

## Indoor Distribution Test Report

### Spectrum Lighting Inc.

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### Spectrum Lighting Photometric Lab

#### Luminaire

SGE12LEDOS 15L 35K XX AR1223OS MW SO  
Nom 12 inch diam, AR1223 trim, MW interior finish, Solite lens

#### Test Number

SP-01197\_2\_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	1446
Efficacy	107.1 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.23
Four luminaires	1.24

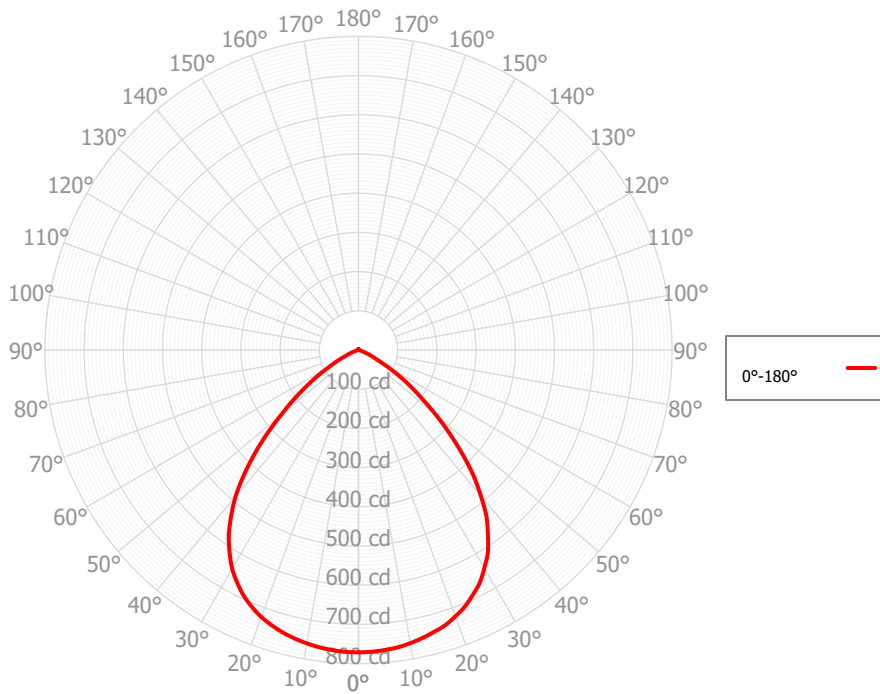
#### Full Beam Angle

0° - 180°	89°
90° - 270°	N/A°

### IES File Header Contents

Keyword	Value
TEST	SP-01197_2_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 SO
LUMINAIRE	Nom 12 inch diam, AR1223 trim, MW interior finish, Solite lens
OTHER	Beam angle: 89 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°	74.21	5.13%	90.00° - 100.00°	0.60	0.04%
10.00° - 20.00°	210.34	14.55%	100.00° - 110.00°	0.59	0.04%
20.00° - 30.00°	317.34	21.95%	100.00° - 120.00°	1.13	0.08%
30.00° - 40.00°	357.25	24.71%	120.00° - 130.00°	0.54	0.04%
40.00° - 50.00°	286.65	19.83%	130.00° - 140.00°	0.52	0.04%
50.00° - 60.00°	147.66	10.21%	140.00° - 150.00°	0.45	0.03%
60.00° - 70.00°	41.75	2.89%	150.00° - 160.00°	0.39	0.03%
70.00° - 80.00°	5.53	0.38%	160.00° - 170.00°	0.24	0.02%
80.00° - 90.00°	1.17	0.08%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	1441.90	99.73%	0.00° - 180.00°	1445.85	100.00%

### Candela Distribution

	0.00°	180.00°
0.00°	771.57	771.57
2.50°	770.73	771.13
5.00°	768.45	768.69
7.50°	765.44	765.15
10.00°	759.74	760.18
12.50°	752.94	753.90
15.00°	744.85	746.25
17.50°	736.33	736.51
20.00°	723.23	724.98
22.50°	709.02	709.92
25.00°	689.86	692.35
27.50°	669.88	669.88
30.00°	642.40	644.59
32.50°	614.10	612.32
35.00°	575.72	576.87
37.50°	536.79	533.74
40.00°	485.71	487.79
42.50°	434.22	432.58
45.00°	374.40	374.80
47.50°	314.97	316.15
50.00°	258.99	257.33
52.50°	205.17	209.62
55.00°	163.57	163.43
57.50°	122.77	124.42
60.00°	85.26	85.94
62.50°	53.23	61.52
65.00°	38.03	37.69
67.50°	24.20	26.21
70.00°	13.57	15.10
72.50°	5.93	8.59
75.00°	3.97	2.84
77.50°	2.51	2.29
80.00°	1.84	1.77
82.50°	1.30	1.41
85.00°	0.91	1.07
87.50°	0.69	0.81
90.00°	0.63	0.61
92.50°	0.57	0.58
95.00°	0.51	0.55
97.50°	0.50	0.53
100.00°	0.52	0.50
102.50°	0.55	0.49
105.00°	0.59	0.50
107.50°	0.65	0.53
110.00°	0.71	0.52
112.50°	0.69	0.47

### 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>	1720	1720	1720	1720	1680	1680	1680	1680	1604	1604	1604	1535	1535	1535	1472	1472	1442
	<b>1</b>	1617	1567	1523	1483	1580	1535	1495	1458	1475	1442	1412	1420	1393	1369	1369	1348	1329
	<b>2</b>	1508	1418	1344	1282	1473	1392	1324	1267	1343	1286	1238	1297	1251	1210	1255	1217	1184
	<b>3</b>	1403	1284	1192	1119	1371	1262	1177	1109	1221	1149	1090	1184	1123	1072	1149	1098	1054
	<b>4</b>	1305	1165	1063	985	1275	1147	1052	978	1113	1031	965	1081	1010	953	1052	991	941
	<b>5</b>	1215	1061	953	874	1187	1046	945	870	1017	928	861	990	913	852	965	898	843
	<b>6</b>	1132	969	860	782	1107	957	853	778	932	840	772	909	828	766	888	816	760
	<b>7</b>	1058	889	780	704	1035	878	775	701	857	764	697	838	754	692	819	745	688
	<b>8</b>	990	819	712	638	969	810	707	636	792	699	632	775	690	629	759	683	626
	<b>9</b>	929	757	652	581	910	749	648	580	734	641	577	719	635	574	705	628	572
	<b>10</b>	874	703	600	532	857	696	597	531	682	591	529	669	586	527	657	580	525

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	25.5 fc	5.4 ft
6.5 ft	18.3 fc	6.4 ft
7.5 ft	13.7 fc	7.4 ft
8.0 ft	12.1 fc	7.9 ft
10.0 ft	7.7 fc	9.8 ft
12.0 ft	5.4 fc	11.8 ft
14.0 ft	3.9 fc	13.8 ft
16.0 ft	3.0 fc	15.7 ft
20.0 ft	1.9 fc	19.7 ft
24.0 ft	1.3 fc	23.6 ft
28.0 ft	1.0 fc	27.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	10574	10574	10574
<b>45.00°</b>	7257	7259	7260
<b>55.00°</b>	3908	3908	3907
<b>65.00°</b>	1233	1231	1228
<b>75.00°</b>	210	195	180
<b>85.00°</b>	144	150	156

### 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	13.3	14.6	13.6	14.9	15.2	13.3	14.6	13.7	14.9	15.3
	3H	13.3	14.5	13.7	14.8	15.2	13.4	14.5	13.7	14.9	15.2
	4H	13.2	14.3	13.6	14.7	15.1	13.3	14.4	13.7	14.7	15.1
	6H	13.2	14.1	13.6	14.5	14.9	13.2	14.2	13.6	14.6	15.0
	8H	13.1	14.1	13.6	14.4	14.9	13.2	14.1	13.6	14.5	14.9
	12H	13.1	14.0	13.5	14.4	14.8	13.1	14.0	13.6	14.4	14.9
4H	2H	13.2	14.3	13.6	14.7	15.0	13.3	14.3	13.7	14.7	15.1
	3H	13.3	14.1	13.7	14.6	15.0	13.3	14.2	13.8	14.6	15.0
	4H	13.2	14.0	13.6	14.4	14.9	13.3	14.0	13.7	14.5	14.9
	6H	13.1	13.8	13.6	14.2	14.7	13.2	13.9	13.7	14.3	14.8
	8H	13.1	13.7	13.5	14.1	14.6	13.1	13.8	13.6	14.2	14.7
	12H	13.0	13.6	13.5	14.1	14.5	13.1	13.6	13.6	14.1	14.6
8H	4H	13.1	13.7	13.5	14.1	14.6	13.1	13.8	13.6	14.2	14.7
	6H	13.0	13.5	13.5	14.0	14.5	13.0	13.5	13.5	14.0	14.5
	8H	12.9	13.4	13.4	13.9	14.4	13.0	13.4	13.5	14.0	14.5
	12H	12.9	13.3	13.4	13.8	14.4	12.9	13.3	13.5	13.8	14.4
12H	4H	13.0	13.6	13.5	14.1	14.5	13.1	13.6	13.6	14.1	14.6
	6H	12.9	13.4	13.5	13.9	14.4	13.0	13.4	13.5	13.9	14.5
	8H	12.9	13.3	13.4	13.8	14.4	12.9	13.3	13.5	13.8	14.4

Corrected UGR values based on total output energy  
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0