

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE10LEDOS 45L 35K XX AR1023OS MW GL
Nom 10 inch diam, AR1023 trim, MW interior finish, clear glass lens

Test Number

SP-00690_3

Test Date

11/5/2020

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

Summary of Results

Power

Input Watts	40 W
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Lumen Output

Output Lumens	4107
Efficacy	102.67 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

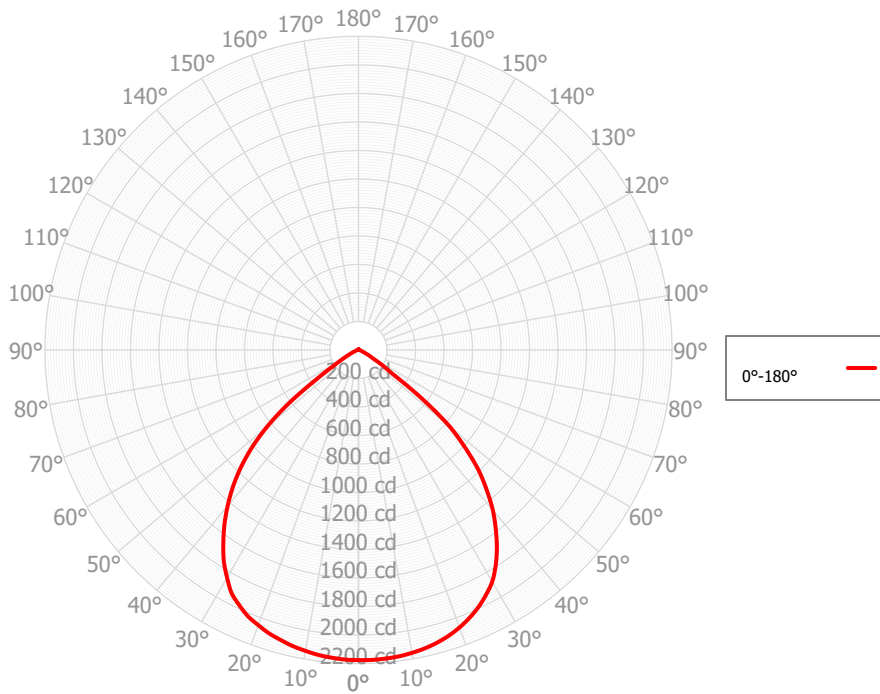
Full Beam Angle

0° - 180°	93°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_3
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE10LEDOS 45L 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
_CRI	80+
_CCTMULT	27K x 0.96, 30K x 0.99, 40K x 1.03
_LAMPMULT	10L x 0.23, 15L x 0.32, 20L x 0.42, 30L x 0.6

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	209.74	5.11%	90.00° - 100.00°	1.55	0.04%
10.00° - 20.00°	597.53	14.55%	100.00° - 110.00°	1.72	0.04%
20.00° - 30.00°	911.59	22.20%	100.00° - 120.00°	3.21	0.08%
30.00° - 40.00°	1040.71	25.34%	120.00° - 130.00°	1.60	0.04%
40.00° - 50.00°	893.73	21.76%	130.00° - 140.00°	1.44	0.03%
50.00° - 60.00°	353.12	8.60%	140.00° - 150.00°	1.10	0.03%
60.00° - 70.00°	64.08	1.56%	150.00° - 160.00°	0.94	0.02%
70.00° - 80.00°	19.31	0.47%	160.00° - 170.00°	0.70	0.02%
80.00° - 90.00°	6.11	0.15%	170.00° - 180.00°	0.26	0.01%
0.00° - 90.00°	4095.92	99.74%	0.00° - 180.00°	4106.73	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2176.40	2176.40
2.50°	2176.95	2174.60
5.00°	2173.76	2167.16
7.50°	2168.36	2158.40
10.00°	2158.26	2143.84
12.50°	2144.98	2128.48
15.00°	2126.58	2107.10
17.50°	2102.74	2085.32
20.00°	2072.17	2055.11
22.50°	2034.75	2023.75
25.00°	1990.85	1977.49
27.50°	1937.54	1926.31
30.00°	1877.23	1844.80
32.50°	1792.08	1758.65
35.00°	1693.04	1653.89
37.50°	1582.19	1545.81
40.00°	1466.51	1428.63
42.50°	1331.47	1305.34
45.00°	1190.63	1169.88
47.50°	1016.03	1016.99
50.00°	834.83	837.40
52.50°	565.70	623.73
55.00°	287.24	370.42
57.50°	196.30	212.03
60.00°	113.95	137.87
62.50°	82.26	90.64
65.00°	52.28	62.09
67.50°	37.86	43.69
70.00°	25.00	30.58
72.50°	20.36	23.55
75.00°	16.10	18.87
77.50°	13.13	15.50
80.00°	10.18	12.48
82.50°	7.24	8.93
85.00°	4.65	5.29
87.50°	2.69	3.33
90.00°	1.44	1.52
92.50°	1.18	1.58
95.00°	1.15	1.65
97.50°	1.36	1.48
100.00°	1.65	1.31
102.50°	2.00	1.19
105.00°	2.09	1.13
107.50°	2.03	1.34
110.00°	2.06	1.41
112.50°	2.14	1.10

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	4886	4886	4886	4886	4771	4771	4771	4771	4557	4557	4557	4361	4361	4361	4181	4181	4096
	1	4598	4458	4333	4220	4492	4367	4254	4152	4196	4105	4021	4039	3966	3898	3894	3837	3758
	2	4294	4043	3836	3662	4195	3969	3780	3619	3829	3672	3536	3701	3571	3457	3582	3476	3404
	3	4000	3667	3410	3205	3909	3606	3369	3177	3491	3289	3123	3384	3214	3071	3285	3143	3078
	4	3724	3333	3047	2828	3640	3282	3016	2810	3186	2956	2773	3096	2898	2738	3013	2843	2786
	5	3469	3038	2737	2514	3392	2995	2713	2502	2914	2666	2476	2838	2621	2451	2767	2579	2528
	6	3236	2778	2471	2251	3165	2742	2452	2241	2673	2415	2223	2608	2380	2205	2548	2346	2301
	7	3023	2549	2242	2027	2959	2518	2227	2020	2459	2197	2007	2404	2169	1994	2352	2141	2102
	8	2830	2348	2044	1836	2771	2321	2032	1831	2270	2008	1821	2222	1985	1811	2177	1962	1928
	9	2655	2170	1873	1672	2602	2147	1863	1668	2103	1843	1661	2061	1823	1653	2022	1805	1774
	10	2497	2013	1723	1530	2448	1993	1715	1527	1954	1698	1521	1918	1682	1515	1883	1666	1639

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	71.9 fc	5.8 ft
6.5 ft	51.5 fc	6.8 ft
7.5 ft	38.7 fc	7.9 ft
8.0 ft	34.0 fc	8.4 ft
10.0 ft	21.8 fc	10.5 ft
12.0 ft	15.1 fc	12.6 ft
14.0 ft	11.1 fc	14.7 ft
16.0 ft	8.5 fc	16.8 ft
20.0 ft	5.4 fc	21.0 ft
24.0 ft	3.8 fc	25.3 ft
28.0 ft	2.8 fc	29.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	43298	43298	43298
45.00°	33498	33352	33206
55.00°	9963	10684	11405
65.00°	2461	2577	2692
75.00°	1238	1291	1344
85.00°	1061	1098	1134

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

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0