

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGE12LEDOS 30L 35K XX AR1223OS MW FG  
Nom 12 inch diam, AR1223 trim, MW interior finish, frosted glass lens

### Test Number

SP-01197\_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	19.2 W
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#### Lumen Output

Output Lumens	1639
Efficacy	85.38 lm/W

#### Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.17
Two luminaires, plane 90°	1.15
Four luminaires	1.23

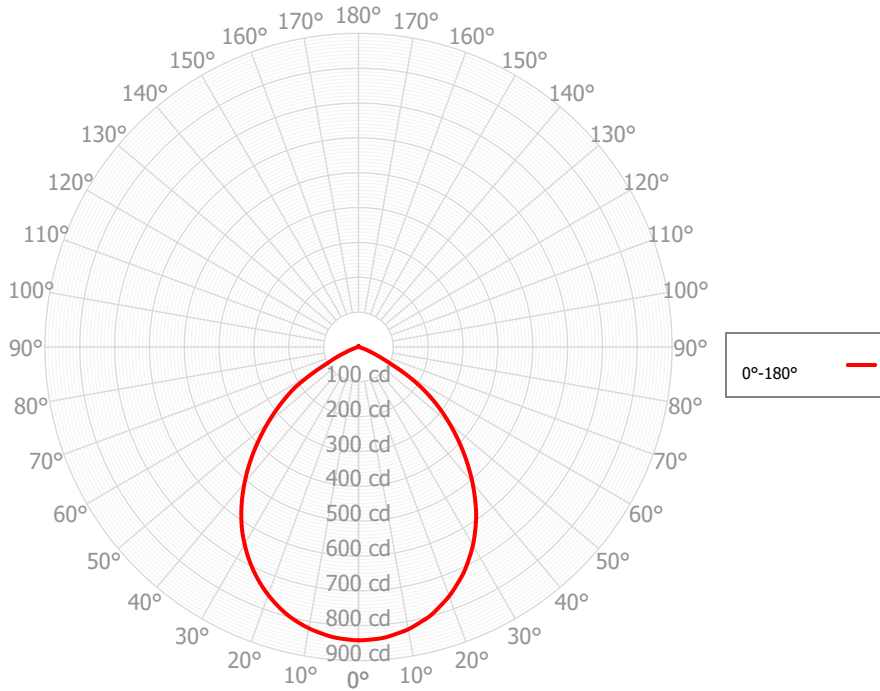
#### Full Beam Angle

0° - 180°	90°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-01197_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE12LEDOS 30L 35K XX AR1223OS MW FG
LUMINAIRE	Nom 12 inch diam, AR1223 trim, MW interior finish, frosted glass lens
OTHER	Beam angle: 90.5 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°	80.54	4.91%	90.00° - 100.00°	0.65	0.04%
10.00° - 20.00°	223.86	13.66%	100.00° - 110.00°	0.68	0.04%
20.00° - 30.00°	327.09	19.95%	100.00° - 120.00°	1.32	0.08%
30.00° - 40.00°	365.57	22.30%	120.00° - 130.00°	0.66	0.04%
40.00° - 50.00°	326.90	19.94%	130.00° - 140.00°	0.64	0.04%
50.00° - 60.00°	225.83	13.78%	140.00° - 150.00°	0.49	0.03%
60.00° - 70.00°	73.47	4.48%	150.00° - 160.00°	0.41	0.03%
70.00° - 80.00°	9.42	0.57%	160.00° - 170.00°	0.26	0.02%
80.00° - 90.00°	2.04	0.12%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	1634.72	99.72%	0.00° - 180.00°	1639.24	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	842.15	842.15
2.50°	840.53	839.80
5.00°	837.88	836.07
7.50°	830.75	828.71
10.00°	822.88	819.97
12.50°	810.72	808.47
15.00°	798.19	794.60
17.50°	779.82	777.16
20.00°	761.14	757.56
22.50°	738.21	735.48
25.00°	714.68	710.74
27.50°	686.30	683.58
30.00°	657.06	653.79
32.50°	623.71	622.15
35.00°	588.90	586.53
37.50°	549.49	548.79
40.00°	509.30	508.72
42.50°	467.35	467.71
45.00°	425.19	425.23
47.50°	382.69	382.34
50.00°	340.39	340.16
52.50°	298.35	298.10
55.00°	254.65	256.68
57.50°	209.27	215.32
60.00°	158.27	157.53
62.50°	102.81	100.28
65.00°	66.14	69.04
67.50°	40.79	39.37
70.00°	23.72	24.32
72.50°	10.43	11.13
75.00°	6.07	7.50
77.50°	4.70	4.48
80.00°	3.67	3.51
82.50°	2.71	2.54
85.00°	1.86	1.61
87.50°	1.03	0.92
90.00°	0.77	0.69
92.50°	0.56	0.56
95.00°	0.54	0.59
97.50°	0.54	0.63
100.00°	0.60	0.67
102.50°	0.66	0.65
105.00°	0.75	0.58
107.50°	0.79	0.52
110.00°	0.63	0.46
112.50°	0.55	0.53

### 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>	1950	1950	1950	1950	1905	1905	1905	1905	1819	1819	1819	1741	1741	1741	1669	1669	1635
	<b>1</b>	1827	1768	1715	1667	1784	1731	1683	1640	1663	1624	1588	1600	1568	1540	1542	1517	1485
	<b>2</b>	1696	1590	1502	1427	1656	1560	1479	1411	1503	1436	1378	1451	1396	1347	1403	1358	1329
	<b>3</b>	1571	1430	1321	1234	1534	1405	1304	1223	1358	1273	1202	1315	1242	1181	1275	1214	1188
	<b>4</b>	1456	1291	1170	1077	1421	1270	1157	1070	1231	1133	1056	1194	1110	1042	1160	1088	1066
	<b>5</b>	1351	1170	1043	949	1319	1152	1033	944	1119	1014	934	1088	997	925	1059	979	960
	<b>6</b>	1256	1065	936	844	1227	1050	929	840	1022	914	833	995	900	826	971	886	869
	<b>7</b>	1171	974	846	756	1145	961	840	754	937	828	749	915	817	744	893	806	790
	<b>8</b>	1095	895	769	683	1071	884	764	681	863	755	677	844	745	673	825	736	723
	<b>9</b>	1026	826	703	620	1005	817	699	619	799	691	616	782	684	613	766	676	664
	<b>10</b>	965	766	647	567	945	757	643	566	742	636	564	727	630	561	713	624	613

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	27.8 fc	5.5 ft
6.5 ft	19.9 fc	6.6 ft
7.5 ft	15.0 fc	7.6 ft
8.0 ft	13.2 fc	8.1 ft
10.0 ft	8.4 fc	10.1 ft
12.0 ft	5.8 fc	12.1 ft
14.0 ft	4.3 fc	14.1 ft
16.0 ft	3.3 fc	16.1 ft
20.0 ft	2.1 fc	20.2 ft
24.0 ft	1.5 fc	24.2 ft
28.0 ft	1.1 fc	28.2 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	11542	11542	11542
<b>45.00°</b>	8241	8241	8241
<b>55.00°</b>	6085	6097	6109
<b>65.00°</b>	2145	2168	2192
<b>75.00°</b>	321	340	359
<b>85.00°</b>	293	283	273

### 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	16.8	18.2	18.5	16.6	18.0	16.9	18.3	18.6
	3H	16.5	17.8	16.9	18.1	18.5	16.6	17.8	17.0	18.2	18.5
	4H	16.5	17.6	16.9	18.0	18.4	16.5	17.7	17.0	18.1	18.4
	6H	16.4	17.4	16.8	17.8	18.2	16.5	17.5	16.9	17.9	18.3
	8H	16.4	17.4	16.8	17.7	18.2	16.4	17.4	16.9	17.8	18.2
	12H	16.3	17.3	16.8	17.7	18.1	16.4	17.4	16.8	17.7	18.2
4H	2H	16.5	17.6	16.9	18.0	18.4	16.6	17.7	17.0	18.1	18.5
	3H	16.5	17.5	16.9	17.9	18.3	16.6	17.5	17.0	18.0	18.4
	4H	16.5	17.3	16.9	17.7	18.2	16.5	17.4	17.0	17.8	18.2
	6H	16.4	17.1	16.9	17.6	18.0	16.5	17.2	16.9	17.6	18.1
	8H	16.3	17.0	16.8	17.5	17.9	16.4	17.1	16.9	17.6	18.0
	12H	16.3	16.9	16.8	17.4	17.9	16.4	17.0	16.9	17.5	17.9
8H	4H	16.3	17.0	16.8	17.5	17.9	16.4	17.1	16.9	17.5	18.0
	6H	16.3	16.8	16.8	17.3	17.8	16.3	16.9	16.9	17.4	17.9
	8H	16.2	16.7	16.7	17.2	17.7	16.3	16.8	16.8	17.3	17.8
	12H	16.2	16.6	16.7	17.1	17.7	16.3	16.7	16.8	17.2	17.8
12H	4H	16.3	16.9	16.8	17.4	17.9	16.4	17.0	16.9	17.5	17.9
	6H	16.2	16.7	16.7	17.2	17.7	16.3	16.8	16.8	17.3	17.8
	8H	16.2	16.6	16.7	17.1	17.7	16.2	16.7	16.8	17.2	17.8

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0