

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: P226056

Luminaire Tested: **FW-LD2-1212-1700-50-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226056
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-LD2-1212-1700-50-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (56) 5000 CCT, 80 CRI LEDS
 EL089N056E850M
Ballast/Driver: OSRAM
 OTi30/120-277/1A0

Summary

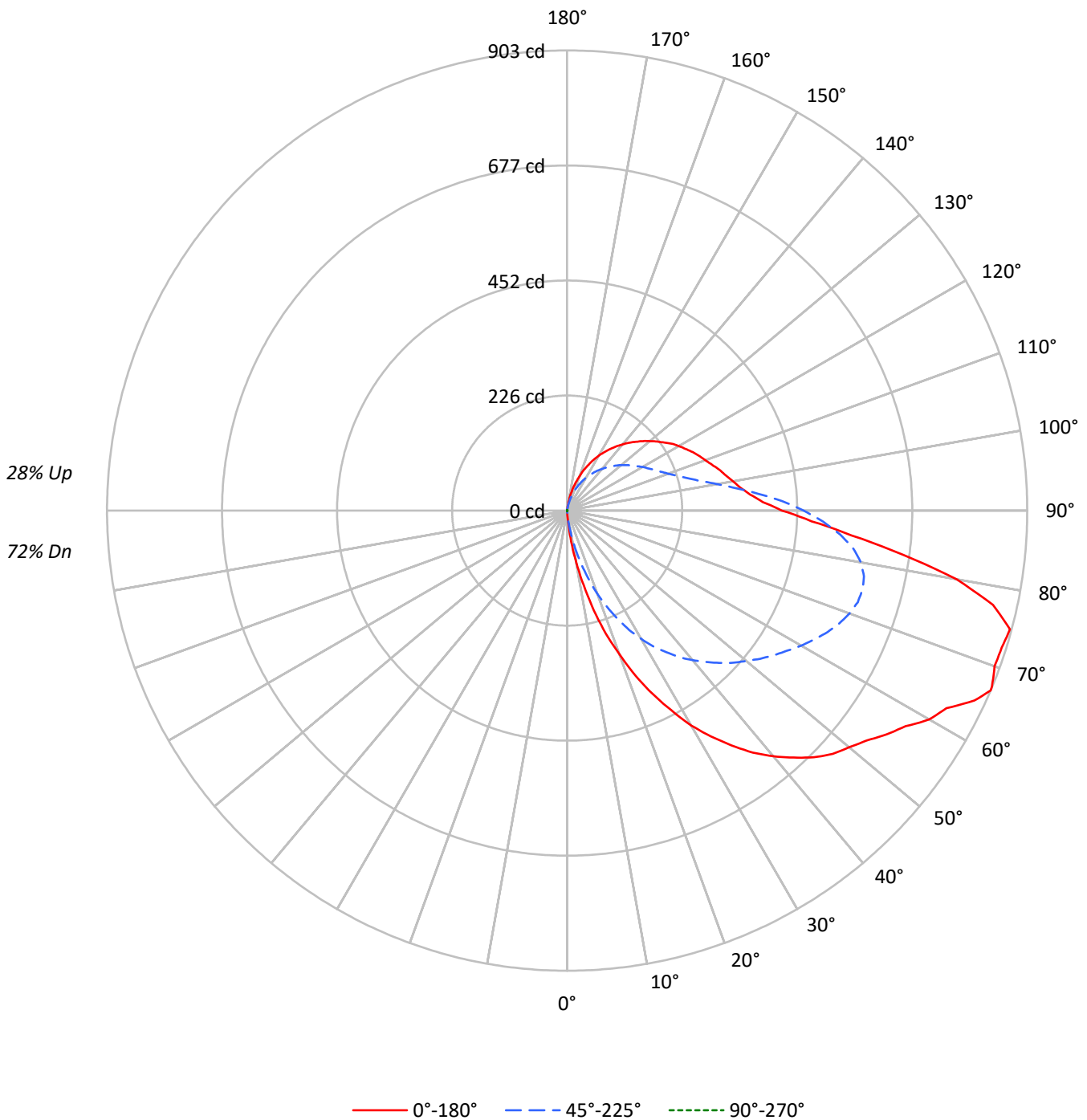
Lumens per Lamp: N/A
Luminaire Lumens: 1750.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '
CIE Type: Semi-Direct

Input Watts (W): 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

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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°	1.2	0.1
10°-20°	15.8	0.9
20°-30°	50.6	2.9
30°-40°	98.1	5.6
40°-50°	148.4	8.5
50°-60°	197.6	11.3
60°-70°	248.5	14.2
70°-80°	274.3	15.7
80°-90°	226.8	13.0
90°-100°	152.6	8.7
100°-110°	107.6	6.2
110°-120°	81.9	4.7
120°-130°	61.5	3.5
130°-140°	42.7	2.4
140°-150°	26.1	1.5
150°-160°	12.6	0.7
160°-170°	3.5	0.2
170°-180°	0.2	0.0
0°-30°	67.6	3.9
0°-40°	165.7	9.5
0°-60°	511.7	29.2
0°-90°	1261.2	72.1
90°-120°	342.2	19.6
90°-150°	472.4	27.0
90°-180°	489.0	27.9
0°-180°	1750.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	26	10	1	0	0	5
15°	202	110	1	0	0	60
25°	397	235	0	0	0	186
35°	562	339	0	0	0	354
45°	685	423	0	0	0	529
55°	766	495	0	0	0	688
65°	882	564	0	0	0	865
75°	900	600	0	0	0	921
85°	560	538	0	0	0	504
90°	421	464	0	0	0	234
95°	361	377	0	0	0	289
105°	309	245	0	0	0	327
115°	272	189	0	0	0	269
125°	233	155	1	0	0	209
135°	191	122	1	0	0	148
145°	148	91	1	0	0	93
155°	99	58	1	0	0	47
165°	46	23	1	0	0	14
175°	2	1	1	0	0	1
180°	0	0	0	0	0	



TEST NUMBER: P226056

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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°	4.1	3.4	2.7	2.7	2.1	1.4	1.4	0.7	0.7	0.7	0.7
5°	26.0	25.3	23.3	20.5	15.7	10.3	5.5	2.1	0.7	0.7	0.7
7.5°	61.6	60.9	56.8	49.3	39.7	29.4	17.8	7.5	1.4	0.7	0.7
10°	103.3	104.0	97.8	86.9	70.5	52.0	32.8	16.4	3.4	0.7	0.7
12.5°	149.8	151.2	143.7	127.3	105.4	80.7	52.7	26.7	7.5	0.7	0.0
15°	202.5	201.1	188.8	169.7	144.4	110.2	74.6	39.7	12.3	0.7	0.7
17.5°	253.1	250.4	239.5	215.5	183.4	141.6	97.2	53.4	17.8	0.7	0.0
20°	299.7	299.0	288.0	260.0	221.7	173.8	120.4	67.7	23.9	0.7	0.0
22.5°	351.0	347.6	331.1	302.4	259.3	204.6	144.4	82.1	29.4	1.4	0.0
25°	396.8	395.4	378.3	344.8	294.9	234.7	167.6	96.5	35.6	1.4	0.0
27.5°	441.3	441.3	421.4	384.5	329.8	264.1	188.1	110.8	42.4	2.1	0.0
30°	487.1	483.0	462.5	421.4	363.3	290.8	208.7	124.5	47.9	2.1	0.0
32.5°	525.4	522.7	501.5	456.3	393.4	316.8	229.2	136.8	53.4	2.7	0.0
35°	562.4	561.0	536.4	489.9	422.8	339.3	246.3	147.8	58.8	4.1	0.0
37.5°	598.6	593.9	569.2	520.6	450.9	362.6	262.0	158.0	63.6	4.8	0.0
40°	629.4	624.6	600.0	549.4	476.2	383.1	277.8	167.6	67.7	4.8	0.0
42.5°	657.5	653.4	626.7	574.7	500.8	403.0	292.1	176.5	71.8	5.5	0.0
45°	684.8	681.4	652.7	599.3	523.4	422.8	306.5	184.7	75.3	6.2	0.0
47.5°	706.7	702.6	676.0	621.9	543.9	442.0	320.9	192.3	78.7	6.8	0.0
50°	722.5	719.7	695.8	642.4	565.1	459.1	333.9	200.5	81.4	6.8	0.0
52.5°	741.0	737.5	715.6	665.0	584.3	477.5	346.2	208.7	84.8	7.5	0.0
55°	765.6	762.2	738.2	686.9	604.8	494.7	359.2	215.5	86.9	8.2	0.0
57.5°	787.5	784.7	761.5	710.2	626.7	511.8	372.2	223.0	90.3	8.2	0.0
60°	820.3	816.9	787.5	734.1	648.6	530.2	385.2	230.6	93.7	8.9	0.0
62.5°	839.5	838.1	816.9	760.8	671.8	547.3	397.5	237.4	96.5	9.6	0.0
65°	881.9	876.4	842.9	784.7	693.1	563.8	408.4	244.2	100.6	10.3	0.0
67°	903.1	897.6	862.0	801.2	707.4	575.4	417.3	250.4	103.3	10.9	0.0
67.5°	902.4	898.3	865.5	805.3	710.2	578.1	418.7	251.8	104.0	10.9	0.0
70°	892.8	890.8	874.4	818.9	723.2	589.7	428.3	258.6	108.1	10.9	0.0
72.5°	894.2	892.2	873.0	823.7	730.7	598.0	435.8	264.8	111.5	11.6	0.0
75°	899.7	893.5	864.8	816.2	730.0	600.0	439.9	268.2	112.9	12.3	0.0
77.5°	855.9	854.5	836.0	796.4	719.1	596.6	439.2	268.9	113.6	12.3	0.0
80°	775.8	775.8	779.9	762.2	697.8	585.6	434.4	266.8	112.9	12.3	0.0
82.5°	665.0	673.9	699.2	707.4	664.3	565.8	422.8	261.4	110.8	12.3	0.0
85°	560.3	567.2	607.5	639.0	619.2	537.8	407.1	253.8	108.1	12.3	0.0
87.5°	480.3	483.7	517.9	567.2	567.2	502.9	385.9	242.9	104.0	11.6	0.0
90°	421.4	423.5	451.5	498.8	508.3	463.9	361.2	229.2	99.2	11.6	0.0
92.5°	384.5	385.9	402.3	433.8	453.6	422.1	333.2	214.1	93.0	10.9	0.0
95°	360.6	360.6	368.1	386.6	400.2	377.0	303.1	197.0	86.2	9.6	0.0
97.5°	342.8	342.8	344.1	351.0	355.1	334.6	271.6	179.9	79.4	8.9	0.0
100°	330.5	329.1	327.0	325.0	320.2	299.0	244.2	164.2	73.9	8.9	0.0
102.5°	318.8	317.5	312.7	304.5	292.1	267.5	220.3	148.5	67.0	7.5	0.0
105°	309.2	307.9	301.0	288.0	270.9	244.9	199.1	135.5	61.6	7.5	0.0
107.5°	298.3	297.6	290.1	275.0	254.5	225.8	182.7	123.1	56.8	6.8	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	288.7	288.0	280.5	264.1	241.5	211.4	169.7	113.6	52.0	6.2	0.0
112.5°	280.5	279.1	270.9	255.2	230.6	199.1	158.0	105.4	47.9	5.5	0.0
115°	271.6	270.2	262.0	245.6	220.3	188.8	147.8	97.8	43.8	5.5	0.0
117.5°	262.0	261.4	253.1	236.0	211.4	179.3	139.6	91.0	39.7	4.8	0.0
120°	253.1	253.1	243.6	227.1	201.8	171.0	132.0	85.5	36.9	4.1	0.7
122.5°	244.2	242.9	234.0	216.9	193.6	162.1	124.5	80.0	34.2	4.1	0.7
125°	232.6	231.9	223.7	207.3	184.7	154.6	117.7	75.3	32.2	3.4	0.7
127.5°	222.4	221.0	213.5	198.4	175.1	146.4	110.8	70.5	30.1	3.4	0.7
130°	212.1	210.7	203.2	188.8	166.9	138.9	104.7	65.7	28.1	3.4	0.7
132.5°	201.8	200.5	193.6	178.6	158.0	130.7	97.8	60.9	25.3	2.7	0.7
135°	190.9	190.2	183.4	169.0	149.1	122.5	91.0	56.8	23.3	2.7	0.7
137.5°	180.6	179.9	172.4	159.4	140.3	114.9	84.8	52.0	21.2	2.7	0.7
140°	169.7	169.0	162.1	149.8	131.4	106.7	78.7	47.9	19.2	2.1	0.7
142.5°	158.7	158.0	151.9	139.6	121.8	99.2	72.5	43.1	17.1	2.1	0.7
145°	147.8	146.4	140.9	129.3	112.9	91.0	65.7	39.0	15.1	2.1	0.7
147.5°	136.1	135.5	130.0	119.0	103.3	82.8	59.5	34.9	13.7	2.1	0.7
150°	124.5	123.8	118.4	108.1	93.7	75.3	53.4	30.8	11.6	2.1	0.7
152.5°	112.2	111.5	106.7	97.2	83.5	66.4	46.5	26.0	10.3	1.4	0.7
155°	99.2	99.2	95.1	86.2	73.2	57.5	39.7	22.6	8.9	1.4	0.7
157.5°	86.9	86.2	81.4	74.6	62.9	48.6	33.5	18.5	6.8	1.4	0.7
160°	72.5	72.5	69.1	62.3	52.0	40.4	27.4	14.4	5.5	1.4	0.7
162.5°	59.5	59.5	56.1	49.9	42.4	31.5	20.5	10.9	4.1	1.4	0.7
165°	46.5	45.8	43.1	38.3	32.2	22.6	14.4	7.5	3.4	1.4	0.7
167.5°	34.2	33.5	30.8	27.4	21.2	15.1	8.9	4.8	2.1	1.4	0.7
170°	20.5	20.5	19.8	15.7	10.9	6.8	4.8	2.7	1.4	0.7	0.7
172.5°	9.6	9.6	7.5	5.5	4.1	3.4	2.1	1.4	1.4	0.7	0.7
175°	2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	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



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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°	0.7	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: P226056

CATALOG NUMBER: FW-LD2-1212-1700-50-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°	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)