PURE EDGE LIGHTING

TEST REPORT

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

MODEL NUMBER
FJ-PST-FL-1-30K-SN

REPORT NUMBER
103597691CHI-025

ISSUE DATE
January 24, 2019

REVISION DATE
None

DOCUMENT CONTROL NUMBER
TBD

545 E. Algonquin Rd
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REPORT NO.: 103597691CHI-025

TEST REPORT **REPORT DATE: January 24, 2019**

TEST OF ONE FAST JACK/RAIL

MODEL NO. FJ-PST-FL-1-30K-SN
LED MODEL NO. LUXEON M/B61402203
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-FL-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 AH01172019034846-025.

DATE OF TESTS
January 23, 2019 through January 24, 2019.

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TEST REPORT **REPORT DATE: January 24, 2019**

SUMMARY

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

CRITERIA	RESULTS	
	INTEGRATING SPHERE	GONIOPHOTOMETER
Lumen Output (lumens)	483.0	477.0
Input Power (W) @ 120 (VAC)	8.96	8.85
Lumen Efficacy (lm/W)	53.9	53.9
Input Power Factor @ 120 (VAC)	0.634	0.673

CRITERIA	RESULTS
Input Current ATHD (%) @ 120 (VAC)	74.33
Correlated Color Temperature (K)	3020
Color Rendering Index - Ra	94.6
Color Rendering - R9	76.8
DUV	0.0009
Chromaticity Coordinate (x)	0.434
Chromaticity Coordinate (y)	0.401
Chromaticity Coordinate (u')	0.250
Chromaticity Coordinate (v')	0.520

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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
Yokogawa Power Analyzer	WT230	146454	10/2/2018	10/2/2019
Staco Variac	3PN2210B	146360	VBU	VBU

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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.

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TEST REPORT

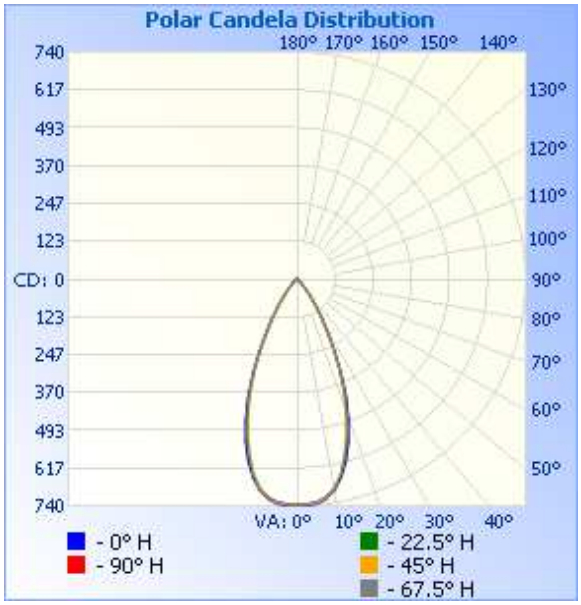
RESULTS OF TESTS

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)
AH01172019034846-025	Base Up	120.1	109.5	8.85	0.673	477.0	53.9

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	736	736	736	736	736
5	736	732	733	731	730
10	699	697	695	692	691
15	614	603	592	597	606
20	487	477	459	469	476
25	337	331	322	324	329
30	200	194	189	188	190
35	110	104	99	100	99
40	53	50	46	45	46
45	25	24	22	22	24
50	12	12	10	11	12
55	6	6	6	6	6
60	4	4	4	4	4
65	3	3	3	3	3
70	2	2	2	2	2
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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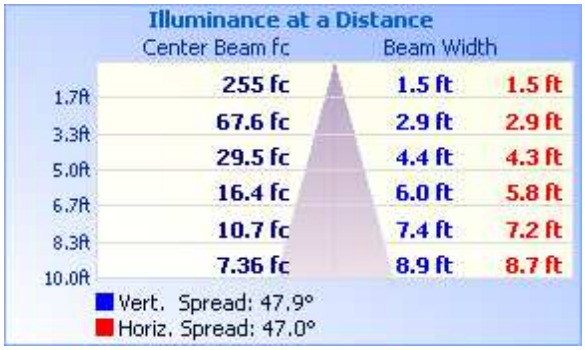
RESULTS OF TESTS

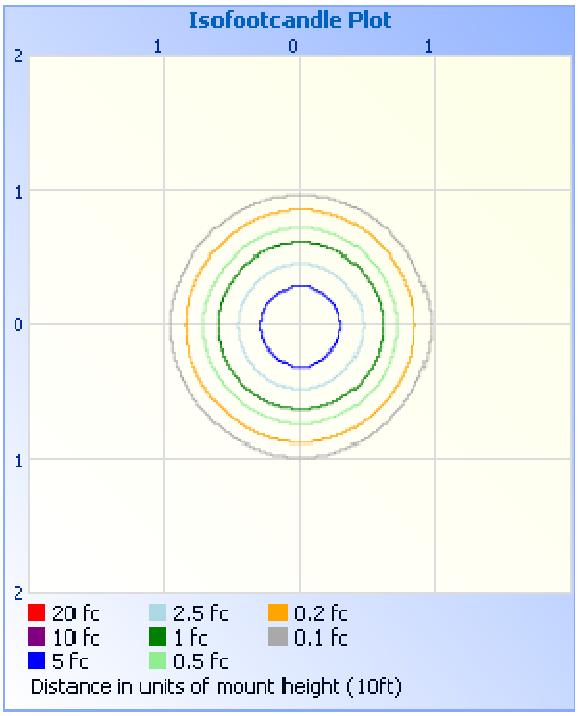
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD (25°C +/- 1°C)

MOUNTING HEIGHT: 10ft

ILLUMINANCE - CONE OF LIGHT



ISOILLUMINATION PLOT



ZONAL LUMEN SUMMARY AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	381.6	80.0
0-40	447.9	93.9
0-60	472.8	99.1
60-90	4.2	0.9
70-100	1.2	0.3
90-120	0.0	0.0
0-90	477.0	100.0
90-180	0.0	0.0
0-180	477.0	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	68.7	14.4
10-20	164.9	34.6
20-30	148.1	31.0
30-40	66.3	13.9
40-50	19.1	4.0
50-60	5.8	1.2
60-70	3.0	0.6
70-80	1.2	0.3
80-90	0.0	0.0

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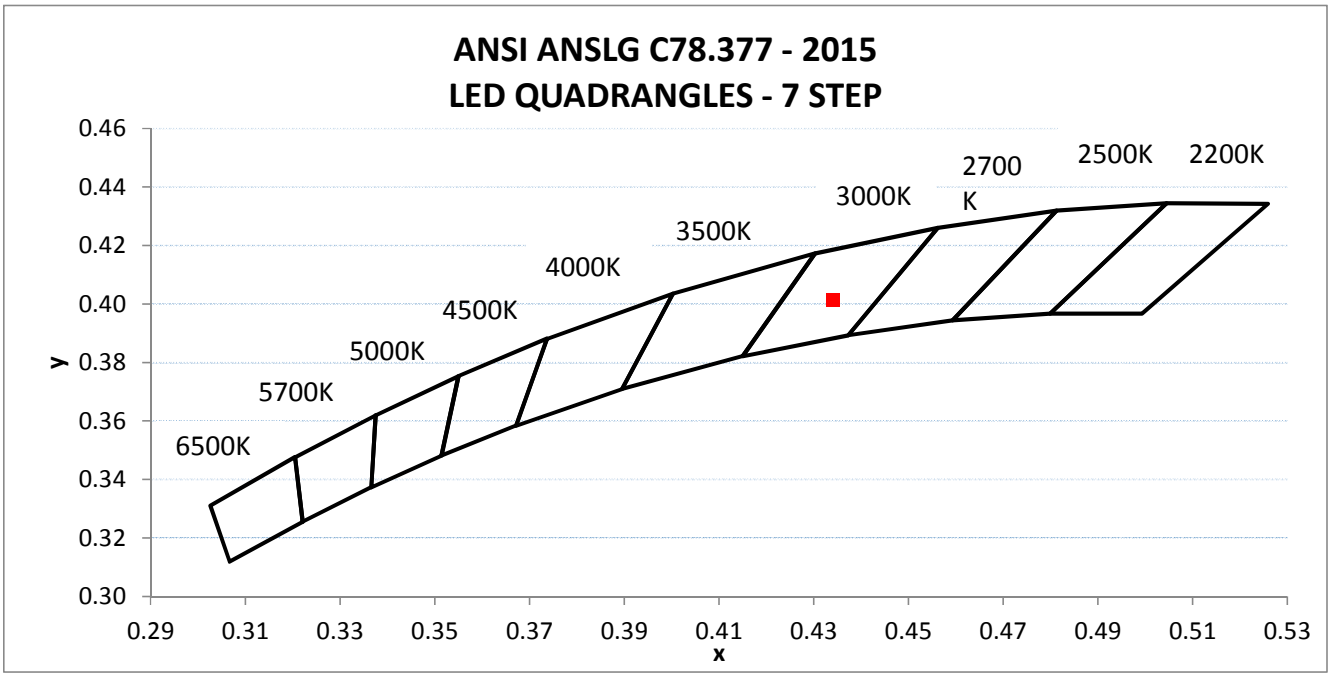
RESULTS OF TESTS

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 (%)
AH01172019034846-025	Base Up	120.09	119.14	8.96	0.634	74.33

LIGHT OUTPUT (lm)	LUMEN EFFICACY (lm/W)	CORRELATED COLOR TEMPERATURE - CCT (K)	CRI - Ra	CRI - R9	DUV
483.0	53.9	3020	94.6	76.8	0.0009

CIE 1931 CHROMATICITY COORDINATE (x)	CIE 1931 CHROMATICITY COORDINATE (y)	CIE 1976 CHROMATICITY COORDINATE (u')	CIE 1976 CHROMATICITY COORDINATE (v')
0.434	0.401	0.250	0.520



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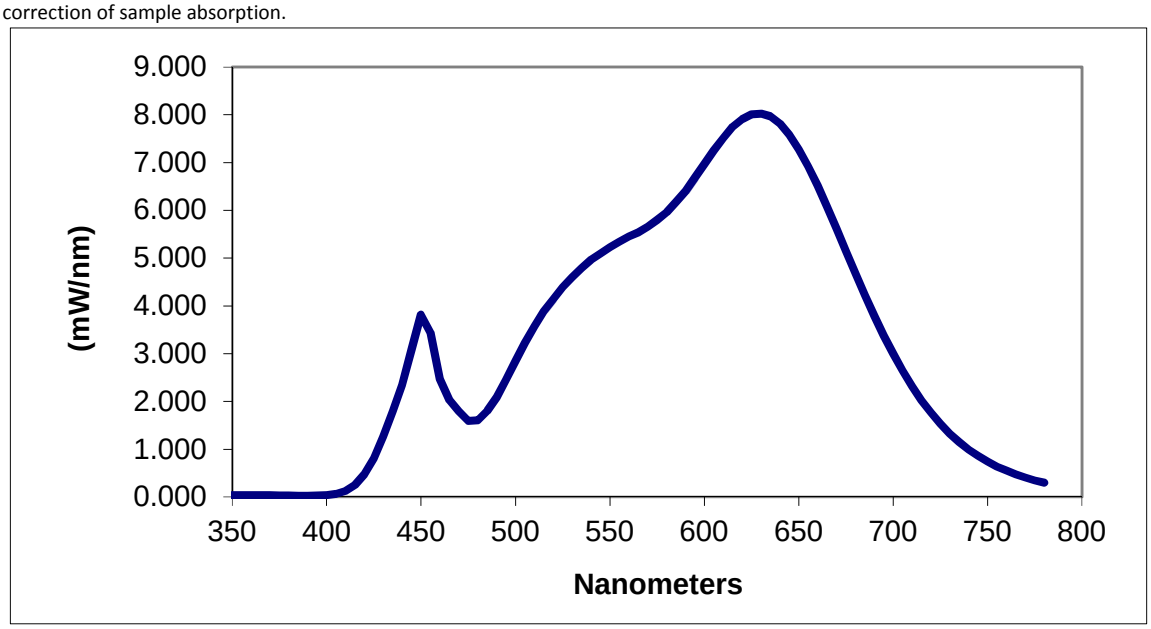
PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - INTEGRATING SPHERE METHOD (25°C +/- 1°C)

SPECTRAL DISTRIBUTION OVER VISIBLE WAVELENGTHS*							
nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
350	0.042	460	2.468	570	5.659	680	4.680
355	0.040	465	2.031	575	5.797	685	4.229
360	0.043	470	1.797	580	5.957	690	3.792
365	0.040	475	1.590	585	6.174	695	3.381
370	0.036	480	1.606	590	6.403	700	2.996
375	0.032	485	1.803	595	6.683	705	2.647
380	0.030	490	2.089	600	6.973	710	2.319
385	0.027	495	2.449	605	7.252	715	2.025
390	0.026	500	2.852	610	7.513	720	1.764
395	0.031	505	3.226	615	7.746	725	1.531
400	0.042	510	3.579	620	7.907	730	1.326
405	0.066	515	3.891	625	8.010	735	1.148
410	0.126	520	4.143	630	8.023	740	0.992
415	0.252	525	4.391	635	7.967	745	0.860
420	0.473	530	4.600	640	7.813	750	0.742
425	0.808	535	4.790	645	7.578	755	0.638
430	1.267	540	4.969	650	7.274	760	0.555
435	1.792	545	5.095	655	6.914	765	0.475
440	2.342	550	5.227	660	6.513	770	0.406
445	3.097	555	5.346	665	6.075	775	0.346
450	3.818	560	5.450	670	5.612	780	0.298
455	3.440	565	5.537	675	5.152		

*Without correction of sample absorption.



End Of Test Results

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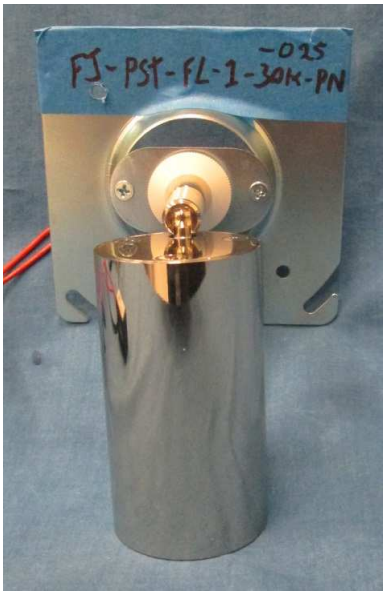
TEST REPORT

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				