UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300

Photometric Indoor Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
LF Illumination LLC
Scott Hershman
9200 Deering Avenue
Chatsworth, CA 91311
United States

Catalog Number
8411-23L-8030-N-MW
Project Number
10581561
Test Number
835660

Test Date

2014-12-03

Prepared By

Dane Hernandez-Adams, Technician

Approved By

Eric Gaudreau, Engineering Project Handler

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Luminaire Description:	Black steel housing, black plastic fan above black aluminum heatsink, patterned specular reflector above white aluminum trim
Catalog Number:	8411-23L-8030-N-MW
Lamp:	One white LED
Mounting:	Recessed
Ballast/Driver:	One ERP ESS030W-0700-42

Luminaire

Test Conditions

Test Temperature:	25.3	°C
Voltage:	119.9	VAC
Current:	0.1958	A
Power:	23.17	W
Power Factor:	0.987	
Frequency:	60	Hz
Current THD:	11.7	%

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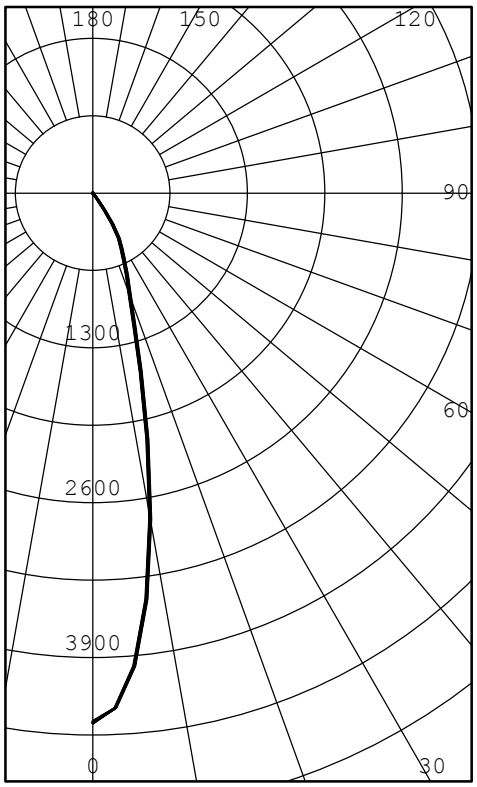

INTENSITY(CANDLEPOWER) SUMMARY

ANGLE	MEAN CP	LUMENS
0	4445	
5	3989	343
10	2778	
15	1550	439
20	912	
25	622	289
30	440	
35	178	114
40	5	
45	1	1
50	1	
55	1	0
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	1072	90.26
0-40	1185	99.83
0-60	1187	99.99
0-90	1187	100.00
40-90	2	0.17
60-90	0	0.01
90-180	0	0.00
0-180	1187	100.00

EFFICACY (LUMENS PER WATT): 51.2

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS DIAMETER: 4.000 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 0.4
SC: 0.4

ANGLE	MEAN CD/SQ M
45	239
55	109
65	31
75	0
85	0

TESTED IN ACCORDANCE WITH IES PROCEDURES.

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INTENSITY(CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	INTENSITY (CANDLEPOWER)	LUMENS
0.0	4445	
2.5	4329	
5.0	3989	343
7.5	3438	
10.0	2778	
12.5	2114	
15.0	1550	439
17.5	1161	
20.0	912	
22.5	746	
25.0	622	289
27.5	524	
30.0	440	
32.5	307	
35.0	178	114
37.5	60	
40.0	5	
42.5	2	
45.0	1	1
47.5	1	
50.0	1	
52.5	1	
55.0	1	0
57.5	0	
60.0	0	
62.5	0	
65.0	0	0
67.5	0	
70.0	0	
72.5	0	
75.0	0	0
77.5	0	
80.0	0	
82.5	0	
85.0	0	0
87.5	0	
90.0	0	

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COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50			30			10			0
RCR	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	1.22	1.22	1.22	1.22	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.18	1.15	1.14	1.12	1.15	1.13	1.12	1.10	1.13	1.11	1.10	1.08	1.07	1.06	1.05	1.04	1.03	1.02	1.00	1.00	0.99	0.97
2	1.14	1.11	1.08	1.05	1.12	1.09	1.06	1.04	1.10	1.07	1.05	1.03	1.04	1.02	1.00	1.01	1.00	0.98	0.99	0.97	0.96	0.95
3	1.10	1.06	1.03	1.00	1.09	1.05	1.02	0.99	1.07	1.03	1.01	0.98	1.01	0.99	0.97	0.99	0.97	0.95	0.97	0.96	0.94	0.93
4	1.08	1.02	0.99	0.96	1.06	1.01	0.98	0.95	1.05	1.00	0.98	0.95	0.99	0.96	0.94	0.97	0.94	0.93	0.95	0.93	0.92	0.91
5	1.05	0.99	0.95	0.92	1.03	0.98	0.94	0.92	1.02	0.97	0.94	0.91	0.96	0.93	0.90	0.94	0.92	0.90	0.93	0.91	0.89	0.88
6	1.02	0.96	0.92	0.89	1.01	0.95	0.92	0.89	1.00	0.95	0.91	0.89	0.93	0.90	0.88	0.92	0.90	0.88	0.91	0.89	0.87	0.86
7	0.99	0.93	0.89	0.87	0.98	0.92	0.89	0.86	0.97	0.92	0.88	0.86	0.91	0.88	0.85	0.90	0.87	0.85	0.89	0.86	0.85	0.84
8	0.97	0.91	0.86	0.84	0.96	0.90	0.86	0.84	0.95	0.89	0.86	0.83	0.88	0.85	0.83	0.88	0.85	0.83	0.87	0.84	0.82	0.81
9	0.94	0.88	0.84	0.81	0.93	0.87	0.84	0.81	0.92	0.87	0.83	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.84	0.82	0.80	0.79
10	0.92	0.85	0.81	0.79	0.91	0.85	0.81	0.78	0.90	0.84	0.81	0.78	0.84	0.81	0.78	0.83	0.80	0.78	0.83	0.80	0.78	0.77

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.