



8165 E Kaiser Blvd. Anaheim, CA 92808
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Report No: L041700105



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Issue Date: 4/6/2017

Prepared For: HK Lighting Group
3529 Old Conejo Rd. # 118 Newbury Park, CA 91320

Model Number: ZXL-30i-WM-15W-AMB-N

Test: Photometric/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.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 4/3/17

Date of Tests: 4/4/17 - 4/6/17

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-S1	11/28/17
ITECH	IT6122	PS-DC03-S1	11/28/17
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/28/17
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

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

Test Summary

Manufacturer:	HK Lighting Group
Model Number:	ZXL-30i-WM-15W-AMB-N
Driver Model Number:	CUSTOM DRIVER
Total Lumens:	359.64
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.28
Input Power (W):	17.65
Input Power Factor:	0.53
Current ATHD @ 120V(%):	83%
Current ATHD @ 277V(%):	N/A
Efficacy:	20
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	2:05
Total Operating Time (Hours):	3:10

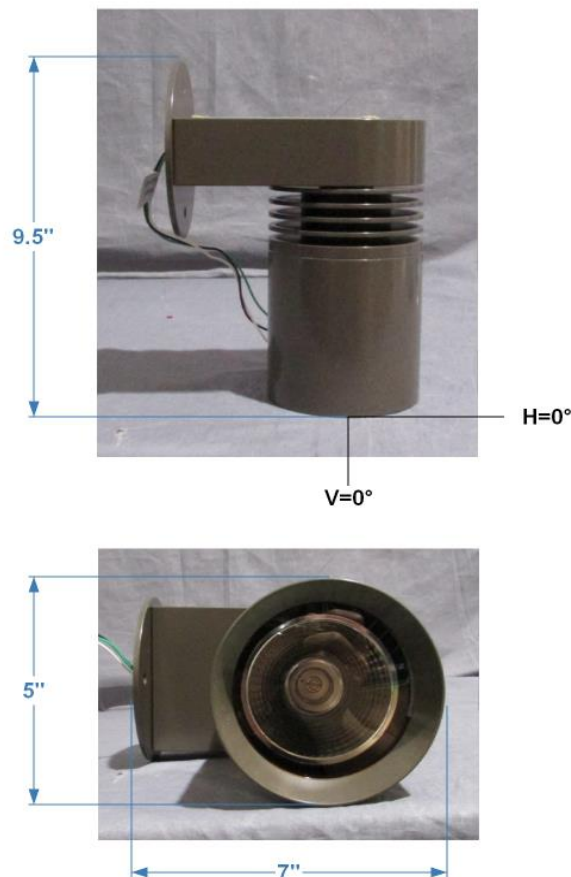


FIG.1 LUMINAIRE

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 : Keyur Patel

Test Report Released by:



Jeff Ahn
Engineering Manager

Test Report Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 7*



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Photometric Test Report

IES FLOOD REPORT

PHOTOMETRIC FILENAME : L041700105.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L041700105
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 4/6/2017
[MANUFAC] HK LIGHTING GROUP
[LUMCAT] ZXL-30i-WM-15W-AMB-N
[LUMINAIRE] WALL MOUNT LED LUMINAIRE
[BALLASTCAT] CUSTOM DRIVER
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 17.65W
[TEST PROCEDURE] IESNA:LM-79-08

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

CHARACTERISTICS

NEMA Type	2 H x 2 V
Maximum Candela	3705
Maximum Candela Angle	-1H 0V
Horizontal Beam Angle (50%)	12.6
Vertical Beam Angle (50%)	12.6
Horizontal Field Angle (10%)	27.3
Vertical Field Angle (10%)	27.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	120
Beam Efficiency	N.A.
Field Lumens	218
Field Efficiency	N.A.
Spill Lumens	142
Luminaire Lumens	360
Total Efficiency	N.A.
Total Luminaire Watts	17.65
Ballast Factor	1.00

IES FLOOD REPORT
PHOTOMETRIC FILENAME : L041700105.IES

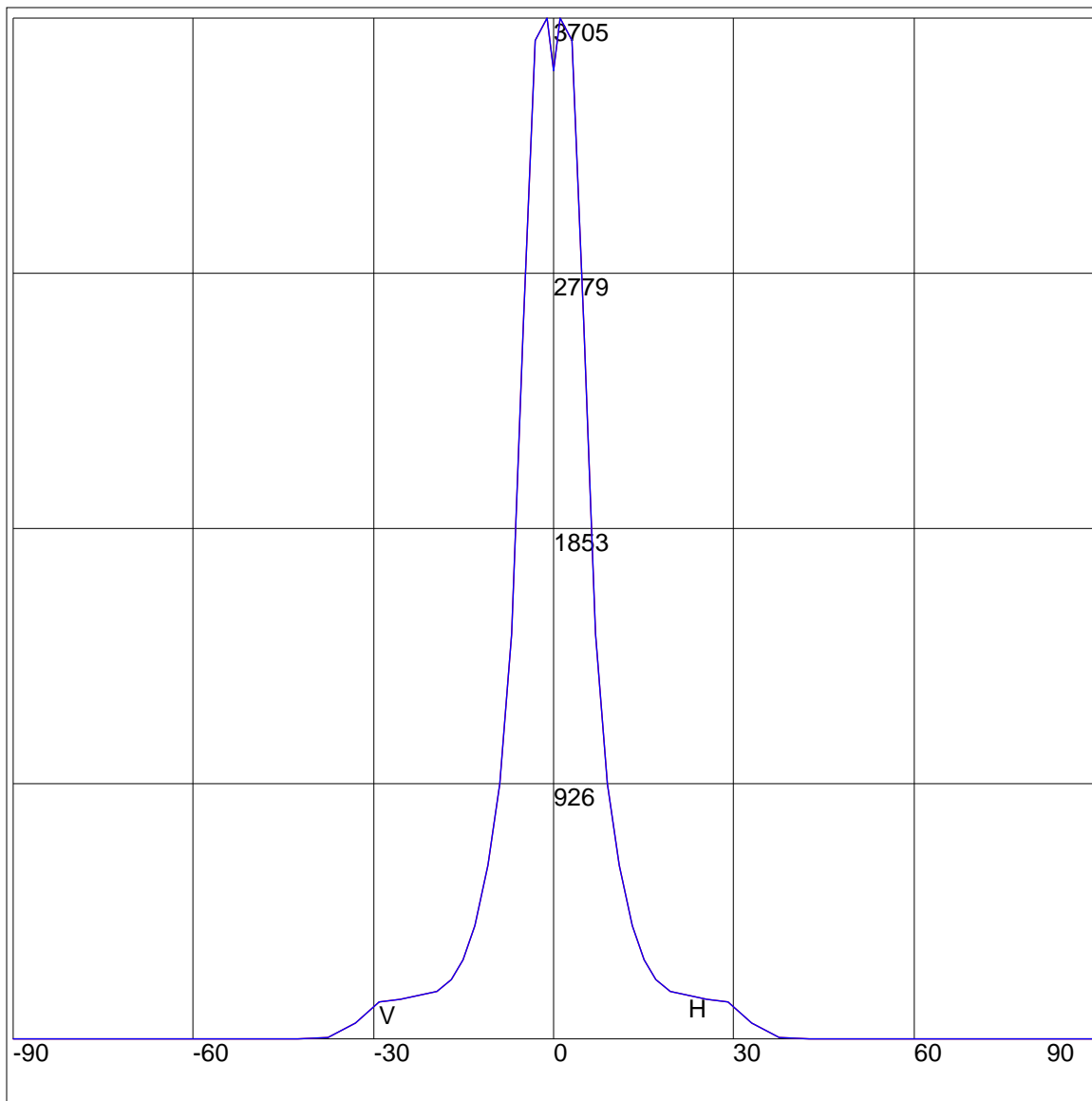
AXIAL CANDELA

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	0	85	0
75	0	75	0
65	1	65	1
55	1	55	1
47.5	1	47.5	1
42.5	2	42.5	2
37.5	7	37.5	7
33	58	33	58
29	134	29	134
25.5	147	25.5	147
22.5	159	22.5	159
19.5	173	19.5	173
17	218	17	218
15	287	15	287
13	413	13	413
11	630	11	630
9	929	9	929
7	1470	7	1470
5	2594	5	2594
3	3626	3	3626
1	3705	1	3705
0	3513	0	3513
-1	3705	-1	3705
-3	3626	-3	3626
-5	2594	-5	2594
-7	1470	-7	1470
-9	929	-9	929
-11	630	-11	630
-13	413	-13	413
-15	287	-15	287
-17	218	-17	218
-19.5	173	-19.5	173
-22.5	159	-22.5	159
-25.5	147	-25.5	147
-29	134	-29	134
-33	58	-33	58
-37.5	7	-37.5	7
-42.5	2	-42.5	2
-47.5	1	-47.5	1
-55	1	-55	1
-65	1	-65	1
-75	0	-75	0
-85	0	-85	0
-90	0	-90	0

ZONAL LUMEN SUMMARY

Zone	%
0-20	73.8
0-30	92.9
0-40	99.3
0-60	99.9
0-80	100
0-90	100
10-90	51.2
20-40	25.5
20-50	25.8
40-70	0.7
60-80	0.1
70-80	0
80-90	0
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

AXIAL CANDELA DISPLAY

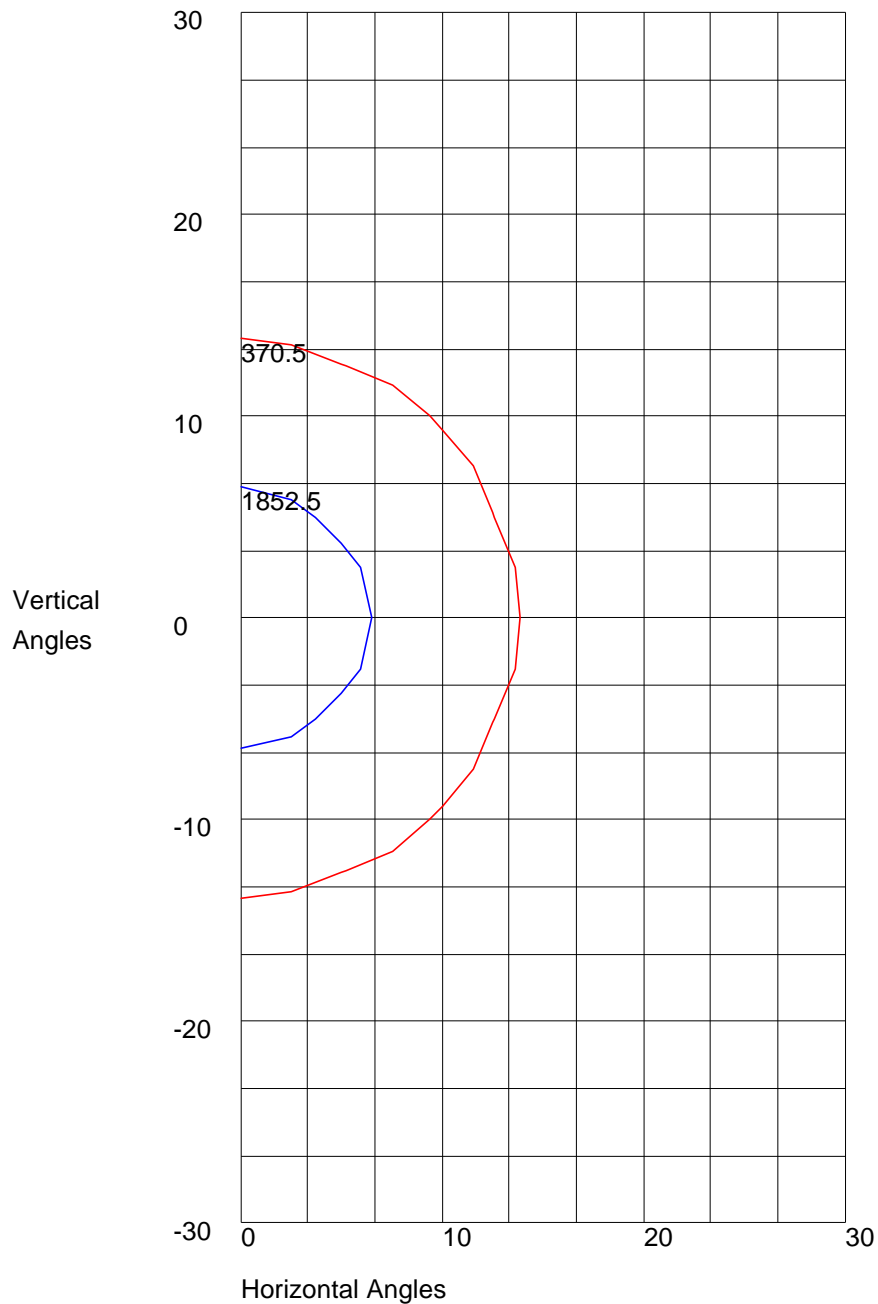


Maximum Candela = 3705 Located At Horizontal Angle = -1, Vertical Angle = 0

H - Horizontal Axial Candela

V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 3705 Located At Horizontal Angle = -1, Vertical Angle = 0
50% Maximum Candela = 1852.5
10% Maximum Candela = 370.5