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

REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G101607677

Original Issue Date:April 28, 2014
Revision Date: May 1, 2014

REPORT NO. 101607677LAX-003

TEST OF ONE OUTDOOR 6 IN 1 LED PAR

MODEL NO. SIXPAR 200IP

RENDERED TO

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

Revision Note May 1, 2014: Updated model number.

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 SIXPAR 200IP. The sample was received by Intertek on April 25, 2014, in undamaged condition and one sample was tested as received. The sample designation was LAN1404250928-003.

DATES OF TESTS: April 28, 2014

SUMMARY

Model No.:	SIXPAR 200IP
Description:	Outdoor 6 In 1 LED PAR

Criteria	Result
Total Lumen Output (Lumens)	2099.8
Total Power (W)	83.79
Luminaire Efficacy (LPW)	25.06
Power Factor	0.975

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	iBTHX-W	000886	09/09/13	09/09/14
Tape Measure	33-428	000684	12/09/13	12/09/14
Stopwatch	365510	001380	11/05/13	11/05/14

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

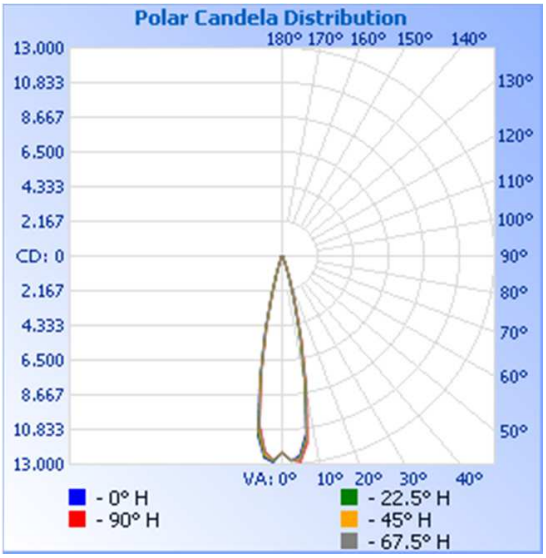
Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

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)
LAN1404250928-003	UP	120.0	716.1	83.79	0.975	2099.8	25.06

Intensity (Candlepower) Summary at 25°C - Candelas

Maximum Candela Value 12891

Angle	0	22.5	45	67.5	90
0	12272	12253	12226	12242	12256
5	12461	12593	12681	12777	12882
10	8067	7933	8131	8405	8547
15	2682	2712	2813	2969	3051
20	664	739	777	777	802
25	217	228	240	251	252
30	87	94	92	97	93
35	59	53	48	48	51
40	34	37	36	42	33
45	36	42	45	35	33
50	27	27	25	19	19
55	23	21	22	27	20
60	21	23	27	17	27
65	4	14	8	22	18
70	17	16	15	18	29
75	1	2	2	15	10
80	0	5	0	8	7
85	9	7	3	1	0
90	9	1	3	5	10

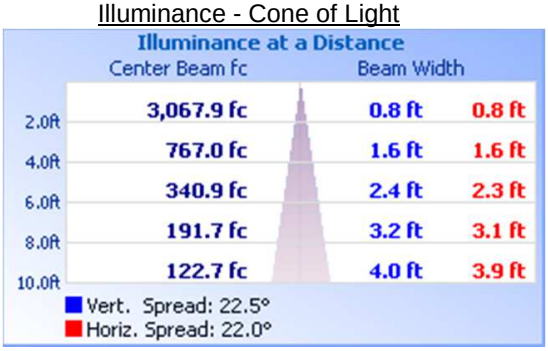


RESULTS OF TEST (cont'd)

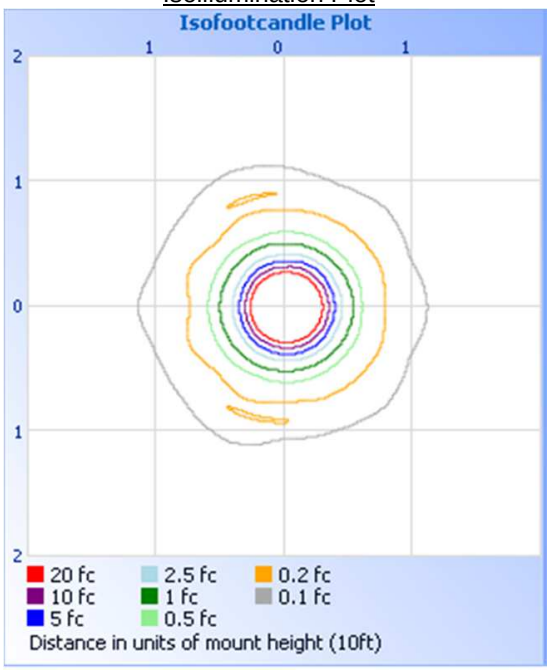
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	1988	94.7%
0-40	2022	96.3%
0-60	2072	98.7%
60-90	27.8	1.3%
0-90	2099.4	0.6%
90-180	0.4	0.0%
0-180	2099.8	100.0%

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	1050	50.0%
10-20	819.2	39.0%
20-30	119.3	5.7%
30-40	34.2	1.6%
40-50	28.1	1.3%
50-60	21.3	1.0%
60-70	15.2	0.7%
70-80	7.0	0.3%
80-90	5.6	0.3%
90-100	0.4	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:

Matthew Felix
Lighting Technician
Lighting Performance

Report Reviewed By:

Kenda Branch
Engineer
Lighting Division

Attachment: None