

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: P226201

Luminaire Tested: **FW-LD2-99-1500-40-PC-R4-LGW**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P226201  
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-LD2-99-1500-40-PC-R4-LGW  
Description: NIGHT CONDOR LED FLOODLIGHT  
Light Source: (56) 4000 CCT, 80 CRI LEDS  
ELO89N056E840M  
Ballast/Driver: OSRAM  
OT25WPRG1250C

**Summary**

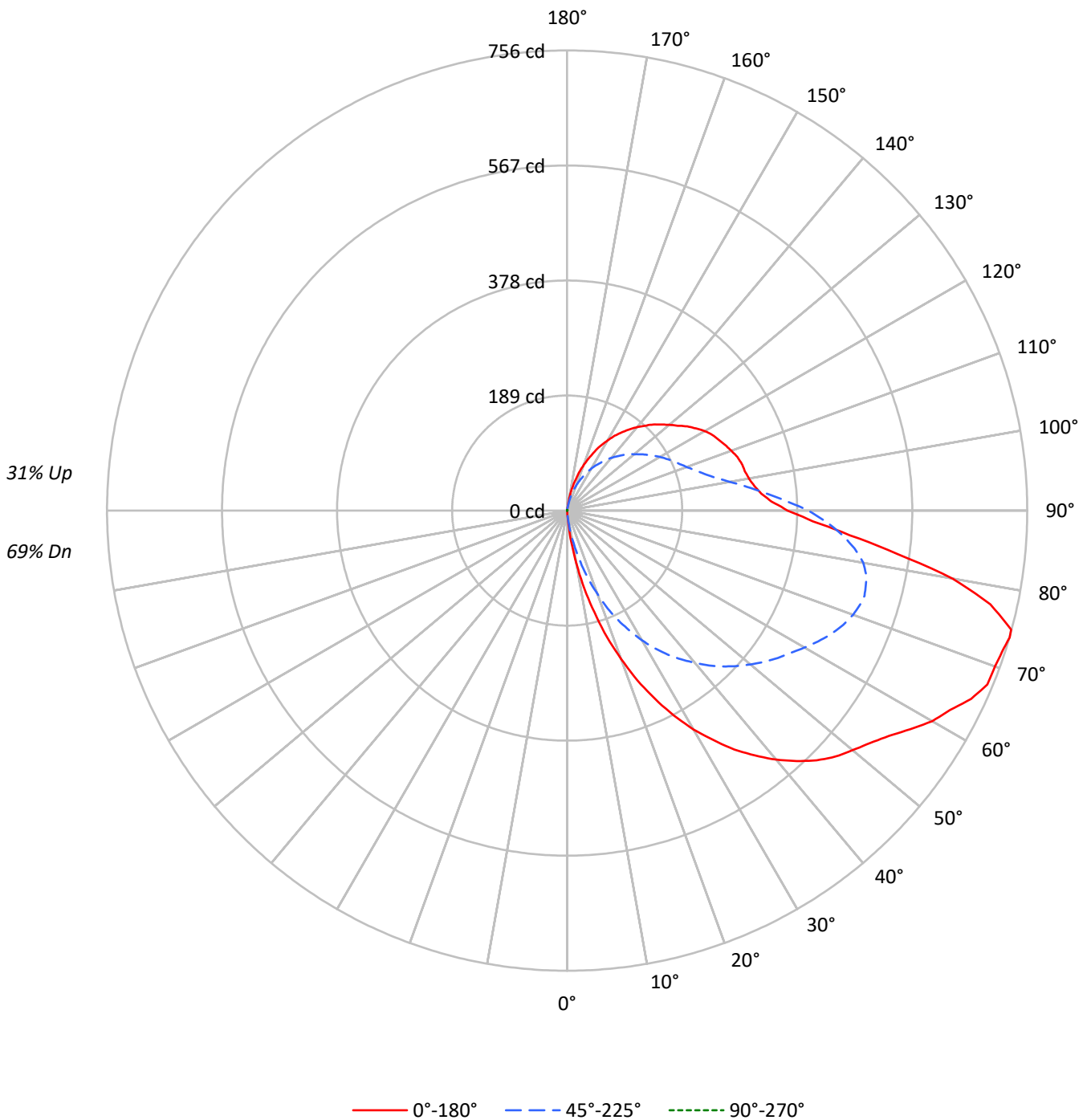
Lumens per Lamp: N/A  
Luminaire Lumens: 1537.0 lumens  
Efficiency: N/A  
Efficacy: 92.0 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: (L: 0 ' x W: 0.75 ' x H: 0.75 '  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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-LD2-99-1500-40-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°	1.0	0.1
10°-20°	13.4	0.9
20°-30°	42.9	2.8
30°-40°	82.9	5.4
40°-50°	125.6	8.2
50°-60°	167.5	10.9
60°-70°	209.7	13.6
70°-80°	231.1	15.0
80°-90°	190.5	12.4
90°-100°	133.8	8.7
100°-110°	102.6	6.7
110°-120°	82.9	5.4
120°-130°	63.3	4.1
130°-140°	44.3	2.9
140°-150°	27.6	1.8
150°-160°	13.6	0.9
160°-170°	4.0	0.3
170°-180°	0.2	0.0
0°-30°	57.3	3.7
0°-40°	140.2	9.1
0°-60°	433.3	28.2
0°-90°	1064.7	69.3
90°-120°	319.4	20.8
90°-150°	454.6	29.6
90°-180°	472.0	30.7
0°-180°	1537.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	21	8	0	0	0	4
15°	173	93	0	0	0	52
25°	341	199	0	0	0	159
35°	479	289	0	0	0	301
45°	580	362	0	0	0	448
55°	645	422	0	0	0	582
65°	732	479	0	0	0	722
75°	755	507	0	0	0	771
85°	466	453	0	0	0	418
90°	362	396	0	0	0	201
95°	320	327	0	0	0	259
105°	297	233	0	0	0	313
115°	275	192	0	0	0	273
125°	241	160	0	0	0	216
135°	200	129	0	0	0	155
145°	157	96	0	0	0	99
155°	107	62	0	0	0	50
165°	51	27	1	0	0	15
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°	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
5°	21.0	20.0	18.0	15.0	12.0	8.0	4.0	2.0	1.0	1.0	0.0
7.5°	51.0	49.0	46.0	42.0	33.0	23.0	13.0	5.0	1.0	1.0	0.0
10°	89.0	86.0	83.0	73.0	59.0	44.0	27.0	13.0	3.0	1.0	0.0
12.5°	132.0	129.0	122.0	109.0	90.0	67.0	44.0	22.0	5.0	1.0	0.0
15°	173.0	173.0	163.0	146.0	122.0	93.0	61.0	32.0	9.0	1.0	0.0
17.5°	218.1	216.1	206.1	185.1	156.0	120.0	81.0	43.0	13.0	1.0	0.0
20°	259.1	259.1	246.1	223.1	187.1	146.0	100.0	55.0	18.0	1.0	0.0
22.5°	302.1	300.1	286.1	259.1	221.1	174.0	121.0	67.0	23.0	1.0	0.0
25°	341.1	339.1	323.1	293.1	251.1	199.1	140.0	79.0	28.0	1.0	0.0
27.5°	379.1	375.1	359.1	326.1	280.1	222.1	159.0	91.0	33.0	1.0	0.0
30°	415.1	411.1	392.1	356.1	307.1	246.1	176.1	103.0	38.0	2.0	0.0
32.5°	447.1	446.1	424.1	387.1	334.1	268.1	194.1	113.0	42.0	2.0	0.0
35°	479.1	476.1	455.1	413.1	357.1	289.1	210.1	123.0	47.0	3.0	0.0
37.5°	507.1	504.1	480.1	438.1	380.1	308.1	224.1	133.0	51.0	3.0	0.0
40°	534.2	529.2	505.1	462.1	402.1	326.1	237.1	141.0	55.0	4.0	0.0
42.5°	558.2	553.2	529.2	483.1	423.1	345.1	251.1	149.0	58.0	4.0	0.0
45°	580.2	575.2	549.2	503.1	442.1	362.1	263.1	157.0	62.0	5.0	0.0
47.5°	598.2	595.2	570.2	522.1	460.1	378.1	275.1	164.0	65.0	5.0	0.0
50°	612.2	609.2	587.2	542.2	478.1	393.1	286.1	171.0	68.0	6.0	0.0
52.5°	627.2	624.2	604.2	560.2	495.1	408.1	297.1	178.1	71.0	6.0	0.0
55°	645.2	643.2	622.2	579.2	513.1	422.1	308.1	185.1	75.0	7.0	0.0
57.5°	668.2	665.2	642.2	597.2	530.2	435.1	319.1	192.1	78.0	7.0	0.0
60°	692.2	688.2	664.2	619.2	548.2	450.1	329.1	199.1	81.0	7.0	0.0
62.5°	709.2	707.2	686.2	640.2	567.2	465.1	340.1	206.1	84.0	8.0	0.0
65°	732.2	728.2	705.2	659.2	585.2	479.1	350.1	212.1	87.0	8.0	0.0
67.5°	747.2	745.2	722.2	677.2	600.2	491.1	359.1	218.1	90.0	9.0	0.0
70°	748.2	747.2	733.2	688.2	611.2	500.1	367.1	223.1	92.0	9.0	0.0
72.5°	752.2	751.2	735.2	693.2	616.2	506.1	372.1	227.1	94.0	9.0	0.0
74°	756.2	752.2	732.2	691.2	617.2	508.1	373.1	228.1	94.0	10.0	0.0
75°	755.2	750.2	727.2	688.2	616.2	507.1	374.1	229.1	94.0	10.0	0.0
77.5°	712.2	714.2	701.2	669.2	606.2	504.1	372.1	227.1	94.0	10.0	0.0
80°	643.2	641.2	651.2	638.2	588.2	494.1	366.1	225.1	93.0	10.0	0.0
82.5°	547.2	554.2	582.2	592.2	559.2	476.1	357.1	220.1	91.0	10.0	0.0
85°	466.1	470.1	505.1	538.2	521.1	453.1	344.1	213.1	89.0	10.0	0.0
87.5°	404.1	407.1	436.1	478.1	480.1	426.1	327.1	204.1	86.0	10.0	0.0
90°	362.1	365.1	385.1	423.1	435.1	396.1	307.1	193.1	82.0	9.0	0.0
92.5°	336.1	338.1	350.1	377.1	390.1	360.1	286.1	182.1	78.0	9.0	0.0
95°	320.1	321.1	327.1	341.1	352.1	327.1	261.1	170.0	73.0	9.0	0.0
97.5°	310.1	310.1	312.1	318.1	319.1	298.1	240.1	157.0	69.0	8.0	0.0
100°	303.1	303.1	302.1	301.1	293.1	271.1	220.1	146.0	64.0	8.0	0.0
102.5°	299.1	299.1	296.1	289.1	276.1	249.1	202.1	135.0	60.0	7.0	0.0
105°	297.1	296.1	290.1	280.1	262.1	233.1	188.1	126.0	56.0	7.0	0.0
107.5°	293.1	292.1	285.1	272.1	251.1	220.1	176.1	118.0	53.0	6.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	287.1	286.1	279.1	264.1	242.1	209.1	166.0	111.0	50.0	6.0	0.0
112.5°	281.1	280.1	273.1	257.1	233.1	200.1	158.0	105.0	47.0	6.0	0.0
115°	275.1	275.1	266.1	249.1	225.1	192.1	150.0	98.0	44.0	5.0	0.0
117.5°	269.1	268.1	258.1	241.1	216.1	184.1	142.0	93.0	41.0	5.0	0.0
120°	261.1	260.1	250.1	232.1	208.1	176.1	135.0	87.0	38.0	5.0	0.0
122.5°	251.1	250.1	241.1	223.1	199.1	168.0	128.0	82.0	36.0	4.0	0.0
125°	241.1	240.1	230.1	214.1	191.1	160.0	121.0	77.0	33.0	4.0	0.0
127.5°	229.1	228.1	220.1	204.1	181.1	152.0	115.0	72.0	31.0	4.0	0.0
130°	219.1	218.1	209.1	194.1	173.0	144.0	109.0	67.0	28.0	3.0	0.0
132.5°	209.1	208.1	200.1	184.1	164.0	137.0	102.0	63.0	26.0	3.0	0.0
135°	200.1	198.1	190.1	175.1	155.0	129.0	96.0	58.0	24.0	3.0	0.0
137.5°	189.1	188.1	180.1	165.0	146.0	121.0	89.0	54.0	22.0	3.0	0.0
140°	179.1	178.1	170.0	156.0	137.0	113.0	83.0	50.0	20.0	3.0	0.0
142.5°	168.0	167.0	160.0	146.0	128.0	105.0	77.0	46.0	18.0	2.0	0.0
145°	157.0	156.0	148.0	136.0	119.0	96.0	70.0	41.0	17.0	2.0	0.0
147.5°	146.0	144.0	138.0	126.0	109.0	88.0	63.0	37.0	15.0	2.0	1.0
150°	133.0	133.0	126.0	115.0	99.0	80.0	57.0	33.0	13.0	2.0	0.0
152.5°	121.0	120.0	114.0	104.0	89.0	71.0	50.0	29.0	12.0	2.0	1.0
155°	107.0	106.0	101.0	92.0	78.0	62.0	43.0	25.0	10.0	1.0	0.0
157.5°	93.0	93.0	89.0	80.0	68.0	53.0	37.0	21.0	8.0	1.0	0.0
160°	80.0	79.0	75.0	67.0	57.0	44.0	30.0	17.0	7.0	1.0	1.0
162.5°	66.0	65.0	62.0	55.0	46.0	36.0	24.0	14.0	5.0	1.0	1.0
165°	51.0	51.0	48.0	43.0	36.0	27.0	17.0	9.0	4.0	1.0	1.0
167.5°	37.0	37.0	36.0	31.0	25.0	17.0	10.0	6.0	3.0	1.0	1.0
170°	23.0	23.0	21.0	16.0	11.0	8.0	6.0	3.0	2.0	1.0	1.0
172.5°	7.0	6.0	6.0	5.0	4.0	3.0	2.0	2.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	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°	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: P226201

CATALOG NUMBER: FW-LD2-99-1500-40-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)