

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-24L935-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-24L935-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

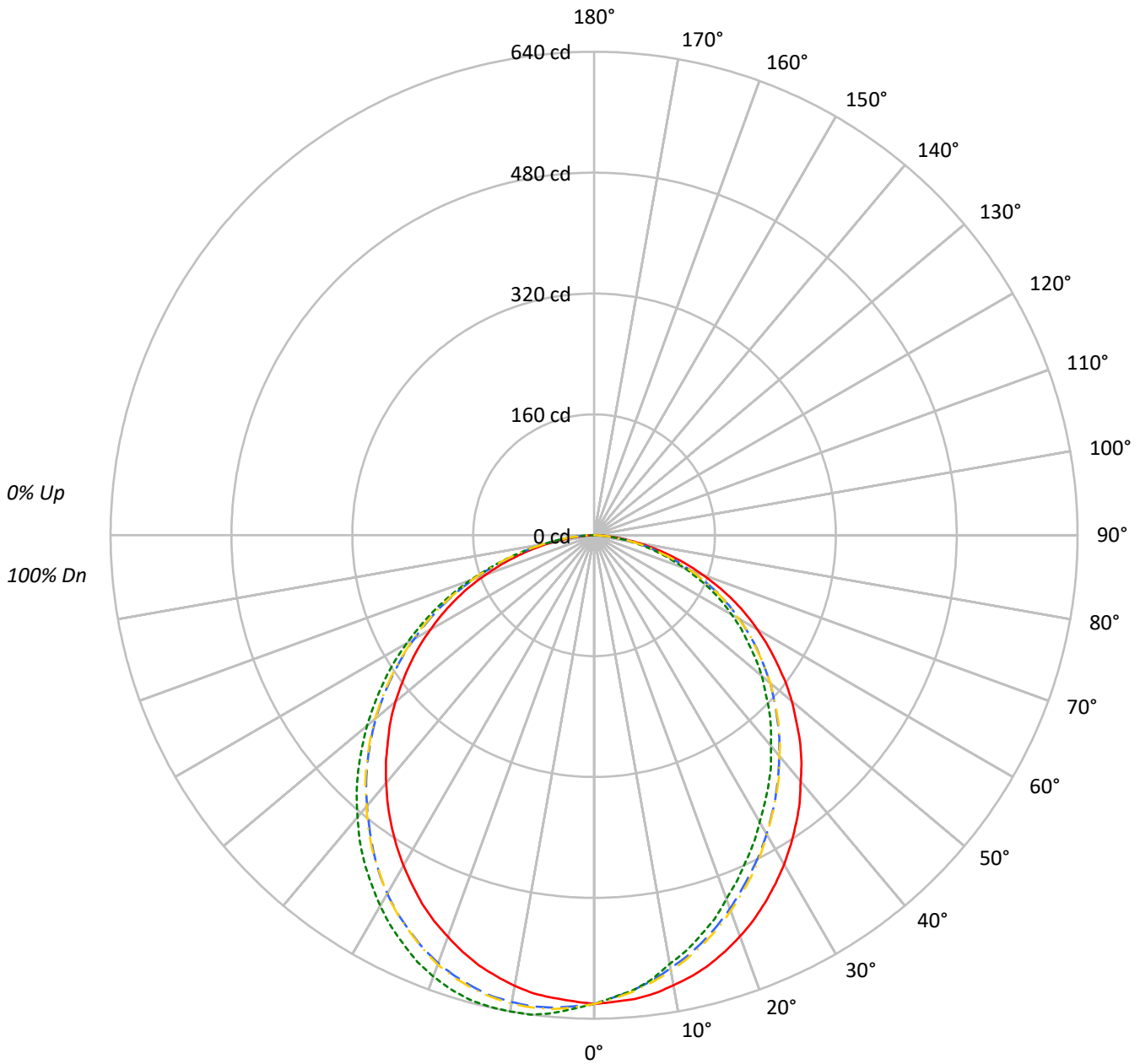
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1663.8 lumens
Efficiency: N/A
Efficacy: 59.6 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				
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°	5724	5724	5724	5724
5°	5707	5596	5694	5882
10°	5667	5398	5675	5997
15°	5624	5229	5631	6080
20°	5546	5030	5553	6105
25°	5457	4844	5480	6079
30°	5360	4673	5376	6033
35°	5249	4537	5272	5968
40°	5122	4386	5156	5865
45°	5027	4277	5035	5761
50°	4906	4161	4926	5631
55°	4752	4007	4785	5475
60°	4611	3884	4622	5283
65°	4427	3724	4427	5056
70°	4127	3445	4108	4713
75°	3754	3126	3700	4228
80°	3241	2683	3129	3613
85°	2530	2011	2382	2964



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	3.5
10°-20°	166.4	10.0
20°-30°	247.3	14.9
30°-40°	291.5	17.5
40°-50°	296.8	17.8
50°-60°	264.4	15.9
60°-70°	199.2	12.0
70°-80°	110.8	6.7
80°-90°	28.8	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°	472.3	28.4
0°-40°	763.8	45.9
0°-60°	1325.0	79.6
0°-90°	1663.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1663.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	620	620	620	620	620	
5°	616	604	615	635	616	58
15°	589	547	590	636	589	166
25°	536	476	538	597	536	247
35°	466	403	468	530	466	292
45°	385	328	386	442	385	297
55°	295	249	298	340	295	265
65°	203	171	203	232	203	200
75°	105	88	104	119	105	112
85°	24	19	22	28	24	29
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°	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4
2.5°	618.3	618.3	618.9	616.2	612.7	611.3	610.5	609.8	611.3	611.9	611.3
5°	616.2	614.8	613.3	609.8	605.7	602.8	601.4	600.7	602.2	604.2	602.2
7.5°	611.9	609.2	606.3	601.4	596.5	592.3	590.2	588.8	590.2	592.3	590.9
10°	604.9	601.4	597.2	591.6	584.5	579.7	577.5	575.4	576.2	576.2	576.2
12.5°	597.9	593.0	588.1	581.0	573.4	567.8	564.3	561.4	562.8	563.5	563.5
15°	588.8	582.5	575.4	567.8	560.0	553.7	549.5	546.7	547.4	547.4	548.1
17.5°	577.5	570.5	563.5	554.4	545.3	538.3	533.4	529.9	531.3	532.0	532.6
20°	564.9	557.3	549.5	539.6	529.9	522.1	517.2	513.0	512.3	512.3	513.0
22.5°	551.6	543.2	534.0	523.5	513.0	504.6	499.6	495.5	494.7	494.7	495.5
25°	536.1	527.0	517.9	507.4	496.1	487.7	481.4	477.2	476.5	475.8	477.2
27.5°	520.0	510.9	501.8	491.2	479.3	470.9	464.6	460.4	459.0	458.2	459.7
30°	503.1	492.6	482.9	471.6	461.1	452.6	446.3	441.5	440.0	438.6	440.0
32.5°	485.0	474.4	463.9	452.6	442.1	433.7	427.3	422.5	421.1	420.3	421.8
35°	466.0	455.5	445.6	434.4	423.8	415.5	409.1	404.9	403.6	402.8	403.6
37.5°	447.1	436.5	426.7	415.5	404.9	396.5	390.2	385.9	385.3	384.6	385.3
40°	425.3	416.2	406.3	395.8	385.3	376.8	371.9	367.0	365.7	364.2	366.3
42.5°	406.3	397.2	387.4	377.6	367.0	358.6	353.0	348.8	347.4	346.7	347.4
45°	385.3	375.4	365.7	356.5	346.7	338.9	333.3	329.2	328.4	327.8	328.4
47.5°	362.8	354.4	345.9	336.9	327.0	319.3	314.4	310.2	308.8	307.4	308.8
50°	341.8	333.3	324.9	316.5	307.4	300.4	295.4	291.3	290.5	289.9	290.5
52.5°	319.3	310.9	303.2	294.8	287.0	280.0	275.1	271.6	270.9	270.1	270.9
55°	295.4	288.4	281.4	274.4	266.6	260.4	256.1	252.0	250.5	249.1	250.5
57.5°	273.0	266.6	259.6	252.6	245.6	240.0	235.8	232.3	231.6	230.9	231.6
60°	249.9	244.2	237.9	231.6	224.6	219.0	215.5	212.6	211.2	210.5	211.2
62.5°	226.7	221.1	216.1	209.8	203.5	199.3	195.8	193.0	191.6	190.9	191.6
65°	202.8	197.9	193.0	187.4	182.5	178.2	174.7	172.0	171.2	170.6	170.6
67.5°	178.2	174.1	169.8	164.9	159.3	155.1	151.6	149.5	148.8	148.1	148.8
70°	153.0	149.5	145.3	141.1	136.8	133.3	131.2	129.2	128.4	127.7	127.7
72.5°	129.2	126.3	122.8	119.3	115.8	112.3	110.2	108.8	108.1	107.4	107.4
75°	105.3	102.4	100.3	97.5	94.0	91.9	89.8	88.4	87.7	87.7	87.7
77.5°	82.8	80.7	78.6	75.8	73.7	71.5	70.2	69.5	68.8	68.8	68.8
80°	61.0	59.7	58.3	56.9	54.8	52.6	51.9	51.3	50.5	50.5	50.5
82.5°	41.4	40.7	39.3	37.9	36.5	35.8	35.1	34.4	34.4	34.4	34.4
85°	23.9	23.1	22.5	21.8	21.0	21.0	20.4	19.6	19.0	19.0	19.0
87.5°	9.9	9.9	9.9	9.1	8.4	8.4	8.4	8.4	8.4	8.4	8.4
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4
2.5°	609.8	611.3	612.7	614.8	616.8	618.9	618.3	617.6	620.4	623.9	624.6
5°	600.7	602.2	604.2	607.8	611.3	614.1	614.8	614.8	620.4	625.3	626.7
7.5°	589.5	591.6	594.4	597.9	602.8	607.0	609.2	611.9	617.6	623.9	626.7
10°	575.4	578.9	583.2	588.1	593.0	597.9	602.2	605.7	612.7	619.7	623.9
12.5°	562.8	566.3	570.5	576.2	582.5	588.8	593.0	597.9	606.3	614.8	619.7
15°	548.8	552.3	557.3	562.8	569.9	576.9	583.2	589.5	597.9	607.0	612.7
17.5°	533.4	536.9	541.8	548.8	556.5	564.3	571.3	578.3	588.1	597.9	604.2
20°	514.4	519.3	525.6	532.6	541.8	550.9	557.9	565.6	576.2	586.7	593.7
22.5°	496.1	501.1	508.1	516.5	526.4	536.1	544.6	553.0	564.3	574.8	582.5
25°	478.6	484.2	491.2	499.6	508.8	518.6	528.4	538.3	549.5	560.8	568.4
27.5°	461.1	466.0	473.0	481.4	492.0	501.8	511.6	521.4	533.4	545.3	553.7
30°	441.5	447.1	453.3	461.7	473.0	484.2	494.0	504.6	516.5	528.4	536.9
32.5°	423.2	428.1	434.4	442.8	454.1	465.2	475.8	487.0	498.2	510.2	518.6
35°	404.9	409.8	416.2	424.6	435.8	447.1	457.6	468.1	479.3	490.5	499.0
37.5°	386.7	391.6	397.9	406.3	416.8	428.1	438.0	448.5	459.7	470.9	478.6
40°	367.7	372.7	377.6	385.9	396.5	407.7	417.6	428.1	439.3	450.6	458.2
42.5°	348.8	353.7	360.0	368.4	378.3	388.1	397.9	407.7	418.2	428.8	436.5
45°	329.8	334.0	340.4	348.1	357.9	367.0	376.8	385.9	396.5	406.3	414.1
47.5°	310.2	314.4	319.3	327.0	336.9	346.7	356.5	365.7	374.8	384.6	391.6
50°	291.3	295.4	301.0	308.0	317.2	326.3	334.8	343.2	352.3	361.4	367.7
52.5°	271.6	275.8	280.7	287.8	295.4	303.9	311.5	320.0	328.4	336.9	343.2
55°	252.0	254.7	259.0	265.3	273.6	282.1	289.9	297.5	305.3	312.3	318.6
57.5°	232.3	235.8	240.7	246.4	253.4	260.4	267.4	274.4	281.4	288.4	294.0
60°	212.6	215.5	219.0	223.9	230.9	237.2	244.2	250.5	256.9	263.1	268.1
62.5°	192.3	195.1	198.6	203.5	209.1	214.7	221.1	226.7	232.3	237.9	242.9
65°	171.2	174.1	177.6	181.7	186.7	191.6	197.2	202.8	207.0	211.2	216.1
67.5°	149.5	152.3	155.8	159.3	163.5	168.4	173.3	178.2	182.5	186.7	190.2
70°	128.4	130.6	134.1	136.8	140.3	143.8	148.1	152.3	155.1	158.6	162.8
72.5°	108.1	110.2	112.9	115.8	117.9	120.7	124.9	128.4	131.9	136.2	138.2
75°	88.4	89.8	91.9	94.0	96.2	98.3	101.1	103.8	106.7	108.8	111.6
77.5°	68.8	70.2	72.3	73.7	75.1	76.5	78.6	80.7	82.8	84.2	87.0
80°	50.5	51.9	53.3	54.8	56.1	57.5	58.3	58.9	61.8	63.9	65.3
82.5°	34.4	35.1	35.8	37.2	37.9	38.6	39.3	39.3	40.7	42.1	44.3
85°	19.6	20.4	21.0	21.0	21.0	21.0	21.8	22.5	23.1	24.5	26.0
87.5°	7.7	7.7	8.4	8.4	8.4	8.4	8.4	8.4	9.1	10.5	11.2
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4	620.4
2.5°	623.9	624.6	625.9	626.7	627.4	627.4	628.1	628.8	627.4	625.9	625.3
5°	627.4	628.1	630.2	632.3	633.7	635.1	634.4	633.7	632.3	630.2	628.8
7.5°	628.1	630.2	632.3	635.1	637.2	640.1	638.6	637.2	634.4	631.6	629.5
10°	625.9	628.8	632.3	635.8	637.9	640.1	638.6	637.2	634.4	630.9	628.1
12.5°	623.2	626.7	630.9	634.4	636.5	639.3	637.2	635.1	631.6	628.1	624.6
15°	616.8	621.1	625.9	630.2	633.7	636.5	634.4	633.0	628.8	623.9	618.9
17.5°	609.2	614.8	619.7	624.6	627.4	630.2	628.8	627.4	622.4	616.8	611.3
20°	600.0	605.7	610.5	615.4	618.9	621.8	619.7	617.6	612.7	607.8	602.2
22.5°	588.8	594.4	600.0	604.9	608.4	611.3	608.4	604.9	600.0	595.2	589.5
25°	574.8	581.0	587.4	592.3	594.4	597.2	594.4	591.6	586.7	581.8	575.4
27.5°	560.8	567.0	573.4	578.3	580.4	583.2	580.4	577.5	572.7	567.8	561.4
30°	544.6	550.9	557.3	562.1	564.3	566.3	563.5	560.8	556.5	551.6	545.3
32.5°	526.4	532.6	537.5	542.5	545.3	548.1	545.3	543.2	538.3	532.0	525.6
35°	506.6	513.0	519.3	524.2	527.0	529.9	526.4	522.9	518.6	513.7	508.1
37.5°	485.0	492.0	499.0	504.6	506.6	509.5	506.6	503.1	499.0	494.0	487.7
40°	464.6	470.9	477.2	482.9	485.0	487.0	484.2	481.4	476.5	471.6	465.2
42.5°	443.5	449.8	455.5	460.4	462.5	465.2	462.5	459.0	455.5	451.2	445.6
45°	421.1	427.3	432.3	437.2	439.3	441.5	438.6	435.1	431.6	428.1	422.5
47.5°	397.9	403.6	408.4	413.3	414.7	416.8	414.1	411.9	408.4	404.9	400.1
50°	374.1	379.7	384.6	388.8	390.2	392.3	389.5	386.7	383.8	381.1	376.8
52.5°	349.5	354.4	359.3	363.5	364.9	366.3	363.5	360.7	357.9	355.1	350.9
55°	324.3	329.2	334.0	337.5	338.9	340.4	337.5	335.4	332.7	330.5	326.3
57.5°	298.9	303.9	308.0	311.5	313.0	314.4	311.5	308.8	306.7	304.5	301.0
60°	273.0	277.9	281.4	284.3	285.6	286.3	283.5	281.4	280.0	278.6	275.1
62.5°	247.7	251.2	254.7	256.9	258.3	259.0	256.9	255.5	254.0	252.6	249.9
65°	221.1	225.2	228.1	230.2	230.9	231.6	229.5	228.1	226.7	225.2	223.1
67.5°	194.4	197.9	200.0	202.1	202.8	202.8	202.8	202.1	200.7	198.6	196.5
70°	167.7	170.6	172.6	174.1	174.7	174.7	173.3	172.0	172.0	171.2	169.8
72.5°	140.3	142.4	143.8	145.3	145.3	145.3	145.3	146.0	145.3	143.8	141.8
75°	114.4	116.5	117.9	118.6	118.6	118.6	118.6	119.3	118.6	117.9	116.5
77.5°	89.8	91.2	91.9	92.7	92.7	92.7	93.3	94.0	93.3	92.7	91.9
80°	66.7	67.4	68.0	68.8	68.0	68.0	68.8	70.2	69.5	68.8	68.0
82.5°	45.6	46.3	47.0	47.0	47.8	48.4	48.4	48.4	48.4	47.8	47.0
85°	27.4	28.0	28.0	28.0	28.0	28.0	28.8	29.5	29.5	28.8	28.8
87.5°	12.6	13.4	12.6	11.9	11.2	11.2	12.6	14.0	14.0	13.4	13.4
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):

	330°	340°	350°	360°
0°	620.4	620.4	620.4	620.4
2.5°	625.9	625.3	621.8	618.3
5°	628.1	625.9	621.1	616.2
7.5°	628.1	625.3	618.3	611.9
10°	624.6	620.4	612.7	604.9
12.5°	620.4	615.4	606.3	597.9
15°	614.1	608.4	598.7	588.8
17.5°	604.9	597.9	588.1	577.5
20°	595.8	588.1	576.2	564.9
22.5°	583.2	576.2	563.5	551.6
25°	569.2	561.4	548.8	536.1
27.5°	554.4	545.3	532.6	520.0
30°	537.5	528.4	515.8	503.1
32.5°	519.3	510.9	498.2	485.0
35°	501.1	492.0	479.3	466.0
37.5°	480.7	472.3	459.7	447.1
40°	459.0	450.6	438.0	425.3
42.5°	438.6	430.9	418.2	406.3
45°	416.2	408.4	396.5	385.3
47.5°	393.0	385.3	374.1	362.8
50°	370.6	362.8	352.3	341.8
52.5°	345.3	338.9	329.2	319.3
55°	320.7	314.4	304.5	295.4
57.5°	296.1	290.5	281.4	273.0
60°	270.1	264.6	257.5	249.9
62.5°	245.6	240.7	233.7	226.7
65°	219.6	215.5	209.1	202.8
67.5°	193.0	189.5	183.8	178.2
70°	166.3	162.1	157.9	153.0
72.5°	139.7	137.6	133.3	129.2
75°	114.4	112.3	108.8	105.3
77.5°	90.5	88.4	85.7	82.8
80°	66.7	65.3	63.2	61.0
82.5°	46.3	44.9	43.5	41.4
85°	28.0	26.6	25.3	23.9
87.5°	12.6	11.9	10.5	9.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)