

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE12LEDOS 20L 35K XX AR1223OS MW GL

Nom 12 inch diam, AR1223 trim, MW interior finish, clear glass lens

Test Number

SP-01197_1_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	1811
Efficacy	94.3 lm/W

Luminous Dimensions

0° - 180° Size	-1
90° - 270° Size	-1
Height	0

Spacing Criterion

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

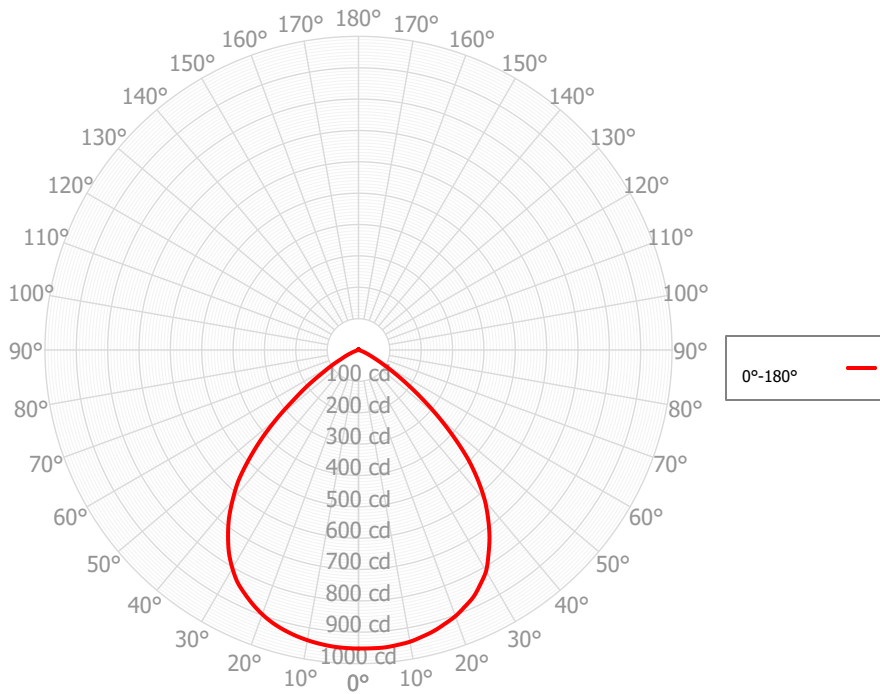
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01197_1_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE12LEDOS 20L 35K XX AR1223OS MW GL
LUMINAIRE	Nom 12 inch diam, AR1223 trim, MW interior finish, clear glass 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, scaled from 45L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	91.84	5.07%	90.00° - 100.00°	0.66	0.04%
10.00° - 20.00°	261.15	14.42%	100.00° - 110.00°	0.64	0.04%
20.00° - 30.00°	396.46	21.90%	100.00° - 120.00°	1.25	0.07%
30.00° - 40.00°	451.73	24.95%	120.00° - 130.00°	0.69	0.04%
40.00° - 50.00°	375.85	20.76%	130.00° - 140.00°	0.58	0.03%
50.00° - 60.00°	177.04	9.78%	140.00° - 150.00°	0.62	0.03%
60.00° - 70.00°	44.52	2.46%	150.00° - 160.00°	0.47	0.03%
70.00° - 80.00°	5.95	0.33%	160.00° - 170.00°	0.28	0.02%
80.00° - 90.00°	1.37	0.08%	170.00° - 180.00°	0.11	0.01%
0.00° - 90.00°	1805.92	99.74%	0.00° - 180.00°	1810.58	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	952.24	952.24
2.50°	952.43	951.31
5.00°	952.35	949.31
7.50°	949.06	945.21
10.00°	944.91	939.90
12.50°	936.80	932.77
15.00°	928.01	923.68
17.50°	915.92	912.29
20.00°	903.54	897.26
22.50°	886.23	878.97
25.00°	868.42	858.11
27.50°	842.20	835.49
30.00°	814.16	804.39
32.50°	771.92	768.75
35.00°	728.50	725.42
37.50°	679.44	679.07
40.00°	627.19	624.62
42.50°	564.76	567.95
45.00°	496.53	495.13
47.50°	415.05	419.29
50.00°	334.94	339.17
52.50°	257.22	258.62
55.00°	188.87	196.85
57.50°	132.96	136.33
60.00°	89.35	97.91
62.50°	58.24	61.56
65.00°	37.56	43.94
67.50°	25.13	27.48
70.00°	15.09	16.86
72.50°	6.51	7.95
75.00°	3.19	4.96
77.50°	2.26	2.70
80.00°	1.70	2.23
82.50°	1.27	1.74
85.00°	1.15	1.21
87.50°	1.09	0.84
90.00°	0.87	0.68
92.50°	0.62	0.59
95.00°	0.57	0.58
97.50°	0.52	0.56
100.00°	0.70	0.55
102.50°	0.85	0.54
105.00°	0.68	0.52
107.50°	0.55	0.51
110.00°	0.66	0.50
112.50°	0.75	0.48

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	2154	2154	2154	2154	2104	2104	2104	2104	2009	2009	2009	1923	1923	1923	1843	1843	1806
	1	2026	1964	1908	1858	1979	1924	1874	1828	1848	1808	1770	1779	1747	1716	1715	1690	1655
	2	1890	1778	1686	1608	1846	1745	1661	1590	1684	1614	1553	1627	1569	1518	1575	1527	1496
	3	1759	1610	1496	1404	1718	1583	1477	1392	1532	1442	1368	1485	1409	1345	1441	1378	1349
	4	1636	1462	1334	1237	1599	1439	1320	1228	1396	1294	1212	1357	1268	1197	1320	1244	1219
	5	1523	1331	1197	1098	1489	1312	1186	1092	1276	1165	1081	1242	1146	1070	1211	1127	1105
	6	1420	1216	1079	981	1388	1200	1071	977	1169	1055	969	1141	1039	962	1114	1024	1005
	7	1326	1115	979	883	1297	1102	972	880	1075	959	874	1051	947	869	1028	934	917
	8	1241	1027	892	800	1215	1015	887	797	992	876	793	971	866	789	951	856	841
	9	1164	949	817	728	1141	939	813	726	919	804	723	901	795	720	883	787	774
	10	1095	880	752	666	1073	871	748	665	854	741	663	838	734	660	823	727	715

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	31.5 fc	5.6 ft
6.5 ft	22.5 fc	6.6 ft
7.5 ft	16.9 fc	7.7 ft
8.0 ft	14.9 fc	8.2 ft
10.0 ft	9.5 fc	10.2 ft
12.0 ft	6.6 fc	12.3 ft
14.0 ft	4.9 fc	14.3 ft
16.0 ft	3.7 fc	16.4 ft
20.0 ft	2.4 fc	20.4 ft
24.0 ft	1.7 fc	24.5 ft
28.0 ft	1.2 fc	28.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	13050	13050	13050
45.00°	9624	9617	9610
55.00°	4513	4561	4608
65.00°	1218	1270	1322
75.00°	169	192	216
85.00°	180	183	185

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	13.0	14.4	13.4	14.7	15.0	13.1	14.5	13.5	14.8	15.1
	3H	13.1	14.2	13.4	14.6	14.9	13.2	14.3	13.6	14.7	15.0
	4H	13.0	14.1	13.4	14.4	14.8	13.1	14.2	13.5	14.5	14.9
	6H	12.9	13.9	13.3	14.3	14.7	13.0	14.0	13.5	14.4	14.8
	8H	12.9	13.8	13.3	14.2	14.6	13.0	13.9	13.4	14.3	14.7
	12H	12.8	13.7	13.3	14.1	14.6	13.0	13.8	13.4	14.2	14.7
4H	2H	13.0	14.1	13.4	14.4	14.8	13.1	14.2	13.5	14.5	14.9
	3H	13.0	13.9	13.5	14.3	14.7	13.2	14.0	13.6	14.4	14.9
	4H	13.0	13.7	13.4	14.2	14.6	13.1	13.9	13.5	14.3	14.7
	6H	12.9	13.5	13.3	14.0	14.5	13.0	13.7	13.5	14.1	14.6
	8H	12.8	13.4	13.3	13.9	14.4	13.0	13.6	13.4	14.0	14.5
	12H	12.8	13.3	13.3	13.8	14.3	12.9	13.5	13.4	14.0	14.4
8H	4H	12.8	13.4	13.3	13.9	14.4	13.0	13.6	13.4	14.0	14.5
	6H	12.7	13.2	13.2	13.7	14.2	12.9	13.4	13.4	13.9	14.4
	8H	12.7	13.1	13.2	13.6	14.1	12.8	13.3	13.3	13.8	14.3
	12H	12.6	13.0	13.1	13.5	14.1	12.8	13.2	13.3	13.7	14.2
12H	4H	12.8	13.3	13.3	13.8	14.3	12.9	13.5	13.4	13.9	14.4
	6H	12.7	13.1	13.2	13.6	14.1	12.8	13.3	13.3	13.7	14.3
	8H	12.6	13.0	13.1	13.5	14.1	12.8	13.2	13.3	13.7	14.2

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0