



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

Report No: L021904303



Report No: L021904303

Issue Date: 2/28/2019

Report Prepared For: Beachside Lighting
905 Kalaniana'ole Hwy #2901 Kailua, HI 96734

Model Number: X1-20-2W-A-NO

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: 2/13/19

Date of Tests: 2/25/19 - 2/26/19

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

Manufacturer:	Beachside Lighting
Model Number:	X1-20-2W-A-NO
Driver Model Number:	N/A

Test Summary

Total Lumens:	30.50
Efficacy:	13.68
Color Redering Index:	-27.4
Correlated Color Temperature:	1668
Input Voltage (VAC/60Hz):	12.02
Input Current (Amp):	0.2519
Input Power (W):	2.23
Input Power Factor:	0.7361
Current ATHD (%):	63.9%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	2:00
Total Operating Time (Hours):	2:40

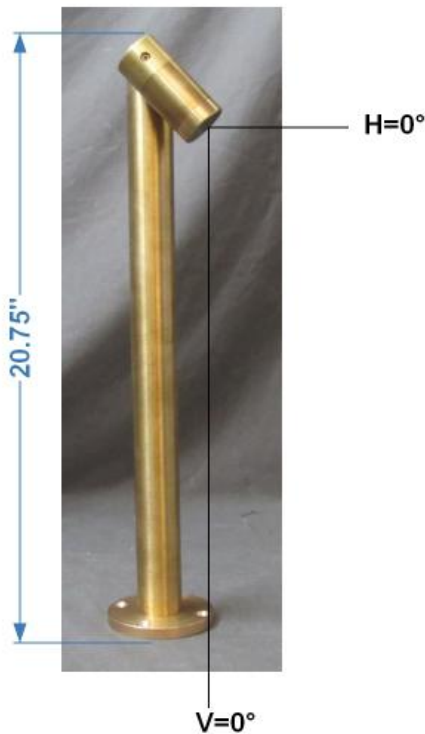
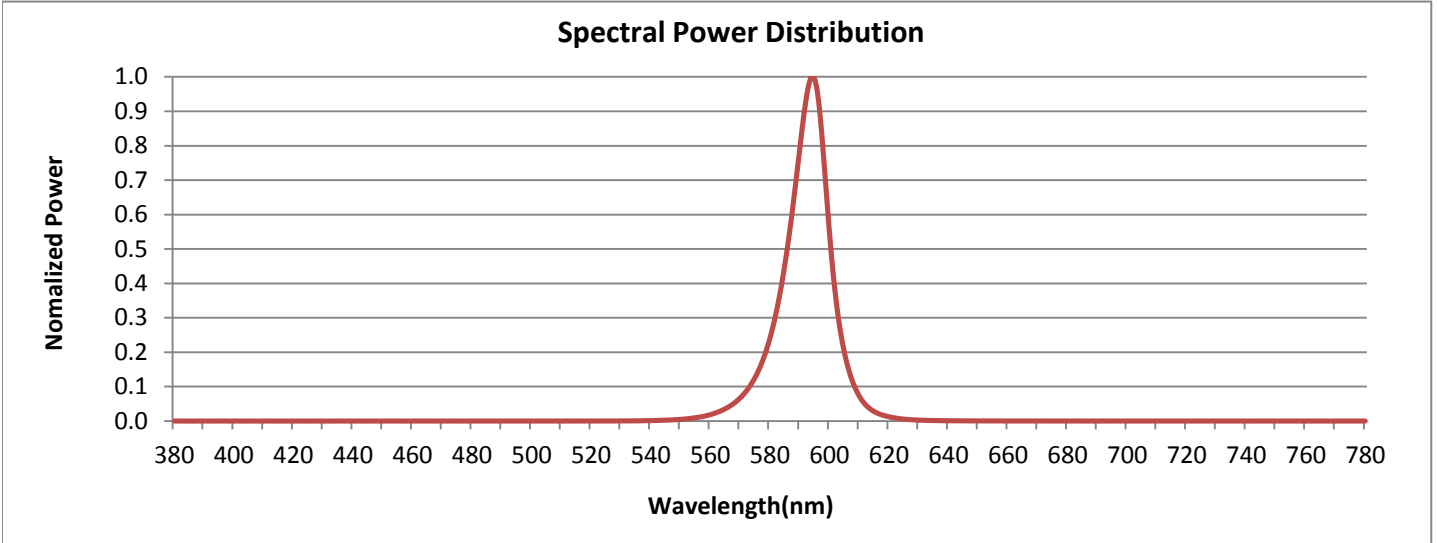


FIG. 1 LUMINAIRE

Colorimetry Test Results

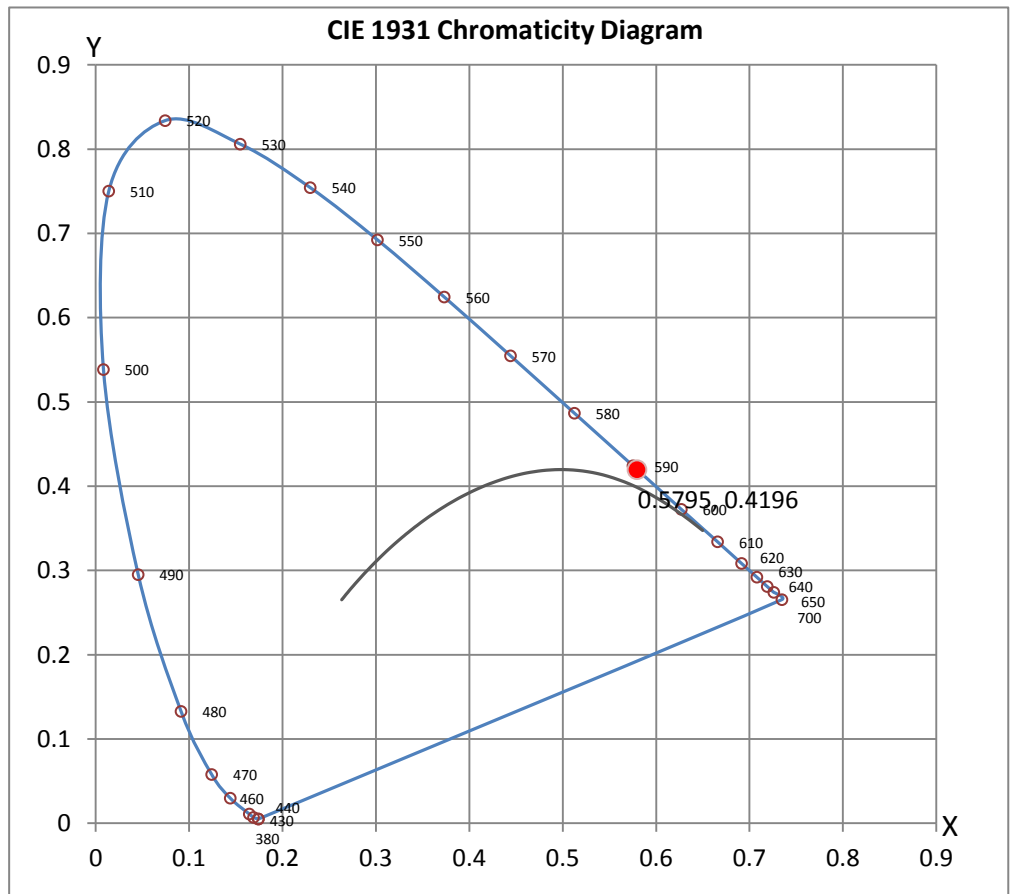


CRI & CCT

x	0.5795
y	0.4196
u'	0.3371
v'	0.5492
CRI	-27.40
CCT	1668
Duv	0.00734

R Values

R1	-44.60
R2	46.35
R3	17.90
R4	-74.41
R5	-47.15
R6	33.82
R7	-9.24
R8	-141.89
R9	-417.31
R10	19.59
R11	-105.41
R12	-21.60
R13	-25.64
R14	45.41
R15	-74.62



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 : Dennis Malonzo

Test Report Released by:



Joseph Shin
Engineering Manager

Test Report Reviewed by:



Steve Kang
Quality Assurance

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



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

Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L021904303
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 02/26/2019
[MANUFAC] Beachside Lighting
[LUMCAT] X1-20-2W-A-NO
[LUMINAIRE] 2w Amber Lamping
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 12.02VAC, 2.23W
[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	31
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	14
Total Luminaire Watts	2.23
Ballast Factor	1.00
Upward Waste Light Ratio	0.06
Maximum Candela	18.472
Maximum Candela Angle	0H 45V
Maximum Candela (<90 Degrees Vertical)	18.472
Maximum Candela Angle (<90 Degrees Vertical)	0H 45V
Maximum Candela At 90 Degrees Vertical	6.619 (21.4% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	11.763 (37.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

ZONAL LUMEN SUMMARY

	Lumens	% Lamp	% Luminaire	Zone	%
FL - Front-Low (0-30)	4.6	N.A.	15.0		
FM - Front-Medium (30-60)	13.0	N.A.	42.4	0-20	8.3
FH - Front-High (60-80)	7.5	N.A.	24.4	0-30	18.8
FVH - Front-Very High (80-90)	1.9	N.A.	6.2	0-40	32.4
BL - Back-Low (0-30)	1.1	N.A.	3.8	0-60	63.3
BM - Back-Medium (30-60)	0.6	N.A.	1.9	0-80	87.9
BH - Back-High (60-80)	0.1	N.A.	0.2	0-90	94.2
BVH - Back-Very High (80-90)	< 0.05	N.A.	0.0	10-90	92.3
UL - Uplight-Low (90-100)	1.1	N.A.	3.5	20-40	24.1
UH - Uplight-High (100-180)	0.7	N.A.	2.3	20-50	39.5
				40-70	44.9
Total	30.6	N.A.	100.0	60-80	24.6
				70-80	10.6
BUG Rating	B0-U1-G0			80-90	6.3
				90-110	5.1
				90-120	5.7
				90-130	5.8
				90-150	5.8
				90-180	5.8
				110-180	0.7
				0-180	100

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	10	15	20	25	30	35	40	45
0.0	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711
2.5	6.497	6.497	6.497	6.497	6.448	6.421	6.388	6.350	6.307	6.260
5.0	8.051	8.039	8.002	7.938	7.850	7.738	7.602	7.445	7.267	7.072
7.5	9.605	9.609	9.531	9.432	9.294	9.119	8.911	8.668	8.394	8.093
10.0	11.352	11.322	11.227	11.070	10.854	10.583	10.259	9.888	9.489	9.071
12.5	12.976	12.948	12.864	12.749	12.424	12.062	11.635	11.149	10.610	10.026
15.0	14.111	14.075	13.967	13.790	13.547	13.242	12.884	12.344	11.674	10.949
17.5	15.029	14.994	14.902	14.755	14.558	14.154	13.720	13.234	12.669	11.799
20.0	15.753	15.713	15.642	15.463	15.205	14.889	14.550	13.937	13.309	12.554
22.5	16.276	16.227	16.149	15.979	15.781	15.485	15.059	14.584	13.847	13.055
25.0	16.713	16.687	16.569	16.394	16.183	15.911	15.545	15.004	14.358	13.453
27.5	17.108	17.068	16.940	16.780	16.524	16.237	15.864	15.360	14.720	13.748
30.0	17.394	17.375	17.269	17.090	16.819	16.496	16.115	15.671	14.938	13.983
32.5	17.648	17.632	17.532	17.346	17.088	16.751	16.351	15.838	15.110	14.124
35.0	17.866	17.850	17.772	17.586	17.324	16.958	16.507	15.970	15.225	14.191
37.5	18.084	18.087	17.996	17.771	17.493	17.108	16.617	16.027	15.230	14.130
40.0	18.267	18.278	18.170	17.935	17.611	17.186	16.625	15.990	15.165	13.990
42.5	18.346	18.381	18.248	17.999	17.664	17.204	16.590	15.901	15.014	13.754
45.0	18.472	18.393	18.262	18.003	17.640	17.149	16.513	15.788	14.845	13.453
47.5	18.451	18.421	18.227	17.942	17.558	17.038	16.397	15.643	14.636	13.080
50.0	18.372	18.341	18.173	17.843	17.439	16.900	16.242	15.400	14.283	12.616
52.5	18.189	18.174	18.017	17.700	17.273	16.696	15.990	15.090	13.786	11.886
55.0	17.953	17.944	17.792	17.506	17.040	16.447	15.711	14.735	13.234	11.077
57.5	17.691	17.705	17.564	17.227	16.743	16.142	15.323	14.196	12.558	10.189
60.0	17.499	17.450	17.290	16.893	16.385	15.758	14.843	13.495	11.564	9.241
62.5	17.191	17.151	16.928	16.513	15.982	15.272	14.229	12.757	10.507	8.261
65.0	16.859	16.772	16.517	16.090	15.529	14.669	13.404	11.634	9.407	7.235
67.5	16.451	16.358	16.071	15.598	14.828	13.846	12.505	10.411	8.303	6.290
70.0	16.014	15.898	15.499	14.847	13.982	12.890	11.176	9.177	7.165	5.719
72.5	15.328	15.155	14.733	13.948	12.994	11.561	9.791	7.957	6.208	5.144
75.0	14.434	14.214	13.668	12.901	11.641	10.068	8.462	6.709	5.605	4.662
77.5	13.321	13.109	12.426	11.345	10.060	8.605	7.098	5.922	4.994	4.326
80.0	11.763	11.495	10.746	9.660	8.503	7.166	6.016	5.263	4.563	3.983
82.5	10.094	9.853	9.143	8.115	6.957	5.950	5.304	4.686	4.193	3.629
85.0	8.662	8.398	7.653	6.589	5.786	5.166	4.609	4.261	3.808	3.231
87.5	7.230	7.018	6.462	5.736	5.027	4.423	4.160	3.835	3.409	2.786
90.0	6.619	6.380	5.783	5.028	4.391	3.988	3.708	3.403	2.933	2.331
92.5	6.008	5.760	5.199	4.535	3.959	3.548	3.251	2.912	2.444	1.865
95.0	5.519	5.299	4.779	4.127	3.522	3.103	2.763	2.415	1.959	1.401
97.5	5.030	4.840	4.351	3.717	3.094	2.634	2.275	1.925	1.478	1.108
100.0	4.541	4.357	3.848	3.213	2.618	2.176	1.807	1.441	1.102	0.933
102.5	3.738	3.590	3.172	2.642	2.120	1.705	1.342	1.051	0.925	0.760
105.0	2.934	2.817	2.482	2.050	1.603	1.224	0.996	0.885	0.752	0.592
107.5	2.131	2.040	1.781	1.437	1.089	0.948	0.839	0.727	0.582	0.424
110.0	1.327	1.293	1.198	1.067	0.918	0.791	0.682	0.573	0.424	0.349
112.5	1.091	1.064	0.986	0.878	0.751	0.636	0.528	0.419	0.349	0.291
115.0	0.856	0.834	0.771	0.683	0.579	0.478	0.380	0.342	0.296	0.236
117.5	0.620	0.603	0.554	0.484	0.402	0.360	0.322	0.278	0.241	0.183
120.0	0.384	0.381	0.371	0.354	0.331	0.302	0.265	0.215	0.180	0.134
122.5	0.323	0.320	0.310	0.294	0.272	0.243	0.209	0.158	0.126	0.104
125.0	0.262	0.259	0.250	0.234	0.213	0.185	0.152	0.117	0.096	0.073
127.5	0.201	0.198	0.189	0.174	0.153	0.133	0.114	0.091	0.000	0.000
130.0	0.140	0.138	0.133	0.125	0.114	0.099	0.082	0.000	0.000	0.000

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

CANDELA TABULATION - (Cont.)

132.5	0.105	0.103	0.099	0.091	0.080	0.000	0.000	0.000	0.000	0.000
135.0	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. 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	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711
2.5	6.208	6.153	6.094	6.033	5.968	5.903	5.836	5.768	5.701	5.633
5.0	6.860	6.633	6.448	6.324	6.195	6.062	5.928	5.792	5.656	5.521
7.5	7.765	7.416	7.047	6.664	6.391	6.190	5.986	5.781	5.576	5.374
10.0	8.619	8.138	7.634	7.110	6.573	6.275	6.005	5.735	5.467	5.201
12.5	9.419	8.801	8.157	7.494	6.817	6.332	5.996	5.661	5.329	5.002
15.0	10.178	9.392	8.610	7.806	6.990	6.355	5.953	5.552	5.158	4.859
17.5	10.882	9.929	8.992	8.045	7.086	6.341	5.870	5.405	4.978	4.703
20.0	11.477	10.366	9.259	8.176	7.088	6.279	5.747	5.222	4.821	4.530
22.5	11.971	10.714	9.452	8.239	7.023	6.186	5.589	5.005	4.662	4.340
25.0	12.380	10.973	9.561	8.219	6.880	6.055	5.393	4.840	4.483	4.135
27.5	12.673	11.121	9.572	8.107	6.653	5.884	5.169	4.681	4.294	3.922
30.0	12.847	11.174	9.493	7.907	6.447	5.675	4.934	4.506	4.090	3.691
32.5	12.894	11.123	9.339	7.643	6.263	5.439	4.773	4.319	3.877	3.413
35.0	12.877	10.968	9.085	7.288	6.043	5.176	4.595	4.118	3.654	3.102
37.5	12.723	10.687	8.729	6.840	5.770	4.905	4.399	3.904	3.376	2.782
40.0	12.430	10.304	8.285	6.422	5.468	4.705	4.178	3.667	3.065	2.446
42.5	12.032	9.831	7.773	6.127	5.135	4.486	3.944	3.379	2.732	2.098
45.0	11.527	9.283	7.179	5.798	4.829	4.258	3.702	3.060	2.393	1.741
47.5	10.927	8.675	6.518	5.431	4.601	4.015	3.429	2.733	2.048	1.381
50.0	10.245	7.997	6.122	5.040	4.363	3.768	3.104	2.395	1.694	1.155
52.5	9.490	7.252	5.729	4.708	4.111	3.520	2.781	2.052	1.337	1.016
55.0	8.711	6.456	5.315	4.467	3.847	3.194	2.451	1.707	1.135	0.878
57.5	7.866	6.005	4.872	4.211	3.582	2.852	2.104	1.356	1.003	0.742
60.0	6.969	5.538	4.574	3.938	3.275	2.505	1.746	1.137	0.866	0.605
62.5	6.214	5.051	4.292	3.655	2.930	2.152	1.385	0.998	0.725	0.460
65.0	5.696	4.638	4.000	3.353	2.581	1.796	1.131	0.858	0.583	0.365
67.5	5.157	4.343	3.699	2.995	2.224	1.442	0.999	0.723	0.442	0.319
70.0	4.673	4.038	3.395	2.629	1.861	1.161	0.872	0.592	0.360	0.274
72.5	4.360	3.725	3.026	2.254	1.490	1.027	0.742	0.461	0.319	0.225
75.0	4.040	3.404	2.648	1.879	1.164	0.890	0.607	0.376	0.276	0.178
77.5	3.712	3.021	2.262	1.498	1.023	0.751	0.469	0.331	0.231	0.132

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

CANDELA TABULATION - (Cont.)

80.0	3.369	2.627	1.869	1.160	0.886	0.611	0.377	0.284	0.188	0.108
82.5	2.958	2.227	1.477	1.020	0.747	0.471	0.328	0.234	0.147	0.090
85.0	2.535	1.821	1.156	0.878	0.607	0.377	0.279	0.181	0.116	0.070
87.5	2.102	1.409	1.012	0.737	0.466	0.328	0.230	0.131	0.091	0.000
90.0	1.660	1.131	0.865	0.592	0.374	0.278	0.180	0.107	0.070	0.000
92.5	1.214	0.971	0.713	0.444	0.324	0.227	0.131	0.089	0.000	0.000
95.0	1.047	0.814	0.559	0.367	0.276	0.177	0.107	0.000	0.000	0.000
97.5	0.884	0.656	0.410	0.318	0.230	0.129	0.088	0.000	0.000	0.000
100.0	0.719	0.494	0.364	0.268	0.183	0.111	0.000	0.000	0.000	0.000
102.5	0.554	0.380	0.315	0.224	0.137	0.090	0.000	0.000	0.000	0.000
105.0	0.397	0.329	0.263	0.180	0.111	0.000	0.000	0.000	0.000	0.000
107.5	0.343	0.276	0.212	0.143	0.085	0.000	0.000	0.000	0.000	0.000
110.0	0.289	0.221	0.162	0.109	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.234	0.166	0.123	0.076	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.179	0.125	0.089	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.132	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.073	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711	5.711
2.5	5.566	5.500	5.435	5.373	5.314	5.257	5.204	5.155	5.109	5.068
5.0	5.388	5.258	5.131	5.010	4.916	4.856	4.799	4.746	4.697	4.652
7.5	5.175	4.981	4.862	4.765	4.672	4.584	4.501	4.425	4.355	4.291
10.0	4.955	4.807	4.671	4.542	4.420	4.306	4.199	4.100	4.009	3.926
12.5	4.805	4.629	4.461	4.302	4.152	4.012	3.884	3.767	3.667	3.521
15.0	4.643	4.433	4.234	4.045	3.869	3.705	3.518	3.329	3.158	3.006
17.5	4.454	4.216	3.987	3.772	3.547	3.294	3.060	2.845	2.651	2.478
20.0	4.250	3.981	3.725	3.439	3.137	2.856	2.595	2.356	2.140	1.947
22.5	4.030	3.732	3.401	3.050	2.719	2.411	2.124	1.862	1.624	1.414
25.0	3.797	3.434	3.035	2.654	2.294	1.959	1.648	1.364	1.210	1.131

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

CANDELA TABULATION - (Cont.)

27.5	3.548	3.095	2.663	2.253	1.866	1.501	1.219	1.116	1.022	0.937
30.0	3.225	2.747	2.286	1.848	1.434	1.170	1.044	0.934	0.836	0.743
32.5	2.889	2.385	1.901	1.437	1.152	1.005	0.871	0.752	0.648	0.551
35.0	2.548	2.016	1.507	1.160	0.993	0.836	0.695	0.570	0.459	0.398
37.5	2.205	1.645	1.193	1.008	0.832	0.667	0.517	0.393	0.359	0.325
40.0	1.851	1.272	1.051	0.857	0.671	0.497	0.371	0.333	0.294	0.255
42.5	1.481	1.122	0.908	0.706	0.513	0.366	0.318	0.277	0.233	0.188
45.0	1.191	0.976	0.761	0.552	0.386	0.319	0.264	0.223	0.176	0.125
47.5	1.057	0.833	0.612	0.402	0.338	0.271	0.207	0.166	0.128	0.101
50.0	0.922	0.692	0.465	0.352	0.286	0.223	0.156	0.119	0.101	0.077
52.5	0.781	0.548	0.384	0.303	0.235	0.173	0.119	0.092	0.071	0.000
55.0	0.636	0.414	0.329	0.249	0.182	0.129	0.096	0.000	0.000	0.000
57.5	0.488	0.356	0.275	0.192	0.129	0.100	0.000	0.000	0.000	0.000
60.0	0.382	0.301	0.220	0.136	0.101	0.072	0.000	0.000	0.000	0.000
62.5	0.334	0.247	0.164	0.107	0.078	0.000	0.000	0.000	0.000	0.000
65.0	0.285	0.196	0.118	0.087	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.237	0.146	0.099	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.193	0.114	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.150	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.116	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

CANDELA TABULATION - (Cont.)

167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Horizontal Angles
Angles

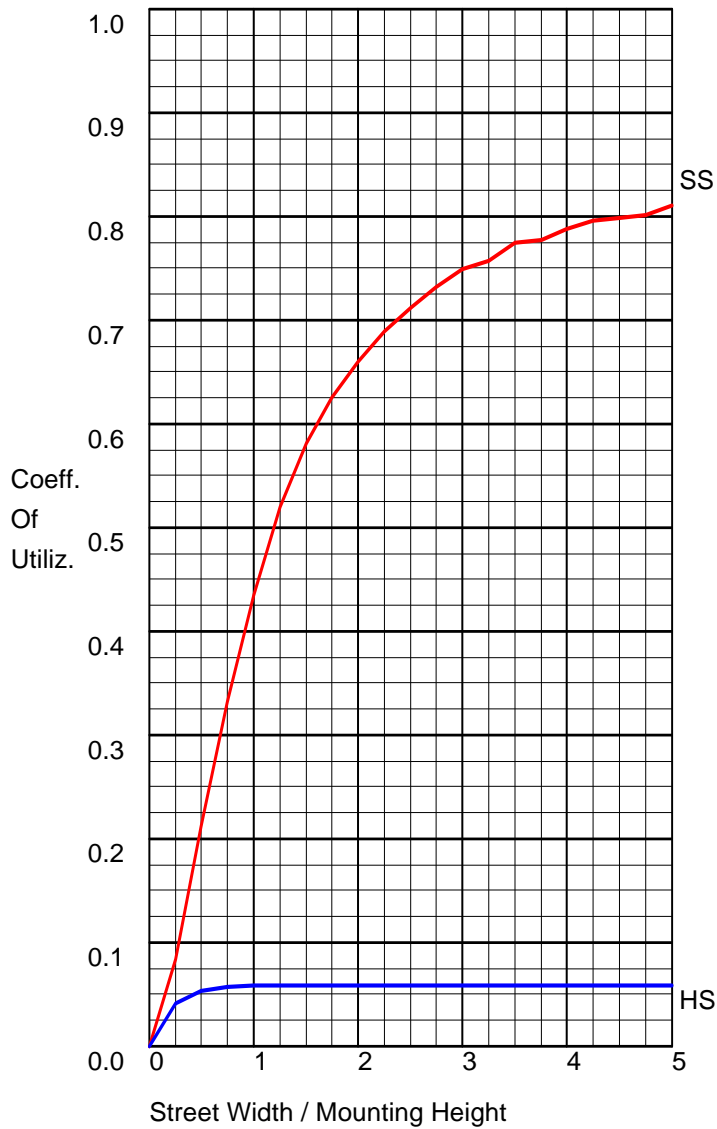
	150	155	160	165	170	175	180
0.0	5.711	5.711	5.711	5.711	5.711	5.711	5.711
2.5	5.032	5.001	4.975	4.954	4.939	4.929	4.925
5.0	4.613	4.579	4.550	4.527	4.510	4.499	4.494
7.5	4.235	4.186	4.144	4.112	4.087	4.071	4.064
10.0	3.853	3.790	3.737	3.695	3.663	3.643	3.633
12.5	3.399	3.294	3.206	3.138	3.090	3.060	3.048
15.0	2.864	2.742	2.640	2.561	2.506	2.473	2.463
17.5	2.327	2.188	2.072	1.980	1.921	1.887	1.877
20.0	1.779	1.632	1.503	1.401	1.334	1.300	1.292
22.5	1.265	1.215	1.162	1.118	1.090	1.081	1.083
25.0	1.066	1.012	0.962	0.914	0.881	0.871	0.873
27.5	0.864	0.808	0.762	0.710	0.672	0.662	0.664
30.0	0.661	0.602	0.559	0.506	0.464	0.452	0.454
32.5	0.462	0.418	0.412	0.393	0.371	0.369	0.376
35.0	0.366	0.345	0.335	0.318	0.294	0.290	0.297
37.5	0.295	0.275	0.260	0.243	0.217	0.211	0.219
40.0	0.220	0.204	0.187	0.167	0.140	0.132	0.140
42.5	0.143	0.131	0.128	0.118	0.105	0.100	0.105
45.0	0.099	0.099	0.094	0.084	0.075	0.072	0.070
47.5	0.083	0.073	0.000	0.000	0.000	0.000	0.000
50.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904303.IES

CANDELA TABULATION - (Cont.)

115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

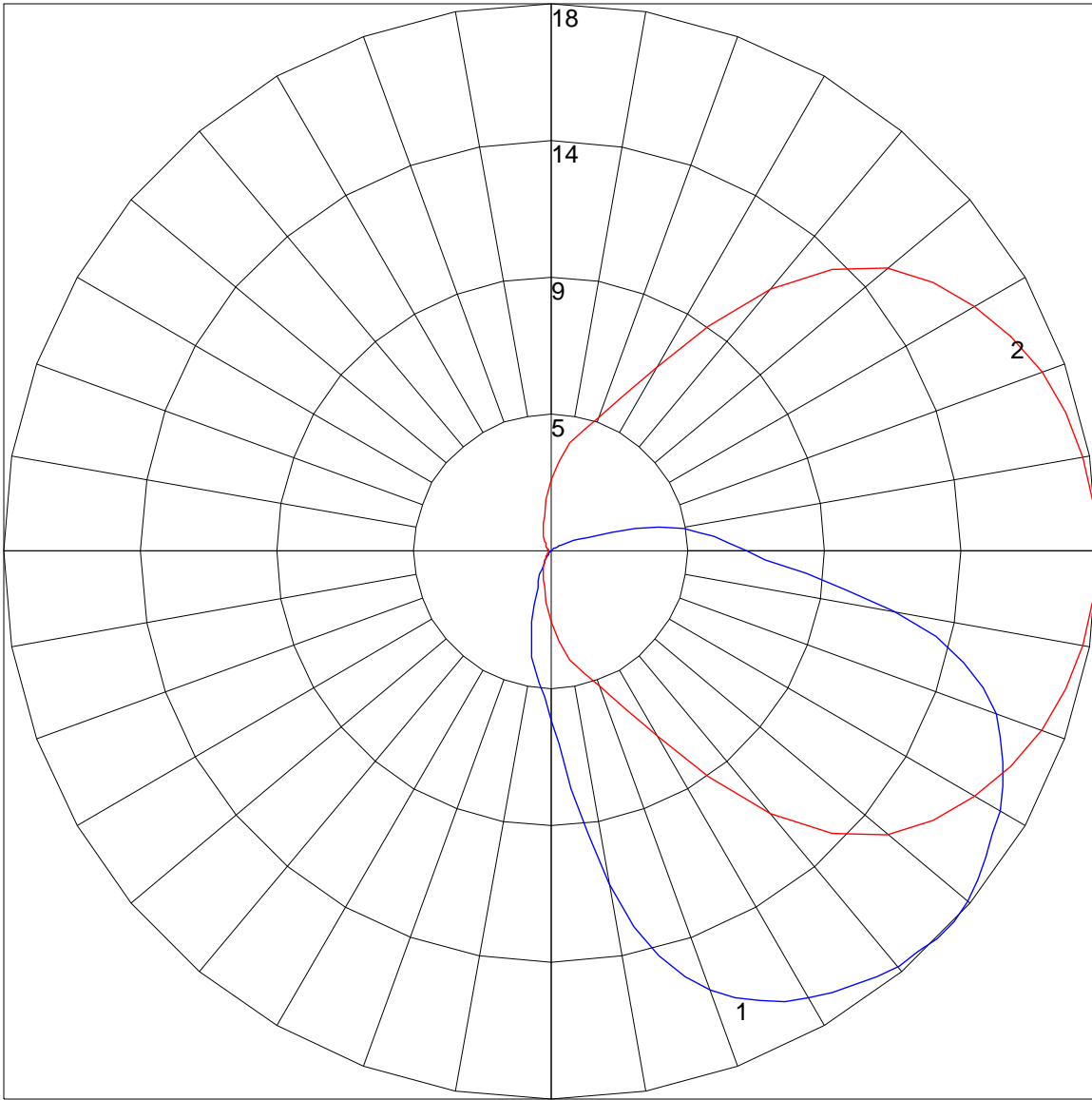
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

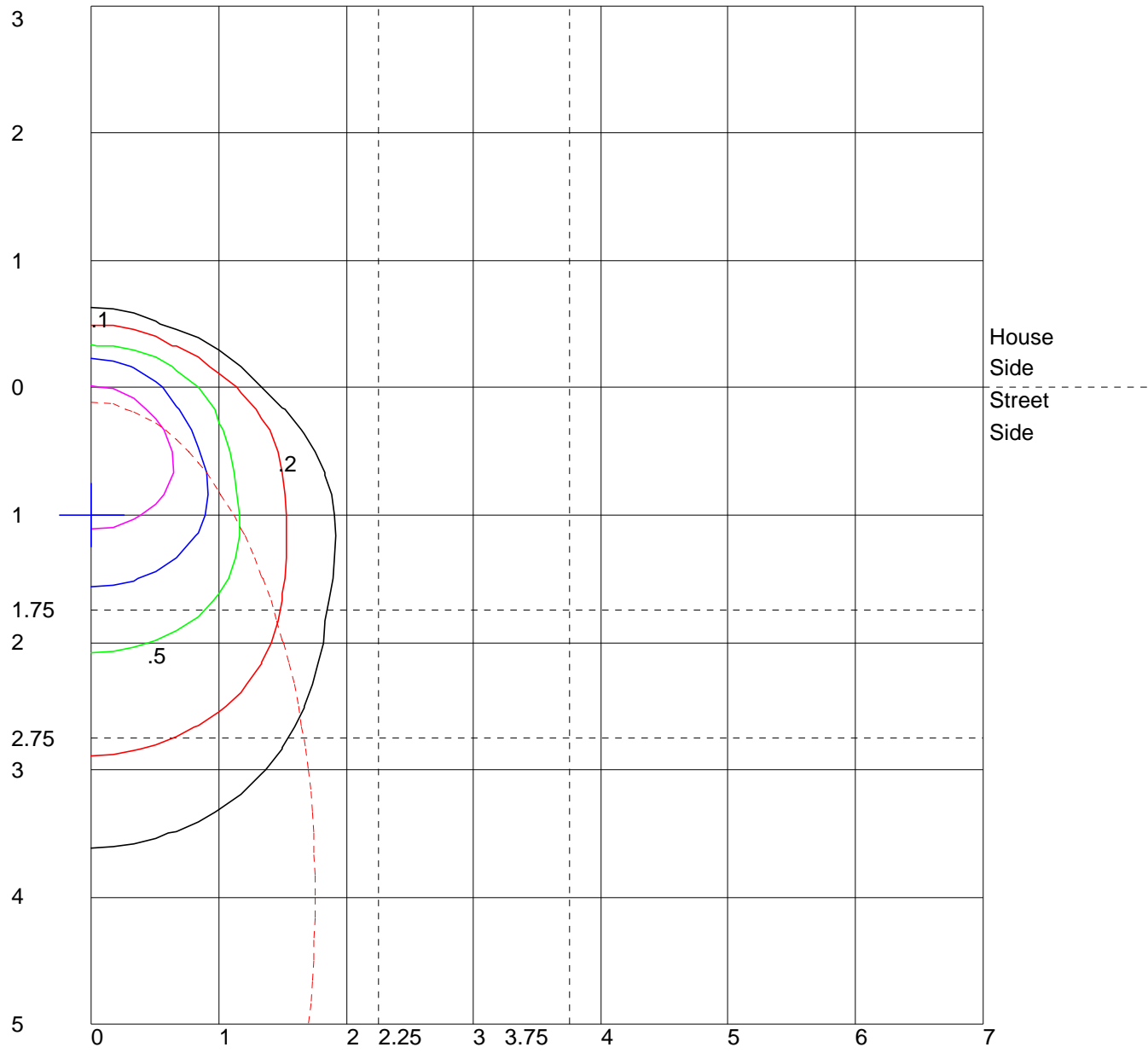
	Lumens	Percent Of Luminaire
Downward Street Side	26.9	88.3
Downward House Side	1.8	5.9
Downward Total	28.7	94.1
Upward Street Side	1.8	5.8
Upward House Side	0.0	0.0
Upward Total	1.8	5.9
Total Flux	30.5	100.0

POLAR GRAPH



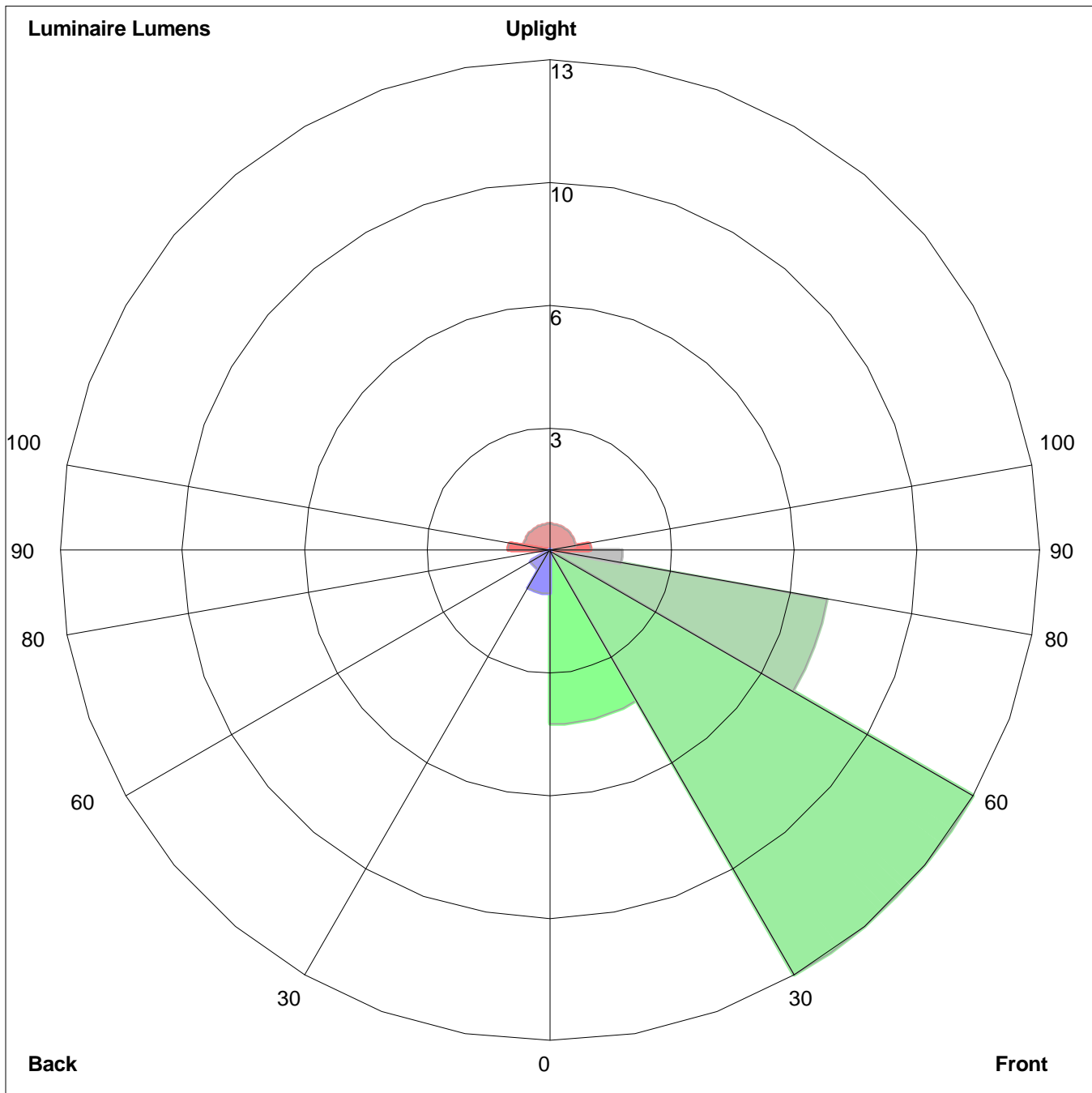
Maximum Candela = 18.472 Located At Horizontal Angle = 0, Vertical Angle = 45
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (45) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
 Values Based On 1.667 Foot Mounting Height
 1/2 Maximum Candela Trace Shown As Dashed Curve
 (+) = Maximum Candela Point

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=4.6, Medium=13.0, High=7.5, Very High=1.9
Back: Low=1.1, Medium=0.6, High=0.1, Very High=0.0
Uplight: Low=1.1, High=0.7

BUG Rating : B0-U1-G0