

VISUAL COMFORT GROUP TEST REPORT

SCOPE OF WORK

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

MODEL NUMBER

700OWCHAS93017BUDUNV

REPORT NUMBER

103643585CHI-037B

ISSUE DATE

November 18, 2019

REVISION DATE

None

DOCUMENT CONTROL NUMBER

TBD

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REPORT DATE: November 18, 2019

TEST REPORT

TEST OF ONE CHARA SQUARE 17 OUTDOOR WALL

MODEL NO. 700OWCHAS93017BUDUNV
LED MODEL NO. CITIZEN CLU028-1203C4-303H5M3-F1
DRIVER MODEL NO. ERP ESS015W-0300-42

RENDERED TO:

VISUAL COMFORT GROUP
7400 LINDER AVE.
SKOKIE, IL 60077

AUTHORIZATION

The testing performed was authorized by signed quote number Qu-00912313-2.

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 700OWCHAS93017BUDUNV. The sample was received by Intertek on January 24, 2019 in undamaged condition and one sample was tested as received. The sample designation was AH01242019034321-037.

DATE OF TESTS

February 13, 2019.

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SUMMARY

MODEL NO:	7000WCHAS93017BUDUNV
DESCRIPTION:	Chara Square 17 Outdoor Wall

CRITERIA	RESULTS
Lumen Output (lumens)	1286.1
Input Power (W) @ 120 (VAC)	11.85
Lumen Efficacy (lm/W)	108.5
Input Power Factor () @ 120 (VAC)	0.986
BUG Rating	B1-U4-G0
IES Classification	Type VS
Longitudinal Classification	Very Short

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	VBV	VBV
Newport Thermohygrometer	iServer	146379	4/16/2018	4/16/2019
Pacific, AC power supply	118-ACX	CHI0358	VBV	VBV

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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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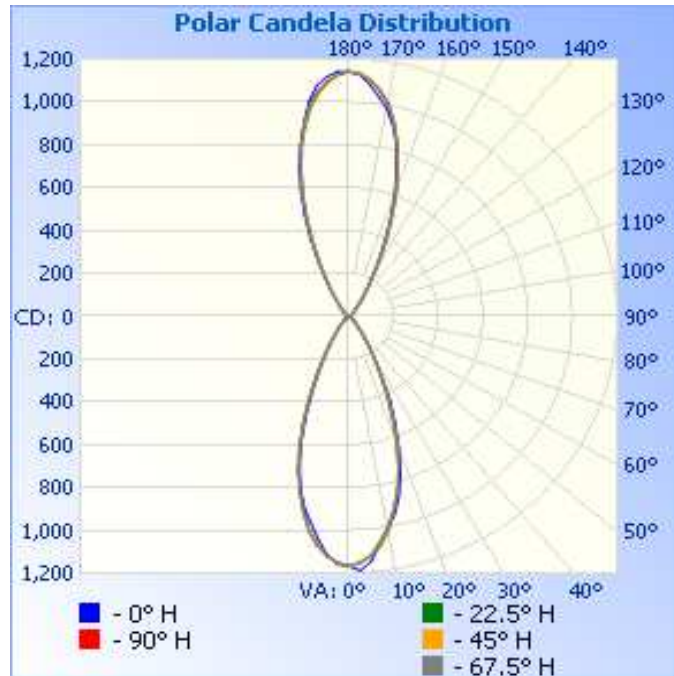
RESULTS OF TESTS

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)
AH01242019034321-037	Base Up	120.1	100.2	11.85	0.986	1286.1	108.5

INTENSITY SUMMARY - CANDELAS

Angle	0	22.5	45	67.5	90
0	1166	1166	1166	1166	1166
5	1149	1121	1126	1127	1124
10	1006	1000	1007	1012	1017
15	868	842	843	845	843
20	653	624	631	633	634
25	437	399	402	403	409
30	239	221	224	230	234
35	129	121	121	124	125
40	70	66	67	66	67
45	40	38	38	38	38
50	24	23	22	22	22
55	14	14	14	14	14
60	10	9	9	9	9
65	7	6	6	6	6
70	5	4	4	4	4
75	3	3	2	2	2
80	2	2	2	1	1
85	1	1	1	1	1
90	1	1	0	0	0
95	1	1	1	1	1
100	2	2	1	1	1
105	3	3	2	2	2
110	4	4	4	4	4
115	6	6	6	6	6
120	9	9	9	9	8
125	13	14	14	14	13
130	21	22	22	21	21
135	35	37	37	36	35
140	60	65	65	63	62
145	108	122	121	119	117
150	205	225	225	219	216
155	374	404	403	394	391
160	599	629	626	615	608
165	829	838	838	836	828
170	983	1011	1013	1010	1005
175	1085	1110	1110	1108	1103
180	1143	1143	1143	1143	1143



Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	261.0	N/A	20.2
FM (30-60)	62.5	N/A	4.8
FH (60-80)	4.6	N/A	0.4
FVH (80-90)	0.5	N/A	0.0
BL (0-30)	262.4	N/A	20.3
BM (30-60)	61.6	N/A	4.8
BH (60-80)	4.1	N/A	0.3
BVH (80-90)	0.4	N/A	0.0
UL (90-100)	0.8	N/A	0.1
UH (100-180)	631.6	N/A	49.0
Total	1289.5	N/A	100.0

BUG RATING B1-U4-G0

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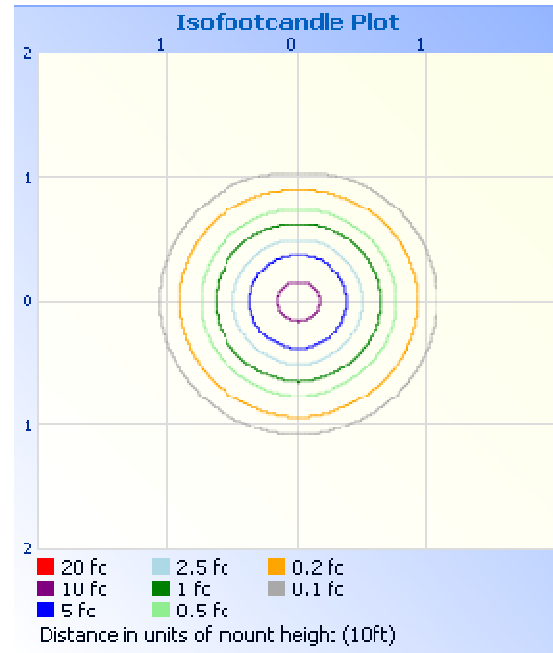
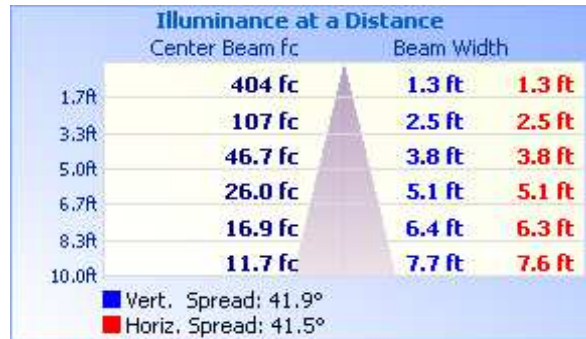
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RESULTS OF TESTS

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

MOUNTING HEIGHT: 10ft	
ILLUMINANCE - CONE OF LIGHT	ISOILLUMINATION PLOT



ZONAL LUMEN SUMMARY AND PERCENTAGES

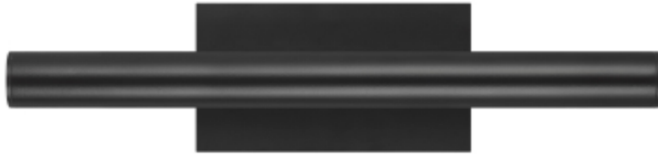
ZONE	LUMENS	% LUMINAIRE
0-30	522.0	40.6
0-40	602.6	46.9
0-60	645.9	50.2
60-90	9.5	0.7
70-100	4.3	0.3
90-120	8.7	0.7
0-90	655.4	51.0
90-180	630.7	49.0
0-180	1286.1	100.0

ZONE	LUMENS	% LUMINAIRE
0-10	103.4	8.0
10-20	231.4	18.0
20-30	187.3	14.6
30-40	80.6	6.3
40-50	30.7	2.4
50-60	12.6	1.0
60-70	6.0	0.5
70-80	2.7	0.2
80-90	0.9	0.1
90-100	0.8	0.1
100-110	2.4	0.2
110-120	5.6	0.4
120-130	12.0	0.9
130-140	28.4	2.2
140-150	75.4	5.9
150-160	178.4	13.9
160-170	225.8	17.6
170-180	101.9	7.9

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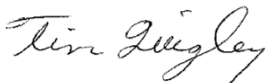
PICTURES



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
Project Engineer
Lighting Division

Report Reviewed By:



Jeff Davis
N.A. Technical Lead
Lighting Division

Attachments: IES File

REVISION HISTORY

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