

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

SR4MOTA5 LE1 RDD4x AMB MWxGL  
Nom 4" diam recessed downlight

### **Test Number**

SP-00789\_1

### **Test Date**

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

Input Watts	15.8 W
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#### Lumen Output

Output Lumens	396
Efficacy	25.06 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.33
90° - 270° Size	-0.33
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.21
Two luminaires, plane 90°	1.21
Four luminaires	1.11

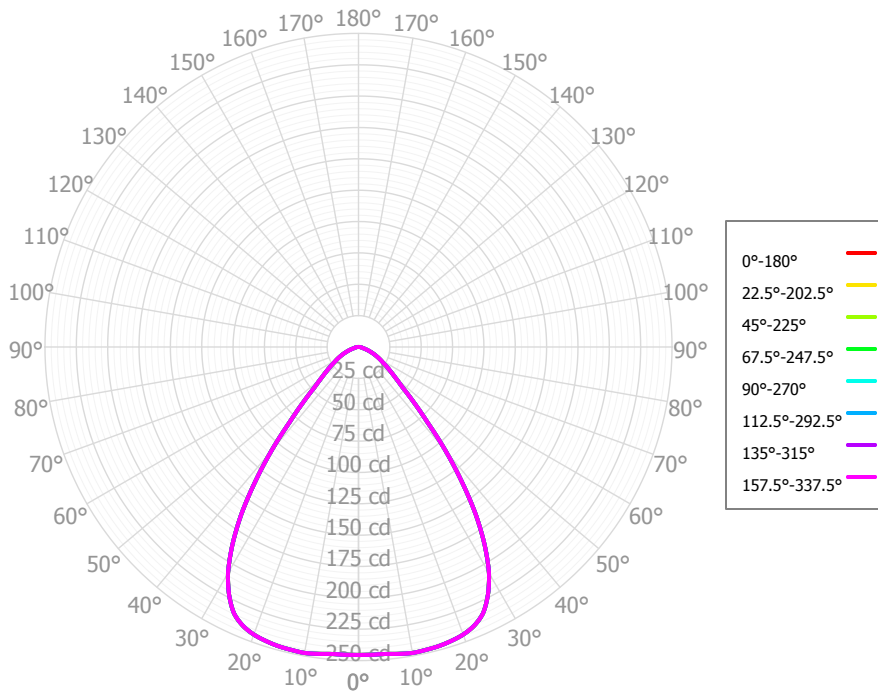
#### Full Beam Angle

0° - 180°	77°
90° - 270°	77°

### IES File Header Contents

Keyword	Value
TEST	SP-00789_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	3/14/2019
UPDATE	4/4/2019
LUMCAT	SR4MOTA5 LE1 RDD4x AMB MWxGL
LUMINAIRE	Nom 4" diam recessed downlight
OTHER	Beam Angle: 75.3 degrees
OTHER	Matte white trim; Clear glass lens
LAMPCAT	N/A
LAMP	N/A, LEDs Amber in color, 590 nm
OTHER	CCT Output Multipliers: N/A
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	N/A
_CCTMULT	N/A
_LAMPMULT	N/A

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	23.90	6.04%	90.00° - 100.00°	0.12	0.03%
10.00° - 20.00°	69.80	17.63%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	106.40	26.87%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	99.54	25.14%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	50.35	12.72%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	25.12	6.34%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	13.78	3.48%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.08	1.28%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.85	0.47%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	395.82	99.97%	0.00° - 180.00°	395.94	100.00%



### Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	471	471	471	471	460	460	460	460	440	440	440	421	421	421	404	404	396
	<b>1</b>	443	430	418	407	433	421	410	400	405	396	388	390	383	376	376	371	363
	<b>2</b>	415	391	372	355	406	384	366	351	371	356	343	359	346	336	347	337	331
	<b>3</b>	388	357	333	314	380	351	329	311	340	321	306	330	314	301	321	307	301
	<b>4</b>	363	327	300	280	355	322	297	278	313	292	275	305	286	271	297	281	275
	<b>5</b>	340	300	272	252	333	296	270	250	289	266	248	282	261	246	275	257	252
	<b>6</b>	319	277	248	228	313	273	247	227	267	243	225	261	240	224	255	237	232
	<b>7</b>	300	256	228	208	294	253	226	207	248	224	206	243	221	205	238	218	214
	<b>8</b>	282	238	210	190	277	235	209	190	230	206	189	226	204	188	222	202	199
	<b>9</b>	266	221	194	175	261	219	193	175	215	191	174	211	189	174	208	188	184
	<b>10</b>	251	207	180	162	247	205	179	162	201	178	161	198	176	161	195	175	172

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	8.1 fc	8.8 ft
6.5 ft	5.8 fc	10.4 ft
7.5 ft	4.4 fc	11.9 ft
8.0 ft	3.8 fc	12.7 ft
10.0 ft	2.5 fc	15.9 ft
12.0 ft	1.7 fc	19.1 ft
14.0 ft	1.3 fc	22.3 ft
16.0 ft	1.0 fc	25.5 ft
20.0 ft	0.6 fc	31.9 ft
24.0 ft	0.4 fc	38.2 ft
28.0 ft	0.3 fc	44.6 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	30,906	30,906	30,906
<b>45.00°</b>	11,090	11,090	11,090
<b>55.00°</b>	6,079	6,079	6,079
<b>65.00°</b>	4,133	4,133	4,133
<b>75.00°</b>	2,103	2,103	2,103
<b>85.00°</b>	2,267	2,267	2,267

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	14.1	15.3	14.5	15.6	15.9	14.1	15.3	14.5	15.6	15.9
	<b>3H</b>	15.0	16.1	15.4	16.4	16.8	15.0	16.1	15.4	16.4	16.8
	<b>4H</b>	15.2	16.2	15.6	16.5	16.9	15.2	16.2	15.6	16.5	16.9
	<b>6H</b>	15.3	16.2	15.7	16.5	16.9	15.3	16.2	15.7	16.5	16.9
	<b>8H</b>	15.3	16.2	15.7	16.6	17.0	15.3	16.2	15.7	16.6	17.0
	<b>12H</b>	15.3	16.2	15.8	16.5	17.0	15.3	16.2	15.8	16.5	17.0
<b>4H</b>	<b>2H</b>	14.4	15.4	14.8	15.8	16.2	14.4	15.4	14.8	15.8	16.2
	<b>3H</b>	15.5	16.3	15.9	16.7	17.1	15.5	16.3	15.9	16.7	17.1
	<b>4H</b>	15.7	16.4	16.1	16.8	17.3	15.7	16.4	16.1	16.8	17.3
	<b>6H</b>	15.8	16.4	16.3	16.9	17.4	15.8	16.4	16.3	16.9	17.4
	<b>8H</b>	15.9	16.5	16.4	16.9	17.4	15.9	16.5	16.4	16.9	17.4
	<b>12H</b>	16.0	16.5	16.4	17.0	17.4	16.0	16.5	16.4	17.0	17.4
<b>8H</b>	<b>4H</b>	15.7	16.3	16.2	16.7	17.2	15.7	16.3	16.2	16.7	17.2
	<b>6H</b>	15.9	16.4	16.4	16.9	17.4	15.9	16.4	16.4	16.9	17.4
	<b>8H</b>	16.0	16.4	16.5	17.0	17.5	16.0	16.4	16.5	17.0	17.5
	<b>12H</b>	16.2	16.5	16.7	17.0	17.6	16.2	16.5	16.7	17.0	17.6
<b>12H</b>	<b>4H</b>	15.7	16.2	16.1	16.7	17.1	15.7	16.2	16.1	16.7	17.1
	<b>6H</b>	15.9	16.3	16.4	16.8	17.3	15.9	16.3	16.4	16.8	17.3
	<b>8H</b>	16.1	16.4	16.6	16.9	17.5	16.1	16.4	16.6	16.9	17.5

Corrected UGR values based on total output lumens

SHR = 1.0