

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE14LEDOS 45L 35K XX AR1423OS MW SO
Nom 14 inch diam, AR1423 trim, MW interior finish, Solite lens

Test Number

SP-01198_1

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	4521
Efficacy	113.02 lm/W

Luminous Dimensions

0° - 180° Size	-1.17
90° - 270° Size	-1.17
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.23
Four luminaires	1.26

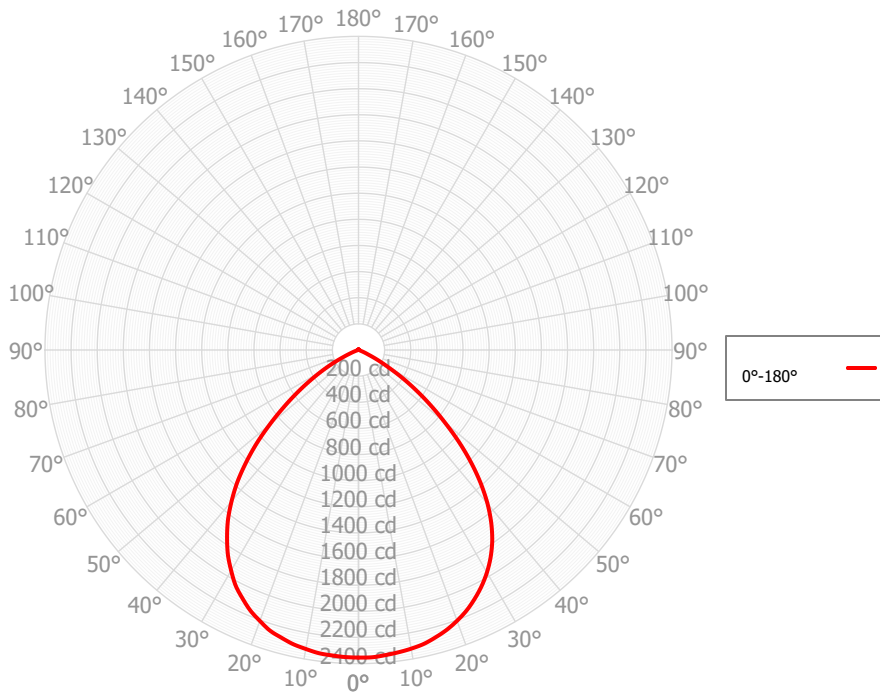
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01198_1
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE14LEDOS 45L 35K XX AR1423OS MW SO
LUMINAIRE	Nom 14 inch diam, AR1423 trim, MW interior finish, Solite lens
OTHER	Beam angle: 91.2 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°	226.64	5.01%	90.00° - 100.00°	1.37	0.03%
10.00° - 20.00°	642.67	14.22%	100.00° - 110.00°	1.29	0.03%
20.00° - 30.00°	965.57	21.36%	100.00° - 120.00°	2.75	0.06%
30.00° - 40.00°	1098.68	24.30%	120.00° - 130.00°	1.55	0.03%
40.00° - 50.00°	930.02	20.57%	130.00° - 140.00°	1.19	0.03%
50.00° - 60.00°	505.33	11.18%	140.00° - 150.00°	1.11	0.02%
60.00° - 70.00°	126.92	2.81%	150.00° - 160.00°	0.93	0.02%
70.00° - 80.00°	12.32	0.27%	160.00° - 170.00°	0.61	0.01%
80.00° - 90.00°	3.10	0.07%	170.00° - 180.00°	0.23	0.00%
0.00° - 90.00°	4511.26	99.78%	0.00° - 180.00°	4520.99	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2354.72	2354.72
2.50°	2354.80	2352.82
5.00°	2344.92	2346.90
7.50°	2334.45	2340.49
10.00°	2321.71	2323.99
12.50°	2305.12	2306.91
15.00°	2277.52	2280.20
17.50°	2246.09	2252.67
20.00°	2205.89	2207.32
22.50°	2159.75	2160.48
25.00°	2102.89	2099.60
27.50°	2039.42	2035.18
30.00°	1966.40	1949.83
32.50°	1882.28	1860.40
35.00°	1784.85	1754.11
37.50°	1669.59	1641.91
40.00°	1537.04	1511.74
42.50°	1385.66	1373.82
45.00°	1219.52	1217.16
47.50°	1044.04	1055.95
50.00°	862.50	886.12
52.50°	697.79	725.97
55.00°	541.79	580.44
57.50°	398.46	447.05
60.00°	260.26	328.86
62.50°	164.45	223.04
65.00°	82.23	129.77
67.50°	45.51	70.63
70.00°	19.47	39.52
72.50°	11.66	20.77
75.00°	6.75	10.44
77.50°	4.83	6.07
80.00°	3.20	4.94
82.50°	2.69	4.19
85.00°	2.21	3.59
87.50°	1.97	2.52
90.00°	1.74	1.28
92.50°	1.47	1.19
95.00°	1.22	1.40
97.50°	1.09	1.19
100.00°	1.04	0.90
102.50°	1.39	0.99
105.00°	1.61	1.13
107.50°	1.32	1.14
110.00°	1.23	1.14
112.50°	1.70	1.09

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	5380	5380	5380	5380	5254	5254	5254	5254	5018	5018	5018	4802	4802	4802	4604	4604	4511
	1	5056	4899	4759	4633	4939	4799	4672	4557	4611	4508	4414	4438	4356	4280	4279	4214	4153
	2	4711	4429	4196	4000	4602	4347	4134	3953	4193	4016	3862	4051	3905	3776	3920	3801	3694
	3	4379	4004	3714	3483	4278	3936	3669	3453	3809	3581	3394	3691	3499	3337	3582	3420	3282
	4	4069	3629	3306	3060	3975	3572	3272	3040	3465	3206	3000	3366	3143	2962	3274	3083	2924
	5	3784	3299	2961	2711	3698	3252	2934	2697	3162	2883	2669	3078	2834	2642	3000	2787	2616
	6	3525	3011	2667	2419	3446	2971	2646	2409	2894	2605	2390	2823	2567	2371	2756	2529	2352
	7	3290	2760	2416	2174	3219	2725	2399	2167	2660	2366	2153	2598	2335	2139	2541	2305	2125
	8	3078	2539	2200	1967	3013	2509	2186	1962	2453	2160	1951	2400	2134	1940	2350	2110	1930
	9	2887	2345	2014	1790	2827	2320	2003	1786	2271	1981	1777	2225	1960	1769	2181	1939	1761
	10	2714	2175	1852	1637	2660	2153	1843	1634	2110	1825	1628	2070	1807	1621	2032	1790	1615

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	77.8 fc	5.6 ft
6.5 ft	55.7 fc	6.6 ft
7.5 ft	41.9 fc	7.7 ft
8.0 ft	36.8 fc	8.2 ft
10.0 ft	23.5 fc	10.2 ft
12.0 ft	16.4 fc	12.3 ft
14.0 ft	12.0 fc	14.3 ft
16.0 ft	9.2 fc	16.3 ft
20.0 ft	5.9 fc	20.4 ft
24.0 ft	4.1 fc	24.5 ft
28.0 ft	3.0 fc	28.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	23575	23575	23575
45.00°	17267	17258	17250
55.00°	9457	9626	9794
65.00°	1948	2230	2511
75.00°	261	297	333
85.00°	254	294	333

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	16.4	17.8	16.8	18.1	18.4	16.9	18.2	17.2	18.5	18.8
	3H	16.3	17.5	16.7	17.9	18.2	16.8	18.0	17.2	18.3	18.7
	4H	16.3	17.4	16.7	17.7	18.1	16.7	17.8	17.1	18.2	18.6
	6H	16.2	17.2	16.6	17.6	18.0	16.7	17.7	17.1	18.0	18.4
	8H	16.2	17.1	16.6	17.5	17.9	16.6	17.6	17.1	18.0	18.4
	12H	16.1	17.0	16.6	17.4	17.8	16.6	17.5	17.0	17.9	18.3
4H	2H	16.3	17.4	16.7	17.8	18.2	16.8	17.9	17.2	18.2	18.6
	3H	16.3	17.1	16.7	17.5	18.0	16.8	17.6	17.2	18.1	18.5
	4H	16.2	17.0	16.6	17.4	17.8	16.7	17.5	17.1	17.9	18.3
	6H	16.1	16.8	16.6	17.2	17.7	16.6	17.3	17.1	17.7	18.2
	8H	16.0	16.7	16.5	17.1	17.6	16.5	17.2	17.0	17.6	18.1
	12H	16.0	16.5	16.5	17.0	17.5	16.5	17.1	17.0	17.5	18.0
8H	4H	16.0	16.7	16.5	17.1	17.6	16.5	17.2	17.0	17.6	18.1
	6H	15.9	16.5	16.4	17.0	17.4	16.4	17.0	17.0	17.5	17.9
	8H	15.9	16.3	16.4	16.9	17.4	16.4	16.8	16.9	17.4	17.9
	12H	15.8	16.2	16.3	16.7	17.3	16.3	16.8	16.9	17.2	17.8
12H	4H	16.0	16.5	16.5	17.0	17.5	16.5	17.1	17.0	17.5	18.0
	6H	15.9	16.3	16.4	16.8	17.4	16.4	16.9	16.9	17.3	17.9
	8H	15.8	16.2	16.3	16.7	17.3	16.3	16.7	16.9	17.2	17.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0