

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE12LEDOS 10L 35K XX AR1223OS MW GL
Nom 12 inch diam, AR1223 trim, MW interior finish, clear glass lens

Test Number

SP-01197_1_M-10L

Test Date

11/5/2020

The results contained in this report pertain only to this IES file.

Summary of Results

Power

Input Watts	8.7 W
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Lumen Output

Output Lumens	992
Efficacy	113.97 lm/W

Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.24
Four luminaires	1.26

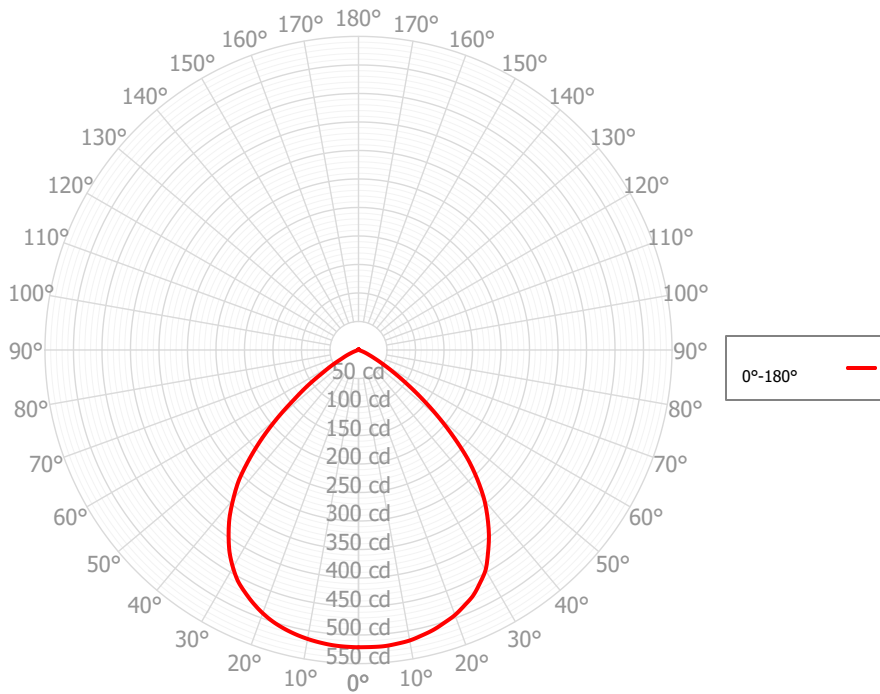
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01197_1_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE12LEDOS 10L 35K XX AR1223OS MW GL
LUMINAIRE	Nom 12 inch diam, AR1223 trim, MW interior finish, clear glass 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°	50.30	5.07%	90.00° - 100.00°	0.36	0.04%
10.00° - 20.00°	143.01	14.42%	100.00° - 110.00°	0.35	0.04%
20.00° - 30.00°	217.11	21.90%	100.00° - 120.00°	0.69	0.07%
30.00° - 40.00°	247.38	24.95%	120.00° - 130.00°	0.38	0.04%
40.00° - 50.00°	205.82	20.76%	130.00° - 140.00°	0.32	0.03%
50.00° - 60.00°	96.95	9.78%	140.00° - 150.00°	0.34	0.03%
60.00° - 70.00°	24.38	2.46%	150.00° - 160.00°	0.26	0.03%
70.00° - 80.00°	3.26	0.33%	160.00° - 170.00°	0.15	0.02%
80.00° - 90.00°	0.75	0.08%	170.00° - 180.00°	0.06	0.01%
0.00° - 90.00°	988.95	99.74%	0.00° - 180.00°	991.51	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	521.46	521.46
2.50°	521.57	520.95
5.00°	521.52	519.86
7.50°	519.72	517.62
10.00°	517.45	514.71
12.50°	513.01	510.80
15.00°	508.20	505.83
17.50°	501.57	499.59
20.00°	494.79	491.36
22.50°	485.32	481.34
25.00°	475.56	469.92
27.50°	461.20	457.53
30.00°	445.85	440.50
32.50°	422.72	420.98
35.00°	398.94	397.25
37.50°	372.07	371.87
40.00°	343.46	342.06
42.50°	309.28	311.02
45.00°	271.91	271.14
47.50°	227.29	229.61
50.00°	183.42	185.74
52.50°	140.86	141.63
55.00°	103.43	107.80
57.50°	72.81	74.66
60.00°	48.93	53.62
62.50°	31.90	33.71
65.00°	20.57	24.06
67.50°	13.76	15.05
70.00°	8.26	9.23
72.50°	3.57	4.36
75.00°	1.75	2.71
77.50°	1.24	1.48
80.00°	0.93	1.22
82.50°	0.70	0.95
85.00°	0.63	0.66
87.50°	0.60	0.46
90.00°	0.48	0.37
92.50°	0.34	0.32
95.00°	0.31	0.32
97.50°	0.29	0.31
100.00°	0.38	0.30
102.50°	0.46	0.30
105.00°	0.37	0.29
107.50°	0.30	0.28
110.00°	0.36	0.28
112.50°	0.41	0.26

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	1180	1180	1180	1180	1152	1152	1152	1152	1100	1100	1100	1053	1053	1053	1009	1009	989
	1	1109	1075	1045	1018	1084	1053	1026	1001	1012	990	970	974	956	940	939	925	912
	2	1035	974	923	881	1011	956	910	870	922	884	851	891	859	832	862	836	813
	3	963	882	819	769	941	867	809	762	839	790	749	813	772	737	789	754	725
	4	896	800	731	677	875	788	723	673	765	708	664	743	695	655	723	681	647
	5	834	729	655	601	815	718	650	598	699	638	592	680	627	586	663	617	580
	6	777	666	591	537	760	657	587	535	640	578	531	625	569	527	610	561	522
	7	726	611	536	484	710	603	532	482	589	525	479	575	518	476	563	512	473
	8	680	562	489	438	665	556	486	437	543	480	434	532	474	432	521	469	430
	9	638	520	448	399	625	514	445	398	503	440	396	493	436	394	484	431	392
	10	599	482	412	365	588	477	410	364	468	406	363	459	402	361	451	398	360

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.2 fc	5.6 ft
6.5 ft	12.3 fc	6.6 ft
7.5 ft	9.3 fc	7.7 ft
8.0 ft	8.1 fc	8.2 ft
10.0 ft	5.2 fc	10.2 ft
12.0 ft	3.6 fc	12.3 ft
14.0 ft	2.7 fc	14.3 ft
16.0 ft	2.0 fc	16.4 ft
20.0 ft	1.3 fc	20.4 ft
24.0 ft	0.9 fc	24.5 ft
28.0 ft	0.7 fc	28.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	7147	7147	7147
45.00°	5270	5266	5263
55.00°	2471	2497	2524
65.00°	667	695	724
75.00°	92	105	118
85.00°	99	100	102

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	10.9	12.3	11.3	12.6	12.9	11.0	12.4	11.4	12.7	13.0
	3H	11.0	12.1	11.4	12.5	12.8	11.1	12.2	11.5	12.6	13.0
	4H	10.9	12.0	11.3	12.3	12.7	11.0	12.1	11.4	12.5	12.8
	6H	10.8	11.8	11.2	12.2	12.6	10.9	11.9	11.4	12.3	12.7
	8H	10.8	11.7	11.2	12.1	12.5	10.9	11.8	11.3	12.2	12.6
	12H	10.7	11.6	11.2	12.0	12.5	10.9	11.8	11.3	12.1	12.6
4H	2H	10.9	12.0	11.3	12.3	12.7	11.0	12.1	11.4	12.4	12.8
	3H	10.9	11.8	11.4	12.2	12.6	11.1	11.9	11.5	12.4	12.8
	4H	10.9	11.6	11.3	12.1	12.5	11.0	11.8	11.4	12.2	12.6
	6H	10.8	11.4	11.3	11.9	12.4	10.9	11.6	11.4	12.0	12.5
	8H	10.7	11.3	11.2	11.8	12.3	10.9	11.5	11.3	11.9	12.4
	12H	10.7	11.2	11.2	11.7	12.2	10.8	11.4	11.3	11.9	12.3
8H	4H	10.7	11.4	11.2	11.8	12.3	10.9	11.5	11.3	11.9	12.4
	6H	10.6	11.1	11.1	11.6	12.1	10.8	11.3	11.3	11.8	12.3
	8H	10.6	11.0	11.1	11.5	12.0	10.7	11.2	11.2	11.7	12.2
	12H	10.5	10.9	11.0	11.4	12.0	10.7	11.1	11.2	11.6	12.2
12H	4H	10.7	11.2	11.2	11.7	12.2	10.8	11.4	11.3	11.9	12.3
	6H	10.6	11.0	11.1	11.5	12.1	10.7	11.2	11.2	11.6	12.2
	8H	10.5	10.9	11.0	11.4	12.0	10.7	11.1	11.2	11.6	12.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0