

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE14LEDOS 20L 35K XX AR1423OS MW GL

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

Test Number

SP-01198_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	1854
Efficacy	96.54 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

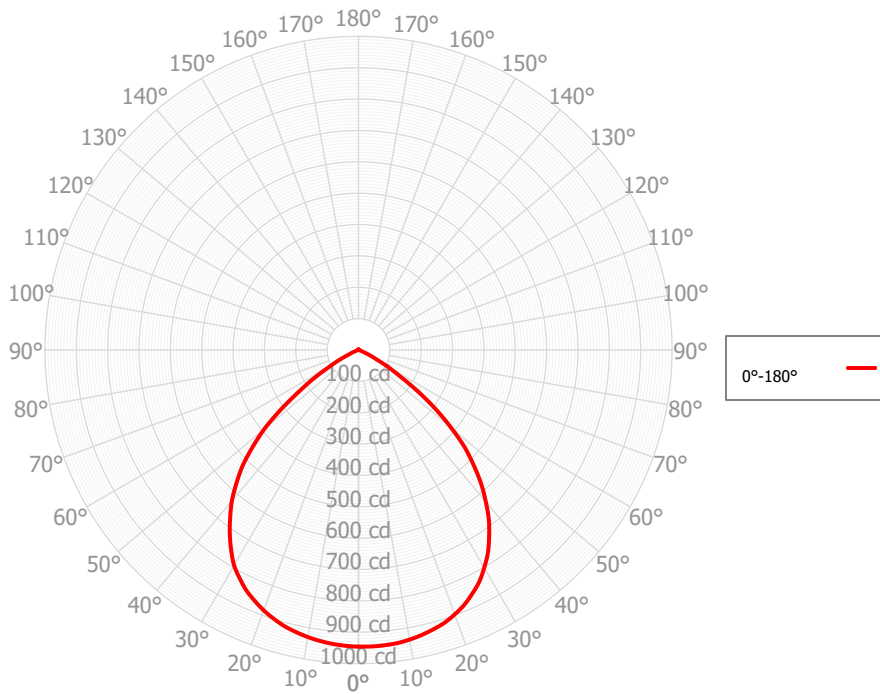
Full Beam Angle

0° - 180°	94°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01198_M-20L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/5/2020
ISSUEDATE	12/28/2020
LUMCAT	SGE14LEDOS 20L 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, scaled from 45L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	91.11	4.92%	90.00° - 100.00°	0.65	0.03%
10.00° - 20.00°	258.67	13.96%	100.00° - 110.00°	0.47	0.03%
20.00° - 30.00°	391.49	21.12%	100.00° - 120.00°	1.02	0.06%
30.00° - 40.00°	448.92	24.22%	120.00° - 130.00°	0.56	0.03%
40.00° - 50.00°	397.14	21.43%	130.00° - 140.00°	0.54	0.03%
50.00° - 60.00°	212.29	11.45%	140.00° - 150.00°	0.50	0.03%
60.00° - 70.00°	45.04	2.43%	150.00° - 160.00°	0.43	0.02%
70.00° - 80.00°	3.78	0.20%	160.00° - 170.00°	0.26	0.01%
80.00° - 90.00°	1.04	0.06%	170.00° - 180.00°	0.10	0.01%
0.00° - 90.00°	1849.48	99.78%	0.00° - 180.00°	1853.55	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	946.15	946.15
2.50°	946.60	944.34
5.00°	945.48	941.17
7.50°	943.06	936.21
10.00°	938.01	929.78
12.50°	931.18	921.51
15.00°	922.29	912.01
17.50°	912.29	898.92
20.00°	897.43	883.86
22.50°	880.43	865.73
25.00°	858.08	846.27
27.50°	833.89	820.95
30.00°	802.01	793.64
32.50°	768.14	756.05
35.00°	726.40	715.79
37.50°	683.15	672.33
40.00°	631.73	628.28
42.50°	579.29	576.27
45.00°	519.60	523.29
47.50°	459.46	458.12
50.00°	385.40	392.17
52.50°	311.05	312.16
55.00°	234.29	232.66
57.50°	159.96	170.31
60.00°	110.57	109.95
62.50°	64.52	70.40
65.00°	40.20	34.42
67.50°	18.89	20.70
70.00°	10.89	8.80
72.50°	4.39	5.03
75.00°	2.81	2.07
77.50°	1.60	1.73
80.00°	1.38	1.39
82.50°	1.16	1.04
85.00°	0.93	0.81
87.50°	0.77	0.83
90.00°	0.72	0.79
92.50°	0.64	0.66
95.00°	0.54	0.59
97.50°	0.46	0.59
100.00°	0.43	0.56
102.50°	0.41	0.49
105.00°	0.40	0.43
107.50°	0.47	0.40
110.00°	0.60	0.37
112.50°	0.66	0.36

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	2206	2206	2206	2206	2154	2154	2154	2154	2057	2057	2057	1969	1969	1969	1888	1888	1849
	1	2073	2009	1951	1900	2025	1968	1916	1869	1891	1849	1810	1820	1786	1755	1755	1728	1692
	2	1931	1816	1720	1640	1887	1782	1695	1621	1719	1646	1584	1661	1601	1548	1607	1558	1526
	3	1795	1641	1522	1427	1753	1613	1504	1415	1561	1468	1391	1513	1434	1368	1468	1402	1373
	4	1667	1486	1354	1253	1629	1463	1340	1245	1420	1313	1229	1379	1287	1213	1341	1262	1237
	5	1550	1351	1212	1109	1515	1331	1201	1103	1294	1180	1092	1260	1160	1081	1228	1140	1118
	6	1443	1232	1090	989	1411	1215	1082	985	1184	1065	977	1155	1049	969	1127	1034	1014
	7	1346	1128	987	888	1317	1114	980	885	1087	967	879	1062	954	873	1038	941	924
	8	1259	1037	898	802	1232	1025	892	800	1002	881	795	980	871	791	960	861	845
	9	1180	958	821	729	1156	947	817	727	927	808	724	908	799	721	890	791	777
	10	1109	887	755	666	1087	878	751	665	861	743	662	844	736	660	828	729	717

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	31.3 fc	5.9 ft
6.5 ft	22.4 fc	7.0 ft
7.5 ft	16.8 fc	8.0 ft
8.0 ft	14.8 fc	8.6 ft
10.0 ft	9.5 fc	10.7 ft
12.0 ft	6.6 fc	12.8 ft
14.0 ft	4.8 fc	15.0 ft
16.0 ft	3.7 fc	17.1 ft
20.0 ft	2.4 fc	21.4 ft
24.0 ft	1.6 fc	25.7 ft
28.0 ft	1.2 fc	29.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	9473	9473	9473
45.00°	7357	7370	7383
55.00°	4090	4082	4075
65.00°	952	918	884
75.00°	109	101	94
85.00°	106	103	100

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	13.1	14.5	13.5	14.8	15.1	13.4	14.7	13.7	15.0	15.3
	3H	13.1	14.3	13.5	14.6	15.0	13.3	14.5	13.7	14.8	15.2
	4H	13.0	14.1	13.4	14.5	14.9	13.2	14.3	13.6	14.7	15.1
	6H	12.9	13.9	13.4	14.3	14.7	13.1	14.1	13.6	14.5	14.9
	8H	12.9	13.8	13.3	14.2	14.7	13.1	14.0	13.5	14.4	14.9
	12H	12.9	13.8	13.3	14.1	14.6	13.1	14.0	13.5	14.4	14.8
4H	2H	13.1	14.2	13.5	14.5	14.9	13.2	14.3	13.7	14.7	15.1
	3H	13.0	13.9	13.4	14.3	14.7	13.2	14.1	13.6	14.5	14.9
	4H	12.9	13.7	13.4	14.1	14.6	13.1	13.9	13.5	14.3	14.8
	6H	12.8	13.5	13.3	14.0	14.4	13.0	13.7	13.5	14.1	14.6
	8H	12.8	13.4	13.3	13.9	14.3	13.0	13.6	13.4	14.0	14.5
	12H	12.7	13.3	13.2	13.8	14.3	12.9	13.5	13.4	14.0	14.4
8H	4H	12.8	13.4	13.3	13.9	14.3	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	12.6	13.1	13.1	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	12.7	13.2	13.3	13.7	14.2
12H	4H	12.7	13.3	13.2	13.8	14.3	12.9	13.5	13.4	14.0	14.4
	6H	12.6	13.1	13.1	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	12.7	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