

# ID+ 4.5" Trimless

LED DOWNLIGHT



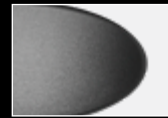
solite lens option



clear diffuse



warm diffuse



black

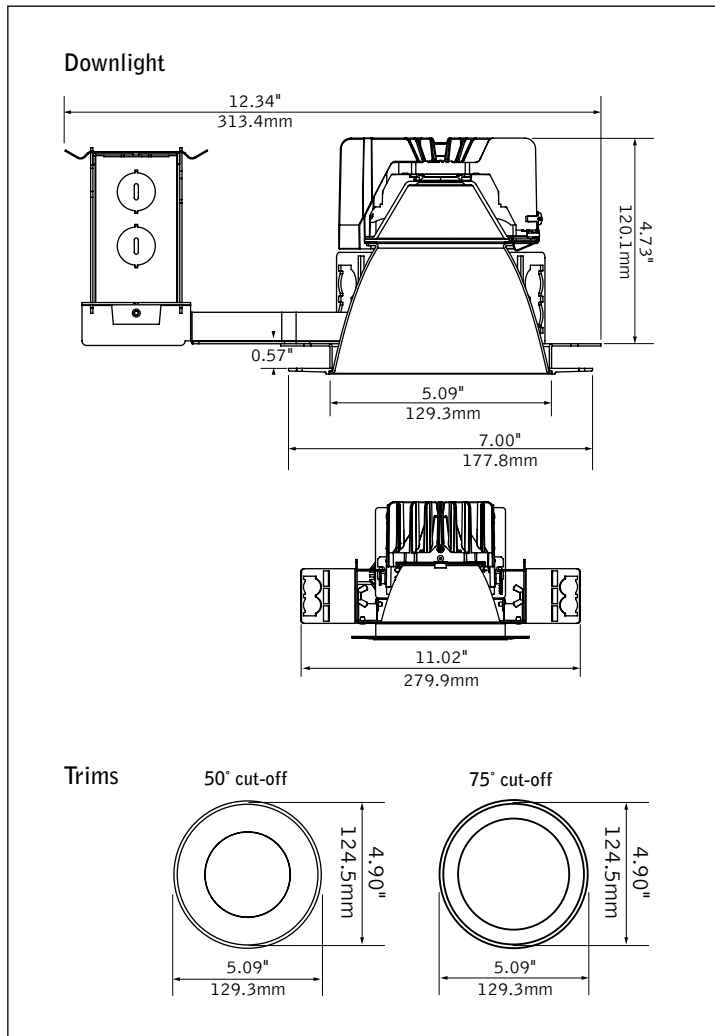


white



overlap companion

## DIMENSIONAL DATA



## FEATURES

Field adjustability of ceiling thickness from 0.5" to 3.0"

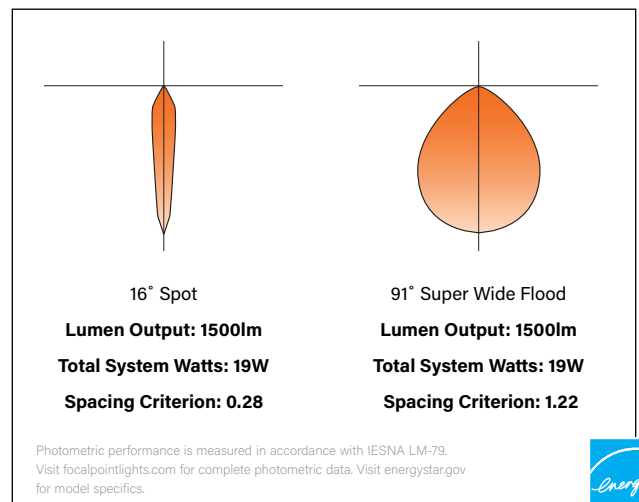
50° or 75° cutoff to light source and its image.

Right Light: Standard delivered lumen outputs 1000, 1500, 2000, 2500, and 3000.

Warm Dim: Lighting that enhances spaces with a warm glow, reminiscent of incandescent or halogen light sources.

PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

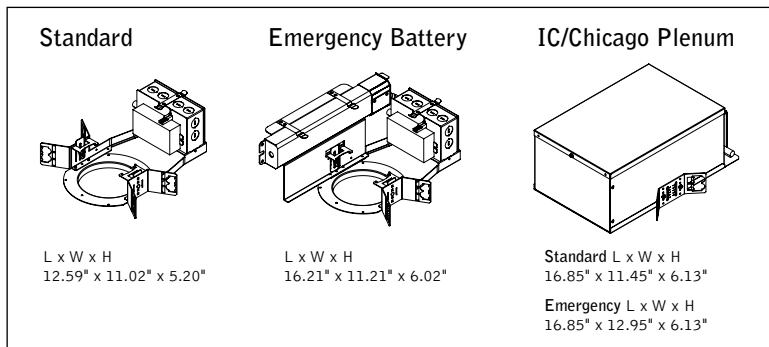
## PERFORMANCE



fixture:

project:

**HOUSING DETAILS**



**HOUSING SPECIFICATIONS**

**Construction**

Thermally protected housing for new construction applications. Insulation to be kept 3" away from housing. Type IC inherently protected, suitable for direct contact with insulation. Butterfly brackets allow mounting to 1/2" emt. Order bar hangers as an accessory. Die-cast aluminum heat sink designed for maximum thermal dissipation. Die-formed housing and integral junction box with (7) 1/2" pry-outs. T-rated: UL & cUL Listed for (6) #14 AWG (3 in, 3 out) 90°C conductors and feed through-branch wiring. IC/CP housing: UL & cUL Listed for (8) #12 AWG (4 in, 4 out) 90°C conductors and feed through-branch wiring for IC/CP housing. Accommodates ceiling thicknesses up to 0.5" standard, field adjustable up to 3.0" thickness. For thicker ceiling consult factory. Order TZB option for TechZone compatible housing brackets. T-rated housing will not exceed 6lb, IC/CP housing will not exceed 12lb.

**Electrical**

Choice of constant current dimming drivers. Power factor > .9 typical. PoE compatible: Integrates with Power over Ethernet lighting systems via standard, low-voltage wires.

**Emergency**

Emergency Battery Pack: Bodine BSL17C-C2. Emergency output -7W for 90 minutes. Maximum mounting height: 25.8ft. (Black reflector: 18.0ft.) Not wet location or outdoor rated.

**Labels**

UL and cUL Listed. Suitable for Dry, Damp or Wet Locations, indoor use only. Specify Outdoor rated (OD) for outdoor recessed ceiling applications.

**Lumen Maintenance**

Reported: L70 at >55,000 hours      Calculated: L70 at 204,000 hours  
L90 at >55,000 hours              L90 at 59,000 hours

Derived from EPA TM-21 calculator. Based on typical conditions, consult factory for additional data.

**Reliability**

At Focal Point, our products are designed to stand the test of time. Each luminaire is engineered using superior components, manufactured with the utmost care and rigorously tested. Contact us for reliability data.

**Warranty**

LED System rated for operation in ambient environments up to 25°C. 5-year limited warranty. Fixture with Outdoor rated option must be installed in a covered ceiling and is warranted for operation in ambient environments between -20°C to +40°C.

**TRIM & LED SPECIFICATIONS**

**LED System**

Proprietary array incorporates premium LEDs on a robust platform. May be specified in 2700K, 3000K, 3500K or 4000K, 80+ CRI or 90+ CRI. 3500K and 4000K with CRI>90 have a cyanosis observation index (COI) of 3.3 or less. Color accuracy within 2 SDCM. Aluminum heat sink provides appropriate thermal management.

**Aesthetics**

Parabolic reflector cone ensures glare free optics. Reflector is .050" spun aluminum. Torsion springs pull trim tight to the ceiling with no visible fasteners.

**Optics**

50-degree or 75-degree cut-off to light source and its image.

Optic	Cut-Off Degree	Lumen Output	Distribution Beam Spread					Spacing Criteria		
			SP	NFL	FL1	FL2	WFL	VWFL	SWFL	
DN	50°	1000-2500	16°   .28	24°   .40	35°   .56	42°   .66	51°   .78	-	-	
		3000	-	26°   .44	36°   .58	41°   .64	52°   .78	-	-	
DSS	75°	1000-2500	-	-	-	-	-	70°   1.00	91°   1.22	
		3000	-	-	-	-	-	70°   1.00	91°   1.24	

**PERFORMANCE CHART\*** - see page 3.

Focal Point LLC reserves the right to change specifications for product improvement without notification.



**HOUSING ORDERING**

<b>Housing Series</b>	<b>FLC4D</b>
ID+ 4.5" Round Downlight	
<b>Trim Type</b>	<b>RT</b>
Round Trimless	
<b>Color Options</b>	
Standard White, 80 & 90 CRI	<b>SW</b>
Warm Dim	<b>WDM</b>
(1500 & 2000 lumens only. UNV & EM not available.)	
<b>Lumen Output</b>	
1000 Lumens	<b>1000L</b>
1500 Lumens	<b>1500L</b>
2000 Lumens	<b>2000L</b>
2500 Lumens	<b>2500L</b>
3000 Lumens	<b>3000L</b>
(Not available with SP distribution, LFP or LTE.)	
<b>Voltage</b>	
UNV 120V/277V	<b>UNV</b>
(IC housing only. Not available with LFP or LTE.)	
120V	<b>120</b>
277V	<b>277</b>
Low Voltage	<b>LV</b>
(IC housing: 2000L max. T & TW housings: 1000L only.)	
<b>Control System &amp; Dimming Level</b>	
0-10V - 0% Dimming	<b>LZ1</b>
0-10V - 1% Dimming	<b>L1</b>
0-10V - 10% Dimming	<b>LD1</b>
Low Voltage, PoE compatible	<b>LVN</b>
(No driver. Not available with EM. LV Voltage only.)	
Forward Phase (120V only)	<b>LFP</b>
Lutron Hi-Lume EcoSystem (LDE1) - 1% Dimming	<b>LH1</b>
Lutron Hi-Lume - Forward Phase - 1% Dimming (120V only)	<b>LTE</b>
DALI - 0% Dimming	<b>DZ1</b>
DALI - 1% Dimming	<b>D11</b>
<b>Housing Type</b>	
IC Rated / Airtight	<b>IC</b>
(L1, LD1, LVN, LH1 2000L max. LZ1, D11, DZ1, LFP 1500L max. LTE 1000L only. LC4AT required for Airtight. Not available with EM.)	
Thermally Protected, Non-IC	<b>T</b>
Thermally Protected, Non-IC Wood (Wood ceiling installation kit required)	<b>TW</b>
<b>Factory Options</b>	
Bar Hangers	<b>BH</b>
Chicago Plenum / National Plenum	<b>CP</b>
Emergency Battery	<b>EM</b>
(Must order LC4EM trim. Not wet location, airtight or outdoor rated.)	
Outdoor Rated	<b>OD</b>
(LD1 driver only. IC housing 1500L max. See dimming Performance Chart on page 3.)	
<b>TRIM &amp; LED MODULE</b>	
<b>Aperture</b>	
4.5" Round Reflector	<b>LC4</b>
4.5" Round Reflector - Airtight (IC housing required for Airtight rating)	<b>LC4AT</b>
4.5" Round Reflector - Emergency (Required for "EM" option. DN optic only. Not wet location or outdoor rated.)	<b>LC4EM</b>
<b>Trim Type</b>	
Round Trimless	<b>RT</b>
Round Die-Cast Trimless (DSS, VWFL & SWFL options only)	<b>RDT</b>
<b>Lumen Output</b>	
(Trim & Housing output must match)	
1000 Lumens	<b>1000L</b>
1500 Lumens	<b>1500L</b>
2000 Lumens	<b>2000L</b>
2500 Lumens	<b>2500L</b>
3000 Lumens	<b>3000L</b>
(Not available with SP distribution)	
<b>Color Temperature</b>	
2700K, 80+ CRI or 90+ CRI	<b>27K or 927K</b>
3000K, 80+ CRI or 90+ CRI	<b>30K or 930K</b>
3500K, 80+ CRI or 90+ CRI	<b>35K or 935K</b>
4000K, 80+ CRI or 90+ CRI	<b>40K or 940K</b>
Warm Dim: 2700-1800K, 90+ CRI (1500 & 2000 lumens only)	<b>92718W</b>
Warm Dim: 3000-1800K, 90+ CRI (1500 & 2000 lumens only)	<b>93018W</b>
<b>Optic</b>	
Downlight	<b>DN</b>
Super Short Cone with Solite Lens 75° cut-off (Die-cast trim, RDT, with VWFL or SWFL only)	<b>DSS</b>
<b>Distribution</b>	
Spot	<b>SP</b>
Narrow Flood	<b>NFL</b>
Flood 1	<b>FL1</b>
Flood 2	<b>FL2</b>
Wide Flood	<b>WFL</b>
Very Wide Flood (DSS Optic only)	<b>VWFL</b>
Super Wide Flood (DSS Optic only)	<b>SWFL</b>
<b>Color</b>	
Clear Diffuse	<b>CD</b>
Warm Diffuse	<b>WD</b>
Black	<b>BK</b>
White	<b>WH</b>
<b>ACCESSORIES</b>	
Wood Ceiling Installation Kit (One kit recommended per 10 downlights)	<b>LC4-WOOD-KIT</b>



Options in orange qualify for the Quickship program. 5-day up to 200 pieces. Refer to Quickship Guide for complete details.

## ROUND DOWNLIGHT PERFORMANCE CHART

Lumen Output	Delivered Lumens	System Watts	LPW
1000L	1061	11	93
1500L	1595	19	83
 1500L	1433	25	57
2000L	2119	26	83
 2000L	2014	37	55
2500L	2562	32	80
3000L	3087	36	85

Based on downlight (DN) optic, 3500K, 80CRI, Wide Flood, Clear Diffuse. WDM base on 3000 - 1800K, 90 CRI. Delivered lumen output may vary +/- 5%. Actual wattage may vary +/- 5%

## OUTDOOR RATED (OD) DRIVER DIMMING PERFORMANCE CHART

Lumen Output	Minimum Dimming Level
1000L	25%
1500L	16%
2000L	12%
2500L	10%
3000L	10%

## ROUND DOWNLIGHT LUMEN MULTIPLIER TABLE

### Color Temperature & CRI

Trim Type	Optic	Lumen Output	Color Temperature	Multiplier
ALL	ALL	ALL	2700K, 80+ CRI [27K]	0.93
			2700K, 90+ CRI [927K]	0.80
			3000K, 80+ CRI [30K]	0.97
			3000K, 90+ CRI [930K]	0.85
			3500K, 80+ CRI [35K]	1.00
			3500K, 90+ CRI [935K]	0.83
			4000K, 80+ CRI [40K]	1.01
			4000K, 90+ CRI [940K]	0.86
		1500	0.94	
		2000	1.01	
1500	0.96			
2000	1.01			
			2700-1800K, 90+ CRI [92718W]	1.01
			3000-1800K, 90+ CRI [93018W]	0.96
			3000-1800K, 90+ CRI [93018W]	1.01

### Distribution

Trim Type	Optic	Distribution	Multiplier	
			1000 - 2500L	3000L
Round Trimless [RT]	Round Downlight with 50° cut-off [DN]	Spot [SP]	1.07	-
		Narrow Flood [NFL]	1.03	1.05
		Flood 1 [FL1]	0.99	1.01
		Flood 2 [FL2]	0.99	0.98
		Wide Flood [WFL]	1.02	1.03
Round Overlap [RO]	Round Downlight with 50° cut-off [DNT]	Spot [SP]	1.07	-
		Narrow Flood [NFL]	1.12	1.11
		Flood 1 [FL1]	1.07	1.01
		Flood 2 [FL2]	1.00	1.02
		Wide Flood [WFL]	1.01	1.02
Round Die-Cast Trimless [RDT]	Super Short Cone with Solite Lens with 75° cut-off [DSS]	Very Wide Flood [VWFL]	0.83	0.84
		Super Wide Flood [SWFL]	0.80	0.81
Round Die-Cast Overlap [RDO]	Super Short Cone with Solite Lens with 75° cut-off [DSS]	Very Wide Flood [VWFL]	0.80	0.83
		Super Wide Flood [SWFL]	0.82	0.82

### Color

Trim Type	Optic	Color	Multiplier
Round Trimless [RT] and Round Overlap [RO]	Round Downlight with 50° cut-off [DN]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	0.86
		White [WH]	1.00
		Black [BK]	0.50
Round Die-Cast Trimless [RDT] and Round Die-Cast Overlap [RDO]	Super Short Cone with Solite Lens with 75° cut-off [DSS]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	0.95
		White [WH]	1.10
		Black [BK]	0.85

Multiplier charts are provided to aid with estimation of lumen levels across options. Apply multipliers against ordered Lumen Output to estimate Delivered Lumens. An estimation should make use of all tables through consecutive application of three multipliers. Refer to IES files for most accurate photometric information

## How To Use Lumen Multipliers

**Formula:** (Lumen Output Value) x (Color Temperature & CRI) x (Distribution) x (Color)

**Example:** LC4-RT-2000L-935K-DN-NFL-WH

(2000) x (0.83) x (1.03) x (1.00) ≈ 1710 lm (estimated delivered lumens)