

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: P226062

Luminaire Tested: **FW-LD2-1212-2500-50-PC-R4-LGW**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P226062  
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-LD2-1212-2500-50-PC-R4-LGW  
Description: NIGHT CONDOR LED FLOODLIGHT  
Light Source: (56) 5000 CCT, 80 CRI LEDS  
                  ELO89N056E850M  
Ballast/Driver: OSRAM  
                  OTI30/120-277/1A0

**Summary**

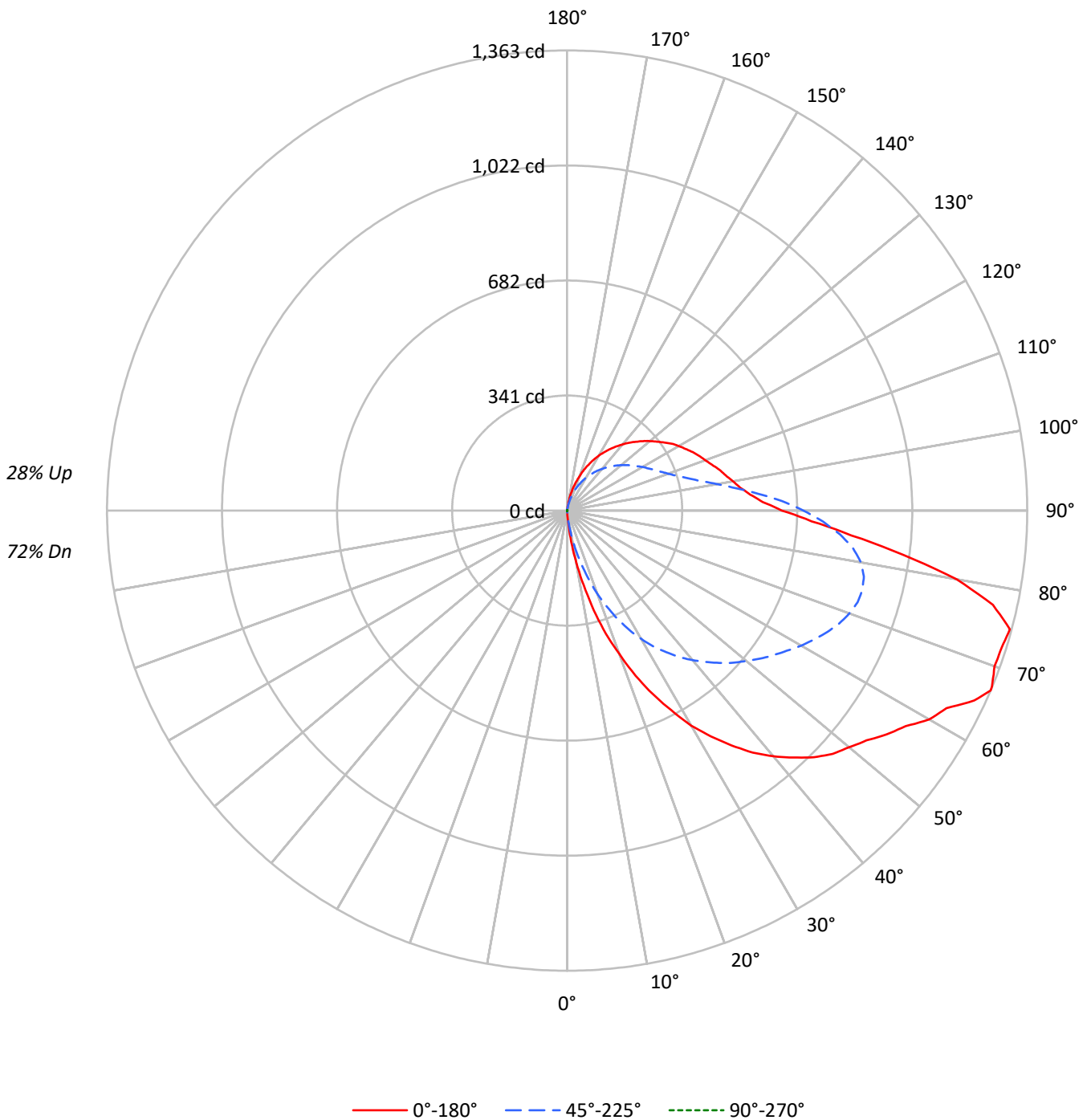
Lumens per Lamp: N/A  
Luminaire Lumens: 2641.0 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '  
CIE Type: Semi-Direct

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

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CATALOG NUMBER: FW-LD2-1212-2500-50-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°			



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1.8	0.1
10°-20°	23.8	0.9
20°-30°	76.4	2.9
30°-40°	148.0	5.6
40°-50°	224.0	8.5
50°-60°	298.2	11.3
60°-70°	375.0	14.2
70°-80°	414.0	15.7
80°-90°	342.3	13.0
90°-100°	230.2	8.7
100°-110°	162.5	6.2
110°-120°	123.7	4.7
120°-130°	92.8	3.5
130°-140°	64.4	2.4
140°-150°	39.4	1.5
150°-160°	19.0	0.7
160°-170°	5.4	0.2
170°-180°	0.3	0.0
0°-30°	102.0	3.9
0°-40°	250.0	9.5
0°-60°	772.2	29.2
0°-90°	1903.4	72.1
90°-120°	516.4	19.6
90°-150°	712.9	27.0
90°-180°	738.0	27.9
0°-180°	2641.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	39	16	1	0	0	8
15°	306	166	1	0	0	91
25°	599	354	0	0	0	280
35°	849	512	0	0	0	535
45°	1034	638	0	0	0	798
55°	1155	746	0	0	0	1039
65°	1331	851	0	0	0	1305
75°	1358	906	0	0	0	1390
85°	846	812	0	0	0	761
90°	636	700	0	0	0	353
95°	544	569	0	0	0	436
105°	467	370	0	0	0	494
115°	410	285	0	0	0	407
125°	351	233	1	0	0	316
135°	288	185	1	0	0	224
145°	223	137	1	0	0	141
155°	150	87	1	0	0	70
165°	70	34	1	0	0	21
175°	3	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°	6.2	5.2	4.1	4.1	3.1	2.1	2.1	1.0	1.0	1.0	1.0
5°	39.2	38.2	35.1	31.0	23.7	15.5	8.3	3.1	1.0	1.0	1.0
7.5°	92.9	91.9	85.7	74.3	59.9	44.4	26.8	11.4	2.1	1.0	1.0
10°	155.9	156.9	147.6	131.1	106.3	78.5	49.6	24.8	5.2	1.0	1.0
12.5°	226.1	228.2	216.8	192.0	159.0	121.8	79.5	40.3	11.4	1.0	0.0
15°	305.6	303.6	285.0	256.1	217.9	166.2	112.5	59.9	18.6	1.0	1.0
17.5°	382.0	377.9	361.4	325.2	276.7	213.7	146.6	80.5	26.8	1.0	0.0
20°	452.2	451.2	434.7	392.4	334.5	262.3	181.7	102.2	36.1	1.0	0.0
22.5°	529.7	524.5	499.7	456.4	391.3	308.7	217.9	123.9	44.4	2.1	0.0
25°	598.9	596.8	571.0	520.4	445.0	354.1	253.0	145.6	53.7	2.1	0.0
27.5°	666.0	666.0	636.0	580.3	497.7	398.5	283.9	167.3	64.0	3.1	0.0
30°	735.1	728.9	698.0	636.0	548.3	438.8	314.9	187.9	72.3	3.1	0.0
32.5°	793.0	788.8	756.8	688.7	593.7	478.0	345.9	206.5	80.5	4.1	0.0
35°	848.7	846.7	809.5	739.3	638.1	512.1	371.7	223.0	88.8	6.2	0.0
37.5°	903.4	896.2	859.0	785.7	680.4	547.2	395.4	238.5	96.0	7.2	0.0
40°	949.9	942.7	905.5	829.1	718.6	578.2	419.2	253.0	102.2	7.2	0.0
42.5°	992.2	986.0	945.8	867.3	755.8	608.1	440.9	266.4	108.4	8.3	0.0
45°	1033.5	1028.4	985.0	904.5	789.9	638.1	462.6	278.8	113.6	9.3	0.0
47.5°	1066.6	1060.4	1020.1	938.5	820.8	667.0	484.2	290.1	118.7	10.3	0.0
50°	1090.3	1086.2	1050.1	969.5	852.8	692.8	503.9	302.5	122.9	10.3	0.0
52.5°	1118.2	1113.0	1080.0	1003.6	881.8	720.7	522.4	314.9	128.0	11.4	0.0
55°	1155.4	1150.2	1114.1	1036.6	912.7	746.5	542.1	325.2	131.1	12.4	0.0
57.5°	1188.4	1184.3	1149.2	1071.7	945.8	772.3	561.7	336.6	136.3	12.4	0.0
60°	1238.0	1232.8	1188.4	1107.9	978.8	800.2	581.3	348.0	141.5	13.4	0.0
62.5°	1266.9	1264.8	1232.8	1148.1	1013.9	826.0	599.9	358.3	145.6	14.5	0.0
65°	1330.9	1322.6	1272.0	1184.3	1045.9	850.8	616.4	368.6	151.8	15.5	0.0
67°	1362.9	1354.6	1301.0	1209.1	1067.6	868.3	629.8	377.9	155.9	16.5	0.0
67.5°	1361.9	1355.7	1306.1	1215.3	1071.7	872.5	631.9	380.0	156.9	16.5	0.0
70°	1347.4	1344.3	1319.5	1235.9	1091.4	890.0	646.3	390.3	163.1	16.5	0.0
72.5°	1349.5	1346.4	1317.5	1243.1	1102.7	902.4	657.7	399.6	168.3	17.6	0.0
75°	1357.7	1348.4	1305.1	1231.8	1101.7	905.5	663.9	404.7	170.4	18.6	0.0
77.5°	1291.7	1289.6	1261.7	1201.8	1085.2	900.3	662.9	405.8	171.4	18.6	0.0
80°	1170.9	1170.9	1177.1	1150.2	1053.2	883.8	655.6	402.7	170.4	18.6	0.0
82.5°	1003.6	1017.0	1055.2	1067.6	1002.6	853.9	638.1	394.4	167.3	18.6	0.0
85°	845.6	855.9	916.9	964.4	934.4	811.5	614.3	383.1	163.1	18.6	0.0
87.5°	724.8	730.0	781.6	855.9	855.9	758.9	582.3	366.5	156.9	17.6	0.0
90°	636.0	639.1	681.5	752.7	767.1	700.0	545.2	345.9	149.7	17.6	0.0
92.5°	580.3	582.3	607.1	654.6	684.5	637.1	502.8	323.2	140.4	16.5	0.0
95°	544.1	544.1	555.5	583.4	604.0	568.9	457.4	297.4	130.1	14.5	0.0
97.5°	517.3	517.3	519.3	529.7	535.9	504.9	409.9	271.5	119.8	13.4	0.0
100°	498.7	496.6	493.5	490.4	483.2	451.2	368.6	247.8	111.5	13.4	0.0
102.5°	481.1	479.1	471.9	459.5	440.9	403.7	332.5	224.1	101.2	11.4	0.0
105°	466.7	464.6	454.3	434.7	408.9	369.6	300.5	204.4	92.9	11.4	0.0
107.5°	450.2	449.1	437.8	415.1	384.1	340.7	275.7	185.9	85.7	10.3	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	435.7	434.7	423.3	398.5	364.5	319.0	256.1	171.4	78.5	9.3	0.0
112.5°	423.3	421.3	408.9	385.1	348.0	300.5	238.5	159.0	72.3	8.3	0.0
115°	409.9	407.8	395.4	370.7	332.5	285.0	223.0	147.6	66.1	8.3	0.0
117.5°	395.4	394.4	382.0	356.2	319.0	270.5	210.6	137.3	59.9	7.2	0.0
120°	382.0	382.0	367.6	342.8	304.6	258.1	199.3	129.1	55.8	6.2	1.0
122.5°	368.6	366.5	353.1	327.3	292.2	244.7	187.9	120.8	51.6	6.2	1.0
125°	351.1	350.0	337.6	312.8	278.8	233.3	177.6	113.6	48.5	5.2	1.0
127.5°	335.6	333.5	322.1	299.4	264.3	221.0	167.3	106.3	45.4	5.2	1.0
130°	320.1	318.0	306.7	285.0	251.9	209.6	158.0	99.1	42.3	5.2	1.0
132.5°	304.6	302.5	292.2	269.5	238.5	197.2	147.6	91.9	38.2	4.1	1.0
135°	288.1	287.0	276.7	255.0	225.1	184.8	137.3	85.7	35.1	4.1	1.0
137.5°	272.6	271.5	260.2	240.6	211.7	173.5	128.0	78.5	32.0	4.1	1.0
140°	256.1	255.0	244.7	226.1	198.2	161.1	118.7	72.3	28.9	3.1	1.0
142.5°	239.5	238.5	229.2	210.6	183.8	149.7	109.4	65.0	25.8	3.1	1.0
145°	223.0	221.0	212.7	195.1	170.4	137.3	99.1	58.9	22.7	3.1	1.0
147.5°	205.5	204.4	196.2	179.7	155.9	124.9	89.8	52.7	20.7	3.1	1.0
150°	187.9	186.9	178.6	163.1	141.5	113.6	80.5	46.5	17.6	3.1	1.0
152.5°	169.3	168.3	161.1	146.6	126.0	100.2	70.2	39.2	15.5	2.1	1.0
155°	149.7	149.7	143.5	130.1	110.5	86.7	59.9	34.1	13.4	2.1	1.0
157.5°	131.1	130.1	122.9	112.5	95.0	73.3	50.6	27.9	10.3	2.1	1.0
160°	109.4	109.4	104.3	94.0	78.5	60.9	41.3	21.7	8.3	2.1	1.0
162.5°	89.8	89.8	84.7	75.4	64.0	47.5	31.0	16.5	6.2	2.1	1.0
165°	70.2	69.2	65.0	57.8	48.5	34.1	21.7	11.4	5.2	2.1	1.0
167.5°	51.6	50.6	46.5	41.3	32.0	22.7	13.4	7.2	3.1	2.1	1.0
170°	31.0	31.0	29.9	23.7	16.5	10.3	7.2	4.1	2.1	1.0	1.0
172.5°	14.5	14.5	11.4	8.3	6.2	5.2	3.1	2.1	2.1	1.0	1.0
175°	3.1	3.1	2.1	2.1	2.1	2.1	2.1	2.1	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



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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°	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: P226062

CATALOG NUMBER: FW-LD2-1212-2500-50-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)