

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: P226055

Luminaire Tested: **FW-LD2-1212-1700-40-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226055
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-LD2-1212-1700-40-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (56) 4000 CCT, 80 CRI LEDS
ELO89N056E840M
Ballast/Driver: OSRAM
OTI30/120-277/1A0

Summary

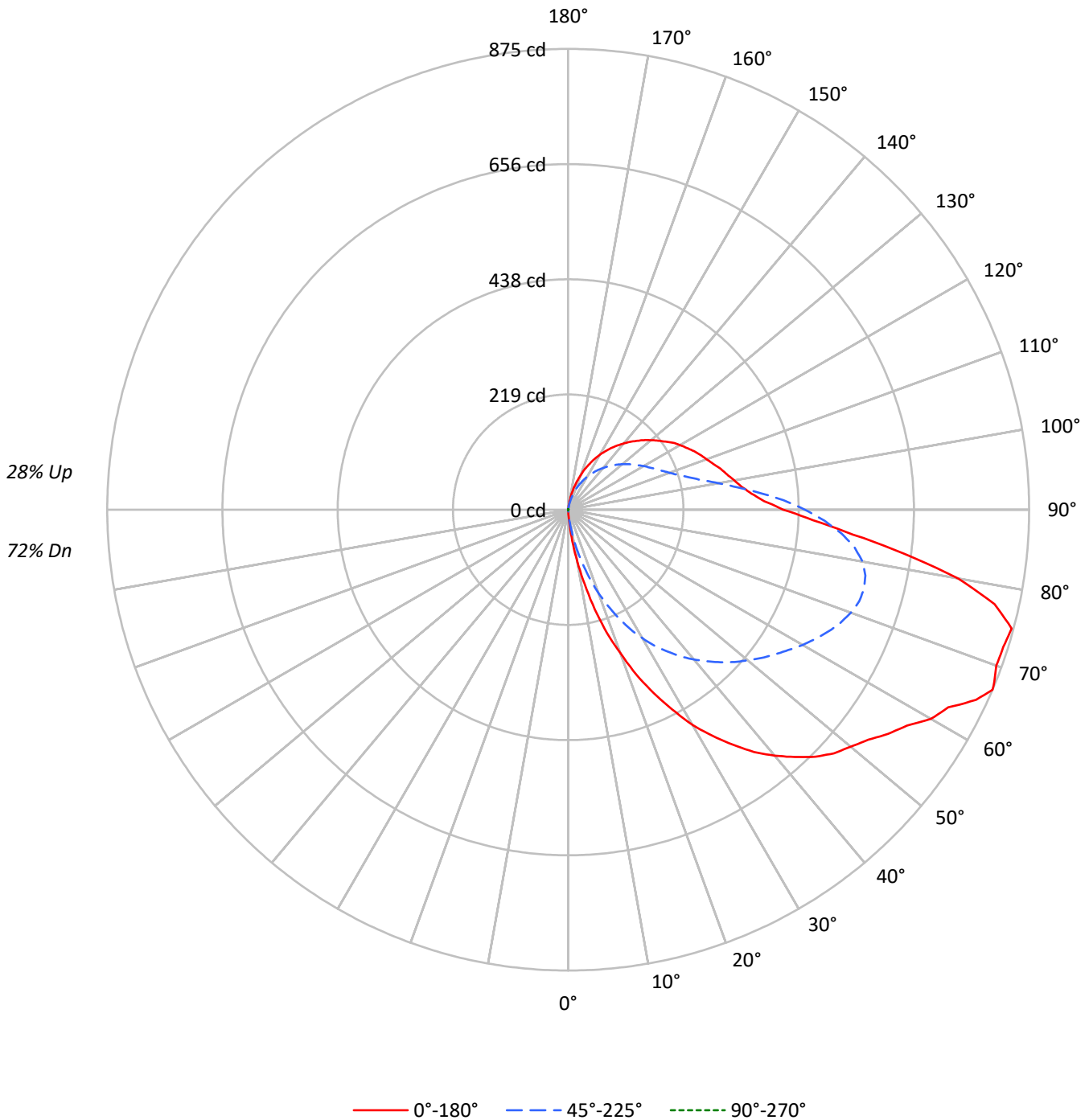
Lumens per Lamp: N/A
Luminaire Lumens: 1695.0 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '
CIE Type: Semi-Direct

Input Watts (W): 16.4
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: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-PC-R4-LGW

Luminous Intensity Polar Plot





TEST NUMBER: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-PC-R4-LGW

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: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-PC-R4-LGW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	0.1
10°-20°	15.3	0.9
20°-30°	49.1	2.9
30°-40°	95.0	5.6
40°-50°	143.7	8.5
50°-60°	191.4	11.3
60°-70°	240.6	14.2
70°-80°	265.7	15.7
80°-90°	219.7	13.0
90°-100°	147.8	8.7
100°-110°	104.3	6.2
110°-120°	79.4	4.7
120°-130°	59.5	3.5
130°-140°	41.3	2.4
140°-150°	25.3	1.5
150°-160°	12.2	0.7
160°-170°	3.4	0.2
170°-180°	0.2	0.0
0°-30°	65.5	3.9
0°-40°	160.5	9.5
0°-60°	495.6	29.2
0°-90°	1221.6	72.1
90°-120°	331.4	19.6
90°-150°	457.6	27.0
90°-180°	473.0	27.9
0°-180°	1695.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	25	10	1	0	0	5
15°	196	107	1	0	0	58
25°	384	227	0	0	0	180
35°	545	329	0	0	0	343
45°	663	410	0	0	0	512
55°	742	479	0	0	0	667
65°	854	546	0	0	0	838
75°	871	581	0	0	0	892
85°	543	521	0	0	0	489
90°	408	449	0	0	0	227
95°	349	365	0	0	0	280
105°	300	237	0	0	0	317
115°	263	183	0	0	0	261
125°	225	150	1	0	0	203
135°	185	119	1	0	0	144
145°	143	88	1	0	0	90
155°	96	56	1	0	0	45
165°	45	22	1	0	0	14
175°	2	1	1	0	0	1
180°	0	0	0	0	0	



TEST NUMBER: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-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°	4.0	3.3	2.7	2.7	2.0	1.3	1.3	0.7	0.7	0.7	0.7
5°	25.2	24.5	22.5	19.9	15.2	9.9	5.3	2.0	0.7	0.7	0.7
7.5°	59.6	59.0	55.0	47.7	38.4	28.5	17.2	7.3	1.3	0.7	0.7
10°	100.1	100.7	94.8	84.2	68.3	50.4	31.8	15.9	3.3	0.7	0.7
12.5°	145.1	146.4	139.2	123.3	102.0	78.2	51.0	25.8	7.3	0.7	0.0
15°	196.1	194.8	182.9	164.3	139.8	106.7	72.2	38.4	11.9	0.7	0.7
17.5°	245.2	242.5	231.9	208.7	177.6	137.2	94.1	51.7	17.2	0.7	0.0
20°	290.2	289.6	279.0	251.8	214.7	168.3	116.6	65.6	23.2	0.7	0.0
22.5°	339.9	336.6	320.7	292.9	251.1	198.1	139.8	79.5	28.5	1.3	0.0
25°	384.3	383.0	366.5	334.0	285.6	227.3	162.4	93.4	34.5	1.3	0.0
27.5°	427.4	427.4	408.2	372.4	319.4	255.8	182.2	107.4	41.1	2.0	0.0
30°	471.8	467.8	448.0	408.2	351.9	281.6	202.1	120.6	46.4	2.0	0.0
32.5°	508.9	506.3	485.7	442.0	381.0	306.8	222.0	132.5	51.7	2.7	0.0
35°	544.7	543.4	519.5	474.5	409.5	328.7	238.6	143.1	57.0	4.0	0.0
37.5°	579.8	575.2	551.3	504.3	436.7	351.2	253.8	153.1	61.6	4.6	0.0
40°	609.6	605.0	581.2	532.1	461.2	371.1	269.0	162.4	65.6	4.6	0.0
42.5°	636.8	632.8	607.0	556.6	485.1	390.3	283.0	171.0	69.6	5.3	0.0
45°	663.3	660.0	632.2	580.5	506.9	409.5	296.9	178.9	72.9	6.0	0.0
47.5°	684.5	680.6	654.7	602.4	526.8	428.1	310.8	186.2	76.2	6.6	0.0
50°	699.8	697.1	673.9	622.2	547.4	444.6	323.4	194.2	78.9	6.6	0.0
52.5°	717.7	714.3	693.1	644.1	565.9	462.5	335.3	202.1	82.2	7.3	0.0
55°	741.5	738.2	715.0	665.3	585.8	479.1	347.9	208.7	84.2	8.0	0.0
57.5°	762.7	760.1	737.5	687.8	607.0	495.7	360.5	216.0	87.5	8.0	0.0
60°	794.5	791.2	762.7	711.0	628.2	513.6	373.1	223.3	90.8	8.6	0.0
62.5°	813.1	811.8	791.2	736.9	650.7	530.1	385.0	229.9	93.4	9.3	0.0
65°	854.2	848.9	816.4	760.1	671.3	546.0	395.6	236.6	97.4	9.9	0.0
67°	874.7	869.4	835.0	776.0	685.2	557.3	404.2	242.5	100.1	10.6	0.0
67.5°	874.1	870.1	838.3	780.0	687.8	559.9	405.5	243.9	100.7	10.6	0.0
70°	864.8	862.8	846.9	793.2	700.4	571.2	414.8	250.5	104.7	10.6	0.0
72.5°	866.1	864.1	845.6	797.8	707.7	579.2	422.1	256.5	108.0	11.3	0.0
75°	871.4	865.4	837.6	790.6	707.1	581.2	426.1	259.8	109.3	11.9	0.0
77.5°	829.0	827.7	809.8	771.3	696.5	577.8	425.4	260.4	110.0	11.9	0.0
80°	751.5	751.5	755.4	738.2	675.9	567.2	420.8	258.4	109.3	11.9	0.0
82.5°	644.1	652.7	677.2	685.2	643.4	548.0	409.5	253.1	107.4	11.9	0.0
85°	542.7	549.3	588.4	618.9	599.7	520.9	394.3	245.8	104.7	11.9	0.0
87.5°	465.2	468.5	501.6	549.3	549.3	487.1	373.7	235.2	100.7	11.3	0.0
90°	408.2	410.2	437.4	483.1	492.4	449.3	349.9	222.0	96.1	11.3	0.0
92.5°	372.4	373.7	389.6	420.1	439.3	408.9	322.7	207.4	90.1	10.6	0.0
95°	349.2	349.2	356.5	374.4	387.7	365.1	293.6	190.8	83.5	9.3	0.0
97.5°	332.0	332.0	333.3	339.9	343.9	324.0	263.1	174.3	76.9	8.6	0.0
100°	320.1	318.7	316.8	314.8	310.1	289.6	236.6	159.0	71.6	8.6	0.0
102.5°	308.8	307.5	302.8	294.9	283.0	259.1	213.4	143.8	64.9	7.3	0.0
105°	299.5	298.2	291.6	279.0	262.4	237.2	192.8	131.2	59.6	7.3	0.0
107.5°	288.9	288.3	281.0	266.4	246.5	218.7	176.9	119.3	55.0	6.6	0.0



TEST NUMBER: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-PC-R4-LGW

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	279.6	279.0	271.7	255.8	233.9	204.8	164.3	110.0	50.4	6.0	0.0
112.5°	271.7	270.4	262.4	247.2	223.3	192.8	153.1	102.0	46.4	5.3	0.0
115°	263.1	261.8	253.8	237.9	213.4	182.9	143.1	94.8	42.4	5.3	0.0
117.5°	253.8	253.1	245.2	228.6	204.8	173.6	135.2	88.1	38.4	4.6	0.0
120°	245.2	245.2	235.9	220.0	195.5	165.7	127.9	82.8	35.8	4.0	0.7
122.5°	236.6	235.2	226.6	210.1	187.5	157.1	120.6	77.5	33.1	4.0	0.7
125°	225.3	224.6	216.7	200.8	178.9	149.8	114.0	72.9	31.1	3.3	0.7
127.5°	215.4	214.0	206.8	192.2	169.6	141.8	107.4	68.3	29.2	3.3	0.7
130°	205.4	204.1	196.8	182.9	161.7	134.5	101.4	63.6	27.2	3.3	0.7
132.5°	195.5	194.2	187.5	173.0	153.1	126.6	94.8	59.0	24.5	2.7	0.7
135°	184.9	184.2	177.6	163.7	144.5	118.6	88.1	55.0	22.5	2.7	0.7
137.5°	174.9	174.3	167.0	154.4	135.8	111.3	82.2	50.4	20.5	2.7	0.7
140°	164.3	163.7	157.1	145.1	127.2	103.4	76.2	46.4	18.6	2.0	0.7
142.5°	153.7	153.1	147.1	135.2	118.0	96.1	70.2	41.7	16.6	2.0	0.7
145°	143.1	141.8	136.5	125.2	109.3	88.1	63.6	37.8	14.6	2.0	0.7
147.5°	131.9	131.2	125.9	115.3	100.1	80.2	57.7	33.8	13.3	2.0	0.7
150°	120.6	119.9	114.6	104.7	90.8	72.9	51.7	29.8	11.3	2.0	0.7
152.5°	108.7	108.0	103.4	94.1	80.8	64.3	45.1	25.2	9.9	1.3	0.7
155°	96.1	96.1	92.1	83.5	70.9	55.7	38.4	21.9	8.6	1.3	0.7
157.5°	84.2	83.5	78.9	72.2	61.0	47.0	32.5	17.9	6.6	1.3	0.7
160°	70.2	70.2	66.9	60.3	50.4	39.1	26.5	13.9	5.3	1.3	0.7
162.5°	57.7	57.7	54.3	48.4	41.1	30.5	19.9	10.6	4.0	1.3	0.7
165°	45.1	44.4	41.7	37.1	31.1	21.9	13.9	7.3	3.3	1.3	0.7
167.5°	33.1	32.5	29.8	26.5	20.5	14.6	8.6	4.6	2.0	1.3	0.7
170°	19.9	19.9	19.2	15.2	10.6	6.6	4.6	2.7	1.3	0.7	0.7
172.5°	9.3	9.3	7.3	5.3	4.0	3.3	2.0	1.3	1.3	0.7	0.7
175°	2.0	2.0	1.3	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7
177.5°	0.0	0.0	0.7	0.7	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



TEST NUMBER: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-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°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.7	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: P226055

CATALOG NUMBER: FW-LD2-1212-1700-40-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°	0.7	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°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.7	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)