

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE10LEDOS 20L 35K XX AR1023OS MW FG
Nom 10 inch diam, AR1023 trim, MW interior finish, frosted glass lens

Test Number

SP-00690_2_M-20L

Test Date

11/5/2020

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

Summary of Results

Power

Input Watts	19.2 W
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Lumen Output

Output Lumens	1577
Efficacy	82.13 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.18
Two luminaires, plane 90°	1.18
Four luminaires	1.24

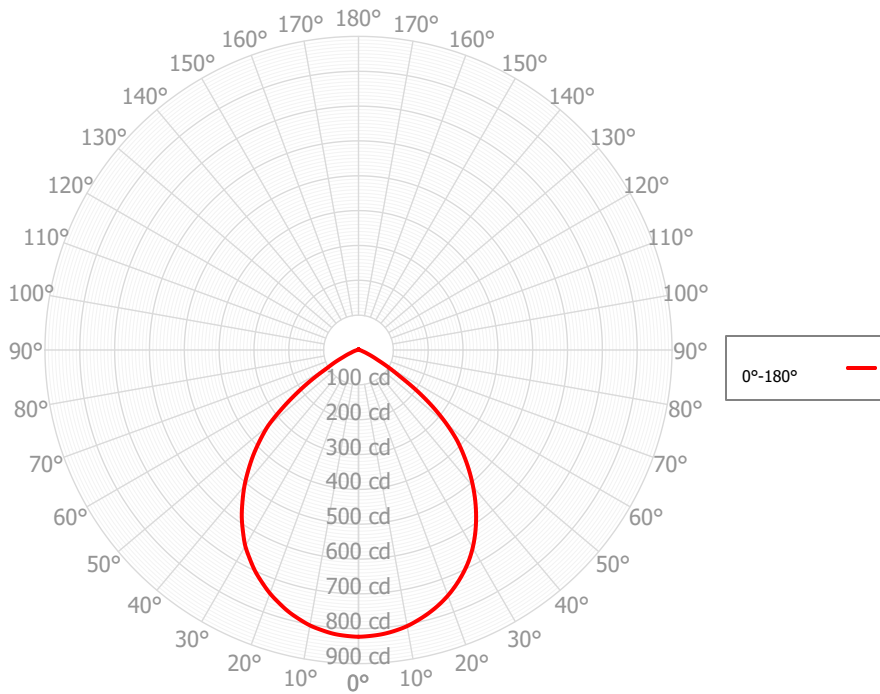
Full Beam Angle

0° - 180°	92°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-00690_2_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE10LEDOS 20L 35K XX AR1023OS MW FG
LUMINAIRE	Nom 10 inch diam, AR1023 trim, MW interior finish, frosted glass lens
OTHER	Beam angle: 91.8 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

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	78.77	5.00%	90.00° - 100.00°	0.91	0.06%
10.00° - 20.00°	219.44	13.92%	100.00° - 110.00°	0.81	0.05%
20.00° - 30.00°	323.73	20.53%	100.00° - 120.00°	1.48	0.09%
30.00° - 40.00°	364.97	23.15%	120.00° - 130.00°	0.68	0.04%
40.00° - 50.00°	327.31	20.76%	130.00° - 140.00°	0.68	0.04%
50.00° - 60.00°	189.16	12.00%	140.00° - 150.00°	0.60	0.04%
60.00° - 70.00°	51.21	3.25%	150.00° - 160.00°	0.36	0.02%
70.00° - 80.00°	13.30	0.84%	160.00° - 170.00°	0.25	0.02%
80.00° - 90.00°	3.88	0.25%	170.00° - 180.00°	0.09	0.01%
0.00° - 90.00°	1571.77	99.68%	0.00° - 180.00°	1576.80	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	823.17	823.17
2.50°	821.42	821.33
5.00°	818.27	817.85
7.50°	812.50	810.99
10.00°	804.77	802.81
12.50°	793.86	790.76
15.00°	781.49	777.45
17.50°	767.09	760.88
20.00°	750.30	743.45
22.50°	730.66	722.68
25.00°	708.67	701.19
27.50°	684.19	675.85
30.00°	655.73	649.87
32.50°	623.64	617.44
35.00°	588.61	584.26
37.50°	551.28	546.97
40.00°	511.65	509.36
42.50°	470.44	468.37
45.00°	427.36	427.25
47.50°	383.19	383.40
50.00°	329.48	339.02
52.50°	270.97	277.77
55.00°	207.28	216.77
57.50°	141.33	159.20
60.00°	98.09	104.67
62.50°	63.13	75.88
65.00°	43.46	49.10
67.50°	28.34	35.11
70.00°	19.85	22.70
72.50°	13.01	17.81
75.00°	10.16	13.35
77.50°	8.08	10.47
80.00°	6.11	7.82
82.50°	4.15	5.94
85.00°	2.71	4.09
87.50°	1.32	2.36
90.00°	0.89	1.12
92.50°	0.52	0.96
95.00°	0.61	0.91
97.50°	0.70	1.07
100.00°	0.64	1.13
102.50°	0.59	1.03
105.00°	0.68	0.88
107.50°	0.75	0.68
110.00°	0.74	0.56
112.50°	0.73	0.55

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	1876	1876	1876	1876	1832	1832	1832	1832	1749	1749	1749	1674	1674	1674	1604	1604	1572
	1	1759	1702	1652	1606	1718	1667	1621	1580	1601	1564	1530	1540	1511	1483	1484	1461	1439
	2	1635	1534	1451	1381	1597	1506	1429	1364	1451	1388	1333	1402	1349	1303	1355	1312	1274
	3	1518	1384	1281	1198	1482	1360	1265	1188	1315	1234	1167	1274	1205	1147	1235	1177	1128
	4	1409	1252	1138	1050	1376	1232	1125	1043	1195	1102	1029	1160	1080	1016	1127	1059	1002
	5	1309	1137	1017	928	1279	1120	1007	923	1088	989	914	1059	972	904	1031	956	895
	6	1218	1037	915	827	1191	1022	907	824	995	893	817	970	879	810	946	866	803
	7	1137	949	828	743	1111	937	822	740	914	810	735	892	799	730	872	789	725
	8	1063	873	753	671	1040	862	748	669	842	739	665	824	730	662	806	721	658
	9	997	806	689	610	976	797	685	609	780	678	606	763	670	603	748	663	600
	10	937	747	634	558	918	739	630	557	724	624	555	710	618	552	697	612	550

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	27.2 fc	5.7 ft
6.5 ft	19.5 fc	6.7 ft
7.5 ft	14.6 fc	7.7 ft
8.0 ft	12.9 fc	8.3 ft
10.0 ft	8.2 fc	10.3 ft
12.0 ft	5.7 fc	12.4 ft
14.0 ft	4.2 fc	14.4 ft
16.0 ft	3.2 fc	16.5 ft
20.0 ft	2.1 fc	20.6 ft
24.0 ft	1.4 fc	24.8 ft
28.0 ft	1.0 fc	28.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	16376	16376	16376
45.00°	12024	12023	12022
55.00°	7189	7272	7354
65.00°	2046	2112	2178
75.00°	781	842	903
85.00°	618	697	776

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	15.2	16.6	15.6	16.9	17.3	15.7	17.0	16.0	17.3	17.7
	3H	15.3	16.5	15.7	16.9	17.2	15.7	17.0	16.1	17.3	17.7
	4H	15.3	16.4	15.7	16.8	17.2	15.7	16.9	16.1	17.2	17.6
	6H	15.3	16.3	15.7	16.7	17.1	15.7	16.7	16.1	17.1	17.5
	8H	15.2	16.2	15.7	16.6	17.0	15.7	16.7	16.1	17.1	17.5
	12H	15.2	16.1	15.6	16.5	17.0	15.7	16.6	16.1	17.0	17.4
4H	2H	15.2	16.3	15.6	16.7	17.1	15.6	16.8	16.0	17.1	17.5
	3H	15.3	16.3	15.8	16.7	17.1	15.8	16.7	16.2	17.1	17.5
	4H	15.3	16.1	15.8	16.6	17.0	15.8	16.6	16.2	17.0	17.5
	6H	15.3	16.0	15.8	16.5	16.9	15.8	16.5	16.2	16.9	17.4
	8H	15.3	15.9	15.8	16.4	16.9	15.7	16.4	16.2	16.9	17.3
	12H	15.3	15.8	15.8	16.3	16.8	15.7	16.3	16.2	16.8	17.3
8H	4H	15.2	15.9	15.7	16.3	16.8	15.7	16.3	16.2	16.8	17.3
	6H	15.2	15.8	15.7	16.3	16.8	15.7	16.2	16.2	16.7	17.2
	8H	15.2	15.7	15.7	16.2	16.7	15.7	16.2	16.2	16.7	17.2
	12H	15.2	15.6	15.7	16.1	16.7	15.7	16.1	16.2	16.6	17.2
12H	4H	15.2	15.8	15.7	16.3	16.7	15.7	16.2	16.1	16.7	17.2
	6H	15.2	15.7	15.7	16.1	16.7	15.7	16.1	16.2	16.6	17.2
	8H	15.2	15.6	15.7	16.1	16.7	15.7	16.1	16.2	16.6	17.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0