

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-32L930-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-32L930-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

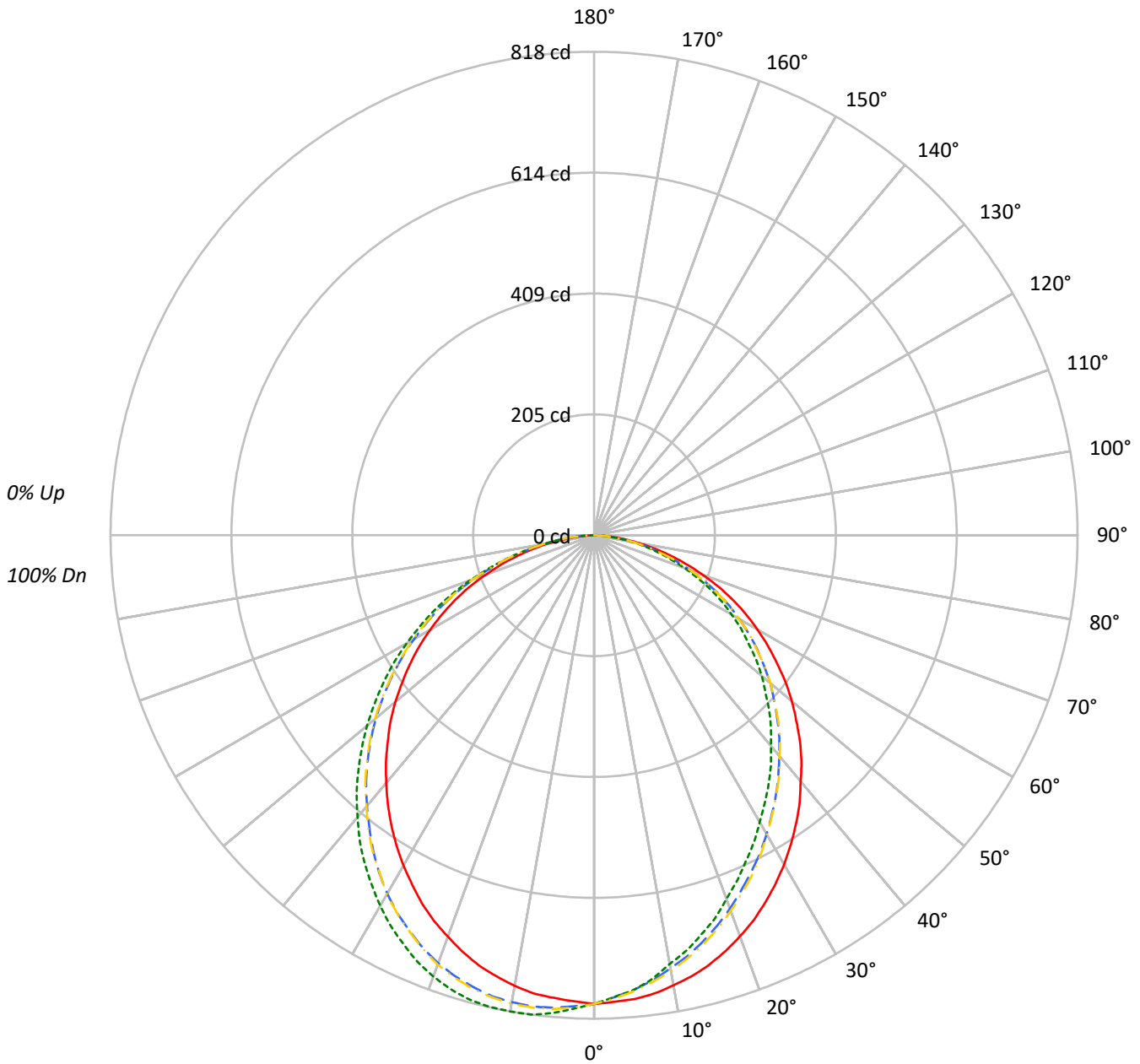
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2126.5 lumens
Efficiency: N/A
Efficacy: 58.4 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): 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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70	70	70	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59	59	59	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51	51	51	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44	44	44	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38	38	38	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34	34	34	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30	30	30	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27	27	27	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7315	7315	7315	7315
5°	7294	7153	7277	7518
10°	7244	6899	7252	7663
15°	7188	6682	7197	7771
20°	7089	6429	7098	7803
25°	6976	6191	7004	7770
30°	6851	5972	6870	7712
35°	6708	5798	6739	7627
40°	6546	5606	6589	7497
45°	6425	5466	6438	7362
50°	6270	5318	6295	7197
55°	6075	5123	6117	6997
60°	5892	4966	5908	6752
65°	5661	4759	5661	6462
70°	5276	4405	5249	6024
75°	4795	3996	4734	5404
80°	4144	3427	4001	4622
85°	3229	2562	3038	3800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.9	3.5
10°-20°	212.6	10.0
20°-30°	316.1	14.9
30°-40°	372.6	17.5
40°-50°	379.4	17.8
50°-60°	338.0	15.9
60°-70°	254.6	12.0
70°-80°	141.6	6.7
80°-90°	36.8	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°	603.7	28.4
0°-40°	976.2	45.9
0°-60°	1693.6	79.6
0°-90°	2126.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2126.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	793	793	793	793	793	
5°	788	772	786	812	788	75
15°	752	700	754	814	752	212
25°	685	608	688	763	685	316
35°	596	515	598	677	596	373
45°	492	419	493	564	492	379
55°	378	318	380	435	378	338
65°	259	218	259	296	259	256
75°	134	112	133	152	134	143
85°	30	24	29	36	30	37
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°	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9
2.5°	790.2	790.2	791.2	787.6	783.1	781.2	780.4	779.5	781.2	782.1	781.2
5°	787.6	785.7	784.0	779.5	774.1	770.5	768.7	767.8	769.6	772.3	769.6
7.5°	782.1	778.5	774.9	768.7	762.4	757.1	754.4	752.5	754.4	757.1	755.2
10°	773.2	768.7	763.3	756.1	747.2	740.9	738.2	735.5	736.4	736.4	736.4
12.5°	764.2	758.0	751.6	742.7	732.8	725.6	721.2	717.6	719.3	720.3	720.3
15°	752.5	744.5	735.5	725.6	715.7	707.7	702.3	698.7	699.6	699.6	700.5
17.5°	738.2	729.2	720.3	708.6	696.9	688.0	681.7	677.2	679.0	679.9	680.8
20°	722.0	712.2	702.3	689.7	677.2	667.3	661.1	655.7	654.8	654.8	655.7
22.5°	705.1	694.3	682.6	669.1	655.7	644.9	638.7	633.2	632.4	632.4	633.2
25°	685.3	673.6	662.0	648.5	634.2	623.4	615.3	609.9	609.1	608.2	609.9
27.5°	664.7	653.0	641.3	627.9	612.7	601.9	593.8	588.4	586.6	585.7	587.5
30°	643.1	629.6	617.1	602.8	589.3	578.6	570.4	564.2	562.4	560.6	562.4
32.5°	619.8	606.3	592.9	578.6	565.1	554.3	546.3	540.0	538.2	537.2	539.1
35°	595.6	582.2	569.6	555.2	541.8	531.0	523.0	517.5	515.8	514.8	515.8
37.5°	571.4	557.9	545.4	531.0	517.5	506.8	498.7	493.4	492.4	491.5	492.4
40°	543.5	531.9	519.4	505.9	492.4	481.7	475.4	469.1	467.4	465.5	468.2
42.5°	519.4	507.7	495.1	482.6	469.1	458.3	451.1	445.8	444.0	443.1	444.0
45°	492.4	479.9	467.4	455.7	443.1	433.2	426.1	420.7	419.8	418.9	419.8
47.5°	463.8	453.0	442.2	430.6	417.9	408.1	401.8	396.5	394.7	392.9	394.7
50°	436.8	426.1	415.3	404.6	392.9	383.9	377.7	372.2	371.4	370.5	371.4
52.5°	408.1	397.4	387.5	376.7	366.9	357.9	351.7	347.1	346.2	345.3	346.2
55°	377.7	368.6	359.7	350.7	340.9	332.7	327.4	322.1	320.2	318.5	320.2
57.5°	348.9	340.9	331.9	322.9	313.9	306.7	301.4	296.9	296.0	295.1	296.0
60°	319.3	312.2	304.1	296.0	287.0	279.8	275.4	271.8	270.0	269.1	270.0
62.5°	289.7	282.5	276.2	268.2	260.1	254.7	250.2	246.6	244.9	244.0	244.9
65°	259.3	252.9	246.6	239.5	233.2	227.8	223.3	219.7	218.9	218.0	218.0
67.5°	227.8	222.5	217.0	210.8	203.6	198.2	193.7	191.0	190.1	189.3	190.1
70°	195.6	191.0	185.7	180.3	174.9	170.4	167.7	165.0	164.1	163.3	163.3
72.5°	165.0	161.4	156.9	152.5	148.0	143.6	140.8	139.0	138.1	137.2	137.2
75°	134.5	130.9	128.3	124.7	120.2	117.5	114.8	113.0	112.1	112.1	112.1
77.5°	105.8	103.2	100.5	96.9	94.1	91.5	89.7	88.8	87.9	87.9	87.9
80°	78.0	76.2	74.4	72.7	70.0	67.3	66.4	65.5	64.5	64.5	64.5
82.5°	52.9	52.0	50.2	48.4	46.7	45.7	44.8	44.0	44.0	44.0	44.0
85°	30.5	29.6	28.7	27.8	26.9	26.9	26.0	25.1	24.2	24.2	24.2
87.5°	12.5	12.5	12.5	11.6	10.8	10.8	10.8	10.8	10.8	10.8	10.8
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°	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9
2.5°	779.5	781.2	783.1	785.7	788.4	791.2	790.2	789.3	792.9	797.4	798.3
5°	767.8	769.6	772.3	776.8	781.2	784.8	785.7	785.7	792.9	799.2	801.0
7.5°	753.5	756.1	759.7	764.2	770.5	775.9	778.5	782.1	789.3	797.4	801.0
10°	735.5	740.0	745.3	751.6	758.0	764.2	769.6	774.1	783.1	792.0	797.4
12.5°	719.3	723.9	729.2	736.4	744.5	752.5	758.0	764.2	774.9	785.7	792.0
15°	701.5	705.9	712.2	719.3	728.4	737.3	745.3	753.5	764.2	775.9	783.1
17.5°	681.7	686.2	692.4	701.5	711.3	721.2	730.1	739.1	751.6	764.2	772.3
20°	657.5	663.7	671.9	680.8	692.4	704.1	713.1	722.9	736.4	749.9	758.8
22.5°	634.2	640.4	649.4	660.2	672.7	685.3	696.0	706.8	721.2	734.6	744.5
25°	611.7	618.9	627.9	638.7	650.3	662.8	675.5	688.0	702.3	716.7	726.5
27.5°	589.3	595.6	604.6	615.3	628.8	641.3	653.9	666.4	681.7	696.9	707.7
30°	564.2	571.4	579.5	590.2	604.6	618.9	631.5	644.9	660.2	675.5	686.2
32.5°	540.8	547.1	555.2	566.0	580.3	594.7	608.2	622.5	636.8	652.1	662.8
35°	517.5	523.8	531.9	542.7	557.0	571.4	584.8	598.3	612.7	627.0	637.7
37.5°	494.2	500.5	508.6	519.4	532.8	547.1	559.7	573.1	587.5	601.9	611.7
40°	470.0	476.3	482.6	493.4	506.8	521.1	533.7	547.1	561.5	575.9	585.7
42.5°	445.8	452.1	460.2	470.9	483.5	496.0	508.6	521.1	534.6	548.0	557.9
45°	421.5	427.0	435.0	444.9	457.5	469.1	481.7	493.4	506.8	519.4	529.2
47.5°	396.5	401.8	408.1	417.9	430.6	443.1	455.7	467.4	479.0	491.5	500.5
50°	372.2	377.7	384.8	393.8	405.4	417.1	427.8	438.6	450.3	461.9	470.0
52.5°	347.1	352.5	358.8	367.8	377.7	388.3	398.2	409.0	419.8	430.6	438.6
55°	322.1	325.6	331.0	339.0	349.8	360.6	370.5	380.3	390.2	399.1	407.2
57.5°	296.9	301.4	307.7	314.9	323.8	332.7	341.8	350.7	359.7	368.6	375.8
60°	271.8	275.4	279.8	286.1	295.1	303.2	312.2	320.2	328.3	336.3	342.6
62.5°	245.8	249.4	253.8	260.1	267.3	274.5	282.5	289.7	296.9	304.1	310.3
65°	218.9	222.5	226.9	232.3	238.6	244.9	252.1	259.3	264.6	270.0	276.2
67.5°	191.0	194.6	199.2	203.6	209.0	215.3	221.6	227.8	233.2	238.6	243.0
70°	164.1	166.8	171.3	174.9	179.4	183.8	189.3	194.6	198.2	202.7	208.1
72.5°	138.1	140.8	144.4	148.0	150.7	154.3	159.7	164.1	168.6	174.0	176.7
75°	113.0	114.8	117.5	120.2	122.9	125.6	129.2	132.8	136.4	139.0	142.6
77.5°	87.9	89.7	92.4	94.1	96.0	97.7	100.5	103.2	105.8	107.6	111.2
80°	64.5	66.4	68.1	70.0	71.7	73.6	74.4	75.3	78.9	81.6	83.4
82.5°	44.0	44.8	45.7	47.6	48.4	49.3	50.2	50.2	52.0	53.8	56.5
85°	25.1	26.0	26.9	26.9	26.9	26.9	27.8	28.7	29.6	31.3	33.2
87.5°	9.9	9.9	10.8	10.8	10.8	10.8	10.8	10.8	11.6	13.5	14.4
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°	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9	792.9
2.5°	797.4	798.3	800.1	801.0	801.9	801.9	802.8	803.7	801.9	800.1	799.2
5°	801.9	802.8	805.5	808.1	810.0	811.7	810.9	810.0	808.1	805.5	803.7
7.5°	802.8	805.5	808.1	811.7	814.4	818.0	816.2	814.4	810.9	807.3	804.5
10°	800.1	803.7	808.1	812.7	815.3	818.0	816.2	814.4	810.9	806.4	802.8
12.5°	796.5	801.0	806.4	810.9	813.6	817.2	814.4	811.7	807.3	802.8	798.3
15°	788.4	793.8	800.1	805.5	810.0	813.6	810.9	809.1	803.7	797.4	791.2
17.5°	778.5	785.7	792.0	798.3	801.9	805.5	803.7	801.9	795.6	788.4	781.2
20°	766.9	774.1	780.4	786.7	791.2	794.7	792.0	789.3	783.1	776.8	769.6
22.5°	752.5	759.7	766.9	773.2	777.7	781.2	777.7	773.2	766.9	760.7	753.5
25°	734.6	742.7	750.8	757.1	759.7	763.3	759.7	756.1	749.9	743.6	735.5
27.5°	716.7	724.8	732.8	739.1	741.7	745.3	741.7	738.2	731.9	725.6	717.6
30°	696.0	704.1	712.2	718.5	721.2	723.9	720.3	716.7	711.3	705.1	696.9
32.5°	672.7	680.8	687.1	693.3	696.9	700.5	696.9	694.3	688.0	679.9	671.9
35°	647.6	655.7	663.7	670.0	673.6	677.2	672.7	668.3	662.8	656.6	649.4
37.5°	619.8	628.8	637.7	644.9	647.6	651.2	647.6	643.1	637.7	631.5	623.4
40°	593.8	601.9	609.9	617.1	619.8	622.5	618.9	615.3	609.1	602.8	594.7
42.5°	566.8	575.0	582.2	588.4	591.1	594.7	591.1	586.6	582.2	576.7	569.6
45°	538.2	546.3	552.6	558.8	561.5	564.2	560.6	556.2	551.6	547.1	540.0
47.5°	508.6	515.8	522.0	528.3	530.1	532.8	529.2	526.6	522.0	517.5	511.2
50°	478.1	485.2	491.5	497.0	498.7	501.4	497.8	494.2	490.6	487.1	481.7
52.5°	446.7	453.0	459.2	464.6	466.4	468.2	464.6	461.0	457.5	453.9	448.5
55°	414.4	420.7	427.0	431.4	433.2	435.0	431.4	428.7	425.1	422.5	417.1
57.5°	382.1	388.3	393.8	398.2	400.1	401.8	398.2	394.7	391.9	389.3	384.8
60°	348.9	355.2	359.7	363.3	365.0	365.9	362.3	359.7	357.9	356.1	351.7
62.5°	316.6	321.1	325.6	328.3	330.1	331.0	328.3	326.5	324.7	322.9	319.3
65°	282.5	287.9	291.5	294.2	295.1	296.0	293.3	291.5	289.7	287.9	285.3
67.5°	248.5	252.9	255.7	258.3	259.3	259.3	259.3	258.3	256.5	253.8	251.2
70°	214.4	218.0	220.6	222.5	223.3	223.3	221.6	219.7	219.7	218.9	217.0
72.5°	179.4	182.1	183.8	185.7	185.7	185.7	185.7	186.6	185.7	183.8	181.2
75°	146.2	148.9	150.7	151.6	151.6	151.6	151.6	152.5	151.6	150.7	148.9
77.5°	114.8	116.6	117.5	118.4	118.4	118.4	119.3	120.2	119.3	118.4	117.5
80°	85.2	86.1	87.0	87.9	87.0	87.0	87.9	89.7	88.8	87.9	87.0
82.5°	58.3	59.2	60.1	60.1	61.0	61.9	61.9	61.9	61.9	61.0	60.1
85°	34.9	35.9	35.9	35.9	35.9	35.9	36.8	37.7	37.7	36.8	36.8
87.5°	16.1	17.1	16.1	15.2	14.4	14.4	16.1	18.0	18.0	17.1	17.1
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°	792.9	792.9	792.9	792.9
2.5°	800.1	799.2	794.7	790.2
5°	802.8	800.1	793.8	787.6
7.5°	802.8	799.2	790.2	782.1
10°	798.3	792.9	783.1	773.2
12.5°	792.9	786.7	774.9	764.2
15°	784.8	777.7	765.1	752.5
17.5°	773.2	764.2	751.6	738.2
20°	761.5	751.6	736.4	722.0
22.5°	745.3	736.4	720.3	705.1
25°	727.5	717.6	701.5	685.3
27.5°	708.6	696.9	680.8	664.7
30°	687.1	675.5	659.2	643.1
32.5°	663.7	653.0	636.8	619.8
35°	640.4	628.8	612.7	595.6
37.5°	614.4	603.6	587.5	571.4
40°	586.6	575.9	559.7	543.5
42.5°	560.6	550.7	534.6	519.4
45°	531.9	522.0	506.8	492.4
47.5°	502.3	492.4	478.1	463.8
50°	473.6	463.8	450.3	436.8
52.5°	441.3	433.2	420.7	408.1
55°	409.9	401.8	389.3	377.7
57.5°	378.5	371.4	359.7	348.9
60°	345.3	338.2	329.2	319.3
62.5°	313.9	307.7	298.7	289.7
65°	280.7	275.4	267.3	259.3
67.5°	246.6	242.2	235.0	227.8
70°	212.6	207.2	201.8	195.6
72.5°	178.5	175.8	170.4	165.0
75°	146.2	143.6	139.0	134.5
77.5°	115.7	113.0	109.4	105.8
80°	85.2	83.4	80.8	78.0
82.5°	59.2	57.4	55.6	52.9
85°	35.9	34.1	32.3	30.5
87.5°	16.1	15.2	13.5	12.5
90°	0.0	0.0	0.0	0.0

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