



8165 E Kaiser Blvd. Anaheim, CA 92808  
p. 714.282.2270  
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Report No: L091501001

Date: 9/4/2015



NVLAP LAB CODE 200927-0

**Report No:** L091501001

**Report Prepared For:** HK Lighting Group  
3529 Old Conejo Road #118

**Model Number:** CMBL-150

**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 CMBL-150 . Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 8/31/15

**Date of Tests:** 9/2/15 - 9/2/15

**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

<b>Manufacturer:</b>	HK Lighting Group
<b>Model Number:</b>	CMBL-150
<b>Driver Model Number:</b>	HATCH LCB009-RL-UNI
<b>Total Lumens:</b>	177.60
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.14
<b>Input Power (W):</b>	7.77
<b>Input Power Factor:</b>	0.46
<b>Current ATHD @ 120V(%):</b>	178%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	23
<b>Color Rendering Index (CRI):</b>	85
<b>Correlated Color Temperature (K):</b>	2765
<b>Chromaticity Coordinate x:</b>	0.4527
<b>Chromaticity Coordinate y:</b>	0.4058
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:40
<b>Total Operating Time (Hours):</b>	2:00
<b>Off State Power(W):</b>	0.00

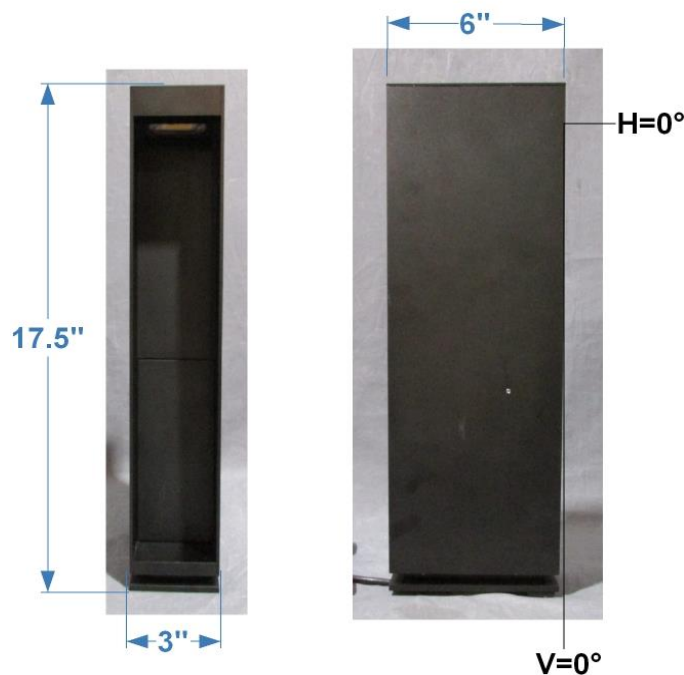
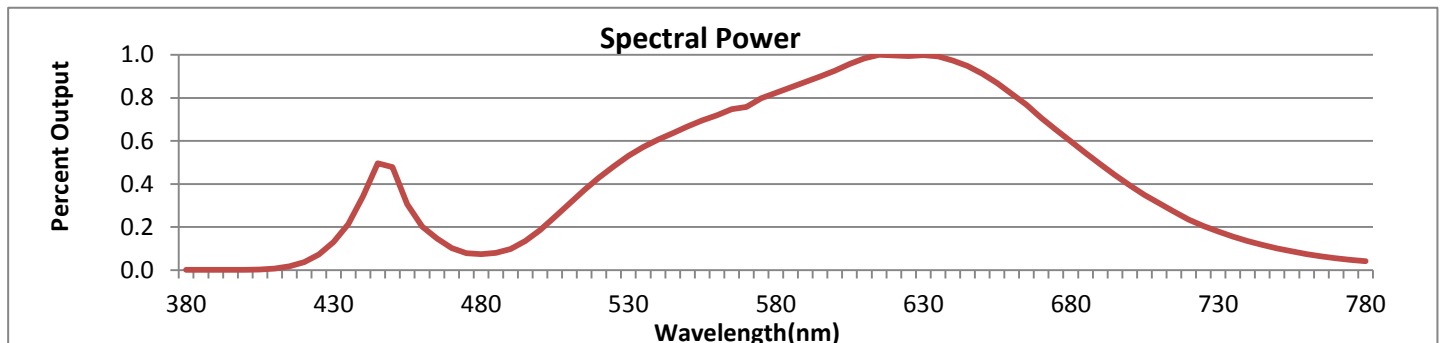


FIG. 1 LUMINAIRE



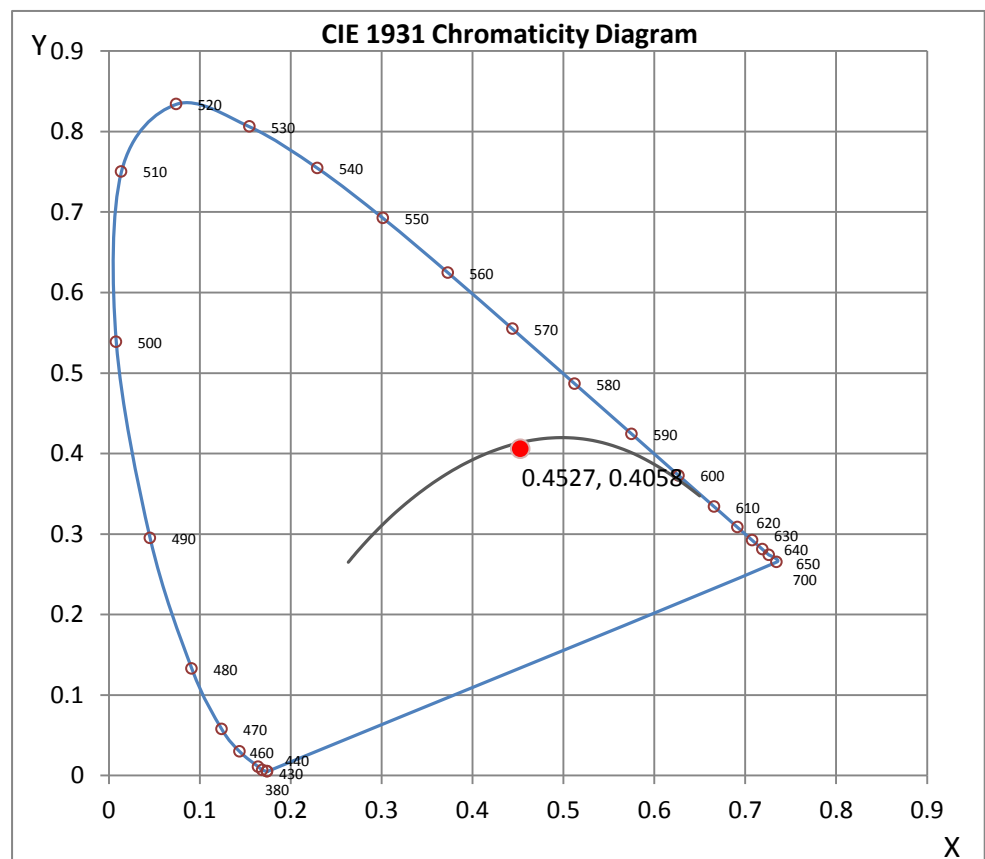
Wavelength	W/m <sup>2</sup> nm	440	0.3438	510	0.3096	580	0.8236	650	0.9124	720	0.2341
380	0.0009	450	0.4782	520	0.4297	590	0.8745	660	0.8193	730	0.1789
390	0.0010	460	0.2014	530	0.5299	600	0.9266	670	0.7076	740	0.1350
400	0.0019	470	0.1025	540	0.6069	610	0.9846	680	0.5982	750	0.1010
410	0.0074	480	0.0737	550	0.6666	620	0.9979	690	0.4924	760	0.0739
420	0.0365	490	0.0982	560	0.7196	630	0.9984	700	0.3942	770	0.0553
430	0.1306	500	0.1856	570	0.7586	640	0.9733	710	0.3101	780	0.0406

#### CRI & CCT

x	0.4527
y	0.4058
u'	0.2600
v'	0.5244
CRI	85.10
CCT	2765
Duv	-0.00115

#### R Values

R1	86.38
R2	88.21
R3	86.84
R4	85.62
R5	83.31
R6	81.64
R7	89.70
R8	79.27
R9	51.03
R10	69.99
R11	83.42
R12	61.44
R13	86.08
R14	91.38





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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 : JEFF AHN

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: 14*

*\*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 ROAD REPORT

PHOTOMETRIC FILENAME : L091501001.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L091501001  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUEDATE] 9/4/2015  
[MANUFAC] HK LIGHTING GROUP  
[LUMCAT] CMBL-150  
[LUMINAIRE] LED mini-bollard 6"L X 3"W X 17.5"H  
[BALLASTCAT] HATCH LCB009-RL-UNI  
[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, 7.77W  
[TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	178
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	23
Total Luminaire Watts	7.77
Ballast Factor	1.00
Upward Waste Light Ratio	0.01
Maximum Candela	153.95
Maximum Candela Angle	0H 25V
Maximum Candela (<90 Degrees Vertical)	153.95
Maximum Candela Angle (<90 Degrees Vertical)	0H 25V
Maximum Candela At 90 Degrees Vertical	5.04 (2.8% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	41.61 (23.4% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091501001.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	33.0	N.A.	18.6
FM - Front-Medium (30-60)	86.1	N.A.	48.5
FH - Front-High (60-80)	50.7	N.A.	28.6
FVH - Front-Very High (80-90)	6.0	N.A.	3.4
BL - Back-Low (0-30)	0.0	N.A.	0.0
BM - Back-Medium (30-60)	0.0	N.A.	0.0
BH - Back-High (60-80)	0.0	N.A.	0.0
BVH - Back-Very High (80-90)	0.0	N.A.	0.0
UL - Uplight-Low (90-100)	0.7	N.A.	0.4
UH - Uplight-High (100-180)	1.1	N.A.	0.6
Total	177.6	N.A.	100.0
BUG Rating	B0-U1-G0		

**ZONAL LUMEN SUMMARY**

Zone	%
0-20	7.6
0-30	18.6
0-40	32.9
0-60	67
0-80	95.6
0-90	99
10-90	98.1
20-40	25.3
20-50	41.9
40-70	50.8
60-80	28.6
70-80	11.9
80-90	3.4
90-110	0.5
90-120	0.7
90-130	0.7
90-150	0.9
90-180	1
110-180	0.5
0-180	100

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091501001.IES**

**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>0</b></u>	<u><b>5</b></u>	<u><b>10</b></u>	<u><b>15</b></u>	<u><b>20</b></u>	<u><b>25</b></u>	<u><b>30</b></u>	<u><b>35</b></u>	<u><b>40</b></u>	<u><b>45</b></u>
<b>0.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5.0</b>	40.93	35.02	21.74	9.07	3.65	2.45	1.97	1.56	1.24	1.00
<b>10.0</b>	142.81	142.97	143.75	144.87	145.60	145.91	145.60	144.45	131.44	105.17
<b>15.0</b>	149.37	149.45	150.24	150.64	150.64	149.96	148.89	147.42	135.94	105.05
<b>20.0</b>	152.73	152.85	153.07	152.92	152.04	150.47	148.59	146.74	136.28	103.03
<b>25.0</b>	153.95	153.94	153.78	153.11	151.80	149.86	147.69	145.24	135.29	101.89
<b>30.0</b>	153.07	152.80	152.34	151.41	150.03	148.25	145.91	143.39	133.71	102.26
<b>35.0</b>	150.39	150.17	149.59	148.45	146.94	145.04	142.73	140.15	132.22	99.97
<b>37.5</b>	148.66	148.45	147.81	146.70	145.28	143.15	140.91	138.13	130.27	97.34
<b>40.0</b>	146.82	146.55	145.80	144.63	143.29	141.24	138.69	136.14	128.02	97.54
<b>42.5</b>	144.89	144.51	143.75	142.54	141.10	138.99	136.60	133.93	125.65	95.56
<b>45.0</b>	142.98	142.59	141.61	140.49	138.82	136.85	134.12	131.15	123.01	95.37
<b>47.5</b>	140.81	140.45	139.59	138.38	136.82	134.48	131.74	128.52	121.40	93.03
<b>50.0</b>	138.20	137.89	137.06	135.90	134.43	132.08	129.20	125.92	118.46	90.92
<b>52.5</b>	135.14	134.95	134.07	133.08	131.69	129.31	126.46	122.93	115.30	90.02
<b>55.0</b>	131.64	131.25	130.45	129.54	128.24	125.97	123.05	119.43	111.93	87.12
<b>57.5</b>	127.57	127.26	126.46	125.43	123.98	122.00	118.97	115.32	108.83	85.54
<b>60.0</b>	123.69	123.37	122.51	121.32	119.79	117.55	114.57	110.97	104.66	82.68
<b>62.5</b>	119.52	119.19	118.26	117.22	115.54	113.17	109.92	106.46	100.07	80.32
<b>65.0</b>	115.03	114.78	114.03	112.93	111.26	108.65	105.35	101.35	94.98	77.18
<b>67.5</b>	110.07	109.84	109.09	107.95	106.27	103.89	100.29	96.13	80.54	72.19
<b>70.0</b>	104.57	104.15	103.38	102.21	100.60	97.92	94.43	90.26	77.32	66.84
<b>72.5</b>	95.27	94.98	94.45	93.70	92.53	90.21	86.79	83.02	73.65	59.64
<b>75.0</b>	79.41	79.27	79.00	78.66	78.00	76.86	74.92	71.12	66.53	52.95
<b>77.5</b>	58.08	58.03	58.09	58.31	58.43	58.38	57.79	56.33	52.95	42.88
<b>80.0</b>	38.62	38.79	39.35	40.13	41.01	41.61	41.57	40.77	38.82	31.57
<b>85.0</b>	13.89	13.99	14.26	14.71	15.28	16.01	16.71	17.25	17.29	14.91
<b>90.0</b>	3.80	3.86	3.96	4.11	4.35	4.59	4.86	5.04	5.04	4.59
<b>95.0</b>	1.05	1.05	1.05	1.07	1.07	1.07	1.02	0.93	0.85	0.73
<b>100.0</b>	0.61	0.63	0.66	0.66	0.68	0.70	0.70	0.66	0.59	0.56
<b>105.0</b>	0.31	0.31	0.32	0.34	0.32	0.34	0.37	0.41	0.43	0.48
<b>110.0</b>	0.17	0.19	0.22	0.24	0.27	0.32	0.34	0.37	0.39	0.44
<b>115.0</b>	0.17	0.19	0.20	0.22	0.26	0.31	0.32	0.36	0.37	0.41
<b>120.0</b>	0.17	0.17	0.19	0.22	0.27	0.29	0.32	0.34	0.37	0.41
<b>125.0</b>	0.17	0.17	0.19	0.20	0.26	0.29	0.31	0.34	0.37	0.39
<b>130.0</b>	0.17	0.17	0.17	0.20	0.24	0.27	0.32	0.34	0.34	0.39
<b>135.0</b>	0.14	0.17	0.17	0.20	0.24	0.27	0.31	0.32	0.34	0.37
<b>140.0</b>	0.14	0.17	0.17	0.20	0.24	0.27	0.29	0.34	0.36	0.36
<b>145.0</b>	0.17	0.17	0.17	0.19	0.24	0.27	0.31	0.34	0.36	0.39
<b>150.0</b>	0.17	0.17	0.19	0.22	0.27	0.27	0.32	0.34	0.37	0.39
<b>155.0</b>	0.17	0.19	0.22	0.24	0.27	0.32	0.36	0.37	0.39	0.41
<b>160.0</b>	0.20	0.22	0.26	0.29	0.34	0.37	0.39	0.41	0.44	0.46
<b>165.0</b>	0.27	0.29	0.31	0.36	0.41	0.44	0.46	0.51	0.53	0.54
<b>170.0</b>	0.34	0.34	0.39	0.41	0.44	0.49	0.54	0.58	0.59	0.63
<b>175.0</b>	0.27	0.27	0.29	0.31	0.32	0.36	0.39	0.43	0.49	0.58
<b>180.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>50</b></u>	<u><b>55</b></u>	<u><b>60</b></u>	<u><b>65</b></u>	<u><b>70</b></u>	<u><b>75</b></u>	<u><b>80</b></u>	<u><b>85</b></u>	<u><b>90</b></u>	<u><b>95</b></u>
<b>0.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5.0</b>	0.71	0.58	0.51	0.48	0.48	0.49	0.49	0.49	0.00	0.00
<b>10.0</b>	66.96	33.34	13.13	5.09	2.23	1.00	0.61	0.51	0.00	0.00

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091501001.IES**

**CANDELA TABULATION - (Cont.)**

15.0	74.87	37.50	15.57	14.21	10.56	4.67	1.41	0.58	0.00	0.00
20.0	73.19	36.26	15.10	12.96	11.41	7.12	2.67	0.82	0.00	0.00
25.0	72.21	34.25	14.77	10.48	9.63	6.40	3.06	0.99	0.00	0.00
30.0	70.78	30.14	13.23	8.36	7.74	5.38	2.62	1.02	0.00	0.00
35.0	69.01	28.65	12.06	6.67	6.22	4.50	2.23	0.97	0.00	0.00
37.5	67.96	28.48	11.89	6.05	5.69	4.09	2.06	0.88	0.00	0.00
40.0	68.89	28.02	11.70	5.50	5.16	3.63	1.92	0.88	0.00	0.00
42.5	65.63	27.54	11.58	5.03	4.70	3.35	1.83	0.88	0.00	0.00
45.0	64.31	25.00	11.58	4.62	4.28	3.13	1.72	0.85	0.00	0.00
47.5	62.71	24.96	11.48	4.25	3.94	2.90	1.56	0.82	0.00	0.00
50.0	62.78	24.39	11.33	3.92	3.67	2.72	1.48	0.80	0.00	0.00
52.5	59.10	23.93	11.31	3.65	3.41	2.46	1.41	0.78	0.00	0.00
55.0	57.19	23.25	11.11	3.36	3.13	2.31	1.33	0.76	0.00	0.00
57.5	54.92	20.65	10.85	3.11	2.92	2.21	1.26	0.75	0.00	0.00
60.0	52.69	20.57	10.68	2.89	2.73	2.09	1.19	0.71	0.00	0.00
62.5	51.95	19.83	10.50	2.70	2.55	1.92	1.16	0.73	0.00	0.00
65.0	47.31	18.70	11.51	2.48	2.34	1.80	1.12	0.71	0.00	0.00
67.5	43.91	16.06	10.87	2.31	2.17	1.70	1.05	0.70	0.00	0.00
70.0	40.42	15.45	4.48	2.12	2.00	1.60	1.02	0.68	0.00	0.00
72.5	37.55	14.03	2.41	1.94	1.85	1.49	0.97	0.66	0.00	0.00
75.0	31.60	12.46	2.24	1.80	1.72	1.38	0.95	0.66	0.00	0.00
77.5	25.76	9.41	2.11	1.65	1.58	1.27	0.90	0.66	0.00	0.00
80.0	19.94	8.02	1.78	1.49	1.43	1.19	0.87	0.63	0.00	0.00
85.0	9.99	4.50	1.41	1.24	1.21	1.04	0.78	0.65	0.00	0.00
90.0	3.33	1.83	1.04	1.00	1.00	0.88	0.71	0.61	0.00	0.00
95.0	0.70	0.73	0.78	0.82	0.83	0.75	0.66	0.59	0.00	0.00
100.0	0.58	0.61	0.65	0.68	0.70	0.66	0.61	0.58	0.00	0.00
105.0	0.51	0.53	0.58	0.59	0.61	0.59	0.58	0.56	0.00	0.00
110.0	0.46	0.48	0.51	0.54	0.56	0.56	0.58	0.56	0.00	0.00
115.0	0.43	0.46	0.49	0.51	0.54	0.54	0.54	0.56	0.00	0.00
120.0	0.43	0.44	0.46	0.49	0.53	0.54	0.54	0.54	0.00	0.00
125.0	0.39	0.43	0.46	0.49	0.51	0.53	0.54	0.58	0.00	0.00
130.0	0.39	0.41	0.44	0.48	0.49	0.51	0.54	0.59	0.00	0.00
135.0	0.39	0.43	0.44	0.48	0.49	0.53	0.56	0.63	0.00	0.00
140.0	0.39	0.43	0.44	0.46	0.49	0.53	0.59	0.66	0.00	0.00
145.0	0.41	0.43	0.44	0.48	0.51	0.56	0.63	0.71	0.00	0.00
150.0	0.41	0.44	0.46	0.49	0.54	0.61	0.68	0.80	0.00	0.00
155.0	0.43	0.46	0.48	0.54	0.61	0.68	0.78	0.87	0.00	0.00
160.0	0.48	0.53	0.54	0.61	0.70	0.82	0.90	0.95	0.00	0.00
165.0	0.56	0.61	0.66	0.75	0.85	0.95	0.99	1.04	0.00	0.00
170.0	0.66	0.75	0.83	0.93	1.00	1.04	1.07	1.09	0.00	0.00
175.0	0.66	0.76	0.87	0.93	0.97	1.02	1.05	1.07	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert. Horizontal Angles**

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091501001.IES**

**CANDELA TABULATION - (Cont.)**

<b>40.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>42.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>45.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>47.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>50.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>52.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>55.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>57.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>60.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>62.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>65.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>67.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>70.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>72.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>75.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>77.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>80.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>85.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>90.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>95.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>100.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>105.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>110.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>115.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>120.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>125.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>130.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>135.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>140.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>145.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>150.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>155.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>160.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>165.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>170.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>175.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>180.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert. Horizontal Angles**  
**Angles**

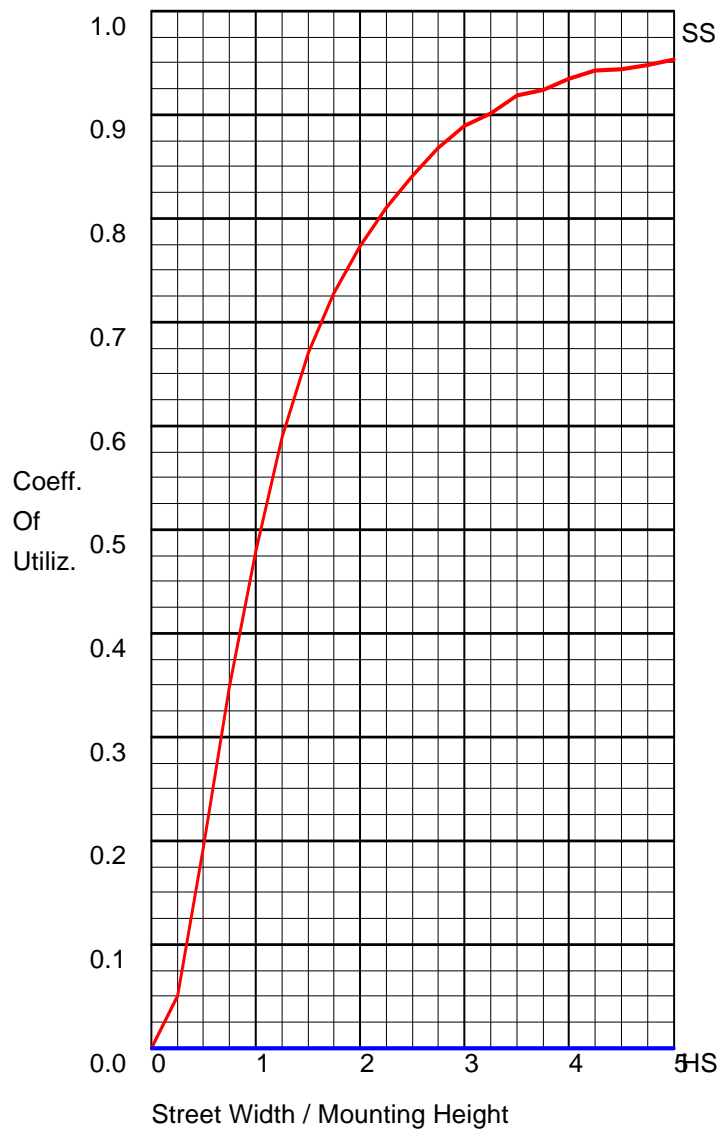
	<u><b>150</b></u>	<u><b>155</b></u>	<u><b>160</b></u>	<u><b>165</b></u>	<u><b>170</b></u>	<u><b>175</b></u>	<u><b>180</b></u>
<b>0.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>15.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>20.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>25.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>30.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>35.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>37.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>40.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>42.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>45.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>47.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>50.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>52.5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES ROAD REPORT  
PHOTOMETRIC FILENAME : L091501001.IES

CANDELA TABULATION - (Cont.)

55.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

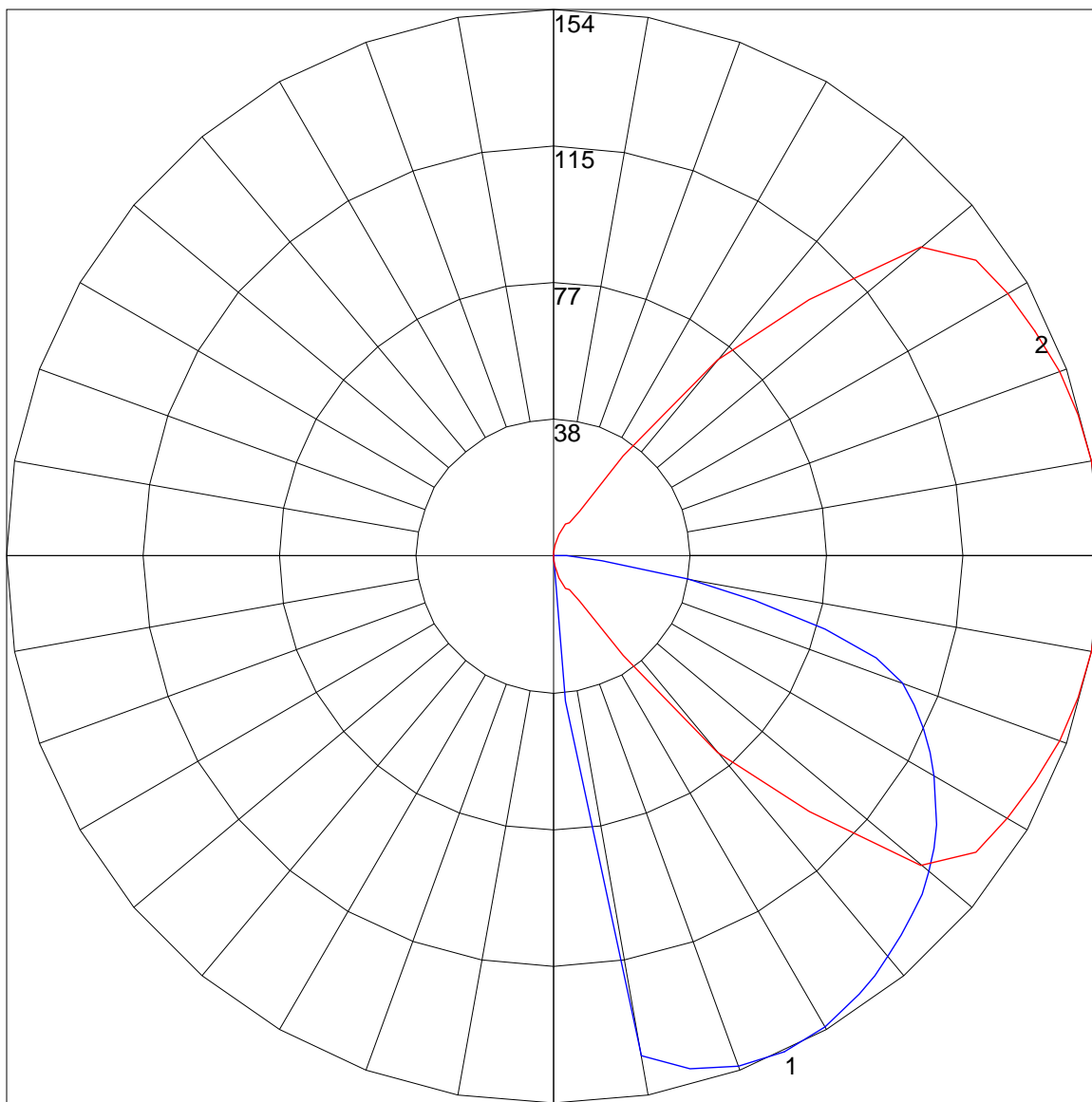
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

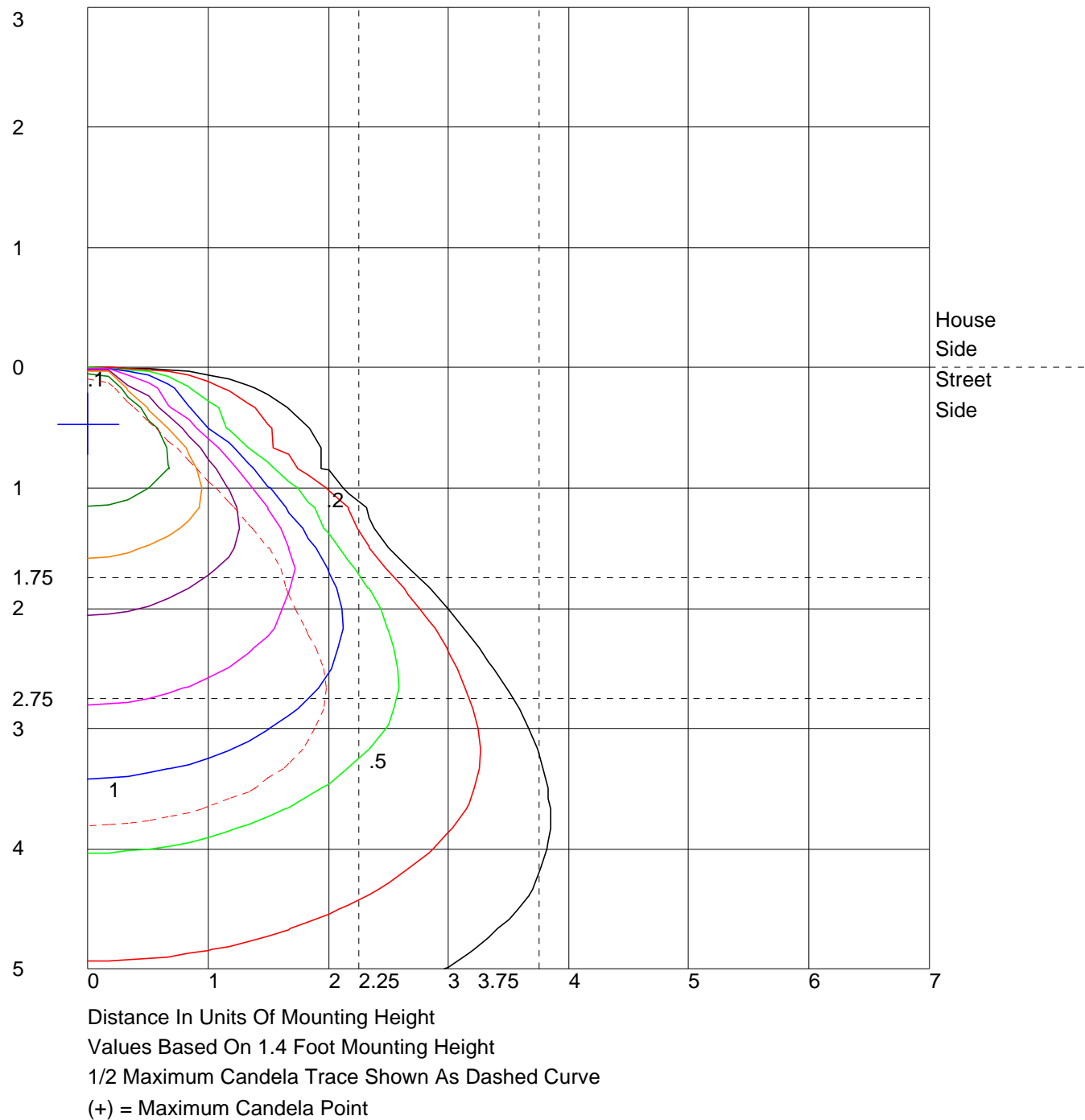
	Lumens	Percent Of Luminaire
Downward Street Side	175.8	99.0
Downward House Side	0.0	0.0
Downward Total	175.8	99.0
Upward Street Side	1.8	1.0
Upward House Side	0.0	0.0
Upward Total	1.8	1.0
Total Flux	177.6	100.0

POLAR GRAPH

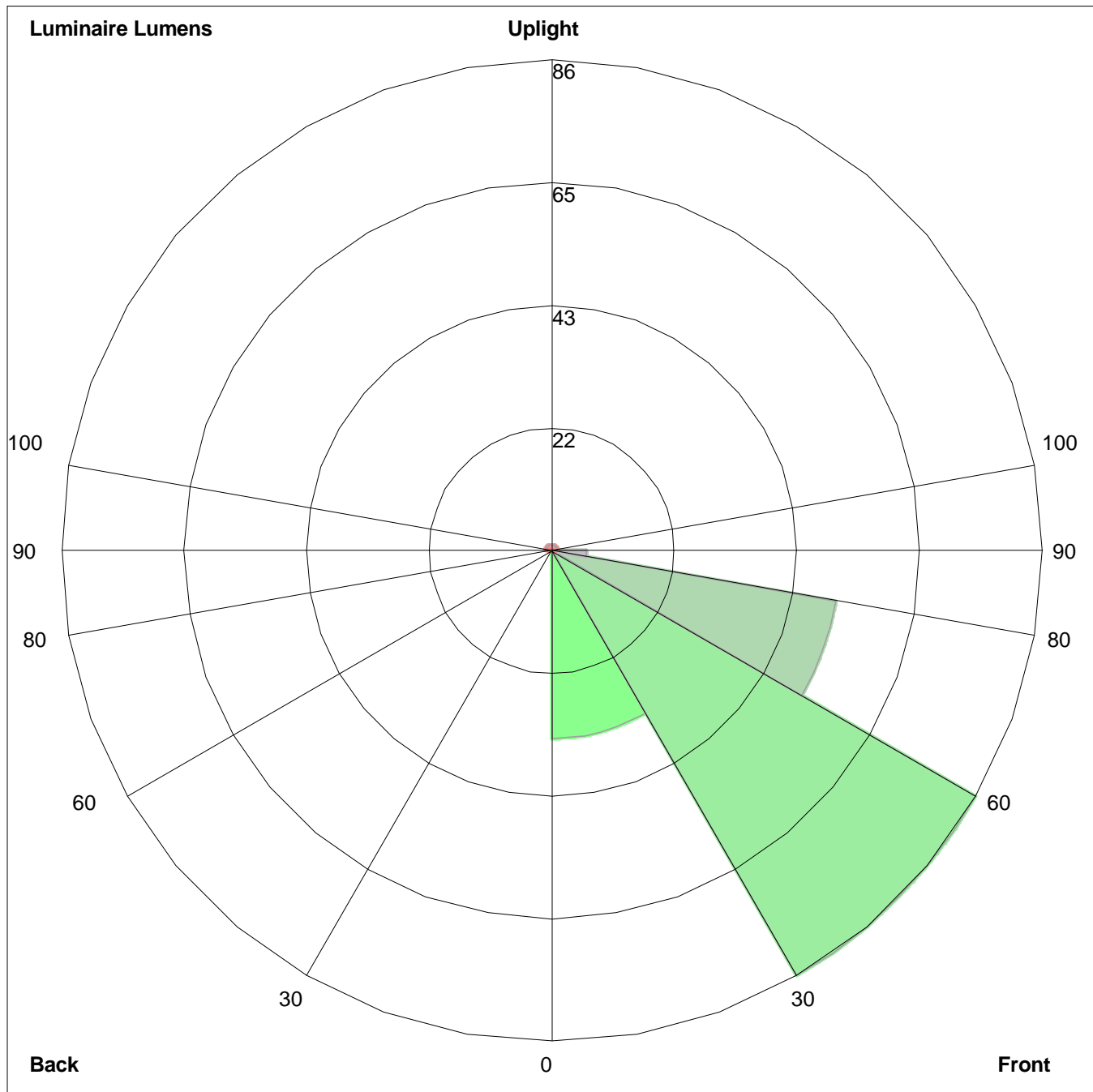


Maximum Candela = 153.95 Located At Horizontal Angle = 0, Vertical Angle = 25  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=33.0, Medium=86.1, High=50.7, Very High=6.0  
Back: Low=0.0, Medium=0.0, High=0.0, Very High=0.0  
Uplight: Low=0.7, High=1.1

BUG Rating : B0-U1-G0