

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

SR4MOTD 10LE1 RDD4x 30K MWxGL  
Nom 4" diam round recessed downlight

### **Test Number**

SP-00790\_1

### **Test Date**

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

### Summary of Results

#### Power

Input Watts	15.9 W
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#### Lumen Output

Output Lumens	790
Efficacy	49.67 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

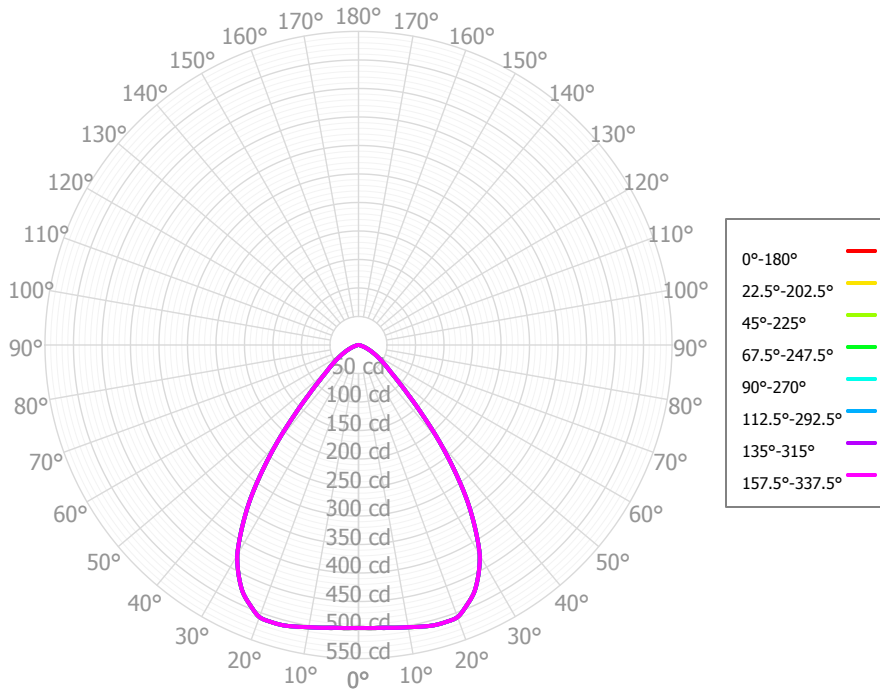
#### Full Beam Angle

0° - 180°	77°
90° - 270°	77°

### IES File Header Contents

Keyword	Value
TEST	SP-00790_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	3/14/2019
UPDATE	3/20/2019
LUMCAT	SR4MOTD 10LE1 RDD4x 30K MWxGL
LUMINAIRE	Nom 4" diam round recessed downlight
OTHER	Beam Angle: 71.6 degrees
OTHER	Matte white trim; Clear glass lens
LAMPCAT	N/A
LAMP	N/A, White Light, CRI: 80
OTHER	CCT Output Multipliers: N/A, only 3500K available
OTHER	Total luminaire wattages is approximate
OTHER	This report prepared by Spectrum Lighting
_CRI	80
_CCTMULT	only 30K available
_LAMPMULT	only 10L available

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	48.45	6.13%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	143.94	18.23%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	218.10	27.62%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	202.69	25.66%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	100.77	12.76%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	46.34	5.87%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	21.63	2.74%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.08	0.77%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.72	0.22%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	789.71	99.99%	0.00° - 180.00°	789.77	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>	940	940	940	940	918	918	918	918	877	877	877	840	840	840	806	806	790
	<b>1</b>	887	861	838	817	867	844	823	804	811	794	779	782	768	756	754	743	728
	<b>2</b>	832	786	748	716	814	772	737	708	746	717	692	722	698	677	699	680	666
	<b>3</b>	779	719	672	635	763	707	664	629	686	649	619	666	635	609	647	621	609
	<b>4</b>	730	659	607	567	715	650	601	564	632	590	557	615	579	550	600	569	558
	<b>5</b>	685	606	552	511	671	599	547	509	583	539	504	569	530	499	556	522	512
	<b>6</b>	643	560	504	464	630	553	500	462	540	494	459	528	487	455	517	481	472
	<b>7</b>	604	518	462	423	592	512	460	422	502	454	420	491	449	417	482	444	436
	<b>8</b>	569	481	426	388	558	476	424	387	467	419	385	458	415	384	450	411	404
	<b>9</b>	536	448	394	358	527	444	392	357	436	389	355	428	385	354	421	382	375
	<b>10</b>	507	419	366	331	498	415	364	330	408	361	329	401	358	328	395	355	350

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	16.4 fc	8.7 ft
6.5 ft	11.7 fc	10.3 ft
7.5 ft	8.8 fc	11.9 ft
8.0 ft	7.8 fc	12.7 ft
10.0 ft	5.0 fc	15.9 ft
12.0 ft	3.4 fc	19.0 ft
14.0 ft	2.5 fc	22.2 ft
16.0 ft	1.9 fc	25.4 ft
20.0 ft	1.2 fc	31.7 ft
24.0 ft	0.9 fc	38.1 ft
28.0 ft	0.6 fc	44.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	62,471	62,471	62,471
<b>45.00°</b>	21,979	21,979	21,979
<b>55.00°</b>	11,210	11,210	11,210
<b>65.00°</b>	6,395	6,395	6,395
<b>75.00°</b>	2,402	2,402	2,402
<b>85.00°</b>	2,331	2,331	2,331

### 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>	15.8	17.0	16.2	17.3	17.6	15.8	17.0	16.2	17.3	17.6
	<b>3H</b>	16.4	17.4	16.8	17.8	18.1	16.4	17.4	16.8	17.8	18.1
	<b>4H</b>	16.4	17.4	16.8	17.8	18.1	16.4	17.4	16.8	17.8	18.1
	<b>6H</b>	16.4	17.3	16.8	17.7	18.1	16.4	17.3	16.8	17.7	18.1
	<b>8H</b>	16.4	17.2	16.8	17.6	18.0	16.4	17.2	16.8	17.6	18.0
	<b>12H</b>	16.3	17.2	16.8	17.5	18.0	16.3	17.2	16.8	17.5	18.0
<b>4H</b>	<b>2H</b>	16.0	17.0	16.4	17.3	17.7	16.0	17.0	16.4	17.3	17.7
	<b>3H</b>	16.7	17.5	17.1	17.9	18.3	16.7	17.5	17.1	17.9	18.3
	<b>4H</b>	16.7	17.4	17.2	17.8	18.3	16.7	17.4	17.2	17.8	18.3
	<b>6H</b>	16.7	17.3	17.2	17.8	18.2	16.7	17.3	17.2	17.8	18.2
	<b>8H</b>	16.7	17.3	17.2	17.7	18.2	16.7	17.3	17.2	17.7	18.2
	<b>12H</b>	16.7	17.2	17.2	17.7	18.1	16.7	17.2	17.2	17.7	18.1
<b>8H</b>	<b>4H</b>	16.6	17.2	17.1	17.7	18.1	16.6	17.2	17.1	17.7	18.1
	<b>6H</b>	16.7	17.1	17.2	17.6	18.1	16.7	17.1	17.2	17.6	18.1
	<b>8H</b>	16.7	17.1	17.2	17.6	18.1	16.7	17.1	17.2	17.6	18.1
	<b>12H</b>	16.7	17.0	17.2	17.5	18.1	16.7	17.0	17.2	17.5	18.1
<b>12H</b>	<b>4H</b>	16.6	17.1	17.1	17.6	18.1	16.6	17.1	17.1	17.6	18.1
	<b>6H</b>	16.6	17.0	17.1	17.5	18.0	16.6	17.0	17.1	17.5	18.0
	<b>8H</b>	16.6	17.0	17.2	17.5	18.1	16.6	17.0	17.2	17.5	18.1

Corrected UGR values based on total output lumens

SHR = 1.0