

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P10182

Luminaire Tested: **MLN-W-120V**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P10182  
Test Lab: PEACHTREE CITY  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MLN-W-120V  
Description: WHITE HEALTHCARE LED NIGHT LIGHT WITH LOUVER FACEPLATE  
WALL PLATE MOUNTING DESIGN  
Light Source: MOUNTED DIRECTLY ON A WALL FACE PLATE  
12 WHITE LED IN A RECTANGULAR ARRAY  
Ballast/Driver: -

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
	AS-5443-2	Good	REFLECTOR
	AS-5443-3	Good	DRIVER
	AS-5443-4	Good	UPPER MODULE
	AS-5443-5	Good	LENS
	AS-5443-6	Good	DRIVER 2
	AS-5443-7	Good	TRIM RING

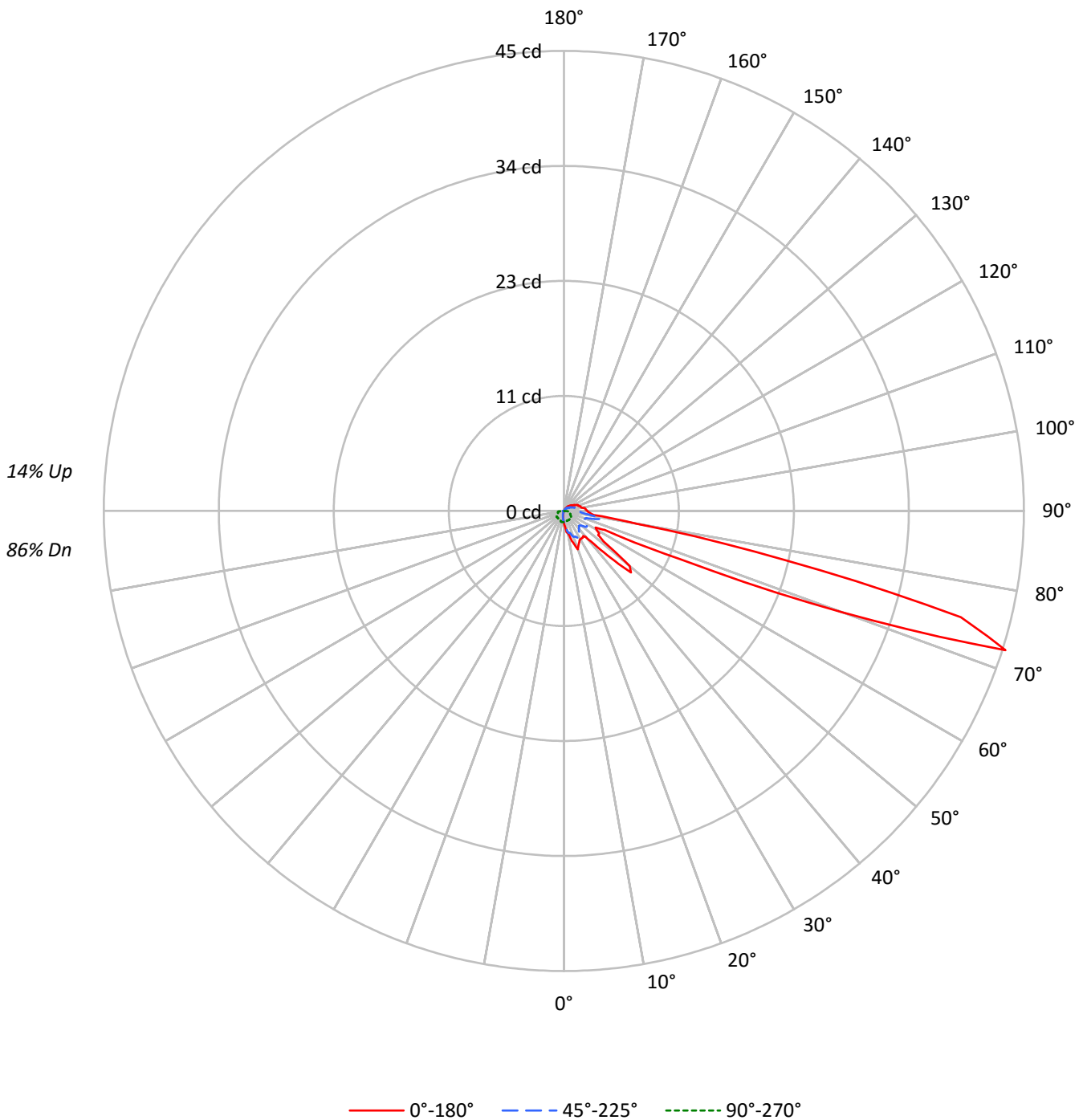
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14.6 lumens  
Efficiency: N/A  
Efficacy: 4.9 lumens/watt  
Spacing Criteria (0/90/45): 2.61 / 1.4 / 1.89  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Semi-Direct

Input Watts (W): 3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

TEST NUMBER: P10182 CATALOG  
NUMBER: MLN-W-120V

### Luminous Intensity Polar Plot





TEST NUMBER: P10182  
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	98	89	82	76	93	86	79	73	79	73	68	72	68	63	66	62	59	55
2	84	71	61	52	79	68	58	50	62	54	47	56	49	43	51	45	40	37
3	74	59	47	38	70	56	45	37	51	42	34	46	38	32	41	35	29	26
4	66	50	39	30	62	48	37	29	43	34	27	39	31	25	35	28	23	20
5	60	44	33	24	57	42	31	23	38	29	22	34	26	20	31	24	19	16
6	55	39	28	20	52	37	27	20	34	25	18	31	23	17	28	21	16	13
7	51	35	25	17	48	34	24	17	31	22	16	28	20	15	25	19	14	11
8	47	32	22	15	45	30	21	15	28	20	14	25	18	13	23	17	12	10
9	44	29	20	13	42	28	19	13	26	18	12	23	16	11	21	15	11	8
10	41	27	18	12	39	26	17	12	24	16	11	22	15	10	20	14	9	7

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.1	0.8
10°-20°	0.4	2.5
20°-30°	0.6	4.4
30°-40°	0.8	5.4
40°-50°	1.2	8.1
50°-60°	1.3	8.6
60°-70°	1.7	11.9
70°-80°	5.4	37.0
80°-90°	1.1	7.5
90°-100°	0.7	4.7
100°-110°	0.5	3.6
110°-120°	0.4	2.6
120°-130°	0.2	1.6
130°-140°	0.1	0.9
140°-150°	0.1	0.4
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1.1	7.6
0°-40°	1.9	13.1
0°-60°	4.3	29.8
0°-90°	12.6	86.2
90°-120°	1.6	10.9
90°-150°	2.0	13.8
90°-180°	2.0	13.7
0°-180°	14.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1	1	1	1	1	
5°	2	2	1	1	1	0
15°	3	2	1	0	0	1
25°	4	3	1	0	0	2
35°	3	3	1	0	0	2
45°	6	2	1	0	0	5
55°	4	3	1	0	0	4
65°	4	2	1	0	0	9
75°	40	3	1	0	0	33
85°	3	2	0	0	0	3
90°	2	2	0	0	0	1
95°	2	1	0	0	0	2
105°	2	1	0	0	0	2
115°	1	1	0	0	0	1
125°	1	1	0	0	0	1
135°	1	0	0	0	0	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



TEST NUMBER: P10182 CATALOG  
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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2.5°	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1
5°	1.6	1.6	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.2	1.1
7.5°	2.1	2.1	2.0	1.9	1.9	1.7	1.6	1.5	1.3	1.2	1.1
10°	2.2	2.2	2.2	2.2	2.2	2.0	1.8	1.6	1.4	1.2	1.1
12.5°	2.4	2.4	2.3	2.2	2.2	2.2	2.0	1.7	1.4	1.2	1.1
15°	3.0	3.0	2.9	2.6	2.4	2.2	2.1	1.8	1.5	1.2	1.1
17.5°	3.4	3.4	3.2	3.0	2.8	2.4	2.1	1.9	1.5	1.2	1.0
20°	4.0	4.0	4.0	3.6	3.3	2.7	2.0	1.8	1.5	1.2	1.0
22.5°	3.7	3.7	3.7	3.7	3.6	2.7	2.0	1.7	1.5	1.2	1.0
25°	3.5	3.5	3.5	3.5	3.3	2.8	2.2	1.7	1.5	1.2	1.0
27.5°	3.3	3.3	3.4	3.3	3.2	3.0	2.4	1.8	1.5	1.2	1.0
30°	3.2	3.2	3.1	3.0	3.0	3.0	2.6	1.9	1.5	1.2	1.0
32.5°	3.2	3.2	3.1	2.8	2.7	2.9	2.7	2.0	1.5	1.2	1.0
35°	3.2	3.2	3.1	2.7	2.6	2.7	2.7	2.2	1.5	1.2	1.0
37.5°	3.1	3.1	2.9	2.7	2.5	2.4	2.7	2.3	1.5	1.2	0.9
40°	3.3	3.3	3.0	2.7	2.4	2.3	2.5	2.3	1.6	1.2	0.9
42.5°	4.4	4.3	3.5	2.8	2.4	2.2	2.2	2.3	1.6	1.2	0.9
45°	6.5	6.3	5.0	3.3	2.4	2.1	2.1	2.3	1.7	1.2	0.9
47.5°	8.9	8.7	6.7	4.0	2.7	2.1	2.0	2.1	1.8	1.1	0.9
50°	8.4	8.3	7.4	4.4	3.1	2.2	1.9	1.9	1.8	1.1	0.9
52.5°	4.9	4.9	4.8	4.2	3.4	2.5	1.9	1.8	1.8	1.1	0.9
55°	4.1	4.1	3.6	3.3	3.3	2.7	1.9	1.7	1.7	1.1	0.8
57.5°	4.1	4.0	3.7	3.2	2.8	2.7	2.0	1.6	1.7	1.0	0.8
60°	3.7	3.6	3.4	3.1	2.7	2.5	2.1	1.6	1.6	1.0	0.7
62.5°	3.5	3.4	3.2	2.9	2.6	2.3	2.1	1.6	1.6	0.9	0.7
65°	4.4	4.3	3.4	2.9	2.5	2.3	2.0	1.6	1.5	0.9	0.7
67.5°	12.3	11.5	8.2	3.6	2.5	2.2	1.9	1.6	1.5	0.9	0.6
70°	28.9	29.2	23.0	8.3	3.2	2.2	1.9	1.6	1.5	0.9	0.6
72.5°	45.3	44.7	39.1	17.0	6.0	2.3	1.9	1.6	1.4	1.0	0.6
75°	40.2	40.0	38.4	22.6	10.1	3.0	1.8	1.6	1.3	1.0	0.6
77.5°	22.1	22.3	22.5	14.6	9.4	3.7	2.0	1.5	1.3	1.1	0.6
80°	7.2	7.1	7.7	6.0	5.5	3.2	2.1	1.4	1.3	1.1	0.6
82.5°	2.9	2.9	2.7	2.5	2.4	2.1	1.8	1.3	1.3	0.9	0.6
85°	2.6	2.6	2.5	2.3	2.0	1.7	1.4	1.2	1.2	0.7	0.5
87.5°	2.4	2.4	2.3	2.1	1.9	1.6	1.3	1.0	0.9	0.4	0.2
90°	2.3	2.2	2.1	2.0	1.7	1.5	1.2	0.9	0.7	0.1	0.0
92.5°	2.2	2.2	2.1	1.9	1.7	1.5	1.2	0.9	0.5	0.0	0.0
95°	2.1	2.1	2.0	1.9	1.7	1.4	1.1	0.8	0.4	0.0	0.0
97.5°	2.1	2.0	1.9	1.8	1.5	1.3	1.0	0.7	0.4	0.0	0.0
100°	1.8	1.8	1.7	1.6	1.4	1.2	1.0	0.7	0.3	0.0	0.0
102.5°	1.7	1.7	1.7	1.6	1.4	1.2	0.9	0.6	0.3	0.0	0.0
105°	1.7	1.7	1.6	1.5	1.3	1.1	0.9	0.6	0.3	0.0	0.0
107.5°	1.6	1.6	1.6	1.4	1.3	1.1	0.8	0.5	0.3	0.0	0.0
110°	1.5	1.5	1.5	1.4	1.2	1.0	0.7	0.5	0.2	0.0	0.0



TEST NUMBER: P10182  
 CATALOG NUMBER: MLN-W-120V

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	1.5	1.4	1.4	1.3	1.1	0.9	0.7	0.4	0.2	0.0	0.0
115°	1.4	1.3	1.3	1.2	1.0	0.8	0.6	0.4	0.2	0.0	0.0
117.5°	1.2	1.2	1.2	1.1	0.9	0.8	0.6	0.4	0.1	0.0	0.0
120°	1.2	1.1	1.1	1.0	0.9	0.7	0.5	0.3	0.0	0.0	0.0
122.5°	1.0	1.0	1.0	0.9	0.8	0.6	0.5	0.3	0.0	0.0	0.0
125°	1.0	1.0	0.9	0.8	0.7	0.6	0.4	0.3	0.0	0.0	0.0
127.5°	0.9	0.9	0.8	0.8	0.7	0.5	0.4	0.2	0.0	0.0	0.0
130°	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.2	0.0	0.0	0.0
132.5°	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.1	0.0	0.0	0.0
135°	0.7	0.7	0.6	0.6	0.5	0.4	0.3	0.1	0.0	0.0	0.0
137.5°	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.0	0.0	0.0	0.0
140°	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.0	0.0	0.0	0.0
142.5°	0.4	0.4	0.4	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0
145°	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0
147.5°	0.3	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P10182  
 CATALOG NUMBER: MLN-W-120V

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2.5°	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9
5°	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7
7.5°	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.4
10°	1.0	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3
12.5°	1.0	0.7	0.6	0.5	0.4	0.3	0.2	0.0	0.0	0.0
15°	0.9	0.7	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0
17.5°	0.9	0.6	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.9	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.8	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P10182  
 CATALOG NUMBER: MLN-W-120V

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)