

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE10LEDOS 15L 35K XX AR1023OS MW GL
Nom 10 inch diam, AR1023 trim, MW interior finish, clear glass lens

Test Number

SP-00690_3_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	1314
Efficacy	97.34 lm/W

Luminous Dimensions

0° - 180° Size	-0.83
90° - 270° Size	-0.83
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.26
Two luminaires, plane 90°	1.25
Four luminaires	1.27

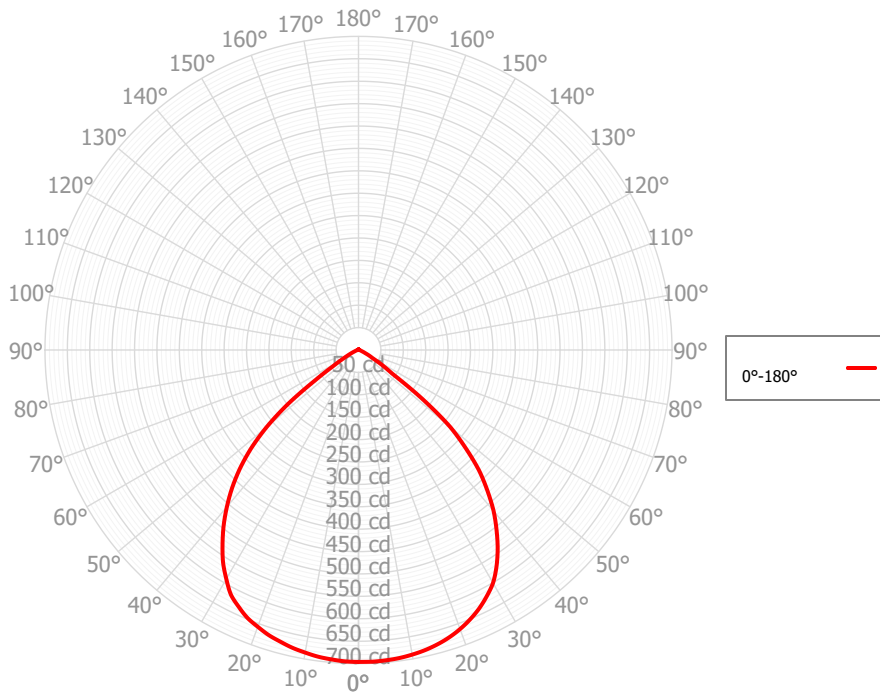
Full Beam Angle

0° - 180°	93°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_3_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE10LEDOS 15L 35K XX AR1023OS MW GL
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, clear glass lens
OTHER	Beam angle: 93 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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	67.12	5.11%	90.00° - 100.00°	0.50	0.04%
10.00° - 20.00°	191.21	14.55%	100.00° - 110.00°	0.55	0.04%
20.00° - 30.00°	291.71	22.20%	100.00° - 120.00°	1.03	0.08%
30.00° - 40.00°	333.03	25.34%	120.00° - 130.00°	0.51	0.04%
40.00° - 50.00°	285.99	21.76%	130.00° - 140.00°	0.46	0.03%
50.00° - 60.00°	113.00	8.60%	140.00° - 150.00°	0.35	0.03%
60.00° - 70.00°	20.51	1.56%	150.00° - 160.00°	0.30	0.02%
70.00° - 80.00°	6.18	0.47%	160.00° - 170.00°	0.22	0.02%
80.00° - 90.00°	1.96	0.15%	170.00° - 180.00°	0.08	0.01%
0.00° - 90.00°	1310.69	99.74%	0.00° - 180.00°	1314.15	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	696.45	696.45
2.50°	696.63	695.87
5.00°	695.60	693.49
7.50°	693.88	690.69
10.00°	690.64	686.03
12.50°	686.40	681.11
15.00°	680.51	674.27
17.50°	672.88	667.30
20.00°	663.09	657.64
22.50°	651.12	647.60
25.00°	637.07	632.80
27.50°	620.01	616.42
30.00°	600.71	590.34
32.50°	573.47	562.77
35.00°	541.77	529.24
37.50°	506.30	494.66
40.00°	469.28	457.16
42.50°	426.07	417.71
45.00°	381.00	374.36
47.50°	325.13	325.44
50.00°	267.15	267.97
52.50°	181.02	199.59
55.00°	91.92	118.53
57.50°	62.82	67.85
60.00°	36.46	44.12
62.50°	26.32	29.00
65.00°	16.73	19.87
67.50°	12.11	13.98
70.00°	8.00	9.79
72.50°	6.51	7.54
75.00°	5.15	6.04
77.50°	4.20	4.96
80.00°	3.26	3.99
82.50°	2.32	2.86
85.00°	1.49	1.69
87.50°	0.86	1.06
90.00°	0.46	0.49
92.50°	0.38	0.50
95.00°	0.37	0.53
97.50°	0.44	0.47
100.00°	0.53	0.42
102.50°	0.64	0.38
105.00°	0.67	0.36
107.50°	0.65	0.43
110.00°	0.66	0.45
112.50°	0.68	0.35

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	1564	1564	1564	1564	1527	1527	1527	1527	1458	1458	1458	1395	1395	1395	1338	1338	1311
	1	1471	1427	1387	1350	1437	1397	1361	1328	1343	1313	1287	1292	1269	1247	1246	1228	1210
	2	1374	1294	1228	1172	1343	1270	1209	1158	1225	1175	1132	1184	1143	1106	1146	1112	1082
	3	1280	1174	1091	1026	1251	1154	1078	1017	1117	1053	999	1083	1028	983	1051	1006	985
	4	1192	1067	975	905	1165	1050	965	899	1019	946	887	991	927	876	964	910	892
	5	1110	972	876	805	1086	958	868	800	932	853	792	908	839	784	886	825	809
	6	1035	889	791	720	1013	877	785	717	855	773	711	835	762	706	815	751	736
	7	967	816	717	649	947	806	713	646	787	703	642	769	694	638	752	685	673
	8	906	751	654	588	887	743	650	586	726	643	583	711	635	580	697	628	617
	9	850	694	599	535	833	687	596	534	673	590	531	659	584	529	647	578	568
	10	799	644	551	490	783	638	549	489	625	543	487	614	538	485	603	533	525

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	23.0 fc	5.8 ft
6.5 ft	16.5 fc	6.8 ft
7.5 ft	12.4 fc	7.9 ft
8.0 ft	10.9 fc	8.4 ft
10.0 ft	7.0 fc	10.5 ft
12.0 ft	4.8 fc	12.6 ft
14.0 ft	3.6 fc	14.7 ft
16.0 ft	2.7 fc	16.8 ft
20.0 ft	1.7 fc	21.0 ft
24.0 ft	1.2 fc	25.3 ft
28.0 ft	0.9 fc	29.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	13855	13855	13855
45.00°	10719	10673	10626
55.00°	3188	3419	3650
65.00°	788	824	861
75.00°	396	413	430
85.00°	340	351	363

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	10.2	11.5	10.6	11.9	12.2	10.5	11.8	10.9	12.2	12.5
	3H	10.3	11.4	10.7	11.8	12.1	10.6	11.7	11.0	12.1	12.5
	4H	10.3	11.3	10.7	11.7	12.1	10.6	11.7	11.0	12.0	12.4
	6H	10.3	11.2	10.7	11.6	12.0	10.6	11.5	11.0	11.9	12.3
	8H	10.2	11.2	10.7	11.5	12.0	10.5	11.5	11.0	11.9	12.3
	12H	10.2	11.1	10.6	11.5	11.9	10.5	11.4	11.0	11.8	12.2
4H	2H	10.2	11.2	10.6	11.6	12.0	10.5	11.5	10.9	11.9	12.3
	3H	10.3	11.1	10.7	11.5	11.9	10.6	11.4	11.0	11.9	12.3
	4H	10.3	11.0	10.7	11.5	11.9	10.6	11.4	11.0	11.8	12.2
	6H	10.3	10.9	10.7	11.4	11.9	10.6	11.3	11.1	11.7	12.2
	8H	10.3	10.9	10.7	11.3	11.8	10.6	11.2	11.1	11.7	12.1
	12H	10.2	10.8	10.7	11.3	11.7	10.6	11.1	11.1	11.6	12.1
8H	4H	10.2	10.8	10.7	11.2	11.7	10.5	11.1	11.0	11.6	12.1
	6H	10.2	10.7	10.7	11.2	11.7	10.5	11.0	11.1	11.6	12.0
	8H	10.2	10.6	10.7	11.2	11.7	10.5	11.0	11.1	11.5	12.0
	12H	10.2	10.6	10.7	11.1	11.7	10.5	11.0	11.1	11.5	12.0
12H	4H	10.1	10.7	10.6	11.2	11.7	10.5	11.0	11.0	11.5	12.0
	6H	10.2	10.6	10.7	11.1	11.6	10.5	11.0	11.0	11.4	12.0
	8H	10.2	10.6	10.7	11.1	11.7	10.5	10.9	11.0	11.4	12.0

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0