



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

Report No: L082210706



**Report No:** L082210706

**Issue Date:** 9/9/2022

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

**Model Number:** R3A-16-8W-RO

**Test:** Photometric/Colorimetric/Electrical Test

**Standards Used:** Appropriate part or all test guidelines were used for test performed:  
*IESNA LM79: 2019* Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products  
*ANSI NEMA ANSLG C78.377: 2017* Specification of the Chromaticity of Solid State Lighting Products  
*ANSI C82.77-10:2014:* 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.

**Date of Tests:** 9/9/22

**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	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
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>	Beachside Lighting
<b>Model Number:</b>	R3A-16-8W-RO
<b>Driver Model Number:</b>	N/A

**Test Summary**

<b>Total Lumens:</b>	216.00
<b>Efficacy:</b>	32.69
<b>Color Redering Index:</b>	18.7
<b>Correlated Color Temperature:</b>	1000
<b>Input Voltage (VAC/60Hz):</b>	12.04
<b>Input Current (Amp):</b>	0.7173
<b>Input Power (W):</b>	6.61
<b>Input Power Factor:</b>	0.7648
<b>Current ATHD (%):</b>	79.1%

**Test Condition**

<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:55
<b>Total Operating Time (Hours):</b>	1:35

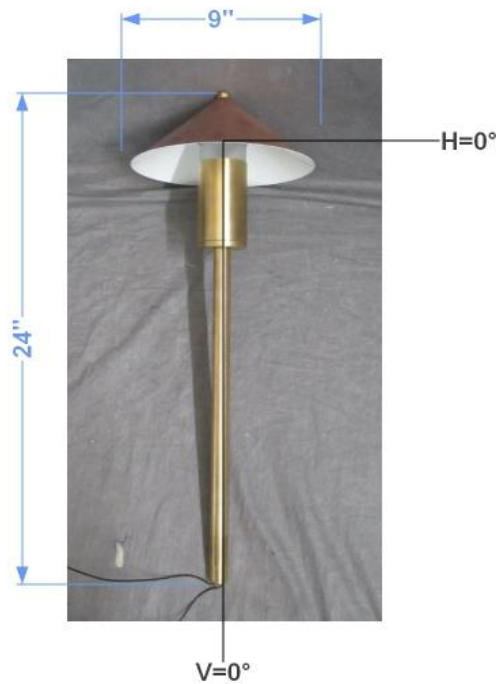
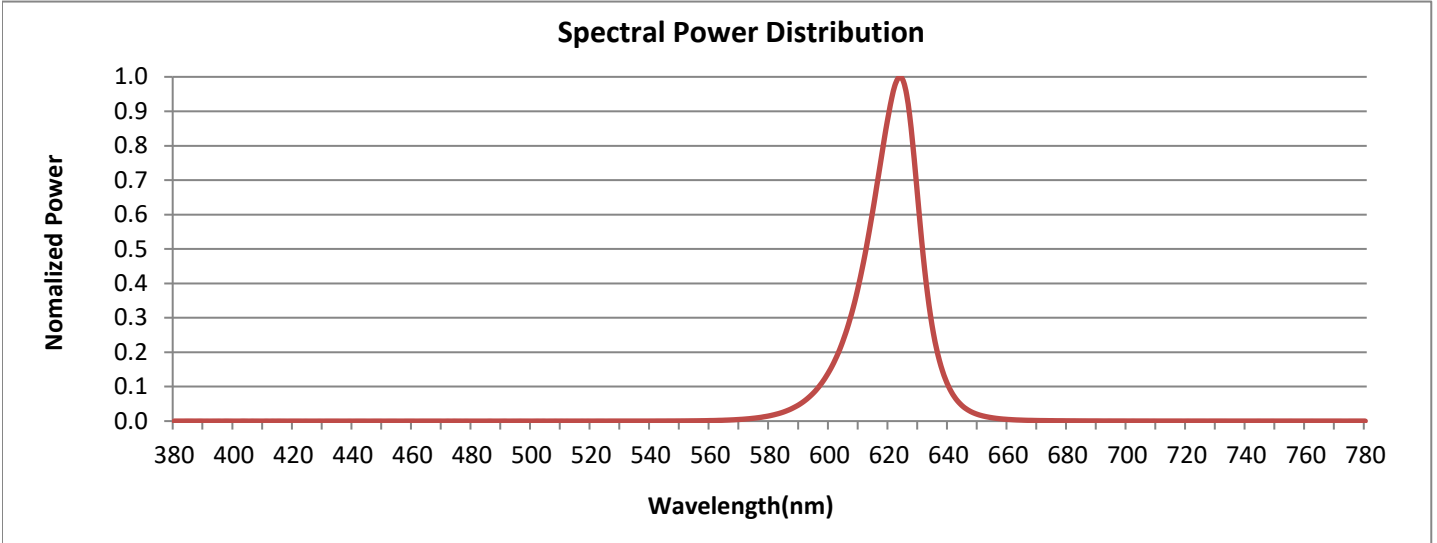


FIG. 1 LUMINAIRE

**Colorimetry Test Results**



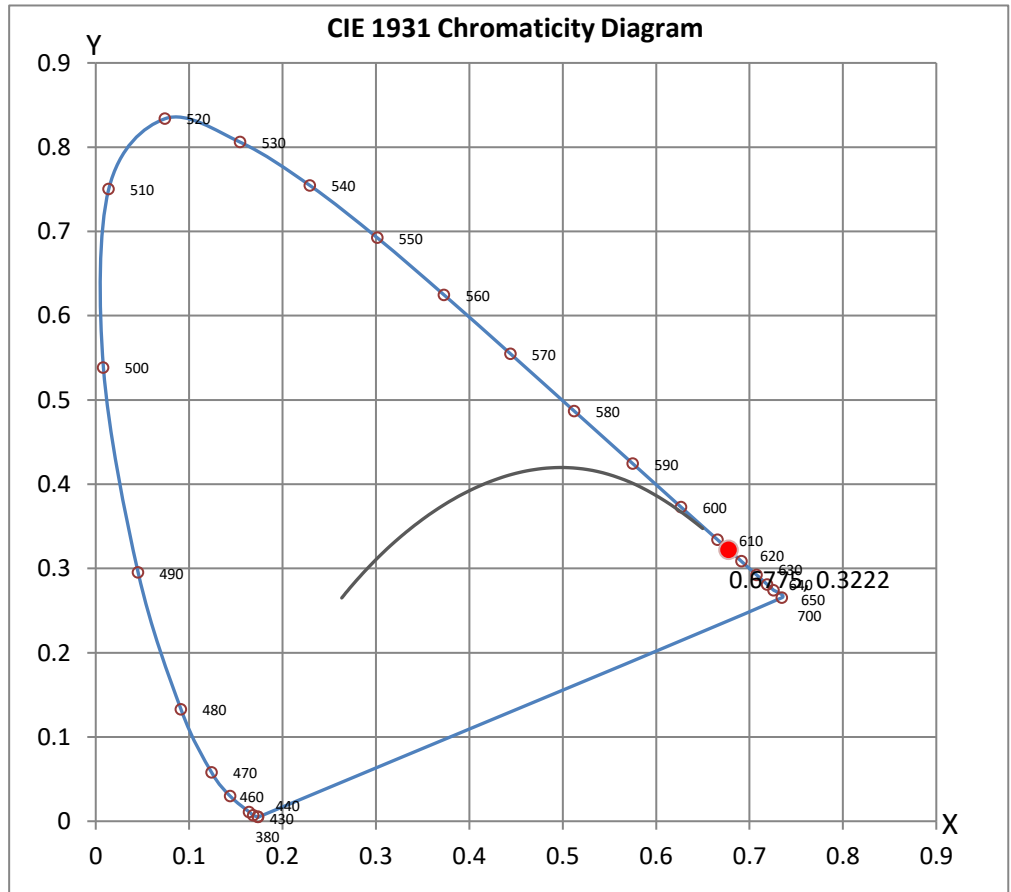
Main: 613 nm  
Peak: 623.77 nm

**CRI & CCT**

x	0.6775
y	0.3222
u'	0.4917
v'	0.5261
CRI	18.70
CCT	1000
Duv	0.11901

**R Values**

R1	9.76
R2	75.13
R3	37.18
R4	-16.38
R5	9.50
R6	90.55
R7	8.27
R8	-64.40
R9	-201.35
R10	66.34
R11	-8.94
R12	77.28
R13	28.21
R14	64.73
R15	-26.96



## 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:

The results related only to the samples as received and tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

Report Prepared by :           Kunjan Modi          

Test Report Reviewed by:



Steve Kang  
Quality Assurance

*\*Attached are photometric data reports.*



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# Photometric Test Report

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L082210706.IES**

## DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L082210706  
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
 [ISSUEDATE] 9/9/2022  
 [MANUFAC] Beachside Lighting  
 [LUMCAT] R3A-16-8W-RO  
 [LUMINAIRE] R3A (12V) on 16 Riser with 8W Red-Orange  
 [BALLASTCAT] N/A  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 12VAC  
 [TEST PROCEDURE] IESNA:LM-79-08

## CHARACTERISTICS

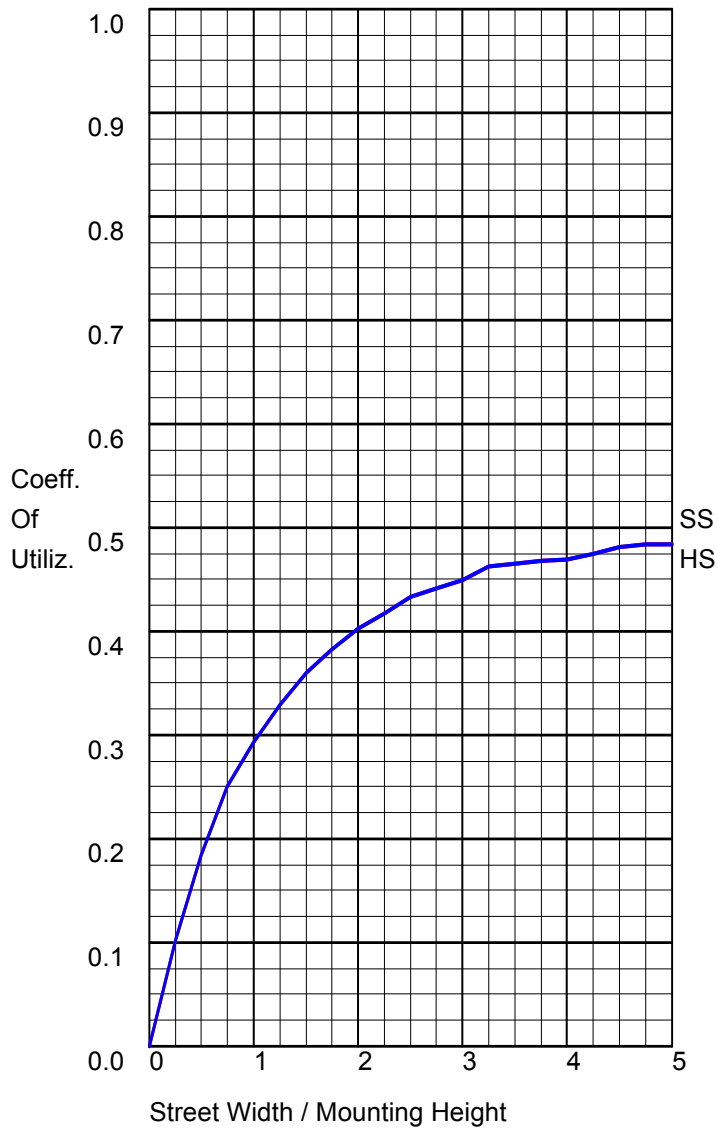
IES Classification	Type V
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	216
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	33
Total Luminaire Watts	6.6
Ballast Factor	1.00
Upward Waste Light Ratio	0.02
Maximum Candela	94
Maximum Candela Angle	0H 0V
Maximum Candela (<90 Degrees Vertical)	94
Maximum Candela Angle (<90 Degrees Vertical)	0H 0V
Maximum Candela At 90 Degrees Vertical	1 (0.5% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	18 (8.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L082210706.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	21.7	N.A.	10.0
FM - Front-Medium (30-60)	41.1	N.A.	19.0
FH - Front-High (60-80)	40.3	N.A.	18.6
FVH - Front-Very High (80-90)	3.4	N.A.	1.6
BL - Back-Low (0-30)	21.7	N.A.	10.0
BM - Back-Medium (30-60)	41.1	N.A.	19.0
BH - Back-High (60-80)	40.3	N.A.	18.6
BVH - Back-Very High (80-90)	3.4	N.A.	1.6
UL - Uplight-Low (90-100)	1.1	N.A.	0.5
UH - Uplight-High (100-180)	2.3	N.A.	1.1
Total	216.4	N.A.	100.0
BUG Rating	B0-U1-G0		

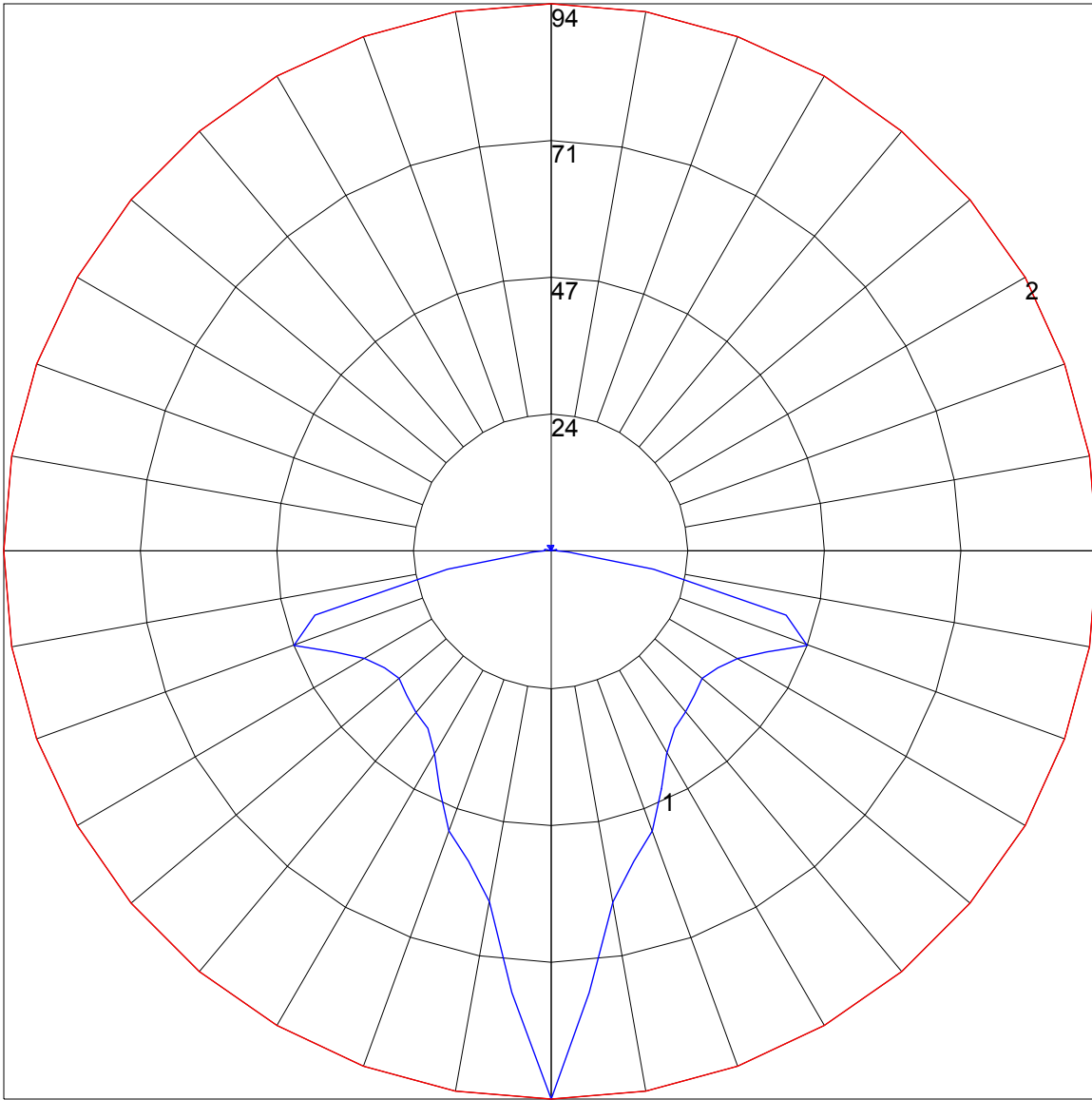
**COEFFICIENTS OF UTILIZATION**



**FLUX DISTRIBUTION**

	Lumens	Percent Of Luminaire
Downward Street Side	106.5	49.2
Downward House Side	106.5	49.2
Downward Total	213.0	98.4
Upward Street Side	1.7	0.8
Upward House Side	1.7	0.8
Upward Total	3.4	1.6
<b>Total Flux</b>	<b>216.4</b>	<b>100.0</b>

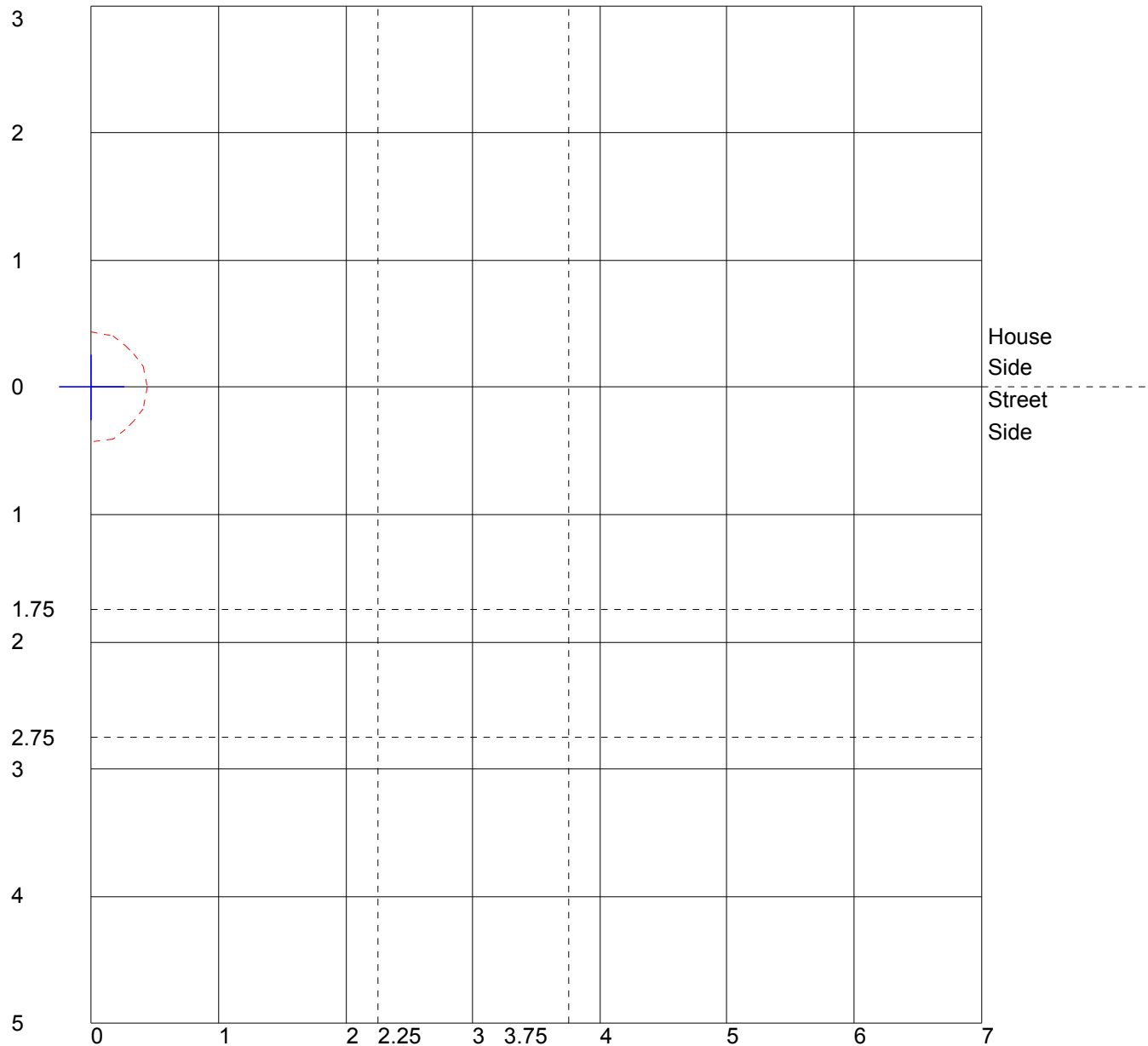
POLAR GRAPH



Maximum Candela = 94 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)



ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height  
 Values Based On 20 Foot Mounting Height  
 1/2 Maximum Candela Trace Shown As Dashed Curve  
 (+) = Maximum Candela Point