

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: P226054

Luminaire Tested: **FW-LD2-1212-1700-35-PC-R4-LGW**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P226054
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-LD2-1212-1700-35-PC-R4-LGW
Description: NIGHT CONDOR LED FLOODLIGHT
Light Source: (56) 3500 CCT, 80 CRI LEDS
 EL089N056E835M
Ballast/Driver: OSRAM
 OTi30/120-277/1A0

Summary

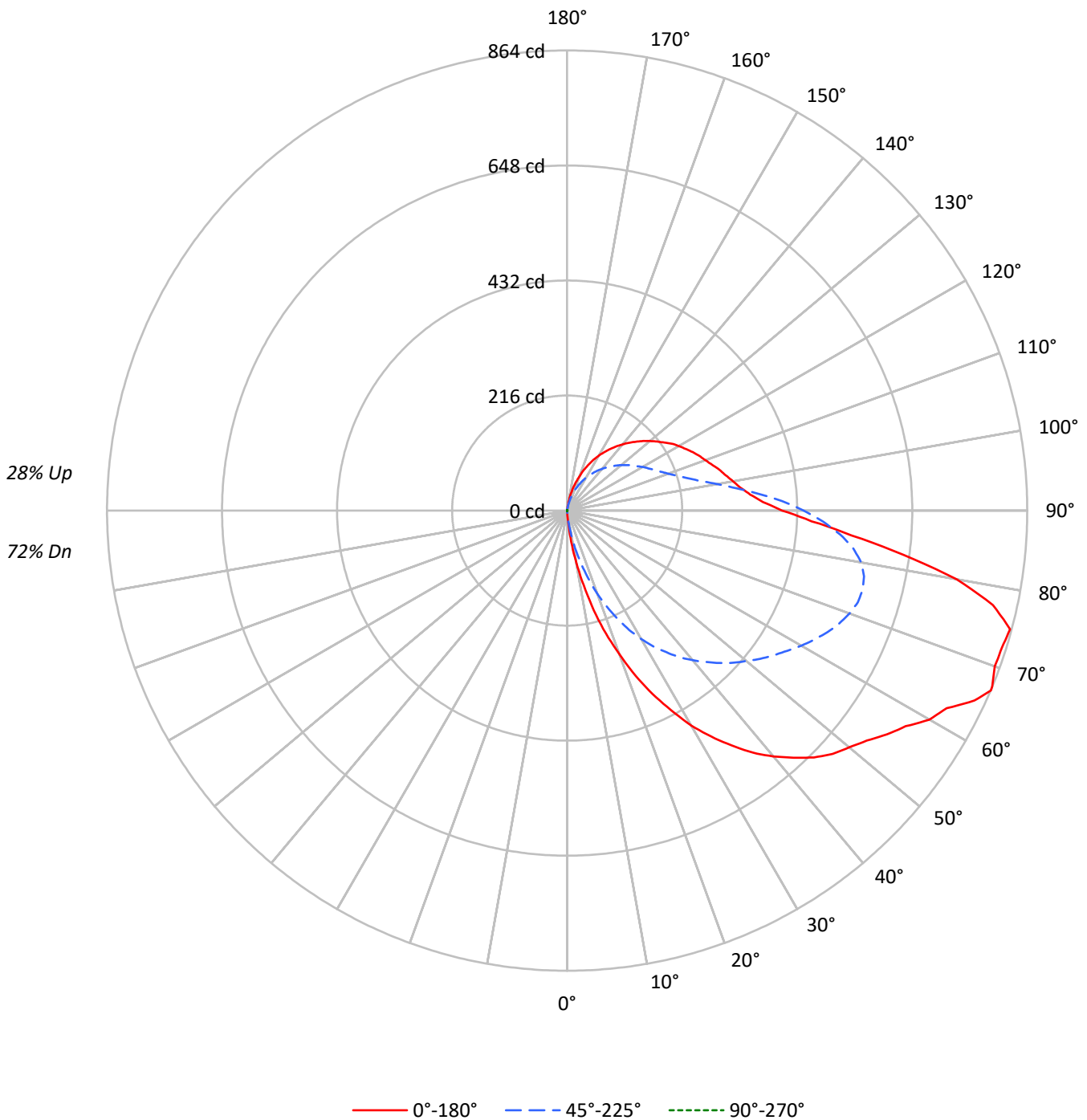
Lumens per Lamp: N/A
Luminaire Lumens: 1675.0 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: (L: 0 ' x W: 1 ' x H: 1 '
CIE Type: Semi-Direct

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°	15.1	0.9
20°-30°	48.5	2.9
30°-40°	93.9	5.6
40°-50°	142.1	8.5
50°-60°	189.1	11.3
60°-70°	237.8	14.2
70°-80°	262.5	15.7
80°-90°	217.1	13.0
90°-100°	146.0	8.7
100°-110°	103.0	6.2
110°-120°	78.4	4.7
120°-130°	58.8	3.5
130°-140°	40.8	2.4
140°-150°	25.0	1.5
150°-160°	12.1	0.7
160°-170°	3.4	0.2
170°-180°	0.2	0.0
0°-30°	64.7	3.9
0°-40°	158.6	9.5
0°-60°	489.8	29.2
0°-90°	1207.2	72.1
90°-120°	327.5	19.6
90°-150°	452.2	27.0
90°-180°	468.0	27.9
0°-180°	1675.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	25	10	1	0	0	5
15°	194	105	1	0	0	58
25°	380	225	0	0	0	178
35°	538	325	0	0	0	339
45°	656	405	0	0	0	506
55°	733	474	0	0	0	659
65°	844	540	0	0	0	828
75°	861	574	0	0	0	882
85°	536	515	0	0	0	483
90°	403	444	0	0	0	224
95°	345	361	0	0	0	277
105°	296	234	0	0	0	313
115°	260	181	0	0	0	258
125°	223	148	1	0	0	200
135°	183	117	1	0	0	142
145°	141	87	1	0	0	89
155°	95	55	1	0	0	45
165°	44	22	1	0	0	13
175°	2	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°	3.9	3.3	2.6	2.6	2.0	1.3	1.3	0.7	0.7	0.7	0.7
5°	24.9	24.2	22.3	19.6	15.1	9.8	5.2	2.0	0.7	0.7	0.7
7.5°	58.9	58.3	54.4	47.1	38.0	28.2	17.0	7.2	1.3	0.7	0.7
10°	98.9	99.5	93.6	83.2	67.4	49.8	31.4	15.7	3.3	0.7	0.7
12.5°	143.4	144.7	137.5	121.8	100.8	77.3	50.4	25.5	7.2	0.7	0.0
15°	193.8	192.5	180.7	162.4	138.2	105.4	71.4	38.0	11.8	0.7	0.7
17.5°	242.3	239.7	229.2	206.3	175.5	135.6	93.0	51.1	17.0	0.7	0.0
20°	286.8	286.2	275.7	248.8	212.2	166.3	115.3	64.8	22.9	0.7	0.0
22.5°	335.9	332.7	316.9	289.4	248.2	195.8	138.2	78.6	28.2	1.3	0.0
25°	379.8	378.5	362.1	330.0	282.2	224.6	160.4	92.3	34.1	1.3	0.0
27.5°	422.4	422.4	403.4	368.0	315.6	252.8	180.1	106.1	40.6	2.0	0.0
30°	466.2	462.3	442.7	403.4	347.7	278.3	199.7	119.2	45.8	2.0	0.0
32.5°	502.9	500.3	480.0	436.8	376.5	303.2	219.4	131.0	51.1	2.6	0.0
35°	538.3	537.0	513.4	468.9	404.7	324.8	235.7	141.4	56.3	3.9	0.0
37.5°	573.0	568.4	544.8	498.3	431.5	347.1	250.8	151.3	60.9	4.6	0.0
40°	602.5	597.9	574.3	525.8	455.8	366.7	265.9	160.4	64.8	4.6	0.0
42.5°	629.3	625.4	599.8	550.1	479.3	385.7	279.6	168.9	68.8	5.2	0.0
45°	655.5	652.2	624.7	573.6	501.0	404.7	293.4	176.8	72.0	5.9	0.0
47.5°	676.5	672.5	647.0	595.3	520.6	423.0	307.1	184.0	75.3	6.5	0.0
50°	691.5	688.9	666.0	614.9	540.9	439.4	319.6	191.9	77.9	6.5	0.0
52.5°	709.2	705.9	685.0	636.5	559.2	457.1	331.4	199.7	81.2	7.2	0.0
55°	732.8	729.5	706.6	657.5	578.9	473.5	343.8	206.3	83.2	7.9	0.0
57.5°	753.7	751.1	728.8	679.7	599.8	489.8	356.2	213.5	86.4	7.9	0.0
60°	785.2	781.9	753.7	702.6	620.8	507.5	368.7	220.7	89.7	8.5	0.0
62.5°	803.5	802.2	781.9	728.2	643.1	523.9	380.5	227.2	92.3	9.2	0.0
65°	844.1	838.9	806.8	751.1	663.4	539.6	390.9	233.8	96.3	9.8	0.0
67°	864.4	859.2	825.1	766.8	677.1	550.7	399.5	239.7	98.9	10.5	0.0
67.5°	863.7	859.8	828.4	770.8	679.7	553.3	400.8	241.0	99.5	10.5	0.0
70°	854.6	852.6	836.9	783.8	692.2	564.5	409.9	247.5	103.5	10.5	0.0
72.5°	855.9	853.9	835.6	788.4	699.4	572.3	417.1	253.4	106.7	11.1	0.0
75°	861.1	855.2	827.7	781.2	698.7	574.3	421.1	256.7	108.0	11.8	0.0
77.5°	819.2	817.9	800.2	762.2	688.2	571.0	420.4	257.4	108.7	11.8	0.0
80°	742.6	742.6	746.5	729.5	667.9	560.5	415.8	255.4	108.0	11.8	0.0
82.5°	636.5	645.0	669.2	677.1	635.9	541.6	404.7	250.2	106.1	11.8	0.0
85°	536.3	542.9	581.5	611.6	592.6	514.7	389.6	242.9	103.5	11.8	0.0
87.5°	459.7	463.0	495.7	542.9	542.9	481.3	369.3	232.5	99.5	11.1	0.0
90°	403.4	405.3	432.2	477.4	486.5	444.0	345.8	219.4	95.0	11.1	0.0
92.5°	368.0	369.3	385.0	415.2	434.2	404.0	318.9	205.0	89.1	10.5	0.0
95°	345.1	345.1	352.3	370.0	383.1	360.8	290.1	188.6	82.5	9.2	0.0
97.5°	328.1	328.1	329.4	335.9	339.9	320.2	260.0	172.2	76.0	8.5	0.0
100°	316.3	315.0	313.0	311.1	306.5	286.2	233.8	157.2	70.7	8.5	0.0
102.5°	305.2	303.8	299.3	291.4	279.6	256.0	210.9	142.1	64.2	7.2	0.0
105°	296.0	294.7	288.1	275.7	259.3	234.4	190.6	129.7	58.9	7.2	0.0
107.5°	285.5	284.9	277.7	263.2	243.6	216.1	174.8	117.9	54.4	6.5	0.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	276.3	275.7	268.5	252.8	231.2	202.3	162.4	108.7	49.8	5.9	0.0
112.5°	268.5	267.2	259.3	244.3	220.7	190.6	151.3	100.8	45.8	5.2	0.0
115°	260.0	258.7	250.8	235.1	210.9	180.7	141.4	93.6	41.9	5.2	0.0
117.5°	250.8	250.2	242.3	225.9	202.3	171.6	133.6	87.1	38.0	4.6	0.0
120°	242.3	242.3	233.1	217.4	193.2	163.7	126.4	81.9	35.4	3.9	0.7
122.5°	233.8	232.5	224.0	207.6	185.3	155.2	119.2	76.6	32.7	3.9	0.7
125°	222.6	222.0	214.1	198.4	176.8	148.0	112.6	72.0	30.8	3.3	0.7
127.5°	212.8	211.5	204.3	189.9	167.6	140.1	106.1	67.4	28.8	3.3	0.7
130°	203.0	201.7	194.5	180.7	159.8	132.9	100.2	62.9	26.8	3.3	0.7
132.5°	193.2	191.9	185.3	170.9	151.3	125.1	93.6	58.3	24.2	2.6	0.7
135°	182.7	182.0	175.5	161.7	142.8	117.2	87.1	54.4	22.3	2.6	0.7
137.5°	172.9	172.2	165.0	152.6	134.2	110.0	81.2	49.8	20.3	2.6	0.7
140°	162.4	161.7	155.2	143.4	125.7	102.2	75.3	45.8	18.3	2.0	0.7
142.5°	151.9	151.3	145.4	133.6	116.6	95.0	69.4	41.3	16.4	2.0	0.7
145°	141.4	140.1	134.9	123.8	108.0	87.1	62.9	37.3	14.4	2.0	0.7
147.5°	130.3	129.7	124.4	113.9	98.9	79.2	57.0	33.4	13.1	2.0	0.7
150°	119.2	118.5	113.3	103.5	89.7	72.0	51.1	29.5	11.1	2.0	0.7
152.5°	107.4	106.7	102.2	93.0	79.9	63.5	44.5	24.9	9.8	1.3	0.7
155°	95.0	95.0	91.0	82.5	70.1	55.0	38.0	21.6	8.5	1.3	0.7
157.5°	83.2	82.5	77.9	71.4	60.2	46.5	32.1	17.7	6.5	1.3	0.7
160°	69.4	69.4	66.1	59.6	49.8	38.6	26.2	13.8	5.2	1.3	0.7
162.5°	57.0	57.0	53.7	47.8	40.6	30.1	19.6	10.5	3.9	1.3	0.7
165°	44.5	43.9	41.3	36.7	30.8	21.6	13.8	7.2	3.3	1.3	0.7
167.5°	32.7	32.1	29.5	26.2	20.3	14.4	8.5	4.6	2.0	1.3	0.7
170°	19.6	19.6	19.0	15.1	10.5	6.5	4.6	2.6	1.3	0.7	0.7
172.5°	9.2	9.2	7.2	5.2	3.9	3.3	2.0	1.3	1.3	0.7	0.7
175°	2.0	2.0	1.3	1.3	1.3	1.3	1.3	1.3	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: P226054

CATALOG NUMBER: FW-LD2-1212-1700-35-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)