

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE10LEDOS 45L 35K XX AR1023OS MW SO
Nom 10 inch diam, AR1023 trim, MW interior finish, Solite lens

Test Number

SP-00690_4

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	4313
Efficacy	107.81 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.25
Two luminaires, plane 90°	1.24
Four luminaires	1.26

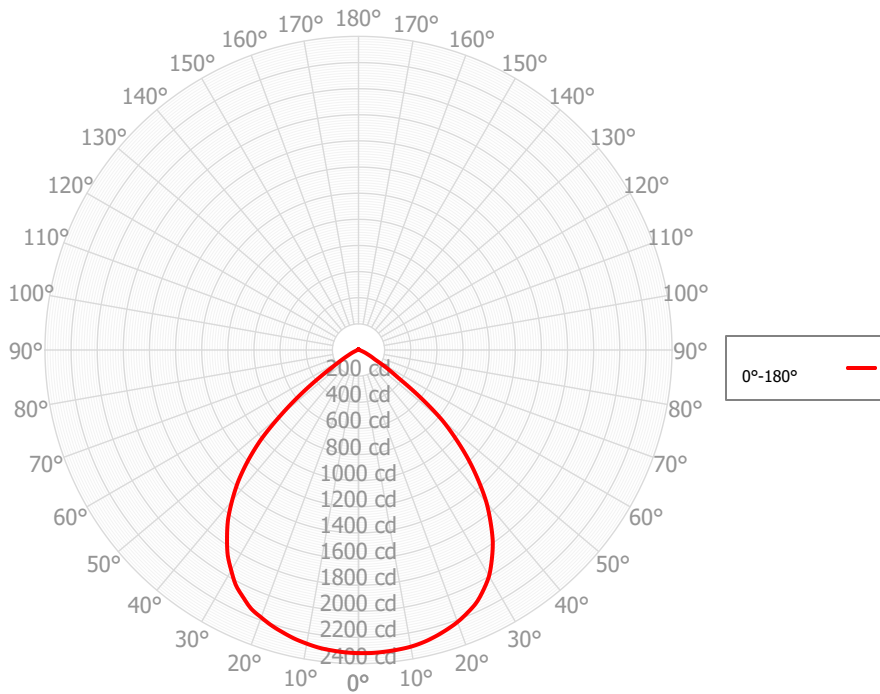
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_4
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 SO
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, Solite lens
OTHER	Beam angle: 91 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°	223.63	5.19%	90.00° - 100.00°	1.62	0.04%
10.00° - 20.00°	636.41	14.76%	100.00° - 110.00°	1.71	0.04%
20.00° - 30.00°	969.31	22.48%	100.00° - 120.00°	3.18	0.07%
30.00° - 40.00°	1100.18	25.51%	120.00° - 130.00°	1.36	0.03%
40.00° - 50.00°	906.58	21.02%	130.00° - 140.00°	1.40	0.03%
50.00° - 60.00°	362.25	8.40%	140.00° - 150.00°	1.25	0.03%
60.00° - 70.00°	75.55	1.75%	150.00° - 160.00°	1.15	0.03%
70.00° - 80.00°	21.37	0.50%	160.00° - 170.00°	0.71	0.02%
80.00° - 90.00°	6.31	0.15%	170.00° - 180.00°	0.27	0.01%
0.00° - 90.00°	4301.59	99.75%	0.00° - 180.00°	4312.53	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2320.46	2320.46
2.50°	2321.61	2316.97
5.00°	2318.52	2309.12
7.50°	2313.59	2299.44
10.00°	2306.15	2282.58
12.50°	2291.96	2263.61
15.00°	2270.73	2238.20
17.50°	2245.15	2211.58
20.00°	2216.01	2178.51
22.50°	2178.06	2144.73
25.00°	2134.65	2088.88
27.50°	2071.24	2031.37
30.00°	1998.49	1948.48
32.50°	1899.77	1863.12
35.00°	1792.17	1754.52
37.50°	1660.70	1641.43
40.00°	1523.73	1505.32
42.50°	1361.34	1361.88
45.00°	1195.38	1193.98
47.50°	1017.05	1007.80
50.00°	837.48	777.09
52.50°	601.39	556.22
55.00°	373.30	352.97
57.50°	254.09	206.63
60.00°	146.05	137.03
62.50°	109.17	89.11
65.00°	75.80	64.09
67.50°	56.12	44.99
70.00°	38.61	30.66
72.50°	27.16	22.34
75.00°	18.50	17.68
77.50°	15.47	14.48
80.00°	12.24	11.97
82.50°	8.72	8.49
85.00°	5.55	4.69
87.50°	2.78	2.77
90.00°	1.39	1.28
92.50°	1.24	1.08
95.00°	1.52	1.06
97.50°	2.09	1.56
100.00°	2.00	2.08
102.50°	1.54	1.93
105.00°	1.35	1.78
107.50°	1.27	1.59
110.00°	1.45	1.41
112.50°	1.71	1.31

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	5131	5131	5131	5131	5011	5011	5011	5011	4786	4786	4786	4580	4580	4580	4390	4390	4302
	1	4829	4682	4551	4433	4718	4587	4468	4361	4407	4311	4224	4242	4166	4095	4091	4030	3947
	2	4510	4248	4031	3848	4407	4170	3971	3803	4024	3859	3716	3889	3753	3633	3764	3653	3554
	3	4203	3855	3585	3371	4108	3791	3542	3341	3670	3458	3284	3558	3379	3230	3454	3304	3177
	4	3915	3505	3206	2977	3827	3452	3173	2957	3351	3110	2919	3257	3049	2881	3170	2992	2845
	5	3648	3197	2882	2649	3568	3152	2856	2635	3067	2807	2608	2987	2760	2582	2913	2715	2557
	6	3404	2925	2604	2373	3330	2887	2584	2363	2814	2545	2344	2747	2508	2325	2683	2472	2307
	7	3182	2686	2364	2139	3114	2653	2348	2132	2591	2317	2118	2533	2287	2104	2479	2259	2091
	8	2980	2475	2157	1939	2918	2447	2144	1934	2393	2119	1923	2343	2095	1913	2296	2071	1903
	9	2796	2289	1978	1767	2740	2264	1967	1763	2218	1946	1755	2174	1926	1748	2133	1906	1740
	10	2630	2124	1821	1619	2579	2103	1812	1616	2062	1794	1610	2024	1778	1603	1988	1761	1597

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	76.7 fc	5.6 ft
6.5 ft	54.9 fc	6.6 ft
7.5 ft	41.3 fc	7.6 ft
8.0 ft	36.3 fc	8.1 ft
10.0 ft	23.2 fc	10.2 ft
12.0 ft	16.1 fc	12.2 ft
14.0 ft	11.8 fc	14.2 ft
16.0 ft	9.1 fc	16.3 ft
20.0 ft	5.8 fc	20.3 ft
24.0 ft	4.0 fc	24.4 ft
28.0 ft	3.0 fc	28.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	46163	46163	46163
45.00°	33631	33621	33612
55.00°	12948	12771	12595
65.00°	3568	3430	3292
75.00°	1422	1406	1391
85.00°	1266	1217	1168

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	15.6	16.9	16.0	17.3	17.6	15.0	16.3	15.3	16.6	16.9
	3H	15.8	16.9	16.1	17.2	17.6	15.1	16.2	15.5	16.6	16.9
	4H	15.7	16.8	16.1	17.1	17.5	15.1	16.1	15.5	16.5	16.9
	6H	15.7	16.7	16.1	17.0	17.4	15.0	16.0	15.5	16.4	16.8
	8H	15.7	16.6	16.1	17.0	17.4	15.0	15.9	15.4	16.3	16.7
	12H	15.6	16.5	16.1	16.9	17.3	15.0	15.9	15.4	16.2	16.7
4H	2H	15.6	16.6	16.0	17.0	17.4	14.9	16.0	15.3	16.3	16.7
	3H	15.7	16.6	16.2	17.0	17.4	15.1	15.9	15.5	16.3	16.7
	4H	15.7	16.5	16.2	16.9	17.4	15.1	15.8	15.5	16.3	16.7
	6H	15.7	16.4	16.2	16.8	17.3	15.1	15.7	15.5	16.2	16.7
	8H	15.7	16.3	16.2	16.8	17.2	15.1	15.7	15.5	16.1	16.6
	12H	15.7	16.2	16.2	16.7	17.2	15.0	15.6	15.5	16.1	16.5
8H	4H	15.6	16.2	16.1	16.7	17.2	15.0	15.6	15.4	16.0	16.5
	6H	15.6	16.1	16.1	16.6	17.1	15.0	15.5	15.5	16.0	16.5
	8H	15.6	16.1	16.1	16.6	17.1	15.0	15.4	15.5	16.0	16.5
	12H	15.6	16.0	16.1	16.5	17.1	15.0	15.4	15.5	15.9	16.5
12H	4H	15.6	16.1	16.1	16.6	17.1	14.9	15.5	15.4	16.0	16.4
	6H	15.6	16.0	16.1	16.5	17.1	14.9	15.4	15.5	15.9	16.4
	8H	15.6	16.0	16.1	16.5	17.1	15.0	15.4	15.5	15.9	16.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0