

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: P709091

Luminaire Tested: **4APN-X-37L935-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709091  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-X-37L935-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

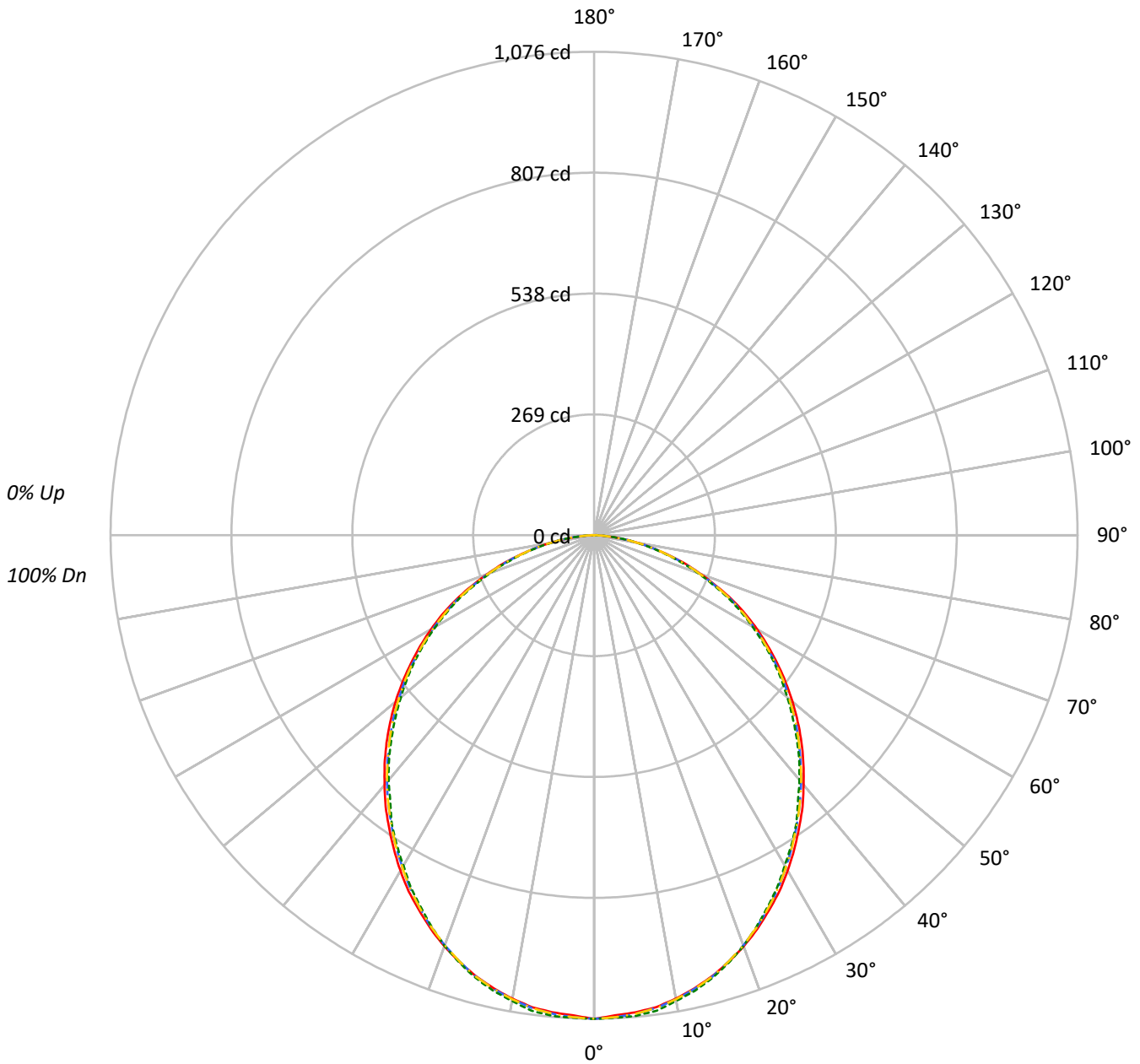
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2799.9 lumens  
Efficiency: N/A  
Efficacy: 68.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.8  
Input Voltage (V): 120  
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



— 0°-180°    - - 45°-225°    ···· 90°-270°    - · - · 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	73	73	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	41	41	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	9929	9929	9929	9929
5°	9870	9942	9870	9942
10°	9812	9860	9812	9860
15°	9702	9740	9702	9740
20°	9560	9547	9560	9547
25°	9377	9296	9377	9296
30°	9183	9043	9183	9043
35°	8954	8836	8954	8836
40°	8735	8562	8735	8562
45°	8522	8315	8522	8315
50°	8279	8054	8279	8054
55°	8011	7821	8011	7821
60°	7735	7516	7735	7516
65°	7401	7172	7401	7172
70°	6841	6628	6841	6628
75°	6181	5996	6181	5996
80°	5308	5164	5308	5164
85°	4033	4033	4033	4033



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.6	3.6
10°-20°	286.8	10.2
20°-30°	422.8	15.1
30°-40°	493.5	17.6
40°-50°	497.6	17.8
50°-60°	439.8	15.7
60°-70°	328.8	11.7
70°-80°	182.3	6.5
80°-90°	46.7	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	811.2	29.0
0°-40°	1304.7	46.6
0°-60°	2242.0	80.1
0°-90°	2799.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2799.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1076	1076	1076	1076	1076	
5°	1066	1074	1066	1074	1066	101
15°	1016	1020	1016	1020	1016	286
25°	921	913	921	913	921	424
35°	795	784	795	784	795	498
45°	653	637	653	637	653	504
55°	498	486	498	486	498	445
65°	339	328	339	328	339	334
75°	173	168	173	168	173	184
85°	38	38	38	38	38	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2
2.5°	1069.6	1074.9	1080.1	1078.8	1074.9	1072.2	1073.5	1073.5	1074.9	1074.9	1074.9
5°	1065.7	1070.9	1074.9	1073.5	1069.6	1068.3	1068.3	1068.3	1070.9	1073.5	1070.9
7.5°	1059.1	1063.0	1067.0	1065.7	1061.7	1060.4	1060.4	1061.7	1064.3	1067.0	1064.3
10°	1047.3	1052.5	1056.5	1053.8	1049.9	1047.3	1047.3	1047.3	1049.9	1052.5	1049.9
12.5°	1032.8	1036.7	1040.7	1039.4	1035.4	1032.8	1032.8	1032.8	1035.4	1038.1	1035.4
15°	1015.7	1019.7	1023.6	1022.3	1018.4	1015.7	1015.7	1015.7	1018.4	1019.7	1018.4
17.5°	996.0	1000.0	1003.9	1001.3	996.0	993.4	993.4	993.4	996.0	997.3	996.0
20°	973.7	977.6	980.2	977.6	972.4	969.7	968.4	968.4	971.0	972.4	971.0
22.5°	948.7	951.3	954.0	951.3	946.1	943.5	942.1	940.8	942.1	943.5	942.1
25°	921.1	923.7	926.4	923.7	918.5	914.5	913.2	911.9	913.2	913.2	913.2
27.5°	893.5	894.8	897.5	893.5	888.3	884.3	883.0	881.7	883.0	883.0	883.0
30°	862.0	863.3	865.9	862.0	855.4	851.5	850.2	848.8	848.8	848.8	848.8
32.5°	829.1	831.8	834.4	829.1	822.6	818.6	817.3	816.0	817.3	817.3	817.3
35°	795.0	796.3	798.9	795.0	788.4	784.5	781.8	780.5	783.1	784.5	783.1
37.5°	762.1	763.4	764.7	760.8	754.2	750.3	747.7	746.4	745.0	745.0	745.0
40°	725.3	726.6	729.3	725.3	718.8	714.8	712.2	710.9	710.9	710.9	710.9
42.5°	689.9	691.2	692.5	688.5	682.0	678.0	675.4	674.1	675.4	675.4	675.4
45°	653.1	653.1	654.4	650.4	645.2	641.2	638.6	637.3	637.3	637.3	637.3
47.5°	615.0	616.3	617.6	613.6	608.4	604.4	601.8	599.2	599.2	599.2	599.2
50°	576.8	576.8	578.2	574.2	569.0	565.0	563.7	562.4	561.1	561.1	561.1
52.5°	537.4	538.7	540.1	536.1	532.2	528.2	525.6	524.3	524.3	524.3	524.3
55°	498.0	498.0	499.3	496.7	492.8	488.8	486.2	484.9	486.2	486.2	486.2
57.5°	458.6	459.9	461.2	457.3	453.3	449.4	448.1	446.8	446.8	446.8	446.8
60°	419.2	419.2	420.5	417.9	413.9	410.0	408.7	407.3	407.3	407.3	407.3
62.5°	379.7	379.7	381.1	378.4	374.5	370.5	369.2	367.9	367.9	367.9	367.9
65°	339.0	339.0	339.0	336.4	333.8	332.4	331.1	329.8	328.5	328.5	328.5
67.5°	294.3	294.3	295.7	293.0	290.4	289.1	287.8	286.5	285.1	285.1	285.1
70°	253.6	253.6	254.9	253.6	251.0	249.7	248.3	247.0	245.7	245.7	245.7
72.5°	214.2	214.2	214.2	212.9	211.6	210.2	208.9	207.6	206.3	206.3	206.3
75°	173.4	173.4	174.8	173.4	172.1	170.8	169.5	169.5	168.2	168.2	168.2
77.5°	135.3	136.7	138.0	136.7	135.3	134.0	132.7	132.7	131.4	131.4	131.4
80°	99.9	101.2	102.5	101.2	99.9	98.6	97.2	97.2	97.2	97.2	97.2
82.5°	67.0	68.3	69.6	68.3	67.0	67.0	65.7	65.7	65.7	65.7	65.7
85°	38.1	39.4	40.7	40.7	39.4	39.4	38.1	38.1	38.1	38.1	38.1
87.5°	14.5	15.8	17.1	17.1	15.8	15.8	15.8	15.8	15.8	15.8	15.8
90°	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):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2
2.5°	1073.5	1073.5	1072.2	1074.9	1078.8	1080.1	1074.9	1069.6	1074.9	1080.1	1078.8
5°	1068.3	1068.3	1068.3	1069.6	1073.5	1074.9	1070.9	1065.7	1070.9	1074.9	1073.5
7.5°	1061.7	1060.4	1060.4	1061.7	1065.7	1067.0	1063.0	1059.1	1063.0	1067.0	1065.7
10°	1047.3	1047.3	1047.3	1049.9	1053.8	1056.5	1052.5	1047.3	1052.5	1056.5	1053.8
12.5°	1032.8	1032.8	1032.8	1035.4	1039.4	1040.7	1036.7	1032.8	1036.7	1040.7	1039.4
15°	1015.7	1015.7	1015.7	1018.4	1022.3	1023.6	1019.7	1015.7	1019.7	1023.6	1022.3
17.5°	993.4	993.4	993.4	996.0	1001.3	1003.9	1000.0	996.0	1000.0	1003.9	1001.3
20°	968.4	968.4	969.7	972.4	977.6	980.2	977.6	973.7	977.6	980.2	977.6
22.5°	940.8	942.1	943.5	946.1	951.3	954.0	951.3	948.7	951.3	954.0	951.3
25°	911.9	913.2	914.5	918.5	923.7	926.4	923.7	921.1	923.7	926.4	923.7
27.5°	881.7	883.0	884.3	888.3	893.5	897.5	894.8	893.5	894.8	897.5	893.5
30°	848.8	850.2	851.5	855.4	862.0	865.9	863.3	862.0	863.3	865.9	862.0
32.5°	816.0	817.3	818.6	822.6	829.1	834.4	831.8	829.1	831.8	834.4	829.1
35°	780.5	781.8	784.5	788.4	795.0	798.9	796.3	795.0	796.3	798.9	795.0
37.5°	746.4	747.7	750.3	754.2	760.8	764.7	763.4	762.1	763.4	764.7	760.8
40°	710.9	712.2	714.8	718.8	725.3	729.3	726.6	725.3	726.6	729.3	725.3
42.5°	674.1	675.4	678.0	682.0	688.5	692.5	691.2	689.9	691.2	692.5	688.5
45°	637.3	638.6	641.2	645.2	650.4	654.4	653.1	653.1	653.1	654.4	650.4
47.5°	599.2	601.8	604.4	608.4	613.6	617.6	616.3	615.0	616.3	617.6	613.6
50°	562.4	563.7	565.0	569.0	574.2	578.2	576.8	576.8	576.8	578.2	574.2
52.5°	524.3	525.6	528.2	532.2	536.1	540.1	538.7	537.4	538.7	540.1	536.1
55°	484.9	486.2	488.8	492.8	496.7	499.3	498.0	498.0	498.0	499.3	496.7
57.5°	446.8	448.1	449.4	453.3	457.3	461.2	459.9	458.6	459.9	461.2	457.3
60°	407.3	408.7	410.0	413.9	417.9	420.5	419.2	419.2	419.2	420.5	417.9
62.5°	367.9	369.2	370.5	374.5	378.4	381.1	379.7	379.7	379.7	381.1	378.4
65°	329.8	331.1	332.4	333.8	336.4	339.0	339.0	339.0	339.0	339.0	336.4
67.5°	286.5	287.8	289.1	290.4	293.0	295.7	294.3	294.3	294.3	295.7	293.0
70°	247.0	248.3	249.7	251.0	253.6	254.9	253.6	253.6	253.6	254.9	253.6
72.5°	207.6	208.9	210.2	211.6	212.9	214.2	214.2	214.2	214.2	214.2	212.9
75°	169.5	169.5	170.8	172.1	173.4	174.8	173.4	173.4	173.4	174.8	173.4
77.5°	132.7	132.7	134.0	135.3	136.7	138.0	136.7	135.3	136.7	138.0	136.7
80°	97.2	97.2	98.6	99.9	101.2	102.5	101.2	99.9	101.2	102.5	101.2
82.5°	65.7	65.7	67.0	67.0	68.3	69.6	68.3	67.0	68.3	69.6	68.3
85°	38.1	38.1	39.4	39.4	40.7	40.7	39.4	38.1	39.4	40.7	40.7
87.5°	15.8	15.8	15.8	15.8	17.1	17.1	15.8	14.5	15.8	17.1	17.1
90°	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):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2	1076.2
2.5°	1074.9	1072.2	1073.5	1073.5	1074.9	1074.9	1074.9	1073.5	1073.5	1072.2	1074.9
5°	1069.6	1068.3	1068.3	1068.3	1070.9	1073.5	1070.9	1068.3	1068.3	1068.3	1069.6
7.5°	1061.7	1060.4	1060.4	1061.7	1064.3	1067.0	1064.3	1061.7	1060.4	1060.4	1061.7
10°	1049.9	1047.3	1047.3	1047.3	1049.9	1052.5	1049.9	1047.3	1047.3	1047.3	1049.9
12.5°	1035.4	1032.8	1032.8	1032.8	1035.4	1038.1	1035.4	1032.8	1032.8	1032.8	1035.4
15°	1018.4	1015.7	1015.7	1015.7	1018.4	1019.7	1018.4	1015.7	1015.7	1015.7	1018.4
17.5°	996.0	993.4	993.4	993.4	996.0	997.3	996.0	993.4	993.4	993.4	996.0
20°	972.4	969.7	968.4	968.4	971.0	972.4	971.0	968.4	968.4	969.7	972.4
22.5°	946.1	943.5	942.1	940.8	942.1	943.5	942.1	940.8	942.1	943.5	946.1
25°	918.5	914.5	913.2	911.9	913.2	913.2	913.2	911.9	913.2	914.5	918.5
27.5°	888.3	884.3	883.0	881.7	883.0	883.0	883.0	881.7	883.0	884.3	888.3
30°	855.4	851.5	850.2	848.8	848.8	848.8	848.8	848.8	850.2	851.5	855.4
32.5°	822.6	818.6	817.3	816.0	817.3	817.3	817.3	816.0	817.3	818.6	822.6
35°	788.4	784.5	781.8	780.5	783.1	784.5	783.1	780.5	781.8	784.5	788.4
37.5°	754.2	750.3	747.7	746.4	745.0	745.0	745.0	746.4	747.7	750.3	754.2
40°	718.8	714.8	712.2	710.9	710.9	710.9	710.9	710.9	712.2	714.8	718.8
42.5°	682.0	678.0	675.4	674.1	675.4	675.4	675.4	674.1	675.4	678.0	682.0
45°	645.2	641.2	638.6	637.3	637.3	637.3	637.3	637.3	638.6	641.2	645.2
47.5°	608.4	604.4	601.8	599.2	599.2	599.2	599.2	599.2	601.8	604.4	608.4
50°	569.0	565.0	563.7	562.4	561.1	561.1	561.1	562.4	563.7	565.0	569.0
52.5°	532.2	528.2	525.6	524.3	524.3	524.3	524.3	524.3	525.6	528.2	532.2
55°	492.8	488.8	486.2	484.9	486.2	486.2	486.2	484.9	486.2	488.8	492.8
57.5°	453.3	449.4	448.1	446.8	446.8	446.8	446.8	446.8	448.1	449.4	453.3
60°	413.9	410.0	408.7	407.3	407.3	407.3	407.3	407.3	408.7	410.0	413.9
62.5°	374.5	370.5	369.2	367.9	367.9	367.9	367.9	367.9	369.2	370.5	374.5
65°	333.8	332.4	331.1	329.8	328.5	328.5	328.5	329.8	331.1	332.4	333.8
67.5°	290.4	289.1	287.8	286.5	285.1	285.1	285.1	286.5	287.8	289.1	290.4
70°	251.0	249.7	248.3	247.0	245.7	245.7	245.7	247.0	248.3	249.7	251.0
72.5°	211.6	210.2	208.9	207.6	206.3	206.3	206.3	207.6	208.9	210.2	211.6
75°	172.1	170.8	169.5	169.5	168.2	168.2	168.2	169.5	169.5	170.8	172.1
77.5°	135.3	134.0	132.7	132.7	131.4	131.4	131.4	132.7	132.7	134.0	135.3
80°	99.9	98.6	97.2	97.2	97.2	97.2	97.2	97.2	97.2	98.6	99.9
82.5°	67.0	67.0	65.7	65.7	65.7	65.7	65.7	65.7	65.7	67.0	67.0
85°	39.4	39.4	38.1	38.1	38.1	38.1	38.1	38.1	38.1	39.4	39.4
87.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





TEST NUMBER: P709091  
 CATALOG NUMBER: 4APN-X-37L935-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1076.2	1076.2	1076.2	1076.2
2.5°	1078.8	1080.1	1074.9	1069.6
5°	1073.5	1074.9	1070.9	1065.7
7.5°	1065.7	1067.0	1063.0	1059.1
10°	1053.8	1056.5	1052.5	1047.3
12.5°	1039.4	1040.7	1036.7	1032.8
15°	1022.3	1023.6	1019.7	1015.7
17.5°	1001.3	1003.9	1000.0	996.0
20°	977.6	980.2	977.6	973.7
22.5°	951.3	954.0	951.3	948.7
25°	923.7	926.4	923.7	921.1
27.5°	893.5	897.5	894.8	893.5
30°	862.0	865.9	863.3	862.0
32.5°	829.1	834.4	831.8	829.1
35°	795.0	798.9	796.3	795.0
37.5°	760.8	764.7	763.4	762.1
40°	725.3	729.3	726.6	725.3
42.5°	688.5	692.5	691.2	689.9
45°	650.4	654.4	653.1	653.1
47.5°	613.6	617.6	616.3	615.0
50°	574.2	578.2	576.8	576.8
52.5°	536.1	540.1	538.7	537.4
55°	496.7	499.3	498.0	498.0
57.5°	457.3	461.2	459.9	458.6
60°	417.9	420.5	419.2	419.2
62.5°	378.4	381.1	379.7	379.7
65°	336.4	339.0	339.0	339.0
67.5°	293.0	295.7	294.3	294.3
70°	253.6	254.9	253.6	253.6
72.5°	212.9	214.2	214.2	214.2
75°	173.4	174.8	173.4	173.4
77.5°	136.7	138.0	136.7	135.3
80°	101.2	102.5	101.2	99.9
82.5°	68.3	69.6	68.3	67.0
85°	40.7	40.7	39.4	38.1
87.5°	17.1	17.1	15.8	14.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)