

# NIO-4SNDSQ

## 4" Iolite Square Reflector with Square Aperture

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

Type

Project

Catalog No.

Notes

### 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
- 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 (800lm) or 3000K (HL), to a romantic and comfortable 2000K on a gradual, even curve. Available in 800lm or HL (1500lm-2500lm).

**Dimming:** Specified by housing

### COMPATIBLE HOUSINGS

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

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

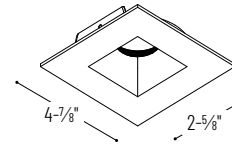
**Accessories:** Luminaires can accommodate (1) hex louver and (1) translucent deco collar or opaque snoot, no accessory holder is required, see accessories page. Flush mount mud ring is available to give the appearance of a trimless, compatible with new construction housing only.

### LABELS AND LISTINGS

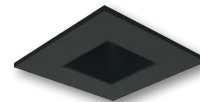
- cULus Listed for Wet Locations
- [5-Year Limited Warranty](#)
- RoHS Compliant
- Certified to the high efficacy requirements of California Title 24 JA8-2022



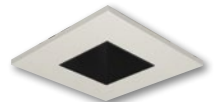
### PRODUCT IMAGES & DIMENSIONS



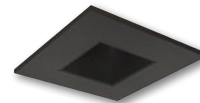
**NIO-4SNDSQ**  
Square Reflector with Square Aperture  
Non-Adjustable



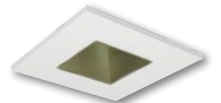
**BB**  
Black Reflector  
Black Flange



**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

Color Temperature	Finish	Lumens / Wattage
<b>NIO-4SNDSQ50X</b> = 5000K*	<b>BB</b> = Black / Black	(blank) = 800lm / 14W
<b>NIO-4SNDSQCDX</b> = Comfort Dim <sup>†</sup>	<b>BW</b> = Black / White	
	<b>BZ</b> = Bronze / Bronze	
<b>NIO-4SNDSQ27X</b> = 2700K	<b>CHMPW</b> = Champagne / Matte Powder White	<b>/10</b> = 1000lm / 14W
<b>NIO-4SNDSQ30X</b> = 3000K	<b>HN</b> = Haze / Natural Metal	<b>/HL</b> = 1500-2500lm
<b>NIO-4SNDSQ35X</b> = 3500K	<b>HW</b> = Haze / White	(varies by housing)
<b>NIO-4SNDSQ40X</b> = 4000K	<b>HZMPW</b> = Haze / Matte Powder White	
<b>NIO-4SNDSQ50X</b> = 5000K	<b>MPW</b> = Matte Powder White	
<b>NIO-4SNDSQCDX</b> = Comfort Dim <sup>†</sup>	<b>WW</b> = 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

### Compatible Housings

Housing Type
<b>NHIOICD-48</b> = ICAT New Construction / 800-1000lm / 14W
<b>NHIOICDCP-48</b> = Chicago Plenum / 800-1000lm / 14W
<b>NHRIOIC-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-4SNDSQ27XWW** = 4" Iolite Square Reflector with Square Aperture, 2700K, White finish, 800lm / 14W

# 4" Iolite Accessories

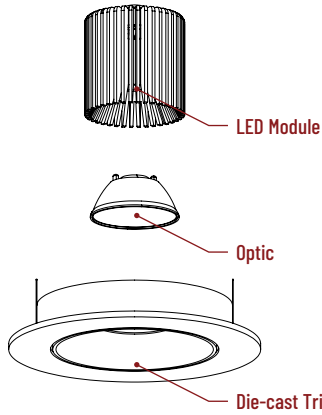
## 4" Iolite Square Reflector with Square Aperture

Type
Project
Catalog No.
Notes

### FIELD CHANGEABLE OPTICS

Iolite 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

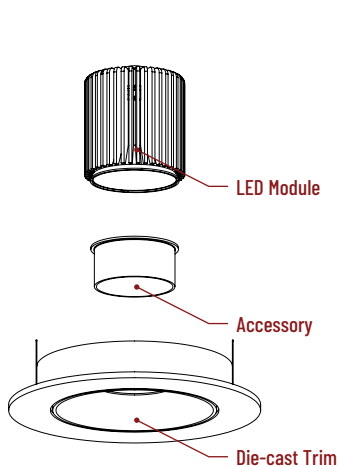
Specialized narrow spot LED module assembly is also available. Requires LE4 housing. [Click Here](#) for more information.



### 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.**

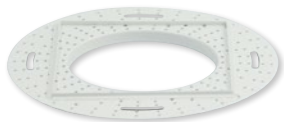
### FLUSH MOUNT

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

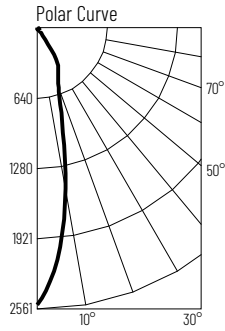
Project

Catalog No.

Notes

## Test Information

Test Number: NTR11370  
Part Number: N10-4SNDSQ27XHW  
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

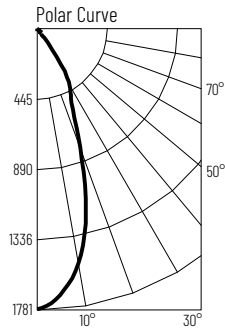
Zone	Lumens	% Luminaire
0-30	742	79.7
0-40	878	94.4
0-60	920	98.8
0-90	926	99.5
90-180	5	0.5
0-180	931	100

## Candela Table

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

## Test Information

Test Number: NTR11371  
Part Number: N10-4SNDSQ27XHW  
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

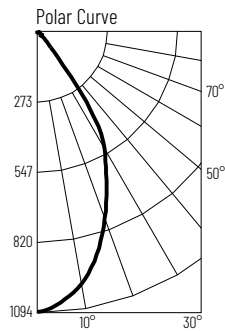
Zone	Lumens	% Luminaire
0-30	745	79.9
0-40	882	94.5
0-60	922	98.8
0-90	928	99.5
90-180	4	0.5
0-180	933	100

## Candela Table

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

## Test Information

Test Number: NTR11372  
Part Number: N10-4SNDSQ27XHW  
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

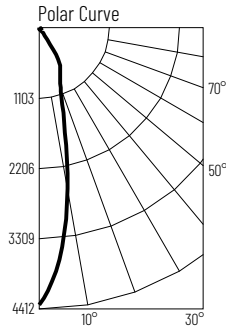
Project

Catalog No.

Notes

## Test Information

Test Number:  
Part Number: N10-4SNDSQ40XWW/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

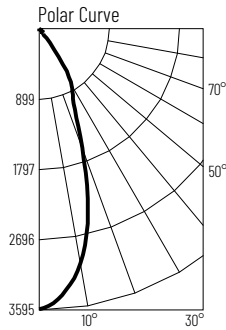
Zone	Lumens	% Luminaire
0-30	1942	75.8
0-40	2293	89.5
0-60	2496	97.4
0-90	2563	100
90-180	0	0
0-180	2563	100

## Candela Table

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

## Test Information

Test Number:  
Part Number: N10-4SNDSQ40XWW/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

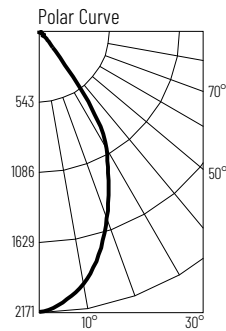
Zone	Lumens	% Luminaire
0-30	2056	73.1
0-40	2547	90.5
0-60	2763	98.2
0-90	2813	100
90-180	0	0
0-180	2813	100

## Candela Table

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

## Test Information

Test Number:  
Part Number: N10-4SNDSQ40XWW/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)