

NIO-4

4" Iolite Reflectors (New Construction and Remodel)

Source: 14W LED
800lm or 1000lm

PRODUCT DESCRIPTION

4" Iolite 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® 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-4SND SQ: Deep regressed cone reflectors optimize visual cut-off.
 NIO-4RG / NIO-4SG: Adjustable surface gimbals adjust up to 40° (Remodel) or 45° (New Construction). NIO-4SD 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 40°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 Iolite housings manufactured by Nora Lighting.

CATALOG NO.	DESCRIPTION
NHIOICD-48	4" IC Air-Tight New Construction
NHIOICDCP-48	4" Chicago Plenum New Construction
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 2. 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



4" Iolite Reflectors - Dedicated Housing Required

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

† Comfort Dim technology available in 800lm & uses non-Cree COB modules. 1" & 2" Iolite uses a different dimming curve than 4" Comfort Dim
¹ Not all finishes are available on all trims

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

4" Iolite Accessories

Iolite 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

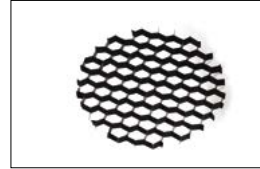
NIO-AS14(color) 5/8"
NIO-AS19(color) 3/4"
NIO-AS24(color) 1"
Color: BLU Blue, AM Amber, FR Frost, R Red



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

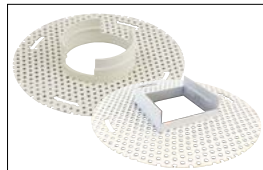
NIO-REFLTIR15 15° Optic
NIO-REFLTIR25 25° Optic



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
NIO-TLMR-4S 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.**

NHIOICD-48 / NHIOICDCP-48
4" Iolite IC Air-Tight New Construction Housing

Source: 14W LED
800lm to 1000lm

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 (must specify)
Power Factor: >0.90
Operating Temp.: 104°F (40°C) max. ambient temp.
Wattage: 14W
Dimming: Triac / ELV or 0-10V Dimming (must specify)
[Click Here](#) or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab

COMPATIBLE TRIMS

CATALOG NO.	DESCRIPTION
NIO-4RC	4" Round Cone Regress
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-4RND	4" Round Non-Adj. Deep Cone Regress
NIO-4SND	4" Square Non-Adj. Deep Cone Regress
NIO-4SND	4" Square Non-Adj. Deep, Square Regress
NIO-4RTLA	4" Round Trimless Surface Adj.
NIO-4RTLND	4" Round Trimless Deep Regress
NIO-4STLND	4" Square Trimless Deep Regress

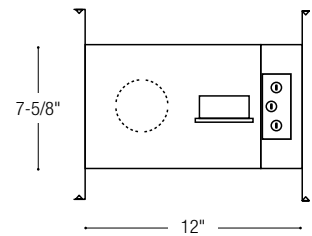
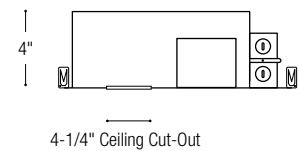
Emergency: Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-BSL17C-C2U.

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



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

Housing Type	Driver / Dimming	Optional Emergency
NHIOICD-48 = IC Air-Tight	LE3 = 120V input; Triac / ELV dimming	EM = Wire for Remote Emergency Battery (ordered separately)
NHIOICDCP-48 = Chicago Plenum	LE4 = 120-277V input; Triac / ELV / 0-10V dimming	

Optional Accessories

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

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

NHRIOIC-48

4" Iolite IC Air-Tight Remodel Housing

Source: 14W LED
800lm

PRODUCT DESCRIPTION

Remodel 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.

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%

SPECIFICATION

Housing 0.030 steel can connects to integrated 0.040 steel structural arm with J-box and driver compartment. Integral spring brackets provided.

Air Flow Restriction Housing has factory installed gaskets to restrict airflow from room into ceiling plenum to <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.

Mounting Four high-tension tempered steel springs secure remodel housing from 1/4" (min) to 5/8" (max) thick ceiling. Hole cutout template provided for convenience.

Junction Box Pre-wired 25 cubic inch 0.064" thick galvanized steel, with five 1/2", two 3/4" 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.: 104°F (40°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

COMPATIBLE TRIMS

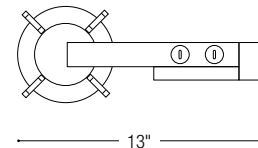
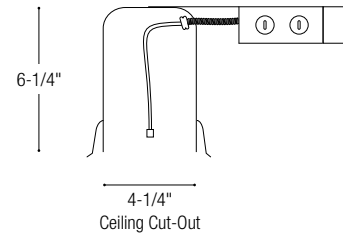
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NIO-4RSL	4" Round Slot Aperture
NIO-4RNB	4" Round Bullnose
NIO-4SNB	4" Square Bullnose
NIO-4RND	4" Round Non-Adj. Deep Cone Regress
NIO-4SND	4" Square Non-Adj. Deep Cone Regress
NIO-4SND	4" Square Non-Adj. Deep, Square Regress

LISTINGS AND WARRANTY

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



PRODUCT IMAGES AND DIMENSIONS



4" Iolite IC Air-Tight Remodel Housing - Compatible with NIO-4 reflectors

Driver / Dimming

NHRIOIC-48LE3 = 120V input; Triac / ELV dimming

NHRIOIC-48LE4 = 120-277V input; 120V Triac/ELV/0-10V or 277V 0-10V dimming

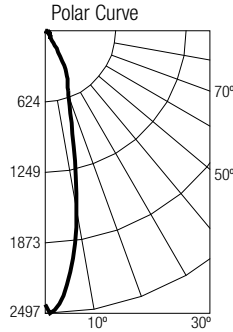
Example: **NHRIOIC-48LE4** = 4" Iolite IC Air-Tight Remodel Housing, 120-277V Input; 120V Triac/ELV/0-10V or 277V 0-10V dimming

PHOTOMETRICS

4" Iolite Series

Test Information

Test Number: NTR11248
 Part Number: NIO-4RG3025WW
 Beam Spread: Spot
 Lumens: 939lm
 Wattage: 14.4W
 Efficacy: 65lpw
 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

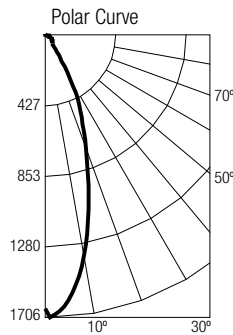
Zone	Lumens	% Luminaire
0-30	667	71
0-40	761	81
0-60	861	91.7
0-90	936	99.7
90-180	3	0.3
0-180	939	100

Candela Table

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

Test Information

Test Number: NTR11250
 Part Number: NIO-4RG3038WW
 Beam Spread: Narrow Flood
 Lumens: 929lm
 Wattage: 14.6W
 Efficacy: 64lpw
 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

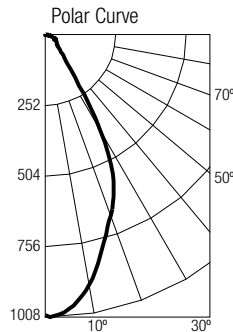
Zone	Lumens	% Luminaire
0-30	652	70.2
0-40	747	80.4
0-60	848	91.3
0-90	926	99.7
90-180	3	0.3
0-180	929	100

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

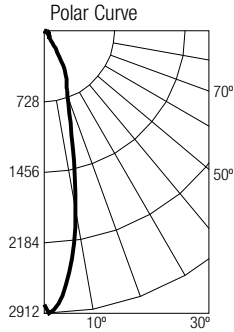
Vertical Angles	Candela
0	1003
5	979
15	802
25	594
35	212
45	80

PHOTOMETRICS

4" Iolite Series

Test Information

Test Number: NTR11236
 Part Number: NIO-4RG3025WW/10
 Beam Spread: Spot
 Lumens: 1111lm
 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

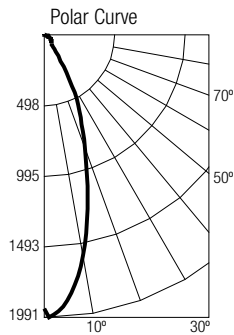
Zone	Lumens	% Luminaire
0-30	795	71.6
0-40	911	82
0-60	1022	92
0-90	1104	99.3
90-180	8	0.7
0-180	1111	100

Candela Table

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

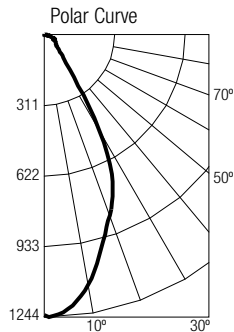
Zone	Lumens	% Luminaire
0-30	766	69.7
0-40	890	81.1
0-60	1005	91.5
0-90	1090	99.3
90-180	8	0.7
0-180	1098	100

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

Vertical Angles	Candela
0	1237
5	1212
15	971
25	713
35	227
45	89