

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGE10LEDOS 30L 35K XX AR1023OS MW GL  
Nom 10 inch diam, AR1023 trim, MW interior finish, clear glass lens

### Test Number

SP-00690\_3\_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	2464
Efficacy	108.55 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.26
Two luminaires, plane 90°	1.25
Four luminaires	1.27

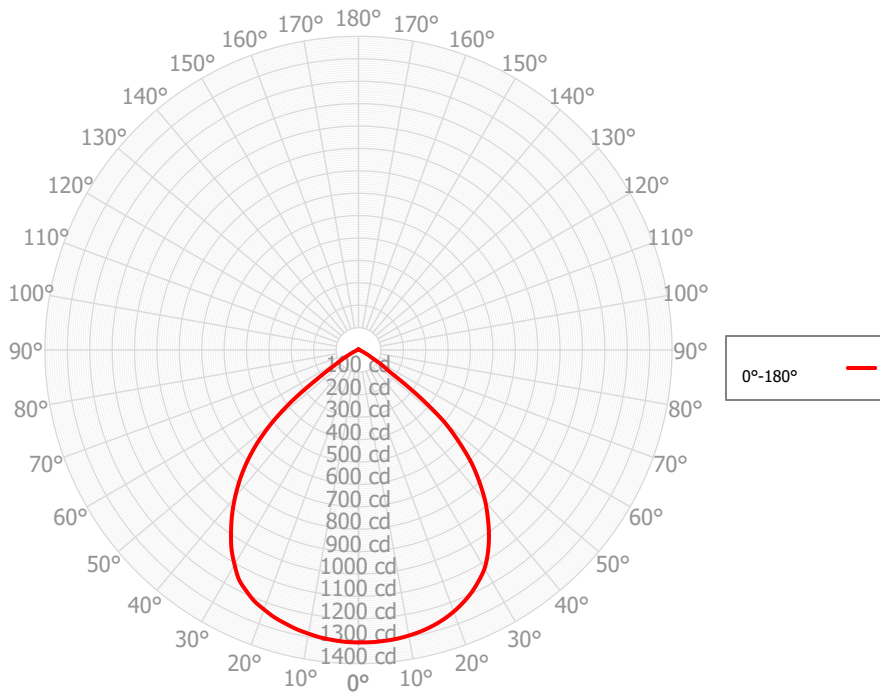
#### Full Beam Angle

0° - 180°	93°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-00690_3_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 GL
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, clear glass lens
OTHER	Beam angle: 93 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°	125.84	5.11%	90.00° - 100.00°	0.93	0.04%
10.00° - 20.00°	358.52	14.55%	100.00° - 110.00°	1.03	0.04%
20.00° - 30.00°	546.95	22.20%	100.00° - 120.00°	1.93	0.08%
30.00° - 40.00°	624.43	25.34%	120.00° - 130.00°	0.96	0.04%
40.00° - 50.00°	536.24	21.76%	130.00° - 140.00°	0.86	0.03%
50.00° - 60.00°	211.87	8.60%	140.00° - 150.00°	0.66	0.03%
60.00° - 70.00°	38.45	1.56%	150.00° - 160.00°	0.57	0.02%
70.00° - 80.00°	11.59	0.47%	160.00° - 170.00°	0.42	0.02%
80.00° - 90.00°	3.67	0.15%	170.00° - 180.00°	0.16	0.01%
0.00° - 90.00°	2457.55	99.74%	0.00° - 180.00°	2464.04	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	1305.84	1305.84
2.50°	1306.17	1304.76
5.00°	1304.26	1300.30
7.50°	1301.02	1295.04
10.00°	1294.96	1286.31
12.50°	1286.99	1277.09
15.00°	1275.95	1264.26
17.50°	1261.65	1251.19
20.00°	1243.30	1233.07
22.50°	1220.85	1214.25
25.00°	1194.51	1186.49
27.50°	1162.52	1155.79
30.00°	1126.34	1106.88
32.50°	1075.25	1055.19
35.00°	1015.82	992.33
37.50°	949.32	927.48
40.00°	879.90	857.18
42.50°	798.88	783.20
45.00°	714.38	701.93
47.50°	609.62	610.19
50.00°	500.90	502.44
52.50°	339.42	374.24
55.00°	172.34	222.25
57.50°	117.78	127.22
60.00°	68.37	82.72
62.50°	49.36	54.38
65.00°	31.37	37.25
67.50°	22.72	26.22
70.00°	15.00	18.35
72.50°	12.22	14.13
75.00°	9.66	11.32
77.50°	7.88	9.30
80.00°	6.11	7.49
82.50°	4.34	5.36
85.00°	2.79	3.17
87.50°	1.61	2.00
90.00°	0.86	0.91
92.50°	0.71	0.95
95.00°	0.69	0.99
97.50°	0.82	0.89
100.00°	0.99	0.79
102.50°	1.20	0.72
105.00°	1.26	0.68
107.50°	1.22	0.80
110.00°	1.24	0.85
112.50°	1.28	0.66

### 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>	2932	2932	2932	2932	2863	2863	2863	2863	2734	2734	2734	2616	2616	2616	2508	2508	2458
	<b>1</b>	2759	2675	2600	2532	2695	2620	2552	2491	2518	2463	2412	2423	2379	2339	2337	2302	2270
	<b>2</b>	2576	2426	2302	2197	2517	2381	2268	2171	2298	2203	2122	2221	2143	2074	2149	2086	2029
	<b>3</b>	2400	2200	2046	1923	2345	2164	2021	1906	2095	1974	1874	2031	1928	1843	1971	1886	1812
	<b>4</b>	2235	2000	1828	1697	2184	1969	1809	1686	1912	1773	1664	1858	1739	1643	1808	1706	1622
	<b>5</b>	2082	1823	1642	1509	2035	1797	1628	1501	1748	1600	1486	1703	1573	1471	1660	1547	1456
	<b>6</b>	1941	1667	1483	1350	1899	1645	1471	1345	1604	1449	1334	1565	1428	1323	1529	1407	1313
	<b>7</b>	1814	1530	1345	1216	1775	1511	1336	1212	1475	1318	1204	1442	1301	1196	1411	1285	1189
	<b>8</b>	1698	1409	1227	1102	1663	1393	1219	1099	1362	1205	1093	1333	1191	1087	1306	1177	1081
	<b>9</b>	1593	1302	1124	1003	1561	1288	1118	1001	1262	1106	996	1237	1094	992	1213	1083	987
	<b>10</b>	1498	1208	1034	918	1469	1196	1029	916	1172	1019	913	1151	1009	909	1130	1000	906

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	43.2 fc	5.8 ft
6.5 ft	30.9 fc	6.8 ft
7.5 ft	23.2 fc	7.9 ft
8.0 ft	20.4 fc	8.4 ft
10.0 ft	13.1 fc	10.5 ft
12.0 ft	9.1 fc	12.6 ft
14.0 ft	6.7 fc	14.7 ft
16.0 ft	5.1 fc	16.8 ft
20.0 ft	3.3 fc	21.0 ft
24.0 ft	2.3 fc	25.3 ft
28.0 ft	1.7 fc	29.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	25979	25979	25979
<b>45.00°</b>	20099	20011	19923
<b>55.00°</b>	5978	6410	6843
<b>65.00°</b>	1477	1546	1615
<b>75.00°</b>	743	774	806
<b>85.00°</b>	637	659	680

### 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>	12.4	13.7	12.8	14.0	14.4	12.7	14.0	13.1	14.3	14.7
	<b>3H</b>	12.5	13.6	12.9	14.0	14.3	12.8	13.9	13.2	14.3	14.6
	<b>4H</b>	12.5	13.5	12.9	13.9	14.3	12.8	13.8	13.2	14.2	14.6
	<b>6H</b>	12.4	13.4	12.9	13.8	14.2	12.8	13.7	13.2	14.1	14.5
	<b>8H</b>	12.4	13.3	12.8	13.7	14.1	12.7	13.7	13.2	14.1	14.5
	<b>12H</b>	12.4	13.3	12.8	13.7	14.1	12.7	13.6	13.1	14.0	14.4
<b>4H</b>	<b>2H</b>	12.4	13.4	12.8	13.8	14.2	12.7	13.7	13.1	14.1	14.5
	<b>3H</b>	12.5	13.3	12.9	13.7	14.1	12.8	13.6	13.2	14.0	14.5
	<b>4H</b>	12.5	13.2	12.9	13.6	14.1	12.8	13.5	13.2	14.0	14.4
	<b>6H</b>	12.5	13.1	12.9	13.6	14.0	12.8	13.5	13.3	13.9	14.4
	<b>8H</b>	12.4	13.1	12.9	13.5	14.0	12.8	13.4	13.3	13.8	14.3
	<b>12H</b>	12.4	13.0	12.9	13.5	13.9	12.8	13.3	13.3	13.8	14.3
<b>8H</b>	<b>4H</b>	12.4	13.0	12.8	13.4	13.9	12.7	13.3	13.2	13.8	14.2
	<b>6H</b>	12.4	12.9	12.9	13.4	13.9	12.7	13.2	13.2	13.7	14.2
	<b>8H</b>	12.4	12.8	12.9	13.4	13.9	12.7	13.2	13.3	13.7	14.2
	<b>12H</b>	12.4	12.8	12.9	13.3	13.9	12.7	13.1	13.3	13.6	14.2
<b>12H</b>	<b>4H</b>	12.3	12.9	12.8	13.4	13.8	12.7	13.2	13.1	13.7	14.2
	<b>6H</b>	12.3	12.8	12.9	13.3	13.8	12.7	13.1	13.2	13.6	14.2
	<b>8H</b>	12.4	12.8	12.9	13.3	13.8	12.7	13.1	13.2	13.6	14.2

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0