

CLUSTER

RECESSED ADJUSTABLE



5x1
Black chrome square louver
Flanged trim

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 recessed adjustable downlights are available in 3, 5, and 10 cell configurations and aims 30° in either direction. A choice of precision optics, beam spreads and subtle louver treatments matches Cluster downlights.

Beam

Soft edge



25° 35° 55°

Sharp edge



15° 30° 45°

Sizes



3x1

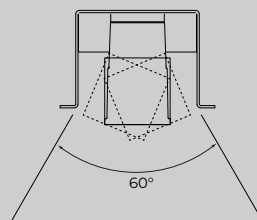


5x1



10x1

Adjustability



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

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Project: _____

Type: _____

Order Guide

1. HOUSING

IC RATED

LUMINAIRE ID	TRIM STYLE	LIGHT SOURCE	INSTALLATION TYPE	MOUNTING OPTION ¹	DRIVER	VOLTAGE	LUMEN PACKAGE ³	DIMMING
		SW						
CLU03RADJ - Cluster 3x1 Recessed Adjustable CLU05RADJ - Cluster 5x1 Recessed Adjustable CLU10RADJ - Cluster 10x1 Recessed Adjustable	TRM - Flanged trim TLMP - Trimless drywall mudplate	SW - Static white	OF - Open Frame Type Non-IC IC - Type-IC RM - Remodel Type Non-IC CP - Chicago Plenum Type-IC (CCEA)	ASB ² - Adjustable standard bar hangers FMB ² - Flush mount bars ACB ² - Adjustable commercial bar hangers AHC ² - Adjustable hat channel bars NA - None	INTEGRAL	120V - 120V 277V - 277V UNV - 120V-277V	3x1 578LM - 578 lm 5x1 923LM - 923 lm 10x1 1791LM - 1791 lm ³ Lumen packages shown at 3500K, with SOF-NFL 25°. For other, see lumen output multipliers on page 5.	D1 - 1% 0-10V ELV ⁴ - ELV 120V TRI ⁴ - TRIAC 120V ⁴ Available with 120V only.
				¹ See page 3 for more details. ² Not available with RM installation type.	REMOTE	DO NOT SPECIFY FOR REMOTE. SEE "REMOTE DRIVER BOX" SECTION BELOW.		

2. LIGHT

LUMINAIRE ID	TRIM STYLE	LIGHT SOURCE	OPTIC	BEAM		CRI
		SW				90CRI
CLU03RADJL - Cluster 3x1 Recessed Adjustable CLU05RADJL - Cluster 5x1 Recessed Adjustable CLU10RADJL - Cluster 10x1 Recessed Adjustable	TRM - Flanged trim TLMP - Trimless drywall mudplate	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
COLOR TEMP.	TRIM FINISH ⁵	LIGHT ELEMENT FINISH	LOUVER	LOUVER FINISH		
27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K	FTMW - Textured matte white FTMB - Textured matte black CF# - Custom finish, specify RAL# ⁵ Applicable for trim and trimless. Body finish matches trim finish.	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		

3. REMOTE DRIVER BOX

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

REMOTE DRIVER ⁶	LUMINAIRE QTY. ⁷	LUMINAIRE ID	VOLTAGE	LUMEN PACKAGE ⁸				DIMMING ⁹
RDB# - Remote driver box ⁶ Specify each required remote driver box on a separate line.	#X - Number of luminaires of luminaires per remote driver. See page 5 for minimum and maximum per driver. ⁷ Specify number (#) of luminaires per remote driver. See page 5 for minimum and maximum per driver.	CLU03RADJ - Cluster 3x1 Recessed Adjustable CLU05RADJ - Cluster 5x1 Recessed Adjustable CLU10RADJ - Cluster 10x1 Recessed Adjustable	120V - 120V 277V UNV - 120V-277V		Low	Medium	High	RD1 - 1% 0-10V RELV ^{10,11} - ELV 120V RTRI ^{10,11} - TRIAC 120V RDA ¹² - DALI RLDE1 ¹² - Lutron Hi-lume 1% Eco RELD1 - eldoLED 1% ECOdrive 0-10V RELD0 - eldoLED 0.1% SOLOdrive 0-10V ⁹ For configurations involving different cluster sizes on a remote driver, please consult factory ¹⁰ Available with 120V only. ¹¹ Only available with high lumen packages. ¹² On-site commissioning is required.
				3x1	145LM - 145 lm	362LM - 362 lm	578LM - 578 lm	
				5x1	230LM - 230 lm	577LM - 577 lm	923LM - 923 lm	
				10x1	448LM - 448 lm	1120LM - 1120 lm	1791LM - 1791 lm	
				⁸ Watts and lumen per watts will vary based on the number of light units per remote driver as well as on the type of driver selected.				

EXAMPLE

MOUNTING	CLU05RADJ-TRM-SW-OF-FMB-REMOTE	REMOTE DRIVER	RDB1-4X-CLU05RADJ-120V-577LM-RD1
LIGHT	CLU05RADJL-TRM-SW-SOF-NFL-90CRI-30K-FTMW-FTMW-HYP-MF01		RDB2-2X-CLU05RADJ-120V-577LM-RD1

CLUSTER

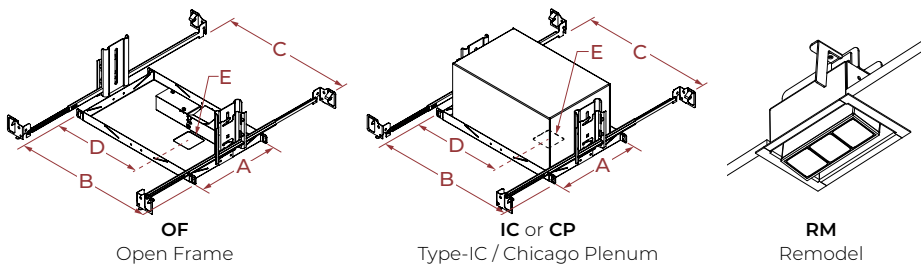
RECESSED ADJUSTABLE



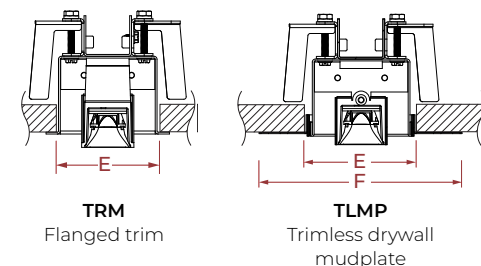
Housing

Cluster can be installed in a wide range of ceiling conditions and with various ceiling trim options. Spring clips clamp the lighting unit to the mounting frame (or directly to the ceiling for remodel). Maximum ceiling thickness is 1.25".

INSTALLATION TYPES



CUT-OUT DIMENSIONS

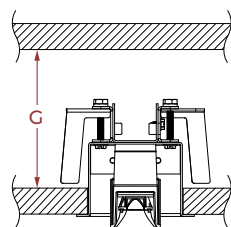


Drawings shown with adjustable standard bar hangers.

	A HOUSING WIDTH	B HOUSING LENGTH	C SPACING BETWEEN BARS	D DISTANCE FROM CUT-OUT
3x1	11"	12 11/16"	12 1/8"	6 3/8"
5x1	11"	13 11/16"	13 1/8"	6 7/8"
10x1	13"	15 1/2"	14 3/8"	7 7/16"

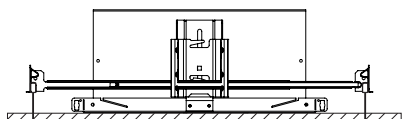
E CUT-OUT DIMENSIONS	F MUDPLATE DIMENSIONS
4 3/8" x 3"	6 7/8" x 5 3/8"
6 3/4" x 3"	9 1/4" x 5 3/8"
12 3/4" x 3"	15 1/4" x 5 3/8"

PLENUM CLEARANCE



	G PLENUM CLEARANCE HEIGHT			
	OF	IC / CP	RM	
	REMOTE & INTEGRAL		INTEGRAL	REMOTE
3x1	4 13/16"		4"	3 1/4"
5x1				
10x1				

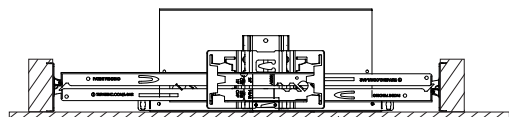
MOUNTING OPTIONS



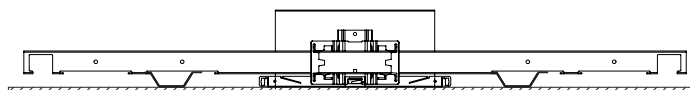
ASB - Adjustable standard bar hangers.
Grid ceiling or drywall with variable height (commercial applications)



FMB - Flush mount bars.
Drywall/metal/wood frame mounting (residential applications)



ACB - Adjustable commercial bar hangers.
Grid ceiling, drywall, metal, wood, frame mounting (also openings for multiple hanging options such as hat channel, IC channel and metal tubing, supplied by others)



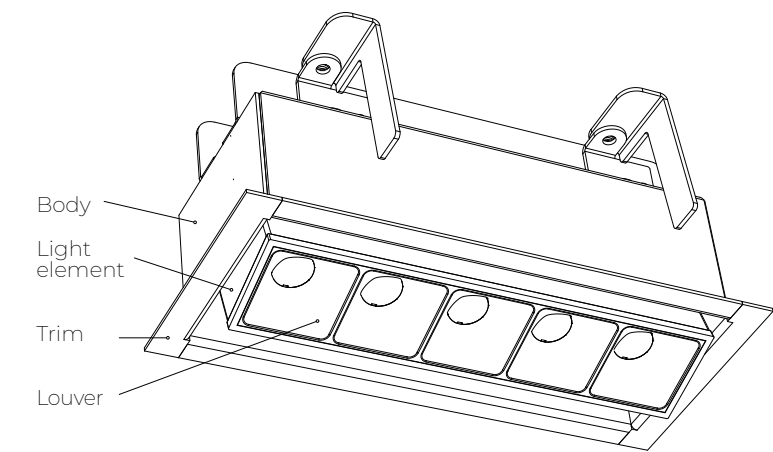
AHC - Adjustable hat channel bars.
With adjustable height

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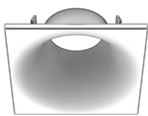
Light



LOUVERS



SQR - Square



HYP - Hyperbolic

LOUVER FINISHES

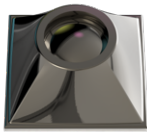
Louver is injection molded with integral texture and color.



MF01 - Matte white

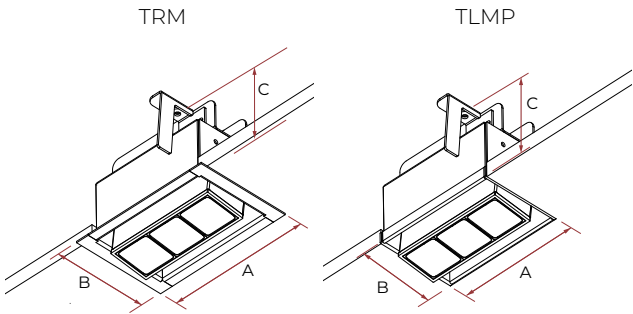


MF04 - Matte black



BL05 - Black chrome

Dimensions



	TRM			TLMP		
	A	B	C	A	B	C
3x1	4 7/8"	3 1/4"	3 1/4"	4 1/8"	2 11/16"	3 1/4"
5x1	7 1/4"			6 9/16"		
10x1	13 1/4"			12 9/16"		

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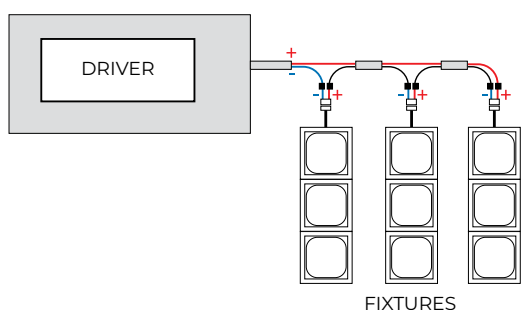


Driver

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 SERIES



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

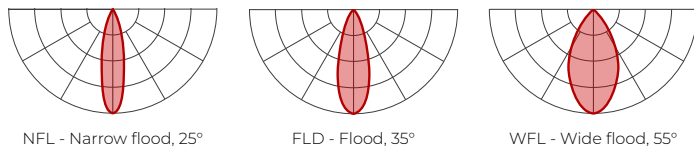
DRIVER	3x1	5x1	10x1
RD1	2-10	1-6	1-2
RELV	4-6	2-3	1
RTRI	4-6	2-3	1
RDA	1-10	1-6	1-2
RLDE1	3-5	2-3	1
RELD1	1-10	1-6	1-2
RELD0	1-10	1-6	1-2

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

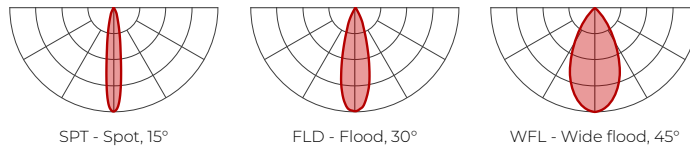
Photometrics

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

SOF - Soft edge downlight



REF - Sharp edge downlight



	LM	W	LM/W
3x1	578	7.8	74
5x1	923	11.8	78
10x1	1791	23.6	76

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

	OF		IC / CP		RM	
	lb	kg	lb	kg	lb	kg
3x1	4.11	1.83	7.49	3.37	1.59	0.69
5x1	4.75	2.14	8.38	3.78	2.18	0.97
10x1	6.9	3.13	11.32	5.14	3.57	1.62

CONSTRUCTION

Housing: Die-cast aluminum

Optics: Polycarbonate

Mounting frame: Galvanized sheet metal

Driver housing: Galvanized sheet metal

Mounting clips: Ø 1.0-1.4 mm spring clips

Adjustable structure: Cold rolled steel

Mounting bracket: Cold rolled steel

Fixture case: Cold rolled steel

CERTIFICATIONS

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

Chicago Plenum: City of Chicago approved (CCEA) when specified with CP installation type option.

IC rated: Suitable for direct contact with insulation when specified with IC or CP installation type options.

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.