

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	22.7 W
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Lumen Output

Output Lumens	2342
Efficacy	103.16 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

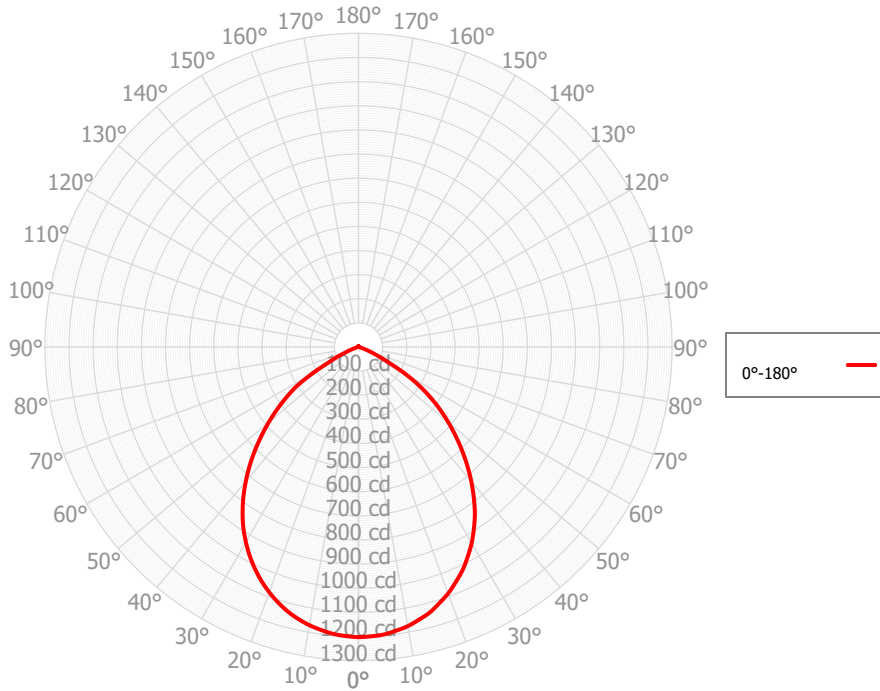
Full Beam Angle

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°	115.06	4.91%	90.00° - 100.00°	0.93	0.04%
10.00° - 20.00°	319.81	13.66%	100.00° - 110.00°	0.97	0.04%
20.00° - 30.00°	467.27	19.95%	100.00° - 120.00°	1.88	0.08%
30.00° - 40.00°	522.24	22.30%	120.00° - 130.00°	0.94	0.04%
40.00° - 50.00°	467.00	19.94%	130.00° - 140.00°	0.92	0.04%
50.00° - 60.00°	322.61	13.78%	140.00° - 150.00°	0.70	0.03%
60.00° - 70.00°	104.96	4.48%	150.00° - 160.00°	0.59	0.03%
70.00° - 80.00°	13.46	0.57%	160.00° - 170.00°	0.38	0.02%
80.00° - 90.00°	2.91	0.12%	170.00° - 180.00°	0.12	0.01%
0.00° - 90.00°	2335.32	99.72%	0.00° - 180.00°	2341.78	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	1203.08	1203.08
2.50°	1200.76	1199.71
5.00°	1196.97	1194.39
7.50°	1186.78	1183.87
10.00°	1175.54	1171.38
12.50°	1158.17	1154.95
15.00°	1140.27	1135.15
17.50°	1114.03	1110.22
20.00°	1087.34	1082.23
22.50°	1054.59	1050.68
25.00°	1020.97	1015.34
27.50°	980.43	976.55
30.00°	938.66	933.99
32.50°	891.02	888.79
35.00°	841.28	837.89
37.50°	784.98	783.99
40.00°	727.57	726.74
42.50°	667.64	668.16
45.00°	607.42	607.47
47.50°	546.71	546.20
50.00°	486.28	485.94
52.50°	426.22	425.86
55.00°	363.79	366.69
57.50°	298.96	307.60
60.00°	226.10	225.05
62.50°	146.86	143.25
65.00°	94.48	98.63
67.50°	58.28	56.24
70.00°	33.89	34.74
72.50°	14.90	15.90
75.00°	8.67	10.72
77.50°	6.71	6.41
80.00°	5.24	5.01
82.50°	3.88	3.64
85.00°	2.66	2.29
87.50°	1.47	1.31
90.00°	1.10	0.98
92.50°	0.80	0.80
95.00°	0.78	0.85
97.50°	0.76	0.90
100.00°	0.85	0.96
102.50°	0.95	0.93
105.00°	1.08	0.84
107.50°	1.13	0.74
110.00°	0.90	0.66
112.50°	0.79	0.75

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	2786	2786	2786	2786	2721	2721	2721	2721	2598	2598	2598	2486	2486	2486	2384	2384	2335
	1	2610	2526	2450	2382	2549	2473	2405	2343	2375	2320	2269	2285	2241	2199	2202	2167	2122
	2	2423	2271	2145	2039	2366	2228	2113	2015	2148	2052	1969	2073	1994	1924	2005	1940	1882
	3	2245	2043	1887	1763	2191	2008	1863	1747	1941	1818	1717	1879	1775	1688	1821	1734	1659
	4	2080	1844	1671	1539	2031	1814	1653	1528	1758	1618	1508	1706	1586	1488	1657	1554	1469
	5	1930	1671	1490	1356	1885	1646	1476	1349	1598	1449	1335	1554	1424	1321	1513	1399	1308
	6	1795	1521	1338	1206	1753	1500	1327	1201	1460	1305	1191	1422	1285	1181	1387	1266	1171
	7	1673	1391	1209	1081	1636	1373	1200	1077	1339	1183	1069	1306	1167	1062	1276	1151	1055
	8	1564	1279	1099	975	1530	1263	1092	973	1233	1078	967	1205	1065	962	1179	1052	956
	9	1466	1180	1005	886	1435	1167	999	884	1141	988	880	1117	976	876	1094	966	872
	10	1378	1094	924	810	1350	1082	919	809	1060	909	805	1038	900	802	1018	891	799

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	39.8 fc	5.5 ft
6.5 ft	28.5 fc	6.6 ft
7.5 ft	21.4 fc	7.6 ft
8.0 ft	18.8 fc	8.1 ft
10.0 ft	12.0 fc	10.1 ft
12.0 ft	8.4 fc	12.1 ft
14.0 ft	6.1 fc	14.1 ft
16.0 ft	4.7 fc	16.1 ft
20.0 ft	3.0 fc	20.2 ft
24.0 ft	2.1 fc	24.2 ft
28.0 ft	1.5 fc	28.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	16488	16488	16488
45.00°	11773	11773	11773
55.00°	8692	8710	8727
65.00°	3064	3098	3131
75.00°	459	486	513
85.00°	419	404	390

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	17.7	19.1	18.1	19.4	19.8	17.8	19.2	18.2	19.5	19.8
	3H	17.8	19.0	18.1	19.3	19.7	17.8	19.1	18.2	19.4	19.8
	4H	17.7	18.8	18.1	19.2	19.6	17.8	18.9	18.2	19.3	19.7
	6H	17.6	18.7	18.0	19.1	19.5	17.7	18.8	18.1	19.1	19.5
	8H	17.6	18.6	18.0	19.0	19.4	17.7	18.7	18.1	19.1	19.5
	12H	17.6	18.5	18.0	18.9	19.3	17.6	18.6	18.1	19.0	19.4
4H	2H	17.7	18.9	18.1	19.2	19.6	17.8	18.9	18.2	19.3	19.7
	3H	17.8	18.7	18.2	19.1	19.5	17.9	18.8	18.3	19.2	19.6
	4H	17.7	18.5	18.1	18.9	19.4	17.8	18.6	18.2	19.0	19.5
	6H	17.6	18.3	18.1	18.8	19.3	17.7	18.4	18.2	18.9	19.4
	8H	17.6	18.2	18.1	18.7	19.2	17.7	18.3	18.1	18.8	19.3
	12H	17.5	18.1	18.0	18.6	19.1	17.6	18.2	18.1	18.7	19.2
8H	4H	17.6	18.2	18.1	18.7	19.2	17.7	18.3	18.1	18.8	19.3
	6H	17.5	18.0	18.0	18.5	19.0	17.6	18.1	18.1	18.6	19.1
	8H	17.4	17.9	18.0	18.5	18.9	17.5	18.0	18.1	18.5	19.0
	12H	17.4	17.8	17.9	18.3	18.9	17.5	17.9	18.0	18.4	19.0
12H	4H	17.5	18.1	18.0	18.6	19.1	17.6	18.2	18.1	18.7	19.2
	6H	17.4	17.9	18.0	18.4	19.0	17.5	18.0	18.1	18.5	19.0
	8H	17.4	17.8	17.9	18.3	18.9	17.5	17.9	18.0	18.4	19.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0