

NIO-4SND SQ

4" Iolite Square Reflector with Square Aperture

Source: 14W to 28W LED
800lm to 2500lm

PRODUCT DESCRIPTION

4" Iolite LED downlights require a dedicated Iolite new construction or remodel housing. Deep regressed cone reflectors optimize visual cut-off.

FEATURES

- 800lm, 1000lm, 1500lm, 2000lm or 2500lm LED packages
- 2700K, 3000K, 3500K, 4000K, 5000K @ 90+ CRI
- Comfort Dim (warm dimming) also available in 800lm only
- Flood optic, narrow flood and spot optics (included)
- 5-Year limited warranty

SPECIFICATION

Construction: Trims are constructed of heat dissipating, die-cast aluminum. The aluminum die-cast LED heat sink is threaded to fit the trim and transfer heat.

Mounting: Luminaire includes friction blades to mount securely to housing.

OPTICS

800-1000lm: Three field changeable optics (spot, narrow flood and flood) are included with each LED module. Premium 10° TIR narrow spot optic assembly also available ([Click Here](#) for more information). Optional frosted and TIR optics are also available.

1500-2500lm: Three field changeable TIR optics (spot, narrow flood and flood) are included with each LED module.

ELECTRICAL

Lumens / Wattage: 800lm / 14W, 1000lm / 14W, 1500lm / 20W, 2000lm / 24W, 2500lm / 28W

Color Temperature: 2700K, 3000K, 3500K, 4000K, 5000K

Color Rendering Index: 90+CRI

Operating Temperature: Specified by housing

Lifetime: 50,000 hours @ L70

Comfort Dim: Comfort Dim color tunes the temperature from a bright 3100K, to a romantic and comfortable 2000K on a gradual, even curve. Available in 800lm only.

Dimming: Specified by housing

COMPATIBLE HOUSINGS

Luminaires are compatible with respective Iolite housings manufactured by Nora Lighting.

CATALOG NO.	DESCRIPTION	LUMENS / WATTAGE
NHIOICD-48	ICAT New Construction	800-1000lm / 14W
NHIOICDCP-48	Chicago Plenum	800-1000lm / 14W
NHRIOIC-48	ICAT Remodel	800-1000lm / 14W
NHIOICD-415	ICAT New Construction	1500lm / 20W
NHIOICDCP-415	Chicago Plenum	1500lm / 20W
NHIOICD-420	ICAT New Construction	2000lm / 24W
NHIOICDCP-420	Chicago Plenum	2000lm / 24W
NHIOICD-425	ICAT New Construction	2500lm / 28W
NHIOICDCP-425	Chicago Plenum	2500lm / 28W

Accessories: Luminaires can accommodate (1) hex louver and (1) translucent deco collar or opaque snoot, no accessory holder is required, see accessories page. Flush mount mud ring is available to give the appearance of a trimless, compatible with new construction housing only.

LABELS AND LISTINGS

- cULus Listed for Wet Locations
- ENERGY STAR certified
- [5-Year Limited Warranty](#)
- RoHS Compliant
- Certified to the high efficacy requirements of California Title 24 JA8-2022



4" Iolite Square Reflector with Square Aperture - Dedicated Housing Required

Color Temperature	Finish	Lumens / Wattage
NIO-4SND SQ50X = 5000K*	BB = Black / Black	(blank) = 800lm / 14W
NIO-4SND SQCDX = Comfort Dim†	BW = Black / White	
	BZ = Bronze / Bronze	
NIO-4SND SQ27X = 2700K	CHMPW = Champagne / Matte Powder White	/10 = 1000lm / 14W
NIO-4SND SQ30X = 3000K	HN = Haze / Natural Metal	/HL = 1500-2500lm
NIO-4SND SQ35X = 3500K	HW = Haze / White	(varies by housing)
NIO-4SND SQ40X = 4000K	HZMPW = Haze / Matte Powder White	
NIO-4SND SQ50X = 5000K	MPW = Matte Powder White	
	WW = White / White	

* 5000K LED modules in 800lm are while supplies last

† Comfort Dim available in 800lm only and 1" Iolite uses a different dimming curve than 2" & 4" Iolite

Example: **NIO-4SND SQ27XWW** = 4" Iolite Square Reflector with Square Aperture, 2700K, White finish, 800lm / 14W

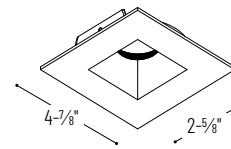
Type

Project

Catalog No.

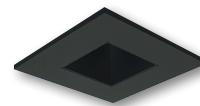
Notes

PRODUCT IMAGES & DIMENSIONS



NIO-4SND SQ

Square Reflector with Square Aperture
Non-Adjustable



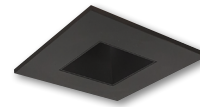
BB

Black Reflector
Black Flange



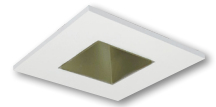
BW

Black Reflector
White Flange



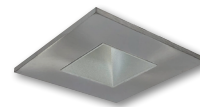
BZ

Bronze Reflector
Bronze Flange



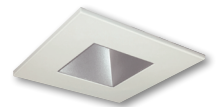
CHMPW

Champagne Haze Reflector
Matte Powder White Flange



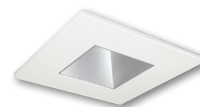
HN

Haze Reflector
Natural Metal Flange



HW

Haze Reflector
White Flange



HZMPW

Haze Reflector
Matte Powder White Flange



MPW

Matte Powder White Reflector
Matte Powder White Flange



WW

White Reflector
White Flange

Compatible Housings

Housing Type
NHIOICD-48 = ICAT New Construction / 800-1000lm / 14W
NHIOICDCP-48 = Chicago Plenum / 800-1000lm / 14W
NHRIOIC-48 = ICAT Remodel / 800-1000lm / 14W
NHIOICD-415 = ICAT New Construction / 1500lm / 20W
NHIOICDCP-415 = Chicago Plenum / 1500lm / 20W
NHIOICD-420 = ICAT New Construction / 2000lm / 24W
NHIOICDCP-420 = Chicago Plenum / 2000lm / 24W
NHIOICD-425 = ICAT New Construction / 2500lm / 28W
NHIOICDCP-425 = Chicago Plenum / 2500lm / 28W

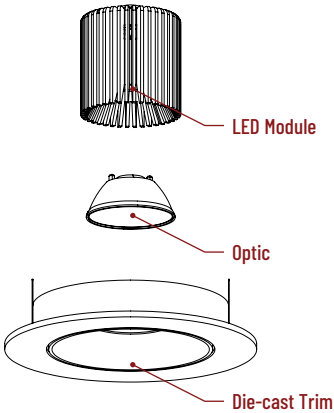
4" Iolite Accessories

4" Iolite Square Reflector with Square Aperture

Type
Project
Catalog No.
Notes

FIELD CHANGEABLE OPTICS

Iolite luminaires include spot, narrow flood and flood optics. Optics can be changed in the field by removing LED module from die-cast trim. Optional frosted and TIR optics are also available.
Note: Frosted and Premium TIR optics are not compatible with /HL LED modules.



Frosted Optics

NIO-REFL38FR 60° Optic
NIO-REFL60FR 73° Optic
Not compatible with /HL LED module.

Premium TIR Optics

NIO-REFLTIR15 22° Optic
NIO-REFLTIR25 26° Optic
Not compatible with /HL, Comfort Dim (CDX) LED modules or Hex Cell Louver.

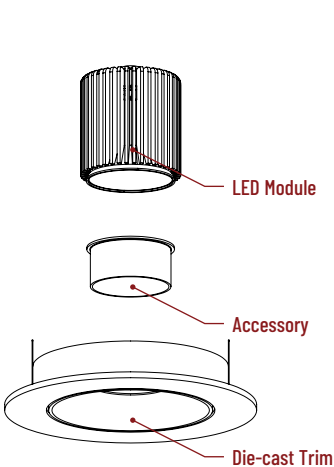
10° TIR Optic Assembly

Specialized narrow spot LED module assembly is also available. Requires LE4 housing. [Click Here](#) for more information.



ACCESSORIES

Iolite accessories can be added at any point in the design process. Accessories easily install between LED module and die-cast trim. Luminaire will accommodate (1) hex louver and (1) collar accessory, no accessory holder required.



Translucent Decorative Collar

NIO-AS14(color) 5/8" length
NIO-AS19(color) 3/4" length
NIO-AS26(color) 1" length
Color: AM (amber), BLU (blue), FR (frosted), R (red)
Translucent collars color the aperture with the specified color while producing white general light. Collars are available in different lengths. Use to add interest, create a theme, match a theme or define a space.

Opaque Collar Snoot

NIO-AS14(color) 5/8" length
NIO-AS19(color) 3/4" length
NIO-AS26(color) 1" length
Color: MPW (matte powder white), WH (white)
Opaque snoot greatly reduces aperture brightness while preserving light output.

Hex Cell Louver

NIO-HC Black
Hex cell louver subtly reduces aperture brightness by reducing light output by about 20%.
Hex cell louver is not compatible with TIR optics.

FLUSH MOUNT

4" Iolite trims can be installed flush with the drywall for a flush mount appearance. A flush mount mud ring is installed after the drywall and a professional drywall finisher floats the ceiling to blend in the mud ring.

Flush Mount Mud Ring

NIO-FMMR-4S Square Mud Ring
Mounts trim flush to ceiling with flange visible. Mud ring attaches to drywall. **Only for use with NH10ICD-48 or NH10ICDCP-48 new construction housings and NIO-4S trims.**
Dimensions: 7-7/8" diameter 1/2" thick



PHOTOMETRICS

4" Iolite Square Reflector with Square Aperture
800 lumens

Type

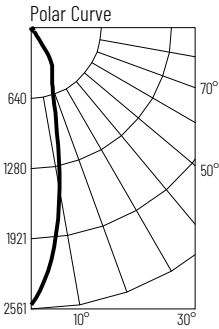
Project

Catalog No.

Notes

Test Information

Test Number: NTR11370
Part Number: NIO-4SNDSQ27XHW
Beam Spread: 27° Spot
Lumens: 931lm
Wattage: 13.86W
Efficacy: 67lpw
CCT / CRI: 2700K / 90 CRI
Spacing Criteria (0°-180°): 0.42
Spacing Criteria (90°-270°): 0.4



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	158fc	1'-11"
6'	70.1fc	2'-11"
8'	39.5fc	3'-11"
10'	25.3fc	4'-10"
12'	17.5fc	5'-10"

Zonal Lumen Summary

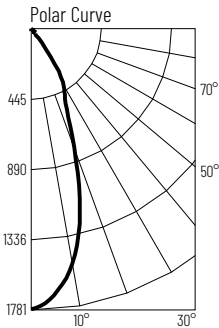
Zone	Lumens	% Luminaire
0-30	742	79.7
0-40	878	94.4
0-60	920	98.8
0-90	926	99.5
90-180	5	0.5
0-180	931	100

Candela Table

Vertical Angles	Candela
0	2525
5	2206
15	956
25	454
35	59
45	31

Test Information

Test Number: NTR11371
Part Number: NIO-4SNDSQ27XHW
Beam Spread: 38° Narrow Flood
Lumens: 933lm
Wattage: 13.85W
Efficacy: 67lpw
CCT / CRI: 2700K / 90 CRI
Spacing Criteria (0°-180°): 0.64
Spacing Criteria (90°-270°): 0.6



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	111fc	2'-10"
6'	49.3fc	4'-1"
8'	27.8fc	5'-6"
10'	17.8fc	6'-11"
12'	12.3fc	8'-4"

Zonal Lumen Summary

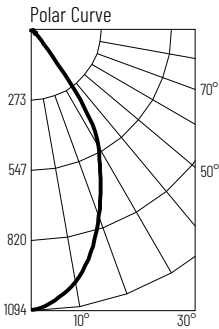
Zone	Lumens	% Luminaire
0-30	745	79.9
0-40	882	94.5
0-60	922	98.8
0-90	928	99.5
90-180	4	0.5
0-180	933	100

Candela Table

Vertical Angles	Candela
0	1776
5	1708
15	1236
25	526
35	97
45	32

Test Information

Test Number: NTR11372
Part Number: NIO-4SNDSQ27XHW
Beam Spread: 56° Flood
Lumens: 888lm
Wattage: 13.85W
Efficacy: 64lpw
CCT / CRI: 2700K / 90 CRI
Spacing Criteria (0°-180°): 0.84
Spacing Criteria (90°-270°): 0.84



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	68.2fc	4'-2"
6'	30.3fc	6'-5"
8'	17fc	8'-6"
10'	10.9fc	10'-7"
12'	7.6fc	12'-8"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	641	72.2
0-40	824	92.8
0-60	877	98.7
0-90	884	99.5
90-180	4	0.5
0-180	888	100

Candela Table

Vertical Angles	Candela
0	1090
5	1057
15	896
25	623
35	185
45	43

Lumen Output Multipliers

Color Temperature: 2700K (1.00), 3000K (1.03), 3500K (1.07), 4000K (1.2), 5000K (1.21)

PHOTOMETRICS

4" Iolite Square Reflector with Square Aperture

2500 lumens

Type

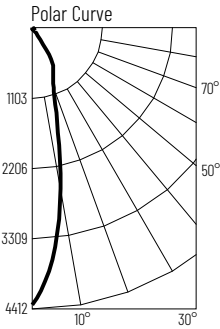
Project

Catalog No.

Notes

Test Information

Test Number:
Part Number: NIO-4SNSQ40XWW/HL
Beam Spread: 40° Spot
Lumens: 2563lm
Wattage: 28.01W
Efficacy: 92lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.66
Spacing Criteria (90°-270°): 0.66



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
8'	68.9fc	5'-10"
12'	30.6fc	8'-10"
16'	17.2fc	11'-8"
20'	11fc	14'-7"
24'	7.7fc	17'-6"

Zonal Lumen Summary

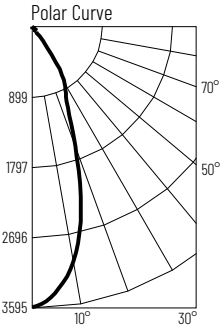
Zone	Lumens	% Luminaire
0-30	1942	75.8
0-40	2293	89.5
0-60	2496	97.4
0-90	2563	100
90-180	0	0
0-180	2563	100

Candela Table

Vertical Angles	Candela
0	4412
5	4285
15	3119
25	1418
35	414
45	122

Test Information

Test Number:
Part Number: NIO-4SNSQ40XWW/HL
Beam Spread: 52° Narrow Flood
Lumens: 2813lm
Wattage: 28.2W
Efficacy: 100lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.84
Spacing Criteria (90°-270°): 0.82



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
8'	56.2fc	7'-10"
12'	25fc	11'-8"
16'	14fc	15'-8"
20'	9fc	19'-7"
24'	6.2fc	23'-6"

Zonal Lumen Summary

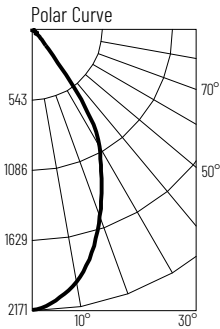
Zone	Lumens	% Luminaire
0-30	2056	73.1
0-40	2547	90.5
0-60	2763	98.2
0-90	2813	100
90-180	0	0
0-180	2813	100

Candela Table

Vertical Angles	Candela
0	3595
5	3533
15	3027
25	1949
35	711
45	149

Test Information

Test Number:
Part Number: NIO-4SNSQ40XWW/HL
Beam Spread: 59° Flood
Lumens: 2237lm
Wattage: 28.05W
Efficacy: 80lpw
CCT / CRI: 4000K / 90 CRI
Spacing Criteria (0°-180°): 0.94
Spacing Criteria (90°-270°): 0.94



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
8'	33.9fc	9'-1"
12'	15.1fc	13'-7"
16'	8.5fc	18'-2"
20'	5.4fc	22'-8"
24'	3.8fc	27'-2"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1427	63.8
0-40	1891	84.5
0-60	2147	96
0-90	2237	100
90-180	0	0
0-180	2237	100

Candela Table

Vertical Angles	Candela
0	2171
5	2148
15	1947
25	1454
35	588
45	156

Lumen Output Multipliers

Color Temperature: 2700K (0.83), 3000K (0.86), 3500K (0.89), 4000K (1.00), 5000K (1.01)