Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE12LEDOS 10L 35K XX AR1223OS MW FG

Nom 12 inch diam, AR1223 trim, MW interior finish, frosted glass lens

Test Number

SP-01197_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

Lumen Output

Output Lumens	898
Efficacy	103.18 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

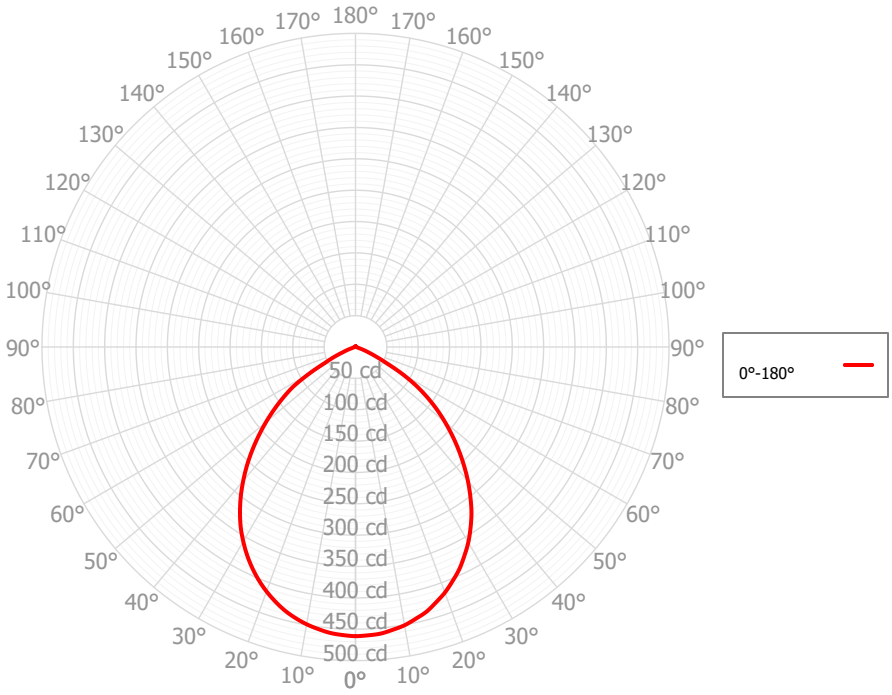
Full Beam Angle

0° - 180°	90°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01197_M-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 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°	44.11	4.91%	90.00° - 100.00°	0.36	0.04%
10.00° - 20.00°	122.59	13.66%	100.00° - 110.00°	0.37	0.04%
20.00° - 30.00°	179.12	19.95%	100.00° - 120.00°	0.72	0.08%
30.00° - 40.00°	200.19	22.30%	120.00° - 130.00°	0.36	0.04%
40.00° - 50.00°	179.02	19.94%	130.00° - 140.00°	0.35	0.04%
50.00° - 60.00°	123.67	13.78%	140.00° - 150.00°	0.27	0.03%
60.00° - 70.00°	40.23	4.48%	150.00° - 160.00°	0.22	0.03%
70.00° - 80.00°	5.16	0.57%	160.00° - 170.00°	0.14	0.02%
80.00° - 90.00°	1.12	0.12%	170.00° - 180.00°	0.05	0.01%
0.00° - 90.00°	895.20	99.72%	0.00° - 180.00°	897.68	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	461.18	461.18
2.50°	460.29	459.89
5.00°	458.84	457.85
7.50°	454.93	453.81
10.00°	450.62	449.03
12.50°	443.96	442.73
15.00°	437.10	435.14
17.50°	427.05	425.59
20.00°	416.81	414.85
22.50°	404.26	402.76
25.00°	391.37	389.21
27.50°	375.83	374.34
30.00°	359.82	358.03
32.50°	341.56	340.70
35.00°	322.49	321.19
37.50°	300.91	300.53
40.00°	278.90	278.58
42.50°	255.93	256.13
45.00°	232.84	232.86
47.50°	209.57	209.38
50.00°	186.41	186.28
52.50°	163.38	163.25
55.00°	139.45	140.56
57.50°	114.60	117.91
60.00°	86.67	86.27
62.50°	56.30	54.91
65.00°	36.22	37.81
67.50°	22.34	21.56
70.00°	12.99	13.32
72.50°	5.71	6.09
75.00°	3.32	4.11
77.50°	2.57	2.46
80.00°	2.01	1.92
82.50°	1.49	1.39
85.00°	1.02	0.88
87.50°	0.56	0.50
90.00°	0.42	0.38
92.50°	0.31	0.31
95.00°	0.30	0.32
97.50°	0.29	0.34
100.00°	0.33	0.37
102.50°	0.36	0.36
105.00°	0.41	0.32
107.50°	0.43	0.29
110.00°	0.35	0.25
112.50°	0.30	0.29

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	1068	1068	1068	1068	1043	1043	1043	1043	996	996	996	953	953	953	914	914	914	895
	1	1001	968	939	913	977	948	922	898	911	889	870	876	859	843	844	831	818	813
	2	929	871	822	782	907	854	810	772	823	786	755	795	764	738	769	744	721	728
	3	861	783	723	676	840	770	714	670	744	697	658	720	680	647	698	665	636	651
	4	797	707	641	590	778	695	634	586	674	620	578	654	608	570	635	596	563	584
RCR	5	740	641	571	520	722	631	566	517	613	556	512	596	546	506	580	536	501	526
	6	688	583	513	462	672	575	509	460	560	500	456	545	493	453	532	485	449	476
	7	641	533	463	414	627	526	460	413	513	453	410	501	447	407	489	441	404	433
	8	600	490	421	374	586	484	419	373	473	413	371	462	408	369	452	403	367	396
	9	562	452	385	340	550	447	383	339	437	379	337	428	374	336	419	370	334	364
	10	528	419	354	311	517	415	352	310	406	349	309	398	345	307	390	341	306	336

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	15.2 fc	5.5 ft
6.5 ft	10.9 fc	6.6 ft
7.5 ft	8.2 fc	7.6 ft
8.0 ft	7.2 fc	8.1 ft
10.0 ft	4.6 fc	10.1 ft
12.0 ft	3.2 fc	12.1 ft
14.0 ft	2.4 fc	14.1 ft
16.0 ft	1.8 fc	16.1 ft
20.0 ft	1.2 fc	20.2 ft
24.0 ft	0.8 fc	24.2 ft
28.0 ft	0.6 fc	28.2 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	6320	6320	6320
45.00°	4513	4513	4513
55.00°	3332	3339	3345
65.00°	1175	1187	1200
75.00°	176	186	197
85.00°	160	155	149

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

Corrected UGR values based on total output energy
SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0