

CLUSTER

PENDANT



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 pendant is available in 1, 3, 5, 2x2, and 3x3 cell configurations, all with a choice of precision optics, beam spreads and subtle louver treatments.

Beam

Soft edge



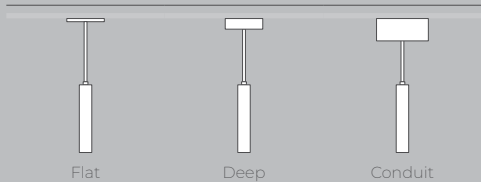
25° 35° 55°

Sharp edge



15° 30° 45°

Mounting Options



Flat

Deep

Conduit

Sizes



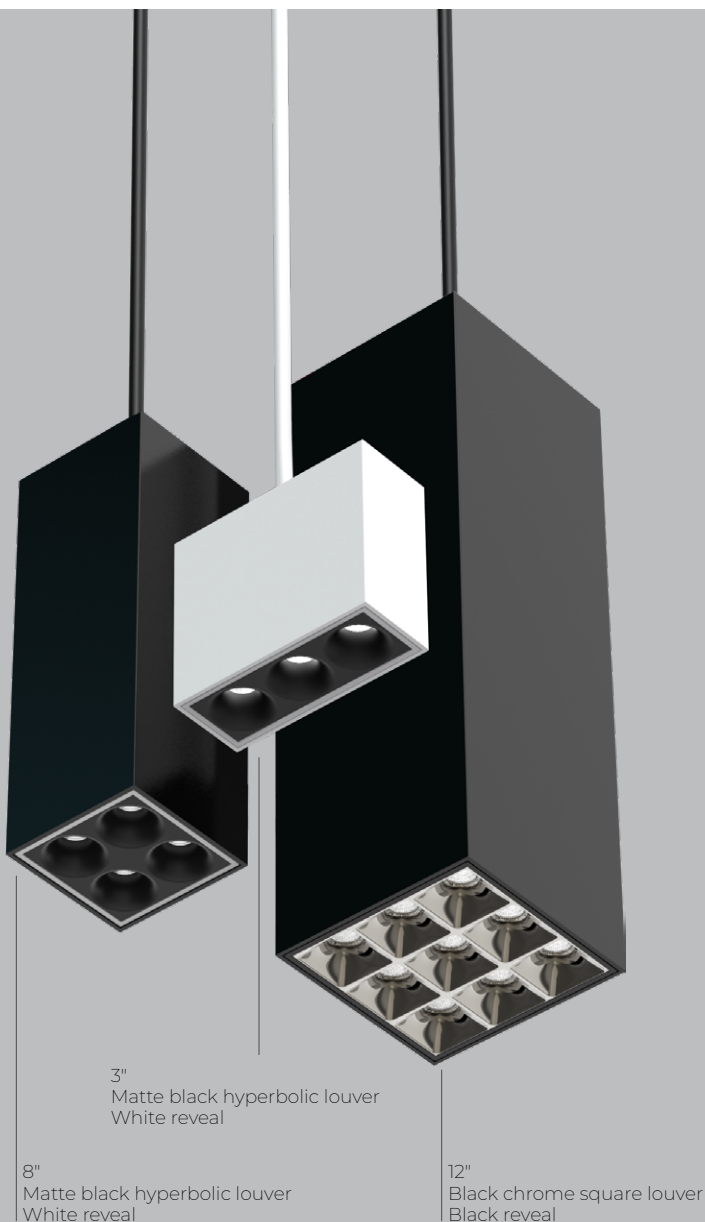
1x1

3x1

5x1

2x2

3x3



Cluster Family (Refer to other spec sheets)

Recessed, Wood Slat



Downlight

Parabolic

Wall Wash

Recessed Adjustable



Downlight

Parabolic

Wall Wash

Pendant



Downlight

Parabolic

Wall Wash

Surface



Downlight

Parabolic

Wall Wash

Combo



Recessed
Pendant
Surface

Acoustix



Blank
Downlight
Parabolic

CLUSTER

PENDANT



Project: _____

Type: _____

Order Guide

LIGHT

LUMINAIRE ID	CUBOID HEIGHT	CUBOID FINISH	LOUVER	LOUVER FINISH
CLU01P - Cluster 1x1 Pendant CLU03P - Cluster 3x1 Pendant CLU05P - Cluster 5x1 Pendant CLU22P - Cluster 2x2 Pendant CLU33P - Cluster 3x3 Pendant	3IN - 3" 8IN - 8" 12IN - 12"	FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL#	SQR - Square HYP - Hyperbolic	MF01 - Matte white MF04 - Matte black BL05 - Black chrome

REVEAL FINISH	LIGHT SOURCE	OPTIC	BEAM	CRI	COLOR TEMP.
FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL#	SW			90CRI	
	SW - Static white	SOF - Soft edge downlight REF - Sharp edge downlight	SOF NFL - Narrow flood FLD - Flood WFL - Wide flood	REF SPT - Spot FLD - Flood WFL - Wide flood	90CRI - 90 CRI 27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K

DRIVER	VOLTAGE	LUMEN PACKAGE ¹	DIMMING	CANOPY TYPE ³	CANOPY FINISH	SUSPENSION
INTEGRAL	120V - 120V 277V - 277V UNV - 120V-277V	1x1 200LM - 200 lm 3x1 578LM - 578 lm 5x1 923LM - 923 lm 2x2 811LM - 811 lm 3x3 1743LM - 1743 lm <small>¹ Lumen packages shown at 3500K, with SOF-NFL 25°. For other, see lumen output multipliers on page 5.</small>	1x1 ND - No dimming 3x1 - 3x3 D1 - 1% 0-10V ELV ² - ELV 120V TRI ² - TRIAC 120V <small>² Available with 120V only.</small>	FLS ⁴ - Flat square canopy, 4" octagonal junction box DS - Deep square canopy CDS - Conduit feed, square canopy <small>³ See page 4 for details. ⁴ Not available with 3" cuboid height when specified with integral driver.</small>	FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL#	STEM ⁵ BKS##IN - Textured black stem WHS##IN - Textured white stem CF#S##IN ⁶ - Custom finish stem <small>⁵ Min 18" - max 48", specify length (##) in inches. ⁶ Specify RAL#.</small>
REMOTE	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 ⁷	LUMINAIRE QTY. ⁸	LUMINAIRE ID	VOLTAGE	LUMEN PACKAGE ⁹				DIMMING ¹⁰
RDB# - Remote driver box ⁷ Specify an RDB number (#) for each required remote driver box.	#X - Number of luminaires ⁸ Specify number (#) of luminaires per remote driver. See page 4 for minimum and maximum per driver.	CLU01P - Cluster 1x1 Pendant CLU03P - Cluster 3x1 Pendant CLU05P - Cluster 5x1 Pendant CLU22P - Cluster 2x2 Pendant CLU33P - Cluster 3x3 Pendant	120V - 120V 277V - 277V UNV - 120V-277V		Low	Medium	High	RD1 - 1% 0-10V RELV ^{11, 12} - ELV 120V RTRI ^{11, 12} - TRIAC 120V RDA ¹³ - DALI RLDE1 ¹³ - Lutron Hi-lume 1% Eco RELD1 - eldoLED 1% ECOdrive 0-10V RELD0 - eldoLED 0.1% SOLOdrive 0-10V ¹⁰ For configurations involving different Cluster sizes on a remote driver, please consult factory. ¹¹ Available with 120V only. ¹² Only available with high lumen packages. ¹³ On-site commissioning is required.
				1x1	50LM - 50 lm	125LM - 125 lm	200LM - 200 lm	
				3x1	145LM - 145 lm	362LM - 362 lm	578LM - 578 lm	
				5x1	230LM - 230 lm	577LM - 577 lm	923LM - 923 lm	
				2x2	203LM - 203 lm	507LM - 507 lm	811LM - 811 lm	
				3x3	436LM - 436 lm	1089LM - 1089 lm	1743LM - 1743 lm	

EXAMPLE

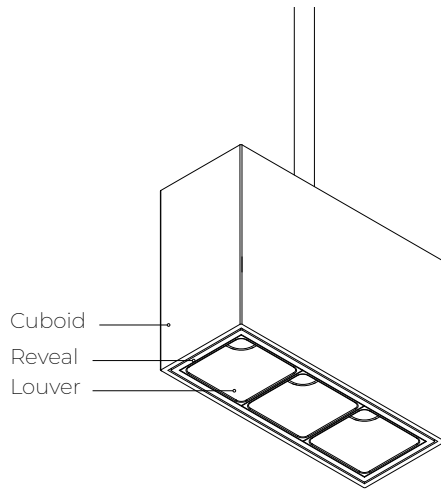
LIGHT	CLU01P-3IN-FTMW-HYP-MF01-FTMW-SW-SOF-NFL-90CRI-35K-INTEGRAL-120V-200LM-ND-DS-FTMW-BKS18IN	REMOTE DRIVER	N/A
LIGHT	CLU01P-3IN-FTMW-HYP-MF01-FTMW-SW-SOF-NFL-90CRI-35K-REMOTE-FLS-FTMW-BKS18IN	REMOTE DRIVER	RDB1-10X-CLU01P-120V-125LM-RD1 RDB2-8X-CLU01P-120V-125LM-RD1

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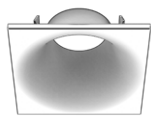
Overview



OPTICS



SQR - Square



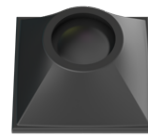
HYP - Hyperbolic

LOUVER FINISHES

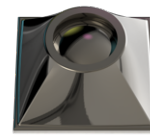
Louver is injection molded with integral texture and color.



MF01 - Matte white

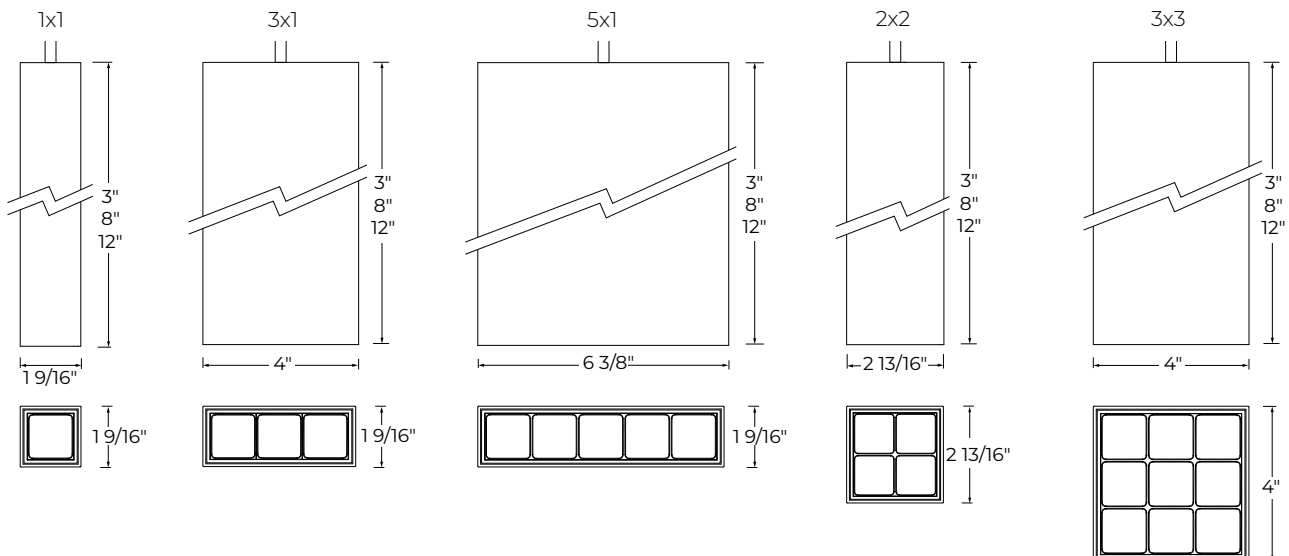


MF04 - Matte black

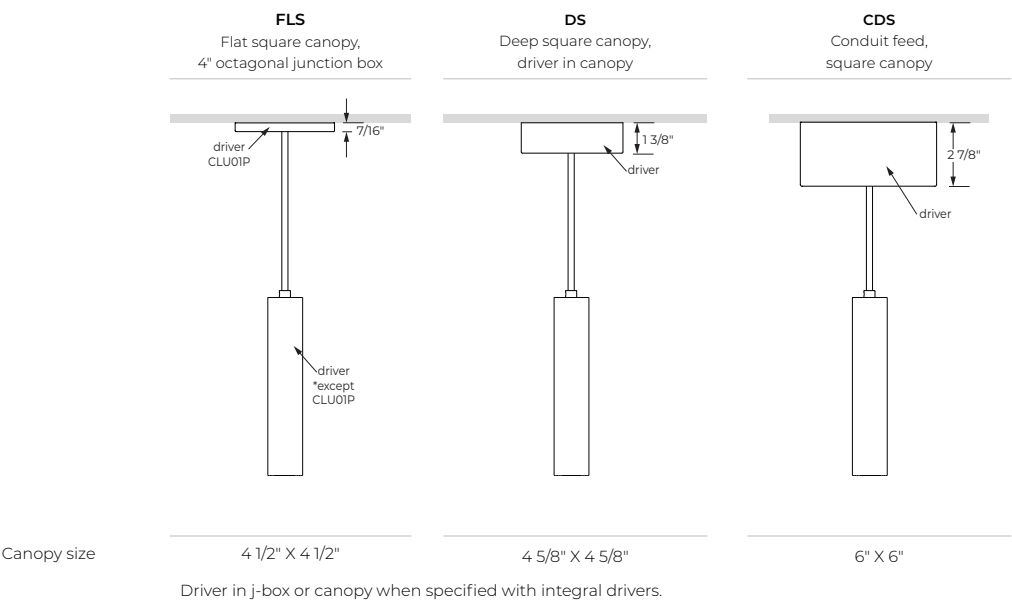


BL05 - Black chrome

Dimensions

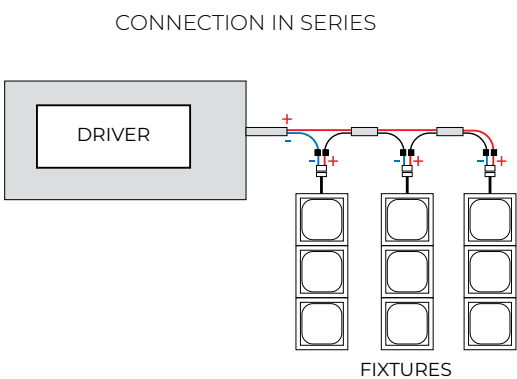


Mounting



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).



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

DRIVER	1x1	3x1	5x1	2x2	3x3
RD1	4-34	2-10	1-6	1-8	1-3
RELV	10-18	4-6	2-3	3-4	1
RTRI	10-18	4-6	2-3	3-4	1
RDA	2-34	1-10	1-6	1-8	1-3
RLDE1	8-16	3-5	2-3	2-4	1
RELD1	2-34	1-10	1-6	1-8	1-3
RELD0	2-34	1-10	1-6	1-8	1-3

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

CLUSTER

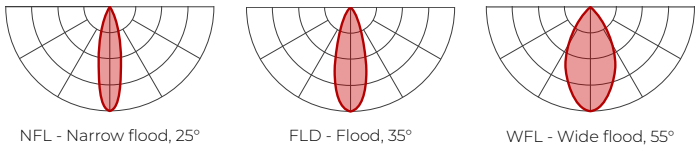
PENDANT



Photometrics

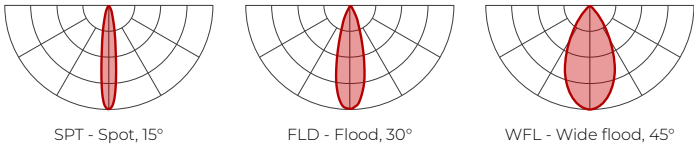
Values calculated based on 3500K, 90 CRI, SOF, and NFL.

SOF - Soft edge downlight



	LM	W	LM/W
1x1	200	3.3	60
3x1	578	7.8	74
5x1	923	11.8	78
2x2	811	10.4	78
3x3	1743	21.5	81

REF - Sharp edge downlight



MULTIPLIER TABLES

Please follow the multiplier tables to ensure correct lumen value. CCT and optics will change the lumen value.

CCT	LPW					
	SOF			REF		
Beam angle	25°	35°	55°	15°	30°	45°
2700K	0.87	0.92	0.82	0.80	0.84	0.86
3000K	0.93	0.99	0.87	0.86	0.89	0.92
3500K	1	1.06	0.94	0.92	0.96	0.99
4000K	1.03	1.09	0.97	0.95	0.99	1.02
5000K	1.08	1.14	1.02	0.99	1.04	1.07



Technical Specifications

OPTICS

Soft edge downlight (SOF)

The Soft edge downlight blends the light into darker areas for a gentle brightness transition. Each LED emitter directs light through a single, custom molded circular optic using total internal reflection (TIR) to shape the light. A 0.5" reflective square louver provides a cut off with a UGR of 10. Three different TIR elements create a choice of beam spread: 25° narrow flood (NFL), 35° flood (FLD), or 55° wide flood (WFL).



Shown with 25°

Sharp edge downlight (REF)

The Sharp edge downlight creates dramatic impact, limiting the spread of light outside of the primary beam. A molded conical reflector redirects light from each emitter into the desired beam angle. A 0.5" reflective square louver provides a cut off with a UGR of 10. Three different TIR elements create a choice of beam spread: 15° spot (SPT), 30° flood (FLD), or 45° wide flood (WFL).



Shown with 15°

LIGHT SOURCE

Custom array of high-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.

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

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
1x1	0.75	0.31	1.12	0.48	1.42	0.62
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
3x3	1.65	0.75	2.27	1.03	2.77	1.26

CONSTRUCTION

Housing: Die-cast aluminum (0.95" nominal)

Optics: Polycarbonate

Cuboid: Extruded aluminum

Cover pendant: Aluminum

Extension bar: Galvanized steel metal

Stem: Ø 1/2" rigid stem 18" to 48" standard length

CERTIFICATIONS

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

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.