



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-M-MW
Project Number
10581561
Test Number
835663

Test Date

2014-12-03

Prepared By

Handwritten signature of Dane Hernandez-Adams in black ink.

Dane Hernandez-Adams, Technician

Approved By

Handwritten signature of Eric M. Gaudreau in black ink.

Eric Gaudreau, Engineering Project Handler

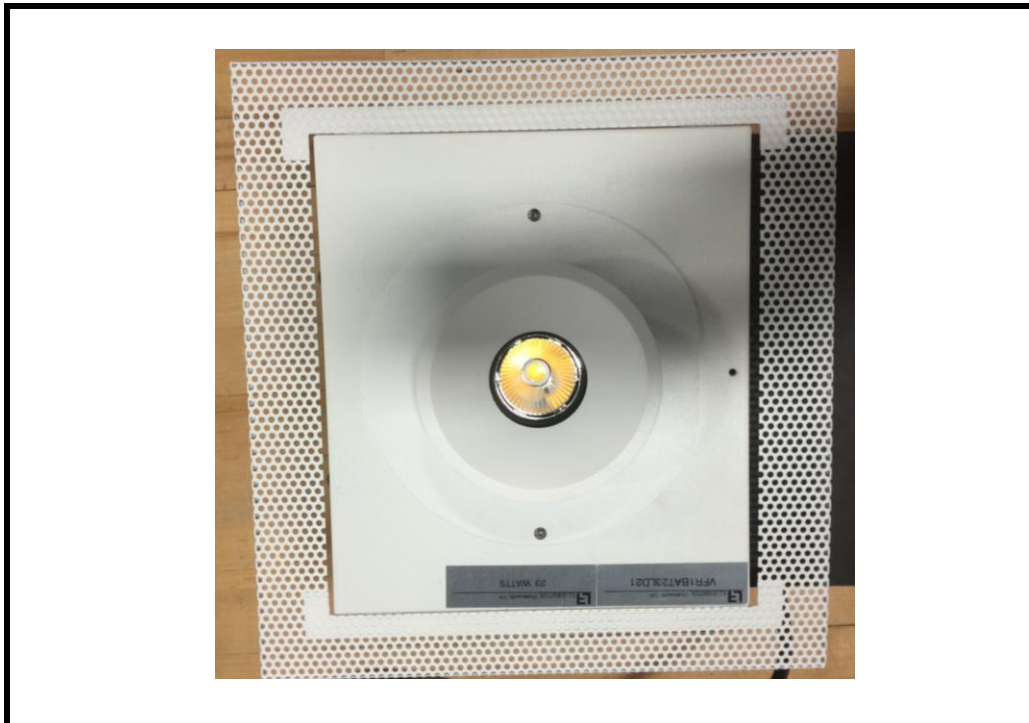
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Black steel housing, black plastic fan above black aluminum heatsink, patterned specular reflector above white aluminum trim
Catalog Number: 8411-23L-8030-M-MW
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One ERP ESS030W-0700-42

Luminaire

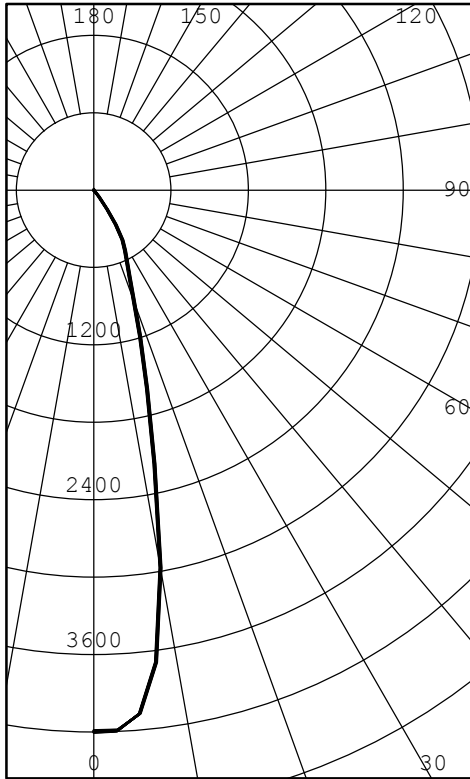


Test Conditions

Test Temperature:	25.6 °C
Voltage:	120.0 VAC
Current:	0.1958 A
Power:	23.20 W
Power Factor:	0.987
Frequency:	60 Hz
Current THD:	11.6 %



INTENSITY (CANDLEPOWER) SUMMARY



ANGLE	MEAN CP	LUMENS
0	4197	
5	4076	357
10	2973	
15	1597	453
20	905	
25	609	286
30	447	
35	182	117
40	6	
45	2	2
50	1	
55	1	1
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	1096	90.19
0-40	1213	99.81
0-60	1215	99.99
0-90	1215	100.00
40-90	2	0.19
60-90	0	0.01
90-180	0	0.00
0-180	1215	100.00

EFFICACY (LUMENS PER WATT): 52.4

*** 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	288
55	125
65	23
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	4197	
2.5	4194	
5.0	4076	357
7.5	3690	
10.0	2973	
12.5	2172	
15.0	1597	453
17.5	1189	
20.0	905	
22.5	726	
25.0	609	286
27.5	528	
30.0	447	
32.5	315	
35.0	182	117
37.5	64	
40.0	6	
42.5	2	
45.0	2	2
47.5	1	
50.0	1	
52.5	1	
55.0	1	1
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	



COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0	
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR	0	1.221	.221	.221	.22	1.191	.191	.191	.19	1.161	.161	.161	.16	1.111	.111	.111	.11	1.061	.061	.061	.06	1.021	.021	.021	.02	1.00
	1	1.181	.151	.141	.12	1.151	.131	.121	.10	1.131	.121	.101	.08	1.071	.061	.05	1.041	.031	.02	1.001	.000	.99	0.97			
	2	1.141	.111	.081	.05	1.121	.091	.061	.04	1.101	.071	.051	.03	1.041	.021	.01	1.011	.000	.99	0.990	.980	.96	0.95			
	3	1.111	.061	.031	.00	1.091	.051	.020	.99	1.071	.041	.010	.99	1.010	.990	.97	0.990	.970	.96	0.970	.960	.94	0.93			
	4	1.081	.030	.990	.96	1.061	.020	.980	.96	1.051	.010	.980	.95	0.990	.960	.94	0.970	.950	.93	0.950	.930	.92	0.91			
	5	1.050	.990	.950	.92	1.030	.980	.940	.92	1.020	.970	.940	.91	0.960	.930	.91	0.940	.920	.90	0.930	.910	.89	0.88			
	6	1.020	.960	.920	.90	1.010	.960	.920	.89	1.000	.950	.910	.89	0.940	.910	.88	0.920	.900	.88	0.910	.890	.87	0.86			
	7	0.990	.930	.890	.87	0.980	.930	.890	.86	0.970	.920	.890	.86	0.910	.880	.86	0.900	.870	.85	0.890	.870	.85	0.84			
	8	0.970	.910	.870	.84	0.960	.900	.860	.84	0.950	.890	.860	.83	0.880	.850	.83	0.880	.850	.83	0.870	.840	.82	0.82			
	9	0.940	.880	.840	.81	0.930	.870	.840	.81	0.930	.870	.840	.81	0.860	.830	.81	0.850	.820	.80	0.850	.820	.80	0.79			
	10	0.920	.850	.810	.79	0.910	.850	.810	.79	0.900	.850	.810	.79	0.840	.810	.79	0.830	.800	.78	0.830	.800	.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.