

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: P709104

Luminaire Tested: **4APN-X-34L950-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709104
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-34L950-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

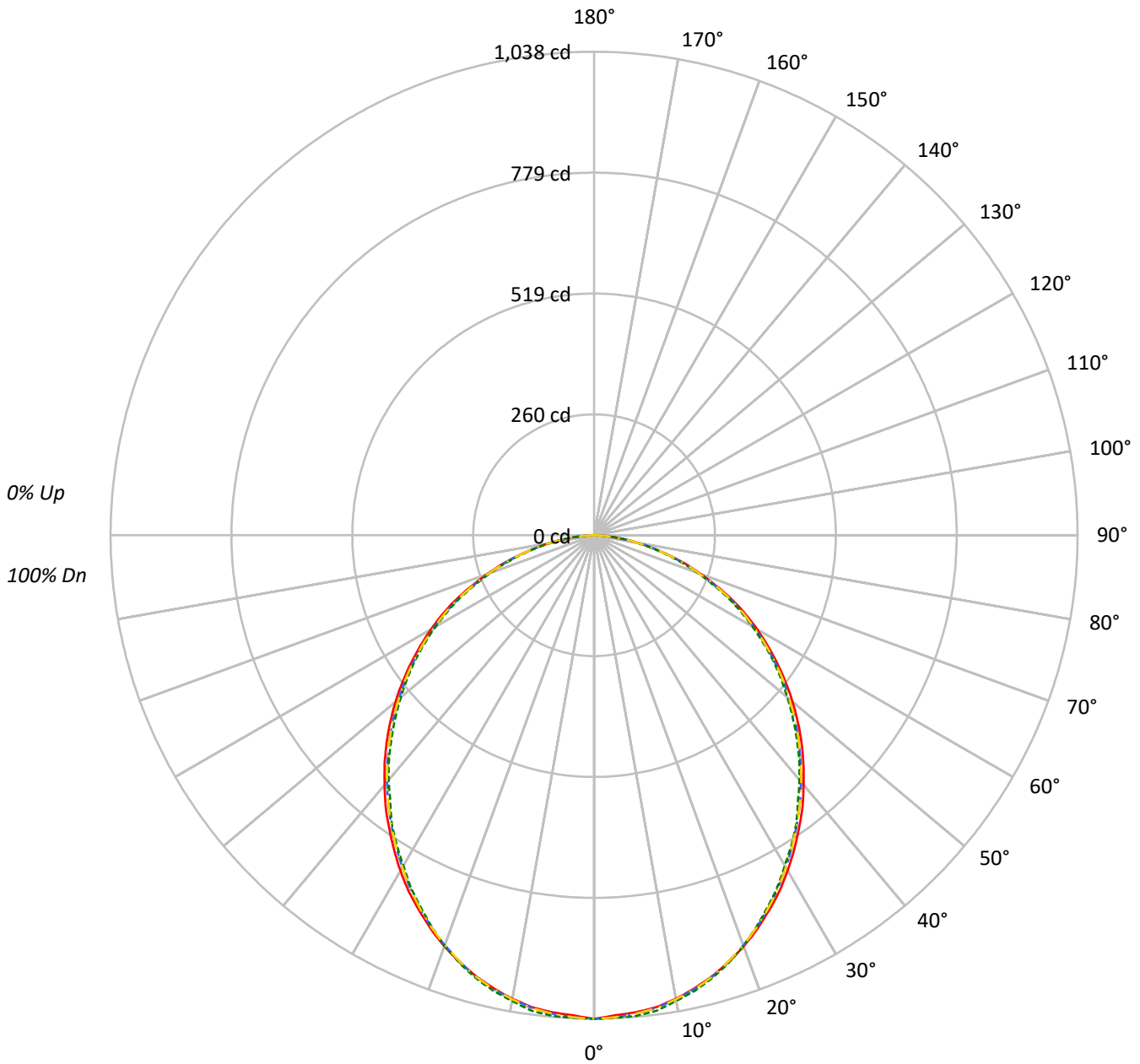
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2701.2 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.8
Input Voltage (V): 120
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



— 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	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	73	73	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	41	41	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9579	9579	9579	9579
5°	9522	9592	9522	9592
10°	9466	9513	9466	9513
15°	9360	9396	9360	9396
20°	9223	9211	9223	9211
25°	9047	8970	9047	8970
30°	8859	8724	8859	8724
35°	8639	8524	8639	8524
40°	8428	8260	8428	8260
45°	8220	8022	8220	8022
50°	7988	7770	7988	7770
55°	7729	7546	7729	7546
60°	7462	7252	7462	7252
65°	7141	6918	7141	6918
70°	6601	6396	6601	6396
75°	5964	5786	5964	5786
80°	5117	4984	5117	4984
85°	3896	3896	3896	3896



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	3.6
10°-20°	276.7	10.2
20°-30°	407.9	15.1
30°-40°	476.1	17.6
40°-50°	480.0	17.8
50°-60°	424.3	15.7
60°-70°	317.3	11.7
70°-80°	175.9	6.5
80°-90°	45.1	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°	782.6	29.0
0°-40°	1258.7	46.6
0°-60°	2163.0	80.1
0°-90°	2701.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2701.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1038	1038	1038	1038	1038	
5°	1028	1036	1028	1036	1028	98
15°	980	984	980	984	980	276
25°	889	881	889	881	889	410
35°	767	757	767	757	767	480
45°	630	615	630	615	630	486
55°	480	469	480	469	480	430
65°	327	317	327	317	327	322
75°	167	162	167	162	167	178
85°	37	37	37	37	37	44
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°	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2
2.5°	1031.9	1037.0	1042.1	1040.8	1037.0	1034.4	1035.7	1035.7	1037.0	1037.0	1037.0
5°	1028.1	1033.2	1037.0	1035.7	1031.9	1030.6	1030.6	1030.6	1033.2	1035.7	1033.2
7.5°	1021.8	1025.6	1029.4	1028.1	1024.3	1023.0	1023.0	1024.3	1026.8	1029.4	1026.8
10°	1010.4	1015.4	1019.2	1016.7	1012.9	1010.4	1010.4	1010.4	1012.9	1015.4	1012.9
12.5°	996.4	1000.2	1004.0	1002.8	999.0	996.4	996.4	996.4	999.0	1001.5	999.0
15°	979.9	983.7	987.5	986.3	982.5	979.9	979.9	979.9	982.5	983.7	982.5
17.5°	960.9	964.7	968.5	966.0	960.9	958.4	958.4	958.4	960.9	962.2	960.9
20°	939.4	943.2	945.7	943.2	938.1	935.6	934.3	934.3	936.8	938.1	936.8
22.5°	915.3	917.8	920.4	917.8	912.7	910.2	908.9	907.7	908.9	910.2	908.9
25°	888.7	891.2	893.7	891.2	886.1	882.3	881.1	879.8	881.1	881.1	881.1
27.5°	862.0	863.3	865.8	862.0	857.0	853.2	851.9	850.6	851.9	851.9	851.9
30°	831.6	832.9	835.4	831.6	825.3	821.5	820.2	818.9	818.9	818.9	818.9
32.5°	799.9	802.5	805.0	799.9	793.6	789.8	788.5	787.2	788.5	788.5	788.5
35°	767.0	768.2	770.8	767.0	760.6	756.8	754.3	753.0	755.6	756.8	755.6
37.5°	735.3	736.5	737.8	734.0	727.7	723.9	721.3	720.1	718.8	718.8	718.8
40°	699.8	701.0	703.6	699.8	693.4	689.6	687.1	685.8	685.8	685.8	685.8
42.5°	665.5	666.8	668.1	664.3	657.9	654.1	651.6	650.3	651.6	651.6	651.6
45°	630.0	630.0	631.3	627.5	622.4	618.6	616.1	614.8	614.8	614.8	614.8
47.5°	593.3	594.6	595.8	592.0	586.9	583.1	580.6	578.1	578.1	578.1	578.1
50°	556.5	556.5	557.8	554.0	548.9	545.1	543.8	542.6	541.3	541.3	541.3
52.5°	518.5	519.8	521.0	517.2	513.4	509.6	507.1	505.8	505.8	505.8	505.8
55°	480.5	480.5	481.7	479.2	475.4	471.6	469.1	467.8	469.1	469.1	469.1
57.5°	442.4	443.7	445.0	441.2	437.4	433.6	432.3	431.0	431.0	431.0	431.0
60°	404.4	404.4	405.7	403.1	399.3	395.5	394.3	393.0	393.0	393.0	393.0
62.5°	366.4	366.4	367.6	365.1	361.3	357.5	356.2	355.0	355.0	355.0	355.0
65°	327.1	327.1	327.1	324.5	322.0	320.7	319.5	318.2	316.9	316.9	316.9
67.5°	284.0	284.0	285.2	282.7	280.2	278.9	277.6	276.4	275.1	275.1	275.1
70°	244.7	244.7	245.9	244.7	242.1	240.9	239.6	238.3	237.1	237.1	237.1
72.5°	206.6	206.6	206.6	205.4	204.1	202.8	201.6	200.3	199.0	199.0	199.0
75°	167.3	167.3	168.6	167.3	166.1	164.8	163.5	163.5	162.3	162.3	162.3
77.5°	130.6	131.8	133.1	131.8	130.6	129.3	128.0	128.0	126.8	126.8	126.8
80°	96.3	97.6	98.9	97.6	96.3	95.1	93.8	93.8	93.8	93.8	93.8
82.5°	64.7	65.9	67.2	65.9	64.7	64.7	63.4	63.4	63.4	63.4	63.4
85°	36.8	38.0	39.3	39.3	38.0	38.0	36.8	36.8	36.8	36.8	36.8
87.5°	13.9	15.2	16.5	16.5	15.2	15.2	15.2	15.2	15.2	15.2	15.2
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°	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2
2.5°	1035.7	1035.7	1034.4	1037.0	1040.8	1042.1	1037.0	1031.9	1037.0	1042.1	1040.8
5°	1030.6	1030.6	1030.6	1031.9	1035.7	1037.0	1033.2	1028.1	1033.2	1037.0	1035.7
7.5°	1024.3	1023.0	1023.0	1024.3	1028.1	1029.4	1025.6	1021.8	1025.6	1029.4	1028.1
10°	1010.4	1010.4	1010.4	1012.9	1016.7	1019.2	1015.4	1010.4	1015.4	1019.2	1016.7
12.5°	996.4	996.4	996.4	999.0	1002.8	1004.0	1000.2	996.4	1000.2	1004.0	1002.8
15°	979.9	979.9	979.9	982.5	986.3	987.5	983.7	979.9	983.7	987.5	986.3
17.5°	958.4	958.4	958.4	960.9	966.0	968.5	964.7	960.9	964.7	968.5	966.0
20°	934.3	934.3	935.6	938.1	943.2	945.7	943.2	939.4	943.2	945.7	943.2
22.5°	907.7	908.9	910.2	912.7	917.8	920.4	917.8	915.3	917.8	920.4	917.8
25°	879.8	881.1	882.3	886.1	891.2	893.7	891.2	888.7	891.2	893.7	891.2
27.5°	850.6	851.9	853.2	857.0	862.0	865.8	863.3	862.0	863.3	865.8	862.0
30°	818.9	820.2	821.5	825.3	831.6	835.4	832.9	831.6	832.9	835.4	831.6
32.5°	787.2	788.5	789.8	793.6	799.9	805.0	802.5	799.9	802.5	805.0	799.9
35°	753.0	754.3	756.8	760.6	767.0	770.8	768.2	767.0	768.2	770.8	767.0
37.5°	720.1	721.3	723.9	727.7	734.0	737.8	736.5	735.3	736.5	737.8	734.0
40°	685.8	687.1	689.6	693.4	699.8	703.6	701.0	699.8	701.0	703.6	699.8
42.5°	650.3	651.6	654.1	657.9	664.3	668.1	666.8	665.5	666.8	668.1	664.3
45°	614.8	616.1	618.6	622.4	627.5	631.3	630.0	630.0	630.0	631.3	627.5
47.5°	578.1	580.6	583.1	586.9	592.0	595.8	594.6	593.3	594.6	595.8	592.0
50°	542.6	543.8	545.1	548.9	554.0	557.8	556.5	556.5	556.5	557.8	554.0
52.5°	505.8	507.1	509.6	513.4	517.2	521.0	519.8	518.5	519.8	521.0	517.2
55°	467.8	469.1	471.6	475.4	479.2	481.7	480.5	480.5	480.5	481.7	479.2
57.5°	431.0	432.3	433.6	437.4	441.2	445.0	443.7	442.4	443.7	445.0	441.2
60°	393.0	394.3	395.5	399.3	403.1	405.7	404.4	404.4	404.4	405.7	403.1
62.5°	355.0	356.2	357.5	361.3	365.1	367.6	366.4	366.4	366.4	367.6	365.1
65°	318.2	319.5	320.7	322.0	324.5	327.1	327.1	327.1	327.1	327.1	324.5
67.5°	276.4	277.6	278.9	280.2	282.7	285.2	284.0	284.0	284.0	285.2	282.7
70°	238.3	239.6	240.9	242.1	244.7	245.9	244.7	244.7	244.7	245.9	244.7
72.5°	200.3	201.6	202.8	204.1	205.4	206.6	206.6	206.6	206.6	206.6	205.4
75°	163.5	163.5	164.8	166.1	167.3	168.6	167.3	167.3	167.3	168.6	167.3
77.5°	128.0	128.0	129.3	130.6	131.8	133.1	131.8	130.6	131.8	133.1	131.8
80°	93.8	93.8	95.1	96.3	97.6	98.9	97.6	96.3	97.6	98.9	97.6
82.5°	63.4	63.4	64.7	64.7	65.9	67.2	65.9	64.7	65.9	67.2	65.9
85°	36.8	36.8	38.0	38.0	39.3	39.3	38.0	36.8	38.0	39.3	39.3
87.5°	15.2	15.2	15.2	15.2	16.5	16.5	15.2	13.9	15.2	16.5	16.5
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2	1038.2
2.5°	1037.0	1034.4	1035.7	1035.7	1037.0	1037.0	1037.0	1035.7	1035.7	1034.4	1037.0
5°	1031.9	1030.6	1030.6	1030.6	1033.2	1035.7	1033.2	1030.6	1030.6	1030.6	1031.9
7.5°	1024.3	1023.0	1023.0	1024.3	1026.8	1029.4	1026.8	1024.3	1023.0	1023.0	1024.3
10°	1012.9	1010.4	1010.4	1010.4	1012.9	1015.4	1012.9	1010.4	1010.4	1010.4	1012.9
12.5°	999.0	996.4	996.4	996.4	999.0	1001.5	999.0	996.4	996.4	996.4	999.0
15°	982.5	979.9	979.9	979.9	982.5	983.7	982.5	979.9	979.9	979.9	982.5
17.5°	960.9	958.4	958.4	958.4	960.9	962.2	960.9	958.4	958.4	958.4	960.9
20°	938.1	935.6	934.3	934.3	936.8	938.1	936.8	934.3	934.3	935.6	938.1
22.5°	912.7	910.2	908.9	907.7	908.9	910.2	908.9	907.7	908.9	910.2	912.7
25°	886.1	882.3	881.1	879.8	881.1	881.1	881.1	879.8	881.1	882.3	886.1
27.5°	857.0	853.2	851.9	850.6	851.9	851.9	851.9	850.6	851.9	853.2	857.0
30°	825.3	821.5	820.2	818.9	818.9	818.9	818.9	818.9	820.2	821.5	825.3
32.5°	793.6	789.8	788.5	787.2	788.5	788.5	788.5	787.2	788.5	789.8	793.6
35°	760.6	756.8	754.3	753.0	755.6	756.8	755.6	753.0	754.3	756.8	760.6
37.5°	727.7	723.9	721.3	720.1	718.8	718.8	718.8	720.1	721.3	723.9	727.7
40°	693.4	689.6	687.1	685.8	685.8	685.8	685.8	685.8	687.1	689.6	693.4
42.5°	657.9	654.1	651.6	650.3	651.6	651.6	651.6	650.3	651.6	654.1	657.9
45°	622.4	618.6	616.1	614.8	614.8	614.8	614.8	614.8	616.1	618.6	622.4
47.5°	586.9	583.1	580.6	578.1	578.1	578.1	578.1	578.1	580.6	583.1	586.9
50°	548.9	545.1	543.8	542.6	541.3	541.3	541.3	542.6	543.8	545.1	548.9
52.5°	513.4	509.6	507.1	505.8	505.8	505.8	505.8	505.8	507.1	509.6	513.4
55°	475.4	471.6	469.1	467.8	469.1	469.1	469.1	467.8	469.1	471.6	475.4
57.5°	437.4	433.6	432.3	431.0	431.0	431.0	431.0	431.0	432.3	433.6	437.4
60°	399.3	395.5	394.3	393.0	393.0	393.0	393.0	393.0	394.3	395.5	399.3
62.5°	361.3	357.5	356.2	355.0	355.0	355.0	355.0	355.0	356.2	357.5	361.3
65°	322.0	320.7	319.5	318.2	316.9	316.9	316.9	318.2	319.5	320.7	322.0
67.5°	280.2	278.9	277.6	276.4	275.1	275.1	275.1	276.4	277.6	278.9	280.2
70°	242.1	240.9	239.6	238.3	237.1	237.1	237.1	238.3	239.6	240.9	242.1
72.5°	204.1	202.8	201.6	200.3	199.0	199.0	199.0	200.3	201.6	202.8	204.1
75°	166.1	164.8	163.5	163.5	162.3	162.3	162.3	163.5	163.5	164.8	166.1
77.5°	130.6	129.3	128.0	128.0	126.8	126.8	126.8	128.0	128.0	129.3	130.6
80°	96.3	95.1	93.8	93.8	93.8	93.8	93.8	93.8	93.8	95.1	96.3
82.5°	64.7	64.7	63.4	63.4	63.4	63.4	63.4	63.4	63.4	64.7	64.7
85°	38.0	38.0	36.8	36.8	36.8	36.8	36.8	36.8	36.8	38.0	38.0
87.5°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
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):

	330°	340°	350°	360°
0°	1038.2	1038.2	1038.2	1038.2
2.5°	1040.8	1042.1	1037.0	1031.9
5°	1035.7	1037.0	1033.2	1028.1
7.5°	1028.1	1029.4	1025.6	1021.8
10°	1016.7	1019.2	1015.4	1010.4
12.5°	1002.8	1004.0	1000.2	996.4
15°	986.3	987.5	983.7	979.9
17.5°	966.0	968.5	964.7	960.9
20°	943.2	945.7	943.2	939.4
22.5°	917.8	920.4	917.8	915.3
25°	891.2	893.7	891.2	888.7
27.5°	862.0	865.8	863.3	862.0
30°	831.6	835.4	832.9	831.6
32.5°	799.9	805.0	802.5	799.9
35°	767.0	770.8	768.2	767.0
37.5°	734.0	737.8	736.5	735.3
40°	699.8	703.6	701.0	699.8
42.5°	664.3	668.1	666.8	665.5
45°	627.5	631.3	630.0	630.0
47.5°	592.0	595.8	594.6	593.3
50°	554.0	557.8	556.5	556.5
52.5°	517.2	521.0	519.8	518.5
55°	479.2	481.7	480.5	480.5
57.5°	441.2	445.0	443.7	442.4
60°	403.1	405.7	404.4	404.4
62.5°	365.1	367.6	366.4	366.4
65°	324.5	327.1	327.1	327.1
67.5°	282.7	285.2	284.0	284.0
70°	244.7	245.9	244.7	244.7
72.5°	205.4	206.6	206.6	206.6
75°	167.3	168.6	167.3	167.3
77.5°	131.8	133.1	131.8	130.6
80°	97.6	98.9	97.6	96.3
82.5°	65.9	67.2	65.9	64.7
85°	39.3	39.3	38.0	36.8
87.5°	16.5	16.5	15.2	13.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)