

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE14LEDOS 30L 35K XX AR1423OS MW SO
Nom 14 inch diam, AR1423 trim, MW interior finish, Solite lens

Test Number

SP-01198_1_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	2713
Efficacy	119.5 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.23
Four luminaires	1.26

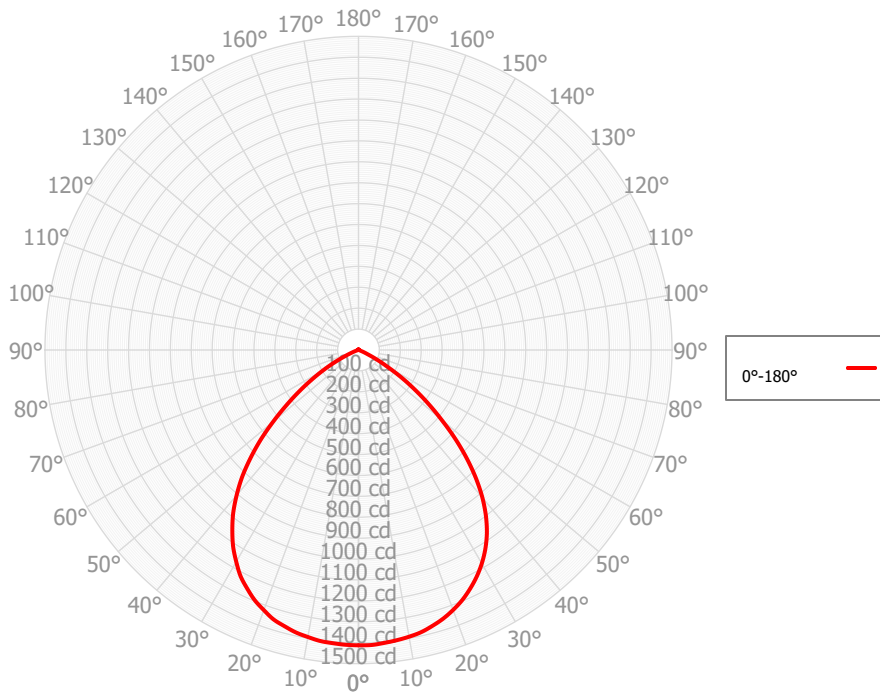
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01198_1_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 SO
LUMINAIRE	Nom 14 inch diam, AR1423 trim, MW interior finish, Solite 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°	135.98	5.01%	90.00° - 100.00°	0.82	0.03%
10.00° - 20.00°	385.60	14.22%	100.00° - 110.00°	0.77	0.03%
20.00° - 30.00°	579.34	21.36%	100.00° - 120.00°	1.65	0.06%
30.00° - 40.00°	659.21	24.30%	120.00° - 130.00°	0.93	0.03%
40.00° - 50.00°	558.01	20.57%	130.00° - 140.00°	0.72	0.03%
50.00° - 60.00°	303.20	11.18%	140.00° - 150.00°	0.67	0.02%
60.00° - 70.00°	76.15	2.81%	150.00° - 160.00°	0.56	0.02%
70.00° - 80.00°	7.39	0.27%	160.00° - 170.00°	0.36	0.01%
80.00° - 90.00°	1.86	0.07%	170.00° - 180.00°	0.14	0.00%
0.00° - 90.00°	2706.75	99.78%	0.00° - 180.00°	2712.59	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	1412.83	1412.83
2.50°	1412.88	1411.69
5.00°	1406.95	1408.14
7.50°	1400.67	1404.29
10.00°	1393.02	1394.40
12.50°	1383.07	1384.15
15.00°	1366.51	1368.12
17.50°	1347.65	1351.60
20.00°	1323.53	1324.39
22.50°	1295.85	1296.29
25.00°	1261.73	1259.76
27.50°	1223.65	1221.11
30.00°	1179.84	1169.90
32.50°	1129.37	1116.24
35.00°	1070.91	1052.46
37.50°	1001.75	985.15
40.00°	922.23	907.05
42.50°	831.40	824.29
45.00°	731.71	730.30
47.50°	626.43	633.57
50.00°	517.50	531.67
52.50°	418.67	435.58
55.00°	325.07	348.27
57.50°	239.07	268.23
60.00°	156.16	197.31
62.50°	98.67	133.82
65.00°	49.34	77.86
67.50°	27.31	42.38
70.00°	11.68	23.71
72.50°	7.00	12.46
75.00°	4.05	6.26
77.50°	2.90	3.64
80.00°	1.92	2.97
82.50°	1.61	2.51
85.00°	1.33	2.16
87.50°	1.18	1.51
90.00°	1.04	0.77
92.50°	0.88	0.72
95.00°	0.73	0.84
97.50°	0.66	0.71
100.00°	0.62	0.54
102.50°	0.83	0.60
105.00°	0.96	0.68
107.50°	0.79	0.68
110.00°	0.74	0.68
112.50°	1.02	0.66

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	3228	3228	3228	3228	3152	3152	3152	3152	3011	3011	3011	2881	2881	2881	2763	2763	2707
	1	3033	2939	2855	2780	2963	2879	2803	2734	2766	2705	2648	2663	2613	2568	2567	2528	2476
	2	2826	2657	2517	2400	2761	2608	2480	2372	2516	2409	2317	2431	2343	2266	2352	2280	2233
	3	2627	2402	2229	2090	2567	2362	2201	2072	2285	2149	2036	2215	2099	2002	2149	2052	1969
	4	2441	2177	1984	1836	2385	2143	1963	1824	2079	1923	1800	2020	1886	1777	1964	1850	1754
	5	2270	1980	1776	1626	2219	1951	1760	1618	1897	1730	1602	1847	1700	1585	1800	1672	1570
	6	2115	1807	1600	1452	2068	1783	1587	1446	1737	1563	1434	1694	1540	1422	1654	1517	1411
	7	1974	1656	1449	1305	1931	1635	1439	1300	1596	1420	1292	1559	1401	1283	1524	1383	1275
	8	1847	1523	1320	1180	1808	1506	1312	1177	1472	1296	1170	1440	1281	1164	1410	1266	1158
	9	1732	1407	1208	1074	1696	1392	1202	1071	1363	1188	1066	1335	1176	1062	1309	1163	1057
	10	1628	1305	1111	982	1596	1292	1106	980	1266	1095	977	1242	1084	973	1219	1074	1056

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.7 fc	5.6 ft
6.5 ft	33.4 fc	6.6 ft
7.5 ft	25.1 fc	7.7 ft
8.0 ft	22.1 fc	8.2 ft
10.0 ft	14.1 fc	10.2 ft
12.0 ft	9.8 fc	12.3 ft
14.0 ft	7.2 fc	14.3 ft
16.0 ft	5.5 fc	16.3 ft
20.0 ft	3.5 fc	20.4 ft
24.0 ft	2.5 fc	24.5 ft
28.0 ft	1.8 fc	28.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	14145	14145	14145
45.00°	10360	10355	10350
55.00°	5674	5775	5877
65.00°	1169	1338	1507
75.00°	157	178	200
85.00°	153	176	200

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	14.7	16.0	15.0	16.3	16.6	15.1	16.4	15.4	16.7	17.1
	3H	14.6	15.8	15.0	16.1	16.5	15.0	16.2	15.4	16.5	16.9
	4H	14.5	15.6	14.9	16.0	16.3	15.0	16.1	15.4	16.4	16.8
	6H	14.4	15.4	14.8	15.8	16.2	14.9	15.9	15.3	16.3	16.7
	8H	14.4	15.3	14.8	15.7	16.1	14.8	15.8	15.3	16.2	16.6
	12H	14.3	15.3	14.8	15.6	16.1	14.8	15.7	15.2	16.1	16.5
4H	2H	14.6	15.7	15.0	16.0	16.4	15.0	16.1	15.4	16.5	16.9
	3H	14.5	15.4	14.9	15.8	16.2	15.0	15.9	15.4	16.3	16.7
	4H	14.4	15.2	14.8	15.6	16.1	14.9	15.7	15.3	16.1	16.6
	6H	14.3	15.0	14.8	15.4	15.9	14.8	15.5	15.3	16.0	16.4
	8H	14.3	14.9	14.7	15.3	15.8	14.8	15.4	15.2	15.9	16.3
	12H	14.2	14.8	14.7	15.3	15.7	14.7	15.3	15.2	15.8	16.2
8H	4H	14.3	14.9	14.7	15.3	15.8	14.8	15.4	15.2	15.9	16.3
	6H	14.2	14.7	14.7	15.2	15.7	14.7	15.2	15.2	15.7	16.2
	8H	14.1	14.6	14.6	15.1	15.6	14.6	15.1	15.1	15.6	16.1
	12H	14.1	14.5	14.6	15.0	15.5	14.6	15.0	15.1	15.5	16.1
12H	4H	14.2	14.8	14.7	15.3	15.7	14.7	15.3	15.2	15.8	16.2
	6H	14.1	14.6	14.6	15.0	15.6	14.6	15.1	15.1	15.5	16.1
	8H	14.1	14.5	14.6	15.0	15.5	14.6	15.0	15.1	15.5	16.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0