

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

Electrical and Photometric tests as required to the IESNA test standard.

MODEL NUMBER

FJ-PST-SP-1-30K-SN

REPORT NUMBER

103597691CHI-023

ISSUE DATE

January 22, 2019

REVISION DATE

None

DOCUMENT CONTROL NUMBER

TBD

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REPORT NO.: 103597691CHI-023

REPORT DATE: January 22, 2019

TEST REPORT

TEST OF ONE FAST JACK/RAIL

MODEL NO. FJ-PST-SP-1-30K-SN
LED MODEL NO. LUXEON M/B61402201
DRIVER MODEL NO. MAGNITUDE/SR-612

RENDERED TO:

PURE EDGE LIGHTING
1718 WEST FULLERTON
CHICAGO, IL 60614

AUTHORIZATION

The testing performed was authorized by signed quote number Qu-00901421-0.

STANDARDS USED

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting
ANSI NEMA ANSLG C78.377: 2015: Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE

The client submitted one production sample of model number FJ-PST-SP-1-30K-SN. The sample was received by Intertek on January 17, 2019 in undamaged condition and one sample was tested as received. The sample designation was AH01172019034846-023.

DATE OF TESTS

January 22, 2019

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SUMMARY

MODEL NO:	FJ-PST-SP-1-30K-SN
DESCRIPTION:	fast jack/rail

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	487.7	498.4
Input Power (W) @ 120 (VAC)	8.94	8.89
Lumen Efficacy (lm/W)	54.6	56.1
Input Power Factor @ 120 (VAC)	0.633	0.678

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	70.14
Correlated Color Temperature (K)	2973
Color Rendering Index - Ra	94.5
Color Rendering - R9	76.2
DUV	0.0007
Chromaticity Coordinate (x)	0.438
Chromaticity Coordinate (y)	0.403
Chromaticity Coordinate (u')	0.252
Chromaticity Coordinate (v')	0.521

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EQUIPMENT LIST

EQUIPMENT USED	MODEL NO.	CONTROL NO.	LAST CAL DATE	CAL DUE DATE
Yokogawa Power Meter	WT210	146919	7/9/2018	7/9/2019
Omega Newport Thermometer	DPI8-C24	146920	10/4/2018	10/4/2019
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
Newport Thermohygrometer	iServer	146379	4/16/2018	4/16/2019
Pacific, AC power supply	118-ACX	CHI0358	VBU	VBU
Labsphere 2M Sphere & Spectroradiometer	CDS1100	146137	VBU	VBU
Elgar AC Power Supply	CW1251M	146113	VBU	VBU
Sorenson DC Power Supply	XFR150-8	146847	VBU	VBU
Yokogawa Power Analyzer	WT1600	146767	4/5/2018	4/5/2019
Omega Temperature	MDSi8	146873	7/10/2018	7/10/2019
Newport Thermohygrometer	iTHX-M	146961	4/16/2018	4/16/2019

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TEST METHODS

SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD

A Spectroradiometer and integrating sphere was used to measure correlated color temperature, chromaticity coordinates, and the color rendering index for each SSL unit.

Ambient temperature was measured at a position inside the sphere. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation. Each SSL unit was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

The calibration of the sphere photometer-spectroradiometer system is traceable to the National Institute of Standards and Technology.

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD

A Type C Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for the SSL sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniometer equipment. The SSL sample was operated on the client provided driver at rated input volts in its designated orientation. The SSL sample was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

TEST REPORT

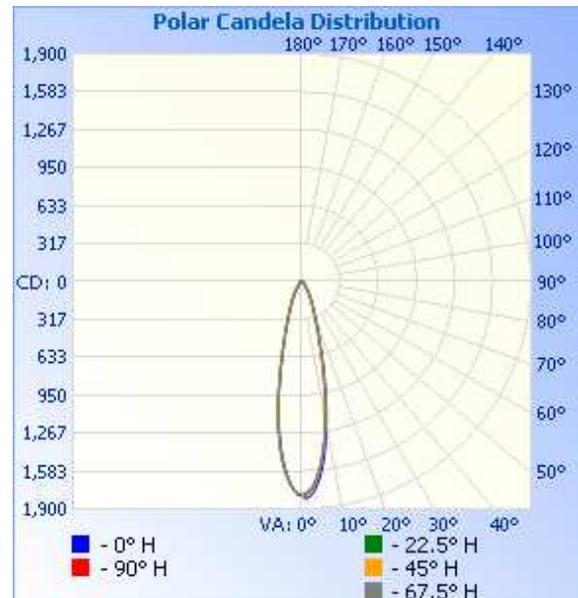
RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR ()	LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)
AH01172019034846-023	Base Up	120.1	109.2	8.89	0.678	498.4	56.1

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	1782	1782	1782	1782	1782
5	1658	1608	1600	1599	1594
10	1178	1122	1128	1131	1131
15	645	607	610	622	622
20	335	312	312	322	331
25	193	177	176	185	196
30	115	104	102	111	120
35	70	64	62	68	74
40	44	42	40	44	46
45	30	29	28	30	31
50	22	21	20	21	22
55	16	15	15	15	16
60	11	10	10	10	11
65	6	6	6	6	6
70	3	3	3	3	3
75	1	1	1	1	1
80	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0



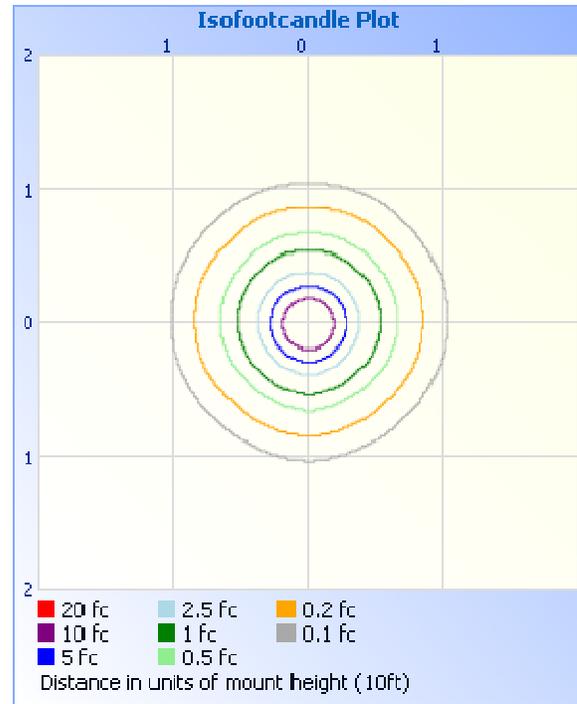
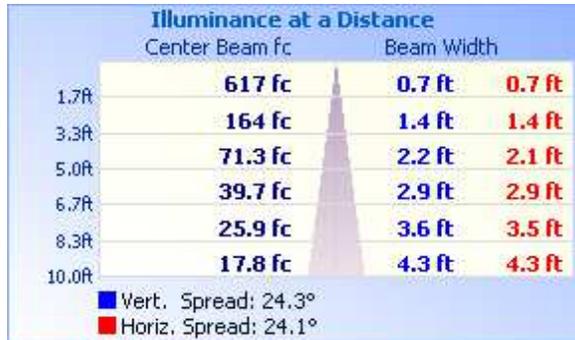
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RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

MOUNTING HEIGHT: 10ft

ILLUMINANCE - CONE OF LIGHT	ISOILLUMINATION PLOT
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ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	405.0	81.3
0-40	451.8	90.6
0-60	490.8	98.5
60-90	7.6	1.5
70-100	1.3	0.3
90-120	0.0	0.0
0-90	498.4	100.0
90-180	0.0	0.0
0-180	498.4	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	137.3	27.5
10-20	175.9	35.3
20-30	91.8	18.4
30-40	46.8	9.4
40-50	24.7	5.0
50-60	14.3	2.9
60-70	6.3	1.3
70-80	1.3	0.3
80-90	0.0	0.0

TEST REPORT

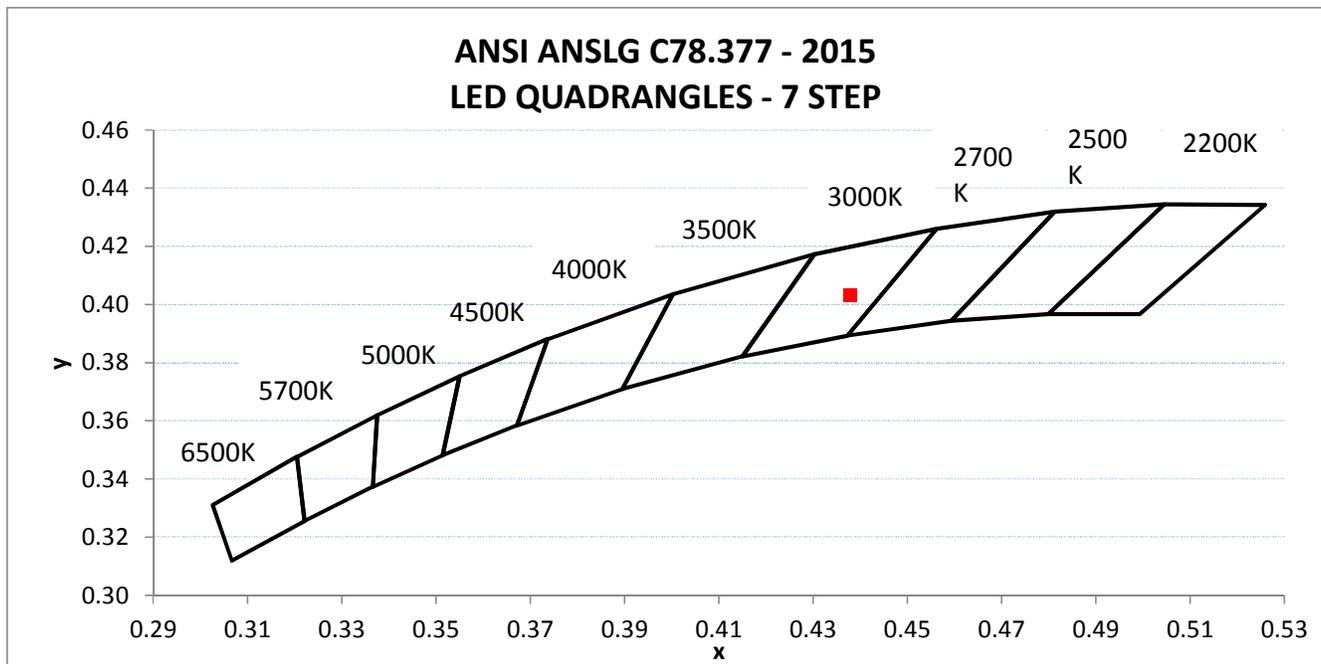
RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

INTERTEK CONTROL NO.	BASE POSITION	INPUT VOLTAGE (VAC)	INPUT CURRENT (mA)	INPUT POWER (W)	INPUT POWER FACTOR	INPUT CURRENT ATHD (%)
AH01172019034846-023	Base Up	120.02	117.69	8.94	0.633	70.14

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
487.7	54.6	2973	94.5	76.2	0.0007

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.438	0.403	0.252	0.521



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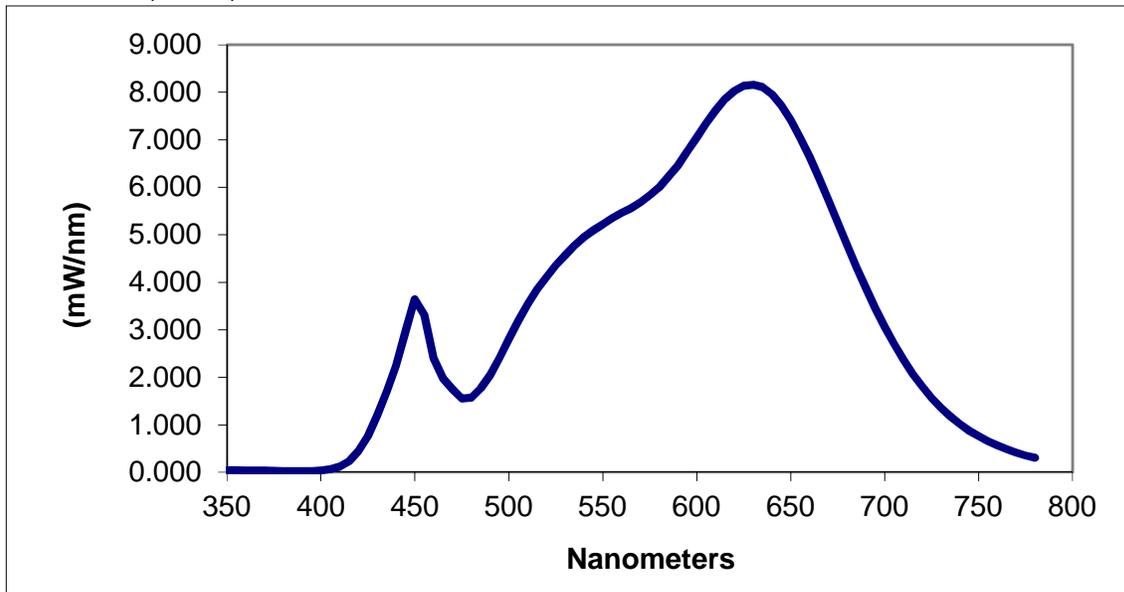
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RESULTS OF TESTS

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.048	460	2.405	570	5.685	680	4.780
355	0.048	465	1.977	575	5.835	685	4.321
360	0.040	470	1.753	580	6.000	690	3.879
365	0.039	475	1.555	585	6.226	695	3.456
370	0.037	480	1.572	590	6.464	700	3.063
375	0.032	485	1.768	595	6.755	705	2.703
380	0.027	490	2.050	600	7.053	710	2.373
385	0.025	495	2.402	605	7.348	715	2.071
390	0.027	500	2.813	610	7.620	720	1.806
395	0.028	505	3.185	615	7.857	725	1.568
400	0.040	510	3.541	620	8.031	730	1.359
405	0.064	515	3.853	625	8.139	735	1.176
410	0.121	520	4.114	630	8.159	740	1.020
415	0.237	525	4.359	635	8.108	745	0.878
420	0.445	530	4.575	640	7.954	750	0.761
425	0.764	535	4.772	645	7.719	755	0.654
430	1.197	540	4.954	650	7.414	760	0.568
435	1.700	545	5.093	655	7.049	765	0.487
440	2.243	550	5.225	660	6.640	770	0.416
445	2.968	555	5.352	665	6.200	775	0.356
450	3.644	560	5.463	670	5.729	780	0.307
455	3.315	565	5.558	675	5.260		

*Without correction of sample absorption.



End Of Test Results

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PICTURES



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:

Timothy Quigley
Engineer
Lighting Division

Report Reviewed By:

Hector Huitron
Associate Engineer
Lighting Division

Attachments: IES File

REVISION HISTORY

JOB NUMBER	DATE OF REVISION	PROJECT HANDLER	REVIEWED BY	REVISION NOTE
None				