



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
Renova Lighting Systems Inc
Rick Edwards
20 Middlesex Rd.
Mansfield, Ma 02048-1828
United States

Catalog Number
L-WDG2-MN-L35-UNV-37DM-W36-C40-FA
Project Number
10405943
Test Number
691886

Test Date

2014-07-11

Prepared By

Handwritten signature of Javier Caban in black ink.

Javier Caban, Technician

Approved By

Handwritten signature of Jeff A. Smith Jr. in black ink.

Jeff Smith Jr., Project Handler

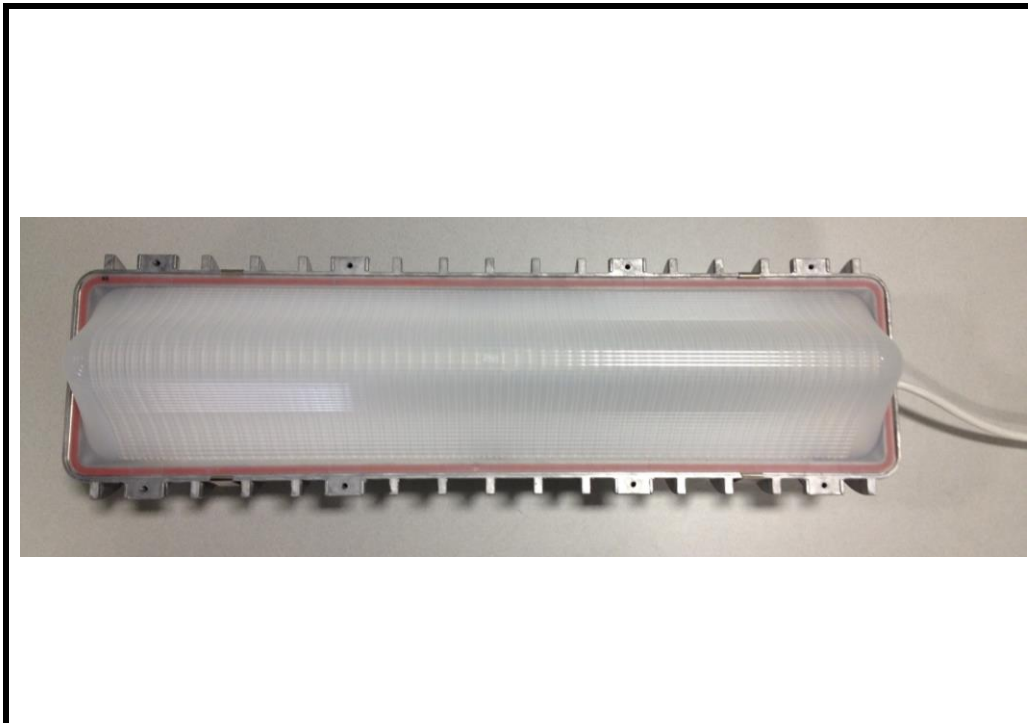
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Steel housing / heatsink, internal specular reflector, frosted patterned lens enclosure
Catalog Number: L-WDG2-MN-L35-UNV-37DM-W36-C40-FA
Lamp: 100 white LEDs, two boards with 50 LEDs each
Mounting: Surface
Ballast/Driver: One LG Innotek LLP 37W 1.04Adc 26-34 max.Vdc

Luminaire

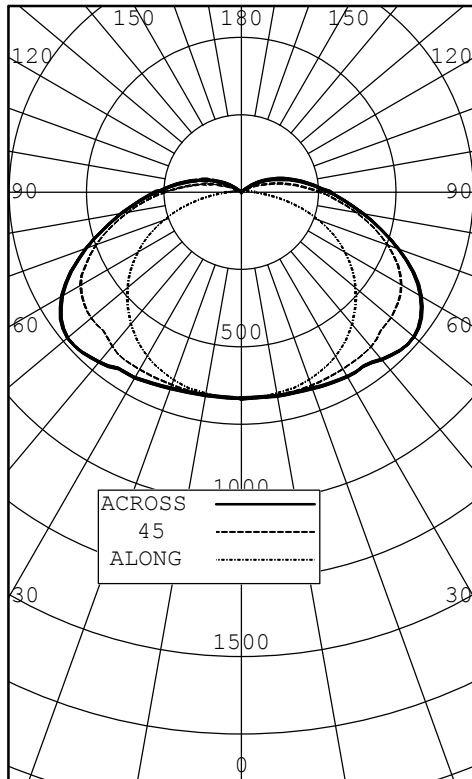


Test Conditions

Test Temperature:	25.0 °C
Voltage:	120.0 VAC
Current:	0.3034 A
Power:	36.20 W
Power Factor:	0.994
Frequency:	60 Hz
Current THD:	5.88 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT
 BEAM SIDE LUMENS



ANGLE	ALONG	67.5	45	22.5	ACROSS	OUTPUT LUMENS
0	667	667	667	667	667	
5	666	669	668	666	666	32
15	655	662	667	670	671	94
25	630	644	663	677	681	152
35	587	612	656	685	687	203
45	521	567	636	705	724	245
55	437	499	619	698	709	266
65	332	405	558	615	613	253
75	203	316	442	475	469	207
85	79	210	314	342	339	147
90	45	161	256	286	286	
95	36	113	202	234	238	94
105	21	39	111	150	160	52
115	10	12	45	81	94	24
125	3	5	7	29	39	7
135	1	2	0	0	3	1
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	0

BOTH SIDES
 ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	557	15.73
0-40	964	27.22
0-60	1987	56.10
0-90	3195	90.22
40-90	2231	62.99
60-90	1208	34.12
90-180	346	9.78
0-180	3541	100.00

EFFICACY (LUMENS PER WATT): 97.8

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 24.500 INS
 WIDTH: 5.250 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	8878	7571	7653
55	9181	8037	7931
65	9466	8236	7534
75	9451	7827	6617
85	10923	7249	5819

TESTED IN ACCORDANCE WITH IES PROCEDURES.



BEAM SIDE
 INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	67.5	45	22.5	ACROSS		
0	667	667	667	667	667	667	
5	666	669	668	666	666	667	32
10	661	666	667	668	669	667	
15	655	662	667	670	671	665	94
20	644	654	665	673	676	663	
25	630	644	663	677	681	660	152
30	611	629	659	682	688	655	
35	587	612	656	685	687	648	203
40	557	592	652	688	706	641	
45	521	567	636	705	724	633	245
50	482	536	631	712	728	621	
55	437	499	619	698	709	597	266
60	387	455	597	665	669	561	
65	332	405	558	615	613	512	253
70	268	364	505	547	542	455	
75	203	316	442	475	469	392	207
80	137	264	377	406	400	329	
85	79	210	314	342	339	269	147
90	45	161	256	286	286	217	
95	36	113	202	234	238	171	94
100	27	71	154	191	198	132	
105	21	39	111	150	160	98	52
110	16	19	72	114	126	69	
115	10	12	45	81	94	47	24
120	4	8	21	53	65	29	
125	3	5	7	29	39	15	7
130	1	3	1	10	18	6	
135	1	2	0	0	3	1	1
140	0	1	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	



OPPOSITE SIDE TO BEAM
 INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	112.5	135	157.5	ACROSS		
0	667	667	667	667	667	667	
5	666	667	666	665	665	666	32
10	661	663	664	665	665	664	
15	655	659	664	667	669	663	94
20	644	652	662	671	674	661	
25	630	642	660	676	681	658	152
30	611	629	661	686	691	657	
35	587	613	660	688	694	650	204
40	557	589	651	698	716	643	
45	521	561	633	710	730	632	245
50	482	533	634	717	734	623	
55	437	497	623	702	713	599	267
60	387	450	600	664	670	561	
65	332	408	555	610	609	511	252
70	268	365	501	542	537	453	
75	203	314	437	468	462	388	205
80	137	261	372	398	393	324	
85	79	207	307	334	331	263	144
90	45	156	249	278	278	211	
95	36	107	194	227	230	165	91
100	27	65	145	181	189	125	
105	21	34	103	141	151	91	49
110	16	17	67	106	117	64	
115	10	12	40	73	85	43	22
120	4	8	17	46	57	25	
125	3	6	5	23	33	13	6
130	1	4	2	6	13	5	
135	1	2	1	0	1	1	1
140	0	1	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	1.211	.211	.211	.21	1.171	.171	.171	.17	1.131	.131	.131	.13	1.061	.061	.06	0.990	.990	.99	0.930	.930	.93	0.90		
	1	1.071	.010	.950	.89	1.030	.970	.920	.87	1.000	.940	.890	.84	0.880	.840	.80	0.820	.790	.76	0.770	.740	.72	0.69		
	2	0.960	.860	.770	.70	0.930	.830	.750	.68	0.890	.800	.730	.67	0.750	.690	.64	0.700	.650	.61	0.660	.620	.58	0.55		
	3	0.870	.740	.640	.56	0.830	.720	.620	.55	0.800	.690	.610	.54	0.650	.580	.52	0.600	.550	.49	0.570	.520	.47	0.45		
	4	0.790	.650	.540	.47	0.760	.630	.530	.46	0.730	.610	.520	.45	0.570	.490	.43	0.540	.470	.42	0.500	.450	.40	0.37		
	5	0.730	.570	.470	.39	0.690	.550	.460	.38	0.660	.540	.440	.38	0.500	.420	.36	0.470	.400	.35	0.440	.390	.34	0.31		
	6	0.660	.510	.400	.33	0.630	.490	.390	.33	0.610	.470	.380	.32	0.450	.370	.31	0.420	.350	.30	0.390	.330	.28	0.26		
	7	0.600	.450	.350	.28	0.580	.430	.340	.28	0.560	.420	.330	.27	0.400	.320	.26	0.370	.300	.25	0.350	.290	.24	0.22		
	8	0.560	.400	.310	.24	0.540	.390	.300	.24	0.510	.380	.290	.23	0.360	.280	.23	0.340	.270	.22	0.320	.260	.21	0.19		
	9	0.520	.370	.270	.21	0.500	.350	.270	.21	0.480	.340	.260	.20	0.320	.250	.20	0.310	.240	.19	0.290	.230	.18	0.16		
	10	0.480	.330	.240	.18	0.460	.320	.230	.18	0.440	.310	.230	.18	0.290	.220	.17	0.280	.210	.16	0.260	.200	.16	0.14		

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.