

CLUSTER

SURFACE PARABOLIC



Cluster is the precise, and scalable family of downlights, wall washers, and adjustables, available for recessed, pendant, and surface mounting.

Based on a fundamental 1.2" square cell, Cluster delivers lighting that is optically sophisticated and aesthetically refined.

Cluster surface parabolic is available in 3, 5, and 2x2 cell configurations, all with precision optics that eliminate multiple shadows, as well as subtle louver treatments.

Light Source

Static White

SOLA

DUO



Mounting Options



Flat



Conduit



Direct mount

Sizes



3x1



5x1



2x2



Declare.



Cluster Family (Refer to other spec sheets)

Recessed, Wood Slat



Downlight



Parabolic



Wall Wash

Recessed Adjustable



Downlight



Parabolic



Wall Wash

Surface



Downlight



Parabolic



Wall Wash

Pendant



Downlight



Parabolic



Wall Wash

Combo



Recessed
Pendant
Surface

Acoustix



Blank
Downlight
Parabolic

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Project: _____

Type: _____

Order Guide

LUMINAIRE ID	CUBOID HEIGHT ¹	CUBOID FINISH	LOUVER FINISH	REVEAL FINISH	LIGHT SOURCE	OPTIC	
						PAR	
CLU03SPAR - Cluster 3x1 Surface Parabolic CLU05SPAR - Cluster 5x1 Surface Parabolic CLU22SPAR - Cluster 2x2 Surface Parabolic	3IN - 3" 8IN - 8" 12IN - 12" ¹ Conduit feed canopy option will add 3" to total height.	FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL#	MWPL - Matte White Parabolic Louver MBPL - Matte Black Parabolic Louver MPL - Matte Parabolic Louver SPL - Specular Parabolic Louver	FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL#	SW - Static white SOLA ² - Dim-to-warm single channel control 35K to 22K DUO ² - Tunable white 2-channel control 65K to 27K ² Not available with integral driver option.	PAR - Parabolic	
CRI	COLOR TEMP.	DRIVER	VOLTAGE	LUMEN PACKAGE ⁵	DIMMING	CANOPY TYPE ⁷	CANOPY FINISH Specify NA for DMRM
90CRI							
90CRI - 90 CRI	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K	INTEGRAL ^{3,4} ³ Not available with 3" cuboid height. ⁴ Not available with 2x2. REMOTE	120V - 120V 277V - 277V UNV - 120V-277V	3x1 578LM - 578 lm 5x1 923LM - 923 lm ⁵ Lumen packages shown at 3500K, with SPL. For other, see lumen output multipliers on page 4.	D1 - 1% 0-10V ELV ⁶ - ELV 120V TRI ⁶ - TRIAC 120V ⁶ Available with 120V only.	FLS - Flat square canopy, 4" octagonal junction box CDRE - Conduit feed, rectangular canopy DMRM ⁸ - Direct mount, remodel ⁷ See page 3 for details. ⁸ Single wiring entry only. No daisy chain connections allowed. May be installed as new construction but without a j-box.	FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL# NA - Not applicable
DO NOT SPECIFY FOR REMOTE. SEE "REMOTE DRIVER BOX" SECTION BELOW.							

REMOTE DRIVER BOX

Ordered separately. Specify each required remote driver box on a separate line.

REMOTE DRIVER ⁹	LUMINAIRE QTY. ¹⁰	LUMINAIRE ID	VOLTAGE
RDB# - Remote driver box ⁹ Specify an RDB number (#) for each required remote driver box.	#X - Number of luminaires ¹⁰ Specify number (#) of luminaires per remote driver. See page 4 for minimum and maximum per driver.	CLU03SPAR - Cluster 3x1 Surface Parabolic CLU05SPAR - Cluster 5x1 Surface Parabolic CLU22SPAR - Cluster 2x2 Surface Parabolic	120V - 120V 277V - 277V UNV - 120V-277V

LUMEN PACKAGE ¹¹	DIMMING ¹²

	Low	Medium	High			
3x1	200LM - 200 lm	365LM - 365 lm	584LM - 584 lm	RD1 - 1% 0-10V RELV ^{13,14} - ELV 120V RTRI ^{13,14} - TRIAC 120V RDA ¹⁵ - DALI RLDE1 ¹⁵ - Lutron Hi-lume 1% Eco ELD1 ¹⁵ - eldoLED 1% ECOdrive 0-10V ELD0 - eldoLED 0.1% SOLOdrive 0-10V	SOLA RSD1 - Single 0-10V input	DUO RDMX ¹⁵ - DMX RDDA ¹⁵ - DALI DT6 RDDA8 ¹⁵ - DALI DT8 RDD1 - Dual 0-10V input for CCT/Intensity RLD2 ¹⁵ - Lutron DALI-2 digital
5x1	239LM - 239 lm	598LM - 598 lm	957LM - 957 lm			
2x2	184LM - 184 lm	460LM - 460 lm	735LM - 735 lm			

¹¹ Watts and lumen per watts will vary based on the number of lighting units per remote driver as well as on the type of driver selected.

¹² For configurations involving different Cluster sizes on a remote driver, please consult factory.

¹³ Available with 120V only.

¹⁴ Only available with high lumen packages.

¹⁵ On-site commissioning is required.

EXAMPLE

LIGHT	CLU03SPAR-8IN-FTMW-SPL-FTMW-SW-PAR-90CRI-35K-INTEGRAL-120V-578LM-D1-FLS-FTMW	REMOTE DRIVER	N/A
LIGHT	CLU22SPAR-3IN-FTMW-SPL-FTMW-SW-PAR-90CRI-35K-REMOTE-DMRM-FTMW	REMOTE DRIVER	RDB1-6X-CLU22SPAR-120V-460LM-RD1 RDB2-2X-CLU22SPAR-120V-460LM-RD1

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CLUSTER-SURFACE-PARABOLIC-SPEC-REV6

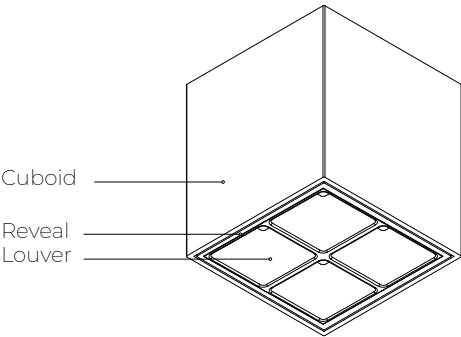
December 20, 2024

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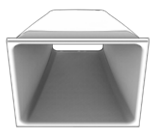


Overview



OPTIC

LOUVER FINISHES
Louver is injection molded with integral texture and color.



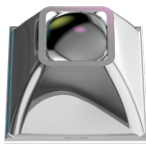
Parabolic



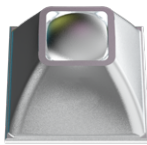
MWPL - Matte White
Parabolic Louver



MBPL - Matte Black
Parabolic Louver

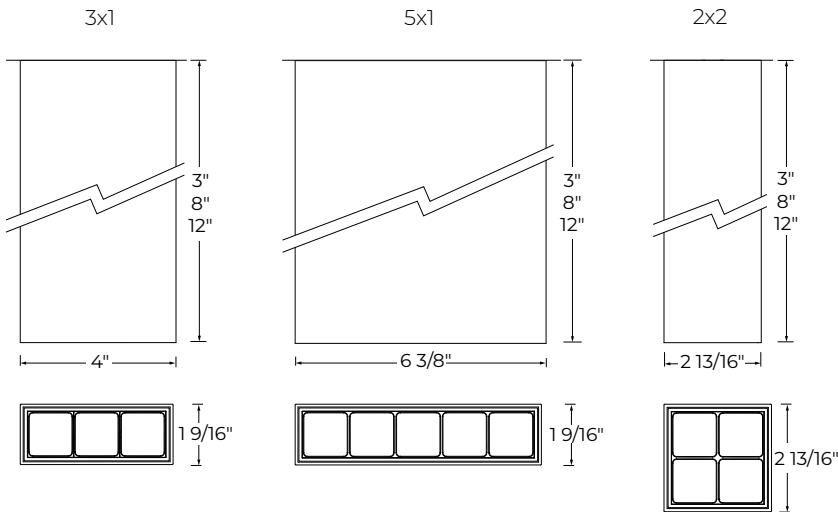


SPL - Specular Parabolic
Louver

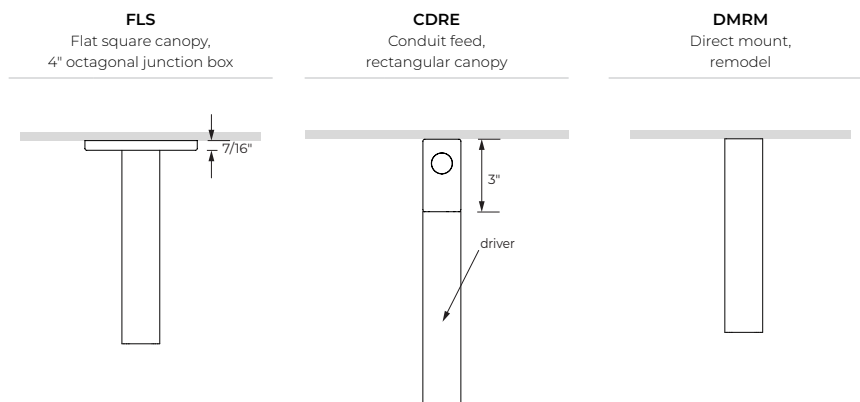


MPL - Matte Parabolic
Louver

Dimensions



Mounting



Canopy size	3x1	4 5/8" X 7 1/16"	3x1	1 9/16" x 4"
	5x1	4 5/8" X 9 7/16"	5x1	1 9/16" x 6 3/8"
	2x2	4 5/8" X 4 5/8"	2x2	2 13/16" x 2 13/16"

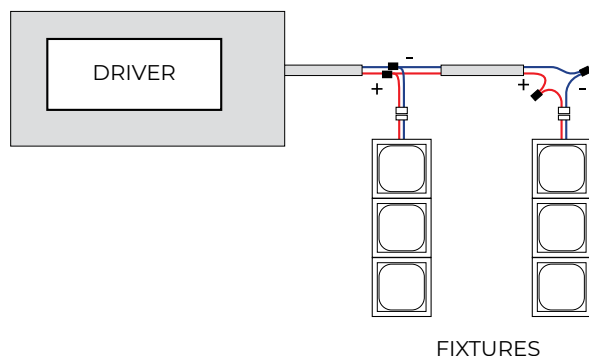
Driver in j-box or canopy when specified with integral drivers.

Driver

REMOTE DRIVER

The remote driver can power several lighting units, depending on their total power. The minimum and maximum number of lighting units and driver type are shown in the table below and must be observed. The remote driver and lighting units are wired together through connection boxes, which are furnished pre-wired to the driver enclosure. All wiring is Class 2 with quick-splice connectors. The remote driver requires access from above the ceiling (or an access panel).

CONNECTION IN PARALLEL



Number of lighting units per driver (minimum and maximum).

Static white	3x1	5x1	2x2
RD1	1-12	1-6	1-6
RELV	1-6	1-3	1-3
RTRI	1-6	1-3	1-3
RDA	1-11	1-6	1-6
RLDE1	1-11	1-6	1-6
RELD1	1-11	1-6	1-6
RELD0	1-11	1-6	1-6

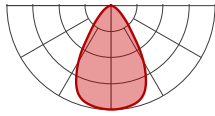
SOLA	3x1	5x1	2x2
RSD1	1-7	1-4	1-4

DUO	3x1	5x1	2x2
RDMX	1-7	1-4	1-4
RDDA	1-7	1-4	1-4
RDDA8	1-7	1-4	1-4
RDD1	1-7	1-4	1-4
RLD2	2-7	1-4	1-4

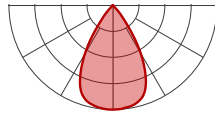
For any quantities of lighting units per driver that fall outside the minimum and maximum listed above, please consult factory.

Photometrics

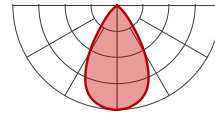
Values calculated based on 3500K, 90 CRI, and SPL.



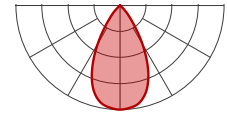
MWPL - Matte White Parabolic Louver



MBPL - Matte Black Parabolic Louver



MPL - Matte Parabolic Louver



SPL - Specular Parabolic Louver

	LM	W	LM/W
3x1	584	7.3	80
5x1	957	11.5	83
2x2	735	9.5	78

MULTIPLIER TABLE

Please follow the multiplier table to ensure correct lumen value. CCT and louver finishes will change the lumen value.

	LPW			
CCT	MWPL	MBPL	MPL	SPL
2700K	0.94	0.58	0.81	0.94
3000K	0.97	0.6	0.83	0.97
3500K	1	0.62	0.86	1
4000K	1.02	0.63	0.88	1.02
5000K	1.06	0.66	0.9	1.06

Technical Specifications

OPTICS

Parabolic Louvers (MWPL, MBPL, MPL, SPL)

Parabolic louver optics provide excellent shielding and a pleasing crisp visual texture. The precisely molded louvers consist of 1" deep blades and side reflectors with shielding of 50° lengthwise and 45° crosswise.

The parabolic contour of the blades and side reflectors direct light into a comfortable downlight distribution with a spacing criterion of 1:1, while minimizing shadows from the LED array above each cell.

Four finishes are available. Specular aluminum (SPL) provides higher efficacy, sharper cut-off, and an ultra-quiet appearance at shallow viewing angles. matte aluminum (MPL) offers a softer appearance, a wider beam spread, and gentle brightness transition at cut-off. Matte white (MWPL) creates the highest louver brightness, while matte black (MBPL) provides a dark appearance with slightly reduced beam spread.

LIGHT SOURCE

Static white

Custom array of mid-flux LEDs mounted onto aluminum-backed circuitry. Available in 2700K, 3000K, 3500K, 4000K and 5000K with a minimum 90 CRI with elevated R9 value. Color consistency is maintained to within 3 SDCM. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

Chromawerx SOLA

It is a single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple analog control sends a common signal to dual output digital drivers, which are programmed to adjust a specially populated LED array to emulate the effect of dimming a filament source. Dimming range is programmable but the default option runs from 3500K at 100% of full power to 2200K at 5% of full power. CRI is maintained above 80 throughout the dimming range.

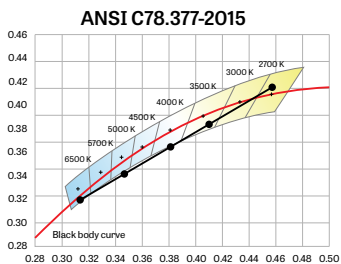
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Chromawerx DUO

It is a two-channel control. It uses an analog (0-10V) protocol for separate control of luminaire CCT and intensity or a digital (DMX, DALI, and LD2) protocol for synchronous control of both warm and cool LED arrays to enable the user to set color temperature and light output. Commonly called “tunable white”, Chromawerx two-channel control provides the range of cool (6500K) to warm (2700K) color that can be useful for helping to entrain circadian rhythms, stimulate alertness for improved educational and work productivity, and compensate for jet lag, among other applications. The Chromawerx drivers are programmed to limit maximum light output and power usage across all color temperatures. CRI is maintained above 80. When paired with DALI drivers (DDA/DDA8), color tuning follows a linear dimming curve.



ELECTRICAL

Unless otherwise specified, dimming down to 1%. At maximum driver load: efficiency>84%, PF>0.9, THD<20%.

Integral: 0-10V, ELV, TRIAC

Remote: 0-10V, ELV, TRIAC, Lutron Hi-Lume 1% EcoSystem, DALI, eldoLED 0.1% SOLOdrive 0-10V, eldoLED 1% ECOdrive 0-10V, DMX, Lutron DALI-2 digital

PoE

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, DUO (tunable white), QUADRO (RGBW), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis

WEIGHT

	3'		8'		12'	
	lb	kg	lb	kg	lb	kg
3x1	1.06	0.46	1.57	0.69	1.97	0.88
5x1	1.95	0.88	3.19	1.45	4.18	1.9
2x2	1.08	0.47	1.57	0.7	1.97	0.88

CONSTRUCTION

Housing: Die-cast aluminum (0.95" nominal)

Optics: Polycarbonate

Cuboid: Extruded aluminum

Cover surface: Galvanized steel metal

Extension bar: Galvanized steel metal

CERTIFICATION

ETL: Rated for indoor dry/damp locations. Conforms to UL 1598 Standard and certified to CAN/CSA Standard C22.2 No. 250.0.

Declare: [LBC Red List Approved](#)

WARRANTY

Lumenwerx provides a five-year limited warranty on electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.