

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: P226196

Luminaire Tested: **FW-LD2-99-1000-50-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226196
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-LD2-99-1000-50-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (56) 5000 CCT, 80 CRI LEDS
 EL089N056E850M
Ballast/Driver: OSRAM
 OT25WPRG1250C

Summary

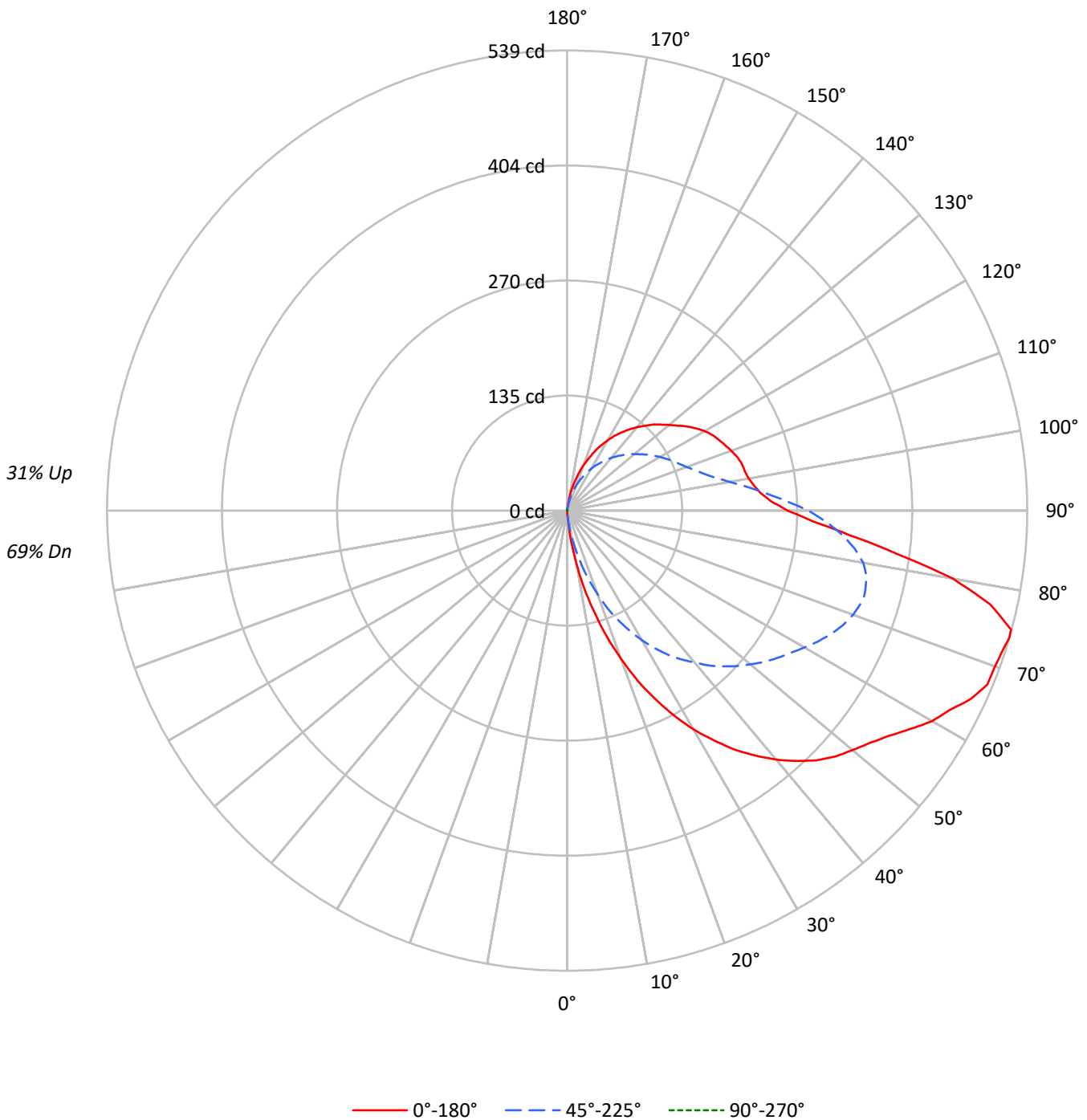
Lumens per Lamp: N/A
Luminaire Lumens: 1095.5 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 0.75 ' x H: 0.75 '
CIE Type: Semi-Direct

Input Watts (W): 11.4
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	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°	0.7	0.1
10°-20°	9.5	0.9
20°-30°	30.6	2.8
30°-40°	59.1	5.4
40°-50°	89.5	8.2
50°-60°	119.4	10.9
60°-70°	149.5	13.6
70°-80°	164.7	15.0
80°-90°	135.8	12.4
90°-100°	95.4	8.7
100°-110°	73.1	6.7
110°-120°	59.1	5.4
120°-130°	45.2	4.1
130°-140°	31.6	2.9
140°-150°	19.7	1.8
150°-160°	9.7	0.9
160°-170°	2.8	0.3
170°-180°	0.1	0.0
0°-30°	40.9	3.7
0°-40°	99.9	9.1
0°-60°	308.8	28.2
0°-90°	758.9	69.3
90°-120°	227.6	20.8
90°-150°	324.0	29.6
90°-180°	337.0	30.8
0°-180°	1095.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	15	6	0	0	0	3
15°	123	66	0	0	0	37
25°	243	142	0	0	0	114
35°	342	206	0	0	0	215
45°	414	258	0	0	0	319
55°	460	301	0	0	0	415
65°	522	342	0	0	0	515
75°	538	362	0	0	0	550
85°	332	323	0	0	0	298
90°	258	282	0	0	0	143
95°	228	233	0	0	0	184
105°	212	166	0	0	0	223
115°	196	137	0	0	0	195
125°	172	114	0	0	0	154
135°	143	92	0	0	0	110
145°	112	68	0	0	0	71
155°	76	44	0	0	0	36
165°	36	19	1	0	0	11
175°	1	1	1	0	0	1
180°	0	0	0	0	0	



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CATALOG NUMBER: FW-LD2-99-1000-50-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°	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.0
5°	15.0	14.3	12.8	10.7	8.6	5.7	2.9	1.4	0.7	0.7	0.0
7.5°	36.4	34.9	32.8	29.9	23.5	16.4	9.3	3.6	0.7	0.7	0.0
10°	63.5	61.3	59.2	52.0	42.1	31.4	19.3	9.3	2.1	0.7	0.0
12.5°	94.1	92.0	87.0	77.7	64.2	47.8	31.4	15.7	3.6	0.7	0.0
15°	123.3	123.3	116.2	104.1	87.0	66.3	43.5	22.8	6.4	0.7	0.0
17.5°	155.4	154.0	146.9	131.9	111.2	85.6	57.8	30.7	9.3	0.7	0.0
20°	184.7	184.7	175.4	159.0	133.3	104.1	71.3	39.2	12.8	0.7	0.0
22.5°	215.3	213.9	203.9	184.7	157.6	124.1	86.3	47.8	16.4	0.7	0.0
25°	243.1	241.7	230.3	208.9	179.0	141.9	99.8	56.3	20.0	0.7	0.0
27.5°	270.2	267.4	256.0	232.4	199.6	158.3	113.4	64.9	23.5	0.7	0.0
30°	295.9	293.0	279.5	253.8	218.9	175.4	125.5	73.4	27.1	1.4	0.0
32.5°	318.7	318.0	302.3	275.9	238.1	191.1	138.3	80.6	29.9	1.4	0.0
35°	341.5	339.4	324.4	294.5	254.5	206.0	149.7	87.7	33.5	2.1	0.0
37.5°	361.5	359.3	342.2	312.3	270.9	219.6	159.7	94.8	36.4	2.1	0.0
40°	380.7	377.2	360.1	329.4	286.6	232.4	169.0	100.5	39.2	2.9	0.0
42.5°	397.8	394.3	377.2	344.4	301.6	246.0	179.0	106.2	41.4	2.9	0.0
45°	413.5	410.0	391.4	358.6	315.1	258.1	187.5	111.9	44.2	3.6	0.0
47.5°	426.4	424.2	406.4	372.2	328.0	269.5	196.1	116.9	46.3	3.6	0.0
50°	436.3	434.2	418.5	386.4	340.8	280.2	203.9	121.9	48.5	4.3	0.0
52.5°	447.0	444.9	430.6	399.3	352.9	290.9	211.8	126.9	50.6	4.3	0.0
55°	459.9	458.4	443.5	412.8	365.8	300.9	219.6	131.9	53.5	5.0	0.0
57.5°	476.3	474.1	457.7	425.6	377.9	310.1	227.4	136.9	55.6	5.0	0.0
60°	493.4	490.5	473.4	441.3	390.7	320.8	234.6	141.9	57.8	5.0	0.0
62.5°	505.5	504.1	489.1	456.3	404.3	331.5	242.4	146.9	59.9	5.7	0.0
65°	521.9	519.0	502.6	469.9	417.1	341.5	249.5	151.2	62.0	5.7	0.0
67.5°	532.6	531.2	514.8	482.7	427.8	350.1	256.0	155.4	64.2	6.4	0.0
70°	533.3	532.6	522.6	490.5	435.6	356.5	261.7	159.0	65.6	6.4	0.0
72.5°	536.2	535.4	524.0	494.1	439.2	360.8	265.2	161.8	67.0	6.4	0.0
74°	539.0	536.2	521.9	492.7	439.9	362.2	265.9	162.6	67.0	7.1	0.0
75°	538.3	534.7	518.3	490.5	439.2	361.5	266.7	163.3	67.0	7.1	0.0
77.5°	507.6	509.1	499.8	477.0	432.1	359.3	265.2	161.8	67.0	7.1	0.0
80°	458.4	457.0	464.1	454.9	419.2	352.2	260.9	160.4	66.3	7.1	0.0
82.5°	390.0	395.0	415.0	422.1	398.6	339.4	254.5	156.9	64.9	7.1	0.0
85°	332.2	335.1	360.1	383.6	371.5	323.0	245.3	151.9	63.5	7.1	0.0
87.5°	288.0	290.2	310.9	340.8	342.2	303.7	233.1	145.4	61.3	7.1	0.0
90°	258.1	260.2	274.5	301.6	310.1	282.3	218.9	137.6	58.5	6.4	0.0
92.5°	239.6	241.0	249.5	268.8	278.1	256.7	203.9	129.8	55.6	6.4	0.0
95°	228.2	228.9	233.1	243.1	251.0	233.1	186.1	121.2	52.0	6.4	0.0
97.5°	221.0	221.0	222.4	226.7	227.4	212.5	171.1	111.9	49.2	5.7	0.0
100°	216.0	216.0	215.3	214.6	208.9	193.2	156.9	104.1	45.6	5.7	0.0
102.5°	213.2	213.2	211.0	206.0	196.8	177.5	144.0	96.3	42.8	5.0	0.0
105°	211.8	211.0	206.8	199.6	186.8	166.1	134.0	89.8	39.9	5.0	0.0
107.5°	208.9	208.2	203.2	193.9	179.0	156.9	125.5	84.1	37.8	4.3	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	204.6	203.9	198.9	188.2	172.5	149.0	118.4	79.1	35.6	4.3	0.0
112.5°	200.3	199.6	194.6	183.2	166.1	142.6	112.7	74.9	33.5	4.3	0.0
115°	196.1	196.1	189.7	177.5	160.4	136.9	106.9	69.9	31.4	3.6	0.0
117.5°	191.8	191.1	183.9	171.8	154.0	131.2	101.2	66.3	29.2	3.6	0.0
120°	186.1	185.4	178.2	165.4	148.3	125.5	96.3	62.0	27.1	3.6	0.0
122.5°	179.0	178.2	171.8	159.0	141.9	119.8	91.3	58.5	25.7	2.9	0.0
125°	171.8	171.1	164.0	152.6	136.2	114.1	86.3	54.9	23.5	2.9	0.0
127.5°	163.3	162.6	156.9	145.4	129.0	108.4	82.0	51.3	22.1	2.9	0.0
130°	156.1	155.4	149.0	138.3	123.3	102.7	77.7	47.8	20.0	2.1	0.0
132.5°	149.0	148.3	142.6	131.2	116.9	97.7	72.7	44.9	18.5	2.1	0.0
135°	142.6	141.2	135.5	124.8	110.5	92.0	68.4	41.4	17.1	2.1	0.0
137.5°	134.8	134.0	128.3	117.6	104.1	86.3	63.5	38.5	15.7	2.1	0.0
140°	127.6	126.9	121.2	111.2	97.7	80.6	59.2	35.6	14.3	2.1	0.0
142.5°	119.8	119.1	114.1	104.1	91.3	74.9	54.9	32.8	12.8	1.4	0.0
145°	111.9	111.2	105.5	97.0	84.8	68.4	49.9	29.2	12.1	1.4	0.0
147.5°	104.1	102.7	98.4	89.8	77.7	62.7	44.9	26.4	10.7	1.4	0.7
150°	94.8	94.8	89.8	82.0	70.6	57.0	40.6	23.5	9.3	1.4	0.0
152.5°	86.3	85.6	81.3	74.1	63.5	50.6	35.6	20.7	8.6	1.4	0.7
155°	76.3	75.6	72.0	65.6	55.6	44.2	30.7	17.8	7.1	0.7	0.0
157.5°	66.3	66.3	63.5	57.0	48.5	37.8	26.4	15.0	5.7	0.7	0.0
160°	57.0	56.3	53.5	47.8	40.6	31.4	21.4	12.1	5.0	0.7	0.7
162.5°	47.1	46.3	44.2	39.2	32.8	25.7	17.1	10.0	3.6	0.7	0.7
165°	36.4	36.4	34.2	30.7	25.7	19.3	12.1	6.4	2.9	0.7	0.7
167.5°	26.4	26.4	25.7	22.1	17.8	12.1	7.1	4.3	2.1	0.7	0.7
170°	16.4	16.4	15.0	11.4	7.8	5.7	4.3	2.1	1.4	0.7	0.7
172.5°	5.0	4.3	4.3	3.6	2.9	2.1	1.4	1.4	0.7	0.7	0.7
175°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
177.5°	0.0	0.0	0.0	0.0	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°	0.0	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: P226196

CATALOG NUMBER: FW-LD2-99-1000-50-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)