Downlight **LCRS** 

Project Name Qty

Catalog / Part Number

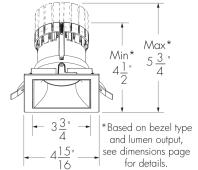


# Max\* Min\* \*Based on bezel type and lumen output, see dimensions page for details.

#### Round trim

(Deep decorative bezel shown with 1 in ceiling springs)

Round trim ceiling cutout: Ø4.5 in



Square trim

(Deep decorative bezel shown with 1 in ceiling springs)

Square trim ceiling cutout: 4.5 in x 4.5 in

### **Photometric Summary**

Based on Narrow Optic (nominal 25°), 4000K, CRI 80+

		Insulated o	eiling	Non-insulated ceiling		
Nominal output [lm]	Delivered output [lm] <sup>[1]</sup>	Power (120V) [W]	Efficacy [lm/W]	Power (120V) [W]	Efficacy [lm/W]	
700	828	6.5	127	8.5	97	
1000	1,070	8	134	10	107	
1300	1,484	11	135	13	114	
2000	2,313	18	129	20	116	

[1] Consult website for latest IES files.

# **Optics**











# Colors and Color Temperatures





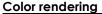












**80**+ 90+ 95+

# **Description**

The Lumencore Small is a high-performance LED downlight for ceiling applications. Available in an array of trims and finishes, outputs (up to 4000lm), optics, color renderings, accessories, and a WET IP54 option, these luminaires are here to outperform. The Lumencore Small possesses a previously unseen lifespan, is quick to install, and can be used with a number of different control options.

# **Physical**

111/01001	
Cutout	Round, Square
Decorative Bezel	Standard, Mid/semi recess, Deep recess, Deep rolled over
Trim	Round, Square trim with round hole, Trimless round, Square, Trimless square
Ceiling Thickness	0.04 in to 1 in ceiling thickness, 1.05 in to 2 in ceiling thickness
Housing Material	Aluminum
TIR Optics Material	Clear polycarbonate
Reflector Material	Aluminum
Weight	3.4 lbs with RM installation type, 4.75 lbs with NC installation type, 10.8 lbs with PC, IC, IC/AT and RMR installation types (weights are approximate based on the heaviest fixture configuration), please consult factory if exact fixture weight is needed
Ceiling space requirements (length x width x height)	Up to 18 in x 18 in x 8 in with RM and NC installation types, Up to 18 in x 15 in x 9 in with PC/IC/ICAT/RMR installation types, dimensions will vary by output and color rendering, refer to Ceiling Requirements table for details
Features	



1220 Marie-Victorin Blvd., Longueuil, QC, J4G 2H9, CA info@lumenpulse.com www.lumenpulse.com

Output (nominal lumens)

**T** United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 www.lumenpulse.com/products/2472

700 lm, 1000 lm, 1300 lm, 2000 lm, 3000 lm, 4000 lm

**F** 514.937.6289

2200K, 2700K, 3000K, 3500K, 4000K, Dim to warm, Dim to warm

Controls	<u> </u>			
ON/OFF	0-10V	PRO 0 -10V	PH	PRO PH
CLUTRON	Caséta Wireless	VIVE by OLUTHON	nLight	PRO Dali
DALI	DALIT8	DMXrdm	lumen <mark>talki</mark>	

# Ceiling cutout shapes





# Decorative bezels (round trim)





semi recess





DB - Deep DR - Deep rolled over

# Decorative bezels (square trim)





semi recess





# Standard finishes for decorative bezel

recess







rolled over

MWH - Matte white MBK - Matte black







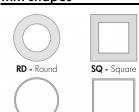
SWT - Satin wheat

DCH - Dark chrome BCH - Bright chrome

CC - Custom color and finish (specify 4-digit RAL K7 color)

SP - Special color (choose from standard Point Source color palette)

# Trim shapes



TLR - Trimless round TLS - Trimless square



Color a	nd Color Temperat
Optics (	(nominal distributio
Decora	tive Bezel Finish
Trim Fin	ish
	tion Type
Options	;
Certific	ations
Warran	ły
Electr	ical and contr

·	plus, Dynamic white, Dynamic warm white, Dynamic warm white plus
Optics (nominal distribution)	Extra narrow spot 5°, Very narrow spot 10°, Narrow spot 15°, Narrow spot/Narrow spot faceted reflector 15°, Narrow 25°, Narrow reflector/Narrow faceted reflector 25°, Medium/Medium faceted reflector 40°, Wide/Wide faceted reflector 60°, Very wide/Very wide faceted reflector 80°
Decorative Bezel Finish	Matte white, Matte black, Nickel satin, Dark chrome, Bright chrome, Satin wheat, Custom color trim (specify 4-digit RAL K7 color), Special color (choose from standard Point Source color palette)
Trim Finish	Matte white, Matte black, Nickel satin, Custom color trim (specify 4-digit RAL K7 color), Special color (choose from standard Point Source color palette)
Installation Type	Remodel non-insulated ceiling, New construction non-insulated ceiling, Plenum non-insulated ceiling, New construction insulated ceiling, New construction insulated ceiling (Chicago Plenum/airtight), Remote recessed insulated ceiling/Plenum
Options	Emergency battery backup with hanger bar (Bodine BSL17C-C2), Emergency battery backup with hanger bar (lota ILB-CP07-A TBTS), IP54 rating suitable for wet locations, For IP55 Shower Rated "Dead Front" applications see Lumencore Small Shower Rated specification sheet
Certifications	UL compliant, UL Wet Location (WET option only), ENERGY STAR®, RoHS
Warranty	5-year limited warranty

# and control

Control

Voltage	120 volts, 277 volts, 347 volts
Wattage range	8.5W to 42W (wattage will vary based on voltage, output, colo temperature, color rendering, optic, control and installation type, refer to Power Consumption table for details)
	Typo, rotor to rottor consumption table for actually

On/Off control, On/Off control 347V, Standard 0-10V dimming to 1% linear curve, Standard 0-10V dimming 1% linear, Standard 0-10V dimming 1% logarithmic, Standard 0-10V dimming 1% linear (347V), Pro 0-10V dimming 0.1% linear, Pro 0-10V dimming 0.1% logarithmic, Phase dimming, Pro Phase Lutron® Hi-lume 1% 2-wire LTEA 120V (temporarily unavailable), Lutron® Hi-lume 1% EcoSystem® LDE1/PEQ1 Soft-on/Fade-to-Black, Lutron® Hi-lume Premier 0.1% EcoSystem® PEQ0 Softon/Fade-to-Black (temporarily unavailable), Lutron® Caséta dimming compatible (Lutron Hi-lume 1% 2-wire LTEA) (temporarily unavailable), Lutron® Vive control enabled (Lutron VIVE FCJS-010), nLight® control enabled (nPS-80-EZ), nLight® emergency control enabled (nPS-80-EZ-ER), nLight® control enabled 347V (nPS-80-EZ-347), Standard DALI dimming 1%linear, Standard DALI dimming 1% logarithmic, Pro DALI dimming 0.1% linear, Pro DALI dimming 0.1% logarithmic, DALI-2 dimming Type 8 (multi channel capability), DMX/RDM (configurable to 1, 2, or 3 channel control via RDM in the field), Lumentalk dimming



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F 514.937.6289

# Standard finishes for trim







MWH - Matte white MBK - Matte black

**CC** - Custom color and finish (Please specify 4-digit RAL K7 color)

SP - Special color (choose from standard Point Source color palette)

# **Options**





Emergency battery backup

IP54 rating suitable for wet locations

# **Ratings**

**IP20** 

**IP54** 



# Certifications









# **Performance**

**Operating Temperature (Ceiling Cavity** 

**Ambient Temperature)** 

Maximum Delivered Output	Up to 2,631 lm (narrow faceted reflector optic 25°, 4000K, CRI 80)
Maximum Delivered Intensity	Up to 45,181 cd (extra narrow spot optic 5°, 4000K, CRI 80)
Efficacy	Up to 98 Im/W (narrow faceted reflector 25°, 4000K, CRI 80, 120V, new construction non-insulated ceiling), Up to 109 Im/W (narrow faceted reflector 25°, 4000K, CRI 80, 120V, new construction insulated ceiling)
Color Consistency	2 SDCM, 3 SDCM (XN optic only)
Color Rendering	CRI 80+, CRI 90+, CRI 95+
Lumen Maintenance	L95 55,000 hrs (Ta 25 °C), L70 225,000 hrs (Ta 25 °C)
Environmental	
Ingress Protection Rating	IP20, IP54 (with CL accessory and WET option specified)
Environment	Damp location rating (interior applications only)

and EBI options)

-4 °F to 104 °F (DA1, DA2, DA3, PDA1, PDA2, SDALI1, SDALI2,

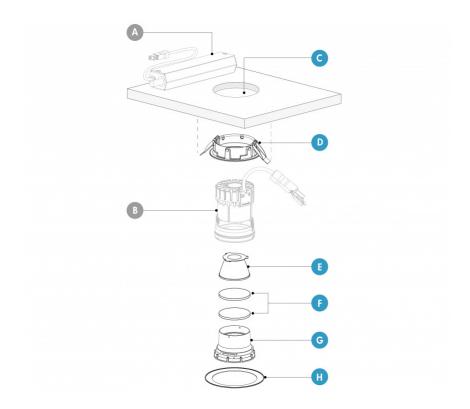
DALI1, DALI2, DALIT8, LT, DMX/RDM and PH control options),

14 °F to 104 °F (NO, NL, NLER, NL347 control options), 32 °F to 104 °F (NO3, VI, PPH2, ES, ESP and CA control options and EBB





# **Exploded overview - part selection**



#### Standard parts

A - MTG kit

B - LUM Core (heatsink, universal fixing ring, LED

MTG: Mounting Kit LUM: Luminaire

#### **Customizable Parts**

C - Ceiling cutout shape (round or square)

**D** - Ceiling mounting ring (round or square, based on ceiling cutout selection)

E - Optic\*

F - Optical accessory (up to two optical accessories can be combined in the fixture, field changeable)

**G** - Decorative bezel\*\*

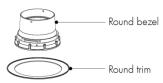
 ${\bf H}$  - Trim (round or square, based on ceiling ring selection)\*\*

\*Field changeable. Consult Interchangeable Optics section of the specification sheet for details. Consult factory for ordering details.

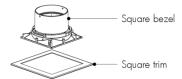
\*\*Field changeable, consult installation instructions for details. Consult factory for ordering details.

# Ceiling cutout shape options

#### RD - Round ceiling cutout



#### SQ - Square ceiling cutout



# **Decorative bezel options**

#### RD - Compatible round decorative bezels









Standard finishes - decorative bezels



MWH - Matte white



MBK - Matte black



NKS - Nickel satin



DCH - Dark chrome



BCH - Bright chrome



SWT - Satin wheat



**CC** - Custom colour\*



# Trim shape options

# **RD** - Compatible round trim shapes



RD - Round



SR - Square trim with round hole



TLR - Trimless round

#### SQ - Compatible square trim shapes



**SQ** - Square





<sup>\*</sup>Custom color: specify 4-digit RAL K7 color.

<sup>\*\*</sup>Special color: choose one of the standard Point Source colors from the Cylinders product brochure or specification sheets. Contact manufacturer for additional information.

LCRS

# Standard finishes - trims











\*Custom color: specify 4-digit RAL K7 color.

\*\*Special color: choose one of the standard Point Source colors from the Cylinders product brochure or specification sheets. Contact manufacturer for additional information.

L30 (CR90, CR95), L40 (CR80)

# **Dimensions**

#### SB - Standard

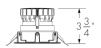
L07, L10, L13, L20 (CR80/90/95) L30 (CR80)



Front view

#### MB - Mid/semi recess

L07, L10, L13, L20 (CR80/90/95) L30 (CR80)

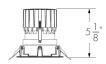


Front view

# Front view

L30 (CR90, CR95), L40 (CR80)

L30 (CR90, CR95), L40 (CR80)



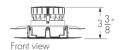
Front view

# SB - Standard (trimless version)

L07, L10, L13, L20 (CR80/90/95) L30 (CR80)

> Aperture  $\emptyset 3\frac{3}{4}$

Ø7



TLR - Trimless round



Bottom view

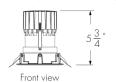
# DB - deep recess/ DR - deep rolled over

L07, L10, L13, L20 (CR80/90/95) L30 (CR80)

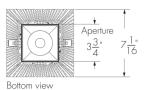


Front view

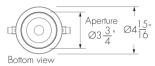
# L30 (CR90, CR95), L40 (CR80)



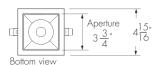
#### TLS - Trimless square



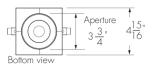
RD - Round shape, round trim



# SQ - Square shape, square trim



# SR - Square shape, round hole



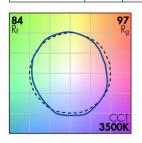
Round ceiling cutout: Ø4.5 in Square ceiling cutout: 4.5 in x 4.5 in

LCRS

# TM-30

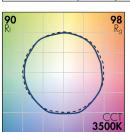
#### CRI 80+

	CRI	80 <b>+</b>						
CCT CIE TM-30								
25001/	R <sub>a</sub>	84	84	$\mathbf{R}_{f}$				
3500K	R <sub>9</sub>	15	97	Rg				



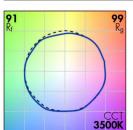
CRI 90+

CRI 90 +								
CCT CIE TM-30								
35001/	R <sub>a</sub>	92	90	$R_{\rm f}$				
3500K	R <sub>9</sub>	59	98	$R_g$				



CRI 95+

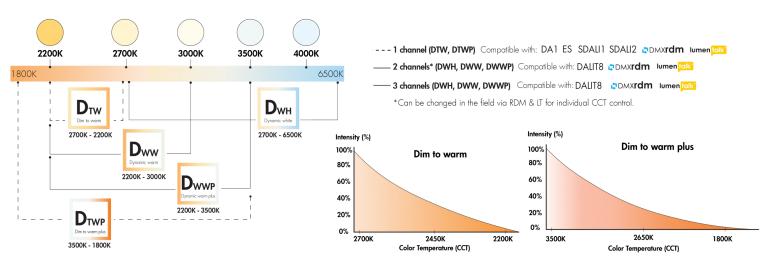
CRI 95 +									
ССТ	CCT CIE TM-30								
25001/	R <sub>a</sub>	97	91	$\mathbf{R}_{f}$					
3500K	R <sub>9</sub>	97	99	$R_g$					



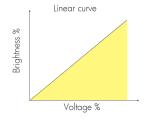
Refer to TM-30 Reference Guide for details.

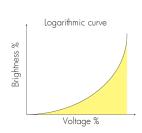
# Color and color temperature

#### Color temperature ranges



# **Control**





Dimming	Control options with linear dimming curve	Control options with logarithmic dimming curve
Dimming down to 0.1%	PDA1 ESP* DALI1	PDA2 DALI2 DALIT8 CDMXrdm**
Dimming down to 1%	DA1 DA3 DAMC ES SDALI1	DA2 SDALI2 DALIT8 DMXrdm** lumen lak

# **Optics**

TIR optic - total internal reflection



Semi-specular reflector

Applicable to NR (25°), M (40°), W (60°) and VW (80°) distributions.

# Faceted reflector



Applicable to NSFR (15°), NFR (25°), MFR (40°), WFR (60°) and VWFR (80°) distributions.

# **Beam widening lenses**

and N (25°) distributions.

		Optic installed in fixture												
	<b>XN</b> 5°	<b>VN</b> 10°	<b>NS</b> 15°	<b>NSR</b> 15°	NSFR 15°	<b>N</b> 25°	<b>NR</b> 25°	NFR 25°	<b>M</b> 40°	MFR 40°	<b>W</b> 60°	WFR 60°	<b>VW</b> 80°	VWFR 80°
BW1	11°	13°	17°	17°	17°	30°	30°	30°	41°	41°	61°	61°	81°	81°
BW2	21°	22°	24°	24°	24°	34°	34°	34°	45°	45°	63°	63°	82°	82°
BW3	30°	31°	33°	33°	33°	41°	41°	41°	50°	50°	67°	67°	85°	85°

The above beam angles are nominal beam angles.

Applicable to XN (5°), VN (10°), NS (15°), NSR (15°)

Variations in beam angles can be seen due to different LES sizes. For exact beam calculations please consult factory.

Beam widening lenses should not be used with other accessories with the nominal results above.

# Interchangeable optics

					Optic instal	led in fixture			
	<b>XN</b> 5°	<b>VN</b> 10°	<b>NS</b> 15°	<b>NSR</b> 15°	<b>N</b> 25°	<b>NR</b> 25°	<b>M</b> 40°	<b>W</b> 60°	<b>VW</b> 80°
Interchangeable optics	N/A	N/A	NSR NSFR	NS NSFR	NR NFR M MFR W WFR VW VWFR	N NFR M MFR W WFR VW	N NR NFR MFR W WFR VW	N NR NFR M MFR WFR VW	N NR NFR M MFR W WFR
				NSFR 15°		NFR 25°	<b>MFR</b> 40°	WFR 60°	VWFR 80°
				NS NSR		N NR M MFR W WFR VW	N NR NFR M W WFR W	N NR NFR M MFR W WW	N NR NFR M MFR W WFR

The optic options listed above are field changeable. Consult factory and installation instructions for details.



<sup>\*</sup> Consult the Lumencore Small Wallwash specification sheet for details.

# **Power consumption**

#### Static white color temperatures

				Powe	er consumptio	n [W]				
	<b>XN</b> (5°) - <b>VN</b> (10°)			NS (15°) - NSR (15°) - NSFR (15°)		' '	NR (25°) - NFR (2 °) - WFR (60°) - V	, , ,	MFR (40°) - 'FR (80°)	
	120 V	277 V	12	20 V	27	77 V	12	0 V	27	77 V
Output [lm]	CR80	/CR90	CR80	CR90/CR95	CR80	CR90/CR95	CR80	CR90/CR95	CR80	CR90/CR95
700	13	15	9.5	10	10.5	12	8.5	9	9.5	11
1000	17*	18*	13	14.5	14	16	10	13	12	15
1300	23*	24*	15	20	16	21	13	15	15	16
2000	N/A	N/A	23**	30**	24**	30**	20	23	21	24
3000	N/A	N/A	N/A	N/A	N/A	N/A	30***	42***	30***	42***
4000	N/A	N/A	N/A	N/A	N/A	N/A	42***	N/A	42***	N/A

<sup>\*</sup>Not applicable to XN optic.

#### Dynamic colors

Power consumption [W]					
NR (25°) - NFR (25°) - M (40°) - MFR (40°) - W (60°) - WFR (60°) - VW (80°) - VWFR (80°					
		120 V		277 V	
Output [lm]	DTW - DTWP	DWW - DWH - DWWP	DTW - DTWP	DWW - DWH - DWWP	
1000	14	N/A	15	N/A	
1300	17	26	18	26	
2000	27	N/A	28	N/A	

- Power consumption values are for non-insulated ceiling (RM and NC) and remote recessed insulated ceiling/plenum (RMR) installation types. For plenum ceiling (PC), and new construction insulated ceiling (IC and IC/AT) installation types, remove 2 watts per fixture.
- Add 3 watts per fixture when specifying LT control option.
- Add 2 watts per fixture when specifying DMX/RDM control option.
- Add 1.5 watts per fixture when specifying PPH2, CA, NL, NLER or NL347 control option.
- Add 1 watt per fixture when specifying VI control option.
- Add 3 watts per fixture when specifying 347V.

<sup>\*\*</sup>Not applicable to NSR and NSFR optics.

<sup>\*\*\*</sup>Not applicable to N optic.

LCRS

Height

Q

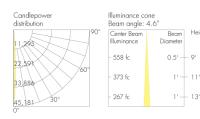
3.5' - 11'

4' - 13'

# **Photometric information**

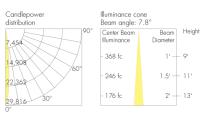
#### XN - Extra Narrow Spot (nominal 5°), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>			
	CR80	CR90		
700	738*	664		



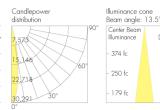
#### VN - Very Narrow Spot (nominal 10°), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>		
	CR80	CR90	
700	644	580	
1000	920	828	
1300	1,196*	1,076	

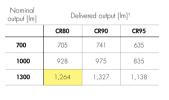


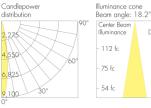
# NS - Narrow Spot (nominal 15°), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>				
	CR80	CR90	CR95		
700	736	773	662		
1000	968	1,017	871		
1300	1,318	1,384	1,187		
2000	2,060*	N/A	N/A		



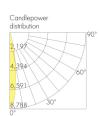
NSR - Narrow spot reflector (nominal  $15^{\circ}$ ), 4000K





# NSFR - Narrow Spot faceted reflector (nominal $15^{\circ}$ ), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>				
	CR80	CR90	CR95		
700	696	731	626		
1000	916	961	824		
1300	1,247	1,309	1,122		



Center Beam Illuminance	Beam Heig Diameter
– 109 fc	3' — 9'
- 73 fc	3.5' — 11'
- 52 fc	4' — 13'

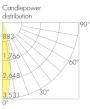
Height

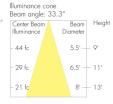
2.5

3' - 13

# N - Narrow (nominal 25°), 4000K

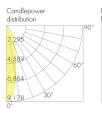
Nominal utput [lm]	Delivered output [lm] <sup>†</sup>			
	CR80	CR90	CR95	
700	630	661	567	
1000	813	854	732	
1300	1,128	1,185	1,015	
2000	1,758	1,846	1,582	





# NR - Narrow reflector (nominal 25°), 4000K

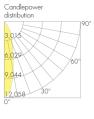
Nominal output [lm]	Delivered output [lm] <sup>†</sup>				
	CR80	CR90	CR95		
700	670	703	603		
1000	865	909	779		
1300	1,200	1,260	1,080		
2000	1,870	1,964	1,683		
3000	2,791	2,931	2,512		
4000	3,673	N/A	N/A		

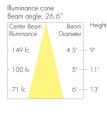


Illuminance cone Beam angle: 27.	.5°	
Center Beam Illuminance	Beam Diameter	Height
- 114 fc	4.5'	- 91
- 76 fc	5.5'	- 11'
– 54 fc	6.5'	- 13'

# NFR - Narrow faceted reflector (nominal 25°), 4000K

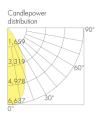
Nominal output [lm]	Delivered output [lm] <sup>†</sup>				
	CR80	CR90	CR95		
700	702	737	632		
1000	906	952	816		
1300	1,257	1,320	1,131		
2000	1,959	2,057	1,763		
3000	2,924	3,070	2,631		
4000	3,847*	N/A	N/A		

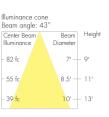




# M - Medium reflector (nominal 40°), 4000K

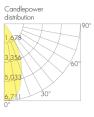
Nominal output [lm]	Delivered output [lm] $^\dagger$							
	CR80	CR90	CR95					
700	658	691	592					
1000	850	892	765					
1300	1,179	1,238	1,061					
2000	1,837	1,929	1,653					
3000	2,741	2,878	2,467					
4000	3,607*	N/A	N/A					

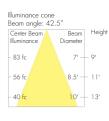




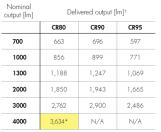
# MFR - Medium faceted reflector (nominal 40°), 4000K

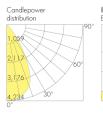
Nominal output [lm]	Delivered output [lm] <sup>†</sup>						
	CR80	CR90	CR95				
700	691	725	622				
1000	892	937	803				
1300	1,238	1,300	1,114				
2000	1,929	2,025	1,736 2,591				
3000	2,879	3,023					
4000	3,788	N/A	N/A				

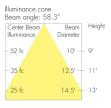




# W - Wide reflector (nominal 60°), 4000K

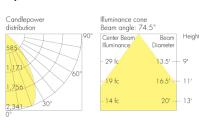






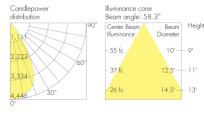
#### VW - Very Wide reflector (nominal 80°), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>							
	CR80	CR90	CR95					
700	659	692	593					
1000	851	894	766					
1300	1,181	1,240	1,063					
2000	1,840	1,932	1,656					
3000	2,746	2,883	2,471					
4000	3,613*	N/A	N/A					



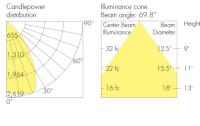
# WFR - Wide faceted reflector (nominal 60°), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>					
	CR80	CR90	CR95			
700	696	731	626			
1000	899	944	809			
1300	1,247	1,309	1,122			
2000	1,943	2,040	1,749			
3000	2,900	3,045	2,610			
4000	3,816	N/A	N/A			



#### VWFR - Very Wide faceted reflector (nominal 80°), 4000K

Nominal output [lm]	Delivered output [lm] <sup>†</sup>						
	CR80	CR90	CR95				
700	692	727	623				
1000	894	939	804				
1300	1,240	1,302	1,116				
2000	1,932	2,029	1,739				
3000	2,883	3,028	2,595				
4000	3,794	N/A	N/A				



Based on Standard Bezel and Round or Square trim configuration.

† Consult website for IES files. Delivered output: +/- 10% tolerance.

Consult Power consumption section for more wattage information.

\*Photometric performance is measured in compliance with IESNA LM-79-08.

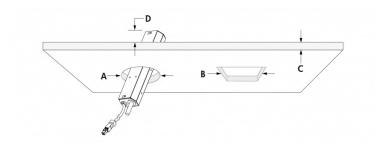
# Ceiling Requirements

# Ceiling Cavity Space Requirements (length x width x height)

Installation type	Bezel Options	Output/Color Rendering								
		L07 L10 L13 L2			.20 L:		.30	L40		
			CR80/90/95		CR80	CR90/CR95	CR80	CR90/95	CR80	
	SB or MB bezel options			4" (with trim) 7" (trimless)		12"x 12"x 6" (with trim)				
RM	<b>DB</b> or <b>DR</b> bezel options			6" (with trim) 7" (trimless)		┥	7" (trimless)	18″x 18″x 8″		
NC -	SB or MB bezel options			4" (with trim) 7" (trimless)		14"x 11"x 6" (with trim) 14"x 11"x 7" (trimless)		18"x 18"x 8"		
	DB or DR bezel options			6" (with trim) 7" (trimless)						
PC/IC/ICAT/RMR	ALL	14.5″x	10″x 7″		18"x 15"x 9"		N/A	N	/A	

See Installation Type section for dimensional view of keep out and/or MTG mounting kit option. Above dimensions include any keep out requirements for proper airflow and thermal cooling

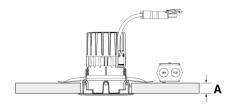
# Ceiling cutout



- A Ceiling cutout: Ø4.5 in
- B Ceiling cutout: 4.5 in x 4.5 in
- C Maximum ceiling thickness: 2 in
- **D** Minimum ceiling height: refer to Ceiling Cavity Space Requirements table

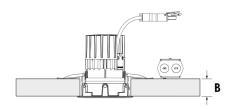
# Ceiling thickness options

# Ceiling thickness 1



A - Ceiling thickness range: 0.04 in to 1 in

# Ceiling thickness 2

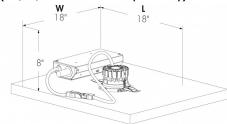


B - Ceiling thickness range: 1.05 in to 2 in

Ceiling springs are field changeable, consult installation instructions and factory for details.

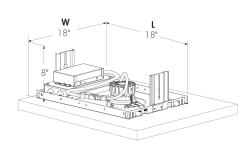
# **Installation types**

# RM - Remodel non-insulated ceiling (NO, PH, ES and ESP control options only)



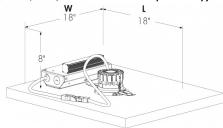
Ceiling cavity space requirements for L30 CR90/95 and L40 CR80 shown.

#### NC - New construction non-insulated ceiling



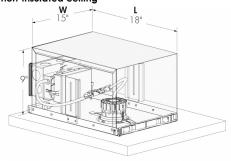
Ceiling cavity space requirements for L30 CR90/95 and L40 CR80 shown.

# RM - Remodel non-insulated ceiling (DALIT8, DMX/RDM and LT control options only)



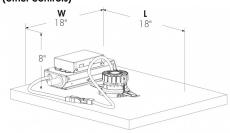
Ceiling cavity space requirements for L30 CR90/95 and L40 CR80 shown.

# IC, PC, IC/AT - New construction insulated and non-insulated ceiling



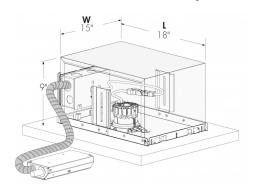
Ceiling cavity space requirements for L13 CR80/90/95 and L20 CR80 shown.

# RM - Remodel non-insulated ceiling (other controls)



Ceiling cavity space requirements for L30 CR90/95 and L40 CR80 shown.

#### RMR - Remote recessed insulated ceiling/ Plenum



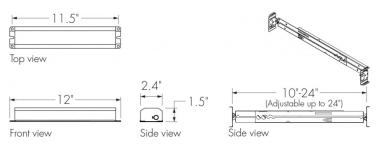
Luminaire ceiling cavity space requirements for L13 CR80/90/95 and L20 CR80/90/95 shown. Refer to remote driver box dimensions in installation instructions for space required for driver.

Remote distance is a maximum of 75 ft, consult Lumenpulse Application Engineering Team for longer remote distances.

Fixture shown for reference only. Refer to Ceiling Requirements section and installation instructions for dimensions and ceiling cutout requirements.

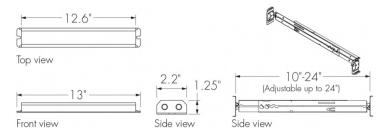
#### **Options**

# EBB - Emergency battery backup with hanger bar (Bodine BSL17C-C2)



Hardware to mount the battery backup to the hanger bar is included. A test button is included. The unit comes pre-wired with 2 ft flexible conduit in and out. Refer to installation instructions for details.

# EBI - Emergency battery backup with hanger bar (lota ILB-CP07-A TBTS)



Hardware to mount the battery backup to the hanger bar is included. A test button is included. The unit comes pre-wired with 2 ft flexible conduit in and out. Refer to installation instructions for details.

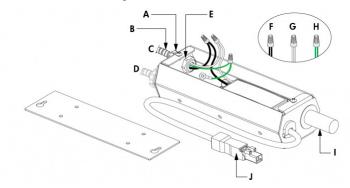
1220 Marie-Victorin Blvd., Longueuil, QC, J4G 2H9, CA info@lumenpulse.com www.lumenpulse.com

T United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 www.lumenpuke.com/products/2472

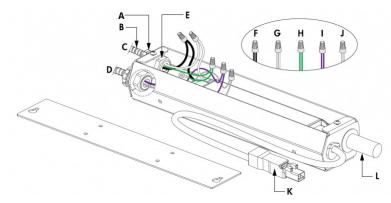
**F** 514.937.6289

# Wiring details RM: remodel non-insulated ceiling

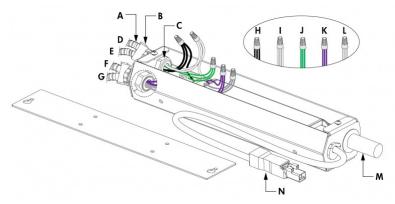
# NO and PH controls - wiring detail



Other controls - wiring detail



Other controls - daisy chain layout wiring detail

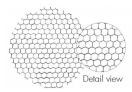


Remodel driver box varies by control option. Refer to installation instructions for additional wiring details.

- A Conduit fitting (by others)
- **B** Conduit (by others)
- C Power Input
- D Optional Output
- E Locknut (by others)
- F Line
- G Neutral
- H Ground
- I Thermal protector
- J Output to luminaire
- A Conduit fitting (by others)
- **B** Conduit (by others)
- C Power Input
- **D** Data Input from Control System
- E Locknut (by others)
- F Line
- G Neutral
- H Ground
- I Data +
- J Data -
- **K** Output to luminaire
- L Thermal protector
- A Conduit (by others)
- **B** Duplex connector (by others)
- C Locknut (by others)
- **D** Power Output to next luminaire
- E Power input
- F Data Output to next luminaire
- G Data Input from Control System
- H Line
- I Neutral
- J Ground
- K Data +
- L Data -
- M Thermal protector
- N Output to luminaire

# **Optical Accessories**

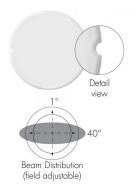
**HL** - Honeycomb louver



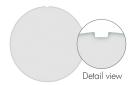
SL - Softening glass lens



LSN - Linear spread lens narrow (1° x 40°)



BW1 - Beam widening lens (+10°)



Refer to Beam Widening Lens table for beam distribution based on optic installed in the fixture.

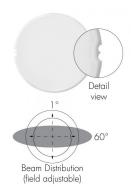
XLVR - Concentric ring louver



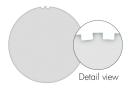
PD - Prismatic diffuser



LSW - Linear spread lens wide (1° x 60°)



BW2 - Beam widening lens (+20°)

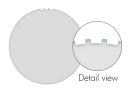


Refer to Beam Widening Lens table for beam distribution based on optic installed in the fixture.

CL - Clear glass lens



BW3 - Beam widening lens (+30°)

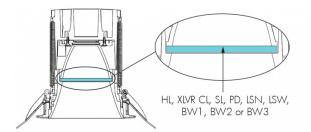


Refer to Beam Widening Lens table for beam distribution based on optic installed in the fixture.

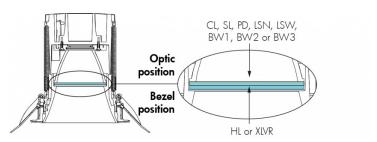
LCRS

# Optical accessories - installation options (field changeable)

#### One optical accessory installed



# Two optical accessories installed



Accessories specified in the fixture code will ship from the factory in the order shown above.

# How to order

Housing (1)	Quickship	Certification	Туре	Voltage	Cutout	Output (nominal lumens)	Color and Color Temperature	Color Rendering	Optics (nominal distribution)
LCRS Lumencore Small - 4 in aperture	QS Quickship (2)	A UL/CUL ESR UL/CUL & ENERGY STAR® (3)	FD Downlight	120 120 volts 277 277 volts 347 347 volts (4) (5) (6) (7)	R Round S Square	L07 700 Im (8) L10 1000 Im L13 1300 Im L20 2000 Im L30 3000 Im (9) (10) L40 4000 Im (8) (9) (10)	22K 2200K (7) (11) (12) 27K 2700K (12) 30K 300K (12) 35K 3500K (12) 40K 4000K (12)  DTW Dim to warm (2700K to 2200K) (7) (13) (14) (15)  DTWP Dim to warm plus (3500K to 1800K) (7) (13) (14) (15)  DWH Dynamic White (2700K to 6500K) (7) (14) (16) (17)  DWW Dynamic warm white (2200K to 3500K) (19) (14) (16) (17)  DWW Dynamic warm white (2200K to 3500K) (19) (14) (16) (17)  DWWP Dynamic warm white (2200K to 3500K) (19) (14) (16) (17)  DWWP Dynamic warm white (1200K to 3500K) (19) (14) (16) (17) (16) (17) (17) (14) (16) (17)	80 CRI 80+ 90 CRI 90+ 95 CRI 95+ (7)	XN 5 TIR (7) (18)  VN 10* TIR (7) (19)  NS 15* TIR (20)  NSR 15* Reflector (21) (22)  NSFR 15* Faceted reflector (21) (22)  N 25* TIR (23)  NR 25* Reflector  NFR 25* Faceted reflector  W 40* Reflector  W 60* Reflector  W 80* Reflector  VWFR 80* Faceted reflector  VWFR 80* Faceted reflector

### Notes:

- 1. Refer to website product configurator for all exceptions
- 2. Refer to website for Quickship configurations.
- 3. Refer to website for ENERGY STAR certified product configurations.
- 4. Not available for 700 lumens. Not available for 1000 lumens when combined with 80 color rendering option.  $\textbf{5.}\, \text{Not available for DTW, DTWP, DWH, DWW or DWWP color options}.$
- 6. Not available for XN and VN optics.
- 7. Not available for ENERGY STAR certification.
- 8. For ENERGY STAR certification, not available with RM or NC installation types when combined with 90 color rendering option.
  9. Available for NR, NFR, M, MFR, W, WFR, VW and VWFR optics only.
- Not available with PC, IC, IC/AT or RMR installation types.
   Available for CRI 80 only.
- 12. Compatible with all control options except for DALIT8.
- 13. Available for 1000, 1300 and 2000 lumens when combined with 90 color rendering option and NR, NFR, M, MFR, W, WFR, VW or VWFR optics only.
- 14. NFR, MFR, WFR and VWFR faceted reflector optics are recommended for optimal performance 15. Compatible with DA1, ES, SDALI1, SDALI2, DMX/RDM and LT control options only.
- 16. Available for 1300 lumens when combined with 80 color rendering option and NR, NFR, M, MFR, W, WFR, VW or VWFR optics
  - 17. Compatible with LT, DMX/RDM and DALIT8 control options only.
- 18. Available for 700 lumens when combined with 80 or 90 color rendering options and 27K, 30K, 35K or 40K color temperature
- 19. Available up to 1300 lumens when combined with 80 or 90 color rendering options and 27K, 30K, 35K or 40K color temperature options only.
- 20. Available up to 2000 lumens when combined with 80 color rendering option. Available up to 1300 lumens when combined with 90 or 95 color rendering options.
- 21. Available up to 1300 lumens when combined with 80, 90 or 95 color rendering options.
- 22. Available with SB bezel only.

# How to order

Control (24)	Decorative Bezel	Decorative Bezel Finish	Trim <sup>(52)</sup>	Trim Finish	Installation Type	Ceiling Thickness <sup>(60)</sup>	Options	Accessories (68)
NO On/Off control (7) (23) NO3 On/Off control 347V (4) (6) (7)  DAMC Standard 0-10V dimming to 1% linear curve (5) (7) (23) (24) (27) DA1 Standard 0-10V dimming 1% linear (25) (28)  DA2 Standard 0-10V dimming 1% linear (347V) (4) (6) (7) PDA1 Pro 0-10V dimming 1% linear (347V) (4) (6) (7) PPA1 Pro 0-10V dimming 0.1% linear (25) (28) PPA2 Pro 0-10V dimming 0.1% linear (25) (28) PPA2 Pro 0-10V dimming 0.1% logarithmic (25) (28) PPA2 Pro 0-10V dimming 0.1% logarithmic (25) (28) PPA2 Pro Phase Lutron® Hi-lume 1% 2-wire LTEA 120V (temporarily unavailable) (6) (29) (30) (31) ES ES ESP Lutron® Hi-lume 1% EcoSystem® LDE1/PEQ1 Soft-on/Fade-to-Black (7) (25) (32) (32) (32) (32) (32) (32) (32) (32	SB Standard MB Mid/semi recess DB Deep recess DR Deep rolled over	MWH Matte white  MBK Matte black (47)  NKS Nickel satin (48)  DCH Dark chrome (47)  SCH South South South (49)  SP Special Point Source color (49) (51)	RD Round (53)  SR Square trim with round hole (53)  TLR Trimless round (53)  SQ Square (54)  TLS Trimless square (54)	MWH Matte white  MBK Matte black  NKS Nickel satin  CC Custom color frim (50)  SP Special Point Source color (51)	RM Remodel non-insulated ceiling (55)  NC New construction non-insulated ceiling (55)  PC Plenum non-insulated ceiling (34) (56) (57) (58)  IC New construction insulated ceiling (34) (55) (57) (58)  IC/AT New construction insulated ceiling (Chicago Plenum/airtight) (34) (56) (57) (58)  RMR Remote recessed insulated ceiling/Plenum (34) (56) (57) (58) (59)	1 0.04 in to 1 in ceiling thickness 2 1.05 in to 2 in ceiling thickness	WET IPS4 rating suitable for wet locations (64) (62) (63) (64) EBB Emergency backup with hanger bar (Bodine BSL) 7C-C2) (66) (67) EBI Emergency backup with hanger bar (Bodine BSL) 7C-C3 (66) (67) EBI (BODINE EMERGENCY (BODINE EM	NA No accessory  HL Honeycomb louver (?)  XLVR Concentric ring louver (?) (?/o) (?/)  SL Softening glass lens (*4)  PD Prismatic diffuser (*4) (?2)  LISN Linear spread lens narrow (1° x 4(0°) (?/) (?/3) (*7)  LISW Linear spread lens wide (1° x 6(0°) (?/) (?/3)  BW1 Beam widening lens (+10°) (?/) (?/4) (*5) BW2 Beam widening lens (+20°) (?/) (?/4)  BW3 Beam widening lens (+30°) (?/) (?/4)  BW3 Beam widening lens (+30°) (?/) (?/4)

#### Notes:

- 4. Not available for 700 lumens. Not available for 1000 lumens when combined with 80 color rendering option.
- 5. Not available for DTW, DTWP, DWH, DWW or DWWP color options.
- 6. Not available for XN and VN optics. 7. Not available for ENERGY STAR certification.
- 24. Control options vary according to color temperature, color rendering, optics and installation type combination. Refer to website product configurator for details. 25. Not available with 347V.
- 26. Not available for XN and VN optics.
- 27. Available up to 3000 lumens when combined with 80 color rendering option. Available up to 2000 lumens when combined
- with 90 or 95 color rendering options.

  28 Driver cuts off nower to the first is when the control signal drops below 0.5V

- 32. One EcoSystem® address per fixture. Available for static white color temperature options and DTW, DTWP color options only.
- 33. Available for 3000 lumens and 4000 lumens only.
- 34. Consult factory for availability.
- 35. One EcoSystem® address per fixture. Lutron® EcoSystem® Enabled dimming not available for 1300 lumens combined with VN optic. Available for static white color temperatures only. **36.** Not available for 3000 and 4000 lumens.
- 37. Consult factory for CA control option.38. Requires Caseta Wireless Dimmer PRO Wall Dimmer.

- 39. Available for RM, NC And RMR installation types only.

  40. When used with PAID installation type the installation type sonly.



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**LCRS** 

Downlight

- 20. Driver cors on power to the fixture when the control signal grops below 0.5 v
- 29. Available for 120V voltage option only.
- 30. Consult factory for PPH2 control option.
- 31. Not available for 700 lumens.
- 43. Configurable between 8 or 16-bit dimming control via RDM. DMX/RDM requires LumenID, LumenID software and onsite commissioning.
- 44. A Control Box (CBX-DS or CBX-ST) and lumenID (LID) must be specified.
- 45. A Lumentranslator 2 (LTL2) and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator 2 and Lumentalk pages and specification sheets for details.
- 46.1% minimum dimming value.
  47. For ENERGY STAR certification, not available with MB, DB and DR decorative bezels when combined with RM or NC
- installation types or PC, IC and IC/AT installation types when combined with 90 color rendering option.

  48. For ENERGY STAR certification, not available with MB, DB and DR decorative bezels when combined with RM or NC installation types.

  49. For ENERGY STAR certification, not available with MB, DB and DR decorative bezels.
- 50. Longer lead times can be expected for custom RAL color finishes.
- 51. Refer to Cylinder specification sheet and brochure for color options
- 52. Not applicable to DR bezel option.
- 53. Cannot be combined with square ceiling cutout.
- 54. Cannot be combined with round ceiling cutout.
- 55. Available for 700 lumens when combined with XN optic and up to 1300 lumens when combined with VN. Available up to 2000 lumens when combined with NS, NSR, NSFR and N optics. Available up to 4000 lumens when combined with NR and NFR, M, MFR, W, WFR, VW and VWFR optics. Refer to optic option notes for color rendering limitations.
- 56. Available for 700 lumens when combined with XN optic. Available up to 1300 lumens when combined with VN, NS, NSR and NSFR optics. Available up to 2000 lumens when combined with N, NR, NFR, M, MFR, W, WFR, VW and VWFR optics. Refer to optic option notes for color rendering limitations.
- 57. Not available for 2000 lumens when combined with DTW and DTWP color options.
- 58. Not available for DWH, DWW or DWWP color options.

- tu. When used with KMK installation type, the installer is responsible for verifying the wireless distance limitations of the main controller to the remote driver installation
- 41. Available for DWH, DWW and DWWP color options only. DALI-2 Type 8 controller required.
- 42. Not available for PC, IC or IC/AT installation types.
- 59. Remote distance is a maximum of 75 ft. For longer remote distances, please contact Lumenpulse Application Engineering Team for application validation.
- 60. Ceiling springs are field changeable, consult factory and installation instructions for details.
- 61. IP54 rating only if installation is interior covered recessed ceiling-mounted or exterior canopy-mounted.
- **62.** DR bezel is recommended for outdoor canopy installations.
- 63. A CL. SL or PD must be specified to maintain an IP54 rating. A second accessory may be specified.
- 64. For ENERGY STAR certification, not available with RM or NC installation types when combined with 90 color rendering option combined and 2000 lumens
- 65. Available for RM and NC installation types only.
- 66. Emergency battery backup options require ceiling access for test button use. The battery will operate for 90 minutes minimum and maintain a minimum of 1 fc from a 7 ft 2 in height as per UL 924. For indoor use only in dry or damp locations.
- 67. Emergency battery backup options are field installed and not presided by Lumenpulse. Refer to related installation instructions for details.
- 69. Not available for DTW and DTWP color options.
- 70. Available for XN, VN and NS optics only.
- 71. Can be combined with PD accessory only.
- 72. Recommended to be combined with HL or XLVR accessory only.
- 73. Recommended for XN, VN, NS, NSR, NSFR, N, NR and NFR oplics when combined with 2200K, 2700K, 3000K, 3500K, 4000K color temperature options. Nominal 10° x 40° distribution when used with the NS oplic. Available for NFR oplic when combined with DTW, DTWP, DWH, DWW or DWWP color options only.
- 74. For optimal performance, it is not recommended to mix with other accessories
- 75. Recommended for XN, VN, NS, NSR, NSFR, N, NR and NFR optics when combined with 2200K, 2700K, 3000K, 3500K, 4000K color temperature options. Nominal 10° x 60° distribution when used with the NS optic. Available for NFR optic when combined with DTW, DTWP, DWH, DWW or DWWP color options only.