

# CDA4 4" Downlight

## Specification Grade Standard Downlight

### Product Description

The CDA4 is a 4" downlight in NICOR's Paragon series of specification grade downlights. The CDA4 offers a wide variety of reflector and flange options to fit any architectural or commercial installation. Narrow, medium, wide, and wall wash optics are easily field installed to customize any space. The CDA4 line features Tri-D dimming on every fixture, allowing the luminaires to interface with TRIAC, ELV, and 0-10V dimmers down to 1% dimming (with select dimmers). The CDA4 light engines come in 16W to 50W packages, with color temperatures ranging from 2700K to 5000K at 80 or 90CRI. The dim-to-warm option provides 3000K full illumination, dimming down to a very warm 1800K at 90CRI. The downlights are available with plaster frame, architectural frame, or remodel housings with J-boxes pre-installed.

#### Trim

The CDA4 trims are spun from high-grade aluminum. The deep reflectors provide 55° cutoff for excellent glare control. Self-flanged and flangeless options are available in white, specular clear, haze, wheat, black and champagne finishes. Flanges are available in the trim color or can be painted white. Custom finishes and flange colors are available upon request.\*

#### Optics

The CDA4 family features four standard optics: narrow, medium, and wide distributions as well as a wall wash. Optics are designed with diffused lenses for smooth, glare-free illumination. Each optic is simple to field install and change with NICOR's twist-lock system. An optional glare shield as an accessory for increased glare reduction.

#### Light Engine

The CDA4 light engine consists of the high-efficiency driver and the LED light module. The module is built from die-cast and extruded aluminum to effectively and efficiently cool the LED and is thermally protected to TBDX°F (TBDX°C) for longer fixture life. All light engines on the CDA4 are rated for 50,000 hours lifetime at L70. The CDA4 light engine is available in lumen outputs ranging from 1300 to 5300 lumens. Color temperature options include 2700K, 3000K, 3500K, 4000K, and 5000K at 80 or 90CRI. The dim-to-warm option dims from 3000K to 1800K at 90CRI. Color variation on the LED is selected within a 3-step MacAdam ellipse for consistency across fixtures. The CDA4 light module features a quick-connect FMC whip for simple connection to the driver, allowing the light module to be stored in a safe environment while the luminaire housing and driver are installed at rough-in.

#### Electrical

Drivers in the series operate on 120-277VAC. The high-efficiency drivers feature Tri-D dimming, seamlessly interfacing with TRIAC & ELV dimmers on 120VAC input, and 0-10V systems on 120-277VAC (down to 1%). The CDA4 driver comes with two flexible metal conduit (FMC) whips installed: one end featuring line voltage and 0-10V dimmer wiring with a conduit connector for simple J-box installation, the other with a quick-connect for easy connection to the light module. CDA4 Class 2 drivers are available in 16W, 25W, 38W and 50W packages with a power factor of >.90.

#### Controls

CDA fixtures are available with NICOR NLC (Network Lighting Controls) which feature a Bluetooth Low Energy (BLE) mesh network providing Luminaire Level Lighting Control (LLLC). Mounted to the frame, the integrated power supply relay (optional) allows for field installed BLE PIR/Daylight sensor (ND) which is shipped with luminaire. The control system provides full dimming control with occupancy and daylight harvesting functions and features are configurable with the NICOR NLC app available on iOS and Android devices.

See [www.nicorlighting/network-lighting-controls](http://www.nicorlighting/network-lighting-controls) for more information and NLC Data Sheets.

#### Housings

CDA4 housings are made of 16ga. powder-coated and galvanized steel construction, making them attractive, rugged, and corrosion resistant. The architectural housing provides butterfly brackets adjustable for up to 2" ceiling thickness, while the plaster frame comes with adjustable, stamped bar hangers to fit a range of joist spacings between 14 5/8" and 25 1/8". The remodel frame is supplied with four arch clips for simple, robust through-ceiling remodel installation. All frames have wing springs to mount the reflector, a safety-wire hook for light engine retention, and junction box with six 1/2" knockouts, one 3/4" knockout, and four non-metallic sheathed cable knockouts. Junction boxes are rated for (8) 12AWG 90°C rated wires.

#### Installation

The CDA4's modular design is focused on ease of installation, allowing installers to rough-in the housing and driver while safely storing the trim and light engine until after ceiling work is complete. The trim twists onto the light engine with three keyholes and screws. The twist-lock optic installs tool-free for quick installation and change-out. Once the reflector and optic are installed, simply slide the light engine into the frame where it is retained by wing springs.

#### Warranty

The NICOR Paragon family comes with our 5-year limited system warranty standard. The warranty does not cover product failure due to an overvoltage event (power surge.) For installations where power surge may be possible, NICOR recommends installing additional surge protection at the fixture or electrical distribution panel.

Project

Catalog

Type

Date



**NICOR** LED  
**Paragon**

\* Contact factory for lead time and minimum order quantity.

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### Ordering Information

#### Light Engine

Example: CDALE2016U278

Series	Version	Wattage	Voltage	CCT	CRI
CDALE	2	016 (16 Watts)	U (120-277VAC)	27 (2700 K)	8 (80 CRI)
		025 (25 Watts)		30 (3000 K)	9 (90 CRI)
		038 (38 Watts)		35 (3500 K)	
		050 (50 Watts)		40 (4000 K)	
				50 (5000 K)	
				DW (Dim to Warm)*	

\*Dim to Warm only available at 90CRI on 16W, 25W, and 38W fixtures

#### Trim and Optic

Example: CDA4TR220WHSF

Series	Version	Optic	Reflector	Flange
CDA4TR	2	20 (Narrow Optic)	WH (White)	SF (Self-flanged)
		40 (Medium Optic)	SC (Specular Clear)	WH (White)
		60 (Wide Optic)	CZ (Clear Haze)	FL (Flangeless)
		WW (Wall Wash White Insert)**	GL (Wheat)	CUST (Custom)
		WS (Wall Wash Specular Clear Insert)**	BK (Black)	
			CM (Champagne)	
			CUST (Custom)	

\*\*Only available in white or specular clear

#### Housing

Example: CDA4H2A

Series	Version	Style	Controls
CDA4HS	2	A (Architectural)	Blank (none)
		F (Plaster Frame)	ND (NLC Controls)
		R (Remodel)	

### Accessories

#### Reflector

Series	Version	Reflector	Flange
CDA4RFL	2	WH (White)	SF (Self-flanged)
		SC (Specular Clear)	WH (White)
		CZ (Clear Haze)	FL (Flangeless)
		GL (Wheat)	CUST (Custom)
		BK (Black)	
		CM (Champagne)	
		CUST (Custom)	

#### Flangeless Adapter

Series
CDA4FLNGLESADAPT

#### Optics

Series	Version	Style
CDAOP	2	20 (Narrow Optic)
		40 (Medium Optic)
		60 (Wide Optic)
		WWSC (Wall Wash Specular Clear)
		WWWH (Wall Wash White)

#### Glare Shield

Series	Version	Style
CDA4GS	2	WH (White)
		SC (Specular Clear)
		CZ (Clear Haze)

# CDA4 4" Downlight

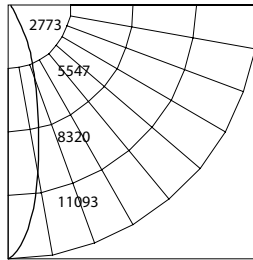
## Specification Grade Standard Downlight

### Photometric Data

#### CDA4 Narrow Optic

##### 3500K 38W 90CRI

Input Voltage (VAC)	120
System Level Power (W)	38.7
Delivered Lumens (Lm)	3677
System Efficacy (Lm/W)	95
Correlated Color Temp (K)	3500
Color Rendering Index (CRI)	90
Beam Angle	29.5
Spacing Criteria	0.47



##### Performance Data

CCT and CRI	Lumens	Watts	Lumens/Watt
CDA4 3500 90CRI	1379	16	86
	2245	25	90
	4457	50	89
CDA4 3500K 80CRI	1655	16	103
	2532	25	101
	4412	38	116
	5347	50	88

##### EM Mode\*

EMB	Estimated Lumens
EMB45	4275
EMB80	7600
EMB250	23750

\*Estimated lumen output is based on lumens per watt of the 3500K 38W test fixture and the wattage of the EM driver. For a better estimate of a specific part number, determine the fixture efficiency and use the formula:  
EM Lumens = Lm/W Fixture x EM driver Wattage

##### Cone of Light Tabulation

Mounted height (Feet)	Footcandles Beam Center	Diameter (Feet)
4	643.7	2.3
6	286.1	3.2
8	160.9	3.9
10	103.0	5.6
12	71.5	6.4
14	52.6	7.2
16	40.2	6.0

##### Intensity Summary (Candle Power)

Angle	Mean CP
0	10300
5	9551
15	5063
25	2127
35	398
45	138
55	69
65	10
75	2
85	0
90	0

##### Adjustment Multipliers

Trim Color	CCT	Wattage	Optic	CRI	Glare Shield
WH=103.7%	27K=100.4%	16=37.5%	Narrow=72.6%	80=120.0%	None= 100.0%
SC=104.5%	30K=93.1%	25=57.4%	Medium=69.7%	90=100%	GS=74.2%
CZ=100.0%	35K=100.0%	38=100%	Wide=100.0%		
GL=99.3%	40K=94.0%	50=121%			
BK=78.3%	50K=93.1%				
CM= 99.3%					

##### Zonal Lumen Summary

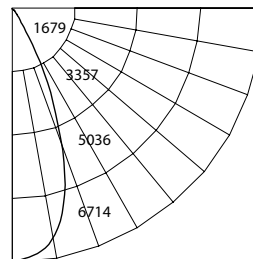
Zone	Lumens	% of Luminaire
0-30	3206	87%
0-40	3493	95%
0-60	3662	99%
0-90	3677	100%

Fixture tested per LM-79-08. Photometric data is of the performance of a representative fixture. Results may vary in the field.

#### CDA4 Medium Optic

##### 3500K 38W 90CRI

Input Voltage (VAC)	120
System Level Power (W)	38.7
Delivered Lumens (Lm)	3627
System Efficacy (Lm/W)	94
Correlated Color Temp (K)	3500
Color Rendering Index (CRI)	90
Beam Angle	44.8
Spacing Criteria	0.74



##### Performance Data

CCT and CRI	Lumens	Watts	Lumens/Watt
CDA4 3500K 90CRI	1354	16	85
	2082	25	83
	4396	50	88
CDA4 3500K 80CRI	1632	16	102
	2498	25	100
	4352	38	115
	5275	50	106

##### EM Mode\*

EMB	Estimated Lumens
EMB45	4230
EMB80	7520
EMB250	23500

\*Estimated lumen output is based on lumens per watt of the 3500K 38W test fixture and the wattage of the EM driver. For a better estimate of a specific part number, determine the fixture efficiency and use the formula:  
EM Lumens = Lm/W Fixture x EM driver Wattage

##### Cone of Light Tabulation

Mounted height (Feet)	Footcandles Beam Center	Diameter (Feet)
4	388.9	2.6
6	172.8	4.2
8	97.2	5.6
10	62.2	8.0
12	43.2	9.0
14	31.8	10.4
16	24.3	12.0

##### Intensity Summary (Candle Power)

Angle	Mean CP
0	6222
5	6162
15	5075
25	2457
35	476
45	160
55	70
65	10
75	3
85	1
90	0

##### Adjustment Multipliers

Trim Color	CCT	Wattage	Optic	CRI	Glare Shield
WH=103.7%	27K=100.4%	16=37.5%	Narrow=72.6%	80=120.0%	None= 100.0%
SC=104.5%	30K=93.1%	25=57.4%	Medium=69.7%	90=100%	GS=74.2%
CZ=100.0%	35K=100.0%	38=100%	Wide=100.0%		
GL=99.3%	40K=94.0%	50=121%			
BK=78.3%	50K=93.1%				
CM= 99.3%					

##### Zonal Lumen Summary

Zone	Lumens	% of Luminaire
0-30	3082	85%
0-40	3423	94%
0-60	3611	99%
0-90	3627	100%

Fixture tested per LM-79-08. Photometric data is of the performance of a representative fixture. Results may vary in the field.

# CDA4 4" Downlight

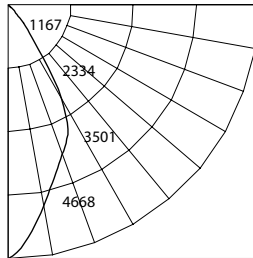
## Specification Grade Standard Downlight

### Photometric Data

#### CDA4 Wide Optic

##### 3500K 38W 90CRI

Input Voltage (VAC)	120
System Level Power (W)	38.7
Delivered Lumens (Lm)	3608
System Efficacy (Lm/W)	93
Correlated Color Temp (K)	3500
Color Rendering Index (CRI)	90
Beam Angle	50.8
Spacing Criteria	0.81



##### Performance Data

CCT and CRI	Lumens	Watts	Lumens/Watt
CDA4 3500K 90CRI	1353	16	85
	2071	25	83
	4373	50	87
CDA4 3500K 80CRI	1624	16	102
	2485	25	99
	4330	38	114
	5248	50	105

##### EM Mode\*

EMB	Estimated Lumens
EMB45	4185
EMB80	7440
EMB250	23250

\*Estimated lumen output is based on lumens per watt of the 3500K 38W test fixture and the wattage of the EM driver. For a better estimate of a specific part number, determine the fixture efficiency and use the formula:  
EM Lumens = Lm/W Fixture x EM driver Wattage

##### Cone of Light Tabulation

Mounted height (Feet)	Footcandles Beam Center	Diameter (Feet)
4	312.6	2.8
6	139.0	5.0
8	78.2	6.0
10	50.0	8.4
12	34.7	10
14	25.5	11.6
16	19.5	13.0

##### Intensity Summary (Candle Power)

Angle	Mean CP
0	5002
5	4919
15	4210
25	2597
35	816
45	231
55	85
65	14
75	4
85	1
90	0

##### Adjustment Multipliers

Trim Color	CCT	Wattage	Optic	CRI	Glare Shield
WH=103.7%	27K=100.4%	16=37.5%	Narrow=72.6%	80=120.0%	None= 100.0%
SC=104.5%	30K=93.1%	25=57.4%	Medium=69.7%	90=100%	GS=74.2%
CZ=100.0%	35K=100.0%	38=100%	Wide=100.0%		
GL=99.3%	40K=94.0%	50=121%			
BK=78.3%	50K=93.1%				
CM= 99.3%					

##### Zonal Lumen Summary

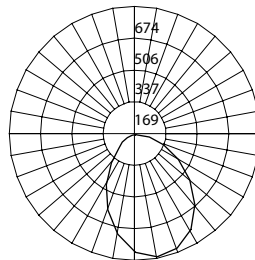
Zone	Lumens	% of Luminaire
0-30	2786	77%
0-40	3321	92%
0-60	3588	99%
0-90	3608	100%

Fixture tested per LM-79-08. Photometric data is of the performance of a representative fixture. Results may vary in the field.

#### CDA4 Wall Wash

##### 3500K 38W 90CRI

Input Voltage (VAC)	120
System Level Power (W)	38.7
Delivered Lumens (Lm)	3608
System Efficacy (Lm/W)	93
Correlated Color Temp (K)	3500
Color Rendering Index (CRI)	90
Beam Angle	50.8
Spacing Criteria	0.81



##### Performance Data

CCT and CRI	Lumens	Watts	Lumens/Watt
CDA4 3500K 90CRI	1353	16	85
CDA4 3500K 80CRI	1624	16	102

##### EM Mode\*

EMB	Estimated Lumens
EMB45	4185
EMB80	7440
EMB250	23250

\*Estimated lumen output is based on lumens per watt of the 3500K 38W test fixture and the wattage of the EM driver. For a better estimate of a specific part number, determine the fixture efficiency and use the formula:  
EM Lumens = Lm/W Fixture x EM driver Wattage

##### Cone of Light Tabulation

Mounted height (Feet)	Footcandles Beam Center	Diameter (Feet)
4	312.6	2.8
6	139.0	5.0
8	78.2	6.0
10	50.0	8.4
12	34.7	10
14	25.5	11.6
16	19.5	13.0

##### Intensity Summary (Candle Power)

Angle	Mean CP
0	5002
5	4919
15	4210
25	2597
35	816
45	231
55	85
65	14
75	4
85	1
90	0

##### Adjustment Multipliers

Trim Color	CCT	Wattage	CRI	Glare Shield
WH=103.7%	27K=100.4%	16=37.5%	80=120.0%	None= 100.0%
SC=104.5%	30K=93.1%	25=57.4%	90=100%	GS=74.2%
CZ=100.0%	35K=100.0%	38=100%		
GL=99.3%	40K=94.0%	50=121%		
BK=78.3%	50K=93.1%			
CM= 99.3%				

##### Zonal Lumen Summary

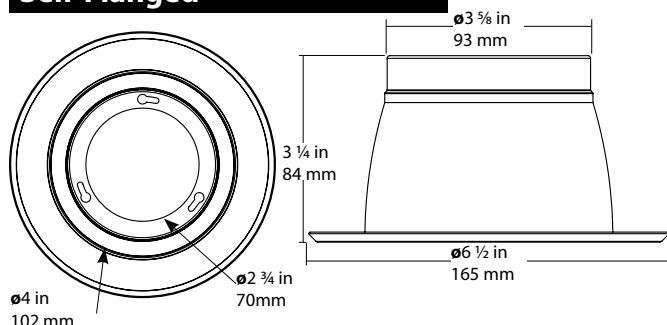
Zone	Lumens	% of Luminaire
0-30	2786	77%
0-40	3321	92%
0-60	3588	99%
0-90	3608	100%

Fixture tested per LM-79-08. Photometric data is of the performance of a representative fixture. Results may vary in the field.

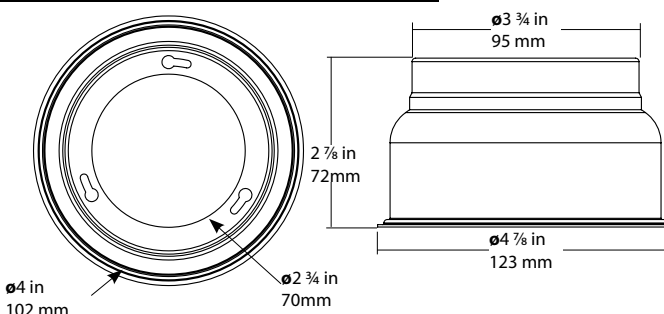
## Specification Grade Standard Downlight

## Trim Styles

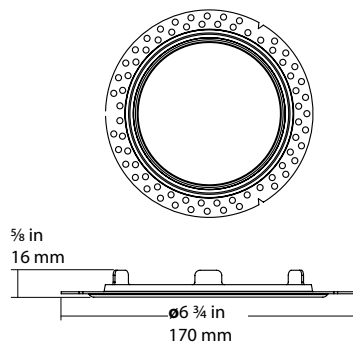
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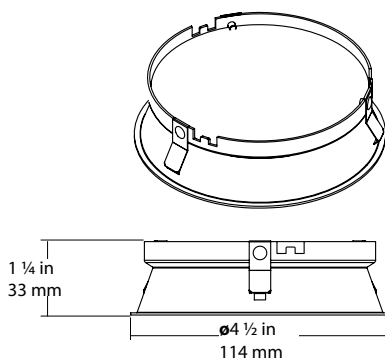
## Flangeless



## Flangeless Adapter

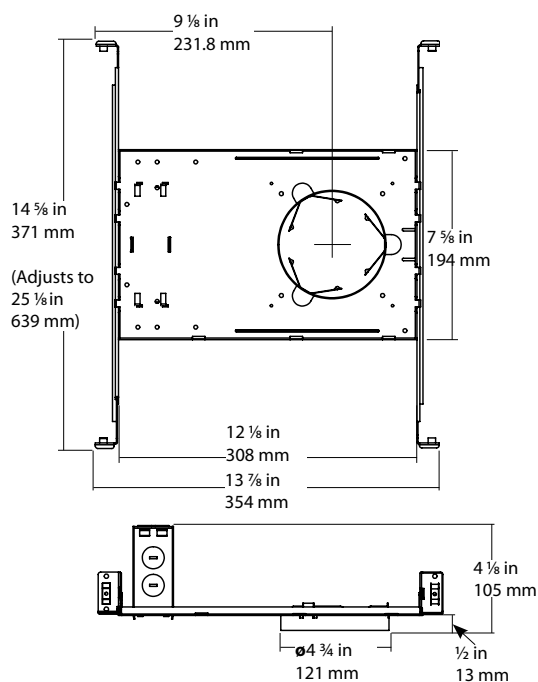


## Glare Shield

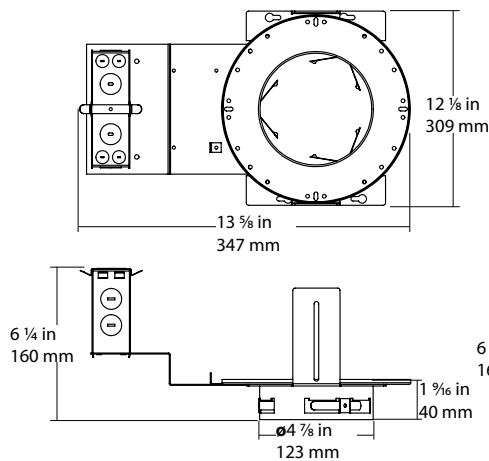


## Housings

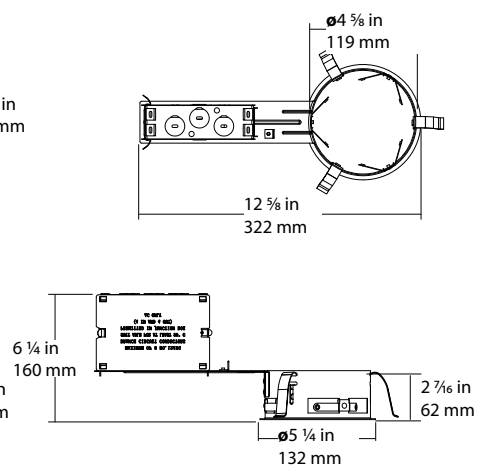
## Plaster Frame



## Architectural Frame



## Remodel Frame



# CDA4 4" Downlight

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## Light Engine

