

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00690_2_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	863
Efficacy	99.25 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.18
Two luminaires, plane 90°	1.18
Four luminaires	1.24

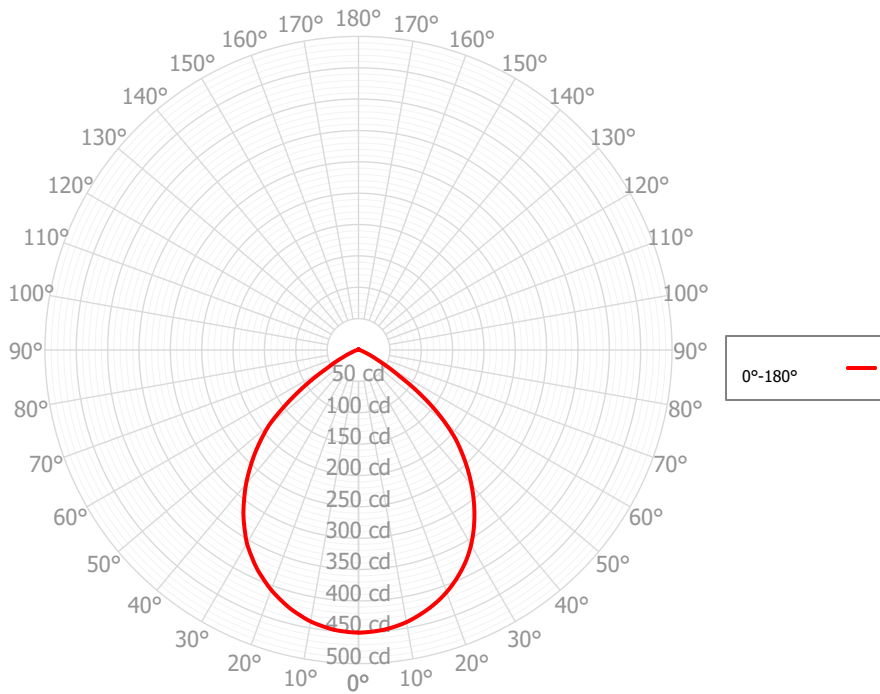
Full Beam Angle

0° - 180°	92°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_2_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 FG
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, frosted glass lens
OTHER	Beam angle: 91.8 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°	43.14	5.00%	90.00° - 100.00°	0.50	0.06%
10.00° - 20.00°	120.17	13.92%	100.00° - 110.00°	0.45	0.05%
20.00° - 30.00°	177.28	20.53%	100.00° - 120.00°	0.81	0.09%
30.00° - 40.00°	199.86	23.15%	120.00° - 130.00°	0.37	0.04%
40.00° - 50.00°	179.24	20.76%	130.00° - 140.00°	0.37	0.04%
50.00° - 60.00°	103.58	12.00%	140.00° - 150.00°	0.33	0.04%
60.00° - 70.00°	28.04	3.25%	150.00° - 160.00°	0.20	0.02%
70.00° - 80.00°	7.29	0.84%	160.00° - 170.00°	0.14	0.02%
80.00° - 90.00°	2.13	0.25%	170.00° - 180.00°	0.05	0.01%
0.00° - 90.00°	860.73	99.68%	0.00° - 180.00°	863.49	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	450.78	450.78
2.50°	449.83	449.78
5.00°	448.10	447.87
7.50°	444.94	444.11
10.00°	440.71	439.64
12.50°	434.73	433.04
15.00°	427.96	425.74
17.50°	420.07	416.67
20.00°	410.88	407.13
22.50°	400.12	395.75
25.00°	388.08	383.98
27.50°	374.68	370.11
30.00°	359.09	355.88
32.50°	341.52	338.12
35.00°	322.34	319.95
37.50°	301.89	299.53
40.00°	280.19	278.93
42.50°	257.62	256.49
45.00°	234.03	233.97
47.50°	209.84	209.96
50.00°	180.43	185.65
52.50°	148.39	152.11
55.00°	113.51	118.71
57.50°	77.40	87.18
60.00°	53.72	57.32
62.50°	34.57	41.55
65.00°	23.80	26.89
67.50°	15.52	19.23
70.00°	10.87	12.43
72.50°	7.13	9.75
75.00°	5.56	7.31
77.50°	4.43	5.73
80.00°	3.35	4.28
82.50°	2.27	3.25
85.00°	1.48	2.24
87.50°	0.72	1.29
90.00°	0.49	0.61
92.50°	0.28	0.53
95.00°	0.33	0.50
97.50°	0.39	0.59
100.00°	0.35	0.62
102.50°	0.32	0.56
105.00°	0.37	0.48
107.50°	0.41	0.37
110.00°	0.41	0.31
112.50°	0.40	0.30

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	1027	1027	1027	1027	1003	1003	1003	1003	958	958	958	917	917	917	879	879	861
	1	963	932	905	880	941	913	888	865	877	856	838	844	827	812	813	800	783
	2	896	840	795	756	875	824	783	747	795	760	730	768	739	713	742	719	698
	3	831	758	701	656	812	745	693	650	720	676	639	698	660	628	676	645	618
	4	771	686	623	575	753	675	616	571	654	604	563	635	591	556	617	580	549
	5	717	623	557	508	700	613	552	506	596	542	500	580	532	495	565	523	490
	6	667	568	501	453	652	560	497	451	545	489	447	531	482	444	518	474	440
	7	622	520	453	407	609	513	450	405	500	444	402	489	438	400	477	432	397
	8	582	478	413	367	570	472	410	366	461	405	364	451	400	362	441	395	360
	9	546	441	377	334	534	436	375	333	427	371	332	418	367	330	410	363	329
	10	513	409	347	306	503	405	345	305	397	342	304	389	338	302	382	335	301

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	14.9 fc	5.7 ft
6.5 ft	10.7 fc	6.7 ft
7.5 ft	8.0 fc	7.7 ft
8.0 ft	7.0 fc	8.3 ft
10.0 ft	4.5 fc	10.3 ft
12.0 ft	3.1 fc	12.4 ft
14.0 ft	2.3 fc	14.4 ft
16.0 ft	1.8 fc	16.5 ft
20.0 ft	1.1 fc	20.6 ft
24.0 ft	0.8 fc	24.8 ft
28.0 ft	0.6 fc	28.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	8968	8968	8968
45.00°	6584	6584	6584
55.00°	3937	3982	4027
65.00°	1120	1157	1193
75.00°	428	461	495
85.00°	339	382	425

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	13.2	14.5	13.5	14.8	15.2	13.6	14.9	13.9	15.3	15.6
	3H	13.2	14.4	13.6	14.8	15.1	13.7	14.9	14.0	15.2	15.6
	4H	13.2	14.3	13.6	14.7	15.1	13.6	14.8	14.0	15.1	15.5
	6H	13.2	14.2	13.6	14.6	15.0	13.6	14.6	14.0	15.0	15.4
	8H	13.1	14.1	13.6	14.5	14.9	13.6	14.6	14.0	15.0	15.4
	12H	13.1	14.0	13.5	14.4	14.9	13.6	14.5	14.0	14.9	15.3
4H	2H	13.1	14.3	13.5	14.6	15.0	13.5	14.7	13.9	15.0	15.4
	3H	13.3	14.2	13.7	14.6	15.0	13.7	14.6	14.1	15.0	15.4
	4H	13.2	14.0	13.7	14.5	14.9	13.7	14.5	14.1	14.9	15.4
	6H	13.2	13.9	13.7	14.4	14.8	13.7	14.4	14.1	14.8	15.3
	8H	13.2	13.8	13.7	14.3	14.8	13.7	14.3	14.1	14.8	15.2
	12H	13.2	13.7	13.7	14.2	14.7	13.6	14.2	14.1	14.7	15.2
8H	4H	13.1	13.8	13.6	14.3	14.7	13.6	14.3	14.1	14.7	15.2
	6H	13.1	13.7	13.6	14.2	14.7	13.6	14.1	14.1	14.6	15.1
	8H	13.1	13.6	13.6	14.1	14.6	13.6	14.1	14.1	14.6	15.1
	12H	13.1	13.5	13.6	14.0	14.6	13.6	14.0	14.1	14.5	15.1
12H	4H	13.1	13.7	13.6	14.2	14.7	13.6	14.1	14.1	14.6	15.1
	6H	13.1	13.6	13.6	14.1	14.6	13.6	14.0	14.1	14.5	15.1
	8H	13.1	13.5	13.6	14.0	14.6	13.6	14.0	14.1	14.5	15.1

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0