

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE14LEDOS 45L 35K XX AR1423OS MW GL

Nom 14 inch diam, AR1423 trim, MW interior finish, clear glass lens

Test Number

SP-01198

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	4413
Efficacy	110.33 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.24
Two luminaires, plane 90°	1.24
Four luminaires	1.27

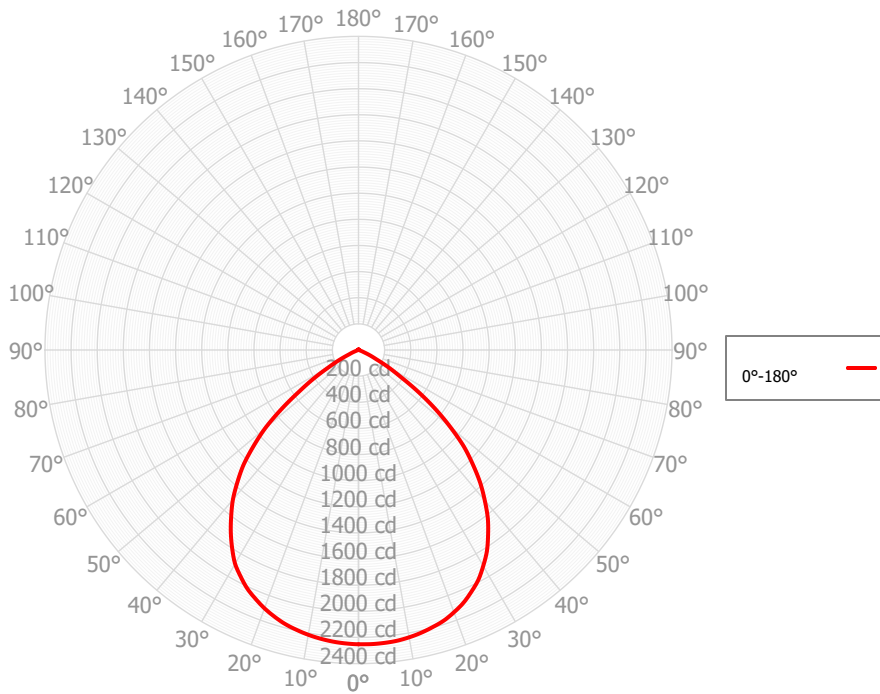
Full Beam Angle

0° - 180°	94°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01198
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 GL
LUMINAIRE	Nom 14 inch diam, AR1423 trim, MW interior finish, clear glass lens
OTHER	Beam angle: 93.8 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
_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°	216.92	4.92%	90.00° - 100.00°	1.54	0.03%
10.00° - 20.00°	615.88	13.96%	100.00° - 110.00°	1.13	0.03%
20.00° - 30.00°	932.11	21.12%	100.00° - 120.00°	2.44	0.06%
30.00° - 40.00°	1068.86	24.22%	120.00° - 130.00°	1.34	0.03%
40.00° - 50.00°	945.57	21.43%	130.00° - 140.00°	1.29	0.03%
50.00° - 60.00°	505.45	11.45%	140.00° - 150.00°	1.20	0.03%
60.00° - 70.00°	107.25	2.43%	150.00° - 160.00°	1.01	0.02%
70.00° - 80.00°	9.00	0.20%	160.00° - 170.00°	0.62	0.01%
80.00° - 90.00°	2.48	0.06%	170.00° - 180.00°	0.24	0.01%
0.00° - 90.00°	4403.53	99.78%	0.00° - 180.00°	4413.21	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	2252.74	2252.74
2.50°	2253.81	2248.43
5.00°	2251.15	2240.88
7.50°	2245.39	2229.07
10.00°	2233.36	2213.77
12.50°	2217.10	2194.07
15.00°	2195.94	2171.45
17.50°	2172.11	2140.27
20.00°	2136.75	2104.42
22.50°	2096.25	2061.26
25.00°	2043.05	2014.92
27.50°	1985.46	1954.65
30.00°	1909.55	1889.62
32.50°	1828.91	1800.13
35.00°	1729.53	1704.25
37.50°	1626.56	1600.78
40.00°	1504.11	1495.91
42.50°	1379.27	1372.06
45.00°	1237.15	1245.93
47.50°	1093.96	1090.76
50.00°	917.63	933.75
52.50°	740.60	743.24
55.00°	557.84	553.96
57.50°	380.86	405.51
60.00°	263.27	261.79
62.50°	153.61	167.62
65.00°	95.72	81.96
67.50°	44.98	49.29
70.00°	25.92	20.95
72.50°	10.46	11.99
75.00°	6.68	4.93
77.50°	3.81	4.12
80.00°	3.28	3.30
82.50°	2.75	2.47
85.00°	2.21	1.93
87.50°	1.82	1.98
90.00°	1.70	1.89
92.50°	1.53	1.58
95.00°	1.27	1.40
97.50°	1.11	1.41
100.00°	1.03	1.33
102.50°	0.98	1.16
105.00°	0.96	1.03
107.50°	1.12	0.95
110.00°	1.42	0.89
112.50°	1.58	0.86

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	5252	5252	5252	5252	5128	5128	5128	5128	4898	4898	4898	4688	4688	4688	4494	4494	4404
	1	4935	4783	4646	4523	4822	4685	4562	4450	4501	4401	4310	4333	4253	4178	4177	4114	4029
	2	4599	4323	4096	3905	4492	4243	4035	3859	4093	3920	3771	3955	3812	3686	3827	3710	3606
	3	4273	3907	3624	3399	4175	3841	3580	3369	3717	3495	3312	3602	3414	3256	3495	3337	3203
	4	3970	3539	3224	2984	3878	3484	3191	2964	3380	3126	2925	3283	3064	2887	3193	3006	2851
	5	3690	3216	2885	2640	3606	3170	2859	2627	3082	2809	2600	3000	2761	2574	2923	2715	2548
	6	3436	2933	2596	2354	3359	2894	2576	2344	2819	2536	2325	2749	2498	2306	2684	2462	2288
	7	3205	2686	2349	2113	3135	2652	2333	2106	2588	2301	2092	2528	2271	2079	2472	2241	2065
	8	2997	2470	2138	1910	2934	2441	2124	1904	2386	2099	1894	2334	2074	1884	2285	2050	1873
	9	2810	2280	1955	1736	2752	2255	1944	1732	2207	1923	1724	2162	1902	1716	2119	1882	1708
	10	2641	2113	1797	1586	2588	2091	1788	1583	2049	1770	1577	2010	1752	1571	1973	1736	1565

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	74.5 fc	5.9 ft
6.5 ft	53.3 fc	7.0 ft
7.5 ft	40.0 fc	8.0 ft
8.0 ft	35.2 fc	8.6 ft
10.0 ft	22.5 fc	10.7 ft
12.0 ft	15.6 fc	12.8 ft
14.0 ft	11.5 fc	15.0 ft
16.0 ft	8.8 fc	17.1 ft
20.0 ft	5.6 fc	21.4 ft
24.0 ft	3.9 fc	25.7 ft
28.0 ft	2.9 fc	29.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	22554	22554	22554
45.00°	17516	17548	17579
55.00°	9737	9720	9703
65.00°	2267	2186	2105
75.00°	259	242	225
85.00°	253	245	237

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	16.2	17.5	16.5	17.8	18.1	16.4	17.7	16.7	18.0	18.4
	3H	16.1	17.3	16.5	17.6	18.0	16.3	17.5	16.7	17.8	18.2
	4H	16.0	17.1	16.4	17.5	17.9	16.2	17.3	16.6	17.7	18.1
	6H	15.9	17.0	16.4	17.3	17.7	16.2	17.2	16.6	17.5	17.9
	8H	15.9	16.9	16.3	17.3	17.7	16.1	17.1	16.5	17.5	17.9
	12H	15.9	16.8	16.3	17.2	17.6	16.1	17.0	16.5	17.4	17.8
4H	2H	16.1	17.2	16.5	17.5	17.9	16.3	17.4	16.7	17.7	18.1
	3H	16.0	16.9	16.4	17.3	17.7	16.2	17.1	16.6	17.5	17.9
	4H	15.9	16.7	16.4	17.1	17.6	16.1	16.9	16.6	17.3	17.8
	6H	15.8	16.5	16.3	17.0	17.4	16.0	16.7	16.5	17.2	17.6
	8H	15.8	16.4	16.3	16.9	17.4	16.0	16.6	16.4	17.1	17.5
	12H	15.7	16.3	16.2	16.8	17.3	15.9	16.5	16.4	17.0	17.5
8H	4H	15.8	16.4	16.3	16.9	17.4	16.0	16.6	16.4	17.1	17.5
	6H	15.7	16.2	16.2	16.7	17.2	15.9	16.4	16.4	16.9	17.4
	8H	15.6	16.1	16.1	16.6	17.1	15.8	16.3	16.3	16.8	17.3
	12H	15.6	16.0	16.1	16.5	17.1	15.8	16.2	16.3	16.7	17.3
12H	4H	15.7	16.3	16.2	16.8	17.3	15.9	16.5	16.4	17.0	17.5
	6H	15.6	16.1	16.2	16.6	17.1	15.8	16.3	16.3	16.8	17.3
	8H	15.6	16.0	16.1	16.5	17.1	15.8	16.2	16.3	16.7	17.3

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0