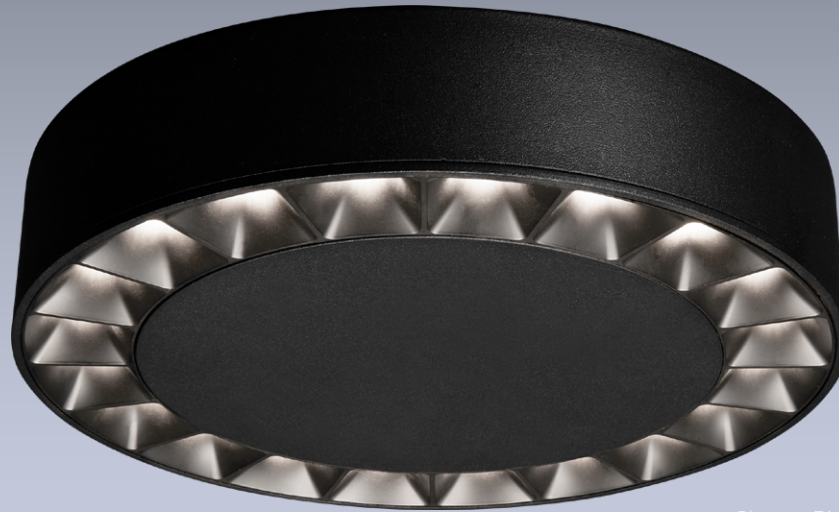


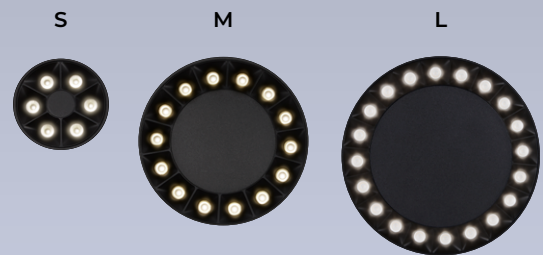
# CLUSTER PI

SURFACE  
MRO OPTIC

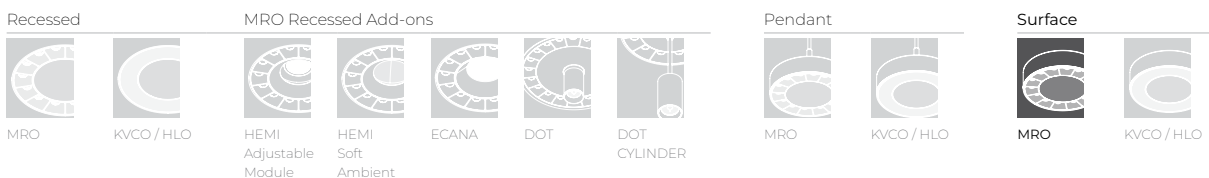


Cluster Pi M MRO

Cluster Pi with Miniature Reflector Optic (MRO) integrates the beauty and quality of our Cluster family into a fixture that illuminates through a circular array of light cells. The luminaire features a low profile of under 2" and can be recessed, surface, or pendant mounted. Of the three available sizes—Small (3.5"), Medium (6.5"), and Large (9")—the Medium and Large recessed models are designed to accommodate an add-on luminaire centrally positioned within its circular array.



## Cluster Pi Family (Refer to other spec sheets)



# CLUSTER PI

## SURFACE

### MRO OPTIC



Project: \_\_\_\_\_

Type: \_\_\_\_\_

**SENSORS**  
For latest information on sensors, click [here](#).



## Order Guide

LUMINAIRE ID	FIXTURE FINISH	LOUVER	LOUVER FINISH	REVEAL FINISH	CENTER BLANK FINISH
		<b>SQR</b>			
<b>CLUPISSMRO</b> - Cluster Pi S Surface MRO <b>CLUPIMSMRO</b> - Cluster Pi M Surface MRO <b>CLUPILSMRO</b> - Cluster Pi L Surface MRO	<b>FTMW</b> - Textured matte white <b>FTMB</b> - Textured matte black <b>CF#</b> - Custom finish, specify RAL#	<b>SQR</b> - Square	<b>MF01</b> - Matte white <b>MF04</b> - Matte black <b>AM07</b> - Matte silver	<b>FTMW</b> - Textured matte white <b>FTMB</b> - Textured matte black <b>CF#</b> - Custom finish, specify RAL#	<b>FTMW</b> - Textured matte white <b>FTMB</b> - Textured matte black <b>CF#</b> - Custom finish, specify RAL#

LIGHT SOURCE	OPTIC	BEAM	CRI	COLOR TEMPERATURE	VOLTAGE	LUMEN PACKAGE <sup>1</sup>						
<b>SW</b>	<b>MRO</b>		<b>90CRI</b>									
<b>SW</b> - Static white	<b>MRO</b> - Miniature Reflector Optic	<b>NFL</b> - Narrow flood <b>FLD</b> - Flood <b>WFL</b> - Wide flood	<b>90CRI</b> - 90 CRI	<b>27K</b> - 2700K <b>30K</b> - 3000K <b>35K</b> - 3500K <b>40K</b> - 4000K <b>50K</b> - 5000K	<b>120V</b> - 120V <b>277V</b> - 277V <b>UNV</b> - 120V-277V	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td> <td style="text-align: center;"><b>890LM</b> - 890 lm</td> </tr> <tr> <td style="text-align: center;">M</td> <td style="text-align: center;"><b>2100LM</b> - 2100 lm</td> </tr> <tr> <td style="text-align: center;">L</td> <td style="text-align: center;"><b>2750LM</b> - 2750 lm</td> </tr> </table> <p><small><sup>1</sup>Delivered lumens at 90 CRI, 3500K.</small></p>	S	<b>890LM</b> - 890 lm	M	<b>2100LM</b> - 2100 lm	L	<b>2750LM</b> - 2750 lm
S	<b>890LM</b> - 890 lm											
M	<b>2100LM</b> - 2100 lm											
L	<b>2750LM</b> - 2750 lm											

DIMMING <sup>2</sup>	CANOPY TYPE	CANOPY FINISH Specify NA for DM
<b>REMOTE DRIVER <sup>3</sup></b> <b>RDI</b> - 1% 0-10V <b>RELV</b> <sup>4,5,6</sup> - ELV 120V <b>RTRI</b> <sup>4,5,6</sup> - TRIAC 120V <b>RLDEI</b> <sup>5,7</sup> - Lutron Hi-Lume 1% Eco  <b>RDA</b> <sup>7</sup> - DALI <b>RELD1</b> - eldoLED 1% ECOdrive 0-10V <b>RELD0</b> - eldoLED 0.1% SOLOdrive 0-10V <b>RPEQ0</b> <sup>6,7</sup> - Lutron Hi-Lume Premier 0.1% EcoSystem	<b>FLR</b> <sup>8</sup> - Flat round canopy, 4" octagonal junction box <b>DM</b> - Direct mount  <small><sup>8</sup>Only available for Cluster Pi S.</small>	<b>FTMW</b> - Textured matte white <b>FTMB</b> - Textured matte black <b>CF#</b> - Custom finish, specify RAL# <b>NA</b> - Not applicable

<sup>2</sup> PoE (Power-over-Ethernet) compatible. Consult factory for details.

<sup>3</sup> A remote driver box is provided, see page 4 for details.

<sup>4</sup> Available with 120V only.

<sup>5</sup> Not available with Cluster Pi S.

<sup>6</sup> Not available with Cluster Pi M.

<sup>7</sup> On-site commissioning is required.

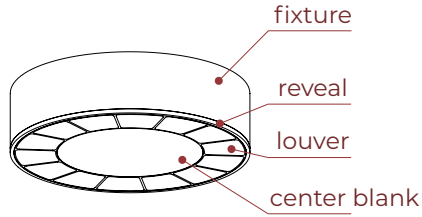


# CLUSTER PI

SURFACE  
MRO OPTIC

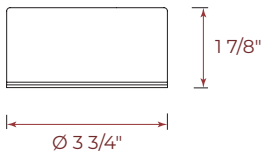


## Overview

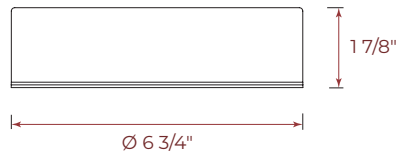


## Dimensions

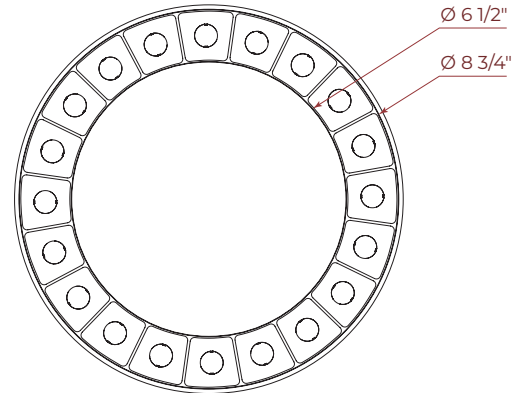
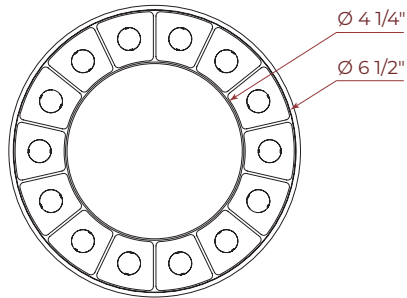
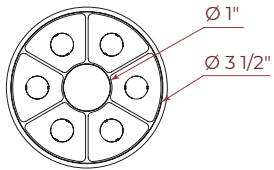
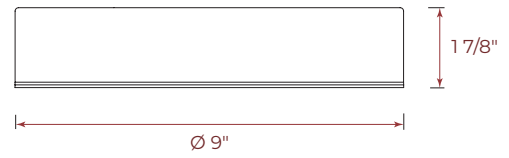
**Cluster Pi S MRO**



**Cluster Pi M MRO**



**Cluster Pi L MRO**



# CLUSTER PI

## SURFACE

### MRO OPTIC



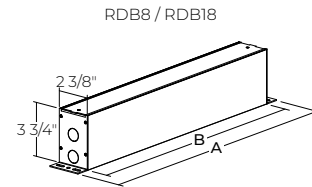
## Mounting

### CANOPY TYPE

REMOTE DRIVER		
	FLR <sup>1</sup>	DM
	Flat round canopy	Direct mount
CANOPY SIZE	Ø 4 1/2" Height 3/8"	NA

<sup>1</sup>Only available for Cluster Pi S.

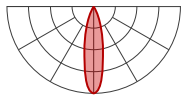
### REMOTE DRIVER BOX



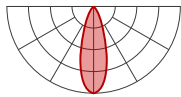
	RDB8	RDB18
<b>A</b>	10"	20"
<b>B</b>	8"	18"
<b>DRIVER</b>	<b>RD1</b> - 1% 0-10V <b>RELV</b> - ELV 120V <b>RTRI</b> - TRIAC 120V <b>RPEQO</b> - Lutron Hi-Lume Premier 0.1% EcoSystem	<b>RLDE1</b> - Lutron Hi-lume 1% Eco <b>RDA</b> - DALI <b>RELD1</b> - eldoLED 1% ECOdrive 0-10V <b>RELD0</b> - eldoLED 0.1%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

## Photometrics

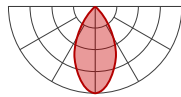
Values calculated based on 3500K and 90 CRI.



**NFL** - Narrow flood, 25°



**FLD** - Flood, 35°



**WFL** - Wide flood, 55°

	LM	W	LM/W
S	890	15	59
M	2100	30.6	70
L	2750	44.6	62

### MULTIPLIER TABLE

Use the table to get results for different color temperatures.

Multiplier - CCT/CRI

CCT	WATTS 90 CRI	LPW 90 CRI
2700K	1.15	0.87
3000K	1.08	0.93
3500K	1	1
4000K	0.97	1.03
5000K	0.93	1.08

## Technical Specifications

### OPTIC

#### Miniature Reflector Optic (MRO)

The Miniature Reflector Optic (MRO) is composed of molded Total Internal Reflection (TIR) elements placed over the LED emitter, along with precise parabolic reflectors that further shield the light source. The resulting beam is soft with a feathered edge.

### LIGHT SOURCE

Compact COB (Chip-On-Board) LED module, 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, eidoLED 0.1% SOLOdrive 0-10V, eidoLED 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

**MRO lens:** Polycarbonate

**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.