



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-N-MW
Project Number
10581561
Test Number
835656

Test Date

2014-12-02

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

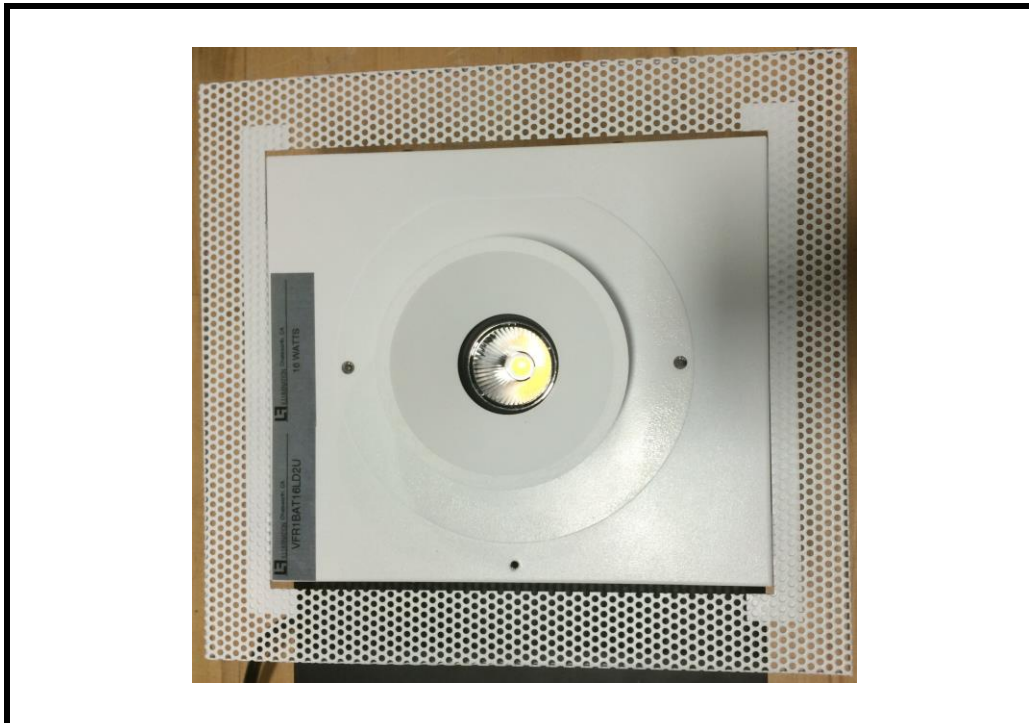
The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.



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

Luminaire Description: Black steel housing, black aluminum heatsink, patterned specular reflector above white aluminum trim
Catalog Number: 8411-16L-9030-N-MW
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One ERP ESS030W-0500-42

Luminaire

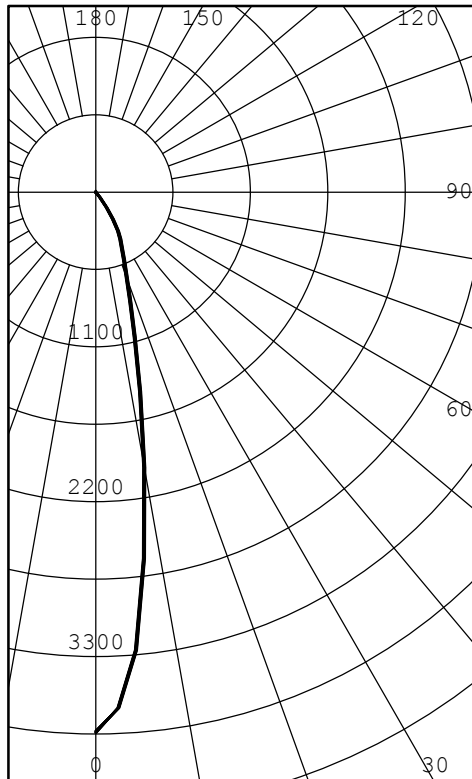


Test Conditions

Test Temperature:	24.7 °C
Voltage:	120.0 VAC
Current:	0.1321 A
Power:	15.60 W
Power Factor:	0.984
Frequency:	60 Hz
Current THD:	14.7 %



INTENSITY (CANDLEPOWER) SUMMARY



ANGLE	MEAN CP	LUMENS
0	3835	
5	3267	269
10	1988	
15	1065	306
20	644	
25	438	205
30	319	
35	134	85
40	4	
45	0	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	780	90.14
0-40	865	99.93
0-60	866	100.00
0-90	866	100.00
40-90	1	0.07
60-90	0	0.00
90-180	0	0.00
0-180	866	100.00

EFFICACY (LUMENS PER WATT): 55.5

*** 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	65
55	0
65	0
75	0
85	0

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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

INTENSITY (CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	INTENSITY (CANDLEPOWER)	LUMENS
0.0	3835	
2.5	3668	
5.0	3267	269
7.5	2623	
10.0	1988	
12.5	1454	
15.0	1065	306
17.5	813	
20.0	644	
22.5	525	
25.0	438	205
27.5	376	
30.0	319	
32.5	228	
35.0	134	85
37.5	47	
40.0	4	
42.5	1	
45.0	0	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	1.221	1.221	1.221	1.191	1.191	1.191	1.191	1.161	1.161	1.161	1.161	1.111	1.111	1.111	1.111	1.061	1.061	1.061	1.061	1.021	1.021	1.021	1.021	1.00
1	1.181	1.151	1.141	1.12	1.151	1.131	1.121	1.10	1.131	1.121	1.101	1.08	1.071	1.061	1.05	1.041	1.041	1.031	1.02	1.001	1.001	1.000	0.99	0.97	
2	1.141	1.111	1.081	1.05	1.121	1.091	1.061	1.04	1.101	1.071	1.051	1.03	1.041	1.021	1.01	1.011	1.011	1.000	0.99	0.990	0.980	0.97	0.95		
3	1.111	1.061	1.031	1.00	1.091	1.051	1.020	0.99	1.071	1.041	1.010	0.99	1.010	0.990	0.97	0.990	0.970	0.96	0.970	0.960	0.94	0.93			
4	1.081	1.030	0.990	0.96	1.061	1.020	0.980	0.96	1.051	1.010	0.980	0.95	0.990	0.960	0.94	0.970	0.950	0.93	0.950	0.930	0.92	0.91			
5	1.050	0.990	0.950	0.92	1.030	0.980	0.940	0.92	1.020	0.970	0.940	0.91	0.960	0.930	0.91	0.940	0.920	0.90	0.930	0.910	0.89	0.88			
6	1.020	0.960	0.920	0.90	1.010	0.960	0.920	0.89	1.000	0.950	0.910	0.89	0.940	0.910	0.88	0.920	0.900	0.88	0.910	0.890	0.87	0.86			
7	0.990	0.930	0.890	0.87	0.980	0.930	0.890	0.86	0.970	0.920	0.890	0.86	0.910	0.880	0.86	0.900	0.870	0.85	0.890	0.870	0.85	0.84			
8	0.970	0.910	0.870	0.84	0.960	0.900	0.860	0.84	0.950	0.890	0.860	0.84	0.890	0.850	0.83	0.880	0.850	0.83	0.870	0.850	0.83	0.82			
9	0.940	0.880	0.840	0.81	0.930	0.870	0.840	0.81	0.930	0.870	0.840	0.81	0.860	0.830	0.81	0.860	0.830	0.81	0.850	0.820	0.80	0.79			
10	0.920	0.850	0.820	0.79	0.910	0.850	0.820	0.79	0.900	0.850	0.820	0.79	0.840	0.810	0.79	0.840	0.810	0.79	0.830	0.800	0.78	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.