

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00690_3_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	945
Efficacy	108.57 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

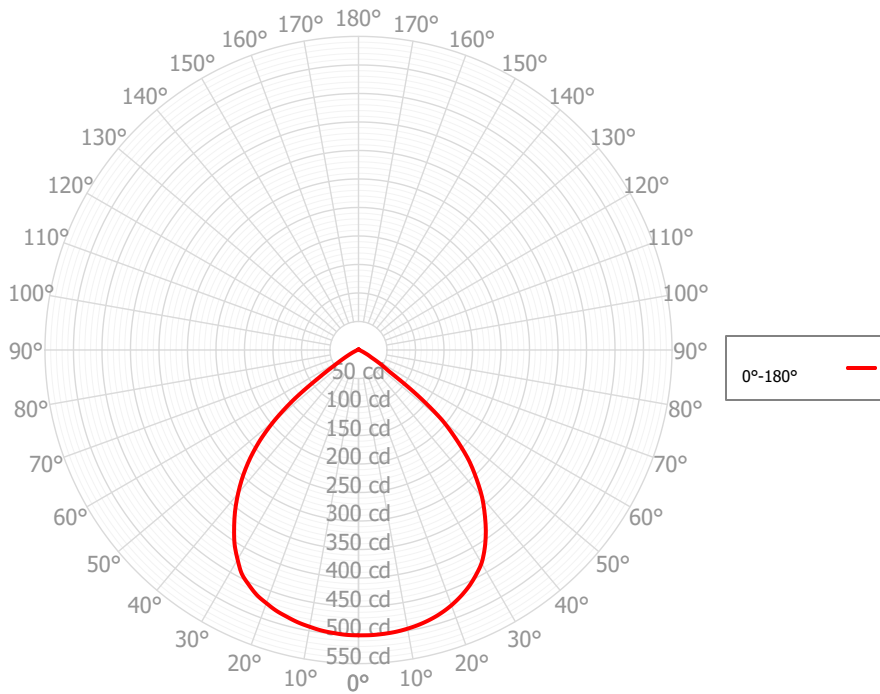
Full Beam Angle

0° - 180°	93°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_3_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE10LEDOS 10L 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°	48.24	5.11%	90.00° - 100.00°	0.36	0.04%
10.00° - 20.00°	137.43	14.55%	100.00° - 110.00°	0.40	0.04%
20.00° - 30.00°	209.66	22.20%	100.00° - 120.00°	0.74	0.08%
30.00° - 40.00°	239.36	25.34%	120.00° - 130.00°	0.37	0.04%
40.00° - 50.00°	205.56	21.76%	130.00° - 140.00°	0.33	0.03%
50.00° - 60.00°	81.22	8.60%	140.00° - 150.00°	0.25	0.03%
60.00° - 70.00°	14.74	1.56%	150.00° - 160.00°	0.22	0.02%
70.00° - 80.00°	4.44	0.47%	160.00° - 170.00°	0.16	0.02%
80.00° - 90.00°	1.41	0.15%	170.00° - 180.00°	0.06	0.01%
0.00° - 90.00°	942.06	99.74%	0.00° - 180.00°	944.55	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	500.57	500.57
2.50°	500.70	500.16
5.00°	499.96	498.45
7.50°	498.72	496.43
10.00°	496.40	493.08
12.50°	493.35	489.55
15.00°	489.11	484.63
17.50°	483.63	479.62
20.00°	476.60	472.68
22.50°	467.99	465.46
25.00°	457.90	454.82
27.50°	445.63	443.05
30.00°	431.76	424.31
32.50°	412.18	404.49
35.00°	389.40	380.39
37.50°	363.90	355.54
40.00°	337.30	328.59
42.50°	306.24	300.23
45.00°	273.84	269.07
47.50°	233.69	233.91
50.00°	192.01	192.60
52.50°	130.11	143.46
55.00°	66.06	85.20
57.50°	45.15	48.77
60.00°	26.21	31.71
62.50°	18.92	20.85
65.00°	12.02	14.28
67.50°	8.71	10.05
70.00°	5.75	7.03
72.50°	4.68	5.42
75.00°	3.70	4.34
77.50°	3.02	3.56
80.00°	2.34	2.87
82.50°	1.67	2.05
85.00°	1.07	1.22
87.50°	0.62	0.76
90.00°	0.33	0.35
92.50°	0.27	0.36
95.00°	0.26	0.38
97.50°	0.31	0.34
100.00°	0.38	0.30
102.50°	0.46	0.27
105.00°	0.48	0.26
107.50°	0.47	0.31
110.00°	0.47	0.32
112.50°	0.49	0.25

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	1124	1124	1124	1124	1097	1097	1097	1097	1048	1048	1048	1003	1003	1003	962	962	942
	1	1057	1025	997	971	1033	1004	978	955	965	944	925	929	912	897	896	882	864
	2	988	930	882	842	965	913	869	832	881	845	813	851	821	795	824	800	783
	3	920	844	784	737	899	829	775	731	803	757	718	778	739	706	756	723	708
	4	857	767	701	651	837	755	694	646	733	680	638	712	667	630	693	654	641
	5	798	699	629	578	780	689	624	575	670	613	570	653	603	564	637	593	581
	6	744	639	568	518	728	631	564	516	615	555	511	600	547	507	586	540	529
	7	695	586	516	466	681	579	512	465	566	505	462	553	499	459	541	493	483
	8	651	540	470	422	637	534	467	421	522	462	419	511	456	417	501	451	443
	9	611	499	431	385	598	494	428	384	484	424	382	474	419	380	465	415	408
	10	574	463	396	352	563	458	394	351	449	391	350	441	387	349	433	383	377

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	16.5 fc	5.8 ft
6.5 ft	11.8 fc	6.8 ft
7.5 ft	8.9 fc	7.9 ft
8.0 ft	7.8 fc	8.4 ft
10.0 ft	5.0 fc	10.5 ft
12.0 ft	3.5 fc	12.6 ft
14.0 ft	2.6 fc	14.7 ft
16.0 ft	2.0 fc	16.8 ft
20.0 ft	1.3 fc	21.0 ft
24.0 ft	0.9 fc	25.3 ft
28.0 ft	0.6 fc	29.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	9958	9958	9958
45.00°	7704	7671	7637
55.00°	2291	2457	2623
65.00°	566	593	619
75.00°	285	297	309
85.00°	244	252	261

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	9.1	10.4	9.5	10.7	11.0	9.4	10.7	9.8	11.0	11.3
	3H	9.1	10.3	9.5	10.6	11.0	9.4	10.6	9.8	10.9	11.3
	4H	9.1	10.2	9.5	10.6	10.9	9.4	10.5	9.8	10.9	11.3
	6H	9.1	10.1	9.5	10.5	10.9	9.4	10.4	9.8	10.8	11.2
	8H	9.1	10.0	9.5	10.4	10.8	9.4	10.3	9.8	10.7	11.1
	12H	9.1	9.9	9.5	10.3	10.8	9.4	10.3	9.8	10.6	11.1
4H	2H	9.0	10.1	9.4	10.4	10.8	9.3	10.4	9.7	10.7	11.1
	3H	9.1	10.0	9.5	10.4	10.8	9.4	10.3	9.9	10.7	11.1
	4H	9.1	9.9	9.6	10.3	10.8	9.5	10.2	9.9	10.6	11.1
	6H	9.1	9.8	9.6	10.2	10.7	9.5	10.1	9.9	10.6	11.0
	8H	9.1	9.7	9.6	10.2	10.7	9.5	10.1	9.9	10.5	11.0
	12H	9.1	9.6	9.6	10.1	10.6	9.4	10.0	9.9	10.5	10.9
8H	4H	9.0	9.6	9.5	10.1	10.6	9.4	10.0	9.8	10.4	10.9
	6H	9.1	9.6	9.6	10.1	10.5	9.4	9.9	9.9	10.4	10.9
	8H	9.0	9.5	9.6	10.0	10.5	9.4	9.9	9.9	10.4	10.9
	12H	9.0	9.5	9.6	10.0	10.5	9.4	9.8	9.9	10.3	10.9
12H	4H	9.0	9.5	9.5	10.0	10.5	9.3	9.9	9.8	10.4	10.8
	6H	9.0	9.5	9.5	9.9	10.5	9.4	9.8	9.9	10.3	10.8
	8H	9.0	9.4	9.5	9.9	10.5	9.4	9.8	9.9	10.3	10.9

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0