



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  
**Sonneman**  
Nicolas Carmichael  
106 Pierces Rd.  
Newburgh, NY 12550-9369

Catalog Number  
**2443**  
Project Number  
**10517633**  
Test Number  
**781281**

Test Date

2014-10-20

Prepared By

A handwritten signature in black ink that reads 'Derek Smarr'.

Derek Smarr, Technician

Approved By

A handwritten signature in black ink that reads 'Jeff A. Smith Jr.'.

Jeff Smith Jr., Project Handler

The results contained in this report pertain only to the tested sample.  
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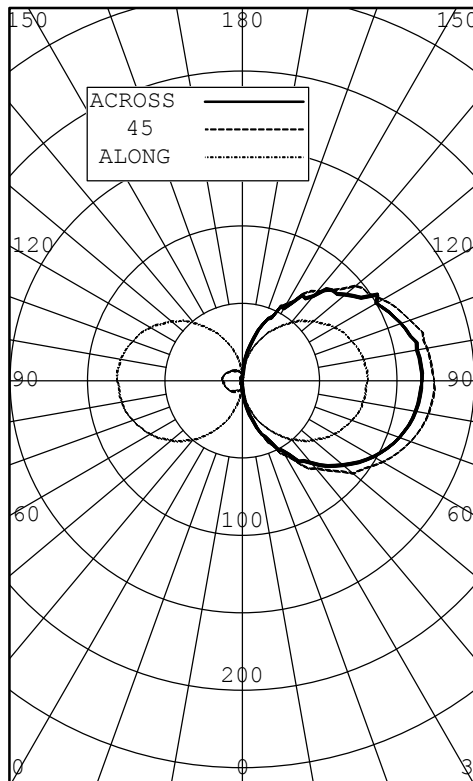
Luminaire Description: Formed steel housing, specular steel reflector, frosted glass tube enclosure  
Catalog Number: 2443  
Lamp: White LEDs  
Mounting: Surface - Wall  
Ballast/Driver: One Eaglerise EEP60SE

Luminaire



Test Conditions

Test Temperature:	25.7 °C
Voltage:	120.0 VAC
Current:	0.1413 A
Power:	16.23 W
Power Factor:	0.956
Frequency:	60 Hz
Current THD:	30.3 %



INTENSITY (CANDLEPOWER)				SUMMARY		OUTPUT LUMENS
ANGLE	ALONG	BEAM SIDE				
		67.5	45	22.5	ACROSS	
0	1	1	1	1	1	
5	7	7	8	9	9	1
15	19	24	28	29	27	4
25	32	38	46	47	44	10
35	44	53	67	67	64	19
45	55	67	83	85	78	29
55	65	79	98	102	92	40
65	72	88	111	114	104	50
75	78	95	120	122	111	57
85	80	98	124	127	115	61
90	81	98	124	127	116	
95	81	98	123	126	116	61
105	78	94	121	122	113	57
115	73	89	111	114	105	50
125	64	79	99	106	94	41
135	55	68	83	86	83	30
145	43	53	68	68	68	19
155	31	39	47	49	45	10
165	19	24	30	30	29	4
175	7	8	10	10	10	1
180	1	1	1	1	1	

BOTH SIDES  
ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	19	2.80
0-40	43	6.34
0-60	130	19.15
0-90	339	49.90
40-90	296	43.56
60-90	209	30.75
90-180	340	50.10
0-180	679	100.00

EFFICACY (LUMENS PER WATT): 41.9

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

LUMINOUS LENGTH: 2.000 INS  
WIDTH: 2.000 INS

LUMINANCE SUMMARY - CD./SQ.M.

BEAM SIDE			
ANGLE	ALONG	45	ACROSS
45	3052	3347	4350
55	3211	3516	4562
65	3295	3648	4755
75	3422	3741	4906
85	3472	3816	5018

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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BEAM SIDE  
INTENSITY (CANDLEPOWER) DATA

ANGLE	ALONG	67.5	PLANE 45	22.5	ACROSS	AVERAGE	OUTPUT LUMENS
0	1	1	1	1	1	1	
5	7	7	8	9	9	8	1
10	13	16	19	19	19	17	
15	19	24	28	29	27	26	4
20	26	31	37	39	37	35	
25	32	38	46	47	44	42	10
30	38	46	56	57	52	51	
35	44	53	67	67	64	60	19
40	50	62	74	76	70	68	
45	55	67	83	85	78	75	29
50	60	73	94	93	85	83	
55	65	79	98	102	92	89	40
60	69	84	105	108	98	95	
65	72	88	111	114	104	100	50
70	75	92	116	119	108	104	
75	78	95	120	122	111	108	57
80	79	97	122	125	114	110	
85	80	98	124	127	115	112	61
90	81	98	124	127	116	112	
95	81	98	123	126	116	111	61
100	80	96	121	125	115	110	
105	78	94	121	122	113	108	57
110	75	94	115	118	109	105	
115	73	89	111	114	105	100	50
120	69	84	105	108	100	95	
125	64	79	99	106	94	91	41
130	60	73	95	94	87	84	
135	55	68	83	86	83	76	30
140	49	62	75	79	71	69	
145	43	53	68	68	68	61	19
150	37	47	58	58	54	52	
155	31	39	47	49	45	43	10
160	25	32	38	39	39	35	
165	19	24	30	30	29	27	4
170	13	17	20	20	20	18	
175	7	8	10	10	10	9	1
180	1	1	1	1	1	1	



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OPPOSITE SIDE TO BEAM  
INTENSITY (CANDLEPOWER) DATA

ANGLE	ALONG	112.5	PLANE 135	157.5	ACROSS	AVERAGE	OUTPUT LUMENS
0	1	1	1	1	1	1	
5	7	6	4	3	3	5	0
10	13	11	6	3	3	7	
15	19	15	6	3	3	9	1
20	26	20	7	3	2	11	
25	32	24	8	2	2	13	3
30	38	28	8	2	2	15	
35	44	33	9	2	1	16	5
40	50	37	9	1	1	18	
45	55	40	10	1	1	20	8
50	60	44	10	0	0	21	
55	65	47	11	0	0	22	10
60	69	50	11	0	0	24	
65	72	53	11	0	0	25	12
70	75	55	12	0	0	26	
75	78	56	12	0	0	27	14
80	79	58	12	0	0	27	
85	80	58	13	0	0	28	15
90	81	59	13	0	0	28	
95	81	59	13	0	0	28	15
100	80	58	13	0	0	28	
105	78	56	13	0	0	27	14
110	75	55	12	0	0	26	
115	73	53	12	0	0	25	12
120	69	50	11	0	0	24	
125	64	47	10	0	0	22	10
130	60	43	10	0	0	21	
135	55	40	9	0	0	19	7
140	49	36	9	0	0	17	
145	43	32	8	0	0	16	5
150	37	28	8	1	1	14	
155	31	23	7	2	1	12	3
160	25	19	7	2	2	10	
165	19	15	6	3	2	8	1
170	13	10	5	3	3	7	
175	7	6	4	3	3	5	0
180	1	1	1	1	1	1	



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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	1.151	1.151	1.151	1.15	1.071	1.071	1.071	1.07	0.990	0.990	0.990	0.99	0.830	0.830	0.83	0.690	0.690	0.69	0.560	0.560	0.56	0.50			
1	1.010	0.930	0.860	0.81	0.920	0.860	0.800	0.75	0.840	0.790	0.730	0.68	0.650	0.610	0.57	0.530	0.500	0.47	0.410	0.390	0.37	0.31			
2	0.890	0.780	0.690	0.61	0.820	0.720	0.630	0.56	0.750	0.650	0.580	0.52	0.540	0.480	0.43	0.430	0.390	0.35	0.330	0.300	0.27	0.22			
3	0.800	0.670	0.560	0.48	0.730	0.610	0.520	0.44	0.660	0.560	0.470	0.41	0.450	0.390	0.34	0.360	0.310	0.27	0.270	0.230	0.20	0.16			
4	0.730	0.580	0.470	0.39	0.660	0.530	0.430	0.36	0.600	0.480	0.400	0.33	0.400	0.330	0.27	0.310	0.260	0.22	0.240	0.200	0.16	0.12			
5	0.660	0.500	0.400	0.32	0.600	0.460	0.370	0.30	0.540	0.420	0.330	0.27	0.340	0.270	0.22	0.270	0.220	0.17	0.200	0.160	0.13	0.09			
6	0.600	0.440	0.340	0.27	0.550	0.410	0.310	0.25	0.500	0.370	0.290	0.22	0.300	0.230	0.18	0.240	0.180	0.14	0.180	0.140	0.10	0.07			
7	0.550	0.390	0.290	0.23	0.500	0.360	0.270	0.21	0.450	0.330	0.250	0.19	0.270	0.200	0.15	0.210	0.160	0.12	0.160	0.120	0.08	0.05			
8	0.500	0.350	0.260	0.19	0.460	0.320	0.240	0.17	0.420	0.290	0.210	0.16	0.240	0.180	0.13	0.190	0.140	0.10	0.140	0.100	0.07	0.04			
9	0.470	0.320	0.220	0.16	0.430	0.290	0.210	0.15	0.390	0.270	0.190	0.14	0.220	0.150	0.11	0.170	0.120	0.08	0.130	0.090	0.06	0.03			
10	0.430	0.290	0.200	0.14	0.400	0.260	0.180	0.13	0.360	0.240	0.170	0.12	0.200	0.140	0.09	0.160	0.100	0.07	0.120	0.080	0.05	0.03			

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.