



# REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G102328456

Date: July 29, 2016

REPORT NO. 102328456LAX-076

TEST OF ONE LED BAR

MODEL NO. DTW BAR 1000 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 prototype sample of model number DTW BAR 1000 CW-WW-A. The sample was received by Intertek on July 27, 2016, in undamaged condition and one sample was tested as received. The sample designation was LAN1607271107-002.

DATES OF TESTS: July 27, 2016

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## SUMMARY

Model No.:	DTW BAR 1000 CW-WW-A
Description:	LED BAR

Criteria	Result
Total Lumen Output (Lumens)	2529
Total Power (W)	123.9
Luminaire Efficacy (LPW)	20.41

## EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date
LSI High Speed Mirror Goniometer	6440T	000943	07/13/16	08/13/16
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)

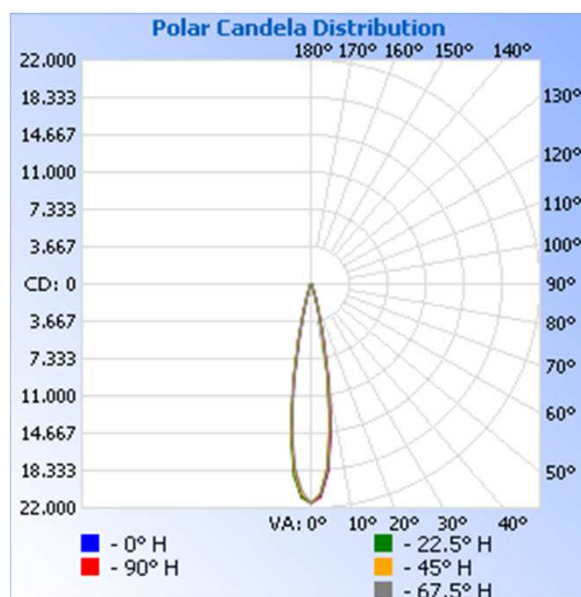
### Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method

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)
LAN1607271107-002	UP	120.0	1047	123.9	0.984	2529	20.41

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

Maximum Candela Value: 21,519.7

Angle	0	22.5	45	67.5	90
0	21520	21520	21520	21520	21520
5	18395	18067	17982	18230	18556
10	9184	8710	8808	9369	9923
15	2522	2425	2620	2793	2952
20	603	598	633	676	738
25	177	176	182	192	206
30	92	89	85	88	95
35	43	56	49	46	54
40	37	29	32	35	32
45	12	28	16	17	23
50	19	12	12	22	11
55	14	6	18	15	21
60	10	16	10	9	14
65	16	11	6	4	9
70	5	7	6	1	9
75	3	0	8	9	1
80	0	6	3	9	4
85	0	0	1	13	10
90	0	0	0	0	0

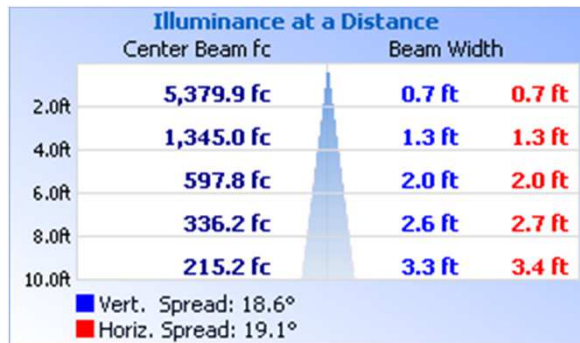


## RESULTS OF TEST (cont'd)

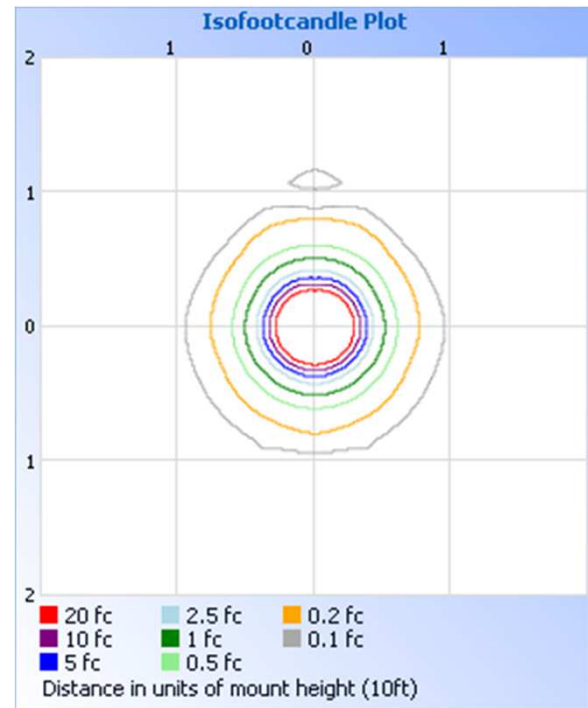
### Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	2449	96.8
0-40	2483	98.2
0-60	2513	99.4
60-90	16.1	0.6
0-90	2529	100.0
90-180	0.0	0.0
0-180	2529	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	1441	57.0
10-20	893.9	35.4
20-30	114.4	4.5
30-40	34.4	1.4
40-50	17.1	0.7
50-60	12.2	0.5
60-70	8.6	0.3
70-80	4.4	0.2
80-90	3.1	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

Attachment: None

Report Reviewed By:



Melanie Brittain  
Associate Engineer  
Lighting Division