



8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L061802501



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Issue Date: 6/11/2018

Report Prepared For: eLuminaire LLC
180 E Selandia Lane Carson, CA 90746

Model Number: eLPLS1-DP10030K8-XX

Test: Photometric/Colorimetric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:
IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products
ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 5/23/18

Date of Tests: 5/30/18 - 6/11/18

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	1/9/19
BK PRECISION	1747	PS-DC04	1/10/19
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/19
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

Test Summary

Manufacturer:	eLuminaire LLC
Model Number:	eLPLS1-DP10030K8-XX
Driver Model Number:	MOONS' MT100A105AQ_CP/C
Total Lumens:	8597.47
Input Voltage (VAC/60Hz):	277.00
Input Current (Amp):	0.30
Input Power (W):	82.30
Input Power Factor:	1.00
Current ATHD @ 277V(%):	8%
Current ATHD @ 480V(%):	10% (0.18A, 82.24W, 0.95PF)
Efficacy:	104
Color Rendering Index (CRI):	83
Correlated Color Temperature (K):	3000
Chromaticity Coordinate x:	0.4371
Chromaticity Coordinate y:	0.4045
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:15

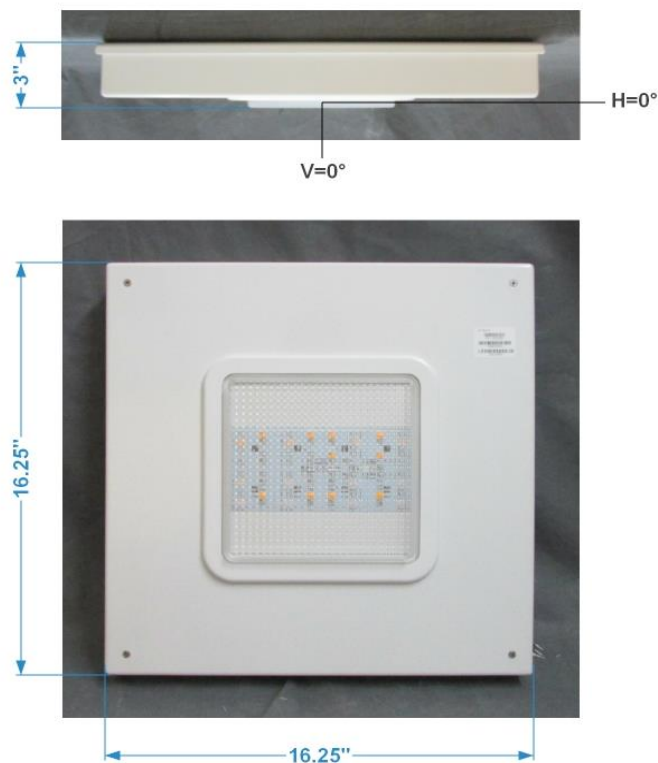
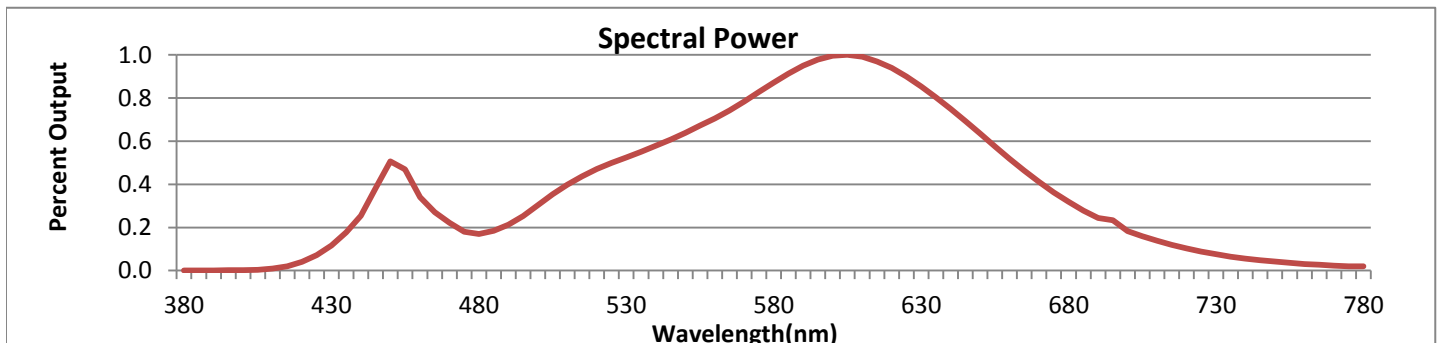


FIG. 1 LUMINAIRE



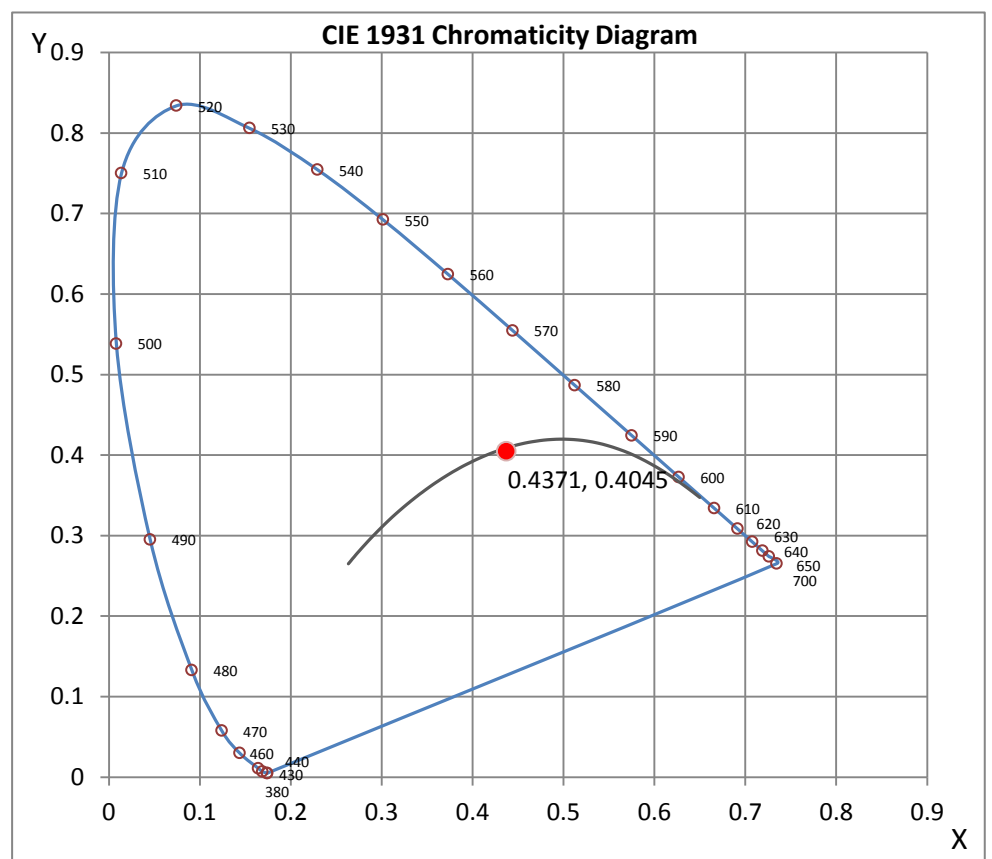
Wavelength	W/m ² nm	440	0.2548	510	0.3979	580	0.8723	650	0.6355	720	0.1022
380	0.0008	450	0.5072	520	0.4705	590	0.9499	660	0.5191	730	0.0755
390	0.0011	460	0.3399	530	0.5243	600	0.9959	670	0.4110	740	0.0555
400	0.0021	470	0.2217	540	0.5792	610	0.9912	680	0.3191	750	0.0414
410	0.0090	480	0.1703	550	0.6391	620	0.9406	690	0.2431	760	0.0309
420	0.0400	490	0.2124	560	0.7058	630	0.8545	700	0.1835	770	0.0230
430	0.1170	500	0.3029	570	0.7837	640	0.7503	710	0.1380	780	0.0198

CRI & CCT

x	0.4371
y	0.4045
u'	0.2505
v'	0.5216
CRI	83.00
CCT	3000
Duv	0.00014

R Values

R1	81.41
R2	89.92
R3	96.58
R4	81.50
R5	80.96
R6	86.96
R7	84.65
R8	62.20
R9	13.29
R10	76.41
R11	80.27
R12	69.29
R13	83.24
R14	97.99





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Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Joseph Shin

Test Report Released by:

Jeff Ahn
Engineering Manager

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 10*

**All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L061802501.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L061802501
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 6/11/2018
[MANUFAC] eLuminaire LLC
[LUMCAT] eLPLS1-DP10030K8-XX
[LUMINAIRE] Canopy / Petroleum Light
[BALLASTCAT] MOONS' MT100A105AQ_CP/C
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 277VAC, 82.30W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8597
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	82.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.56 ft
Luminous Width (90-270)	0.56 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	103199	102908	106351
55	80113	73357	76585
65	62154	60288	55987
75	49950	63596	43193
85	80658	97183	81838

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L061802501.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0	3201	3201	3201	3201	3201	3201	3201	3201	3201	3201
5	3223	3222	3222	3223	3224	3221	3223	3224	3222	3220
10	3256	3257	3259	3266	3275	3284	3291	3299	3301	3298
15	3312	3318	3331	3355	3384	3411	3438	3455	3453	3434
20	3081	3086	3106	3137	3183	3243	3312	3384	3444	3460
25	2951	2955	2965	2974	2978	2990	3013	3037	3072	3122
30	2769	2775	2784	2795	2814	2821	2829	2844	2852	2860
35	2589	2594	2594	2604	2630	2654	2663	2657	2649	2652
40	2365	2363	2362	2360	2371	2390	2407	2416	2427	2432
45	2128	2126	2120	2115	2116	2118	2112	2110	2113	2122
50	1763	1762	1758	1752	1736	1717	1705	1695	1691	1691
55	1340	1333	1320	1322	1335	1331	1296	1251	1235	1227
60	1032	1040	1053	1039	1019	1020	1016	982	949	930
65	766	764	774	788	789	775	766	783	765	743
70	523	526	544	571	582	576	592	591	593	592
75	377	378	386	411	463	473	460	465	471	480
80	328	319	305	307	343	365	378	370	388	381
85	205	203	203	213	235	244	252	264	262	247
90	92	92	92	96	98	98	100	104	109	111
95	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0	3201	3201	3201	3201	3201	3201	3201	3201	3201
5	3217	3217	3214	3207	3202	3197	3193	3190	3190
10	3292	3284	3270	3250	3235	3220	3207	3197	3194
15	3405	3370	3328	3287	3254	3230	3212	3200	3197
20	3432	3366	3285	3200	3131	3108	3108	3114	3115
25	3177	3199	3184	3115	3036	2971	2956	2973	2989
30	2871	2914	2989	3032	2996	2899	2848	2868	2898
35	2659	2684	2714	2740	2752	2720	2665	2660	2681
40	2425	2427	2437	2460	2480	2470	2474	2478	2468
45	2131	2138	2140	2145	2152	2137	2160	2193	2193
50	1692	1698	1703	1714	1731	1732	1751	1773	1779
55	1222	1219	1251	1287	1284	1256	1254	1271	1281
60	923	939	966	964	945	953	971	963	959

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L061802501.IES

CANDELA TABULATION - (Cont.)

65	746	750	722	714	727	719	693	687	690
70	584	568	563	541	539	521	485	463	462
75	468	459	448	457	442	374	337	326	326
80	383	365	372	360	334	293	284	296	307
85	263	268	260	256	244	224	208	205	208
90	117	120	121	119	117	111	104	98	93
95	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L061802501.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1241.65	N.A.	14.40
0-30	2646.83	N.A.	30.80
0-40	4309.56	N.A.	50.10
0-60	7108.59	N.A.	82.70
0-80	8317.65	N.A.	96.70
0-90	8568.58	N.A.	99.70
10-90	8260.25	N.A.	96.10
20-40	3067.91	N.A.	35.70
20-50	4691.43	N.A.	54.60
40-70	3547.62	N.A.	41.30
60-80	1209.06	N.A.	14.10
70-80	460.47	N.A.	5.40
80-90	250.93	N.A.	2.90
90-110	28.89	N.A.	0.30
90-120	28.89	N.A.	0.30
90-130	28.89	N.A.	0.30
90-150	28.89	N.A.	0.30
90-180	28.89	N.A.	0.30
110-180	0.00	N.A.	0.00
0-180	8597.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	308.32
10-20	933.32
20-30	1405.18
30-40	1662.73
40-50	1623.51
50-60	1175.51
60-70	748.59
70-80	460.47
80-90	250.93
90-100	28.89
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

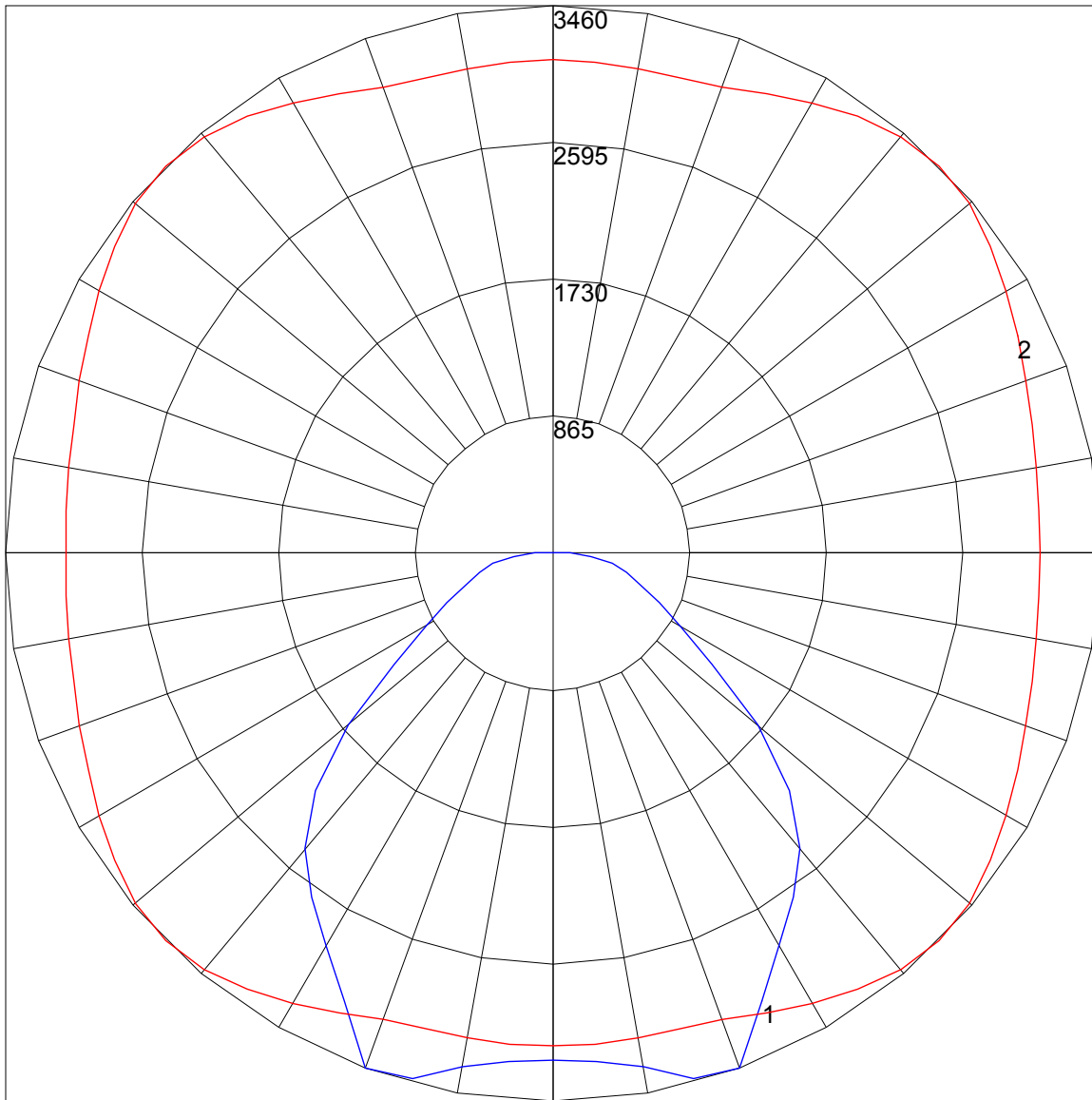
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	74	67	89	80	73	67	77	71	66	74	69	64	71	67	63	61
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

POLAR GRAPH



Maximum Candela = 3460 Located At Horizontal Angle = 45, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)