

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: P226061

Luminaire Tested: **FW-LD2-1212-2500-40-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226061
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-LD2-1212-2500-40-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

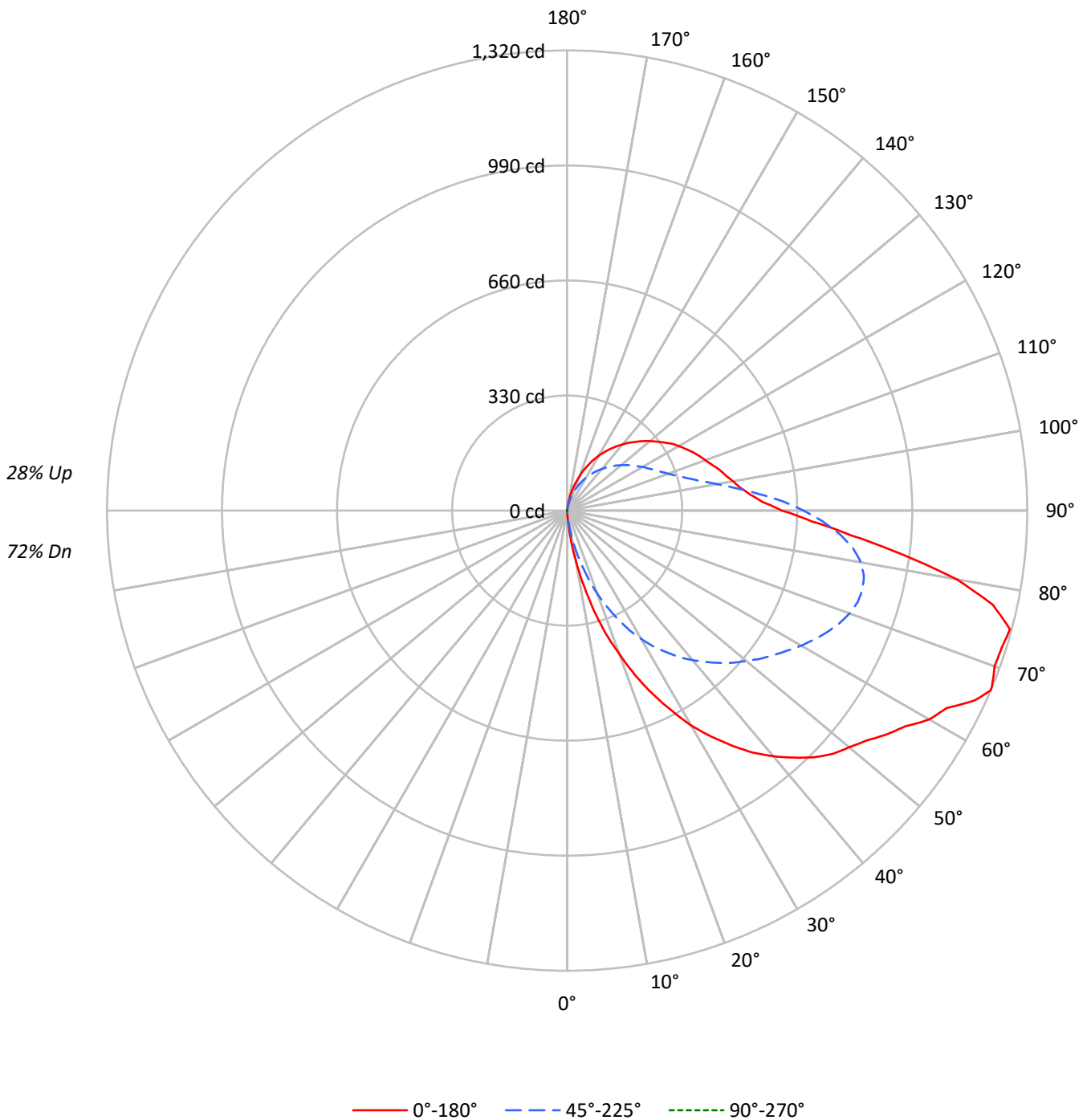
Lumens per Lamp: N/A
Luminaire Lumens: 2557.9 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '
CIE Type: Semi-Direct

Input Watts (W): 27.3
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°	1.8	0.1
10°-20°	23.0	0.9
20°-30°	74.0	2.9
30°-40°	143.3	5.6
40°-50°	216.9	8.5
50°-60°	288.8	11.3
60°-70°	363.2	14.2
70°-80°	400.9	15.7
80°-90°	331.5	13.0
90°-100°	223.0	8.7
100°-110°	157.3	6.2
110°-120°	119.8	4.7
120°-130°	89.9	3.5
130°-140°	62.4	2.4
140°-150°	38.2	1.5
150°-160°	18.4	0.7
160°-170°	5.2	0.2
170°-180°	0.3	0.0
0°-30°	98.8	3.9
0°-40°	242.2	9.5
0°-60°	747.9	29.2
0°-90°	1843.6	72.1
90°-120°	500.1	19.6
90°-150°	690.5	27.0
90°-180°	714.0	27.9
0°-180°	2557.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	38	15	1	0	0	7
15°	296	161	1	0	0	88
25°	580	343	0	0	0	271
35°	822	496	0	0	0	518
45°	1001	618	0	0	0	773
55°	1119	723	0	0	0	1006
65°	1289	824	0	0	0	1264
75°	1315	877	0	0	0	1346
85°	819	786	0	0	0	737
90°	616	678	0	0	0	342
95°	527	551	0	0	0	422
105°	452	358	0	0	0	478
115°	397	276	0	0	0	394
125°	340	226	1	0	0	306
135°	279	179	1	0	0	217
145°	216	133	1	0	0	136
155°	145	84	1	0	0	68
165°	68	33	1	0	0	20
175°	3	2	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°	6.0	5.0	4.0	4.0	3.0	2.0	2.0	1.0	1.0	1.0	1.0
5°	38.0	37.0	34.0	30.0	23.0	15.0	8.0	3.0	1.0	1.0	1.0
7.5°	90.0	89.0	83.0	72.0	58.0	43.0	26.0	11.0	2.0	1.0	1.0
10°	151.0	152.0	143.0	127.0	103.0	76.0	48.0	24.0	5.0	1.0	1.0
12.5°	219.0	221.0	210.0	186.0	154.0	118.0	77.0	39.0	11.0	1.0	0.0
15°	296.0	294.0	276.0	248.0	211.0	161.0	109.0	58.0	18.0	1.0	1.0
17.5°	370.0	366.0	350.0	315.0	268.0	207.0	142.0	78.0	26.0	1.0	0.0
20°	438.0	437.0	421.0	380.0	324.0	254.0	176.0	99.0	35.0	1.0	0.0
22.5°	513.0	508.0	484.0	442.0	379.0	299.0	211.0	120.0	43.0	2.0	0.0
25°	580.0	578.0	553.0	504.0	431.0	343.0	245.0	141.0	52.0	2.0	0.0
27.5°	645.0	645.0	616.0	562.0	482.0	386.0	275.0	162.0	62.0	3.0	0.0
30°	712.0	706.0	676.0	616.0	531.0	425.0	305.0	182.0	70.0	3.0	0.0
32.5°	768.0	764.0	733.0	667.0	575.0	463.0	335.0	200.0	78.0	4.0	0.0
35°	822.0	820.0	784.0	716.0	618.0	496.0	360.0	216.0	86.0	6.0	0.0
37.5°	875.0	868.0	832.0	761.0	659.0	530.0	383.0	231.0	93.0	7.0	0.0
40°	920.0	913.0	877.0	803.0	696.0	560.0	406.0	245.0	99.0	7.0	0.0
42.5°	961.1	955.1	916.0	840.0	732.0	589.0	427.0	258.0	105.0	8.0	0.0
45°	1001.1	996.1	954.1	876.0	765.0	618.0	448.0	270.0	110.0	9.0	0.0
47.5°	1033.1	1027.1	988.1	909.0	795.0	646.0	469.0	281.0	115.0	10.0	0.0
50°	1056.1	1052.1	1017.1	939.0	826.0	671.0	488.0	293.0	119.0	10.0	0.0
52.5°	1083.1	1078.1	1046.1	972.1	854.0	698.0	506.0	305.0	124.0	11.0	0.0
55°	1119.1	1114.1	1079.1	1004.1	884.0	723.0	525.0	315.0	127.0	12.0	0.0
57.5°	1151.1	1147.1	1113.1	1038.1	916.0	748.0	544.0	326.0	132.0	12.0	0.0
60°	1199.1	1194.1	1151.1	1073.1	948.1	775.0	563.0	337.0	137.0	13.0	0.0
62.5°	1227.1	1225.1	1194.1	1112.1	982.1	800.0	581.0	347.0	141.0	14.0	0.0
65°	1289.1	1281.1	1232.1	1147.1	1013.1	824.0	597.0	357.0	147.0	15.0	0.0
67°	1320.1	1312.1	1260.1	1171.1	1034.1	841.0	610.0	366.0	151.0	16.0	0.0
67.5°	1319.1	1313.1	1265.1	1177.1	1038.1	845.0	612.0	368.0	152.0	16.0	0.0
70°	1305.1	1302.1	1278.1	1197.1	1057.1	862.0	626.0	378.0	158.0	16.0	0.0
72.5°	1307.1	1304.1	1276.1	1204.1	1068.1	874.0	637.0	387.0	163.0	17.0	0.0
75°	1315.1	1306.1	1264.1	1193.1	1067.1	877.0	643.0	392.0	165.0	18.0	0.0
77.5°	1251.1	1249.1	1222.1	1164.1	1051.1	872.0	642.0	393.0	166.0	18.0	0.0
80°	1134.1	1134.1	1140.1	1114.1	1020.1	856.0	635.0	390.0	165.0	18.0	0.0
82.5°	972.1	985.1	1022.1	1034.1	971.1	827.0	618.0	382.0	162.0	18.0	0.0
85°	819.0	829.0	888.0	934.0	905.0	786.0	595.0	371.0	158.0	18.0	0.0
87.5°	702.0	707.0	757.0	829.0	829.0	735.0	564.0	355.0	152.0	17.0	0.0
90°	616.0	619.0	660.0	729.0	743.0	678.0	528.0	335.0	145.0	17.0	0.0
92.5°	562.0	564.0	588.0	634.0	663.0	617.0	487.0	313.0	136.0	16.0	0.0
95°	527.0	527.0	538.0	565.0	585.0	551.0	443.0	288.0	126.0	14.0	0.0
97.5°	501.0	501.0	503.0	513.0	519.0	489.0	397.0	263.0	116.0	13.0	0.0
100°	483.0	481.0	478.0	475.0	468.0	437.0	357.0	240.0	108.0	13.0	0.0
102.5°	466.0	464.0	457.0	445.0	427.0	391.0	322.0	217.0	98.0	11.0	0.0
105°	452.0	450.0	440.0	421.0	396.0	358.0	291.0	198.0	90.0	11.0	0.0
107.5°	436.0	435.0	424.0	402.0	372.0	330.0	267.0	180.0	83.0	10.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	422.0	421.0	410.0	386.0	353.0	309.0	248.0	166.0	76.0	9.0	0.0
112.5°	410.0	408.0	396.0	373.0	337.0	291.0	231.0	154.0	70.0	8.0	0.0
115°	397.0	395.0	383.0	359.0	322.0	276.0	216.0	143.0	64.0	8.0	0.0
117.5°	383.0	382.0	370.0	345.0	309.0	262.0	204.0	133.0	58.0	7.0	0.0
120°	370.0	370.0	356.0	332.0	295.0	250.0	193.0	125.0	54.0	6.0	1.0
122.5°	357.0	355.0	342.0	317.0	283.0	237.0	182.0	117.0	50.0	6.0	1.0
125°	340.0	339.0	327.0	303.0	270.0	226.0	172.0	110.0	47.0	5.0	1.0
127.5°	325.0	323.0	312.0	290.0	256.0	214.0	162.0	103.0	44.0	5.0	1.0
130°	310.0	308.0	297.0	276.0	244.0	203.0	153.0	96.0	41.0	5.0	1.0
132.5°	295.0	293.0	283.0	261.0	231.0	191.0	143.0	89.0	37.0	4.0	1.0
135°	279.0	278.0	268.0	247.0	218.0	179.0	133.0	83.0	34.0	4.0	1.0
137.5°	264.0	263.0	252.0	233.0	205.0	168.0	124.0	76.0	31.0	4.0	1.0
140°	248.0	247.0	237.0	219.0	192.0	156.0	115.0	70.0	28.0	3.0	1.0
142.5°	232.0	231.0	222.0	204.0	178.0	145.0	106.0	63.0	25.0	3.0	1.0
145°	216.0	214.0	206.0	189.0	165.0	133.0	96.0	57.0	22.0	3.0	1.0
147.5°	199.0	198.0	190.0	174.0	151.0	121.0	87.0	51.0	20.0	3.0	1.0
150°	182.0	181.0	173.0	158.0	137.0	110.0	78.0	45.0	17.0	3.0	1.0
152.5°	164.0	163.0	156.0	142.0	122.0	97.0	68.0	38.0	15.0	2.0	1.0
155°	145.0	145.0	139.0	126.0	107.0	84.0	58.0	33.0	13.0	2.0	1.0
157.5°	127.0	126.0	119.0	109.0	92.0	71.0	49.0	27.0	10.0	2.0	1.0
160°	106.0	106.0	101.0	91.0	76.0	59.0	40.0	21.0	8.0	2.0	1.0
162.5°	87.0	87.0	82.0	73.0	62.0	46.0	30.0	16.0	6.0	2.0	1.0
165°	68.0	67.0	63.0	56.0	47.0	33.0	21.0	11.0	5.0	2.0	1.0
167.5°	50.0	49.0	45.0	40.0	31.0	22.0	13.0	7.0	3.0	2.0	1.0
170°	30.0	30.0	29.0	23.0	16.0	10.0	7.0	4.0	2.0	1.0	1.0
172.5°	14.0	14.0	11.0	8.0	6.0	5.0	3.0	2.0	2.0	1.0	1.0
175°	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
177.5°	0.0	0.0	1.0	1.0	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°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	1.0	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°	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: P226061

CATALOG NUMBER: FW-LD2-1212-2500-40-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°	1.0	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°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	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)