

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE14LEDOS 30L 35K XX AR1423OS MW GL
Nom 14 inch diam, AR1423 trim, MW interior finish, clear glass lens

Test Number

SP-01198_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	2648
Efficacy	116.65 lm/W

Luminous Dimensions

0° - 180° Size	-1.17
90° - 270° Size	-1.17
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.24
Four luminaires	1.27

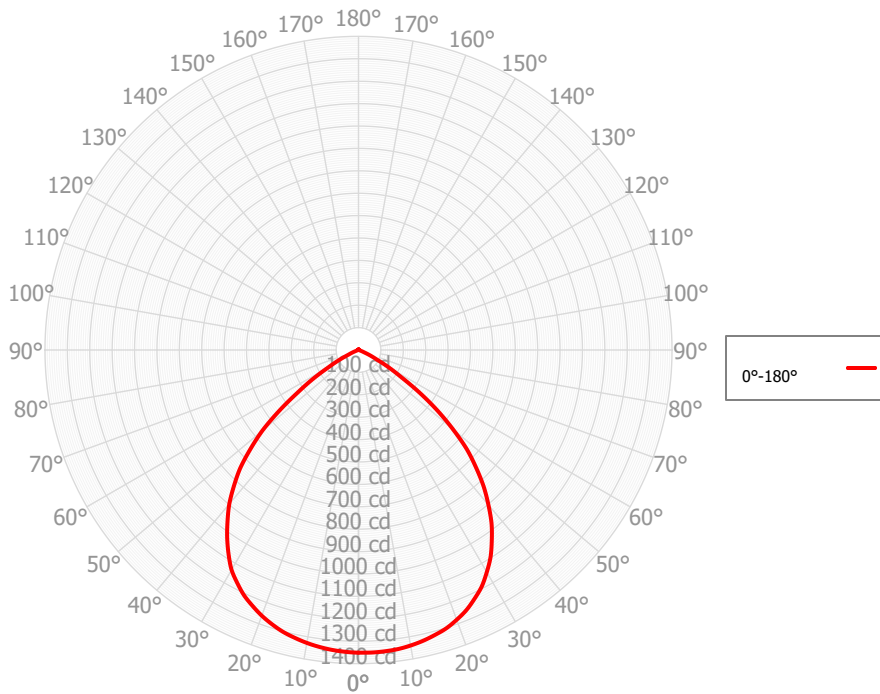
Full Beam Angle

0° - 180°	94°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01198_M-30L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE14LEDOS 30L 35K XX AR1423OS MW GL
LUMINAIRE	Nom 14 inch diam, AR1423 trim, MW interior finish, clear glass lens
OTHER	Beam angle: 93.8 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°	130.15	4.92%	90.00° - 100.00°	0.92	0.03%
10.00° - 20.00°	369.53	13.96%	100.00° - 110.00°	0.68	0.03%
20.00° - 30.00°	559.27	21.12%	100.00° - 120.00°	1.46	0.06%
30.00° - 40.00°	641.32	24.22%	120.00° - 130.00°	0.81	0.03%
40.00° - 50.00°	567.34	21.43%	130.00° - 140.00°	0.78	0.03%
50.00° - 60.00°	303.27	11.45%	140.00° - 150.00°	0.72	0.03%
60.00° - 70.00°	64.35	2.43%	150.00° - 160.00°	0.61	0.02%
70.00° - 80.00°	5.40	0.20%	160.00° - 170.00°	0.37	0.01%
80.00° - 90.00°	1.49	0.06%	170.00° - 180.00°	0.14	0.01%
0.00° - 90.00°	2642.12	99.78%	0.00° - 180.00°	2647.93	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	1351.64	1351.64
2.50°	1352.28	1349.06
5.00°	1350.69	1344.53
7.50°	1347.23	1337.44
10.00°	1340.02	1328.26
12.50°	1330.26	1316.44
15.00°	1317.56	1302.87
17.50°	1303.27	1284.16
20.00°	1282.05	1262.65
22.50°	1257.75	1236.75
25.00°	1225.83	1208.95
27.50°	1191.28	1172.79
30.00°	1145.73	1133.77
32.50°	1097.34	1080.08
35.00°	1037.72	1022.55
37.50°	975.93	960.47
40.00°	902.47	897.55
42.50°	827.56	823.24
45.00°	742.29	747.56
47.50°	656.38	654.46
50.00°	550.58	560.25
52.50°	444.36	445.94
55.00°	334.70	332.37
57.50°	228.52	243.31
60.00°	157.96	157.07
62.50°	92.16	100.57
65.00°	57.43	49.17
67.50°	26.99	29.57
70.00°	15.55	12.57
72.50°	6.28	7.19
75.00°	4.01	2.96
77.50°	2.29	2.47
80.00°	1.97	1.98
82.50°	1.65	1.48
85.00°	1.32	1.16
87.50°	1.09	1.19
90.00°	1.02	1.13
92.50°	0.92	0.95
95.00°	0.77	0.84
97.50°	0.66	0.84
100.00°	0.62	0.80
102.50°	0.59	0.69
105.00°	0.57	0.62
107.50°	0.67	0.57
110.00°	0.85	0.53
112.50°	0.95	0.52

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	3151	3151	3151	3151	3077	3077	3077	3077	2939	2939	2939	2813	2813	2813	2697	2697	2642
	1	2961	2870	2788	2714	2893	2811	2737	2670	2701	2641	2586	2600	2552	2507	2506	2468	2418
	2	2759	2594	2457	2343	2695	2546	2421	2315	2456	2352	2262	2373	2287	2212	2296	2226	2180
	3	2564	2344	2175	2039	2505	2305	2148	2022	2230	2097	1987	2161	2048	1954	2097	2002	1961
	4	2382	2124	1935	1790	2327	2090	1914	1778	2028	1876	1755	1970	1839	1732	1916	1803	1767
	5	2214	1930	1731	1584	2164	1902	1715	1576	1849	1685	1560	1800	1657	1544	1754	1629	1597
	6	2061	1760	1558	1412	2015	1736	1545	1407	1691	1522	1395	1649	1499	1384	1610	1477	1449
	7	1923	1612	1410	1268	1881	1591	1400	1264	1553	1381	1255	1517	1362	1247	1483	1345	1320
	8	1798	1482	1283	1146	1760	1464	1275	1143	1431	1259	1136	1400	1244	1130	1371	1230	1208
	9	1686	1368	1173	1041	1651	1353	1167	1039	1324	1154	1034	1297	1141	1029	1272	1129	1110
	10	1584	1268	1078	952	1553	1255	1073	950	1229	1062	946	1206	1051	942	1184	1041	1024

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	44.7 fc	5.9 ft
6.5 ft	32.0 fc	7.0 ft
7.5 ft	24.0 fc	8.0 ft
8.0 ft	21.1 fc	8.6 ft
10.0 ft	13.5 fc	10.7 ft
12.0 ft	9.4 fc	12.8 ft
14.0 ft	6.9 fc	15.0 ft
16.0 ft	5.3 fc	17.1 ft
20.0 ft	3.4 fc	21.4 ft
24.0 ft	2.3 fc	25.7 ft
28.0 ft	1.7 fc	29.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	13532	13532	13532
45.00°	10510	10529	10547
55.00°	5842	5832	5822
65.00°	1360	1312	1263
75.00°	155	145	135
85.00°	152	147	142

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	14.4	15.7	14.8	16.1	16.4	14.6	15.9	15.0	16.3	16.6
	3H	14.3	15.5	14.7	15.8	16.2	14.5	15.7	14.9	16.0	16.4
	4H	14.2	15.3	14.7	15.7	16.1	14.5	15.6	14.9	15.9	16.3
	6H	14.2	15.2	14.6	15.6	16.0	14.4	15.4	14.8	15.8	16.2
	8H	14.1	15.1	14.6	15.5	15.9	14.3	15.3	14.8	15.7	16.1
	12H	14.1	15.0	14.5	15.4	15.8	14.3	15.2	14.7	15.6	16.0
4H	2H	14.3	15.4	14.7	15.7	16.1	14.5	15.6	14.9	15.9	16.3
	3H	14.2	15.1	14.7	15.5	15.9	14.4	15.3	14.8	15.7	16.1
	4H	14.2	14.9	14.6	15.4	15.8	14.3	15.1	14.8	15.5	16.0
	6H	14.1	14.7	14.5	15.2	15.7	14.3	14.9	14.7	15.4	15.9
	8H	14.0	14.6	14.5	15.1	15.6	14.2	14.8	14.7	15.3	15.8
	12H	14.0	14.5	14.5	15.0	15.5	14.2	14.7	14.6	15.2	15.7
8H	4H	14.0	14.6	14.5	15.1	15.6	14.2	14.8	14.7	15.3	15.8
	6H	13.9	14.4	14.4	14.9	15.4	14.1	14.6	14.6	15.1	15.6
	8H	13.8	14.3	14.4	14.8	15.3	14.0	14.5	14.6	15.0	15.5
	12H	13.8	14.2	14.3	14.7	15.3	14.0	14.4	14.5	14.9	15.5
12H	4H	14.0	14.5	14.5	15.0	15.5	14.2	14.7	14.6	15.2	15.7
	6H	13.9	14.3	14.4	14.8	15.3	14.0	14.5	14.6	15.0	15.5
	8H	13.8	14.2	14.3	14.7	15.3	14.0	14.4	14.5	14.9	15.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0