

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SGE4LEDOS-20L35KE1-AR4223OSMWSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST]20141005_M-20L-Gen3
[TESTLAB]OSRAM SYLVANIA
[TESTDATE]8/11/2014
[ISSUEDATE]8/11/2014
[UPDATE]11/14/2016
[MANUFAC]Spectrum Lighting
[LUMCAT]SGE4LEDOS-20L-35K-E1-AR4223OS-MW-SO
[LUMINAIRE]4" Diam., Open Aperture LED Downlight
[OTHER]Shallow Profile, Matte White Lower Cone
[OTHER]Integral, Regressed Solite Lens
[OTHER]62.4 Degree Beam Angle
[LAMP]N/A
[LAMPCAT]N/A
[OTHER]Total Luminaire Watts is approximate
[OTHER]Photometric measurements taken at 120VAC
[OTHER]Output Multipliers: 40K x 1.0, 30K x 1.0, 27K x 0.946
[OTHER]Catalog number designation update: 25W is now called 20L
[OTHER]This report updated by Spectrum Lighting, scaled from 30L, Gen2

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1726
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	20.24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.96
Spacing Criterion (90-270)	0.96
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.33 ft (Diameter)
Luminous Width (90-270)	0.33 ft (Diameter)
Luminous Height	0.00 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	43398	43268	43139
55	29978	30069	29905
65	23772	24004	23569
75	18661	18922	18949
85	13530	14146	14252

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283
2.5	1439.316	1438.158	1437.362	1437.746	1438.064	1437.746	1437.362	1438.158	1439.316	1438.158
5.0	1426.623	1424.010	1424.589	1423.294	1424.126	1423.294	1424.589	1424.010	1426.623	1424.010
7.5	1403.688	1399.122	1399.028	1397.175	1395.605	1397.175	1399.028	1399.122	1403.688	1399.122
10.0	1363.046	1361.757	1363.190	1362.076	1360.534	1362.076	1363.190	1361.757	1363.046	1361.757
12.5	1311.156	1311.366	1310.961	1310.758	1308.080	1310.758	1310.961	1311.366	1311.156	1311.366
15.0	1254.310	1252.833	1252.508	1251.690	1253.774	1251.690	1252.508	1252.833	1254.310	1252.833
17.5	1196.558	1192.122	1193.881	1191.659	1192.520	1191.659	1193.881	1192.122	1196.558	1192.122
20.0	1135.963	1134.052	1137.020	1137.041	1134.711	1137.041	1137.020	1134.052	1135.963	1134.052
22.5	1067.805	1068.015	1067.704	1068.550	1066.271	1068.550	1067.704	1068.015	1067.805	1068.015
25.0	984.044	982.285	980.881	983.154	981.865	983.154	980.881	982.285	984.044	982.285
27.5	885.577	882.154	881.438	879.223	879.028	879.223	881.438	882.154	885.577	882.154
30.0	776.450	774.866	773.411	771.906	769.677	771.906	773.411	774.866	776.450	774.866
32.5	663.068	662.707	660.695	661.599	659.320	661.599	660.695	662.707	663.068	662.707
35.0	552.118	551.315	554.050	553.392	549.281	553.392	554.050	551.315	552.118	551.315
37.5	449.881	449.917	452.602	449.816	447.992	449.816	452.602	449.917	449.881	449.917
40.0	360.772	362.740	362.494	361.517	360.924	361.517	362.494	362.740	360.772	362.740
42.5	293.902	293.786	292.114	292.042	292.628	292.042	292.114	293.786	293.902	293.786
45.0	244.068	243.829	243.337	242.266	242.613	242.266	243.337	243.829	244.068	243.829
47.5	206.920	206.956	207.405	206.421	205.929	206.421	207.405	206.956	206.920	206.956
50.0	178.312	178.414	178.334	177.733	177.321	177.733	178.334	178.414	178.312	178.414
52.5	155.726	155.899	155.509	155.002	154.669	155.002	155.509	155.899	155.726	155.899
55.0	136.758	137.185	137.170	136.497	136.425	136.497	137.170	137.185	136.758	137.185
57.5	120.713	121.364	121.488	120.865	120.662	120.865	121.488	121.364	120.713	121.364
60.0	106.572	107.173	107.187	106.804	106.037	106.804	107.187	107.173	106.572	107.173
62.5	92.851	93.560	93.661	92.988	92.076	92.988	93.661	93.560	92.851	93.560
65.0	79.904	80.475	80.685	79.853	79.223	79.853	80.685	80.475	79.904	80.475
67.5	67.608	68.462	69.178	68.571	67.594	68.571	69.178	68.462	67.608	68.462
70.0	56.463	56.369	56.405	56.499	56.796	56.499	56.405	56.369	56.463	56.369
72.5	46.896	47.127	47.344	47.482	47.453	47.482	47.344	47.127	46.896	47.127
75.0	38.414	38.631	38.950	39.044	39.007	39.044	38.950	38.631	38.414	38.631
77.5	30.461	30.591	30.967	31.097	31.112	31.097	30.967	30.591	30.461	30.591
80.0	23.028	23.093	23.347	23.716	23.607	23.716	23.347	23.093	23.028	23.093
82.5	15.936	16.059	16.305	16.645	16.508	16.645	16.305	16.059	15.936	16.059
85.0	9.379	9.444	9.806	9.965	9.879	9.965	9.806	9.444	9.379	9.444
87.5	3.626	3.590	3.727	3.937	3.908	3.937	3.727	3.590	3.626	3.590
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283	1442.283
2.5	1437.362	1437.746	1438.064	1437.746	1437.362	1438.158	1439.316
5.0	1424.589	1423.294	1424.126	1423.294	1424.589	1424.010	1426.623
7.5	1399.028	1397.175	1395.605	1397.175	1399.028	1399.122	1403.688
10.0	1363.190	1362.076	1360.534	1362.076	1363.190	1361.757	1363.046
12.5	1310.961	1310.758	1308.080	1310.758	1310.961	1311.366	1311.156
15.0	1252.508	1251.690	1253.774	1251.690	1252.508	1252.833	1254.310
17.5	1193.881	1191.659	1192.520	1191.659	1193.881	1192.122	1196.558
20.0	1137.020	1137.041	1134.711	1137.041	1137.020	1134.052	1135.963
22.5	1067.704	1068.550	1066.271	1068.550	1067.704	1068.015	1067.805
25.0	980.881	983.154	981.865	983.154	980.881	982.285	984.044
27.5	881.438	879.223	879.028	879.223	881.438	882.154	885.577
30.0	773.411	771.906	769.677	771.906	773.411	774.866	776.450
32.5	660.695	661.599	659.320	661.599	660.695	662.707	663.068
35.0	554.050	553.392	549.281	553.392	554.050	551.315	552.118
37.5	452.602	449.816	447.992	449.816	452.602	449.917	449.881
40.0	362.494	361.517	360.924	361.517	362.494	362.740	360.772
42.5	292.114	292.042	292.628	292.042	292.114	293.786	293.902
45.0	243.337	242.266	242.613	242.266	243.337	243.829	244.068
47.5	207.405	206.421	205.929	206.421	207.405	206.956	206.920
50.0	178.334	177.733	177.321	177.733	178.334	178.414	178.312
52.5	155.509	155.002	154.669	155.002	155.509	155.899	155.726
55.0	137.170	136.497	136.425	136.497	137.170	137.185	136.758
57.5	121.488	120.865	120.662	120.865	121.488	121.364	120.713
60.0	107.187	106.804	106.037	106.804	107.187	107.173	106.572
62.5	93.661	92.988	92.076	92.988	93.661	93.560	92.851
65.0	80.685	79.853	79.223	79.853	80.685	80.475	79.904
67.5	69.178	68.571	67.594	68.571	69.178	68.462	67.608
70.0	56.405	56.499	56.796	56.499	56.405	56.369	56.463
72.5	47.344	47.482	47.453	47.482	47.344	47.127	46.896
75.0	38.950	39.044	39.007	39.044	38.950	38.631	38.414
77.5	30.967	31.097	31.112	31.097	30.967	30.591	30.461
80.0	23.347	23.716	23.607	23.716	23.347	23.093	23.028

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82.5	16.305	16.645	16.508	16.645	16.305	16.059	15.936
85.0	9.806	9.965	9.879	9.965	9.806	9.444	9.379
87.5	3.727	3.937	3.908	3.937	3.727	3.590	3.626
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	485.37	N.A.	28.10
0-30	930.08	N.A.	53.90
0-40	1275.5	N.A.	73.90
0-60	1593.76	N.A.	92.30
0-80	1715.07	N.A.	99.30
0-90	1726.35	N.A.	100.00
10-90	1592.38	N.A.	92.20
20-40	790.13	N.A.	45.80
20-50	984.32	N.A.	57.00
40-70	398.20	N.A.	23.10
60-80	121.31	N.A.	7.00
70-80	41.37	N.A.	2.40
80-90	11.28	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1726.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

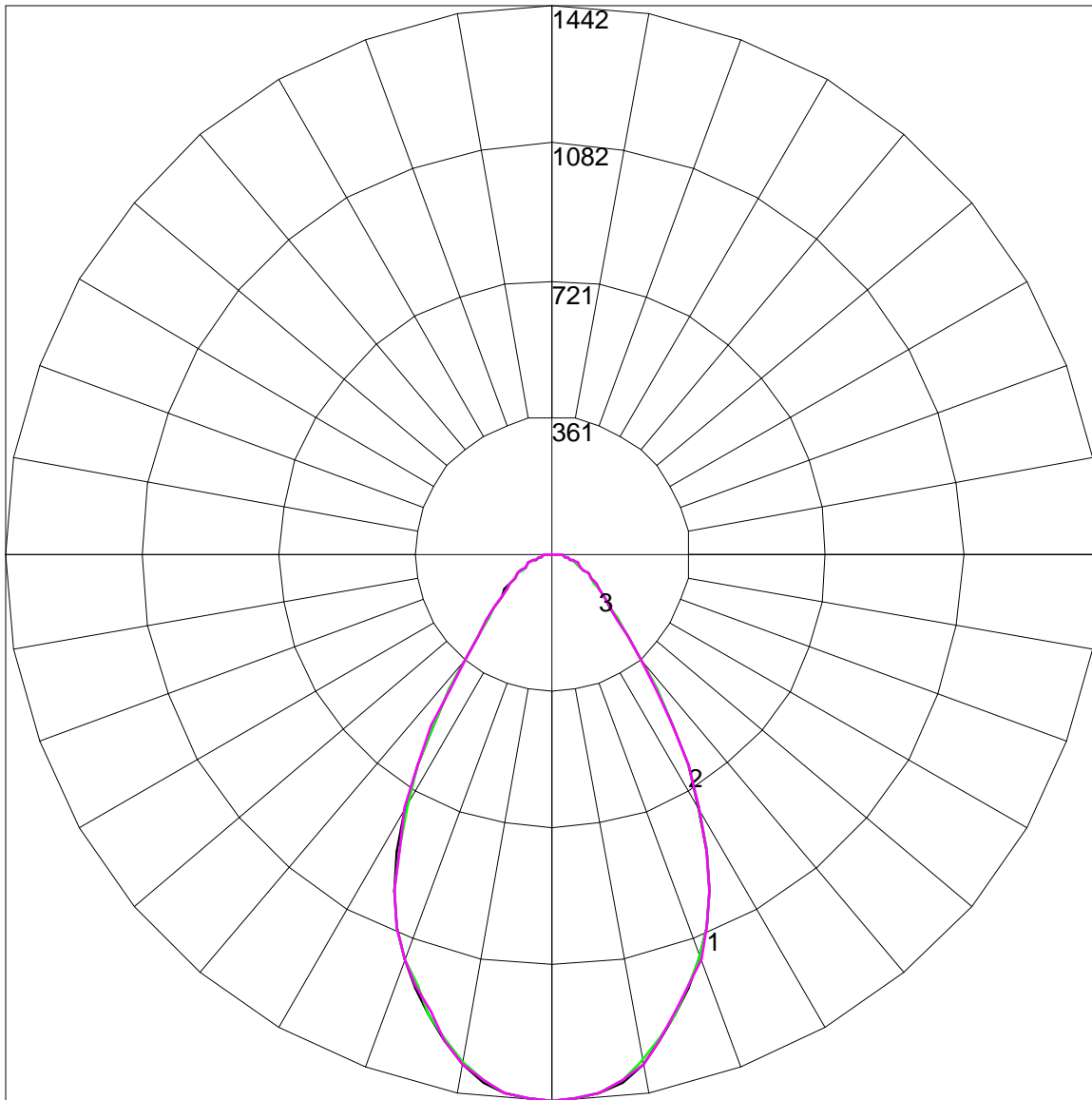
Zone	Lumens
0-10	133.97
10-20	351.41
20-30	444.71
30-40	345.42
40-50	194.19
50-60	124.07
60-70	79.95
70-80	41.37
80-90	11.28
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	76	70	90	81	75	70	79	73	69	77	72	68	75	71	67	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	51
8	72	61	54	49	71	60	54	49	59	53	49	58	53	49	57	52	48	47
9	68	57	50	46	67	56	50	45	55	49	45	54	49	45	54	49	45	43
10	65	53	47	42	63	53	47	42	52	46	42	51	46	42	50	46	42	40

POLAR GRAPH



Maximum Candela = 1442.283 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (0 - 180)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Vertical Plane Through Horizontal Angles (45 - 225)