

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-20L950-X-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-20L950-X-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

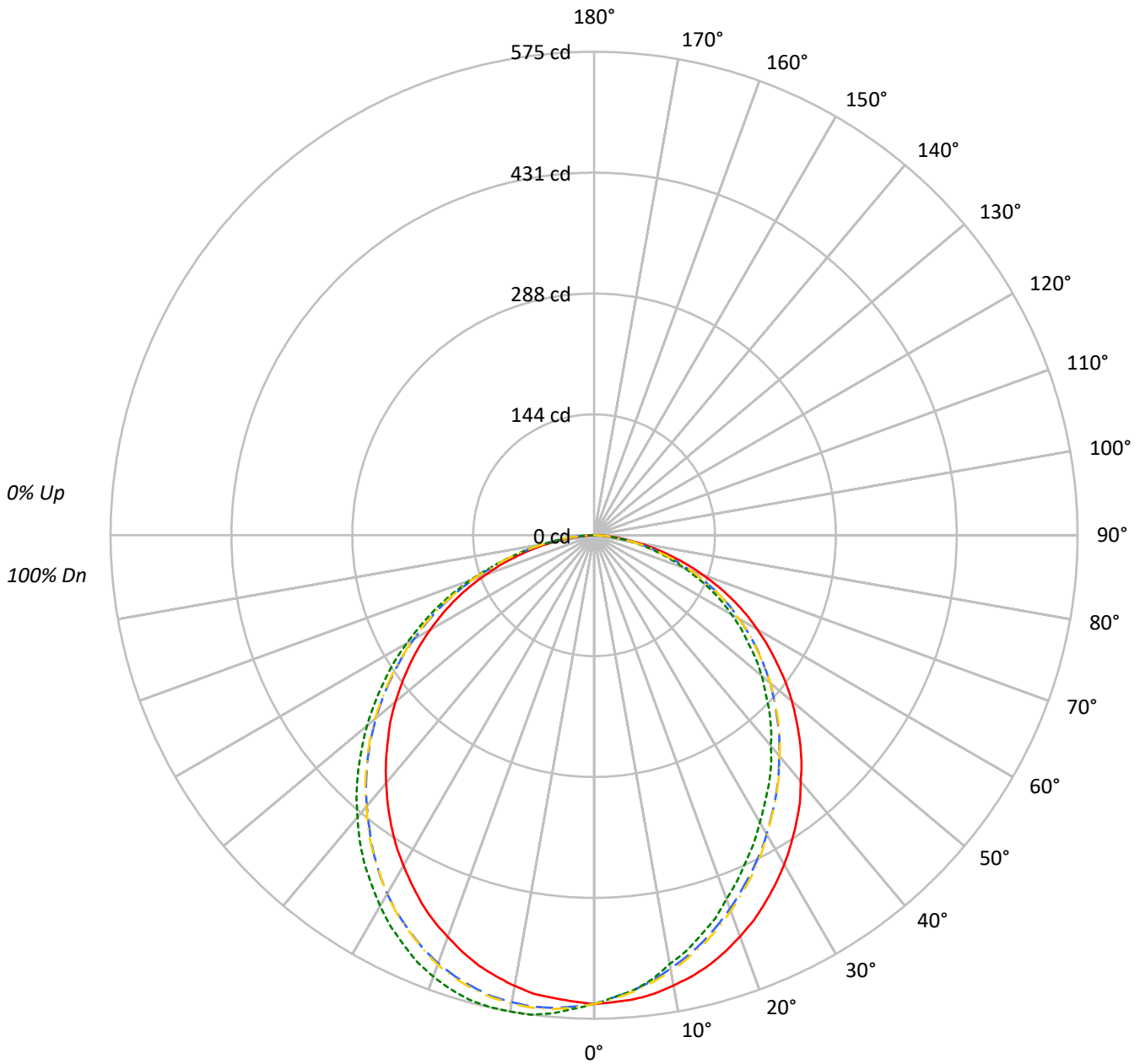
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1495.4 lumens  
Efficiency: N/A  
Efficacy: 62.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.8  
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	94	92	94	91	89	90	88	86	86	86	86	84	
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	72	72	72	70	
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	61	61	61	59	
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	53	53	53	51	
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44	
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	41	41	41	38	
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	36	36	36	34	
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	32	32	32	30	
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	29	29	29	27	
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	27	27	25	

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

	0°	90°	180°	270°
0°	5144	5144	5144	5144
5°	5129	5030	5118	5286
10°	5094	4851	5099	5389
15°	5055	4699	5060	5465
20°	4985	4520	4992	5486
25°	4906	4353	4925	5465
30°	4818	4200	4831	5423
35°	4717	4078	4738	5363
40°	4604	3942	4635	5273
45°	4518	3844	4526	5176
50°	4409	3739	4427	5061
55°	4271	3603	4303	4921
60°	4143	3491	4155	4748
65°	3980	3345	3980	4545
70°	3709	3097	3693	4235
75°	3372	2809	3326	3800
80°	2917	2417	2816	3252
85°	2276	1810	2138	2678



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.7	3.5
10°-20°	149.5	10.0
20°-30°	222.3	14.9
30°-40°	262.0	17.5
40°-50°	266.8	17.8
50°-60°	237.7	15.9
60°-70°	179.0	12.0
70°-80°	99.6	6.7
80°-90°	25.9	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°	424.5	28.4
0°-40°	686.5	45.9
0°-60°	1190.9	79.6
0°-90°	1495.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1495.4	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	558	558	558	558	558	
5°	554	543	553	571	554	53
15°	529	492	530	572	529	149
25°	482	428	484	537	482	222
35°	419	362	421	476	419	262
45°	346	295	347	397	346	267
55°	266	224	268	306	266	238
65°	182	153	182	208	182	180
75°	95	79	93	107	95	101
85°	22	17	20	25	22	26
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°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5
2.5°	555.7	555.7	556.3	553.8	550.6	549.4	548.8	548.1	549.4	550.0	549.4
5°	553.8	552.6	551.3	548.1	544.3	541.8	540.6	539.9	541.2	543.1	541.2
7.5°	550.0	547.5	545.0	540.6	536.1	532.4	530.4	529.2	530.4	532.4	531.1
10°	543.7	540.6	536.8	531.7	525.4	521.0	519.1	517.2	517.8	517.8	517.8
12.5°	537.4	533.0	528.6	522.2	515.3	510.2	507.1	504.6	505.8	506.5	506.5
15°	529.2	523.5	517.2	510.2	503.3	497.7	493.9	491.3	492.0	492.0	492.6
17.5°	519.1	512.8	506.5	498.2	490.0	483.8	479.3	476.2	477.5	478.1	478.7
20°	507.7	500.8	493.9	485.1	476.2	469.3	464.9	461.1	460.4	460.4	461.1
22.5°	495.8	488.2	480.0	470.5	461.1	453.5	449.1	445.3	444.7	444.7	445.3
25°	481.9	473.7	465.5	456.0	446.0	438.4	432.7	428.9	428.3	427.6	428.9
27.5°	467.4	459.2	451.0	441.5	430.8	423.2	417.6	413.8	412.5	411.9	413.1
30°	452.2	442.7	434.0	423.8	414.4	406.8	401.2	396.7	395.4	394.2	395.4
32.5°	435.8	426.4	416.9	406.8	397.4	389.8	384.1	379.7	378.5	377.8	379.0
35°	418.8	409.4	400.5	390.5	381.0	373.4	367.7	363.9	362.7	362.1	362.7
37.5°	401.8	392.3	383.5	373.4	363.9	356.4	350.7	346.9	346.3	345.7	346.3
40°	382.3	374.1	365.2	355.7	346.3	338.7	334.3	329.9	328.6	327.3	329.2
42.5°	365.2	357.0	348.1	339.3	329.9	322.3	317.3	313.5	312.2	311.5	312.2
45°	346.3	337.5	328.6	320.4	311.5	304.6	299.6	295.8	295.2	294.6	295.2
47.5°	326.1	318.6	311.0	302.8	293.9	287.0	282.6	278.8	277.5	276.2	277.5
50°	307.2	299.6	292.0	284.4	276.2	270.0	265.5	261.8	261.1	260.5	261.1
52.5°	287.0	279.5	272.5	264.9	258.0	251.7	247.3	244.1	243.5	242.9	243.5
55°	265.5	259.3	252.9	246.6	239.7	234.0	230.2	226.4	225.2	224.0	225.2
57.5°	245.3	239.7	233.4	227.1	220.7	215.7	212.0	208.7	208.2	207.5	208.2
60°	224.5	219.5	213.8	208.2	201.8	196.8	193.6	191.1	189.8	189.2	189.8
62.5°	203.8	198.7	194.3	188.5	182.9	179.1	176.0	173.4	172.2	171.6	172.2
65°	182.3	177.9	173.4	168.4	164.0	160.2	157.0	154.5	153.9	153.2	153.2
67.5°	160.2	156.5	152.7	148.3	143.2	139.4	136.3	134.3	133.7	133.0	133.7
70°	137.5	134.3	130.6	126.8	123.0	119.9	117.9	116.1	115.4	114.8	114.8
72.5°	116.1	113.5	110.4	107.2	104.1	101.0	99.0	97.7	97.2	96.5	96.5
75°	94.6	92.1	90.2	87.7	84.5	82.6	80.8	79.5	78.8	78.8	78.8
77.5°	74.4	72.6	70.6	68.1	66.2	64.4	63.1	62.4	61.8	61.8	61.8
80°	54.9	53.6	52.4	51.1	49.2	47.3	46.7	46.0	45.5	45.5	45.5
82.5°	37.2	36.6	35.3	34.0	32.8	32.2	31.5	30.9	30.9	30.9	30.9
85°	21.5	20.8	20.2	19.5	18.9	18.9	18.3	17.7	17.1	17.1	17.1
87.5°	8.9	8.9	8.9	8.2	7.6	7.6	7.6	7.6	7.6	7.6	7.6
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°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5
2.5°	548.1	549.4	550.6	552.6	554.4	556.3	555.7	555.0	557.5	560.8	561.4
5°	539.9	541.2	543.1	546.2	549.4	551.9	552.6	552.6	557.5	562.0	563.2
7.5°	529.8	531.7	534.2	537.4	541.8	545.5	547.5	550.0	555.0	560.8	563.2
10°	517.2	520.4	524.2	528.6	533.0	537.4	541.2	544.3	550.6	557.0	560.8
12.5°	505.8	509.0	512.8	517.8	523.5	529.2	533.0	537.4	545.0	552.6	557.0
15°	493.3	496.4	500.8	505.8	512.2	518.4	524.2	529.8	537.4	545.5	550.6
17.5°	479.3	482.5	486.9	493.3	500.2	507.1	513.5	519.7	528.6	537.4	543.1
20°	462.3	466.7	472.4	478.7	486.9	495.1	501.5	508.4	517.8	527.3	533.7
22.5°	446.0	450.3	456.7	464.2	473.1	481.9	489.5	497.1	507.1	516.6	523.5
25°	430.2	435.2	441.5	449.1	457.3	466.2	474.9	483.8	493.9	504.0	510.9
27.5°	414.4	418.8	425.1	432.7	442.2	451.0	459.8	468.7	479.3	490.0	497.7
30°	396.7	401.8	407.4	415.0	425.1	435.2	444.0	453.5	464.2	474.9	482.5
32.5°	380.3	384.8	390.5	398.0	408.1	418.2	427.6	437.8	447.8	458.5	466.2
35°	363.9	368.3	374.1	381.6	391.7	401.8	411.2	420.7	430.8	440.9	448.5
37.5°	347.5	351.9	357.6	365.2	374.7	384.8	393.6	403.0	413.1	423.2	430.2
40°	330.5	335.0	339.3	346.9	356.4	366.5	375.3	384.8	394.8	404.9	411.9
42.5°	313.5	317.9	323.5	331.2	339.9	348.8	357.6	366.5	375.9	385.4	392.3
45°	296.4	300.2	305.9	312.8	321.7	329.9	338.7	346.9	356.4	365.2	372.1
47.5°	278.8	282.6	287.0	293.9	302.8	311.5	320.4	328.6	336.8	345.7	351.9
50°	261.8	265.5	270.6	276.9	285.1	293.3	300.8	308.4	316.6	324.8	330.5
52.5°	244.1	247.9	252.3	258.6	265.5	273.1	280.0	287.7	295.2	302.8	308.4
55°	226.4	228.9	232.7	238.4	246.0	253.6	260.5	267.5	274.4	280.7	286.4
57.5°	208.7	212.0	216.3	221.4	227.7	234.0	240.3	246.6	252.9	259.3	264.2
60°	191.1	193.6	196.8	201.2	207.5	213.2	219.5	225.2	230.9	236.5	240.9
62.5°	172.8	175.4	178.5	182.9	188.0	193.0	198.7	203.8	208.7	213.8	218.2
65°	153.9	156.5	159.6	163.4	167.8	172.2	177.2	182.3	186.1	189.8	194.3
67.5°	134.3	136.9	140.1	143.2	147.0	151.4	155.8	160.2	164.0	167.8	170.9
70°	115.4	117.3	120.5	123.0	126.1	129.3	133.0	136.9	139.4	142.5	146.3
72.5°	97.2	99.0	101.5	104.1	105.9	108.5	112.3	115.4	118.6	122.3	124.3
75°	79.5	80.8	82.6	84.5	86.4	88.3	90.8	93.3	95.9	97.7	100.3
77.5°	61.8	63.1	65.0	66.2	67.5	68.8	70.6	72.6	74.4	75.7	78.2
80°	45.5	46.7	47.9	49.2	50.4	51.7	52.4	53.0	55.5	57.4	58.6
82.5°	30.9	31.5	32.2	33.5	34.0	34.7	35.3	35.3	36.6	37.8	39.7
85°	17.7	18.3	18.9	18.9	18.9	18.9	19.5	20.2	20.8	22.0	23.3
87.5°	6.9	6.9	7.6	7.6	7.6	7.6	7.6	7.6	8.2	9.5	10.0
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°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5
2.5°	560.8	561.4	562.6	563.2	563.9	563.9	564.5	565.2	563.9	562.6	562.0
5°	563.9	564.5	566.4	568.3	569.5	570.8	570.2	569.5	568.3	566.4	565.2
7.5°	564.5	566.4	568.3	570.8	572.7	575.2	573.9	572.7	570.2	567.7	565.7
10°	562.6	565.2	568.3	571.5	573.3	575.2	573.9	572.7	570.2	567.0	564.5
12.5°	560.1	563.2	567.0	570.2	572.1	574.6	572.7	570.8	567.7	564.5	561.4
15°	554.4	558.2	562.6	566.4	569.5	572.1	570.2	569.0	565.2	560.8	556.3
17.5°	547.5	552.6	557.0	561.4	563.9	566.4	565.2	563.9	559.5	554.4	549.4
20°	539.3	544.3	548.8	553.2	556.3	558.8	557.0	555.0	550.6	546.2	541.2
22.5°	529.2	534.2	539.3	543.7	546.8	549.4	546.8	543.7	539.3	534.9	529.8
25°	516.6	522.2	527.9	532.4	534.2	536.8	534.2	531.7	527.3	522.9	517.2
27.5°	504.0	509.7	515.3	519.7	521.7	524.2	521.7	519.1	514.7	510.2	504.6
30°	489.5	495.1	500.8	505.3	507.1	509.0	506.5	504.0	500.2	495.8	490.0
32.5°	473.1	478.7	483.1	487.6	490.0	492.6	490.0	488.2	483.8	478.1	472.4
35°	455.4	461.1	466.7	471.1	473.7	476.2	473.1	469.9	466.2	461.7	456.7
37.5°	435.8	442.2	448.5	453.5	455.4	458.0	455.4	452.2	448.5	444.0	438.4
40°	417.6	423.2	428.9	434.0	435.8	437.8	435.2	432.7	428.3	423.8	418.2
42.5°	398.7	404.3	409.4	413.8	415.6	418.2	415.6	412.5	409.4	405.6	400.5
45°	378.5	384.1	388.5	393.0	394.8	396.7	394.2	391.0	387.9	384.8	379.7
47.5°	357.6	362.7	367.0	371.5	372.8	374.7	372.1	370.3	367.0	363.9	359.5
50°	336.2	341.2	345.7	349.4	350.7	352.6	350.1	347.5	345.0	342.5	338.7
52.5°	314.1	318.6	323.0	326.8	328.0	329.2	326.8	324.2	321.7	319.2	315.4
55°	291.4	295.8	300.2	303.4	304.6	305.9	303.4	301.5	299.0	297.1	293.3
57.5°	268.7	273.1	276.9	280.0	281.3	282.6	280.0	277.5	275.7	273.7	270.6
60°	245.3	249.8	252.9	255.5	256.7	257.3	254.8	252.9	251.7	250.4	247.3
62.5°	222.7	225.8	228.9	230.9	232.1	232.7	230.9	229.6	228.3	227.1	224.5
65°	198.7	202.5	205.0	206.9	207.5	208.2	206.3	205.0	203.8	202.5	200.5
67.5°	174.7	177.9	179.8	181.6	182.3	182.3	182.3	181.6	180.4	178.5	176.6
70°	150.7	153.2	155.2	156.5	157.0	157.0	155.8	154.5	154.5	153.9	152.7
72.5°	126.1	128.1	129.3	130.6	130.6	130.6	130.6	131.2	130.6	129.3	127.4
75°	102.8	104.7	105.9	106.6	106.6	106.6	106.6	107.2	106.6	105.9	104.7
77.5°	80.8	82.0	82.6	83.3	83.3	83.3	83.9	84.5	83.9	83.3	82.6
80°	59.9	60.6	61.2	61.8	61.2	61.2	61.8	63.1	62.4	61.8	61.2
82.5°	41.0	41.7	42.2	42.2	42.9	43.5	43.5	43.5	43.5	42.9	42.2
85°	24.6	25.3	25.3	25.3	25.3	25.3	25.8	26.5	26.5	25.8	25.8
87.5°	11.3	12.0	11.3	10.7	10.0	10.0	11.3	12.6	12.6	12.0	12.0
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°	557.5	557.5	557.5	557.5
2.5°	562.6	562.0	558.8	555.7
5°	564.5	562.6	558.2	553.8
7.5°	564.5	562.0	555.7	550.0
10°	561.4	557.5	550.6	543.7
12.5°	557.5	553.2	545.0	537.4
15°	551.9	546.8	538.0	529.2
17.5°	543.7	537.4	528.6	519.1
20°	535.5	528.6	517.8	507.7
22.5°	524.2	517.8	506.5	495.8
25°	511.5	504.6	493.3	481.9
27.5°	498.2	490.0	478.7	467.4
30°	483.1	474.9	463.6	452.2
32.5°	466.7	459.2	447.8	435.8
35°	450.3	442.2	430.8	418.8
37.5°	432.0	424.5	413.1	401.8
40°	412.5	404.9	393.6	382.3
42.5°	394.2	387.2	375.9	365.2
45°	374.1	367.0	356.4	346.3
47.5°	353.2	346.3	336.2	326.1
50°	333.0	326.1	316.6	307.2
52.5°	310.3	304.6	295.8	287.0
55°	288.2	282.6	273.7	265.5
57.5°	266.2	261.1	252.9	245.3
60°	242.9	237.8	231.5	224.5
62.5°	220.7	216.3	210.0	203.8
65°	197.4	193.6	188.0	182.3
67.5°	173.4	170.3	165.2	160.2
70°	149.5	145.7	141.9	137.5
72.5°	125.5	123.6	119.9	116.1
75°	102.8	101.0	97.7	94.6
77.5°	81.3	79.5	77.0	74.4
80°	59.9	58.6	56.8	54.9
82.5°	41.7	40.4	39.1	37.2
85°	25.3	24.0	22.7	21.5
87.5°	11.3	10.7	9.5	8.9
90°	0.0	0.0	0.0	0.0

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