

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGE10LEDOS 30L 35K XX AR1023OS MW SO  
Nom 10 inch diam, AR1023 trim, MW interior finish, Solite lens

### Test Number

SP-00690\_4\_M-30L

### Test Date

11/5/2020

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

### Summary of Results

#### Power

Input Watts	22.7 W
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#### Lumen Output

Output Lumens	2588
Efficacy	113.99 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.83
90° - 270° Size	-0.83
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.24
Four luminaires	1.26

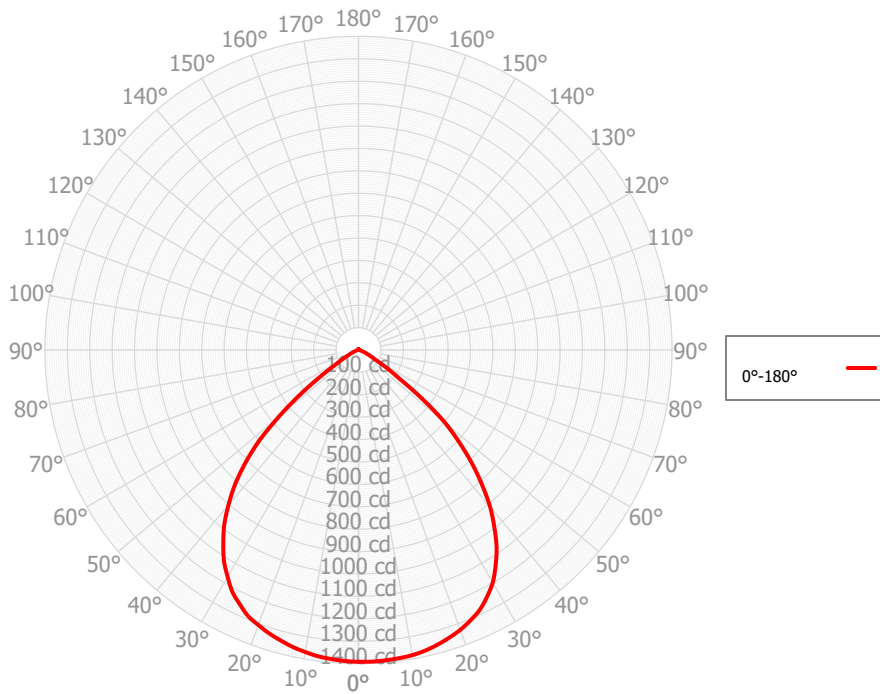
#### Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-00690_4_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE10LEDOS 30L 35K XX AR1023OS MW SO
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, Solite lens
OTHER	Beam angle: 91 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

**Candela Polar Plot**



**Zonal Lumen Summary**

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	134.18	5.19%	90.00° - 100.00°	0.97	0.04%
10.00° - 20.00°	381.85	14.76%	100.00° - 110.00°	1.03	0.04%
20.00° - 30.00°	581.59	22.48%	100.00° - 120.00°	1.91	0.07%
30.00° - 40.00°	660.11	25.51%	120.00° - 130.00°	0.82	0.03%
40.00° - 50.00°	543.95	21.02%	130.00° - 140.00°	0.84	0.03%
50.00° - 60.00°	217.35	8.40%	140.00° - 150.00°	0.75	0.03%
60.00° - 70.00°	45.33	1.75%	150.00° - 160.00°	0.69	0.03%
70.00° - 80.00°	12.82	0.50%	160.00° - 170.00°	0.42	0.02%
80.00° - 90.00°	3.79	0.15%	170.00° - 180.00°	0.16	0.01%
0.00° - 90.00°	2580.95	99.75%	0.00° - 180.00°	2587.52	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	1392.28	1392.28
2.50°	1392.97	1390.18
5.00°	1391.11	1385.47
7.50°	1388.16	1379.66
10.00°	1383.69	1369.55
12.50°	1375.17	1358.16
15.00°	1362.44	1342.92
17.50°	1347.09	1326.95
20.00°	1329.61	1307.10
22.50°	1306.84	1286.84
25.00°	1280.79	1253.33
27.50°	1242.75	1218.82
30.00°	1199.10	1169.09
32.50°	1139.86	1117.87
35.00°	1075.30	1052.71
37.50°	996.42	984.86
40.00°	914.24	903.19
42.50°	816.80	817.13
45.00°	717.23	716.39
47.50°	610.23	604.68
50.00°	502.49	466.25
52.50°	360.84	333.73
55.00°	223.98	211.78
57.50°	152.45	123.98
60.00°	87.63	82.22
62.50°	65.50	53.47
65.00°	45.48	38.45
67.50°	33.67	26.99
70.00°	23.17	18.40
72.50°	16.30	13.40
75.00°	11.10	10.61
77.50°	9.28	8.69
80.00°	7.34	7.18
82.50°	5.23	5.09
85.00°	3.33	2.81
87.50°	1.67	1.66
90.00°	0.83	0.77
92.50°	0.74	0.65
95.00°	0.91	0.63
97.50°	1.26	0.93
100.00°	1.20	1.25
102.50°	0.92	1.16
105.00°	0.81	1.07
107.50°	0.76	0.95
110.00°	0.87	0.85
112.50°	1.03	0.79

### 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>	3079	3079	3079	3079	3006	3006	3006	3006	2871	2871	2871	2748	2748	2748	2634	2634	2581
	<b>1</b>	2897	2809	2731	2660	2831	2752	2681	2617	2644	2587	2534	2545	2499	2457	2454	2418	2368
	<b>2</b>	2706	2549	2418	2309	2644	2502	2383	2282	2414	2315	2230	2333	2252	2180	2258	2192	2147
	<b>3</b>	2522	2313	2151	2022	2465	2274	2125	2005	2202	2075	1971	2135	2028	1938	2072	1983	1942
	<b>4</b>	2349	2103	1923	1786	2296	2071	1904	1774	2010	1866	1751	1954	1830	1729	1902	1795	1759
	<b>5</b>	2189	1918	1729	1589	2141	1891	1714	1581	1840	1684	1565	1792	1656	1549	1748	1629	1597
	<b>6</b>	2042	1755	1562	1424	1998	1732	1550	1418	1689	1527	1406	1648	1505	1395	1610	1483	1455
	<b>7</b>	1909	1611	1419	1283	1869	1592	1409	1279	1555	1390	1271	1520	1372	1263	1487	1355	1330
	<b>8</b>	1788	1485	1294	1163	1751	1468	1287	1160	1436	1271	1154	1406	1257	1148	1378	1243	1221
	<b>9</b>	1678	1373	1187	1060	1644	1359	1180	1058	1331	1168	1053	1305	1156	1049	1280	1144	1124
	<b>10</b>	1578	1274	1092	971	1548	1262	1087	969	1237	1077	966	1215	1067	962	1193	1057	1040

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.0 fc	5.6 ft
6.5 ft	33.0 fc	6.6 ft
7.5 ft	24.8 fc	7.6 ft
8.0 ft	21.8 fc	8.1 ft
10.0 ft	13.9 fc	10.2 ft
12.0 ft	9.7 fc	12.2 ft
14.0 ft	7.1 fc	14.2 ft
16.0 ft	5.4 fc	16.3 ft
20.0 ft	3.5 fc	20.3 ft
24.0 ft	2.4 fc	24.4 ft
28.0 ft	1.8 fc	28.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	27698	27698	27698
<b>45.00°</b>	20179	20173	20167
<b>55.00°</b>	7769	7663	7557
<b>65.00°</b>	2141	2058	1975
<b>75.00°</b>	853	844	834
<b>85.00°</b>	760	730	701

### 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	13.9	15.2	14.2	15.5	15.8	13.2	14.5	13.6	14.8	15.1
	3H	14.0	15.1	14.4	15.5	15.8	13.3	14.4	13.7	14.8	15.1
	4H	14.0	15.0	14.4	15.4	15.8	13.3	14.3	13.7	14.7	15.1
	6H	13.9	14.9	14.3	15.3	15.7	13.3	14.2	13.7	14.6	15.0
	8H	13.9	14.8	14.3	15.2	15.6	13.2	14.2	13.7	14.6	15.0
	12H	13.9	14.7	14.3	15.1	15.6	13.2	14.1	13.6	14.5	14.9
4H	2H	13.8	14.9	14.2	15.2	15.6	13.1	14.2	13.5	14.6	14.9
	3H	14.0	14.8	14.4	15.2	15.6	13.3	14.1	13.7	14.6	15.0
	4H	14.0	14.7	14.4	15.1	15.6	13.3	14.1	13.7	14.5	14.9
	6H	14.0	14.6	14.4	15.1	15.5	13.3	13.9	13.8	14.4	14.9
	8H	13.9	14.5	14.4	15.0	15.5	13.3	13.9	13.8	14.3	14.8
	12H	13.9	14.4	14.4	14.9	15.4	13.3	13.8	13.7	14.3	14.8
8H	4H	13.9	14.5	14.3	14.9	15.4	13.2	13.8	13.7	14.3	14.7
	6H	13.9	14.4	14.4	14.9	15.3	13.2	13.7	13.7	14.2	14.7
	8H	13.8	14.3	14.4	14.8	15.3	13.2	13.7	13.7	14.2	14.7
	12H	13.8	14.2	14.4	14.7	15.3	13.2	13.6	13.7	14.1	14.7
12H	4H	13.8	14.4	14.3	14.8	15.3	13.2	13.7	13.6	14.2	14.7
	6H	13.8	14.3	14.3	14.7	15.3	13.2	13.6	13.7	14.1	14.6
	8H	13.8	14.2	14.3	14.7	15.3	13.2	13.6	13.7	14.1	14.7

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0