



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
8432-16L-9030-W-MW
Project Number
10581561
Test Number
835680

Test Date

2014-12-04

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

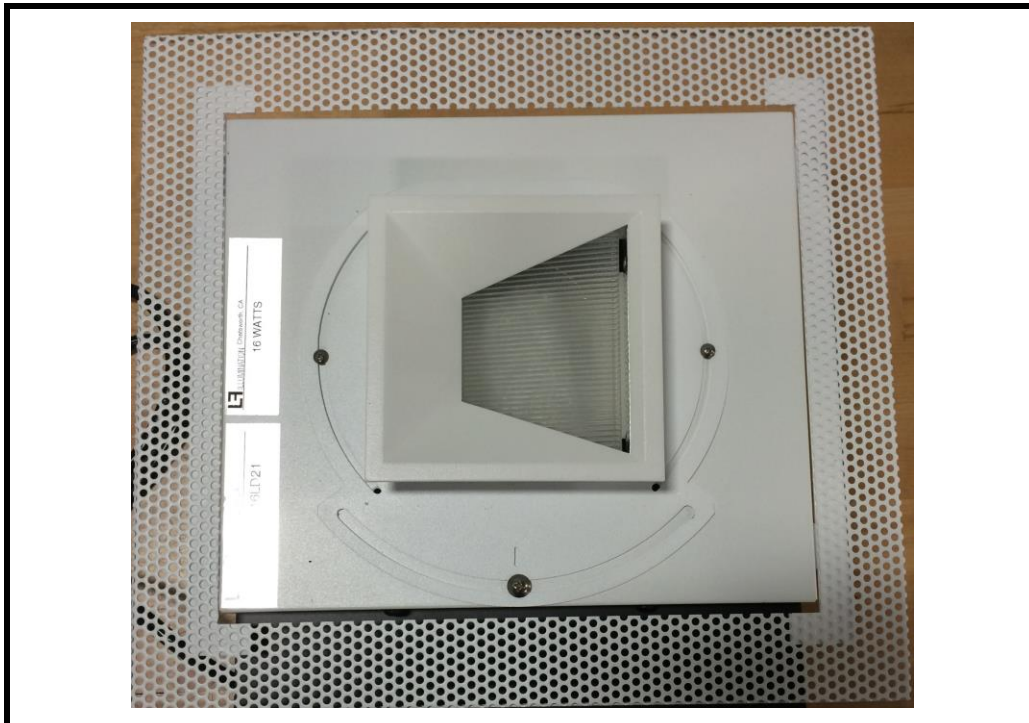
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Luminaire Description: Black steel housing, black aluminum heatsink, patterned specular reflector above frosted white glass, white aluminum trim
Catalog Number: 8432-16L-9030-W-MW
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One ERP ESS030W-0500-42

Luminaire

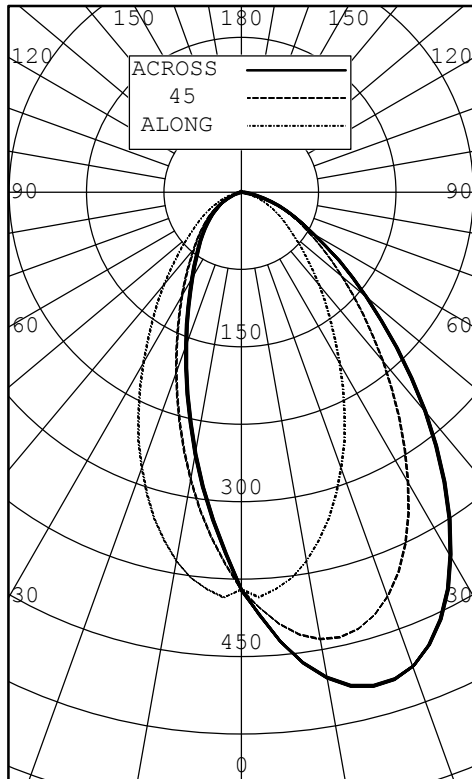


Test Conditions

Test Temperature:	24.7 °C
Voltage:	120.0 VAC
Current:	0.1302 A
Power:	15.41 W
Power Factor:	0.986
Frequency:	60 Hz
Current THD:	13.1 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT
 BEAM SIDE LUMENS



ANGLE	ALONG	67.5	45	22.5	ACROSS	OUTPUT LUMENS
0	385	385	385	385	385	
5	386	402	420	433	437	20
10	363	402	440	468	478	
15	327	382	438	480	495	60
20	283	349	416	469	488	
25	237	304	376	435	457	83
30	190	254	323	382	406	
35	150	205	267	322	343	81
40	117	160	213	260	277	
45	89	123	166	202	213	62
50	67	93	127	153	159	
55	52	70	97	114	116	41
60	39	52	73	83	81	
65	28	37	53	59	58	24
70	18	25	35	40	39	
75	8	13	20	24	23	10
80	2	4	8	10	10	
85	0	0	1	3	3	1
90	0	0	0	0	0	

BOTH SIDES
 ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	249	45.06
0-40	361	65.29
0-60	506	91.41
0-90	553	100.00
40-90	192	34.71
60-90	48	8.59
90-180	0	0.00
0-180	553	100.00

EFFICACY (LUMENS PER WATT): 35.9

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 4.000 INS
 WIDTH: 4.000 INS

LUMINANCE SUMMARY - CD./SQ.M.

BEAM SIDE			
ANGLE	ALONG	45	ACROSS
45	12193	22870	29306
55	8782	16394	19700
65	6418	12283	13299
75	2994	7607	8716
85	0	1448	3235

TESTED IN ACCORDANCE WITH IES PROCEDURES.



BEAM SIDE
 INTENSITY (CANDLEPOWER) DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	67.5	45	22.5	ACROSS	AVERAGE	
0.0	385	385	385	385	385	385	
2.5	393	395	403	408	410	402	
5.0	386	402	420	433	437	416	20
7.5	377	404	433	453	460	427	
10.0	363	402	440	468	478	432	
12.5	346	394	442	477	490	433	
15.0	327	382	438	480	495	428	60
17.5	306	367	430	478	495	419	
20.0	283	349	416	469	488	405	
22.5	261	327	398	454	475	387	
25.0	237	304	376	435	457	365	83
27.5	213	279	351	410	433	341	
30.0	190	254	323	382	406	314	
32.5	169	229	295	353	375	287	
35.0	150	205	267	322	343	260	81
37.5	133	182	239	291	310	233	
40.0	117	160	213	260	277	208	
42.5	102	141	189	230	244	183	
45.0	89	123	166	202	213	161	62
47.5	78	107	146	176	184	140	
50.0	67	93	127	153	159	122	
52.5	59	81	111	132	136	105	
55.0	52	70	97	114	116	91	41
57.5	45	61	84	98	97	78	
60.0	39	52	73	83	81	67	
62.5	33	44	63	69	68	57	
65.0	28	37	53	59	58	48	24
67.5	23	31	44	49	48	40	
70.0	18	25	35	40	39	32	
72.5	13	19	27	32	31	25	
75.0	8	13	20	24	23	18	10
77.5	5	8	14	17	16	12	
80.0	2	4	8	10	10	7	
82.5	1	2	4	6	6	4	
85.0	0	0	1	3	3	1	1
87.5	0	0	0	0	0	0	
90.0	0	0	0	0	0	0	



OPPOSITE SIDE TO BEAM
INTENSITY (CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	112.5	135	157.5	ACROSS		
0.0	385	385	385	385	385	385	
2.5	393	372	361	354	351	365	
5.0	386	355	336	324	319	342	16
7.5	377	335	310	294	288	318	
10.0	363	314	284	265	258	293	
12.5	346	292	257	237	229	268	
15.0	327	268	232	211	203	244	34
17.5	306	245	208	186	179	220	
20.0	283	222	186	165	157	198	
22.5	261	200	165	145	139	178	
25.0	237	179	146	128	123	158	36
27.5	213	160	130	114	108	141	
30.0	190	142	115	101	96	125	
32.5	169	126	102	90	86	111	
35.0	150	112	91	80	77	99	31
37.5	133	99	81	72	69	88	
40.0	117	87	72	65	63	79	
42.5	102	77	65	58	56	70	
45.0	89	69	59	53	51	62	24
47.5	78	61	52	47	45	55	
50.0	67	54	47	42	40	49	
52.5	59	48	41	37	36	43	
55.0	52	42	37	33	31	38	17
57.5	45	37	32	28	27	33	
60.0	39	32	28	24	23	29	
62.5	33	27	24	20	18	24	
65.0	28	23	20	16	15	20	10
67.5	23	18	16	12	11	16	
70.0	18	14	12	9	7	12	
72.5	13	10	8	5	4	8	
75.0	8	6	4	2	2	4	3
77.5	5	3	1	1	1	2	
80.0	2	1	0	1	1	1	
82.5	1	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	1.151	.111	.081	.05	1.121	.091	.061	.03	1.101	.071	.041	.02	1.031	.000	.98	0.990	.970	.95	0.950	.940	.93	0.91			
	2	1.071	.020	.970	.92	1.051	.000	.950	.91	1.030	.980	.930	.90	0.940	.910	.88	0.920	.890	.86	0.890	.860	.84	0.82			
	3	1.010	.920	.860	.81	0.990	.910	.850	.80	0.970	.900	.840	.80	0.870	.820	.79	0.840	.810	.77	0.820	.790	.76	0.74			
	4	0.950	.850	.780	.73	0.930	.840	.770	.72	0.910	.830	.770	.72	0.800	.750	.71	0.780	.740	.70	0.760	.730	.69	0.68			
	5	0.890	.780	.710	.65	0.870	.770	.700	.65	0.850	.760	.690	.65	0.740	.680	.64	0.720	.670	.64	0.710	.660	.63	0.61			
	6	0.830	.720	.640	.59	0.820	.710	.640	.59	0.800	.700	.630	.59	0.680	.630	.58	0.670	.620	.58	0.660	.610	.57	0.56			
	7	0.770	.660	.590	.54	0.760	.650	.580	.53	0.750	.640	.580	.53	0.630	.570	.53	0.620	.560	.52	0.610	.560	.52	0.50			
	8	0.730	.610	.540	.49	0.720	.600	.530	.49	0.700	.600	.530	.48	0.580	.520	.48	0.570	.520	.48	0.560	.510	.48	0.46			
	9	0.680	.570	.490	.44	0.670	.560	.490	.44	0.660	.550	.490	.44	0.540	.480	.44	0.530	.480	.44	0.520	.470	.43	0.42			
	10	0.640	.520	.450	.41	0.630	.520	.450	.40	0.620	.510	.450	.40	0.500	.440	.40	0.500	.440	.40	0.490	.440	.40	0.38			

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.