

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: P226195

Luminaire Tested: **FW-LD2-99-1000-40-PC-R4-LGW**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P226195  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-064-4)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FW-LD2-99-1000-40-PC-R4-LGW  
Description: NIGHT CONDOR LED FLOODLIGHT  
Light Source: (56) 4000 CCT, 80 CRI LEDS  
ELO89N056E840M  
Ballast/Driver: OSRAM  
OT25WPRG1250C

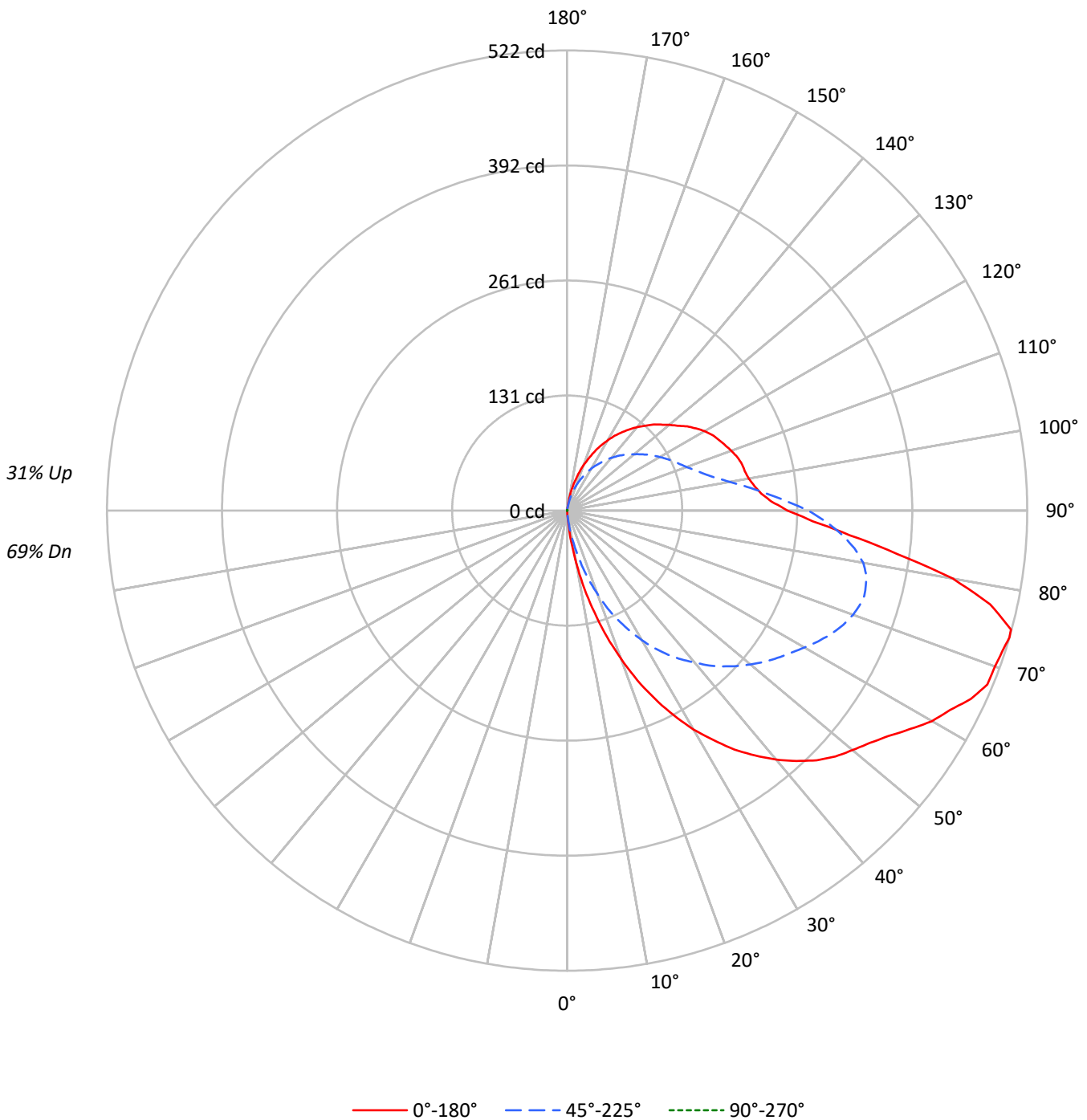
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1061.0 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: (L: 0 ' x W: 0.75 ' x H: 0.75 '  
CIE Type: Semi-Direct

Input Watts (W): 11.4  
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

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CATALOG NUMBER: FW-LD2-99-1000-40-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	106	106	106	106	94	94	94		83	83	83		74	74	74	69
1	95	88	81	75	89	82	76	71	72	67	63		63	59	55		54	51	48	44
2	83	72	63	55	78	67	59	52	59	52	46		51	45	40		43	39	35	31
3	74	61	50	42	69	57	47	40	49	41	35		42	36	31		36	31	26	22
4	67	52	42	33	62	49	39	31	42	34	28		36	29	24		30	25	20	17
5	61	45	35	27	56	42	33	26	37	29	22		31	25	19		26	21	16	13
6	55	40	30	22	51	37	28	21	32	24	18		28	21	16		23	18	13	10
7	51	36	26	19	47	33	24	18	29	21	16		25	18	13		21	15	11	8
8	47	32	23	16	43	30	21	15	26	19	13		22	16	11		19	13	9	7
9	43	29	20	14	40	27	19	13	24	16	11		20	14	10		17	12	8	6
10	40	26	18	12	38	25	17	11	22	15	10		19	13	8		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°	0.7	0.1
10°-20°	9.2	0.9
20°-30°	29.6	2.8
30°-40°	57.2	5.4
40°-50°	86.7	8.2
50°-60°	115.6	10.9
60°-70°	144.8	13.6
70°-80°	159.5	15.0
80°-90°	131.5	12.4
90°-100°	92.4	8.7
100°-110°	70.8	6.7
110°-120°	57.3	5.4
120°-130°	43.7	4.1
130°-140°	30.6	2.9
140°-150°	19.0	1.8
150°-160°	9.4	0.9
160°-170°	2.7	0.3
170°-180°	0.1	0.0
0°-30°	39.6	3.7
0°-40°	96.8	9.1
0°-60°	299.1	28.2
0°-90°	734.9	69.3
90°-120°	220.5	20.8
90°-150°	313.8	29.6
90°-180°	326.0	30.7
0°-180°	1061.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	14	6	0	0	0	3
15°	120	64	0	0	0	36
25°	236	137	0	0	0	110
35°	331	200	0	0	0	208
45°	400	250	0	0	0	309
55°	445	291	0	0	0	402
65°	505	331	0	0	0	499
75°	521	350	0	0	0	532
85°	322	313	0	0	0	289
90°	250	273	0	0	0	139
95°	221	226	0	0	0	179
105°	205	161	0	0	0	216
115°	190	133	0	0	0	188
125°	166	110	0	0	0	149
135°	138	89	0	0	0	107
145°	108	66	0	0	0	68
155°	74	43	0	0	0	35
165°	35	19	1	0	0	11
175°	1	1	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°	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.0
5°	14.5	13.8	12.4	10.4	8.3	5.5	2.8	1.4	0.7	0.7	0.0
7.5°	35.2	33.8	31.8	29.0	22.8	15.9	9.0	3.5	0.7	0.7	0.0
10°	61.5	59.4	57.3	50.4	40.7	30.4	18.6	9.0	2.1	0.7	0.0
12.5°	91.1	89.1	84.2	75.3	62.1	46.3	30.4	15.2	3.5	0.7	0.0
15°	119.5	119.5	112.6	100.8	84.2	64.2	42.1	22.1	6.2	0.7	0.0
17.5°	150.5	149.1	142.2	127.7	107.7	82.9	55.9	29.7	9.0	0.7	0.0
20°	178.8	178.8	169.9	154.0	129.1	100.8	69.1	38.0	12.4	0.7	0.0
22.5°	208.5	207.2	197.5	178.8	152.6	120.1	83.6	46.3	15.9	0.7	0.0
25°	235.5	234.1	223.0	202.3	173.3	137.4	96.7	54.5	19.3	0.7	0.0
27.5°	261.7	258.9	247.9	225.1	193.3	153.3	109.8	62.8	22.8	0.7	0.0
30°	286.6	283.8	270.7	245.8	212.0	169.9	121.5	71.1	26.2	1.4	0.0
32.5°	308.7	308.0	292.8	267.2	230.6	185.1	134.0	78.0	29.0	1.4	0.0
35°	330.8	328.7	314.2	285.2	246.5	199.6	145.0	84.9	32.5	2.1	0.0
37.5°	350.1	348.0	331.4	302.4	262.4	212.7	154.7	91.8	35.2	2.1	0.0
40°	368.7	365.3	348.7	319.0	277.6	225.1	163.6	97.4	38.0	2.8	0.0
42.5°	385.3	381.8	365.3	333.5	292.1	238.2	173.3	102.9	40.0	2.8	0.0
45°	400.5	397.0	379.1	347.3	305.2	250.0	181.6	108.4	42.8	3.5	0.0
47.5°	412.9	410.8	393.6	360.4	317.6	261.0	189.9	113.2	44.9	3.5	0.0
50°	422.6	420.5	405.3	374.3	330.1	271.4	197.5	118.1	47.0	4.1	0.0
52.5°	432.9	430.9	417.1	386.7	341.8	281.7	205.1	122.9	49.0	4.1	0.0
55°	445.4	444.0	429.5	399.8	354.2	291.4	212.7	127.7	51.8	4.8	0.0
57.5°	461.3	459.2	443.3	412.2	366.0	300.4	220.3	132.6	53.9	4.8	0.0
60°	477.8	475.1	458.5	427.4	378.4	310.7	227.2	137.4	55.9	4.8	0.0
62.5°	489.6	488.2	473.7	441.9	391.5	321.1	234.8	142.2	58.0	5.5	0.0
65°	505.4	502.7	486.8	455.0	403.9	330.8	241.7	146.4	60.1	5.5	0.0
67.5°	515.8	514.4	498.5	467.5	414.3	339.0	247.9	150.5	62.1	6.2	0.0
70°	516.5	515.8	506.1	475.1	421.9	345.3	253.4	154.0	63.5	6.2	0.0
72.5°	519.3	518.6	507.5	478.5	425.4	349.4	256.9	156.7	64.9	6.2	0.0
74°	522.0	519.3	505.4	477.1	426.0	350.8	257.6	157.4	64.9	6.9	0.0
75°	521.3	517.9	502.0	475.1	425.4	350.1	258.2	158.1	64.9	6.9	0.0
77.5°	491.6	493.0	484.0	461.9	418.4	348.0	256.9	156.7	64.9	6.9	0.0
80°	444.0	442.6	449.5	440.5	406.0	341.1	252.7	155.4	64.2	6.9	0.0
82.5°	377.7	382.5	401.9	408.8	386.0	328.7	246.5	151.9	62.8	6.9	0.0
85°	321.8	324.5	348.7	371.5	359.8	312.8	237.5	147.1	61.5	6.9	0.0
87.5°	279.0	281.0	301.1	330.1	331.4	294.2	225.8	140.9	59.4	6.9	0.0
90°	250.0	252.0	265.8	292.1	300.4	273.4	212.0	133.3	56.6	6.2	0.0
92.5°	232.0	233.4	241.7	260.3	269.3	248.6	197.5	125.7	53.9	6.2	0.0
95°	221.0	221.7	225.8	235.5	243.1	225.8	180.2	117.4	50.4	6.2	0.0
97.5°	214.1	214.1	215.4	219.6	220.3	205.8	165.7	108.4	47.6	5.5	0.0
100°	209.2	209.2	208.5	207.8	202.3	187.1	151.9	100.8	44.2	5.5	0.0
102.5°	206.5	206.5	204.4	199.6	190.6	171.9	139.5	93.2	41.4	4.8	0.0
105°	205.1	204.4	200.2	193.3	180.9	160.9	129.8	87.0	38.7	4.8	0.0
107.5°	202.3	201.6	196.8	187.8	173.3	151.9	121.5	81.5	36.6	4.1	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	198.2	197.5	192.7	182.3	167.1	144.3	114.6	76.6	34.5	4.1	0.0
112.5°	194.0	193.3	188.5	177.5	160.9	138.1	109.1	72.5	32.5	4.1	0.0
115°	189.9	189.9	183.7	171.9	155.4	132.6	103.6	67.7	30.4	3.5	0.0
117.5°	185.7	185.1	178.1	166.4	149.1	127.1	98.1	64.2	28.3	3.5	0.0
120°	180.2	179.5	172.6	160.2	143.6	121.5	93.2	60.1	26.2	3.5	0.0
122.5°	173.3	172.6	166.4	154.0	137.4	116.0	88.4	56.6	24.9	2.8	0.0
125°	166.4	165.7	158.8	147.8	131.9	110.5	83.6	53.2	22.8	2.8	0.0
127.5°	158.1	157.4	151.9	140.9	125.0	105.0	79.4	49.7	21.4	2.8	0.0
130°	151.2	150.5	144.3	134.0	119.5	99.4	75.3	46.3	19.3	2.1	0.0
132.5°	144.3	143.6	138.1	127.1	113.2	94.6	70.4	43.5	18.0	2.1	0.0
135°	138.1	136.7	131.2	120.8	107.0	89.1	66.3	40.0	16.6	2.1	0.0
137.5°	130.5	129.8	124.3	113.9	100.8	83.6	61.5	37.3	15.2	2.1	0.0
140°	123.6	122.9	117.4	107.7	94.6	78.0	57.3	34.5	13.8	2.1	0.0
142.5°	116.0	115.3	110.5	100.8	88.4	72.5	53.2	31.8	12.4	1.4	0.0
145°	108.4	107.7	102.2	93.9	82.2	66.3	48.3	28.3	11.7	1.4	0.0
147.5°	100.8	99.4	95.3	87.0	75.3	60.8	43.5	25.5	10.4	1.4	0.7
150°	91.8	91.8	87.0	79.4	68.4	55.2	39.4	22.8	9.0	1.4	0.0
152.5°	83.6	82.9	78.7	71.8	61.5	49.0	34.5	20.0	8.3	1.4	0.7
155°	73.9	73.2	69.7	63.5	53.9	42.8	29.7	17.3	6.9	0.7	0.0
157.5°	64.2	64.2	61.5	55.2	47.0	36.6	25.5	14.5	5.5	0.7	0.0
160°	55.2	54.5	51.8	46.3	39.4	30.4	20.7	11.7	4.8	0.7	0.7
162.5°	45.6	44.9	42.8	38.0	31.8	24.9	16.6	9.7	3.5	0.7	0.7
165°	35.2	35.2	33.1	29.7	24.9	18.6	11.7	6.2	2.8	0.7	0.7
167.5°	25.5	25.5	24.9	21.4	17.3	11.7	6.9	4.1	2.1	0.7	0.7
170°	15.9	15.9	14.5	11.0	7.6	5.5	4.1	2.1	1.4	0.7	0.7
172.5°	4.8	4.1	4.1	3.5	2.8	2.1	1.4	1.4	0.7	0.7	0.7
175°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
177.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	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
67.5°	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
74°	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: P226195

CATALOG NUMBER: FW-LD2-99-1000-40-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°	0.0	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)