

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-32L940-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-32L940-X-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

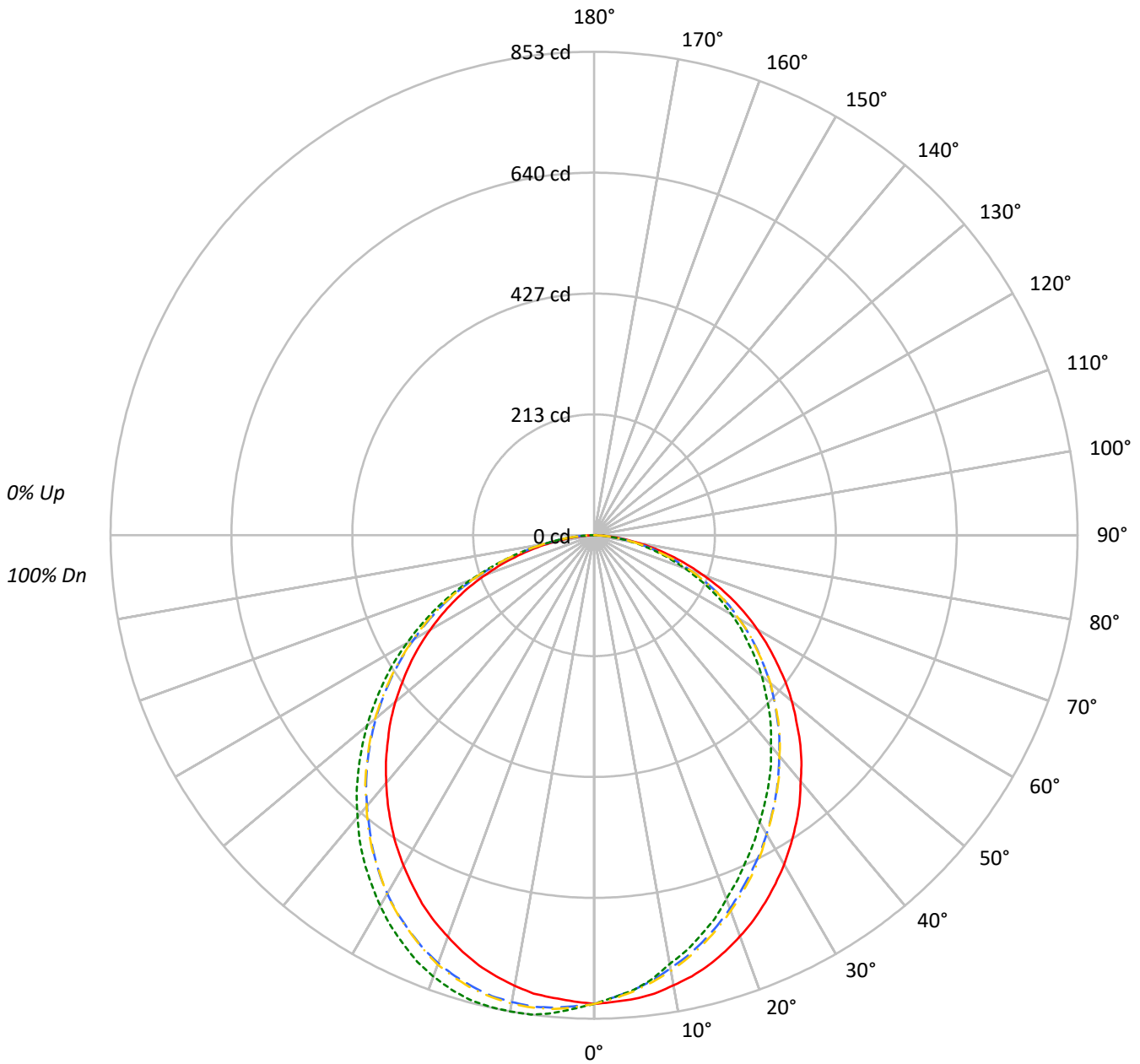
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2217.6 lumens  
Efficiency: N/A  
Efficacy: 60.9 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): 36.4  
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				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°	7628	7628	7628	7628
5°	7605	7459	7589	7840
10°	7554	7194	7562	7991
15°	7496	6969	7505	8103
20°	7393	6704	7402	8136
25°	7275	6456	7303	8103
30°	7145	6228	7164	8041
35°	6996	6047	7027	7954
40°	6827	5846	6871	7819
45°	6701	5699	6713	7676
50°	6539	5545	6565	7505
55°	6334	5340	6379	7296
60°	6145	5178	6161	7041
65°	5901	4962	5901	6739
70°	5500	4591	5473	6283
75°	5001	4167	4934	5632
80°	4325	3576	4176	4819
85°	3366	2678	3176	3959



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.1	3.5
10°-20°	221.7	10.0
20°-30°	329.6	14.9
30°-40°	388.5	17.5
40°-50°	395.6	17.8
50°-60°	352.4	15.9
60°-70°	265.5	12.0
70°-80°	147.6	6.7
80°-90°	38.4	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°	629.5	28.4
0°-40°	1018.0	45.9
0°-60°	1766.1	79.6
0°-90°	2217.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2217.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	827	827	827	827	827	
5°	821	805	819	846	821	78
15°	785	730	786	848	785	221
25°	715	634	717	796	715	329
35°	621	537	624	706	621	389
45°	514	437	514	588	514	396
55°	394	332	397	454	394	353
65°	270	227	270	309	270	267
75°	140	117	138	158	140	149
85°	32	25	30	37	32	38
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°	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8
2.5°	824.1	824.1	825.0	821.2	816.6	814.7	813.8	812.8	814.7	815.6	814.7
5°	821.2	819.4	817.5	812.8	807.2	803.5	801.6	800.7	802.5	805.4	802.5
7.5°	815.6	811.9	808.1	801.6	795.0	789.4	786.7	784.8	786.7	789.4	787.6
10°	806.3	801.6	796.0	788.5	779.2	772.6	769.8	767.0	767.9	767.9	767.9
12.5°	797.0	790.3	783.8	774.5	764.2	756.7	752.1	748.3	750.1	751.1	751.1
15°	784.8	776.3	767.0	756.7	746.5	738.0	732.4	728.7	729.6	729.6	730.5
17.5°	769.8	760.5	751.1	739.0	726.8	717.4	710.9	706.2	708.1	709.0	709.9
20°	753.0	742.7	732.4	719.3	706.2	695.9	689.4	683.8	682.8	682.8	683.8
22.5°	735.2	724.0	711.8	697.8	683.8	672.5	666.0	660.3	659.4	659.4	660.3
25°	714.6	702.5	690.3	676.3	661.3	650.1	641.6	636.1	635.1	634.2	636.1
27.5°	693.1	681.0	668.8	654.7	638.9	627.6	619.2	613.6	611.7	610.8	612.7
30°	670.7	656.6	643.6	628.5	614.5	603.4	594.9	588.3	586.5	584.6	586.5
32.5°	646.3	632.3	618.3	603.4	589.3	578.1	569.6	563.1	561.2	560.3	562.1
35°	621.1	607.0	594.0	579.0	565.0	553.8	545.4	539.7	537.8	536.9	537.8
37.5°	595.8	581.8	568.7	553.8	539.7	528.5	520.1	514.5	513.6	512.5	513.6
40°	566.8	554.7	541.6	527.6	513.6	502.3	495.8	489.2	487.4	485.4	488.3
42.5°	541.6	529.4	516.3	503.2	489.2	478.0	470.5	464.9	463.0	462.1	463.0
45°	513.6	500.5	487.4	475.2	462.1	451.8	444.3	438.7	437.8	436.8	437.8
47.5°	483.6	472.3	461.1	449.0	435.9	425.6	419.0	413.4	411.6	409.6	411.6
50°	455.6	444.3	433.1	421.8	409.6	400.3	393.8	388.2	387.2	386.3	387.2
52.5°	425.6	414.3	404.1	392.9	382.5	373.2	366.7	362.0	361.1	360.1	361.1
55°	393.8	384.5	375.1	365.8	355.4	347.0	341.4	335.8	333.9	332.0	333.9
57.5°	363.8	355.4	346.1	336.7	327.4	319.9	314.3	309.6	308.7	307.8	308.7
60°	333.0	325.5	317.1	308.7	299.3	291.8	287.2	283.4	281.6	280.6	281.6
62.5°	302.1	294.7	288.1	279.6	271.3	265.6	260.9	257.2	255.4	254.4	255.4
65°	270.3	263.8	257.2	249.8	243.2	237.6	232.9	229.2	228.2	227.3	227.3
67.5°	237.6	232.0	226.4	219.8	212.3	206.7	202.0	199.2	198.3	197.4	198.3
70°	203.9	199.2	193.6	188.0	182.4	177.8	174.9	172.1	171.2	170.2	170.2
72.5°	172.1	168.4	163.7	159.0	154.3	149.6	146.9	144.9	144.0	143.1	143.1
75°	140.3	136.5	133.8	130.0	125.3	122.5	119.8	117.8	116.9	116.9	116.9
77.5°	110.4	107.6	104.7	101.1	98.2	95.4	93.5	92.6	91.6	91.6	91.6
80°	81.4	79.5	77.6	75.8	72.9	70.2	69.2	68.3	67.3	67.3	67.3
82.5°	55.2	54.2	52.4	50.5	48.7	47.7	46.7	45.8	45.8	45.8	45.8
85°	31.8	30.9	30.0	29.0	28.0	28.0	27.1	26.2	25.3	25.3	25.3
87.5°	13.1	13.1	13.1	12.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
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°	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8
2.5°	812.8	814.7	816.6	819.4	822.1	825.0	824.1	823.2	826.8	831.6	832.5
5°	800.7	802.5	805.4	810.1	814.7	818.5	819.4	819.4	826.8	833.4	835.2
7.5°	785.7	788.5	792.3	797.0	803.5	809.1	811.9	815.6	823.2	831.6	835.2
10°	767.0	771.7	777.2	783.8	790.3	797.0	802.5	807.2	816.6	825.9	831.6
12.5°	750.1	754.8	760.5	767.9	776.3	784.8	790.3	797.0	808.1	819.4	825.9
15°	731.4	736.1	742.7	750.1	759.5	768.9	777.2	785.7	797.0	809.1	816.6
17.5°	710.9	715.6	722.1	731.4	741.7	752.1	761.4	770.7	783.8	797.0	805.4
20°	685.6	692.1	700.6	709.9	722.1	734.3	743.6	753.9	767.9	781.9	791.4
22.5°	661.3	667.9	677.2	688.5	701.5	714.6	725.8	737.0	752.1	766.1	776.3
25°	637.9	645.4	654.7	666.0	678.1	691.2	704.3	717.4	732.4	747.4	757.6
27.5°	614.5	621.1	630.5	641.6	655.7	668.8	681.9	695.0	710.9	726.8	738.0
30°	588.3	595.8	604.3	615.4	630.5	645.4	658.5	672.5	688.5	704.3	715.6
32.5°	564.0	570.5	579.0	590.2	605.2	620.1	634.2	649.2	664.1	680.0	691.2
35°	539.7	546.3	554.7	565.9	580.9	595.8	609.9	623.9	638.9	653.8	665.0
37.5°	515.4	521.9	530.3	541.6	555.6	570.5	583.6	597.7	612.7	627.6	637.9
40°	490.1	496.7	503.2	514.5	528.5	543.4	556.5	570.5	585.6	600.5	610.8
42.5°	464.9	471.4	479.8	491.1	504.1	517.2	530.3	543.4	557.4	571.5	581.8
45°	439.6	445.2	453.6	464.0	477.0	489.2	502.3	514.5	528.5	541.6	551.9
47.5°	413.4	419.0	425.6	435.9	449.0	462.1	475.2	487.4	499.4	512.5	521.9
50°	388.2	393.8	401.3	410.7	422.8	434.9	446.2	457.4	469.6	481.7	490.1
52.5°	362.0	367.6	374.1	383.5	393.8	405.0	415.3	426.5	437.8	449.0	457.4
55°	335.8	339.6	345.1	353.6	364.8	376.0	386.3	396.6	406.9	416.3	424.7
57.5°	309.6	314.3	320.9	328.3	337.6	347.0	356.4	365.8	375.1	384.5	391.9
60°	283.4	287.2	291.8	298.4	307.8	316.2	325.5	333.9	342.3	350.7	357.3
62.5°	256.3	260.0	264.7	271.3	278.7	286.2	294.7	302.1	309.6	317.1	323.6
65°	228.2	232.0	236.7	242.3	248.8	255.4	262.9	270.3	276.0	281.6	288.1
67.5°	199.2	202.9	207.6	212.3	218.0	224.5	231.1	237.6	243.2	248.8	253.5
70°	171.2	174.0	178.7	182.4	187.1	191.8	197.4	202.9	206.7	211.4	217.0
72.5°	144.0	146.9	150.6	154.3	157.1	160.9	166.5	171.2	175.8	181.4	184.3
75°	117.8	119.8	122.5	125.3	128.2	130.9	134.7	138.4	142.2	144.9	148.7
77.5°	91.6	93.5	96.3	98.2	100.1	102.0	104.7	107.6	110.4	112.2	116.0
80°	67.3	69.2	71.1	72.9	74.9	76.7	77.6	78.6	82.3	85.1	86.9
82.5°	45.8	46.7	47.7	49.6	50.5	51.4	52.4	52.4	54.2	56.1	58.9
85°	26.2	27.1	28.0	28.0	28.0	28.0	29.0	30.0	30.9	32.7	34.6
87.5°	10.3	10.3	11.2	11.2	11.2	11.2	11.2	11.2	12.2	14.0	14.9
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°	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8	826.8
2.5°	831.6	832.5	834.3	835.2	836.3	836.3	837.2	838.1	836.3	834.3	833.4
5°	836.3	837.2	839.9	842.8	844.6	846.5	845.6	844.6	842.8	839.9	838.1
7.5°	837.2	839.9	842.8	846.5	849.3	853.0	851.2	849.3	845.6	841.8	839.0
10°	834.3	838.1	842.8	847.4	850.3	853.0	851.2	849.3	845.6	840.9	837.2
12.5°	830.6	835.2	840.9	845.6	848.3	852.1	849.3	846.5	841.8	837.2	832.5
15°	822.1	827.8	834.3	839.9	844.6	848.3	845.6	843.7	838.1	831.6	825.0
17.5°	811.9	819.4	825.9	832.5	836.3	839.9	838.1	836.3	829.7	822.1	814.7
20°	799.7	807.2	813.8	820.3	825.0	828.7	825.9	823.2	816.6	810.1	802.5
22.5°	784.8	792.3	799.7	806.3	811.0	814.7	811.0	806.3	799.7	793.2	785.7
25°	766.1	774.5	782.9	789.4	792.3	796.0	792.3	788.5	781.9	775.4	767.0
27.5°	747.4	755.8	764.2	770.7	773.6	777.2	773.6	769.8	763.2	756.7	748.3
30°	725.8	734.3	742.7	749.2	752.1	754.8	751.1	747.4	741.7	735.2	726.8
32.5°	701.5	709.9	716.5	723.0	726.8	730.5	726.8	724.0	717.4	709.0	700.6
35°	675.4	683.8	692.1	698.7	702.5	706.2	701.5	696.8	691.2	684.7	677.2
37.5°	646.3	655.7	665.0	672.5	675.4	679.1	675.4	670.7	665.0	658.5	650.1
40°	619.2	627.6	636.1	643.6	646.3	649.2	645.4	641.6	635.1	628.5	620.1
42.5°	591.2	599.6	607.0	613.6	616.4	620.1	616.4	611.7	607.0	601.4	594.0
45°	561.2	569.6	576.2	582.7	585.6	588.3	584.6	579.9	575.2	570.5	563.1
47.5°	530.3	537.8	544.3	550.9	552.8	555.6	551.9	549.1	544.3	539.7	533.2
50°	498.5	506.0	512.5	518.2	520.1	522.9	519.1	515.4	511.6	507.9	502.3
52.5°	465.8	472.3	478.9	484.5	486.4	488.3	484.5	480.8	477.0	473.3	467.6
55°	432.1	438.7	445.2	449.9	451.8	453.6	449.9	447.1	443.4	440.5	434.9
57.5°	398.5	405.0	410.7	415.3	417.2	419.0	415.3	411.6	408.7	406.0	401.3
60°	363.8	370.4	375.1	378.8	380.7	381.6	377.9	375.1	373.2	371.4	366.7
62.5°	330.2	334.9	339.6	342.3	344.2	345.1	342.3	340.5	338.6	336.7	333.0
65°	294.7	300.3	304.0	306.8	307.8	308.7	305.8	304.0	302.1	300.3	297.4
67.5°	259.1	263.8	266.6	269.4	270.3	270.3	270.3	269.4	267.5	264.7	261.9
70°	223.6	227.3	230.1	232.0	232.9	232.9	231.1	229.2	229.2	228.2	226.4
72.5°	187.1	189.8	191.8	193.6	193.6	193.6	193.6	194.5	193.6	191.8	188.9
75°	152.5	155.3	157.1	158.0	158.0	158.0	158.0	159.0	158.0	157.1	155.3
77.5°	119.8	121.6	122.5	123.5	123.5	123.5	124.4	125.3	124.4	123.5	122.5
80°	88.9	89.8	90.7	91.6	90.7	90.7	91.6	93.5	92.6	91.6	90.7
82.5°	60.8	61.8	62.7	62.7	63.6	64.5	64.5	64.5	64.5	63.6	62.7
85°	36.5	37.4	37.4	37.4	37.4	37.4	38.4	39.3	39.3	38.4	38.4
87.5°	16.9	17.8	16.9	15.9	14.9	14.9	16.9	18.7	18.7	17.8	17.8
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):**

	330°	340°	350°	360°
0°	826.8	826.8	826.8	826.8
2.5°	834.3	833.4	828.7	824.1
5°	837.2	834.3	827.8	821.2
7.5°	837.2	833.4	824.1	815.6
10°	832.5	826.8	816.6	806.3
12.5°	826.8	820.3	808.1	797.0
15°	818.5	811.0	797.9	784.8
17.5°	806.3	797.0	783.8	769.8
20°	794.1	783.8	767.9	753.0
22.5°	777.2	767.9	751.1	735.2
25°	758.6	748.3	731.4	714.6
27.5°	739.0	726.8	709.9	693.1
30°	716.5	704.3	687.5	670.7
32.5°	692.1	681.0	664.1	646.3
35°	667.9	655.7	638.9	621.1
37.5°	640.7	629.5	612.7	595.8
40°	611.7	600.5	583.6	566.8
42.5°	584.6	574.3	557.4	541.6
45°	554.7	544.3	528.5	513.6
47.5°	523.8	513.6	498.5	483.6
50°	493.9	483.6	469.6	455.6
52.5°	460.2	451.8	438.7	425.6
55°	427.4	419.0	406.0	393.8
57.5°	394.7	387.2	375.1	363.8
60°	360.1	352.7	343.3	333.0
62.5°	327.4	320.9	311.5	302.1
65°	292.7	287.2	278.7	270.3
67.5°	257.2	252.5	245.1	237.6
70°	221.6	216.0	210.5	203.9
72.5°	186.2	183.3	177.8	172.1
75°	152.5	149.6	144.9	140.3
77.5°	120.7	117.8	114.1	110.4
80°	88.9	86.9	84.2	81.4
82.5°	61.8	59.8	58.0	55.2
85°	37.4	35.6	33.7	31.8
87.5°	16.9	15.9	14.0	13.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)