



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
10 B2-RD--358USD-A072000
Project Number
10520546
Test Number
785415

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

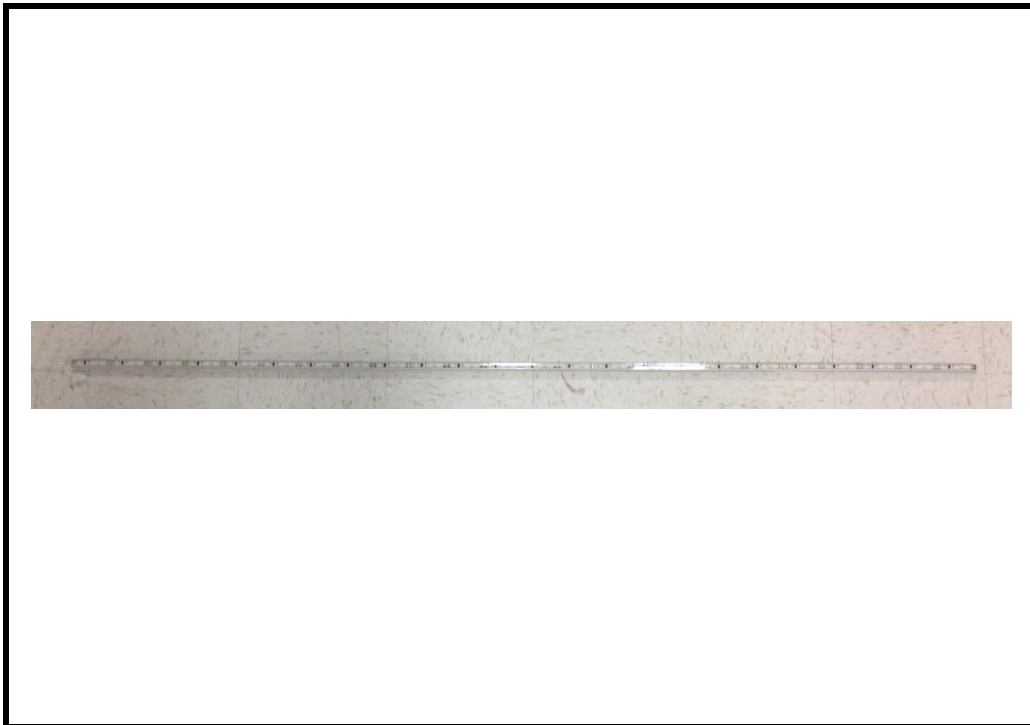
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Grey aluminum housing, clear plastic enclosure
Catalog Number: 10 B2-RD--358USD-A072000
Lamp: 72 white LEDs
Mounting: Surface
Ballast/Driver: One High Perfection Tech. LP1090-24-GG-290

Luminaire

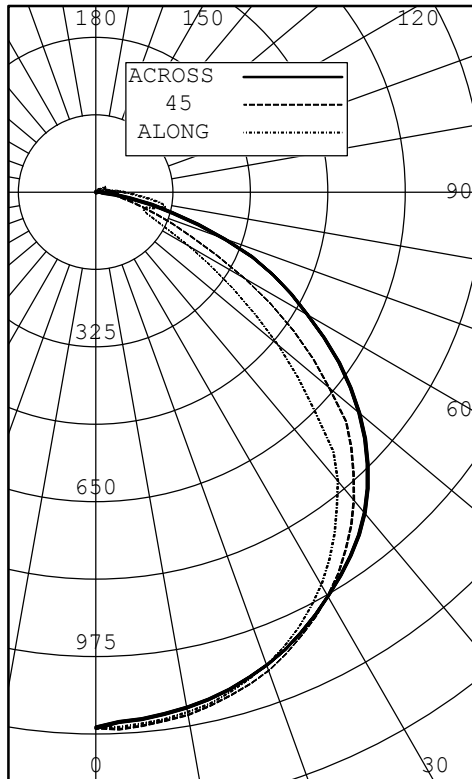


Test Conditions

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.3781 A
Power:	44.47 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	1124	1124	1124	1124	1124	
5	1120	1119	1125	1126	1111	108
15	1088	1086	1094	1091	1081	307
25	1008	1010	1026	1030	1020	469
35	874	886	915	934	932	568
45	650	695	759	802	808	572
55	351	391	507	620	623	446
65	140	155	225	371	412	258
75	128	88	77	110	167	119
85	94	94	43	21	14	60
90	58	59	41	8	0	
95	38	36	26	1	0	24
105	22	22	12	1	0	13
115	23	20	10	0	0	10
125	14	12	7	0	0	6
135	8	7	1	0	0	3
145	3	0	0	0	0	1
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	885	29.86
0-40	1452	49.01
0-60	2470	83.36
0-90	2906	98.09
40-90	1454	49.08
60-90	436	14.73
90-180	57	1.91
0-180	2963	100.00

EFFICACY (LUMENS PER WATT): 66.6

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 72.250 INS
 WIDTH: 0.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
 SC (ALONG): 1.2, SC (ACROSS): 1.3

ANGLE	ALONG	45	ACROSS
45	39447	46209	49191
55	26264	38086	46800
65	14173	22883	41952
75	21178	12738	27765
85	46105	21248	6992

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0	1124	1124	1124	1124	1124	1124	
5	1120	1119	1125	1126	1111	1121	108
10	1109	1106	1115	1113	1099	1109	
15	1088	1086	1094	1091	1081	1089	307
20	1055	1052	1067	1066	1055	1060	
25	1008	1010	1026	1030	1020	1020	469
30	949	955	976	988	978	970	
35	874	886	915	934	932	909	568
40	791	803	843	874	878	839	
45	650	695	759	802	808	746	572
50	500	543	641	720	722	629	
55	351	391	507	620	623	501	446
60	226	256	360	500	513	371	
65	140	155	225	371	412	257	258
70	106	99	138	233	291	167	
75	128	88	77	110	167	106	119
80	143	117	47	46	75	80	
85	94	94	43	21	14	53	60
90	58	59	41	8	0	34	
95	38	36	26	1	0	21	24
100	26	27	18	1	0	15	
105	22	22	12	1	0	11	13
110	21	20	11	0	0	10	
115	23	20	10	0	0	11	10
120	20	19	11	0	0	10	
125	14	12	7	0	0	6	6
130	10	9	6	0	0	5	
135	8	7	1	0	0	3	3
140	7	5	0	0	0	2	
145	3	0	0	0	0	0	1
150	0	0	0	0	0	0	
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	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	1.101	.101	.101	.10	1.051	.051	.051	.05	1.001	.001	.001	.00	0.98
	1	1.131	.081	.041	.00	1.101	.061	.020	.99	1.071	.031	.000	.97	0.990	.960	.93	0.940	.920	.90	0.910	.890	.87	0.85			
	2	1.040	.970	.910	.85	1.010	.950	.890	.84	0.990	.930	.870	.83	0.890	.840	.80	0.850	.820	.78	0.820	.790	.76	0.74			
	3	0.960	.860	.780	.72	0.940	.840	.770	.72	0.910	.830	.760	.71	0.800	.740	.70	0.770	.720	.68	0.740	.700	.67	0.65			
	4	0.890	.780	.690	.63	0.870	.760	.690	.63	0.850	.750	.680	.62	0.720	.660	.61	0.700	.640	.60	0.670	.630	.59	0.57			
	5	0.830	.700	.610	.55	0.800	.690	.600	.54	0.780	.670	.600	.54	0.650	.580	.53	0.630	.570	.53	0.610	.560	.52	0.50			
	6	0.760	.630	.540	.48	0.740	.620	.540	.48	0.720	.610	.530	.47	0.590	.520	.47	0.570	.510	.46	0.550	.500	.46	0.44			
	7	0.700	.560	.480	.42	0.680	.550	.470	.42	0.660	.550	.470	.41	0.530	.460	.41	0.510	.450	.40	0.500	.440	.40	0.38			
	8	0.650	.510	.430	.37	0.630	.500	.420	.37	0.620	.490	.420	.36	0.480	.410	.36	0.470	.400	.36	0.450	.400	.35	0.34			
	9	0.600	.470	.380	.32	0.590	.460	.380	.32	0.570	.450	.380	.32	0.440	.370	.32	0.430	.360	.32	0.410	.360	.31	0.30			
	10	0.550	.420	.340	.29	0.540	.420	.340	.29	0.530	.410	.340	.29	0.400	.330	.28	0.390	.320	.28	0.380	.320	.28	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	1124.0	112.4	2.7	562.0	1.3
2	281.0	28.1	5.4	140.5	2.6
3	124.9	12.5	8.2	62.4	3.8
4	70.2	7.0	10.9	35.1	5.1
5	45.0	4.5	13.6	22.5	6.4
6	31.2	3.1	16.3	15.6	7.7
7	22.9	2.3	19.0	11.5	9.0
8	17.6	1.8	21.7	8.8	10.2

10% CONE ANGLE: 107.3 DEGREES
 50% CONE ANGLE: 65.2 DEGREES