



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
2420
Project Number
10517633
Test Number
781273

Test Date

2014-10-20

Prepared By

Handwritten signature of Derek Smarr in black ink.

Derek Smarr, Technician

Approved By

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

Jeff Smith Jr., Project Handler

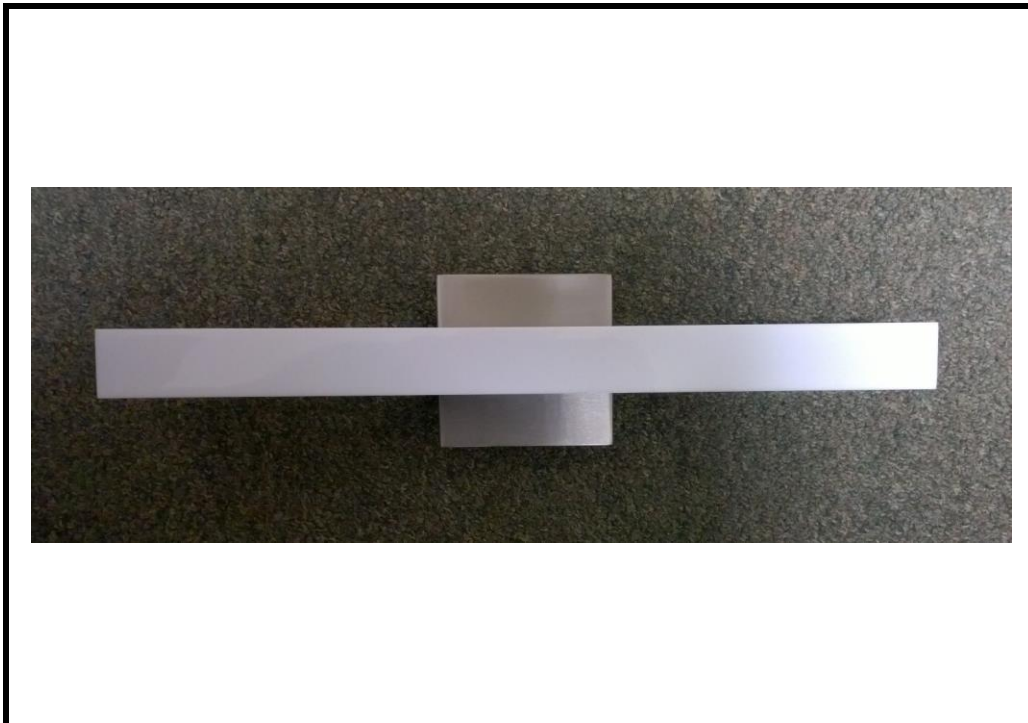
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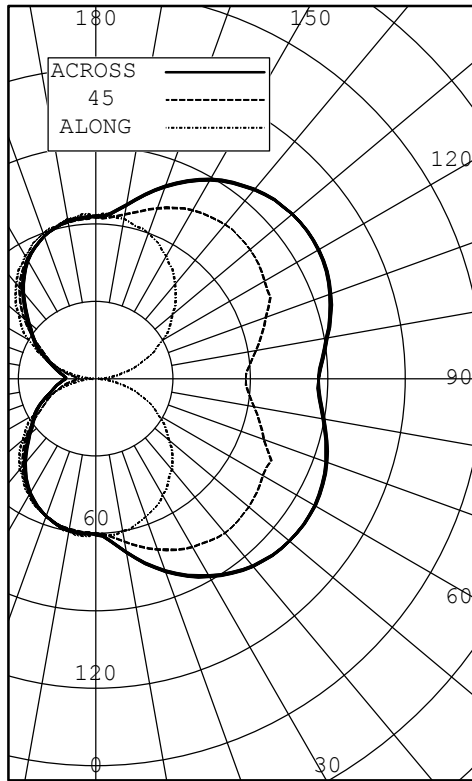
Luminaire Description: Cast aluminum housing, white plastic enclosure
Catalog Number: 2420
Lamp: White LEDs
Mounting: Surface - Wall
Ballast/Driver: One Eaglerise EEP60SE

Luminaire



Test Conditions

Test Temperature:	25.4 °C
Voltage:	120.0 VAC
Current:	0.1443 A
Power:	16.58 W
Power Factor:	0.958
Frequency:	60 Hz
Current THD:	29.7 %



INTENSITY (CANDLEPOWER) SUMMARY							OUTPUT
BEAM SIDE							LUMENS
ANGLE	ALONG	67.5	45	22.5	ACROSS		
0	60	60	60	60	60		
5	61	61	61	63	63		3
15	59	62	68	73	74		10
25	55	62	73	82	84		17
35	49	61	77	88	92		23
45	42	58	78	92	97		29
55	33	53	76	94	99		32
65	24	46	75	91	97		34
75	13	41	66	86	93		32
85	4	32	59	80	87		30
90	1	30	58	79	86		
95	4	32	60	81	88		30
105	14	40	67	87	94		33
115	25	46	75	92	99		34
125	35	53	77	94	100		33
135	44	58	78	93	98		29
145	52	61	77	89	93		23
155	58	62	73	82	85		17
165	61	63	67	72	74		10
175	64	63	63	64	64		3
180	63	63	63	63	63		

BOTH SIDES
 ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	53	8.72
0-40	91	15.04
0-60	181	29.94
0-90	301	49.65
40-90	210	34.61
60-90	119	19.72
90-180	305	50.35
0-180	606	100.00

EFFICACY (LUMENS PER WATT): 36.5

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 1.500 INS
 WIDTH: 18.000 INS

LUMINANCE SUMMARY - CD./SQ.M.

BEAM SIDE			
ANGLE	ALONG	45	ACROSS
45	1704	3589	7289
55	1360	3658	8843
65	1036	3860	11221
75	609	3789	15726
85	211	4005	29495

TESTED IN ACCORDANCE WITH IES PROCEDURES.



BEAM SIDE
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	67.5	45	22.5	ACROSS		
0	60	60	60	60	60	60	
5	61	61	61	63	63	62	3
10	60	61	64	67	68	64	
15	59	62	68	73	74	67	10
20	57	62	71	77	80	70	
25	55	62	73	82	84	72	17
30	52	62	75	85	89	73	
35	49	61	77	88	92	74	23
40	46	60	78	91	95	75	
45	42	58	78	92	97	74	29
50	37	56	77	93	98	73	
55	33	53	76	94	99	72	32
60	28	51	75	92	98	70	
65	24	46	75	91	97	68	34
70	18	44	69	88	95	65	
75	13	41	66	86	93	61	32
80	8	35	62	83	90	57	
85	4	32	59	80	87	54	30
90	1	30	58	79	86	53	
95	4	32	60	81	88	55	30
100	9	36	63	84	91	58	
105	14	40	67	87	94	62	33
110	19	44	70	90	97	66	
115	25	46	75	92	99	69	34
120	30	51	76	94	100	71	
125	35	53	77	94	100	73	33
130	39	56	78	94	100	74	
135	44	58	78	93	98	75	29
140	48	60	78	91	96	75	
145	52	61	77	89	93	75	23
150	55	62	75	86	89	74	
155	58	62	73	82	85	72	17
160	60	63	70	77	79	70	
165	61	63	67	72	74	67	10
170	63	63	65	67	68	65	
175	64	63	63	64	64	63	3
180	63	63	63	63	63	63	



OPPOSITE SIDE TO BEAM
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	112.5	135	157.5	ACROSS		
0	60	60	60	60	60	60	
5	61	60	60	60	60	60	3
10	60	59	59	60	60	60	
15	59	58	58	59	59	58	8
20	57	57	57	57	57	57	
25	55	55	54	54	54	54	13
30	52	52	51	51	51	52	
35	49	49	48	48	47	48	15
40	46	45	44	43	43	44	
45	42	41	40	39	38	40	15
50	37	37	36	34	34	36	
55	33	33	30	29	30	31	14
60	28	28	25	27	27	27	
65	24	22	21	23	24	23	11
70	18	17	18	20	21	19	
75	13	12	15	17	18	15	8
80	8	9	12	15	16	12	
85	4	6	9	12	14	9	5
90	1	5	7	10	12	7	
95	4	6	8	11	12	8	5
100	9	9	11	13	14	11	
105	14	12	15	16	17	15	8
110	19	17	18	19	20	18	
115	25	23	22	23	23	23	11
120	30	29	25	27	27	27	
125	35	34	31	30	30	32	14
130	39	39	36	35	34	36	
135	44	43	41	39	39	41	16
140	48	48	46	45	44	46	
145	52	51	50	49	49	50	16
150	55	54	54	53	53	54	
155	58	57	56	56	56	57	13
160	60	59	59	59	59	59	
165	61	61	61	61	61	61	9
170	63	62	62	62	62	62	
175	64	63	62	63	63	63	3
180	63	63	63	63	63	63	



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	0.920	0.88	0.950	0.900	0.850	0.81	0.880	0.830	0.790	0.74	0.690	0.660	0.63	0.570	0.550	0.53	0.460	0.440	0.43	0.37			
	2	0.930	0.840	0.760	0.69	0.860	0.770	0.700	0.64	0.790	0.710	0.650	0.60	0.600	0.550	0.51	0.490	0.450	0.42	0.390	0.360	0.34	0.29			
	3	0.850	0.730	0.640	0.56	0.780	0.670	0.590	0.53	0.710	0.620	0.550	0.49	0.520	0.460	0.42	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	0.510	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	0.40	0.650	0.520	0.440	0.37	0.590	0.480	0.400	0.35	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	0.540	0.410	0.330	0.27	0.500	0.380	0.310	0.25	0.320	0.260	0.22	0.260	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	0.23	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	0.10			
	9	0.510	0.360	0.270	0.22	0.470	0.340	0.260	0.20	0.430	0.310	0.240	0.19	0.260	0.210	0.16	0.220	0.170	0.14	0.170	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	0.210	0.17	0.240	0.180	0.14	0.200	0.150	0.12	0.160	0.120	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.