

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-22L935-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-22L935-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

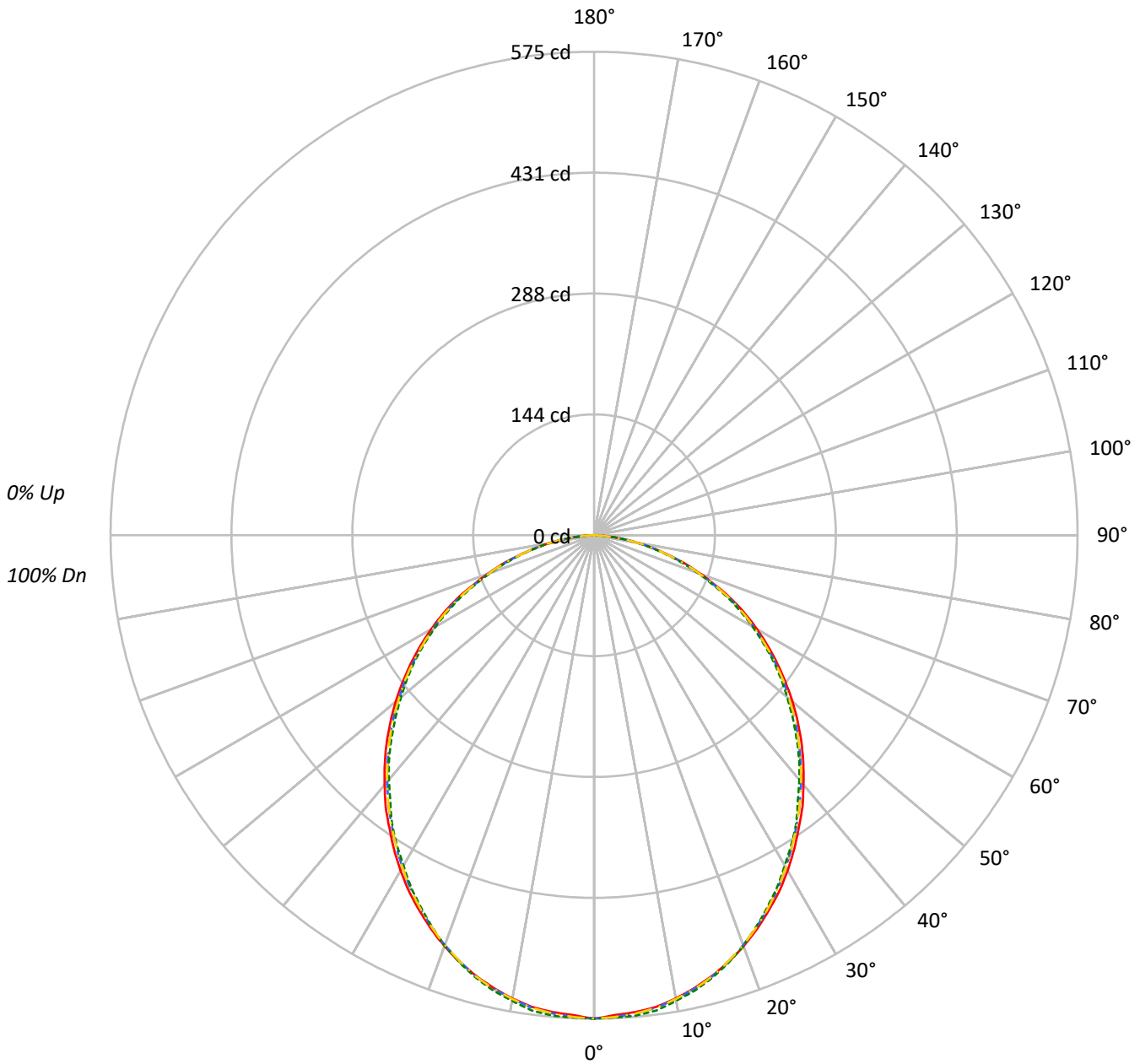
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1495.5 lumens  
Efficiency: N/A  
Efficacy: 62.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 24  
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°	5304	5304	5304	5304
5°	5272	5311	5272	5311
10°	5241	5267	5241	5267
15°	5182	5202	5182	5202
20°	5107	5100	5107	5100
25°	5009	4966	5009	4966
30°	4905	4830	4905	4830
35°	4782	4719	4782	4719
40°	4666	4573	4666	4573
45°	4551	4441	4551	4441
50°	4422	4302	4422	4302
55°	4279	4177	4279	4177
60°	4131	4015	4131	4015
65°	3954	3831	3954	3831
70°	3652	3542	3652	3542
75°	3305	3201	3305	3201
80°	2837	2758	2837	2758
85°	2160	2160	2160	2160



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.3	3.6
10°-20°	153.2	10.2
20°-30°	225.8	15.1
30°-40°	263.6	17.6
40°-50°	265.8	17.8
50°-60°	234.9	15.7
60°-70°	175.7	11.7
70°-80°	97.4	6.5
80°-90°	25.0	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°	433.3	29.0
0°-40°	696.9	46.6
0°-60°	1197.5	80.1
0°-90°	1495.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1495.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	575	575	575	575	575	
5°	569	573	569	573	569	54
15°	542	545	542	545	542	153
25°	492	488	492	488	492	227
35°	425	419	425	419	425	266
45°	349	340	349	340	349	269
55°	266	260	266	260	266	238
65°	181	176	181	176	181	178
75°	93	90	93	90	93	99
85°	20	20	20	20	20	25
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°	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9
2.5°	571.3	574.1	576.9	576.2	574.1	572.7	573.4	573.4	574.1	574.1	574.1
5°	569.2	572.0	574.1	573.4	571.3	570.6	570.6	570.6	572.0	573.4	572.0
7.5°	565.7	567.8	569.9	569.2	567.1	566.4	566.4	567.1	568.5	569.9	568.5
10°	559.4	562.2	564.3	562.9	560.8	559.4	559.4	559.4	560.8	562.2	560.8
12.5°	551.6	553.8	555.9	555.1	553.1	551.6	551.6	551.6	553.1	554.5	553.1
15°	542.5	544.6	546.7	546.0	544.0	542.5	542.5	542.5	544.0	544.6	544.0
17.5°	532.0	534.1	536.2	534.9	532.0	530.6	530.6	530.6	532.0	532.7	532.0
20°	520.1	522.2	523.6	522.2	519.4	518.0	517.2	517.2	518.7	519.4	518.7
22.5°	506.7	508.1	509.6	508.1	505.3	504.0	503.2	502.5	503.2	504.0	503.2
25°	492.0	493.4	494.8	493.4	490.6	488.5	487.8	487.1	487.8	487.8	487.8
27.5°	477.2	478.0	479.3	477.2	474.5	472.3	471.7	471.0	471.7	471.7	471.7
30°	460.4	461.1	462.6	460.4	456.9	454.8	454.1	453.4	453.4	453.4	453.4
32.5°	442.8	444.3	445.7	442.8	439.3	437.3	436.6	435.8	436.6	436.6	436.6
35°	424.6	425.3	426.7	424.6	421.1	419.0	417.6	416.9	418.3	419.0	418.3
37.5°	407.1	407.8	408.4	406.4	402.8	400.8	399.3	398.7	397.9	397.9	397.9
40°	387.4	388.2	389.5	387.4	383.9	381.8	380.4	379.7	379.7	379.7	379.7
42.5°	368.4	369.2	369.9	367.8	364.3	362.2	360.8	360.0	360.8	360.8	360.8
45°	348.8	348.8	349.5	347.4	344.6	342.5	341.1	340.4	340.4	340.4	340.4
47.5°	328.5	329.2	329.9	327.8	325.0	322.9	321.4	320.0	320.0	320.0	320.0
50°	308.1	308.1	308.8	306.7	303.9	301.8	301.1	300.4	299.7	299.7	299.7
52.5°	287.0	287.8	288.5	286.4	284.3	282.1	280.7	280.0	280.0	280.0	280.0
55°	266.0	266.0	266.7	265.3	263.2	261.1	259.7	259.0	259.7	259.7	259.7
57.5°	245.0	245.6	246.4	244.2	242.1	240.0	239.4	238.6	238.6	238.6	238.6
60°	223.9	223.9	224.6	223.2	221.1	219.0	218.2	217.6	217.6	217.6	217.6
62.5°	202.8	202.8	203.6	202.1	200.1	198.0	197.2	196.5	196.5	196.5	196.5
65°	181.1	181.1	181.1	179.7	178.3	177.6	176.8	176.2	175.5	175.5	175.5
67.5°	157.2	157.2	157.9	156.6	155.1	154.4	153.7	153.0	152.3	152.3	152.3
70°	135.4	135.4	136.2	135.4	134.1	133.3	132.7	131.9	131.3	131.3	131.3
72.5°	114.4	114.4	114.4	113.7	113.0	112.3	111.6	110.9	110.2	110.2	110.2
75°	92.7	92.7	93.3	92.7	91.9	91.3	90.5	90.5	89.8	89.8	89.8
77.5°	72.3	73.0	73.7	73.0	72.3	71.5	70.9	70.9	70.2	70.2	70.2
80°	53.4	54.0	54.8	54.0	53.4	52.6	51.9	51.9	51.9	51.9	51.9
82.5°	35.8	36.5	37.2	36.5	35.8	35.8	35.1	35.1	35.1	35.1	35.1
85°	20.4	21.0	21.8	21.8	21.0	21.0	20.4	20.4	20.4	20.4	20.4
87.5°	7.7	8.4	9.1	9.1	8.4	8.4	8.4	8.4	8.4	8.4	8.4
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°	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9
2.5°	573.4	573.4	572.7	574.1	576.2	576.9	574.1	571.3	574.1	576.9	576.2
5°	570.6	570.6	570.6	571.3	573.4	574.1	572.0	569.2	572.0	574.1	573.4
7.5°	567.1	566.4	566.4	567.1	569.2	569.9	567.8	565.7	567.8	569.9	569.2
10°	559.4	559.4	559.4	560.8	562.9	564.3	562.2	559.4	562.2	564.3	562.9
12.5°	551.6	551.6	551.6	553.1	555.1	555.9	553.8	551.6	553.8	555.9	555.1
15°	542.5	542.5	542.5	544.0	546.0	546.7	544.6	542.5	544.6	546.7	546.0
17.5°	530.6	530.6	530.6	532.0	534.9	536.2	534.1	532.0	534.1	536.2	534.9
20°	517.2	517.2	518.0	519.4	522.2	523.6	522.2	520.1	522.2	523.6	522.2
22.5°	502.5	503.2	504.0	505.3	508.1	509.6	508.1	506.7	508.1	509.6	508.1
25°	487.1	487.8	488.5	490.6	493.4	494.8	493.4	492.0	493.4	494.8	493.4
27.5°	471.0	471.7	472.3	474.5	477.2	479.3	478.0	477.2	478.0	479.3	477.2
30°	453.4	454.1	454.8	456.9	460.4	462.6	461.1	460.4	461.1	462.6	460.4
32.5°	435.8	436.6	437.3	439.3	442.8	445.7	444.3	442.8	444.3	445.7	442.8
35°	416.9	417.6	419.0	421.1	424.6	426.7	425.3	424.6	425.3	426.7	424.6
37.5°	398.7	399.3	400.8	402.8	406.4	408.4	407.8	407.1	407.8	408.4	406.4
40°	379.7	380.4	381.8	383.9	387.4	389.5	388.2	387.4	388.2	389.5	387.4
42.5°	360.0	360.8	362.2	364.3	367.8	369.9	369.2	368.4	369.2	369.9	367.8
45°	340.4	341.1	342.5	344.6	347.4	349.5	348.8	348.8	348.8	349.5	347.4
47.5°	320.0	321.4	322.9	325.0	327.8	329.9	329.2	328.5	329.2	329.9	327.8
50°	300.4	301.1	301.8	303.9	306.7	308.8	308.1	308.1	308.1	308.8	306.7
52.5°	280.0	280.7	282.1	284.3	286.4	288.5	287.8	287.0	287.8	288.5	286.4
55°	259.0	259.7	261.1	263.2	265.3	266.7	266.0	266.0	266.0	266.7	265.3
57.5°	238.6	239.4	240.0	242.1	244.2	246.4	245.6	245.0	245.6	246.4	244.2
60°	217.6	218.2	219.0	221.1	223.2	224.6	223.9	223.9	223.9	224.6	223.2
62.5°	196.5	197.2	198.0	200.1	202.1	203.6	202.8	202.8	202.8	203.6	202.1
65°	176.2	176.8	177.6	178.3	179.7	181.1	181.1	181.1	181.1	181.1	179.7
67.5°	153.0	153.7	154.4	155.1	156.6	157.9	157.2	157.2	157.2	157.9	156.6
70°	131.9	132.7	133.3	134.1	135.4	136.2	135.4	135.4	135.4	136.2	135.4
72.5°	110.9	111.6	112.3	113.0	113.7	114.4	114.4	114.4	114.4	114.4	113.7
75°	90.5	90.5	91.3	91.9	92.7	93.3	92.7	92.7	92.7	93.3	92.7
77.5°	70.9	70.9	71.5	72.3	73.0	73.7	73.0	72.3	73.0	73.7	73.0
80°	51.9	51.9	52.6	53.4	54.0	54.8	54.0	53.4	54.0	54.8	54.0
82.5°	35.1	35.1	35.8	35.8	36.5	37.2	36.5	35.8	36.5	37.2	36.5
85°	20.4	20.4	21.0	21.0	21.8	21.8	21.0	20.4	21.0	21.8	21.8
87.5°	8.4	8.4	8.4	8.4	9.1	9.1	8.4	7.7	8.4	9.1	9.1
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°	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9	574.9
2.5°	574.1	572.7	573.4	573.4	574.1	574.1	574.1	573.4	573.4	572.7	574.1
5°	571.3	570.6	570.6	570.6	572.0	573.4	572.0	570.6	570.6	570.6	571.3
7.5°	567.1	566.4	566.4	567.1	568.5	569.9	568.5	567.1	566.4	566.4	567.1
10°	560.8	559.4	559.4	559.4	560.8	562.2	560.8	559.4	559.4	559.4	560.8
12.5°	553.1	551.6	551.6	551.6	553.1	554.5	553.1	551.6	551.6	551.6	553.1
15°	544.0	542.5	542.5	542.5	544.0	544.6	544.0	542.5	542.5	542.5	544.0
17.5°	532.0	530.6	530.6	530.6	532.0	532.7	532.0	530.6	530.6	530.6	532.0
20°	519.4	518.0	517.2	517.2	518.7	519.4	518.7	517.2	517.2	518.0	519.4
22.5°	505.3	504.0	503.2	502.5	503.2	504.0	503.2	502.5	503.2	504.0	505.3
25°	490.6	488.5	487.8	487.1	487.8	487.8	487.8	487.1	487.8	488.5	490.6
27.5°	474.5	472.3	471.7	471.0	471.7	471.7	471.7	471.0	471.7	472.3	474.5
30°	456.9	454.8	454.1	453.4	453.4	453.4	453.4	453.4	454.1	454.8	456.9
32.5°	439.3	437.3	436.6	435.8	436.6	436.6	436.6	435.8	436.6	437.3	439.3
35°	421.1	419.0	417.6	416.9	418.3	419.0	418.3	416.9	417.6	419.0	421.1
37.5°	402.8	400.8	399.3	398.7	397.9	397.9	397.9	398.7	399.3	400.8	402.8
40°	383.9	381.8	380.4	379.7	379.7	379.7	379.7	379.7	380.4	381.8	383.9
42.5°	364.3	362.2	360.8	360.0	360.8	360.8	360.8	360.0	360.8	362.2	364.3
45°	344.6	342.5	341.1	340.4	340.4	340.4	340.4	340.4	341.1	342.5	344.6
47.5°	325.0	322.9	321.4	320.0	320.0	320.0	320.0	320.0	321.4	322.9	325.0
50°	303.9	301.8	301.1	300.4	299.7	299.7	299.7	300.4	301.1	301.8	303.9
52.5°	284.3	282.1	280.7	280.0	280.0	280.0	280.0	280.0	280.7	282.1	284.3
55°	263.2	261.1	259.7	259.0	259.7	259.7	259.7	259.0	259.7	261.1	263.2
57.5°	242.1	240.0	239.4	238.6	238.6	238.6	238.6	238.6	239.4	240.0	242.1
60°	221.1	219.0	218.2	217.6	217.6	217.6	217.6	217.6	218.2	219.0	221.1
62.5°	200.1	198.0	197.2	196.5	196.5	196.5	196.5	196.5	197.2	198.0	200.1
65°	178.3	177.6	176.8	176.2	175.5	175.5	175.5	176.2	176.8	177.6	178.3
67.5°	155.1	154.4	153.7	153.0	152.3	152.3	152.3	153.0	153.7	154.4	155.1
70°	134.1	133.3	132.7	131.9	131.3	131.3	131.3	131.9	132.7	133.3	134.1
72.5°	113.0	112.3	111.6	110.9	110.2	110.2	110.2	110.9	111.6	112.3	113.0
75°	91.9	91.3	90.5	90.5	89.8	89.8	89.8	90.5	90.5	91.3	91.9
77.5°	72.3	71.5	70.9	70.9	70.2	70.2	70.2	70.9	70.9	71.5	72.3
80°	53.4	52.6	51.9	51.9	51.9	51.9	51.9	51.9	51.9	52.6	53.4
82.5°	35.8	35.8	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.8	35.8
85°	21.0	21.0	20.4	20.4	20.4	20.4	20.4	20.4	20.4	21.0	21.0
87.5°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
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  
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**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	574.9	574.9	574.9	574.9
2.5°	576.2	576.9	574.1	571.3
5°	573.4	574.1	572.0	569.2
7.5°	569.2	569.9	567.8	565.7
10°	562.9	564.3	562.2	559.4
12.5°	555.1	555.9	553.8	551.6
15°	546.0	546.7	544.6	542.5
17.5°	534.9	536.2	534.1	532.0
20°	522.2	523.6	522.2	520.1
22.5°	508.1	509.6	508.1	506.7
25°	493.4	494.8	493.4	492.0
27.5°	477.2	479.3	478.0	477.2
30°	460.4	462.6	461.1	460.4
32.5°	442.8	445.7	444.3	442.8
35°	424.6	426.7	425.3	424.6
37.5°	406.4	408.4	407.8	407.1
40°	387.4	389.5	388.2	387.4
42.5°	367.8	369.9	369.2	368.4
45°	347.4	349.5	348.8	348.8
47.5°	327.8	329.9	329.2	328.5
50°	306.7	308.8	308.1	308.1
52.5°	286.4	288.5	287.8	287.0
55°	265.3	266.7	266.0	266.0
57.5°	244.2	246.4	245.6	245.0
60°	223.2	224.6	223.9	223.9
62.5°	202.1	203.6	202.8	202.8
65°	179.7	181.1	181.1	181.1
67.5°	156.6	157.9	157.2	157.2
70°	135.4	136.2	135.4	135.4
72.5°	113.7	114.4	114.4	114.4
75°	92.7	93.3	92.7	92.7
77.5°	73.0	73.7	73.0	72.3
80°	54.0	54.8	54.0	53.4
82.5°	36.5	37.2	36.5	35.8
85°	21.8	21.8	21.0	20.4
87.5°	9.1	9.1	8.4	7.7
90°	0.0	0.0	0.0	0.0

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