REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G101918458 Date: February 2, 2015

REPORT NO. 101918458LAX-004

TEST OF ONE LED PAR

MODEL NO. CUPIX PAR300 RED

RENDERED TO

ELATION LIGHTING INC.
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 Q500519256.

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 CUPIX PAR300 RED . The sample was received by Intertek on January 29, 2015, in undamaged condition and one sample was tested as received. The sample designation was LAN1501290915-001.

DATES OF TESTS: January 29, 2015

SUMMARY

Model No.:	CUPIX PAR300 RED
Description:	LED PAR

Criteria	Result
Total Lumen Output (Lumens)	1021.3
Total Power (W)	64.21
Luminaire Efficacy (LPW)	15.91
Power Factor	0.918

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date
LSI High Speed Mirror Goniometer	6440T	000943	01/26/15	02/26/15
Elgar Power Supply	CW1251	000944	VBU	VBU
Yokogawa Power Analyzer	WT210	000945	11/26/14	11/26/15
Temp. & RH Meter	971	001178	12/22/14	12/22/15
Extech Instruments Stop Watch	N/A	001390	12/08/14	12/08/15
Tape Measure	33-430	001491	12/08/14	12/08/15

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

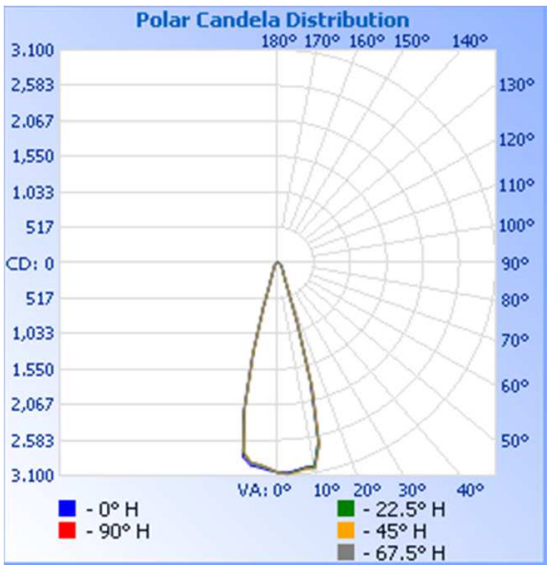
Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
LAN1501290915-001	UP	120.00	583.0	64.21	0.918	1021.3	15.91

Intensity (Candlepower) Summary at 25°C - Candelas

Maximum Candela Value: 3,084.7

Angle	0	22.5	45	67.5	90
0	3050	3050	3050	3050	3050
5	3032	3043	3064	3054	3039
10	3011	3006	3037	3040	3023
15	1785	1828	1867	1904	1872
20	432	450	459	462	449
25	214	220	226	224	220
30	152	154	153	145	144
35	115	120	114	108	108
40	90	92	91	89	91
45	73	73	74	75	75
50	60	60	62	60	61
55	53	55	55	56	57
60	45	44	45	47	46
65	32	33	34	33	36
70	21	22	23	21	22
75	12	13	13	13	13
80	5	5	6	6	7
85	1	1	2	2	2
90	0	0	0	0	1

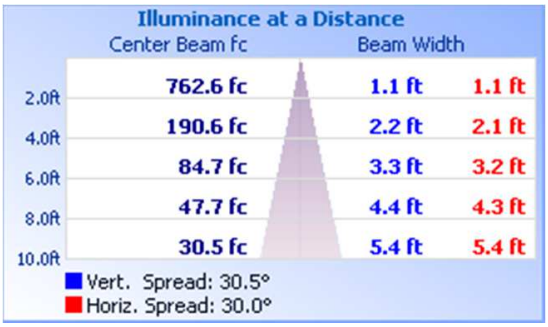


RESULTS OF TEST (cont'd)

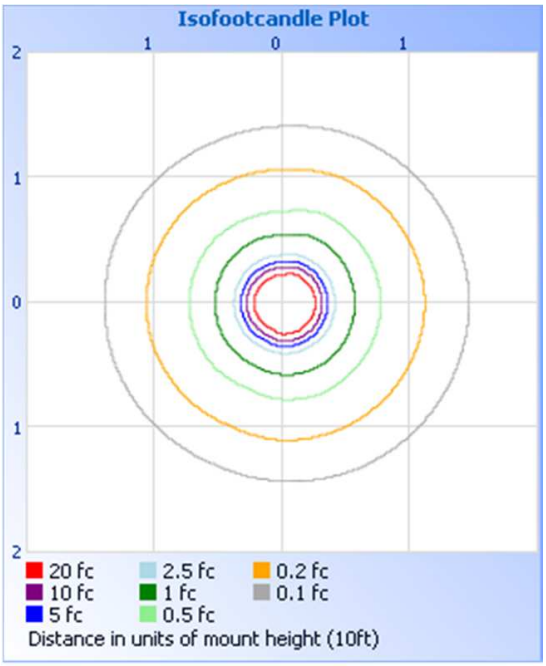
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	804.7	78.8%
0-40	873.1	85.5%
0-60	974.8	95.4%
60-90	46.5	4.6%
0-90	1021.3	1.5%
90-180	0	0.0%
0-180	1021.3	100.0%

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	284.4	27.8%
10-20	418.9	41.0%
20-30	101.4	9.9%
30-40	68.5	6.7%
40-50	55.1	5.4%
50-60	46.5	4.6%
60-70	31.6	3.1%
70-80	12.9	1.3%
80-90	2.0	0.2%
		0.0%

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
Lighting Performance Team Lead
Lighting Division

Attachment: None