



8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Test #: L031410405

Date: 4/14/2014



NVLAP LAB CODE 200927-0

Test Report: L031410405

Model Number: BV12-1RE-36IN-27K-SA

Report Prepared For: Edge Lighting
1718 W. Fullerton Ave, Chicago, IL 60614

Test: Electrical and Photometric tests as required by the IESNA test standards.

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. Fixture catalog number is BV12-1RE-36IN-27K-SA .
Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 3/30/14

Date of Tests: 4/10/14 - 4/14/14

Seasoning of Sample SSL: 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	01/04/15
Xitron Power Analysis System	2503AH	MT-EL01	01/09/15
BK Precision DC Power Supply	1747	PSDC-04	01/08/15
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/15
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.

LM-79 Test Summary

Manufacturer:	Edge Lighting
Model Number:	BV12-1RE-36IN-27K-SA
LAMPCAT:	N/A
Driver Model Number:	L.T.F ELECTRONIC TRANSFORMER TA60WA12LED-0005
Total Lumens:	811.11
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.20
Input Power (W):	23.07
Input Power Factor:	0.97
Total Harmonic Distortion @ 120V(%):	27%
Total Harmonic Distortion @ 277V(%):	N/A
Efficacy:	35
Color Rendering Index (CRI):	92
Correlated Color Temperature (K):	2746
Chromaticity Coordinate x:	0.4522
Chromaticity Coordinate y:	0.4026
Ambient Temperature (°F):	77.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:50
Off State Power(W):	0.00

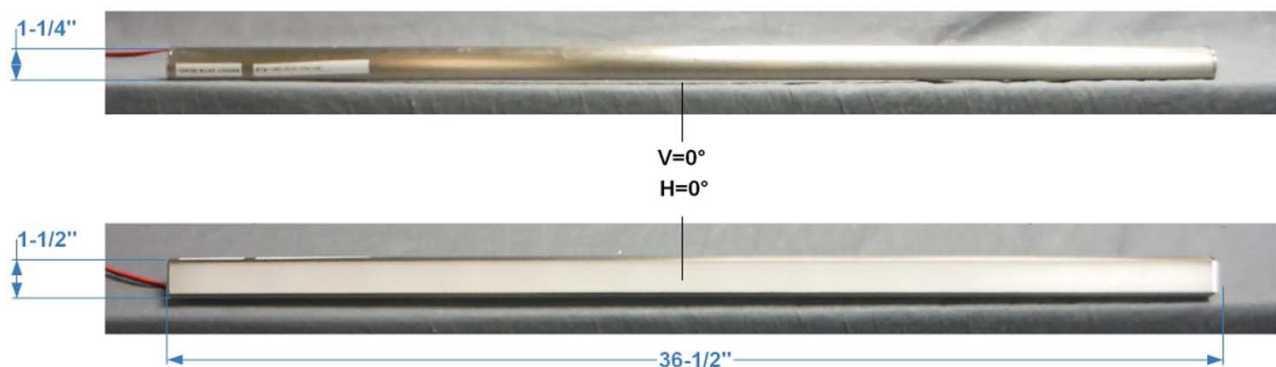
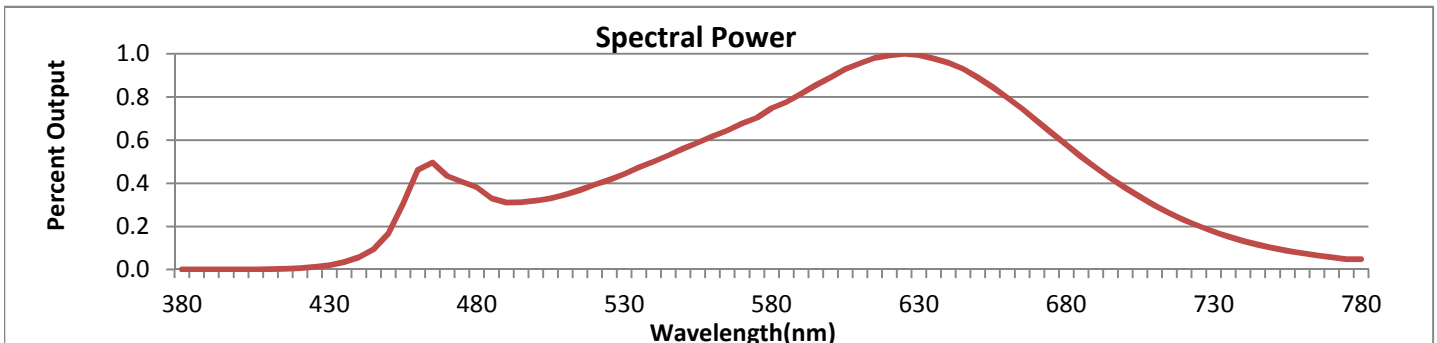


FIG.1 LUMINAIRE



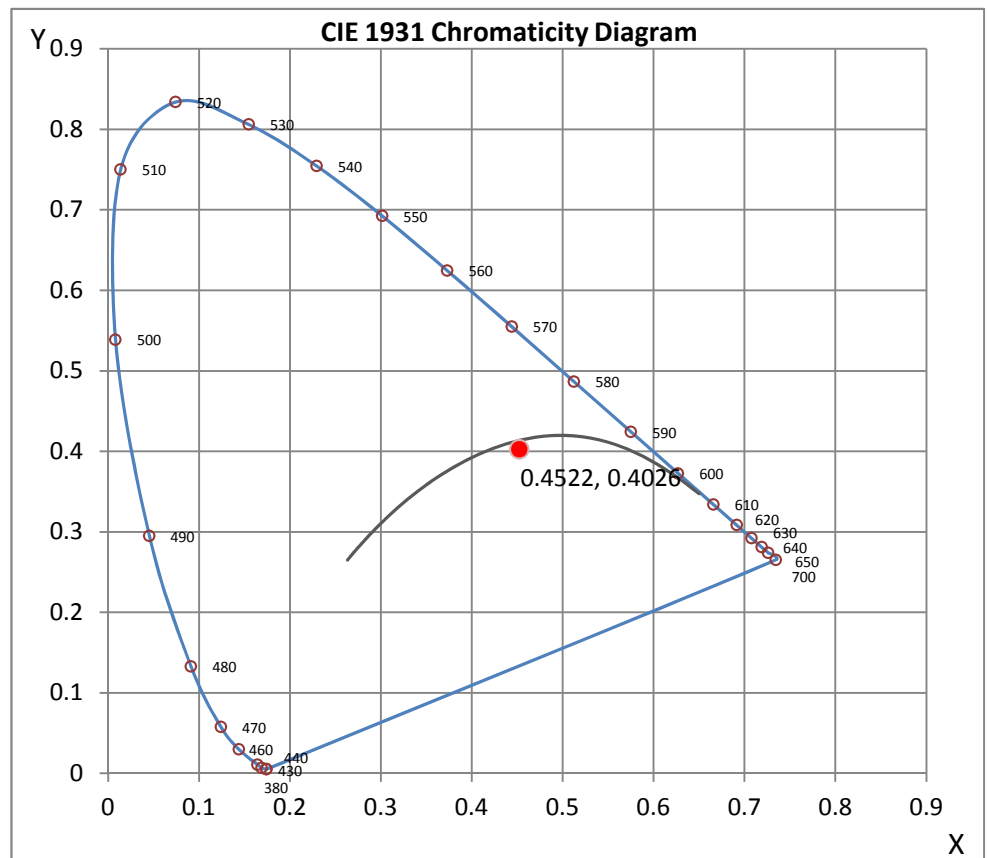
Wavelength	W/m ² nm	440	0.0009	510	0.0053	580	0.0114	650	0.0136	720	0.0035
380	0.0000	450	0.0025	520	0.0060	590	0.0124	660	0.0121	730	0.0027
390	0.0000	460	0.0070	530	0.0067	600	0.0136	670	0.0105	740	0.0020
400	0.0000	470	0.0066	540	0.0076	610	0.0146	680	0.0088	750	0.0015
410	0.0000	480	0.0058	550	0.0085	620	0.0151	690	0.0072	760	0.0011
420	0.0001	490	0.0047	560	0.0094	630	0.0151	700	0.0058	770	0.0009
430	0.0003	500	0.0049	570	0.0103	640	0.0146	710	0.0045	780	0.0007

CRI & CCT

x	0.4522
y	0.4026
u'	0.2611
v'	0.5231
CRI	91.70
CCT	2746
Duv	-0.00233

R Values

R1	95.84
R2	97.43
R3	92.91
R4	89.67
R5	94.84
R6	93.49
R7	87.62
R8	82.03
R9	68.25
R10	96.34
R11	90.27
R12	80.42
R13	98.26
R14	97.16





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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 : Keyur Patel

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 : L031410405.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L031410405
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 04/14/2014
[MANUFAC] EDGE LIGHTING
[LUMCAT] BV12-1RE-36IN-27K-SA
[LUMINAIRE] 1-1/2"L. X 36-1/2"W. X 1-1/4"H. LED FIXTURE
[MORE] DIFFUSED LENS
[BALLASTCAT] L.T.F ELECTRONIC TRANSFORMER TA60WA12LED-0005
[BALLAST] INPUT: 120VAC, 0.5A, 60HZ OUPUT: 12VAC, 60W Max.
[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, 23.07W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	811
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	35
Total Luminaire Watts	23.07
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.32
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.09 ft
Luminous Width (90-270)	3.02 ft
Luminous Height	0.00 ft

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031410405.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10150	10434	10718
55	9357	9684	10017
65	8416	8806	9171
75	7173	7520	7841
85	5756	5602	5143

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031410405.IES

CANDELA TABULATION

	0	5	10	15	20	25	30	35	40	45
0	315.15	315.15	315.15	315.15	315.15	315.15	315.15	315.15	315.15	315.15
5	312.52	313.11	312.98	313.23	313.15	313.40	313.36	313.23	313.02	313.48
10	306.64	306.22	306.64	306.68	307.19	306.85	307.23	307.23	307.10	307.52
15	296.65	295.56	296.36	296.07	296.99	296.40	297.66	297.20	297.70	297.53
20	282.38	282.22	282.43	282.64	282.59	283.60	283.43	283.73	284.61	284.78
25	265.59	265.26	266.39	265.72	266.77	266.48	267.48	267.44	268.32	268.74
30	246.20	247.09	246.58	247.34	247.04	248.43	248.30	248.85	250.02	250.40
35	225.64	226.23	226.35	226.65	226.81	227.48	228.45	229.00	229.58	230.17
40	204.15	203.98	203.98	204.99	205.16	206.29	206.04	207.59	207.67	209.27
45	181.40	181.40	182.11	182.11	182.58	183.16	184.25	184.84	185.77	186.48
50	158.48	158.65	158.95	159.28	160.12	160.54	161.04	161.84	162.85	163.65
55	135.65	135.74	136.20	136.37	136.83	137.54	138.25	139.09	139.64	140.39
60	112.82	112.86	113.11	113.45	113.99	114.46	115.17	115.63	116.51	117.31
65	89.90	90.32	90.41	90.87	91.20	91.54	92.34	92.72	93.47	94.06
70	68.25	67.95	68.41	68.37	68.92	69.30	69.84	70.13	70.72	71.10
75	46.92	47.09	47.05	47.43	47.51	47.85	48.06	48.48	48.81	49.19
80	28.04	27.91	28.04	28.00	28.21	28.29	28.46	28.58	28.71	28.88
85	12.68	12.72	12.68	12.68	12.76	12.63	12.63	12.55	12.47	12.34
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles **Horizontal Angles**

	50	55	60	65	70	75	80	85	90
0	315.15	315.15	315.15	315.15	315.15	315.15	315.15	315.15	315.15
5	313.74	313.48	313.57	312.90	314.28	313.61	314.37	313.15	314.20
10	307.65	307.78	308.28	308.11	308.53	308.20	308.74	308.32	309.16
15	298.37	298.42	298.88	299.42	298.88	299.76	299.09	300.10	299.00
20	285.24	285.45	286.12	285.87	286.96	286.96	287.59	286.75	287.76
25	269.25	269.92	270.30	270.76	271.51	271.60	271.51	272.14	272.48
30	251.03	251.45	252.75	252.63	253.76	253.67	254.51	254.26	253.93
35	230.93	232.31	232.56	233.15	233.57	234.16	234.83	234.24	234.62
40	209.40	210.65	210.99	211.79	212.33	213.34	213.13	213.63	213.47
45	187.32	187.82	189.04	189.79	190.00	190.89	191.10	191.64	191.56
50	164.40	165.33	166.08	166.79	167.34	167.80	168.14	168.64	168.89
55	141.53	142.24	142.70	143.58	144.05	144.84	144.63	145.43	145.22
60	117.94	118.74	119.41	120.16	120.54	121.17	121.09	121.89	121.55
65	94.94	95.36	95.95	96.28	97.16	97.21	97.84	97.71	97.96
70	71.86	72.19	72.69	73.16	73.53	73.91	73.91	74.29	74.21
75	49.44	49.78	50.07	50.37	50.62	50.62	51.08	51.04	51.29
80	28.92	29.04	29.04	29.21	29.17	29.30	29.30	29.46	29.46
85	12.17	12.05	11.84	11.67	11.58	11.42	11.37	11.37	11.33
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	113.67	N.A.	14.00
0-30	237.44	N.A.	29.30
0-40	381.52	N.A.	47.00
0-60	651.18	N.A.	80.30
0-80	796.67	N.A.	98.20
0-90	811.11	N.A.	100.00
10-90	781.38	N.A.	96.30
20-40	267.86	N.A.	33.00
20-50	411.80	N.A.	50.80
40-70	362.88	N.A.	44.70
60-80	145.49	N.A.	17.90
70-80	52.26	N.A.	6.40
80-90	14.44	N.A.	1.80
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	811.11	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	29.73
10-20	83.94
20-30	123.78
30-40	144.08
40-50	143.94
50-60	125.72
60-70	93.22
70-80	52.26
80-90	14.44
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

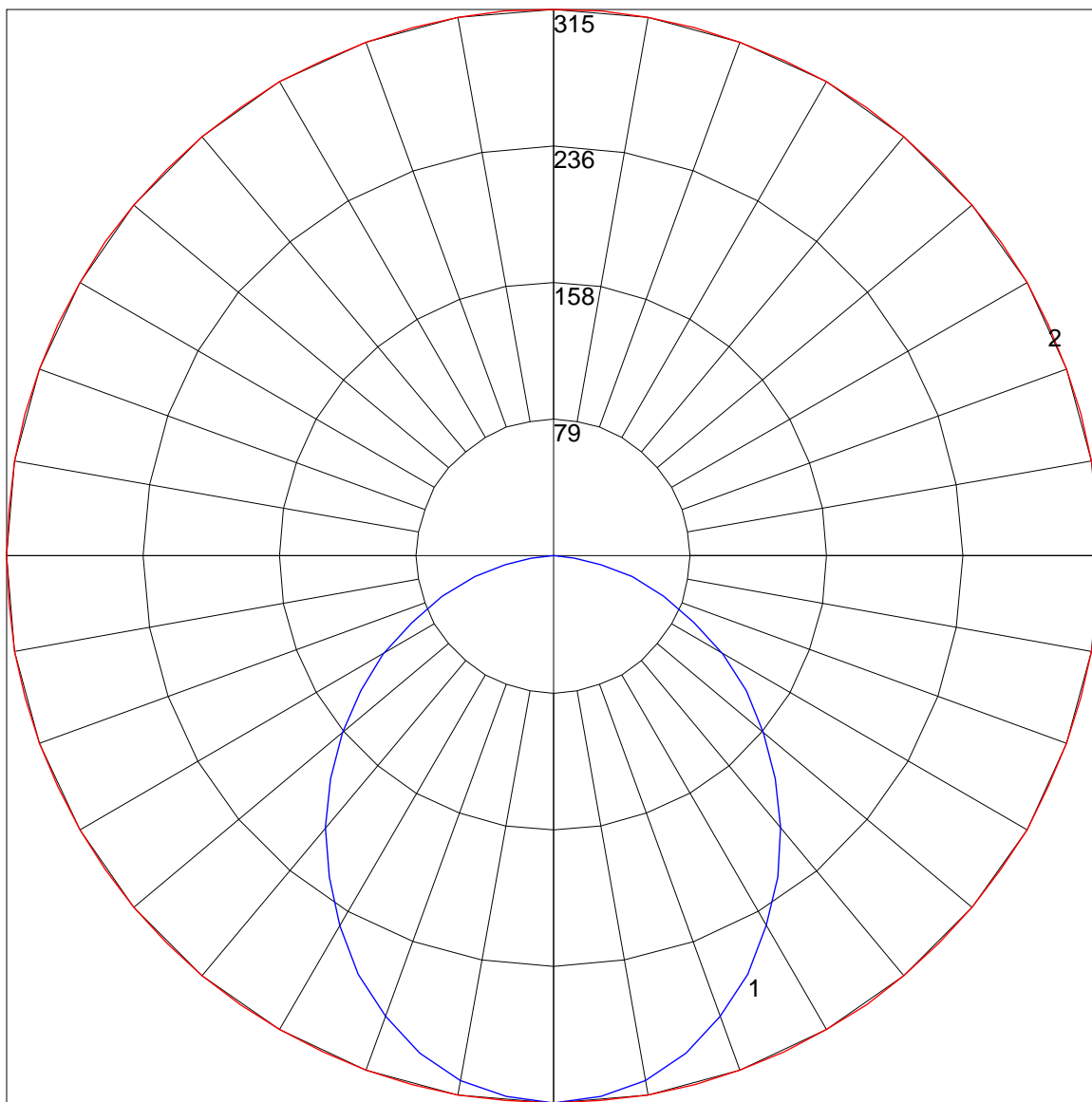
IES INDOOR REPORT
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	99	91	85	79	97	89	83	78	86	81	76	83	78	74	79	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25

POLAR GRAPH



Maximum Candela = 315.15 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)