

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

SGE14LEDOS 20L 35K XX AR1423OS MW SO
Nom 14 inch diam, AR1423 trim, MW interior finish, Solite lens

Test Number

SP-01198_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	1899
Efficacy	98.9 lm/W

Luminous Dimensions

0° - 180° Size	-1.17
90° - 270° Size	-1.17
Height	0

Spacing Criterion

Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.23
Four luminaires	1.26

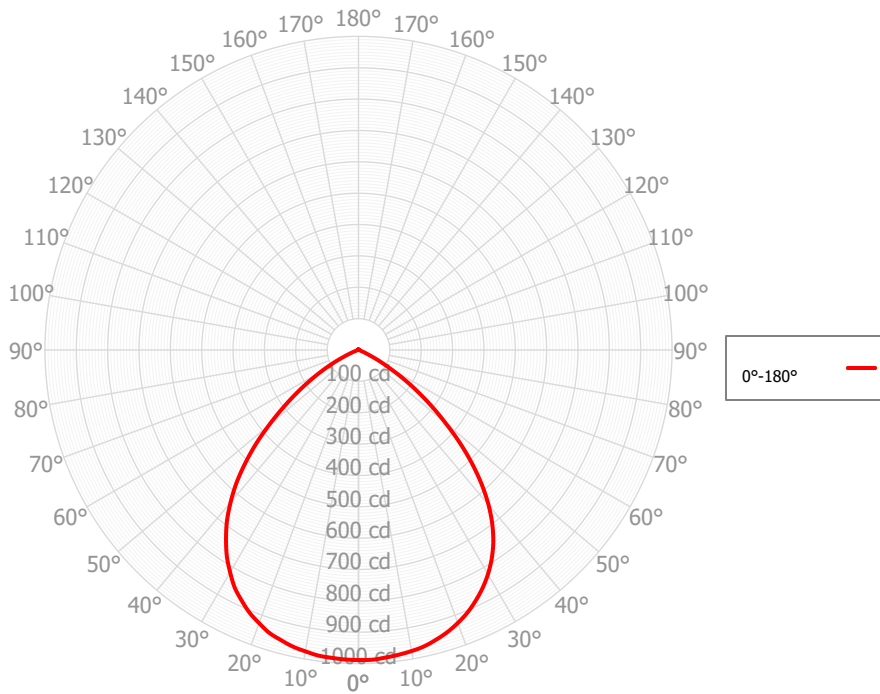
Full Beam Angle

0° - 180°	91°
90° - 270°	N/A°

IES File Header Contents

Keyword	Value
TEST	SP-01198_1_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 SO
LUMINAIRE	Nom 14 inch diam, AR1423 trim, MW interior finish, Solite 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°	95.19	5.01%	90.00° - 100.00°	0.58	0.03%
10.00° - 20.00°	269.92	14.22%	100.00° - 110.00°	0.54	0.03%
20.00° - 30.00°	405.54	21.36%	100.00° - 120.00°	1.15	0.06%
30.00° - 40.00°	461.45	24.30%	120.00° - 130.00°	0.65	0.03%
40.00° - 50.00°	390.61	20.57%	130.00° - 140.00°	0.50	0.03%
50.00° - 60.00°	212.24	11.18%	140.00° - 150.00°	0.47	0.02%
60.00° - 70.00°	53.31	2.81%	150.00° - 160.00°	0.39	0.02%
70.00° - 80.00°	5.18	0.27%	160.00° - 170.00°	0.25	0.01%
80.00° - 90.00°	1.30	0.07%	170.00° - 180.00°	0.09	0.00%
0.00° - 90.00°	1894.73	99.78%	0.00° - 180.00°	1898.81	100.00%

Candela Distribution

	0.00°	180.00°
0.00°	988.98	988.98
2.50°	989.02	988.19
5.00°	984.87	985.70
7.50°	980.47	983.01
10.00°	975.12	976.08
12.50°	968.15	968.90
15.00°	956.56	957.69
17.50°	943.36	946.12
20.00°	926.47	927.07
22.50°	907.09	907.40
25.00°	883.21	881.83
27.50°	856.55	854.77
30.00°	825.89	818.93
32.50°	790.56	781.37
35.00°	749.64	736.72
37.50°	701.23	689.60
40.00°	645.56	634.93
42.50°	581.98	577.01
45.00°	512.20	511.21
47.50°	438.50	443.50
50.00°	362.25	372.17
52.50°	293.07	304.91
55.00°	227.55	243.79
57.50°	167.35	187.76
60.00°	109.31	138.12
62.50°	69.07	93.68
65.00°	34.54	54.50
67.50°	19.11	29.66
70.00°	8.18	16.60
72.50°	4.90	8.72
75.00°	2.84	4.39
77.50°	2.03	2.55
80.00°	1.35	2.08
82.50°	1.13	1.76
85.00°	0.93	1.51
87.50°	0.83	1.06
90.00°	0.73	0.54
92.50°	0.62	0.50
95.00°	0.51	0.59
97.50°	0.46	0.50
100.00°	0.44	0.38
102.50°	0.58	0.42
105.00°	0.68	0.47
107.50°	0.56	0.48
110.00°	0.52	0.48
112.50°	0.71	0.46

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	2260	2260	2260	2260	2206	2206	2206	2206	2108	2108	2108	2017	2017	2017	1934	1934	1895
	1	2123	2058	1999	1946	2074	2015	1962	1914	1937	1893	1854	1864	1829	1797	1797	1770	1733
	2	1979	1860	1762	1680	1933	1826	1736	1660	1761	1687	1622	1702	1640	1586	1647	1596	1551
	3	1839	1682	1560	1463	1797	1653	1541	1450	1600	1504	1425	1550	1469	1402	1504	1437	1379
	4	1709	1524	1389	1285	1670	1500	1374	1277	1455	1346	1260	1414	1320	1244	1375	1295	1228
	5	1589	1386	1243	1138	1553	1366	1232	1133	1328	1211	1121	1293	1190	1110	1260	1170	1099
	6	1480	1265	1120	1016	1447	1248	1111	1012	1216	1094	1004	1186	1078	996	1158	1062	988
	7	1382	1159	1015	913	1352	1145	1008	910	1117	994	904	1091	981	898	1067	968	892
	8	1293	1066	924	826	1265	1054	918	824	1030	907	819	1008	896	815	987	886	811
	9	1212	985	846	752	1188	974	841	750	954	832	747	934	823	743	916	814	740
	10	1140	913	778	688	1117	904	774	686	886	766	684	869	759	681	853	752	678

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	32.7 fc	5.6 ft
6.5 ft	23.4 fc	6.6 ft
7.5 ft	17.6 fc	7.7 ft
8.0 ft	15.5 fc	8.2 ft
10.0 ft	9.9 fc	10.2 ft
12.0 ft	6.9 fc	12.3 ft
14.0 ft	5.0 fc	14.3 ft
16.0 ft	3.9 fc	16.3 ft
20.0 ft	2.5 fc	20.4 ft
24.0 ft	1.7 fc	24.5 ft
28.0 ft	1.3 fc	28.6 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	9901	9901	9901
45.00°	7252	7249	7245
55.00°	3972	4043	4114
65.00°	818	936	1055
75.00°	110	125	140
85.00°	107	123	140

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	13.4	14.8	13.8	15.1	15.4	13.8	15.2	14.2	15.5	15.8
	3H	13.3	14.5	13.7	14.8	15.2	13.8	15.0	14.2	15.3	15.7
	4H	13.3	14.4	13.7	14.7	15.1	13.7	14.8	14.1	15.2	15.6
	6H	13.2	14.2	13.6	14.6	15.0	13.6	14.7	14.1	15.0	15.4
	8H	13.1	14.1	13.6	14.5	14.9	13.6	14.6	14.0	15.0	15.4
	12H	13.1	14.0	13.5	14.4	14.8	13.6	14.5	14.0	14.9	15.3
4H	2H	13.3	14.4	13.7	14.8	15.2	13.8	14.9	14.2	15.2	15.6
	3H	13.2	14.1	13.7	14.5	14.9	13.7	14.6	14.2	15.0	15.4
	4H	13.2	13.9	13.6	14.4	14.8	13.7	14.4	14.1	14.9	15.3
	6H	13.1	13.8	13.5	14.2	14.7	13.6	14.3	14.1	14.7	15.2
	8H	13.0	13.7	13.5	14.1	14.6	13.5	14.2	14.0	14.6	15.1
	12H	13.0	13.5	13.5	14.0	14.5	13.5	14.0	14.0	14.5	15.0
8H	4H	13.0	13.7	13.5	14.1	14.6	13.5	14.2	14.0	14.6	15.1
	6H	12.9	13.4	13.4	13.9	14.4	13.4	13.9	13.9	14.4	14.9
	8H	12.9	13.3	13.4	13.8	14.3	13.4	13.8	13.9	14.4	14.8
	12H	12.8	13.2	13.3	13.7	14.3	13.3	13.7	13.8	14.2	14.8
12H	4H	13.0	13.5	13.5	14.0	14.5	13.5	14.0	14.0	14.5	15.0
	6H	12.9	13.3	13.4	13.8	14.4	13.4	13.8	13.9	14.3	14.9
	8H	12.8	13.2	13.3	13.7	14.3	13.3	13.7	13.8	14.2	14.8

Corrected UGR values based on total output energy
 SHR = 1.0

Corrected UGR values based on total output lumens

SHR = 1.0