

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: P

Luminaire Tested: **4APN-X-30L840-UNV-NP**

Issue Date: 06/06/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 06/06/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-X-30L840-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

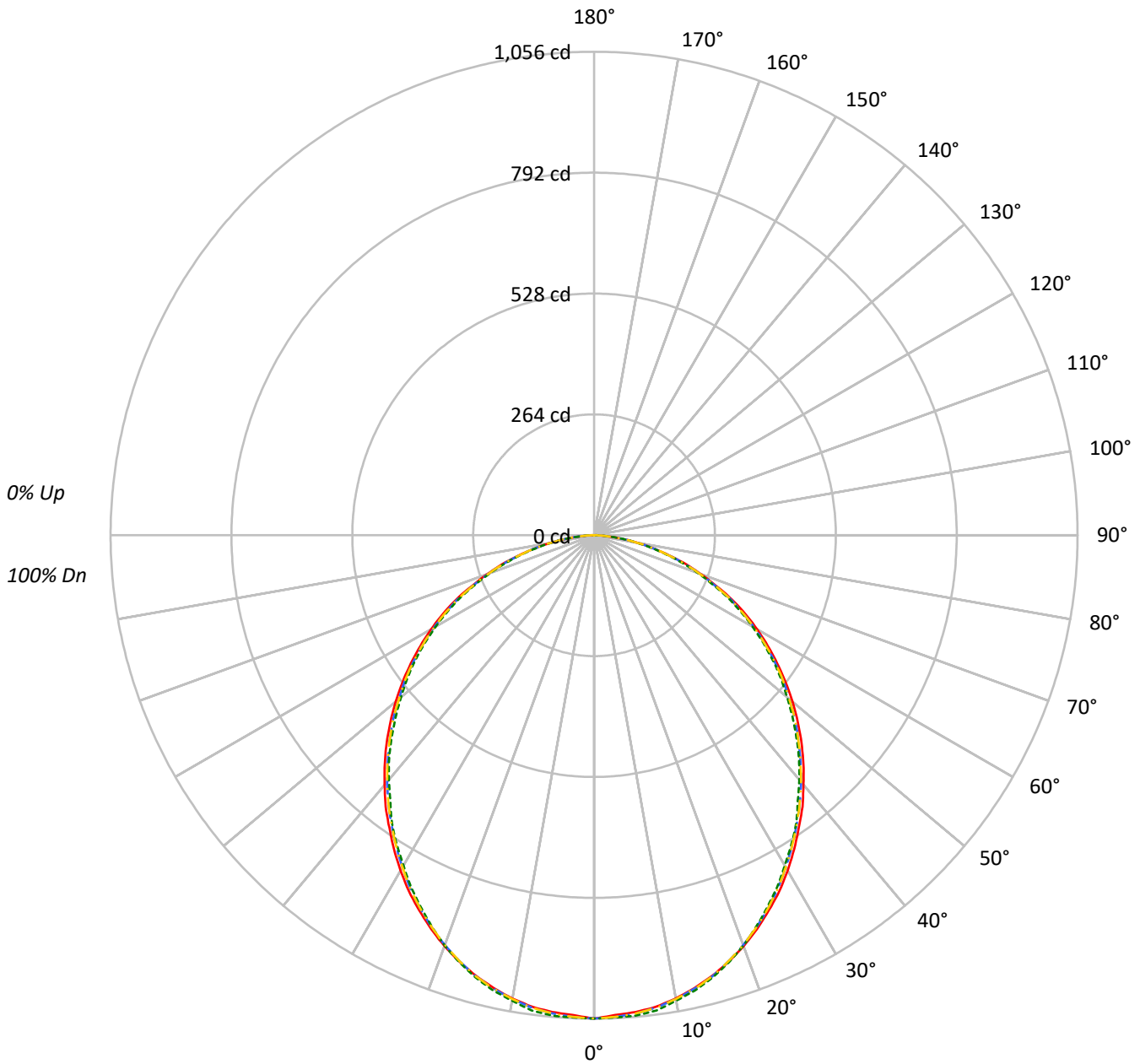
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2746.4 lumens  
Efficiency: N/A  
Efficacy: 84.5 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): 32.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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				
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°	9739	9739	9739	9739
5°	9681	9752	9681	9752
10°	9624	9672	9624	9672
15°	9516	9554	9516	9554
20°	9377	9365	9377	9365
25°	9199	9119	9199	9119
30°	9008	8871	9008	8871
35°	8783	8667	8783	8667
40°	8569	8398	8569	8398
45°	8358	8156	8358	8156
50°	8121	7899	8121	7899
55°	7858	7671	7858	7671
60°	7586	7374	7586	7374
65°	7261	7034	7261	7034
70°	6712	6501	6712	6501
75°	6064	5878	6064	5878
80°	5202	5063	5202	5063
85°	3949	3949	3949	3949



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.6	3.6
10°-20°	281.4	10.2
20°-30°	414.7	15.1
30°-40°	484.1	17.6
40°-50°	488.1	17.8
50°-60°	431.4	15.7
60°-70°	322.6	11.7
70°-80°	178.8	6.5
80°-90°	45.8	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°	795.7	29.0
0°-40°	1279.8	46.6
0°-60°	2199.2	80.1
0°-90°	2746.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2746.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1056	1056	1056	1056	1056	
5°	1045	1053	1045	1053	1045	99
15°	996	1000	996	1000	996	281
25°	904	896	904	896	904	416
35°	780	770	780	770	780	488
45°	641	625	641	625	641	494
55°	488	477	488	477	488	437
65°	333	322	333	322	333	327
75°	170	165	170	165	170	181
85°	37	37	37	37	37	45
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°	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6
2.5°	1049.1	1054.3	1059.5	1058.2	1054.3	1051.7	1053.0	1053.0	1054.3	1054.3	1054.3
5°	1045.3	1050.4	1054.3	1053.0	1049.1	1047.9	1047.9	1047.9	1050.4	1053.0	1050.4
7.5°	1038.8	1042.7	1046.6	1045.3	1041.4	1040.1	1040.1	1041.4	1044.0	1046.6	1044.0
10°	1027.3	1032.4	1036.2	1033.7	1029.9	1027.3	1027.3	1027.3	1029.9	1032.4	1029.9
12.5°	1013.1	1017.0	1020.8	1019.5	1015.7	1013.1	1013.1	1013.1	1015.7	1018.3	1015.7
15°	996.3	1000.2	1004.1	1002.8	998.9	996.3	996.3	996.3	998.9	1000.2	998.9
17.5°	977.0	980.8	984.7	982.1	977.0	974.4	974.4	974.4	977.0	978.2	977.0
20°	955.1	959.0	961.6	959.0	953.8	951.2	949.9	949.9	952.5	953.8	952.5
22.5°	930.6	933.2	935.7	933.2	928.0	925.4	924.1	922.8	924.1	925.4	924.1
25°	903.6	906.0	908.6	906.0	901.0	897.1	895.8	894.5	895.8	895.8	895.8
27.5°	876.5	877.7	880.3	876.5	871.3	867.4	866.1	864.8	866.1	866.1	866.1
30°	845.5	846.8	849.3	845.5	839.1	835.2	833.9	832.7	832.7	832.7	832.7
32.5°	813.3	815.9	818.5	813.3	806.8	803.0	801.7	800.4	801.7	801.7	801.7
35°	779.8	781.0	783.6	779.8	773.4	769.5	766.9	765.6	768.2	769.5	768.2
37.5°	747.6	748.8	750.1	746.3	739.8	735.9	733.4	732.1	730.8	730.8	730.8
40°	711.5	712.8	715.4	711.5	705.1	701.2	698.6	697.3	697.3	697.3	697.3
42.5°	676.7	677.9	679.2	675.4	668.9	665.0	662.5	661.2	662.5	662.5	662.5
45°	640.6	640.6	641.9	638.0	632.9	629.0	626.4	625.1	625.1	625.1	625.1
47.5°	603.2	604.5	605.8	601.9	596.7	592.9	590.4	587.8	587.8	587.8	587.8
50°	565.8	565.8	567.1	563.2	558.1	554.2	552.9	551.6	550.3	550.3	550.3
52.5°	527.2	528.5	529.8	525.9	522.0	518.2	515.6	514.3	514.3	514.3	514.3
55°	488.5	488.5	489.8	487.2	483.3	479.4	476.9	475.6	476.9	476.9	476.9
57.5°	449.8	451.1	452.4	448.6	444.7	440.8	439.5	438.2	438.2	438.2	438.2
60°	411.1	411.1	412.4	409.8	406.0	402.2	400.9	399.6	399.6	399.6	399.6
62.5°	372.5	372.5	373.8	371.2	367.3	363.5	362.2	360.9	360.9	360.9	360.9
65°	332.6	332.6	332.6	330.0	327.4	326.1	324.8	323.5	322.2	322.2	322.2
67.5°	288.7	288.7	290.0	287.4	284.8	283.5	282.2	280.9	279.7	279.7	279.7
70°	248.8	248.8	250.0	248.8	246.2	244.9	243.6	242.3	241.0	241.0	241.0
72.5°	210.1	210.1	210.1	208.8	207.5	206.3	205.0	203.7	202.4	202.4	202.4
75°	170.1	170.1	171.4	170.1	168.8	167.5	166.2	166.2	164.9	164.9	164.9
77.5°	132.8	134.1	135.3	134.1	132.8	131.5	130.2	130.2	128.9	128.9	128.9
80°	97.9	99.2	100.5	99.2	97.9	96.6	95.3	95.3	95.3	95.3	95.3
82.5°	65.7	67.0	68.3	67.0	65.7	65.7	64.4	64.4	64.4	64.4	64.4
85°	37.3	38.6	39.9	39.9	38.6	38.6	37.3	37.3	37.3	37.3	37.3
87.5°	14.2	15.5	16.8	16.8	15.5	15.5	15.5	15.5	15.5	15.5	15.5
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°	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6
2.5°	1053.0	1053.0	1051.7	1054.3	1058.2	1059.5	1054.3	1049.1	1054.3	1059.5	1058.2
5°	1047.9	1047.9	1047.9	1049.1	1053.0	1054.3	1050.4	1045.3	1050.4	1054.3	1053.0
7.5°	1041.4	1040.1	1040.1	1041.4	1045.3	1046.6	1042.7	1038.8	1042.7	1046.6	1045.3
10°	1027.3	1027.3	1027.3	1029.9	1033.7	1036.2	1032.4	1027.3	1032.4	1036.2	1033.7
12.5°	1013.1	1013.1	1013.1	1015.7	1019.5	1020.8	1017.0	1013.1	1017.0	1020.8	1019.5
15°	996.3	996.3	996.3	998.9	1002.8	1004.1	1000.2	996.3	1000.2	1004.1	1002.8
17.5°	974.4	974.4	974.4	977.0	982.1	984.7	980.8	977.0	980.8	984.7	982.1
20°	949.9	949.9	951.2	953.8	959.0	961.6	959.0	955.1	959.0	961.6	959.0
22.5°	922.8	924.1	925.4	928.0	933.2	935.7	933.2	930.6	933.2	935.7	933.2
25°	894.5	895.8	897.1	901.0	906.0	908.6	906.0	903.6	906.0	908.6	906.0
27.5°	864.8	866.1	867.4	871.3	876.5	880.3	877.7	876.5	877.7	880.3	876.5
30°	832.7	833.9	835.2	839.1	845.5	849.3	846.8	845.5	846.8	849.3	845.5
32.5°	800.4	801.7	803.0	806.8	813.3	818.5	815.9	813.3	815.9	818.5	813.3
35°	765.6	766.9	769.5	773.4	779.8	783.6	781.0	779.8	781.0	783.6	779.8
37.5°	732.1	733.4	735.9	739.8	746.3	750.1	748.8	747.6	748.8	750.1	746.3
40°	697.3	698.6	701.2	705.1	711.5	715.4	712.8	711.5	712.8	715.4	711.5
42.5°	661.2	662.5	665.0	668.9	675.4	679.2	677.9	676.7	677.9	679.2	675.4
45°	625.1	626.4	629.0	632.9	638.0	641.9	640.6	640.6	640.6	641.9	638.0
47.5°	587.8	590.4	592.9	596.7	601.9	605.8	604.5	603.2	604.5	605.8	601.9
50°	551.6	552.9	554.2	558.1	563.2	567.1	565.8	565.8	565.8	567.1	563.2
52.5°	514.3	515.6	518.2	522.0	525.9	529.8	528.5	527.2	528.5	529.8	525.9
55°	475.6	476.9	479.4	483.3	487.2	489.8	488.5	488.5	488.5	489.8	487.2
57.5°	438.2	439.5	440.8	444.7	448.6	452.4	451.1	449.8	451.1	452.4	448.6
60°	399.6	400.9	402.2	406.0	409.8	412.4	411.1	411.1	411.1	412.4	409.8
62.5°	360.9	362.2	363.5	367.3	371.2	373.8	372.5	372.5	372.5	373.8	371.2
65°	323.5	324.8	326.1	327.4	330.0	332.6	332.6	332.6	332.6	332.6	330.0
67.5°	280.9	282.2	283.5	284.8	287.4	290.0	288.7	288.7	288.7	290.0	287.4
70°	242.3	243.6	244.9	246.2	248.8	250.0	248.8	248.8	248.8	250.0	248.8
72.5°	203.7	205.0	206.3	207.5	208.8	210.1	210.1	210.1	210.1	210.1	208.8
75°	166.2	166.2	167.5	168.8	170.1	171.4	170.1	170.1	170.1	171.4	170.1
77.5°	130.2	130.2	131.5	132.8	134.1	135.3	134.1	132.8	134.1	135.3	134.1
80°	95.3	95.3	96.6	97.9	99.2	100.5	99.2	97.9	99.2	100.5	99.2
82.5°	64.4	64.4	65.7	65.7	67.0	68.3	67.0	65.7	67.0	68.3	67.0
85°	37.3	37.3	38.6	38.6	39.9	39.9	38.6	37.3	38.6	39.9	39.9
87.5°	15.5	15.5	15.5	15.5	16.8	16.8	15.5	14.2	15.5	16.8	16.8
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):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6	1055.6
2.5°	1054.3	1051.7	1053.0	1053.0	1054.3	1054.3	1054.3	1053.0	1053.0	1051.7	1054.3
5°	1049.1	1047.9	1047.9	1047.9	1050.4	1053.0	1050.4	1047.9	1047.9	1047.9	1049.1
7.5°	1041.4	1040.1	1040.1	1041.4	1044.0	1046.6	1044.0	1041.4	1040.1	1040.1	1041.4
10°	1029.9	1027.3	1027.3	1027.3	1029.9	1032.4	1029.9	1027.3	1027.3	1027.3	1029.9
12.5°	1015.7	1013.1	1013.1	1013.1	1015.7	1018.3	1015.7	1013.1	1013.1	1013.1	1015.7
15°	998.9	996.3	996.3	996.3	998.9	1000.2	998.9	996.3	996.3	996.3	998.9
17.5°	977.0	974.4	974.4	974.4	977.0	978.2	977.0	974.4	974.4	974.4	977.0
20°	953.8	951.2	949.9	949.9	952.5	953.8	952.5	949.9	949.9	951.2	953.8
22.5°	928.0	925.4	924.1	922.8	924.1	925.4	924.1	922.8	924.1	925.4	928.0
25°	901.0	897.1	895.8	894.5	895.8	895.8	895.8	894.5	895.8	897.1	901.0
27.5°	871.3	867.4	866.1	864.8	866.1	866.1	866.1	864.8	866.1	867.4	871.3
30°	839.1	835.2	833.9	832.7	832.7	832.7	832.7	832.7	833.9	835.2	839.1
32.5°	806.8	803.0	801.7	800.4	801.7	801.7	801.7	800.4	801.7	803.0	806.8
35°	773.4	769.5	766.9	765.6	768.2	769.5	768.2	765.6	766.9	769.5	773.4
37.5°	739.8	735.9	733.4	732.1	730.8	730.8	730.8	732.1	733.4	735.9	739.8
40°	705.1	701.2	698.6	697.3	697.3	697.3	697.3	697.3	698.6	701.2	705.1
42.5°	668.9	665.0	662.5	661.2	662.5	662.5	662.5	661.2	662.5	665.0	668.9
45°	632.9	629.0	626.4	625.1	625.1	625.1	625.1	625.1	626.4	629.0	632.9
47.5°	596.7	592.9	590.4	587.8	587.8	587.8	587.8	587.8	590.4	592.9	596.7
50°	558.1	554.2	552.9	551.6	550.3	550.3	550.3	551.6	552.9	554.2	558.1
52.5°	522.0	518.2	515.6	514.3	514.3	514.3	514.3	514.3	515.6	518.2	522.0
55°	483.3	479.4	476.9	475.6	476.9	476.9	476.9	475.6	476.9	479.4	483.3
57.5°	444.7	440.8	439.5	438.2	438.2	438.2	438.2	438.2	439.5	440.8	444.7
60°	406.0	402.2	400.9	399.6	399.6	399.6	399.6	399.6	400.9	402.2	406.0
62.5°	367.3	363.5	362.2	360.9	360.9	360.9	360.9	360.9	362.2	363.5	367.3
65°	327.4	326.1	324.8	323.5	322.2	322.2	322.2	323.5	324.8	326.1	327.4
67.5°	284.8	283.5	282.2	280.9	279.7	279.7	279.7	280.9	282.2	283.5	284.8
70°	246.2	244.9	243.6	242.3	241.0	241.0	241.0	242.3	243.6	244.9	246.2
72.5°	207.5	206.3	205.0	203.7	202.4	202.4	202.4	203.7	205.0	206.3	207.5
75°	168.8	167.5	166.2	166.2	164.9	164.9	164.9	166.2	166.2	167.5	168.8
77.5°	132.8	131.5	130.2	130.2	128.9	128.9	128.9	130.2	130.2	131.5	132.8
80°	97.9	96.6	95.3	95.3	95.3	95.3	95.3	95.3	95.3	96.6	97.9
82.5°	65.7	65.7	64.4	64.4	64.4	64.4	64.4	64.4	64.4	65.7	65.7
85°	38.6	38.6	37.3	37.3	37.3	37.3	37.3	37.3	37.3	38.6	38.6
87.5°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
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: P  
 CATALOG NUMBER: 4APN-X-30L840-UNV-NP

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1055.6	1055.6	1055.6	1055.6
2.5°	1058.2	1059.5	1054.3	1049.1
5°	1053.0	1054.3	1050.4	1045.3
7.5°	1045.3	1046.6	1042.7	1038.8
10°	1033.7	1036.2	1032.4	1027.3
12.5°	1019.5	1020.8	1017.0	1013.1
15°	1002.8	1004.1	1000.2	996.3
17.5°	982.1	984.7	980.8	977.0
20°	959.0	961.6	959.0	955.1
22.5°	933.2	935.7	933.2	930.6
25°	906.0	908.6	906.0	903.6
27.5°	876.5	880.3	877.7	876.5
30°	845.5	849.3	846.8	845.5
32.5°	813.3	818.5	815.9	813.3
35°	779.8	783.6	781.0	779.8
37.5°	746.3	750.1	748.8	747.6
40°	711.5	715.4	712.8	711.5
42.5°	675.4	679.2	677.9	676.7
45°	638.0	641.9	640.6	640.6
47.5°	601.9	605.8	604.5	603.2
50°	563.2	567.1	565.8	565.8
52.5°	525.9	529.8	528.5	527.2
55°	487.2	489.8	488.5	488.5
57.5°	448.6	452.4	451.1	449.8
60°	409.8	412.4	411.1	411.1
62.5°	371.2	373.8	372.5	372.5
65°	330.0	332.6	332.6	332.6
67.5°	287.4	290.0	288.7	288.7
70°	248.8	250.0	248.8	248.8
72.5°	208.8	210.1	210.1	210.1
75°	170.1	171.4	170.1	170.1
77.5°	134.1	135.3	134.1	132.8
80°	99.2	100.5	99.2	97.9
82.5°	67.0	68.3	67.0	65.7
85°	39.9	39.9	38.6	37.3
87.5°	16.8	16.8	15.5	14.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)