



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
16 B2-CL---358USD-A072000
Project Number
10520546
Test Number
785430

Test Date

2014-10-15

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

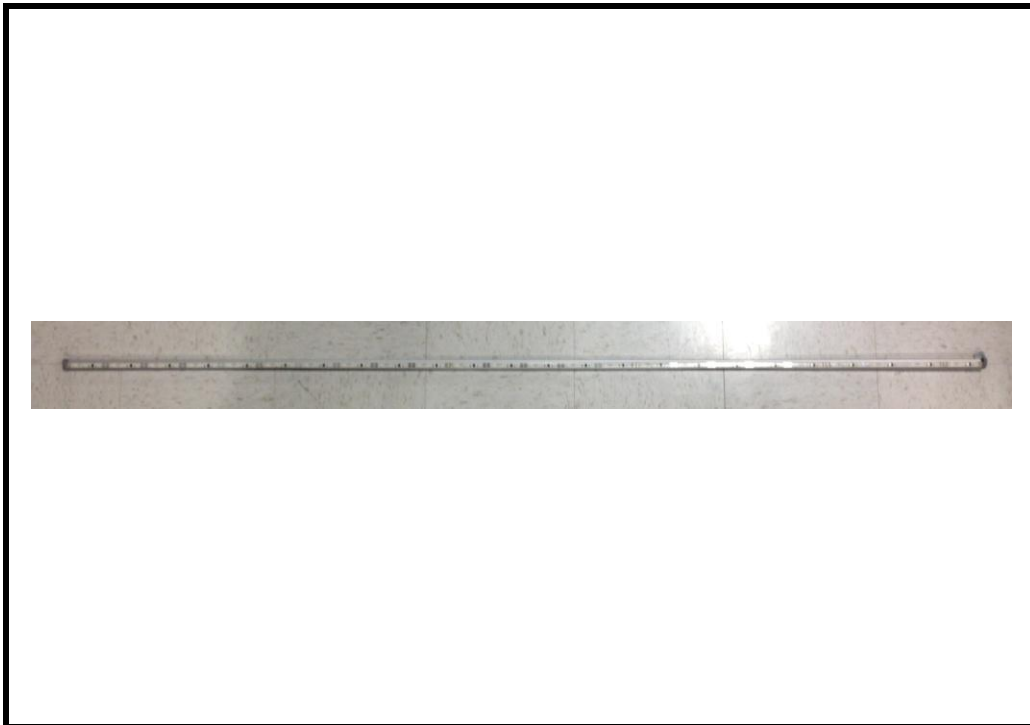
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Grey aluminum housing, clear plastic enclosure
Catalog Number: 16 B2-CL---358USD-A072000
Lamp: 72 white LEDs
Mounting: Surface
Ballast/Driver: One High Perfection Tech. LP1090-24-GG-290

Luminaire

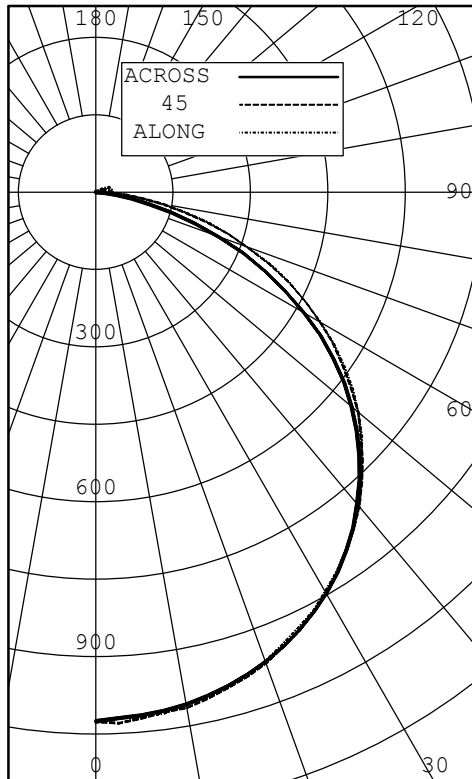


Test Conditions

Test Temperature:	24.4 °C
Voltage:	120.0 VAC
Current:	0.3768 A
Power:	44.32 W
Power Factor:	0.980
Frequency:	60 Hz
Current THD:	11.9 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	1026	1026	1026	1026	1026	
5	1022	1020	1024	1027	1018	99
15	992	993	995	995	991	280
25	930	931	938	937	936	430
35	845	846	848	850	847	529
45	729	731	731	722	723	561
55	588	589	583	569	563	516
65	415	413	412	378	362	393
75	227	225	218	198	151	219
85	61	60	59	52	18	65
90	31	32	30	28	0	
95	30	31	28	25	0	27
105	31	30	21	10	0	20
115	20	17	9	0	0	9
125	8	8	1	0	0	3
135	1	0	0	0	0	0
145	0	0	0	0	0	0
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	809	25.67
0-40	1339	42.46
0-60	2415	76.62
0-90	3093	98.10
40-90	1754	55.64
60-90	677	21.48
90-180	60	1.90
0-180	3153	100.00

EFFICACY (LUMENS PER WATT): 71.2

*** 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	44219	44531	44008
55	43985	43793	42257
65	42168	42001	36851
75	37565	36183	25153
85	29981	29219	9043

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0	1026	1026	1026	1026	1026	1026	
5	1022	1020	1024	1027	1018	1023	99
10	1010	1010	1015	1012	1008	1011	
15	992	993	995	995	991	993	280
20	965	965	971	973	967	969	
25	930	931	938	937	936	935	430
30	891	893	895	899	896	895	
35	845	846	848	850	847	847	529
40	795	792	794	792	788	793	
45	729	731	731	722	723	727	561
50	663	665	664	649	648	658	
55	588	589	583	569	563	579	516
60	503	506	501	479	465	492	
65	415	413	412	378	362	398	393
70	316	321	313	285	255	301	
75	227	225	218	198	151	208	219
80	128	129	134	113	70	119	
85	61	60	59	52	18	53	65
90	31	32	30	28	0	26	
95	30	31	28	25	0	25	27
100	32	32	26	18	0	23	
105	31	30	21	10	0	19	20
110	28	25	14	3	0	14	
115	20	17	9	0	0	9	9
120	12	11	6	0	0	6	
125	8	8	1	0	0	3	3
130	5	4	0	0	0	2	
135	1	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
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	1.221	1.221	1.221	1.191	1.191	1.191	1.191	1.161	1.161	1.161	1.161	1.101	1.101	1.101	1.101	1.051	1.051	1.051	1.051	1.001	1.001	1.001	1.001	0.98
1	1.121	1.071	1.020	0.98	1.091	1.041	1.000	0.97	1.061	1.020	0.980	0.95	0.970	0.940	0.91	0.930	0.910	0.88	0.890	0.870	0.85	0.83	0.83	0.83	0.83
2	1.020	0.940	0.870	0.81	1.000	0.920	0.860	0.80	0.970	0.900	0.840	0.79	0.860	0.810	0.77	0.830	0.790	0.75	0.790	0.760	0.73	0.71	0.71	0.71	0.71
3	0.930	0.830	0.740	0.68	0.910	0.810	0.730	0.67	0.890	0.790	0.720	0.66	0.760	0.700	0.65	0.730	0.680	0.64	0.700	0.660	0.62	0.60	0.60	0.60	0.60
4	0.860	0.740	0.650	0.58	0.840	0.720	0.640	0.58	0.820	0.710	0.630	0.57	0.680	0.610	0.56	0.660	0.600	0.55	0.630	0.580	0.54	0.52	0.52	0.52	0.52
5	0.790	0.660	0.570	0.50	0.770	0.650	0.560	0.49	0.750	0.630	0.550	0.49	0.610	0.540	0.48	0.590	0.530	0.48	0.570	0.510	0.47	0.45	0.45	0.45	0.45
6	0.730	0.590	0.500	0.43	0.710	0.580	0.490	0.43	0.690	0.570	0.480	0.42	0.550	0.470	0.42	0.530	0.460	0.41	0.510	0.450	0.41	0.39	0.39	0.39	0.39
7	0.670	0.520	0.430	0.38	0.650	0.520	0.430	0.37	0.630	0.510	0.420	0.37	0.490	0.410	0.36	0.470	0.410	0.36	0.460	0.400	0.35	0.33	0.33	0.33	0.33
8	0.620	0.470	0.390	0.33	0.600	0.470	0.380	0.32	0.590	0.460	0.380	0.32	0.440	0.370	0.32	0.430	0.360	0.32	0.420	0.360	0.31	0.29	0.29	0.29	0.29
9	0.570	0.430	0.340	0.28	0.560	0.420	0.340	0.28	0.540	0.420	0.340	0.28	0.400	0.330	0.28	0.390	0.320	0.28	0.380	0.320	0.27	0.26	0.26	0.26	0.26
10	0.530	0.390	0.300	0.25	0.520	0.390	0.300	0.25	0.500	0.380	0.300	0.25	0.370	0.300	0.25	0.360	0.290	0.25	0.350	0.290	0.24	0.23	0.23	0.23	0.23

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	1026.0	102.6	2.9	513.0	1.3
2	256.5	25.6	5.9	128.2	2.6
3	114.0	11.4	8.8	57.0	3.9
4	64.1	6.4	11.7	32.1	5.2
5	41.0	4.1	14.6	20.5	6.5
6	28.5	2.8	17.6	14.2	7.8
7	20.9	2.1	20.5	10.5	9.1
8	16.0	1.6	23.4	8.0	10.4

10% CONE ANGLE: 111.3 DEGREES
 50% CONE ANGLE: 65.9 DEGREES