

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

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

### **Test Number**

SP-00690\_2\_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	2253
Efficacy	99.23 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.18
Two luminaires, plane 90°	1.18
Four luminaires	1.24

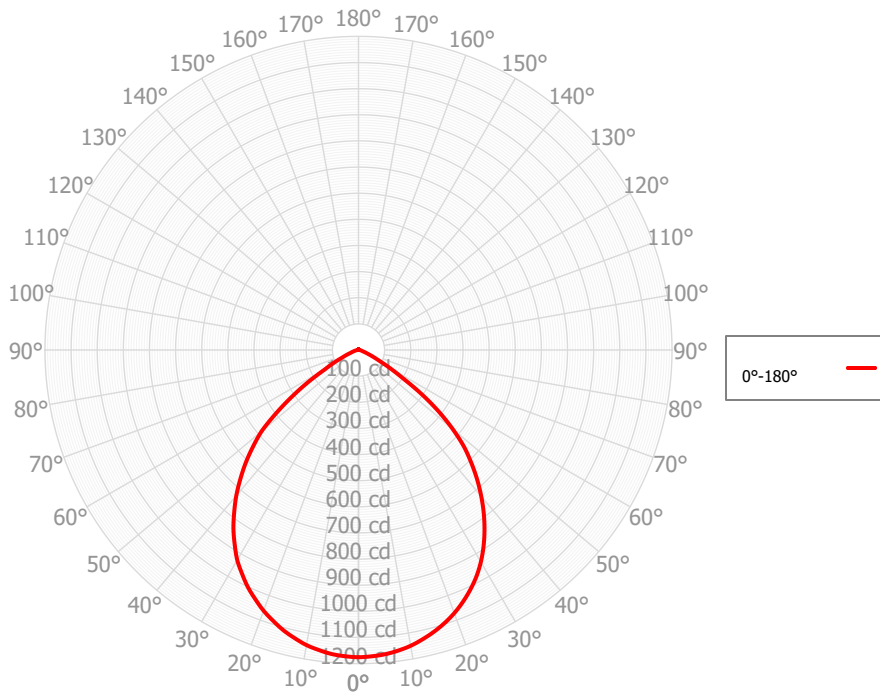
#### Full Beam Angle

0° - 180°	92°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-00690_2_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 FG
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, frosted glass lens
OTHER	Beam angle: 91.8 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

**Candela Polar Plot**



**Zonal Lumen Summary**

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	112.54	5.00%	90.00° - 100.00°	1.30	0.06%
10.00° - 20.00°	313.48	13.92%	100.00° - 110.00°	1.16	0.05%
20.00° - 30.00°	462.47	20.53%	100.00° - 120.00°	2.11	0.09%
30.00° - 40.00°	521.38	23.15%	120.00° - 130.00°	0.97	0.04%
40.00° - 50.00°	467.58	20.76%	130.00° - 140.00°	0.96	0.04%
50.00° - 60.00°	270.22	12.00%	140.00° - 150.00°	0.85	0.04%
60.00° - 70.00°	73.15	3.25%	150.00° - 160.00°	0.52	0.02%
70.00° - 80.00°	19.01	0.84%	160.00° - 170.00°	0.35	0.02%
80.00° - 90.00°	5.54	0.25%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	2245.38	99.68%	0.00° - 180.00°	2252.58	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	1175.96	1175.96
2.50°	1173.46	1173.33
5.00°	1168.95	1168.36
7.50°	1160.71	1158.56
10.00°	1149.67	1146.88
12.50°	1134.09	1129.66
15.00°	1116.41	1110.64
17.50°	1095.84	1086.97
20.00°	1071.86	1062.07
22.50°	1043.80	1032.40
25.00°	1012.38	1001.69
27.50°	977.42	965.49
30.00°	936.76	928.39
32.50°	890.92	882.06
35.00°	840.88	834.66
37.50°	787.54	781.39
40.00°	730.93	727.65
42.50°	672.05	669.10
45.00°	610.52	610.36
47.50°	547.42	547.72
50.00°	470.69	484.31
52.50°	387.09	396.81
55.00°	296.12	309.68
57.50°	201.90	227.43
60.00°	140.13	149.52
62.50°	90.19	108.40
65.00°	62.08	70.15
67.50°	40.49	50.16
70.00°	28.36	32.42
72.50°	18.59	25.44
75.00°	14.52	19.07
77.50°	11.55	14.95
80.00°	8.73	11.18
82.50°	5.93	8.48
85.00°	3.87	5.84
87.50°	1.88	3.37
90.00°	1.27	1.60
92.50°	0.74	1.37
95.00°	0.87	1.30
97.50°	1.01	1.53
100.00°	0.92	1.62
102.50°	0.84	1.47
105.00°	0.96	1.26
107.50°	1.08	0.97
110.00°	1.06	0.81
112.50°	1.05	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>	2680	2680	2680	2680	2617	2617	2617	2617	2499	2499	2499	2391	2391	2391	2292	2292	2245
	<b>1</b>	2512	2432	2360	2295	2454	2382	2316	2257	2287	2234	2186	2200	2158	2119	2121	2087	2044
	<b>2</b>	2336	2192	2073	1972	2281	2151	2042	1949	2074	1983	1904	2002	1927	1861	1936	1875	1820
	<b>3</b>	2168	1977	1830	1712	2117	1943	1807	1697	1879	1763	1667	1820	1721	1639	1765	1682	1612
	<b>4</b>	2012	1789	1625	1500	1965	1760	1608	1490	1706	1574	1470	1657	1543	1451	1610	1513	1432
	<b>5</b>	1870	1624	1453	1326	1826	1600	1439	1319	1555	1413	1305	1512	1389	1292	1473	1365	1278
	<b>6</b>	1741	1481	1307	1182	1701	1461	1296	1177	1422	1276	1167	1386	1256	1157	1352	1237	1148
	<b>7</b>	1624	1356	1182	1061	1588	1339	1174	1057	1306	1158	1050	1275	1142	1043	1246	1127	1036
	<b>8</b>	1519	1247	1076	959	1486	1232	1069	956	1204	1056	950	1177	1043	945	1152	1030	940
	<b>9</b>	1424	1152	985	872	1394	1139	979	870	1114	968	866	1091	957	861	1069	947	857
	<b>10</b>	1339	1068	905	797	1311	1056	901	796	1035	891	792	1014	882	789	995	874	786

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	38.9 fc	5.7 ft
6.5 ft	27.8 fc	6.7 ft
7.5 ft	20.9 fc	7.7 ft
8.0 ft	18.4 fc	8.3 ft
10.0 ft	11.8 fc	10.3 ft
12.0 ft	8.2 fc	12.4 ft
14.0 ft	6.0 fc	14.4 ft
16.0 ft	4.6 fc	16.5 ft
20.0 ft	2.9 fc	20.6 ft
24.0 ft	2.0 fc	24.8 ft
28.0 ft	1.5 fc	28.9 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	23395	23395	23395
<b>45.00°</b>	17177	17176	17174
<b>55.00°</b>	10271	10388	10506
<b>65.00°</b>	2922	3017	3112
<b>75.00°</b>	1116	1203	1291
<b>85.00°</b>	883	996	1109

### 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	16.5	17.9	16.9	18.2	18.5	16.9	18.3	17.3	18.6	18.9
	3H	16.6	17.8	16.9	18.1	18.5	17.0	18.2	17.4	18.5	18.9
	4H	16.5	17.7	16.9	18.0	18.4	17.0	18.1	17.4	18.5	18.8
	6H	16.5	17.5	16.9	17.9	18.3	16.9	18.0	17.4	18.3	18.7
	8H	16.5	17.4	16.9	17.8	18.3	16.9	17.9	17.4	18.3	18.7
	12H	16.4	17.4	16.9	17.8	18.2	16.9	17.8	17.3	18.2	18.7
4H	2H	16.5	17.6	16.9	17.9	18.3	16.9	18.0	17.3	18.4	18.7
	3H	16.6	17.5	17.0	17.9	18.3	17.0	17.9	17.4	18.3	18.7
	4H	16.6	17.4	17.0	17.8	18.3	17.0	17.8	17.5	18.2	18.7
	6H	16.6	17.3	17.0	17.7	18.2	17.0	17.7	17.5	18.2	18.6
	8H	16.5	17.2	17.0	17.6	18.1	17.0	17.6	17.5	18.1	18.6
	12H	16.5	17.1	17.0	17.6	18.0	17.0	17.5	17.5	18.0	18.5
8H	4H	16.5	17.1	17.0	17.6	18.1	16.9	17.6	17.4	18.0	18.5
	6H	16.5	17.0	17.0	17.5	18.0	16.9	17.5	17.4	18.0	18.5
	8H	16.4	16.9	17.0	17.4	17.9	16.9	17.4	17.4	17.9	18.4
	12H	16.4	16.9	16.9	17.4	17.9	16.9	17.3	17.4	17.8	18.4
12H	4H	16.4	17.0	16.9	17.5	18.0	16.9	17.5	17.4	18.0	18.4
	6H	16.4	16.9	17.0	17.4	17.9	16.9	17.4	17.4	17.8	18.4
	8H	16.4	16.8	16.9	17.3	17.9	16.9	17.3	17.4	17.8	18.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0