

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

SGE12LEDOS 15L 35K XX AR1223OS MW GL  
Nom 12 inch diam, AR1223 trim, MW interior finish, clear glass lens

### Test Number

SP-01197\_1\_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	1379
Efficacy	102.18 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

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

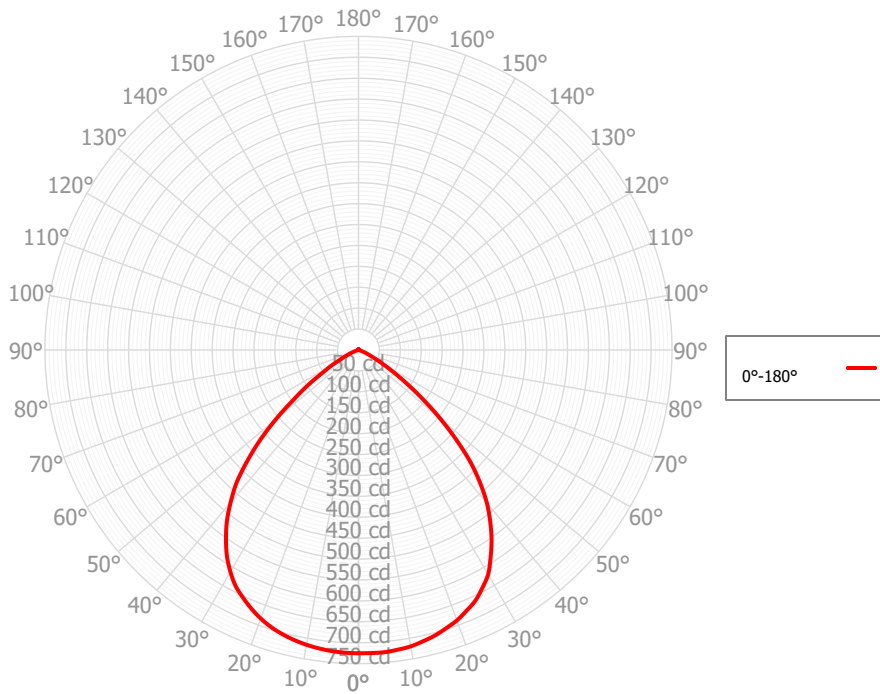
#### Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-01197_1_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE12LEDOS 15L 35K XX AR1223OS MW GL
LUMINAIRE	Nom 12 inch diam, AR1223 trim, MW interior finish, clear glass lens
OTHER	Beam angle: 91.2 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°	69.98	5.07%	90.00° - 100.00°	0.50	0.04%
10.00° - 20.00°	198.97	14.42%	100.00° - 110.00°	0.49	0.04%
20.00° - 30.00°	302.06	21.90%	100.00° - 120.00°	0.96	0.07%
30.00° - 40.00°	344.18	24.95%	120.00° - 130.00°	0.53	0.04%
40.00° - 50.00°	286.37	20.76%	130.00° - 140.00°	0.44	0.03%
50.00° - 60.00°	134.88	9.78%	140.00° - 150.00°	0.48	0.03%
60.00° - 70.00°	33.92	2.46%	150.00° - 160.00°	0.36	0.03%
70.00° - 80.00°	4.54	0.33%	160.00° - 170.00°	0.21	0.02%
80.00° - 90.00°	1.04	0.08%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	1375.94	99.74%	0.00° - 180.00°	1379.49	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	725.52	725.52
2.50°	725.66	724.80
5.00°	725.60	723.29
7.50°	723.09	720.16
10.00°	719.94	716.11
12.50°	713.75	710.68
15.00°	707.06	703.76
17.50°	697.84	695.08
20.00°	688.41	683.63
22.50°	675.23	669.69
25.00°	661.65	653.80
27.50°	641.68	636.56
30.00°	620.31	612.87
32.50°	588.13	585.71
35.00°	555.05	552.70
37.50°	517.67	517.39
40.00°	477.86	475.90
42.50°	430.30	432.72
45.00°	378.31	377.24
47.50°	316.22	319.46
50.00°	255.19	258.42
52.50°	195.98	197.05
55.00°	143.90	149.98
57.50°	101.30	103.87
60.00°	68.07	74.59
62.50°	44.38	46.90
65.00°	28.62	33.48
67.50°	19.14	20.94
70.00°	11.50	12.85
72.50°	4.96	6.06
75.00°	2.43	3.78
77.50°	1.72	2.05
80.00°	1.30	1.70
82.50°	0.97	1.32
85.00°	0.87	0.92
87.50°	0.83	0.64
90.00°	0.66	0.52
92.50°	0.47	0.45
95.00°	0.43	0.44
97.50°	0.40	0.43
100.00°	0.53	0.42
102.50°	0.65	0.41
105.00°	0.52	0.40
107.50°	0.42	0.39
110.00°	0.51	0.38
112.50°	0.57	0.37

### 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>	1641	1641	1641	1641	1603	1603	1603	1603	1531	1531	1531	1465	1465	1465	1404	1404	1376
	<b>1</b>	1544	1496	1454	1416	1508	1466	1427	1393	1408	1377	1349	1356	1331	1308	1307	1287	1261
	<b>2</b>	1440	1355	1285	1225	1407	1330	1266	1211	1283	1229	1183	1240	1196	1157	1200	1164	1140
	<b>3</b>	1340	1227	1140	1070	1309	1206	1126	1061	1168	1099	1043	1132	1074	1025	1098	1050	1028
	<b>4</b>	1246	1114	1016	942	1218	1096	1006	936	1064	986	924	1034	966	912	1006	948	929
	<b>5</b>	1160	1014	912	836	1134	999	904	832	972	888	824	947	873	815	923	859	842
	<b>6</b>	1082	927	822	748	1058	914	816	745	891	804	739	869	792	733	849	780	765
	<b>7</b>	1010	850	746	673	988	839	741	671	819	731	666	801	721	662	783	712	699
	<b>8</b>	945	782	680	609	926	773	676	608	756	668	604	740	660	601	725	652	641
	<b>9</b>	887	723	623	555	869	715	619	554	700	613	551	686	606	548	673	600	590
	<b>10</b>	834	671	573	508	818	664	570	507	651	564	505	639	559	503	627	554	545

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	24.0 fc	5.6 ft
6.5 ft	17.2 fc	6.6 ft
7.5 ft	12.9 fc	7.7 ft
8.0 ft	11.3 fc	8.2 ft
10.0 ft	7.3 fc	10.2 ft
12.0 ft	5.0 fc	12.3 ft
14.0 ft	3.7 fc	14.3 ft
16.0 ft	2.8 fc	16.4 ft
20.0 ft	1.8 fc	20.4 ft
24.0 ft	1.3 fc	24.5 ft
28.0 ft	0.9 fc	28.6 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	9943	9943	9943
<b>45.00°</b>	7332	7327	7322
<b>55.00°</b>	3438	3475	3511
<b>65.00°</b>	928	967	1007
<b>75.00°</b>	129	146	164
<b>85.00°</b>	137	139	141

### 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>	12.1	13.4	12.5	13.7	14.1	12.2	13.5	12.6	13.8	14.2
	<b>3H</b>	12.1	13.3	12.5	13.6	14.0	12.2	13.4	12.6	13.7	14.1
	<b>4H</b>	12.1	13.1	12.5	13.5	13.9	12.2	13.2	12.6	13.6	14.0
	<b>6H</b>	12.0	13.0	12.4	13.3	13.7	12.1	13.1	12.5	13.5	13.9
	<b>8H</b>	11.9	12.9	12.4	13.3	13.7	12.1	13.0	12.5	13.4	13.8
	<b>12H</b>	11.9	12.8	12.3	13.2	13.6	12.0	12.9	12.4	13.3	13.7
<b>4H</b>	<b>2H</b>	12.0	13.1	12.4	13.5	13.9	12.2	13.2	12.6	13.6	14.0
	<b>3H</b>	12.1	13.0	12.5	13.4	13.8	12.2	13.1	12.6	13.5	13.9
	<b>4H</b>	12.0	12.8	12.5	13.2	13.7	12.1	12.9	12.6	13.3	13.8
	<b>6H</b>	11.9	12.6	12.4	13.0	13.5	12.1	12.7	12.5	13.2	13.7
	<b>8H</b>	11.9	12.5	12.4	12.9	13.4	12.0	12.6	12.5	13.1	13.6
	<b>12H</b>	11.8	12.4	12.3	12.9	13.3	12.0	12.5	12.5	13.0	13.5
<b>8H</b>	<b>4H</b>	11.9	12.5	12.4	13.0	13.4	12.0	12.6	12.5	13.1	13.6
	<b>6H</b>	11.8	12.3	12.3	12.8	13.3	11.9	12.4	12.4	12.9	13.4
	<b>8H</b>	11.7	12.2	12.2	12.7	13.2	11.9	12.3	12.4	12.8	13.3
	<b>12H</b>	11.7	12.1	12.2	12.6	13.2	11.8	12.2	12.3	12.7	13.3
<b>12H</b>	<b>4H</b>	11.8	12.4	12.3	12.9	13.3	12.0	12.5	12.5	13.0	13.5
	<b>6H</b>	11.7	12.2	12.3	12.7	13.2	11.9	12.3	12.4	12.8	13.3
	<b>8H</b>	11.7	12.1	12.2	12.6	13.2	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