

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-X-30L940-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-X-30L940-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

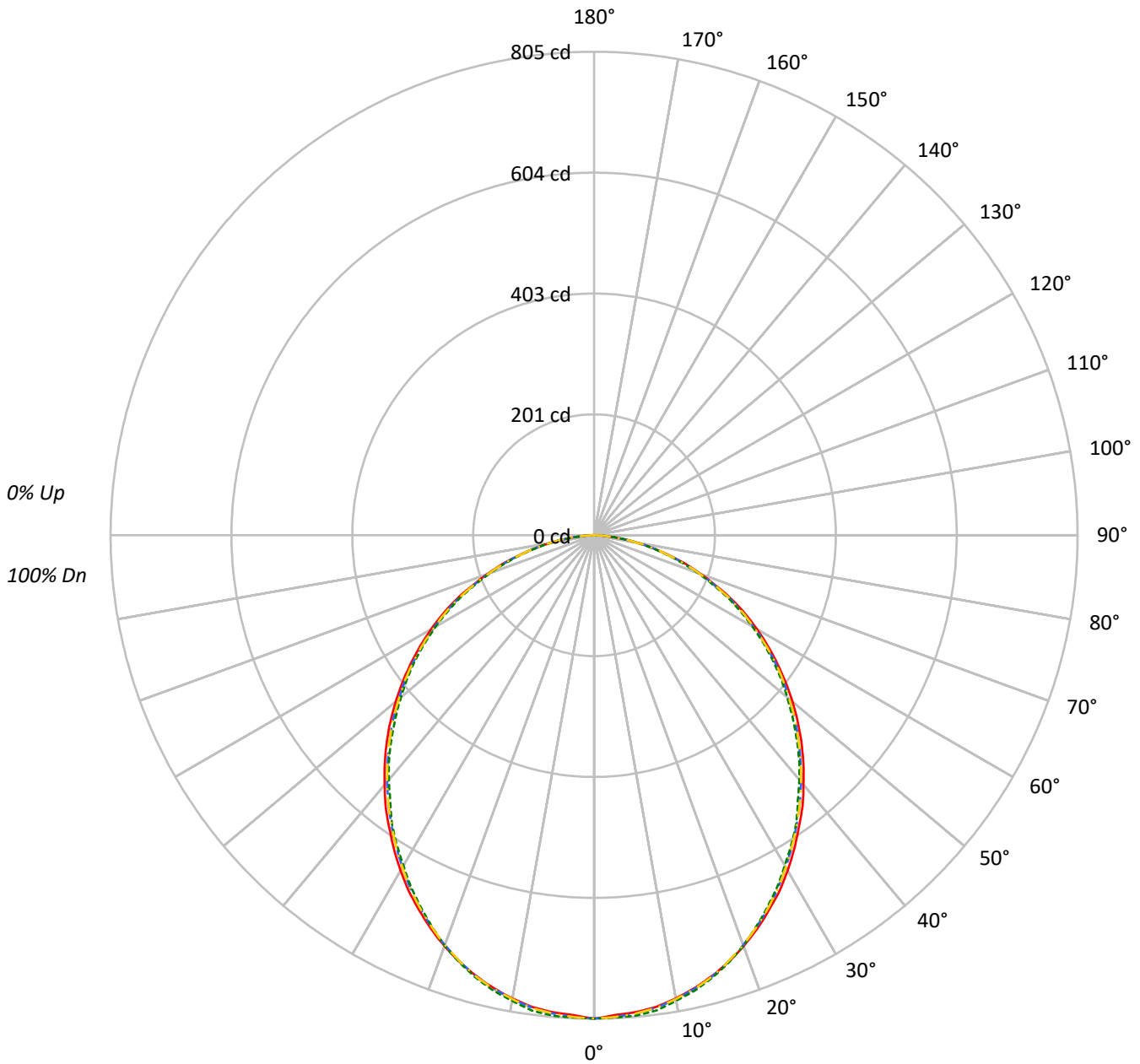
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2093.9 lumens
Efficiency: N/A
Efficacy: 64.4 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): 32.5
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				
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°	7425	7425	7425	7425
5°	7381	7435	7381	7435
10°	7336	7374	7336	7374
15°	7255	7283	7255	7283
20°	7149	7140	7149	7140
25°	7012	6952	7012	6952
30°	6868	6763	6868	6763
35°	6696	6608	6696	6608
40°	6533	6403	6533	6403
45°	6373	6219	6373	6219
50°	6192	6023	6192	6023
55°	5990	5847	5990	5847
60°	5785	5621	5785	5621
65°	5534	5362	5534	5362
70°	5117	4958	5117	4958
75°	4623	4484	4623	4484
80°	3969	3863	3969	3863
85°	3017	3017	3017	3017



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.0	3.6
10°-20°	214.5	10.2
20°-30°	316.2	15.1
30°-40°	369.1	17.6
40°-50°	372.1	17.8
50°-60°	328.8	15.7
60°-70°	245.9	11.7
70°-80°	136.3	6.5
80°-90°	35.0	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°	606.6	29.0
0°-40°	975.7	46.6
0°-60°	1676.6	80.1
0°-90°	2093.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2093.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	805	805	805	805	805	
5°	797	803	797	803	797	76
15°	760	762	760	762	760	214
25°	689	683	689	683	689	317
35°	594	587	594	587	594	372
45°	488	477	488	477	488	377
55°	372	364	372	364	372	333
65°	254	246	254	246	254	250
75°	130	126	130	126	130	138
85°	28	28	28	28	28	34
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°	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8
2.5°	799.8	803.8	807.8	806.7	803.8	801.9	802.8	802.8	803.8	803.8	803.8
5°	797.0	800.8	803.8	802.8	799.8	798.9	798.9	798.9	800.8	802.8	800.8
7.5°	792.0	794.9	797.9	797.0	794.0	793.0	793.0	794.0	796.0	797.9	796.0
10°	783.1	787.1	790.1	788.1	785.2	783.1	783.1	783.1	785.2	787.1	785.2
12.5°	772.4	775.3	778.3	777.2	774.3	772.4	772.4	772.4	774.3	776.3	774.3
15°	759.6	762.5	765.4	764.5	761.6	759.6	759.6	759.6	761.6	762.5	761.6
17.5°	744.9	747.8	750.8	748.8	744.9	742.9	742.9	742.9	744.9	745.8	744.9
20°	728.1	731.1	733.1	731.1	727.2	725.2	724.2	724.2	726.2	727.2	726.2
22.5°	709.5	711.4	713.4	711.4	707.5	705.5	704.6	703.6	704.6	705.5	704.6
25°	688.8	690.8	692.8	690.8	686.9	683.9	682.9	682.0	682.9	682.9	682.9
27.5°	668.2	669.2	671.1	668.2	664.3	661.4	660.3	659.3	660.3	660.3	660.3
30°	644.7	645.6	647.6	644.7	639.7	636.7	635.8	634.8	634.8	634.8	634.8
32.5°	620.0	622.0	624.0	620.0	615.2	612.2	611.2	610.3	611.2	611.2	611.2
35°	594.5	595.5	597.5	594.5	589.6	586.7	584.6	583.7	585.7	586.7	585.7
37.5°	570.0	570.9	571.9	569.0	564.1	561.1	559.1	558.2	557.2	557.2	557.2
40°	542.4	543.4	545.4	542.4	537.5	534.6	532.6	531.6	531.6	531.6	531.6
42.5°	515.9	516.9	517.9	514.9	510.0	507.0	505.1	504.1	505.1	505.1	505.1
45°	488.4	488.4	489.4	486.4	482.5	479.5	477.6	476.6	476.6	476.6	476.6
47.5°	459.9	460.9	461.8	458.9	455.0	452.1	450.0	448.1	448.1	448.1	448.1
50°	431.4	431.4	432.3	429.4	425.5	422.6	421.5	420.6	419.6	419.6	419.6
52.5°	401.9	402.9	403.8	400.9	397.9	395.0	393.0	392.0	392.0	392.0	392.0
55°	372.4	372.4	373.4	371.5	368.5	365.6	363.5	362.6	363.5	363.5	363.5
57.5°	343.0	343.9	344.9	342.0	339.0	336.1	335.1	334.1	334.1	334.1	334.1
60°	313.5	313.5	314.5	312.5	309.5	306.6	305.6	304.6	304.6	304.6	304.6
62.5°	284.0	284.0	285.0	283.0	280.0	277.2	276.1	275.1	275.1	275.1	275.1
65°	253.5	253.5	253.5	251.5	249.6	248.6	247.6	246.6	245.6	245.6	245.6
67.5°	220.1	220.1	221.1	219.2	217.1	216.2	215.2	214.2	213.3	213.3	213.3
70°	189.7	189.7	190.7	189.7	187.7	186.7	185.7	184.8	183.8	183.8	183.8
72.5°	160.2	160.2	160.2	159.2	158.2	157.2	156.3	155.3	154.3	154.3	154.3
75°	129.7	129.7	130.6	129.7	128.7	127.8	126.8	126.8	125.8	125.8	125.8
77.5°	101.2	102.2	103.2	102.2	101.2	100.2	99.2	99.2	98.3	98.3	98.3
80°	74.7	75.7	76.6	75.7	74.7	73.7	72.7	72.7	72.7	72.7	72.7
82.5°	50.2	51.1	52.1	51.1	50.2	50.2	49.1	49.1	49.1	49.1	49.1
85°	28.5	29.5	30.4	30.4	29.5	29.5	28.5	28.5	28.5	28.5	28.5
87.5°	10.8	11.8	12.8	12.8	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°	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8
2.5°	802.8	802.8	801.9	803.8	806.7	807.8	803.8	799.8	803.8	807.8	806.7
5°	798.9	798.9	798.9	799.8	802.8	803.8	800.8	797.0	800.8	803.8	802.8
7.5°	794.0	793.0	793.0	794.0	797.0	797.9	794.9	792.0	794.9	797.9	797.0
10°	783.1	783.1	783.1	785.2	788.1	790.1	787.1	783.1	787.1	790.1	788.1
12.5°	772.4	772.4	772.4	774.3	777.2	778.3	775.3	772.4	775.3	778.3	777.2
15°	759.6	759.6	759.6	761.6	764.5	765.4	762.5	759.6	762.5	765.4	764.5
17.5°	742.9	742.9	742.9	744.9	748.8	750.8	747.8	744.9	747.8	750.8	748.8
20°	724.2	724.2	725.2	727.2	731.1	733.1	731.1	728.1	731.1	733.1	731.1
22.5°	703.6	704.6	705.5	707.5	711.4	713.4	711.4	709.5	711.4	713.4	711.4
25°	682.0	682.9	683.9	686.9	690.8	692.8	690.8	688.8	690.8	692.8	690.8
27.5°	659.3	660.3	661.4	664.3	668.2	671.1	669.2	668.2	669.2	671.1	668.2
30°	634.8	635.8	636.7	639.7	644.7	647.6	645.6	644.7	645.6	647.6	644.7
32.5°	610.3	611.2	612.2	615.2	620.0	624.0	622.0	620.0	622.0	624.0	620.0
35°	583.7	584.6	586.7	589.6	594.5	597.5	595.5	594.5	595.5	597.5	594.5
37.5°	558.2	559.1	561.1	564.1	569.0	571.9	570.9	570.0	570.9	571.9	569.0
40°	531.6	532.6	534.6	537.5	542.4	545.4	543.4	542.4	543.4	545.4	542.4
42.5°	504.1	505.1	507.0	510.0	514.9	517.9	516.9	515.9	516.9	517.9	514.9
45°	476.6	477.6	479.5	482.5	486.4	489.4	488.4	488.4	488.4	489.4	486.4
47.5°	448.1	450.0	452.1	455.0	458.9	461.8	460.9	459.9	460.9	461.8	458.9
50°	420.6	421.5	422.6	425.5	429.4	432.3	431.4	431.4	431.4	432.3	429.4
52.5°	392.0	393.0	395.0	397.9	400.9	403.8	402.9	401.9	402.9	403.8	400.9
55°	362.6	363.5	365.6	368.5	371.5	373.4	372.4	372.4	372.4	373.4	371.5
57.5°	334.1	335.1	336.1	339.0	342.0	344.9	343.9	343.0	343.9	344.9	342.0
60°	304.6	305.6	306.6	309.5	312.5	314.5	313.5	313.5	313.5	314.5	312.5
62.5°	275.1	276.1	277.2	280.0	283.0	285.0	284.0	284.0	284.0	285.0	283.0
65°	246.6	247.6	248.6	249.6	251.5	253.5	253.5	253.5	253.5	253.5	251.5
67.5°	214.2	215.2	216.2	217.1	219.2	221.1	220.1	220.1	220.1	221.1	219.2
70°	184.8	185.7	186.7	187.7	189.7	190.7	189.7	189.7	189.7	190.7	189.7
72.5°	155.3	156.3	157.2	158.2	159.2	160.2	160.2	160.2	160.2	160.2	159.2
75°	126.8	126.8	127.8	128.7	129.7	130.6	129.7	129.7	129.7	130.6	129.7
77.5°	99.2	99.2	100.2	101.2	102.2	103.2	102.2	101.2	102.2	103.2	102.2
80°	72.7	72.7	73.7	74.7	75.7	76.6	75.7	74.7	75.7	76.6	75.7
82.5°	49.1	49.1	50.2	50.2	51.1	52.1	51.1	50.2	51.1	52.1	51.1
85°	28.5	28.5	29.5	29.5	30.4	30.4	29.5	28.5	29.5	30.4	30.4
87.5°	11.8	11.8	11.8	11.8	12.8	12.8	11.8	10.8	11.8	12.8	12.8
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°	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8	804.8
2.5°	803.8	801.9	802.8	802.8	803.8	803.8	803.8	802.8	802.8	801.9	803.8
5°	799.8	798.9	798.9	798.9	800.8	802.8	800.8	798.9	798.9	798.9	799.8
7.5°	794.0	793.0	793.0	794.0	796.0	797.9	796.0	794.0	793.0	793.0	794.0
10°	785.2	783.1	783.1	783.1	785.2	787.1	785.2	783.1	783.1	783.1	785.2
12.5°	774.3	772.4	772.4	772.4	774.3	776.3	774.3	772.4	772.4	772.4	774.3
15°	761.6	759.6	759.6	759.6	761.6	762.5	761.6	759.6	759.6	759.6	761.6
17.5°	744.9	742.9	742.9	742.9	744.9	745.8	744.9	742.9	742.9	742.9	744.9
20°	727.2	725.2	724.2	724.2	726.2	727.2	726.2	724.2	724.2	725.2	727.2
22.5°	707.5	705.5	704.6	703.6	704.6	705.5	704.6	703.6	704.6	705.5	707.5
25°	686.9	683.9	682.9	682.0	682.9	682.9	682.9	682.0	682.9	683.9	686.9
27.5°	664.3	661.4	660.3	659.3	660.3	660.3	660.3	659.3	660.3	661.4	664.3
30°	639.7	636.7	635.8	634.8	634.8	634.8	634.8	634.8	635.8	636.7	639.7
32.5°	615.2	612.2	611.2	610.3	611.2	611.2	611.2	610.3	611.2	612.2	615.2
35°	589.6	586.7	584.6	583.7	585.7	586.7	585.7	583.7	584.6	586.7	589.6
37.5°	564.1	561.1	559.1	558.2	557.2	557.2	557.2	558.2	559.1	561.1	564.1
40°	537.5	534.6	532.6	531.6	531.6	531.6	531.6	531.6	532.6	534.6	537.5
42.5°	510.0	507.0	505.1	504.1	505.1	505.1	505.1	504.1	505.1	507.0	510.0
45°	482.5	479.5	477.6	476.6	476.6	476.6	476.6	476.6	477.6	479.5	482.5
47.5°	455.0	452.1	450.0	448.1	448.1	448.1	448.1	448.1	450.0	452.1	455.0
50°	425.5	422.6	421.5	420.6	419.6	419.6	419.6	420.6	421.5	422.6	425.5
52.5°	397.9	395.0	393.0	392.0	392.0	392.0	392.0	392.0	393.0	395.0	397.9
55°	368.5	365.6	363.5	362.6	363.5	363.5	363.5	362.6	363.5	365.6	368.5
57.5°	339.0	336.1	335.1	334.1	334.1	334.1	334.1	334.1	335.1	336.1	339.0
60°	309.5	306.6	305.6	304.6	304.6	304.6	304.6	304.6	305.6	306.6	309.5
62.5°	280.0	277.2	276.1	275.1	275.1	275.1	275.1	275.1	276.1	277.2	280.0
65°	249.6	248.6	247.6	246.6	245.6	245.6	245.6	246.6	247.6	248.6	249.6
67.5°	217.1	216.2	215.2	214.2	213.3	213.3	213.3	214.2	215.2	216.2	217.1
70°	187.7	186.7	185.7	184.8	183.8	183.8	183.8	184.8	185.7	186.7	187.7
72.5°	158.2	157.2	156.3	155.3	154.3	154.3	154.3	155.3	156.3	157.2	158.2
75°	128.7	127.8	126.8	126.8	125.8	125.8	125.8	126.8	126.8	127.8	128.7
77.5°	101.2	100.2	99.2	99.2	98.3	98.3	98.3	99.2	99.2	100.2	101.2
80°	74.7	73.7	72.7	72.7	72.7	72.7	72.7	72.7	72.7	73.7	74.7
82.5°	50.2	50.2	49.1	49.1	49.1	49.1	49.1	49.1	49.1	50.2	50.2
85°	29.5	29.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	29.5	29.5
87.5°	11.8	11.8	11.8	11.8	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):

	330°	340°	350°	360°
0°	804.8	804.8	804.8	804.8
2.5°	806.7	807.8	803.8	799.8
5°	802.8	803.8	800.8	797.0
7.5°	797.0	797.9	794.9	792.0
10°	788.1	790.1	787.1	783.1
12.5°	777.2	778.3	775.3	772.4
15°	764.5	765.4	762.5	759.6
17.5°	748.8	750.8	747.8	744.9
20°	731.1	733.1	731.1	728.1
22.5°	711.4	713.4	711.4	709.5
25°	690.8	692.8	690.8	688.8
27.5°	668.2	671.1	669.2	668.2
30°	644.7	647.6	645.6	644.7
32.5°	620.0	624.0	622.0	620.0
35°	594.5	597.5	595.5	594.5
37.5°	569.0	571.9	570.9	570.0
40°	542.4	545.4	543.4	542.4
42.5°	514.9	517.9	516.9	515.9
45°	486.4	489.4	488.4	488.4
47.5°	458.9	461.8	460.9	459.9
50°	429.4	432.3	431.4	431.4
52.5°	400.9	403.8	402.9	401.9
55°	371.5	373.4	372.4	372.4
57.5°	342.0	344.9	343.9	343.0
60°	312.5	314.5	313.5	313.5
62.5°	283.0	285.0	284.0	284.0
65°	251.5	253.5	253.5	253.5
67.5°	219.2	221.1	220.1	220.1
70°	189.7	190.7	189.7	189.7
72.5°	159.2	160.2	160.2	160.2
75°	129.7	130.6	129.7	129.7
77.5°	102.2	103.2	102.2	101.2
80°	75.7	76.6	75.7	74.7
82.5°	51.1	52.1	51.1	50.2
85°	30.4	30.4	29.5	28.5
87.5°	12.8	12.8	11.8	10.8
90°	0.0	0.0	0.0	0.0

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