



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

Report No: L091706903



**Report No:** L091706903

**Issue Date:** 10/9/2017

**Report Prepared For:** USTE, dba Vista Professional Outdoor Lighting  
1625 Surveyor Ave., Simi Valley CA 93063

**Model Number:** 1470/1471-2Q90-A

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

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

**Sample Arrival Date:** 10/3/17

**Date of Tests:** 10/5/17 - 10/9/17

**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	11/28/17
ITECH	IT6122	PS-DC03-S1	11/28/17
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/28/17
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.

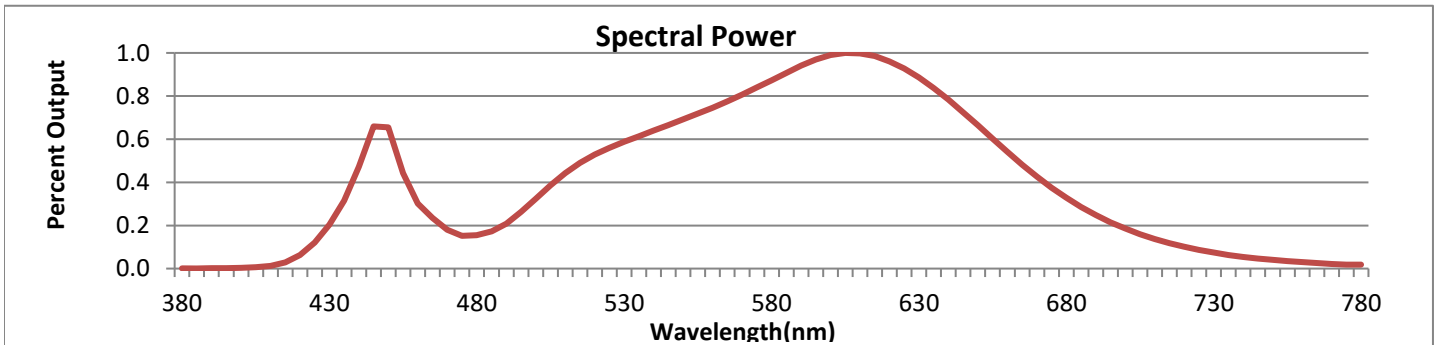
**Test Summary**

<b>Manufacturer:</b>	USTE, dba Vista Professional Outdoor Lighting
<b>Model Number:</b>	1470/1471-2Q90-A
<b>Driver Model Number:</b>	ERP ESS015W-0350-32
<b>Total Lumens:</b>	744.00
<b>Input Voltage (VAC/60Hz):</b>	120.00
<b>Input Current (Amp):</b>	0.1
<b>Input Power (W):</b>	11.83
<b>Input Power Factor:</b>	0.98
<b>Current ATHD @ 120V(%):</b>	15%
<b>Current ATHD @ 277V(%):</b>	N/A
<b>Efficacy:</b>	63
<b>Color Rendering Index (CRI):</b>	84
<b>Correlated Color Temperature (K):</b>	3164
<b>Chromaticity Coordinate x:</b>	0.4233
<b>Chromaticity Coordinate y:</b>	0.3944
<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:30
<b>Total Operating Time (Hours):</b>	1:20



FIG. 1 LUMINAIRE

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



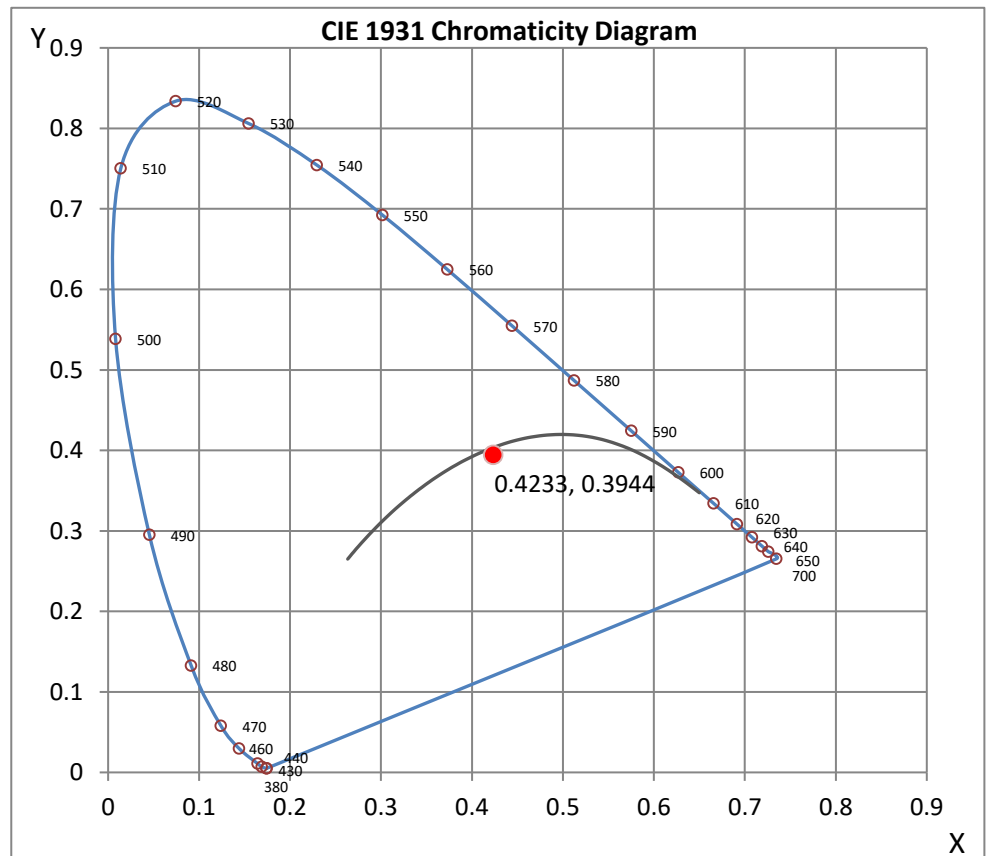
Wavelength	W/m <sup>2</sup> nm	440	0.4726	510	0.4423	580	0.8730	650	0.6646	720	0.1009
380	0.0010	450	0.6554	520	0.5281	590	0.9411	660	0.5421	730	0.0741
390	0.0012	460	0.3017	530	0.5884	600	0.9899	670	0.4257	740	0.0544
400	0.0029	470	0.1802	540	0.6396	610	0.9984	680	0.3278	750	0.0401
410	0.0128	480	0.1542	550	0.6922	620	0.9612	690	0.2481	760	0.0294
420	0.0631	490	0.2086	560	0.7451	630	0.8860	700	0.1854	770	0.0220
430	0.2035	500	0.3247	570	0.8059	640	0.7835	710	0.1375	780	0.0189

**CRI & CCT**

x	0.4233
y	0.3944
u'	0.2459
v'	0.5155
CRI	84.20
CCT	3164
Duv	-0.00190

**R Values**

R1	83.82
R2	89.13
R3	93.02
R4	84.39
R5	83.08
R6	85.42
R7	86.41
R8	68.23
R9	24.26
R10	74.00
R11	83.99
R12	69.50
R13	84.72
R14	95.48



\*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 :                     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: 14*



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# Photometric Test Report

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091706903.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L091706903  
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
 [ISSUEDATE] 10/9/2017  
 [MANUFAC] USTE, DBA VISTA PROFESSIONAL OUTDOOR LIGHTING  
 [LUMCAT] 1470/1471-2Q90-A  
 [LUMINAIRE] Bollard, 2 quadrant distribution, 90° apart, 350mA  
 [BALLASTCAT] ERP ESS015W-0350-32  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 120VAC, 11.83W  
 [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	744
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	63
Total Luminaire Watts	11.83
Ballast Factor	1.00
Upward Waste Light Ratio	0.06
Maximum Candela	331.4
Maximum Candela Angle	0H 15V
Maximum Candela (<90 Degrees Vertical)	331.4
Maximum Candela Angle (<90 Degrees Vertical)	0H 15V
Maximum Candela At 90 Degrees Vertical	45.8 (6.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	108 (14.5% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091706903.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	96.6	N.A.	13.0
FM - Front-Medium (30-60)	245.2	N.A.	33.0
FH - Front-High (60-80)	178.1	N.A.	23.9
FVH - Front-Very High (80-90)	33.3	N.A.	4.5
BL - Back-Low (0-30)	29.2	N.A.	3.9
BM - Back-Medium (30-60)	68.4	N.A.	9.2
BH - Back-High (60-80)	41.0	N.A.	5.5
BVH - Back-Very High (80-90)	9.4	N.A.	1.3
UL - Uplight-Low (90-100)	19.4	N.A.	2.6
UH - Uplight-High (100-180)	23.4	N.A.	3.1
Total	744.0	N.A.	100.0
BUG Rating	B0-U2-G1		

**ZONAL LUMEN SUMMARY**

Zone	%
0-20	7.4
0-30	16.9
0-40	29.1
0-60	59.1
0-80	88.5
0-90	94.2
10-90	92.8
20-40	21.7
20-50	34.9
40-70	48.5
60-80	29.4
70-80	10.9
80-90	5.7
90-110	4
90-120	4.9
90-130	5.4
90-150	5.7
90-180	5.8
110-180	1.7
0-180	100

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<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>
0.0	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
5.0	193.2	193.3	194.2	192.8	191.8	190.3	186.6	182.9	178.7	175.2
10.0	296.7	299.7	302.0	289.0	280.4	276.1	266.6	253.4	244.6	238.8
15.0	331.4	326.0	318.1	308.6	300.1	285.8	275.6	267.1	255.9	244.0
20.0	323.3	323.8	318.9	301.1	292.5	287.8	274.8	257.6	250.0	243.0
25.0	304.0	305.7	304.8	290.9	277.9	272.8	266.4	246.0	236.1	231.6
30.0	290.8	293.1	292.7	285.9	270.8	263.7	258.7	246.1	234.5	229.6
35.0	282.7	282.8	280.8	276.2	263.8	255.2	248.9	238.9	228.6	222.9
37.5	276.5	274.7	272.3	268.9	258.0	248.5	242.1	231.4	222.8	217.2
40.0	268.6	265.6	263.5	261.7	249.3	238.8	233.5	225.3	216.4	210.6
42.5	260.0	256.1	254.5	253.6	241.9	229.9	226.4	218.7	209.1	203.3
45.0	251.0	246.6	245.6	244.8	231.1	221.7	220.4	212.2	202.6	196.9
47.5	242.6	238.9	237.6	237.2	226.0	215.6	214.0	205.7	196.9	190.5
50.0	237.8	234.8	234.3	233.2	224.0	216.6	212.9	204.5	197.1	190.3
52.5	244.1	243.7	244.5	243.2	239.7	233.7	227.6	223.0	217.7	209.4
55.0	264.5	265.7	268.9	265.0	266.1	262.9	257.4	256.0	251.9	244.6
57.5	284.1	283.0	286.6	282.1	282.0	279.8	275.2	277.3	274.2	269.2
60.0	292.3	290.4	292.2	285.3	283.5	279.6	274.8	276.9	272.4	269.9
62.5	292.9	292.2	293.0	286.6	284.3	278.5	271.1	271.9	264.1	261.5
65.0	286.9	289.0	289.0	281.2	281.2	270.9	262.7	261.3	254.0	248.3
67.5	260.9	264.5	262.1	255.0	251.6	242.4	234.3	232.5	225.5	220.1
70.0	217.6	220.7	218.3	212.4	208.2	200.8	193.4	190.9	186.7	182.4
72.5	173.0	173.2	171.8	170.0	167.1	160.2	154.7	151.4	146.5	143.4
75.0	137.1	138.7	139.5	138.5	136.9	133.7	130.3	126.3	120.0	116.0
77.5	117.5	118.9	120.9	120.3	119.6	118.7	114.8	111.4	105.7	101.2
80.0	105.5	105.9	107.0	108.0	107.2	104.4	101.7	99.9	95.7	91.4
85.0	73.5	74.5	75.0	73.9	71.4	69.2	66.6	64.9	63.7	61.8
90.0	45.8	45.8	45.6	45.2	44.8	43.7	41.4	39.1	36.6	34.0
95.0	29.7	29.7	29.9	30.5	30.8	30.5	29.4	27.9	25.9	23.6
100.0	21.3	21.5	21.4	21.3	21.5	21.5	21.5	20.9	19.9	18.9
105.0	16.0	15.7	16.0	16.1	16.3	16.3	16.3	16.0	15.6	15.1
110.0	12.6	12.7	12.7	12.9	12.9	12.8	12.8	12.5	12.3	12.0
115.0	10.5	10.4	10.6	10.4	10.4	10.4	10.4	10.2	10.0	9.7
120.0	8.6	8.4	8.5	8.5	8.5	8.5	8.4	8.2	7.9	7.8
125.0	6.9	6.7	6.7	6.9	6.7	6.8	6.7	6.6	6.4	6.2
130.0	5.0	5.2	5.0	5.1	5.0	5.0	5.0	4.9	4.8	4.7
135.0	3.6	3.7	3.6	3.4	3.6	3.4	3.5	3.4	3.2	3.2
140.0	2.6	2.4	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1
145.0	1.3	1.4	1.4	1.4	1.4	1.3	1.2	1.2	1.1	1.2
150.0	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7
155.0	0.5	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7
160.0	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5
165.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3
170.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
175.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.1
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
5.0	169.4	162.1	155.1	148.2	138.1	129.8	122.1	113.7	102.9	94.3
10.0	224.9	213.0	205.6	199.3	186.8	177.6	172.5	164.4	150.8	143.0

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091706903.IES**

**CANDELA TABULATION - (Cont.)**

15.0	235.5	227.4	212.6	203.1	193.9	184.1	177.6	173.7	164.2	151.6
20.0	226.5	215.4	210.4	201.6	186.4	180.4	175.0	170.0	161.2	156.0
25.0	222.8	206.8	201.3	197.0	185.3	172.4	167.9	163.2	156.4	150.7
30.0	222.8	206.9	199.6	193.6	185.0	171.4	164.1	159.5	151.5	145.8
35.0	214.1	203.1	194.3	184.8	177.0	166.1	159.0	155.6	149.9	141.1
37.5	209.4	198.9	189.3	178.6	171.2	162.3	155.1	152.3	146.7	136.9
40.0	203.8	194.2	183.7	172.4	165.8	157.9	150.8	148.4	144.1	133.5
42.5	197.5	190.4	177.3	165.2	160.3	153.3	145.2	143.9	140.1	129.2
45.0	190.5	183.2	170.4	157.9	154.9	149.6	139.1	139.1	135.7	125.2
47.5	183.5	176.6	163.0	151.3	148.7	142.4	134.5	134.2	130.5	121.2
50.0	183.0	176.1	163.8	153.3	149.4	140.6	134.4	132.3	125.7	119.1
52.5	201.2	194.7	183.3	172.7	165.8	154.6	146.1	138.5	129.5	121.1
55.0	236.2	229.8	217.0	203.9	191.7	177.7	167.9	153.7	142.2	129.9
57.5	260.8	253.2	240.0	225.3	211.9	196.3	184.3	167.6	153.4	138.7
60.0	262.7	255.3	241.6	226.5	213.6	197.7	187.4	169.9	157.8	143.4
62.5	258.2	249.9	236.6	226.0	212.9	195.4	185.0	168.8	154.4	142.5
65.0	247.0	239.3	227.5	218.0	205.5	189.0	180.7	165.2	149.9	140.3
67.5	217.1	211.1	202.2	192.6	180.2	168.7	160.8	149.6	137.3	130.2
70.0	176.8	170.0	164.8	158.8	149.7	141.2	133.2	124.1	115.5	108.9
72.5	139.2	133.8	128.4	124.1	118.3	112.5	106.7	100.1	93.7	88.3
75.0	113.3	110.5	105.5	99.8	94.8	91.2	86.9	81.9	76.9	72.6
77.5	98.0	95.3	91.9	88.1	82.6	78.3	75.2	70.4	65.8	62.0
80.0	87.9	84.0	80.5	77.4	73.1	68.2	64.7	61.4	57.5	54.0
85.0	59.6	56.9	53.6	50.1	47.7	45.9	44.2	41.4	39.2	37.5
90.0	32.4	31.4	30.3	29.7	29.3	29.1	28.3	27.0	26.2	25.4
95.0	21.3	19.8	19.2	19.6	20.3	20.7	20.8	20.4	19.4	18.6
100.0	17.4	15.9	15.1	14.7	14.5	14.7	15.1	14.9	14.4	13.7
105.0	14.3	13.5	12.6	12.1	12.0	11.6	11.6	11.4	11.0	10.4
110.0	11.6	11.2	10.8	10.2	9.8	9.4	8.9	8.7	8.4	8.0
115.0	9.4	9.2	8.8	8.4	8.0	7.5	7.3	6.9	6.6	6.2
120.0	7.7	7.5	7.1	6.7	6.5	6.2	5.9	5.5	5.1	4.8
125.0	6.1	5.8	5.5	5.2	5.0	4.8	4.5	4.2	4.0	3.6
130.0	4.6	4.4	4.2	3.9	3.6	3.5	3.3	3.2	3.0	2.8
135.0	3.2	3.0	2.8	2.7	2.6	2.4	2.3	2.2	2.1	2.0
140.0	2.0	2.0	1.8	1.7	1.7	1.7	1.6	1.5	1.4	1.3
145.0	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.9	1.0	0.9
150.0	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.9
155.0	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.6	0.6	0.6
160.0	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6
165.0	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3
170.0	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.3	0.3
175.0	0.2	0.1	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Vert. Horizontal Angles**

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	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
5.0	87.1	78.4	69.0	59.2	51.6	43.1	36.5	31.3	27.6	24.0
10.0	135.4	122.0	106.4	98.0	89.4	76.8	65.6	57.6	48.7	37.5
15.0	140.6	134.4	121.0	106.2	96.7	88.4	75.1	62.8	56.4	46.2
20.0	146.9	133.7	121.8	114.3	101.9	87.1	78.7	70.3	57.2	45.9
25.0	145.7	135.8	117.1	110.3	104.9	90.8	76.3	70.7	62.0	47.5
30.0	140.8	134.4	116.5	106.7	100.6	91.1	75.1	68.9	62.8	48.8
35.0	134.8	128.9	114.1	100.7	94.6	87.4	72.7	65.3	60.0	50.3
37.5	131.3	125.5	112.8	97.8	91.4	84.9	71.0	62.5	56.9	48.2



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091706903.IES**

**CANDELA TABULATION - (Cont.)**

<b>40.0</b>	126.6	121.6	108.0	93.7	88.0	81.5	69.0	60.4	55.1	47.0
<b>42.5</b>	122.0	116.1	103.2	90.2	85.0	78.0	65.8	57.7	52.1	44.3
<b>45.0</b>	119.1	112.2	99.5	87.4	81.8	72.7	62.6	54.9	49.0	41.8
<b>47.5</b>	115.9	107.2	94.3	85.0	77.9	69.2	60.1	52.1	46.3	39.0
<b>50.0</b>	112.4	101.6	91.1	82.8	73.1	64.9	58.4	49.2	42.1	35.9
<b>52.5</b>	112.2	98.0	88.5	79.3	68.6	61.4	55.4	46.4	39.0	33.0
<b>55.0</b>	115.3	97.5	86.3	75.6	65.0	59.0	51.9	43.3	36.9	31.2
<b>57.5</b>	120.3	102.7	87.4	73.7	63.0	56.4	49.1	41.2	34.7	28.6
<b>60.0</b>	123.9	105.4	87.9	74.3	62.8	54.6	46.7	39.1	32.5	26.7
<b>62.5</b>	125.1	107.0	89.8	75.4	63.1	52.7	44.5	37.0	30.7	25.0
<b>65.0</b>	123.5	106.6	91.0	75.3	61.4	50.1	42.1	34.6	28.3	23.3
<b>67.5</b>	114.2	99.4	85.3	71.8	59.1	48.3	40.1	32.1	25.4	20.9
<b>70.0</b>	98.6	88.4	77.2	65.5	53.8	44.2	37.0	30.2	24.0	19.2
<b>72.5</b>	81.5	73.8	65.8	57.5	47.9	39.7	33.1	27.9	22.4	17.7
<b>75.0</b>	67.4	61.4	55.0	48.7	41.7	35.5	29.6	24.6	20.1	16.3
<b>77.5</b>	58.0	53.4	47.6	41.7	35.0	29.9	25.6	21.4	17.5	14.3
<b>80.0</b>	49.9	45.8	41.4	35.9	30.0	25.5	22.1	18.6	15.3	12.2
<b>85.0</b>	35.9	33.7	30.6	27.0	22.5	18.7	15.9	13.7	11.1	8.8
<b>90.0</b>	24.3	23.3	22.3	20.3	17.4	14.7	12.6	10.3	7.9	6.1
<b>95.0</b>	17.9	17.2	16.3	15.5	14.4	12.9	11.0	9.2	6.9	5.1
<b>100.0</b>	13.1	12.4	11.7	11.0	10.2	9.4	8.3	7.3	5.8	4.4
<b>105.0</b>	9.7	9.1	8.5	7.9	7.3	6.6	5.9	5.3	4.6	3.6
<b>110.0</b>	7.5	6.9	6.5	5.9	5.5	5.0	4.5	3.9	3.3	2.8
<b>115.0</b>	5.7	5.3	5.0	4.4	4.0	3.6	3.3	2.8	2.6	2.2
<b>120.0</b>	4.4	4.2	3.7	3.4	3.0	2.8	2.4	2.1	1.9	1.7
<b>125.0</b>	3.5	3.2	2.8	2.4	2.2	2.0	1.8	1.7	1.5	1.3
<b>130.0</b>	2.6	2.3	2.1	2.0	1.7	1.6	1.4	1.2	1.1	1.1
<b>135.0</b>	1.8	1.7	1.5	1.5	1.3	1.2	1.1	1.0	1.1	1.1
<b>140.0</b>	1.3	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.9	0.9
<b>145.0</b>	0.9	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8
<b>150.0</b>	0.9	0.8	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.8
<b>155.0</b>	0.8	0.8	0.8	0.6	0.7	0.7	0.8	0.7	0.7	0.8
<b>160.0</b>	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7
<b>165.0</b>	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5
<b>170.0</b>	0.4	0.4	0.3	0.4	0.5	0.5	0.3	0.5	0.5	0.5
<b>175.0</b>	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4
<b>180.0</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

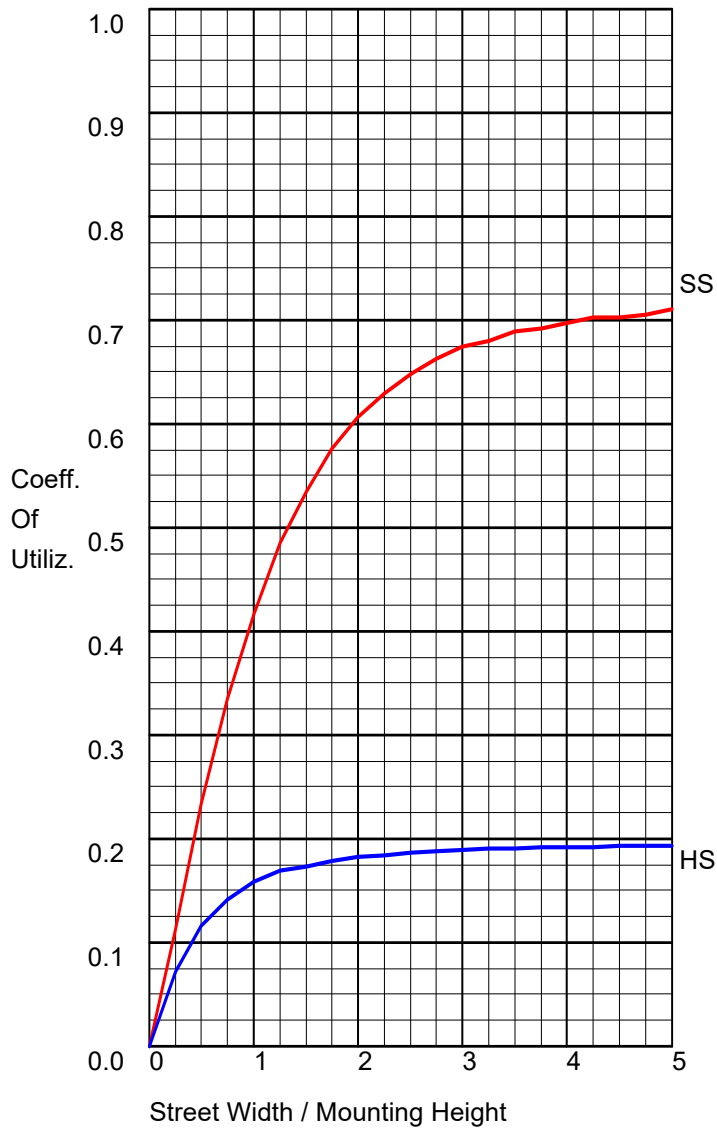
	<b>150</b>	<b>155</b>	<b>160</b>	<b>165</b>	<b>170</b>	<b>175</b>	<b>180</b>
<b>0.0</b>	24.4	24.4	24.4	24.4	24.4	24.4	24.4
<b>5.0</b>	21.2	20.0	19.6	20.3	21.1	21.7	21.7
<b>10.0</b>	29.5	23.4	18.0	13.6	11.8	11.2	10.6
<b>15.0</b>	35.6	25.8	19.5	13.4	8.6	6.3	5.7
<b>20.0</b>	40.4	31.2	19.7	14.0	10.0	6.6	5.5
<b>25.0</b>	39.4	33.7	25.6	14.5	9.4	6.6	5.4
<b>30.0</b>	38.4	32.5	26.0	16.1	9.6	6.1	5.0
<b>35.0</b>	36.8	30.3	24.6	16.9	10.2	6.1	4.6
<b>37.5</b>	36.1	29.1	23.2	15.9	9.6	5.8	4.6
<b>40.0</b>	34.4	27.2	22.1	16.1	9.9	6.0	4.3
<b>42.5</b>	33.4	26.0	20.9	14.9	9.3	5.7	4.3
<b>45.0</b>	31.0	23.7	18.5	13.9	8.9	5.4	4.0
<b>47.5</b>	29.1	21.7	16.9	13.0	8.6	5.4	3.9
<b>50.0</b>	27.7	20.2	15.0	11.6	7.5	4.8	3.9
<b>52.5</b>	24.9	18.0	13.1	9.8	6.7	4.4	3.5

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091706903.IES**

**CANDELA TABULATION - (Cont.)**

<b>55.0</b>	24.4	17.2	12.2	8.9	6.1	4.1	3.4
<b>57.5</b>	21.9	15.6	10.8	7.9	5.6	4.0	3.4
<b>60.0</b>	20.9	14.5	10.3	7.5	5.2	3.8	3.2
<b>62.5</b>	19.6	14.0	9.6	7.0	4.9	3.7	3.2
<b>65.0</b>	18.1	12.7	8.9	6.4	4.6	3.8	3.2
<b>67.5</b>	17.1	12.4	8.7	6.3	4.6	3.6	3.2
<b>70.0</b>	15.3	11.6	8.3	5.9	4.4	3.6	3.2
<b>72.5</b>	14.0	10.6	7.9	5.7	4.1	3.3	3.2
<b>75.0</b>	12.9	9.6	7.1	5.3	4.0	3.2	3.0
<b>77.5</b>	11.5	8.3	6.3	4.8	3.7	3.1	3.0
<b>80.0</b>	9.8	7.8	5.8	4.3	3.4	3.0	2.7
<b>85.0</b>	6.9	5.5	4.3	3.5	2.9	2.5	2.4
<b>90.0</b>	4.7	3.8	3.2	2.8	2.4	2.4	2.3
<b>95.0</b>	3.8	3.1	2.8	2.4	2.2	2.2	2.2
<b>100.0</b>	3.3	2.8	2.3	2.1	2.0	2.0	2.0
<b>105.0</b>	2.8	2.4	2.1	2.0	1.9	2.0	2.0
<b>110.0</b>	2.3	2.0	1.9	1.8	1.7	1.8	1.9
<b>115.0</b>	2.0	1.7	1.5	1.5	1.6	1.5	1.6
<b>120.0</b>	1.5	1.4	1.3	1.3	1.3	1.3	1.3
<b>125.0</b>	1.1	1.1	1.1	1.2	1.1	1.2	1.2
<b>130.0</b>	1.1	1.0	1.0	1.0	1.1	1.0	1.1
<b>135.0</b>	0.9	1.0	0.9	1.1	0.9	0.9	0.9
<b>140.0</b>	0.9	0.9	0.9	1.0	0.9	0.8	0.8
<b>145.0</b>	0.9	0.9	0.9	0.9	0.8	0.9	0.9
<b>150.0</b>	0.8	0.8	0.9	0.9	0.9	0.8	0.8
<b>155.0</b>	0.7	0.7	0.8	0.8	0.8	0.8	0.7
<b>160.0</b>	0.7	0.7	0.8	0.7	0.8	0.7	0.7
<b>165.0</b>	0.6	0.5	0.6	0.7	0.7	0.7	0.7
<b>170.0</b>	0.7	0.5	0.5	0.5	0.5	0.5	0.5
<b>175.0</b>	0.3	0.5	0.5	0.5	0.5	0.3	0.4
<b>180.0</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0

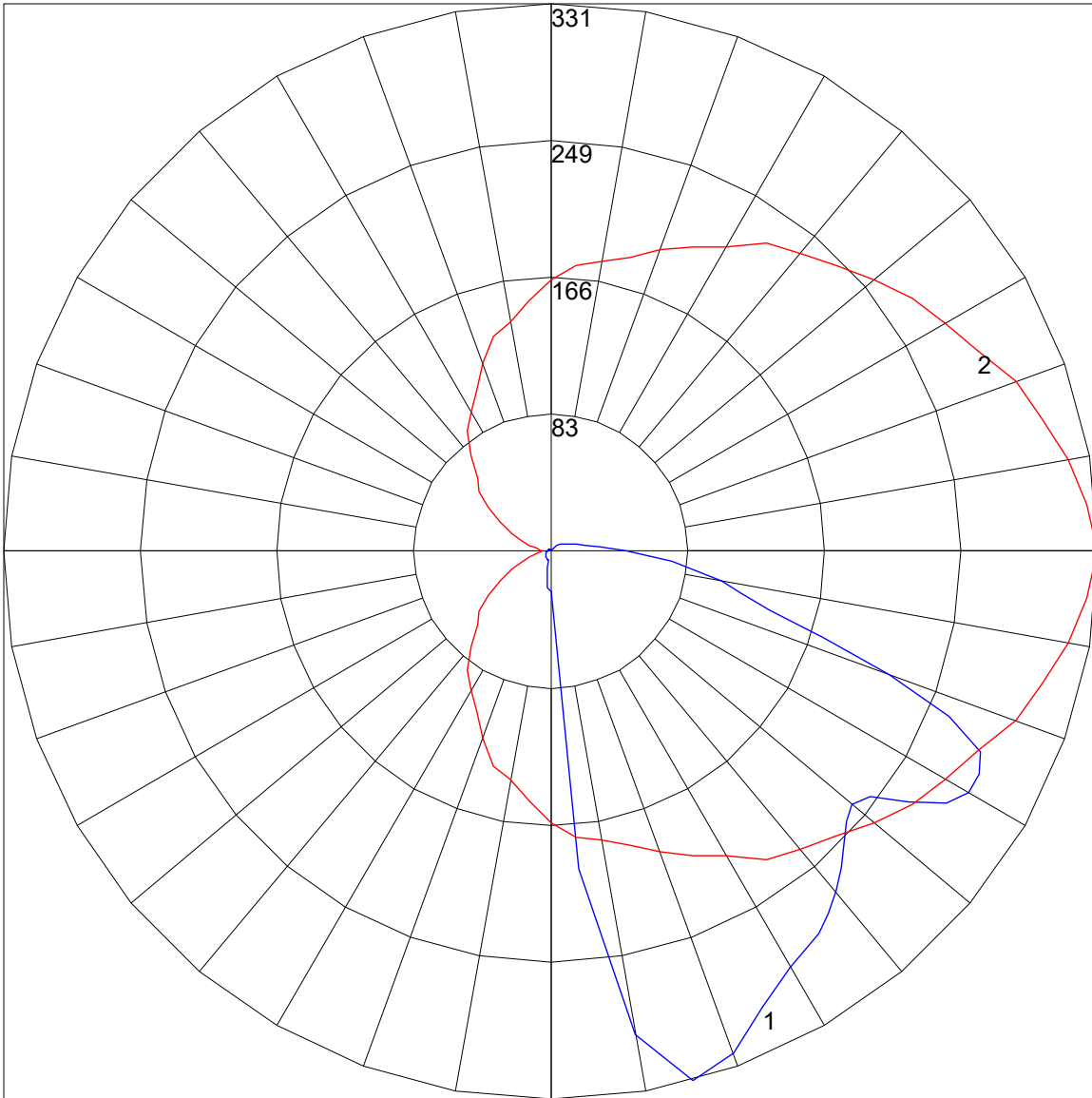
**COEFFICIENTS OF UTILIZATION**



**FLUX DISTRIBUTION**

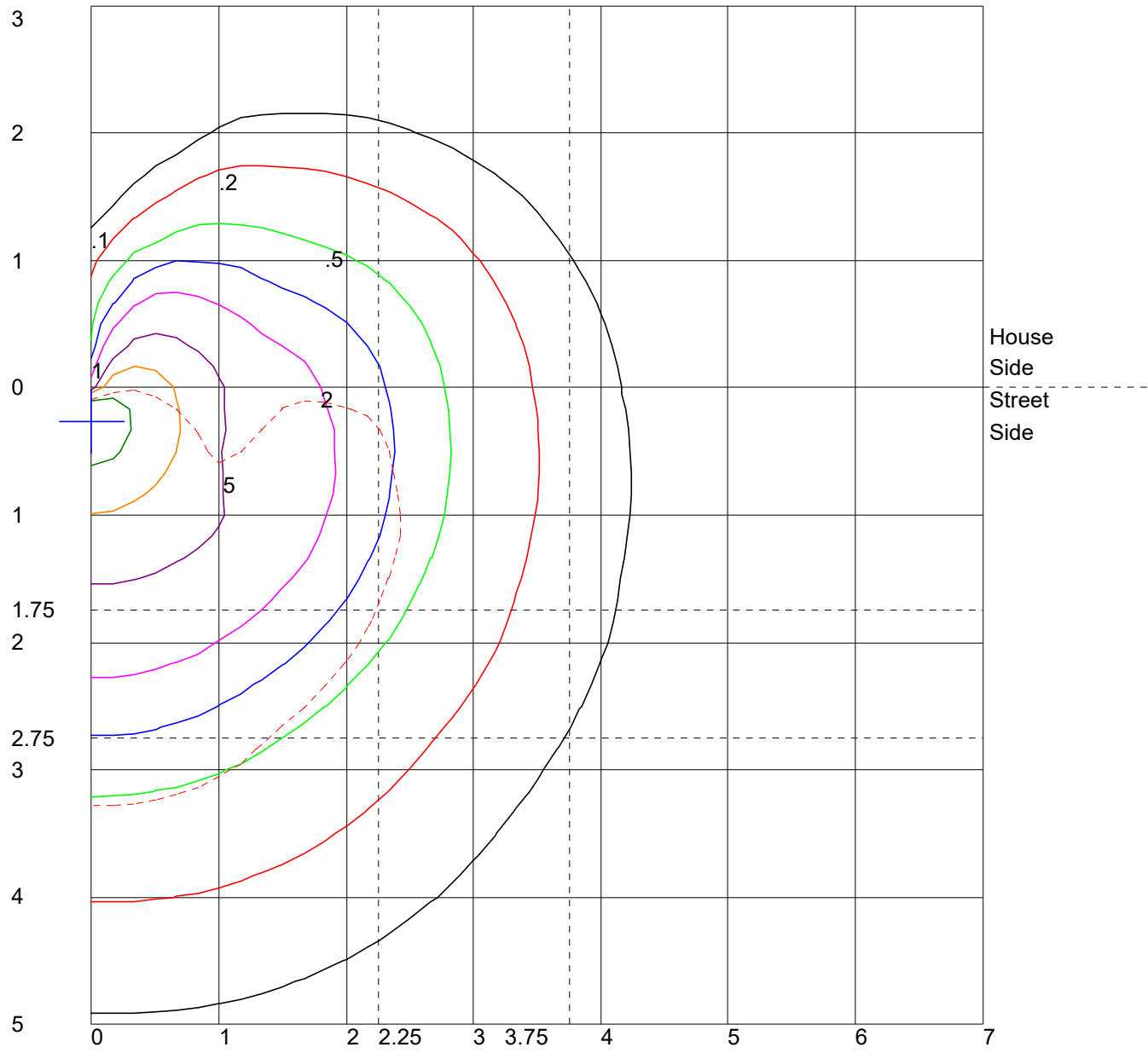
	Lumens	Percent Of Luminaire
Downward Street Side	553.3	74.4
Downward House Side	147.9	19.9
Downward Total	701.2	94.2
Upward Street Side	31.0	4.2
Upward House Side	11.8	1.6
Upward Total	42.8	5.8
<b>Total Flux</b>	<b>744.0</b>	<b>100.0</b>

POLAR GRAPH



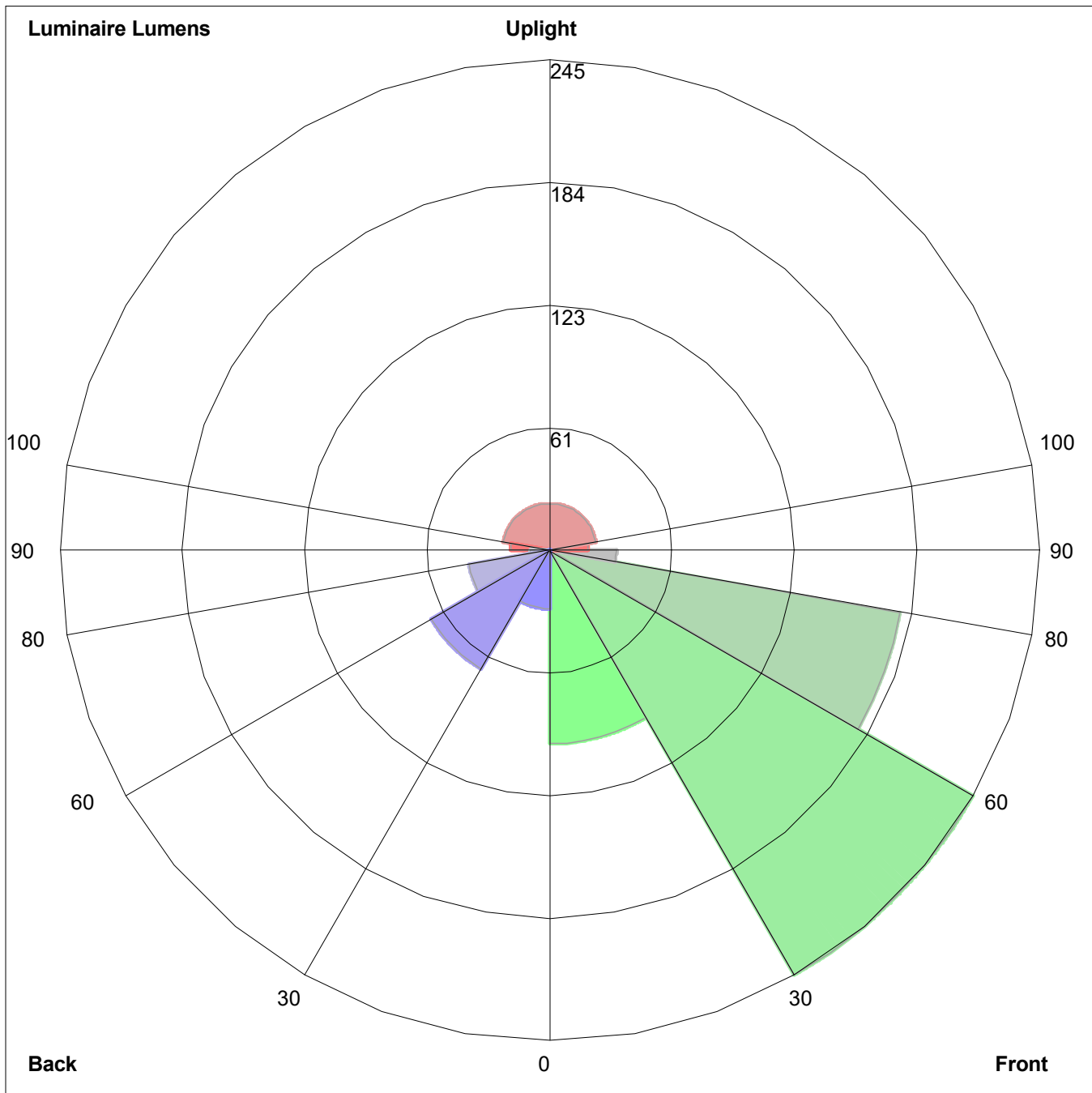
Maximum Candela = 331.4 Located At Horizontal Angle = 0, Vertical Angle = 15  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (15) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height  
 Values Based On 3 Foot Mounting Height  
 1/2 Maximum Candela Trace Shown As Dashed Curve  
 (+) = Maximum Candela Point

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
 Front: Low=96.6, Medium=245.2, High=178.1, Very High=33.3  
 Back: Low=29.2, Medium=68.4, High=41.0, Very High=9.4  
 Uplight: Low=19.4, High=23.4

BUG Rating : B0-U2-G1