



# MOONRING 1.5

MR1.5 | SUSPENDED, CEILING

### STANDARD SIZES

Ring diameters from 2 feet to 16 feet

### LAMPING

LED - Direct & Indirect - 80/90 CRI - 3000K/3500K/4000K

Output Options: MIN/LOW/MED/HI/RGB

Dimming down to 0%

### FINISH

Two Tone Paint Options:

Brushed Aluminum, White, Black, Silver, Brass, RAL Classic Colors

### CONSTRUCTION

Industrial Strength Extruded & Welded 6061 Aluminum





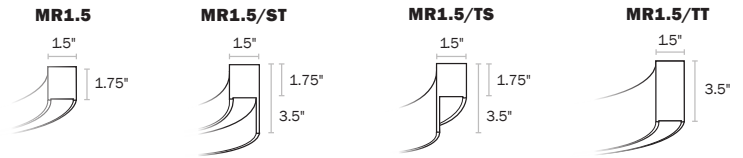
# PRODUCT SUBMITTAL WORKSHEET

## SAMPLE PRODUCT CODE

MR1.5/TS – D3 – SS – MED/90/3500 – 0/10V/0% – LENS – LOW/90/3500 – 0/10V/0% – HT – BK – RAL1001 – UNV – EMB/1 – OS/1 – SB  
 1 2 3 4 5 6 7 8 9 10 11 12 13a 13b 13c

### 1. BASE MODEL (CHOOSE ONE)

- MR1.5** Inside short wall, outside short wall
- MR1.5/ST** Inside short wall, outside tall wall
- MR1.5/TS** Inside tall wall, outside short wall
- MR1.5/TT** Inside tall wall, outside tall wall

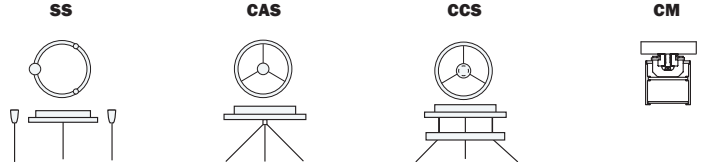


### 2. NOMINAL SIZE (CHOOSE ONE)

- D2** 2' (24") outer diameter
- D3** 3' (36") outer diameter
- D4** 4' (48") outer diameter
- D5** 5' (60") outer diameter
- D6** 6' (72") outer diameter
- D7** 7' (84") outer diameter
- D8** 8' (96") outer diameter
- D10** 10' (120") outer diameter
- D12** 12' (144") outer diameter
- D14** 14' (168") outer diameter
- D16** 16' (192") outer diameter

### 3. MOUNTING (CHOOSE ONE)

- SS** Standard Suspension
- CAS<sup>1</sup>** Central Axis Suspension
- CCS<sup>1</sup>** Collared Central Suspension
- CM** Ceiling Mounted (Not available with indirect lighting)



<sup>1</sup>Unavailable for rings D7, D8, D10, D12, D14 or D16

### 4. LED LAMPING – DIRECT (CHOOSE ONE UNDER A, B, & C)

- A. OUTPUT<sup>2</sup>**      **B. CRI<sup>3</sup>**      **C. CCT<sup>3</sup>**
- MIN**       **80**       **3000K**
  - LOW**       **90**       **3500K**
  - MED**            **4000K**
  - HI**
  - RGB**

DELIVERED LUMENS (LM)	WATTS (W)	EFFICACY (LM/W)
See pages 6-7 for complete details.		~65

<sup>2</sup>Direct/Indirect lighting combinations are limited when specifying HIGH OUTPUT due to increased thermal temperatures and/or driver type limitations. See the 'Direct/Indirect LED Lamping Chart' on page 8 and LED driver footnotes.

<sup>3</sup>CRI/CCT not applicable for RGB lighting.



## 5. REMOTE DRIVER — DIRECT (CHOOSE ONE)

- 0/10V/S** 0-10V dimming down to 5% (Standard Dimming)
- 0/10V/1%<sup>4</sup>** 0-10V dimming down to 1%
- 0/10V/0%<sup>5</sup>** 0-10V premium dimming down to 0%
- DALI<sup>5</sup>** DALI flicker-free dimming down to 0%
- DMX** DMX flicker-free dimming down to 0% (Recommended for RGB lamping)
- ECOSYS1** Lutron Hi-lume 1% EcoSystem, constant current
- ECOSYS5** Lutron 5-Series 5% EcoSystem, constant current
- LTEA** Lutron Hi-lume 1% 2-wire TRIAC dimming (120V forward-phase only), constant current

<sup>4</sup>If choosing HIGH output for the DIRECT lamping option, INDIRECT lamping is unavailable for rings D7 and above.

<sup>5</sup>If choosing HIGH output for the DIRECT lamping option, INDIRECT lamping is unavailable for rings D8 and D16. Also not available in 347V driver models (#12).

## 6. LENS — DIRECT

- LENS** Extra diffuse lens

## 7. LED LAMPING — INDIRECT (CHOOSE NONE OR ONE UNDER A, B, & C — NOT AVAILABLE WITH CEILING MOUNTING)

- N** None. Choose when indirect lamping is not desired.

### A. OUTPUT<sup>6</sup>

- MIN**
- LOW**
- MED**
- HI**
- RGB**

### B. CRI<sup>7</sup>

- 80**
- 90**

### C. CCT<sup>7</sup>

- 3000K**
- 3500K**
- 4000K**

DELIVERED LUMENS (LM)	WATTS (W)	EFFICACY (LM/W)
See pages 6-7 for complete details.		~65

<sup>6</sup>Direct/Indirect lamping combinations are limited when specifying HIGH OUTPUT due to increased thermal temperatures and/or driver type limitations. See the 'Direct/Indirect Lamping Chart' on page 8 and LED driver footnotes.

<sup>7</sup>CRI/CCT not applicable for RGB lamping.

## 8. REMOTE DRIVER — INDIRECT (CHOOSE ONE — NOT AVAILABLE WITH CEILING MOUNTING)

- N** None. Choose when indirect lamping is not desired.
- 0/10V/S** 0-10V dimming down to 5% (Standard Dimming)
- 0/10V/1%<sup>8</sup>** 0-10V dimming down to 1%
- 0/10V/0%<sup>9</sup>** 0-10V premium dimming down to 0%
- DALI<sup>9</sup>** DALI flicker-free dimming down to 0%
- DMX** DMX flicker-free dimming down to 0% (Recommended for RGB lamping)
- ECOSYS1** Lutron Hi-lume 1% EcoSystem, constant current
- ECOSYS5** Lutron 5-Series 5% EcoSystem, constant current
- LTEA** Lutron Hi-lume 1% 2-wire TRIAC dimming (120V forward-phase only), constant current

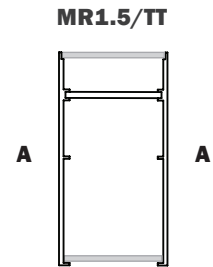
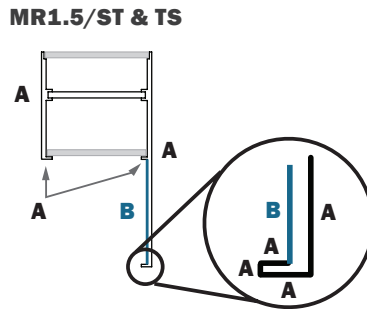
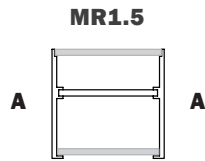
<sup>8</sup>If choosing HI output for the DIRECT lamping option, INDIRECT lamping is unavailable for rings D7 and above.

<sup>9</sup>If choosing HI output for the DIRECT lamping option, INDIRECT lamping is unavailable for rings D8 and D16. Also not available in 347V driver models (#12).

## 9. LENS — INDIRECT (CHOOSE ONE)

- N** None. Choose when indirect lamping is not desired. Fixture will be supplied with an aluminum cover in place of a lens to match the exterior finish.
- LENS** Extra diffuse lens
- HT<sup>10</sup>** High transmission, near-clear lens

<sup>10</sup>High transmission lens increases lumen output by ~14%, but LED chip is visible. Recommended only when top-side of fixture is not directly visible.



**10. FINISH – SURFACE (A)** (CHOOSE ONE)

- BAL** Brushed Aluminum
- BK** Black Powder Coat
- BRS** Brass Metallic Powder Coat
- SV** Silver Powder Coat
- WH** White Powder Coat
- WH/AM** White Antimicrobial Powder Coat (for healthcare environments)
- RAL\_\_\_\_\_** Specify RAL Classic Color code (ex: RAL3003) [ralcolorchart.com/ral-classic](http://ralcolorchart.com/ral-classic)

**11. FINISH – SURFACE (B)** (CHOOSE ONE - NOT APPLICABLE FOR MR1.5 AND MR1.5/TT BASE MODELS)

- BAL** Brushed Aluminum
- BK** Black Powder Coat
- BRS** Brass Metallic Powder Coat
- SV** Silver Powder Coat
- WH** White Powder Coat
- WH/AM** White Antimicrobial Powder Coat (for healthcare environments)
- RAL\_\_\_\_\_** Specify RAL Classic Color code (ex: RAL3003) [ralcolorchart.com/ral-classic](http://ralcolorchart.com/ral-classic)

**12. VOLTAGE** (CHOOSE ONE)

- UNV** Universal Voltage (120VAC-277VAC)
- 347** 347 Volt (*Driver options may be limited*)

**13. ADDITIONAL OPTIONS** (OPTIONAL – CHOOSE ONE UNDER A, B, & C, IF DESIRED)

**A. EMERGENCY OPTIONS**

- EMB/\_\_\_<sup>11</sup>** Emergency Battery (*indicate quantity – each battery powers 4 linear feet*)
- EMC/\_\_\_<sup>11</sup>** Emergency Circuit (*indicate quantity of 4 linear foot section to be illuminated by emergency circuit*)

<sup>11</sup>Consult ALW for more details.

**B. SENSOR OPTIONS** (COMPATIBLE ONLY WITH 0-10V DRIVERS – INDICATE QUANTITY IF DESIRED, OTHERWISE IT WILL AUTOMATICALLY BE CALCULATED)

- ENLGH/\_\_\_<sup>12</sup>** Enlighted® remote smart sensor (*occupancy, daylight, networking, and more*)
- OS/\_\_\_** 0-10V remote occupancy sensor
- PH/\_\_\_** 0-10V remote photocell/daylight sensor

<sup>12</sup>Enlighted® Gateway and Energy Manager (by others) plus programming required. Learn more at [enlightedinc.com](http://enlightedinc.com).

**C. ADDITIONAL OPTIONS** (NOT APPLICABLE FOR CEILING MOUNT)

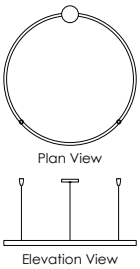
- SB** Seismic Bracing



## MECHANICAL DIAGRAMS

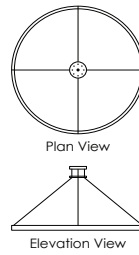


## MOUNTING OPTIONS



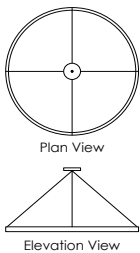
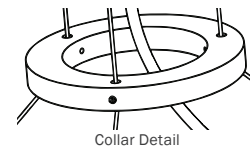
### Standard Suspension (SS)

- (1) 4.5" white canopy per power feed location
- (1) bullet mount
- (1) 8' aircraft cable and
- (1) 2" white canopy (for use with T-bar mounting) per suspension point



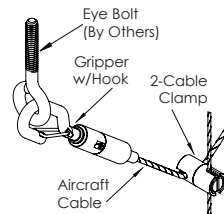
### Central Collared Suspension (CCS)

- (1) 5" white central axis canopy and
- (1) 5" collared ring (color matches specified body finish) that all aircraft cables and power feeds route through.



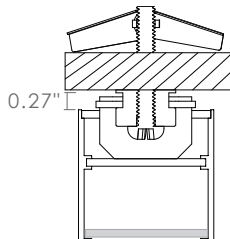
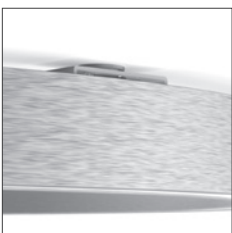
### Central Axis Suspension (CAS)

- (1) 5" white central axis canopy per fixture that all aircraft cables/power feeds route into, as shown.



### Seismic Bracing (SB)

- Add-on hardware includes cable gripper with hook, 2-cable clamp and specified length of aircraft cable per suspension point.



### Ceiling Mount (CM)

Ceiling mount is for horizontal, ceiling mounting only. The fixture is not compatible with indirect lighting or vertical surface mounting (i.e. on a wall). Three ceiling-mount brackets per fixture. Surface Mount hardware adds 0.27" height to all options, as shown.

SS110618-A.0



## PERFORMANCE & MOUNTING DETAILS<sup>13</sup>

RING DIAMETER	OUTPUT TYPE	LUMENS (LM) <i>direct</i> <i>indirect</i>	WATTS (W) <i>direct OR indirect</i> <i>direct AND indirect</i>	POWER DROPS <sup>14</sup> <i>direct OR indirect</i> <i>direct AND indirect</i> <i>(0/10V/S Driver)<sup>16</sup></i>	REMOTE DRIVER BOXES <sup>15</sup> <i>direct OR indirect</i> <i>direct AND indirect</i> <i>(0/10V/S Driver)<sup>16</sup></i>	SUSPENSION POINTS	FIXTURE SECTIONS	APPROX. WEIGHT (LBS)	CENTRAL AXIS, COLLARED OR CEILING
D2	MIN	1500 1650	TBD	TBD	TBD	3	1x Ring	12.5	YES
	LOW	2250 2500	35 70	1 1	1 1				
	MED	3000 3350	47 94	1 1	1 1				
	HIGH	4500 5050	70 140	1 1	1 1				
D3	MIN	2250 2525	TBD	TBD	TBD	3	1x Ring	18.75	YES
	LOW	3375 3750	54 108	1 1	1 1				
	MED	4500 5050	72 144	1 1	1 1				
	HIGH	6750 7575	108 216	1 2	1 2				
D4	MIN	3000 3350	TBD	TBD	TBD	3	1x Ring	25	YES
	LOW	4500 5050	73 146	1 1	1 1				
	MED	6000 6750	97 194	1 2	1 2				
	HIGH	9000 10100	145 290	1 2	1 2				
D5	MIN	3750 4200	TBD	TBD	TBD	3	1x Ring	31.75	YES
	LOW	5600 6300	92 184	1 1	1 1				
	MED	7500 8400	122 244	1 2	1 2				
	HIGH	11250 12625	183 366	1 2	1 2				
D6	MIN	4500 5050	TBD	TBD	TBD	3	1x Ring	37.5	NO
	LOW	6750 7575	110 220	1 2	1 2				
	MED	9000 10100	147 294	1 2	1 2				
	HIGH	13500 15150	220 440	2 2	2 4				
D7	MIN	5250 5900	TBD	TBD	TBD	4	2x Joined Arcs	40.75	NO
	LOW	7900 8850	129 258	2 2	2 2				
	MED	10500 11800	172 344	2 2	2 2				
	HIGH	15750 17700	257 514	2 2	2 4				

<sup>13</sup>Performance calculations are based on LM-79 test of MAX output at 80 CRI and 4000K. MIN, LOW, MED and HIGH calculations are extrapolated values.

<sup>14</sup>Power Drop refers to the total quantity of canopies dropping low voltage power to the fixture. Each canopy may have one or multiple wire feeds supplying power to the fixture.

<sup>15</sup>One or more drivers may be enclosed in each Remote Driver Box. See your final drawing/submittal for details.

<sup>16</sup>Applies to 0/10V/S drivers. For additional info on other driver models see your final drawing/submittal.



## PERFORMANCE & MOUNTING DETAILS (CONT.)<sup>13</sup>

RING DIAMETER	OUTPUT TYPE	LUMENS (LM) <i>direct indirect</i>	WATTS (W) <i>direct OR indirect direct AND indirect</i>	POWER DROPS <sup>14</sup> <i>direct OR indirect direct AND indirect (0/10V/S Driver)<sup>16</sup></i>	REMOTE DRIVER BOXES <sup>15</sup> <i>direct OR indirect direct AND indirect (0/10V/S Driver)<sup>16</sup></i>	SUSPENSION POINTS	FIXTURE SECTIONS	APPROX. WEIGHT (LBS)	CENTRAL AXIS, COLLARED OR CEILING
<b>D8</b>	MIN	6000 6725	TBD	TBD	TBD	4	2x Joined Arcs	50	NO
	LOW	9000 10100	147 294	2	2 2				
	MED	12000 13475	196 392	2	2 4				
	HIGH	18000 20200	295 590	2	2 4				
<b>D10</b>	MIN	7500 8425	TBD	TBD	TBD	8	4x Joined Arcs	62.5	NO
	LOW	11250 12625	185 370	4	4 4				
	MED	15000 16850	246 492	4	4 4				
	HIGH	22500 25250	369 738	4	4 4				
<b>D12</b>	MIN	9000 10100	TBD	TBD	TBD	8	4x Joined Arcs	75	NO
	LOW	13500 15150	222 444	4	4 4				
	MED	18000 20200	296 592	4	4 4				
	HIGH	27000 30300	444 888	4	4 8				
<b>D14</b>	MIN	10500 11800	TBD	TBD	TBD	8	4x Joined Arcs	87.5	NO
	LOW	15750 17700	259 518	4	4 4				
	MED	21000 23575	346 692	4	4 4				
	HIGH	31500 35350	518 1036	4	4 8				
<b>D16</b>	MIN	12000 13500	TBD	TBD	TBD	8	4x Joined Arcs	100	NO
	LOW	18000 20200	298 596	4	4 4				
	MED	24000 27000	397 794	4	4 8				
	HIGH	36000 40400	595 1190	4	4 8				

<sup>13</sup>Performance calculations are based on LM-79 test of MAX output at 80 CRI and 4000K. MIN, LOW, MED and HIGH calculations are extrapolated values.

<sup>14</sup>Power Drop refers to the total quantity of canopies dropping low voltage power to the fixture. Each canopy may have one or multiple wire feeds supplying power to the fixture.

<sup>15</sup>One or more drivers may be enclosed in each Remote Driver Box. See your final drawing/submittal for details.

<sup>16</sup>Applies to 0/10V/S drivers. For additional info on other driver models see your final drawing/submittal.



## DIRECT/INDIRECT LED LAMPING CHART

Due to high thermal conditions, Direct & Indirect Lamping combinations are limited to the options below. Additional lamping combinations may be limited to the driver specified.

		INDIRECT LAMPING					
		NONE	MIN	LOW	MED	HIGH	RGB
DIRECT LAMPING	MIN	✓	✓	✓	✓	✓	✓
	LOW	✓	✓	✓	✓	✓	✓
	MED	✓	✓	✓	✓		
	HIGH	✓	✓	✓			
	RGB	✓	✓	✓			✓

## HOW TO CALCULATE VOLTAGE DROP?

Your MOONRING may be powered with more than 1x Class 2 LED driver. Let's use the White LED, 33VDC chart below as an example.

### 1. Determine Load Size of Each Circuit

- Open the driver enclosure and you'll see a silver sticker that indicates the Power (Wattage).
- Let's say the load is 45W. Round up to the nearest load, which is 50W (we're using the White LED, 33VDC chart in this example).

### 2. Determine Distance from Driver to Load

Let's assume the distance is 60 ft.

### 3. Determine Wire Gauge

In this example, ALW recommends to install 16 AWG wire between the Driver and Canopy (where power drops to the ring).

## MOONRING 1.5 VOLTAGE DROP CHART FOR REMOTE DRIVERS - WHITE LED, 33VDC

For best performance, ensure proper wire gauge is installed between the remote LED driver and canopy that is dropping power to your fixture. *This chart only applies to MOONRING 1.5 White LEDs at 33VDC. Do not use this chart to calculate voltage drop for other fixtures.*

WIRE GAUGE	20W 0.61A	30W 0.91A	40W 1.21A	50W 1.52A	60W 1.82A	70W 2.12A	80W 2.42A	90W 2.73A	100W 3.03A
18 AWG	119 ft.	77 ft.	55 ft.	43 ft.	34 ft.	28 ft.	23 ft.	20 ft.	17 ft.
16 AWG	195 ft.	127 ft.	93 ft.	73 ft.	59 ft.	50 ft.	42 ft.	37 ft.	32 ft.
14 AWG	315 ft.	207 ft.	153 ft.	121 ft.	99 ft.	84 ft.	72 ft.	63 ft.	56 ft.
12 AWG	506 ft.	334 ft.	249 ft.	197 ft.	163 ft.	138 ft.	120 ft.	106 ft.	94 ft.
10 AWG	809 ft.	537 ft.	400 ft.	319 ft.	264 ft.	225 ft.	196 ft.	173 ft.	155 ft.

## MOONRING 1.5 VOLTAGE DROP CHART FOR REMOTE DRIVERS - RGB LED, 24VDC

For best performance, ensure proper wire gauge is installed between the remote LED driver and canopy that is dropping power to your fixture. *This chart only applies to MOONRING 1.5 RGB fixtures at 24VDC. Do not use this chart to calculate voltage drop for other fixtures.*

WIRE GAUGE	20W 0.83A	30W 1.25A	40W 1.67A	50W 2.08A	60W 2.50A	70W 2.92A	80W 3.33A	90W 3.75A	100W 4.20A
18 AWG	59 ft.	37 ft.	25 ft.	19 ft.	14 ft.	11 ft.	8 ft.	7 ft.	5 ft.
16 AWG	99 ft.	63 ft.	45 ft.	35 ft.	27 ft.	22 ft.	18 ft.	15 ft.	13 ft.
14 AWG	163 ft.	106 ft.	77 ft.	60 ft.	49 ft.	40 ft.	34 ft.	30 ft.	26 ft.
12 AWG	264 ft.	173 ft.	128 ft.	100 ft.	82 ft.	69 ft.	60 ft.	52 ft.	46 ft.
10 AWG	424 ft.	280 ft.	208 ft.	164 ft.	136 ft.	115 ft.	100 ft.	88 ft.	78 ft.

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## ADDITIONAL OPTIONS & SPECIFICATIONS

### LENS

**Direct:** Extra diffused opal acrylic lens (LENS).

**Indirect:** Extra diffused opal acrylic lens (LENS) OR clear high transmission lens (HT).

### HOUSING

100% recyclable, extruded architectural grade 6061 aluminum with a 0.075" minimum wall thickness.

### SAFETY & REGULATORY

ETL Listed (U.S. & Canada). Suitable for dry locations only.  
Conforms to UL std. 2108, Low Voltage Luminaires / Low Voltage Lighting Systems.  
Certified to CSA std. C22.2#250.0:2008 Ed. 3+G1;G2.

### OPERATING TEMPERATURE

Luminaire should be installed and operated ONLY in dry environments where the ambient temperature ranges from -4 °F to 122 °F (-20 °C to 50 °C). Luminaire operation in environments outside the listed temperature range voids the warranty AND may damage the product or adversely impact lamp life, lumen output and color consistency.

### WARRANTY

Limited 5-year warranty. Details: [alwusa.com/warranty](http://alwusa.com/warranty)

### SENSOR OPTIONS

Optional, occupancy detection (OS) and/or daylight harvesting (PS) sensor available. Or upgrade to an optional Enlighted® Smart Sensor (ENLGHT) for additional capabilities. Contact ALW for details.

### FINISH



**Brushed  
Aluminum**



**White\***



**Black**



**Silver**



**Brass**



**RAL Classic**

\*For healthcare environments, a white antimicrobial finish (WH/AM) is also available.