



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

Report No: L021904304



Report No: L021904304

Issue Date: 2/28/2019

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

Model Number: X1-20-3W-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:	X1-20-3W-NO
Driver Model Number:	N/A

Test Summary

Total Lumens:	75.60
Efficacy:	27.35
Color Redering Index:	81.2
Correlated Color Temperature:	3084
Input Voltage (VAC/60Hz):	12.04
Input Current (Amp):	0.3129
Input Power (W):	2.76
Input Power Factor:	0.7358
Current ATHD (%):	62.9%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:15
Total Operating Time (Hours):	1:45

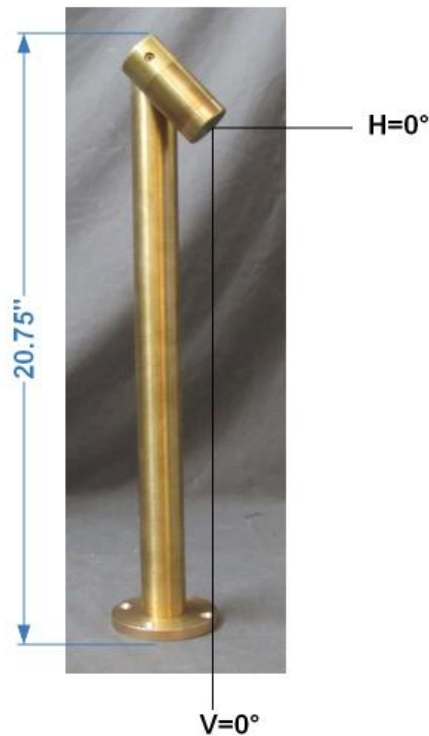
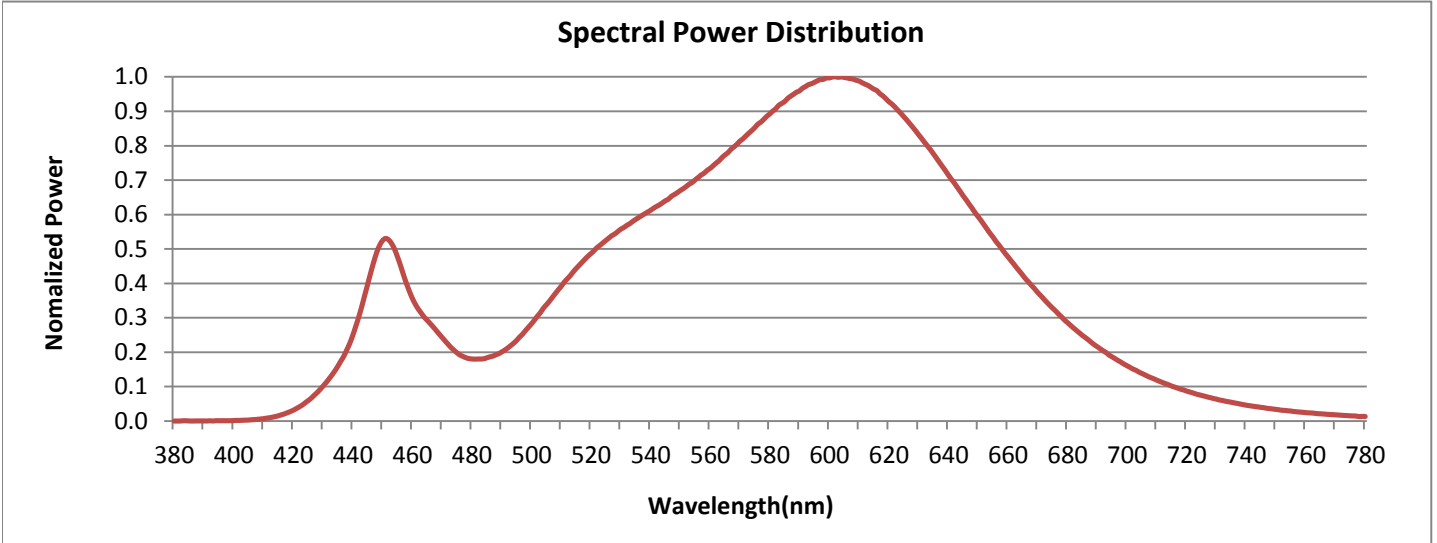


FIG. 1 LUMINAIRE

Colorimetry Test Results

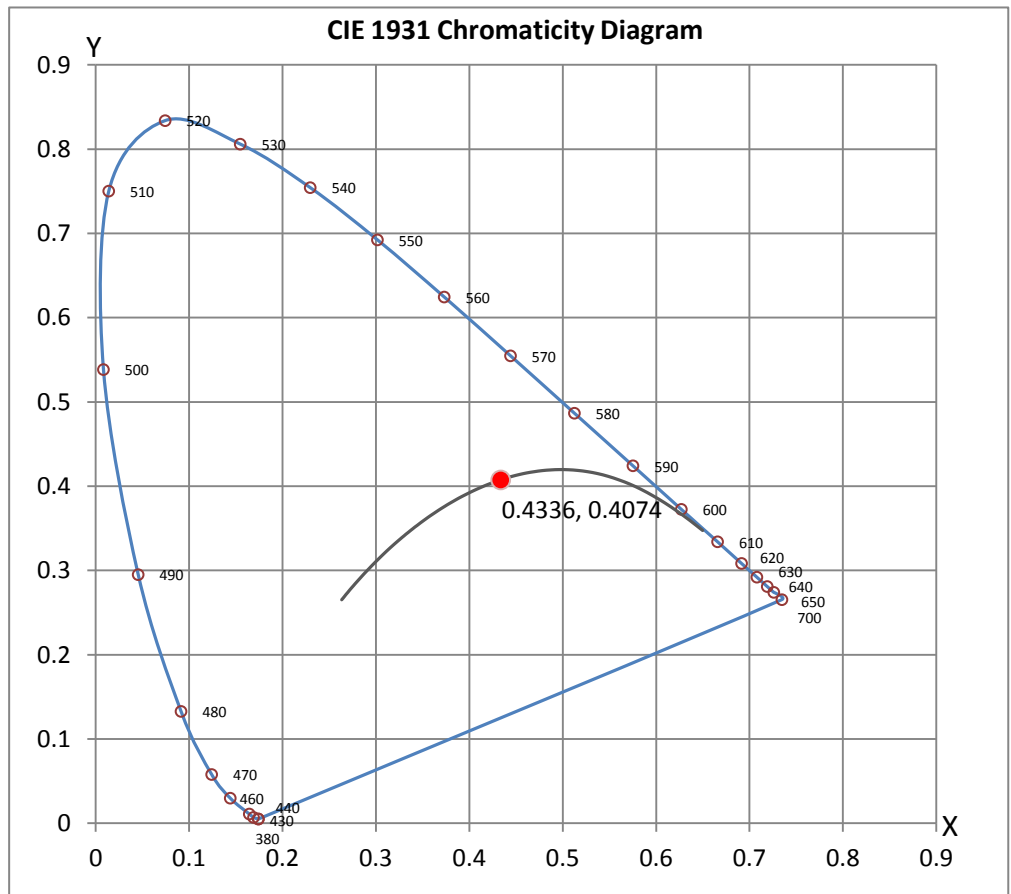


CRI & CCT

x	0.4336
y	0.4074
u'	0.2470
v'	0.5222
CRI	81.20
CCT	3084
Duv	0.00180

R Values

R1	79.07
R2	87.94
R3	95.44
R4	79.72
R5	78.51
R6	84.30
R7	84.50
R8	59.93
R9	5.81
R10	71.54
R11	77.38
R12	62.95
R13	80.81
R14	97.05
R15	72.39



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*



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Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904304.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L021904304
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 02/26/2019
[MANUFAC] Beachside Lighting
[LUMCAT] X1-20-3W-NO
[LUMINAIRE] 3w 3000K Lamping
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 12.04VAC, 2.76W
[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	76
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	27
Total Luminaire Watts	2.76
Ballast Factor	1.00
Upward Waste Light Ratio	0.05
Maximum Candela	48.84
Maximum Candela Angle	0H 45V
Maximum Candela (<90 Degrees Vertical)	48.84
Maximum Candela Angle (<90 Degrees Vertical)	0H 45V
Maximum Candela At 90 Degrees Vertical	13.771 (18.1% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	28.897 (38.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904304.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

ZONAL LUMEN SUMMARY

	Lumens	% Lamp	% Luminaire	Zone	%
FL - Front-Low (0-30)	11.7	N.A.	15.6		
FM - Front-Medium (30-60)	32.9	N.A.	43.6	0-20	8.2
FH - Front-High (60-80)	18.4	N.A.	24.3	0-30	18.8
FVH - Front-Very High (80-90)	4.6	N.A.	6.1	0-40	32.7
BL - Back-Low (0-30)	2.5	N.A.	3.3	0-60	64
BM - Back-Medium (30-60)	1.2	N.A.	1.6	0-80	88.5
BH - Back-High (60-80)	0.1	N.A.	0.2	0-90	94.6
BVH - Back-Very High (80-90)	< 0.05	N.A.	0.0	10-90	92.8
UL - Uplight-Low (90-100)	2.6	N.A.	3.4	20-40	24.4
UH - Uplight-High (100-180)	1.5	N.A.	2.0	20-50	40.1
				40-70	45.3
Total	75.5	N.A.	100.0	60-80	24.5
				70-80	10.5
BUG Rating	B0-U1-G0			80-90	6.1
				90-110	4.8
				90-120	5.2
				90-130	5.3
				90-150	5.4
				90-180	5.4
				110-180	0.6
				0-180	100

IES ROAD REPORT
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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	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709
2.5	15.962	15.962	15.962	15.962	15.820	15.742	15.647	15.538	15.414	15.277
5.0	20.363	20.324	20.212	20.028	19.774	19.453	19.068	18.623	18.122	17.572
7.5	24.764	24.757	24.518	24.224	23.821	23.316	22.721	22.033	21.259	20.406
10.0	29.324	29.234	28.975	28.549	27.968	27.241	26.374	25.379	24.282	23.103
12.5	33.614	33.534	33.296	32.969	32.102	31.138	29.992	28.684	27.233	25.658
15.0	36.823	36.715	36.404	35.887	35.190	34.330	33.310	31.838	30.053	28.124
17.5	39.304	39.213	38.958	38.539	38.037	36.915	35.679	34.290	32.687	30.354
20.0	41.192	41.104	40.877	40.376	39.706	38.904	38.037	36.263	34.446	32.327
22.5	42.647	42.524	42.233	41.766	41.201	40.394	39.281	38.053	35.946	33.700
25.0	43.870	43.761	43.428	42.922	42.286	41.479	40.476	39.035	37.218	34.653
27.5	44.896	44.805	44.458	43.968	43.222	42.355	41.282	39.873	38.120	35.387
30.0	45.826	45.717	45.348	44.804	44.044	43.088	41.965	40.697	38.627	35.892
32.5	46.576	46.432	46.101	45.574	44.775	43.798	42.559	41.095	39.026	36.217
35.0	47.328	47.212	46.808	46.200	45.411	44.357	43.015	41.428	39.268	36.293
37.5	48.000	47.844	47.371	46.715	45.918	44.751	43.330	41.615	39.325	36.133
40.0	48.480	48.332	47.837	47.070	46.126	44.956	43.454	41.636	39.189	35.706
42.5	48.708	48.575	48.100	47.257	46.254	44.997	43.396	41.480	38.842	35.013
45.0	48.840	48.675	48.214	47.297	46.252	44.892	43.205	41.185	38.320	34.079
47.5	48.769	48.567	48.042	47.136	46.078	44.660	42.882	40.738	37.570	32.859
50.0	48.515	48.305	47.734	46.876	45.738	44.281	42.480	39.984	36.363	31.351
52.5	48.070	47.851	47.286	46.419	45.263	43.723	41.758	38.953	34.761	29.203
55.0	47.415	47.300	46.716	45.842	44.600	42.980	40.914	37.765	33.016	26.829
57.5	46.734	46.594	46.026	45.173	43.805	42.115	39.747	36.099	30.999	24.274
60.0	45.965	45.783	45.216	44.236	42.848	41.094	38.267	33.953	28.200	21.650
62.5	45.099	44.890	44.266	43.220	41.788	39.711	36.434	31.668	25.215	19.061
65.0	44.062	43.850	43.204	42.140	40.602	37.995	33.984	28.554	22.157	16.372
67.5	42.927	42.677	42.018	40.919	38.786	35.653	31.325	25.217	19.302	13.921
70.0	41.530	41.383	40.505	38.991	36.557	33.013	27.748	21.904	16.355	12.543
72.5	39.434	39.269	38.479	36.568	33.817	29.512	24.135	18.785	13.908	11.134
75.0	36.745	36.526	35.523	33.669	30.265	25.682	20.769	15.587	12.456	9.963
77.5	33.427	33.263	32.087	29.683	26.213	22.068	17.385	13.687	10.976	9.184
80.0	28.897	28.638	27.557	25.429	22.447	18.568	14.793	12.132	9.989	8.393
82.5	24.065	23.911	23.200	21.587	18.843	15.746	13.222	10.787	9.145	7.571
85.0	19.682	19.594	19.134	17.747	16.190	14.140	11.745	9.949	8.291	6.711
87.5	15.299	15.472	15.789	15.591	14.500	12.622	10.809	9.072	7.410	5.799
90.0	13.064	13.339	13.736	13.771	12.998	11.597	9.845	8.162	6.430	4.854
92.5	10.828	11.265	11.909	12.356	11.825	10.540	8.879	7.092	5.426	3.885
95.0	9.536	9.918	10.551	11.002	10.651	9.454	7.701	5.940	4.363	2.876
97.5	8.243	8.572	9.191	9.659	9.316	8.010	6.392	4.734	3.243	2.256
100.0	6.951	7.230	7.778	8.079	7.619	6.460	4.999	3.485	2.370	1.934
102.5	5.737	5.928	6.276	6.413	5.931	4.883	3.551	2.453	2.030	1.608
105.0	4.524	4.638	4.807	4.780	4.254	3.279	2.488	2.086	1.680	1.278
107.5	3.310	3.359	3.370	3.179	2.653	2.426	2.093	1.711	1.321	0.940
110.0	2.096	2.151	2.228	2.280	2.207	2.002	1.690	1.327	0.956	0.777
112.5	1.799	1.832	1.870	1.878	1.781	1.571	1.278	0.938	0.776	0.648
115.0	1.502	1.517	1.520	1.483	1.361	1.143	0.882	0.773	0.652	0.521
117.5	1.205	1.203	1.174	1.097	0.949	0.840	0.747	0.646	0.529	0.398
120.0	0.908	0.900	0.875	0.835	0.779	0.703	0.613	0.517	0.406	0.290
122.5	0.760	0.752	0.728	0.689	0.635	0.564	0.478	0.385	0.294	0.221
125.0	0.611	0.603	0.581	0.543	0.491	0.424	0.344	0.277	0.216	0.148
127.5	0.463	0.455	0.433	0.397	0.347	0.296	0.250	0.198	0.000	0.000
130.0	0.314	0.310	0.298	0.278	0.255	0.215	0.169	0.000	0.000	0.000

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904304.IES

CANDELA TABULATION - (Cont.)

132.5	0.227	0.223	0.211	0.195	0.178	0.000	0.000	0.000	0.000	0.000
135.0	0.140	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
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	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709
2.5	15.127	14.967	14.798	14.620	14.435	14.246	14.052	13.856	13.660	13.464
5.0	16.975	16.337	15.811	15.450	15.077	14.694	14.305	13.913	13.520	13.131
7.5	19.484	18.503	17.470	16.396	15.628	15.050	14.465	13.877	13.291	12.710
10.0	21.838	20.499	19.099	17.652	16.169	15.316	14.534	13.753	12.976	12.210
12.5	24.014	22.313	20.539	18.710	16.842	15.475	14.493	13.516	12.550	11.602
15.0	26.075	23.951	21.780	19.556	17.299	15.518	14.338	13.167	12.015	11.166
17.5	27.897	25.342	22.768	20.160	17.523	15.439	14.067	12.709	11.463	10.723
20.0	29.462	26.504	23.509	20.507	17.489	15.212	13.669	12.148	11.019	10.240
22.5	30.743	27.379	23.984	20.616	17.248	14.890	13.173	11.492	10.576	9.720
25.0	31.702	27.943	24.164	20.460	16.775	14.457	12.574	11.017	10.072	9.151
27.5	32.349	28.194	24.045	20.035	16.059	13.903	11.890	10.563	9.541	8.551
30.0	32.638	28.139	23.637	19.359	15.404	13.248	11.182	10.071	8.984	7.929
32.5	32.659	27.843	23.031	18.488	14.777	12.516	10.703	9.534	8.392	7.259
35.0	32.470	27.277	22.209	17.430	14.077	11.724	10.199	8.971	7.774	6.550
37.5	32.030	26.464	21.193	16.195	13.315	10.970	9.663	8.382	7.107	5.818
40.0	31.172	25.358	19.974	15.032	12.477	10.449	9.100	7.773	6.401	5.062
42.5	30.000	23.949	18.502	14.173	11.567	9.889	8.506	7.118	5.680	4.286
45.0	28.543	22.418	16.870	13.246	10.726	9.300	7.886	6.413	4.935	3.497
47.5	26.809	20.721	15.070	12.267	10.134	8.686	7.231	5.688	4.173	2.692
50.0	24.841	18.855	13.974	11.221	9.518	8.048	6.522	4.947	3.395	2.223
52.5	22.661	16.825	12.903	10.354	8.870	7.390	5.788	4.193	2.610	1.972
55.0	20.506	14.663	11.775	9.694	8.201	6.660	5.039	3.422	2.195	1.720
57.5	18.205	13.446	10.589	9.008	7.507	5.910	4.274	2.639	1.950	1.468
60.0	15.769	12.197	9.808	8.296	6.771	5.144	3.499	2.190	1.700	1.214
62.5	13.758	10.922	9.083	7.565	5.998	4.370	2.717	1.943	1.448	0.955
65.0	12.449	9.882	8.355	6.824	5.223	3.594	2.196	1.696	1.195	0.786
67.5	11.117	9.148	7.618	6.058	4.458	2.819	1.951	1.447	0.943	0.689
70.0	9.937	8.391	6.865	5.292	3.693	2.226	1.709	1.198	0.782	0.592
72.5	9.186	7.643	6.084	4.515	2.921	1.989	1.463	0.948	0.688	0.495
75.0	8.415	6.881	5.306	3.736	2.257	1.747	1.217	0.786	0.596	0.398
77.5	7.633	6.092	4.529	2.955	2.002	1.495	0.972	0.693	0.503	0.307

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904304.IES

CANDELA TABULATION - (Cont.)

80.0	6.837	5.283	3.735	2.276	1.759	1.240	0.805	0.601	0.408	0.250
82.5	6.002	4.461	2.926	2.025	1.515	0.987	0.708	0.508	0.313	0.196
85.0	5.151	3.624	2.272	1.769	1.266	0.820	0.610	0.412	0.251	0.140
87.5	4.269	2.765	2.005	1.507	1.008	0.727	0.512	0.314	0.196	0.000
90.0	3.359	2.221	1.732	1.240	0.831	0.626	0.414	0.251	0.140	0.000
92.5	2.420	1.935	1.455	0.968	0.723	0.519	0.313	0.195	0.000	0.000
95.0	2.105	1.645	1.172	0.811	0.613	0.411	0.249	0.000	0.000	0.000
97.5	1.798	1.347	0.890	0.699	0.503	0.304	0.193	0.000	0.000	0.000
100.0	1.487	1.042	0.774	0.586	0.393	0.244	0.000	0.000	0.000	0.000
102.5	1.170	0.821	0.656	0.473	0.289	0.186	0.000	0.000	0.000	0.000
105.0	0.864	0.703	0.539	0.360	0.231	0.000	0.000	0.000	0.000	0.000
107.5	0.748	0.587	0.422	0.270	0.173	0.000	0.000	0.000	0.000	0.000
110.0	0.630	0.470	0.308	0.210	0.000	0.000	0.000	0.000	0.000	0.000
112.5	0.509	0.353	0.241	0.150	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.385	0.264	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.278	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.212	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.146	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. Horizontal Angles
Angles

	100	105	110	115	120	125	130	135	140	145
0.0	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709	13.709
2.5	13.271	13.081	12.896	12.717	12.547	12.385	12.233	12.092	11.964	11.848
5.0	12.747	12.371	12.006	11.655	11.384	11.210	11.048	10.898	10.762	10.639
7.5	12.140	11.584	11.240	10.958	10.689	10.435	10.198	9.979	9.778	9.599
10.0	11.498	11.076	10.689	10.318	9.967	9.634	9.326	9.041	8.782	8.550
12.5	11.054	10.567	10.098	9.646	9.216	8.810	8.434	8.087	7.788	7.468
15.0	10.576	10.004	9.454	8.928	8.430	7.961	7.502	7.069	6.675	6.321
17.5	10.050	9.400	8.779	8.185	7.605	7.037	6.508	6.019	5.570	5.167
20.0	9.486	8.760	8.066	7.381	6.716	6.087	5.497	4.953	4.457	4.008
22.5	8.890	8.091	7.302	6.532	5.802	5.116	4.475	3.878	3.335	2.844
25.0	8.258	7.375	6.496	5.663	4.876	4.132	3.439	2.796	2.450	2.283

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904304.IES

CANDELA TABULATION - (Cont.)

27.5	7.588	6.609	5.669	4.774	3.930	3.140	2.514	2.303	2.106	1.927
30.0	6.864	5.823	4.824	3.871	2.970	2.424	2.190	1.965	1.759	1.568
32.5	6.120	5.021	3.965	2.957	2.368	2.103	1.858	1.625	1.407	1.208
35.0	5.356	4.204	3.095	2.368	2.066	1.782	1.523	1.283	1.054	0.913
37.5	4.571	3.370	2.412	2.075	1.760	1.463	1.188	0.947	0.852	0.759
40.0	3.769	2.521	2.126	1.776	1.449	1.141	0.905	0.800	0.705	0.607
42.5	2.946	2.211	1.835	1.473	1.133	0.883	0.764	0.653	0.555	0.455
45.0	2.320	1.930	1.543	1.168	0.865	0.746	0.624	0.506	0.403	0.306
47.5	2.057	1.653	1.254	0.878	0.741	0.616	0.486	0.362	0.270	0.231
50.0	1.793	1.378	0.970	0.757	0.620	0.491	0.354	0.256	0.204	0.159
52.5	1.529	1.103	0.804	0.648	0.498	0.367	0.262	0.203	0.144	0.000
55.0	1.265	0.845	0.692	0.540	0.380	0.268	0.209	0.000	0.000	0.000
57.5	0.997	0.738	0.580	0.431	0.278	0.212	0.000	0.000	0.000	0.000
60.0	0.800	0.632	0.468	0.315	0.230	0.161	0.000	0.000	0.000	0.000
62.5	0.702	0.528	0.361	0.247	0.178	0.000	0.000	0.000	0.000	0.000
65.0	0.604	0.427	0.269	0.197	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.505	0.325	0.223	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.406	0.255	0.178	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.306	0.207	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.243	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.143	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 : L021904304.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

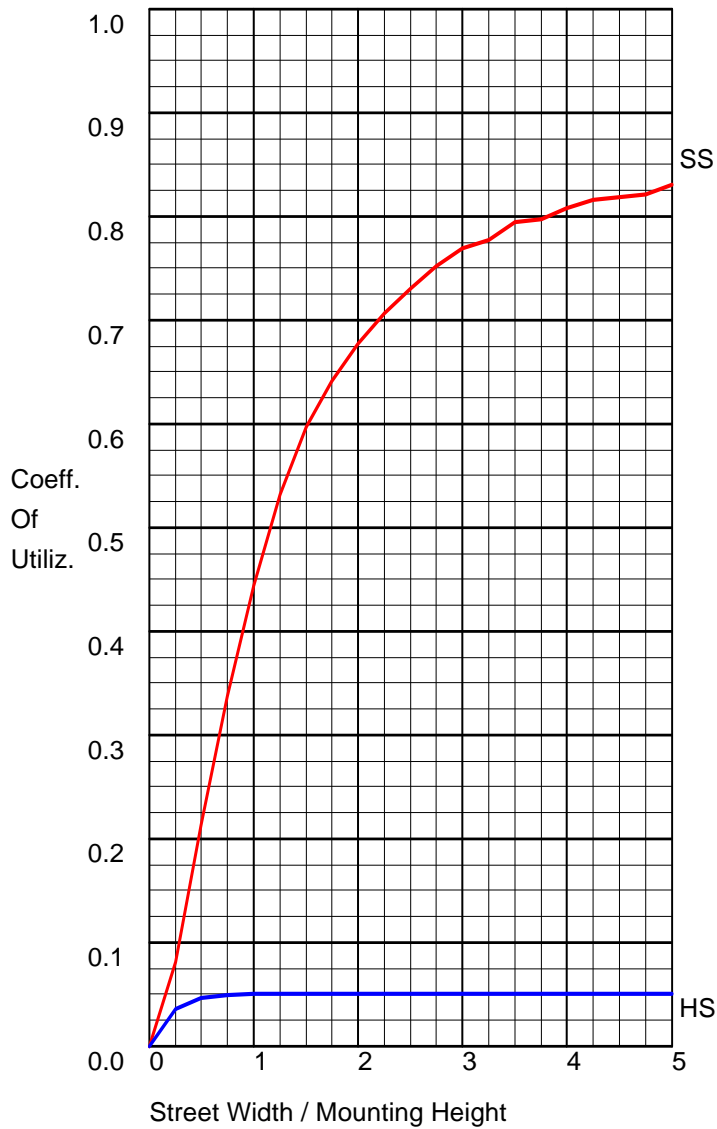
	150	155	160	165	170	175	180
0.0	13.709	13.709	13.709	13.709	13.709	13.709	13.709
2.5	11.746	11.659	11.586	11.530	11.489	11.464	11.456
5.0	10.531	10.439	10.362	10.302	10.258	10.232	10.222
7.5	9.441	9.306	9.194	9.106	9.042	9.003	8.988
10.0	8.345	8.170	8.024	7.910	7.826	7.774	7.754
12.5	7.201	6.971	6.779	6.629	6.520	6.453	6.427
15.0	6.007	5.737	5.512	5.335	5.208	5.129	5.100
17.5	4.812	4.503	4.245	4.039	3.895	3.806	3.772
20.0	3.612	3.268	2.979	2.746	2.582	2.483	2.445
22.5	2.493	2.369	2.260	2.171	2.107	2.070	2.052
25.0	2.130	1.995	1.880	1.788	1.719	1.678	1.659
27.5	1.765	1.621	1.498	1.402	1.330	1.287	1.266
30.0	1.399	1.245	1.114	1.014	0.941	0.895	0.873
32.5	1.029	0.907	0.842	0.793	0.757	0.735	0.725
35.0	0.828	0.755	0.691	0.640	0.602	0.582	0.576
37.5	0.674	0.601	0.537	0.487	0.447	0.428	0.428
40.0	0.517	0.443	0.382	0.334	0.292	0.274	0.279
42.5	0.359	0.284	0.255	0.235	0.215	0.206	0.210
45.0	0.249	0.215	0.188	0.167	0.151	0.143	0.140
47.5	0.184	0.148	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 : L021904304.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

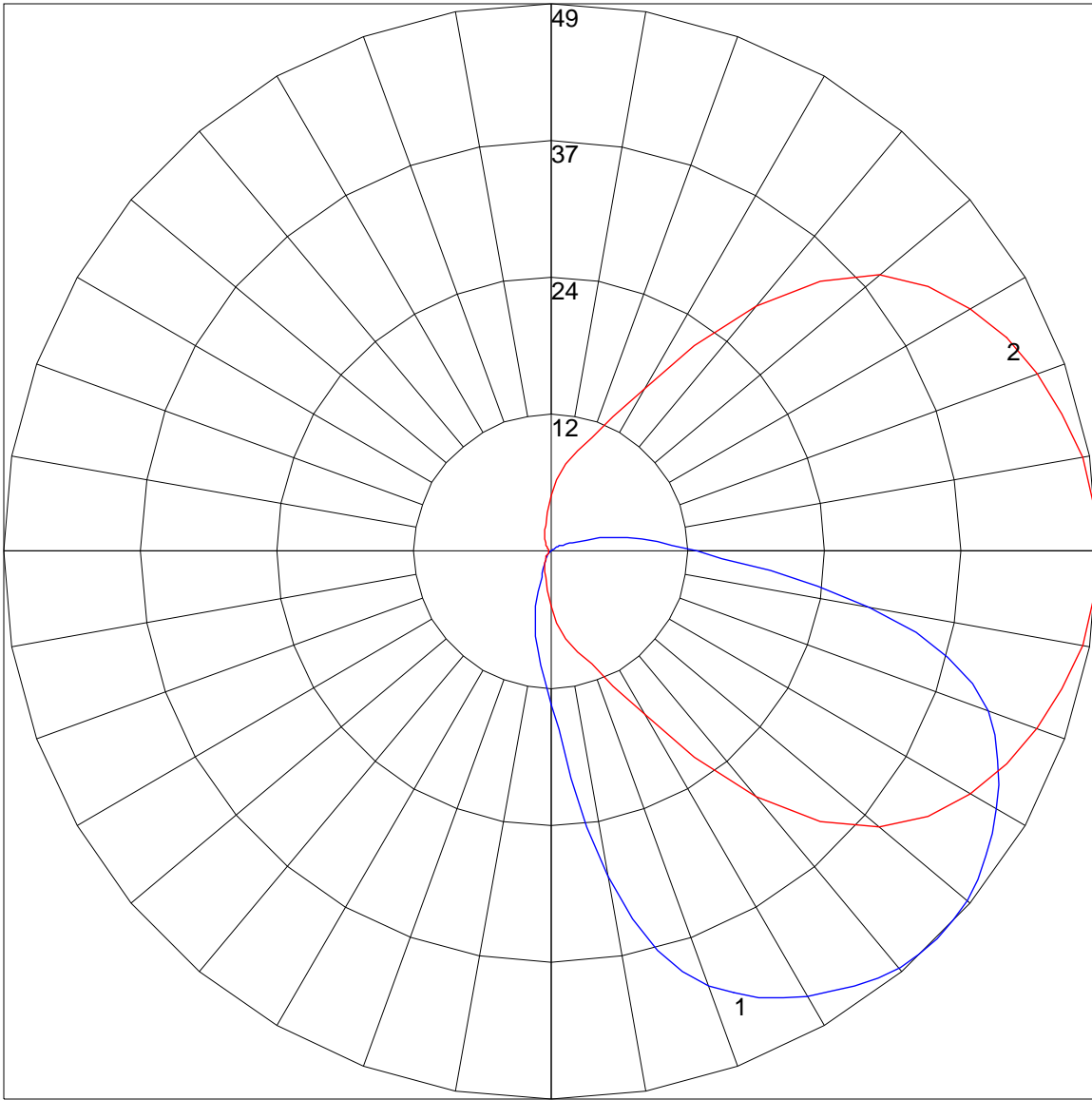
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

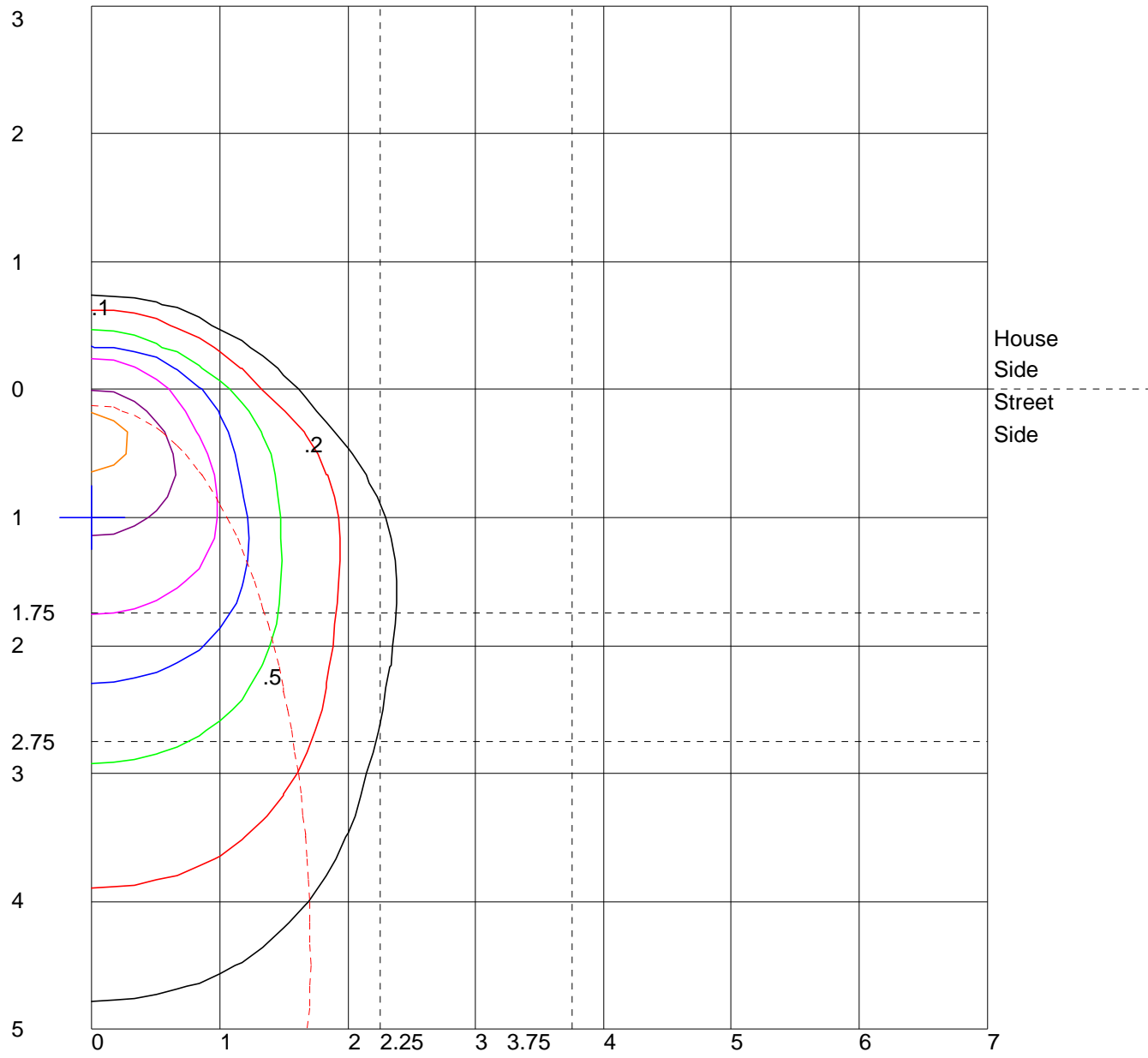
	Lumens	Percent Of Luminaire
Downward Street Side	67.6	89.5
Downward House Side	3.9	5.1
Downward Total	71.5	94.6
Upward Street Side	4.1	5.4
Upward House Side	0.0	0.0
Upward Total	4.1	5.4
Total Flux	75.6	100.1

POLAR GRAPH



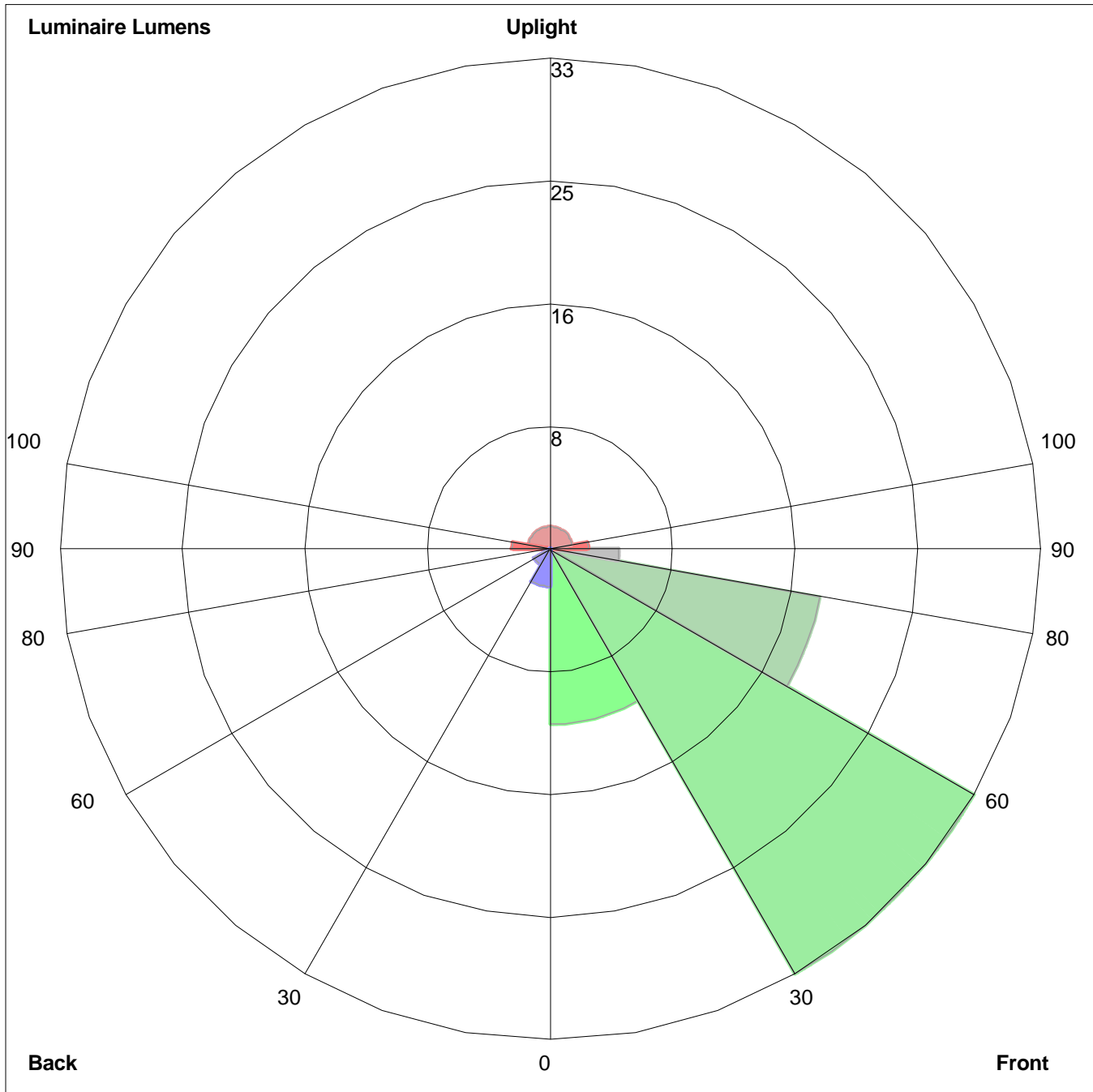
Maximum Candela = 48.84 Located At Horizontal Angle = 0, Vertical Angle = 45
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (45) (Through Max. Cd.)

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=11.7, Medium=32.9, High=18.4, Very High=4.6
 Back: Low=2.5, Medium=1.2, High=0.1, Very High=0.0
 Uplight: Low=2.6, High=1.5

BUG Rating : B0-U1-G0