

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: P226202

Luminaire Tested: **FW-LD2-99-1500-50-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226202
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1705-064-4)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FW-LD2-99-1500-50-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (56) 5000 CCT, 80 CRI LEDS
 EL089N056E850M
Ballast/Driver: OSRAM
 OT25WPRG1250C

Summary

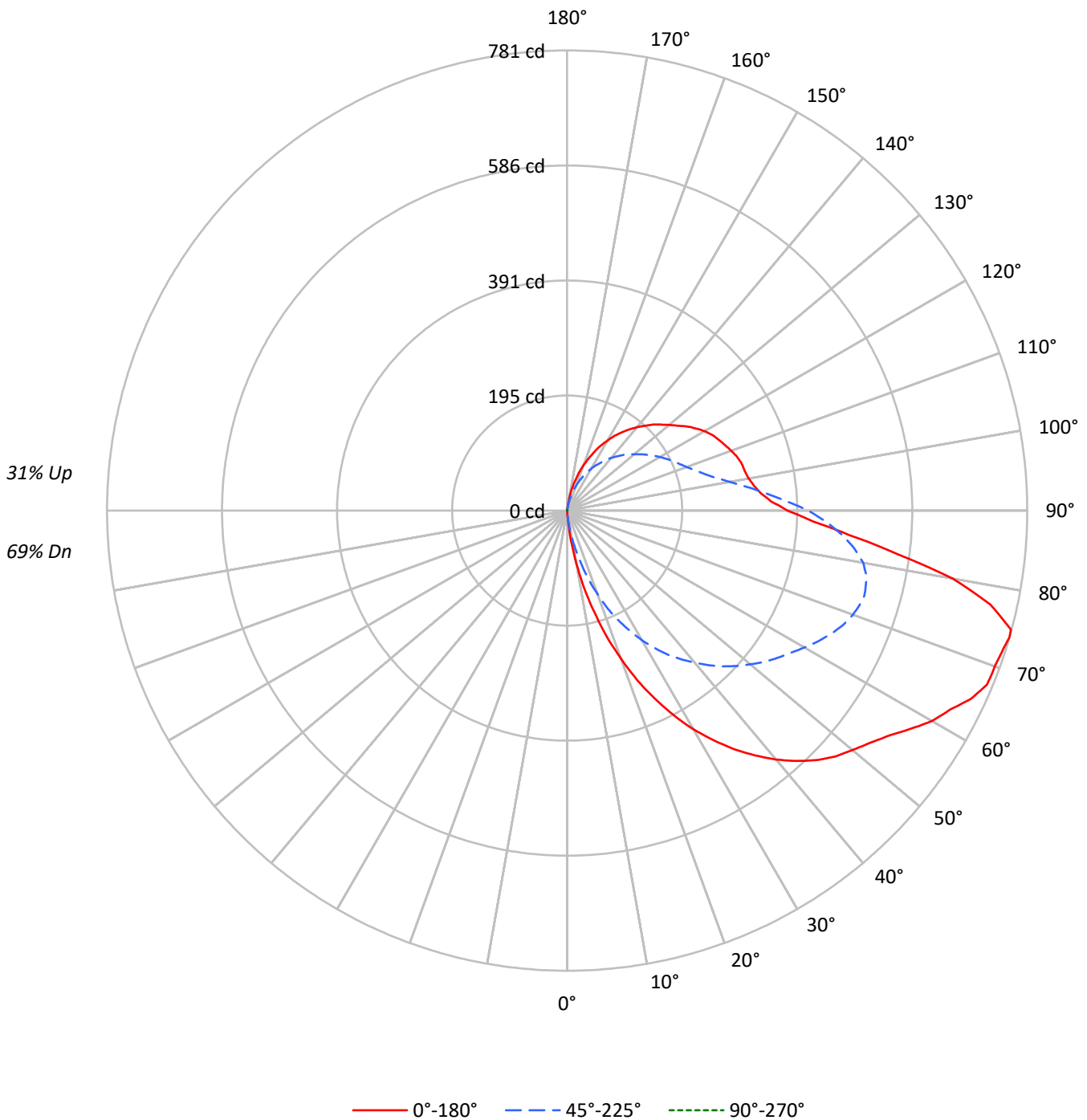
Lumens per Lamp: N/A
Luminaire Lumens: 1587.0 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 0.75 ' x H: 0.75 '
CIE Type: Semi-Direct

Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): 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	106	106	106	106	94	94	94		83	83	83		74	74	74	69
1	95	88	81	75	89	82	76	71	72	67	63		63	59	55		54	51	48	44
2	83	72	63	55	78	67	59	52	59	52	46		51	45	40		43	39	35	31
3	74	61	50	42	69	57	47	40	49	41	35		42	36	31		36	31	26	22
4	67	52	42	33	62	49	39	31	42	34	28		36	29	24		30	25	20	17
5	61	45	35	27	56	42	33	26	37	29	22		31	25	19		26	21	16	13
6	55	40	30	22	51	37	28	21	32	24	18		28	21	16		23	18	13	10
7	51	36	26	19	47	33	24	18	29	21	16		25	18	13		21	15	11	8
8	47	32	23	16	43	30	21	15	26	19	13		22	16	11		19	13	9	7
9	43	29	20	14	40	27	19	13	24	16	11		20	14	10		17	12	8	6
10	40	26	18	12	38	25	17	11	22	15	10		19	13	8		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°	1.0	0.1
10°-20°	13.8	0.9
20°-30°	44.3	2.8
30°-40°	85.6	5.4
40°-50°	129.7	8.2
50°-60°	172.9	10.9
60°-70°	216.6	13.6
70°-80°	238.6	15.0
80°-90°	196.7	12.4
90°-100°	138.2	8.7
100°-110°	106.0	6.7
110°-120°	85.6	5.4
120°-130°	65.4	4.1
130°-140°	45.8	2.9
140°-150°	28.5	1.8
150°-160°	14.0	0.9
160°-170°	4.1	0.3
170°-180°	0.2	0.0
0°-30°	59.2	3.7
0°-40°	144.8	9.1
0°-60°	447.4	28.2
0°-90°	1099.3	69.3
90°-120°	329.8	20.8
90°-150°	469.4	29.6
90°-180°	488.0	30.7
0°-180°	1587.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	22	8	0	0	0	4
15°	179	96	0	0	0	54
25°	352	206	0	0	0	165
35°	495	298	0	0	0	311
45°	599	374	0	0	0	463
55°	666	436	0	0	0	601
65°	756	495	0	0	0	746
75°	780	524	0	0	0	796
85°	481	468	0	0	0	432
90°	374	409	0	0	0	207
95°	330	338	0	0	0	267
105°	307	241	0	0	0	323
115°	284	198	0	0	0	282
125°	249	165	0	0	0	223
135°	207	133	0	0	0	160
145°	162	99	0	0	0	102
155°	110	64	0	0	0	52
165°	53	28	1	0	0	16
175°	1	1	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°	2.1	2.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	0.0
5°	21.7	20.7	18.6	15.5	12.4	8.3	4.1	2.1	1.0	1.0	0.0
7.5°	52.7	50.6	47.5	43.4	34.1	23.8	13.4	5.2	1.0	1.0	0.0
10°	91.9	88.8	85.7	75.4	60.9	45.4	27.9	13.4	3.1	1.0	0.0
12.5°	136.3	133.2	126.0	112.6	93.0	69.2	45.4	22.7	5.2	1.0	0.0
15°	178.7	178.7	168.4	150.8	126.0	96.1	63.0	33.1	9.3	1.0	0.0
17.5°	225.2	223.1	212.8	191.1	161.1	123.9	83.7	44.4	13.4	1.0	0.0
20°	267.5	267.5	254.1	230.3	193.1	150.8	103.3	56.8	18.6	1.0	0.0
22.5°	311.9	309.9	295.4	267.5	228.3	179.7	125.0	69.2	23.8	1.0	0.0
25°	352.2	350.1	333.6	302.6	259.2	205.5	144.6	81.6	28.9	1.0	0.0
27.5°	391.4	387.3	370.8	336.7	289.2	229.3	164.2	94.0	34.1	1.0	0.0
30°	428.6	424.5	404.9	367.7	317.1	254.1	181.8	106.4	39.2	2.1	0.0
32.5°	461.7	460.6	437.9	399.7	345.0	276.8	200.4	116.7	43.4	2.1	0.0
35°	494.7	491.6	469.9	426.6	368.7	298.5	216.9	127.0	48.5	3.1	0.0
37.5°	523.7	520.6	495.8	452.4	392.5	318.1	231.4	137.4	52.7	3.1	0.0
40°	551.5	546.4	521.6	477.2	415.2	336.7	244.8	145.6	56.8	4.1	0.0
42.5°	576.3	571.2	546.4	498.9	436.9	356.3	259.2	153.9	59.9	4.1	0.0
45°	599.0	593.9	567.0	519.5	456.5	373.9	271.6	162.2	64.0	5.2	0.0
47.5°	617.6	614.5	588.7	539.1	475.1	390.4	284.0	169.4	67.1	5.2	0.0
50°	632.1	629.0	606.3	559.8	493.7	405.9	295.4	176.6	70.2	6.2	0.0
52.5°	647.6	644.5	623.8	578.4	511.3	421.4	306.8	183.8	73.3	6.2	0.0
55°	666.2	664.1	642.4	598.0	529.8	435.9	318.1	191.1	77.5	7.2	0.0
57.5°	689.9	686.8	663.1	616.6	547.4	449.3	329.5	198.3	80.6	7.2	0.0
60°	714.7	710.6	685.8	639.3	566.0	464.8	339.8	205.5	83.7	7.2	0.0
62.5°	732.3	730.2	708.5	661.0	585.6	480.3	351.2	212.8	86.8	8.3	0.0
65°	756.0	751.9	728.2	680.6	604.2	494.7	361.5	219.0	89.9	8.3	0.0
67.5°	771.5	769.5	745.7	699.2	619.7	507.1	370.8	225.2	93.0	9.3	0.0
70°	772.6	771.5	757.1	710.6	631.1	516.4	379.1	230.3	95.0	9.3	0.0
72.5°	776.7	775.7	759.1	715.8	636.2	522.6	384.2	234.5	97.1	9.3	0.0
74°	780.8	776.7	756.0	713.7	637.3	524.7	385.2	235.5	97.1	10.3	0.0
75°	779.8	774.6	750.9	710.6	636.2	523.7	386.3	236.5	97.1	10.3	0.0
77.5°	735.4	737.4	724.0	691.0	625.9	520.6	384.2	234.5	97.1	10.3	0.0
80°	664.1	662.1	672.4	659.0	607.3	510.2	378.0	232.4	96.1	10.3	0.0
82.5°	565.0	572.2	601.1	611.4	577.4	491.6	368.7	227.2	94.0	10.3	0.0
85°	481.3	485.4	521.6	555.7	538.1	467.9	355.3	220.0	91.9	10.3	0.0
87.5°	417.3	420.4	450.3	493.7	495.8	440.0	337.7	210.7	88.8	10.3	0.0
90°	373.9	377.0	397.6	436.9	449.3	409.0	317.1	199.3	84.7	9.3	0.0
92.5°	347.0	349.1	361.5	389.4	402.8	371.8	295.4	188.0	80.6	9.3	0.0
95°	330.5	331.5	337.7	352.2	363.6	337.7	269.6	175.6	75.4	9.3	0.0
97.5°	320.2	320.2	322.2	328.4	329.5	307.8	247.9	162.2	71.3	8.3	0.0
100°	313.0	313.0	311.9	310.9	302.6	279.9	227.2	150.8	66.1	8.3	0.0
102.5°	308.8	308.8	305.7	298.5	285.1	257.2	208.6	139.4	62.0	7.2	0.0
105°	306.8	305.7	299.5	289.2	270.6	240.7	194.2	130.1	57.8	7.2	0.0
107.5°	302.6	301.6	294.4	280.9	259.2	227.2	181.8	121.9	54.7	6.2	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	296.4	295.4	288.2	272.7	249.9	215.9	171.5	114.6	51.6	6.2	0.0
112.5°	290.2	289.2	282.0	265.4	240.7	206.6	163.2	108.4	48.5	6.2	0.0
115°	284.0	284.0	274.7	257.2	232.4	198.3	154.9	101.2	45.4	5.2	0.0
117.5°	277.8	276.8	266.5	248.9	223.1	190.0	146.7	96.1	42.3	5.2	0.0
120°	269.6	268.5	258.2	239.6	214.8	181.8	139.4	89.9	39.2	5.2	0.0
122.5°	259.2	258.2	248.9	230.3	205.5	173.5	132.2	84.7	37.2	4.1	0.0
125°	248.9	247.9	237.6	221.0	197.3	165.3	125.0	79.5	34.1	4.1	0.0
127.5°	236.5	235.5	227.2	210.7	186.9	157.0	118.8	74.4	32.0	4.1	0.0
130°	226.2	225.2	215.9	200.4	178.7	148.7	112.6	69.2	28.9	3.1	0.0
132.5°	215.9	214.8	206.6	190.0	169.4	141.5	105.3	65.1	26.9	3.1	0.0
135°	206.6	204.5	196.2	180.7	160.1	133.2	99.2	59.9	24.8	3.1	0.0
137.5°	195.2	194.2	185.9	170.4	150.8	125.0	91.9	55.8	22.7	3.1	0.0
140°	184.9	183.8	175.6	161.1	141.5	116.7	85.7	51.6	20.7	3.1	0.0
142.5°	173.5	172.5	165.3	150.8	132.2	108.4	79.5	47.5	18.6	2.1	0.0
145°	162.2	161.1	152.9	140.5	122.9	99.2	72.3	42.3	17.6	2.1	0.0
147.5°	150.8	148.7	142.5	130.1	112.6	90.9	65.1	38.2	15.5	2.1	1.0
150°	137.4	137.4	130.1	118.8	102.3	82.6	58.9	34.1	13.4	2.1	0.0
152.5°	125.0	123.9	117.7	107.4	91.9	73.3	51.6	30.0	12.4	2.1	1.0
155°	110.5	109.5	104.3	95.0	80.6	64.0	44.4	25.8	10.3	1.0	0.0
157.5°	96.1	96.1	91.9	82.6	70.2	54.7	38.2	21.7	8.3	1.0	0.0
160°	82.6	81.6	77.5	69.2	58.9	45.4	31.0	17.6	7.2	1.0	1.0
162.5°	68.2	67.1	64.0	56.8	47.5	37.2	24.8	14.5	5.2	1.0	1.0
165°	52.7	52.7	49.6	44.4	37.2	27.9	17.6	9.3	4.1	1.0	1.0
167.5°	38.2	38.2	37.2	32.0	25.8	17.6	10.3	6.2	3.1	1.0	1.0
170°	23.8	23.8	21.7	16.5	11.4	8.3	6.2	3.1	2.1	1.0	1.0
172.5°	7.2	6.2	6.2	5.2	4.1	3.1	2.1	2.1	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	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°	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
74°	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: P226202

CATALOG NUMBER: FW-LD2-99-1500-50-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°	0.0	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)