

NLCB2-651 / NLCB2-652 / NLCB2-653 / NLCB2-656

6" Cobalt Dedicated High Lumen Reflectors

Source: 21W to 34W LED
1500lm to 2000lm

PRODUCT DESCRIPTION

6" Cobalt dedicated series is cULus listed for use in with Cobalt high lumens housings. The 6" luminaires produce over 2000 lumens at 90+ CRI. The Cobalt series intergrates a Cree® COB family of LED arrays, giving bright spectacular light output and low power consumption. An obvious and smart choice for Green Energy efficient lighting in commercial and residential applications.

FEATURES

- 1500lm or 2000lm LED packages
- 2700K, 3000K, 3500K or 4000K @ 90+ CRI
- Cree® COB LED Technology
- 5-year limited warranty
- ENERGY STAR certified
- cULus listed for wet locations

SPECIFICATION

Trim: Aluminum spun reflector (NLCB2-651) with deep set diffused lens for excellent visual comfort while providing high lumen output. Aluminum spun baffle (NLCB2-652) with deep grooves to reduce aperture glare while providing high lumen output. Die-cast Aluminum Square aperture with deep regress (NLCB2-656).

Mounting: Two torsion springs allow for easy and secure mounting in housing. Refer to housing for ceiling thickness.

ELECTRICAL

Lumens / Wattage:

15 = 1500lm / wattage varies by housing
20 = 2000lm+ / wattage varies by housing
(Delivered lumens will vary depending on CCT and finish)

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

CRI: 90+CRI

Operating Temp.: 0°C to 25°C ambient temperature

Lifetime: 60,000 hours @ L70

Dimming: Refer to housing for dimming

COMPATIBLE HOUSINGS

Reflectors are compatible with Cobalt High Lumen housings manufactured by Nora Lighting.

CATALOG NO. DESCRIPTION

NHICCB-615	6" IC New Construction (1500lm)
NHICCB-620	6" IC New Construction (2000lm)
NHCB-615	6" Non-IC New Construction (1500lm)
NHCB-620	6" Non-IC New Construction (2000lm)
NHRCB-615	6" Non-IC Remodel (1500lm)
NHRCB-620	6" Non-IC Remodel (2000lm)

ACCESSORIES

NLCBC-6EYELID: Round eyelid used to convert round reflector or baffle to half moon wall wash trim.

NLCBC-6OR: Round oversize ring used to cover ceiling cut-outs up to 8-1/4".

LABELS AND LISTINGS

- cULus Listed for Wet Locations
- ENERGY STAR certified
- [5-Year Limited Warranty](#)
- Can be used to comply with 2016 Title 24 High Efficacy LED light source requirements (IC housing only)



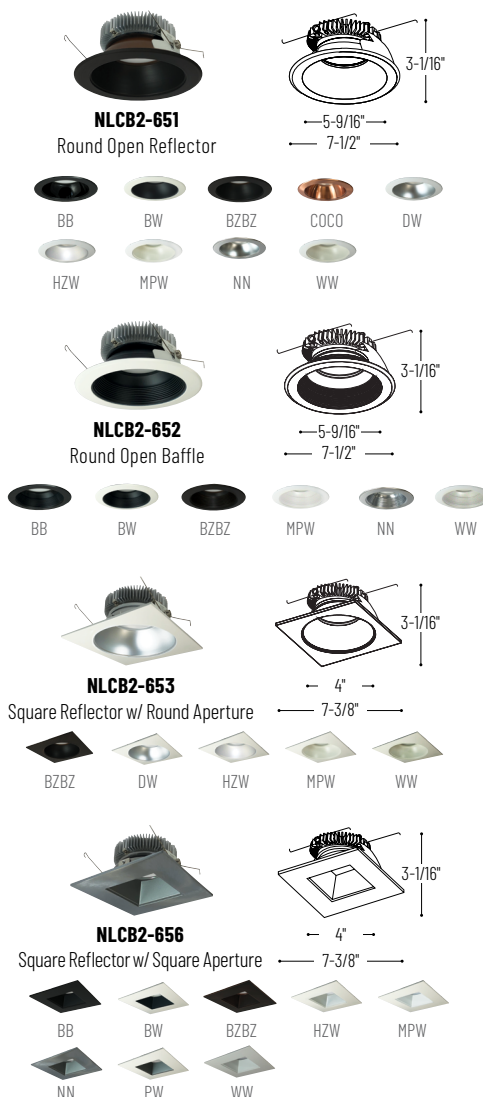
Type _____

Project _____

Catalog No. _____

Notes _____

PRODUCT IMAGES & DIMENSIONS



6" Cobalt Dedicated High Lumen Reflectors - Dedicated Housing Required

Reflector Type	Lumens	Color Temp.	Finish (see chart below)
NLCB2-651 = Round Reflector	15 = 1500lm	27 = 2700K	BB = Black / Black
NLCB2-652 = Round Baffle	20 = 2000lm	30 = 3000K	BW = Black / White
NLCB2-653 = Square with Round Aperture	35 = 3500K	35 = 3500K	BZBZ = Bronze / Bronze
NLCB2-656 = Square with Square Aperture	40 = 4000K	40 = 4000K	COCO = Copper / Copper
			DW = Diffused / White
			HZW = Haze / White
			MPW = Matte Powder White
			NN = Natural Metal / Nat. Metal
			PW = Pewter / White
			WW = White / White

Available Trim Finishes

	BB	BW	BZBZ	COCO	DW	HZW	MPW	NN	PW	WW
651	•	•	•	•	•	•	•	•	•	•
652	•	•	•	•	•	•	•	•	•	•
653	•	•	•	•	•	•	•	•	•	•
656	•	•	•	•	•	•	•	•	•	•

Optional Accessories

Description
NLCBC-6EYELIDB = 6" Round Eyelid, Black
NLCBC-6EYELIDBZ = 6" Round Eyelid, Bronze
NLCBC-6EYELIDMPW = 6" Round Eyelid, Matte Powder White
NLCBC-6EYELIDW = 6" Round Eyelid, White
NLCBC-6OR-B = 6" Round Oversize Ring, Black
NLCBC-6OR-BZ = 6" Round Oversize Ring, Bronze
NLCBC-6OR-MPW = 6" Round Oversize Ring, Matte Powder White
NLCBC-6OR-W = 6" Round Oversize Ring, White

Example: NLCB2-6512035DW = 6" Cobalt Dedicated High Lumen Round Reflector, 2000lm LED, 3500K, Diffused Clear Reflector / White Flange

NHICCB-6

6" Cobalt Dedicated IC Air-Tight High Lumen New Construction Housing

Source: 22W or 28W LED

Type _____

Project _____

Catalog No. _____

Notes _____

PRODUCT DESCRIPTION

Dedicated IC Air-Tight 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. The housing is dedicated and labeled for use with Cobalt High Lumen reflectors.

CONSTRUCTION

Plaster Frame: High quality 0.04" steel die cut one piece frame.

Housing: 0.04" aluminum housing with riveted. Housing adjusts to a ceiling thicknesses from 1/2" to 7/8". Spring brackets accept torsion wing trim springs; slots inside housing accept standard coil springs.

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.**

Bar Hangers: Two 13-3/4" to 24-1/2" adjustable bar hangers with captive nails are included on frame. 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 allow for easy installation in a suspended ceiling.

Junction Box: Prewired 25 cubic inch 0.064" thick galvanized steel, with five 1/2", two 3/4" knockouts and 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

Input Voltage: 120/277V 50/60Hz

Wattage: 22W or 28W

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

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.

COMPATIBLE REFLECTORS

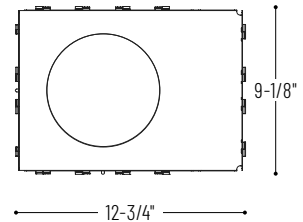
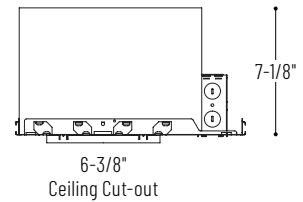
CATALOG NO.	DESCRIPTION
NLCB2-651	6" Round Open Reflector
NLCB2-652	6" Round Baffle
NLCB2-653	6" Square Reflector with Round Aperture
NLCB2-656	6" Square Reflector with Square Aperture

LABELS AND LISTINGS

- cULus Listed for Wet Location (only w/designated reflectors)
- [5-Year Limited Warranty](#)
- Meets or exceeds ASTM-283 Air-Tight Requirements
- Can be used to comply with 2016 Title 24 High Efficacy LED light source requirements



PRODUCT IMAGES & DIMENSIONS



6" Cobalt Dedicated ICAT High Lumen New Construction Housing - Compatible w/Cobalt High Lumen Reflectors

Installation Type	Lumens / Wattage	Driver / Dimming	Optional Emergency Wiring
NHICCB-6 = IC Air-Tight New Construction	15 = 1500lm / 22W 20 = 2000lm / 28W	LE4 = 120/277V input; Triac, ELV or 0-10V	/PEM = Pre-Wired for Remote Emergency

Optional Accessories

Description
NEPK-BSL17C-C2U = Remote Emergency Battery w/Test Switch

Example: NHICCB-620LE4 = 6" Cobalt Dedicated IC Air-Tight High Lumen New Construction Housing, 28W, 120/277V Input

NHCB-6

6" Cobalt Dedicated Non-IC High Lumen New Construction Housing

Source: 21W or 34W LED

Type

Project

Catalog No.

Notes

PRODUCT DESCRIPTION

Dedicated new construction housing for use where insulation can be kept 3" away from housing. The housing is dedicated and labeled for use with Cobalt High Lumens series.

CONSTRUCTION

Plaster Frame: High quality 0.040 aluminum die cut one piece frame.

Housing: 0.040 aluminum housing adjusts to a ceiling thickness from 1/2" to 1-1/4". Spring brackets accept torsion wing trim springs.

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.

Bar Hangers: Two 13-3/4" to 24-1/2" adjustable bar hangers with captive nails are included on frame. 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 allow for easy installation in a suspended ceiling.

Junction Box: Prewired 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).

CLEARANCE

Non-Insulated housings require a minimum clearance of 3" from thermal insulation and 1/2" from adjacent building components.

ELECTRICAL

Input Voltage: 120V or 277V

Wattage: 21W or 34W

Operating Temp.: 0°C to 30°C ambient temperature

Dimming: 0-10V dimming

[Click Here](#) or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab

Emergency LED Driver (BSL17C-C2)

- Up to 7.5W emergency illumination with LEDs.
- Illumination Time: 90min
- Voltage: 120/277 VAC, 60Hz
- Output Voltage: 15.0-50.0 VDC

COMPATIBLE REFLECTORS

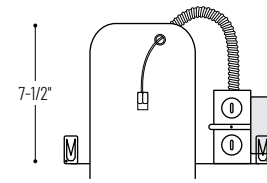
CATALOG NO.	DESCRIPTION
NLCB2-651	6" Round Open Reflector
NLCB2-652	6" Round Baffle
NLCB2-653	6" Square Reflector with Round Aperture
NLCB2-656	6" Square Reflector with Square Aperture

LABELS AND LISTINGS

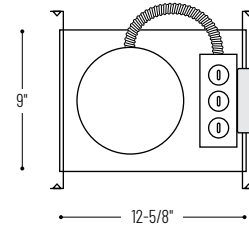
- cULus Listed for Wet Location (only w/designated reflectors)
- [5-Year Limited Warranty](#)
- Meets or exceeds ASTM-283 Air-Tight Requirements



PRODUCT IMAGES & DIMENSIONS



6-3/8" Ceiling Cut-out



6" Cobalt Dedicated Non-IC High Lumen New Construction Housing - Compatible with Cobalt High Lumen Reflectors

Installation Type	Lumens / Wattage	Driver / Dimming	Optional Emergency Battery
NHCB-6 = Non-IC New Construction	15 = 1500lm / 21W 20 = 2000lm / 34W	LE1 = 120V Input; 0-10V dimming LE2 = 277V Input; 0-10V dimming	EM = Emergency Pack w/ Remote Test Switch

Example: **NHCB-620LE1** = 6" Cobalt Dedicated Non-IC High Lumen New Construction Housing, 34W, 120V Input

NHRCB-6

6" Cobalt Dedicated Non-IC High Lumen Remodel Housing

Source: 21W or 34W LED

Type _____

Project _____

Catalog No. _____

Notes _____

PRODUCT DESCRIPTION

Dedicated remodel housing for use where insulation can be kept 3" away from housing. The housing is dedicated and labeled for use with Cobalt High Lumens series.

CONSTRUCTION

Housing: 0.040 aluminum housing terminates at a 1/4" ceiling flange for even positioning of housing angle within the ceiling. Structural arm consisting of 0.050 structural steel connects housing with junction box.

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.

Mounting: Four high tension tempered steel springs accommodate ceiling thicknesses from 1/2" to 1-1/4" (Hole cutout template provided for convenience).

Junction Box: Prewired 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).

CLEARANCE

Non-Insulated housings require a minimum clearance of 3" from thermal insulation and 1/2" from adjacent building components.

ELECTRICAL

Input Voltage: 120V or 277V

Wattage: 21W or 34W

Operating Temp.: 0°C to 30°C ambient temperature

Dimming: 0-10V dimming

[Click Here](#) or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab

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.

COMPATIBLE REFLECTORS

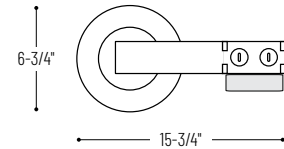
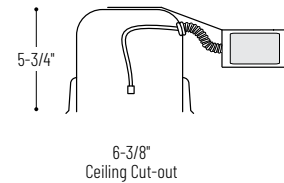
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NLCB2-652	6" Round Baffle
NLCB2-653	6" Square Reflector with Round Aperture
NLCB2-656	6" Square Reflector with Square Aperture

LABELS AND LISTINGS

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



PRODUCT IMAGES & DIMENSIONS



6" Cobalt Dedicated Non-IC High Lumen Remodel Housing - Compatible with Cobalt High Lumen Reflectors

Installation Type	Lumens / Wattage	Driver / Dimming
NHRCB-6 = Non-IC Remodel	15 = 1500lm / 21W	LE1 = 120V Input; 0-10V dimming
	20 = 2000lm / 34W	LE2 = 277V Input; 0-10V dimming

Optional Accessories

Description
NEPK-BSL17C-C2U = Remote Emergency Battery w/Test Switch

Example: NHRCB-620LE1 = 6" Cobalt Dedicated Non-IC High Lumen Remodel Housing, 34W, 120V Input

PHOTOMETRICS

6" Cobalt Dedicated High Lumen Reflectors

Type

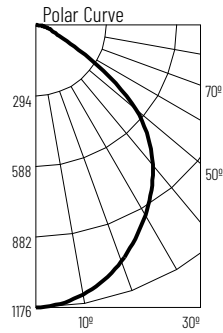
Project

Catalog No.

Notes

Test Information

Test Number: NTR1167
 Part Number: NLCB2-6512040WW
 Lumens: 2495lm
 Wattage: 27.58W
 Efficacy: 90lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.18
 Spacing Criteria (90°-270): 1.18



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	32.7fc	13'-5"
9'	14.5fc	20'-1"
12'	8.2fc	26'-11"
15'	5.2fc	33'-7"
18'	3.6fc	40'-4"

Zonal Lumen Summary

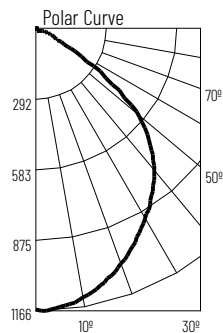
Zone	Lumens	% Luminaire
0-30	875	35.1
0-40	1402	56.2
0-60	2252	90.3
0-90	2470	99
90-180	24	1
0-180	2495	100

Candela Table

Vertical Angles	Candela
0	1176
5	1172
15	1102
25	984
35	844
45	668

Test Information

Test Number: NTR1146R1
 Part Number: NLCB2-6522040WW
 Lumens: 2476lm
 Wattage: 27.74W
 Efficacy: 89lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.18
 Spacing Criteria (90°-270): 1.18



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	32.4fc	13'-5"
9'	14.4fc	20'-1"
12'	8.1fc	26'-10"
15'	5.2fc	33'-6"
18'	3.6fc	40'-2"

Zonal Lumen Summary

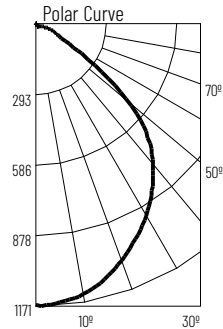
Zone	Lumens	% Luminaire
0-30	1398	35.2
0-40	1398	56.5
0-60	2236	90.3
0-90	2451	99
90-180	25	1
0-180	2476	100

Candela Table

Vertical Angles	Candela
0	1166
5	1165
15	1095
25	981
35	845
45	662

Test Information

Test Number: NTR1145R1
 Part Number: NLCB2-6532040WW
 Lumens: 2466
 Wattage: 27.75W
 Efficacy: 89lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.2
 Spacing Criteria (90°-270): 1.2



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	32.5fc	13'-2"
9'	14.5fc	19'-10"
12'	8.1fc	26'-5"
15'	5.2fc	33'
18'	3.6fc	39'-7"

Zonal Lumen Summary

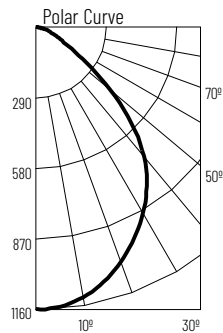
Zone	Lumens	% Luminaire
0-30	877	35.6
0-40	1409	57.1
0-60	2225	90.2
0-90	2443	99.1
90-180	23	0.9
0-180	2466	100

Candela Table

Vertical Angles	Candela
0	1171
5	1164
15	1101
25	990
35	852
45	663

Test Information

Test Number: NTR1150R2
 Part Number: NLCB2-6562040WW
 Lumens: 2166lm
 Wattage: 27.63W
 Efficacy: 78lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.16
 Spacing Criteria (90°-270): 1.16



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	32.2fc	11'-4"
9'	14.3fc	17'
12'	8.1fc	22'-8"
15'	5.2fc	28'-4"
18'	3.6fc	34'

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	858	40.5
0-40	1352	63.8
0-60	1959	92.5
0-90	2119	100
90-180	0	0
0-180	2119	100

Candela Table

Vertical Angles	Candela
0	1160
5	1151
15	1087
25	963
35	795
45	529

Lumen Output Multipliers

Color Temperature: 2700K (0.76), 3000K (0.91), 3500K (0.95), 4000K (1.00)