

# NIO-4SND SQ

## 4" Iolite Square Reflector with Square Aperture

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

Type

Project

Catalog No.

Notes

### PRODUCT DESCRIPTION

4" Iolite reflectors can be specified for use with Iolite new construction or remodel housings. Deep regressed cone reflectors optimize visual cut-off.

### FEATURES

- 800lm, 1000lm, 1500lm, 2000lm or 2500lm LED packages
- 2700K, 3000K, 3500K, 4000K, 5000K @ 90+ CRI
- Cree® LED COB or Comfort Dim Technology
- Flood optic, narrow flood and spot optics (included)
- 5-Year limited warranty

### SPECIFICATION

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

**Mounting:** Reflector includes friction blades to mount securely to housing.

### OPTICS

**800-1000lm:** Each reflector includes field changeable optics (flood, narrow flood and spot). Premium 15° and 25° TIR optics are also available.

**1500-2500lm:** Each reflector includes field changeable TIR optics (flood, narrow flood and spot).

### ELECTRICAL

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

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

**CRI:** 90+ CRI

**Operating Temp.:** 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

Reflectors 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
NHRIIC-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

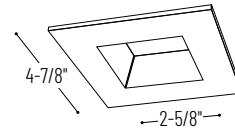
**Accessories:** Reflectors will accommodate (1) hex louver and (1) translucent deco collar or opaque snoot, no accessory holder is required, see accessories page. Flush mount mud ring is available to give the appearance of a trimless reflector, compatible with new construction housing only.

### LABELS AND LISTINGS

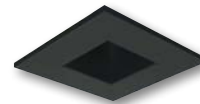
- cULus Listed for Wet Locations
- ENERGY STAR certified
- [5-Year Limited Warranty](#)
- RoHS Compliant
- Certified to the high efficacy requirements of California Title 24 JA8-2019



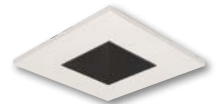
### PRODUCT IMAGES & DIMENSIONS



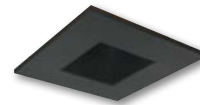
**NIO-4SND SQ**  
Square Reflector with Square Aperture  
Non-Adjustable



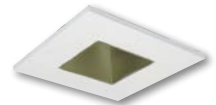
**BB**  
Black Reflector  
Black Flange



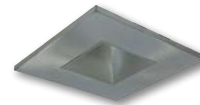
**BW**  
Black Reflector  
White Flange



**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

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

Reflector Type	Color Temp.	Finish	Lumens / Wattage
NIO-4SND SQ = Square Reflector with Square Aperture	<b>27X</b> = 2700K	<b>BB</b> = Black / Black	(blank) = 800lm / 14W
	<b>30X</b> = 3000K	<b>BW</b> = Black / White	<b>/10</b> = 1000lm / 14W
	<b>35X</b> = 3500K	<b>BZ</b> = Bronze / Bronze	<b>/HL</b> = 1500-2500lm
	<b>40X</b> = 4000K	<b>CHMPW</b> = Champagne / Matte Powder White	(varies by housing)
	<b>50X</b> = 5000K	<b>HW</b> = Haze / White	
	<b>CDX</b> = Comfort Dim <sup>†</sup>	<b>HZMPW</b> = Haze / Matte Powder White	
		<b>MPW</b> = Matte Powder White	
	<b>NN</b> = Natural Metal / Natural Metal		
	<b>WW</b> = White / White		

<sup>†</sup> Comfort Dim technology available in 800lm & uses non-Cree COB modules. 1" & 2" Iolite uses a different dimming curve than 4" Comfort Dim

### Compatible Housings

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

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

# 4" Iolite Accessories

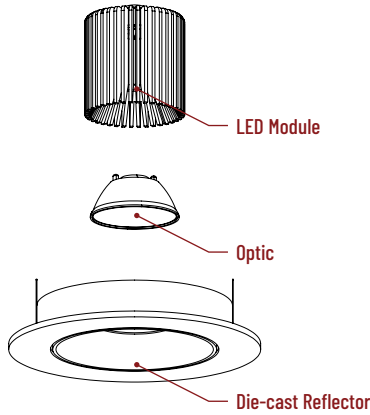
## 4" Iolite Square Reflector with Square Aperture

Type
Project
Catalog No.
Notes

### FIELD CHANGEABLE OPTICS

Iolite reflectors include spot, narrow flood and flood optics. Optics can be changed in the field by removing LED module from die-cast reflector. Replacement optics include an optional frosted lens.

**Note:** Frosted filter-optics and Premium TIR optics are not compatible with /HL LED modules.



Frosted Filter-Optic

NIO-REFL15FR	15° Optic
NIO-REFL25FR	25° Optic
NIO-REFL38FR	38° Optic
NIO-REFL60FR	60° Optic

Optic assembly includes optional frosted lens. 25°, 38° and 60° optics are included with 800lm and 1000lm reflector.  
**Not compatible with /HL LED module.**



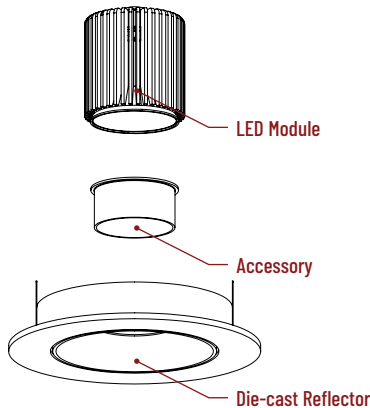
Premium TIR Optics

NIO-REFLTIR15	15° Optic
NIO-REFLTIR25	25° Optic

**Not compatible with /HL LED module or Comfort Dim (CDX) technology**

### ACCESSORIES

Iolite accessories can be added at any point in the design process. Accessories easily install between LED module and die-cast reflector. 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
<b>Color:</b>	
AM (amber), BLU (blue), FR (frosted), R (red)	

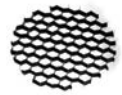
Translucent collars color the aperture with the specified color while producing white general light. Collars are available in different lengths. Use to add interest, create a theme, match a theme or define a space.



Opaque Collar Snoot

NIO-AS14(color)	5/8" length
NIO-AS19(color)	3/4" length
NIO-AS26(color)	1" length
<b>Color:</b>	
BLK (black), MPW (matte powder white), WH (white)	

Opaque snoot greatly reduces aperture brightness while preserving light output. (Note: Black snoot will reduce light)



Hex Cell Louver

NIO-HC	Black
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Hex cell louver subtly reduces aperture brightness by reducing light output by about 20%.

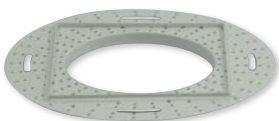
### FLUSH MOUNT

4" Iolite reflectors 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
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Mounts reflector flush to ceiling with flange visible. Mud ring attaches to drywall. **Only for use with NHIOICD-48 or NHIOICDCP-48 new construction housings and NIO-4S reflectors.** Dimensions: 7-7/8" diameter 1/2" thick



# PHOTOMETRICS

4" Iolite Square Reflector with Square Aperture  
800 lumens

Type

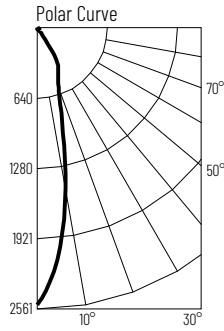
Project

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

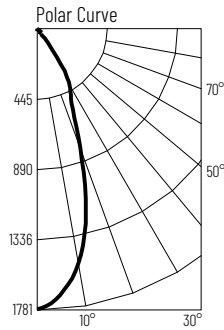
Zone	Lumens	% Luminaire
0-30	742	79.7
0-40	878	94.4
0-60	920	98.8
0-90	926	99.5
90-180	5	0.5
0-180	931	100

## 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

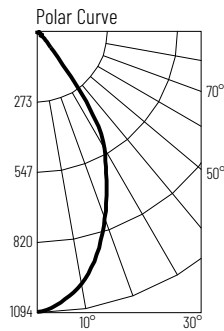
Zone	Lumens	% Luminaire
0-30	745	79.9
0-40	882	94.5
0-60	922	98.8
0-90	928	99.5
90-180	4	0.5
0-180	933	100

## 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'	10.6fc	10'-7"
12'	12.7fc	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  
1000 lumens

Type

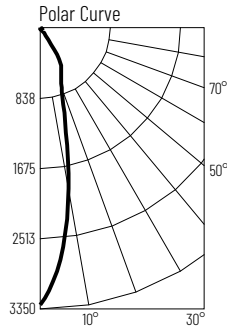
Project

Catalog No.

Notes

## Test Information

Test Number: NTR11261  
Part Number: N10-4SND SQ27XHW/10  
Beam Spread: 25° Spot  
Lumens: 1181lm  
Wattage: 14.2W  
Efficacy: 83lpw  
CCT / CRI: 2700K / 90 CRI  
Spacing Criteria (0°-180): 0.5  
Spacing Criteria (90°-270): 0.42



## Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	182fc	1'-11"
6'	80.7fc	2'-11"
8'	45.4fc	3'-11"
10'	29.1fc	4'-11"
12'	20.2fc	5'-10"

## Zonal Lumen Summary

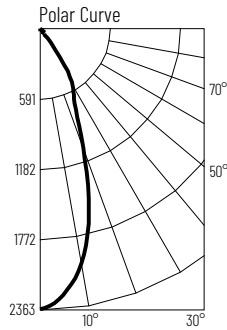
Zone	Lumens	% Luminaire
0-30	943	79.8
0-40	1101	93.3
0-60	1166	98.7
0-90	1173	99.3
90-180	8	0.7
0-180	1181	100

## Candela Table

Vertical Angles	Candela
0	2906
5	3065
15	1407
25	628
35	97
45	43

## Test Information

Test Number: NTR11262  
Part Number: N10-4SND SQ27XHW/10  
Beam Spread: 37° Narrow Flood  
Lumens: 1184lm  
Wattage: 14.33W  
Efficacy: 83lpw  
CCT / CRI: 2700K / 90 CRI  
Spacing Criteria (0°-180): 0.64  
Spacing Criteria (90°-270): 0.62



## Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	143fc	2'-8"
6'	63.5fc	4'-1"
8'	35.7fc	5'-5"
10'	22.9fc	6'-10"
12'	15.9fc	8'-2"

## Zonal Lumen Summary

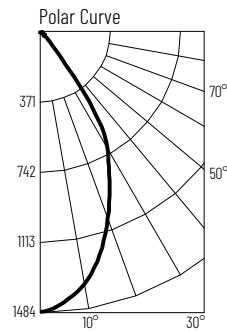
Zone	Lumens	% Luminaire
0-30	951	80.3
0-40	1113	94
0-60	1168	98.7
0-90	1176	99.3
90-180	8	0.7
0-180	1184	100

## Candela Table

Vertical Angles	Candela
0	2288
5	2247
15	1524
25	681
35	101
45	40

## Test Information

Test Number: NTR113263  
Part Number: N10-4SND SQ27XHW/10  
Beam Spread: 55° Flood  
Lumens: 1182lm  
Wattage: 14.45W  
Efficacy: 82lpw  
CCT / CRI: 2700K / 90 CRI  
Spacing Criteria (0°-180): 0.82  
Spacing Criteria (90°-270): 0.82



## Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	92.4fc	4'-2"
6'	41.1fc	6'-4"
8'	23.1fc	8'-4"
10'	14.8fc	10'-5"
12'	10.3fc	12'-6"

## Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	866	73.2
0-40	1098	92.9
0-60	1165	98.6
0-90	1174	99.3
90-180	8	0.7
0-180	1182	100

## Candela Table

Vertical Angles	Candela
0	1478
5	1457
15	1209
25	834
35	229
45	55

## Lumen Output Multipliers

Color Temperature: 2700K (1.00), 3000K (1.02), 3500K (1.11), 4000K (1.21), 5000K (1.18)