

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-24L835-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-24L835-X-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

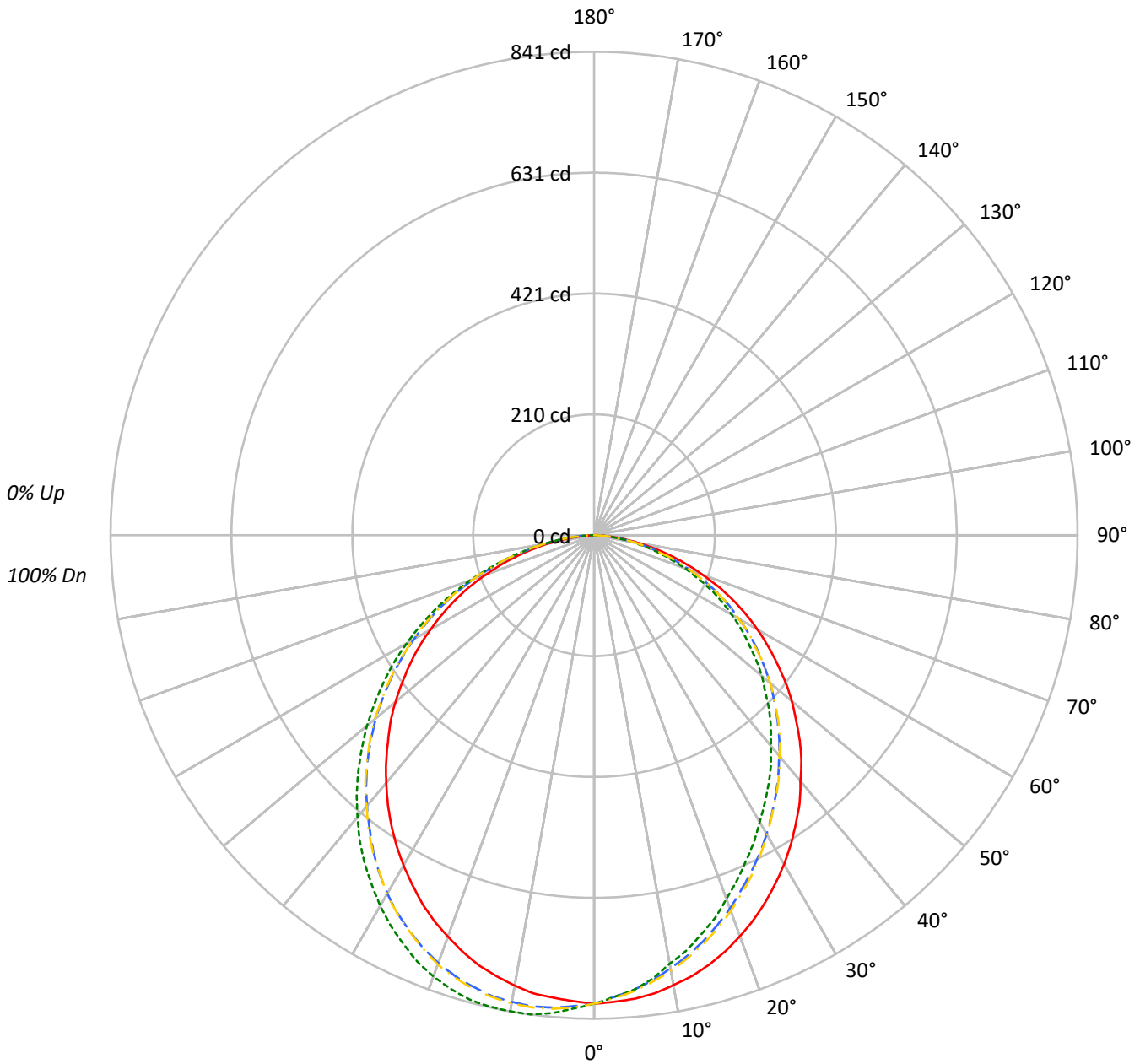
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2185.7 lumens  
Efficiency: N/A  
Efficacy: 78.3 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): 27.9  
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°	7519	7519	7519	7519
5°	7496	7351	7480	7727
10°	7445	7091	7454	7877
15°	7388	6869	7397	7987
20°	7286	6608	7295	8020
25°	7170	6362	7198	7986
30°	7042	6139	7061	7926
35°	6894	5959	6926	7839
40°	6728	5763	6772	7706
45°	6604	5618	6615	7565
50°	6445	5466	6472	7396
55°	6244	5265	6288	7193
60°	6056	5104	6075	6942
65°	5818	4890	5818	6643
70°	5422	4527	5398	6194
75°	4930	4107	4866	5554
80°	4261	3528	4112	4750
85°	3313	2636	3123	3906



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.0	3.5
10°-20°	218.5	10.0
20°-30°	324.9	14.9
30°-40°	382.9	17.5
40°-50°	389.9	17.8
50°-60°	347.4	15.9
60°-70°	261.7	12.0
70°-80°	145.5	6.7
80°-90°	37.8	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°	620.4	28.4
0°-40°	1003.4	45.9
0°-60°	1740.6	79.6
0°-90°	2185.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2185.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	815	815	815	815	815	
5°	809	794	808	834	809	77
15°	774	719	774	836	774	218
25°	704	625	707	784	704	324
35°	612	529	615	696	612	383
45°	506	431	507	580	506	390
55°	388	327	391	447	388	348
65°	266	224	266	304	266	263
75°	138	115	136	156	138	147
85°	31	25	30	37	31	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°	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0
2.5°	812.2	812.2	813.1	809.4	804.8	803.0	802.0	801.1	803.0	803.9	803.0
5°	809.4	807.6	805.7	801.1	795.6	791.9	790.1	789.1	791.0	793.7	791.0
7.5°	803.9	800.2	796.5	790.1	783.6	778.1	775.3	773.5	775.3	778.1	776.2
10°	794.7	790.1	784.5	777.2	767.9	761.5	758.7	755.9	756.9	756.9	756.9
12.5°	785.5	779.0	772.5	763.3	753.2	745.8	741.2	737.5	739.4	740.3	740.3
15°	773.5	765.2	755.9	745.8	735.7	727.4	721.8	718.1	719.1	719.1	720.0
17.5°	758.7	749.5	740.3	728.3	716.3	707.1	700.6	696.0	697.9	698.8	699.7
20°	742.1	732.0	721.8	708.9	696.0	685.9	679.4	673.9	673.0	673.0	673.9
22.5°	724.6	713.5	701.5	687.7	673.9	662.8	656.4	650.8	649.9	649.9	650.8
25°	704.3	692.3	680.3	666.5	651.8	640.7	632.4	626.9	625.9	625.0	626.9
27.5°	683.1	671.1	659.1	645.3	629.6	618.6	610.3	604.7	602.9	602.0	603.8
30°	661.0	647.2	634.2	619.5	605.7	594.6	586.3	579.8	578.0	576.2	578.0
32.5°	637.0	623.2	609.3	594.6	580.8	569.7	561.4	555.0	553.1	552.2	554.0
35°	612.1	598.3	585.4	570.6	556.8	545.7	537.4	531.9	530.1	529.1	530.1
37.5°	587.2	573.4	560.5	545.7	531.9	520.8	512.5	507.0	506.1	505.2	506.1
40°	558.6	546.7	533.7	519.9	506.1	495.0	488.6	482.1	480.4	478.5	481.2
42.5°	533.7	521.8	508.9	495.9	482.1	471.1	463.8	458.2	456.4	455.5	456.4
45°	506.1	493.2	480.4	468.4	455.5	445.3	438.0	432.4	431.5	430.6	431.5
47.5°	476.7	465.6	454.5	442.6	429.7	419.5	413.1	407.5	405.7	403.8	405.7
50°	449.0	438.0	426.9	415.8	403.8	394.6	388.2	382.6	381.7	380.8	381.7
52.5°	419.5	408.4	398.3	387.2	377.1	367.9	361.4	356.8	355.9	355.0	355.9
55°	388.2	378.9	369.7	360.5	350.4	342.1	336.5	331.0	329.2	327.3	329.2
57.5°	358.7	350.4	341.1	331.9	322.7	315.3	309.8	305.2	304.3	303.3	304.3
60°	328.2	320.9	312.6	304.3	295.0	287.7	283.1	279.4	277.5	276.6	277.5
62.5°	297.8	290.4	284.0	275.7	267.4	261.8	257.2	253.6	251.7	250.8	251.7
65°	266.5	260.0	253.6	246.2	239.7	234.2	229.6	225.9	225.0	224.0	224.0
67.5°	234.2	228.7	223.1	216.7	209.3	203.8	199.2	196.4	195.5	194.5	195.5
70°	201.0	196.4	190.9	185.3	179.8	175.2	172.4	169.6	168.7	167.8	167.8
72.5°	169.6	166.0	161.3	156.7	152.1	147.5	144.8	142.9	142.0	141.1	141.1
75°	138.3	134.6	131.8	128.2	123.5	120.8	118.0	116.2	115.2	115.2	115.2
77.5°	108.8	106.0	103.3	99.6	96.8	94.0	92.2	91.3	90.4	90.4	90.4
80°	80.2	78.4	76.5	74.7	71.9	69.2	68.2	67.3	66.4	66.4	66.4
82.5°	54.4	53.5	51.6	49.8	47.9	47.0	46.1	45.2	45.2	45.2	45.2
85°	31.3	30.4	29.5	28.6	27.7	27.7	26.7	25.8	24.9	24.9	24.9
87.5°	12.9	12.9	12.9	12.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1
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):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0
2.5°	801.1	803.0	804.8	807.6	810.3	813.1	812.2	811.3	815.0	819.6	820.5
5°	789.1	791.0	793.7	798.4	803.0	806.7	807.6	807.6	815.0	821.4	823.3
7.5°	774.4	777.2	780.8	785.5	791.9	797.4	800.2	803.9	811.3	819.6	823.3
10°	755.9	760.6	766.1	772.5	779.0	785.5	791.0	795.6	804.8	814.0	819.6
12.5°	739.4	744.0	749.5	756.9	765.2	773.5	779.0	785.5	796.5	807.6	814.0
15°	720.9	725.5	732.0	739.4	748.6	757.8	766.1	774.4	785.5	797.4	804.8
17.5°	700.6	705.2	711.7	720.9	731.1	741.2	750.4	759.6	772.5	785.5	793.7
20°	675.7	682.2	690.5	699.7	711.7	723.7	732.9	743.0	756.9	770.7	779.9
22.5°	651.8	658.2	667.4	678.5	691.4	704.3	715.4	726.4	741.2	755.0	765.2
25°	628.7	636.1	645.3	656.4	668.4	681.3	694.2	707.1	721.8	736.6	746.7
27.5°	605.7	612.1	621.3	632.4	646.2	659.1	672.0	685.0	700.6	716.3	727.4
30°	579.8	587.2	595.5	606.6	621.3	636.1	649.0	662.8	678.5	694.2	705.2
32.5°	555.9	562.3	570.6	581.7	596.4	611.2	625.0	639.8	654.5	670.2	681.3
35°	531.9	538.4	546.7	557.7	572.5	587.2	601.1	614.9	629.6	644.4	655.4
37.5°	507.9	514.4	522.7	533.7	547.6	562.3	575.2	589.1	603.8	618.6	628.7
40°	483.0	489.5	495.9	507.0	520.8	535.6	548.5	562.3	577.1	591.8	602.0
42.5°	458.2	464.7	473.0	484.0	496.9	509.8	522.7	535.6	549.4	563.2	573.4
45°	433.3	438.9	447.2	457.3	470.2	482.1	495.0	507.0	520.8	533.7	543.9
47.5°	407.5	413.1	419.5	429.7	442.6	455.5	468.4	480.4	492.3	505.2	514.4
50°	382.6	388.2	395.5	404.8	416.7	428.7	439.8	450.9	462.8	474.8	483.0
52.5°	356.8	362.3	368.8	378.0	388.2	399.2	409.4	420.4	431.5	442.6	450.9
55°	331.0	334.7	340.2	348.5	359.6	370.6	380.8	390.9	401.1	410.3	418.6
57.5°	305.2	309.8	316.2	323.6	332.8	342.1	351.3	360.5	369.7	378.9	386.3
60°	279.4	283.1	287.7	294.1	303.3	311.6	320.9	329.2	337.5	345.8	352.2
62.5°	252.6	256.3	260.9	267.4	274.8	282.1	290.4	297.8	305.2	312.6	319.0
65°	225.0	228.7	233.3	238.8	245.3	251.7	259.1	266.5	272.0	277.5	284.0
67.5°	196.4	200.1	204.7	209.3	214.8	221.3	227.7	234.2	239.7	245.3	249.9
70°	168.7	171.5	176.1	179.8	184.4	189.0	194.5	200.1	203.8	208.4	213.9
72.5°	142.0	144.8	148.4	152.1	154.9	158.6	164.1	168.7	173.3	178.9	181.6
75°	116.2	118.0	120.8	123.5	126.3	129.1	132.8	136.5	140.1	142.9	146.6
77.5°	90.4	92.2	95.0	96.8	98.7	100.5	103.3	106.0	108.8	110.6	114.3
80°	66.4	68.2	70.1	71.9	73.8	75.6	76.5	77.4	81.1	83.9	85.7
82.5°	45.2	46.1	47.0	48.9	49.8	50.7	51.6	51.6	53.5	55.3	58.1
85°	25.8	26.7	27.7	27.7	27.7	27.7	28.6	29.5	30.4	32.3	34.1
87.5°	10.1	10.1	11.1	11.1	11.1	11.1	11.1	11.1	12.0	13.8	14.8
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°	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0	815.0
2.5°	819.6	820.5	822.3	823.3	824.2	824.2	825.1	826.0	824.2	822.3	821.4
5°	824.2	825.1	827.9	830.6	832.5	834.3	833.4	832.5	830.6	827.9	826.0
7.5°	825.1	827.9	830.6	834.3	837.1	840.8	838.9	837.1	833.4	829.7	826.9
10°	822.3	826.0	830.6	835.2	838.0	840.8	838.9	837.1	833.4	828.8	825.1
12.5°	818.6	823.3	828.8	833.4	836.2	839.8	837.1	834.3	829.7	825.1	820.5
15°	810.3	815.9	822.3	827.9	832.5	836.2	833.4	831.6	826.0	819.6	813.1
17.5°	800.2	807.6	814.0	820.5	824.2	827.9	826.0	824.2	817.7	810.3	803.0
20°	788.2	795.6	802.0	808.5	813.1	816.8	814.0	811.3	804.8	798.4	791.0
22.5°	773.5	780.8	788.2	794.7	799.3	803.0	799.3	794.7	788.2	781.8	774.4
25°	755.0	763.3	771.6	778.1	780.8	784.5	780.8	777.2	770.7	764.2	755.9
27.5°	736.6	744.9	753.2	759.6	762.4	766.1	762.4	758.7	752.3	745.8	737.5
30°	715.4	723.7	732.0	738.4	741.2	744.0	740.3	736.6	731.1	724.6	716.3
32.5°	691.4	699.7	706.2	712.6	716.3	720.0	716.3	713.5	707.1	698.8	690.5
35°	665.6	673.9	682.2	688.6	692.3	696.0	691.4	686.8	681.3	674.8	667.4
37.5°	637.0	646.2	655.4	662.8	665.6	669.3	665.6	661.0	655.4	649.0	640.7
40°	610.3	618.6	626.9	634.2	637.0	639.8	636.1	632.4	625.9	619.5	611.2
42.5°	582.6	590.9	598.3	604.7	607.5	611.2	607.5	602.9	598.3	592.8	585.4
45°	553.1	561.4	567.9	574.3	577.1	579.8	576.2	571.5	566.9	562.3	555.0
47.5°	522.7	530.1	536.5	543.0	544.8	547.6	543.9	541.1	536.5	531.9	525.4
50°	491.3	498.7	505.2	510.7	512.5	515.3	511.6	507.9	504.2	500.6	495.0
52.5°	459.2	465.6	472.1	477.6	479.4	481.2	477.6	473.9	470.2	466.5	461.0
55°	426.0	432.4	438.9	443.5	445.3	447.2	443.5	440.7	437.0	434.3	428.7
57.5°	392.8	399.2	404.8	409.4	411.2	413.1	409.4	405.7	402.9	400.1	395.5
60°	358.7	365.1	369.7	373.4	375.3	376.2	372.5	369.7	367.9	366.0	361.4
62.5°	325.5	330.1	334.7	337.5	339.3	340.2	337.5	335.6	333.8	331.9	328.2
65°	290.4	296.0	299.7	302.4	303.3	304.3	301.5	299.7	297.8	296.0	293.2
67.5°	255.4	260.0	262.8	265.5	266.5	266.5	266.5	265.5	263.7	260.9	258.2
70°	220.4	224.0	226.8	228.7	229.6	229.6	227.7	225.9	225.9	225.0	223.1
72.5°	184.4	187.2	189.0	190.9	190.9	190.9	190.9	191.8	190.9	189.0	186.2
75°	150.3	153.1	154.9	155.8	155.8	155.8	155.8	156.7	155.8	154.9	153.1
77.5°	118.0	119.9	120.8	121.7	121.7	121.7	122.6	123.5	122.6	121.7	120.8
80°	87.6	88.5	89.4	90.4	89.4	89.4	90.4	92.2	91.3	90.4	89.4
82.5°	59.9	60.9	61.8	61.8	62.7	63.6	63.6	63.6	63.6	62.7	61.8
85°	36.0	36.9	36.9	36.9	36.9	36.9	37.8	38.7	38.7	37.8	37.8
87.5°	16.6	17.5	16.6	15.7	14.8	14.8	16.6	18.4	18.4	17.5	17.5
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):**

	330°	340°	350°	360°
0°	815.0	815.0	815.0	815.0
2.5°	822.3	821.4	816.8	812.2
5°	825.1	822.3	815.9	809.4
7.5°	825.1	821.4	812.2	803.9
10°	820.5	815.0	804.8	794.7
12.5°	815.0	808.5	796.5	785.5
15°	806.7	799.3	786.4	773.5
17.5°	794.7	785.5	772.5	758.7
20°	782.7	772.5	756.9	742.1
22.5°	766.1	756.9	740.3	724.6
25°	747.6	737.5	720.9	704.3
27.5°	728.3	716.3	699.7	683.1
30°	706.2	694.2	677.6	661.0
32.5°	682.2	671.1	654.5	637.0
35°	658.2	646.2	629.6	612.1
37.5°	631.5	620.4	603.8	587.2
40°	602.9	591.8	575.2	558.6
42.5°	576.2	566.0	549.4	533.7
45°	546.7	536.5	520.8	506.1
47.5°	516.2	506.1	491.3	476.7
50°	486.7	476.7	462.8	449.0
52.5°	453.6	445.3	432.4	419.5
55°	421.4	413.1	400.1	388.2
57.5°	389.1	381.7	369.7	358.7
60°	355.0	347.6	338.4	328.2
62.5°	322.7	316.2	307.0	297.8
65°	288.6	283.1	274.8	266.5
67.5°	253.6	248.9	241.6	234.2
70°	218.5	213.0	207.5	201.0
72.5°	183.5	180.7	175.2	169.6
75°	150.3	147.5	142.9	138.3
77.5°	118.9	116.2	112.5	108.8
80°	87.6	85.7	83.0	80.2
82.5°	60.9	59.0	57.2	54.4
85°	36.9	35.0	33.2	31.3
87.5°	16.6	15.7	13.8	12.9
90°	0.0	0.0	0.0	0.0

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