

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE10LEDOS 15L 35K XX AR1023OS MW SO
Nom 10 inch diam, AR1023 trim, MW interior finish, Solite lens

Test Number

SP-00690_4_M-15L

Test Date

11/5/2020

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

Summary of Results

Power

Input Watts	13.5 W
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Lumen Output

Output Lumens	1380
Efficacy	102.22 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

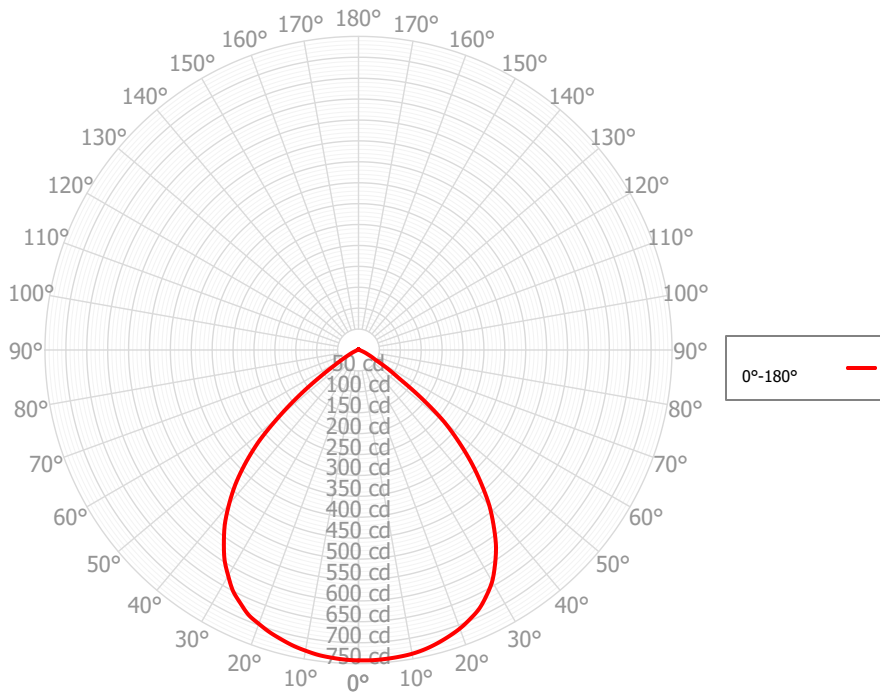
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_4_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE10LEDOS 15L 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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	71.56	5.19%	90.00° - 100.00°	0.52	0.04%
10.00° - 20.00°	203.65	14.76%	100.00° - 110.00°	0.55	0.04%
20.00° - 30.00°	310.18	22.48%	100.00° - 120.00°	1.02	0.07%
30.00° - 40.00°	352.06	25.51%	120.00° - 130.00°	0.44	0.03%
40.00° - 50.00°	290.10	21.02%	130.00° - 140.00°	0.45	0.03%
50.00° - 60.00°	115.92	8.40%	140.00° - 150.00°	0.40	0.03%
60.00° - 70.00°	24.18	1.75%	150.00° - 160.00°	0.37	0.03%
70.00° - 80.00°	6.84	0.50%	160.00° - 170.00°	0.23	0.02%
80.00° - 90.00°	2.02	0.15%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	1376.51	99.75%	0.00° - 180.00°	1380.01	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	742.55	742.55
2.50°	742.92	741.43
5.00°	741.93	738.92
7.50°	740.35	735.82
10.00°	737.97	730.43
12.50°	733.43	724.35
15.00°	726.63	716.23
17.50°	718.45	707.70
20.00°	709.12	697.12
22.50°	696.98	686.31
25.00°	683.09	668.44
27.50°	662.80	650.04
30.00°	639.52	623.51
32.50°	607.92	596.20
35.00°	573.49	561.45
37.50°	531.42	525.26
40.00°	487.59	481.70
42.50°	435.63	435.80
45.00°	382.52	382.07
47.50°	325.45	322.50
50.00°	267.99	248.67
52.50°	192.45	177.99
55.00°	119.46	112.95
57.50°	81.31	66.12
60.00°	46.74	43.85
62.50°	34.94	28.51
65.00°	24.25	20.51
67.50°	17.96	14.40
70.00°	12.36	9.81
72.50°	8.69	7.15
75.00°	5.92	5.66
77.50°	4.95	4.63
80.00°	3.92	3.83
82.50°	2.79	2.72
85.00°	1.78	1.50
87.50°	0.89	0.89
90.00°	0.45	0.41
92.50°	0.40	0.35
95.00°	0.49	0.34
97.50°	0.67	0.50
100.00°	0.64	0.67
102.50°	0.49	0.62
105.00°	0.43	0.57
107.50°	0.41	0.51
110.00°	0.46	0.45
112.50°	0.55	0.42

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	1642	1642	1642	1642	1603	1603	1603	1603	1531	1531	1531	1465	1465	1465	1405	1405	1377
	1	1545	1498	1456	1419	1510	1468	1430	1395	1410	1380	1352	1358	1333	1310	1309	1290	1263
	2	1443	1359	1290	1231	1410	1334	1271	1217	1288	1235	1189	1244	1201	1163	1204	1169	1145
	3	1345	1234	1147	1079	1314	1213	1133	1069	1174	1107	1051	1138	1081	1033	1105	1057	1036
	4	1253	1122	1026	953	1225	1105	1015	946	1072	995	934	1042	976	922	1014	957	938
	5	1167	1023	922	848	1142	1009	914	843	981	898	835	956	883	826	932	869	852
	6	1089	936	833	759	1066	924	827	756	901	814	750	879	803	744	859	791	776
	7	1018	859	757	684	997	849	751	682	829	742	678	811	732	673	793	723	710
	8	953	792	690	621	934	783	686	619	766	678	616	750	670	612	735	663	651
	9	895	732	633	566	877	725	629	564	710	623	562	696	616	559	683	610	600
	10	842	680	583	518	825	673	580	517	660	574	515	648	569	513	636	564	554

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	24.5 fc	5.6 ft
6.5 ft	17.6 fc	6.6 ft
7.5 ft	13.2 fc	7.6 ft
8.0 ft	11.6 fc	8.1 ft
10.0 ft	7.4 fc	10.2 ft
12.0 ft	5.2 fc	12.2 ft
14.0 ft	3.8 fc	14.2 ft
16.0 ft	2.9 fc	16.3 ft
20.0 ft	1.9 fc	20.3 ft
24.0 ft	1.3 fc	24.4 ft
28.0 ft	0.9 fc	28.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	14772	14772	14772
45.00°	10762	10759	10756
55.00°	4143	4087	4030
65.00°	1142	1098	1054
75.00°	455	450	445
85.00°	405	389	374

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	11.7	13.0	12.0	13.3	13.6	11.0	12.3	11.4	12.6	12.9
	3H	11.8	12.9	12.2	13.3	13.6	11.1	12.3	11.5	12.6	13.0
	4H	11.8	12.8	12.2	13.2	13.6	11.1	12.2	11.5	12.5	12.9
	6H	11.7	12.7	12.2	13.1	13.5	11.1	12.0	11.5	12.4	12.8
	8H	11.7	12.6	12.1	13.0	13.4	11.1	12.0	11.5	12.4	12.8
	12H	11.7	12.6	12.1	12.9	13.4	11.0	11.9	11.5	12.3	12.7
4H	2H	11.6	12.7	12.0	13.0	13.4	11.0	12.0	11.4	12.4	12.8
	3H	11.8	12.6	12.2	13.1	13.5	11.1	12.0	11.5	12.4	12.8
	4H	11.8	12.5	12.2	13.0	13.4	11.1	11.9	11.5	12.3	12.7
	6H	11.8	12.4	12.2	12.9	13.3	11.1	11.8	11.6	12.2	12.7
	8H	11.7	12.4	12.2	12.8	13.3	11.1	11.7	11.6	12.2	12.6
	12H	11.7	12.3	12.2	12.7	13.2	11.1	11.6	11.6	12.1	12.6
8H	4H	11.7	12.3	12.1	12.7	13.2	11.0	11.6	11.5	12.1	12.6
	6H	11.7	12.2	12.2	12.7	13.2	11.0	11.5	11.5	12.0	12.5
	8H	11.7	12.1	12.2	12.6	13.1	11.0	11.5	11.5	12.0	12.5
	12H	11.7	12.1	12.2	12.6	13.1	11.0	11.4	11.5	11.9	12.5
12H	4H	11.6	12.2	12.1	12.7	13.1	11.0	11.5	11.5	12.0	12.5
	6H	11.6	12.1	12.2	12.6	13.1	11.0	11.4	11.5	11.9	12.5
	8H	11.6	12.0	12.1	12.5	13.1	11.0	11.4	11.5	11.9	12.5

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0