

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : SGE4LEDOS-45L35KE1-AR4224OSMWSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]201410982\_M-45L-Gen3  
[TESTLAB] OSRAM SYLVANIA  
[TESTDATE] 8/11/2014  
[ISSUEDATE]8/11/2014  
[UPDATE]1/3/2017  
[MANUFAC]Spectrum Lighting  
[LUMCAT]SGE4LEDOS-45L-35K-E1-AR4224OS-MW-SO  
[LUMINAIRE]4" Diam., Open Aperture LED Downlight  
[OTHER]Deep Profile, Matte White Lower Cone  
[OTHER]Integral, Regressed Solite Lens  
[OTHER]54.7 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]This report updated by Spectrum Lighting, scaled from Gen2, 30L

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3186
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	78
Total Luminaire Watts	41.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.86
Spacing Criterion (90-270)	0.86
Spacing Criterion (Diagonal)	0.84
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	73423	73088	73064
55	60731	60503	60606
65	53582	53700	53959
75	48652	48702	48988
85	36009	37365	36836

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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>
<b>0.0</b>	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622
<b>2.5</b>	2991.362	2988.833	2989.025	2991.759	2996.125	2991.759	2989.025	2988.833	2991.362	2988.833
<b>5.0</b>	2955.435	2951.084	2950.878	2952.142	2957.287	2952.142	2950.878	2951.084	2955.435	2951.084
<b>7.5</b>	2886.536	2886.051	2885.125	2882.508	2889.197	2882.508	2885.125	2886.051	2886.536	2886.051
<b>10.0</b>	2783.342	2785.738	2787.429	2788.825	2794.911	2788.825	2787.429	2785.738	2783.342	2785.738
<b>12.5</b>	2665.213	2668.667	2667.271	2670.152	2674.356	2670.152	2667.271	2668.667	2665.213	2668.667
<b>15.0</b>	2543.703	2543.291	2545.276	2545.967	2549.098	2545.967	2545.276	2543.291	2543.703	2543.291
<b>17.5</b>	2415.416	2410.829	2412.476	2412.608	2410.271	2412.608	2412.476	2410.829	2415.416	2410.829
<b>20.0</b>	2231.137	2230.416	2226.624	2230.372	2233.195	2230.372	2226.624	2230.416	2231.137	2230.416
<b>22.5</b>	2009.960	2008.446	1999.112	2000.685	2004.051	2000.685	1999.112	2008.446	2009.960	2008.446
<b>25.0</b>	1755.195	1749.697	1746.992	1747.066	1746.360	1747.066	1746.992	1749.697	1755.195	1749.697
<b>27.5</b>	1488.449	1480.128	1481.466	1483.215	1480.231	1483.215	1481.466	1480.128	1488.449	1480.128
<b>30.0</b>	1221.570	1217.851	1219.218	1223.716	1223.981	1223.716	1219.218	1217.851	1221.570	1217.851
<b>32.5</b>	977.873	977.668	979.873	985.429	983.445	985.429	979.873	977.668	977.873	977.668
<b>35.0</b>	779.556	776.498	779.688	783.966	783.598	783.966	779.688	776.498	779.556	776.498
<b>37.5</b>	632.556	632.276	633.070	634.526	635.716	634.526	633.070	632.276	632.556	632.276
<b>40.0</b>	532.904	533.213	532.787	534.757	535.256	534.757	532.787	533.213	532.904	533.213
<b>42.5</b>	464.961	464.182	463.197	464.285	463.873	464.285	463.197	464.182	464.961	464.182
<b>45.0</b>	412.923	411.835	411.041	411.086	410.909	411.086	411.041	411.835	412.923	411.835
<b>47.5</b>	370.896	370.425	369.867	369.823	369.852	369.823	369.867	370.425	370.896	370.425
<b>50.0</b>	337.982	337.718	337.071	337.233	337.336	337.233	337.071	337.718	337.982	337.718
<b>52.5</b>	307.774	307.348	306.304	306.642	306.495	306.642	306.304	307.348	307.774	307.348
<b>55.0</b>	277.051	276.419	276.007	276.522	276.478	276.522	276.007	276.419	277.051	276.419
<b>57.5</b>	249.371	249.312	249.253	249.871	249.974	249.871	249.253	249.312	249.371	249.312
<b>60.0</b>	223.381	223.734	223.793	224.631	224.704	224.631	223.793	223.734	223.381	223.734
<b>62.5</b>	200.934	201.008	201.023	201.508	201.655	201.508	201.023	201.008	200.934	201.008
<b>65.0</b>	180.104	180.237	180.501	181.133	181.369	181.133	180.501	180.237	180.104	180.237
<b>67.5</b>	159.598	159.848	160.083	160.656	161.083	160.656	160.083	159.848	159.598	159.848
<b>70.0</b>	139.724	139.885	140.120	140.532	140.885	140.532	140.120	139.885	139.724	139.885
<b>72.5</b>	120.202	120.011	120.275	120.643	120.775	120.643	120.275	120.011	120.202	120.011
<b>75.0</b>	100.151	100.034	100.254	101.165	100.842	101.165	100.254	100.034	100.151	100.034
<b>77.5</b>	80.600	80.821	81.085	82.026	81.659	82.026	81.085	80.821	80.600	80.821
<b>80.0</b>	62.078	62.152	62.313	62.960	62.696	62.960	62.313	62.152	62.078	62.152
<b>82.5</b>	43.630	43.865	43.835	44.232	43.835	44.232	43.835	43.865	43.630	43.865
<b>85.0</b>	24.961	25.843	25.901	26.048	25.534	26.048	25.901	25.843	24.961	25.843
<b>87.5</b>	7.644	8.747	9.026	8.996	8.761	8.996	9.026	8.747	7.644	8.747
<b>90.0</b>	0.426	1.235	1.441	1.220	0.956	1.220	1.441	1.235	0.426	1.235
<b>92.5</b>	0.441	0.970	1.147	0.911	0.647	0.911	1.147	0.970	0.441	0.970
<b>95.0</b>	0.485	0.970	1.205	0.956	0.632	0.956	1.205	0.970	0.485	0.970
<b>97.5</b>	0.706	1.000	1.205	1.014	0.706	1.014	1.205	1.000	0.706	1.000
<b>100.0</b>	0.941	1.073	1.323	1.161	0.897	1.161	1.323	1.073	0.941	1.073
<b>102.5</b>	1.161	1.132	1.426	1.308	0.985	1.308	1.426	1.132	1.161	1.132
<b>105.0</b>	1.220	1.117	1.426	1.455	0.985	1.455	1.426	1.117	1.220	1.117
<b>107.5</b>	0.867	1.073	1.161	1.602	1.073	1.602	1.161	1.073	0.867	1.073
<b>110.0</b>	0.559	1.000	0.926	1.646	1.176	1.646	0.926	1.000	0.559	1.000
<b>112.5</b>	0.529	0.970	0.882	1.397	1.308	1.397	0.882	0.970	0.529	0.970
<b>115.0</b>	0.515	0.882	0.941	1.323	1.455	1.323	0.941	0.882	0.515	0.882
<b>117.5</b>	0.515	0.853	1.000	1.426	1.602	1.426	1.000	0.853	0.515	0.853
<b>120.0</b>	0.515	0.897	1.014	1.514	1.720	1.514	1.014	0.897	0.515	0.897
<b>122.5</b>	0.500	0.809	1.029	1.441	1.632	1.441	1.029	0.809	0.500	0.809
<b>125.0</b>	0.515	0.779	1.117	1.411	1.352	1.411	1.117	0.779	0.515	0.779
<b>127.5</b>	0.559	0.735	1.191	1.411	1.250	1.411	1.191	0.735	0.559	0.735
<b>130.0</b>	0.603	0.764	1.235	1.441	1.294	1.441	1.235	0.764	0.603	0.764
<b>132.5</b>	0.662	0.823	1.279	1.514	1.382	1.514	1.279	0.823	0.662	0.823

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**CANDELA TABULATION - (Cont.)**

135.0	0.750	0.926	1.397	1.632	1.485	1.632	1.397	0.926	0.750	0.926
137.5	0.956	1.058	1.544	1.691	1.602	1.691	1.544	1.058	0.956	1.058
140.0	1.191	1.279	1.705	1.852	1.764	1.852	1.705	1.279	1.191	1.279
142.5	1.514	1.588	1.926	2.058	1.985	2.058	1.926	1.588	1.514	1.588
145.0	1.985	2.014	2.234	2.411	2.337	2.411	2.234	2.014	1.985	2.014
147.5	2.484	2.514	2.675	2.867	2.793	2.867	2.675	2.514	2.484	2.514
150.0	3.087	3.146	3.263	3.381	3.352	3.381	3.263	3.146	3.087	3.146
152.5	3.749	3.822	3.925	3.998	4.013	3.998	3.925	3.822	3.749	3.822
155.0	4.572	4.631	4.660	4.778	4.807	4.778	4.660	4.631	4.572	4.631
157.5	5.586	5.630	5.601	5.792	5.807	5.792	5.601	5.630	5.586	5.630
160.0	7.188	7.188	7.203	7.335	7.379	7.335	7.203	7.188	7.188	7.188
162.5	9.364	9.437	9.349	9.437	9.555	9.437	9.349	9.437	9.364	9.437
165.0	12.025	11.936	11.936	12.010	12.025	12.010	11.936	11.936	12.025	11.936
167.5	15.244	15.317	15.317	15.317	15.229	15.317	15.317	15.317	15.244	15.317
170.0	18.963	19.037	18.992	18.919	18.934	18.919	18.992	19.037	18.963	19.037
172.5	22.344	22.418	22.418	22.315	22.315	22.315	22.418	22.418	22.344	22.418
175.0	24.799	24.623	24.064	24.005	24.211	24.005	24.064	24.623	24.799	24.623
177.5	24.667	24.652	24.608	24.461	24.358	24.461	24.608	24.652	24.667	24.652
180.0	24.858	24.858	24.858	24.858	24.858	24.858	24.858	24.858	24.858	24.858

**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	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622	3003.622
2.5	2989.025	2991.759	2996.125	2991.759	2989.025	2988.833	2991.362
5.0	2950.878	2952.142	2957.287	2952.142	2950.878	2951.084	2955.435
7.5	2885.125	2882.508	2889.197	2882.508	2885.125	2886.051	2886.536
10.0	2787.429	2788.825	2794.911	2788.825	2787.429	2785.738	2783.342
12.5	2667.271	2670.152	2674.356	2670.152	2667.271	2668.667	2665.213
15.0	2545.276	2545.967	2549.098	2545.967	2545.276	2543.291	2543.703
17.5	2412.476	2412.608	2410.271	2412.608	2412.476	2410.829	2415.416
20.0	2226.624	2230.372	2233.195	2230.372	2226.624	2230.416	2231.137
22.5	1999.112	2000.685	2004.051	2000.685	1999.112	2008.446	2009.960
25.0	1746.992	1747.066	1746.360	1747.066	1746.992	1749.697	1755.195
27.5	1481.466	1483.215	1480.231	1483.215	1481.466	1480.128	1488.449
30.0	1219.218	1223.716	1223.981	1223.716	1219.218	1217.851	1221.570
32.5	979.873	985.429	983.445	985.429	979.873	977.668	977.873
35.0	779.688	783.966	783.598	783.966	779.688	776.498	779.556
37.5	633.070	634.526	635.716	634.526	633.070	632.276	632.556
40.0	532.787	534.757	535.256	534.757	532.787	533.213	532.904
42.5	463.197	464.285	463.873	464.285	463.197	464.182	464.961
45.0	411.041	411.086	410.909	411.086	411.041	411.835	412.923
47.5	369.867	369.823	369.852	369.823	369.867	370.425	370.896
50.0	337.071	337.233	337.336	337.233	337.071	337.718	337.982
52.5	306.304	306.642	306.495	306.642	306.304	307.348	307.774
55.0	276.007	276.522	276.478	276.522	276.007	276.419	277.051
57.5	249.253	249.871	249.974	249.871	249.253	249.312	249.371
60.0	223.793	224.631	224.704	224.631	223.793	223.734	223.381
62.5	201.023	201.508	201.655	201.508	201.023	201.008	200.934
65.0	180.501	181.133	181.369	181.133	180.501	180.237	180.104
67.5	160.083	160.656	161.083	160.656	160.083	159.848	159.598
70.0	140.120	140.532	140.885	140.532	140.120	139.885	139.724
72.5	120.275	120.643	120.775	120.643	120.275	120.011	120.202
75.0	100.254	101.165	100.842	101.165	100.254	100.034	100.151
77.5	81.085	82.026	81.659	82.026	81.085	80.821	80.600
80.0	62.313	62.960	62.696	62.960	62.313	62.152	62.078

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**CANDELA TABULATION - (Cont.)**

82.5	43.835	44.232	43.835	44.232	43.835	43.865	43.630
85.0	25.901	26.048	25.534	26.048	25.901	25.843	24.961
87.5	9.026	8.996	8.761	8.996	9.026	8.747	7.644
90.0	1.441	1.220	0.956	1.220	1.441	1.235	0.426
92.5	1.147	0.911	0.647	0.911	1.147	0.970	0.441
95.0	1.205	0.956	0.632	0.956	1.205	0.970	0.485
97.5	1.205	1.014	0.706	1.014	1.205	1.000	0.706
100.0	1.323	1.161	0.897	1.161	1.323	1.073	0.941
102.5	1.426	1.308	0.985	1.308	1.426	1.132	1.161
105.0	1.426	1.455	0.985	1.455	1.426	1.117	1.220
107.5	1.161	1.602	1.073	1.602	1.161	1.073	0.867
110.0	0.926	1.646	1.176	1.646	0.926	1.000	0.559
112.5	0.882	1.397	1.308	1.397	0.882	0.970	0.529
115.0	0.941	1.323	1.455	1.323	0.941	0.882	0.515
117.5	1.000	1.426	1.602	1.426	1.000	0.853	0.515
120.0	1.014	1.514	1.720	1.514	1.014	0.897	0.515
122.5	1.029	1.441	1.632	1.441	1.029	0.809	0.500
125.0	1.117	1.411	1.352	1.411	1.117	0.779	0.515
127.5	1.191	1.411	1.250	1.411	1.191	0.735	0.559
130.0	1.235	1.441	1.294	1.441	1.235	0.764	0.603
132.5	1.279	1.514	1.382	1.514	1.279	0.823	0.662
135.0	1.397	1.632	1.485	1.632	1.397	0.926	0.750
137.5	1.544	1.691	1.602	1.691	1.544	1.058	0.956
140.0	1.705	1.852	1.764	1.852	1.705	1.279	1.191
142.5	1.926	2.058	1.985	2.058	1.926	1.588	1.514
145.0	2.234	2.411	2.337	2.411	2.234	2.014	1.985
147.5	2.675	2.867	2.793	2.867	2.675	2.514	2.484
150.0	3.263	3.381	3.352	3.381	3.263	3.146	3.087
152.5	3.925	3.998	4.013	3.998	3.925	3.822	3.749
155.0	4.660	4.778	4.807	4.778	4.660	4.631	4.572
157.5	5.601	5.792	5.807	5.792	5.601	5.630	5.586
160.0	7.203	7.335	7.379	7.335	7.203	7.188	7.188
162.5	9.349	9.437	9.555	9.437	9.349	9.437	9.364
165.0	11.936	12.010	12.025	12.010	11.936	11.936	12.025
167.5	15.317	15.317	15.229	15.317	15.317	15.317	15.244
170.0	18.992	18.919	18.934	18.919	18.992	19.037	18.963
172.5	22.418	22.315	22.315	22.315	22.418	22.418	22.344
175.0	24.064	24.005	24.211	24.005	24.064	24.623	24.799
177.5	24.608	24.461	24.358	24.461	24.608	24.652	24.667
180.0	24.858	24.858	24.858	24.858	24.858	24.858	24.858

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	987.07	N.A.	31.00
0-30	1778.62	N.A.	55.80
0-40	2284.05	N.A.	71.70
0-60	2856.28	N.A.	89.60
0-80	3141.87	N.A.	98.60
0-90	3171.85	N.A.	99.50
10-90	2895.24	N.A.	90.90
20-40	1296.98	N.A.	40.70
20-50	1620.43	N.A.	50.90
40-70	751.43	N.A.	23.60
60-80	285.59	N.A.	9.00
70-80	106.40	N.A.	3.30
80-90	29.98	N.A.	0.90
90-110	2.35	N.A.	0.10
90-120	3.41	N.A.	0.10
90-130	4.38	N.A.	0.10
90-150	6.79	N.A.	0.20
90-180	14.50	N.A.	0.50
110-180	12.15	N.A.	0.40
0-180	3186.35	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	276.61
10-20	710.46
20-30	791.55
30-40	505.43
40-50	323.45
50-60	248.78
60-70	179.19
70-80	106.40
80-90	29.98
90-100	1.07
100-110	1.28
110-120	1.06
120-130	0.97
130-140	0.99
140-150	1.41
150-160	2.21
160-170	3.36
170-180	2.14

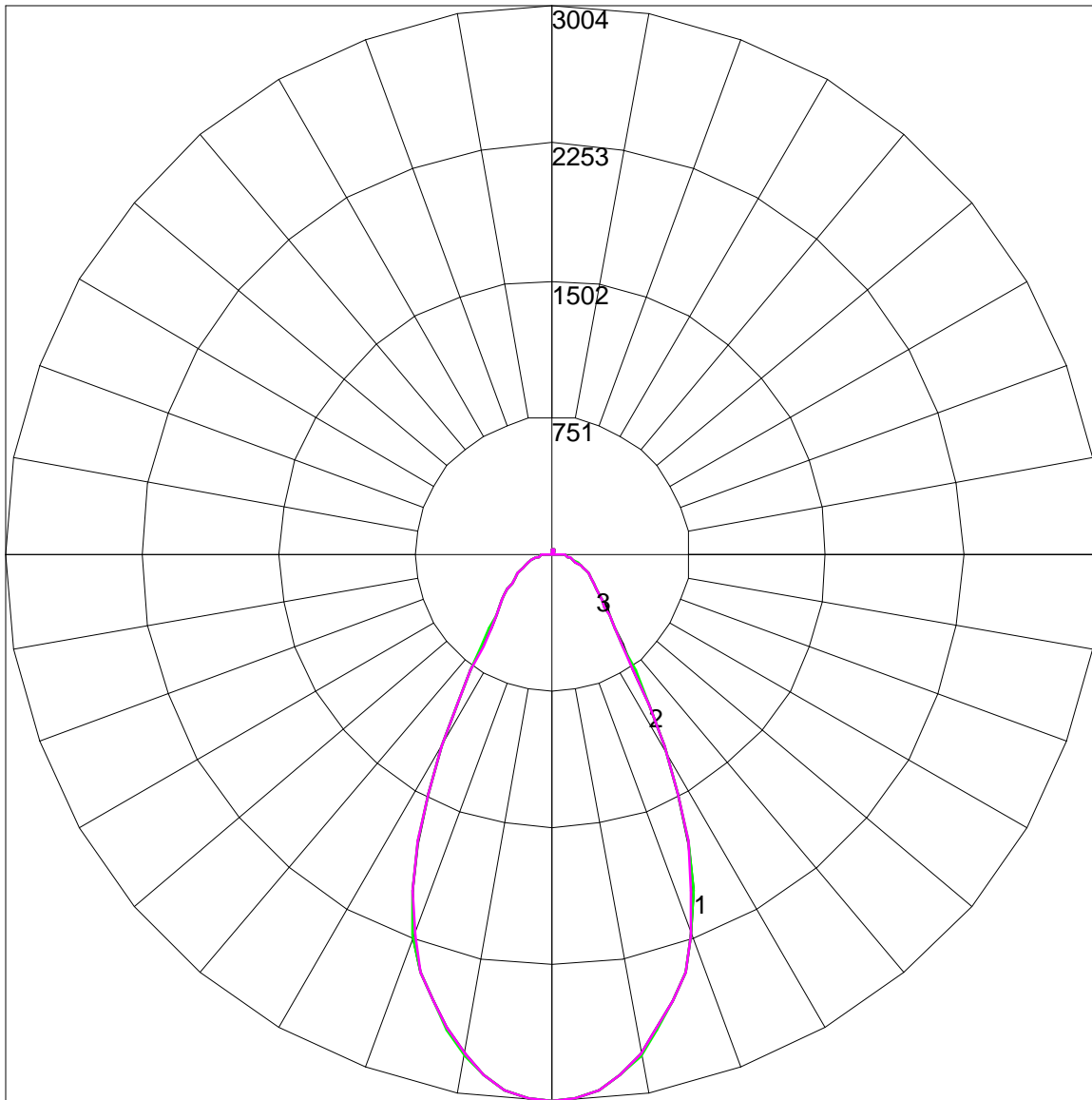
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : SGE4LEDOS-45L35KE1-AR4224OSMWSO.IES**

**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	111	108	104	102	109	105	103	100	101	99	97	97	95	94	94	92	91	89
2	104	98	93	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	71
4	91	82	75	70	89	81	74	69	78	73	68	76	71	68	74	70	67	65
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	71	60	54	49	59	53	49	58	53	49	57	52	48	47
9	68	57	51	46	67	57	50	46	56	50	46	55	49	46	54	49	45	44
10	65	54	47	43	64	54	47	43	53	47	43	52	46	43	51	46	43	41

POLAR GRAPH



Maximum Candela = 3003.622 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)