



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

Report No: L032511503



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Issue Date: 3/25/2025

Report Prepared For: HK Lighting
2151 Anchor Ct, Thousand Oaks CA 91320

Reference:N/A

Amendment:N/A

Model Number: ZXL30-IR1FB-ABR-UNIV38W-30W

Test: Photometric/Colorimetric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IES LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI/IES LM79: 2019 Approved Methods for Optical and Electrical Measurements of Solid-State Lighting Products

ANSI/NEMA 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: 3/25/25

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-S3	6/21/26
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	6/25/26
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:	HK Lighting
Model Number:	ZXL30-IR1FB-ABR-UNIV38W-30W
Driver Model Number:	ERP PSB50W-1200-42

Test Summary

Total Lumens:	2633.00
Efficacy:	70.75
Color Redering Index:	93.2
Correlated Color Temperature:	2920
Input Voltage (VAC/60Hz):	120.03
Input Current (Amp):	0.3212
Input Power (W):	37.22
Input Power Factor:	0.9653
Current ATHD (%):	15.1%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:10

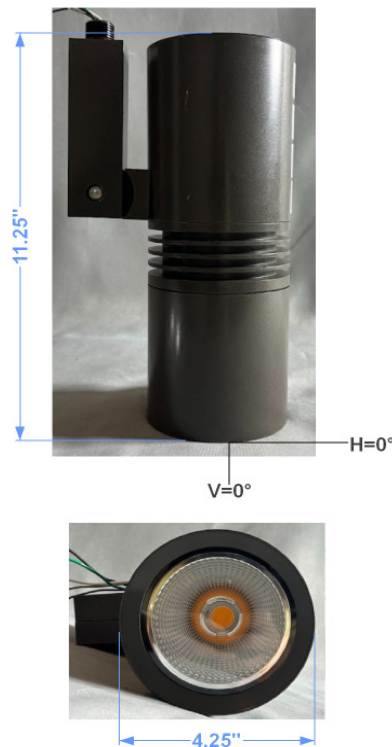
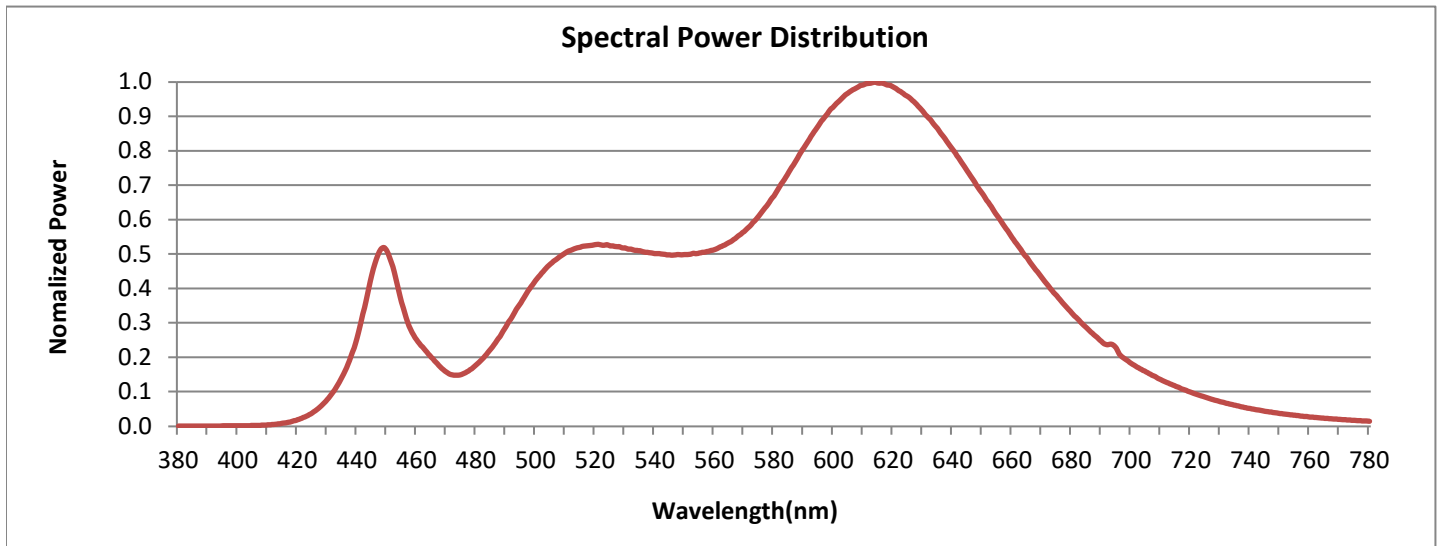


FIG. 1 LUMINAIRE

Colorimetry Test Results

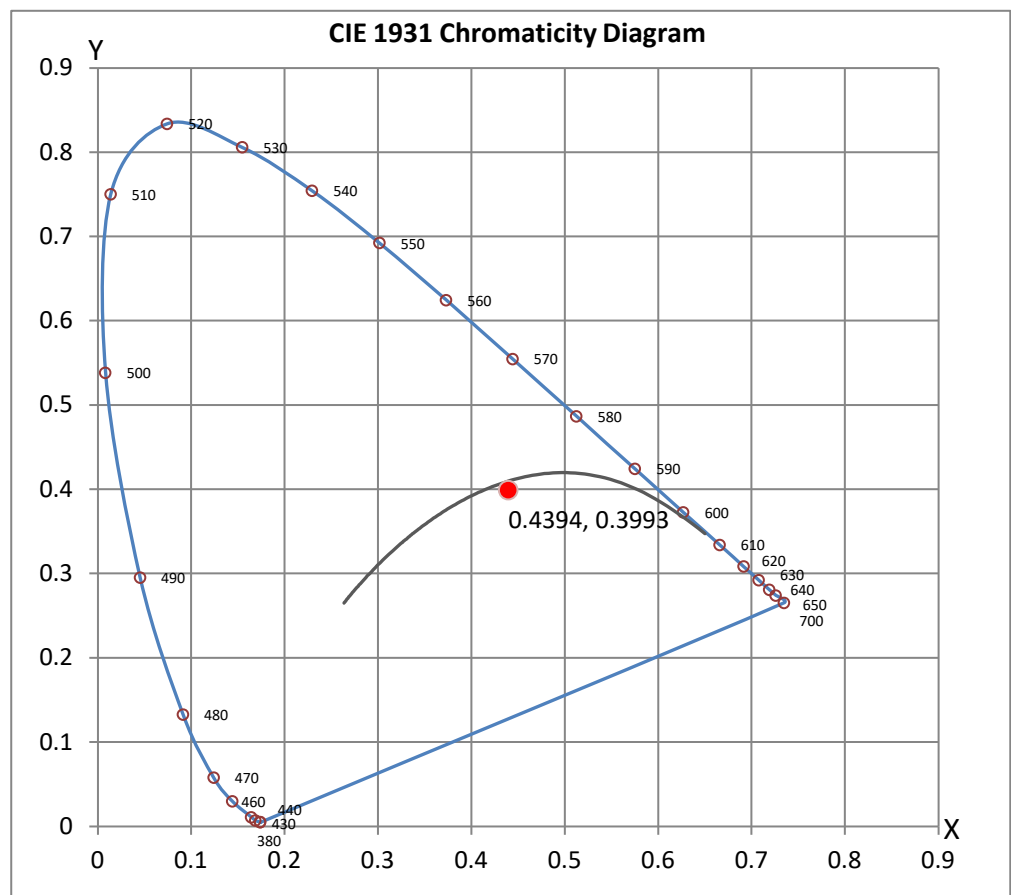


CRI & CCT

x	0.4394
y	0.3993
u'	0.2543
v'	0.5199
CRI	93.20
CCT	2920
Duv	-0.00223

R Values

R1	98.87
R2	98.29
R3	95.57
R4	95.42
R5	97.19
R6	90.90
R7	89.32
R8	79.67
R9	56.52
R10	95.12
R11	87.43
R12	92.48
R13	98.48
R14	98.08
R15	90.85



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.

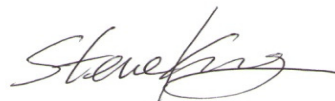
Electrical measurements are measured using the listed equipment.

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 : JG

Test Report Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports.*



8165 E. Kaiser Blvd. Anaheim, CA 92808

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Photometric Test Report

IES FLOOD REPORT

PHOTOMETRIC FILENAME : L032511503.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] L032511503

[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)

[ISSUEDATE] 3/25/2025

[MANUFAC] HK Lighting

[LUMCAT] ZXL30-IR1FB-ABR-UNIV38W-30W

[LUMINAIRE] ZXL30 Accent Light, 38W, 3000K, Wide Beam

[BALLASTCAT] ERP PSB50W-1200-42

[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.

[INPUT] 120VAC

[TEST PROCEDURE] IESNA:LM-79-19

Note: Candela values converted from Type-C to Type-B

CHARACTERISTICS

NEMA Type	4 H x 4 V
Maximum Candela	5329
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	42.4
Vertical Beam Angle (50%)	42.4
Horizontal Field Angle (10%)	63.2
Vertical Field Angle (10%)	63.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	1689
Beam Efficiency	N.A.
Field Lumens	2501
Field Efficiency	N.A.
Spill Lumens	132
Luminaire Lumens	2633
Total Efficiency	N.A.
Total Luminaire Watts	37.22
Ballast Factor	1.00

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AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	3	75	3
65	5	65	5
55	12	55	12
47.5	30	47.5	30
42.5	34	42.5	34
37.5	94	37.5	94
33	204	33	204
29	1134	29	1134
25.5	1891	25.5	1891
22.5	2422	22.5	2422
19.5	2980	19.5	2980
17	3475	17	3475
15	3994	15	3994
13	4374	13	4374
11	4646	11	4646
9	4819	9	4819
7	5033	7	5033
5	5176	5	5176
3	5274	3	5274
1	5322	1	5322
0	5329	0	5329
-1	5322	-1	5322
-3	5274	-3	5274
-5	5176	-5	5176
-7	5033	-7	5033
-9	4819	-9	4819
-11	4646	-11	4646
-13	4374	-13	4374
-15	3994	-15	3994
-17	3475	-17	3475
-19.5	2980	-19.5	2980
-22.5	2422	-22.5	2422
-25.5	1891	-25.5	1891
-29	1134	-29	1134
-33	204	-33	204
-37.5	94	-37.5	94
-42.5	34	-42.5	34
-47.5	30	-47.5	30
-55	12	-55	12
-65	5	-65	5
-75	3	-75	3
-85	0	-85	0
-90	0	-90	0

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CANDELA TABULATION

Maximum Candela = 5329

Beam Edge = 2664.5 Cd (50% of Max.)

Field Edge = 532.9 Cd (10% of Max.)

* Indicates Values Inside Field Edge

Vert. Angles	Horizontal Angles									
	<u>-90.0</u>	<u>-85.0</u>	<u>-75.0</u>	<u>-65.0</u>	<u>-55.0</u>	<u>-47.5</u>	<u>-42.5</u>	<u>-37.5</u>	<u>-33.0</u>	<u>-29.0</u>
90.0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0
75.0	0	0	0	0	1	2	2	2	2	2
65.0	0	0	0	2	3	3	4	4	4	4
55.0	0	0	1	3	4	5	5	6	8	9
47.5	0	0	2	3	5	7	8	10	12	15
42.5	0	0	2	4	5	8	11	14	20	24
37.5	0	0	2	4	6	10	14	22	28	31
33.0	0	0	2	4	8	12	20	28	32	34
29.0	0	0	2	4	9	15	24	31	34	63
25.5	0	0	3	4	9	18	28	33	54	90
22.5	0	0	3	5	10	21	30	34	73	128
19.5	0	0	3	5	10	23	31	45	91	168
17.0	0	0	3	5	11	25	32	56	114	198
15.0	0	0	3	5	11	26	32	64	133	356
13.0	0	0	3	5	11	27	33	72	150	542 *
11.0	0	0	3	5	11	28	33	78	165	705 *
9.0	0	0	3	5	12	28	33	83	178	844 *
7.0	0	0	3	5	12	29	34	87	188	957 *
5.0	0	0	3	5	12	30	34	91	196	1043 *
3.0	0	0	3	5	12	30	34	93	201	1101 *
1.0	0	0	3	5	12	30	34	94	204	1134 *
0.0	0	0	3	5	12	30	34	94	204	1134 *
-1.0	0	0	3	5	12	30	34	94	204	1134 *
-3.0	0	0	3	5	12	30	34	93	201	1101 *
-5.0	0	0	3	5	12	30	34	91	196	1043 *
-7.0	0	0	3	5	12	29	34	87	188	957 *
-9.0	0	0	3	5	12	28	33	83	178	844 *
-11.0	0	0	3	5	11	28	33	78	165	705 *
-13.0	0	0	3	5	11	27	33	72	150	542 *
-15.0	0	0	3	5	11	26	32	64	133	356
-17.0	0	0	3	5	11	25	32	56	114	198
-19.5	0	0	3	5	10	23	31	45	91	168
-22.5	0	0	3	5	10	21	30	34	73	128
-25.5	0	0	3	4	9	18	28	33	54	90
-29.0	0	0	2	4	9	15	24	31	34	63
-33.0	0	0	2	4	8	12	20	28	32	34
-37.5	0	0	2	4	6	10	14	22	28	31
-42.5	0	0	2	4	5	8	11	14	20	24
-47.5	0	0	2	3	5	7	8	10	12	15
-55.0	0	0	1	3	4	5	5	6	8	9
-65.0	0	0	0	2	3	3	4	4	4	4
-75.0	0	0	0	0	1	2	2	2	2	2
-85.0	0	0	0	0	0	0	0	0	0	0
-90.0	0	0	0	0	0	0	0	0	0	0

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CANDELA TABULATION - (Cont.)

Vert. Angles	Horizontal Angles									
	<u>-25.5</u>	<u>-22.5</u>	<u>-19.5</u>	<u>-17.0</u>	<u>-15.0</u>	<u>-13.0</u>	<u>-11.0</u>	<u>-9.0</u>	<u>-7.0</u>	<u>-5.0</u>
90.0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0
75.0	3	3	3	3	3	3	3	3	3	3
65.0	4	5	5	5	5	5	5	5	5	5
55.0	9	10	10	11	11	11	11	12	12	12
47.5	18	21	23	25	26	27	28	28	29	30
42.5	28	30	31	32	32	33	33	33	34	34
37.5	33	34	45	56	64	72	78	83	87	91
33.0	54	73	91	114	133	150	165	178	188	196
29.0	90	128	168	198	356	542 *	705 *	844 *	957 *	1043 *
25.5	144	192	506	825 *	1058 *	1259 *	1431 *	1579 *	1700 *	1793 *
22.5	192	576 *	1032 *	1365 *	1605 *	1823 *	1994 *	2131 *	2243 *	2330 *
19.5	506	1032 *	1500 *	1858 *	2082 *	2281 *	2462 *	2626 *	2762 *	2867 *
17.0	825 *	1365 *	1858 *	2181 *	2422 *	2648 *	2857 *	3045 *	3209 *	3337 *
15.0	1058 *	1605 *	2082 *	2422 *	2684 *	2933 *	3173 *	3388 *	3600 *	3788 *
13.0	1259 *	1823 *	2281 *	2648 *	2933 *	3217 *	3483 *	3795 *	4044 *	4201 *
11.0	1431 *	1994 *	2462 *	2857 *	3173 *	3483 *	3862 *	4150 *	4374 *	4500 *
9.0	1579 *	2131 *	2626 *	3045 *	3388 *	3795 *	4150 *	4415 *	4594 *	4708 *
7.0	1700 *	2243 *	2762 *	3209 *	3600 *	4044 *	4374 *	4594 *	4742 *	4862 *
5.0	1793 *	2330 *	2867 *	3337 *	3788 *	4201 *	4500 *	4708 *	4862 *	5033 *
3.0	1856 *	2389 *	2939 *	3425 *	3919 *	4310 *	4592 *	4777 *	4967 *	5117 *
1.0	1891 *	2422 *	2980 *	3475 *	3994 *	4374 *	4646 *	4819 *	5033 *	5176 *
0.0	1891 *	2422 *	2980 *	3475 *	3994 *	4374 *	4646 *	4819 *	5033 *	5176 *
-1.0	1891 *	2422 *	2980 *	3475 *	3994 *	4374 *	4646 *	4819 *	5033 *	5176 *
-3.0	1856 *	2389 *	2939 *	3425 *	3919 *	4310 *	4592 *	4777 *	4967 *	5117 *
-5.0	1793 *	2330 *	2867 *	3337 *	3788 *	4201 *	4500 *	4708 *	4862 *	5033 *
-7.0	1700 *	2243 *	2762 *	3209 *	3600 *	4044 *	4374 *	4594 *	4742 *	4862 *
-9.0	1579 *	2131 *	2626 *	3045 *	3388 *	3795 *	4150 *	4415 *	4594 *	4708 *
-11.0	1431 *	1994 *	2462 *	2857 *	3173 *	3483 *	3862 *	4150 *	4374 *	4500 *
-13.0	1259 *	1823 *	2281 *	2648 *	2933 *	3217 *	3483 *	3795 *	4044 *	4201 *
-15.0	1058 *	1605 *	2082 *	2422 *	2684 *	2933 *	3173 *	3388 *	3600 *	3788 *
-17.0	825 *	1365 *	1858 *	2181 *	2422 *	2648 *	2857 *	3045 *	3209 *	3337 *
-19.5	506	1032 *	1500 *	1858 *	2082 *	2281 *	2462 *	2626 *	2762 *	2867 *
-22.5	192	576 *	1032 *	1365 *	1605 *	1823 *	1994 *	2131 *	2243 *	2330 *
-25.5	144	192	506	825 *	1058 *	1259 *	1431 *	1579 *	1700 *	1793 *
-29.0	90	128	168	198	356	542 *	705 *	844 *	957 *	1043 *
-33.0	54	73	91	114	133	150	165	178	188	196
-37.5	33	34	45	56	64	72	78	83	87	91
-42.5	28	30	31	32	32	33	33	33	34	34
-47.5	18	21	23	25	26	27	28	28	29	30
-55.0	9	10	10	11	11	11	11	12	12	12
-65.0	4	5	5	5	5	5	5	5	5	5
-75.0	3	3	3	3	3	3	3	3	3	3
-85.0	0	0	0	0	0	0	0	0	0	0
-90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	<u>-3.0</u>	<u>-1.0</u>	<u>0.0</u>	<u>1.0</u>	<u>3.0</u>	<u>5.0</u>	<u>7.0</u>	<u>9.0</u>	<u>11.0</u>	<u>13.0</u>
90.0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0
75.0	3	3	3	3	3	3	3	3	3	3
65.0	5	5	5	5	5	5	5	5	5	5

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CANDELA TABULATION - (Cont.)

55.0	12	12	12	12	12	12	12	12	11	11
47.5	30	30	30	30	30	30	29	28	28	27
42.5	34	34	34	34	34	34	34	33	33	33
37.5	93	94	94	94	93	91	87	83	78	72
33.0	201	204	204	204	201	196	188	178	165	150
29.0	1101 *	1134 *	1134 *	1134 *	1101 *	1043 *	957 *	844 *	705 *	542 *
25.5	1856 *	1891 *	1891 *	1891 *	1856 *	1793 *	1700 *	1579 *	1431 *	1259 *
22.5	2389 *	2422 *	2422 *	2422 *	2389 *	2330 *	2243 *	2131 *	1994 *	1823 *
19.5	2939 *	2980 *	2980 *	2980 *	2939 *	2867 *	2762 *	2626 *	2462 *	2281 *
17.0	3425 *	3475 *	3475 *	3475 *	3425 *	3337 *	3209 *	3045 *	2857 *	2648 *
15.0	3919 *	3994 *	3994 *	3994 *	3919 *	3788 *	3600 *	3388 *	3173 *	2933 *
13.0	4310 *	4374 *	4374 *	4374 *	4310 *	4201 *	4044 *	3795 *	3483 *	3217 *
11.0	4592 *	4646 *	4646 *	4646 *	4592 *	4500 *	4374 *	4150 *	3862 *	3483 *
9.0	4777 *	4819 *	4819 *	4819 *	4777 *	4708 *	4594 *	4415 *	4150 *	3795 *
7.0	4967 *	5033 *	5033 *	5033 *	4967 *	4862 *	4742 *	4594 *	4374 *	4044 *
5.0	5117 *	5176 *	5176 *	5176 *	5117 *	5033 *	4862 *	4708 *	4500 *	4201 *
3.0	5213 *	5266 *	5274 *	5266 *	5213 *	5117 *	4967 *	4777 *	4592 *	4310 *
1.0	5266 *	5312 *	5322 *	5312 *	5266 *	5176 *	5033 *	4819 *	4646 *	4374 *
0.0	5274 *	5322 *	5329 *	5322 *	5274 *	5176 *	5033 *	4819 *	4646 *	4374 *
-1.0	5266 *	5312 *	5322 *	5312 *	5266 *	5176 *	5033 *	4819 *	4646 *	4374 *
-3.0	5213 *	5266 *	5274 *	5266 *	5213 *	5117 *	4967 *	4777 *	4592 *	4310 *
-5.0	5117 *	5176 *	5176 *	5176 *	5117 *	5033 *	4862 *	4708 *	4500 *	4201 *
-7.0	4967 *	5033 *	5033 *	5033 *	4967 *	4862 *	4742 *	4594 *	4374 *	4044 *
-9.0	4777 *	4819 *	4819 *	4819 *	4777 *	4708 *	4594 *	4415 *	4150 *	3795 *
-11.0	4592 *	4646 *	4646 *	4646 *	4592 *	4500 *	4374 *	4150 *	3862 *	3483 *
-13.0	4310 *	4374 *	4374 *	4374 *	4310 *	4201 *	4044 *	3795 *	3483 *	3217 *
-15.0	3919 *	3994 *	3994 *	3994 *	3919 *	3788 *	3600 *	3388 *	3173 *	2933 *
-17.0	3425 *	3475 *	3475 *	3475 *	3425 *	3337 *	3209 *	3045 *	2857 *	2648 *
-19.5	2939 *	2980 *	2980 *	2980 *	2939 *	2867 *	2762 *	2626 *	2462 *	2281 *
-22.5	2389 *	2422 *	2422 *	2422 *	2389 *	2330 *	2243 *	2131 *	1994 *	1823 *
-25.5	1856 *	1891 *	1891 *	1891 *	1856 *	1793 *	1700 *	1579 *	1431 *	1259 *
-29.0	1101 *	1134 *	1134 *	1134 *	1101 *	1043 *	957 *	844 *	705 *	542 *
-33.0	201	204	204	204	201	196	188	178	165	150
-37.5	93	94	94	94	93	91	87	83	78	72
-42.5	34	34	34	34	34	34	34	33	33	33
-47.5	30	30	30	30	30	30	29	28	28	27
-55.0	12	12	12	12	12	12	12	12	11	11
-65.0	5	5	5	5	5	5	5	5	5	5
-75.0	3	3	3	3	3	3	3	3	3	3
-85.0	0	0	0	0	0	0	0	0	0	0
-90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	<u>15.0</u>	<u>17.0</u>	<u>19.5</u>	<u>22.5</u>	<u>25.5</u>	<u>29.0</u>	<u>33.0</u>	<u>37.5</u>	<u>42.5</u>	<u>47.5</u>
90.0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0
75.0	3	3	3	3	3	2	2	2	2	2
65.0	5	5	5	5	4	4	4	4	4	3
55.0	11	11	10	10	9	9	8	6	5	5
47.5	26	25	23	21	18	15	12	10	8	7
42.5	32	32	31	30	28	24	20	14	11	8
37.5	64	56	45	34	33	31	28	22	14	10
33.0	133	114	91	73	54	34	32	28	20	12
29.0	356	198	168	128	90	63	34	31	24	15
25.5	1058 *	825 *	506	192	144	90	54	33	28	18

IES FLOOD REPORT
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CANDELA TABULATION - (Cont.)

22.5	1605 *	1365 *	1032 *	576 *	192	128	73	34	30	21
19.5	2082 *	1858 *	1500 *	1032 *	506	168	91	45	31	23
17.0	2422 *	2181 *	1858 *	1365 *	825 *	198	114	56	32	25
15.0	2684 *	2422 *	2082 *	1605 *	1058 *	356	133	64	32	26
13.0	2933 *	2648 *	2281 *	1823 *	1259 *	542 *	150	72	33	27
11.0	3173 *	2857 *	2462 *	1994 *	1431 *	705 *	165	78	33	28
9.0	3388 *	3045 *	2626 *	2131 *	1579 *	844 *	178	83	33	28
7.0	3600 *	3209 *	2762 *	2243 *	1700 *	957 *	188	87	34	29
5.0	3788 *	3337 *	2867 *	2330 *	1793 *	1043 *	196	91	34	30
3.0	3919 *	3425 *	2939 *	2389 *	1856 *	1101 *	201	93	34	30
1.0	3994 *	3475 *	2980 *	2422 *	1891 *	1134 *	204	94	34	30
0.0	3994 *	3475 *	2980 *	2422 *	1891 *	1134 *	204	94	34	30
-1.0	3994 *	3475 *	2980 *	2422 *	1891 *	1134 *	204	94	34	30
-3.0	3919 *	3425 *	2939 *	2389 *	1856 *	1101 *	201	93	34	30
-5.0	3788 *	3337 *	2867 *	2330 *	1793 *	1043 *	196	91	34	30
-7.0	3600 *	3209 *	2762 *	2243 *	1700 *	957 *	188	87	34	29
-9.0	3388 *	3045 *	2626 *	2131 *	1579 *	844 *	178	83	33	28
-11.0	3173 *	2857 *	2462 *	1994 *	1431 *	705 *	165	78	33	28
-13.0	2933 *	2648 *	2281 *	1823 *	1259 *	542 *	150	72	33	27
-15.0	2684 *	2422 *	2082 *	1605 *	1058 *	356	133	64	32	26
-17.0	2422 *	2181 *	1858 *	1365 *	825 *	198	114	56	32	25
-19.5	2082 *	1858 *	1500 *	1032 *	506	168	91	45	31	23
-22.5	1605 *	1365 *	1032 *	576 *	192	128	73	34	30	21
-25.5	1058 *	825 *	506	192	144	90	54	33	28	18
-29.0	356	198	168	128	90	63	34	31	24	15
-33.0	133	114	91	73	54	34	32	28	20	12
-37.5	64	56	45	34	33	31	28	22	14	10
-42.5	32	32	31	30	28	24	20	14	11	8
-47.5	26	25	23	21	18	15	12	10	8	7
-55.0	11	11	10	10	9	9	8	6	5	5
-65.0	5	5	5	5	4	4	4	4	4	3
-75.0	3	3	3	3	3	2	2	2	2	2
-85.0	0	0	0	0	0	0	0	0	0	0
-90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles				
	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>	<u>85.0</u>	<u>90.0</u>
90.0	0	0	0	0	0
85.0	0	0	0	0	0
75.0	1	0	0	0	0
65.0	3	2	0	0	0
55.0	4	3	1	0	0
47.5	5	3	2	0	0
42.5	5	4	2	0	0
37.5	6	4	2	0	0
33.0	8	4	2	0	0
29.0	9	4	2	0	0
25.5	9	4	3	0	0
22.5	10	5	3	0	0
19.5	10	5	3	0	0
17.0	11	5	3	0	0
15.0	11	5	3	0	0
13.0	11	5	3	0	0
11.0	11	5	3	0	0
9.0	12	5	3	0	0

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CANDELA TABULATION - (Cont.)

7.0	12	5	3	0	0
5.0	12	5	3	0	0
3.0	12	5	3	0	0
1.0	12	5	3	0	0
0.0	12	5	3	0	0
-1.0	12	5	3	0	0
-3.0	12	5	3	0	0
-5.0	12	5	3	0	0
-7.0	12	5	3	0	0
-9.0	12	5	3	0	0
-11.0	11	5	3	0	0
-13.0	11	5	3	0	0
-15.0	11	5	3	0	0
-17.0	11	5	3	0	0
-19.5	10	5	3	0	0
-22.5	10	5	3	0	0
-25.5	9	4	3	0	0
-29.0	9	4	2	0	0
-33.0	8	4	2	0	0
-37.5	6	4	2	0	0
-42.5	5	4	2	0	0
-47.5	5	3	2	0	0
-55.0	4	3	1	0	0
-65.0	3	2	0	0	0
-75.0	1	0	0	0	0
-85.0	0	0	0	0	0
-90.0	0	0	0	0	0

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LUMEN TABULATION

Average Of Right And Left Sides

Total Luminaire Lumens (one side of beam only) = 1316.62

Total Field Lumens (one side of beam only) = 1250.38

* Indicates Values Inside Field Edge

Vert. Angles	Horizontal Angles									
	<u>0</u>	<u>1</u>	<u>3</u>	<u>5</u>	<u>7</u>	<u>9</u>	<u>11</u>	<u>13</u>	<u>15</u>	<u>17</u>
90										
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
65	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
55	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
47.5	0.05	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.08	0.09
42.5	0.05	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.10
37.5	0.10	0.19	0.19	0.19	0.18	0.17	0.16	0.15	0.13	0.15
33	0.20	0.41	0.40	0.38	0.36	0.34	0.31	0.28	0.24	0.25
29	0.82 *	1.61 *	1.54 *	1.44 *	1.31 *	1.14	0.93	0.70	0.47	0.41
25.5	1.61 *	3.19 *	3.08 *	2.91 *	2.68 *	2.39 *	2.05 *	1.66 *	1.25 *	1.07
22.5	1.97 *	3.91 *	3.81 *	3.67 *	3.46 *	3.21 *	2.91 *	2.55 *	2.13 *	2.02 *
19.5	2.47 *	4.90 *	4.80 *	4.64 *	4.42 *	4.15 *	3.83 *	3.45 *	3.03 *	3.12 *
17	2.46 *	4.88 *	4.77 *	4.61 *	4.39 *	4.12 *	3.82 *	3.48 *	3.13 *	3.34 *
15	2.28 *	4.51 *	4.40 *	4.22 *	3.99 *	3.74 *	3.46 *	3.16 *	2.84 *	3.09 *
13	2.55 *	5.05 *	4.93 *	4.74 *	4.47 *	4.15 *	3.82 *	3.48 *	3.13 *	3.41 *
11	2.75 *	5.46 *	5.35 *	5.19 *	4.94 *	4.59 *	4.18 *	3.78 *	3.40 *	3.71 *
9	2.88 *	5.73 *	5.64 *	5.51 *	5.29 *	4.97 *	4.56 *	4.09 *	3.65 *	3.97 *
7	3.00 *	5.97 *	5.87 *	5.73 *	5.53 *	5.26 *	4.88 *	4.38 *	3.88 *	4.21 *
5	3.11 *	6.18 *	6.07 *	5.91 *	5.70 *	5.45 *	5.10 *	4.62 *	4.08 *	4.40 *
3	3.18 *	6.32 *	6.22 *	6.05 *	5.83 *	5.57 *	5.24 *	4.79 *	4.24 *	4.54 *
1	3.22 *	6.41 *	6.31 *	6.15 *	5.91 *	5.65 *	5.34 *	4.91 *	4.34 *	4.64 *
0	1.62 *	3.22 *	3.17 *	3.09 *	2.97 *	2.84 *	2.69 *	2.47 *	2.19 *	2.33 *
-1	1.62 *	3.22 *	3.17 *	3.09 *	2.97 *	2.84 *	2.69 *	2.47 *	2.19 *	2.33 *
	3.22 *	6.41 *	6.31 *	6.15 *	5.91 *	5.65 *	5.34 *	4.91 *	4.34 *	4.64 *

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LUMENS TABULATION - (Cont.)

-3	3.18 *	6.32 *	6.22 *	6.05 *	5.83 *	5.57 *	5.24 *	4.79 *	4.24 *	4.54 *
-5	3.11 *	6.18 *	6.07 *	5.91 *	5.70 *	5.45 *	5.10 *	4.62 *	4.08 *	4.40 *
-7	3.00 *	5.97 *	5.87 *	5.73 *	5.53 *	5.26 *	4.88 *	4.38 *	3.88 *	4.21 *
-9	2.88 *	5.73 *	5.64 *	5.51 *	5.29 *	4.97 *	4.56 *	4.09 *	3.65 *	3.97 *
-11	2.75 *	5.46 *	5.35 *	5.19 *	4.94 *	4.59 *	4.18 *	3.78 *	3.40 *	3.71 *
-13	2.55 *	5.05 *	4.93 *	4.74 *	4.47 *	4.15 *	3.82 *	3.48 *	3.13 *	3.41 *
-15	2.28 *	4.51 *	4.40 *	4.22 *	3.99 *	3.74 *	3.46 *	3.16 *	2.84 *	3.09 *
-17	2.46 *	4.88 *	4.77 *	4.61 *	4.39 *	4.12 *	3.82 *	3.48 *	3.13 *	3.34 *
-19.5	2.47 *	4.90 *	4.80 *	4.64 *	4.42 *	4.15 *	3.83 *	3.45 *	3.03 *	3.12 *
-22.5	1.97 *	3.91 *	3.81 *	3.67 *	3.46 *	3.21 *	2.91 *	2.55 *	2.13 *	2.02 *
-25.5	1.61 *	3.19 *	3.08 *	2.91 *	2.68 *	2.39 *	2.05 *	1.66 *	1.25 *	1.07
-29	0.82 *	1.61 *	1.54 *	1.44 *	1.31 *	1.14	0.93	0.70	0.47	0.41
-33	0.20	0.41	0.40	0.38	0.36	0.34	0.31	0.28	0.24	0.25
-37.5	0.10	0.19	0.19	0.19	0.18	0.17	0.16	0.15	0.13	0.15
-42.5	0.05	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.10
-47.5	0.05	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.08	0.09
-55	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
-65	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
-75	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	68.72	136.41	133.69	129.38	123.41	116.00	107.05	96.42	84.74	89.93

Vert. Horizontal Angles

	<u>19.5</u>	<u>22.5</u>	<u>25.5</u>	<u>29</u>	<u>33</u>	<u>37.5</u>	<u>42.5</u>	<u>47.5</u>	<u>55</u>	<u>65</u>
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
75	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.01
65	0.06	0.06	0.06	0.07	0.06	0.06	0.05	0.05	0.05	0.02
55	0.10	0.09	0.09	0.09	0.08	0.06	0.05	0.06	0.04	0.02

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LUMENS TABULATION - (Cont.)

47.5										
	0.11	0.10	0.10	0.09	0.08	0.06	0.05	0.04	0.03	0.01
42.5										
	0.15	0.13	0.14	0.13	0.12	0.09	0.06	0.05	0.04	0.02
37.5										
	0.23	0.18	0.16	0.15	0.14	0.11	0.07	0.06	0.04	0.01
33										
	0.39	0.29	0.23	0.17	0.14	0.12	0.08	0.06	0.04	0.01
29										
	0.74	0.40	0.32	0.22	0.15	0.12	0.08	0.06	0.03	0.01
25.5										
	1.48 *	0.69	0.39	0.27	0.16	0.11	0.08	0.06	0.03	0.01
22.5										
	2.65 *	1.44 *	0.71	0.36	0.20	0.12	0.08	0.07	0.03	0.01
19.5										
	3.07 *	1.94 *	1.01	0.37	0.21	0.12	0.07	0.06	0.03	0.01
17										
	2.95 *	2.03 *	1.15 *	0.42	0.21	0.11	0.06	0.05	0.02	0.01
15										
	3.32 *	2.40 *	1.52 *	0.62	0.23	0.12	0.06	0.05	0.02	0.01
13										
	3.65 *	2.72 *	1.87 *	0.82	0.26	0.13	0.07	0.06	0.02	0.01
11										
	3.93 *	2.98 *	2.16 *	0.99	0.28	0.13	0.07	0.06	0.03	0.01
9										
	4.16 *	3.19 *	2.41 *	1.13 *	0.30	0.14	0.07	0.06	0.03	0.01
7										
	4.35 *	3.37 *	2.60 *	1.24 *	0.31	0.14	0.07	0.06	0.03	0.01
5										
	4.49 *	3.49 *	2.74 *	1.33 *	0.33	0.15	0.07	0.06	0.03	0.01
3										
	4.58 *	3.57 *	2.83 *	1.38 *	0.33	0.15	0.07	0.06	0.03	0.01
1										
	2.30 *	1.80 *	1.43 *	0.70 *	0.17	0.07	0.03	0.03	0.01	0.00
0										
	2.30 *	1.80 *	1.43 *	0.70 *	0.17	0.07	0.03	0.03	0.01	0.00
-1										
	4.58 *	3.57 *	2.83 *	1.38 *	0.33	0.15	0.07	0.06	0.03	0.01
-3										
	4.49 *	3.49 *	2.74 *	1.33 *	0.33	0.15	0.07	0.06	0.03	0.01
-5										
	4.35 *	3.37 *	2.60 *	1.24 *	0.31	0.14	0.07	0.06	0.03	0.01
-7										
	4.16 *	3.19 *	2.41 *	1.13 *	0.30	0.14	0.07	0.06	0.03	0.01
-9										
	3.93 *	2.98 *	2.16 *	0.99	0.28	0.13	0.07	0.06	0.03	0.01
-11										
	3.65 *	2.72 *	1.87 *	0.82	0.26	0.13	0.07	0.06	0.02	0.01
-13										
	3.32 *	2.40 *	1.52 *	0.62	0.23	0.12	0.06	0.05	0.02	0.01
-15										
	2.95 *	2.03 *	1.15 *	0.42	0.21	0.11	0.06	0.05	0.02	0.01
-17										
	3.07 *	1.94 *	1.01	0.37	0.21	0.12	0.07	0.06	0.03	0.01
-19.5										
	2.65 *	1.44 *	0.71	0.36	0.20	0.12	0.08	0.07	0.03	0.01

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LUMENS TABULATION - (Cont.)

-22.5	1.48 *	0.69	0.39	0.27	0.16	0.11	0.08	0.06	0.03	0.01
-25.5	0.74	0.40	0.32	0.22	0.15	0.12	0.08	0.06	0.03	0.01
-29	0.39	0.29	0.23	0.17	0.14	0.12	0.08	0.06	0.04	0.01
-33	0.23	0.18	0.16	0.15	0.14	0.11	0.07	0.06	0.04	0.01
-37.5	0.15	0.13	0.14	0.13	0.12	0.09	0.06	0.05	0.04	0.02
-42.5	0.11	0.10	0.10	0.09	0.08	0.06	0.05	0.04	0.03	0.01
-47.5	0.10	0.09	0.09	0.09	0.08	0.06	0.05	0.06	0.04	0.02
-55	0.06	0.06	0.06	0.07	0.06	0.06	0.05	0.05	0.05	0.02
-65	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.01
-75	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	85.54	61.84	43.95	21.16	7.61	4.30	2.53	2.22	1.21	0.42

Vert. Angles	Horizontal Angles			
	<u>75</u>	<u>85</u>	<u>90</u>	<u>Total</u>
90	0.00	0.00	0.00	
85	0.00	0.00	0.18	
75	0.00	0.00	0.52	
65	0.00	0.00	1.01	
55	0.00	0.00	1.54	
47.5	0.00	0.00	1.57	
42.5	0.00	0.00	2.53	
37.5	0.00	0.00	4.33	
33	0.00	0.00	11.90	
29	0.00	0.00	24.05	
25.5	0.00	0.00	32.93	
22.5	0.00	0.00	44.49	
19.5	0.00	0.00	45.90	
17	0.00	0.00	42.69	

IES FLOOD REPORT
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LUMENS TABULATION - (Cont.)

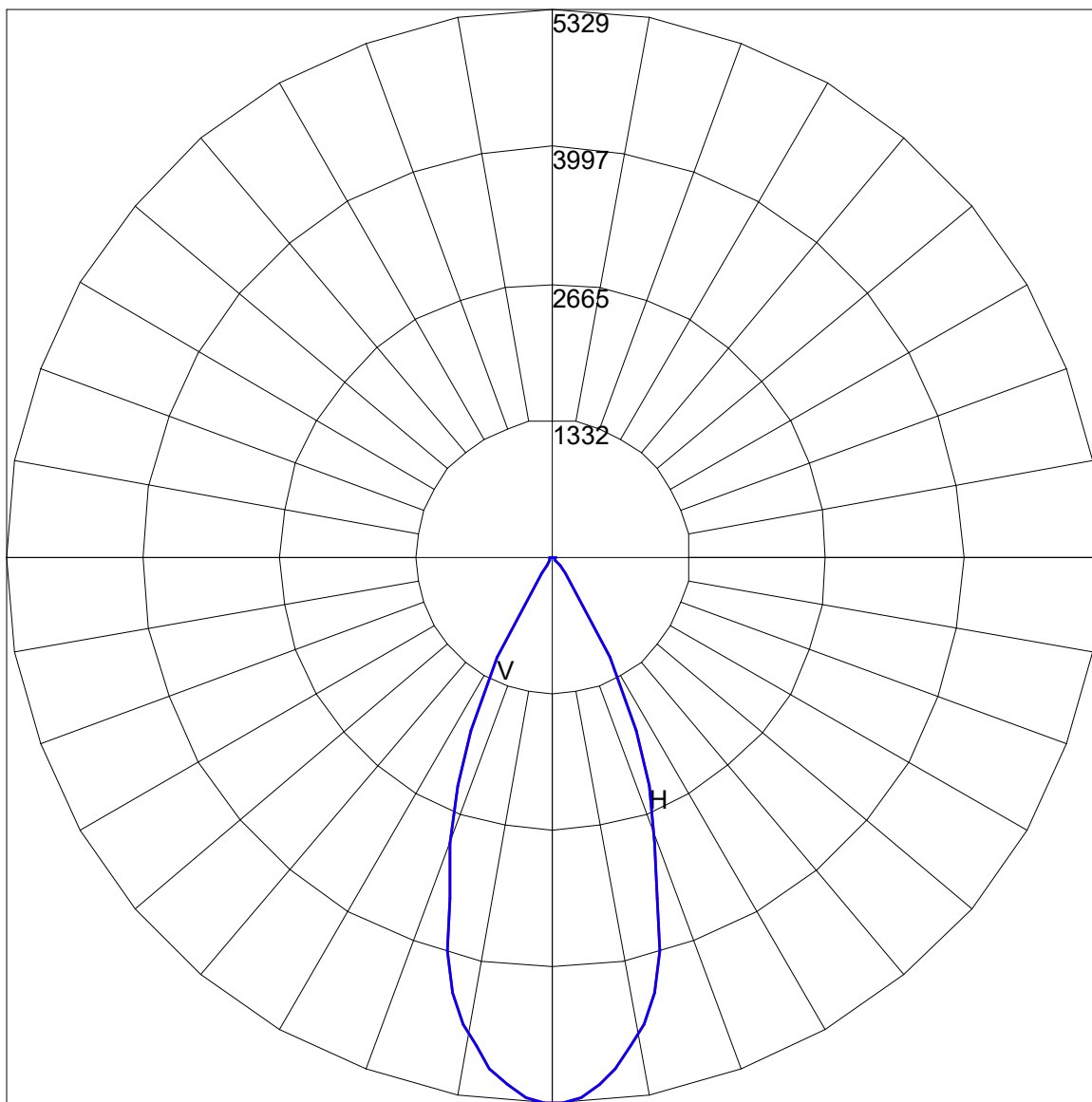
15	0.00	0.00	48.09
13	0.00	0.00	52.92
11	0.00	0.00	56.92
9	0.00	0.00	60.19
7	0.00	0.00	62.81
5	0.00	0.00	64.69
3	0.00	0.00	65.88
1	0.00	0.00	33.16
0	0.00	0.00	33.16
-1	0.00	0.00	65.88
-3	0.00	0.00	64.69
-5	0.00	0.00	62.81
-7	0.00	0.00	60.19
-9	0.00	0.00	56.92
-11	0.00	0.00	52.92
-13	0.00	0.00	48.09
-15	0.00	0.00	42.69
-17	0.00	0.00	45.90
-19.5	0.00	0.00	44.49
-22.5	0.00	0.00	32.93
-25.5	0.00	0.00	24.05
-29	0.00	0.00	11.90
-33	0.00	0.00	4.33
-37.5	0.00	0.00	2.53
-42.5	0.00	0.00	1.57
-47.5	0.00	0.00	1.54
-55	0.00	0.00	1.01
-65	0.00	0.00	0.52

IES FLOOD REPORT
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LUMENS TABULATION - (Cont.)

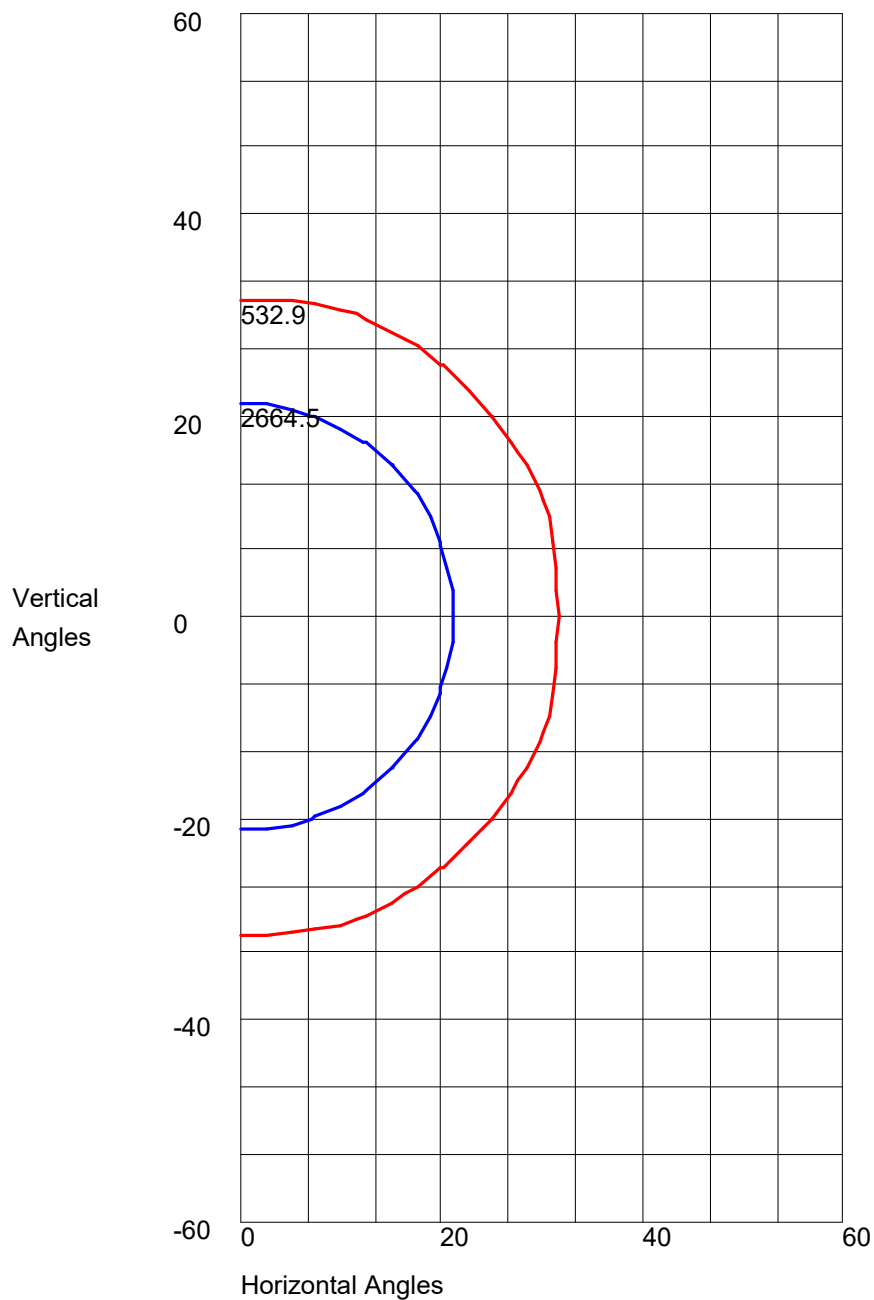
-75	0.00	0.00	0.18
-85	0.00	0.00	0.00
-90			
Total	0.07	0.00	1316.62

AXIAL CANDELA DISPLAY



Maximum Candela = 5329 Located At Horizontal Angle = 0, Vertical Angle = 0
H - Horizontal Axial Candela
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 5329 Located At Horizontal Angle = 0, Vertical Angle = 0
50% Maximum Candela = 2664.5
10% Maximum Candela = 532.9