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Report No: L011505601

Date: 1/26/2015



NVLAP LAB CODE 200927-0

Report No: L011505601

Report Prepared For: Dreamscape Lighting Mfg., Inc
 5521 W. Washington Blvd. Los Angeles, CA 90016

Model Number: DLED-12000

Test: Electrical and Photometric tests

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. Catalog number is DLED-12000. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 1/19/15

Date of Tests: 1/21/15 - 1/21/15

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-S1	11/10/15
Xitron Power Analysis System	2503AH	MT-EL01	10/20/15
BK Precision DC Power Supply	1747	PSDC-04	01/08/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/05/16
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:	Dreamscape Lighting Mfg., Inc
Model Number:	DLED-12000
Driver Model Number:	L.T.F DA20W24V-0000
Total Lumens:	408.49
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.09
Input Power (W):	9.51
Input Power Factor:	0.88
Current ATHD @ 120V(%):	20%
Current ATHD @ 277V(%):	N/A
Efficacy:	43
Color Rendering Index (CRI):	98
Correlated Color Temperature (K):	2876
Chromaticity Coordinate x:	0.4413
Chromaticity Coordinate y:	0.3977
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:20
Off State Power(W):	0.00

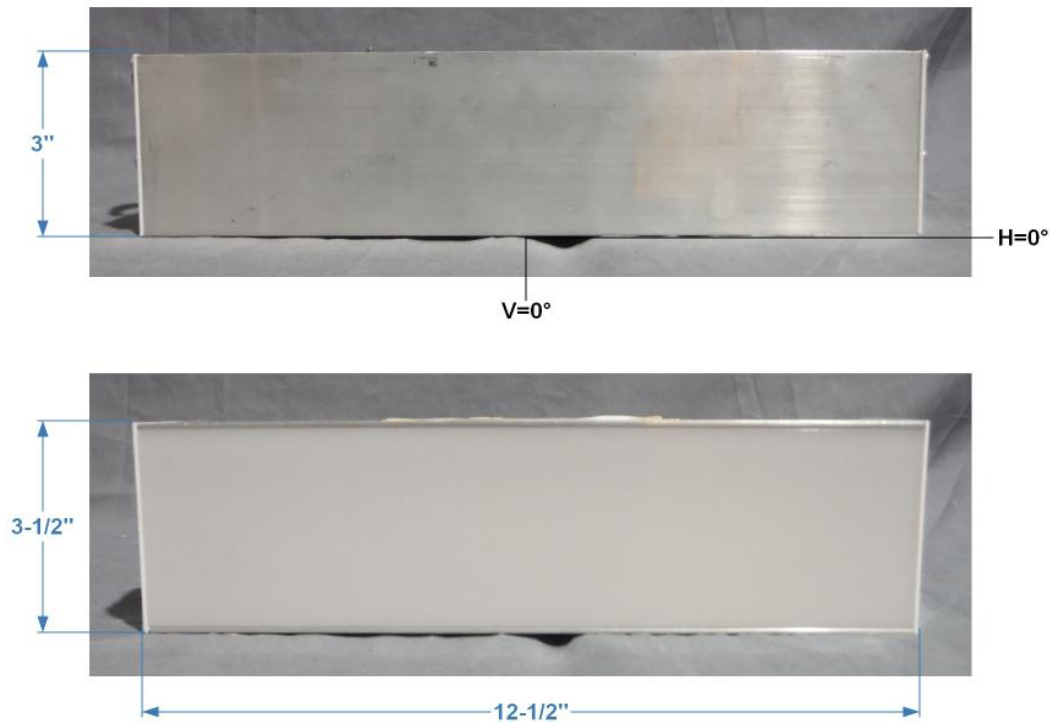
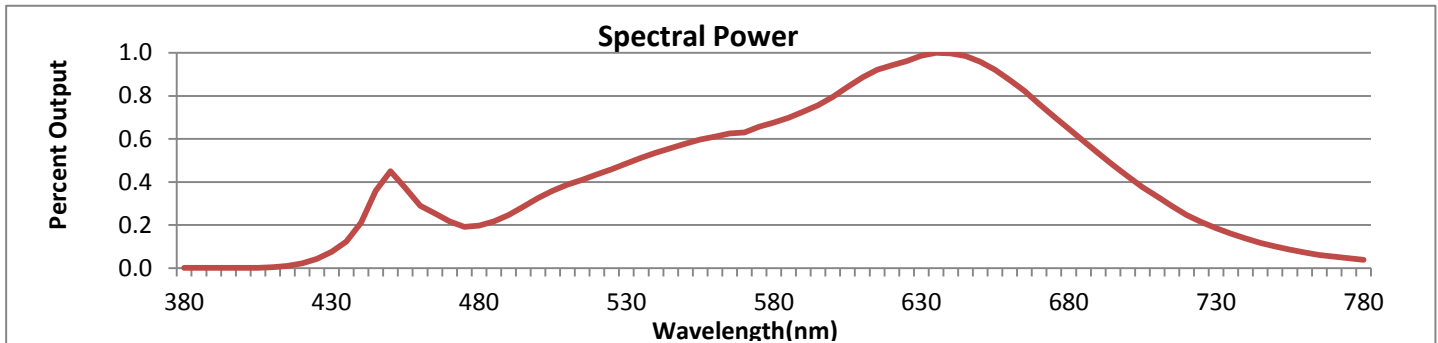


FIG. 1 LUMINAIRE

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



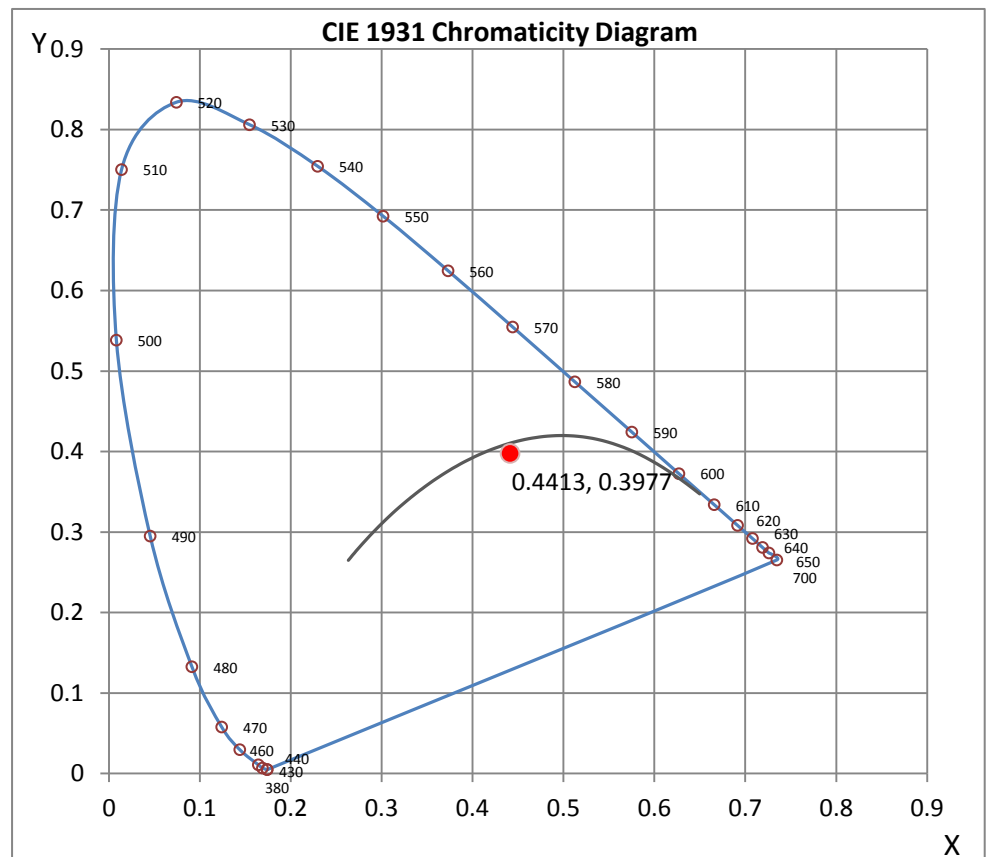
Wavelength	W/m ² nm	440	0.2103	510	0.3872	580	0.6757	650	0.9583	720	0.2472
380	0.0008	450	0.4500	520	0.4348	590	0.7261	660	0.8734	730	0.1852
390	0.0009	460	0.2903	530	0.4859	600	0.7952	670	0.7626	740	0.1373
400	0.0012	470	0.2164	540	0.5365	610	0.8861	680	0.6478	750	0.1008
410	0.0040	480	0.1968	550	0.5787	620	0.9427	690	0.5329	760	0.0726
420	0.0221	490	0.2468	560	0.6110	630	0.9867	700	0.4260	770	0.0531
430	0.0755	500	0.3249	570	0.6294	640	0.9973	710	0.3328	780	0.0384

CRI & CCT

x	0.4413
y	0.3977
u'	0.2562
v'	0.5195
CRI	97.60
CCT	2876
Duv	-0.00309

R Values

R1	99.00
R2	95.37
R3	96.41
R4	99.18
R5	97.41
R6	97.27
R7	97.75
R8	95.29
R9	97.06
R10	94.74
R11	89.60
R12	98.72
R13	96.30
R14	0.00



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

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 : Wilson Khounlavong

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*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L011505601.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L011505601
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 1/26/2015
 [MANUFAC] DREAMSCAPE LIGHTING MFG., INC
 [LUMCAT] DLED-12000
 [LUMINAIRE] 12-1/2"L X 3-1/2"W X 3"H. LED LUMINAIRE
 [MORE] DIFFUSED LENS
 [BALLASTCAT] L.T.F DA20W24V-0000
 [BALLAST] INPUT: 120VAC, 0.2A, 50/60HZ. OUTPUT: 24VDC, 20W
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC, 9.51W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	408
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	43
Total Luminaire Watts	9.51
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.02 ft
Luminous Width (90-270)	0.27 ft
Luminous Height	0.00 ft

IES INDOOR REPORT
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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5174	5223	5250
55	4962	5012	5034
65	4654	4707	4720
75	4081	4140	4159
85	2706	2840	2917

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L011505601.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	145.95	145.95	145.95	145.95	145.95	145.95	145.95	145.95	145.95	145.95
5	143.98	143.98	143.97	144.10	144.33	144.56	144.77	144.96	145.22	145.45
10	141.86	141.84	141.85	141.99	142.24	142.45	142.61	142.80	143.02	143.27
15	138.37	138.35	138.37	138.48	138.71	138.90	139.06	139.23	139.46	139.68
20	133.52	133.49	133.52	133.63	133.84	134.03	134.17	134.35	134.55	134.74
25	127.43	127.40	127.42	127.53	127.72	127.89	128.03	128.18	128.38	128.57
30	120.34	120.37	120.37	120.47	120.63	120.78	120.93	121.09	121.25	121.45
35	112.07	112.10	112.12	112.22	112.35	112.51	112.66	112.79	112.97	113.11
40	103.42	103.42	103.47	103.53	103.66	103.81	103.93	104.07	104.23	104.38
45	93.70	93.73	93.75	93.83	93.96	94.06	94.17	94.34	94.47	94.58
50	83.64	83.67	83.69	83.75	83.87	83.99	84.12	84.26	84.35	84.46
55	72.88	72.92	72.96	72.99	73.09	73.19	73.33	73.41	73.53	73.62
60	61.83	61.82	61.85	61.88	61.99	62.08	62.20	62.28	62.36	62.46
65	50.37	50.40	50.42	50.46	50.53	50.60	50.69	50.78	50.86	50.94
70	38.66	38.62	38.64	38.66	38.70	38.78	38.87	38.91	38.96	39.00
75	27.05	27.10	27.10	27.13	27.15	27.22	27.27	27.31	27.39	27.44
80	15.21	15.21	15.19	15.23	15.26	15.31	15.36	15.42	15.48	15.52
85	6.04	6.02	6.01	6.05	6.11	6.17	6.20	6.25	6.29	6.34
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	145.95	145.95	145.95	145.95	145.95	145.95	145.95	145.95	145.95
5	145.66	145.83	145.99	146.15	146.32	146.44	146.51	146.58	146.62
10	143.46	143.60	143.77	143.91	144.05	144.16	144.24	144.31	144.33
15	139.85	139.99	140.16	140.28	140.39	140.53	140.62	140.63	140.68
20	134.90	135.03	135.16	135.31	135.44	135.53	135.59	135.65	135.65
25	128.71	128.84	128.94	129.09	129.20	129.28	129.35	129.39	129.41
30	121.57	121.66	121.77	121.89	122.00	122.09	122.13	122.17	122.17
35	113.24	113.33	113.42	113.55	113.63	113.70	113.73	113.75	113.78
40	104.46	104.57	104.64	104.74	104.81	104.86	104.89	104.92	104.93
45	94.67	94.76	94.84	94.91	94.97	95.00	95.03	95.04	95.07
50	84.53	84.61	84.68	84.75	84.79	84.83	84.85	84.86	84.87
55	73.68	73.75	73.81	73.86	73.90	73.91	73.93	73.95	73.94
60	62.52	62.58	62.63	62.66	62.68	62.69	62.71	62.70	62.70
65	50.98	51.02	51.05	51.09	51.10	51.09	51.12	51.12	51.09
70	39.10	39.11	39.13	39.12	39.15	39.17	39.23	39.18	39.20
75	27.48	27.50	27.53	27.55	27.56	27.56	27.57	27.57	27.57
80	15.55	15.60	15.63	15.64	15.65	15.66	15.65	15.66	15.67
85	6.37	6.41	6.44	6.46	6.49	6.49	6.52	6.51	6.51
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	53.17	N.A.	13.00
0-30	112.38	N.A.	27.50
0-40	183.13	N.A.	44.80
0-60	321.79	N.A.	78.80
0-80	400.85	N.A.	98.10
0-90	408.49	N.A.	100.00
10-90	394.68	N.A.	96.60
20-40	129.96	N.A.	31.80
20-50	202.89	N.A.	49.70
40-70	188.91	N.A.	46.20
60-80	79.05	N.A.	19.40
70-80	28.80	N.A.	7.10
80-90	7.64	N.A.	1.90
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	408.49	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

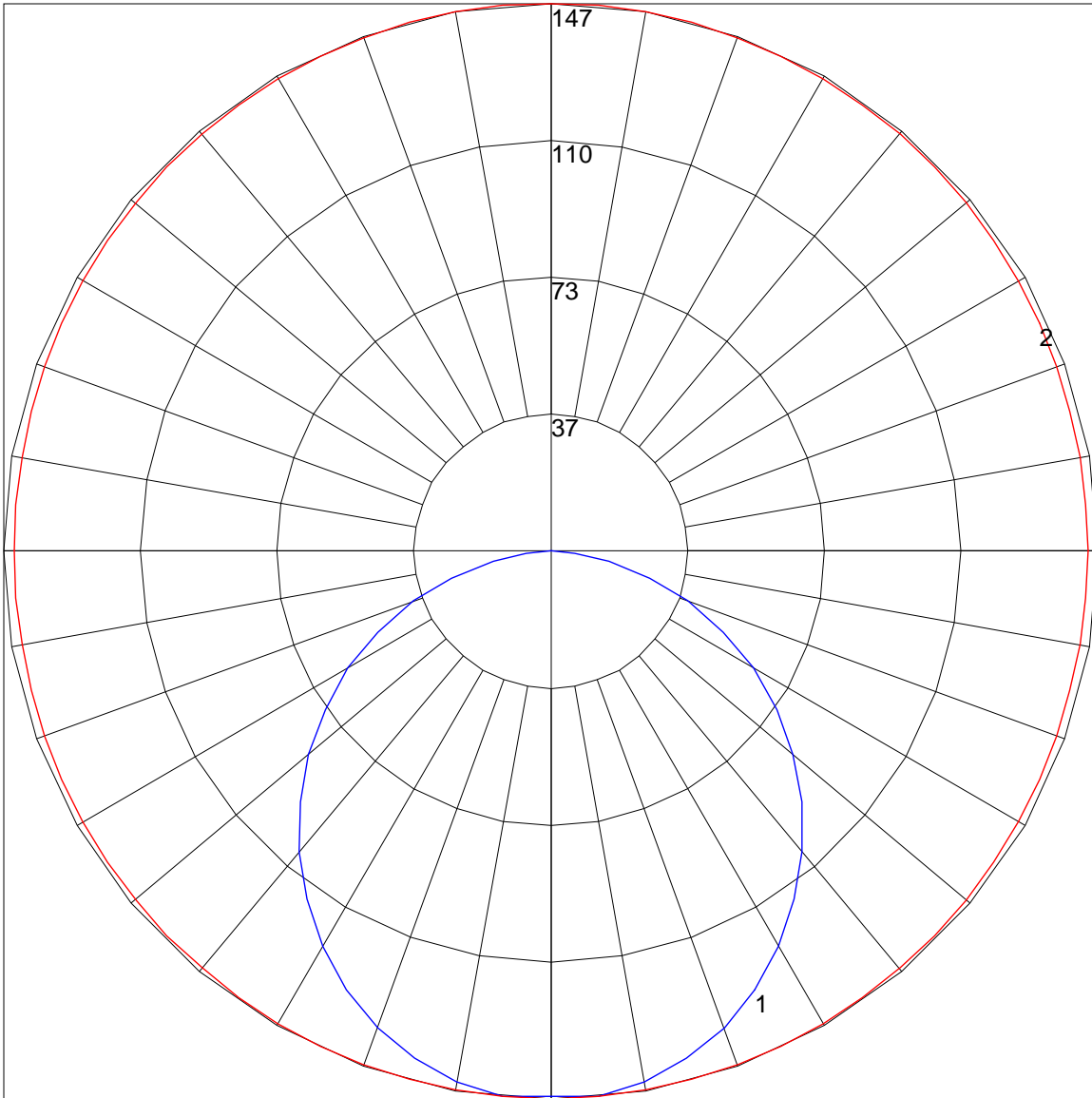
Zone	Lumens
0-10	13.80
10-20	39.37
20-30	59.21
30-40	70.76
40-50	72.93
50-60	65.73
60-70	50.25
70-80	28.80
80-90	7.64
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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	107	107	107	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 146.62 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)