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

NVLAP TESTING
NVLAP LAB CODE 200927-0

Report No: L121706464 **Issue Date: 1/22/2018**

Report Prepared For: Number Eight Lighting Company
526 Portal Street, Cotati, CA 94931

Model Number: 804/M2-R-HI-25/WH/DIM1-8-1400 with FR-P-1-WH trim

Test: Photometric/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: 1/2/18

Date of Tests: 1/18/18 - 1/22/18

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.

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

NVLAP TESTING
NVLAP LAB CODE 200927-0

Test Summary	
Manufacturer:	Number Eight Lighting Company
Model Number:	804/M2-R-HI-25/WH/DIM1-8-1400 with FR-P-1-WH trim
Driver Model Number:	IntuitiveSystems ISD-701-1400-20-D
Total Lumens:	755.19
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.17
Input Power (W):	20.69
Input Power Factor:	0.99
Current ATHD @ 120V(%):	6%
Current ATHD @ 277V(%):	N/A
Efficacy:	37
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:15

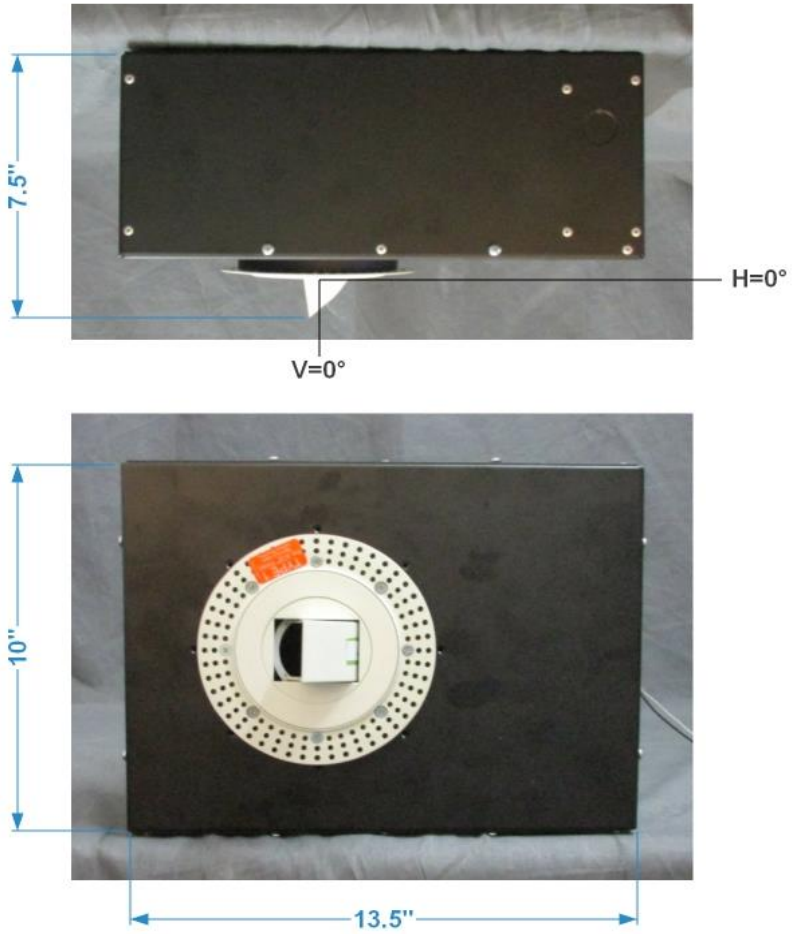


FIG. 1 LUMINAIRE

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

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

NVLAP TESTING
NVLAP LAB CODE 200927-0

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.

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

Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706464.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L121706464
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 1/22/2018
[MANUFAC] Number Eight Lighting Company
[LUMCAT] 804/M2-R-HI-25/WH/DIM1-8-1400 with FR-P-1-WH trim
[LUMINAIRE] LED Recessed Downlight, 25° Beam Spread, 45° Aiming Angle,
[MORE] Mirror Lens Accessory
[BALLASTCAT] IntuitiveSystems ISD-701-1400-20-D
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 20.69W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	755
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	37
Total Luminaire Watts	20.69
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.52
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.06 ft
Luminous Width (90-270)	0.15 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	11829	28727
55	0	9374	28123
65	0	8482	25446
75	0	13850	18466
85	0	0	27419

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706464.IES

CANDELA TABULATION

	0	5	10	15	20	25	30	35	40	45
0.0	72	72	72	72	72	72	72	72	72	72
5.0	85	85	85	84	84	83	83	82	81	80
10.0	91	91	92	92	92	92	92	92	91	90
15.0	33	33	35	38	43	52	64	74	80	83
20.0	23	23	22	22	22	23	23	24	27	35
22.5	17	17	17	18	18	20	20	21	21	23
25.0	9	9	10	10	12	14	17	18	18	19
27.5	8	8	8	8	9	10	13	15	16	16
30.0	7	7	7	7	8	8	10	12	14	14
32.0	7	6	6	6	7	7	9	11	12	13
34.0	7	7	6	6	6	7	8	10	10	11
36.0	4	4	5	6	6	7	7	8	9	10
38.0	0	0	0	3	4	5	7	7	8	9
40.0	0	0	0	0	3	3	5	7	8	8
41.0	0	0	0	0	3	3	4	6	7	8
42.0	0	0	0	0	3	3	4	5	7	8
43.0	0	0	0	0	3	3	4	4	6	8
44.0	0	0	0	0	0	3	3	4	6	7
45.0	0	0	0	0	0	3	3	4	5	7
46.0	0	0	0	0	0	3	3	4	5	6
47.0	0	0	0	0	0	3	3	4	5	6
48.0	0	0	0	0	0	3	3	4	4	5
49.0	0	0	0	0	0	0	3	4	4	5
50.0	0	0	0	0	0	0	3	3	4	5
52.0	0	0	0	0	0	0	3	3	4	5
54.0	0	0	0	0	0	0	3	3	4	5
56.0	0	0	0	0	0	0	0	3	4	4
58.0	0	0	0	0	0	0	0	3	3	4
60.0	0	0	0	0	0	0	0	3	3	4
62.5	0	0	0	0	0	0	0	3	3	4
65.0	0	0	0	0	0	0	0	3	3	3
67.5	0	0	0	0	0	0	0	0	3	3
70.0	0	0	0	0	0	0	0	0	3	3
75.0	0	0	0	0	0	0	0	0	3	3
80.0	0	0	0	0	0	0	0	0	0	3
85.0	0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	50	55	60	65	70	75	80	85	90	95
0.0	72	72	72	72	72	72	72	72	72	72
5.0	80	79	77	76	76	75	74	73	72	71
10.0	88	86	83	80	77	75	73	71	69	67
15.0	84	82	80	77	74	71	68	66	64	61
20.0	51	66	71	69	67	64	61	59	57	55
22.5	30	46	60	64	62	59	57	55	53	52
25.0	22	30	45	55	55	53	51	50	48	48
27.5	18	23	32	42	47	46	44	43	43	43
30.0	15	18	24	31	37	37	36	36	36	37
32.0	14	15	19	24	29	30	30	30	31	33
34.0	12	14	16	19	22	24	25	25	27	29
36.0	11	12	14	15	18	20	21	22	23	26
38.0	10	11	12	13	15	17	18	19	21	24

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706464.IES

CANDELA TABULATION - (Cont.)

40.0	9	10	11	12	13	14	15	17	20	22
41.0	9	10	11	11	12	13	15	17	19	22
42.0	9	10	10	11	11	12	14	16	19	21
43.0	8	9	10	10	11	12	13	15	18	21
44.0	8	9	9	10	10	11	13	15	17	21
45.0	8	8	9	9	10	10	12	14	17	20
46.0	8	8	9	9	9	10	11	14	16	20
47.0	7	8	8	9	9	9	10	13	16	20
48.0	7	8	8	8	8	9	10	13	16	20
49.0	6	7	8	8	8	8	10	12	15	19
50.0	6	7	7	8	8	8	9	12	15	19
52.0	5	6	7	7	7	8	8	11	14	18
54.0	5	6	6	7	7	7	8	10	14	18
56.0	5	6	6	6	6	7	7	10	13	17
58.0	5	5	6	6	6	6	7	9	12	16
60.0	5	5	5	6	6	6	6	8	12	16
62.5	4	5	5	5	5	5	6	7	10	14
65.0	4	4	5	5	5	5	5	6	9	12
67.5	4	4	5	5	5	4	4	5	8	11
70.0	3	4	4	4	4	4	3	4	6	10
75.0	3	3	4	4	4	3	3	3	4	8
80.0	3	3	3	3	3	3	2	2	3	6
85.0	0	0	0	0	0	0	1	1	2	4
90.0	0	0	0	0	0	0	0	0	0	2

Vert. Angles	**Horizontal Angles**									
	100	**105**	**110**	**115**	**120**	**125**	**130**	**135**	**140**	**145**
0.0	72	72	72	72	72	72	72	72	72	72
5.0	70	69	68	66	65	64	63	62	62	61
10.0	65	63	62	60	59	58	57	56	55	55
15.0	59	58	56	55	54	52	51	50	49	48
20.0	54	53	52	50	49	47	46	46	45	46
22.5	51	50	49	48	47	46	45	45	45	49
25.0	47	47	47	46	45	44	44	44	48	60
27.5	43	44	44	44	43	43	43	46	55	78
30.0	39	40	42	42	42	43	43	48	63	97
32.0	35	37	39	41	42	43	44	50	69	112
34.0	31	34	37	39	41	43	45	51	75	135
36.0	29	32	35	38	40	43	45	51	81	164
38.0	27	31	34	37	40	43	45	53	86	171
40.0	26	30	33	36	40	43	46	56	91	187
41.0	25	29	33	36	40	43	47	56	86	175
42.0	25	29	33	36	40	43	48	56	82	183
43.0	25	29	32	35	39	44	49	59	87	175
44.0	24	29	32	36	40	44	50	58	83	167
45.0	24	29	32	36	40	45	51	59	82	164
46.0	24	28	32	36	40	45	51	57	78	154
47.0	24	28	32	36	40	46	51	56	77	148
48.0	24	28	32	36	40	46	51	57	74	148
49.0	24	28	32	36	40	46	51	57	74	136
50.0	23	28	32	36	41	46	51	56	70	121
52.0	23	27	31	35	40	46	51	55	66	112
54.0	22	27	31	35	40	45	50	54	62	100
56.0	21	26	30	35	38	43	48	52	59	83
58.0	21	25	30	34	38	42	47	51	56	74

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706464.IES

CANDELA TABULATION - (Cont.)

60.0	20	24	29	32	36	40	45	49	52	65
62.5	18	23	27	31	34	39	43	46	48	54
65.0	17	21	26	29	32	37	41	44	44	46
67.5	15	20	24	27	30	34	38	41	41	42
70.0	14	18	22	26	29	33	36	38	39	39
75.0	11	15	19	23	26	29	33	34	35	35
80.0	9	13	17	20	23	26	29	31	31	31
85.0	7	10	14	17	20	23	25	27	27	27
90.0	5	8	11	13	16	19	21	22	23	23

Vert. Angles	**Horizontal Angles**						
	150	**155**	**160**	**165**	**170**	**175**	**180**
0.0	72	72	72	72	72	72	72
5.0	61	60	60	60	59	59	59
10.0	54	53	53	52	52	51	51
15.0	48	47	47	47	46	46	46
20.0	47	50	55	60	66	69	70
22.5	57	71	91	116	138	152	157
25.0	86	125	175	230	280	315	329
27.5	119	187	291	410	512	590	619
30.0	166	284	455	651	839	979	1031
32.0	201	363	612	953	1224	1411	1477
34.0	265	504	881	1237	1551	1773	1878
36.0	326	615	1016	1435	1819	2138	2276
38.0	348	764	1149	1677	2152	2559	2668
40.0	386	805	1269	1866	2401	2769	3150
41.0	373	833	1305	1903	2436	3122	3357
42.0	393	839	1342	1965	2518	3245	3511
43.0	378	844	1406	2064	2607	3381	3626
44.0	351	818	1388	2068	2573	3470	3752
45.0	361	805	1380	2026	2622	3486	3817
46.0	359	839	1335	2043	2564	3519	3801
47.0	337	810	1298	2002	2571	3441	3714
48.0	323	775	1254	1990	2539	3338	3598
49.0	300	733	1194	1907	2482	3176	3421
50.0	263	752	1129	1759	2438	2753	3231
52.0	235	666	1014	1534	2068	2546	2777
54.0	196	410	808	1289	1739	2156	2333
56.0	149	302	611	1094	1475	1806	1934
58.0	124	236	471	823	1139	1404	1518
60.0	100	172	316	554	770	973	1061
62.5	72	109	187	332	486	605	657
65.0	56	77	119	194	277	341	365
67.5	45	55	75	117	151	174	182
70.0	40	43	50	60	68	74	77
75.0	34	35	35	36	37	38	38
80.0	30	31	31	32	33	33	33
85.0	28	28	29	29	30	30	30
90.0	23	22	22	22	21	21	20

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706464.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	23.21	N.A.	3.10
0-30	59.64	N.A.	7.90
0-40	211.06	N.A.	27.90
0-60	674.89	N.A.	89.40
0-80	743.36	N.A.	98.40
0-90	755.19	N.A.	100.00
10-90	748.36	N.A.	99.10
20-40	187.85	N.A.	24.90
20-50	462.21	N.A.	61.20
40-70	515.66	N.A.	68.30
60-80	68.47	N.A.	9.10
70-80	16.64	N.A.	2.20
80-90	11.83	N.A.	1.60
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	755.19	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	6.84
10-20	16.37
20-30	36.43
30-40	151.42
40-50	274.35
50-60	189.48
60-70	51.83
70-80	16.64
80-90	11.83
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
PHOTOMETRIC FILENAME : L121706464.IES

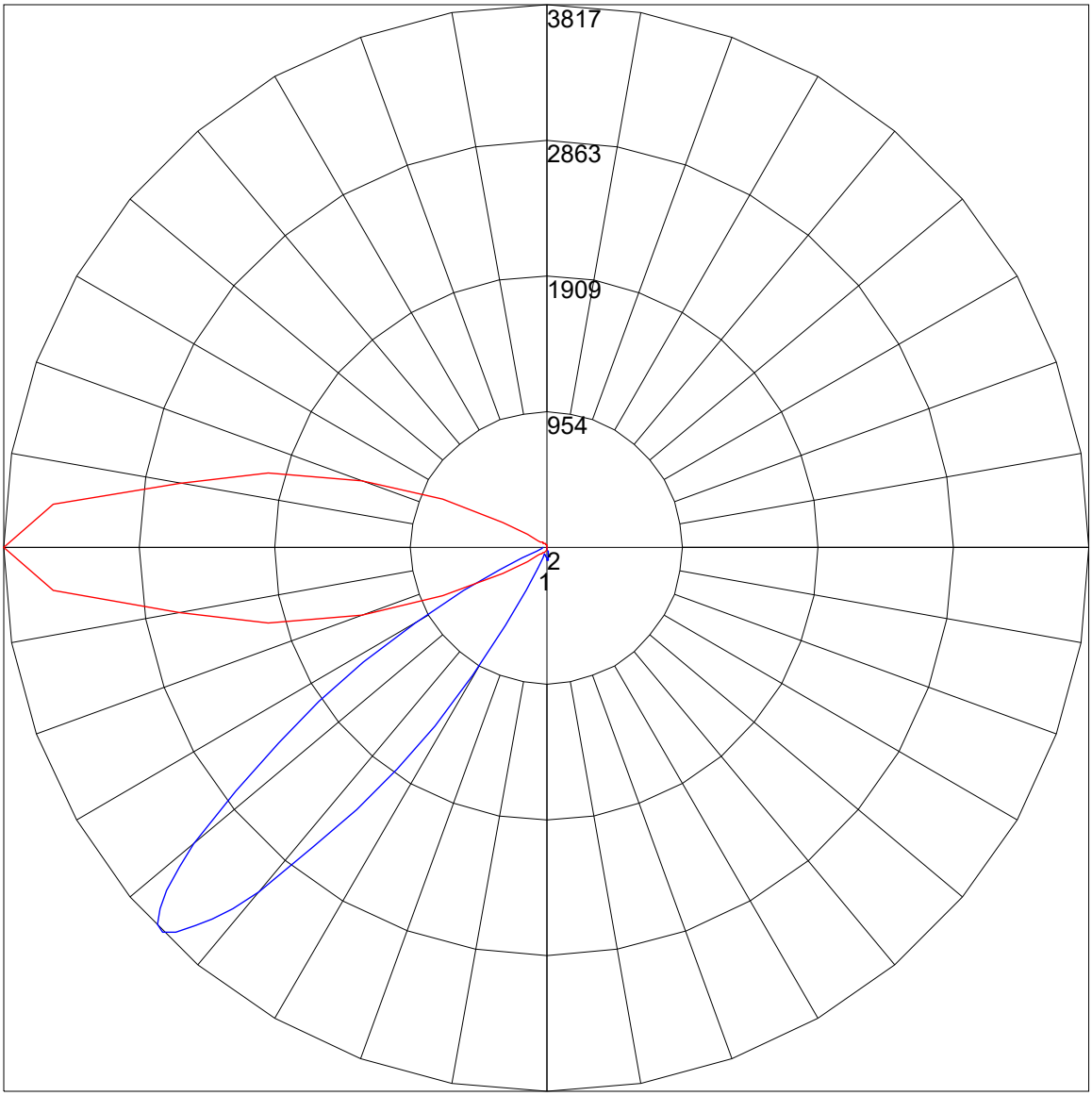
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	60	54	49	47
5	73	59	50	43	71	58	49	42	56	48	42	54	47	41	52	46	41	39
6	66	52	42	35	64	51	42	35	49	41	35	47	40	35	46	39	34	32
7	60	46	36	30	59	45	36	30	43	35	29	42	34	29	40	34	29	27
8	55	41	31	25	54	40	31	25	38	30	25	37	30	25	36	29	24	22
9	51	36	27	21	49	36	27	21	34	27	21	33	26	21	32	26	21	19
10	47	33	24	18	46	32	24	18	31	23	18	30	23	18	29	22	18	16

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L121706464.IES

POLAR GRAPH



Maximum Candela = 3817 Located At Horizontal Angle = 180, Vertical Angle = 45
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (45) (Through Max. Cd.)