

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: P226085

Luminaire Tested: **FW-LD2-612-1000-40-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226085
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-064-10)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FW-LD2-612-1000-40-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (28) 4000 CCT, 80 CRI LEDS
 EL089N028E840M
Ballast/Driver: OSRAM
 OT25WPRG1250C

Summary

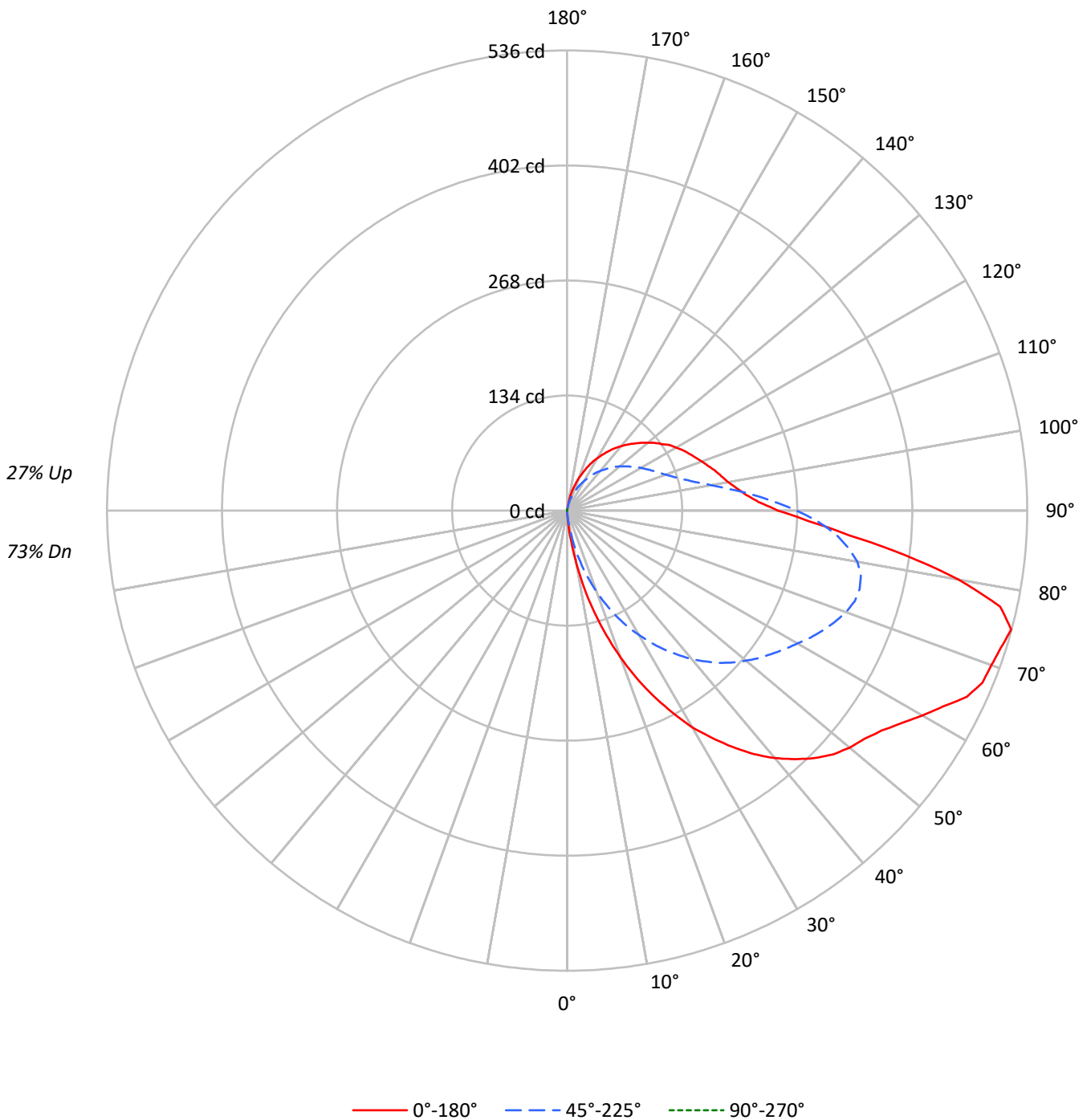
Lumens per Lamp: N/A
Luminaire Lumens: 1021.0 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 0.5 ' x H: 1 '
CIE Type: Semi-Direct

Input Watts (W): 13.1
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: P226085

CATALOG NUMBER: FW-LD2-612-1000-40-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	113	113	113	113	107	107	107	107	96	96	96		86	86	86		77	77	77	73
1	95	88	81	75	90	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	37	31		37	32	27	23
4	67	52	41	33	62	49	39	31	43	34	28		37	30	24		31	26	21	18
5	61	45	35	27	56	42	33	25	37	29	22		32	25	20		27	22	17	14
6	55	40	29	22	51	37	28	21	33	25	18		28	21	16		24	18	14	11
7	51	35	26	19	47	33	24	18	29	21	15		25	19	13		22	16	12	9
8	47	32	22	16	44	30	21	15	26	19	13		23	16	11		20	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°	0.8	0.1
10°-20°	9.4	0.9
20°-30°	29.6	2.9
30°-40°	57.6	5.6
40°-50°	87.8	8.6
50°-60°	116.0	11.4
60°-70°	145.1	14.2
70°-80°	161.9	15.9
80°-90°	132.6	13.0
90°-100°	87.5	8.6
100°-110°	61.8	6.1
110°-120°	47.5	4.6
120°-130°	35.6	3.5
130°-140°	24.4	2.4
140°-150°	14.6	1.4
150°-160°	6.8	0.7
160°-170°	1.9	0.2
170°-180°	0.1	0.0
0°-30°	39.8	3.9
0°-40°	97.4	9.5
0°-60°	301.2	29.5
0°-90°	740.8	72.6
90°-120°	196.8	19.3
90°-150°	271.4	26.6
90°-180°	280.0	27.4
0°-180°	1021.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	16	7	0	0	0	3
15°	122	66	0	0	0	36
25°	238	136	0	0	0	112
35°	336	198	0	0	0	212
45°	408	251	0	0	0	315
55°	447	291	0	0	0	404
65°	514	329	0	0	0	505
75°	536	353	0	0	0	549
85°	329	314	0	0	0	299
90°	245	267	0	0	0	136
95°	209	216	0	0	0	168
105°	179	140	0	0	0	189
115°	157	110	0	0	0	156
125°	135	89	0	0	0	122
135°	110	71	0	0	0	86
145°	85	50	0	0	0	53
155°	56	31	0	0	0	26
165°	25	12	0	0	0	8
175°	0	1	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P226085

CATALOG NUMBER: FW-LD2-612-1000-40-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°	3.1	2.4	2.4	2.4	1.6	0.8	0.8	0.8	0.8	0.0	0.0
5°	16.5	15.7	14.9	13.3	10.2	7.1	3.9	1.6	0.8	0.0	0.0
7.5°	36.8	37.6	35.3	30.6	24.3	18.0	11.0	5.5	1.6	0.8	0.0
10°	63.5	63.5	60.4	53.3	43.1	32.1	20.4	10.2	2.4	0.8	0.0
12.5°	93.3	91.7	87.0	76.8	63.5	47.8	32.1	16.5	4.7	0.8	0.0
15°	122.3	119.9	113.7	102.7	86.2	65.9	43.9	23.5	7.8	0.8	0.0
17.5°	152.1	151.3	143.5	128.6	108.2	83.1	56.4	30.6	10.2	0.8	0.0
20°	181.9	180.3	170.1	153.7	130.1	101.1	69.8	38.4	13.3	0.8	0.0
22.5°	210.9	208.5	197.6	178.0	150.5	118.4	82.3	46.3	16.5	0.8	0.0
25°	238.3	236.0	225.0	201.5	171.7	135.6	94.9	54.1	20.4	0.8	0.0
27.5°	265.0	263.4	249.3	225.0	191.3	152.1	107.4	61.9	23.5	1.6	0.0
30°	291.6	288.5	273.6	246.2	210.1	167.0	119.9	69.8	26.7	1.6	0.0
32.5°	313.6	312.0	295.6	267.3	228.1	182.7	130.9	77.6	29.8	2.4	0.0
35°	336.3	334.8	317.5	287.7	246.2	197.6	142.7	84.7	32.9	2.4	0.0
37.5°	357.5	354.4	337.9	305.8	262.6	211.7	154.4	91.7	36.1	3.1	0.0
40°	376.3	374.0	355.9	323.8	279.1	225.8	164.6	97.2	38.4	3.1	0.0
42.5°	392.8	391.2	373.2	339.5	294.8	238.3	173.3	103.5	40.8	3.1	0.0
45°	407.7	405.3	387.3	354.4	308.9	250.9	181.9	109.0	43.1	3.1	0.0
47.5°	420.2	417.9	399.8	366.1	321.4	261.8	189.7	113.7	44.7	3.9	0.0
50°	429.6	428.1	411.6	379.4	333.2	272.0	197.6	117.6	47.0	3.9	0.0
52.5°	436.7	435.1	421.8	391.2	344.2	282.2	205.4	122.3	48.6	3.9	0.0
55°	446.9	445.3	432.0	403.0	355.9	290.9	211.7	126.2	51.0	3.9	0.0
57.5°	461.0	459.4	444.5	416.3	367.7	300.3	218.7	130.9	52.5	4.7	0.0
60°	477.4	475.9	459.4	428.1	379.4	309.7	225.8	135.6	54.9	4.7	0.0
62.5°	493.9	491.6	476.7	443.7	392.8	319.9	232.1	139.5	56.4	4.7	0.0
65°	513.5	510.4	491.6	457.8	404.5	329.3	239.1	143.5	58.0	4.7	0.0
67.5°	523.7	521.3	504.9	472.0	415.5	337.9	244.6	146.6	59.6	5.5	0.0
70°	526.0	524.5	514.3	482.1	424.9	345.7	250.1	150.5	61.2	5.5	0.0
72.5°	530.0	529.2	518.2	488.4	431.2	351.2	254.0	152.9	61.9	5.5	0.0
75°	535.5	532.3	515.9	486.8	432.8	352.8	256.4	153.7	62.7	5.5	0.0
77.5°	516.6	513.5	501.0	475.1	427.3	350.4	255.6	153.7	62.7	5.5	0.0
80°	463.3	464.9	468.0	454.7	414.7	343.4	250.9	151.3	61.2	5.5	0.0
82.5°	396.7	399.8	419.4	420.2	392.0	330.1	243.8	147.4	60.4	5.5	0.0
85°	329.3	333.2	360.6	381.0	365.3	313.6	233.6	141.9	58.0	5.5	0.0
87.5°	281.4	283.8	305.8	335.5	333.2	292.4	219.5	134.8	55.7	5.5	0.0
90°	245.4	247.7	264.2	292.4	299.5	267.3	204.6	127.0	52.5	4.7	0.0
92.5°	223.4	225.0	235.2	253.2	263.4	240.7	188.2	117.6	49.4	4.7	0.0
95°	209.3	209.3	214.0	225.0	230.5	215.6	170.9	108.2	46.3	4.7	0.0
97.5°	199.1	199.1	199.9	203.0	205.4	191.3	153.7	99.6	43.1	3.9	0.0
100°	190.5	189.7	188.9	187.4	184.2	170.1	138.0	90.9	40.0	3.9	0.0
102.5°	184.2	184.2	181.1	175.6	167.8	152.9	125.4	83.1	36.8	3.9	0.0
105°	178.7	178.0	174.0	166.2	156.8	140.3	114.5	76.8	33.7	3.9	0.0
107.5°	172.5	171.7	167.8	159.1	147.4	130.1	105.8	70.6	31.4	3.1	0.0
110°	167.0	167.0	161.5	152.9	139.5	122.3	98.0	65.9	29.8	3.1	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	161.5	161.5	156.8	147.4	133.3	115.2	91.7	61.2	27.4	3.1	0.0
115°	156.8	156.0	151.3	141.9	127.8	109.8	86.2	57.2	25.9	2.4	0.0
117.5°	152.1	151.3	146.6	136.4	122.3	104.3	81.5	53.3	23.5	2.4	0.0
120°	146.6	145.8	141.1	130.9	116.8	99.6	76.8	50.2	22.0	2.4	0.0
122.5°	141.9	140.3	135.6	125.4	112.1	94.1	72.9	46.3	20.4	2.4	0.0
125°	134.8	134.8	129.4	119.9	106.6	89.4	68.2	43.1	18.0	1.6	0.0
127.5°	129.4	128.6	123.9	114.5	101.9	84.7	64.3	40.0	17.2	1.6	0.0
130°	123.1	122.3	117.6	109.0	96.4	80.0	60.4	37.6	15.7	1.6	0.0
132.5°	116.8	116.0	111.3	102.7	90.9	75.3	56.4	34.5	14.1	1.6	0.0
135°	110.5	110.5	105.1	96.4	85.5	70.6	52.5	32.1	12.5	1.6	0.0
137.5°	104.3	103.5	99.6	90.9	79.2	65.1	48.6	29.0	11.8	1.6	0.0
140°	98.0	97.2	92.5	84.7	73.7	60.4	44.7	26.7	10.2	0.8	0.0
142.5°	91.7	90.9	86.2	78.4	68.2	55.7	40.8	23.5	9.4	0.8	0.0
145°	84.7	83.9	80.0	72.1	61.9	50.2	36.1	21.2	8.6	0.8	0.0
147.5°	77.6	77.6	72.9	65.9	56.4	44.7	32.1	18.8	7.1	0.8	0.0
150°	70.6	70.6	65.9	59.6	50.2	40.0	28.2	16.5	6.3	0.8	0.0
152.5°	63.5	62.7	59.6	53.3	44.7	35.3	24.3	14.1	5.5	0.8	0.0
155°	55.7	55.7	51.7	47.0	39.2	30.6	21.2	11.8	4.7	0.8	0.0
157.5°	47.8	47.8	44.7	40.0	32.9	25.1	17.2	9.4	3.9	0.8	0.0
160°	40.8	40.0	37.6	33.7	27.4	21.2	14.1	7.8	3.1	0.8	0.8
162.5°	32.1	32.1	30.6	26.7	22.0	16.5	11.0	6.3	2.4	0.8	0.0
165°	25.1	25.1	23.5	20.4	17.2	12.5	7.8	3.9	1.6	0.8	0.0
167.5°	18.0	18.0	16.5	14.9	11.0	7.8	4.7	3.1	1.6	0.8	0.8
170°	9.4	9.4	8.6	7.1	5.5	3.9	2.4	1.6	0.8	0.8	0.8
172.5°	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.0
175°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.0
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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CATALOG NUMBER: FW-LD2-612-1000-40-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°	0.0	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
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
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P226085

CATALOG NUMBER: FW-LD2-612-1000-40-PC-R4-LGW

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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)