

# ID+ 4.5" x 4.5" Trimless

LED DOWNLIGHT



solite lens option



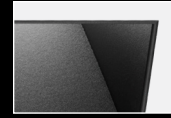
clear diffuse



warm diffuse



white



black

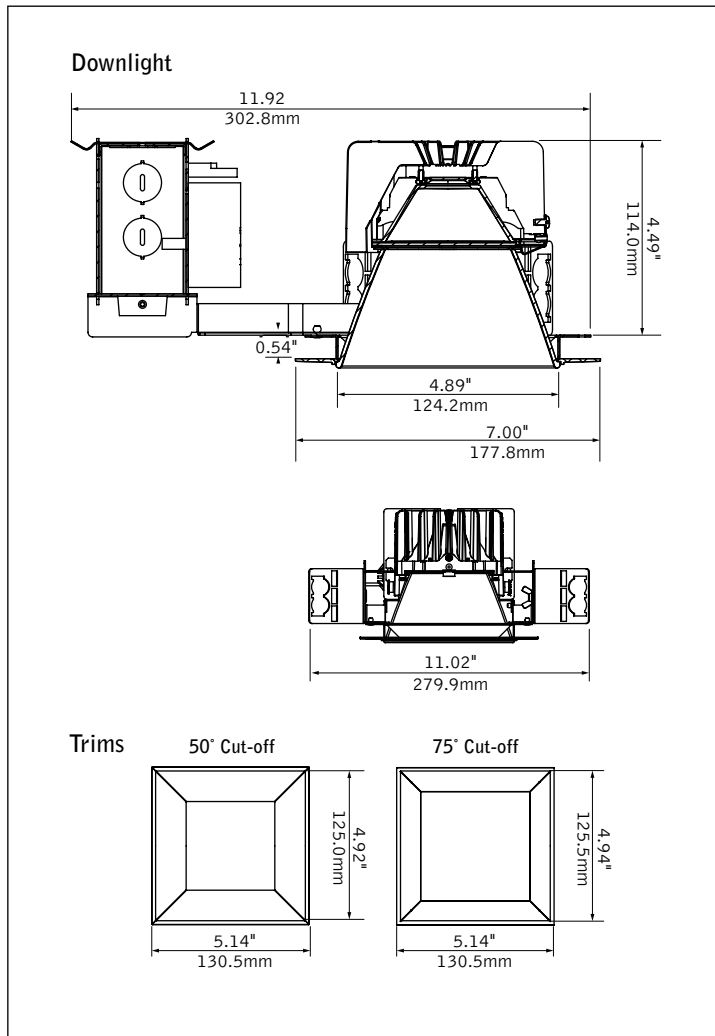


overlap companion



The Naturals collection - Grey Elm shown

## DIMENSIONAL DATA



## FEATURES

Field adjustability of ceiling thickness from 0.5" to 3.0"

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

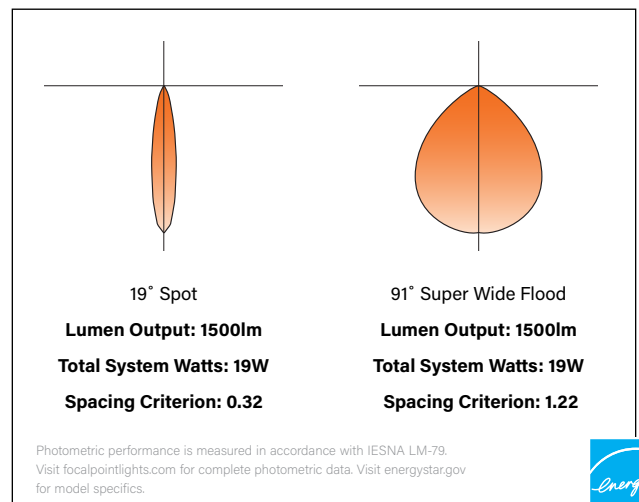
Right Light: Standard delivered lumen outputs 1000, 1500, 2000, 2500, and 3000.

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.

Available with The Naturals, a series of finishes that exude biophilic beauty.

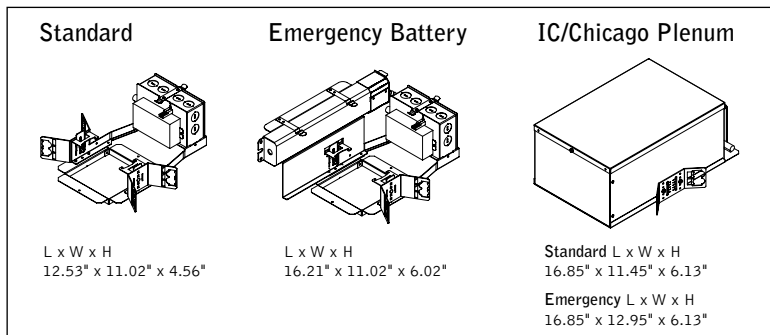
## PERFORMANCE



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**

Torsion springs pull single molded die-cast trim right to the ceiling with no visible fasteners within the trim. The Naturals: 100% low VOC vinyl.

**Optics**

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

Op-tic	Cut-Off Degree	Lumen Output	Distribution Beam Spread						Spacing Criteria	
			SP	NFL	FL1	FL2	WFL	VWFL	SWFL	
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	
		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**

<b>Housing Series</b>	<b>FLC44D</b>	<b>FLC44D</b>
<b>ID+ 4.5" Square Downlight</b>		
<b>Trim Type</b>		<b>ST</b>
<b>Square Trimless</b>		<b>ST</b>
<b>Color Options</b>		
<b>Standard White, 80 &amp; 90 CRI</b>		<b>SW</b>
<b>Warm Dim</b>		<b>WDM</b>
<small>(1500 &amp; 2000 lumens only. UNV &amp; EM not available.)</small>		
<b>Lumen Output</b>		
<b>1000 Lumens</b>		<b>1000L</b>
<b>1500 Lumens</b>		<b>1500L</b>
<b>2000 Lumens</b>		<b>2000L</b>
<b>2500 Lumens</b>		<b>2500L</b>
<b>3000 Lumens</b>		<b>3000L</b>
<small>(Not available with SP distribution or LFP)</small>		
<b>Voltage</b>		
<b>UNV 120V/277V</b>		<b>UNV</b>
<small>(IC housing only. Not available with LFP)</small>		
<b>120V</b>		<b>120</b>
<b>277V</b>		<b>277</b>
<b>Low Voltage</b>		<b>LV</b>
<small>(IC housing: 2000L max. T &amp; TW housings: 1000L only)</small>		
<b>Control System &amp; Dimming Level</b>		
<b>0-10V - 0% Dimming</b>		<b>LZ1</b>
<b>0-10V - 1% Dimming</b>		<b>L11</b>
<b>0-10V - 10% Dimming</b>		<b>LD1</b>
<b>Low Voltage, PoE compatible</b>		<b>LVN</b>
<small>(No driver. Not available with EM. LV Voltage only)</small>		
<b>Forward Phase (120V only)</b>		<b>LFP</b>
<b>Lutron Hi-Lume EcoSystem (LDE1) -</b>		
<b>1% Dimming</b>		<b>LH1</b>
<b>DALI - 0% Dimming</b>		<b>DZ1</b>
<b>DALI - 1% Dimming</b>		<b>DT1</b>
<b>Housing Type</b>		
<b>IC Rated / Airtight</b>		<b>IC</b>
<small>(L11, LD1, LVN, LH1 2000L max. LZ1, D11, DZ1, LFP 1500L max. LC44AT required for Airtight. Not available with EM)</small>		
<b>Thermally Protected, Non-IC</b>		<b>T</b>
<b>Thermally Protected, Non-IC Wood</b>		<b>TW</b>
<small>(Wood ceiling installation kit required)</small>		
<b>Factory Options</b>		
<b>Bar Hangers</b>		<b>BH</b>
<b>Chicago Plenum</b>		<b>CP</b>
<b>Emergency Battery**</b>		<b>EM</b>
<small>(Must order LC44EM trim. Not wet location, airtight or outdoor rated.)</small>		
<b>Outdoor Rated</b>		<b>OD</b>
<small>(LD1 driver only. IC housing 1500L max. See dimming Performance Chart on page 3.)</small>		
<b>TRIM &amp; LED MODULE</b>		
<b>Aperture</b>		
<b>4.5" Square Reflector</b>		<b>LC44</b>
<b>4.5" Square Reflector - Airtight</b>		<b>LC44AT</b>
<small>(IC housing required for Airtight rating)</small>		
<b>4.5" Square Reflector - Emergency**</b>		<b>LC44EM</b>
<small>(Required for "EM" option. DN optic only. Not wet location, airtight or outdoor rated.)</small>		
<b>Trim Type</b>		
<b>Square Die-Cast Trimless</b>		<b>SDT</b>
<b>Lumen Output</b>		
<small>(Trim &amp; Housing output must match)</small>		
<b>1000 Lumens</b>		<b>1000L</b>
<b>1500 Lumens</b>		<b>1500L</b>
<b>2000 Lumens</b>		<b>2000L</b>
<b>2500 Lumens</b>		<b>2500L</b>
<b>3000 Lumens</b>		<b>3000L</b>
<small>(Not available with SP distribution)</small>		
<b>Color Temperature</b>		
<b>2700K, 80+ CRI or 90+ CRI</b>		<b>27K or 927K</b>
<b>3000K, 80+ CRI or 90+ CRI</b>		<b>30K or 930K</b>
<b>3500K, 80+ CRI or 90+ CRI</b>		<b>35K or 935K</b>
<b>4000K, 80+ CRI or 90+ CRI</b>		<b>40K or 940K</b>
<b>Warm Dim: 2700-1800K, 90+ CRI</b>		<b>92718W</b>
<small>(1500 &amp; 2000 lumens only)</small>		
<b>Warm Dim: 3000-1800K, 90+ CRI</b>		<b>93018W</b>
<small>(1500 &amp; 2000 lumens only)</small>		
<b>Optic</b>		
<b>Downlight</b>		<b>DN</b>
<b>Super Short Cone with Solite Lens 75° cut-off</b>		<b>DSS</b>
<small>(VWFL or SWFL only)</small>		
<b>Distribution</b>		
<b>Spot</b>		<b>SP</b>
<b>Narrow Flood</b>		<b>NFL</b>
<b>Flood 1</b>		<b>FL1</b>
<b>Flood 2</b>		<b>FL2</b>
<b>Wide Flood</b>		<b>WFL</b>
<b>Very Wide Flood</b>		<b>VWFL</b>
<b>Super Wide Flood (DSS Optic only)</b>		<b>SWFL</b>
<b>Color</b>		
<small>(See finishes page for The Naturals options)</small>		
<b>Clear Diffuse</b>		<b>CD</b>
<b>Warm Diffuse</b>		<b>WD</b>
<b>Black</b>		<b>BK</b>
<b>White</b>		<b>WH</b>
<b>ACCESSORIES</b>		
<b>Wood Ceiling Installation Kit</b>		<b>LC44-WOOD-KIT</b>
<small>(One kit recommended per 10 downlights)</small>		

**QS 5/10 DAY\*\*** Options in orange qualify for the Quickship program. All options 5-day up to 200 pieces except Emergency Battery and 4.5" Square Reflector - Emergency 10-day only.

## SQUARE DOWNLIGHT PERFORMANCE CHART

Lumen Output	Delivered Lumens	System Watts	LPW
1000L	1032	11	91
1500L	1552	19	81
 1500L	1480	25	58
2000L	2061	26	81
 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%.

## OUTDOOR RATED (OD) DRIVER DIMMING PERFORMANCE CHART

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

## SQUARE 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]	0.75
			3000K, 80+ CRI [30K]	0.93
			3000K, 90+ CRI [930K]	0.81
			3500K, 80+ CRI [35K]	1.00
			3500K, 90+ CRI [935K]	0.81
			4000K, 80+ CRI [40K]	1.00
			4000K, 90+ CRI [940K]	0.87
		1500	0.93	
		2000	1.09	
		1500	0.99	
		2000	1.04	

### Distribution

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

### Color

Trim Type	Optic	Color	Multiplier
Square Die-Cast Trimless [SDT] and Square Die-Cast Overlap [SDO]	Downlight with 50° cut-off [DN]	Clear Diffuse [CD]	1.00
		Warm Diffuse [WD]	0.84
		White [WH]	1.11
		Black [BK]	0.65
	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
ALL	ALL	Woven Linen [WLN]	0.93
		Walnut [WLT]	0.45
		Gray Elm [GRE]	0.72
		Chestnut [CHT]	0.75
		Light Oak [LOK]	0.90

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)

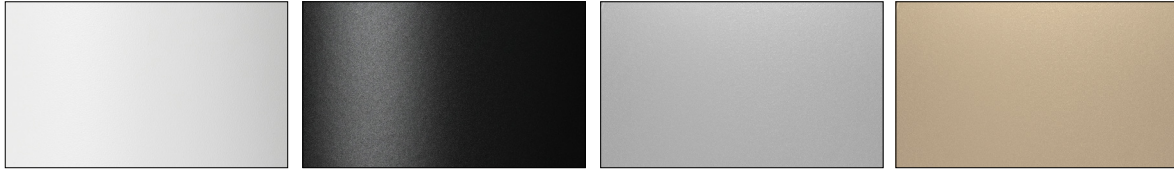
**Example:** LC44-SDT-2000L-935K-DN-NFL-WH

(2000) x (0.81) x (1.04) x (1.11) ≈ 1870 lm (estimated delivered lumens)

# Finishes

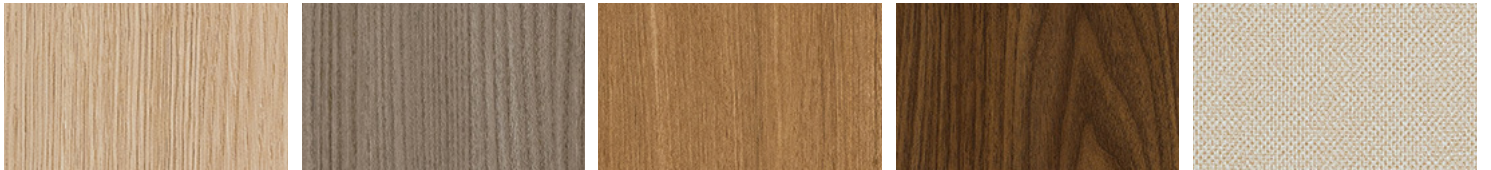


## STANDARD FINISHES



WHITE WH BLACK BK CLEAR DIFFUSE CD WARM DIFFUSE WD

## THE NATURALS (25% SCALE)



LIGHT OAK LOK GRAY ELM GRE CHESTNUT CHT WALNUT WLT WOVEN LINEN WLN