

Туре	
Project	
Catalog No.	
Lamn/Wattage	

### NHIOICD-48

4" Iolite IC Air-Tight New Construction Housing

#### PRODUCT DESCRIPTION

New construction housing for use in insulated ceilings can be in direct contact with insulation\*\*. Air-tight construction provides energy savings by reducing the flow of air through the ceiling. Patented design allows for easy, tool-less removal of the driver.

#### **FEATURES**

- · IC rated for direct contact with insulation\*\*
- Quick connect provided for electrical connection to the LED reflector
- · ASTM E283 for Air-Tight
- · Dimming down to 5%
- · Patented driver assembly

#### **SPECIFICATION**

**Housing:** 0.040" Aluminum shallow housing with patented driver assembly, allows for driver to slide out without tools. Extension collar is available for ceiling thickness up to 2", must specify NIO-4EXTC2.

**Air Flow Restriction**: Meets requirements of Air Tight (AT) <2CFM (cubic feet per minute) in accordance with ASTM-283 Air-Tight requirements.

**Clearance\*\*:** "IC" Insulated ceiling housings are direct contact rated. Not to be used in direct contact with spray foam insulation.

**Bar Hangers**: Two 13-3/4" to 24-1/2" adjustable bar hangers with captive nails are included on housing. Bar hangers are parallel to junction box, but can be repositioned 90° perpendicular to junction box if desired. "L"-shaped bar hanger foot to align to bottom of construction joist. A T-bar notch allows for easy installation in a suspended ceiling.

**Junction Box**: Pre-wired 25 cubic inch 0.064" thick galvanized steel, with seven 1/2" knockouts, four Romex® pryouts, and snap-on covers. All leads are #18AWG wire, the ground wire is connected to the bottom, and quick connectors are supplied on all leads. Through branch circuit wiring, (4-in, 4-out).

#### **ELECTRICAL**

**Voltage:** 120V or 120-277V **Power Factor:** >0.90

**Operating Temp.:** 122°F (50°C) max. ambient temp.

Wattage: 14W

**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

4" Round Cone Regress

#### **COMPATIBLE TRIMS**

NIO-4RC

#### CATALOG NO. DESCRIPTION

	a.ra concregiose
NIO-4SC	4" Square Cone Regress
NIO-4RG	4" Round Adj. Surface Gimbal
NIO-4SG	4" Square Adj. Surface Gimbal
NIO-4RD	4" Round Adj. Deep Regress
NIO-4SD	4" Square Adj. Deep Regress
NIO-4RPH	4" Round Pinhole
NIO-4RSL	4" Round Slot Aperture
NIO-4RNB	4" Round Bullnose
NIO-4SNB	4" Square Bullnose
NIO-4RNDC	4" Round Non-Adj. Deep Cone Regress
NIO-4SNDC	4" Square Non-Adj. Deep Cone Regress
NIO-4SNDSQ	4" Square Non-Adj. Deep, Square Regress
NIO-4RTLA	4" Round Trimless Surface Adj.
NIO-4RTLNDC	4" Round Trimless Deep Regress
NIO-4STLNDC	4" Square Trimless Deep Regress

**Emergency**: Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-BSL17C-C2U.

#### **LISTINGS AND WARRANTY**

- · cULus Listed for Damp Location
- cULus Listed for Wet Location (w/designated reflectors)
- · 5-Year Limited Warranty
- · RoHS compliant
- Patent #D824567S
- · Meets or exceeds ASTM-283 Air-Tight Requirements





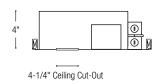


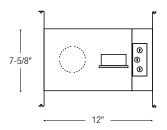
#### PRODUCT IMAGES AND DIMENSIONS



Source: 14W LED

800lm to 1000lm





### 4" Iolite IC Air-Tight New Construction Housing - Compatible with NIO-4 reflectors

Driver / Dimming Optional Emergency

NHIOICD-48LE3 = 120V input; Triac / ELV dimming
NHIOICD-48LE4 = 120-277V input; Triac / ELV / 0-10V dimming

 $\mathbf{EM} = \text{Wire for Remote Emergency Battery (ordered separately)}$ 

**Optional Accessories** 

Description

NEPK-BSL17C-C2U = Remote Emergency Battery w/Test Switch NIO-4EXTC2 = Ceiling Extension Collar up to 2"

Example: NHIOICD-48LE3 = 4" lolite IC Air-Tight LED Dedicated New Construction Housing, 120V input; Triac / ELV dimming





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Type **Project** 

Catalog No. Lamp/Wattage

### NIO-4

4" Iolite Reflectors (New Construction and Remodel)

#### PRODUCT DESCRIPTION

4" lolite reflectors can be specified for use in new construction or remodel applications. The die-cast aluminum reflectors are available in square and round designs, with sharp and clean edges. Reflectors ship with a 60° optic installed, 25° and 38° optics are included and can be easily changed in the field. The reflectors produce 800 or 1000 lumen output at 90+ CRI, utilizing 14W.

#### **FEATURES**

- Cree<sup>®</sup> LED COB or Comfort Dim Technology
- Wide variety of reflectors and finishes
- 60° (Flood) optic installed, 38° (Narrow flood) and 25° (Spot) optics included
- 5-Year limited warranty

#### CONSTRUCTION

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

#### Reflectors:

NIO-4RNDC / NIO-4SNDC / NIO-4SNDSQ: Deep regressed cone reflectors optimize visual cut-off. NIO-4RG / NIO-4SG: Adjustable surface gimbals adjusts up to 40° (Remodel) or 45° (New Construction). NIO-4SG adjust up to 35°.

NIO-4RC / NIO-4SC: Regressed cone reflectors optimize visual cut-off and adjust up to 40° (Remodel) or 45° (New Construction). NIO-4SC adjust up to 35°.

NIO-4RD / NIO-4SD: Adjustable deep regressed cone reflectors optimize visual cut-off and adjusts up to 40° (Remodel) or 45° (New Construction). NIO-4SD adjust up to 35°.

NIO-4RPH: Pinhole reflector focuses the beam spread through 2-1/4" opening.

NIO-4RSL: Adjustable slot aperture focus the beam spread through 2-1/4" x 2" opening and adjust up to 15° (Remodel) or 30° (New Construction).

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

Field Changeable Optics: Each reflector comes with a 60° (installed), 38° and 25° optics (included). Premium TIR optics are also available in 15° or 25°, see page 2.

#### **ELECTRICAL**

#### Lumens / Wattage:

800lm / 14W (New Construction or Remodel Housing) 1000lm / 14W (New Construction Housing only)

#### **Color Temperature:**

2700K, 3000K, 3500K, 4000K, 5000K

CRI: 90+

**Operating Temp.:** 0°C to 45°C ambient temperature **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 lolite housings manufactured by Nora Lighting.

#### CATALOG NO. DESCRIPTION

4" IC Air-Tight New Construction NHIOICD-48 NHRIOIC-48 4" IC Air-Tight Remodel

Accessories: Reflectors will accommodate (1) hex louver and (1) translucent deco collar or opaque snoot, no accessory holder is required, see page 4. Flush mount mud ring is available to give the appearance of a trimless reflector, compatible with new construction housing only.

#### LISTINGS AND WARRANTY

- · cULus Listed for Wet Location (NIO-4RD and NIO-4SD are rated for damp location)
- ENERGY STAR® certified
- 5 Year Limited Warranty
- RoHS Compliant
- Can be used to comply with 2016 Title 24 part 6 High Efficacy LED light source requirements















#### PRODUCT IMAGES AND DIMENSIONS



NIO-4RG Round Surface 40° - 45° Adjustable BB. BZ. MPW. NN. WW



Source: 14W LED

800lm or 1000lm

NIO-4SG Square Surface 35° Adjustable BW, BZ, MPW, NN, WW



NIO-4RC Round 0.64" Reg. Cone 40° - 45° Adjustable BB, BW, BZ, HW, MPW, NN, WW



NIO-4SC Square 0.64" Reg. Cone 35° Adjustable BB, BW, BZ, HW, MPW, NN, WW



NIO-4RD Round Deep Cone (2" Regressed) 40° - 45° Adjustable

BB, BW, BZ, HW, MPW, NN, WW



(2" Regressed) 35° Adjustable BB, BZ, MPW, NN, WW



NIO-4RNDC Round Deep Regressed Cone

Non-Adjustable BB, BW, BZ, HW, MPW, NN, WW



NIO-4SNDC Square Deep Regressed Cone Non-Adjustable

BB, BW, BZ, HW, MPW, NN, WW



NIO-4RPH Round Non-Adj. Pinhole

Non Adjustable BB, BMPW, HZMPW, MPWMPW



NIO-4SNDSQ Square Deep Cone, Square Regressed

Non Adjustable BB, BW, BZ, HN, HW, MPW, WW



NIO-4RSL Round Adj. Slot Aperture

15° - 30° Adjustable BB, BMPW, HZMPW, MPWMPW



NIO-4RNB Round Bullnose Non-Adjustable BB, BZ, MPW, NN, WW



NIO-4SNB Square Bullnose Non-Adjustable BZ, MPW, NN, WW

#### 4" Iolite Reflectors - Dedicated Housing Required

Shape	Reflector Style	Color Temp.	Finish <sup>1</sup>	Lumens
NIO-4R = Round	C = Cone Regress	<b>27X</b> = 2700K	BB = Black / Black	<b>(blank)</b> = 800lm
NIO-4S = Square	<b>G</b> = Adj. Surface Gimbal	30X = 3000K	BW = Black / White	/10 = 1000lm
	D = Adj. Deep Cone Regress	<b>35X</b> = 3500K	<b>BZ</b> = Bronze / Bronze	
	NDC = Non-Adj. Deep	40X = 4000K	HN = Haze / Natural Metal	
	Cone Regress	50X = 5000K	HW = Haze / White	
	NDSQ = Deep Cone Non-Adj.	CDX = Comfort Dim <sup>†</sup>	<b>HZMPW</b> = Haze / Matte Powder White	
	Square Regress		MPW = Matte Powder White	
	NDSQ only available with square trim		NN= Natural Metal / Natural Metal	
	<b>PH</b> = Non-Adj. Pinhole (round only)		WW = White / White	
	<b>SL</b> = Slot Adjustable (round only)			
	NB = Non-Adj. Bullnose			

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

Example: NIO-4RG27XWW = 4" lolite Round Adjustable Surface Gimbal, 2700K, White Finish, 800lm

<sup>&</sup>lt;sup>1</sup> Not all finishes are available on all trims



**Project** 

Catalog No.

Lamp/Wattage

# NIO-4RTL / NIO-4STL

4" Iolite Trimless Reflectors (New Construction only)

#### ELECTRICAL

Lumens / Wattage:

800lm or 1000lm / 14W

#### **Color Temperature:**

2700K, 3000K, 3500K, 4000K, 5000K

CRI: 90+

**Operating Temp.:** 0°C to 45°C ambient temperature **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 800Im only. **Dimming:** Specified by housing

## FEATURES

· Cree® LED COB or Comfort Dim Technology

4" Trimless lolite reflectors have no exposed trim

flange and does not extend beyond the ceiling plane.

Iolite Trimless requires a Trimless Mud Ring and New

Construction housing. Reflectors ship with a 60° optic

installed, 25° and 38° optics are included and can be easily

changed in the field. The reflectors produce 800 or 1000

· Variety of reflectors and finishes

lumen output at 90+ CRI, utilizing 14W.

- 60° (Flood) optic installed, 38° (Narrow flood) and 25° (Spot) optics included
- · 800 or 1000 lumens @ 14W
- 5-year limited warranty

PRODUCT DESCRIPTION

· ENERG STAR certified

#### CONSTRUCTION

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

#### Reflectors:

NIO-4RTLNDC / NIO-4STLNDC: Deep regressed cone reflectors optimize visual cut-off.

NIO-4RTLA: Regressed cone reflector optimizes visual cut-off and adjust up to 35°.

**Mounting:** Reflector includes friction clips to mount securely in trimless die-cast mud-ring.

**Field Changeable Optics:** Each reflector comes with a 60° (installed), 38° and 25° optics (included). Premium TIR optics are also available in 15° or 25°, see page 2.

#### **COMPATIBLE HOUSINGS**

Reflectors are compatible with respective lolite housing manufactured by Nora Lighting.

CATALOG NO. DESCRIPTION

NHIOICD-48 4" IC Air-Tight New Construction

**Accessories:** Reflectors will accommodate (1) hex louver and (1) translucent deco collar or opaque snoot, no accessory holder is required, see page 4.

#### LISTINGS AND WARRANTY

- cULus Listed for Wet Location (NIO-4RTLA is rated for damp location)
- ENERGY STAR® certified
- · 5 Year Limited Warranty
- · RoHS Compliant
- Can be used to comply with 2016 Title 24 part 6
   High Efficacy LED light source requirements















#### PRODUCT IMAGES AND DIMENSIONS





Source: 14W LED

800lm or 1000lm

NIO-4RTLA Round Trimless Surface

40° - 45° Adjustable BB, BW, BZ, HW, HZ, MPW, WW





NIO-4RTLNDC Round Trimless Deep Regressed Cone

Non-Adjustable BB, BW, BZ, MPW, WW





NIO-4STLNDC Square Trimless Deep Regressed Cone Non-Adjustable

Non-Adjustable BB, BZ, HZ, MPW, WW

### 4" Iolite Trimless Reflectors - New Construction Housing & Trimless Mud Ring Required

Shape	Reflector Style	Color Temp.	Finish <sup>1</sup>	Lumens
NIO-4RTL = Round NIO-4STL = Square	A = Adjustable (round only)  NDC = Non-Adj. Deep Cone Regress	27X = 2700K 30X = 3000K 35X = 3500K 40X = 4000K 50X = 5000K CDX = Comfort Dim <sup>†</sup>	BB = Black BW = Black / White BZ = Bronze HW = Haze / White HZ = Haze MPW = Matte Powder White	<b>(blank)</b> = 800lm <b>/10</b> = 1000lm
			<b>WW</b> = White	

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

### 4" Trimless Mud Ring

**NIO-TLMR-4R** = 4" Round Trimless Mud Ring **NIO-TLMR-4S** = 4" Square Trimless Mud Ring



Aperture



NIO-TLMR-4R Round Trimless Mud Ring

NIO-TLMR-4S Square Trimless Mud Ring

Example: NIO-4RTLNDC27XWW / NIO-TLMR-4R = 4" lolite Round Trimless Non-Adjustable Deep Cone Regress, 2700K, White Finish, 800lm / 4" Round Trimless Mud Ring



<sup>&</sup>lt;sup>1</sup> Not all finishes are available on all trims



**Project** 

Catalog No.

Lamp/Wattage

### 4" Iolite Accessories

lolite Accessories can be added at any point in the design process. Accessories easily install between module and die-cast reflector.



#### **Frosted Filter-Optic**

 NIO-REFL15FR
 15° Optic

 NIO-REFL25FR
 25° Optic

 NIO-REFL38FR
 38° Optic

 NIO-REFL60FR
 38° Optic



### **Translucent Deco Collar**

NIO-AS14(color) 5/8" NIO-AS19(color) 3/4" NIO-AS24(color) 1"

Color: BLU Blue, AM Amber, FR Frost, R Red



#### **Opaque Collar Snoot**

NIO-AS14(color) 5/8" NIO-AS19(color) 3/4" NIO-AS24(color) 1"

Color: BLK Black, MPW Matte Powder White, WH White



## **Hex Cell Louver**

NIO-HC

Hex cell louver subtly reduces aperture brightness by reducing light output by about 20%



#### **Premium TIR Optics**

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



### Flush Mount Mud Ring

NIO-FMMR-4R 4" Round NIO-FMMR-4S 4" Square

Mounts trim flush to ceiling with trim flange visible. Attaches to drywall.
Requires professional drywall finishing. Requires and only for use with NHIOICD-48 new construction housing and NIO-4 trims.
7-7/8" Diameter 1/2" Thick



#### **Trimless Mud Ring**

NIO-TLMR-4R 4" Round 4" Square

Mounts Trimless trim with no exposed flange and no extension beyond ceiling plane. Attaches to drywall. Requires professional drywall finishing. Requires and only for use with NHIOICD-48 new construction housing and NIO-4RTL or NIO-4STL Trimless reflector.

7-7/8" Diameter 1/2" Thick



#### Ceiling Extension Collar NIO-4EXTC2

Allows new construction housing to install in ceiling thicknesses up to 2". Only for use with NHIOICD-48 new construction housing.





**Project** 

Catalog No.

Lamp/Wattage

### **PHOTOMETRICS**

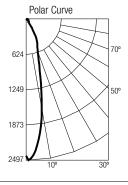
4" Iolite Series

#### **Test Information**

Test Number: NTR11248 Part Number: NIO-4RG3025WW Beam Spread: Spot Lumens: 939Im

Wattage: 14.4W Efficacy: 65lpw CCT / CRI: 3000K / 9

CCT / CRI: 3000K / 90 CRI Spacing Criteria (0°-180): 0.42 Spacing Criteria (90°-270): 0.42



#### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	156fc	1'-10"
6'	69.4fc	2'-7"
8'	39fc	3'-6"
10'	25fc	4'-5"
12'	17.3fc	5'-4"

### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	667	71
0-40	761	81
0-60	861	91.7
0-90	936	99.7
90-180	3	0.3
0-180	939	100

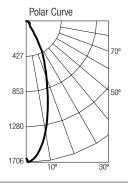
### Candela Table

Carideia Table		
Vertical Angles	Candela	
0	2497	
5	2255	
15	905	
25	466	
35	129	
45	68	

#### **Test Information**

Test Number: NTR11249 Part Number: NIO-4RG3038WW Beam Spread: Narrow Flood Lumens: 929Im Wattage: 14.6W Efficacy: 64Ipw

CCT / CRI: 3000K / 90 CRI Spacing Criteria (0°-180): 0.58 Spacing Criteria (90°-270): 0.58



#### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	106fc	2'-6"
6'	47.1fc	3'-10"
8'	26.5fc	5'
10'	17fc	6'-4"
12'	11.8fc	7'-6"

#### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	652	70.2
0-40	747	80.4
0-60	848	91.3
0-90	926	99.7
90-180	3	0.3
0-180	929	100

#### Candela Table

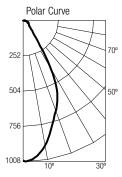
Vertical Angles	Candela
0	1697
5	1602
15	1013
25	495
35	126
45	68

#### **Test Information**

Test Number: NTR11250 Part Number: NIO-4RG3060WW Beam Spread: Flood

Lumens: 927lm Wattage: 14.5W Efficacy: 64lpw

CCT / CRI: 3000K / 90 CRI Spacing Criteria (0°-180): 0.86 Spacing Criteria (90°-270): 0.86



#### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	62.7fc	4'-2"
6'	27.9fc	6'-5"
8'	15.7fc	8'-6"
10'	10fc	10'-7"
12'	7fc	12'-8"

### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	583	62.9
0-40	726	78.3
0-60	841	90.7
0-90	924	99.7
90-180	3	0.3
0-180	927	100

### Candela Table

Vertical Angles	Candela	
0	1003	
5	979	
15	802	
25	594	
35	212	
45	80	



**Project** 

Catalog No.

Lamp/Wattage

### **PHOTOMETRICS**

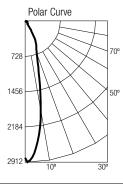
4" Iolite Series

#### **Test Information**

Test Number: NTR11236 Part Number: NIO-4RG3025WW/10

Beam Spread: Spot Lumens: 1111Im Wattage: 13W Efficacy: 85lpw

CCT / CRI: 3000K / 90 CRI Spacing Criteria (0°-180): 0.44 Spacing Criteria (90°-270): 0.46



#### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	176fc	1'-10"
6'	78.4fc	2'-8"
8'	44.1fc	3'-7"
10'	28.2fc	4'-6"
12'	19.6fc	5'-5"

#### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	795	71.6
0-40	911	82
0-60	1022	92
0-90	1104	99.3
90-180	8	0.7
0-180	1111	100

#### Candela Table

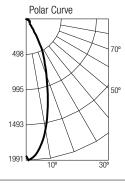
Odridola Table		
Vertical Angles	Candela	
0	2822	
5	2559	
15	1111	
25	550	
35	150	
45	76	

#### **Test Information**

Test Number: NTR11237 Part Number: NIO-4RG3038WW/10 Beam Spread: Narrow Flood

Lumens: 1098lm Wattage: 13W Efficacy: 84lpw

CCT / CRI: 3000K / 90 CRI Spacing Criteria (0°-180): 0.6 Spacing Criteria (90°-270): 0.62



#### Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	120fc	2'-7"
6'	53.5fc	3'-11"
8'	30.1fc	5'-2"
10'	19.3fc	6'-6"
12'	13.4fc	7'-10"

#### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	766	69.7
0-40	890	81.1
0-60	1005	91.5
0-90	1090	99.3
90-180	8	0.7
0-180	1098	100

#### Candela Table

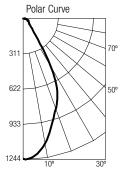
Vertical Angles	Candela
0	1928
5	1839
15	1187
25	578
35	163
45	76

#### **Test Information**

Test Number: NTR11238 Part Number: NIO-4RG3060WW/10

Beam Spread: Flood Lumens: 1084lm Wattage: 13W Efficacy: 83lpw

CCT / CRI: 3000K / 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'	77.3fc	4'-2"
6'	34.4fc	6'-2"
8'	19.3fc	8'-4"
10'	12.4fc	10'-5"
12'	8.6fc	12'-6"

### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	701	64.7
0-40	859	79.2
0-60	987	91.1
0-90	1077	99.3
90-180	7	0.7
0-180	1084	100

#### Candela Table

Candela		
1237		
1212		
971		
713		
227		
89		