

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: P226057

Luminaire Tested: **FW-LD2-1212-2000-35-PC-R4-LGW**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P226057  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-064-1)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FW-LD2-1212-2000-35-PC-R4-LGW  
Description: NIGHT CONDOR LED FLOODLIGHT  
Light Source: (56) 3500 CCT, 80 CRI LEDS  
                  EL089N056E835M  
Ballast/Driver: OSRAM  
                  OTi30/120-277/1A0

**Summary**

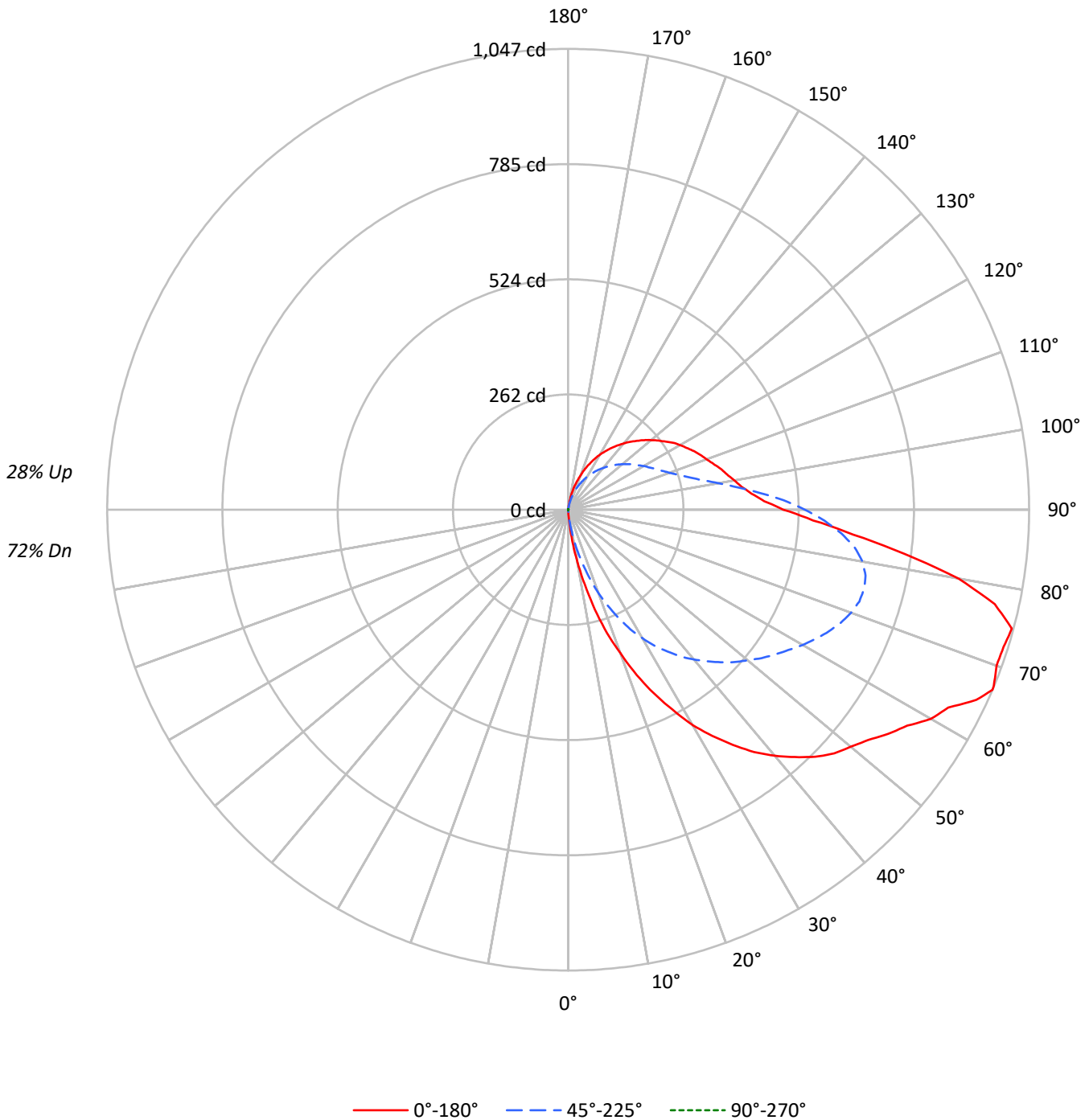
Lumens per Lamp: N/A  
Luminaire Lumens: 2029.0 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '  
CIE Type: Semi-Direct

Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): 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

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### Luminous Intensity Polar Plot





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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	112	112	112	112	107	107	107	107	96	96	96	86	86	86	76	76	76	72
1	95	88	81	75	89	83	77	71	73	68	64	64	60	57	56	53	50	46
2	84	72	63	55	78	68	59	52	59	52	46	52	46	41	45	40	36	32
3	74	61	50	42	69	57	47	39	50	42	35	43	36	31	37	31	27	23
4	67	52	41	33	62	49	39	31	42	34	28	37	30	24	31	26	21	17
5	61	45	35	27	56	42	33	25	37	29	22	32	25	20	27	21	17	14
6	55	40	30	22	51	37	28	21	33	24	18	28	21	16	24	18	14	11
7	51	35	26	19	47	33	24	18	29	21	15	25	18	13	21	16	11	9
8	47	32	22	16	44	30	21	15	26	19	13	23	16	11	19	14	10	7
9	43	29	20	14	40	27	19	13	24	16	11	21	14	10	18	12	8	6
10	40	26	18	12	38	25	17	11	22	15	10	19	13	9	16	11	7	5

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

	0°	90°	180°
0°	Luminous shape not found,		
5°	reference photometric report, or contact		
10°	the photometric lab for calculations.		
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°	1.4	0.1
10°-20°	18.3	0.9
20°-30°	58.7	2.9
30°-40°	113.7	5.6
40°-50°	172.1	8.5
50°-60°	229.1	11.3
60°-70°	288.1	14.2
70°-80°	318.0	15.7
80°-90°	263.0	13.0
90°-100°	176.9	8.7
100°-110°	124.8	6.2
110°-120°	95.0	4.7
120°-130°	71.3	3.5
130°-140°	49.5	2.4
140°-150°	30.3	1.5
150°-160°	14.6	0.7
160°-170°	4.1	0.2
170°-180°	0.2	0.0
0°-30°	78.4	3.9
0°-40°	192.1	9.5
0°-60°	593.3	29.2
0°-90°	1462.3	72.1
90°-120°	396.7	19.6
90°-150°	547.7	27.0
90°-180°	567.0	27.9
0°-180°	2029.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	30	12	1	0	0	6
15°	235	128	1	0	0	70
25°	460	272	0	0	0	215
35°	652	393	0	0	0	411
45°	794	490	0	0	0	613
55°	888	574	0	0	0	798
65°	1022	654	0	0	0	1003
75°	1043	696	0	0	0	1068
85°	650	624	0	0	0	585
90°	489	538	0	0	0	271
95°	418	437	0	0	0	335
105°	358	284	0	0	0	379
115°	315	219	0	0	0	312
125°	270	179	1	0	0	243
135°	221	142	1	0	0	172
145°	171	106	1	0	0	108
155°	115	67	1	0	0	54
165°	54	26	1	0	0	16
175°	2	2	1	0	0	1
180°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	4.8	4.0	3.2	3.2	2.4	1.6	1.6	0.8	0.8	0.8	0.8
5°	30.1	29.3	27.0	23.8	18.2	11.9	6.3	2.4	0.8	0.8	0.8
7.5°	71.4	70.6	65.8	57.1	46.0	34.1	20.6	8.7	1.6	0.8	0.8
10°	119.8	120.6	113.4	100.7	81.7	60.3	38.1	19.0	4.0	0.8	0.8
12.5°	173.7	175.3	166.6	147.5	122.2	93.6	61.1	30.9	8.7	0.8	0.0
15°	234.8	233.2	218.9	196.7	167.4	127.7	86.5	46.0	14.3	0.8	0.8
17.5°	293.5	290.3	277.6	249.9	212.6	164.2	112.6	61.9	20.6	0.8	0.0
20°	347.4	346.6	334.0	301.4	257.0	201.5	139.6	78.5	27.8	0.8	0.0
22.5°	406.9	403.0	383.9	350.6	300.6	237.2	167.4	95.2	34.1	1.6	0.0
25°	460.1	458.5	438.7	399.8	341.9	272.1	194.3	111.8	41.2	1.6	0.0
27.5°	511.6	511.6	488.6	445.8	382.3	306.2	218.1	128.5	49.2	2.4	0.0
30°	564.8	560.0	536.2	488.6	421.2	337.1	241.9	144.4	55.5	2.4	0.0
32.5°	609.2	606.0	581.4	529.1	456.1	367.3	265.7	158.6	61.9	3.2	0.0
35°	652.0	650.5	621.9	568.0	490.2	393.4	285.6	171.3	68.2	4.8	0.0
37.5°	694.1	688.5	660.0	603.7	522.7	420.4	303.8	183.2	73.8	5.6	0.0
40°	729.8	724.2	695.7	637.0	552.1	444.2	322.1	194.3	78.5	5.6	0.0
42.5°	762.3	757.5	726.6	666.3	580.7	467.2	338.7	204.7	83.3	6.3	0.0
45°	794.0	790.1	756.8	694.9	606.8	490.2	355.4	214.2	87.3	7.1	0.0
47.5°	819.4	814.7	783.7	721.1	630.6	512.4	372.0	222.9	91.2	7.9	0.0
50°	837.7	834.5	806.7	744.9	655.2	532.3	387.1	232.4	94.4	7.9	0.0
52.5°	859.1	855.1	829.7	771.0	677.4	553.7	401.4	241.9	98.4	8.7	0.0
55°	887.6	883.7	855.9	796.4	701.2	573.5	416.5	249.9	100.7	9.5	0.0
57.5°	913.0	909.8	882.9	823.4	726.6	593.3	431.5	258.6	104.7	9.5	0.0
60°	951.1	947.1	913.0	851.1	752.0	614.8	446.6	267.3	108.7	10.3	0.0
62.5°	973.3	971.7	947.1	882.1	779.0	634.6	460.9	275.3	111.8	11.1	0.0
65°	1022.5	1016.1	977.3	909.8	803.6	653.6	473.6	283.2	116.6	11.9	0.0
67°	1047.1	1040.7	999.5	928.9	820.2	667.1	483.9	290.3	119.8	12.7	0.0
67.5°	1046.3	1041.5	1003.4	933.6	823.4	670.3	485.5	291.9	120.6	12.7	0.0
70°	1035.2	1032.8	1013.8	949.5	838.5	683.8	496.6	299.8	125.3	12.7	0.0
72.5°	1036.8	1034.4	1012.2	955.1	847.2	693.3	505.3	307.0	129.3	13.5	0.0
75°	1043.1	1036.0	1002.7	946.3	846.4	695.7	510.1	310.9	130.9	14.3	0.0
77.5°	992.3	990.8	969.3	923.3	833.7	691.7	509.3	311.7	131.7	14.3	0.0
80°	899.5	899.5	904.3	883.7	809.1	679.0	503.7	309.4	130.9	14.3	0.0
82.5°	771.0	781.3	810.7	820.2	770.2	656.0	490.2	303.0	128.5	14.3	0.0
85°	649.7	657.6	704.4	740.9	717.9	623.5	472.0	294.3	125.3	14.3	0.0
87.5°	556.9	560.8	600.5	657.6	657.6	583.0	447.4	281.6	120.6	13.5	0.0
90°	488.6	491.0	523.5	578.3	589.4	537.8	418.8	265.7	115.0	13.5	0.0
92.5°	445.8	447.4	466.4	502.9	525.9	489.4	386.3	248.3	107.9	12.7	0.0
95°	418.0	418.0	426.8	448.2	464.0	437.1	351.4	228.5	99.9	11.1	0.0
97.5°	397.4	397.4	399.0	406.9	411.7	387.9	314.9	208.6	92.0	10.3	0.0
100°	383.1	381.5	379.2	376.8	371.2	346.6	283.2	190.4	85.7	10.3	0.0
102.5°	369.6	368.1	362.5	353.0	338.7	310.2	255.4	172.1	77.7	8.7	0.0
105°	358.5	357.0	349.0	334.0	314.1	284.0	230.8	157.1	71.4	8.7	0.0
107.5°	345.9	345.1	336.3	318.9	295.1	261.8	211.8	142.8	65.8	7.9	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	334.7	334.0	325.2	306.2	280.0	245.1	196.7	131.7	60.3	7.1	0.0
112.5°	325.2	323.6	314.1	295.9	267.3	230.8	183.2	122.2	55.5	6.3	0.0
115°	314.9	313.3	303.8	284.8	255.4	218.9	171.3	113.4	50.8	6.3	0.0
117.5°	303.8	303.0	293.5	273.7	245.1	207.8	161.8	105.5	46.0	5.6	0.0
120°	293.5	293.5	282.4	263.4	234.0	198.3	153.1	99.2	42.8	4.8	0.8
122.5°	283.2	281.6	271.3	251.5	224.5	188.0	144.4	92.8	39.7	4.8	0.8
125°	269.7	268.9	259.4	240.4	214.2	179.3	136.4	87.3	37.3	4.0	0.8
127.5°	257.8	256.2	247.5	230.0	203.1	169.8	128.5	81.7	34.9	4.0	0.8
130°	245.9	244.3	235.6	218.9	193.6	161.0	121.4	76.2	32.5	4.0	0.8
132.5°	234.0	232.4	224.5	207.0	183.2	151.5	113.4	70.6	29.3	3.2	0.8
135°	221.3	220.5	212.6	195.9	172.9	142.0	105.5	65.8	27.0	3.2	0.8
137.5°	209.4	208.6	199.9	184.8	162.6	133.3	98.4	60.3	24.6	3.2	0.8
140°	196.7	195.9	188.0	173.7	152.3	123.7	91.2	55.5	22.2	2.4	0.8
142.5°	184.0	183.2	176.1	161.8	141.2	115.0	84.1	50.0	19.8	2.4	0.8
145°	171.3	169.8	163.4	149.9	130.9	105.5	76.2	45.2	17.5	2.4	0.8
147.5°	157.9	157.1	150.7	138.0	119.8	96.0	69.0	40.5	15.9	2.4	0.8
150°	144.4	143.6	137.2	125.3	108.7	87.3	61.9	35.7	13.5	2.4	0.8
152.5°	130.1	129.3	123.7	112.6	96.8	76.9	53.9	30.1	11.9	1.6	0.8
155°	115.0	115.0	110.3	99.9	84.9	66.6	46.0	26.2	10.3	1.6	0.8
157.5°	100.7	99.9	94.4	86.5	73.0	56.3	38.9	21.4	7.9	1.6	0.8
160°	84.1	84.1	80.1	72.2	60.3	46.8	31.7	16.7	6.3	1.6	0.8
162.5°	69.0	69.0	65.0	57.9	49.2	36.5	23.8	12.7	4.8	1.6	0.8
165°	53.9	53.1	50.0	44.4	37.3	26.2	16.7	8.7	4.0	1.6	0.8
167.5°	39.7	38.9	35.7	31.7	24.6	17.5	10.3	5.6	2.4	1.6	0.8
170°	23.8	23.8	23.0	18.2	12.7	7.9	5.6	3.2	1.6	0.8	0.8
172.5°	11.1	11.1	8.7	6.3	4.8	4.0	2.4	1.6	1.6	0.8	0.8
175°	2.4	2.4	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.8
177.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	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	0.0	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





TEST NUMBER: P226057

CATALOG NUMBER: FW-LD2-1212-2000-35-PC-R4-LGW

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	0.8	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°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.8	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)