



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

Report No: L021904301



Report No: L021904301

Issue Date: 3/4/2019

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

Model Number: RP-120V-3W-A

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: 3/1/19 - 3/2/19

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:	RP-120V-3W-A
Driver Model Number:	N/A

Test Summary

Total Lumens:	16.80
Efficacy:	6.28
Color Redering Index:	-13.3
Correlated Color Temperature:	1340
Input Voltage (VAC/60Hz):	120.06
Input Current (Amp):	0.0382
Input Power (W):	2.68
Input Power Factor:	0.5834
Current ATHD (%):	78.8%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:50
Total Operating Time (Hours):	2:45

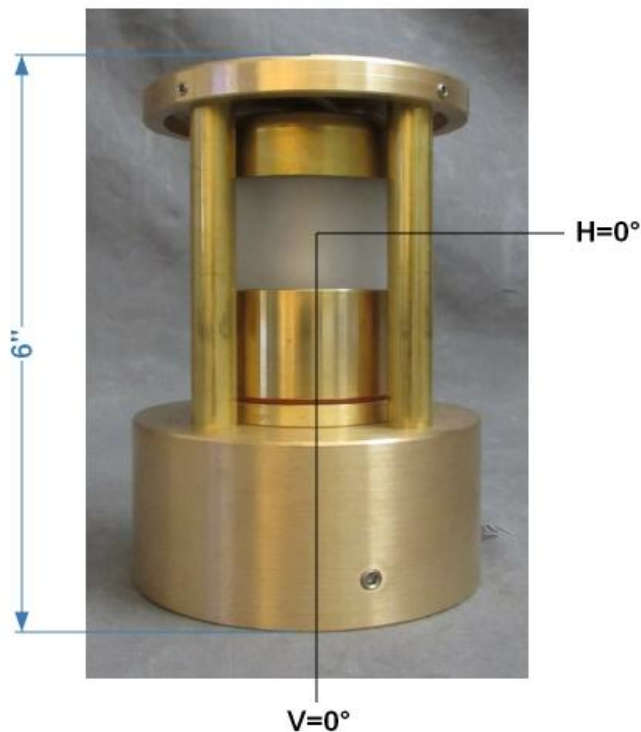
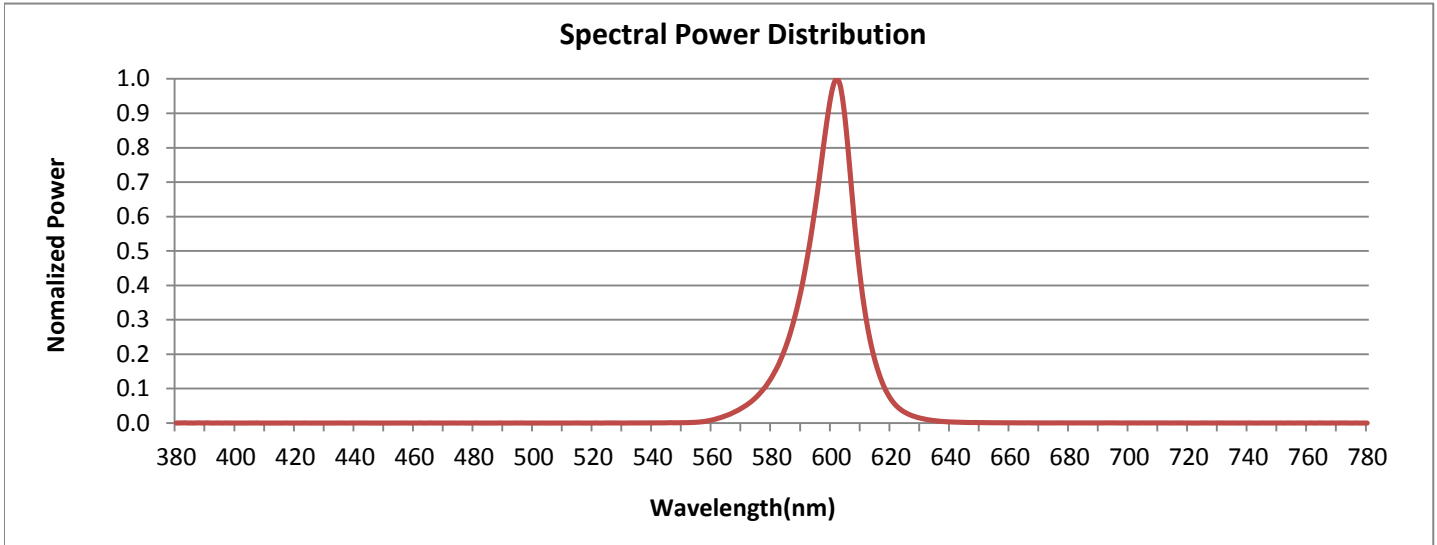


FIG. 1 LUMINAIRE

Colorimetry Test Results

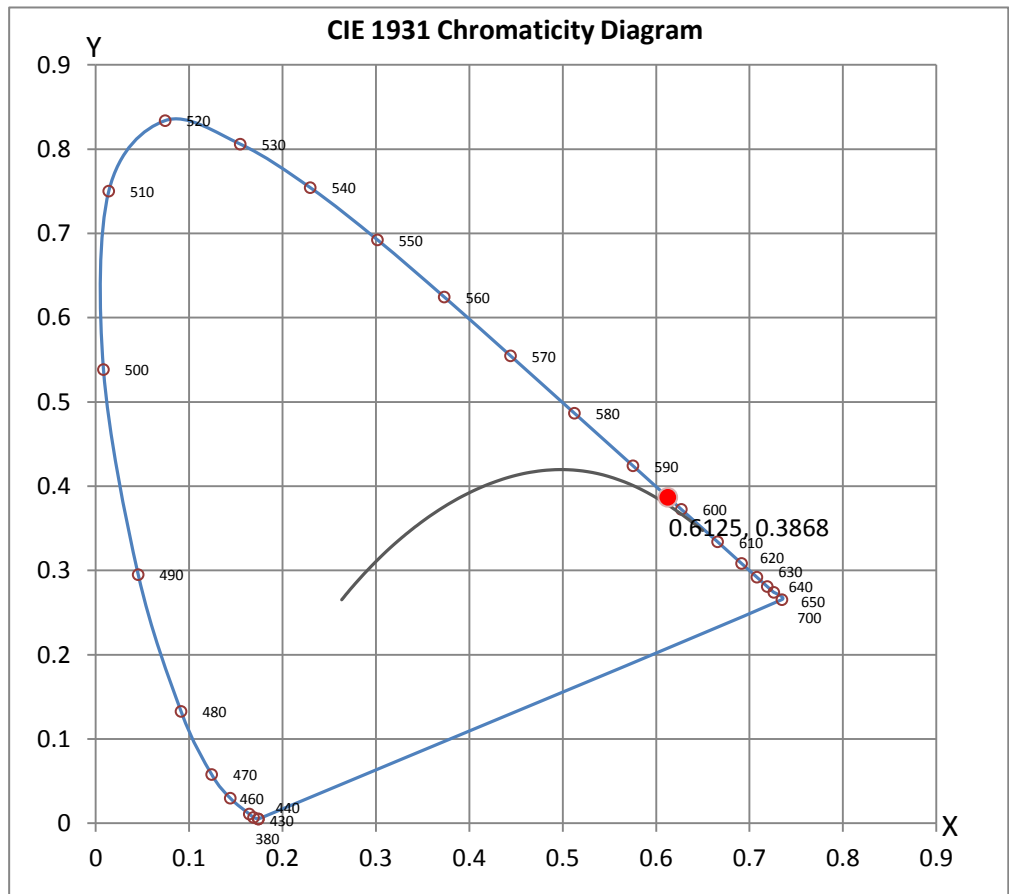


CRI & CCT

x	0.6125
y	0.3868
u'	0.3818
v'	0.5425
CRI	-13.30
CCT	1340
Duv	0.01584

R Values

R1	-23.16
R2	58.90
R3	17.14
R4	-57.17
R5	-28.53
R6	61.21
R7	-8.71
R8	-126.03
R9	-341.21
R10	42.04
R11	-76.42
R12	23.27
R13	-4.74
R14	47.80
R15	-57.04



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 Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 12*



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

Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904301.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L021904301
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 03/01/2019
 [MANUFAC] Beachside Lighting
 [LUMCAT] RP-120V-3W-A
 [LUMINAIRE] RP with 3w G9 Amber Lamping
 [BALLASTCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120.06VAC, 2.68W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type VS
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	17
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	6
Total Luminaire Watts	2.68
Ballast Factor	1.00
Upward Waste Light Ratio	0.31
Maximum Candela	3.161
Maximum Candela Angle	90H 72.5V
Maximum Candela (<90 Degrees Vertical)	3.161
Maximum Candela Angle (<90 Degrees Vertical)	90H 72.5V
Maximum Candela At 90 Degrees Vertical	2.62 (15.4% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	3.039 (17.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904301.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

ZONAL LUMEN SUMMARY

	Lumens	% Lamp	% Luminaire	Zone	%
FL - Front-Low (0-30)	0.1	N.A.	0.5		
FM - Front-Medium (30-60)	1.7	N.A.	10.3	0-20	0.1
FH - Front-High (60-80)	2.7	N.A.	15.9	0-30	1
FVH - Front-Very High (80-90)	1.3	N.A.	7.8	0-40	3.9
BL - Back-Low (0-30)	0.1	N.A.	0.5	0-60	21.7
BM - Back-Medium (30-60)	1.7	N.A.	10.3	0-80	53.6
BH - Back-High (60-80)	2.7	N.A.	15.9	0-90	69.3
BVH - Back-Very High (80-90)	1.3	N.A.	7.8	10-90	69.2
UL - Uplight-Low (90-100)	2.2	N.A.	12.9	20-40	3.8
UH - Uplight-High (100-180)	3.0	N.A.	17.7	20-50	10.3
				40-70	32.9
Total	16.8	N.A.	100.0	60-80	31.9
				70-80	16.7
BUG Rating	B0-U1-G0			80-90	15.7
				90-110	22.2
				90-120	26.9
				90-130	29.1
				90-150	30.6
				90-180	30.8
				110-180	8.6
				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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.0	0.052	0.044	0.044	0.052	0.052	0.052	0.052	0.052	0.052	0.061
20.0	0.087	0.096	0.079	0.079	0.087	0.079	0.079	0.079	0.079	0.087
30.0	0.576	0.576	0.568	0.550	0.524	0.498	0.472	0.445	0.428	0.428
35.0	0.873	0.873	0.864	0.847	0.821	0.777	0.742	0.707	0.681	0.672
40.0	1.170	1.170	1.161	1.144	1.109	1.057	0.995	0.917	0.873	0.864
45.0	1.554	1.554	1.537	1.537	1.484	1.423	1.319	1.196	1.092	1.065
50.0	1.973	1.956	1.956	1.956	1.912	1.816	1.642	1.458	1.310	1.249
55.0	2.393	2.393	2.401	2.410	2.340	2.218	1.991	1.720	1.511	1.423
60.0	2.724	2.724	2.716	2.742	2.681	2.489	2.235	1.921	1.642	1.563
65.0	2.969	2.951	2.943	2.960	2.899	2.724	2.393	2.035	1.755	1.633
70.0	3.074	3.056	3.056	3.082	3.004	2.812	2.506	2.104	1.799	1.677
72.5	3.091	3.065	3.074	3.100	3.021	2.820	2.489	2.122	1.773	1.677
75.0	3.056	3.056	3.065	3.082	2.995	2.794	2.480	2.087	1.781	1.659
77.5	3.021	2.995	3.004	3.030	2.943	2.759	2.419	2.052	1.746	1.624
80.0	2.951	2.934	2.943	2.960	2.899	2.689	2.375	2.017	1.685	1.589
82.5	2.864	2.855	2.855	2.882	2.803	2.620	2.314	1.947	1.659	1.554
85.0	2.759	2.759	2.777	2.794	2.724	2.515	2.244	1.912	1.580	1.502
87.5	2.672	2.655	2.672	2.689	2.620	2.445	2.157	1.825	1.563	1.450
90.0	2.550	2.541	2.550	2.567	2.515	2.349	2.052	1.746	1.484	1.388
92.5	2.428	2.419	2.428	2.436	2.401	2.227	1.973	1.685	1.432	1.327
95.0	2.288	2.279	2.288	2.297	2.253	2.113	1.851	1.580	1.353	1.266
97.5	2.131	2.131	2.148	2.157	2.113	1.965	1.755	1.511	1.275	1.196
100.0	1.991	1.991	2.000	2.000	1.973	1.851	1.659	1.397	1.214	1.135
102.5	1.851	1.851	1.851	1.869	1.834	1.729	1.537	1.327	1.126	1.057
105.0	1.711	1.703	1.711	1.711	1.685	1.580	1.423	1.222	1.057	0.978
107.5	1.554	1.554	1.563	1.563	1.537	1.458	1.284	1.118	0.978	0.908
110.0	1.415	1.415	1.406	1.415	1.397	1.292	1.170	1.022	0.873	0.821
115.0	1.100	1.100	1.109	1.109	1.083	1.030	0.926	0.812	0.716	0.672
120.0	0.856	0.847	0.838	0.838	0.830	0.795	0.725	0.637	0.576	0.533
125.0	0.611	0.620	0.611	0.611	0.603	0.576	0.541	0.498	0.437	0.393
130.0	0.437	0.463	0.445	0.445	0.437	0.428	0.393	0.384	0.341	0.314
135.0	0.332	0.341	0.332	0.332	0.332	0.306	0.306	0.279	0.253	0.236
140.0	0.210	0.210	0.210	0.210	0.210	0.210	0.201	0.192	0.183	0.166
145.0	0.175	0.175	0.166	0.157	0.175	0.140	0.140	0.140	0.140	0.131
150.0	0.140	0.140	0.140	0.122	0.122	0.122	0.114	0.114	0.105	0.105
160.0	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
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

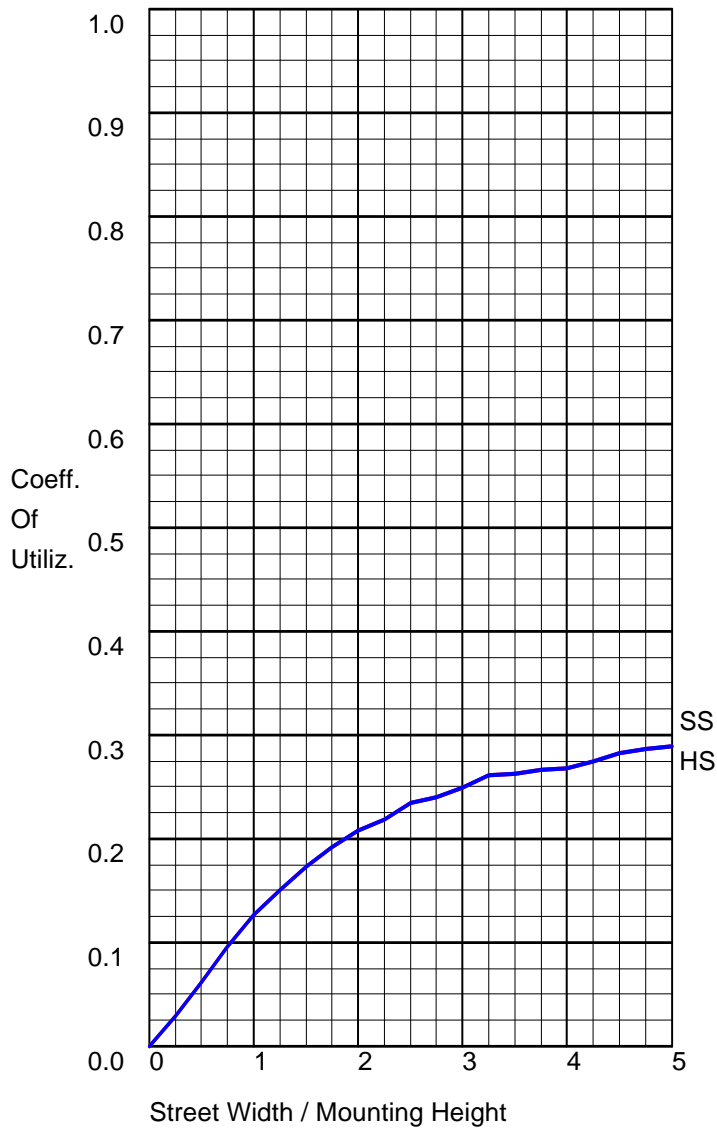
Vert. Angles	Horizontal Angles								
	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.0	0.044	0.035	0.044	0.035	0.035	0.035	0.035	0.035	0.035
20.0	0.079	0.087	0.087	0.087	0.087	0.087	0.087	0.087	0.070
30.0	0.428	0.454	0.480	0.515	0.524	0.559	0.568	0.585	0.576
35.0	0.681	0.716	0.751	0.803	0.830	0.856	0.864	0.891	0.891
40.0	0.891	0.952	1.022	1.109	1.144	1.161	1.170	1.188	1.188
45.0	1.100	1.214	1.345	1.458	1.528	1.554	1.554	1.580	1.589
50.0	1.336	1.484	1.677	1.860	1.956	1.973	1.991	1.991	1.991
55.0	1.519	1.755	2.043	2.262	2.393	2.428	2.419	2.419	2.428
60.0	1.659	1.956	2.279	2.550	2.724	2.786	2.759	2.759	2.777

IES ROAD REPORT
PHOTOMETRIC FILENAME : L021904301.IES

CANDELA TABULATION - (Cont.)

65.0	1.781	2.096	2.436	2.777	2.943	3.013	3.004	3.004	3.039
70.0	1.825	2.139	2.550	2.873	3.065	3.135	3.126	3.144	3.161
72.5	1.808	2.148	2.541	2.899	3.074	3.161	3.152	3.152	3.161
75.0	1.799	2.131	2.515	2.847	3.065	3.135	3.135	3.135	3.144
77.5	1.790	2.096	2.454	2.812	3.004	3.082	3.082	3.091	3.109
80.0	1.720	2.061	2.410	2.733	2.951	3.021	3.013	3.013	3.039
82.5	1.694	1.991	2.375	2.681	2.855	2.925	2.925	2.934	2.951
85.0	1.624	1.939	2.288	2.576	2.768	2.838	2.829	2.838	2.847
87.5	1.572	1.860	2.200	2.489	2.672	2.724	2.733	2.733	2.759
90.0	1.519	1.773	2.096	2.401	2.558	2.611	2.602	2.602	2.620
92.5	1.441	1.729	2.008	2.270	2.445	2.471	2.471	2.480	2.497
95.0	1.362	1.598	1.895	2.166	2.279	2.340	2.331	2.331	2.358
97.5	1.284	1.537	1.790	2.008	2.139	2.200	2.183	2.192	2.183
100.0	1.214	1.415	1.685	1.877	2.000	2.035	2.035	2.043	2.061
102.5	1.144	1.327	1.554	1.755	1.860	1.895	1.886	1.886	1.904
105.0	1.057	1.214	1.423	1.580	1.650	1.642	1.633	1.650	1.659
107.5	0.969	1.109	1.275	1.388	1.371	1.275	1.196	1.196	1.205
110.0	0.864	0.987	1.118	1.161	1.057	0.882	0.777	0.768	0.768
115.0	0.699	0.760	0.795	0.733	0.576	0.375	0.271	0.236	0.227
120.0	0.533	0.533	0.515	0.445	0.323	0.218	0.166	0.140	0.140
125.0	0.393	0.358	0.323	0.262	0.183	0.131	0.122	0.096	0.087
130.0	0.288	0.253	0.218	0.175	0.131	0.096	0.079	0.070	0.070
135.0	0.218	0.183	0.157	0.131	0.114	0.087	0.079	0.070	0.070
140.0	0.166	0.140	0.122	0.114	0.105	0.079	0.070	0.070	0.070
145.0	0.131	0.105	0.105	0.096	0.079	0.079	0.070	0.070	0.070
150.0	0.105	0.105	0.096	0.079	0.079	0.070	0.070	0.070	0.070
160.0	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
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

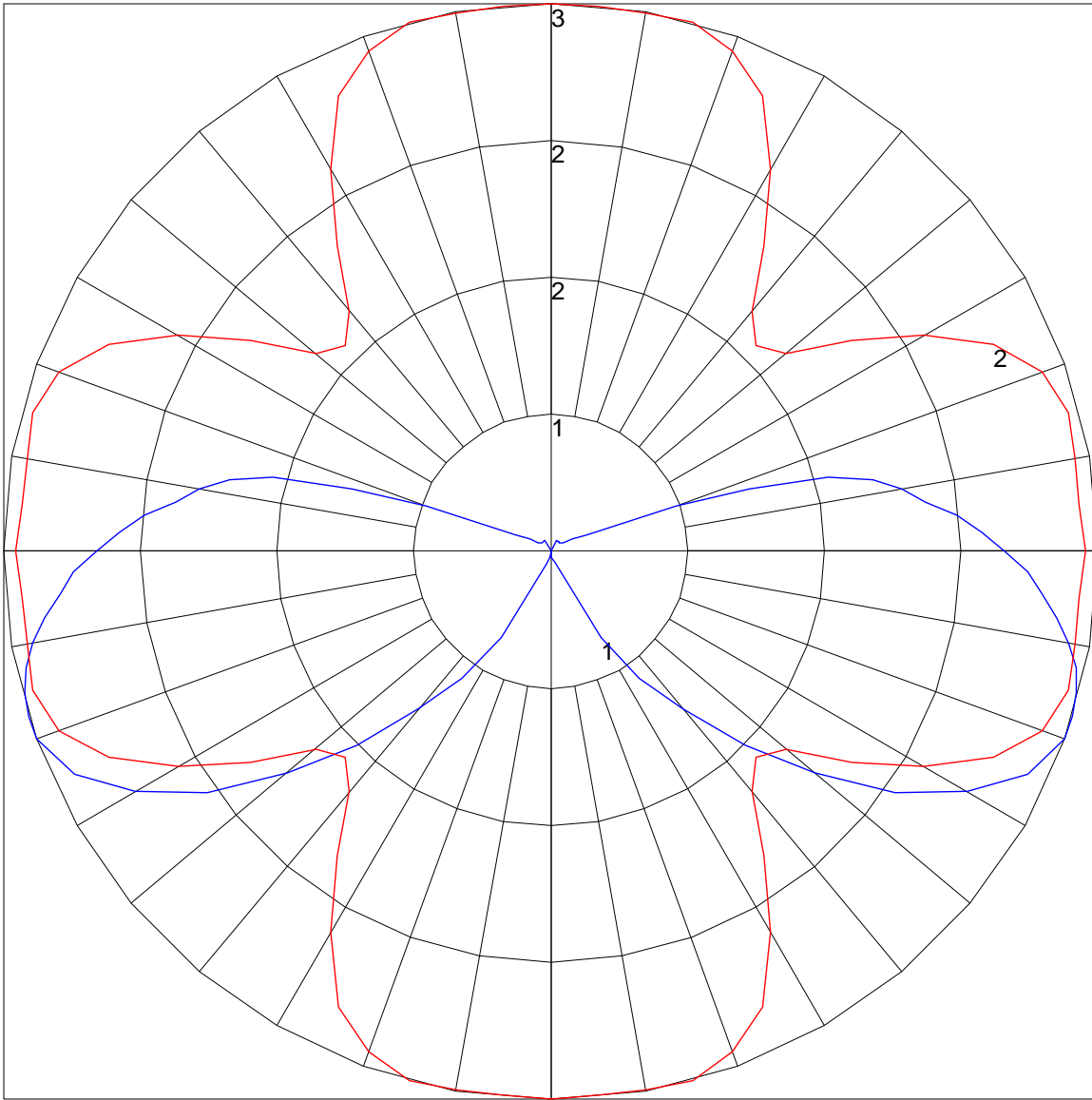
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

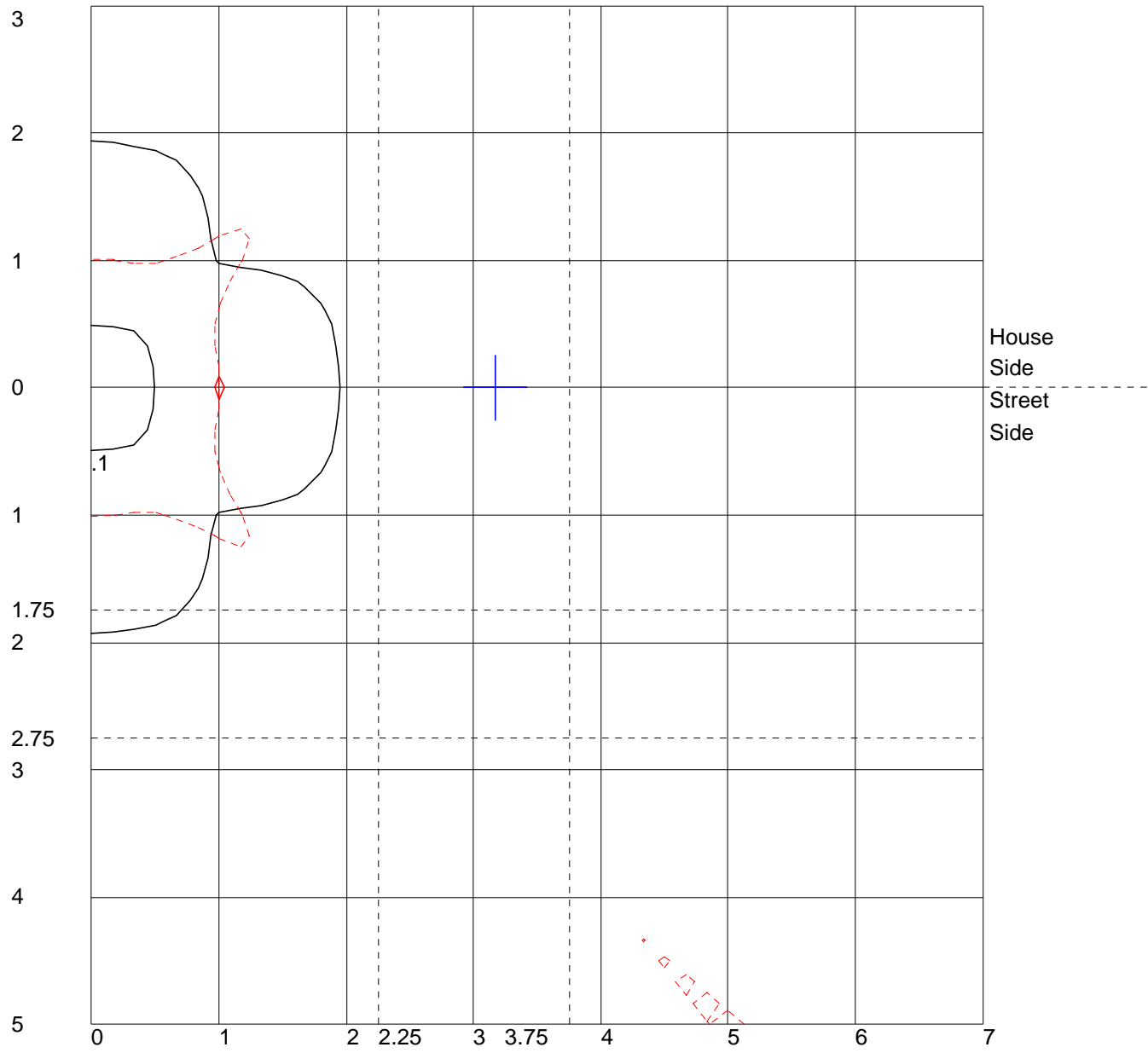
	Lumens	Percent Of Luminaire
Downward Street Side	5.8	34.6
Downward House Side	5.8	34.6
Downward Total	11.6	69.4
Upward Street Side	2.6	15.4
Upward House Side	2.6	15.4
Upward Total	5.2	31.1
Total Flux	16.8	100.5

POLAR GRAPH



Maximum Candela = 3.161 Located At Horizontal Angle = 90, Vertical Angle = 72.5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (72.5) (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

