

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: P226058

Luminaire Tested: **FW-LD2-1212-2000-40-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226058
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-LD2-1212-2000-40-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (56) 4000 CCT, 80 CRI LEDS
 EL089N056E840M
Ballast/Driver: OSRAM
 OTi30/120-277/1A0

Summary

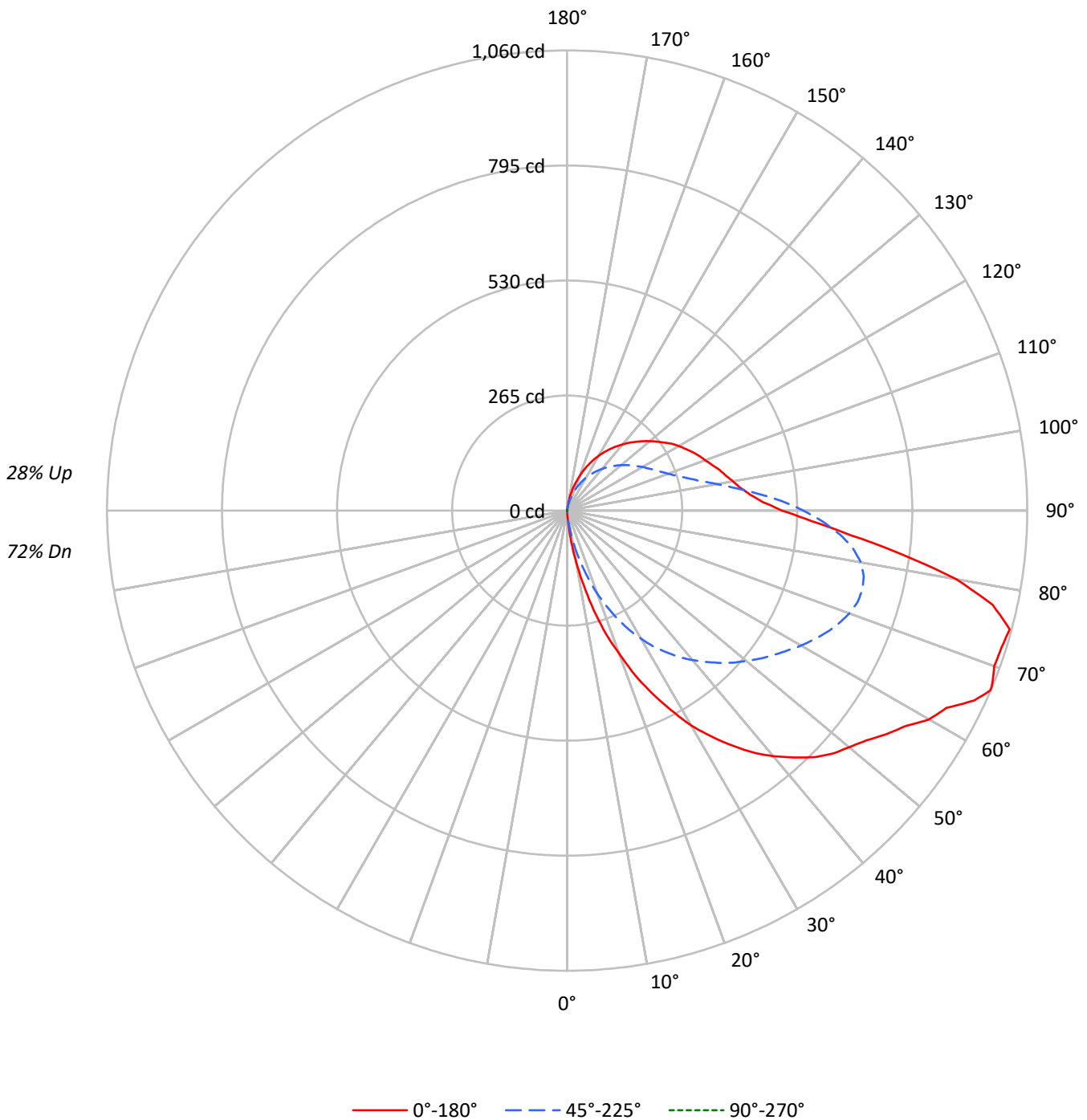
Lumens per Lamp: N/A
Luminaire Lumens: 2053.0 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '
CIE Type: Semi-Direct

Input Watts (W): 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°	18.5	0.9
20°-30°	59.4	2.9
30°-40°	115.1	5.6
40°-50°	174.1	8.5
50°-60°	231.8	11.3
60°-70°	291.5	14.2
70°-80°	321.8	15.7
80°-90°	266.1	13.0
90°-100°	179.0	8.7
100°-110°	126.3	6.2
110°-120°	96.1	4.7
120°-130°	72.1	3.5
130°-140°	50.1	2.4
140°-150°	30.6	1.5
150°-160°	14.8	0.7
160°-170°	4.2	0.2
170°-180°	0.2	0.0
0°-30°	79.3	3.9
0°-40°	194.4	9.5
0°-60°	600.3	29.2
0°-90°	1479.6	72.1
90°-120°	401.4	19.6
90°-150°	554.2	27.0
90°-180°	573.0	27.9
0°-180°	2053.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	30	12	1	0	0	6
15°	238	129	1	0	0	70
25°	466	275	0	0	0	218
35°	660	398	0	0	0	416
45°	803	496	0	0	0	620
55°	898	580	0	0	0	808
65°	1035	661	0	0	0	1015
75°	1055	704	0	0	0	1081
85°	657	631	0	0	0	592
90°	494	544	0	0	0	275
95°	423	442	0	0	0	339
105°	363	287	0	0	0	384
115°	319	222	0	0	0	316
125°	273	181	1	0	0	246
135°	224	144	1	0	0	174
145°	173	107	1	0	0	109
155°	116	67	1	0	0	55
165°	55	26	1	0	0	16
175°	2	2	1	0	0	1
180°	0	0	0	0	0	



TEST NUMBER: P226058

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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°	30.5	29.7	27.3	24.1	18.5	12.0	6.4	2.4	0.8	0.8	0.8
7.5°	72.2	71.4	66.6	57.8	46.6	34.5	20.9	8.8	1.6	0.8	0.8
10°	121.2	122.0	114.8	101.9	82.7	61.0	38.5	19.3	4.0	0.8	0.8
12.5°	175.8	177.4	168.6	149.3	123.6	94.7	61.8	31.3	8.8	0.8	0.0
15°	237.6	236.0	221.5	199.1	169.4	129.2	87.5	46.6	14.4	0.8	0.8
17.5°	297.0	293.8	280.9	252.8	215.1	166.1	114.0	62.6	20.9	0.8	0.0
20°	351.5	350.7	337.9	305.0	260.0	203.9	141.3	79.5	28.1	0.8	0.0
22.5°	411.7	407.7	388.5	354.8	304.2	240.0	169.4	96.3	34.5	1.6	0.0
25°	465.5	463.9	443.9	404.5	345.9	275.3	196.6	113.2	41.7	1.6	0.0
27.5°	517.7	517.7	494.4	451.1	386.9	309.8	220.7	130.0	49.8	2.4	0.0
30°	571.5	566.7	542.6	494.4	426.2	341.1	244.8	146.1	56.2	2.4	0.0
32.5°	616.4	613.2	588.3	535.3	461.5	371.6	268.9	160.5	62.6	3.2	0.0
35°	659.8	658.2	629.3	574.7	496.0	398.1	288.9	173.4	69.0	4.8	0.0
37.5°	702.3	696.7	667.8	610.8	528.9	425.4	307.4	185.4	74.6	5.6	0.0
40°	738.4	732.8	703.9	644.5	558.6	449.5	325.9	196.6	79.5	5.6	0.0
42.5°	771.3	766.5	735.2	674.2	587.5	472.7	342.7	207.1	84.3	6.4	0.0
45°	803.4	799.4	765.7	703.1	614.0	496.0	359.6	216.7	88.3	7.2	0.0
47.5°	829.1	824.3	793.0	729.6	638.1	518.5	376.4	225.5	92.3	8.0	0.0
50°	847.6	844.4	816.3	753.7	663.0	538.6	391.7	235.2	95.5	8.0	0.0
52.5°	869.2	865.2	839.5	780.1	685.4	560.2	406.1	244.8	99.5	8.8	0.0
55°	898.1	894.1	866.0	805.8	709.5	580.3	421.4	252.8	101.9	9.6	0.0
57.5°	923.8	920.6	893.3	833.1	735.2	600.4	436.6	261.7	105.9	9.6	0.0
60°	962.3	958.3	923.8	861.2	760.9	622.0	451.9	270.5	110.0	10.4	0.0
62.5°	984.8	983.2	958.3	892.5	788.2	642.1	466.3	278.5	113.2	11.2	0.0
65°	1034.6	1028.2	988.8	920.6	813.1	661.4	479.2	286.5	118.0	12.0	0.0
67°	1059.5	1053.0	1011.3	939.9	829.9	675.0	489.6	293.8	121.2	12.8	0.0
67.5°	1058.7	1053.8	1015.3	944.7	833.1	678.2	491.2	295.4	122.0	12.8	0.0
70°	1047.4	1045.0	1025.8	960.7	848.4	691.9	502.4	303.4	126.8	12.8	0.0
72.5°	1049.0	1046.6	1024.1	966.4	857.2	701.5	511.3	310.6	130.8	13.6	0.0
75°	1055.4	1048.2	1014.5	957.5	856.4	703.9	516.1	314.6	132.4	14.4	0.0
77.5°	1004.1	1002.5	980.8	934.3	843.6	699.9	515.3	315.4	133.2	14.4	0.0
80°	910.2	910.2	915.0	894.1	818.7	687.0	509.7	313.0	132.4	14.4	0.0
82.5°	780.1	790.6	820.3	829.9	779.3	663.8	496.0	306.6	130.0	14.4	0.0
85°	657.3	665.4	712.7	749.6	726.4	630.9	477.6	297.8	126.8	14.4	0.0
87.5°	563.4	567.5	607.6	665.4	665.4	589.9	452.7	284.9	122.0	13.6	0.0
90°	494.4	496.8	529.7	585.1	596.3	544.2	423.8	268.9	116.4	13.6	0.0
92.5°	451.1	452.7	471.9	508.9	532.1	495.2	390.9	251.2	109.2	12.8	0.0
95°	423.0	423.0	431.8	453.5	469.5	442.2	355.6	231.2	101.1	11.2	0.0
97.5°	402.1	402.1	403.7	411.7	416.6	392.5	318.6	211.1	93.1	10.4	0.0
100°	387.7	386.1	383.7	381.2	375.6	350.7	286.5	192.6	86.7	10.4	0.0
102.5°	374.0	372.4	366.8	357.2	342.7	313.8	258.4	174.2	78.7	8.8	0.0
105°	362.8	361.2	353.2	337.9	317.8	287.3	233.6	158.9	72.2	8.8	0.0
107.5°	349.9	349.1	340.3	322.7	298.6	264.9	214.3	144.5	66.6	8.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	338.7	337.9	329.1	309.8	283.3	248.0	199.1	133.2	61.0	7.2	0.0
112.5°	329.1	327.5	317.8	299.4	270.5	233.6	185.4	123.6	56.2	6.4	0.0
115°	318.6	317.0	307.4	288.1	258.4	221.5	173.4	114.8	51.4	6.4	0.0
117.5°	307.4	306.6	297.0	276.9	248.0	210.3	163.7	106.7	46.6	5.6	0.0
120°	297.0	297.0	285.7	266.5	236.8	200.7	154.9	100.3	43.3	4.8	0.8
122.5°	286.5	284.9	274.5	254.4	227.1	190.2	146.1	93.9	40.1	4.8	0.8
125°	272.9	272.1	262.5	243.2	216.7	181.4	138.1	88.3	37.7	4.0	0.8
127.5°	260.9	259.2	250.4	232.8	205.5	171.8	130.0	82.7	35.3	4.0	0.8
130°	248.8	247.2	238.4	221.5	195.8	162.9	122.8	77.1	32.9	4.0	0.8
132.5°	236.8	235.2	227.1	209.5	185.4	153.3	114.8	71.4	29.7	3.2	0.8
135°	223.9	223.1	215.1	198.2	175.0	143.7	106.7	66.6	27.3	3.2	0.8
137.5°	211.9	211.1	202.3	187.0	164.5	134.8	99.5	61.0	24.9	3.2	0.8
140°	199.1	198.2	190.2	175.8	154.1	125.2	92.3	56.2	22.5	2.4	0.8
142.5°	186.2	185.4	178.2	163.7	142.9	116.4	85.1	50.6	20.1	2.4	0.8
145°	173.4	171.8	165.3	151.7	132.4	106.7	77.1	45.7	17.7	2.4	0.8
147.5°	159.7	158.9	152.5	139.7	121.2	97.1	69.8	40.9	16.1	2.4	0.8
150°	146.1	145.3	138.9	126.8	110.0	88.3	62.6	36.1	13.6	2.4	0.8
152.5°	131.6	130.8	125.2	114.0	97.9	77.9	54.6	30.5	12.0	1.6	0.8
155°	116.4	116.4	111.6	101.1	85.9	67.4	46.6	26.5	10.4	1.6	0.8
157.5°	101.9	101.1	95.5	87.5	73.8	57.0	39.3	21.7	8.0	1.6	0.8
160°	85.1	85.1	81.1	73.0	61.0	47.4	32.1	16.9	6.4	1.6	0.8
162.5°	69.8	69.8	65.8	58.6	49.8	36.9	24.1	12.8	4.8	1.6	0.8
165°	54.6	53.8	50.6	44.9	37.7	26.5	16.9	8.8	4.0	1.6	0.8
167.5°	40.1	39.3	36.1	32.1	24.9	17.7	10.4	5.6	2.4	1.6	0.8
170°	24.1	24.1	23.3	18.5	12.8	8.0	5.6	3.2	1.6	0.8	0.8
172.5°	11.2	11.2	8.8	6.4	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: P226058

CATALOG NUMBER: FW-LD2-1212-2000-40-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°	0.8	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)