

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: P735580

Luminaire Tested: **4APN6-19-B2750-W2D-CP250-3500K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735580  
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: 4APN6-19-B2750-W2D-CP250-3500K  
Description: 4FT 1900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3500K CCT, AND CP250 LENS  
  
Light Source: -  
Ballast/Driver: -

**Summary**

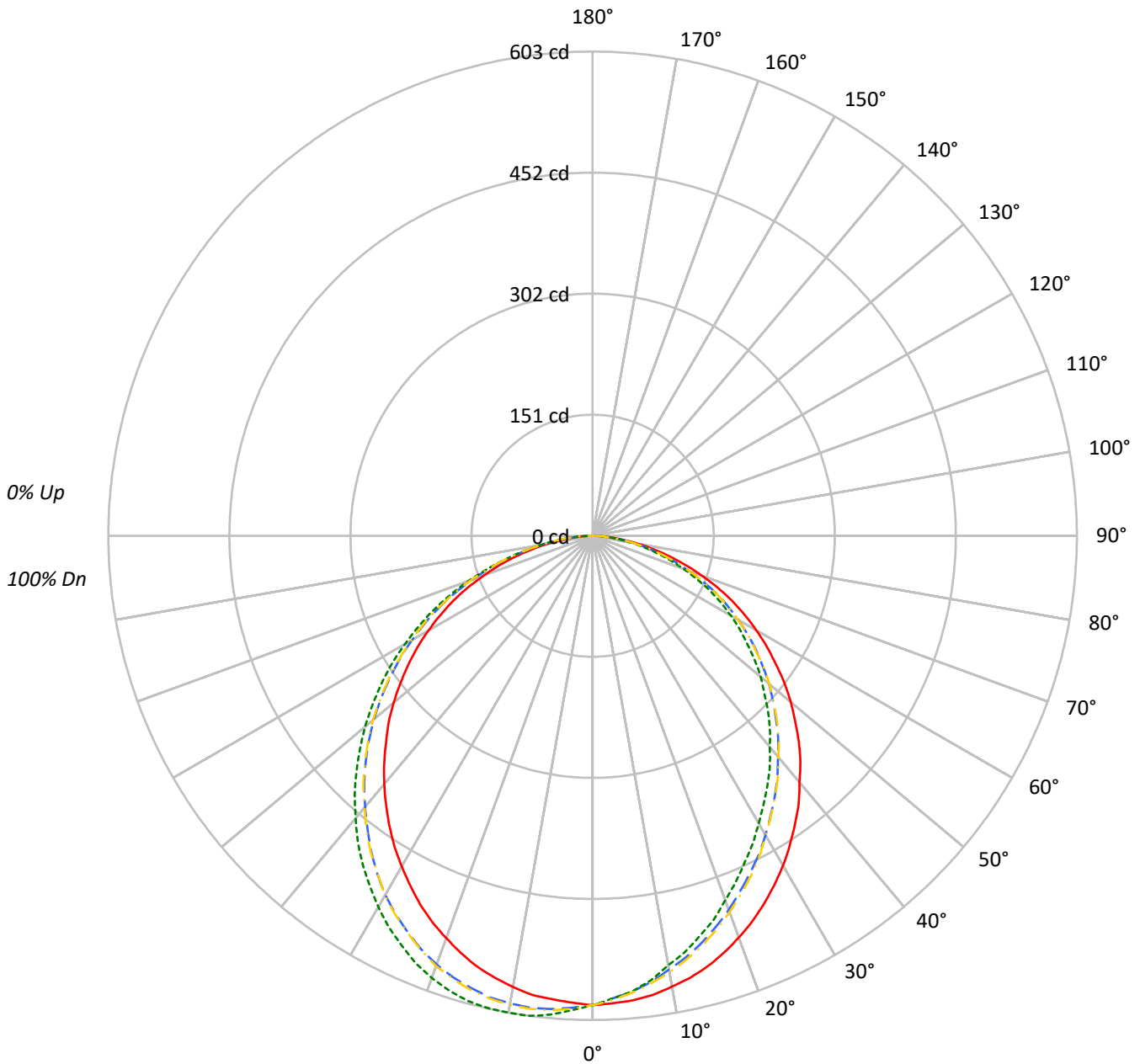
Lumens per Lamp: N/A  
Luminaire Lumens: 1568.0 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 19  
Input Voltage (V): NR  
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





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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°	5394	5394	5394	5394
5°	5378	5273	5366	5544
10°	5341	5087	5348	5650
15°	5300	4928	5307	5729
20°	5227	4740	5234	5754
25°	5144	4565	5163	5729
30°	5052	4404	5066	5686
35°	4946	4275	4968	5625
40°	4827	4133	4860	5528
45°	4738	4030	4747	5428
50°	4623	3920	4642	5306
55°	4478	3777	4510	5160
60°	4344	3661	4357	4978
65°	4172	3508	4172	4766
70°	3890	3248	3871	4440
75°	3536	2948	3490	3985
80°	3060	2529	2954	3411
85°	2382	1895	2244	2805



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.2	3.5
10°-20°	156.8	10.0
20°-30°	233.1	14.9
30°-40°	274.7	17.5
40°-50°	279.7	17.8
50°-60°	249.2	15.9
60°-70°	187.7	12.0
70°-80°	104.4	6.7
80°-90°	27.1	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°	445.1	28.4
0°-40°	719.8	45.9
0°-60°	1248.7	79.6
0°-90°	1568.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1568.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	585	585	585	585	585	
5°	581	569	579	599	581	55
15°	555	516	556	600	555	156
25°	505	448	507	563	505	233
35°	439	380	441	499	439	275
45°	363	309	364	416	363	280
55°	278	235	280	321	278	249
65°	191	161	191	218	191	189
75°	99	83	98	112	99	105
85°	22	18	21	26	22	27
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°	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6
2.5°	582.7	582.7	583.3	580.7	577.4	576.1	575.4	574.7	576.1	576.7	576.1
5°	580.7	579.4	578.0	574.7	570.8	568.1	566.8	566.1	567.5	569.4	567.5
7.5°	576.7	574.1	571.4	566.8	562.2	558.2	556.2	554.9	556.2	558.2	556.8
10°	570.1	566.8	562.8	557.6	550.9	546.3	544.3	542.4	543.0	543.0	543.0
12.5°	563.5	558.9	554.2	547.6	540.3	535.0	531.7	529.1	530.4	531.1	531.1
15°	554.9	549.0	542.4	535.0	527.8	521.8	517.9	515.2	515.9	515.9	516.5
17.5°	544.3	537.7	531.1	522.5	513.9	507.2	502.7	499.4	500.6	501.3	502.0
20°	532.4	525.1	517.9	508.6	499.4	492.0	487.4	483.5	482.8	482.8	483.5
22.5°	519.8	511.9	503.3	493.4	483.5	475.5	470.9	466.9	466.3	466.3	466.9
25°	505.3	496.7	488.1	478.2	467.6	459.7	453.7	449.8	449.0	448.4	449.8
27.5°	490.1	481.5	472.9	463.0	451.7	443.8	437.8	433.9	432.5	431.9	433.2
30°	474.2	464.2	455.0	444.4	434.5	426.6	420.6	416.0	414.7	413.4	414.7
32.5°	457.0	447.1	437.2	426.6	416.7	408.7	402.7	398.2	396.8	396.1	397.5
35°	439.1	429.2	420.0	409.4	399.4	391.6	385.6	381.6	380.3	379.6	380.3
37.5°	421.3	411.4	402.1	391.6	381.6	373.7	367.7	363.8	363.1	362.4	363.1
40°	400.8	392.2	382.9	373.0	363.1	355.2	350.5	345.9	344.6	343.2	345.3
42.5°	382.9	374.3	365.1	355.8	345.9	337.9	332.7	328.7	327.4	326.7	327.4
45°	363.1	353.9	344.6	336.0	326.7	319.4	314.2	310.2	309.5	308.9	309.5
47.5°	342.0	334.0	326.1	317.5	308.2	300.9	296.3	292.4	291.0	289.7	291.0
50°	322.1	314.2	306.2	298.3	289.7	283.1	278.4	274.5	273.8	273.1	273.8
52.5°	300.9	293.0	285.7	277.8	270.5	263.9	259.3	256.0	255.3	254.6	255.3
55°	278.4	271.8	265.2	258.6	251.3	245.4	241.4	237.4	236.1	234.8	236.1
57.5°	257.2	251.3	244.7	238.1	231.5	226.2	222.2	218.9	218.3	217.6	218.3
60°	235.4	230.2	224.2	218.3	211.7	206.4	203.1	200.4	199.1	198.4	199.1
62.5°	213.6	208.3	203.7	197.7	191.8	187.8	184.5	181.9	180.5	179.9	180.5
65°	191.1	186.5	181.9	176.6	172.0	168.0	164.6	162.0	161.3	160.7	160.7
67.5°	168.0	164.0	160.1	155.4	150.2	146.1	142.8	140.9	140.2	139.5	140.2
70°	144.2	140.9	136.9	132.9	129.0	125.7	123.7	121.7	121.0	120.4	120.4
72.5°	121.7	119.1	115.7	112.4	109.1	105.8	103.9	102.5	101.9	101.2	101.2
75°	99.2	96.5	94.6	92.0	88.7	86.6	84.6	83.3	82.7	82.7	82.7
77.5°	78.0	76.1	74.1	71.4	69.4	67.5	66.1	65.5	64.8	64.8	64.8
80°	57.6	56.2	54.9	53.5	51.6	49.6	49.0	48.3	47.6	47.6	47.6
82.5°	39.1	38.3	37.0	35.7	34.4	33.7	33.1	32.4	32.4	32.4	32.4
85°	22.5	21.8	21.2	20.5	19.8	19.8	19.2	18.5	17.9	17.9	17.9
87.5°	9.3	9.3	9.3	8.6	8.0	8.0	8.0	8.0	8.0	8.0	8.0
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):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6
2.5°	574.7	576.1	577.4	579.4	581.3	583.3	582.7	582.0	584.6	587.9	588.7
5°	566.1	567.5	569.4	572.7	576.1	578.7	579.4	579.4	584.6	589.3	590.6
7.5°	555.6	557.6	560.1	563.5	568.1	572.1	574.1	576.7	582.0	587.9	590.6
10°	542.4	545.7	549.6	554.2	558.9	563.5	567.5	570.8	577.4	584.0	587.9
12.5°	530.4	533.7	537.7	543.0	549.0	554.9	558.9	563.5	571.4	579.4	584.0
15°	517.2	520.5	525.1	530.4	537.0	543.6	549.6	555.6	563.5	572.1	577.4
17.5°	502.7	506.0	510.5	517.2	524.5	531.7	538.3	545.0	554.2	563.5	569.4
20°	484.8	489.4	495.3	502.0	510.5	519.2	525.8	533.1	543.0	552.9	559.5
22.5°	467.6	472.2	478.8	486.8	496.1	505.3	513.2	521.2	531.7	541.6	549.0
25°	451.0	456.4	463.0	470.9	479.5	488.7	498.0	507.2	517.9	528.4	535.7
27.5°	434.5	439.1	445.7	453.7	463.6	472.9	482.1	491.4	502.7	513.9	521.8
30°	416.0	421.3	427.2	435.2	445.7	456.4	465.6	475.5	486.8	498.0	506.0
32.5°	398.8	403.5	409.4	417.3	427.9	438.5	448.4	459.0	469.6	480.8	488.7
35°	381.6	386.2	392.2	400.2	410.7	421.3	431.2	441.1	451.7	462.3	470.2
37.5°	364.4	369.0	375.0	382.9	392.8	403.5	412.7	422.6	433.2	443.8	451.0
40°	346.5	351.2	355.8	363.8	373.7	384.2	393.5	403.5	414.0	424.6	431.9
42.5°	328.7	333.3	339.3	347.2	356.5	365.7	375.0	384.2	394.2	404.1	411.4
45°	310.9	314.8	320.8	328.0	337.3	345.9	355.2	363.8	373.7	382.9	390.2
47.5°	292.4	296.3	300.9	308.2	317.5	326.7	336.0	344.6	353.1	362.4	369.0
50°	274.5	278.4	283.7	290.3	299.0	307.6	315.5	323.4	332.0	340.6	346.5
52.5°	256.0	259.9	264.6	271.2	278.4	286.4	293.6	301.6	309.5	317.5	323.4
55°	237.4	240.1	244.0	250.0	257.9	265.9	273.1	280.4	287.7	294.3	300.2
57.5°	218.9	222.2	226.8	232.1	238.7	245.4	252.0	258.6	265.2	271.8	277.1
60°	200.4	203.1	206.4	210.9	217.6	223.5	230.2	236.1	242.0	248.0	252.7
62.5°	181.2	183.9	187.2	191.8	197.1	202.4	208.3	213.6	218.9	224.2	228.8
65°	161.3	164.0	167.3	171.3	175.9	180.5	185.8	191.1	195.1	199.1	203.7
67.5°	140.9	143.5	146.8	150.2	154.1	158.7	163.4	168.0	172.0	175.9	179.2
70°	121.0	123.0	126.3	129.0	132.3	135.6	139.5	143.5	146.1	149.4	153.5
72.5°	101.9	103.9	106.5	109.1	111.1	113.8	117.7	121.0	124.3	128.3	130.3
75°	83.3	84.6	86.6	88.7	90.6	92.6	95.3	97.9	100.5	102.5	105.2
77.5°	64.8	66.1	68.1	69.4	70.8	72.1	74.1	76.1	78.0	79.4	82.0
80°	47.6	49.0	50.2	51.6	52.9	54.3	54.9	55.6	58.2	60.2	61.5
82.5°	32.4	33.1	33.7	35.0	35.7	36.4	37.0	37.0	38.3	39.7	41.7
85°	18.5	19.2	19.8	19.8	19.8	19.8	20.5	21.2	21.8	23.1	24.5
87.5°	7.2	7.2	8.0	8.0	8.0	8.0	8.0	8.0	8.6	9.9	10.6
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):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6	584.6
2.5°	587.9	588.7	589.9	590.6	591.3	591.3	592.0	592.6	591.3	589.9	589.3
5°	591.3	592.0	593.9	595.9	597.2	598.6	597.9	597.2	595.9	593.9	592.6
7.5°	592.0	593.9	595.9	598.6	600.5	603.1	601.9	600.5	597.9	595.3	593.2
10°	589.9	592.6	595.9	599.2	601.2	603.1	601.9	600.5	597.9	594.6	592.0
12.5°	587.3	590.6	594.6	597.9	599.8	602.5	600.5	598.6	595.3	592.0	588.7
15°	581.3	585.3	589.9	593.9	597.2	599.8	597.9	596.5	592.6	587.9	583.3
17.5°	574.1	579.4	584.0	588.7	591.3	593.9	592.6	591.3	586.6	581.3	576.1
20°	565.5	570.8	575.4	580.0	583.3	586.0	584.0	582.0	577.4	572.7	567.5
22.5°	554.9	560.1	565.5	570.1	573.4	576.1	573.4	570.1	565.5	560.9	555.6
25°	541.6	547.6	553.5	558.2	560.1	562.8	560.1	557.6	552.9	548.3	542.4
27.5°	528.4	534.4	540.3	545.0	546.9	549.6	546.9	544.3	539.7	535.0	529.1
30°	513.2	519.2	525.1	529.8	531.7	533.7	531.1	528.4	524.5	519.8	513.9
32.5°	496.1	502.0	506.6	511.3	513.9	516.5	513.9	511.9	507.2	501.3	495.3
35°	477.5	483.5	489.4	494.0	496.7	499.4	496.1	492.7	488.7	484.1	478.8
37.5°	457.0	463.6	470.2	475.5	477.5	480.2	477.5	474.2	470.2	465.6	459.7
40°	437.8	443.8	449.8	455.0	457.0	459.0	456.4	453.7	449.0	444.4	438.5
42.5°	418.0	423.9	429.2	433.9	435.8	438.5	435.8	432.5	429.2	425.3	420.0
45°	396.8	402.7	407.4	412.0	414.0	416.0	413.4	410.1	406.8	403.5	398.2
47.5°	375.0	380.3	385.0	389.5	390.9	392.8	390.2	388.3	385.0	381.6	377.0
50°	352.5	357.8	362.4	366.4	367.7	369.7	367.1	364.4	361.8	359.1	355.2
52.5°	329.4	334.0	338.7	342.6	343.9	345.3	342.6	339.9	337.3	334.6	330.7
55°	305.6	310.2	314.8	318.1	319.4	320.8	318.1	316.1	313.5	311.5	307.6
57.5°	281.7	286.4	290.3	293.6	295.0	296.3	293.6	291.0	289.1	287.0	283.7
60°	257.2	261.9	265.2	267.9	269.2	269.8	267.2	265.2	263.9	262.6	259.3
62.5°	233.5	236.8	240.1	242.0	243.4	244.0	242.0	240.7	239.4	238.1	235.4
65°	208.3	212.3	215.0	216.9	217.6	218.3	216.3	215.0	213.6	212.3	210.3
67.5°	183.2	186.5	188.5	190.5	191.1	191.1	191.1	190.5	189.1	187.2	185.2
70°	158.0	160.7	162.7	164.0	164.6	164.6	163.4	162.0	162.0	161.3	160.1
72.5°	132.3	134.2	135.6	136.9	136.9	136.9	136.9	137.6	136.9	135.6	133.6
75°	107.8	109.8	111.1	111.8	111.8	111.8	111.8	112.4	111.8	111.1	109.8
77.5°	84.6	86.0	86.6	87.3	87.3	87.3	88.0	88.7	88.0	87.3	86.6
80°	62.8	63.5	64.2	64.8	64.2	64.2	64.8	66.1	65.5	64.8	64.2
82.5°	43.0	43.6	44.3	44.3	45.0	45.7	45.7	45.7	45.7	45.0	44.3
85°	25.8	26.5	26.5	26.5	26.5	26.5	27.1	27.8	27.8	27.1	27.1
87.5°	11.9	12.6	11.9	11.3	10.6	10.6	11.9	13.2	13.2	12.6	12.6
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: P735580

CATALOG NUMBER: 4APN6-19-B2750-W2D-CP250-3500K

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	584.6	584.6	584.6	584.6
2.5°	589.9	589.3	586.0	582.7
5°	592.0	589.9	585.3	580.7
7.5°	592.0	589.3	582.7	576.7
10°	588.7	584.6	577.4	570.1
12.5°	584.6	580.0	571.4	563.5
15°	578.7	573.4	564.2	554.9
17.5°	570.1	563.5	554.2	544.3
20°	561.5	554.2	543.0	532.4
22.5°	549.6	543.0	531.1	519.8
25°	536.4	529.1	517.2	505.3
27.5°	522.5	513.9	502.0	490.1
30°	506.6	498.0	486.1	474.2
32.5°	489.4	481.5	469.6	457.0
35°	472.2	463.6	451.7	439.1
37.5°	453.1	445.1	433.2	421.3
40°	432.5	424.6	412.7	400.8
42.5°	413.4	406.1	394.2	382.9
45°	392.2	385.0	373.7	363.1
47.5°	370.4	363.1	352.5	342.0
50°	349.2	342.0	332.0	322.1
52.5°	325.4	319.4	310.2	300.9
55°	302.3	296.3	287.0	278.4
57.5°	279.1	273.8	265.2	257.2
60°	254.6	249.4	242.8	235.4
62.5°	231.5	226.8	220.2	213.6
65°	207.0	203.1	197.1	191.1
67.5°	181.9	178.6	173.3	168.0
70°	156.8	152.8	148.8	144.2
72.5°	131.7	129.6	125.7	121.7
75°	107.8	105.8	102.5	99.2
77.5°	85.4	83.3	80.7	78.0
80°	62.8	61.5	59.5	57.6
82.5°	43.6	42.4	41.0	39.1
85°	26.5	25.1	23.8	22.5
87.5°	11.9	11.3	9.9	9.3
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)