



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--358UOD-A072000
Project Number
10520546
Test Number
785418

Test Date

2014-10-14

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

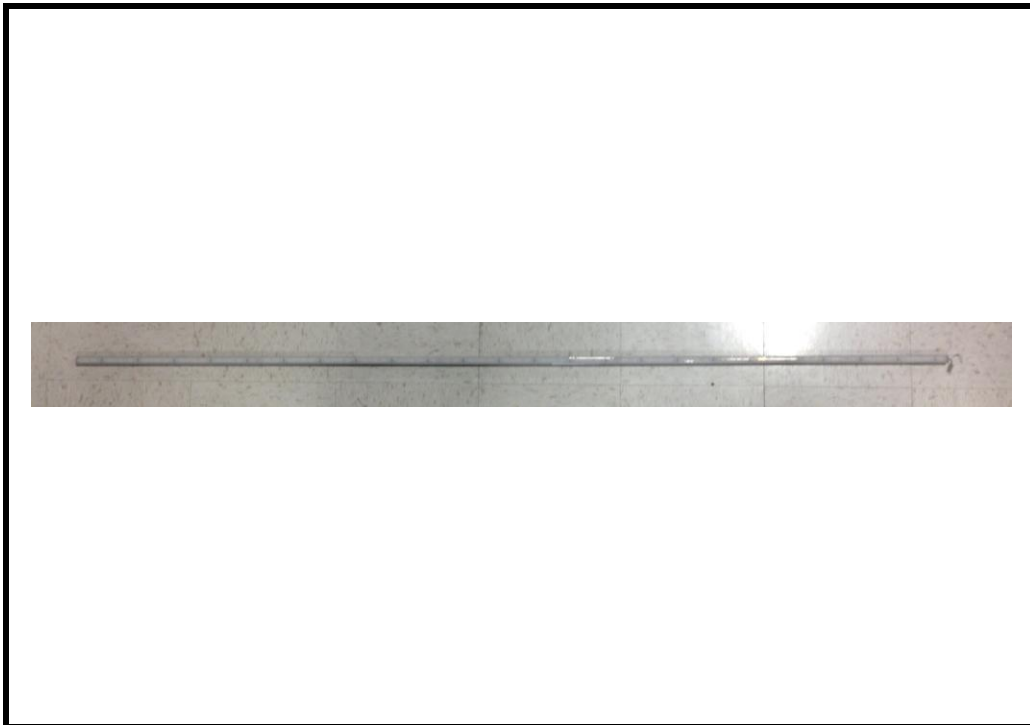
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Grey aluminum housing, frosted plastic enclosure
Catalog Number: 10 B2-RD--358UOD-A072000
Lamp: 72 white LEDs
Mounting: Surface
Ballast/Driver: One High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

Luminaire

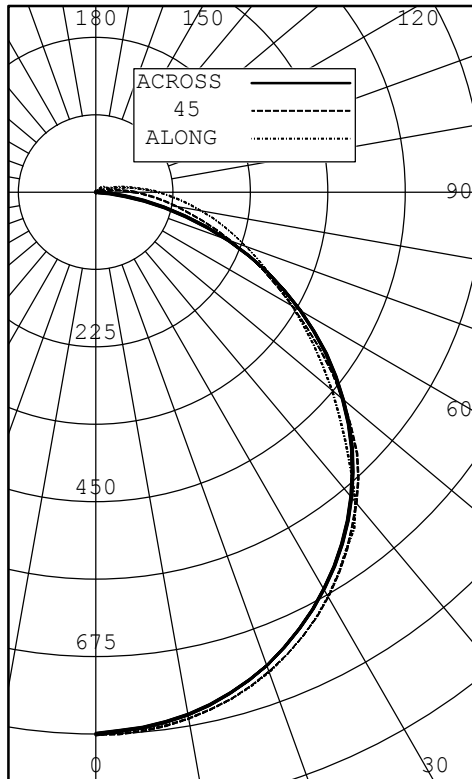


Test Conditions

Test Temperature:	24.6 °C
Voltage:	120.0 VAC
Current:	0.3784 A
Power:	44.53 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	788	788	788	788	788	
5	786	785	786	785	782	76
15	762	762	762	759	754	214
25	713	712	712	706	700	326
35	635	634	636	632	624	395
45	513	520	537	536	526	406
55	386	388	398	415	408	357
65	278	274	268	277	276	271
75	194	184	161	137	135	172
85	121	112	85	46	21	88
90	90	82	56	20	0	
95	64	56	34	7	0	36
105	26	21	11	2	0	13
115	16	14	9	1	0	8
125	13	11	6	0	0	5
135	8	7	3	0	0	3
145	3	2	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	0

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	616	25.99
0-40	1012	42.66
0-60	1775	74.84
0-90	2306	97.23
40-90	1294	54.57
60-90	531	22.38
90-180	66	2.77
0-180	2371	100.00

EFFICACY (LUMENS PER WATT): 53.3

*** 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	31155	32693	32060
55	28904	29875	30659
65	28249	27340	28138
75	32128	26772	22490
85	59693	42126	10155

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0	788	788	788	788	788	788	
5	786	785	786	785	782	785	76
10	777	776	777	775	771	776	
15	762	762	762	759	754	760	214
20	742	741	740	735	731	738	
25	713	712	712	706	700	709	326
30	677	677	678	672	665	674	
35	635	634	636	632	624	633	395
40	587	592	589	587	578	587	
45	513	520	537	536	526	528	406
50	449	452	469	479	469	465	
55	386	388	398	415	408	400	357
60	329	328	329	347	343	335	
65	278	274	268	277	276	274	271
70	234	227	212	201	206	215	
75	194	184	161	137	135	162	172
80	156	147	120	86	71	117	
85	121	112	85	46	21	79	88
90	90	82	56	20	0	51	
95	64	56	34	7	0	32	36
100	42	35	17	3	0	19	
105	26	21	11	2	0	12	13
110	18	16	10	2	0	9	
115	16	14	9	1	0	8	8
120	15	13	8	0	0	7	
125	13	11	6	0	0	6	5
130	10	9	4	0	0	5	
135	8	7	3	0	0	3	3
140	6	4	0	0	0	2	
145	3	2	0	0	0	1	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	1.211	.211	.211	.21	1.181	.181	.181	.18	1.151	.151	.151	.15	1.101	.101	.101	.10	1.041	.041	.041	.04	0.990	.990	.99	0.97
	1	1.111	.061	.010	.97	1.081	.030	.990	.95	1.051	.010	.970	.93	0.960	.930	.90	0.920	.890	.87	0.880	.850	.84	0.81		
	2	1.020	.930	.860	.80	0.990	.910	.850	.79	0.960	.890	.830	.78	0.850	.800	.75	0.810	.770	.73	0.780	.740	.71	0.69		
	3	0.930	.820	.740	.67	0.900	.800	.720	.66	0.880	.790	.710	.66	0.750	.690	.64	0.720	.670	.63	0.690	.650	.61	0.59		
	4	0.860	.730	.640	.58	0.830	.720	.640	.57	0.810	.710	.630	.57	0.680	.610	.56	0.650	.590	.55	0.630	.580	.53	0.51		
	5	0.790	.660	.560	.50	0.770	.640	.560	.49	0.740	.630	.550	.49	0.610	.530	.48	0.580	.520	.47	0.560	.510	.46	0.44		
	6	0.730	.590	.500	.43	0.710	.580	.490	.43	0.690	.570	.480	.42	0.540	.470	.42	0.530	.460	.41	0.510	.450	.41	0.39		
	7	0.670	.530	.440	.38	0.650	.520	.430	.37	0.630	.510	.430	.37	0.490	.410	.36	0.470	.410	.36	0.460	.400	.35	0.33		
	8	0.620	.480	.390	.33	0.600	.470	.390	.33	0.590	.460	.380	.32	0.440	.370	.32	0.430	.360	.32	0.420	.360	.31	0.29		
	9	0.570	.440	.350	.29	0.560	.430	.340	.29	0.540	.420	.340	.29	0.400	.330	.28	0.390	.330	.28	0.380	.320	.28	0.26		
	10	0.530	.400	.310	.26	0.520	.390	.310	.26	0.510	.380	.310	.25	0.370	.300	.25	0.360	.290	.25	0.350	.290	.24	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	788.0	78.8	2.8	394.0	1.3
2	197.0	19.7	5.6	98.5	2.5
3	87.6	8.8	8.4	43.8	3.8
4	49.2	4.9	11.3	24.6	5.1
5	31.5	3.2	14.1	15.8	6.3
6	21.9	2.2	16.9	10.9	7.6
7	16.1	1.6	19.7	8.0	8.9
8	12.3	1.2	22.5	6.2	10.2

10% CONE ANGLE: 109.2 DEGREES
 50% CONE ANGLE: 64.8 DEGREES