

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-32L950-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-32L950-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

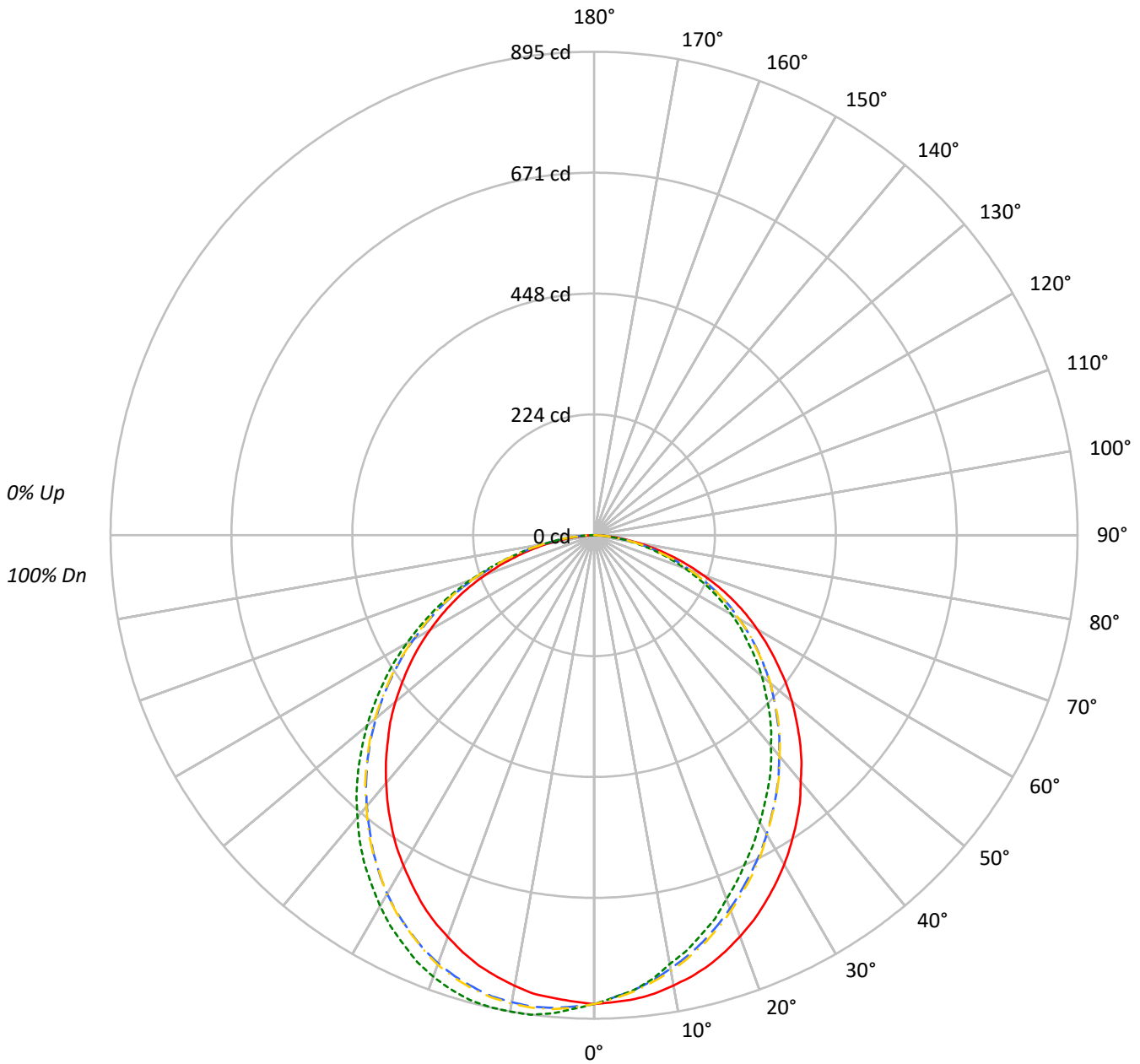
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2327.5 lumens
Efficiency: N/A
Efficacy: 63.9 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_{in}): 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°	8007	8007	8007	8007
5°	7983	7829	7965	8228
10°	7929	7551	7937	8389
15°	7868	7314	7876	8506
20°	7759	7037	7769	8540
25°	7635	6776	7666	8504
30°	7499	6537	7520	8441
35°	7342	6347	7375	8348
40°	7166	6136	7212	8207
45°	7033	5982	7045	8058
50°	6862	5820	6891	7877
55°	6648	5606	6696	7658
60°	6449	5434	6468	7390
65°	6193	5207	6193	7073
70°	5773	4821	5749	6593
75°	5247	4374	5180	5917
80°	4537	3756	4378	5058
85°	3536	2805	3324	4160



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.0	3.5
10°-20°	232.7	10.0
20°-30°	346.0	14.9
30°-40°	407.8	17.5
40°-50°	415.2	17.8
50°-60°	369.9	15.9
60°-70°	278.7	12.0
70°-80°	155.0	6.7
80°-90°	40.3	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°	660.7	28.4
0°-40°	1068.5	45.9
0°-60°	1853.6	79.6
0°-90°	2327.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2327.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	868	868	868	868	868	
5°	862	845	860	888	862	82
15°	824	766	825	890	824	232
25°	750	666	753	835	750	346
35°	652	564	655	741	652	408
45°	539	458	540	618	539	415
55°	413	348	416	476	413	370
65°	284	238	284	324	284	280
75°	147	123	145	166	147	156
85°	33	26	31	39	33	40
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°	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9
2.5°	864.9	864.9	865.9	862.0	857.1	855.1	854.1	853.1	855.1	856.1	855.1
5°	862.0	860.0	858.0	853.1	847.2	843.4	841.3	840.4	842.3	845.3	842.3
7.5°	856.1	852.1	848.2	841.3	834.5	828.6	825.7	823.7	825.7	828.6	826.7
10°	846.3	841.3	835.4	827.6	817.8	810.9	807.9	805.0	806.0	806.0	806.0
12.5°	836.4	829.6	822.7	812.9	802.0	794.2	789.3	785.4	787.4	788.3	788.3
15°	823.7	814.9	805.0	794.2	783.4	774.6	768.7	764.8	765.7	765.7	766.7
17.5°	807.9	798.2	788.3	775.6	762.8	753.0	746.1	741.2	743.2	744.1	745.2
20°	790.3	779.5	768.7	754.9	741.2	730.4	723.6	717.7	716.7	716.7	717.7
22.5°	771.6	759.9	747.1	732.3	717.7	705.9	699.0	693.1	692.1	692.1	693.1
25°	750.0	737.3	724.5	709.8	694.1	682.3	673.4	667.6	666.6	665.6	667.6
27.5°	727.5	714.7	701.9	687.3	670.6	658.8	649.9	644.0	642.1	641.1	643.0
30°	703.9	689.2	675.5	659.7	645.0	633.2	624.4	617.6	615.5	613.6	615.5
32.5°	678.4	663.7	648.9	633.2	618.5	606.7	597.9	591.0	589.1	588.1	590.0
35°	651.9	637.2	623.4	607.7	592.9	581.2	572.4	566.5	564.5	563.5	564.5
37.5°	625.4	610.6	596.9	581.2	566.5	554.7	545.8	539.9	539.0	538.0	539.0
40°	595.0	582.2	568.4	553.7	539.0	527.2	520.3	513.5	511.5	509.5	512.4
42.5°	568.4	555.7	542.0	528.2	513.5	501.7	493.8	487.9	486.0	485.0	486.0
45°	539.0	525.3	511.5	498.7	485.0	474.2	466.3	460.4	459.4	458.5	459.4
47.5°	507.6	495.8	484.0	471.2	457.5	446.7	439.8	433.9	432.0	430.0	432.0
50°	478.1	466.3	454.5	442.7	430.0	420.2	413.3	407.4	406.4	405.5	406.4
52.5°	446.7	434.9	424.1	412.3	401.5	391.8	384.8	380.0	378.9	377.9	378.9
55°	413.3	403.5	393.7	383.8	373.0	364.2	358.4	352.5	350.5	348.5	350.5
57.5°	381.9	373.0	363.3	353.4	343.6	335.8	329.9	324.9	324.0	323.0	324.0
60°	349.5	341.6	332.8	324.0	314.1	306.3	301.4	297.4	295.5	294.5	295.5
62.5°	317.1	309.2	302.4	293.6	284.7	278.8	273.9	270.0	268.0	267.0	268.0
65°	283.7	276.9	270.0	262.1	255.2	249.4	244.4	240.5	239.5	238.5	238.5
67.5°	249.4	243.5	237.6	230.7	222.8	216.9	212.1	209.1	208.1	207.2	208.1
70°	214.0	209.1	203.2	197.3	191.4	186.5	183.6	180.6	179.7	178.7	178.7
72.5°	180.6	176.7	171.8	166.9	162.0	157.1	154.2	152.1	151.2	150.2	150.2
75°	147.2	143.4	140.4	136.5	131.6	128.6	125.7	123.7	122.7	122.7	122.7
77.5°	115.8	112.9	110.0	106.0	103.1	100.1	98.2	97.2	96.2	96.2	96.2
80°	85.4	83.4	81.5	79.5	76.6	73.7	72.7	71.6	70.7	70.7	70.7
82.5°	57.9	57.0	55.0	53.0	51.1	50.1	49.1	48.1	48.1	48.1	48.1
85°	33.4	32.4	31.4	30.4	29.4	29.4	28.5	27.5	26.5	26.5	26.5
87.5°	13.7	13.7	13.7	12.7	11.8	11.8	11.8	11.8	11.8	11.8	11.8
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9
2.5°	853.1	855.1	857.1	860.0	863.0	865.9	864.9	863.9	867.9	872.8	873.8
5°	840.4	842.3	845.3	850.2	855.1	859.0	860.0	860.0	867.9	874.7	876.7
7.5°	824.6	827.6	831.6	836.4	843.4	849.2	852.1	856.1	863.9	872.8	876.7
10°	805.0	810.0	815.8	822.7	829.6	836.4	842.3	847.2	857.1	866.9	872.8
12.5°	787.4	792.3	798.2	806.0	814.9	823.7	829.6	836.4	848.2	860.0	866.9
15°	767.7	772.6	779.5	787.4	797.2	807.0	815.8	824.6	836.4	849.2	857.1
17.5°	746.1	751.1	757.9	767.7	778.5	789.3	799.1	809.0	822.7	836.4	845.3
20°	719.6	726.4	735.3	745.2	757.9	770.7	780.5	791.3	806.0	820.8	830.5
22.5°	694.1	701.0	710.8	722.6	736.3	750.0	761.8	773.7	789.3	804.1	814.9
25°	669.6	677.4	687.3	699.0	711.8	725.5	739.3	753.0	768.7	784.4	795.2
27.5°	645.0	651.9	661.7	673.4	688.2	701.9	715.7	729.4	746.1	762.8	774.6
30°	617.6	625.4	634.2	646.0	661.7	677.4	691.1	705.9	722.6	739.3	751.1
32.5°	592.0	598.8	607.7	619.5	635.2	650.9	665.6	681.4	697.0	713.7	725.5
35°	566.5	573.3	582.2	594.0	609.6	625.4	640.1	654.8	670.6	686.2	698.0
37.5°	540.9	547.9	556.6	568.4	583.2	598.8	612.6	627.3	643.0	658.8	669.6
40°	514.5	521.3	528.2	539.9	554.7	570.3	584.2	598.8	614.6	630.3	641.1
42.5°	487.9	494.8	503.6	515.4	529.1	542.9	556.6	570.3	585.1	599.9	610.6
45°	461.5	467.3	476.1	486.9	500.6	513.5	527.2	539.9	554.7	568.4	579.2
47.5°	433.9	439.8	446.7	457.5	471.2	485.0	498.7	511.5	524.2	538.0	547.9
50°	407.4	413.3	421.2	430.9	443.8	456.5	468.3	480.1	492.8	505.6	514.5
52.5°	380.0	385.9	392.7	402.5	413.3	425.1	435.9	447.6	459.4	471.2	480.1
55°	352.5	356.4	362.3	371.1	382.9	394.6	405.5	416.3	427.1	436.8	445.7
57.5°	324.9	329.9	336.7	344.6	354.4	364.2	374.1	383.8	393.7	403.5	411.3
60°	297.4	301.4	306.3	313.2	323.0	331.8	341.6	350.5	359.3	368.2	375.1
62.5°	269.0	272.9	277.8	284.7	292.6	300.4	309.2	317.1	324.9	332.8	339.7
65°	239.5	243.5	248.4	254.3	261.1	268.0	275.9	283.7	289.6	295.5	302.4
67.5°	209.1	213.1	218.0	222.8	228.7	235.7	242.5	249.4	255.2	261.1	266.1
70°	179.7	182.6	187.5	191.4	196.4	201.3	207.2	213.1	216.9	221.8	227.7
72.5°	151.2	154.2	158.0	162.0	164.9	168.8	174.7	179.7	184.6	190.5	193.4
75°	123.7	125.7	128.6	131.6	134.5	137.5	141.3	145.3	149.2	152.1	156.1
77.5°	96.2	98.2	101.1	103.1	105.0	107.0	110.0	112.9	115.8	117.8	121.7
80°	70.7	72.7	74.6	76.6	78.6	80.5	81.5	82.4	86.4	89.3	91.3
82.5°	48.1	49.1	50.1	52.0	53.0	54.0	55.0	55.0	57.0	58.9	61.9
85°	27.5	28.5	29.4	29.4	29.4	29.4	30.4	31.4	32.4	34.4	36.3
87.5°	10.8	10.8	11.8	11.8	11.8	11.8	11.8	11.8	12.7	14.8	15.7
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°	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9	867.9
2.5°	872.8	873.8	875.7	876.7	877.7	877.7	878.7	879.7	877.7	875.7	874.7
5°	877.7	878.7	881.6	884.6	886.5	888.4	887.5	886.5	884.6	881.6	879.7
7.5°	878.7	881.6	884.6	888.4	891.4	895.4	893.4	891.4	887.5	883.6	880.6
10°	875.7	879.7	884.6	889.5	892.4	895.4	893.4	891.4	887.5	882.6	878.7
12.5°	871.8	876.7	882.6	887.5	890.5	894.3	891.4	888.4	883.6	878.7	873.8
15°	863.0	868.8	875.7	881.6	886.5	890.5	887.5	885.5	879.7	872.8	865.9
17.5°	852.1	860.0	866.9	873.8	877.7	881.6	879.7	877.7	870.8	863.0	855.1
20°	839.4	847.2	854.1	861.0	865.9	869.8	866.9	863.9	857.1	850.2	842.3
22.5°	823.7	831.6	839.4	846.3	851.2	855.1	851.2	846.3	839.4	832.5	824.6
25°	804.1	812.9	821.7	828.6	831.6	835.4	831.6	827.6	820.8	813.8	805.0
27.5°	784.4	793.3	802.0	809.0	811.9	815.8	811.9	807.9	801.1	794.2	785.4
30°	761.8	770.7	779.5	786.4	789.3	792.3	788.3	784.4	778.5	771.6	762.8
32.5°	736.3	745.2	752.0	758.9	762.8	766.7	762.8	759.9	753.0	744.1	735.3
35°	708.8	717.7	726.4	733.4	737.3	741.2	736.3	731.4	725.5	718.6	710.8
37.5°	678.4	688.2	698.0	705.9	708.8	712.7	708.8	703.9	698.0	691.1	682.3
40°	649.9	658.8	667.6	675.5	678.4	681.4	677.4	673.4	666.6	659.7	650.9
42.5°	620.5	629.3	637.2	644.0	647.0	650.9	647.0	642.1	637.2	631.3	623.4
45°	589.1	597.9	604.7	611.7	614.6	617.6	613.6	608.7	603.7	598.8	591.0
47.5°	556.6	564.5	571.4	578.3	580.2	583.2	579.2	576.2	571.4	566.5	559.6
50°	523.2	531.2	538.0	543.9	545.8	548.8	544.9	540.9	537.0	533.1	527.2
52.5°	488.9	495.8	502.7	508.6	510.5	512.4	508.6	504.6	500.6	496.8	490.9
55°	453.5	460.4	467.3	472.2	474.2	476.1	472.2	469.3	465.3	462.4	456.5
57.5°	418.2	425.1	430.9	435.9	437.9	439.8	435.9	432.0	429.0	426.1	421.2
60°	381.9	388.8	393.7	397.6	399.6	400.5	396.6	393.7	391.8	389.7	384.8
62.5°	346.6	351.5	356.4	359.3	361.2	362.3	359.3	357.4	355.4	353.4	349.5
65°	309.2	315.1	319.1	322.1	323.0	324.0	321.0	319.1	317.1	315.1	312.2
67.5°	271.9	276.9	279.8	282.8	283.7	283.7	283.7	282.8	280.7	277.8	274.8
70°	234.6	238.5	241.5	243.5	244.4	244.4	242.5	240.5	240.5	239.5	237.6
72.5°	196.4	199.3	201.3	203.2	203.2	203.2	203.2	204.2	203.2	201.3	198.3
75°	160.1	163.0	164.9	166.0	166.0	166.0	166.0	166.9	166.0	164.9	163.0
77.5°	125.7	127.6	128.6	129.6	129.6	129.6	130.6	131.6	130.6	129.6	128.6
80°	93.3	94.2	95.2	96.2	95.2	95.2	96.2	98.2	97.2	96.2	95.2
82.5°	63.8	64.8	65.7	65.7	66.8	67.8	67.8	67.8	67.8	66.8	65.7
85°	38.3	39.3	39.3	39.3	39.3	39.3	40.3	41.2	41.2	40.3	40.3
87.5°	17.7	18.6	17.7	16.7	15.7	15.7	17.7	19.6	19.6	18.6	18.6
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°	867.9	867.9	867.9	867.9
2.5°	875.7	874.7	869.8	864.9
5°	878.7	875.7	868.8	862.0
7.5°	878.7	874.7	864.9	856.1
10°	873.8	867.9	857.1	846.3
12.5°	867.9	861.0	848.2	836.4
15°	859.0	851.2	837.5	823.7
17.5°	846.3	836.4	822.7	807.9
20°	833.5	822.7	806.0	790.3
22.5°	815.8	806.0	788.3	771.6
25°	796.1	785.4	767.7	750.0
27.5°	775.6	762.8	745.2	727.5
30°	752.0	739.3	721.6	703.9
32.5°	726.4	714.7	697.0	678.4
35°	701.0	688.2	670.6	651.9
37.5°	672.5	660.7	643.0	625.4
40°	642.1	630.3	612.6	595.0
42.5°	613.6	602.8	585.1	568.4
45°	582.2	571.4	554.7	539.0
47.5°	549.8	539.0	523.2	507.6
50°	518.3	507.6	492.8	478.1
52.5°	483.0	474.2	460.4	446.7
55°	448.6	439.8	426.1	413.3
57.5°	414.3	406.4	393.7	381.9
60°	377.9	370.1	360.3	349.5
62.5°	343.6	336.7	326.9	317.1
65°	307.3	301.4	292.6	283.7
67.5°	270.0	265.1	257.2	249.4
70°	232.7	226.8	220.9	214.0
72.5°	195.4	192.4	186.5	180.6
75°	160.1	157.1	152.1	147.2
77.5°	126.7	123.7	119.8	115.8
80°	93.3	91.3	88.3	85.4
82.5°	64.8	62.8	60.9	57.9
85°	39.3	37.3	35.3	33.4
87.5°	17.7	16.7	14.8	13.7
90°	0.0	0.0	0.0	0.0

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