REPORT

545 E. Algonquin Rd., Arlington Heights, IL 60005

Project No. G102503549 Date: March 31, 2016

REPORT NO. 102503549CHI-017

TEST OF ONE PENDANT

MODEL NO. APD.38
LED MODEL NO. CITIZEN
DRIVER MODEL NO. THOMAS LED25W-62-C0400-D

RENDERED TO

LUMENART LTD
3333 W. 47TH ST/
CHICAGO, IL 60632

TEST: Electrical and Photometric tests as required to the IESNA test standard.

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-00660984-3.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

DESCRIPTION OF SAMPLE: The client submitted one prototype sample of model number APD.38. The sample was received by Intertek on March 8, 2016, in undamaged condition and one sample was tested as received. The sample designation was AH03082016100716-17.

DATES OF TESTS: March 31, 2016

SUMMARY

Model No.:	APD.38
Description:	PENDANT

Criteria	Result
Total Lumen Output (Lumens)	1266
Total Power (W)	17.04
Luminaire Efficacy (LPW)	74.30
Power Factor	0.993

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Yokogawa Power Meter	WT210	146919	07/14/15	07/14/16	03/31/16
Omega Newport Thermometer	DPI8-C24	146920	10/09/15	10/09/16	03/31/16
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU	03/31/16
Newport Thermohygrometer	iServer	146956	01/04/16	01/04/17	03/31/16
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU	03/31/16

TEST METHODS

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

Photometric and Electrical Measurements – Distribution Method

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the Xitron or Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

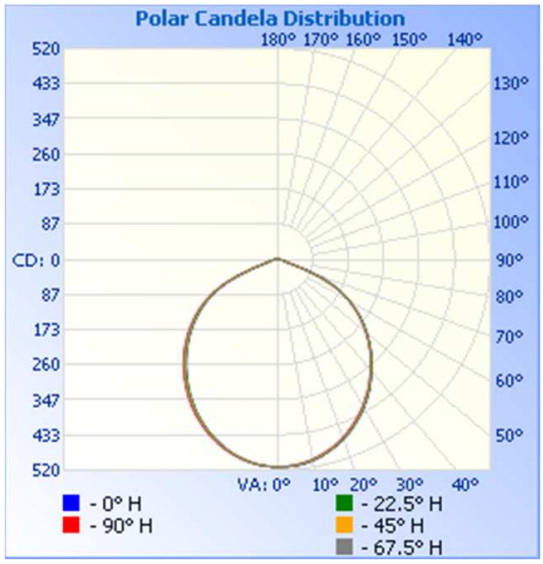
RESULTS OF TEST

Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (LPW)
AH03082016100716-17	Up	120.0	143.0	17.04	0.993	1266	74.30

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	512	512	512	512	512
5	511	511	510	509	509
10	504	503	502	501	500
15	491	490	489	487	486
20	472	472	470	469	468
25	449	449	447	446	444
30	422	422	420	419	418
35	392	392	390	389	387
40	358	358	357	356	355
45	324	324	322	321	321
50	287	286	285	284	284
55	248	246	245	245	244
60	204	203	202	201	201
65	153	149	148	147	145
70	79	72	69	67	64
75	21	21	20	20	20
80	16	15	15	15	14
85	9	8	8	8	8
90	1	1	1	1	0

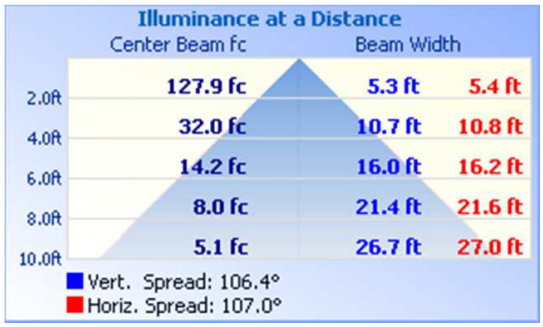


RESULTS OF TEST (cont'd)

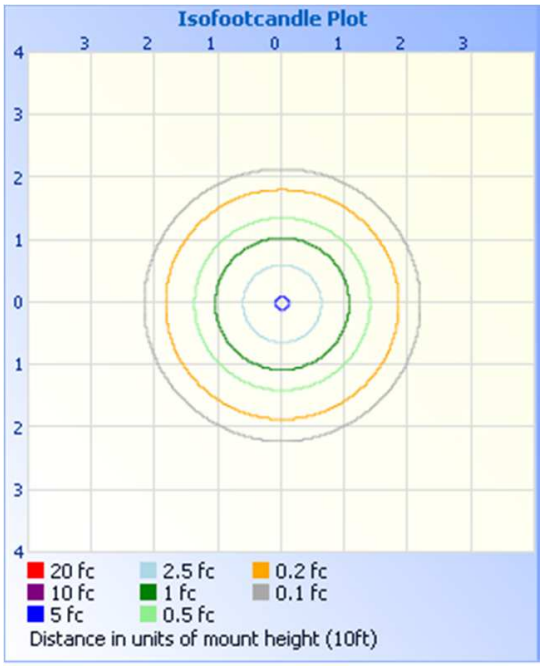
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



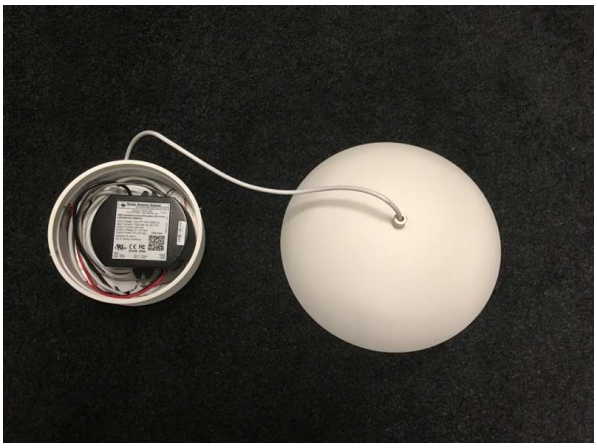
Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	389.7	30.8
0-40	631.0	49.9
0-60	1093	86.3
60-90	173.0	13.7
0-90	1266	100.0
90-180	0.1	0.0
0-180	1266	100.0

Zonal Lumens and Percentages at 25°(

Zone	Lumens	% Luminaire
0-10	48.3	3.8
10-20	137.1	10.8
20-30	204.3	16.1
30-40	241.4	19.1
40-50	245.6	19.4
50-60	216.1	17.1
60-70	136.9	10.8
70-80	28.1	2.2
80-90	8.1	0.6
90-100	0.1	0.0

PICTURES (not to scale)



CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:

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Report Reviewed By:

Timothy Quigley
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Attachment: None