



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

Report No: L061910602



**Report No:** L061910602

**Issue Date:** 6/14/2019

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

**Model Number:** 1180-X-H-30-A-MV-ND

**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:** 6/12/19

**Date of Tests:** 6/12/19 - 6/14/19

**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	1/9/21
BK PRECISION	1747	PS-DC04	1/10/21
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/21
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**

<b>Manufacturer:</b>	Vista Professional Outdoor Lighting
<b>Model Number:</b>	1180-X-H-30-A-MV-ND
<b>Driver Model Number:</b>	CUSTOM DRIVER

**Test Summary**

<b>Total Lumens:</b>	29.00
<b>Efficacy:</b>	2.12
<b>Color Redering Index:</b>	84.1
<b>Correlated Color Temperature:</b>	2870
<b>Input Voltage (VAC/60Hz):</b>	120.03
<b>Input Current (Amp):</b>	0.1183
<b>Input Power (W):</b>	13.69
<b>Input Power Factor:</b>	0.9639
<b>Current ATHD (%):</b>	18.5%

**Test Condition**

<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	1:15
<b>Total Operating Time (Hours):</b>	2:10

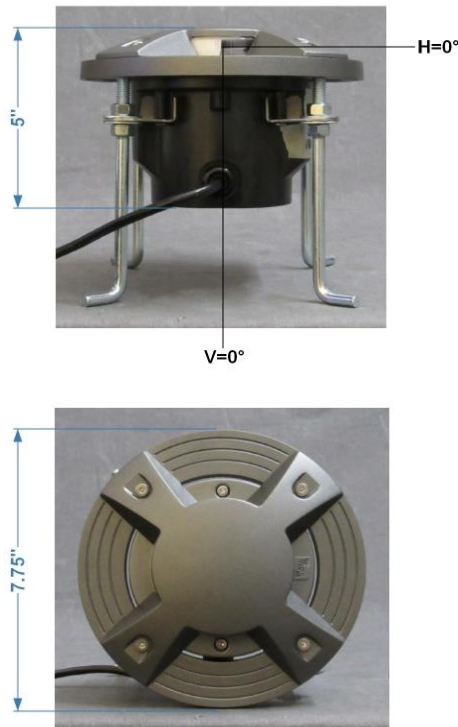
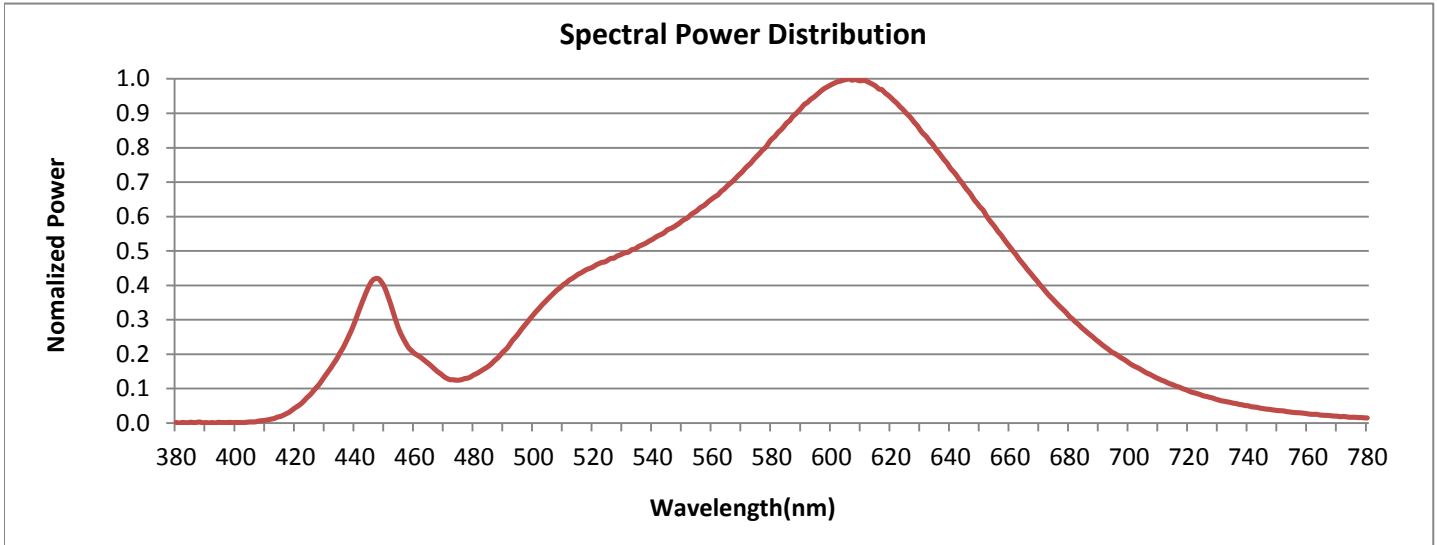


FIG. 1 LUMINAIRE

**Colorimetry Test Results**

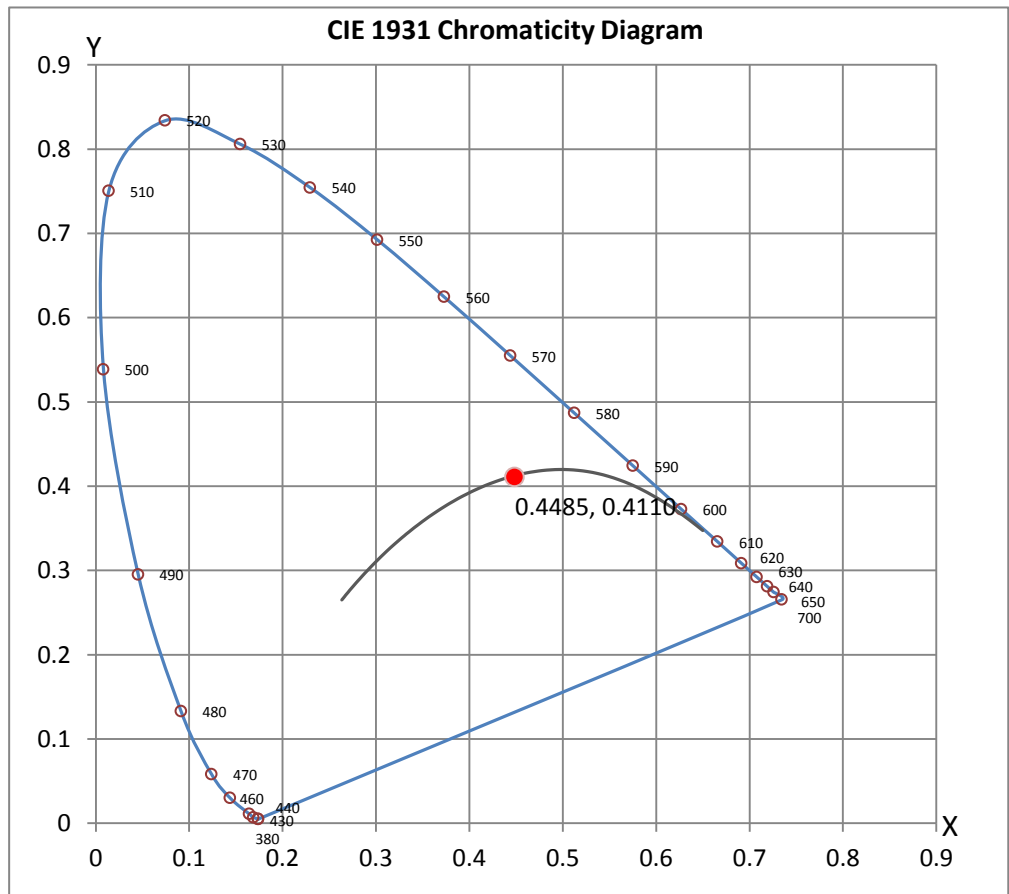


**CRI & CCT**

x	0.4485
y	0.4110
u'	0.2550
v'	0.5258
CRI	84.10
CCT	2870
Duv	0.00126

**R Values**

R1	82.29
R2	90.08
R3	97.51
R4	84.35
R5	82.95
R6	89.21
R7	84.63
R8	61.83
R9	13.47
R10	78.10
R11	84.98
R12	75.65
R13	83.84
R14	98.45
R15	74.60



## 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: 15*



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 www.lightlaboratory.com

# Photometric Test Report

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L061910602  
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
 [ISSUEDATE] 6/14/2019  
 [MANUFAC] Vista Professional Outdoor Lighting  
 [LUMCAT] 1180-X-H-30-A-MV-ND  
 [LUMINAIRE] Drive-Over Light, H-Half 180° Distribution  
 [BALLASTCAT] CUSTOM DRIVER  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 120.03VAC, 13.69W  
 [TEST PROCEDURE] IESNA:LM-79-08

**CHARACTERISTICS**

IES Classification	N.A.
Longitudinal Classification	N.A.
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	29
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	2
Total Luminaire Watts	13.69
Ballast Factor	1.00
Upward Waste Light Ratio	0.84
Maximum Candela	19.91
Maximum Candela Angle	0H 104V
Maximum Candela (<90 Degrees Vertical)	14.39
Maximum Candela Angle (<90 Degrees Vertical)	0H 88V
Maximum Candela At 90 Degrees Vertical	14.88 (51.3% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	14.39 (49.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	0.0	N.A.	0.0
FM - Front-Medium (30-60)	0.1	N.A.	0.2
FH - Front-High (60-80)	0.3	N.A.	0.9
FVH - Front-Very High (80-90)	3.4	N.A.	11.7
BL - Back-Low (0-30)	0.0	N.A.	0.0
BM - Back-Medium (30-60)	0.1	N.A.	0.3
BH - Back-High (60-80)	0.2	N.A.	0.6
BVH - Back-Very High (80-90)	0.6	N.A.	1.9
UL - Uplight-Low (90-100)	5.9	N.A.	20.1
UH - Uplight-High (100-180)	18.6	N.A.	63.7
<b>Total</b>	<b>29.2</b>	<b>N.A.</b>	<b>100.0</b>
<b>BUG Rating</b>	<b>B0-U2-G0</b>		

**ZONAL LUMEN SUMMARY**

Zone	%
0-20	0
0-30	0
0-40	0
0-60	0.4
0-80	1.9
0-90	15.6
10-90	15.6
20-40	0
20-50	0.2
40-70	0.8
60-80	1.5
70-80	1.2
80-90	13.7
90-110	42.9
90-120	59.8
90-130	74.7
90-150	81.9
90-180	84.4
110-180	41.5
0-180	100

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.04	0.05	0.05	0.05	0.05	0.07	0.05	0.07	0.07	0.09
50	0.04	0.05	0.05	0.05	0.05	0.07	0.05	0.07	0.07	0.07
55	0.04	0.05	0.05	0.05	0.07	0.05	0.07	0.07	0.05	0.07
60	0.04	0.05	0.05	0.05	0.05	0.05	0.07	0.05	0.07	0.07
62	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.07	0.07
64	0.04	0.05	0.05	0.05	0.05	0.07	0.07	0.05	0.07	0.07
66	0.04	0.05	0.05	0.05	0.05	0.07	0.07	0.05	0.07	0.07
68	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.07
70	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.07
72	0.04	0.05	0.05	0.05	0.04	0.05	0.05	0.05	0.07	0.07
74	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.07	0.07
76	0.21	0.21	0.19	0.19	0.19	0.16	0.14	0.12	0.11	0.11
78	1.22	1.22	1.15	1.05	0.93	0.79	0.65	0.51	0.37	0.30
80	3.00	2.95	2.81	2.60	2.31	1.97	1.64	1.28	1.00	0.86
82	6.71	6.60	6.32	5.78	5.13	4.42	3.62	2.74	2.20	1.85
84	11.32	11.18	10.60	9.76	8.54	7.18	5.69	4.19	3.41	2.81
86	12.05	11.86	11.39	10.62	9.41	7.98	6.34	4.89	4.21	3.60
88	14.39	14.20	13.66	12.68	11.25	9.68	7.44	6.03	5.20	4.65
90	14.88	14.69	14.13	12.98	11.63	9.99	7.84	6.57	5.75	5.26
92	15.16	14.97	14.36	13.26	11.68	9.87	8.14	6.71	5.87	5.47
94	15.02	14.81	14.02	12.96	11.35	9.57	7.89	6.36	5.45	4.98
96	16.45	16.15	15.05	13.64	11.91	9.82	7.96	6.27	5.36	4.94
98	17.60	17.27	16.24	14.76	12.64	10.34	8.21	6.51	5.66	5.12
100	18.51	18.15	17.25	15.65	13.40	11.06	8.56	6.72	5.66	5.07
102	19.56	19.16	18.22	16.31	14.09	11.58	8.73	6.93	5.69	5.05
104	19.91	19.53	18.53	16.77	14.29	11.74	9.15	7.11	5.71	5.13
106	19.00	18.65	17.59	16.08	13.76	11.09	8.89	6.97	5.66	5.17
108	17.60	17.36	16.38	15.04	13.12	10.39	8.37	6.65	5.55	5.07
110	15.93	15.67	14.98	13.60	11.84	9.75	7.54	6.20	5.24	4.84
112	14.50	14.30	13.73	12.63	10.90	8.98	7.07	5.73	4.84	4.54
114	13.38	13.19	12.59	11.67	10.09	8.14	6.51	5.26	4.51	4.23
116	12.61	12.45	11.89	11.09	9.78	7.68	6.06	4.84	4.21	3.96
118	12.75	12.61	12.16	11.42	9.99	7.65	5.76	4.51	3.89	3.70
120	15.05	14.97	14.69	13.94	12.09	9.15	5.87	4.24	3.62	3.44
125	15.19	14.98	14.57	13.59	11.46	8.91	6.15	3.86	2.93	2.79
130	9.85	9.83	9.62	9.08	7.95	5.92	4.17	2.76	1.99	1.82
135	2.83	2.79	2.76	2.66	2.45	2.15	1.78	1.55	1.43	1.38
140	1.85	1.82	1.80	1.76	1.68	1.59	1.45	1.36	1.28	1.22
145	1.33	1.33	1.31	1.31	1.31	1.29	1.29	1.28	1.24	1.21
150	1.33	1.31	1.31	1.31	1.31	1.29	1.29	1.28	1.26	1.22
155	1.36	1.36	1.36	1.35	1.33	1.33	1.29	1.28	1.24	1.21
160	1.26	1.28	1.26	1.26	1.26	1.24	1.22	1.21	1.19	1.15
165	1.15	1.15	1.15	1.15	1.15	1.14	1.14	1.10	1.08	1.05
170	0.98	0.98	0.98	0.94	0.94	0.94	0.94	0.93	0.93	0.91

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**CANDELA TABULATION - (Cont.)**

<b>175</b>	0.77	0.77	0.77	0.77	0.77	0.77	0.79	0.77	0.77	0.77
<b>180</b>	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>
<b>0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>15</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>20</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>25</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>30</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>35</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>40</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>45</b>	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.05	0.05
<b>50</b>	0.09	0.09	0.09	0.11	0.09	0.09	0.07	0.07	0.07	0.07
<b>55</b>	0.09	0.09	0.11	0.11	0.09	0.09	0.07	0.07	0.07	0.07
<b>60</b>	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07
<b>62</b>	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07
<b>64</b>	0.07	0.07	0.09	0.09	0.09	0.09	0.07	0.07	0.09	0.07
<b>66</b>	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07
<b>68</b>	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07
<b>70</b>	0.07	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.09
<b>72</b>	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.09
<b>74</b>	0.07	0.09	0.09	0.12	0.12	0.12	0.11	0.11	0.11	0.09
<b>76</b>	0.12	0.18	0.19	0.23	0.26	0.28	0.30	0.28	0.24	0.21
<b>78</b>	0.38	0.54	0.70	0.80	0.91	0.98	0.98	0.93	0.82	0.73
<b>80</b>	1.05	1.28	1.52	1.78	2.01	2.15	2.18	2.06	1.85	1.64
<b>82</b>	2.20	2.64	3.18	3.72	4.28	4.65	4.73	4.51	4.07	3.48
<b>84</b>	3.07	3.67	4.54	5.52	6.58	7.30	7.37	6.58	5.55	4.47
<b>86</b>	3.51	4.05	4.86	5.87	7.02	7.82	7.75	6.76	5.24	4.07
<b>88</b>	4.17	4.75	5.62	6.83	8.00	8.87	8.72	7.70	6.15	4.75
<b>90</b>	4.58	5.10	5.99	7.35	8.59	9.45	9.29	8.30	6.71	5.17
<b>92</b>	4.87	5.36	6.43	7.79	9.08	9.97	9.75	8.66	7.02	5.45
<b>94</b>	4.52	5.07	6.20	7.58	9.10	10.06	9.97	8.72	7.14	5.52
<b>96</b>	4.79	5.47	6.72	8.10	9.71	10.60	10.43	9.10	7.48	5.97
<b>98</b>	5.01	5.62	6.93	8.45	10.09	11.14	11.06	9.89	8.07	6.41
<b>100</b>	5.08	5.76	7.23	9.10	10.67	11.79	11.72	10.69	8.78	6.76
<b>102</b>	5.22	6.03	7.49	9.75	11.47	12.64	12.71	11.63	9.45	7.34
<b>104</b>	5.41	6.34	8.02	10.09	11.82	13.03	13.10	12.07	10.09	7.74
<b>106</b>	5.41	6.34	7.95	9.73	11.58	12.66	12.71	11.70	9.87	7.61
<b>108</b>	5.24	6.10	7.54	9.22	11.14	12.03	12.12	11.02	9.38	7.35
<b>110</b>	5.03	5.69	6.83	8.66	10.16	11.11	11.18	10.30	8.63	6.58
<b>112</b>	4.66	5.24	6.37	8.02	9.48	10.46	10.44	9.61	7.96	6.01
<b>114</b>	4.31	4.79	5.85	7.28	8.80	9.71	9.75	8.80	7.39	5.54
<b>116</b>	4.00	4.51	5.48	6.97	8.68	9.41	9.47	8.54	7.06	5.34
<b>118</b>	3.74	4.19	5.33	7.11	9.01	10.01	10.08	9.24	7.30	5.22
<b>120</b>	3.49	4.03	5.64	8.65	11.07	12.17	12.10	11.00	8.23	5.22
<b>125</b>	3.06	4.03	6.32	9.10	11.46	13.03	12.80	11.11	8.54	5.69
<b>130</b>	2.04	3.04	4.51	6.41	8.33	9.08	8.87	7.63	5.90	4.00
<b>135</b>	1.42	1.54	1.85	2.34	2.71	2.92	2.86	2.64	2.15	1.59
<b>140</b>	1.26	1.35	1.45	1.59	1.69	1.71	1.66	1.52	1.33	1.14
<b>145</b>	1.21	1.14	1.10	1.07	1.01	1.01	0.96	0.93	0.89	0.86
<b>150</b>	1.21	1.17	1.14	1.10	1.08	1.03	0.98	0.96	0.94	0.91
<b>155</b>	1.19	1.15	1.12	1.07	1.05	1.01	0.98	0.94	0.91	0.87



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**CANDELA TABULATION - (Cont.)**

<b>160</b>	1.12	1.08	1.07	1.03	1.00	0.98	0.94	0.91	0.87	0.86
<b>165</b>	1.05	1.01	0.98	0.96	0.93	0.91	0.87	0.86	0.80	0.80
<b>170</b>	0.91	0.87	0.87	0.84	0.82	0.80	0.79	0.75	0.75	0.72
<b>175</b>	0.75	0.73	0.73	0.72	0.70	0.70	0.68	0.68	0.65	0.65
<b>180</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**

	<b>100</b>	<b>105</b>	<b>110</b>	<b>115</b>	<b>120</b>	<b>125</b>	<b>130</b>	<b>135</b>	<b>140</b>	<b>145</b>
<b>0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>15</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>20</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>25</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>30</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>35</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>40</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>45</b>	0.07	0.07	0.07	0.09	0.11	0.12	0.12	0.14	0.14	0.14
<b>50</b>	0.07	0.07	0.09	0.11	0.11	0.14	0.14	0.14	0.14	0.14
<b>55</b>	0.07	0.07	0.09	0.09	0.11	0.14	0.14	0.16	0.14	0.14
<b>60</b>	0.07	0.09	0.09	0.09	0.11	0.12	0.14	0.14	0.14	0.14
<b>62</b>	0.09	0.09	0.09	0.09	0.11	0.14	0.14	0.14	0.14	0.14
<b>64</b>	0.07	0.09	0.09	0.09	0.12	0.14	0.14	0.14	0.14	0.14
<b>66</b>	0.09	0.09	0.09	0.11	0.12	0.12	0.14	0.14	0.14	0.16
<b>68</b>	0.09	0.09	0.09	0.11	0.12	0.12	0.14	0.14	0.18	0.16
<b>70</b>	0.09	0.09	0.09	0.11	0.12	0.14	0.14	0.18	0.16	0.18
<b>72</b>	0.09	0.09	0.09	0.11	0.12	0.14	0.14	0.18	0.18	0.16
<b>74</b>	0.09	0.09	0.11	0.12	0.12	0.14	0.14	0.16	0.16	0.16
<b>76</b>	0.19	0.16	0.14	0.14	0.16	0.16	0.16	0.18	0.16	0.16
<b>78</b>	0.59	0.51	0.42	0.33	0.26	0.24	0.23	0.21	0.18	0.18
<b>80</b>	1.33	1.10	0.87	0.70	0.56	0.45	0.40	0.33	0.26	0.23
<b>82</b>	2.85	2.22	1.66	1.26	0.87	0.66	0.49	0.38	0.31	0.24
<b>84</b>	3.20	2.34	1.64	1.15	0.79	0.56	0.42	0.33	0.30	0.24
<b>86</b>	2.95	2.15	1.50	1.05	0.72	0.49	0.38	0.31	0.28	0.26
<b>88</b>	3.63	2.62	1.85	1.35	0.87	0.54	0.40	0.33	0.31	0.28
<b>90</b>	3.98	2.81	2.06	1.48	0.94	0.63	0.49	0.38	0.35	0.31
<b>92</b>	4.21	3.07	2.15	1.55	1.01	0.72	0.54	0.42	0.38	0.31
<b>94</b>	4.17	3.13	2.22	1.52	1.07	0.75	0.56	0.45	0.38	0.31
<b>96</b>	4.44	3.30	2.38	1.59	1.08	0.79	0.58	0.45	0.38	0.31
<b>98</b>	4.68	3.46	2.41	1.64	1.10	0.77	0.59	0.45	0.38	0.33
<b>100</b>	5.12	3.65	2.50	1.75	1.17	0.80	0.59	0.49	0.40	0.33
<b>102</b>	5.50	3.76	2.64	1.75	1.17	0.82	0.59	0.47	0.40	0.35
<b>104</b>	5.82	4.12	2.79	1.92	1.24	0.89	0.63	0.47	0.40	0.33
<b>106</b>	5.76	4.17	2.86	1.92	1.29	0.94	0.63	0.51	0.40	0.33
<b>108</b>	5.33	4.03	2.93	1.92	1.33	0.96	0.68	0.51	0.44	0.37
<b>110</b>	5.07	3.69	2.71	1.96	1.33	0.94	0.68	0.54	0.44	0.38
<b>112</b>	4.63	3.51	2.57	1.89	1.29	0.96	0.70	0.54	0.47	0.40
<b>114</b>	4.14	3.25	2.41	1.73	1.24	0.94	0.68	0.56	0.49	0.44
<b>116</b>	3.86	3.04	2.32	1.64	1.21	0.91	0.72	0.59	0.52	0.47
<b>118</b>	3.69	2.85	2.15	1.55	1.14	0.87	0.70	0.59	0.54	0.51
<b>120</b>	3.67	2.71	2.04	1.52	1.12	0.82	0.68	0.61	0.54	0.52
<b>125</b>	3.56	2.39	1.69	1.22	0.87	0.73	0.65	0.58	0.52	0.49
<b>130</b>	2.39	1.62	1.17	0.87	0.75	0.66	0.59	0.56	0.51	0.45
<b>135</b>	1.22	1.00	0.87	0.77	0.70	0.65	0.59	0.54	0.52	0.47
<b>140</b>	1.00	0.86	0.79	0.73	0.68	0.65	0.61	0.56	0.52	0.49

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**CANDELA TABULATION - (Cont.)**

<b>145</b>	0.84	0.80	0.77	0.73	0.70	0.68	0.63	0.59	0.56	0.51
<b>150</b>	0.87	0.84	0.79	0.77	0.73	0.70	0.66	0.63	0.58	0.54
<b>155</b>	0.84	0.82	0.79	0.75	0.73	0.70	0.66	0.63	0.59	0.56
<b>160</b>	0.80	0.79	0.75	0.73	0.70	0.70	0.66	0.63	0.63	0.58
<b>165</b>	0.77	0.75	0.72	0.72	0.70	0.66	0.66	0.63	0.61	0.58
<b>170</b>	0.70	0.68	0.66	0.66	0.65	0.63	0.63	0.63	0.61	0.59
<b>175</b>	0.63	0.63	0.63	0.63	0.61	0.59	0.59	0.59	0.59	0.58
<b>180</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**

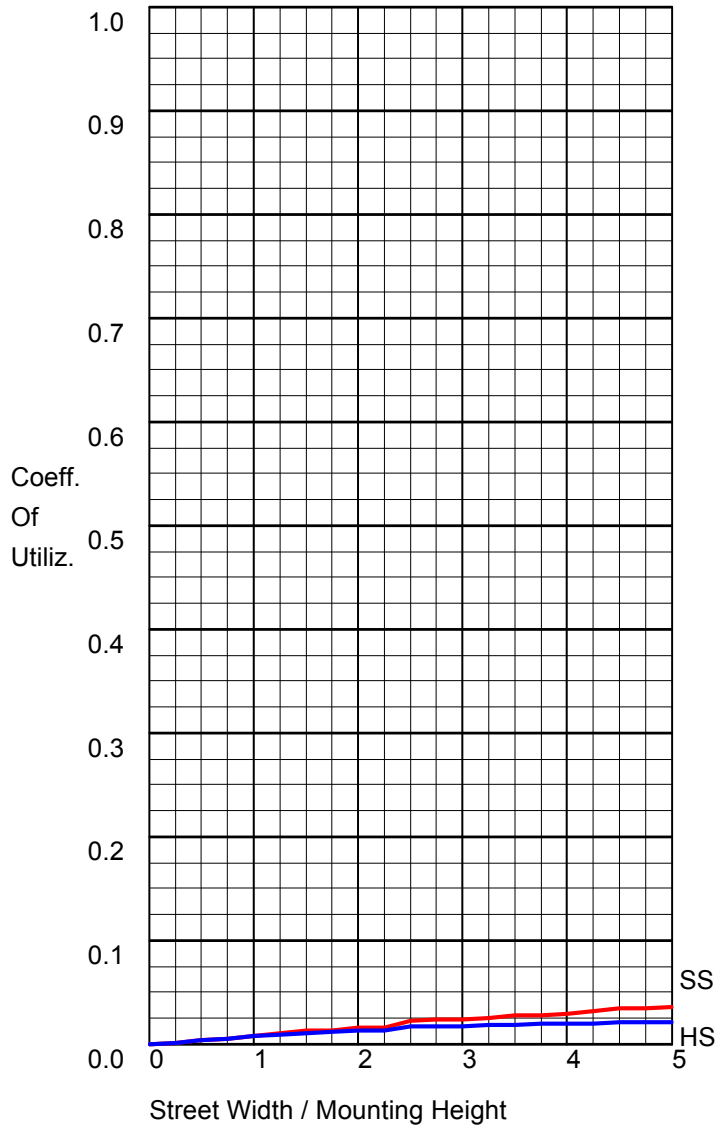
	<u><b>150</b></u>	<u><b>155</b></u>	<u><b>160</b></u>	<u><b>165</b></u>	<u><b>170</b></u>	<u><b>175</b></u>	<u><b>180</b></u>
<b>0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>5</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>10</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>15</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>20</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>25</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>30</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>35</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>40</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>45</b>	0.14	0.12	0.12	0.09	0.09	0.07	0.07
<b>50</b>	0.14	0.14	0.12	0.09	0.09	0.09	0.07
<b>55</b>	0.14	0.14	0.12	0.12	0.09	0.11	0.11
<b>60</b>	0.14	0.14	0.12	0.12	0.11	0.11	0.11
<b>62</b>	0.14	0.14	0.12	0.12	0.12	0.11	0.11
<b>64</b>	0.14	0.14	0.14	0.12	0.11	0.11	0.11
<b>66</b>	0.14	0.14	0.14	0.12	0.12	0.11	0.11
<b>68</b>	0.14	0.14	0.14	0.12	0.12	0.11	0.14
<b>70</b>	0.16	0.14	0.14	0.14	0.12	0.12	0.11
<b>72</b>	0.16	0.16	0.14	0.14	0.12	0.12	0.11
<b>74</b>	0.16	0.14	0.14	0.14	0.12	0.12	0.14
<b>76</b>	0.16	0.16	0.16	0.14	0.14	0.14	0.14
<b>78</b>	0.18	0.16	0.16	0.14	0.14	0.14	0.14
<b>80</b>	0.18	0.16	0.14	0.14	0.16	0.14	0.14
<b>82</b>	0.18	0.14	0.14	0.14	0.14	0.14	0.14
<b>84</b>	0.18	0.16	0.14	0.14	0.16	0.14	0.14
<b>86</b>	0.21	0.18	0.16	0.14	0.16	0.14	0.11
<b>88</b>	0.21	0.18	0.16	0.16	0.16	0.14	0.14
<b>90</b>	0.24	0.18	0.14	0.16	0.14	0.12	0.14
<b>92</b>	0.24	0.21	0.16	0.16	0.12	0.14	0.14
<b>94</b>	0.24	0.19	0.16	0.12	0.14	0.12	0.14
<b>96</b>	0.26	0.21	0.16	0.14	0.14	0.11	0.11
<b>98</b>	0.28	0.23	0.16	0.14	0.12	0.11	0.11
<b>100</b>	0.26	0.23	0.18	0.14	0.11	0.11	0.11
<b>102</b>	0.26	0.23	0.18	0.14	0.11	0.11	0.11
<b>104</b>	0.26	0.23	0.18	0.14	0.12	0.11	0.11
<b>106</b>	0.28	0.24	0.19	0.18	0.14	0.11	0.11
<b>108</b>	0.30	0.26	0.23	0.19	0.16	0.14	0.14
<b>110</b>	0.33	0.28	0.24	0.21	0.19	0.18	0.18
<b>112</b>	0.35	0.31	0.28	0.26	0.23	0.21	0.21
<b>114</b>	0.38	0.35	0.33	0.31	0.30	0.28	0.28
<b>116</b>	0.45	0.42	0.40	0.40	0.40	0.38	0.38
<b>118</b>	0.47	0.45	0.45	0.45	0.45	0.45	0.45
<b>120</b>	0.49	0.49	0.49	0.49	0.49	0.49	0.49
<b>125</b>	0.47	0.49	0.49	0.49	0.49	0.49	0.49

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L061910602.IES**

**CANDELA TABULATION - (Cont.)**

<b>130</b>	0.44	0.42	0.42	0.38	0.38	0.38	0.38
<b>135</b>	0.44	0.42	0.38	0.35	0.35	0.33	0.31
<b>140</b>	0.45	0.42	0.38	0.35	0.35	0.35	0.35
<b>145</b>	0.47	0.45	0.42	0.38	0.38	0.35	0.35
<b>150</b>	0.51	0.49	0.45	0.42	0.40	0.38	0.38
<b>155</b>	0.54	0.49	0.47	0.45	0.44	0.42	0.42
<b>160</b>	0.54	0.52	0.49	0.47	0.45	0.45	0.45
<b>165</b>	0.58	0.56	0.52	0.51	0.49	0.49	0.49
<b>170</b>	0.58	0.56	0.56	0.54	0.52	0.52	0.52
<b>175</b>	0.56	0.56	0.56	0.54	0.54	0.54	0.52
<b>180</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00

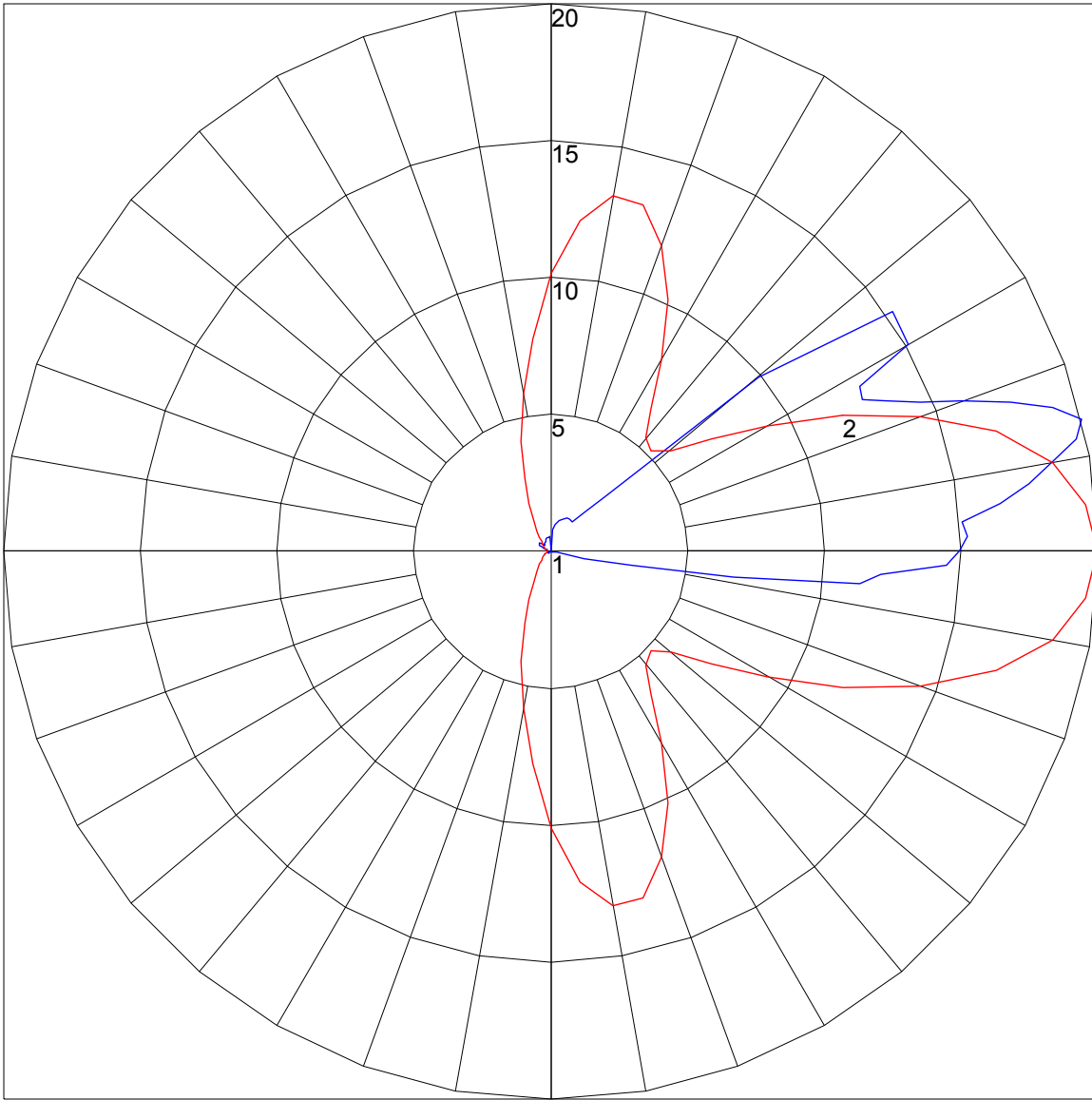
**COEFFICIENTS OF UTILIZATION**



**FLUX DISTRIBUTION**

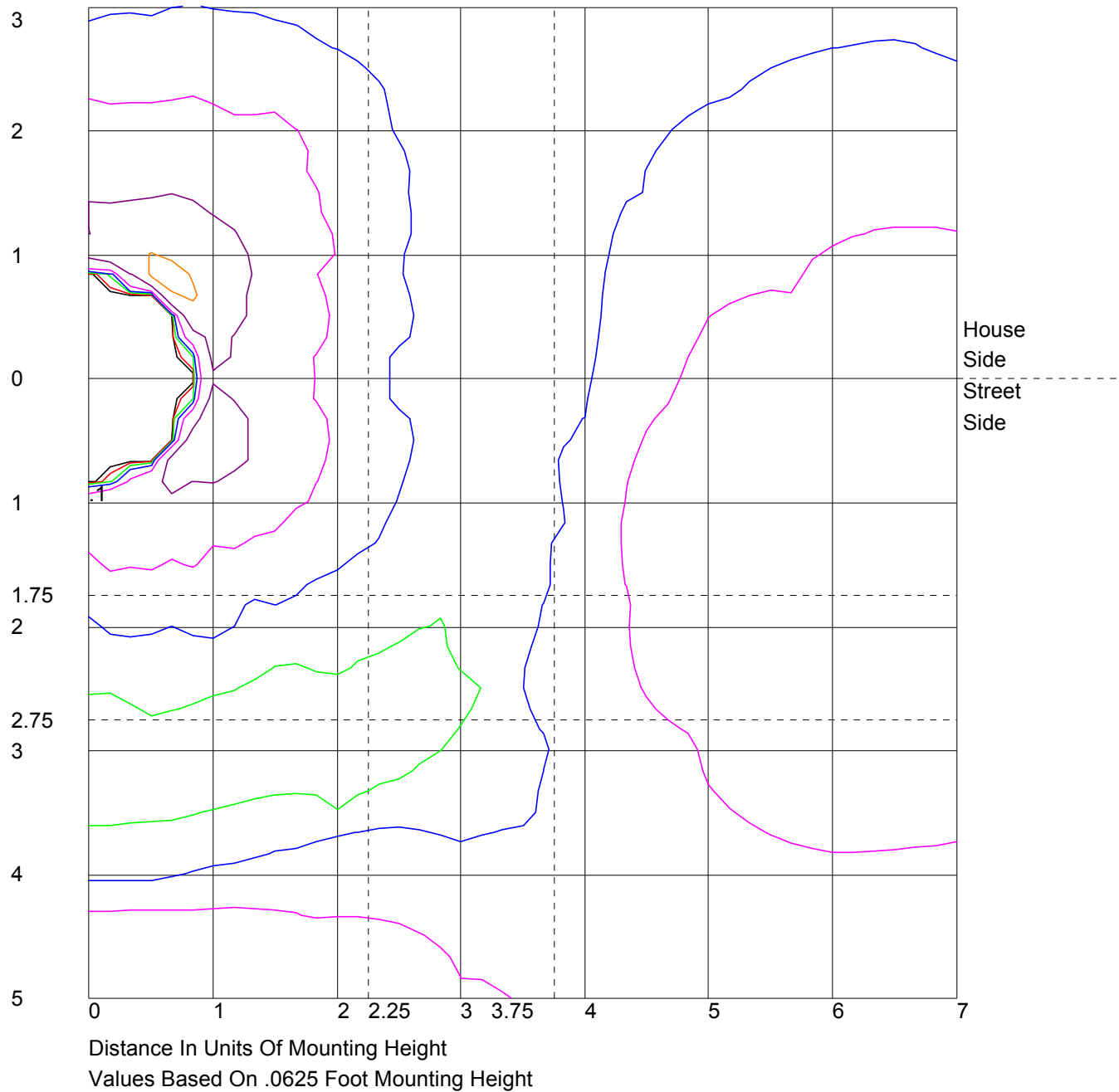
	Lumens	Percent Of Luminaire
Downward Street Side	3.7	12.8
Downward House Side	0.8	2.8
Downward Total	4.5	15.5
Upward Street Side	20.7	71.2
Upward House Side	3.8	13.2
Upward Total	24.5	84.4
Total Flux	29.0	99.9

POLAR GRAPH

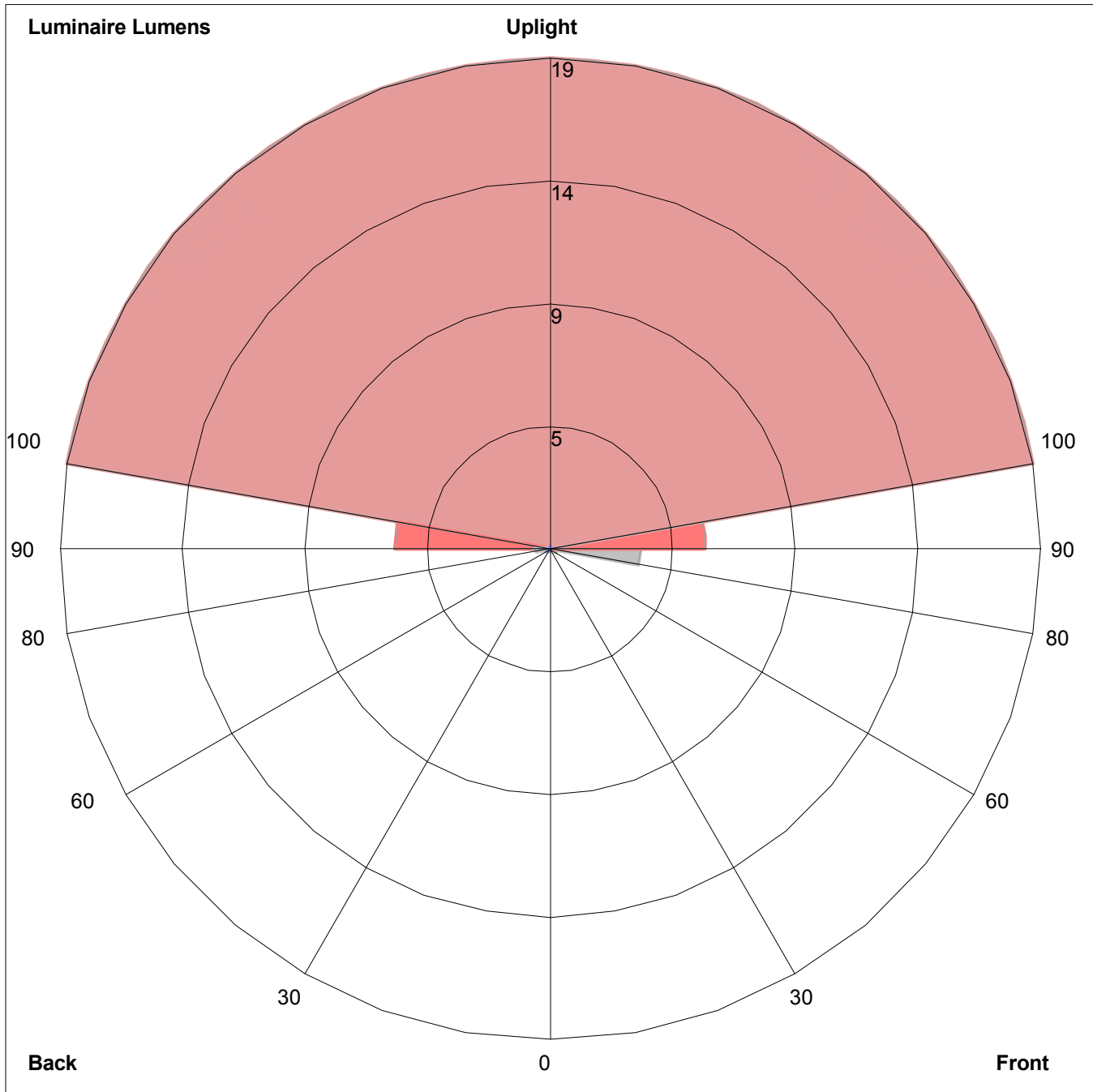


Maximum Candela = 19.91 Located At Horizontal Angle = 0, Vertical Angle = 104  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (104) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



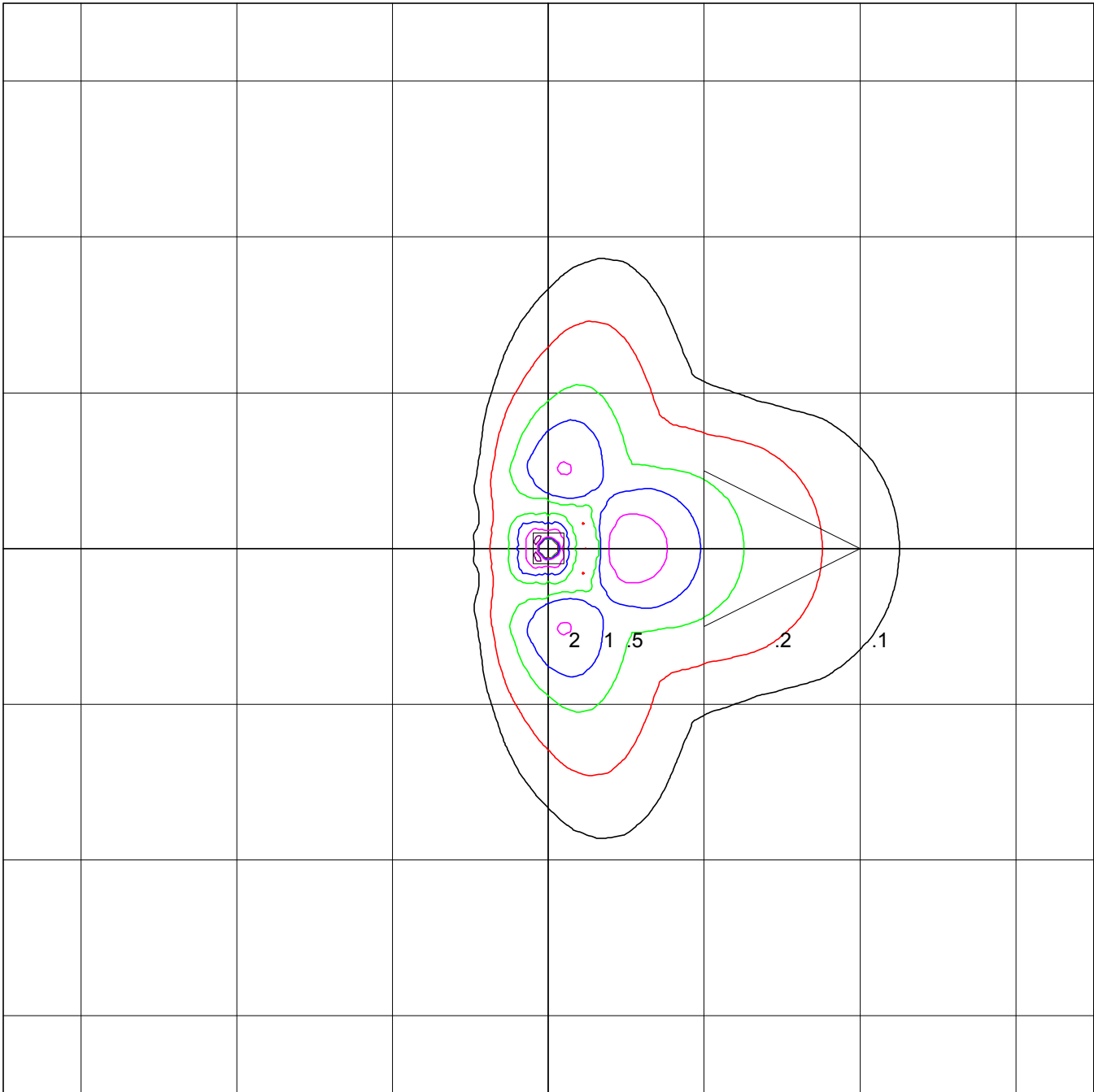
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=0.0, Medium=0.1, High=0.3, Very High=3.4  
Back: Low=0.0, Medium=0.1, High=0.2, Very High=0.6  
Uplight: Low=5.9, High=18.6

BUG Rating : B0-U2-G0

## Photometric Test Report



Vista Professional Outdoor Lighting  
1180-X-H-30-A-MV-ND  
Drive-Over Light, H-Half 180° Distribution

Horizontal Footcandles  
Scale: 1 Inch = 1 Ft.  
Light Loss Factor = 1.00  
Lumens Per Lamp = N.A. (absolute photometry)  
Luminaire Lumens = 29  
Mounting Height = 0.08 Ft  
Maximum Calculated Value = 7.06 Fc  
Arrangement: Single