FOR THE SCOPE OF
ACCREDITATION UNDER A2LA
TO ISO/IEC 17025:2005.

REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G101607677 Date: April 7, 2014

REPORT NO. 101607677LAX-003

TEST OF ONE ARENA PAR ZOOM ---ZOOM IN

RENDERED TO

ELATION PROFESSIONAL
6122 S. EASTERN AVE.
COMMERCE, CA 90040

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 A2LA, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500519256.

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 production sample of model number . The sample was received by Intertek on April 2, 2014, in undamaged condition and one sample was tested as received. The sample designation was LAN1404020912-001.

DATES OF TESTS: April 2, 2014

SUMMARY

Description: ARENA PAR ZOOM ---ZOOM IN

Criteria	Result
Total Lumen Output (Lumens)	2859.7
Total Power (W)	198.30
Luminaire Efficacy (LPW)	14.42
Power Factor	0.994

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date
LSI High Speed Mirror Goniometer	6440T	000943	VBU	VBU
Elgar Power Supply	CW1251	000944	VBU	VBU
Yokogawa Power Analyzer	WT210	000945	11/14/13	11/14/14
Omega Environmental Monitor	N/A	000882	09/09/13	09/09/14
Extech Instruments Stop Watch	N/A	001380	04/22/13	04/22/14
Tape Measure	33-428	000684	12/09/13	12/09/14

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 Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

RESULTS OF TEST

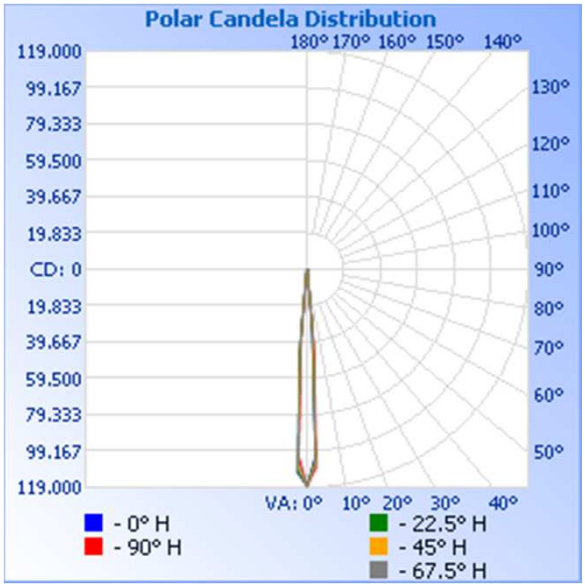
Photometric and Electrical Measurements at Ambient Temperature (25℃ +/- 1℃) – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
LAN1404020912-001	UP	120.0	1663	198.3	0.994	2859.7	14.42

Intensity (Candlepower) Summary at 25℃ - Candelas

Maximum Candela Value: 118474

Angle	0	22.5	45	67.5	90
0	118229	118153	118474	118311	118327
5	31480	32032	35412	40610	45648
10	514	541	616	730	615
15	0	127	125	156	102
20	148	0	163	97	18
25	67	157	80	0	159
30	247	112	80	126	119
35	206	0	0	41	101
40	153	161	195	19	131
45	86	19	47	0	69
50	0	0	121	72	0
55	0	116	0	7	53
60	0	0	0	0	0
65	0	15	69	133	29
70	0	77	0	6	0
75	11	0	0	0	0
80	0	0	0	0	42
85	0	76	27	0	0
90	0	84	0	0	0

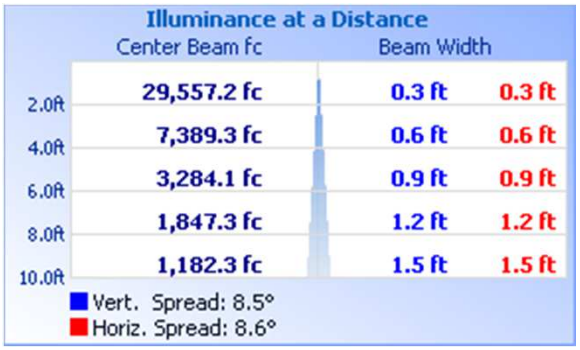


RESULTS OF TEST (cont'd)

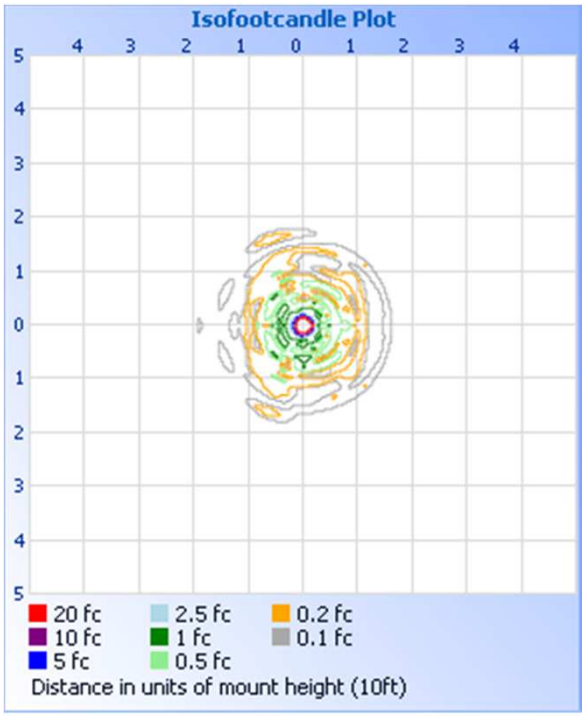
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25℃

Zone	Lumens	% Luminaire
0-30	2605	91.1%
0-40	2665	93.2%
0-60	2771	96.9%
60-90	84.7	3.0%
0-90	2855.6	2.2%
90-180	4.1	0.1%
0-180	2859.7	100.0%

Zonal Lumens and Percentages at 25℃

Zone	Lumens	% Luminaire
0-10	2503	87.5%
10-20	60.0	2.1%
20-30	41.7	1.5%
30-40	60.3	2.1%
40-50	55.8	2.0%
50-60	49.8	1.7%
60-70	25.1	0.9%
70-80	28.0	1.0%
80-90	31.5	1.1%
90-100	4.1	0.1%

PICTURE (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:

Ameet Alawi
Technician
Lighting Division

Report Reviewed By:

Kenda Branch
Engineer
Lighting Division

Attachment: None