

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: P735584

Luminaire Tested: **4APN6-24-B2750-W2D-3000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735584  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P709119)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 1/5/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN6-24-B2750-W2D-3000K  
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3000K CCT

Light Source: -  
Ballast/Driver: -

**Summary**

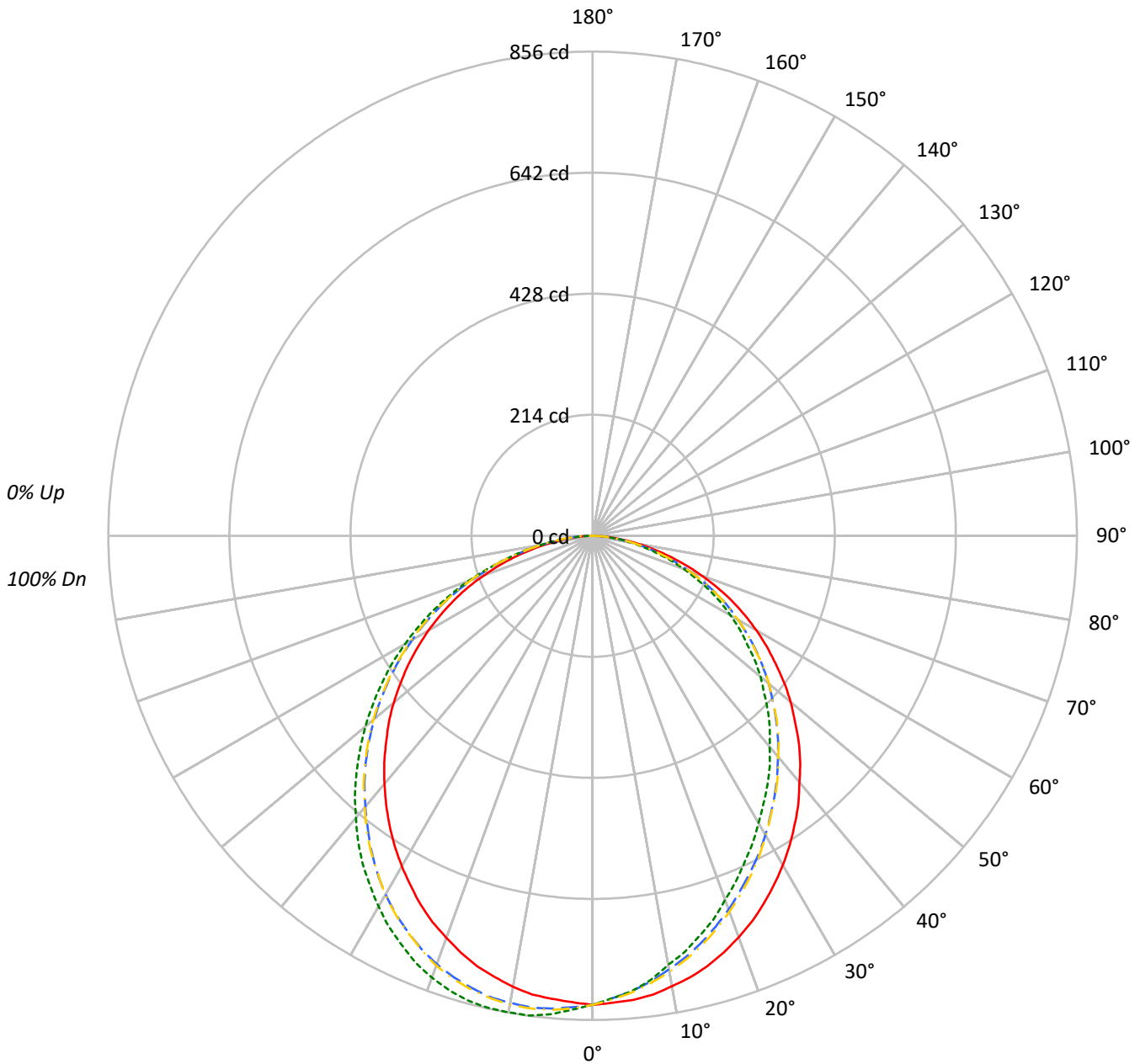
Lumens per Lamp: N/A  
Luminaire Lumens: 2224.0 lumens  
Efficiency: N/A  
Efficacy: 93.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.8  
Input Voltage (V): NR  
Input Current (Ain): 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





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	100																			
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84																			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70																			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59																			
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51																			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44																			
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38																			
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34																			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30																			
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27																			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																			

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

	0°	90°	180°	270°
0°	7650	7650	7650	7650
5°	7628	7480	7610	7863
10°	7575	7216	7585	8015
15°	7517	6989	7527	8127
20°	7415	6724	7424	8160
25°	7296	6474	7323	8127
30°	7164	6246	7185	8065
35°	7015	6064	7046	7978
40°	6847	5863	6893	7841
45°	6720	5716	6733	7698
50°	6558	5561	6584	7525
55°	6352	5356	6397	7319
60°	6161	5193	6180	7062
65°	5916	4975	5916	6759
70°	5517	4607	5492	6299
75°	5016	4181	4948	5654
80°	4336	3592	4187	4835
85°	3377	2689	3176	3970



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.4	3.5
10°-20°	222.4	10.0
20°-30°	330.6	14.9
30°-40°	389.6	17.5
40°-50°	396.7	17.8
50°-60°	353.4	15.9
60°-70°	266.3	12.0
70°-80°	148.1	6.7
80°-90°	38.5	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°	631.3	28.4
0°-40°	1021.0	45.9
0°-60°	1771.2	79.6
0°-90°	2224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	829	829	829	829	829	
5°	824	808	822	849	824	78
15°	787	732	788	851	787	222
25°	717	636	719	798	717	330
35°	623	538	626	708	623	390
45°	515	438	516	590	515	397
55°	395	333	398	455	395	354
65°	271	228	271	310	271	268
75°	141	117	139	159	141	150
85°	32	25	30	38	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°	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2
2.5°	826.4	826.4	827.3	823.6	819.0	817.1	816.2	815.2	817.1	818.0	817.1
5°	823.6	821.7	819.8	815.2	809.6	805.8	803.9	803.0	804.9	807.7	804.9
7.5°	818.0	814.3	810.5	803.9	797.4	791.7	788.9	787.0	788.9	791.7	789.8
10°	808.6	803.9	798.3	790.8	781.4	774.8	772.0	769.3	770.2	770.2	770.2
12.5°	799.2	792.7	786.1	776.7	766.4	758.9	754.2	750.5	752.3	753.3	753.3
15°	787.0	778.6	769.3	758.9	748.6	740.1	734.5	730.7	731.7	731.7	732.6
17.5°	772.0	762.7	753.3	741.1	728.8	719.4	713.0	708.3	710.1	711.1	712.0
20°	755.2	744.8	734.5	721.3	708.3	697.9	691.3	685.7	684.8	684.8	685.7
22.5°	737.3	726.0	713.9	699.8	685.7	674.4	667.9	662.3	661.4	661.4	662.3
25°	716.7	704.5	692.3	678.2	663.2	652.0	643.5	637.9	636.9	636.0	637.9
27.5°	695.1	682.9	670.8	656.7	640.7	629.4	620.9	615.4	613.5	612.6	614.5
30°	672.5	658.5	645.4	630.3	616.3	605.1	596.6	590.0	588.2	586.3	588.2
32.5°	648.2	634.1	620.1	605.1	591.0	579.7	571.2	564.8	562.9	561.9	563.8
35°	622.8	608.8	595.7	580.6	566.6	555.4	546.9	541.3	539.4	538.4	539.4
37.5°	597.5	583.5	570.4	555.4	541.3	530.0	521.5	516.0	515.0	514.1	515.0
40°	568.5	556.3	543.1	529.0	515.0	503.8	497.2	490.6	488.7	486.8	489.7
42.5°	543.1	530.9	517.9	504.7	490.6	479.3	471.9	466.3	464.4	463.4	464.4
45°	515.0	501.9	488.7	476.5	463.4	453.1	445.6	439.9	439.0	438.1	439.0
47.5°	485.0	473.7	462.5	450.3	437.1	426.8	420.3	414.7	412.8	410.9	412.8
50°	456.9	445.6	434.3	423.0	410.9	401.5	394.9	389.3	388.3	387.4	388.3
52.5°	426.8	415.6	405.3	394.0	383.6	374.2	367.8	363.1	362.1	361.2	362.1
55°	394.9	385.5	376.1	366.8	356.5	348.0	342.4	336.7	334.9	333.0	334.9
57.5°	364.9	356.5	347.1	337.7	328.3	320.9	315.2	310.5	309.6	308.6	309.6
60°	333.9	326.4	318.0	309.6	300.2	292.7	288.0	284.2	282.3	281.4	282.3
62.5°	303.0	295.5	288.9	280.4	272.1	266.4	261.7	258.0	256.1	255.2	256.1
65°	271.0	264.6	258.0	250.5	243.9	238.2	233.5	229.8	228.8	227.9	227.9
67.5°	238.2	232.6	227.0	220.5	213.0	207.3	202.6	199.8	198.9	197.9	198.9
70°	204.5	199.8	194.2	188.5	182.9	178.2	175.5	172.7	171.7	170.8	170.8
72.5°	172.7	168.9	164.2	159.5	154.8	150.1	147.3	145.4	144.5	143.5	143.5
75°	140.7	136.9	134.1	130.4	125.8	122.8	120.1	118.2	117.3	117.3	117.3
77.5°	110.7	107.9	105.1	101.3	98.5	95.7	93.8	92.9	91.9	91.9	91.9
80°	81.6	79.7	77.8	75.9	73.2	70.4	69.5	68.5	67.6	67.6	67.6
82.5°	55.4	54.4	52.5	50.7	48.8	47.8	46.9	46.0	46.0	46.0	46.0
85°	31.9	30.9	30.0	29.0	28.1	28.1	27.3	26.2	25.4	25.4	25.4
87.5°	13.2	13.2	13.2	12.2	11.3	11.3	11.3	11.3	11.3	11.3	11.3
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°	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2
2.5°	815.2	817.1	819.0	821.7	824.5	827.3	826.4	825.5	829.2	833.9	834.9
5°	803.0	804.9	807.7	812.4	817.1	820.9	821.7	821.7	829.2	835.8	837.7
7.5°	788.0	790.8	794.5	799.2	805.8	811.5	814.3	818.0	825.5	833.9	837.7
10°	769.3	773.9	779.5	786.1	792.7	799.2	804.9	809.6	819.0	828.3	833.9
12.5°	752.3	757.0	762.7	770.2	778.6	787.0	792.7	799.2	810.5	821.7	828.3
15°	733.5	738.2	744.8	752.3	761.7	771.0	779.5	788.0	799.2	811.5	819.0
17.5°	713.0	717.7	724.1	733.5	743.9	754.2	763.6	772.9	786.1	799.2	807.7
20°	687.6	694.2	702.6	712.0	724.1	736.4	745.8	756.1	770.2	784.2	793.6
22.5°	663.2	669.7	679.1	690.4	703.6	716.7	727.9	739.2	754.2	768.3	778.6
25°	639.7	647.3	656.7	667.9	680.1	693.2	706.4	719.4	734.5	749.5	759.9
27.5°	616.3	622.8	632.2	643.5	657.6	670.8	683.8	697.0	713.0	728.8	740.1
30°	590.0	597.5	606.0	617.3	632.2	647.3	660.4	674.4	690.4	706.4	717.7
32.5°	565.7	572.3	580.6	591.9	606.9	622.0	636.0	651.0	666.1	681.9	693.2
35°	541.3	547.8	556.3	567.6	582.5	597.5	611.6	625.6	640.7	655.7	667.0
37.5°	516.9	523.4	531.9	543.1	557.2	572.3	585.3	599.4	614.5	629.4	639.7
40°	491.5	498.1	504.7	516.0	530.0	545.0	558.2	572.3	587.2	602.2	612.6
42.5°	466.3	472.7	481.2	492.5	505.6	518.8	531.9	545.0	559.1	573.1	583.5
45°	440.9	446.5	455.0	465.3	478.4	490.6	503.8	516.0	530.0	543.1	553.5
47.5°	414.7	420.3	426.8	437.1	450.3	463.4	476.5	488.7	500.9	514.1	523.4
50°	389.3	394.9	402.4	411.8	424.1	436.2	447.5	458.7	471.0	483.1	491.5
52.5°	363.1	368.7	375.2	384.6	394.9	406.2	416.5	427.7	439.0	450.3	458.7
55°	336.7	340.5	346.1	354.6	365.9	377.1	387.4	397.7	408.1	417.5	425.8
57.5°	310.5	315.2	321.8	329.2	338.6	348.0	357.4	366.8	376.1	385.5	393.0
60°	284.2	288.0	292.7	299.2	308.6	317.1	326.4	334.9	343.3	351.8	358.4
62.5°	257.0	260.8	265.5	272.1	279.5	287.0	295.5	303.0	310.5	318.0	324.5
65°	228.8	232.6	237.3	242.9	249.5	256.1	263.6	271.0	276.7	282.3	288.9
67.5°	199.8	203.6	208.3	213.0	218.6	225.1	231.7	238.2	243.9	249.5	254.2
70°	171.7	174.4	179.1	182.9	187.6	192.3	197.9	203.6	207.3	212.0	217.7
72.5°	144.5	147.3	151.0	154.8	157.6	161.4	167.0	171.7	176.3	182.0	184.8
75°	118.2	120.1	122.8	125.8	128.5	131.3	135.1	138.8	142.6	145.4	149.2
77.5°	91.9	93.8	96.6	98.5	100.4	102.3	105.1	107.9	110.7	112.6	116.4
80°	67.6	69.5	71.3	73.2	75.0	76.9	77.8	78.8	82.5	85.3	87.2
82.5°	46.0	46.9	47.8	49.7	50.7	51.6	52.5	52.5	54.4	56.3	59.1
85°	26.2	27.3	28.1	28.1	28.1	28.1	29.0	30.0	30.9	32.8	34.7
87.5°	10.3	10.3	11.3	11.3	11.3	11.3	11.3	11.3	12.2	14.1	15.0
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°	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2	829.2
2.5°	833.9	834.9	836.7	837.7	838.6	838.6	839.6	840.5	838.6	836.7	835.8
5°	838.6	839.6	842.4	845.2	847.1	849.0	848.0	847.1	845.2	842.4	840.5
7.5°	839.6	842.4	845.2	849.0	851.8	855.5	853.7	851.8	848.0	844.3	841.4
10°	836.7	840.5	845.2	849.9	852.7	855.5	853.7	851.8	848.0	843.3	839.6
12.5°	833.0	837.7	843.3	848.0	850.8	854.6	851.8	849.0	844.3	839.6	834.9
15°	824.5	830.2	836.7	842.4	847.1	850.8	848.0	846.1	840.5	833.9	827.3
17.5°	814.3	821.7	828.3	834.9	838.6	842.4	840.5	838.6	832.0	824.5	817.1
20°	802.1	809.6	816.2	822.6	827.3	831.1	828.3	825.5	819.0	812.4	804.9
22.5°	787.0	794.5	802.1	808.6	813.3	817.1	813.3	808.6	802.1	795.5	788.0
25°	768.3	776.7	785.1	791.7	794.5	798.3	794.5	790.8	784.2	777.6	769.3
27.5°	749.5	758.0	766.4	772.9	775.7	779.5	775.7	772.0	765.5	758.9	750.5
30°	727.9	736.4	744.8	751.4	754.2	757.0	753.3	749.5	743.9	737.3	728.8
32.5°	703.6	712.0	718.6	725.1	728.8	732.6	728.8	726.0	719.4	711.1	702.6
35°	677.2	685.7	694.2	700.7	704.5	708.3	703.6	698.9	693.2	686.6	679.1
37.5°	648.2	657.6	667.0	674.4	677.2	681.0	677.2	672.5	667.0	660.4	652.0
40°	620.9	629.4	637.9	645.4	648.2	651.0	647.3	643.5	636.9	630.3	622.0
42.5°	592.9	601.3	608.8	615.4	618.2	622.0	618.2	613.5	608.8	603.2	595.7
45°	562.9	571.2	577.8	584.4	587.2	590.0	586.3	581.6	576.9	572.3	564.8
47.5°	531.9	539.4	546.0	552.5	554.4	557.2	553.5	550.7	546.0	541.3	534.7
50°	500.0	507.5	514.1	519.7	521.5	524.3	520.7	516.9	513.2	509.4	503.8
52.5°	467.2	473.7	480.3	485.9	487.8	489.7	485.9	482.1	478.4	474.6	469.1
55°	433.4	439.9	446.5	451.2	453.1	455.0	451.2	448.4	444.6	441.8	436.2
57.5°	399.6	406.2	411.8	416.5	418.4	420.3	416.5	412.8	410.0	407.1	402.4
60°	364.9	371.5	376.1	379.9	381.8	382.7	378.9	376.1	374.2	372.5	367.8
62.5°	331.1	335.8	340.5	343.3	345.2	346.1	343.3	341.4	339.6	337.7	333.9
65°	295.5	301.1	304.9	307.7	308.6	309.6	306.8	304.9	303.0	301.1	298.3
67.5°	259.9	264.6	267.4	270.2	271.0	271.0	271.0	270.2	268.3	265.5	262.7
70°	224.1	227.9	230.7	232.6	233.5	233.5	231.7	229.8	229.8	228.8	227.0
72.5°	187.6	190.4	192.3	194.2	194.2	194.2	194.2	195.1	194.2	192.3	189.5
75°	152.9	155.7	157.6	158.6	158.6	158.6	158.6	159.5	158.6	157.6	155.7
77.5°	120.1	122.0	122.8	123.9	123.9	123.9	124.7	125.8	124.7	123.9	122.8
80°	89.1	90.0	91.0	91.9	91.0	91.0	91.9	93.8	92.9	91.9	91.0
82.5°	61.0	61.9	62.9	62.9	63.8	64.8	64.8	64.8	64.8	63.8	62.9
85°	36.6	37.5	37.5	37.5	37.5	37.5	38.4	39.4	39.4	38.4	38.4
87.5°	16.9	17.9	16.9	16.0	15.0	15.0	16.9	18.8	18.8	17.9	17.9
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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CATALOG NUMBER: 4APN6-24-B2750-W2D-3000K

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	829.2	829.2	829.2	829.2
2.5°	836.7	835.8	831.1	826.4
5°	839.6	836.7	830.2	823.6
7.5°	839.6	835.8	826.4	818.0
10°	834.9	829.2	819.0	808.6
12.5°	829.2	822.6	810.5	799.2
15°	820.9	813.3	800.2	787.0
17.5°	808.6	799.2	786.1	772.0
20°	796.4	786.1	770.2	755.2
22.5°	779.5	770.2	753.3	737.3
25°	760.8	750.5	733.5	716.7
27.5°	741.1	728.8	712.0	695.1
30°	718.6	706.4	689.5	672.5
32.5°	694.2	682.9	666.1	648.2
35°	669.7	657.6	640.7	622.8
37.5°	642.6	631.3	614.5	597.5
40°	613.5	602.2	585.3	568.5
42.5°	586.3	575.9	559.1	543.1
45°	556.3	546.0	530.0	515.0
47.5°	525.3	515.0	500.0	485.0
50°	495.3	485.0	471.0	456.9
52.5°	461.6	453.1	439.9	426.8
55°	428.7	420.3	407.1	394.9
57.5°	395.9	388.3	376.1	364.9
60°	361.2	353.7	344.3	333.9
62.5°	328.3	321.8	312.4	303.0
65°	293.6	288.0	279.5	271.0
67.5°	258.0	253.3	245.8	238.2
70°	222.4	216.7	211.1	204.5
72.5°	186.7	183.8	178.2	172.7
75°	152.9	150.1	145.4	140.7
77.5°	121.1	118.2	114.5	110.7
80°	89.1	87.2	84.4	81.6
82.5°	61.9	60.1	58.2	55.4
85°	37.5	35.6	33.7	31.9
87.5°	16.9	16.0	14.1	13.2
90°	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - · 135°-315°















(END OF REPORT)