

VISUAL COMFORT GROUP TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER
700LNG18x-LED930

REPORT NUMBER
103643585CHI-018

ISSUE DATE
January 22, 2019

REVISION DATE
None

DOCUMENT CONTROL NUMBER
TBD
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REPORT DATE: January 22, 2019

TEST REPORT

TEST OF ONE CHANDELIER

MODEL NO. 700LNG18X-LED930
LED MODEL NO. CITIZEN CLU028-1203C4-303H5M3-F1
DRIVER MODEL NO. (2) LTF DA32W900C2036C-3001

RENDERED TO:

VISUAL COMFORT GROUP
7400 LINDER AVE.
SKOKIE, IL 60077

AUTHORIZATION

The testing performed was authorized by signed quote number Qu-00912313.

STANDARDS USED

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

DESCRIPTION OF SAMPLE

The client submitted one production sample of model number 700LNG18x-LED930. The sample was received by Intertek on January 8, 2019 in undamaged condition and one sample was tested as received. The sample designation was AH01082019040430-006.

DATE OF TESTS

January 10, 2019.

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SUMMARY

MODEL NO:	700LNG18x-LED930
DESCRIPTION:	Chandelier

CRITERIA	RESULTS
Lumen Output (lumens)	6994.3
Input Power (W) @ 120 (VAC)	80.81
Lumen Efficacy (lm/W)	86.6
Input Power Factor @ 120 (VAC)	0.997

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 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

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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 - 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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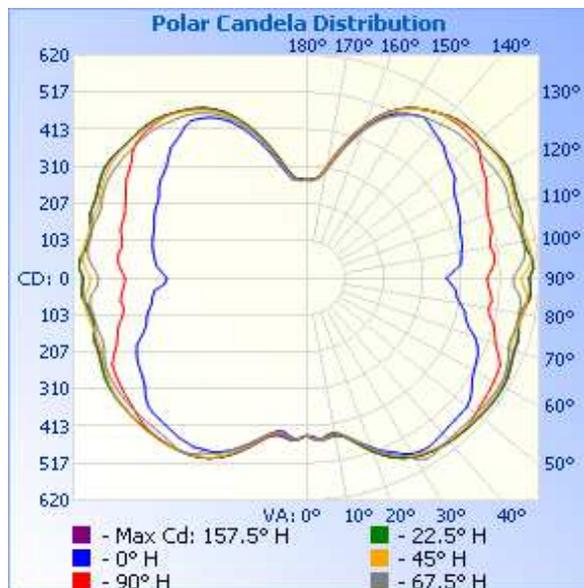
RESULTS OF TESTS

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)
AH01082019040430-006	Base Up	120.0	675.7	80.81	0.997	6994.3	86.6

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	440	440	440	440	440
5	456	455	454	452	453
10	446	446	442	441	439
15	464	470	464	464	468
20	502	515	506	506	513
25	535	552	545	543	553
30	566	578	572	583	576
35	574	589	585	598	588
40	566	596	592	589	594
45	560	599	595	588	597
50	559	602	597	590	590
55	539	606	599	594	583
60	517	605	599	597	578
65	505	598	590	591	571
70	478	589	578	573	537
75	440	585	579	574	518
80	417	579	587	576	493
85	400	598	591	571	494
90	373	593	572	552	483
95	413	604	604	583	504
100	420	590	598	586	498
105	428	596	592	583	512
110	436	602	591	577	515
115	447	610	603	588	530
120	457	618	610	587	554
125	484	612	609	580	568
130	496	605	603	576	589
135	518	600	598	570	591
140	530	590	587	558	585
145	546	570	569	548	569
150	528	547	545	524	546
155	497	507	505	488	508
160	442	448	448	432	451
165	372	378	377	364	382
170	309	310	311	303	315
175	278	277	275	274	277
180	273	273	273	273	273



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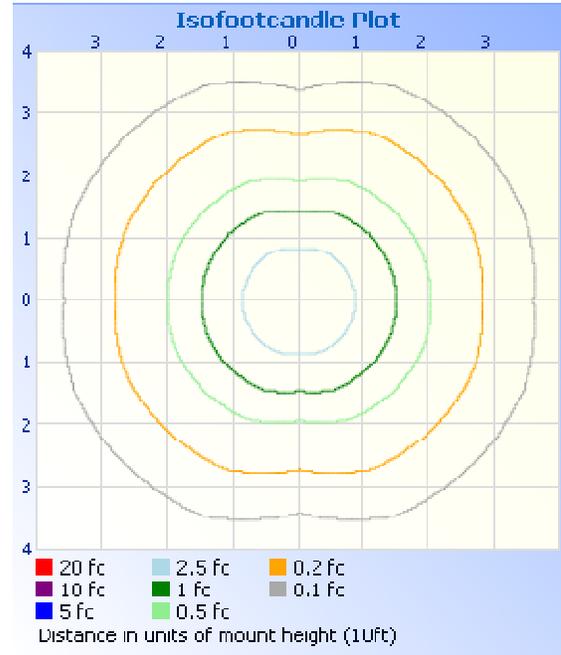
RESULTS OF TESTS

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

MOUNTING HEIGHT: 10ft

ILLUMINANCE - CONE OF LIGHT	ISOILLUMINATION PLOT
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Illuminance at a Distance		
	Center Beam fc	Beam Width
1.7R	152 fc	
3.3R	40.4 fc	
5.0R	17.6 fc	
6.7R	9.81 fc	
8.3R	6.39 fc	
10.0R	4.41 fc	



ZONAL LUMEN SUMMARY AND PERCENTAGES

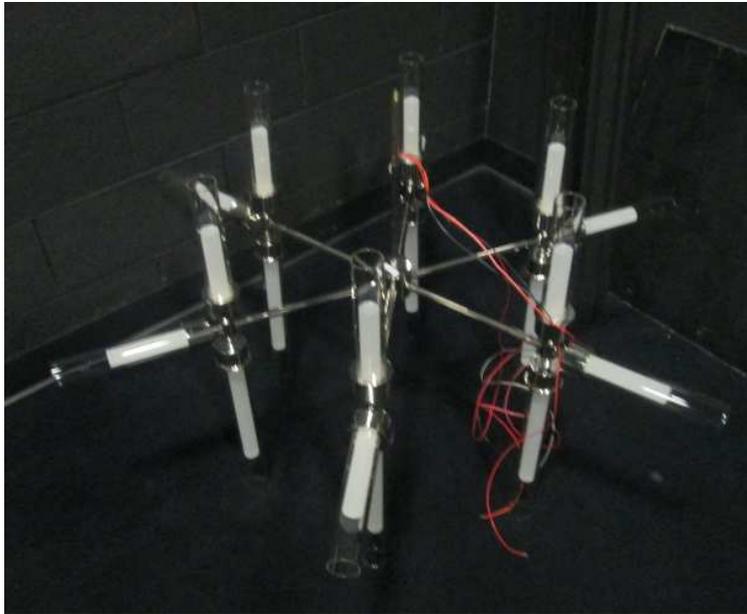
ZONE	LUMENS	% LUMINAIRE
0-30	429.1	6.1
0-40	796.3	11.4
0-60	1782.0	25.5
60-90	1758.1	25.1
70-100	1790.9	25.6
90-120	1765.1	25.2
0-90	3540.1	50.6
90-180	3454.2	49.4
0-180	6994.3	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	42.5	0.6
10-20	133.9	1.9
20-30	252.7	3.6
30-40	367.2	5.2
40-50	457.0	6.5
50-60	528.7	7.6
60-70	572.8	8.2
70-80	587.1	8.4
80-90	598.2	8.6
90-100	605.5	8.7
100-110	591.8	8.5
110-120	567.7	8.1
120-130	522.2	7.5
130-140	449.1	6.4
140-150	351.2	5.0
150-160	231.0	3.3
160-170	108.3	1.5
170-180	27.3	0.4

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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:

Tess Gallagher

Tess Gallagher
Engineer
Lighting Division

Report Reviewed By:

Tim Quigley

Timothy Quigley
Engineer
Lighting Division

Attachments: IES File

REVISION HISTORY

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