



REPORT

545 E. ALGONQUIN ROAD ARLINGTON HEIGHTS, IL 60005

Project No. G100766137

Date: October 3, 2012

REPORT NO. 100766137CHI-020

TEST OF ONE CEILING-MOUNT FLUORESCENT LUMINAIRE

FIXTURE MODEL NO. ACL.37
BALLAST MODEL NO. FULHAM WH22-120C

RENDERED TO
LUMENART LTD.
3333 W 47th STREET
CHICAGO, IL 60632

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

AUTHORIZATION: The testing performed was authorized by signed quote number 500383499.

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-41 1998 Approved Method for Photometric Testing of Indoor Fluorescent Luminaires

DESCRIPTION OF SAMPLE: The client submitted one sample of model number ACL.37. The sample was received by Intertek on September 4, 2012, in undamaged condition, and one sample was tested as received. The sample designation was CHI1209041744-013.

DATES OF TESTS: September 6, 2012

SUMMARY

Model No.: ACL.37
Description: Ceiling-mount luminaire with 1x26W CFL

Criteria	Result
Total Lumen Output	775.2 Lumens
Total Power	25.94 W
Luminaire Efficacy	29.88
Power Factor	0.948

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Yokogawa Power Meter	WT210	146919	11/18/2011	11/18/2012
Omega Thermometer	DPI8-C24	146920	11/18/2011	11/18/2012
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
Newport Hygrometer	iServer	146961	2/23/2012	2/23/2013
Elgar, AC Power Supply	CW1251P	146918	VBU	VBU
Extech Stopwatch	365510	146830	2/16/2012	2/16/2013



TEST METHODS

Seasoning in Sample Orientation – LED Products

Seasoning was performed in accordance with IESNA LM-66.

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.

Estimated Total Operating Time

<u>Model No.</u>	<u>Total Hours</u>
ACL.37	2

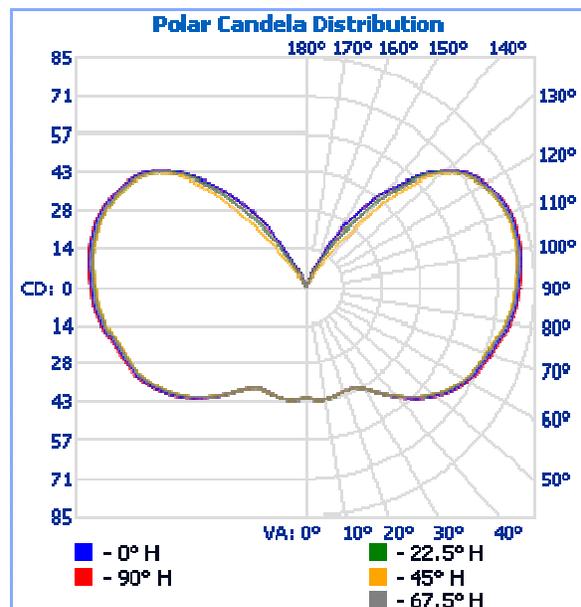
RESULTS OF TESTS

Photometric and Electrical Measurements – 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)
ACL.37							
CHI1208061220-001	Up	120.1	227.9	25.94	0.948	775.2	29.88

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
ACL.37					
0	41	41	41	41	41
5	42	42	42	42	42
10	42	42	42	42	42
15	42	42	42	42	42
20	41	41	41	41	41
25	41	41	41	41	41
30	44	44	44	43	43
35	48	48	48	48	48
40	53	53	52	53	53
45	58	58	58	58	58
50	62	62	62	62	63
55	66	65	65	66	66
60	69	68	68	68	69
65	71	70	70	71	72
70	72	72	71	72	73
75	74	73	73	74	75
80	76	75	75	76	77
85	78	77	77	77	79
90	79	78	77	78	79
95	80	79	78	79	80
100	81	79	79	80	81
105	81	80	79	80	81
110	80	79	79	80	81
115	79	78	78	78	79
120	77	76	76	76	77
125	73	72	72	72	73
130	67	66	65	66	67
135	58	56	52	56	57
140	46	41	30	41	46
145	34	26	12	26	34
150	19	11	5	12	18
155	6	5	3	4	7
160	3	2	1	2	3
165	1	1	1	1	1
170	1	1	1	1	1
175	0	0	0	0	0
180	0	0	0	0	0



RESULTS OF TESTS (cont'd)

Illumination Plots

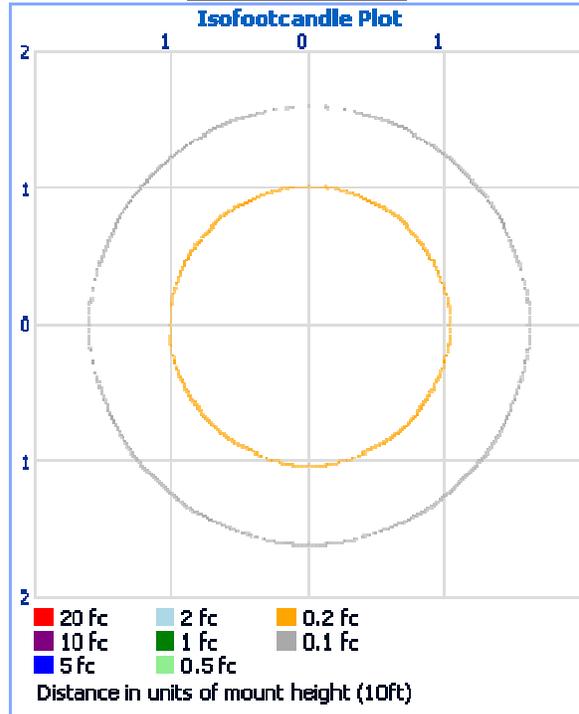
Model No.: ACL.37
 Mounting Height: 10 ft.

Illuminance - Cone of Light

Illuminance at a Distance		
	Center Beam FC	Field Width
1.7ft	14.69 fc	1.6ft
3.3ft	3.67 fc	3.2ft
5.0ft	1.63 fc	4.9ft
6.7ft	0.92 fc	6.5ft
8.3ft	0.59 fc	8.1ft
10.0ft	0.41 fc	9.7ft

■ Horiz. Spread: 51.8°

Isoillumination Plot



RESULTS OF TESTS (cont'd)

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
ACL.37		
0-10	4.0	0.5
10-20	11.8	1.5
20-30	19.3	2.5
30-40	30.2	3.9
40-50	44.7	5.8
50-60	58.8	7.6
60-70	69.9	9.0
70-80	77.9	10.1
80-90	84.2	10.9
90-100	86.3	11.1
100-110	84.5	10.9
110-120	77.5	10.0
120-130	64.7	8.3
130-140	42.3	5.5
140-150	16.1	2.1
150-160	2.7	0.3
160-170	0.3	0.0
170-180	0.0	0.0

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
ACL.37		
0-30	35.2	4.5
0-40	65.4	8.4
0-60	168.8	21.8
60-90	232.0	29.9
0-90	400.8	51.7
90-180	374.4	48.3
0-180	775.2	100.0

Pictures (not to scale)



Model ACL.37 mounted on goniophotometer



Model ACL.37



Model ACL.37 assembly

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:

Tim Quigley
Engineer
Lighting Division

Attachment: None

Report Reviewed By:

Jacki Swiernik
Staff Engineer
Lighting Division