# ID+ 4.5" x 4.5" Trimless

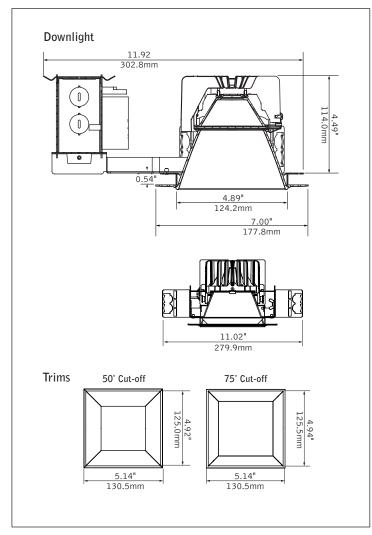


## LED DOWNLIGHT





#### **DIMENSIONAL DATA**



### FEATURES

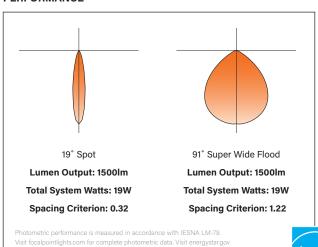
Field adjustability of ceiling thickness from 0.5" to 3.0".

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

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

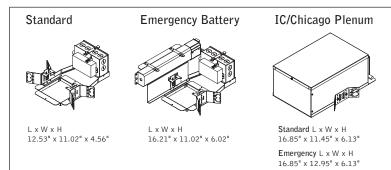
Warm Dim: Lighting that enhances spaces with a warm glow, reminiscent of incandescent or halogen light sources.

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



#### PERFORMANCE

#### 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 warrantied 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

Torsion springs pull single molded die-cast trim right to the ceiling with no visible fasteners within the trim.

#### Optics

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

Op- tic		Lumen	Distribution Beam Spread   Spacing Criteria						
tic Degree		Output	SP	NFL	FL1	FL2	WFL	VWFL	SWFL
DN	DN 50°	1000- 2500	19° .32	23° .40	34° .56	46°   .74	57°   .92	68°   1.02	-
		3000	-	25°   .44	39° .64	48°   .76	57°   .92	68°   1.02	-
DSS 75°	1000- 2500	-	-	-	-	-	70°   1.03	91°   1.22	
	275	3000	-	-	-	-	-	71°   1.02	91°   1.22

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

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

#### HOUSING ORDERING **Housing Series** FLC44D ID+ 4.5" Square FI C44D Trim Type **Color Options** Standard White, Warm Dim WDM (1500 & 2000 lumens only. UNV & EM not available.) Lumen Output 2500 Lumens (Not available with SP distribution, LFP or LTE.) Voltage UNV 120V (IC housing only. Not available with LFP or LTE.) Low Voltage LV (IC housing: 2000L max. T & TW housing **Control System & Dimming Level** 0-10V - 0% Dimming 0-10V - 1% Dimming Low Voltage, PoE compatible LVN (No driver. Not available with EM. LV Voltage only.) Forward Phase (120V only) Lutron Hi-Lume EcoSystem (LDE1) -1% Dimming LH1 Lutron Hi-Lume - Forward Phase -1% Dimming (120V only) DALI - 0% Dimming ITE D71 DALI - 1% Dimming D11 Housing Type IC B (L11, LD1, LVN, LH1 2000L max. LZ1, D11, DZ1, LFP 1500L max. LTE

ST

SDT

1000L only. LC44AT requied for Airtight. Not available with EM.) Thermally Protected, Non-IC Wood TW (Wood ce **Factory Options** 

Chicago Plenum / National Plenum (Must order LC44EM trim. Not wet location, airtight or outdoo

rated. Outdoor Rated OD (LD1 driver only. IC housing 1500L max. See dimming Performance Chart on page 3.)

#### **TRIM & LED MODULE** Aperture

4.5" Square Reflector 4.5" Square Reflector - Airtight (IC housing required for Airtight rating) 4.5" Square Reflector - Emergency IC44FM (Required for "EM" option, DN optic only Not wet location, airtight or outdoor rated. Trim Type Square Die-Cast Trin Lumen Output (Trim & Housing output must match) 1000 Lumens 1500 Lumens 2000 Lumens 2500 Lumens (Not available with SP distribution) Color Temperature 2700K, 80+ CRI or 90+ CRI 27K or 927K 3000K, 80+ CRI or 90+ CRI 30K or 930K 3500K, 80+ CRI or 90+ 35K or 9 80+ CRI or 90+ CRI 40K or 940K Warm Dim: 2700-1800K, 90+ CRI 92718W (1500 & 2000 lumens only Warm Dim: 3000-1800K, 90+ CRI 93018W (1500 & 2000 lumens only) Optic Super Short Cone with Solite Lens 75° cut-off DSS Distribution Narrow Flood NFL Flood 1 FL1 Flood 2 FL2 WFL VWFI Wide Flood Verv Wide Flood Super Wide Flood (DSS Optic only) SWFL Color Clear F Warm Diffuse WD Black BK White

ACCESSORIES Wood Ceiling Installation Kit LC44-WOOD-KIT (One kit recommended per 10 downlights)



#### SQUARE DOWNLIGHT PERFORMANCE CHART

Lu	men Output	Delivered Lumens	System Watts	LPW
	1000L	1032	11	91
	1500L	1552	19	81
WD	1500L	1480	25	58
	2000L	2061	26	81
WD	2000L	2079	37	57
	2500L	2492	32	78
	3000L	2981	36	82

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%

#### SQUARE DOWNLIGHT LUMEN MULTIPLIER TABLE

#### **Color Temperature & CRI**

OUTDOOR BATED	DRIVER DIMMING PERFORMANCE CHART
	DRIVER DIWIWIING FERFORWANCE CHART

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

Trim Type	Optic	Lumen Ouput	Color Temperature	Multiplier
	ALL	ALL	2700K, 80+ CRI [27K]	0.93
			2700K, 90+ CRI [927K]	0.75
			3000K, 80+ CRI [30K]	0.93
			3000K, 90+ CRI [930K]	0.81
			3500K, 80+ CRI [35K]	1.00
			3500K, 90+ CRI [935K]	0.81
ALL			4000K, 80+ CRI [40K]	1.00
			4000K, 90+ CRI [940K]	0.87
		1500	2700-1800K, 90+ CRI [92718W]	0.93
		2000	2700-100013, 30+ Chil [3271800]	1.09
		1500	3000-1800K, 90+ CRI [93018W]	0.99
		2000	5000-1000K, 90+ CRI [93018W]	1.04

#### Distribution

Trim Type	Optic	Distribution	Multiplier	
Trim Type	Optic	Distribution	1000 - 2500L	3000L
		Spot [SP]	1.05	-
	Downlight with 50° cut-off [DN]	Narrow Flood [NFL]	1.04	1.04
Squara Dia Cast Trimlaga [SDT]		Flood 1 [FL1]	0.97	0.96
Square Die-Cast Trimless [SDT]		Flood 2 [FL2]	0.99	0.98
		Wide Flood [WFL]	1.00	1.00
		Very Wide Flood [VWFL]	0.94	0.93
	Downlight with 50° cut-off [DN]	Spot [SP]	1.03	-
		Narrow Flood [NFL]	1.02	1.02
Square Dia Cast Quarlan [SDO]		Flood 1 [FL1]	0.96	0.93
Square Die-Cast Overlap [SDO]		Flood 2 [FL2]	0.97	0.94
		Wide Flood [WFL]	0.98	0.98
		Very Wide Flood [VWFL]	0.90	0.90
Squara Dia Cast Trimlaga [SDT]	Super Short Cone with Solite Lens with 75° cut-off [DSS]	Very Wide Flood [VWFL]	0.87	0.88
Square Die-Cast Trimless [SDT]		Super Wide Flood [SWFL]	0.81	0.84
Square Dia Cast Quarlan [SDQ]	Super Short Cone with Solite Lens	Very Wide Flood [VWFL]	0.80	0.82
Square Die-Cast Overlap [SDO]	with 75° cut-off [DSS]	Super Wide Flood [SWFL]	0.81	0.75

Color

Trim Type	Optic	Color	Multiplier
	Downlight with 50° cut-off [DN]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	0.84
		White [WH]	1.11
Square Die-Cast Trimless [SDT]		Black [BK]	0.65
and Square Die-Cast Overlap [SDO]	Super Short Cone with Solite Lens with 75° cut-off [DSS]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	1.01
		White [WH]	1.16
		Black [BK]	0.93

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: LC44-SDT-2000L-935K-DN-NFL-WH (2000) x (0.81) x (1.04) x (1.11) ≈ 1870 Im (estimated delivered lumens)