

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: P226060

Luminaire Tested: **FW-LD2-1212-2500-35-PC-R4-LGW**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P226060  
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-LD2-1212-2500-35-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**

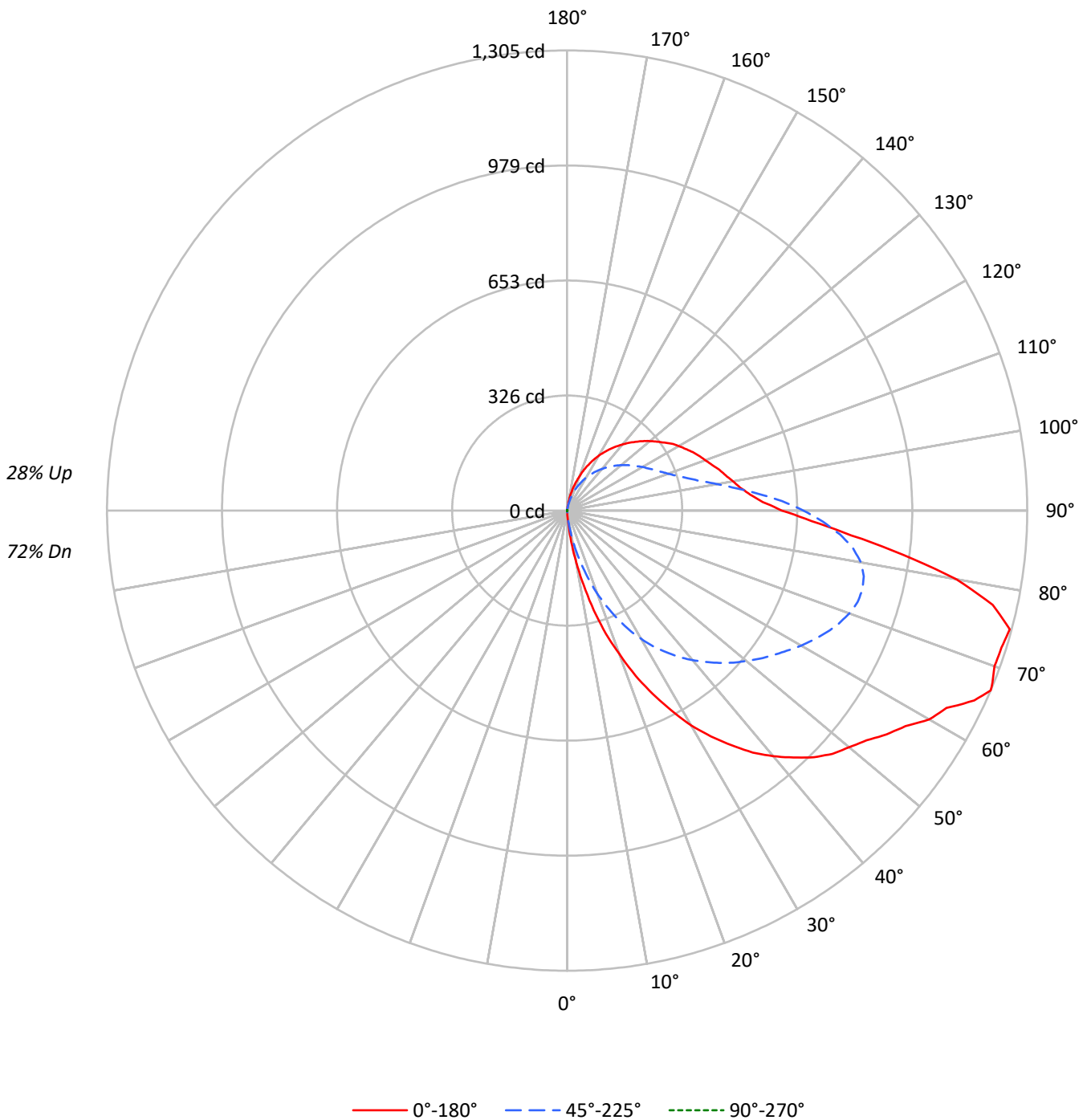
Lumens per Lamp: N/A  
Luminaire Lumens: 2528.0 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '  
CIE Type: Semi-Direct

Input Watts (W): 27.3  
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

TEST NUMBER: P226060

CATALOG NUMBER: FW-LD2-1212-2500-35-PC-R4-LGW

### 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°			



TEST NUMBER: P226060

CATALOG NUMBER: FW-LD2-1212-2500-35-PC-R4-LGW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1.8	0.1
10°-20°	22.8	0.9
20°-30°	73.2	2.9
30°-40°	141.7	5.6
40°-50°	214.4	8.5
50°-60°	285.4	11.3
60°-70°	358.9	14.2
70°-80°	396.2	15.7
80°-90°	327.6	13.0
90°-100°	220.4	8.7
100°-110°	155.5	6.2
110°-120°	118.4	4.7
120°-130°	88.8	3.5
130°-140°	61.6	2.4
140°-150°	37.7	1.5
150°-160°	18.2	0.7
160°-170°	5.1	0.2
170°-180°	0.3	0.0
0°-30°	97.7	3.9
0°-40°	239.3	9.5
0°-60°	739.2	29.2
0°-90°	1822.0	72.1
90°-120°	494.3	19.6
90°-150°	682.4	27.0
90°-180°	706.0	27.9
0°-180°	2528.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	38	15	1	0	0	7
15°	292	159	1	0	0	87
25°	573	339	0	0	0	268
35°	812	490	0	0	0	512
45°	989	611	0	0	0	764
55°	1106	715	0	0	0	994
65°	1274	814	0	0	0	1249
75°	1300	867	0	0	0	1331
85°	809	777	0	0	0	729
90°	609	670	0	0	0	338
95°	521	545	0	0	0	417
105°	447	354	0	0	0	472
115°	392	273	0	0	0	389
125°	336	223	1	0	0	302
135°	276	177	1	0	0	214
145°	214	131	1	0	0	135
155°	143	83	1	0	0	67
165°	67	33	1	0	0	20
175°	3	2	1	0	0	1
180°	0	0	0	0	0	



TEST NUMBER: P226060

CATALOG NUMBER: FW-LD2-1212-2500-35-PC-R4-LGW

**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°	5.9	4.9	4.0	4.0	3.0	2.0	2.0	1.0	1.0	1.0	1.0
5°	37.6	36.6	33.6	29.6	22.7	14.8	7.9	3.0	1.0	1.0	1.0
7.5°	88.9	88.0	82.0	71.2	57.3	42.5	25.7	10.9	2.0	1.0	1.0
10°	149.2	150.2	141.3	125.5	101.8	75.1	47.4	23.7	4.9	1.0	1.0
12.5°	216.4	218.4	207.5	183.8	152.2	116.6	76.1	38.5	10.9	1.0	0.0
15°	292.5	290.6	272.8	245.1	208.5	159.1	107.7	57.3	17.8	1.0	1.0
17.5°	365.7	361.7	345.9	311.3	264.9	204.6	140.3	77.1	25.7	1.0	0.0
20°	432.9	431.9	416.1	375.6	320.2	251.0	173.9	97.8	34.6	1.0	0.0
22.5°	507.0	502.1	478.3	436.8	374.6	295.5	208.5	118.6	42.5	2.0	0.0
25°	573.2	571.3	546.5	498.1	426.0	339.0	242.1	139.4	51.4	2.0	0.0
27.5°	637.5	637.5	608.8	555.4	476.4	381.5	271.8	160.1	61.3	3.0	0.0
30°	703.7	697.8	668.1	608.8	524.8	420.0	301.4	179.9	69.2	3.0	0.0
32.5°	759.0	755.1	724.4	659.2	568.3	457.6	331.1	197.7	77.1	4.0	0.0
35°	812.4	810.4	774.8	707.6	610.8	490.2	355.8	213.5	85.0	5.9	0.0
37.5°	864.8	857.9	822.3	752.1	651.3	523.8	378.5	228.3	91.9	6.9	0.0
40°	909.3	902.3	866.8	793.6	687.9	553.5	401.3	242.1	97.8	6.9	0.0
42.5°	949.8	943.8	905.3	830.2	723.5	582.1	422.0	255.0	103.8	7.9	0.0
45°	989.3	984.4	942.9	865.8	756.1	610.8	442.8	266.8	108.7	8.9	0.0
47.5°	1020.9	1015.0	976.5	898.4	785.7	638.5	463.5	277.7	113.7	9.9	0.0
50°	1043.7	1039.7	1005.1	928.0	816.4	663.2	482.3	289.6	117.6	9.9	0.0
52.5°	1070.4	1065.4	1033.8	960.7	844.0	689.9	500.1	301.4	122.6	10.9	0.0
55°	1105.9	1101.0	1066.4	992.3	873.7	714.6	518.9	311.3	125.5	11.9	0.0
57.5°	1137.6	1133.6	1100.0	1025.9	905.3	739.3	537.6	322.2	130.5	11.9	0.0
60°	1185.0	1180.1	1137.6	1060.5	936.9	766.0	556.4	333.1	135.4	12.8	0.0
62.5°	1212.7	1210.7	1180.1	1099.0	970.5	790.7	574.2	342.9	139.4	13.8	0.0
65°	1274.0	1266.0	1217.6	1133.6	1001.2	814.4	590.0	352.8	145.3	14.8	0.0
67°	1304.6	1296.7	1245.3	1157.3	1021.9	831.2	602.9	361.7	149.2	15.8	0.0
67.5°	1303.6	1297.7	1250.2	1163.3	1025.9	835.1	604.9	363.7	150.2	15.8	0.0
70°	1289.8	1286.8	1263.1	1183.0	1044.7	851.9	618.7	373.6	156.2	15.8	0.0
72.5°	1291.7	1288.8	1261.1	1189.9	1055.5	863.8	629.6	382.5	161.1	16.8	0.0
75°	1299.6	1290.8	1249.2	1179.1	1054.5	866.8	635.5	387.4	163.1	17.8	0.0
77.5°	1236.4	1234.4	1207.7	1150.4	1038.7	861.8	634.5	388.4	164.1	17.8	0.0
80°	1120.8	1120.8	1126.7	1101.0	1008.1	846.0	627.6	385.4	163.1	17.8	0.0
82.5°	960.7	973.5	1010.1	1021.9	959.7	817.3	610.8	377.5	160.1	17.8	0.0
85°	809.4	819.3	877.6	923.1	894.4	776.8	588.1	366.7	156.2	17.8	0.0
87.5°	693.8	698.7	748.2	819.3	819.3	726.4	557.4	350.9	150.2	16.8	0.0
90°	608.8	611.8	652.3	720.5	734.3	670.1	521.8	331.1	143.3	16.8	0.0
92.5°	555.4	557.4	581.1	626.6	655.3	609.8	481.3	309.3	134.4	15.8	0.0
95°	520.8	520.8	531.7	558.4	578.2	544.6	437.8	284.6	124.5	13.8	0.0
97.5°	495.2	495.2	497.1	507.0	512.9	483.3	392.4	259.9	114.6	12.8	0.0
100°	477.4	475.4	472.4	469.5	462.5	431.9	352.8	237.2	106.7	12.8	0.0
102.5°	460.6	458.6	451.7	439.8	422.0	386.4	318.2	214.5	96.9	10.9	0.0
105°	446.7	444.7	434.9	416.1	391.4	353.8	287.6	195.7	88.9	10.9	0.0
107.5°	430.9	429.9	419.0	397.3	367.7	326.1	263.9	177.9	82.0	9.9	0.0



TEST NUMBER: P226060

CATALOG NUMBER: FW-LD2-1212-2500-35-PC-R4-LGW

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	417.1	416.1	405.2	381.5	348.9	305.4	245.1	164.1	75.1	8.9	0.0
112.5°	405.2	403.2	391.4	368.6	333.1	287.6	228.3	152.2	69.2	7.9	0.0
115°	392.4	390.4	378.5	354.8	318.2	272.8	213.5	141.3	63.3	7.9	0.0
117.5°	378.5	377.5	365.7	341.0	305.4	258.9	201.6	131.4	57.3	6.9	0.0
120°	365.7	365.7	351.8	328.1	291.6	247.1	190.7	123.5	53.4	5.9	1.0
122.5°	352.8	350.9	338.0	313.3	279.7	234.2	179.9	115.6	49.4	5.9	1.0
125°	336.0	335.0	323.2	299.5	266.8	223.4	170.0	108.7	46.5	4.9	1.0
127.5°	321.2	319.2	308.4	286.6	253.0	211.5	160.1	101.8	43.5	4.9	1.0
130°	306.4	304.4	293.5	272.8	241.2	200.6	151.2	94.9	40.5	4.9	1.0
132.5°	291.6	289.6	279.7	258.0	228.3	188.8	141.3	88.0	36.6	4.0	1.0
135°	275.7	274.8	264.9	244.1	215.5	176.9	131.4	82.0	33.6	4.0	1.0
137.5°	260.9	259.9	249.1	230.3	202.6	166.0	122.6	75.1	30.6	4.0	1.0
140°	245.1	244.1	234.2	216.4	189.8	154.2	113.7	69.2	27.7	3.0	1.0
142.5°	229.3	228.3	219.4	201.6	175.9	143.3	104.8	62.3	24.7	3.0	1.0
145°	213.5	211.5	203.6	186.8	163.1	131.4	94.9	56.3	21.7	3.0	1.0
147.5°	196.7	195.7	187.8	172.0	149.2	119.6	86.0	50.4	19.8	3.0	1.0
150°	179.9	178.9	171.0	156.2	135.4	108.7	77.1	44.5	16.8	3.0	1.0
152.5°	162.1	161.1	154.2	140.3	120.6	95.9	67.2	37.6	14.8	2.0	1.0
155°	143.3	143.3	137.4	124.5	105.8	83.0	57.3	32.6	12.8	2.0	1.0
157.5°	125.5	124.5	117.6	107.7	90.9	70.2	48.4	26.7	9.9	2.0	1.0
160°	104.8	104.8	99.8	89.9	75.1	58.3	39.5	20.8	7.9	2.0	1.0
162.5°	86.0	86.0	81.0	72.1	61.3	45.5	29.6	15.8	5.9	2.0	1.0
165°	67.2	66.2	62.3	55.3	46.5	32.6	20.8	10.9	4.9	2.0	1.0
167.5°	49.4	48.4	44.5	39.5	30.6	21.7	12.8	6.9	3.0	2.0	1.0
170°	29.6	29.6	28.7	22.7	15.8	9.9	6.9	4.0	2.0	1.0	1.0
172.5°	13.8	13.8	10.9	7.9	5.9	4.9	3.0	2.0	2.0	1.0	1.0
175°	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
177.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P226060

CATALOG NUMBER: FW-LD2-1212-2500-35-PC-R4-LGW

**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°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	1.0	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: P226060

CATALOG NUMBER: FW-LD2-1212-2500-35-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°	1.0	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°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	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)