

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-35L940-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-35L940-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

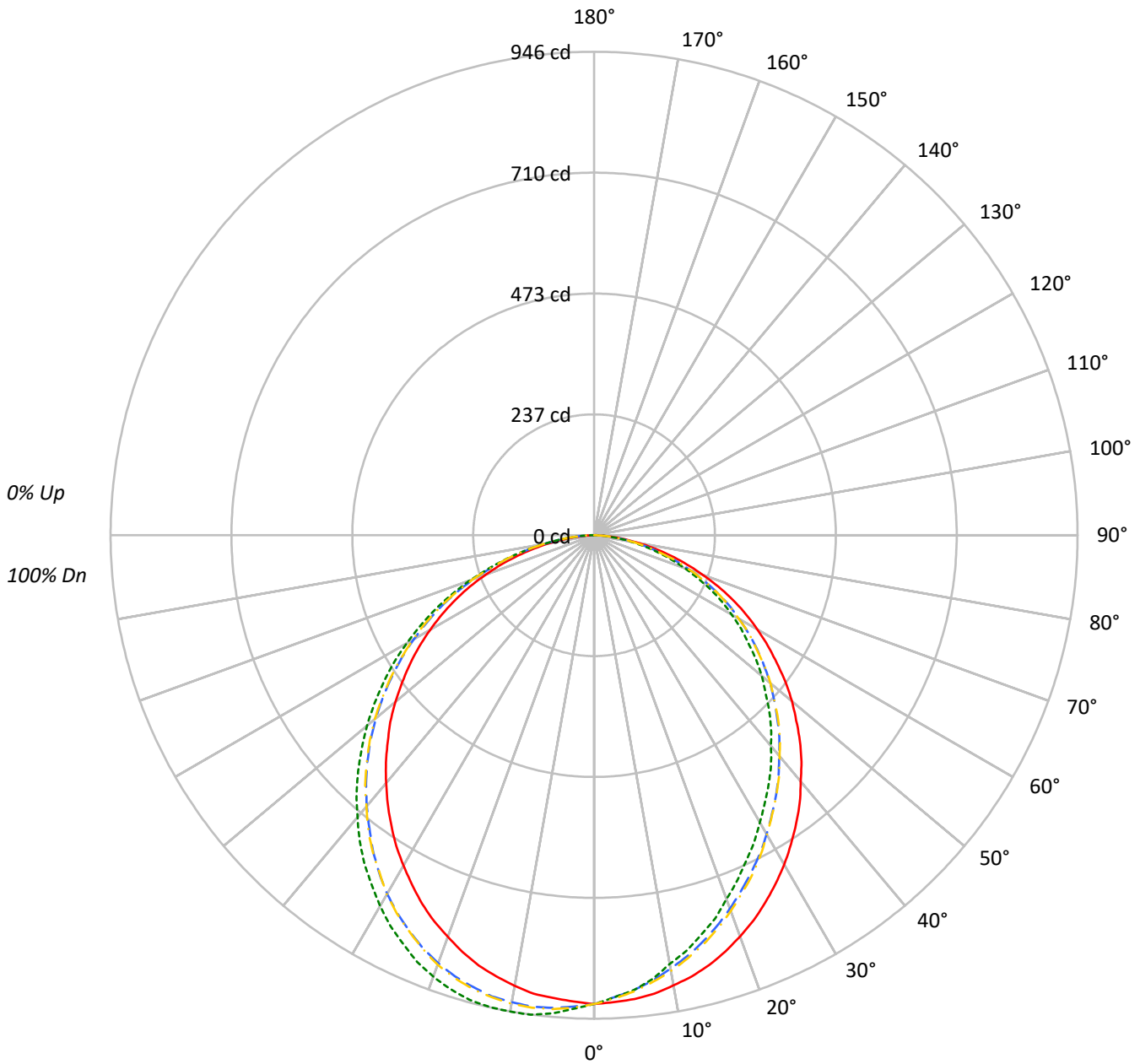
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2460.1 lumens
Efficiency: N/A
Efficacy: 60.9 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): 40.4
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°	8463	8463	8463	8463
5°	8437	8274	8419	8697
10°	8379	7981	8389	8865
15°	8316	7730	8326	8990
20°	8201	7437	8211	9026
25°	8070	7162	8102	8989
30°	7926	6909	7949	8921
35°	7760	6708	7795	8824
40°	7573	6486	7624	8674
45°	7433	6323	7446	8516
50°	7253	6150	7283	8325
55°	7026	5924	7078	8094
60°	6816	5744	6837	7813
65°	6545	5506	6545	7475
70°	6102	5093	6075	6968
75°	5547	4623	5475	6253
80°	4798	3969	4628	5350
85°	3737	2964	3515	4393



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.7	3.5
10°-20°	246.0	10.0
20°-30°	365.7	14.9
30°-40°	431.0	17.5
40°-50°	438.9	17.8
50°-60°	391.0	15.9
60°-70°	294.5	12.0
70°-80°	163.8	6.7
80°-90°	42.6	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°	698.3	28.4
0°-40°	1129.4	45.9
0°-60°	1959.2	79.6
0°-90°	2460.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2460.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	917	917	917	917	917	
5°	911	893	909	939	911	86
15°	871	809	872	941	871	245
25°	793	704	796	883	793	365
35°	689	596	692	783	689	431
45°	570	485	571	653	570	439
55°	437	368	440	503	437	391
65°	300	252	300	342	300	296
75°	156	130	154	175	156	165
85°	35	28	33	42	35	42
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°	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3
2.5°	914.2	914.2	915.2	911.0	905.9	903.8	902.7	901.7	903.8	904.9	903.8
5°	911.0	909.0	906.9	901.7	895.4	891.3	889.3	888.3	890.3	893.4	890.3
7.5°	904.9	900.7	896.6	889.3	882.0	875.8	872.7	870.6	872.7	875.8	873.7
10°	894.4	889.3	883.0	874.7	864.4	857.1	854.0	850.9	851.9	851.9	851.9
12.5°	884.1	876.8	869.5	859.2	847.8	839.5	834.2	830.1	832.2	833.2	833.2
15°	870.6	861.2	850.9	839.5	828.0	818.7	812.5	808.3	809.3	809.3	810.4
17.5°	854.0	843.6	833.2	819.8	806.3	795.9	788.6	783.4	785.5	786.6	787.6
20°	835.3	823.9	812.5	798.0	783.4	772.0	764.7	758.5	757.5	757.5	758.5
22.5°	815.6	803.2	789.7	774.1	758.5	746.1	738.8	732.6	731.5	731.5	732.6
25°	792.7	779.3	765.8	750.2	733.6	721.2	711.8	705.6	704.6	703.5	705.6
27.5°	768.9	755.4	741.9	726.4	708.7	696.3	686.9	680.7	678.6	677.6	679.7
30°	744.0	728.5	713.9	697.3	681.7	669.3	660.0	652.7	650.6	648.5	650.6
32.5°	717.0	701.5	685.9	669.3	653.7	641.3	631.9	624.7	622.6	621.5	623.6
35°	689.0	673.4	658.9	642.3	626.8	614.3	604.9	598.7	596.6	595.6	596.6
37.5°	661.0	645.4	630.9	614.3	598.7	586.3	576.9	570.7	569.7	568.6	569.7
40°	628.8	615.3	600.8	585.2	569.7	557.3	550.0	542.7	540.7	538.5	541.7
42.5°	600.8	587.3	572.7	558.3	542.7	530.2	521.9	515.7	513.6	512.6	513.6
45°	569.7	555.1	540.7	527.1	512.6	501.2	492.9	486.6	485.6	484.6	485.6
47.5°	536.4	524.0	511.5	498.1	483.6	472.2	464.9	458.6	456.6	454.5	456.6
50°	505.3	492.9	480.5	468.0	454.5	444.1	436.8	430.7	429.6	428.5	429.6
52.5°	472.2	459.7	448.3	435.8	424.4	414.0	406.8	401.5	400.5	399.5	400.5
55°	436.8	426.5	416.1	405.7	394.3	384.9	378.8	372.5	370.5	368.3	370.5
57.5°	403.7	394.3	383.9	373.6	363.2	354.9	348.6	343.4	342.4	341.4	342.4
60°	369.4	361.1	351.7	342.4	332.0	323.7	318.6	314.4	312.4	311.3	312.4
62.5°	335.1	326.8	319.6	310.3	300.9	294.7	289.5	285.4	283.2	282.2	283.2
65°	299.8	292.6	285.4	277.1	269.8	263.6	258.3	254.2	253.2	252.2	252.2
67.5°	263.6	257.3	251.2	243.9	235.6	229.3	224.1	221.0	220.0	219.0	220.0
70°	226.2	221.0	214.8	208.6	202.4	197.1	194.1	190.9	189.9	188.8	188.8
72.5°	190.9	186.8	181.6	176.4	171.2	166.1	162.9	160.8	159.8	158.8	158.8
75°	155.6	151.5	148.3	144.2	139.0	135.9	132.9	130.7	129.7	129.7	129.7
77.5°	122.4	119.3	116.2	112.0	109.0	105.8	103.7	102.7	101.7	101.7	101.7
80°	90.3	88.2	86.1	84.1	81.0	77.8	76.8	75.8	74.7	74.7	74.7
82.5°	61.2	60.2	58.1	56.1	53.9	52.9	51.9	50.8	50.8	50.8	50.8
85°	35.3	34.2	33.2	32.2	31.2	31.2	30.1	29.0	28.0	28.0	28.0
87.5°	14.6	14.6	14.6	13.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4
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°	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3
2.5°	901.7	903.8	905.9	909.0	912.1	915.2	914.2	913.1	917.3	922.5	923.5
5°	888.3	890.3	893.4	898.6	903.8	908.0	909.0	909.0	917.3	924.6	926.6
7.5°	871.7	874.7	878.9	884.1	891.3	897.6	900.7	904.9	913.1	922.5	926.6
10°	850.9	856.1	862.3	869.5	876.8	884.1	890.3	895.4	905.9	916.3	922.5
12.5°	832.2	837.4	843.6	851.9	861.2	870.6	876.8	884.1	896.6	909.0	916.3
15°	811.5	816.6	823.9	832.2	842.6	852.9	862.3	871.7	884.1	897.6	905.9
17.5°	788.6	793.8	801.0	811.5	822.9	834.2	844.6	855.1	869.5	884.1	893.4
20°	760.6	767.8	777.2	787.6	801.0	814.6	824.9	836.3	851.9	867.5	877.8
22.5°	733.6	740.9	751.2	763.7	778.3	792.7	805.2	817.6	834.2	849.8	861.2
25°	707.6	715.9	726.4	738.8	752.3	766.8	781.4	795.9	812.5	829.1	840.5
27.5°	681.7	689.0	699.3	711.8	727.4	741.9	756.4	771.0	788.6	806.3	818.7
30°	652.7	661.0	670.3	682.7	699.3	715.9	730.5	746.1	763.7	781.4	793.8
32.5°	625.7	633.0	642.3	654.7	671.4	688.0	703.5	720.2	736.8	754.4	766.8
35°	598.7	606.0	615.3	627.8	644.4	661.0	676.6	692.1	708.7	725.3	737.8
37.5°	571.7	579.0	588.3	600.8	616.4	633.0	647.5	663.1	679.7	696.3	707.6
40°	543.7	551.0	558.3	570.7	586.3	602.9	617.4	633.0	649.5	666.1	677.6
42.5°	515.7	523.0	532.3	544.8	559.3	573.9	588.3	602.9	618.5	634.0	645.4
45°	487.7	493.9	503.2	514.7	529.2	542.7	557.3	570.7	586.3	600.8	612.2
47.5°	458.6	464.9	472.2	483.6	498.1	512.6	527.1	540.7	554.1	568.6	579.0
50°	430.7	436.8	445.1	455.6	469.0	482.5	494.9	507.4	520.9	534.4	543.7
52.5°	401.5	407.8	415.1	425.4	436.8	449.3	460.7	473.2	485.6	498.1	507.4
55°	372.5	376.6	382.9	392.2	404.7	417.1	428.5	440.0	451.4	461.7	471.0
57.5°	343.4	348.6	355.9	364.2	374.6	384.9	395.4	405.7	416.1	426.5	434.8
60°	314.4	318.6	323.7	331.0	341.4	350.7	361.1	370.5	379.8	389.1	396.4
62.5°	284.3	288.5	293.7	300.9	309.2	317.5	326.8	335.1	343.4	351.7	359.0
65°	253.2	257.3	262.5	268.8	276.0	283.2	291.5	299.8	306.1	312.4	319.6
67.5°	221.0	225.2	230.3	235.6	241.7	249.0	256.3	263.6	269.8	276.0	281.2
70°	189.9	193.0	198.2	202.4	207.5	212.7	219.0	225.2	229.3	234.5	240.7
72.5°	159.8	162.9	167.1	171.2	174.4	178.5	184.7	189.9	195.1	201.3	204.4
75°	130.7	132.9	135.9	139.0	142.2	145.3	149.5	153.6	157.8	160.8	164.9
77.5°	101.7	103.7	106.9	109.0	111.0	113.1	116.2	119.3	122.4	124.6	128.7
80°	74.7	76.8	78.8	81.0	83.0	85.1	86.1	87.1	91.3	94.4	96.5
82.5°	50.8	51.9	52.9	55.0	56.1	57.1	58.1	58.1	60.2	62.2	65.4
85°	29.0	30.1	31.2	31.2	31.2	31.2	32.2	33.2	34.2	36.3	38.4
87.5°	11.4	11.4	12.4	12.4	12.4	12.4	12.4	12.4	13.5	15.6	16.6
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°	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3	917.3
2.5°	922.5	923.5	925.6	926.6	927.6	927.6	928.7	929.7	927.6	925.6	924.6
5°	927.6	928.7	931.8	934.9	937.0	939.1	938.0	937.0	934.9	931.8	929.7
7.5°	928.7	931.8	934.9	939.1	942.2	946.3	944.2	942.2	938.0	933.9	930.8
10°	925.6	929.7	934.9	940.1	943.2	946.3	944.2	942.2	938.0	932.9	928.7
12.5°	921.4	926.6	932.9	938.0	941.2	945.3	942.2	939.1	933.9	928.7	923.5
15°	912.1	918.3	925.6	931.8	937.0	941.2	938.0	935.9	929.7	922.5	915.2
17.5°	900.7	909.0	916.3	923.5	927.6	931.8	929.7	927.6	920.4	912.1	903.8
20°	887.1	895.4	902.7	910.0	915.2	919.3	916.3	913.1	905.9	898.6	890.3
22.5°	870.6	878.9	887.1	894.4	899.6	903.8	899.6	894.4	887.1	880.0	871.7
25°	849.8	859.2	868.5	875.8	878.9	883.0	878.9	874.7	867.5	860.2	850.9
27.5°	829.1	838.4	847.8	855.1	858.1	862.3	858.1	854.0	846.8	839.5	830.1
30°	805.2	814.6	823.9	831.2	834.2	837.4	833.2	829.1	822.9	815.6	806.3
32.5°	778.3	787.6	794.9	802.1	806.3	810.4	806.3	803.2	795.9	786.6	777.2
35°	749.2	758.5	767.8	775.1	779.3	783.4	778.3	773.0	766.8	759.5	751.2
37.5°	717.0	727.4	737.8	746.1	749.2	753.4	749.2	744.0	737.8	730.5	721.2
40°	686.9	696.3	705.6	713.9	717.0	720.2	715.9	711.8	704.6	697.3	688.0
42.5°	655.8	665.1	673.4	680.7	683.8	688.0	683.8	678.6	673.4	667.3	658.9
45°	622.6	631.9	639.2	646.4	649.5	652.7	648.5	643.4	638.1	633.0	624.7
47.5°	588.3	596.6	603.9	611.2	613.2	616.4	612.2	609.1	603.9	598.7	591.5
50°	553.1	561.4	568.6	574.9	576.9	580.0	575.9	571.7	567.6	563.4	557.3
52.5°	516.8	524.0	531.3	537.5	539.6	541.7	537.5	533.4	529.2	525.1	518.8
55°	479.3	486.6	493.9	499.1	501.2	503.2	499.1	496.0	491.9	488.8	482.5
57.5°	442.0	449.3	455.6	460.7	462.8	464.9	460.7	456.6	453.4	450.3	445.1
60°	403.7	410.9	416.1	420.2	422.4	423.4	419.2	416.1	414.0	411.9	406.8
62.5°	366.3	371.5	376.6	379.8	381.9	382.9	379.8	377.7	375.6	373.6	369.4
65°	326.8	333.1	337.3	340.3	341.4	342.4	339.3	337.3	335.1	333.1	330.0
67.5°	287.4	292.6	295.7	298.8	299.8	299.8	299.8	298.8	296.8	293.7	290.5
70°	248.0	252.2	255.3	257.3	258.3	258.3	256.3	254.2	254.2	253.2	251.2
72.5°	207.5	210.7	212.7	214.8	214.8	214.8	214.8	215.8	214.8	212.7	209.6
75°	169.1	172.2	174.4	175.4	175.4	175.4	175.4	176.4	175.4	174.4	172.2
77.5°	132.9	134.9	135.9	137.0	137.0	137.0	138.0	139.0	138.0	137.0	135.9
80°	98.6	99.6	100.7	101.7	100.7	100.7	101.7	103.7	102.7	101.7	100.7
82.5°	67.5	68.5	69.5	69.5	70.5	71.6	71.6	71.6	71.6	70.5	69.5
85°	40.5	41.5	41.5	41.5	41.5	41.5	42.5	43.6	43.6	42.5	42.5
87.5°	18.7	19.7	18.7	17.6	16.6	16.6	18.7	20.7	20.7	19.7	19.7
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°	917.3	917.3	917.3	917.3
2.5°	925.6	924.6	919.3	914.2
5°	928.7	925.6	918.3	911.0
7.5°	928.7	924.6	914.2	904.9
10°	923.5	917.3	905.9	894.4
12.5°	917.3	910.0	896.6	884.1
15°	908.0	899.6	885.1	870.6
17.5°	894.4	884.1	869.5	854.0
20°	881.0	869.5	851.9	835.3
22.5°	862.3	851.9	833.2	815.6
25°	841.5	830.1	811.5	792.7
27.5°	819.8	806.3	787.6	768.9
30°	794.9	781.4	762.7	744.0
32.5°	767.8	755.4	736.8	717.0
35°	740.9	727.4	708.7	689.0
37.5°	710.8	698.3	679.7	661.0
40°	678.6	666.1	647.5	628.8
42.5°	648.5	637.1	618.5	600.8
45°	615.3	603.9	586.3	569.7
47.5°	581.0	569.7	553.1	536.4
50°	547.9	536.4	520.9	505.3
52.5°	510.5	501.2	486.6	472.2
55°	474.2	464.9	450.3	436.8
57.5°	437.9	429.6	416.1	403.7
60°	399.5	391.2	380.8	369.4
62.5°	363.2	355.9	345.6	335.1
65°	324.8	318.6	309.2	299.8
67.5°	285.4	280.2	271.9	263.6
70°	245.9	239.7	233.5	226.2
72.5°	206.5	203.4	197.1	190.9
75°	169.1	166.1	160.8	155.6
77.5°	133.9	130.7	126.6	122.4
80°	98.6	96.5	93.4	90.3
82.5°	68.5	66.4	64.4	61.2
85°	41.5	39.5	37.3	35.3
87.5°	18.7	17.6	15.6	14.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)