

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE12LEDOS 20L 35K XX AR1223OS MW SO
Nom 12 inch diam, AR1223 trim, MW interior finish, Solite lens

Test Number

SP-01197_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	1898
Efficacy	98.84 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.23
Four luminaires	1.24

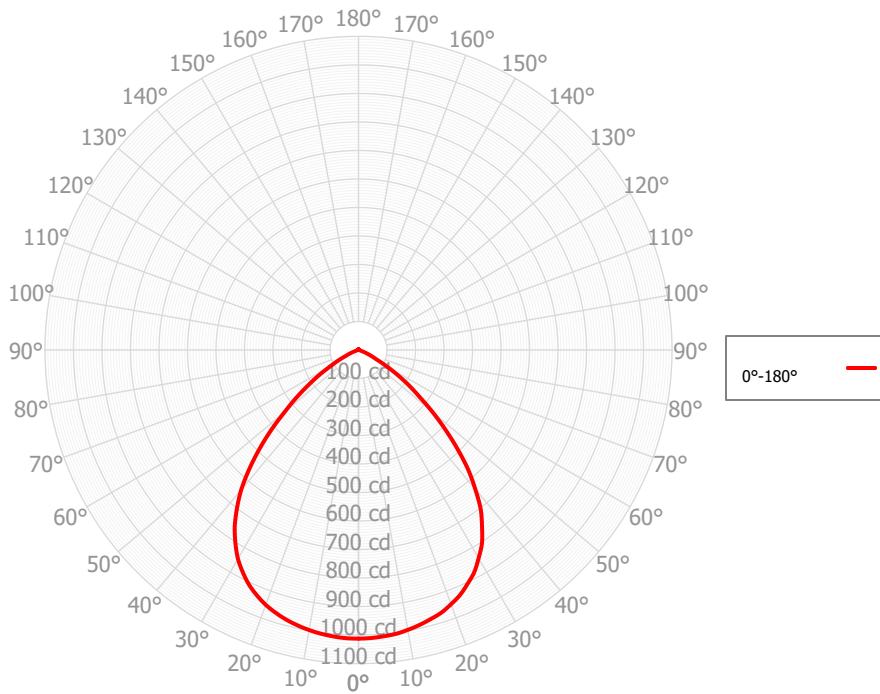
Full Beam Angle

0° - 180°	89°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01197_2_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 SO
LUMINAIRE	Nom 12 inch diam, AR1223 trim, MW interior finish, Solite lens
OTHER	Beam angle: 89 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°	97.40	5.13%	90.00° - 100.00°	0.79	0.04%
10.00° - 20.00°	276.07	14.55%	100.00° - 110.00°	0.77	0.04%
20.00° - 30.00°	416.50	21.95%	100.00° - 120.00°	1.48	0.08%
30.00° - 40.00°	468.89	24.71%	120.00° - 130.00°	0.71	0.04%
40.00° - 50.00°	376.23	19.83%	130.00° - 140.00°	0.69	0.04%
50.00° - 60.00°	193.81	10.21%	140.00° - 150.00°	0.60	0.03%
60.00° - 70.00°	54.79	2.89%	150.00° - 160.00°	0.51	0.03%
70.00° - 80.00°	7.26	0.38%	160.00° - 170.00°	0.31	0.02%
80.00° - 90.00°	1.54	0.08%	170.00° - 180.00°	0.10	0.01%
0.00° - 90.00°	1892.49	99.73%	0.00° - 180.00°	1897.68	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	1012.69	1012.69
2.50°	1011.58	1012.10
5.00°	1008.59	1008.91
7.50°	1004.64	1004.26
10.00°	997.16	997.74
12.50°	988.23	989.50
15.00°	977.61	979.46
17.50°	966.43	966.67
20.00°	949.24	951.54
22.50°	930.58	931.77
25.00°	905.45	908.71
27.50°	879.22	879.21
30.00°	843.16	846.03
32.50°	806.00	803.66
35.00°	755.63	757.14
37.50°	704.54	700.53
40.00°	637.50	640.23
42.50°	569.92	567.76
45.00°	491.41	491.93
47.50°	413.39	414.95
50.00°	339.93	337.75
52.50°	269.29	275.12
55.00°	214.69	214.50
57.50°	161.13	163.30
60.00°	111.90	112.80
62.50°	69.86	80.75
65.00°	49.92	49.47
67.50°	31.76	34.39
70.00°	17.81	19.82
72.50°	7.79	11.27
75.00°	5.20	3.73
77.50°	3.29	3.01
80.00°	2.41	2.33
82.50°	1.70	1.86
85.00°	1.20	1.41
87.50°	0.91	1.06
90.00°	0.83	0.80
92.50°	0.75	0.77
95.00°	0.68	0.73
97.50°	0.66	0.69
100.00°	0.69	0.66
102.50°	0.73	0.65
105.00°	0.78	0.65
107.50°	0.85	0.69
110.00°	0.94	0.68
112.50°	0.91	0.62

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	2258	2258	2258	2258	2205	2205	2205	2205	2106	2106	2106	2015	2015	2015	1932	1932	1892
	1	2123	2057	1999	1946	2074	2015	1962	1914	1936	1893	1854	1863	1829	1797	1796	1769	1733
	2	1979	1861	1764	1683	1933	1827	1738	1663	1762	1689	1625	1703	1642	1588	1648	1598	1565
	3	1841	1685	1564	1468	1799	1657	1545	1455	1603	1508	1430	1554	1474	1406	1508	1441	1383
	4	1712	1529	1395	1293	1673	1505	1381	1284	1461	1353	1267	1419	1326	1251	1380	1301	1235
	5	1594	1392	1251	1147	1558	1372	1240	1141	1335	1219	1130	1299	1198	1118	1266	1178	1107
	6	1486	1272	1129	1026	1453	1255	1120	1022	1223	1103	1013	1193	1087	1005	1165	1071	997
	7	1388	1167	1024	924	1358	1153	1017	921	1125	1003	915	1100	990	908	1075	977	903
	8	1300	1075	934	837	1272	1063	928	835	1039	917	830	1017	906	825	996	896	821
	9	1220	994	856	762	1195	983	851	761	963	842	757	943	833	754	925	824	750
	10	1147	922	788	698	1125	913	784	697	895	776	694	878	769	692	862	762	689

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	33.5 fc	5.4 ft
6.5 ft	24.0 fc	6.4 ft
7.5 ft	18.0 fc	7.4 ft
8.0 ft	15.8 fc	7.9 ft
10.0 ft	10.1 fc	9.8 ft
12.0 ft	7.0 fc	11.8 ft
14.0 ft	5.2 fc	13.8 ft
16.0 ft	4.0 fc	15.7 ft
20.0 ft	2.5 fc	19.7 ft
24.0 ft	1.8 fc	23.6 ft
28.0 ft	1.3 fc	27.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	13879	13879	13879
45.00°	9524	9527	9529
55.00°	5130	5129	5128
65.00°	1619	1615	1612
75.00°	276	256	236
85.00°	189	197	205

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	14.2	15.5	14.6	15.8	16.2	14.2	15.6	14.6	15.9	16.2
	3H	14.2	15.4	14.6	15.7	16.1	14.3	15.5	14.7	15.8	16.2
	4H	14.2	15.3	14.6	15.6	16.0	14.2	15.3	14.6	15.7	16.1
	6H	14.1	15.1	14.5	15.5	15.9	14.2	15.2	14.6	15.5	15.9
	8H	14.1	15.0	14.5	15.4	15.8	14.1	15.1	14.6	15.5	15.9
	12H	14.0	14.9	14.5	15.3	15.7	14.1	15.0	14.5	15.4	15.8
4H	2H	14.2	15.2	14.6	15.6	16.0	14.2	15.3	14.6	15.6	16.0
	3H	14.2	15.1	14.6	15.5	15.9	14.3	15.2	14.7	15.6	16.0
	4H	14.1	14.9	14.6	15.3	15.8	14.2	15.0	14.6	15.4	15.9
	6H	14.1	14.7	14.5	15.2	15.7	14.1	14.8	14.6	15.3	15.7
	8H	14.0	14.6	14.5	15.1	15.6	14.1	14.7	14.6	15.2	15.6
	12H	14.0	14.5	14.5	15.0	15.5	14.0	14.6	14.5	15.1	15.6
8H	4H	14.0	14.6	14.5	15.1	15.6	14.1	14.7	14.6	15.2	15.6
	6H	13.9	14.4	14.4	14.9	15.4	14.0	14.5	14.5	15.0	15.5
	8H	13.9	14.3	14.4	14.8	15.3	13.9	14.4	14.4	14.9	15.4
	12H	13.8	14.2	14.3	14.7	15.3	13.9	14.3	14.4	14.8	15.4
12H	4H	14.0	14.5	14.5	15.0	15.5	14.0	14.6	14.5	15.1	15.5
	6H	13.9	14.3	14.4	14.8	15.3	13.9	14.4	14.5	14.9	15.4
	8H	13.8	14.2	14.3	14.7	15.3	13.9	14.3	14.4	14.8	15.4

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0