



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
2430
Project Number
10517633
Test Number
781277

Test Date

2014-10-20

Prepared By

A handwritten signature in black ink, appearing to read 'Bhavik Shah'.

Bhavik Shah, Technician

Approved By

A handwritten signature in black ink, appearing to read 'Jeff A. Smith Jr.'.

Jeff Smith Jr., Project Handler

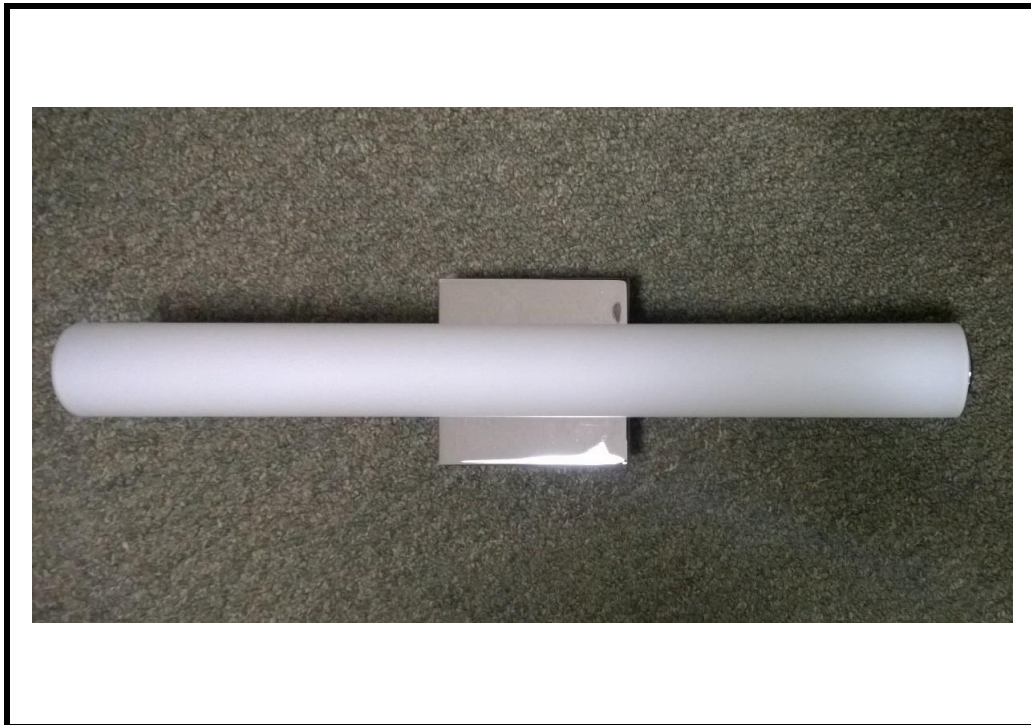
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Luminaire Description: Formed steel housing, frosted glass tube enclosure
Catalog Number: 2430
Lamp: White LEDs
Mounting: Surface - Wall
Ballast/Driver: One Eaglerise EEP60SE

Luminaire

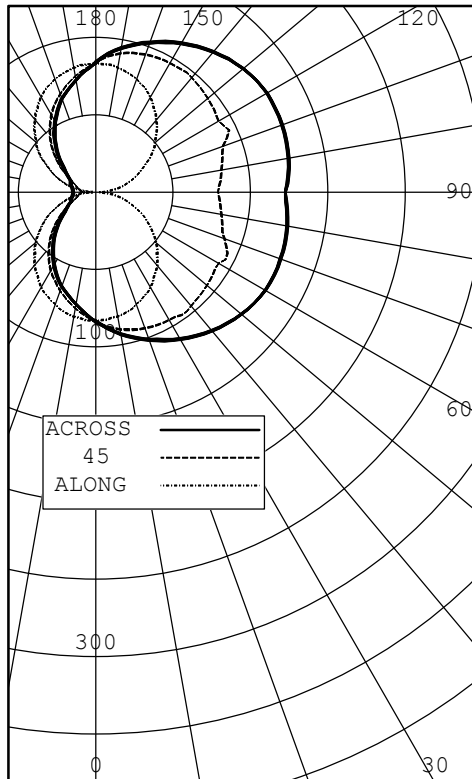


Test Conditions

Test Temperature:	24.4 °C
Voltage:	120.0 VAC
Current:	0.1416 A
Power:	16.25 W
Power Factor:	0.956
Frequency:	60 Hz
Current THD:	30.3 %



INTENSITY (CANDLEPOWER) SUMMARY OUTPUT
 BEAM SIDE LUMENS



ANGLE	ALONG	67.5	45	22.5	ACROSS	OUTPUT LUMENS
0	84	84	84	84	84	
5	83	86	87	88	89	4
15	80	87	92	96	98	13
25	74	85	95	103	106	22
35	66	81	97	109	114	29
45	56	73	95	113	120	36
55	45	68	93	118	125	41
65	33	60	94	120	127	43
75	20	49	85	116	127	43
85	8	43	81	112	124	41
90	2	42	79	111	123	
95	7	44	81	113	125	41
105	20	49	85	116	128	43
115	32	58	95	120	128	43
125	45	67	93	119	127	41
135	56	74	96	114	122	36
145	66	82	97	110	115	30
155	75	85	96	104	107	22
165	80	87	93	97	99	13
175	83	86	88	89	90	4
180	84	84	84	84	84	

BOTH SIDES
 ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	68	9.08
0-40	114	15.33
0-60	221	29.74
0-90	373	50.13
40-90	259	34.80
60-90	152	20.39
90-180	371	49.87
0-180	744	100.00

EFFICACY (LUMENS PER WATT): 45.9

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 2.000 INS
 WIDTH: 18.000 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	3409	5377	6612
55	3377	6273	8135
65	3361	8215	10496
75	3327	10895	14932
85	3952	21038	27088

TESTED IN ACCORDANCE WITH IES PROCEDURES.



BEAM SIDE
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	67.5	45	22.5	ACROSS		
0	84	84	84	84	84	84	
5	83	86	87	88	89	87	4
10	82	86	90	92	93	89	
15	80	87	92	96	98	91	13
20	77	86	94	99	102	92	
25	74	85	95	103	106	93	22
30	71	83	95	106	110	94	
35	66	81	97	109	114	94	29
40	62	77	96	111	117	93	
45	56	73	95	113	120	92	36
50	51	69	94	115	123	91	
55	45	68	93	118	125	91	41
60	39	61	92	120	127	89	
65	33	60	94	120	127	88	43
70	26	52	89	118	127	84	
75	20	49	85	116	127	81	43
80	14	46	83	114	126	78	
85	8	43	81	112	124	75	41
90	2	42	79	111	123	73	
95	7	44	81	113	125	76	41
100	14	47	83	115	127	79	
105	20	49	85	116	128	81	43
110	26	52	88	117	128	84	
115	32	58	95	120	128	88	43
120	38	61	92	122	128	89	
125	45	67	93	119	127	91	41
130	50	70	95	116	124	92	
135	56	74	96	114	122	93	36
140	61	78	97	112	118	94	
145	66	82	97	110	115	95	30
150	71	83	96	107	111	94	
155	75	85	96	104	107	94	22
160	78	87	95	101	103	93	
165	80	87	93	97	99	92	13
170	82	87	91	94	95	90	
175	83	86	88	89	90	87	4
180	84	84	84	84	84	84	



OPPOSITE SIDE TO BEAM
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	112.5	135	157.5	ACROSS		
0	84	84	84	84	84	84	
5	83	82	80	79	79	80	4
10	82	79	76	75	74	77	
15	80	76	72	70	69	73	10
20	77	72	68	66	65	69	
25	74	68	63	61	60	65	15
30	71	63	59	55	54	60	
35	66	58	53	50	49	55	17
40	62	53	47	44	43	49	
45	56	47	42	38	37	44	17
50	51	42	36	33	32	38	
55	45	35	30	27	26	32	14
60	39	29	24	22	23	27	
65	33	23	19	19	20	22	11
70	26	17	15	17	17	18	
75	20	12	13	16	17	15	8
80	14	8	12	15	16	12	
85	8	7	10	14	15	10	6
90	2	6	9	13	15	9	
95	7	6	10	14	15	10	6
100	14	8	11	14	16	12	
105	20	11	13	16	17	14	8
110	26	16	14	16	17	17	
115	32	22	17	18	18	20	10
120	38	28	21	21	21	25	
125	45	34	27	24	24	30	13
130	50	40	33	30	29	36	
135	56	47	40	36	35	42	16
140	61	52	46	42	41	48	
145	66	58	52	48	47	53	17
150	71	63	58	54	53	59	
155	75	68	63	60	59	64	15
160	78	72	68	65	64	69	
165	80	76	72	70	69	73	10
170	82	79	76	75	74	77	
175	83	82	80	79	79	81	4
180	84	84	84	84	84	84	



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	1.030	0.970	0.910	0.87	0.950	0.900	0.850	0.81	0.870	0.830	0.780	0.74	0.690	0.660	0.63	0.570	0.550	0.52	0.460	0.440	0.42	0.37			
2	0.930	0.830	0.750	0.68	0.860	0.770	0.700	0.64	0.790	0.710	0.650	0.59	0.590	0.550	0.50	0.490	0.450	0.42	0.390	0.360	0.34	0.29			
3	0.840	0.720	0.630	0.56	0.780	0.670	0.590	0.52	0.710	0.620	0.540	0.49	0.520	0.460	0.41	0.420	0.380	0.35	0.340	0.310	0.28	0.24			
4	0.770	0.640	0.540	0.47	0.710	0.590	0.500	0.44	0.650	0.550	0.470	0.41	0.460	0.400	0.35	0.380	0.330	0.29	0.300	0.270	0.24	0.20			
5	0.710	0.550	0.470	0.39	0.650	0.520	0.430	0.37	0.590	0.480	0.400	0.34	0.400	0.340	0.30	0.330	0.290	0.25	0.270	0.230	0.20	0.17			
6	0.650	0.500	0.410	0.34	0.590	0.460	0.380	0.32	0.540	0.430	0.350	0.29	0.360	0.300	0.25	0.300	0.250	0.21	0.240	0.200	0.17	0.14			
7	0.590	0.450	0.350	0.29	0.550	0.410	0.330	0.27	0.500	0.380	0.310	0.25	0.320	0.260	0.22	0.270	0.220	0.18	0.210	0.180	0.15	0.12			
8	0.550	0.400	0.310	0.25	0.500	0.370	0.290	0.24	0.460	0.340	0.270	0.22	0.290	0.230	0.19	0.240	0.190	0.16	0.190	0.160	0.13	0.11			
9	0.510	0.360	0.280	0.22	0.470	0.340	0.260	0.20	0.430	0.310	0.240	0.19	0.260	0.210	0.17	0.220	0.170	0.14	0.180	0.140	0.11	0.09			
10	0.470	0.330	0.240	0.19	0.430	0.310	0.230	0.18	0.400	0.280	0.220	0.17	0.240	0.180	0.15	0.200	0.150	0.12	0.160	0.130	0.10	0.08			

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.