

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGE14LEDOS 15L 35K XX AR1423OS MW GL  
Nom 14 inch diam, AR1423 trim, MW interior finish, clear glass lens

### Test Number

SP-01198\_M-15L

### Test Date

11/5/2020

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

### Summary of Results

#### Power

Input Watts	13.5 W
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#### Lumen Output

Output Lumens	1412
Efficacy	104.61 lm/W

#### Luminous Dimensions

0° - 180° Size	-1.17
90° - 270° Size	-1.17
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.24
Four luminaires	1.27

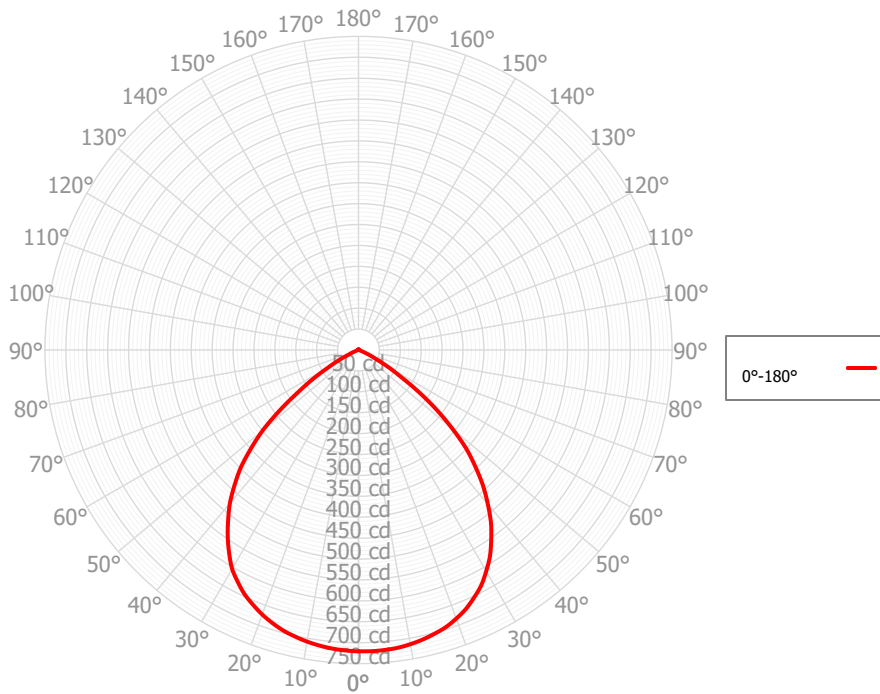
#### Full Beam Angle

0° - 180°	94°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-01198_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE14LEDOS 15L 35K XX AR1423OS MW GL
LUMINAIRE	Nom 14 inch diam, AR1423 trim, MW interior finish, clear glass lens
OTHER	Beam angle: 93.8 deg
LAMPCAT	N/A
LAMP	N/A, G4
OTHER	CCT Output Multiplier: 27K x 0.96, 30K x 0.99, 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 45L

**Candela Polar Plot**



**Zonal Lumen Summary**

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	69.42	4.92%	90.00° - 100.00°	0.49	0.03%
10.00° - 20.00°	197.08	13.96%	100.00° - 110.00°	0.36	0.03%
20.00° - 30.00°	298.28	21.12%	100.00° - 120.00°	0.78	0.06%
30.00° - 40.00°	342.03	24.22%	120.00° - 130.00°	0.43	0.03%
40.00° - 50.00°	302.58	21.43%	130.00° - 140.00°	0.41	0.03%
50.00° - 60.00°	161.74	11.45%	140.00° - 150.00°	0.38	0.03%
60.00° - 70.00°	34.32	2.43%	150.00° - 160.00°	0.32	0.02%
70.00° - 80.00°	2.88	0.20%	160.00° - 170.00°	0.20	0.01%
80.00° - 90.00°	0.79	0.06%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	1409.13	99.78%	0.00° - 180.00°	1412.23	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	720.88	720.88
2.50°	721.22	719.50
5.00°	720.37	717.08
7.50°	718.52	713.30
10.00°	714.68	708.41
12.50°	709.47	702.10
15.00°	702.70	694.86
17.50°	695.08	684.89
20.00°	683.76	673.42
22.50°	670.80	659.60
25.00°	653.78	644.77
27.50°	635.35	625.49
30.00°	611.06	604.68
32.50°	585.25	576.04
35.00°	553.45	545.36
37.50°	520.50	512.25
40.00°	481.32	478.69
42.50°	441.37	439.06
45.00°	395.89	398.70
47.50°	350.07	349.04
50.00°	293.64	298.80
52.50°	236.99	237.84
55.00°	178.51	177.27
57.50°	121.88	129.76
60.00°	84.25	83.77
62.50°	49.15	53.64
65.00°	30.63	26.23
67.50°	14.39	15.77
70.00°	8.30	6.70
72.50°	3.35	3.84
75.00°	2.14	1.58
77.50°	1.22	1.32
80.00°	1.05	1.06
82.50°	0.88	0.79
85.00°	0.71	0.62
87.50°	0.58	0.63
90.00°	0.55	0.60
92.50°	0.49	0.51
95.00°	0.41	0.45
97.50°	0.35	0.45
100.00°	0.33	0.42
102.50°	0.31	0.37
105.00°	0.31	0.33
107.50°	0.36	0.30
110.00°	0.46	0.29
112.50°	0.50	0.27

### 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>	1680	1680	1680	1680	1641	1641	1641	1641	1567	1567	1567	1500	1500	1500	1438	1438	1409
	<b>1</b>	1579	1531	1487	1447	1543	1499	1460	1424	1440	1408	1379	1387	1361	1337	1337	1317	1289
	<b>2</b>	1472	1383	1311	1249	1438	1358	1291	1235	1310	1254	1207	1266	1220	1180	1225	1187	1163
	<b>3</b>	1368	1250	1160	1088	1336	1229	1146	1078	1189	1118	1060	1153	1092	1042	1118	1068	1046
	<b>4</b>	1270	1133	1032	955	1241	1115	1021	948	1082	1000	936	1051	981	924	1022	962	942
	<b>5</b>	1181	1029	923	845	1154	1014	915	841	986	899	832	960	883	824	935	869	852
	<b>6</b>	1099	939	831	753	1075	926	824	750	902	812	744	880	799	738	859	788	773
	<b>7</b>	1026	860	752	676	1003	849	747	674	828	736	670	809	727	665	791	717	704
	<b>8</b>	959	790	684	611	939	781	680	609	763	672	606	747	664	603	731	656	644
	<b>9</b>	899	730	626	555	881	722	622	554	706	615	552	692	609	549	678	602	592
	<b>10</b>	845	676	575	508	828	669	572	507	656	566	505	643	561	503	631	555	546

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	23.8 fc	5.9 ft
6.5 ft	17.1 fc	7.0 ft
7.5 ft	12.8 fc	8.0 ft
8.0 ft	11.3 fc	8.6 ft
10.0 ft	7.2 fc	10.7 ft
12.0 ft	5.0 fc	12.8 ft
14.0 ft	3.7 fc	15.0 ft
16.0 ft	2.8 fc	17.1 ft
20.0 ft	1.8 fc	21.4 ft
24.0 ft	1.3 fc	25.7 ft
28.0 ft	0.9 fc	29.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	7217	7217	7217
45.00°	5605	5615	5625
55.00°	3116	3110	3105
65.00°	726	700	673
75.00°	83	77	72
85.00°	81	79	76

### UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	12.2	13.6	12.6	13.9	14.2	12.4	13.8	12.8	14.1	14.4
	3H	12.1	13.3	12.5	13.7	14.0	12.3	13.5	12.7	13.9	14.2
	4H	12.1	13.2	12.5	13.5	13.9	12.3	13.4	12.7	13.7	14.1
	6H	12.0	13.0	12.4	13.4	13.8	12.2	13.2	12.6	13.6	14.0
	8H	11.9	12.9	12.4	13.3	13.7	12.2	13.1	12.6	13.5	13.9
	12H	11.9	12.8	12.3	13.2	13.6	12.1	13.0	12.5	13.4	13.8
4H	2H	12.1	13.2	12.5	13.6	14.0	12.3	13.4	12.7	13.8	14.1
	3H	12.1	12.9	12.5	13.3	13.8	12.2	13.1	12.7	13.5	13.9
	4H	12.0	12.8	12.4	13.2	13.6	12.2	12.9	12.6	13.4	13.8
	6H	11.9	12.6	12.4	13.0	13.5	12.1	12.7	12.5	13.2	13.7
	8H	11.8	12.5	12.3	12.9	13.4	12.0	12.6	12.5	13.1	13.6
	12H	11.8	12.3	12.3	12.8	13.3	12.0	12.5	12.5	13.0	13.5
8H	4H	11.8	12.5	12.3	12.9	13.4	12.0	12.6	12.5	13.1	13.6
	6H	11.7	12.2	12.2	12.7	13.2	11.9	12.4	12.4	12.9	13.4
	8H	11.7	12.1	12.2	12.7	13.1	11.8	12.3	12.4	12.8	13.3
	12H	11.6	12.0	12.1	12.5	13.1	11.8	12.2	12.3	12.7	13.3
12H	4H	11.8	12.3	12.3	12.8	13.3	12.0	12.5	12.5	13.0	13.5
	6H	11.7	12.1	12.2	12.6	13.2	11.9	12.3	12.4	12.8	13.3
	8H	11.6	12.0	12.1	12.5	13.1	11.8	12.2	12.3	12.7	13.3

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0