CLUSTER PI
SURFACE
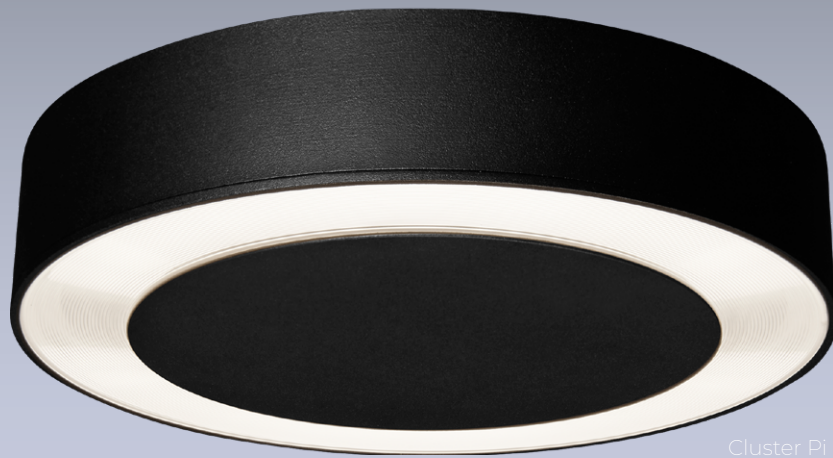### KVCO, HLO OPTICS

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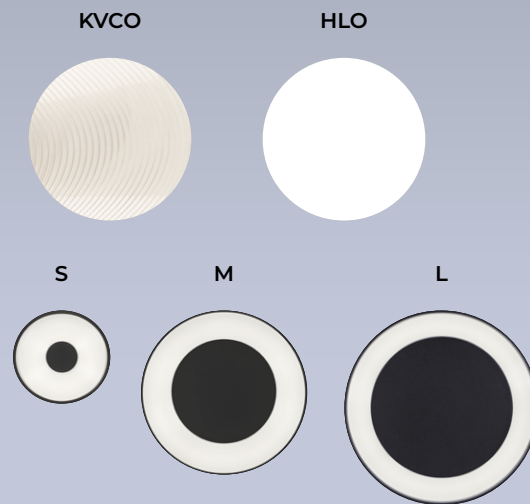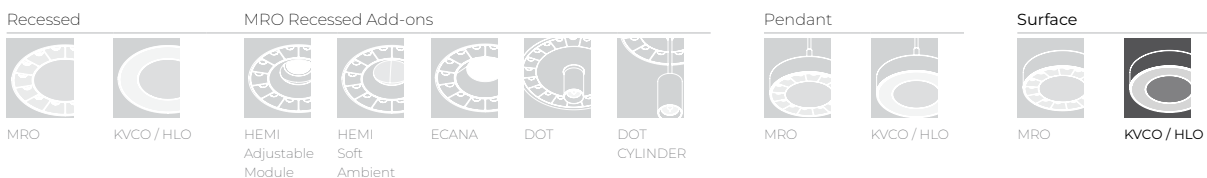
Cluster Pi M KVCO

Both Cluster Pi with HLO and Cluster Pi with KVCO™ integrate the beauty and quality of our Cluster family into circular fixtures featuring sophisticated optics and a timeless modernist esthetic. The luminaires occupy low profiles of under 2", are available in three sizes—Small (3.5"), Medium (6.5"), and Large (9")—and can be recessed, surface, or pendant mounted.

KVCO **HLO**

S **M** **L**

5 YEAR WARRANTY

Cluster Pi Family (Refer to other spec sheets)

Recessed		MRO Recessed Add-ons					Pendant		Surface	
MRO	KVCO / HLO	HEMI Adjustable Module	HEMI Soft Ambient	ECANA	DOT	DOT CYLINDER	MRO	KVCO / HLO	MRO	KVCO / HLO

www.lumenwerx.com
T (514) 225-4304

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CLUSTER-PI-SURFACE-KVCO-HLO-SPEC-REV1   January 24, 2024

PoE
Power over Ethernet

CLUSTER PI
SURFACE
KVCO, HLO OPTICS

Lumenwerx

Project: _____

_____

Type: _____

Order Guide

LUMINAIRE ID	FIXTURE FINISH	REVEAL FINISH	CENTER BLANK FINISH
CLUPISS - Cluster Pi S Surface **CLUPIMS** - Cluster Pi M Surface **CLUPILS** - Cluster Pi L Surface	**FTMW** - Textured matte white **FTMB** - Textured matte black **CF#** - Custom finish, specify RAL#	**FTMW** - Textured matte white **FTMB** - Textured matte black **CF#** - Custom finish, specify RAL#	**FTMW** - Textured matte white **FTMB** - Textured matte black **CF#** - Custom finish, specify RAL#

LIGHT SOURCE	OPTIC	CRI	COLOR TEMPERATURE	VOLTAGE	LUMEN PACKAGE [1]	
SW		**90CRI**				
SW - Static white	**KVCO** - Kinetic Visual Comfort Optic **HLO** - High-Efficiency Lambertian Optic	**90CRI** - 90 CRI	**27K** - 2700K **30K** - 3000K **35K** - 3500K **40K** - 4000K **50K** - 5000K	**120V** - 120V **277V** - 277V **UNV** - 120V-277V		

	KVCO	HLO
S	**360LM** - 360 lm	**400LM** - 400 lm
M	**700LM** - 700 lm	**780LM** - 780 lm
L	**1200LM** - 1200 lm	**1350LM** - 1350 lm

[1] Delivered lumens at 90 CRI, 3500K.

DIMMING [2]		CANOPY TYPE	CANOPY FINISH Specify NA for DM

REMOTE DRIVER [3]

RD1 - 1% 0-10V	**RDA** [6] - DALI
RELV [4,5] - ELV 120V	**RELD1** - eldoLED 1% ECOdrive 0-10V
RTRI [4,5] - TRIAC 120V	**RELD0** - eldoLED 0.1% SOLOdrive 0-10V
RLDE1 [5,6] - Lutron Hi-Lume 1% Eco	**RPEQ0** [6] - Lutron Hi-Lume Premier 0.1% EcoSystem

[2] PoE (Power-over-Ethernet) compatible. Consult factory for details.
[3] A remote driver box is provided, see page 4 for details.
[4] Available with 120V only.
[5] Not available with Cluster Pi S.
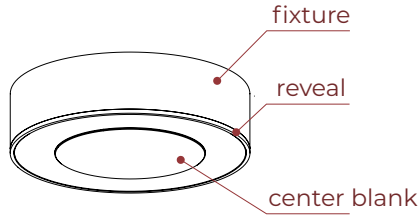[6] On-site commissioning is required.

CANOPY TYPE

FLR [7] - Flat round canopy, 4" octagonal junction box
DM - Direct mount

[7] Only available for Cluster Pi S.

CANOPY FINISH

FTMW - Textured matte white
FTMB - Textured matte black
CF# - Custom finish, specify RAL#
NA - Not applicable

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PoE Power over Ethernet

CLUSTER PI
SURFACE
KVCO, HLO OPTICS

Overview

fixture

reveal

center blank

Dimensions

Cluster Pi S

1 7/8"

Ø 3 3/4"

Ø 1"

Ø 3 1/2"

Cluster Pi M

1 7/8"

Ø 6 3/4"

Ø 4 1/4"

Ø 6 1/2"

Cluster Pi L

1 7/8"

Ø 9"

Ø 6 1/2"

Ø 8 3/4"

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PoE
Power over Ethernet

CLUSTER PI
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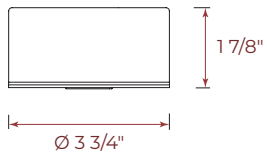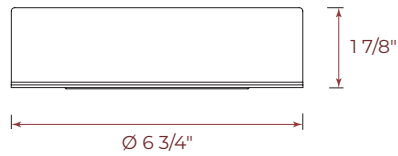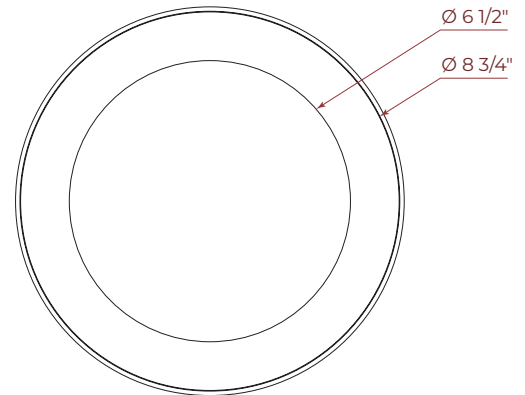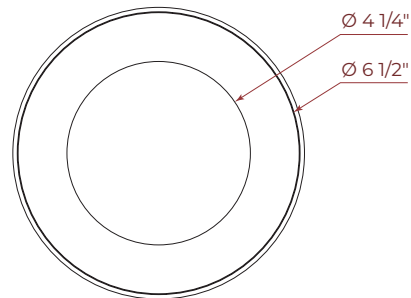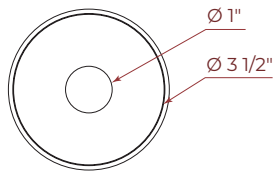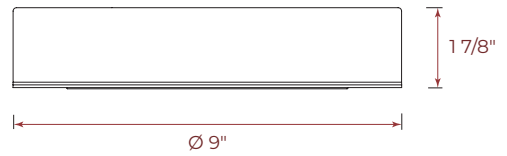
Mounting

CANOPY TYPE

REMOTE DRIVER	
FLR [1] Flat round canopy	**DM** Direct mount
Driver	Driver

CANOPY SIZE	Ø 4 1/2" Height 3/8"	NA

[1] Only available for Cluster Pi S.

REMOTE DRIVER BOX

RDB8 / RDB18

2 3/8"
3 3/4"
B
A

	RDB8	RDB18
A	10"	20"
B	8"	18"
DRIVER	**RD1** - 1% 0-10V **RELV** - ELV 120V **RTRI** - TRIAC 120V **RPEQ0** - Lutron Hi-lume Premier 0.1% EcoSystem	**RLDE1** - Lutron Hi-lume 1% Eco **RDA** - DALI **RELD1** - eldoLED 1% ECOdrive 0-10V **RELD0** - eldoLED 0.1% SOLOdrive 0-10V

Photometrics

Values calculated based on 3500K and 90 CRI for all optics.

KVCO

	LM	W	LM/W
S	360	4.9	73
M	700	8.2	85
L	1200	16.7	72

HLO

	LM	W	LM/W
S	400	4.9	82
M	780	8.2	95
L	1350	16.7	81

MULTIPLIER TABLE

Use the table to get results for different color temperatures for all photometric tables.

Multiplier - CCT/CRI

CCT	WATTS 90 CRI	LPW 90 CRI
2700K	1.04	0.95
3000K	1.02	0.98
3500K	1	1
4000K	0.97	1.02
5000K	0.96	1.05

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PoE

CLUSTER PI
SURFACE
KVCO, HLO OPTICS

Technical Specifications

OPTICS

Kinetic Visual Comfort Optic™ (KVCO™)
The Kinetic Visual Comfort Optic™ is finely crafted with a series of concentric grooves serving as light-bending prisms that redirect parallel rays to a common focal length. The resulting beams are precise and clean. The optic can change in appearance depending on the lighting conditions in its immediate surroundings.

High-Efficiency Lambertian Optic (HLO)
The High-Efficiency Lambertian Optic (HLO) is engineered with reflective sidewalls that distribute LED output across acrylic shielding, delivering soft, diffused beams. To negotiate the curves of Lumenwerx rounded fixtures, the HLO is equipped with proprietary SupremeGrip™ technology, which keeps the optic securely in place.

LIGHT SOURCE

Custom array of mid-flux LEDs are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with 90 CRI and elevated R9 value. Color consistency 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%.
Remote driver: 0-10V, ELV, TRIAC, Lutron Hi-Lume 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.

CONSTRUCTION

Housing: Die-cast aluminum
Cover: Cold rolled steel
Lens: Acrylic
Canopy: Flat and direct
Finish: Textured matte white and matte black. Custom colors also available (provide RAL #).

WEIGHT

Cluster Pi S FLR: 1.4 lbs - 0.6 kg
Cluster Pi S DM: 1.1 lbs - 0.5 kg
Cluster Pi M DM: 2.2 lbs - 1 kg
Cluster Pi L DM: 3.4 lbs - 1.5 kg

CERTIFICATION

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

WARRANTY

Lumenwerx provides a five-year limited warranty of 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.