

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-24L950-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-24L950-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

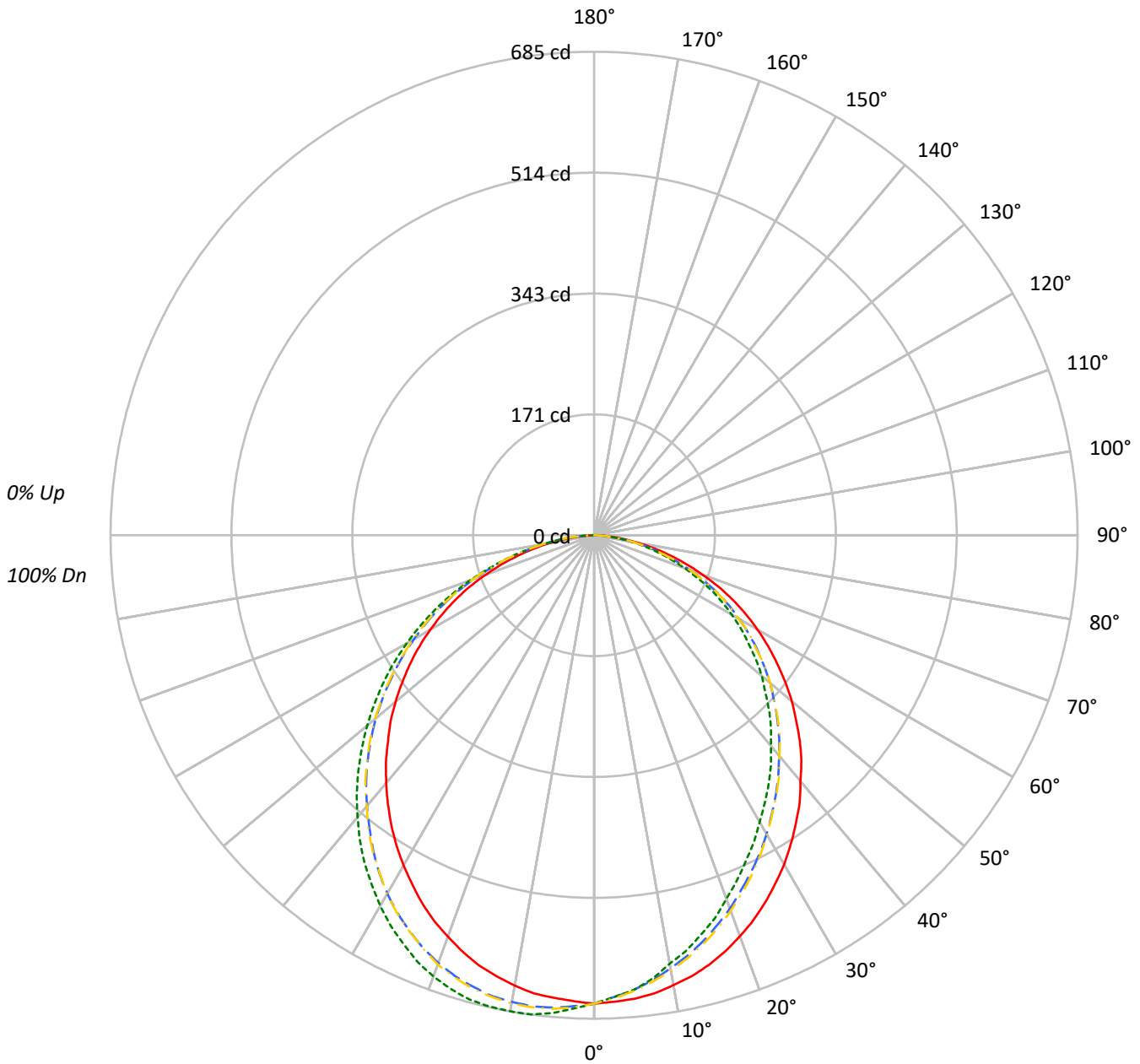
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1780.1 lumens
Efficiency: N/A
Efficacy: 63.8 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): 27.9
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	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	72	72	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	61	61	61	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	53	53	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	41	41	41	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	36	36	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	32	32	32	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	29	29	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6123	6123	6123	6123
5°	6105	5988	6092	6293
10°	6063	5775	6071	6416
15°	6018	5594	6024	6505
20°	5935	5381	5942	6531
25°	5840	5182	5863	6504
30°	5736	5000	5751	6455
35°	5615	4854	5641	6385
40°	5480	4694	5516	6276
45°	5378	4575	5389	6161
50°	5249	4451	5269	6024
55°	5086	4288	5122	5858
60°	4932	4155	4945	5654
65°	4737	3984	4737	5408
70°	4416	3685	4394	5044
75°	4017	3347	3960	4524
80°	3475	2869	3353	3868
85°	2699	2149	2551	3186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.7	3.5
10°-20°	178.0	10.0
20°-30°	264.6	14.9
30°-40°	311.9	17.5
40°-50°	317.6	17.8
50°-60°	282.9	15.9
60°-70°	213.1	12.0
70°-80°	118.5	6.7
80°-90°	30.8	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°	505.3	28.4
0°-40°	817.2	45.9
0°-60°	1417.7	79.6
0°-90°	1780.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1780.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	664	664	664	664	664	
5°	659	646	658	680	659	63
15°	630	586	631	681	630	177
25°	574	509	576	639	574	264
35°	498	431	501	567	498	312
45°	412	351	413	472	412	318
55°	316	267	318	364	316	283
65°	217	182	217	248	217	214
75°	113	94	111	127	113	120
85°	26	20	24	30	26	31
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°	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7
2.5°	661.5	661.5	662.3	659.2	655.4	654.0	653.2	652.5	654.0	654.7	654.0
5°	659.2	657.8	656.3	652.5	648.0	644.9	643.5	642.7	644.2	646.5	644.2
7.5°	654.7	651.8	648.7	643.5	638.2	633.7	631.5	630.0	631.5	633.7	632.2
10°	647.2	643.5	638.9	633.0	625.5	620.2	617.9	615.7	616.4	616.4	616.4
12.5°	639.7	634.4	629.2	621.7	613.4	607.4	603.7	600.7	602.2	602.9	602.9
15°	630.0	623.2	615.7	607.4	599.2	592.4	588.0	584.9	585.7	585.7	586.4
17.5°	617.9	610.5	602.9	593.2	583.4	575.9	570.6	566.9	568.4	569.2	569.9
20°	604.5	596.2	588.0	577.4	566.9	558.6	553.4	548.9	548.1	548.1	548.9
22.5°	590.2	581.1	571.4	560.1	548.9	539.8	534.6	530.1	529.3	529.3	530.1
25°	573.7	563.9	554.1	542.9	530.9	521.9	515.1	510.6	509.9	509.0	510.6
27.5°	556.4	546.7	536.9	525.6	512.8	503.8	497.1	492.5	491.1	490.3	491.8
30°	538.4	527.1	516.6	504.6	493.3	484.3	477.5	472.2	470.8	469.3	470.8
32.5°	518.8	507.6	496.3	484.3	473.1	464.0	457.3	452.1	450.5	449.8	451.2
35°	498.5	487.3	476.8	464.8	453.5	444.5	437.8	433.2	431.8	431.0	431.8
37.5°	478.3	467.0	456.5	444.5	433.2	424.2	417.5	413.0	412.2	411.5	412.2
40°	455.0	445.2	434.7	423.5	412.2	403.2	397.9	392.7	391.2	389.7	391.9
42.5°	434.7	424.9	414.4	403.9	392.7	383.6	377.7	373.1	371.7	370.9	371.7
45°	412.2	401.7	391.2	381.4	370.9	362.6	356.6	352.1	351.4	350.6	351.4
47.5°	388.2	379.2	370.2	360.4	349.9	341.6	336.3	331.9	330.4	328.9	330.4
50°	365.7	356.6	347.7	338.7	328.9	321.4	316.2	311.6	310.9	310.1	310.9
52.5°	341.6	332.7	324.4	315.3	307.1	299.6	294.3	290.6	289.8	289.0	289.8
55°	316.2	308.6	301.1	293.6	285.4	278.5	274.0	269.6	268.0	266.6	268.0
57.5°	292.1	285.4	277.8	270.3	262.8	256.8	252.3	248.6	247.7	247.0	247.7
60°	267.3	261.3	254.6	247.7	240.3	234.3	230.5	227.5	226.0	225.2	226.0
62.5°	242.5	236.5	231.2	224.5	217.8	213.3	209.5	206.5	205.0	204.2	205.0
65°	217.0	211.8	206.5	200.4	195.2	190.8	187.0	183.9	183.2	182.5	182.5
67.5°	190.8	186.2	181.7	176.5	170.5	166.0	162.2	160.0	159.1	158.4	159.1
70°	163.7	160.0	155.4	150.9	146.4	142.6	140.4	138.1	137.4	136.6	136.6
72.5°	138.1	135.2	131.4	127.6	123.9	120.1	117.9	116.4	115.6	114.9	114.9
75°	112.7	109.6	107.4	104.4	100.6	98.4	96.1	94.6	93.9	93.9	93.9
77.5°	88.6	86.4	84.1	81.1	78.8	76.6	75.1	74.3	73.6	73.6	73.6
80°	65.4	63.8	62.3	60.9	58.5	56.3	55.6	54.8	54.0	54.0	54.0
82.5°	44.3	43.5	42.0	40.6	39.0	38.3	37.5	36.8	36.8	36.8	36.8
85°	25.5	24.8	24.1	23.2	22.5	22.5	21.8	21.0	20.3	20.3	20.3
87.5°	10.5	10.5	10.5	9.8	9.0	9.0	9.0	9.0	9.0	9.0	9.0
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°	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7
2.5°	652.5	654.0	655.4	657.8	660.0	662.3	661.5	660.7	663.7	667.5	668.3
5°	642.7	644.2	646.5	650.2	654.0	657.0	657.8	657.8	663.7	669.0	670.5
7.5°	630.7	633.0	636.0	639.7	644.9	649.5	651.8	654.7	660.7	667.5	670.5
10°	615.7	619.5	623.9	629.2	634.4	639.7	644.2	648.0	655.4	663.0	667.5
12.5°	602.2	605.9	610.5	616.4	623.2	630.0	634.4	639.7	648.7	657.8	663.0
15°	587.1	590.9	596.2	602.2	609.7	617.2	623.9	630.7	639.7	649.5	655.4
17.5°	570.6	574.4	579.7	587.1	595.4	603.7	611.2	618.7	629.2	639.7	646.5
20°	550.3	555.6	562.4	569.9	579.7	589.4	596.9	605.2	616.4	627.7	635.3
22.5°	530.9	536.1	543.6	552.6	563.2	573.7	582.7	591.6	603.7	615.0	623.2
25°	512.1	518.1	525.6	534.6	544.3	554.9	565.4	575.9	588.0	599.9	608.2
27.5°	493.3	498.5	506.1	515.1	526.4	536.9	547.4	557.9	570.6	583.4	592.4
30°	472.2	478.3	485.1	494.1	506.1	518.1	528.6	539.8	552.6	565.4	574.4
32.5°	452.8	458.0	464.8	473.8	485.8	497.8	509.0	521.1	533.1	545.9	554.9
35°	433.2	438.5	445.2	454.3	466.3	478.3	489.6	500.8	512.8	524.8	533.8
37.5°	413.7	419.0	425.8	434.7	446.0	458.0	468.6	479.8	491.8	503.8	512.1
40°	393.4	398.7	403.9	413.0	424.2	436.3	446.8	458.0	470.0	482.0	490.3
42.5°	373.1	378.4	385.2	394.2	404.7	415.2	425.8	436.3	447.5	458.8	467.0
45°	352.9	357.4	364.2	372.4	382.9	392.7	403.2	413.0	424.2	434.7	443.0
47.5°	331.9	336.3	341.6	349.9	360.4	370.9	381.4	391.2	401.0	411.5	419.0
50°	311.6	316.2	322.1	329.6	339.4	349.2	358.2	367.1	376.9	386.7	393.4
52.5°	290.6	295.0	300.3	307.9	316.2	325.1	333.4	342.4	351.4	360.4	367.1
55°	269.6	272.5	277.1	283.8	292.8	301.9	310.1	318.4	326.7	334.1	340.9
57.5°	248.6	252.3	257.5	263.5	271.1	278.5	286.1	293.6	301.1	308.6	314.6
60°	227.5	230.5	234.3	239.5	247.0	253.8	261.3	268.0	274.8	281.6	286.8
62.5°	205.7	208.7	212.5	217.8	223.8	229.8	236.5	242.5	248.6	254.6	259.8
65°	183.2	186.2	189.9	194.4	199.7	205.0	211.0	217.0	221.5	226.0	231.2
67.5°	160.0	162.9	166.7	170.5	174.9	180.2	185.5	190.8	195.2	199.7	203.5
70°	137.4	139.7	143.4	146.4	150.2	153.9	158.4	162.9	166.0	169.6	174.2
72.5°	115.6	117.9	120.9	123.9	126.1	129.2	133.7	137.4	141.2	145.7	147.9
75°	94.6	96.1	98.4	100.6	102.9	105.1	108.2	111.1	114.1	116.4	119.4
77.5°	73.6	75.1	77.4	78.8	80.3	81.9	84.1	86.4	88.6	90.1	93.1
80°	54.0	55.6	57.1	58.5	60.0	61.6	62.3	63.1	66.1	68.3	69.8
82.5°	36.8	37.5	38.3	39.8	40.6	41.3	42.0	42.0	43.5	45.1	47.3
85°	21.0	21.8	22.5	22.5	22.5	22.5	23.2	24.1	24.8	26.3	27.8
87.5°	8.3	8.3	9.0	9.0	9.0	9.0	9.0	9.0	9.8	11.2	12.0
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°	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7	663.7
2.5°	667.5	668.3	669.7	670.5	671.3	671.3	672.0	672.8	671.3	669.7	669.0
5°	671.3	672.0	674.3	676.6	678.0	679.5	678.8	678.0	676.6	674.3	672.8
7.5°	672.0	674.3	676.6	679.5	681.8	684.8	683.3	681.8	678.8	675.7	673.5
10°	669.7	672.8	676.6	680.3	682.6	684.8	683.3	681.8	678.8	675.0	672.0
12.5°	666.8	670.5	675.0	678.8	681.0	684.0	681.8	679.5	675.7	672.0	668.3
15°	660.0	664.5	669.7	674.3	678.0	681.0	678.8	677.3	672.8	667.5	662.3
17.5°	651.8	657.8	663.0	668.3	671.3	674.3	672.8	671.3	666.1	660.0	654.0
20°	642.0	648.0	653.2	658.5	662.3	665.2	663.0	660.7	655.4	650.2	644.2
22.5°	630.0	636.0	642.0	647.2	651.0	654.0	651.0	647.2	642.0	636.7	630.7
25°	615.0	621.7	628.4	633.7	636.0	638.9	636.0	633.0	627.7	622.4	615.7
27.5°	599.9	606.7	613.4	618.7	621.0	623.9	621.0	617.9	612.7	607.4	600.7
30°	582.7	589.4	596.2	601.4	603.7	605.9	602.9	599.9	595.4	590.2	583.4
32.5°	563.2	569.9	575.1	580.4	583.4	586.4	583.4	581.1	575.9	569.2	562.4
35°	542.1	548.9	555.6	560.9	563.9	566.9	563.2	559.4	554.9	549.6	543.6
37.5°	518.8	526.4	533.8	539.8	542.1	545.1	542.1	538.4	533.8	528.6	521.9
40°	497.1	503.8	510.6	516.6	518.8	521.1	518.1	515.1	509.9	504.6	497.8
42.5°	474.6	481.3	487.3	492.5	494.8	497.8	494.8	491.1	487.3	482.8	476.8
45°	450.5	457.3	462.6	467.8	470.0	472.2	469.3	465.5	461.7	458.0	452.1
47.5°	425.8	431.8	437.0	442.3	443.8	446.0	443.0	440.7	437.0	433.2	428.0
50°	400.2	406.2	411.5	416.0	417.5	419.7	416.7	413.7	410.8	407.7	403.2
52.5°	374.0	379.2	384.5	388.9	390.5	391.9	388.9	385.9	382.9	380.0	375.4
55°	346.9	352.1	357.4	361.1	362.6	364.2	361.1	358.9	355.9	353.7	349.2
57.5°	319.8	325.1	329.6	333.4	334.9	336.3	333.4	330.4	328.1	325.8	322.1
60°	292.1	297.3	301.1	304.1	305.6	306.4	303.3	301.1	299.6	298.1	294.3
62.5°	265.1	268.8	272.5	274.8	276.3	277.1	274.8	273.3	271.8	270.3	267.3
65°	236.5	241.0	244.1	246.3	247.0	247.7	245.5	244.1	242.5	241.0	238.8
67.5°	208.0	211.8	214.0	216.2	217.0	217.0	217.0	216.2	214.7	212.5	210.2
70°	179.4	182.5	184.7	186.2	187.0	187.0	185.5	183.9	183.9	183.2	181.7
72.5°	150.2	152.4	153.9	155.4	155.4	155.4	155.4	156.2	155.4	153.9	151.7
75°	122.3	124.7	126.1	126.9	126.9	126.9	126.9	127.6	126.9	126.1	124.7
77.5°	96.1	97.6	98.4	99.1	99.1	99.1	99.9	100.6	99.9	99.1	98.4
80°	71.4	72.1	72.8	73.6	72.8	72.8	73.6	75.1	74.3	73.6	72.8
82.5°	48.8	49.5	50.3	50.3	51.1	51.8	51.8	51.8	51.8	51.1	50.3
85°	29.3	30.1	30.1	30.1	30.1	30.1	30.8	31.5	31.5	30.8	30.8
87.5°	13.6	14.3	13.6	12.7	12.0	12.0	13.6	15.0	15.0	14.3	14.3
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):

	330°	340°	350°	360°
0°	663.7	663.7	663.7	663.7
2.5°	669.7	669.0	665.2	661.5
5°	672.0	669.7	664.5	659.2
7.5°	672.0	669.0	661.5	654.7
10°	668.3	663.7	655.4	647.2
12.5°	663.7	658.5	648.7	639.7
15°	657.0	651.0	640.5	630.0
17.5°	647.2	639.7	629.2	617.9
20°	637.5	629.2	616.4	604.5
22.5°	623.9	616.4	602.9	590.2
25°	609.0	600.7	587.1	573.7
27.5°	593.2	583.4	569.9	556.4
30°	575.1	565.4	551.9	538.4
32.5°	555.6	546.7	533.1	518.8
35°	536.1	526.4	512.8	498.5
37.5°	514.3	505.3	491.8	478.3
40°	491.1	482.0	468.6	455.0
42.5°	469.3	461.0	447.5	434.7
45°	445.2	437.0	424.2	412.2
47.5°	420.4	412.2	400.2	388.2
50°	396.5	388.2	376.9	365.7
52.5°	369.4	362.6	352.1	341.6
55°	343.2	336.3	325.8	316.2
57.5°	316.9	310.9	301.1	292.1
60°	289.0	283.1	275.6	267.3
62.5°	262.8	257.5	250.0	242.5
65°	235.0	230.5	223.8	217.0
67.5°	206.5	202.7	196.8	190.8
70°	177.9	173.4	168.9	163.7
72.5°	149.5	147.2	142.6	138.1
75°	122.3	120.1	116.4	112.7
77.5°	96.9	94.6	91.6	88.6
80°	71.4	69.8	67.6	65.4
82.5°	49.5	48.0	46.6	44.3
85°	30.1	28.5	27.0	25.5
87.5°	13.6	12.7	11.2	10.5
90°	0.0	0.0	0.0	0.0

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