



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
8411-16L-9030-M-MW
Project Number
10581561
Test Number
835659

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

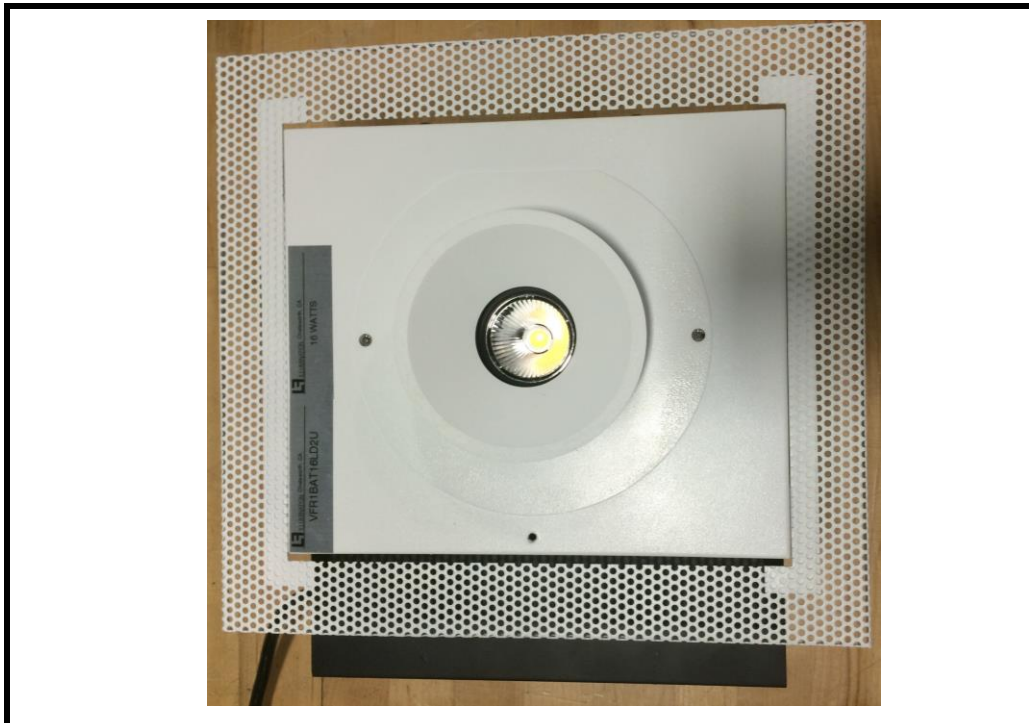
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Black steel housing, black aluminum heatsink, patterned specular reflector above white aluminum trim
Catalog Number: 8411-16L-9030-M-MW
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One ERP ESS030W-0500-42

Luminaire



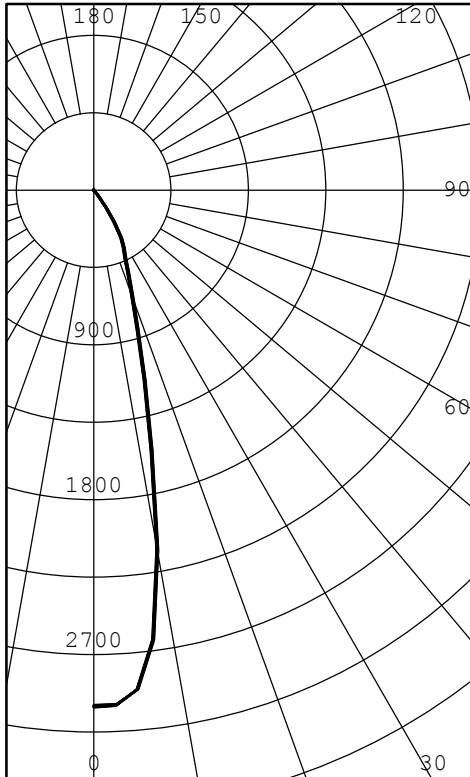
Test Conditions

Test Temperature:	25.0 °C
Voltage:	120.0 VAC
Current:	0.1323 A
Power:	15.62 W
Power Factor:	0.984
Frequency:	60 Hz
Current THD:	14.7 %



INTENSITY (CANDLEPOWER) SUMMARY

ANGLE	MEAN CP	LUMENS
0	3001	
5	2913	255
10	2124	
15	1139	323
20	648	
25	435	205
30	318	
35	125	81
40	3	
45	1	1
50	0	
55	0	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	783	90.59
0-40	864	99.91
0-60	864	100.00
0-90	864	100.00
40-90	1	0.09
60-90	0	0.00
90-180	0	0.00
0-180	864	100.00

EFFICACY (LUMENS PER WATT): 55.4

*** 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	120
55	0
65	0
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	3001	
2.5	2997	
5.0	2913	255
7.5	2637	
10.0	2124	
12.5	1551	
15.0	1139	323
17.5	848	
20.0	648	
22.5	521	
25.0	435	205
27.5	377	
30.0	318	
32.5	221	
35.0	125	81
37.5	38	
40.0	3	
42.5	1	
45.0	1	1
47.5	0	
50.0	0	
52.5	0	
55.0	0	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	



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	1.011	.000	.99	0.98			
	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	.97	0.95			
	3	1.111	.061	.031	.00	1.091	.051	.020	.99	1.071	.041	.010	.99	1.020	.990	.97	0.990	.980	.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	1.040	.980	.940	.92	1.020	.970	.940	.92	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	0.930	.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	.84	0.890	.860	.83	0.880	.850	.83	0.870	.850	.83	0.82			
	9	0.940	.880	.840	.81	0.930	.880	.840	.81	0.930	.870	.840	.81	0.860	.830	.81	0.860	.830	.81	0.850	.820	.80	0.80			
	10	0.920	.850	.820	.79	0.910	.850	.820	.79	0.900	.850	.820	.79	0.840	.810	.79	0.840	.810	.79	0.830	.800	.78	0.78			

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.