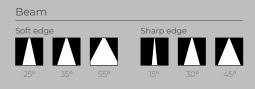
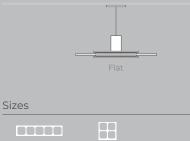
Cluster Acoustix is the precise family of downlights for pendant mounting. Complementing the cuboid light engine is a 22" stepped three-layer acoustic panel in round or square for excellent sound absorption.

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

Cluster Acoustix pendant is available in 5 and 2x2 cell configurations, all with a choice of precision optics, beam spreads and subtle louver treatments. Pendant downlights fit a 6" height acoustic cuboid enclosure.



Mounting





Cluster Family (Refer to other spec sheets)



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Intertek

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WELL WELL WELL



Matte black louver

Surface



Project:

Order Guide

Type:

LUMINAIRE ID		SHAP	≣	сивс	DID HEIGH	T CUBOID FIN	ISH		LOUVER		LOUVER FINISH	LIGHT SOURCE
				6IN								sw
CLU05ACOP - Clus Acoustix Pendant CLU22ACOP - Clus Acoustix Pendant	ter 2x2	Ø 22" S22INX		6IN - 6	ô"	FTMW - Textur FTMB - Textur CF# - Custom	red matte blac	k	SQR - Squ HYP - Hyp		MF01 - Matte white MF04 - Matte black BL05 - Black chrome	SW - Static white
OPTIC	BEAM				CRI	COLOR TEMP.	DRIVER	VOLT	AGE	LUME		DIMMING
					90CRI							
SOF - Soft edge	SOF	REF				27K - 2700K	INTEGRAL	120V -		5x1	923LM - 923 lm	D1 - 1% 0-10V
downlight REF - Sharp edge downlight	NFL - Narrov flood FLD - Flood WFL - Wide	CL - Narrow SPT - Spot od FLD - Flood		30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K			- 277V - 120V-277V	1 Lumen with SC	811LM - 811 lm packages shown at 3500K, DF-NFL 25°. For other, see output multipliers on page 6.	ELV ² - ELV 120V TRI ² - TRIAC 120V ² Available with 120V only.		
							REMOTE	DO NOT SPECIFY FOR REMO SEE "REMOTE DRIVER BOX" SECTIO				

CANOPY TYPE 3	CANOPY FINISH	SUSPENSION	INSIDE FELT COLOR			OUTSIDE FELT COLOR				
FLS			IN###				OUT##	#		
FLS - Flat square canopy, 4"	FTMW - Textured	STEM ⁴	STANDARD (COLORS		PREMIUM	1 COLORS [©]	, 7		
octagonal junction box	matte white FTMB - Textured matte	BKS##IN - Textured black stem WHS##IN - Textured white stem	FWN	MDN	PMN	PKN	EGN	BLN	CNN	CFN
³ See page 4 for details.	black	CF#S##IN ⁵ - Custom finish stem	FON	LVN	FGN	OGN	CDN	NVN	GHN	GRN
	CF# - Custom finish, specify RAL#	⁴ Min 18" - max 48", specify length (##)		LEN			LCN	IVN	CLN	MON
		in inches. ⁵ Specify RAL#.	TBN	CYN			SYN	SLN r more color o	BHN	ESN
						⁷ Lead time			puons.	

REMOTE DRIVER BOX

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

REMOTE DRIVER ⁸	LUMINAIRE QTY. ⁹	LUMINAIRE ID	VOLTAGE	LUMEN P	ACKAGE ¹⁰		
RDB# - Remote driver box ^a Specify an RDB number (#) for each	#X - Number of luminaires ⁹ Specify number (#) of luminaires per remote	CLU05ACOP - Cluster 5x1 Acoustix Pendant CLU22ACOP - Cluster 2x2 Acoustix Pendant	120V - 120V 277V - 277V UNV - 120V-277V	Low Medium	5x1 230LM - 230 lm 577LM - 577 lm	2x2 203LM - 203 lm 507LM - 507 lm	RDI - 1% 0-10V RELV ^{12,13} - ELV 120V RTRI ^{12,13} - TRIAC 120V RDA ¹⁴ - DALI RLDEI ¹⁴ - Lutron Hi-lume 1% Eco
required remote driver box.	driver. See page 4 for minimum and maximum per driver.			number of	923LM - 957 Im umen per watts will va ighting units per remo of driver selected.		RELD1 - eldoLED 1% ECOdrive 0-10V RELD0 - eldoLED 1% ECOdrive 0-10V "For configurations involving different Cluster sizes on a remote driver, please consult factory. "Available with 120V only. "Only available with high lumen package. "On-site commissioning is required.

EXAMPLE

LIGHT	CLU05ACOP-R22IN-6IN-FTMW-HYP-BL05-SW-SOF-NFL-90CRI-35K-INTEGRAL-120V-923LM-D1-FLS-FTMW-WHS	N REMO	DTE DRIVER	N/A	
LIGHT	CLU22ACOP-R22IN-6IN-FTMW-HYP-BL05-SW-SOF-NFL-90CRI-35K-REMOTE-FLS-FTMW-WHS18IN-INFWN- OUTCYN	REMOTE DRIVER		LU22ACOP-120 LU22ACOP-120	

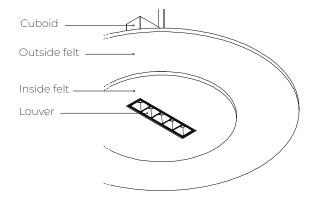
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Overview



OPTICS







LOUVER FINISHES





SQR - Square

HYP - Hyperbolic

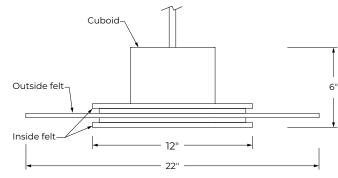
MF01 - Matte white

MF04 - Matte black

Louver is injection molded with integral texture and color.

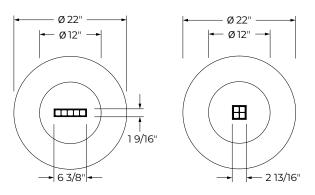
BL05 - Black chrome

Dimensions



SHAPE

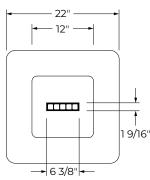
ROUND

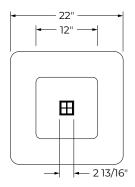


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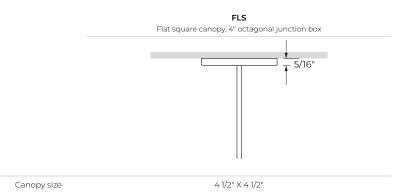






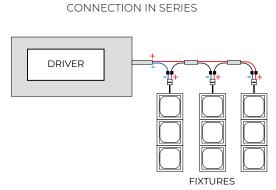
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Mounting



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	5x1	2x2
RD1	1-6	1-8
RELV	2-3	3-4
RTRI	2-3	3-4
RDA	1-6	1-8
RLDE1	2-3	2-4
RELD1	1-6	1-8
RELD0	1-6	1-8

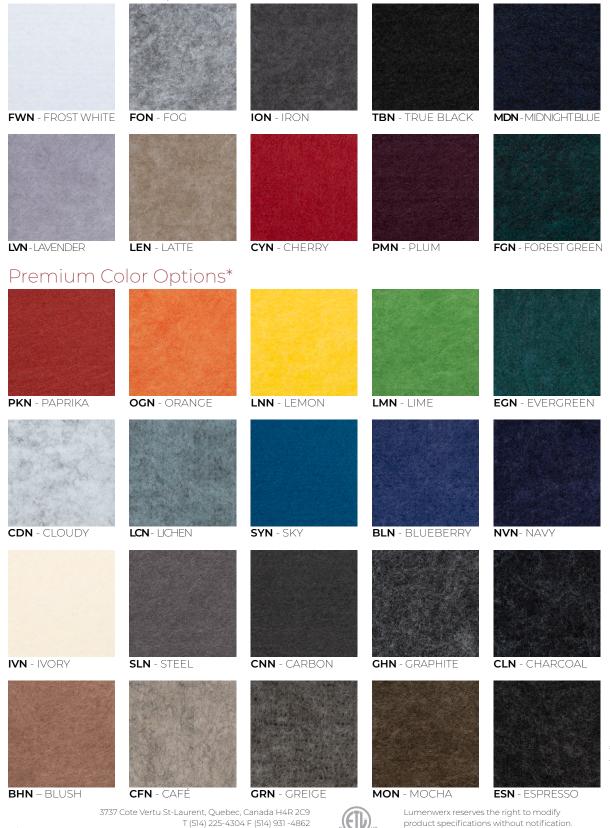
For any quantities of lighting units per driver that fall outside the minimum and maximum listed above, please consult factory.





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Standard Color Options



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*Please consult factory for more color options. *Lead time may vary.

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Acoustic Calculator

Use the Lumenwerx Acoustix Value Calculator table to determine the number of acoustic luminaires required in a space by fixture type. We have three levels of recommended sound reduction: good, better, and best. Choosing one of these options will reduce the sound accordingly. The best option indicates the best acoustic improvement. Calculations are based on a standard ceiling height of 9'.

Value calculator table

	Room dimensions under 300 sq ft				Room dimensions over 300 sq ft			
SHAPE	COOD ©		BEST		COOD ©	BETTER	BEST	
% in reduction in reverberation time	25%	40%	50%		25%	40%	50%	
Round	30	15	10		48	24	16	
Square	38	19	13		61	30	20	

Use the Lumenwerx Acoustix Value Formula to determine the number of luminaires needed in the room.

Room square footage (sq ft) = Number of luminaires. Value

Example: How many square Cluster Acoustix luminaires are needed for a 10' x 10' room size, for a BEST (50%) acoustic: (10' x 10') ÷ (13) = 8 luminaires

NOTES

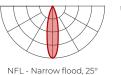
- You can mix lit and blank fixtures.

- Lumenwerx acoustic calculators were developed to act as a guide. For precise acoustic performance in a space, please consult an acoustician.

Photometrics

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

SOF - Soft edge downlight

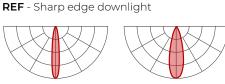


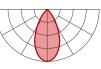


FLD - Flood, 35°

WFL - Wide flood, 55°







SPT - Spot, 15°

FLD - Flood, 30°

WFL - Wide flood, 45°

MULTIPLIER TABLES

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

сст	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			

	LM	w	LM/W
5x1	923	11.8	78
2x2	811	10.4	78





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).



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.

WELL BUILDING STANDARD



WELL for Light

The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

This fixture meets Features:

- Feature 58 or L07 when 90+ CRI is selected
- Feature 55 or L04 meets WELL glare category (b-c-d)

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of 5% or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



WELL for Sound

This luminaire is recommended for use as an acoustical absorption surface to limit reverberation times (RT) in a given space. This luminaire contributes to noise reduction and vibration dampening to promote focus and concentration. Reverberation needs to be calculated in each space based on the materials used.



WELL for Mind

This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, smooth optics, and a sound diminishing element. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind. For more information please contact well@lumenwerx.com.







CLUSTER ACOUSTIX **ZLumenwerx**

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

	lb	kg
5x1	6.35	2.88
2x2	6.75	3

CONSTRUCTION

Housing: Die-cast aluminum Optics: Polycarbonate Cuboid: Extruded aluminum Cover pendant: Aluminum Stem: Ø 1/2" rigid stem 18" to 48" standard length

ACOUSTIC FINISH

Material is 100% polyester containing up to 50% of recycled plastic bottles (PET) with an ASTM E-84 Class A fire rating and is moisture resistant.

CARE

Remove dust and debris with a clean, dry, soft, lint-free cloth, or vacuum.

CERTIFICATION

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.



