



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  
Optolum  
Karen Baker  
1407 W. 10th Place, Suite 107  
Tempe, AZ 85018  
United States

Catalog Number  
12 B2-AL-L-358USD-A072000  
Project Number  
10520546  
Test Number  
785420

Test Date

2014-10-16

Prepared By

A handwritten signature in black ink, appearing to read 'Todd Heiland'.

Todd Heiland, Technician

Approved By

A handwritten signature in black ink, appearing to read 'Zachary Mooney'.

Zachary Mooney, Engineer Project Associate

The results contained in this report pertain only to the tested sample.  
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Luminaire Description: Grey aluminum housing, clear plastic enclosure  
Catalog Number: 12 B2-AL-L-358USD-A072000  
Lamp: 72 white LEDs  
Mounting: Surface  
Ballast/Driver: One High Perfection Tech. LP1090-24-GG-290

Luminaire

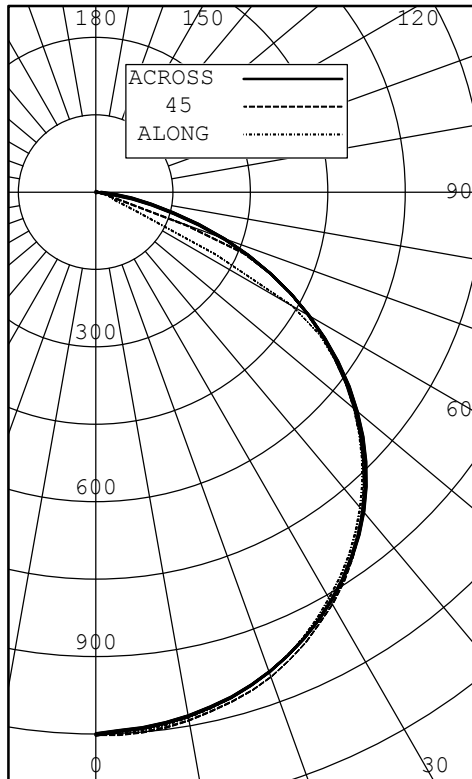


Test Conditions

Test Temperature:	24.5 °C
Voltage:	120.0 VAC
Current:	0.3777 A
Power:	44.42 W
Power Factor:	0.980
Frequency:	60 Hz
Current THD:	11.1 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	1051	1051	1051	1051	1051	
5	1047	1047	1051	1051	1043	101
10	1034	1035	1040	1040	1032	
15	1015	1017	1022	1022	1014	287
20	988	991	999	996	988	
25	952	957	963	963	955	441
30	907	911	920	923	913	
35	856	859	867	875	864	540
40	798	800	804	818	807	
45	730	729	733	750	739	567
50	654	647	654	671	661	
55	566	556	566	581	572	505
60	440	453	473	478	477	
65	83	190	372	370	375	297
70	33	32	187	258	267	
75	27	24	21	155	156	84
80	21	19	14	34	72	
85	13	11	8	4	11	11
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	830	29.29
0-40	1370	48.36
0-60	2442	86.18
0-90	2833	100.00
40-90	1463	51.64
60-90	391	13.82
90-180	0	0.00
0-180	2833	100.00

EFFICACY (LUMENS PER WATT): 63.8

\*\*\* THIS IS AN ABSOLUTE TEST \*\*\*

LUMINOUS LENGTH: 72.250 INS  
 WIDTH: 0.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3  
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	44304	44620	45037
55	42358	42505	42959
65	8452	37921	38197
75	4409	3452	26035
85	6153	4047	5584

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	1051	1051	1051	1051	1051	1051	
2.5	1050	1050	1053	1053	1045	1051	
5.0	1047	1047	1051	1051	1043	1048	101
7.5	1041	1041	1047	1046	1038	1043	
10.0	1034	1035	1040	1040	1032	1037	
12.5	1026	1027	1031	1032	1023	1029	
15.0	1015	1017	1022	1022	1014	1019	287
17.5	1003	1005	1012	1010	1002	1007	
20.0	988	991	999	996	988	993	
22.5	971	975	982	980	972	977	
25.0	952	957	963	963	955	959	441
27.5	930	935	942	943	935	938	
30.0	907	911	920	923	913	916	
32.5	882	884	895	900	890	891	
35.0	856	859	867	875	864	865	540
37.5	828	831	837	848	836	837	
40.0	798	800	804	818	807	806	
42.5	765	766	769	786	774	773	
45.0	730	729	733	750	739	737	567
47.5	693	689	695	712	701	698	
50.0	654	647	654	671	661	657	
52.5	611	602	612	627	617	614	
55.0	566	556	566	581	572	568	505
57.5	516	506	521	531	525	520	
60.0	440	453	473	478	477	466	
62.5	263	368	424	425	427	390	
65.0	83	190	372	370	375	290	297
67.5	39	56	310	314	321	215	
70.0	33	32	187	258	267	157	
72.5	29	27	46	206	210	100	
75.0	27	24	21	155	156	73	84
77.5	24	22	17	107	111	53	
80.0	21	19	14	34	72	28	
82.5	18	16	11	7	37	16	
85.0	13	11	8	4	11	9	11
87.5	5	4	3	1	0	3	
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	1.131	.091	.051	.02	1.111	.071	.031	.00	1.081	.051	.020	.99	1.000	.980	.96	0.970	.950	.93	0.930	.910	.90	0.88			
	2	1.050	.980	.920	.86	1.020	.960	.900	.85	1.000	.940	.890	.84	0.900	.860	.82	0.870	.840	.81	0.840	.810	.79	0.77			
	3	0.970	.870	.790	.73	0.940	.850	.780	.73	0.920	.840	.770	.72	0.810	.750	.71	0.780	.740	.70	0.760	.720	.69	0.67			
	4	0.890	.780	.700	.64	0.870	.770	.690	.63	0.850	.750	.680	.63	0.730	.670	.62	0.710	.650	.61	0.690	.640	.60	0.58			
	5	0.830	.700	.610	.55	0.800	.690	.610	.54	0.780	.680	.600	.54	0.650	.590	.54	0.640	.580	.53	0.620	.570	.52	0.51			
	6	0.760	.630	.540	.48	0.740	.620	.530	.47	0.720	.610	.530	.47	0.590	.520	.47	0.570	.510	.46	0.560	.500	.46	0.44			
	7	0.690	.560	.470	.42	0.680	.550	.470	.41	0.660	.540	.460	.41	0.530	.450	.40	0.510	.450	.40	0.500	.440	.40	0.38			
	8	0.640	.500	.420	.36	0.630	.500	.420	.36	0.610	.490	.410	.36	0.480	.410	.36	0.470	.400	.35	0.450	.400	.35	0.33			
	9	0.600	.460	.370	.32	0.580	.450	.370	.32	0.570	.450	.370	.32	0.430	.360	.31	0.420	.360	.31	0.410	.350	.31	0.29			
	10	0.550	.420	.330	.28	0.540	.410	.330	.28	0.530	.400	.330	.28	0.390	.330	.28	0.390	.320	.28	0.380	.320	.27	0.26			

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.



CONE OF LIGHT

MOUNTING HEIGHT ABOVE WORK PLANE (FT)	INITIAL FC AT NADIR -FCN (FC)	.1*FCN (FC)	10% LIGHTED DIAMETER (FT)	.5*FCN (FC)	50% LIGHTED DIAMETER (FT)
1	1051.0	105.1	2.9	525.5	1.3
2	262.8	26.3	5.8	131.4	2.6
3	116.8	11.7	8.6	58.4	3.9
4	65.7	6.6	11.5	32.8	5.2
5	42.0	4.2	14.4	21.0	6.5
6	29.2	2.9	17.3	14.6	7.8
7	21.4	2.1	20.1	10.7	9.1
8	16.4	1.6	23.0	8.2	10.3

10% CONE ANGLE: 110.4 DEGREES  
 50% CONE ANGLE: 65.8 DEGREES