

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-22L835-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-22L835-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

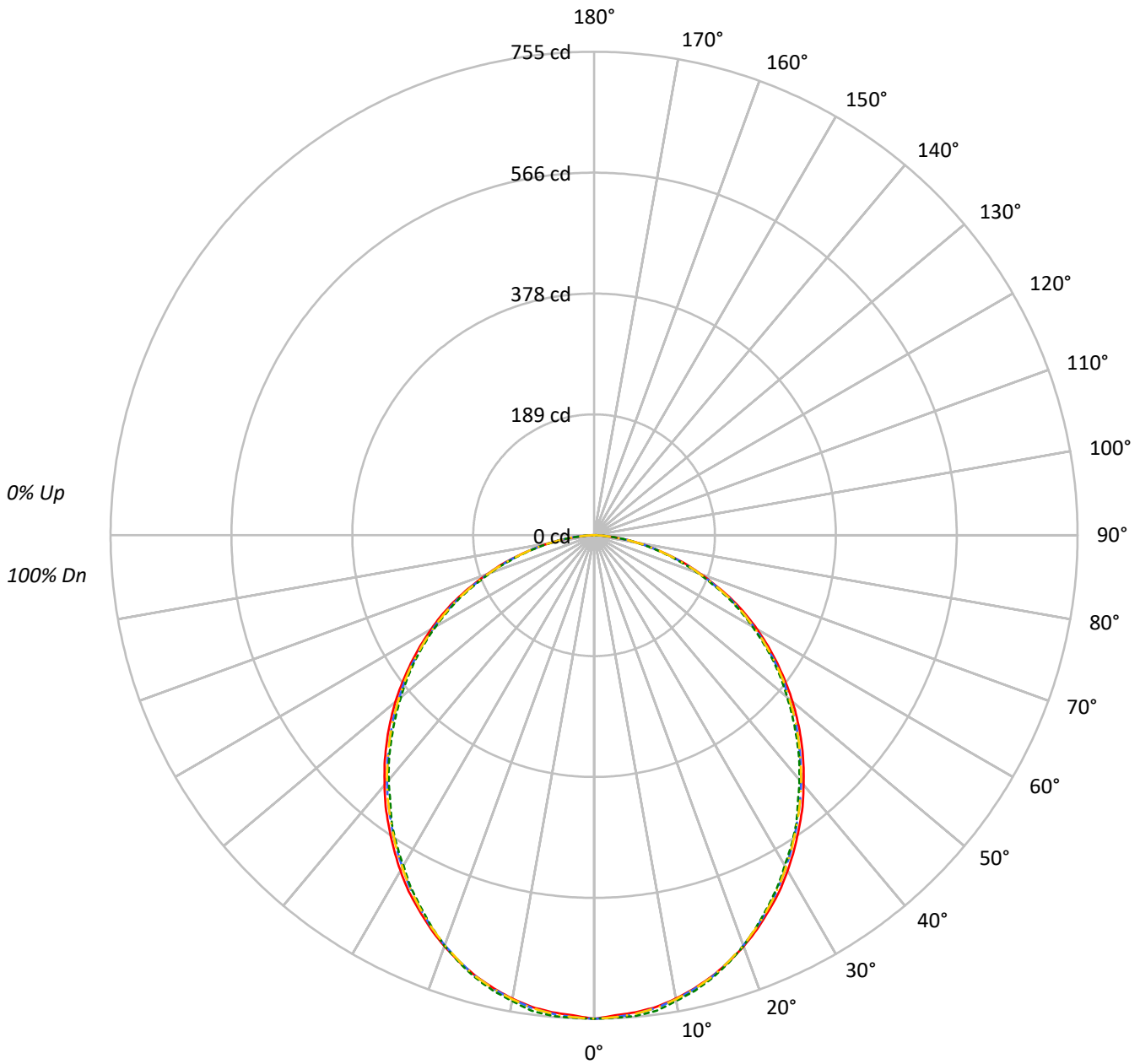
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1964.6 lumens
Efficiency: N/A
Efficacy: 81.9 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): 24
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°	6967	6967	6967	6967
5°	6925	6977	6925	6977
10°	6884	6919	6884	6919
15°	6807	6834	6807	6834
20°	6708	6699	6708	6699
25°	6579	6523	6579	6523
30°	6443	6345	6443	6345
35°	6283	6199	6283	6199
40°	6129	6008	6129	6008
45°	5979	5835	5979	5835
50°	5810	5651	5810	5651
55°	5620	5487	5620	5487
60°	5427	5274	5427	5274
65°	5194	5032	5194	5032
70°	4799	4651	4799	4651
75°	4338	4206	4338	4206
80°	3725	3624	3725	3624
85°	2826	2826	2826	2826



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	3.6
10°-20°	201.3	10.2
20°-30°	296.6	15.1
30°-40°	346.3	17.6
40°-50°	349.1	17.8
50°-60°	308.6	15.7
60°-70°	230.7	11.7
70°-80°	127.9	6.5
80°-90°	32.8	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°	569.2	29.0
0°-40°	915.5	46.6
0°-60°	1573.2	80.1
0°-90°	1964.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1964.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	755	755	755	755	755	
5°	748	753	748	753	748	71
15°	713	716	713	716	713	201
25°	646	641	646	641	646	298
35°	558	550	558	550	558	349
45°	458	447	458	447	458	353
55°	349	341	349	341	349	313
65°	238	230	238	230	238	234
75°	122	118	122	118	122	129
85°	27	27	27	27	27	32
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°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1
2.5°	750.5	754.2	757.9	757.0	754.2	752.4	753.3	753.3	754.2	754.2	754.2
5°	747.7	751.4	754.2	753.3	750.5	749.6	749.6	749.6	751.4	753.3	751.4
7.5°	743.1	745.9	748.7	747.7	745.0	744.1	744.1	745.0	746.8	748.7	746.8
10°	734.8	738.5	741.3	739.4	736.7	734.8	734.8	734.8	736.7	738.5	736.7
12.5°	724.7	727.5	730.2	729.3	726.5	724.7	724.7	724.7	726.5	728.4	726.5
15°	712.7	715.5	718.2	717.3	714.6	712.7	712.7	712.7	714.6	715.5	714.6
17.5°	698.9	701.6	704.4	702.6	698.9	697.0	697.0	697.0	698.9	699.8	698.9
20°	683.2	686.0	687.8	686.0	682.3	680.4	679.5	679.5	681.4	682.3	681.4
22.5°	665.7	667.5	669.4	667.5	663.8	662.0	661.1	660.2	661.1	662.0	661.1
25°	646.3	648.2	650.0	648.2	644.5	641.7	640.8	639.9	640.8	640.8	640.8
27.5°	627.0	627.9	629.7	627.0	623.3	620.5	619.6	618.7	619.6	619.6	619.6
30°	604.8	605.8	607.6	604.8	600.2	597.5	596.5	595.6	595.6	595.6	595.6
32.5°	581.8	583.6	585.5	581.8	577.2	574.4	573.5	572.6	573.5	573.5	573.5
35°	557.8	558.7	560.6	557.8	553.2	550.4	548.6	547.7	549.5	550.4	549.5
37.5°	534.8	535.7	536.6	533.8	529.2	526.5	524.6	523.7	522.8	522.8	522.8
40°	508.9	509.9	511.7	508.9	504.3	501.6	499.7	498.8	498.8	498.8	498.8
42.5°	484.1	485.0	485.9	483.1	478.5	475.8	473.9	473.0	473.9	473.9	473.9
45°	458.2	458.2	459.2	456.4	452.7	449.9	448.1	447.2	447.2	447.2	447.2
47.5°	431.5	432.4	433.3	430.6	426.9	424.1	422.3	420.4	420.4	420.4	420.4
50°	404.8	404.8	405.7	402.9	399.2	396.5	395.5	394.6	393.7	393.7	393.7
52.5°	377.1	378.0	378.9	376.2	373.4	370.6	368.8	367.9	367.9	367.9	367.9
55°	349.4	349.4	350.4	348.5	345.8	343.0	341.1	340.2	341.1	341.1	341.1
57.5°	321.8	322.7	323.6	320.9	318.1	315.3	314.4	313.5	313.5	313.5	313.5
60°	294.1	294.1	295.0	293.2	290.4	287.7	286.7	285.8	285.8	285.8	285.8
62.5°	266.5	266.5	267.4	265.5	262.8	260.0	259.1	258.2	258.2	258.2	258.2
65°	237.9	237.9	237.9	236.0	234.2	233.3	232.3	231.4	230.5	230.5	230.5
67.5°	206.5	206.5	207.5	205.6	203.8	202.8	201.9	201.0	200.1	200.1	200.1
70°	177.9	177.9	178.9	177.9	176.1	175.2	174.3	173.3	172.4	172.4	172.4
72.5°	150.3	150.3	150.3	149.4	148.4	147.5	146.6	145.7	144.8	144.8	144.8
75°	121.7	121.7	122.6	121.7	120.8	119.9	118.9	118.9	118.0	118.0	118.0
77.5°	95.0	95.9	96.8	95.9	95.0	94.0	93.1	93.1	92.2	92.2	92.2
80°	70.1	71.0	71.9	71.0	70.1	69.2	68.2	68.2	68.2	68.2	68.2
82.5°	47.0	47.9	48.9	47.9	47.0	47.0	46.1	46.1	46.1	46.1	46.1
85°	26.7	27.7	28.6	28.6	27.7	27.7	26.7	26.7	26.7	26.7	26.7
87.5°	10.1	11.1	12.0	12.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1
2.5°	753.3	753.3	752.4	754.2	757.0	757.9	754.2	750.5	754.2	757.9	757.0
5°	749.6	749.6	749.6	750.5	753.3	754.2	751.4	747.7	751.4	754.2	753.3
7.5°	745.0	744.1	744.1	745.0	747.7	748.7	745.9	743.1	745.9	748.7	747.7
10°	734.8	734.8	734.8	736.7	739.4	741.3	738.5	734.8	738.5	741.3	739.4
12.5°	724.7	724.7	724.7	726.5	729.3	730.2	727.5	724.7	727.5	730.2	729.3
15°	712.7	712.7	712.7	714.6	717.3	718.2	715.5	712.7	715.5	718.2	717.3
17.5°	697.0	697.0	697.0	698.9	702.6	704.4	701.6	698.9	701.6	704.4	702.6
20°	679.5	679.5	680.4	682.3	686.0	687.8	686.0	683.2	686.0	687.8	686.0
22.5°	660.2	661.1	662.0	663.8	667.5	669.4	667.5	665.7	667.5	669.4	667.5
25°	639.9	640.8	641.7	644.5	648.2	650.0	648.2	646.3	648.2	650.0	648.2
27.5°	618.7	619.6	620.5	623.3	627.0	629.7	627.9	627.0	627.9	629.7	627.0
30°	595.6	596.5	597.5	600.2	604.8	607.6	605.8	604.8	605.8	607.6	604.8
32.5°	572.6	573.5	574.4	577.2	581.8	585.5	583.6	581.8	583.6	585.5	581.8
35°	547.7	548.6	550.4	553.2	557.8	560.6	558.7	557.8	558.7	560.6	557.8
37.5°	523.7	524.6	526.5	529.2	533.8	536.6	535.7	534.8	535.7	536.6	533.8
40°	498.8	499.7	501.6	504.3	508.9	511.7	509.9	508.9	509.9	511.7	508.9
42.5°	473.0	473.9	475.8	478.5	483.1	485.9	485.0	484.1	485.0	485.9	483.1
45°	447.2	448.1	449.9	452.7	456.4	459.2	458.2	458.2	458.2	459.2	456.4
47.5°	420.4	422.3	424.1	426.9	430.6	433.3	432.4	431.5	432.4	433.3	430.6
50°	394.6	395.5	396.5	399.2	402.9	405.7	404.8	404.8	404.8	405.7	402.9
52.5°	367.9	368.8	370.6	373.4	376.2	378.9	378.0	377.1	378.0	378.9	376.2
55°	340.2	341.1	343.0	345.8	348.5	350.4	349.4	349.4	349.4	350.4	348.5
57.5°	313.5	314.4	315.3	318.1	320.9	323.6	322.7	321.8	322.7	323.6	320.9
60°	285.8	286.7	287.7	290.4	293.2	295.0	294.1	294.1	294.1	295.0	293.2
62.5°	258.2	259.1	260.0	262.8	265.5	267.4	266.5	266.5	266.5	267.4	265.5
65°	231.4	232.3	233.3	234.2	236.0	237.9	237.9	237.9	237.9	237.9	236.0
67.5°	201.0	201.9	202.8	203.8	205.6	207.5	206.5	206.5	206.5	207.5	205.6
70°	173.3	174.3	175.2	176.1	177.9	178.9	177.9	177.9	177.9	178.9	177.9
72.5°	145.7	146.6	147.5	148.4	149.4	150.3	150.3	150.3	150.3	150.3	149.4
75°	118.9	118.9	119.9	120.8	121.7	122.6	121.7	121.7	121.7	122.6	121.7
77.5°	93.1	93.1	94.0	95.0	95.9	96.8	95.9	95.0	95.9	96.8	95.9
80°	68.2	68.2	69.2	70.1	71.0	71.9	71.0	70.1	71.0	71.9	71.0
82.5°	46.1	46.1	47.0	47.0	47.9	48.9	47.9	47.0	47.9	48.9	47.9
85°	26.7	26.7	27.7	27.7	28.6	28.6	27.7	26.7	27.7	28.6	28.6
87.5°	11.1	11.1	11.1	11.1	12.0	12.0	11.1	10.1	11.1	12.0	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°	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1	755.1
2.5°	754.2	752.4	753.3	753.3	754.2	754.2	754.2	753.3	753.3	752.4	754.2
5°	750.5	749.6	749.6	749.6	751.4	753.3	751.4	749.6	749.6	749.6	750.5
7.5°	745.0	744.1	744.1	745.0	746.8	748.7	746.8	745.0	744.1	744.1	745.0
10°	736.7	734.8	734.8	734.8	736.7	738.5	736.7	734.8	734.8	734.8	736.7
12.5°	726.5	724.7	724.7	724.7	726.5	728.4	726.5	724.7	724.7	724.7	726.5
15°	714.6	712.7	712.7	712.7	714.6	715.5	714.6	712.7	712.7	712.7	714.6
17.5°	698.9	697.0	697.0	697.0	698.9	699.8	698.9	697.0	697.0	697.0	698.9
20°	682.3	680.4	679.5	679.5	681.4	682.3	681.4	679.5	679.5	680.4	682.3
22.5°	663.8	662.0	661.1	660.2	661.1	662.0	661.1	660.2	661.1	662.0	663.8
25°	644.5	641.7	640.8	639.9	640.8	640.8	640.8	639.9	640.8	641.7	644.5
27.5°	623.3	620.5	619.6	618.7	619.6	619.6	619.6	618.7	619.6	620.5	623.3
30°	600.2	597.5	596.5	595.6	595.6	595.6	595.6	595.6	596.5	597.5	600.2
32.5°	577.2	574.4	573.5	572.6	573.5	573.5	573.5	572.6	573.5	574.4	577.2
35°	553.2	550.4	548.6	547.7	549.5	550.4	549.5	547.7	548.6	550.4	553.2
37.5°	529.2	526.5	524.6	523.7	522.8	522.8	522.8	523.7	524.6	526.5	529.2
40°	504.3	501.6	499.7	498.8	498.8	498.8	498.8	498.8	499.7	501.6	504.3
42.5°	478.5	475.8	473.9	473.0	473.9	473.9	473.9	473.0	473.9	475.8	478.5
45°	452.7	449.9	448.1	447.2	447.2	447.2	447.2	447.2	448.1	449.9	452.7
47.5°	426.9	424.1	422.3	420.4	420.4	420.4	420.4	420.4	422.3	424.1	426.9
50°	399.2	396.5	395.5	394.6	393.7	393.7	393.7	394.6	395.5	396.5	399.2
52.5°	373.4	370.6	368.8	367.9	367.9	367.9	367.9	367.9	368.8	370.6	373.4
55°	345.8	343.0	341.1	340.2	341.1	341.1	341.1	340.2	341.1	343.0	345.8
57.5°	318.1	315.3	314.4	313.5	313.5	313.5	313.5	313.5	314.4	315.3	318.1
60°	290.4	287.7	286.7	285.8	285.8	285.8	285.8	285.8	286.7	287.7	290.4
62.5°	262.8	260.0	259.1	258.2	258.2	258.2	258.2	258.2	259.1	260.0	262.8
65°	234.2	233.3	232.3	231.4	230.5	230.5	230.5	231.4	232.3	233.3	234.2
67.5°	203.8	202.8	201.9	201.0	200.1	200.1	200.1	201.0	201.9	202.8	203.8
70°	176.1	175.2	174.3	173.3	172.4	172.4	172.4	173.3	174.3	175.2	176.1
72.5°	148.4	147.5	146.6	145.7	144.8	144.8	144.8	145.7	146.6	147.5	148.4
75°	120.8	119.9	118.9	118.9	118.0	118.0	118.0	118.9	118.9	119.9	120.8
77.5°	95.0	94.0	93.1	93.1	92.2	92.2	92.2	93.1	93.1	94.0	95.0
80°	70.1	69.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	69.2	70.1
82.5°	47.0	47.0	46.1	46.1	46.1	46.1	46.1	46.1	46.1	47.0	47.0
85°	27.7	27.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	27.7	27.7
87.5°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
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°	755.1	755.1	755.1	755.1
2.5°	757.0	757.9	754.2	750.5
5°	753.3	754.2	751.4	747.7
7.5°	747.7	748.7	745.9	743.1
10°	739.4	741.3	738.5	734.8
12.5°	729.3	730.2	727.5	724.7
15°	717.3	718.2	715.5	712.7
17.5°	702.6	704.4	701.6	698.9
20°	686.0	687.8	686.0	683.2
22.5°	667.5	669.4	667.5	665.7
25°	648.2	650.0	648.2	646.3
27.5°	627.0	629.7	627.9	627.0
30°	604.8	607.6	605.8	604.8
32.5°	581.8	585.5	583.6	581.8
35°	557.8	560.6	558.7	557.8
37.5°	533.8	536.6	535.7	534.8
40°	508.9	511.7	509.9	508.9
42.5°	483.1	485.9	485.0	484.1
45°	456.4	459.2	458.2	458.2
47.5°	430.6	433.3	432.4	431.5
50°	402.9	405.7	404.8	404.8
52.5°	376.2	378.9	378.0	377.1
55°	348.5	350.4	349.4	349.4
57.5°	320.9	323.6	322.7	321.8
60°	293.2	295.0	294.1	294.1
62.5°	265.5	267.4	266.5	266.5
65°	236.0	237.9	237.9	237.9
67.5°	205.6	207.5	206.5	206.5
70°	177.9	178.9	177.9	177.9
72.5°	149.4	150.3	150.3	150.3
75°	121.7	122.6	121.7	121.7
77.5°	95.9	96.8	95.9	95.0
80°	71.0	71.9	71.0	70.1
82.5°	47.9	48.9	47.9	47.0
85°	28.6	28.6	27.7	26.7
87.5°	12.0	12.0	11.1	10.1
90°	0.0	0.0	0.0	0.0

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