



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
8012-16L-9030-M-MW
Project Number
10581561
Test Number
835655

Test Date

2014-12-05

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

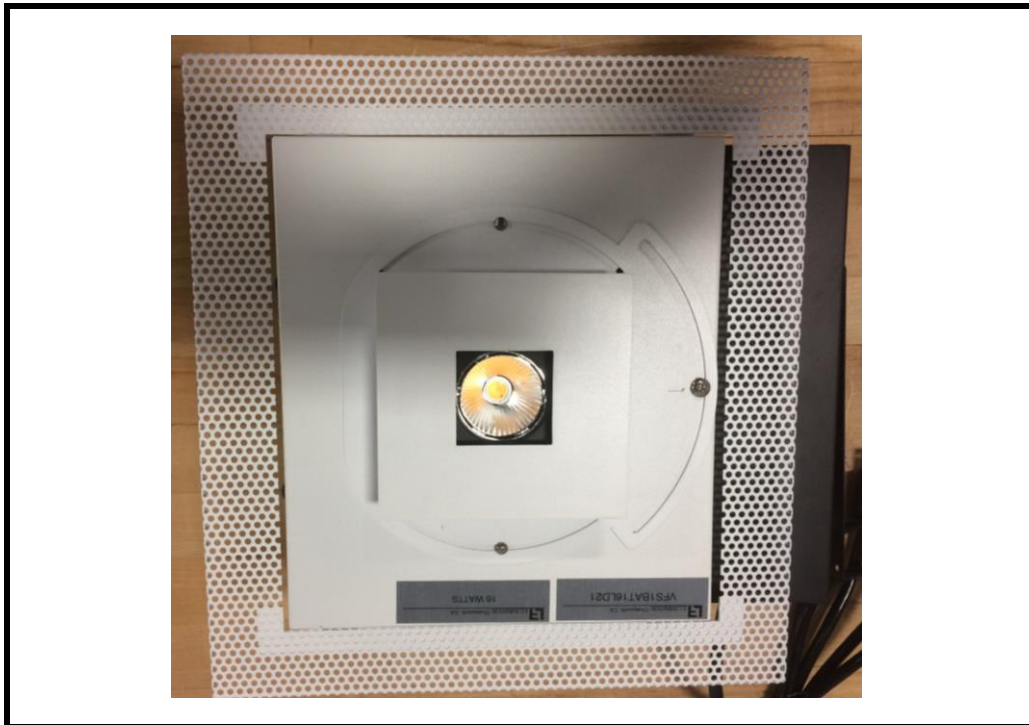
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Luminaire Description: Black steel housing, black aluminum heatsink, patterned specular reflector above white aluminum trim
Catalog Number: 8012-16L-9030-M-MW
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One ERP ESS030W-0500-42

Luminaire

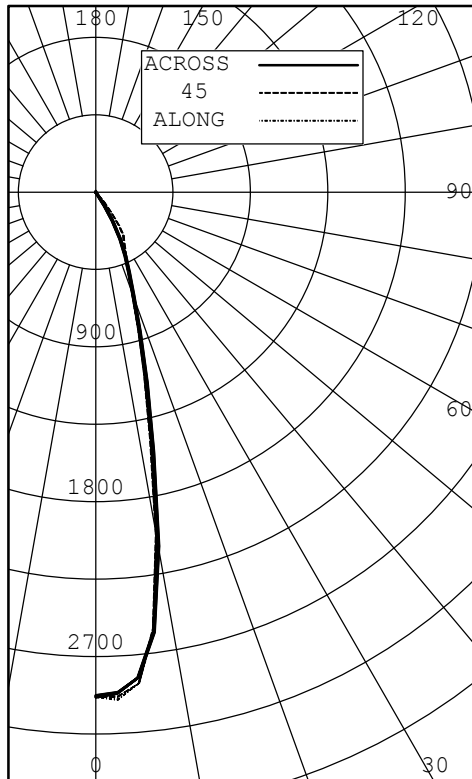


Test Conditions

Test Temperature:	24.8 °C
Voltage:	120.0 VAC
Current:	0.1285 A
Power:	15.20 W
Power Factor:	0.986
Frequency:	60 Hz
Current THD:	13.1 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	2931	2931	2931	2931	2931	
5	2866	2867	2866	2854	2833	248
10	2032	2009	2023	2059	2091	
15	1099	1091	1092	1122	1150	313
20	620	620	625	633	639	
25	409	415	418	412	410	191
30	198	267	327	264	196	
35	22	85	238	77	19	71
40	1	2	74	1	1	
45	0	0	0	0	0	3
50	0	0	0	0	0	
55	0	0	0	0	0	0
60	0	0	0	0	0	
65	0	0	0	0	0	0
70	0	0	0	0	0	
75	0	0	0	0	0	0
80	0	0	0	0	0	
85	0	0	0	0	0	0
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	752	91.09
0-40	823	99.69
0-60	825	100.00
0-90	825	100.00
40-90	3	0.31
60-90	0	0.00
90-180	0	0.00
0-180	825	100.00

EFFICACY (LUMENS PER WATT): 54.3

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 1.750 INS
 WIDTH: 1.750 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 0.4
 SC: 0.4

ANGLE	ALONG	45	ACROSS
45	107	323	107
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	2931	2931	2931	2931	2931	2931	
2.5	2954	2950	2938	2924	2914	2936	
5.0	2866	2867	2866	2854	2833	2859	248
7.5	2567	2561	2560	2570	2579	2566	
10.0	2032	2009	2023	2059	2091	2038	
12.5	1479	1457	1470	1510	1546	1487	
15.0	1099	1091	1092	1122	1150	1107	313
17.5	815	815	821	837	852	827	
20.0	620	620	625	633	639	627	
22.5	501	495	500	501	502	499	
25.0	409	415	418	412	410	413	191
27.5	312	349	364	353	310	344	
30.0	198	267	327	264	196	264	
32.5	98	173	301	167	98	185	
35.0	22	85	238	77	19	105	71
37.5	2	19	150	10	2	45	
40.0	1	2	74	1	1	19	
42.5	0	0	16	1	0	4	
45.0	0	0	0	0	0	0	3
47.5	0	0	0	0	0	0	
50.0	0	0	0	0	0	0	
52.5	0	0	0	0	0	0	
55.0	0	0	0	0	0	0	0
57.5	0	0	0	0	0	0	
60.0	0	0	0	0	0	0	
62.5	0	0	0	0	0	0	
65.0	0	0	0	0	0	0	0
67.5	0	0	0	0	0	0	
70.0	0	0	0	0	0	0	
72.5	0	0	0	0	0	0	
75.0	0	0	0	0	0	0	0
77.5	0	0	0	0	0	0	
80.0	0	0	0	0	0	0	
82.5	0	0	0	0	0	0	
85.0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	
90.0	0	0	0	0	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	1.161	.141	.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	1.021	.000	.99	0.990	.980	.97	0.95			
	3	1.111	.061	.031	.00	1.091	.051	.021	.00	1.081	.041	.010	.99	1.020	.990	.97	0.990	.980	.96	0.970	.960	.95	0.93			
	4	1.081	.030	.990	.97	1.061	.020	.980	.96	1.051	.010	.980	.95	0.990	.960	.94	0.970	.950	.93	0.950	.940	.92	0.91			
	5	1.051	.000	.950	.93	1.040	.990	.950	.92	1.020	.980	.940	.92	0.960	.930	.91	0.950	.920	.90	0.930	.910	.90	0.89			
	6	1.030	.970	.930	.90	1.010	.960	.920	.90	1.000	.950	.920	.89	0.940	.910	.89	0.930	.900	.88	0.920	.890	.88	0.87			
	7	0.990	.940	.900	.87	0.990	.930	.890	.87	0.980	.930	.890	.86	0.910	.880	.86	0.900	.880	.86	0.890	.870	.85	0.84			
	8	0.980	.910	.870	.85	0.970	.900	.870	.84	0.950	.900	.860	.84	0.890	.860	.84	0.880	.850	.83	0.870	.850	.83	0.82			
	9	0.940	.890	.850	.82	0.940	.880	.840	.82	0.930	.870	.840	.82	0.870	.840	.81	0.860	.830	.81	0.850	.830	.81	0.80			
	10	0.930	.860	.820	.79	0.920	.860	.820	.79	0.910	.850	.820	.79	0.850	.810	.79	0.840	.810	.79	0.840	.810	.79	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.