

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE12LEDOS 30L 35K XX AR1223OS MW SO
Nom 12 inch diam, AR1223 trim, MW interior finish, Solite lens

Test Number

SP-01197_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	2711
Efficacy	119.43 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

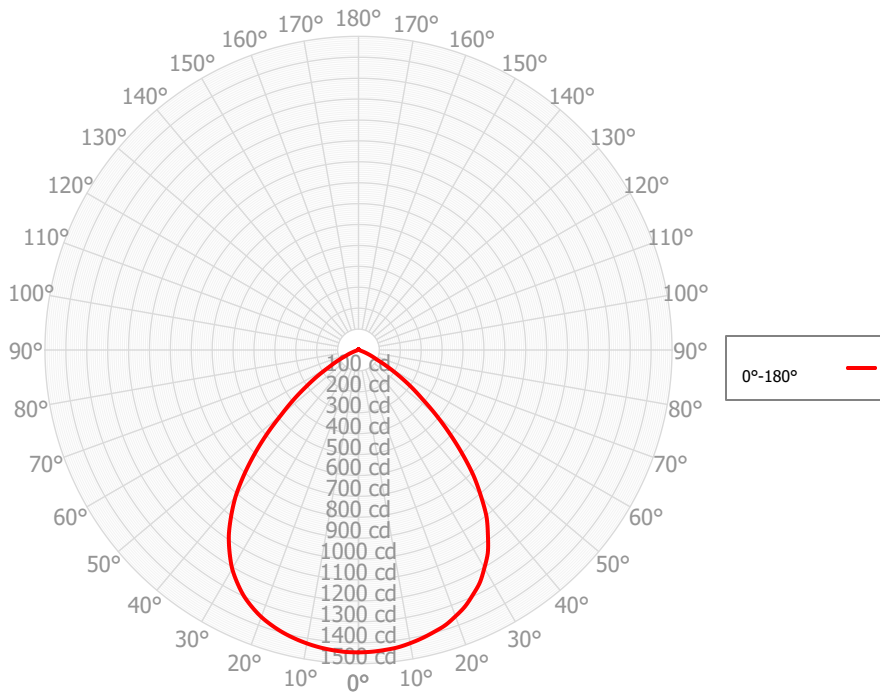
Full Beam Angle

0° - 180°	89°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01197_2_M-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 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°	139.14	5.13%	90.00° - 100.00°	1.12	0.04%
10.00° - 20.00°	394.39	14.55%	100.00° - 110.00°	1.10	0.04%
20.00° - 30.00°	595.01	21.95%	100.00° - 120.00°	2.11	0.08%
30.00° - 40.00°	669.84	24.71%	120.00° - 130.00°	1.02	0.04%
40.00° - 50.00°	537.47	19.83%	130.00° - 140.00°	0.98	0.04%
50.00° - 60.00°	276.87	10.21%	140.00° - 150.00°	0.85	0.03%
60.00° - 70.00°	78.28	2.89%	150.00° - 160.00°	0.73	0.03%
70.00° - 80.00°	10.37	0.38%	160.00° - 170.00°	0.44	0.02%
80.00° - 90.00°	2.20	0.08%	170.00° - 180.00°	0.15	0.01%
0.00° - 90.00°	2703.56	99.73%	0.00° - 180.00°	2710.98	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	1446.70	1446.70
2.50°	1445.11	1445.86
5.00°	1440.85	1441.30
7.50°	1435.20	1434.66
10.00°	1424.51	1425.34
12.50°	1411.76	1413.57
15.00°	1396.59	1399.22
17.50°	1380.62	1380.95
20.00°	1356.06	1359.34
22.50°	1329.41	1331.10
25.00°	1293.50	1298.16
27.50°	1256.03	1256.02
30.00°	1204.51	1208.61
32.50°	1151.43	1148.09
35.00°	1079.47	1081.62
37.50°	1006.48	1000.76
40.00°	910.71	914.61
42.50°	814.17	811.09
45.00°	702.01	702.75
47.50°	590.56	592.79
50.00°	485.61	482.50
52.50°	384.70	393.03
55.00°	306.70	306.43
57.50°	230.19	233.28
60.00°	159.86	161.14
62.50°	99.80	115.35
65.00°	71.32	70.67
67.50°	45.37	49.13
70.00°	25.45	28.32
72.50°	11.12	16.10
75.00°	7.43	5.32
77.50°	4.70	4.29
80.00°	3.45	3.33
82.50°	2.43	2.65
85.00°	1.71	2.01
87.50°	1.30	1.52
90.00°	1.18	1.15
92.50°	1.07	1.09
95.00°	0.97	1.04
97.50°	0.94	0.98
100.00°	0.98	0.94
102.50°	1.04	0.92
105.00°	1.11	0.94
107.50°	1.22	0.99
110.00°	1.34	0.98
112.50°	1.30	0.88

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	3226	3226	3226	3226	3150	3150	3150	3150	3008	3008	3008	2878	2878	2878	2759	2759	2704
	1	3032	2939	2855	2780	2962	2878	2803	2734	2766	2704	2648	2662	2613	2567	2566	2527	2475
	2	2827	2659	2520	2404	2762	2610	2483	2376	2518	2412	2321	2433	2345	2269	2354	2283	2235
	3	2630	2407	2235	2097	2570	2367	2207	2079	2290	2155	2044	2220	2105	2009	2154	2058	1976
	4	2446	2185	1993	1847	2390	2151	1972	1834	2087	1932	1810	2027	1894	1787	1972	1858	1764
	5	2277	1989	1788	1639	2226	1960	1772	1630	1906	1741	1614	1856	1711	1597	1809	1683	1581
	6	2123	1818	1613	1466	2076	1794	1600	1460	1748	1576	1448	1705	1552	1436	1665	1530	1424
	7	1983	1668	1463	1320	1941	1647	1453	1315	1608	1433	1306	1571	1415	1298	1536	1396	1289
	8	1857	1536	1334	1196	1818	1518	1326	1192	1484	1310	1186	1453	1295	1179	1423	1280	1173
	9	1742	1420	1223	1089	1707	1405	1216	1087	1375	1203	1082	1348	1190	1077	1322	1178	1072
	10	1639	1318	1126	998	1607	1304	1120	996	1279	1109	992	1255	1098	988	1232	1088	984

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	47.8 fc	5.4 ft
6.5 ft	34.2 fc	6.4 ft
7.5 ft	25.7 fc	7.4 ft
8.0 ft	22.6 fc	7.9 ft
10.0 ft	14.5 fc	9.8 ft
12.0 ft	10.0 fc	11.8 ft
14.0 ft	7.4 fc	13.8 ft
16.0 ft	5.7 fc	15.7 ft
20.0 ft	3.6 fc	19.7 ft
24.0 ft	2.5 fc	23.6 ft
28.0 ft	1.8 fc	27.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	19827	19827	19827
45.00°	13606	13610	13613
55.00°	7328	7327	7325
65.00°	2313	2307	2302
75.00°	394	366	338
85.00°	270	281	293

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	15.4	16.8	15.8	17.1	17.4	15.5	16.8	15.9	17.1	17.5
	3H	15.5	16.6	15.9	17.0	17.4	15.5	16.7	15.9	17.0	17.4
	4H	15.4	16.5	15.8	16.9	17.2	15.5	16.6	15.9	16.9	17.3
	6H	15.3	16.3	15.8	16.7	17.1	15.4	16.4	15.8	16.8	17.2
	8H	15.3	16.2	15.7	16.6	17.0	15.4	16.3	15.8	16.7	17.1
	12H	15.3	16.2	15.7	16.5	17.0	15.3	16.2	15.8	16.6	17.0
4H	2H	15.4	16.5	15.8	16.8	17.2	15.4	16.5	15.9	16.9	17.3
	3H	15.5	16.3	15.9	16.7	17.2	15.5	16.4	15.9	16.8	17.2
	4H	15.4	16.2	15.8	16.6	17.0	15.4	16.2	15.9	16.6	17.1
	6H	15.3	16.0	15.8	16.4	16.9	15.4	16.0	15.8	16.5	17.0
	8H	15.3	15.9	15.7	16.3	16.8	15.3	15.9	15.8	16.4	16.9
	12H	15.2	15.8	15.7	16.2	16.7	15.3	15.8	15.8	16.3	16.8
8H	4H	15.3	15.9	15.7	16.3	16.8	15.3	15.9	15.8	16.4	16.9
	6H	15.2	15.7	15.7	16.2	16.7	15.2	15.7	15.7	16.2	16.7
	8H	15.1	15.6	15.6	16.1	16.6	15.2	15.6	15.7	16.1	16.6
	12H	15.1	15.5	15.6	16.0	16.5	15.1	15.5	15.6	16.0	16.6
12H	4H	15.2	15.8	15.7	16.2	16.7	15.3	15.8	15.8	16.3	16.8
	6H	15.1	15.6	15.6	16.0	16.6	15.2	15.6	15.7	16.1	16.6
	8H	15.1	15.5	15.6	16.0	16.5	15.1	15.5	15.6	16.0	16.6

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0