONS



6" Sapphire II Remodel Frame-In - Compatible with Sapphire II Reflectors

| Lumens / Wattage | Driver |
|------------------------------------|---|
| NCHR2-634/09 = 900lm / 16W | LE3 = 120V Input; Triac/ELV0-10V dimming |
| NCHR2-634/15 = 1500lm / 18W | LE6 = 120-277V Input; 0-10V dimming |
| NCHR2-634/25 = 2500lm / 28W | |
| NCHR2-634/35 = 3500lm / 46W | |
| NCHR2-634/45 = 4500lm / 60W | |

Optional Accessories

| Description |
|---|
| NEPK-07LEDUNV = Remote Emergency Battery w/Test Switch |

Example: **NCHR2-634/15LE6** = 6" Sapphire II LED Remodel Frame-In, 1500lm / 18W, 120-277V Input

PHOTOMETRICS

6" Sapphire II Series
900lm

Type

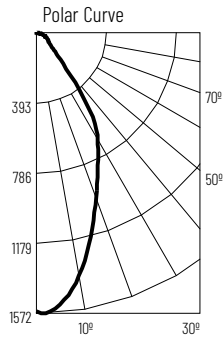
Project

Catalog No.

Notes

Test Information

Test Number: NTR1335
Part Number: NC2-631L0940SWSF
Part Number: 35° Spot
Lumens: 1113lm
Wattage: 14.89W
Efficacy: 75lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.56
Spacing Criteria (90°-270°): 0.54



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 4' | 95.2fc | 2'-7" |
| 6' | 42.3fc | 3'-11" |
| 8' | 23.8fc | 5'-2" |
| 10' | 15.2fc | 6'-6" |
| 12' | 10.6fc | 7'-10" |

Zonal Lumen Summary

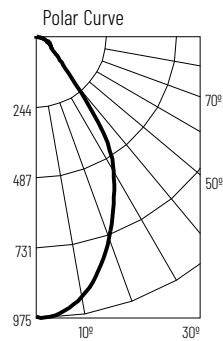
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 637 | 57.2 |
| 0-40 | 869 | 78.1 |
| 0-60 | 1019 | 91.6 |
| 0-90 | 1106 | 99.4 |
| 90-180 | 7 | 0.6 |
| 0-180 | 1113 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 1522 |
| 5 | 1421 |
| 15 | 868 |
| 25 | 595 |
| 35 | 401 |
| 45 | 114 |

Test Information

Test Number: NTR1321
Part Number: NC2-631L0940MWSF
Part Number: 65° Narrow Flood
Lumens: 1114lm
Wattage: 14.86W
Efficacy: 75lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.92
Spacing Criteria (90°-270°): 0.92



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 4' | 60.7fc | 5'-1" |
| 6' | 27fc | 7'-8" |
| 8' | 15.2fc | 10'-2" |
| 10' | 9.7fc | 12'-10" |
| 12' | 6.8fc | 15'-4" |

Zonal Lumen Summary

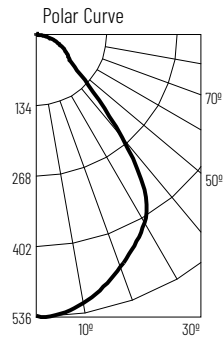
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 607 | 54.5 |
| 0-40 | 855 | 76.8 |
| 0-60 | 1019 | 91.4 |
| 0-90 | 1108 | 99.4 |
| 90-180 | 7 | 0.6 |
| 0-180 | 1114 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 972 |
| 5 | 955 |
| 15 | 825 |
| 25 | 627 |
| 35 | 426 |
| 45 | 128 |

Test Information

Test Number: NTR1321
Part Number: NC2-631L0940FWSF
Part Number: 79° Flood
Lumens: 898lm
Wattage: 15.02W
Efficacy: 60lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 1.16
Spacing Criteria (90°-270°): 1.16



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 4' | 33.3fc | 6'-6" |
| 6' | 14.8fc | 9'-10" |
| 8' | 8.3fc | 13'-1" |
| 10' | 5.3fc | 16'-4" |
| 12' | 3.7fc | 19'-7" |

Zonal Lumen Summary

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 390 | 43.4 |
| 0-40 | 605 | 67.4 |
| 0-60 | 795 | 88.5 |
| 0-90 | 891 | 99.3 |
| 90-180 | 7 | 0.7 |
| 0-180 | 898 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 533 |
| 5 | 527 |
| 15 | 491 |
| 25 | 436 |
| 35 | 354 |
| 45 | 154 |

Lumen Output Multipliers

Color Temperature: 2700K (0.87), 3000K (0.91), 3500K (0.96), 4000K (1.00)

PHOTOMETRICS

6" Sapphire II Series
1500lm

Type

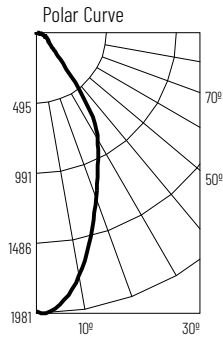
Project

Catalog No.

Notes

Test Information

Test Number: NTR1335
Part Number: NC2-631L1540SWSF
Part Number: 42° Spot
Lumens: 1561lm
Wattage: 16.78W
Efficacy: 93lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.64
Spacing Criteria (90°-270°): 0.66



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 54.1fc | 4'-6" |
| 9' | 24fc | 6'-10" |
| 12' | 13.5fc | 9'-1" |
| 15' | 8.7fc | 11'-5" |
| 18' | 6fc | 13'-7" |

Zonal Lumen Summary

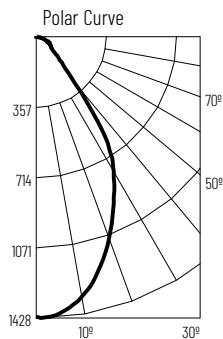
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 904 | 57.9 |
| 0-40 | 1213 | 77.7 |
| 0-60 | 1435 | 91.9 |
| 0-90 | 1550 | 99.3 |
| 90-180 | 11 | 0.7 |
| 0-180 | 1561 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 1946 |
| 5 | 1844 |
| 15 | 1234 |
| 25 | 832 |
| 35 | 504 |
| 45 | 159 |

Test Information

Test Number: NTR1335
Part Number: NC2-631L1540MWSF
Part Number: 63° Narrow Flood
Lumens: 1566lm
Wattage: 16.92W
Efficacy: 93lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.9
Spacing Criteria (90°-270°): 0.9



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 39.4fc | 7'-5" |
| 9' | 17.5fc | 11'-1" |
| 12' | 9.9fc | 14'-8" |
| 15' | 6.3fc | 18'-5" |
| 18' | 4.4fc | 22'-1" |

Zonal Lumen Summary

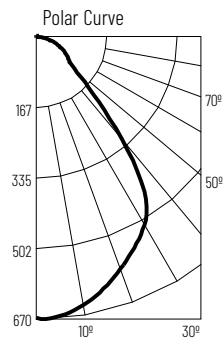
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 877 | 56 |
| 0-40 | 1216 | 77.6 |
| 0-60 | 1439 | 91.9 |
| 0-90 | 1556 | 99.4 |
| 90-180 | 10 | 0.6 |
| 0-180 | 1566 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 1420 |
| 5 | 1402 |
| 15 | 1206 |
| 25 | 895 |
| 35 | 572 |
| 45 | 176 |

Test Information

Test Number: NTR11321
Part Number: NC2-631L1540FWSF
Part Number: 79° Flood
Lumens: 1132lm
Wattage: 15.04W
Efficacy: 75lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 1.16
Spacing Criteria (90°-270°): 1.16



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 18.5fc | 9'-11" |
| 9' | 8.2fc | 14'-10" |
| 12' | 4.6fc | 19'-8" |
| 15' | 3fc | 24'-7" |
| 18' | 2.1fc | 29'-7" |

Zonal Lumen Summary

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 490 | 43.3 |
| 0-40 | 756 | 66.7 |
| 0-60 | 1005 | 88.8 |
| 0-90 | 1124 | 99.3 |
| 90-180 | 8 | 0.7 |
| 0-180 | 1132 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 667 |
| 5 | 662 |
| 15 | 618 |
| 25 | 551 |
| 35 | 436 |
| 45 | 202 |

Lumen Output Multipliers

Color Temperature: 2700K (0.87), 3000K (0.91), 3500K (0.96), 4000K (1.00)

PHOTOMETRICS

6" Sapphire II Series
2500lm

Type

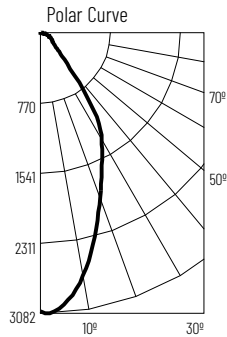
Project

Catalog No.

Notes

Test Information

Test Number: NTR1335
Part Number: NC2-631L2540SWSF
Part Number: 40° Spot
Lumens: 2367lm
Wattage: 28.8W
Efficacy: 82lpw
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 |
|-------------------------|-------------|---------------|
| 6' | 84.5fc | 4'-5" |
| 9' | 37.6fc | 6'-7" |
| 12' | 21.1fc | 8'-8" |
| 15' | 13.5fc | 10'-11" |
| 18' | 9.4fc | 13'-1" |

Zonal Lumen Summary

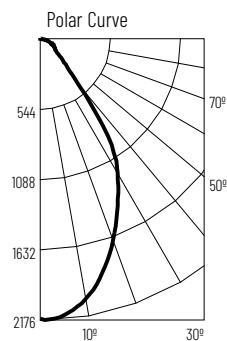
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1371 | 57.9 |
| 0-40 | 1860 | 78.6 |
| 0-60 | 2170 | 91.7 |
| 0-90 | 2350 | 99.3 |
| 90-180 | 17 | 0.7 |
| 0-180 | 2367 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 3043 |
| 5 | 2842 |
| 15 | 1879 |
| 25 | 1271 |
| 35 | 836 |
| 45 | 233 |

Test Information

Test Number: NTR1335
Part Number: NC2-631L2540MWSF
Part Number: 63° Narrow Flood
Lumens: 2408lm
Wattage: 29.04W
Efficacy: 83lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.9
Spacing Criteria (90°-270°): 0.9



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 60.4fc | 7'-5" |
| 9' | 26.8fc | 11' |
| 12' | 15.1fc | 14'-8" |
| 15' | 9.7fc | 18'-5" |
| 18' | 6.7fc | 22'-1" |

Zonal Lumen Summary

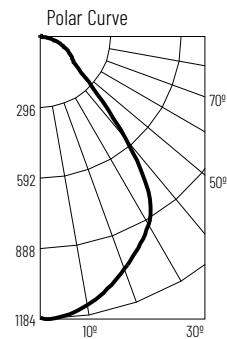
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1345 | 55.8 |
| 0-40 | 1867 | 77.5 |
| 0-60 | 2207 | 91.7 |
| 0-90 | 2390 | 99.3 |
| 90-180 | 18 | 0.7 |
| 0-180 | 2408 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 2173 |
| 5 | 2137 |
| 15 | 1837 |
| 25 | 1371 |
| 35 | 889 |
| 45 | 269 |

Test Information

Test Number: NTR1321
Part Number: NC2-631L2540FWSF
Part Number: 79° Flood
Lumens: 2004lm
Wattage: 29.24W
Efficacy: 69lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 1.16
Spacing Criteria (90°-270°): 1.16



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 32.8fc | 9'-10" |
| 9' | 14.6fc | 14'-8" |
| 12' | 8.2fc | 19'-7" |
| 15' | 5.3fc | 24'-7" |
| 18' | 3.6fc | 29'-6" |

Zonal Lumen Summary

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 867 | 43.3 |
| 0-40 | 1336 | 66.7 |
| 0-60 | 1780 | 88.8 |
| 0-90 | 1989 | 99.3 |
| 90-180 | 14 | 0.7 |
| 0-180 | 2004 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 1181 |
| 5 | 1171 |
| 15 | 1094 |
| 25 | 976 |
| 35 | 779 |
| 45 | 349 |

Lumen Output Multipliers

Color Temperature: 2700K (0.87), 3000K (0.91), 3500K (0.96), 4000K (1.00)

PHOTOMETRICS

6" Sapphire II Series
3500lm

Type

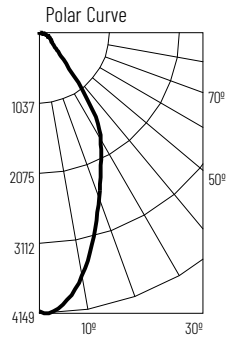
Project

Catalog No.

Notes

Test Information

Test Number: NTR1335
Part Number: NC2-631L3540SWSF
Part Number: 51° Spot
Lumens: 3775lm
Wattage: 43.71W
Efficacy: 86lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.76
Spacing Criteria (90°-270°): 0.76



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 115fc | 5'-10" |
| 9' | 51fc | 8'-8" |
| 12' | 28.7fc | 11'-7" |
| 15' | 18.3fc | 14'-6" |
| 18' | 12.7fc | 17'-5" |

Zonal Lumen Summary

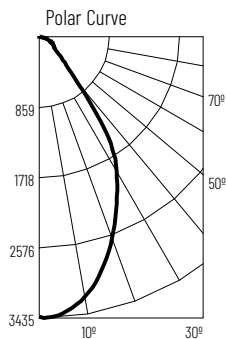
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 2200 | 58.3 |
| 0-40 | 2960 | 78.4 |
| 0-60 | 3450 | 91.4 |
| 0-90 | 3732 | 98.9 |
| 90-180 | 43 | 1.1 |
| 0-180 | 3775 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 4128 |
| 5 | 4010 |
| 15 | 3069 |
| 25 | 2125 |
| 35 | 1262 |
| 45 | 366 |

Test Information

Test Number: NTR1335
Part Number: NC2-631L3540MWSF
Part Number: 64° Narrow Flood
Lumens: 3844lm
Wattage: 43.49W
Efficacy: 88lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.92
Spacing Criteria (90°-270°): 0.92



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 95fc | 7'-6" |
| 9' | 42.2fc | 11'-4" |
| 12' | 23.8fc | 15' |
| 15' | 15.2fc | 18'-10" |
| 18' | 10.6fc | 22'-6" |

Zonal Lumen Summary

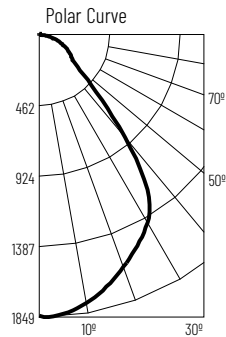
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 2157 | 56.1 |
| 0-40 | 2988 | 77.7 |
| 0-60 | 3526 | 91.7 |
| 0-90 | 3815 | 99.2 |
| 90-180 | 29 | 0.8 |
| 0-180 | 3844 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 3421 |
| 5 | 3374 |
| 15 | 2947 |
| 25 | 2226 |
| 35 | 1400 |
| 45 | 426 |

Test Information

Test Number: NTR1321
Part Number: NC2-631L3540FWSF
Part Number: 79° Flood
Lumens: 3127lm
Wattage: 43.27W
Efficacy: 72lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 1.16
Spacing Criteria (90°-270°): 1.16



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 51.3fc | 9'-11" |
| 9' | 22.8fc | 14'-10" |
| 12' | 12.8fc | 19'-8" |
| 15' | 8.2fc | 24'-8" |
| 18' | 5.7fc | 29'-7" |

Zonal Lumen Summary

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1357 | 43.4 |
| 0-40 | 2107 | 67.4 |
| 0-60 | 2777 | 88.8 |
| 0-90 | 3104 | 99.3 |
| 90-180 | 23 | 0.7 |
| 0-180 | 3127 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 1847 |
| 5 | 1832 |
| 15 | 1710 |
| 25 | 1525 |
| 35 | 1240 |
| 45 | 546 |

Lumen Output Multipliers

Color Temperature: 2700K (0.87), 3000K (0.91), 3500K (0.96), 4000K (1.00)

PHOTOMETRICS

6" Sapphire II Series
4500lm

Type

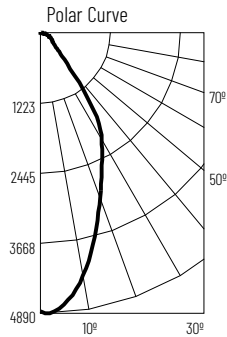
Project

Catalog No.

Notes

Test Information

Test Number: 727461
Part Number: NC2-631L4540SWSF
Part Number: 52° Spot
Lumens: 4585lm
Wattage: 56.2W
Efficacy: 82lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.76
Spacing Criteria (90°-270°): 0.76



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 135fc | 5'-11" |
| 9' | 60fc | 8'-10" |
| 12' | 33.8fc | 11'-8" |
| 15' | 21.6fc | 14'-8" |
| 18' | 15fc | 17'-7" |

Zonal Lumen Summary

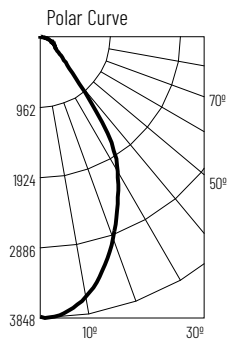
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 2624 | 57.2 |
| 0-40 | 3579 | 78.1 |
| 0-60 | 4198 | 91.6 |
| 0-90 | 4549 | 99.2 |
| 90-180 | 36 | 0.8 |
| 0-180 | 4585 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 4861 |
| 5 | 4724 |
| 15 | 3654 |
| 25 | 2535 |
| 35 | 1597 |
| 45 | 462 |

Test Information

Test Number: 727477
Part Number: NC2-631L4540MWSF
Part Number: 64° Narrow Flood
Lumens: 4395lm
Wattage: 55.5W
Efficacy: 79lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.92
Spacing Criteria (90°-270°): 0.92



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 106fc | 7'-7" |
| 9' | 47.3fc | 11'-4" |
| 12' | 26.6fc | 15'-1" |
| 15' | 17fc | 18'-11" |
| 18' | 11.8fc | 22'-8" |

Zonal Lumen Summary

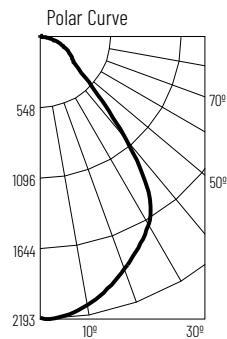
| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 2429 | 55.3 |
| 0-40 | 3387 | 77.1 |
| 0-60 | 4021 | 91.5 |
| 0-90 | 4361 | 99.2 |
| 90-180 | 34.43 | 0.8 |
| 0-180 | 4395 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 3833 |
| 5 | 3769 |
| 15 | 3296 |
| 25 | 2587 |
| 35 | 1596 |
| 45 | 500 |

Test Information

Test Number: 727489
Part Number: NC2-631L4540FWSF
Part Number: 79° Flood
Lumens: 3687lm
Wattage: 56.5W
Efficacy: 65lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 1.16
Spacing Criteria (90°-270°): 1.16



Illuminance at a Distance

| Distance from Luminaire | FC at Nadir | Beam Diameter |
|-------------------------|-------------|---------------|
| 6' | 60.6fc | 9'-10" |
| 9' | 26.9fc | 14'-10" |
| 12' | 15.2fc | 19'-8" |
| 15' | 9.7fc | 24'-7" |
| 18' | 6.7fc | 29'-6" |

Zonal Lumen Summary

| Zone | Lumens | % Luminaire |
|--------|--------|-------------|
| 0-30 | 1602 | 43.5 |
| 0-40 | 2487 | 67.4 |
| 0-60 | 3274 | 88.8 |
| 0-90 | 3659 | 99.2 |
| 90-180 | 28 | 0.8 |
| 0-180 | 3687 | 100 |

Candela Table

| Vertical Angles | Candela |
|-----------------|---------|
| 0 | 2182 |
| 5 | 2164 |
| 15 | 2018 |
| 25 | 1799 |
| 35 | 1454 |
| 45 | 643 |

Lumen Output Multipliers

Color Temperature: 2700K (0.87), 3000K (0.91), 3500K (0.96), 4000K (1.00)