



# REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G102697884

Date: August 22, 2016

REPORT NO. 102697884LAX-001

TEST OF ONE LED MOVING HEAD BEAM

MODEL NO. DTW PAR 300 CW/WW/A

RENDERED TO

ELATION LIGHTING  
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 Qu-00648726.

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 DTW PAR 300 CW/WW/A. The sample was received by Intertek on August 11, 2016, in undamaged condition and one sample was tested as received. The sample designation was LAN1608110839-001.

DATES OF TESTS: August 15, 2016

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## SUMMARY

Model No.:	DTW PAR 300 CW/WW/A
Description:	LED Moving Head Beam

Criteria	Result
Total Lumen Output (Lumens)	3632
Total Power (W)	120.3
Luminaire Efficacy (LPW)	30.19

## EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date
LSI High Speed Mirror Goniometer	6440T	000943	08/15/16	09/15/16
Elgar Power Supply	CW1251	000944	VBU	VBU
Yokogawa Power Analyzer	WT210	000945	12/04/15	12/04/16
Temp. & RH Meter	971	001178	12/18/15	12/18/16
Extech Instruments Stop Watch	365510	001379	11/19/15	11/19/16
Tape Measure	C1-25	000915	12/04/15	12/04/16
Empire Magnetic Level	581-9	001610	VBU	VBU

## 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 (cont'd)

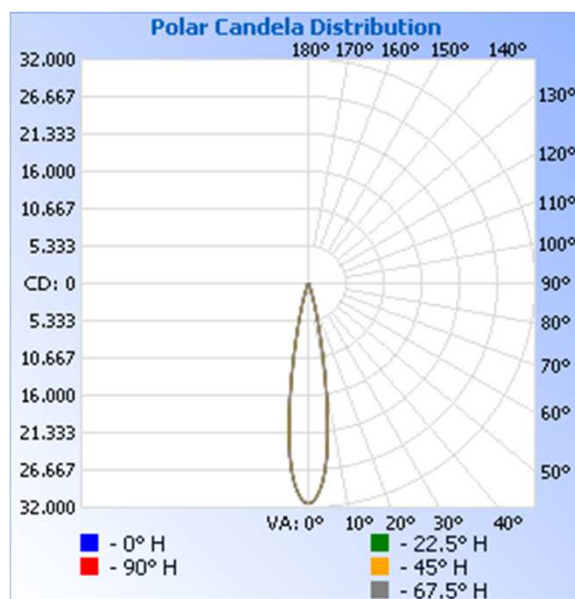
### Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

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)
LAN1608110839-001	UP	120.0	1039	120.3	0.965	3632	30.19

### Intensity (Candlepower) Summary at 25°C - Candelas

Maximum Candela Value: 31,409.4

Angle	0	22.5	45	67.5	90
0	31409	31409	31409	31409	31409
5	26881	26882	26846	26872	26840
10	13805	13839	13774	13678	13607
15	4139	4175	4154	4183	4116
20	1020	1051	1036	1037	1024
25	293	302	291	299	309
30	139	133	130	135	121
35	63	66	59	53	59
40	11	17	16	23	25
45	0	4	0	0	0
50	5	0	0	0	0
55	0	0	0	0	0
60	0	0	0	0	0
65	0	0	0	0	0
70	0	0	0	0	0
75	0	0	0	0	0
80	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

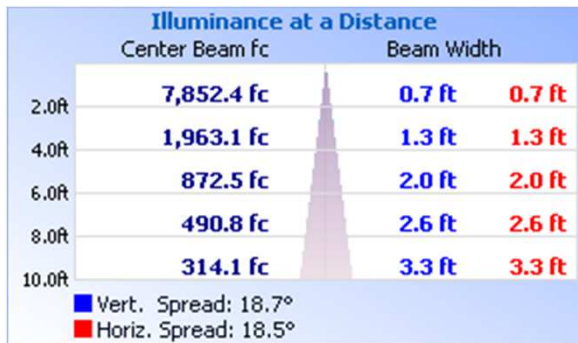


## RESULTS OF TEST (cont'd)

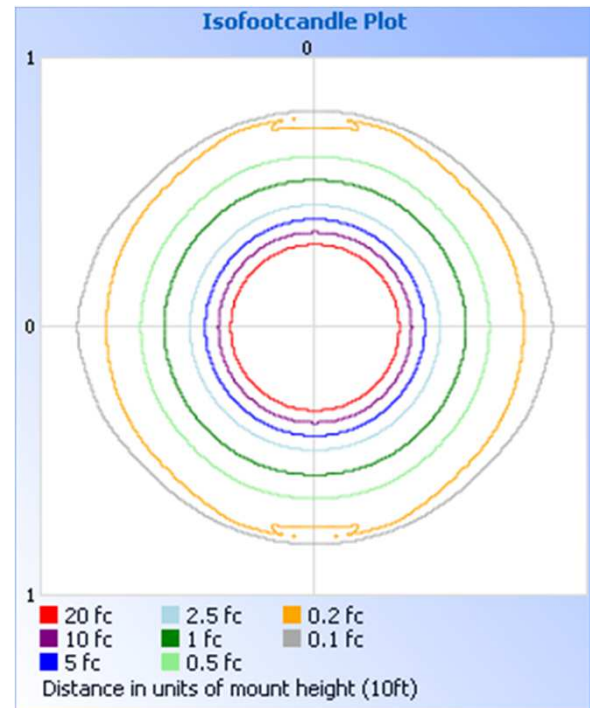
### Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



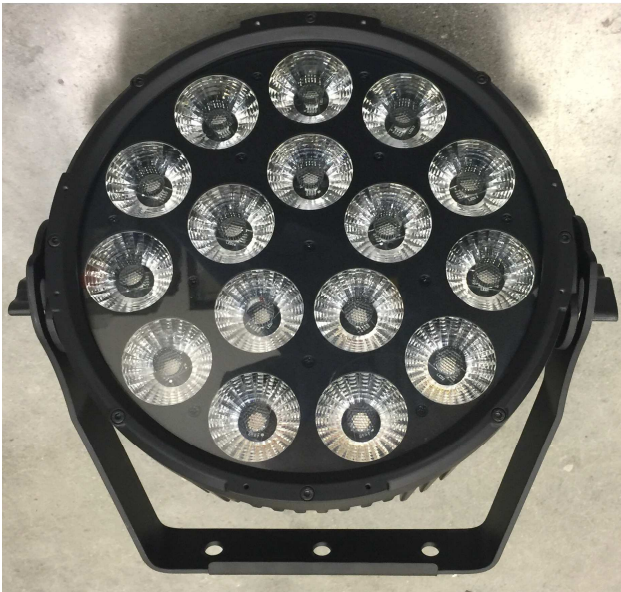
Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	3591	98.9
0-40	3628	99.9
0-60	3632	100.0
60-90	0.0	0.0
0-90	3632	100.0
90-180	0.0	0.0
0-180	3632	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	2120	58.4
10-20	1302	35.9
20-30	168.4	4.6
30-40	37.6	1.0
40-50	3.5	0.1
50-60	0.0	0.0
60-70	0.0	0.0
70-80	0.0	0.0
80-90	0.0	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:

A handwritten signature in black ink, appearing to read 'Ameet Alawi', written over a light blue grid background.

Ameet Alawi  
Technician  
Lighting Division

Attachment: None

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Melanie Brittain', written over a light blue grid background.

Melanie Brittain  
Associate Engineer  
Lighting Division