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Report No: L051600907

Date: 5/18/2016



NVLAP LAB CODE 200927-0

Report No: L051600907

Prepared For: Vantage Lighting
 645 Myles Standish Blvd., Taunton, MA 02780

Model Number: VW4120BLED-07-1340K-MD

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. Catalog number is VW4120BLED-07-1340K-MD. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 5/10/16

Date of Tests: 5/18/16 - 5/18/16

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	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
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:	Vantage Lighting
Model Number:	VW4120BLED-07-1340K-MD
Driver Model Number:	HATCH LC20-0350Z-UNV-AA (2 DRIVERS)
Total Lumens:	1901.15
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.23
Input Power (W):	26.75
Input Power Factor:	0.99
Current ATHD @ 120V(%):	4%
Current ATHD @ 277V(%):	N/A
Efficacy:	71
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:05
Total Operating Time (Hours):	2:05
Off State Power(W):	0.00

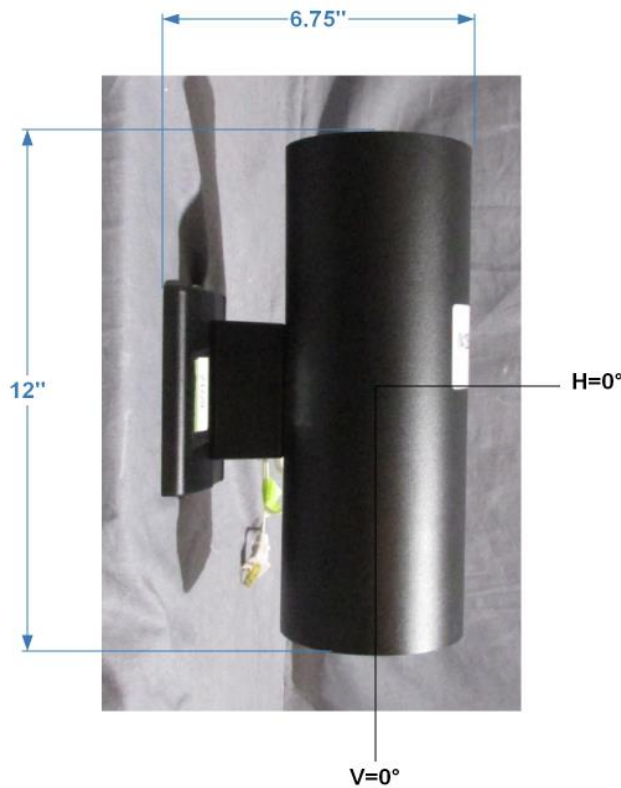


FIG.1 LUMINAIRE

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

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: 8*



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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L051600907.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L051600907
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 5/18/2016
 [MANUFAC] VANTAGE LIGHTING
 [LUMCAT] VW4120BLED-07-1340K-MD
 [LUMINAIRE] 4.5" BLACK LED WALL MOUNT UP/DOWN
 [BALLASTCAT] HATCH LC20-0350Z-UNV-AA (2 DRIVERS)
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC, 26.75W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1901
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	26.75
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 ft (Diameter)
Luminous Height	1.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	170	170	170
55	29	29	29
65	0	0	0
75	0	0	0
85	0	0	0

IES INDOOR REPORT
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CANDELA TABULATION

	<u>0</u>
0.0	2241
1.0	2239
3.0	2206
5.0	2116
7.0	1925
9.0	1667
11.0	1408
13.0	1173
15.0	986
17.0	837
19.5	684
22.5	531
25.5	452
29.0	404
33.0	307
37.5	26
42.5	9
47.5	2
55.0	1
65.0	0
75.0	0
85.0	0
90.0	0
95.0	0
105.0	5
115.0	14
125.0	29
132.5	51
137.5	79
142.5	129
147.0	210
151.0	333
154.5	486
157.5	646
160.5	842
163.0	1061
165.0	1299
167.0	1606
169.0	1993
171.0	2440
173.0	2920
175.0	3366
177.0	3713
179.0	3894
180.0	3911

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L051600907.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	448.41	N.A.	23.60
0-30	660.99	N.A.	34.80
0-40	788.70	N.A.	41.50
0-60	797.96	N.A.	42.00
0-80	798.43	N.A.	42.00
0-90	798.43	N.A.	42.00
10-90	645.08	N.A.	33.90
20-40	340.29	N.A.	17.90
20-50	348.59	N.A.	18.30
40-70	9.73	N.A.	0.50
60-80	0.47	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	2.70	N.A.	0.10
90-120	12.47	N.A.	0.70
90-130	32.87	N.A.	1.70
90-150	168.60	N.A.	8.90
90-180	1102.71	N.A.	58.00
110-180	1100.02	N.A.	57.90
0-180	1901.15	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.35
10-20	295.06
20-30	212.58
30-40	127.71
40-50	8.30
50-60	0.96
60-70	0.47
70-80	0.00
80-90	0.00
90-100	0.00
100-110	2.70
110-120	9.78
120-130	20.39
130-140	50.83
140-150	84.91
150-160	209.01
160-170	399.84
170-180	325.26

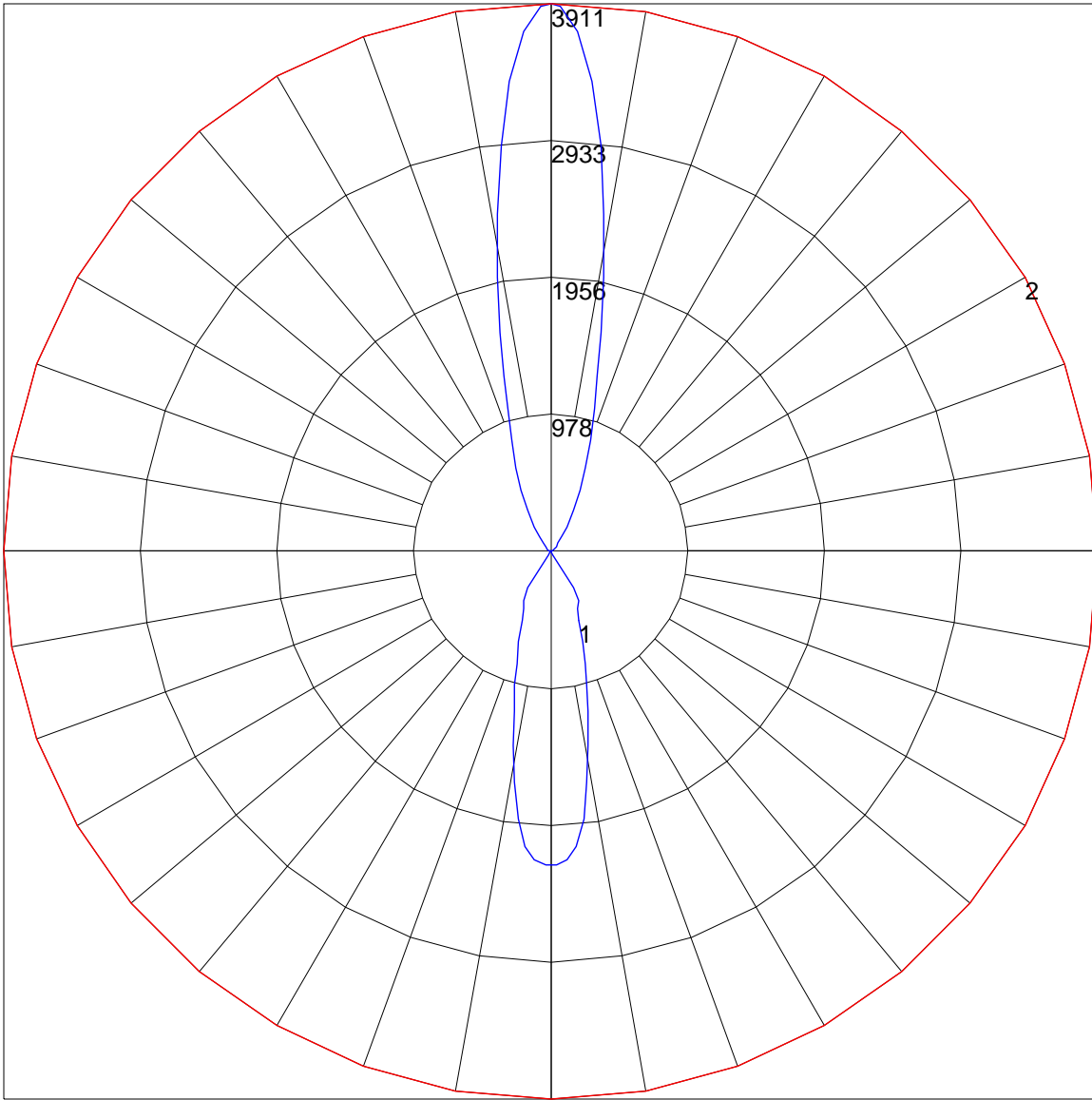
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42	
1	98	95	92	89	90	87	85	82	72	71	69	59	58	57	47	46	46	40	
2	92	86	81	77	84	79	75	72	67	64	62	55	53	52	44	43	43	38	
3	86	78	73	68	79	73	68	64	62	58	56	52	49	48	42	41	40	36	
4	80	72	66	61	74	67	61	57	57	54	51	48	46	44	40	39	38	34	
5	75	66	60	55	69	62	56	52	53	49	46	46	43	41	38	37	35	32	
6	71	61	55	50	65	57	52	48	50	46	43	43	40	38	37	35	33	31	
7	67	57	50	46	62	53	48	44	47	43	40	41	38	36	35	33	32	29	
8	63	53	47	42	58	50	44	41	44	40	37	38	36	34	33	31	30	28	
9	60	50	43	39	55	47	41	38	42	37	35	37	34	32	32	30	29	27	
10	56	47	41	37	53	44	39	35	39	35	33	35	32	30	31	29	27	26	

POLAR GRAPH



Maximum Candela = 3911 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)