



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

Report No: L052111301R01



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Issue Date: 6/2/2021

Report Prepared For: Hunter Industries
1940 Diamond Street, San Marcos, CA 92078

Model Number: VOZD1LEDRDSS

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.

Special Test Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 5/24/21

Date of Tests: 5/25/21 - 5/26/21

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	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
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

General Information

Manufacturer:	Hunter Industries
Model Number:	VOZD1LEDRDSS
Driver Model Number:	N/A

Test Summary

Total Lumens:	98.10
Efficacy:	31.96
Color Redering Index:	83.0
Correlated Color Temperature:	2669
Input Voltage (VAC/60Hz):	11.99
Input Current (Amp):	0.3939
Input Power (W):	3.07
Input Power Factor:	0.6493
Current ATHD (%):	74.4%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:55

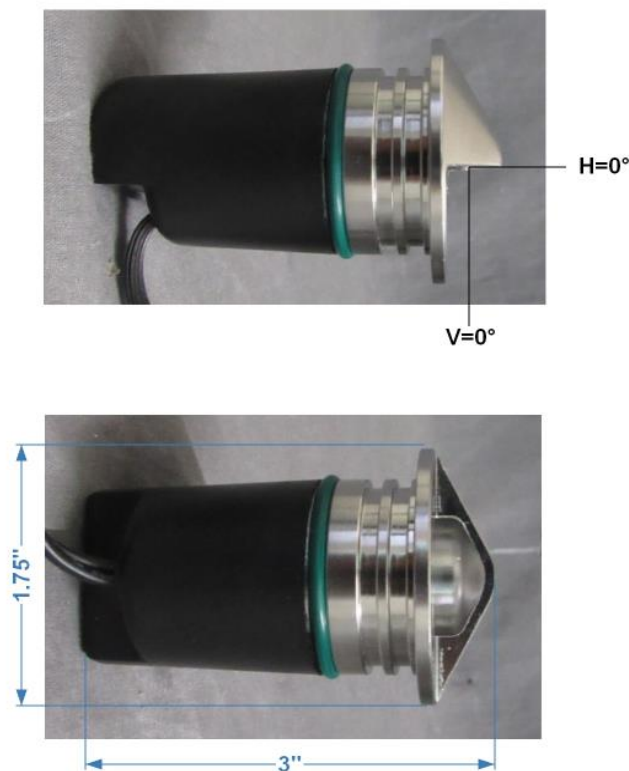
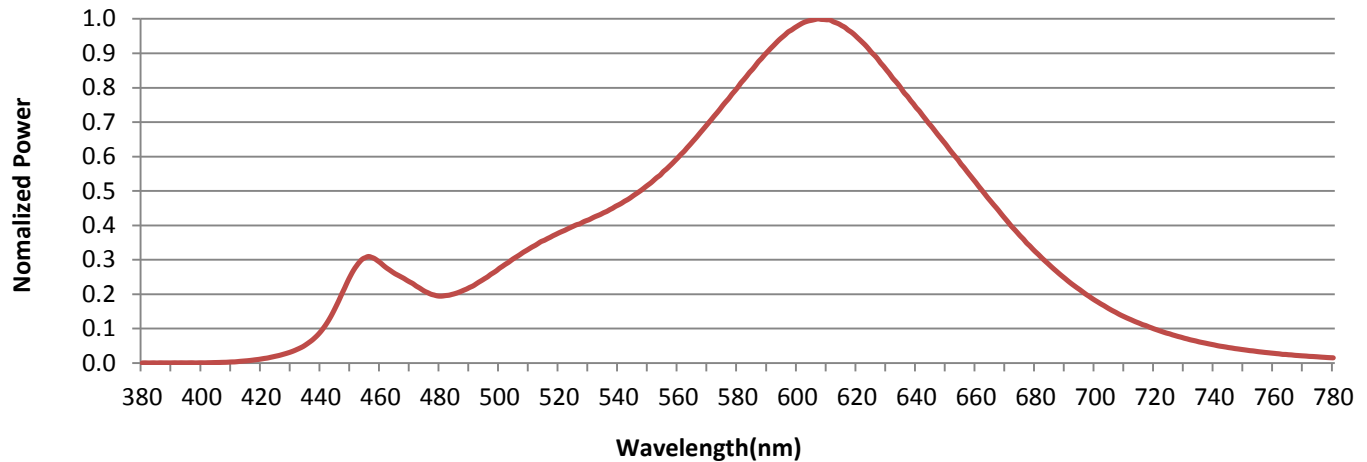


FIG. 1 LUMINAIRE

Colorimetry Test Results

Spectral Power Distribution



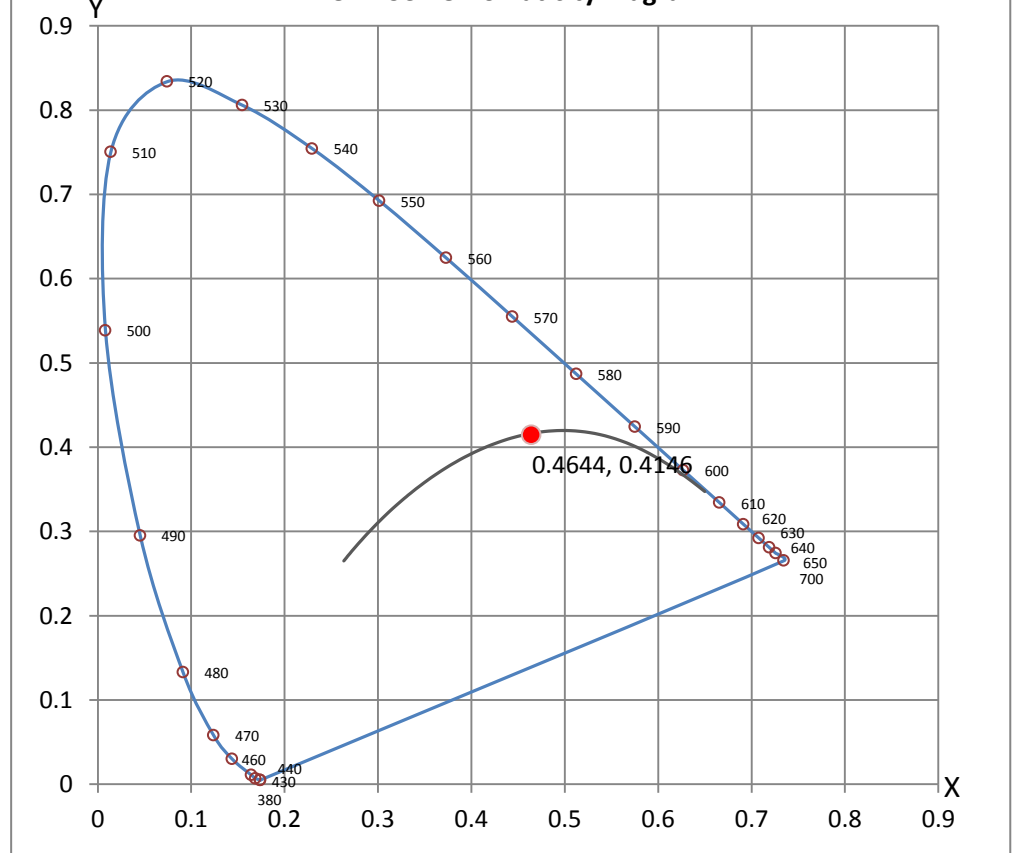
CRI & CCT

x	0.4644
y	0.4146
u'	0.2636
v'	0.5295
CRI	83.00
CCT	2669
Duv	0.00111

R Values

R1	81.80
R2	93.10
R3	93.82
R4	80.46
R5	82.73
R6	93.80
R7	80.81
R8	57.37
R9	10.25
R10	85.15
R11	80.24
R12	78.18
R13	84.49
R14	97.27
R15	73.44

CIE 1931 Chromaticity Diagram





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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 Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 16*



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Photometric Test Report

IES ROAD REPORT

PHOTOMETRIC FILENAME : L052111301R01.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L052111301R01
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 6/2/2021
[MANUFAC] Hunter Industries
[LUMCAT] VOZD1LEDRDSS
[LUMINAIRE] VO, 1LED, Round, Stainless Steel
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 11.99VAC, 3.07W
[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	99
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	32
Total Luminaire Watts	3.07
Ballast Factor	1.00
Upward Waste Light Ratio	0.11
Maximum Candela	300.17
Maximum Candela Angle	0H 80V
Maximum Candela (<90 Degrees Vertical)	300.17
Maximum Candela Angle (<90 Degrees Vertical)	0H 80V
Maximum Candela At 90 Degrees Vertical	104.84 (105.9% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	300.17 (303.2% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	2.7	N.A.	2.7
FM - Front-Medium (30-60)	11.5	N.A.	11.6
FH - Front-High (60-80)	45.1	N.A.	45.6
FVH - Front-Very High (80-90)	25.2	N.A.	25.5
BL - Back-Low (0-30)	1.3	N.A.	1.3
BM - Back-Medium (30-60)	1.4	N.A.	1.4
BH - Back-High (60-80)	0.8	N.A.	0.8
BVH - Back-Very High (80-90)	0.3	N.A.	0.3
UL - Uplight-Low (90-100)	7.0	N.A.	7.1
UH - Uplight-High (100-180)	3.6	N.A.	3.7
Total	98.9	N.A.	100.0
BUG Rating	B0-U1-G1		

ZONAL LUMEN SUMMARY

Zone	%
0-20	0
0-30	0
0-40	0
0-60	0
0-80	1.2
0-90	3.6
10-90	3.6
20-40	0
20-50	0
40-70	0.2
60-80	1.2
70-80	0.9
80-90	2.5
90-110	6.1
90-120	9.3
90-130	13.1
90-150	28.8
90-180	96.4
110-180	90.3
0-180	100

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	10	15	20	25	30	35	40	45
0.0	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48
2.5	5.87	5.86	5.86	5.85	5.84	5.82	5.80	5.78	5.76	5.74
5.0	6.25	6.25	6.25	6.22	6.19	6.16	6.13	6.09	6.04	6.00
7.5	6.46	6.46	6.44	6.43	6.41	6.38	6.35	6.32	6.28	6.24
10.0	6.67	6.67	6.65	6.62	6.60	6.56	6.52	6.48	6.43	6.38
12.5	6.53	6.53	6.52	6.53	6.54	6.56	6.58	6.61	6.58	6.51
15.0	6.39	6.38	6.38	6.38	6.39	6.42	6.45	6.48	6.52	6.57
17.5	6.48	6.47	6.45	6.42	6.39	6.36	6.33	6.36	6.41	6.47
20.0	6.57	6.56	6.54	6.52	6.48	6.44	6.40	6.35	6.31	6.36
22.5	6.65	6.64	6.63	6.59	6.55	6.51	6.44	6.38	6.33	6.29
25.0	6.74	6.73	6.71	6.66	6.61	6.55	6.48	6.40	6.35	6.31
27.5	7.30	7.26	7.17	7.00	6.79	6.59	6.51	6.45	6.38	6.32
30.0	7.86	7.80	7.69	7.51	7.28	7.01	6.69	6.51	6.43	6.34
32.5	8.24	8.20	8.11	7.96	7.76	7.48	7.15	6.78	6.47	6.37
35.0	8.63	8.60	8.51	8.36	8.15	7.90	7.59	7.17	6.70	6.37
37.5	9.33	9.27	9.12	8.87	8.54	8.29	7.97	7.59	7.05	6.47
40.0	10.02	9.96	9.78	9.52	9.17	8.75	8.35	7.93	7.41	6.78
42.5	11.54	11.39	11.01	10.41	9.81	9.36	8.82	8.29	7.75	7.10
45.0	13.06	12.88	12.46	11.78	10.94	9.95	9.36	8.67	8.06	7.40
47.5	15.74	15.43	14.66	13.36	12.21	11.09	9.89	9.15	8.37	7.66
50.0	18.41	18.09	17.30	15.92	14.01	12.22	10.82	9.61	8.72	7.91
52.5	25.29	24.50	22.22	18.51	16.38	13.83	11.75	10.16	9.09	8.17
55.0	32.17	31.33	28.79	24.67	19.20	15.91	12.71	10.92	9.42	8.43
57.5	47.54	45.47	39.22	30.71	24.73	17.90	14.49	11.60	9.77	8.66
60.0	62.91	60.62	53.63	42.58	30.03	22.40	16.14	12.31	10.28	8.85
62.5	88.21	83.26	70.85	55.58	39.89	26.84	17.93	13.62	10.75	9.02
65.0	119.09	112.16	94.63	71.72	50.79	31.59	21.44	14.78	11.16	9.15
67.5	156.12	146.91	122.45	92.02	61.66	40.17	24.51	15.75	11.48	9.41
70.0	197.34	185.71	154.26	114.32	86.11	47.55	26.99	16.93	12.15	9.56
72.5	236.56	223.82	188.38	137.75	92.03	53.70	30.85	18.74	12.60	9.58
75.0	268.70	255.24	215.89	159.70	104.28	61.13	34.89	20.01	12.79	9.43
77.5	291.49	276.54	236.46	176.76	114.62	65.89	37.23	20.38	12.64	8.99
80.0	300.17	283.17	242.98	183.12	118.64	67.47	37.36	19.79	11.97	8.30
82.5	275.76	266.83	226.11	169.14	104.25	63.28	34.24	18.16	10.66	7.30
85.0	220.89	208.82	181.13	134.58	84.13	52.42	28.22	15.43	9.15	6.26
87.5	154.16	148.26	128.91	90.34	64.88	38.48	21.83	11.96	7.58	5.32
90.0	104.84	100.58	85.89	65.18	43.68	26.70	15.42	9.15	5.96	4.45
92.5	70.87	68.15	58.00	43.59	30.13	18.99	11.15	7.27	4.97	3.80
95.0	45.97	45.26	38.02	29.83	20.65	14.32	8.66	5.82	4.23	3.30
97.5	29.72	27.01	24.02	19.76	14.97	10.29	6.92	4.88	3.69	2.93
100.0	18.72	17.65	15.59	14.09	10.93	7.43	5.58	4.17	3.21	2.61
102.5	10.69	10.64	9.96	8.77	7.23	5.79	4.59	3.55	2.80	2.30
105.0	7.65	7.47	7.15	6.57	5.65	4.70	3.80	3.00	2.43	2.00
107.5	5.89	5.83	5.59	5.17	4.62	3.89	3.15	2.52	2.06	1.69
110.0	4.65	4.69	4.53	4.24	3.82	3.25	2.60	2.06	1.68	1.39
112.5	3.99	3.97	3.83	3.56	3.19	2.65	2.11	1.67	1.34	1.12
115.0	3.39	3.36	3.23	3.01	2.65	2.13	1.70	1.35	1.10	0.93
117.5	2.94	2.91	2.80	2.56	2.19	1.75	1.33	1.08	0.90	0.77
120.0	2.59	2.55	2.42	2.16	1.78	1.40	1.08	0.84	0.74	0.64
122.5	2.22	2.18	2.05	1.78	1.40	1.04	0.84	0.68	0.60	0.54
125.0	1.85	1.78	1.59	1.31	0.99	0.81	0.61	0.55	0.49	0.45
127.5	1.21	1.17	1.03	0.81	0.71	0.56	0.48	0.44	0.40	0.37
130.0	0.56	0.60	0.61	0.56	0.46	0.39	0.37	0.35	0.32	0.30

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

132.5	0.42	0.42	0.39	0.33	0.32	0.32	0.29	0.29	0.26	0.27
135.0	0.28	0.26	0.26	0.27	0.28	0.27	0.28	0.27	0.26	0.25
137.5	0.28	0.26	0.26	0.26	0.26	0.27	0.27	0.26	0.26	0.26
140.0	0.28	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
142.5	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
145.0	0.24	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
147.5	0.00	0.00	0.00	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	0.00	0.00	0.00
152.5	0.00	0.00	0.00	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	0.00	0.00	0.00
157.5	0.00	0.00	0.00	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	0.00	0.00	0.00
162.5	0.00	0.00	0.00	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	0.00	0.00	0.00
167.5	0.00	0.00	0.00	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	0.00	0.00	0.00
172.5	0.00	0.00	0.00	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	0.00	0.00	0.00
177.5	0.00	0.00	0.00	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	0.00	0.00	0.00

Vert. Angles **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>	<u>95</u>
0.0	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48
2.5	5.71	5.68	5.65	5.62	5.59	5.55	5.52	5.48	5.45	5.46
5.0	5.94	5.88	5.82	5.76	5.69	5.62	5.56	5.48	5.41	5.43
7.5	6.18	6.10	6.00	5.91	5.81	5.71	5.60	5.49	5.39	5.41
10.0	6.32	6.26	6.19	6.06	5.93	5.79	5.65	5.51	5.36	5.39
12.5	6.44	6.36	6.29	6.20	6.06	5.90	5.73	5.56	5.39	5.42
15.0	6.57	6.49	6.39	6.29	6.19	6.00	5.81	5.61	5.41	5.45
17.5	6.54	6.62	6.50	6.39	6.27	6.11	5.88	5.65	5.41	5.47
20.0	6.44	6.53	6.62	6.49	6.36	6.22	5.96	5.69	5.41	5.49
22.5	6.32	6.43	6.56	6.58	6.43	6.27	6.02	5.72	5.41	5.49
25.0	6.27	6.32	6.47	6.62	6.50	6.31	6.06	5.74	5.41	5.50
27.5	6.28	6.24	6.37	6.54	6.55	6.33	6.08	5.72	5.36	5.45
30.0	6.28	6.23	6.22	6.40	6.57	6.33	6.10	5.70	5.31	5.40
32.5	6.26	6.18	6.11	6.26	6.47	6.33	6.08	5.68	5.26	5.35
35.0	6.23	6.11	6.05	6.10	6.35	6.33	6.06	5.66	5.21	5.30
37.5	6.22	6.07	5.99	5.93	6.22	6.34	6.06	5.65	5.18	5.27
40.0	6.23	6.07	5.94	5.88	6.11	6.36	6.06	5.65	5.15	5.23
42.5	6.39	6.08	5.89	5.83	5.98	6.34	6.04	5.63	5.12	5.20
45.0	6.67	6.12	5.88	5.77	5.83	6.22	6.01	5.60	5.08	5.17
47.5	6.92	6.15	5.88	5.71	5.68	6.09	5.97	5.58	5.04	5.13
50.0	7.13	6.33	5.88	5.64	5.55	5.96	5.93	5.55	5.00	5.08
52.5	7.33	6.47	5.86	5.57	5.47	5.84	5.89	5.51	4.98	5.06
55.0	7.50	6.59	5.85	5.50	5.40	5.72	5.85	5.46	4.96	5.03
57.5	7.66	6.70	5.85	5.46	5.32	5.58	5.78	5.42	4.94	5.02
60.0	7.79	6.81	5.93	5.44	5.23	5.44	5.71	5.36	4.93	5.02
62.5	7.91	6.93	6.01	5.42	5.13	5.25	5.57	5.22	4.84	4.96
65.0	8.05	7.03	6.06	5.36	4.99	5.03	5.42	5.05	4.75	4.91
67.5	8.11	7.05	6.08	5.30	4.84	4.79	5.14	4.79	4.59	4.76
70.0	8.10	7.01	6.02	5.19	4.71	4.54	4.85	4.50	4.44	4.60
72.5	7.96	6.90	5.94	5.05	4.50	4.23	4.50	4.11	4.11	4.29
75.0	7.71	6.66	5.68	4.85	4.25	3.89	4.14	3.71	3.77	3.96
77.5	7.33	6.34	5.35	4.56	3.86	3.48	3.70	3.20	3.27	3.47

IES ROAD REPORT
PHOTOMETRIC FILENAME : L052111301R01.IES

CANDELA TABULATION - (Cont.)

80.0	6.72	5.69	4.81	4.16	3.39	3.05	3.24	2.68	2.76	2.97
82.5	5.96	4.99	4.22	3.59	2.87	2.55	2.57	2.15	2.18	2.22
85.0	4.96	4.26	3.57	2.90	2.34	2.04	1.85	1.61	1.61	1.45
87.5	4.16	3.58	2.99	2.38	1.79	1.54	1.33	1.09	1.08	0.96
90.0	3.55	2.92	2.43	1.89	1.24	1.03	0.80	0.58	0.56	0.47
92.5	3.12	2.51	2.04	1.59	1.06	0.85	0.65	0.47	0.42	0.38
95.0	2.73	2.16	1.69	1.31	0.90	0.68	0.51	0.37	0.28	0.28
97.5	2.39	1.93	1.51	1.12	0.80	0.61	0.46	0.34	0.28	0.28
100.0	2.14	1.72	1.33	0.97	0.71	0.55	0.42	0.32	0.28	0.28
102.5	1.90	1.52	1.15	0.86	0.65	0.50	0.39	0.31	0.28	0.28
105.0	1.66	1.31	1.00	0.76	0.59	0.45	0.36	0.30	0.28	0.28
107.5	1.39	1.11	0.85	0.66	0.52	0.42	0.34	0.30	0.28	0.28
110.0	1.13	0.92	0.73	0.58	0.46	0.38	0.33	0.30	0.28	0.28
112.5	0.94	0.78	0.63	0.50	0.42	0.35	0.31	0.29	0.29	0.28
115.0	0.78	0.66	0.55	0.45	0.37	0.33	0.29	0.28	0.30	0.28
117.5	0.65	0.56	0.47	0.39	0.34	0.31	0.29	0.29	0.30	0.29
120.0	0.55	0.46	0.39	0.35	0.31	0.29	0.28	0.30	0.30	0.30
122.5	0.48	0.41	0.34	0.31	0.29	0.28	0.28	0.29	0.29	0.30
125.0	0.40	0.35	0.30	0.29	0.28	0.28	0.28	0.28	0.28	0.29
127.5	0.33	0.31	0.28	0.28	0.28	0.28	0.28	0.29	0.28	0.29
130.0	0.29	0.27	0.27	0.27	0.27	0.28	0.29	0.29	0.28	0.29
132.5	0.26	0.26	0.26	0.26	0.27	0.28	0.29	0.30	0.29	0.30
135.0	0.26	0.26	0.26	0.26	0.27	0.28	0.29	0.30	0.30	0.30
137.5	0.26	0.26	0.26	0.26	0.27	0.28	0.29	0.30	0.30	0.30
140.0	0.26	0.26	0.27	0.27	0.27	0.28	0.29	0.30	0.30	0.30
142.5	0.26	0.26	0.27	0.28	0.28	0.28	0.29	0.30	0.30	0.30
145.0	0.26	0.27	0.27	0.28	0.28	0.29	0.30	0.30	0.30	0.30
147.5	0.00	0.00	0.00	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	0.00	0.00	0.00
152.5	0.00	0.00	0.00	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	0.00	0.00	0.00
157.5	0.00	0.00	0.00	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	0.00	0.00	0.00
162.5	0.00	0.00	0.00	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	0.00	0.00	0.00
167.5	0.00	0.00	0.00	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	0.00	0.00	0.00
172.5	0.00	0.00	0.00	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	0.00	0.00	0.00
177.5	0.00	0.00	0.00	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	0.00	0.00	0.00

Vert. Angles **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	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48
2.5	5.46	5.47	5.47	5.48	5.49	5.49	5.50	5.50	5.51	5.51
5.0	5.44	5.46	5.47	5.49	5.50	5.51	5.52	5.54	5.55	5.55
7.5	5.43	5.45	5.47	5.49	5.51	5.53	5.56	5.44	5.24	5.07
10.0	5.41	5.44	5.46	5.49	5.52	5.22	4.92	4.64	4.39	4.16
12.5	5.45	5.48	5.50	5.41	4.99	4.59	4.22	3.87	3.55	3.29
15.0	5.49	5.53	5.56	5.00	4.49	4.00	3.55	3.21	2.96	2.73
17.5	5.52	5.57	5.19	4.58	3.98	3.41	3.05	2.73	2.44	2.18
20.0	5.56	5.62	4.86	4.15	3.47	3.03	2.62	2.25	1.93	1.71
22.5	5.57	5.32	4.50	3.72	3.13	2.66	2.21	1.83	1.54	1.30
25.0	5.59	5.04	4.12	3.29	2.78	2.28	1.86	1.50	1.17	0.91

IES ROAD REPORT
PHOTOMETRIC FILENAME : L052111301R01.IES

CANDELA TABULATION - (Cont.)

27.5	5.55	4.72	3.72	2.98	2.42	1.91	1.51	1.15	0.84	0.63
30.0	5.49	4.37	3.27	2.63	2.04	1.59	1.16	0.82	0.59	0.36
32.5	5.27	4.03	2.95	2.28	1.69	1.25	0.83	0.59	0.34	0.25
35.0	5.03	3.69	2.66	1.95	1.41	0.94	0.63	0.38	0.25	0.25
37.5	4.80	3.35	2.38	1.62	1.17	0.73	0.46	0.25	0.25	0.25
40.0	4.57	3.00	2.12	1.42	0.96	0.60	0.31	0.25	0.25	0.24
42.5	4.35	2.69	1.88	1.25	0.78	0.47	0.25	0.25	0.25	0.24
45.0	4.13	2.47	1.67	1.10	0.66	0.35	0.25	0.25	0.25	0.24
47.5	3.91	2.29	1.47	0.97	0.57	0.25	0.25	0.25	0.25	0.25
50.0	3.69	2.12	1.31	0.85	0.49	0.26	0.25	0.25	0.25	0.25
52.5	3.47	1.95	1.19	0.75	0.41	0.26	0.25	0.25	0.25	0.25
55.0	3.26	1.79	1.09	0.66	0.33	0.25	0.25	0.26	0.26	0.26
57.5	3.07	1.66	1.00	0.59	0.25	0.25	0.25	0.26	0.26	0.26
60.0	2.88	1.54	0.92	0.52	0.25	0.25	0.25	0.25	0.26	0.26
62.5	2.68	1.41	0.84	0.46	0.25	0.25	0.25	0.26	0.26	0.27
65.0	2.47	1.28	0.75	0.42	0.26	0.26	0.26	0.26	0.26	0.27
67.5	2.24	1.15	0.68	0.38	0.26	0.26	0.26	0.26	0.26	0.28
70.0	2.02	1.05	0.60	0.34	0.26	0.26	0.27	0.27	0.27	0.29
72.5	1.77	0.94	0.53	0.31	0.26	0.27	0.28	0.28	0.28	0.30
75.0	1.54	0.84	0.48	0.29	0.27	0.28	0.28	0.28	0.28	0.30
77.5	1.27	0.72	0.43	0.28	0.28	0.28	0.28	0.28	0.29	0.31
80.0	1.02	0.61	0.39	0.28	0.28	0.28	0.28	0.28	0.29	0.32
82.5	0.79	0.51	0.35	0.28	0.28	0.28	0.28	0.29	0.30	0.33
85.0	0.59	0.43	0.32	0.28	0.28	0.28	0.28	0.30	0.31	0.33
87.5	0.45	0.36	0.30	0.28	0.28	0.28	0.29	0.30	0.33	0.33
90.0	0.32	0.30	0.28	0.28	0.28	0.28	0.30	0.32	0.33	0.35
92.5	0.30	0.29	0.28	0.28	0.28	0.28	0.30	0.32	0.33	0.36
95.0	0.28	0.28	0.28	0.28	0.28	0.29	0.30	0.31	0.33	0.37
97.5	0.28	0.28	0.28	0.28	0.28	0.31	0.31	0.32	0.34	0.36
100.0	0.28	0.28	0.28	0.28	0.28	0.31	0.32	0.33	0.35	0.36
102.5	0.28	0.28	0.28	0.28	0.28	0.31	0.32	0.33	0.34	0.36
105.0	0.28	0.28	0.28	0.28	0.29	0.31	0.32	0.33	0.34	0.37
107.5	0.28	0.28	0.28	0.29	0.30	0.31	0.31	0.32	0.34	0.37
110.0	0.28	0.28	0.28	0.29	0.30	0.30	0.31	0.32	0.35	0.37
112.5	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.32	0.34	0.36
115.0	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.33	0.34	0.37
117.5	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.33	0.34	0.36
120.0	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.32	0.34	0.35
122.5	0.30	0.30	0.31	0.30	0.30	0.31	0.31	0.32	0.33	0.35
125.0	0.30	0.30	0.30	0.29	0.31	0.31	0.31	0.32	0.33	0.35
127.5	0.30	0.30	0.29	0.28	0.30	0.30	0.30	0.32	0.33	0.33
130.0	0.30	0.29	0.29	0.29	0.30	0.30	0.31	0.32	0.33	0.33
132.5	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.32	0.31	0.32
135.0	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.32
137.5	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.32
140.0	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.31
142.5	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.30	0.30	0.30
145.0	0.30	0.31	0.31	0.31	0.31	0.31	0.30	0.30	0.30	0.30
147.5	0.00	0.00	0.00	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	0.00	0.00	0.00
152.5	0.00	0.00	0.00	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	0.00	0.00	0.00
157.5	0.00	0.00	0.00	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	0.00	0.00	0.00
162.5	0.00	0.00	0.00	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	0.00	0.00	0.00

IES ROAD REPORT
PHOTOMETRIC FILENAME : L052111301R01.IES

CANDELA TABULATION - (Cont.)

167.5	0.00	0.00	0.00	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	0.00	0.00	0.00
172.5	0.00	0.00	0.00	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	0.00	0.00	0.00
177.5	0.00	0.00	0.00	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	0.00	0.00	0.00

Vert. Horizontal Angles
Angles

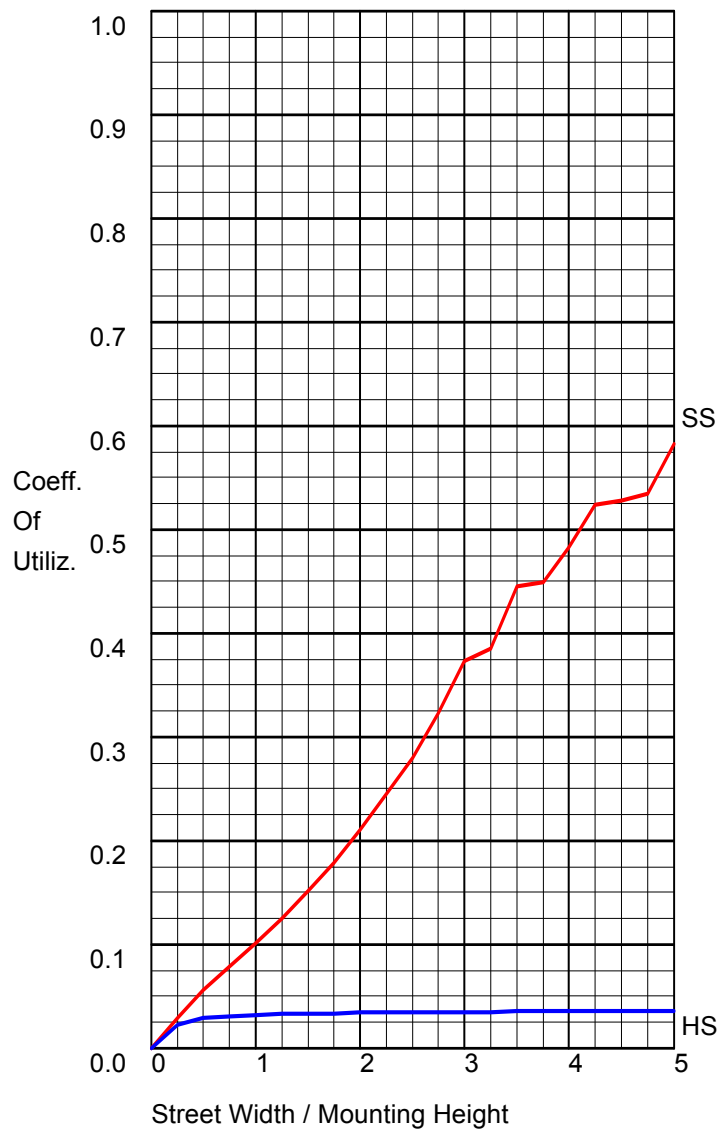
	150	155	160	165	170	175	180
0.0	5.48	5.48	5.48	5.48	5.48	5.48	5.48
2.5	5.52	5.52	5.53	5.53	5.53	5.53	5.54
5.0	5.56	5.57	5.58	5.58	5.58	5.59	5.59
7.5	4.91	4.77	4.66	4.56	4.50	4.45	4.44
10.0	3.95	3.77	3.61	3.48	3.38	3.31	3.28
12.5	3.13	2.98	2.85	2.74	2.66	2.61	2.59
15.0	2.52	2.34	2.19	2.06	1.97	1.91	1.89
17.5	1.96	1.79	1.67	1.58	1.52	1.48	1.47
20.0	1.53	1.37	1.24	1.14	1.08	1.05	1.05
22.5	1.10	0.94	0.83	0.75	0.69	0.65	0.65
25.0	0.75	0.60	0.48	0.38	0.31	0.26	0.24
27.5	0.45	0.28	0.24	0.25	0.24	0.24	0.24
30.0	0.25	0.25	0.24	0.25	0.25	0.24	0.24
32.5	0.25	0.25	0.25	0.25	0.24	0.24	0.24
35.0	0.25	0.25	0.25	0.25	0.25	0.24	0.24
37.5	0.24	0.25	0.25	0.25	0.24	0.24	0.24
40.0	0.24	0.25	0.25	0.25	0.25	0.24	0.24
42.5	0.23	0.24	0.25	0.25	0.25	0.24	0.24
45.0	0.24	0.25	0.25	0.25	0.25	0.24	0.24
47.5	0.24	0.25	0.25	0.25	0.25	0.24	0.24
50.0	0.25	0.25	0.25	0.25	0.25	0.25	0.24
52.5	0.25	0.25	0.25	0.25	0.25	0.25	0.24
55.0	0.25	0.25	0.25	0.25	0.25	0.26	0.24
57.5	0.26	0.26	0.25	0.26	0.25	0.26	0.24
60.0	0.26	0.26	0.25	0.26	0.25	0.26	0.24
62.5	0.26	0.26	0.26	0.27	0.26	0.26	0.26
65.0	0.27	0.27	0.26	0.28	0.26	0.26	0.28
67.5	0.28	0.28	0.26	0.28	0.27	0.28	0.28
70.0	0.28	0.29	0.29	0.30	0.28	0.29	0.28
72.5	0.29	0.30	0.31	0.31	0.31	0.32	0.31
75.0	0.31	0.32	0.33	0.34	0.34	0.33	0.35
77.5	0.32	0.34	0.36	0.37	0.37	0.35	0.35
80.0	0.33	0.36	0.38	0.41	0.43	0.39	0.35
82.5	0.35	0.38	0.41	0.45	0.47	0.44	0.38
85.0	0.35	0.39	0.43	0.48	0.51	0.50	0.42
87.5	0.37	0.40	0.45	0.50	0.53	0.55	0.47
90.0	0.39	0.42	0.45	0.51	0.54	0.56	0.52
92.5	0.38	0.42	0.47	0.51	0.54	0.55	0.54
95.0	0.40	0.43	0.47	0.51	0.52	0.53	0.56
97.5	0.40	0.43	0.47	0.51	0.53	0.53	0.58
100.0	0.40	0.43	0.47	0.50	0.52	0.54	0.59
102.5	0.39	0.44	0.47	0.51	0.52	0.56	0.59
105.0	0.40	0.44	0.47	0.50	0.53	0.58	0.59
107.5	0.40	0.44	0.47	0.51	0.54	0.58	0.59
110.0	0.40	0.43	0.47	0.51	0.53	0.57	0.59
112.5	0.40	0.43	0.46	0.50	0.53	0.57	0.58

IES ROAD REPORT
PHOTOMETRIC FILENAME : L052111301R01.IES

CANDELA TABULATION - (Cont.)

115.0	0.39	0.43	0.46	0.50	0.53	0.56	0.56
117.5	0.39	0.43	0.45	0.49	0.52	0.53	0.54
120.0	0.39	0.41	0.43	0.46	0.50	0.50	0.52
122.5	0.37	0.38	0.41	0.44	0.47	0.47	0.49
125.0	0.35	0.37	0.40	0.43	0.44	0.44	0.45
127.5	0.34	0.36	0.39	0.40	0.41	0.42	0.42
130.0	0.34	0.36	0.37	0.38	0.39	0.40	0.38
132.5	0.33	0.35	0.36	0.36	0.38	0.38	0.37
135.0	0.33	0.33	0.34	0.34	0.36	0.37	0.35
137.5	0.33	0.33	0.33	0.34	0.34	0.35	0.35
140.0	0.32	0.32	0.32	0.33	0.33	0.33	0.35
142.5	0.31	0.31	0.32	0.33	0.33	0.32	0.33
145.0	0.30	0.31	0.32	0.32	0.32	0.31	0.31
147.5	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
152.5	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
157.5	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
162.5	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
167.5	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
172.5	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
177.5	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

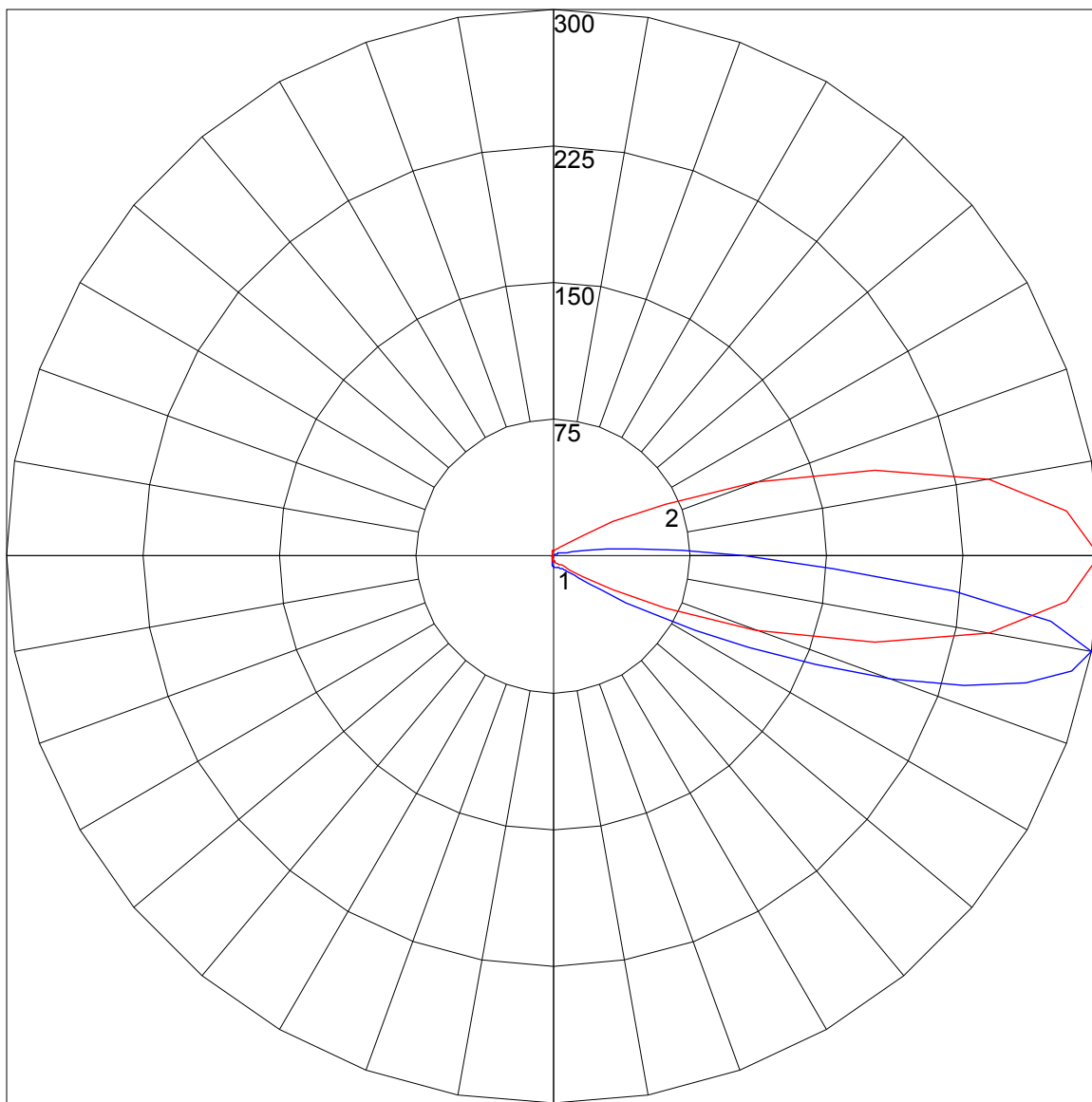
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

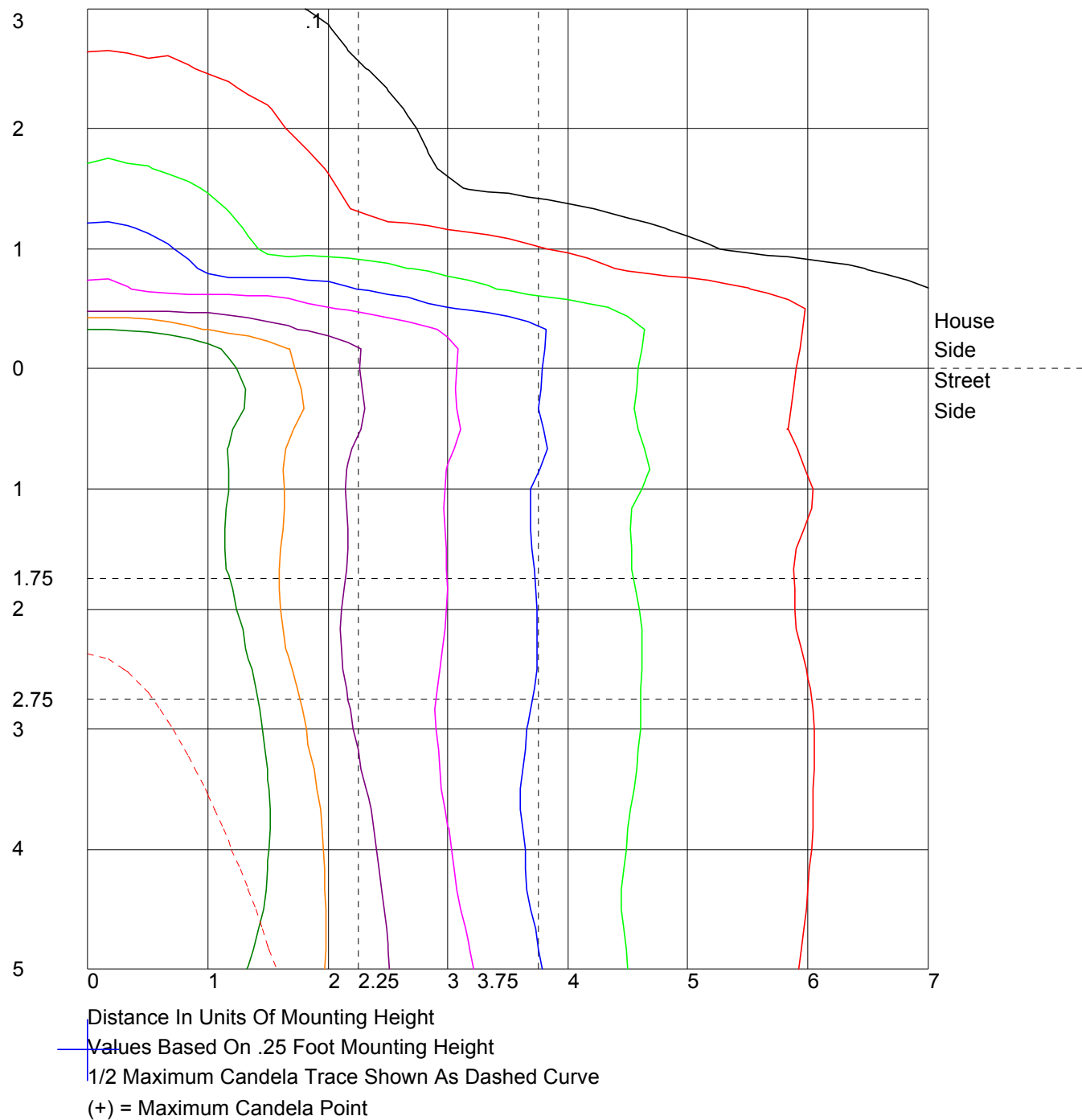
	Lumens	Percent Of Luminaire
Downward Street Side	84.5	85.5
Downward House Side	3.7	3.7
Downward Total	88.2	89.3
Upward Street Side	9.7	9.8
Upward House Side	0.9	0.9
Upward Total	10.6	10.7
Total Flux	98.8	100.0

POLAR GRAPH

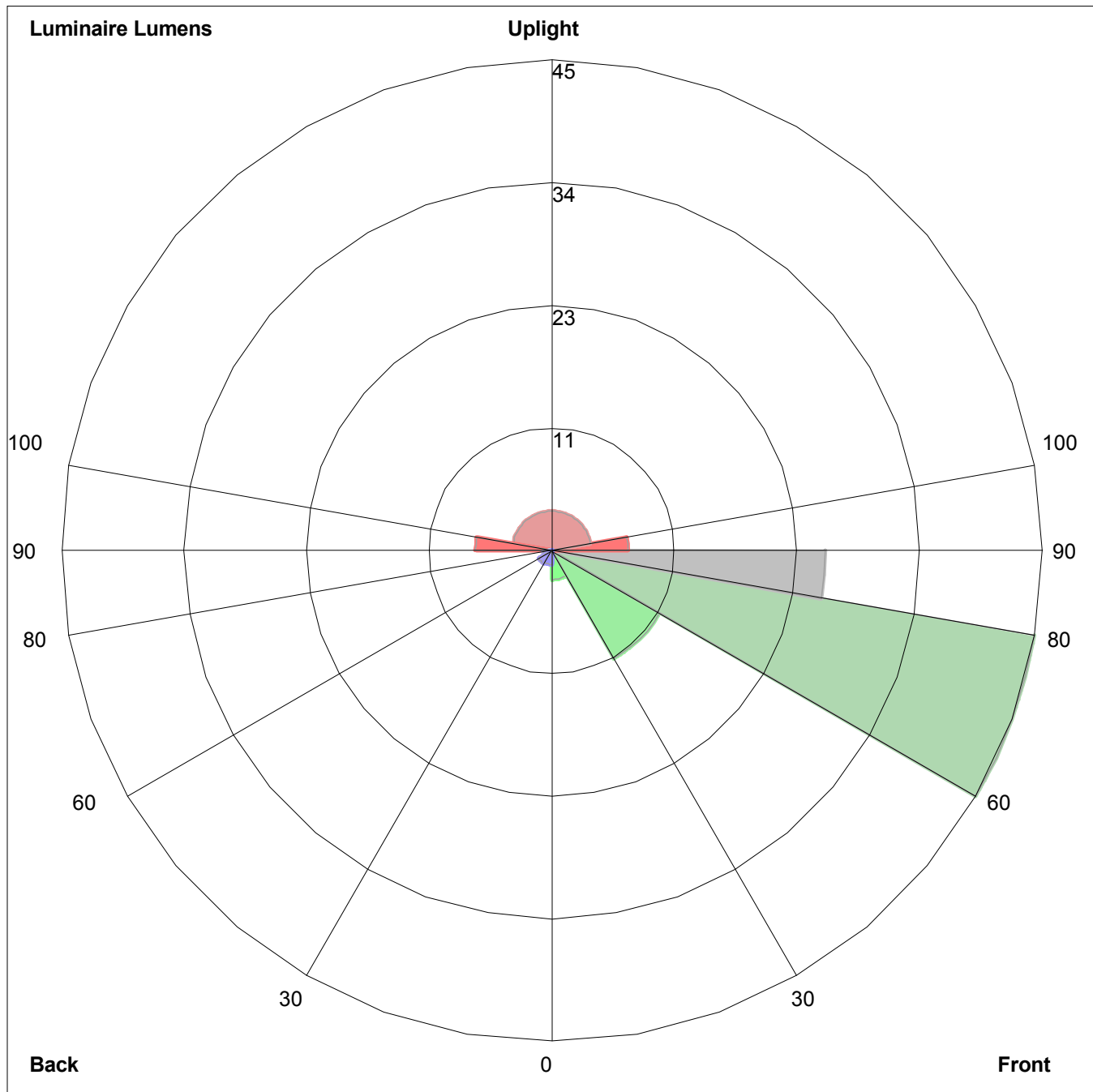


Maximum Candela = 300.17 Located At Horizontal Angle = 0, Vertical Angle = 80
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (80) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=2.7, Medium=11.5, High=45.1, Very High=25.2
Back: Low=1.3, Medium=1.4, High=0.8, Very High=0.3
Uplight: Low=7.0, High=3.6

BUG Rating : B0-U1-G1