

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-22L930-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-22L930-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

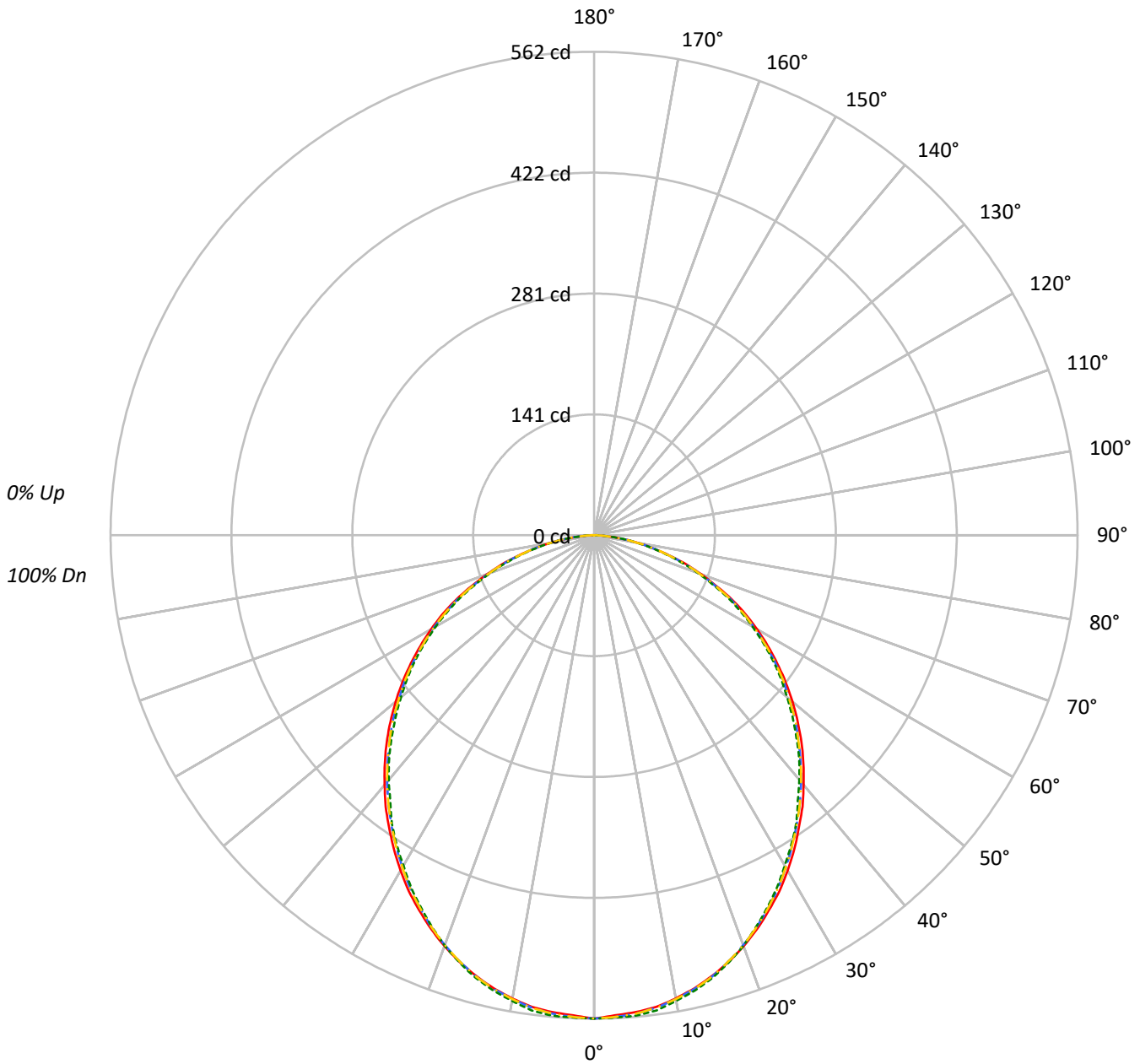
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1461.9 lumens
Efficiency: N/A
Efficacy: 60.9 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°	5184	5184	5184	5184
5°	5153	5192	5153	5192
10°	5123	5149	5123	5149
15°	5065	5086	5065	5086
20°	4992	4985	4992	4985
25°	4896	4855	4896	4855
30°	4795	4722	4795	4722
35°	4675	4613	4675	4613
40°	4562	4471	4562	4471
45°	4449	4341	4449	4341
50°	4323	4204	4323	4204
55°	4182	4082	4182	4082
60°	4039	3925	4039	3925
65°	3864	3744	3864	3744
70°	3572	3461	3572	3461
75°	3226	3130	3226	3130
80°	2773	2699	2773	2699
85°	2107	2107	2107	2107



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.0	3.6
10°-20°	149.8	10.2
20°-30°	220.7	15.1
30°-40°	257.7	17.6
40°-50°	259.8	17.8
50°-60°	229.6	15.7
60°-70°	171.7	11.7
70°-80°	95.2	6.5
80°-90°	24.4	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°	423.5	29.0
0°-40°	681.2	46.6
0°-60°	1170.6	80.1
0°-90°	1461.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1461.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	562	562	562	562	562	
5°	556	561	556	561	556	53
15°	530	532	530	532	530	149
25°	481	477	481	477	481	222
35°	415	410	415	410	415	260
45°	341	333	341	333	341	263
55°	260	254	260	254	260	233
65°	177	172	177	172	177	174
75°	90	88	90	88	90	96
85°	20	20	20	20	20	24
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°	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9
2.5°	558.5	561.2	564.0	563.2	561.2	559.8	560.6	560.6	561.2	561.2	561.2
5°	556.4	559.2	561.2	560.6	558.5	557.8	557.8	557.8	559.2	560.6	559.2
7.5°	553.0	555.0	557.1	556.4	554.4	553.7	553.7	554.4	555.8	557.1	555.8
10°	546.8	549.6	551.6	550.2	548.2	546.8	546.8	546.8	548.2	549.6	548.2
12.5°	539.3	541.3	543.4	542.7	540.7	539.3	539.3	539.3	540.7	542.0	540.7
15°	530.3	532.5	534.5	533.7	531.7	530.3	530.3	530.3	531.7	532.5	531.7
17.5°	520.1	522.1	524.2	522.8	520.1	518.7	518.7	518.7	520.1	520.7	520.1
20°	508.4	510.4	511.8	510.4	507.7	506.4	505.6	505.6	507.0	507.7	507.0
22.5°	495.4	496.8	498.1	496.8	494.0	492.6	491.9	491.2	491.9	492.6	491.9
25°	480.9	482.3	483.7	482.3	479.6	477.5	476.9	476.1	476.9	476.9	476.9
27.5°	466.5	467.3	468.6	466.5	463.8	461.7	461.1	460.4	461.1	461.1	461.1
30°	450.1	450.8	452.1	450.1	446.6	444.6	443.9	443.2	443.2	443.2	443.2
32.5°	433.0	434.3	435.6	433.0	429.5	427.4	426.8	426.1	426.8	426.8	426.8
35°	415.1	415.7	417.1	415.1	411.7	409.6	408.3	407.5	408.9	409.6	408.9
37.5°	397.9	398.6	399.3	397.3	393.8	391.8	390.4	389.7	389.0	389.0	389.0
40°	378.8	379.4	380.8	378.8	375.3	373.2	371.8	371.2	371.2	371.2	371.2
42.5°	360.2	360.9	361.6	359.5	356.1	354.0	352.7	351.9	352.7	352.7	352.7
45°	341.0	341.0	341.7	339.6	336.9	334.8	333.5	332.7	332.7	332.7	332.7
47.5°	321.1	321.8	322.4	320.4	317.6	315.6	314.2	312.8	312.8	312.8	312.8
50°	301.2	301.2	301.9	299.8	297.1	295.0	294.3	293.7	292.9	292.9	292.9
52.5°	280.7	281.3	281.9	279.9	277.9	275.8	274.5	273.7	273.7	273.7	273.7
55°	260.0	260.0	260.7	259.4	257.3	255.2	253.8	253.2	253.8	253.8	253.8
57.5°	239.4	240.1	240.8	238.8	236.7	234.6	234.0	233.3	233.3	233.3	233.3
60°	218.9	218.9	219.5	218.1	216.1	214.1	213.4	212.7	212.7	212.7	212.7
62.5°	198.3	198.3	199.0	197.6	195.6	193.4	192.8	192.1	192.1	192.1	192.1
65°	177.0	177.0	177.0	175.6	174.3	173.6	172.9	172.2	171.5	171.5	171.5
67.5°	153.7	153.7	154.3	153.0	151.7	150.9	150.3	149.5	148.9	148.9	148.9
70°	132.4	132.4	133.1	132.4	131.0	130.4	129.6	129.0	128.3	128.3	128.3
72.5°	111.8	111.8	111.8	111.2	110.5	109.8	109.1	108.4	107.7	107.7	107.7
75°	90.5	90.5	91.3	90.5	89.9	89.2	88.5	88.5	87.8	87.8	87.8
77.5°	70.6	71.4	72.0	71.4	70.6	70.0	69.3	69.3	68.6	68.6	68.6
80°	52.2	52.8	53.5	52.8	52.2	51.4	50.8	50.8	50.8	50.8	50.8
82.5°	35.0	35.7	36.3	35.7	35.0	35.0	34.3	34.3	34.3	34.3	34.3
85°	19.9	20.6	21.3	21.3	20.6	20.6	19.9	19.9	19.9	19.9	19.9
87.5°	7.6	8.2	8.9	8.9	8.2	8.2	8.2	8.2	8.2	8.2	8.2
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9
2.5°	560.6	560.6	559.8	561.2	563.2	564.0	561.2	558.5	561.2	564.0	563.2
5°	557.8	557.8	557.8	558.5	560.6	561.2	559.2	556.4	559.2	561.2	560.6
7.5°	554.4	553.7	553.7	554.4	556.4	557.1	555.0	553.0	555.0	557.1	556.4
10°	546.8	546.8	546.8	548.2	550.2	551.6	549.6	546.8	549.6	551.6	550.2
12.5°	539.3	539.3	539.3	540.7	542.7	543.4	541.3	539.3	541.3	543.4	542.7
15°	530.3	530.3	530.3	531.7	533.7	534.5	532.5	530.3	532.5	534.5	533.7
17.5°	518.7	518.7	518.7	520.1	522.8	524.2	522.1	520.1	522.1	524.2	522.8
20°	505.6	505.6	506.4	507.7	510.4	511.8	510.4	508.4	510.4	511.8	510.4
22.5°	491.2	491.9	492.6	494.0	496.8	498.1	496.8	495.4	496.8	498.1	496.8
25°	476.1	476.9	477.5	479.6	482.3	483.7	482.3	480.9	482.3	483.7	482.3
27.5°	460.4	461.1	461.7	463.8	466.5	468.6	467.3	466.5	467.3	468.6	466.5
30°	443.2	443.9	444.6	446.6	450.1	452.1	450.8	450.1	450.8	452.1	450.1
32.5°	426.1	426.8	427.4	429.5	433.0	435.6	434.3	433.0	434.3	435.6	433.0
35°	407.5	408.3	409.6	411.7	415.1	417.1	415.7	415.1	415.7	417.1	415.1
37.5°	389.7	390.4	391.8	393.8	397.3	399.3	398.6	397.9	398.6	399.3	397.3
40°	371.2	371.8	373.2	375.3	378.8	380.8	379.4	378.8	379.4	380.8	378.8
42.5°	351.9	352.7	354.0	356.1	359.5	361.6	360.9	360.2	360.9	361.6	359.5
45°	332.7	333.5	334.8	336.9	339.6	341.7	341.0	341.0	341.0	341.7	339.6
47.5°	312.8	314.2	315.6	317.6	320.4	322.4	321.8	321.1	321.8	322.4	320.4
50°	293.7	294.3	295.0	297.1	299.8	301.9	301.2	301.2	301.2	301.9	299.8
52.5°	273.7	274.5	275.8	277.9	279.9	281.9	281.3	280.7	281.3	281.9	279.9
55°	253.2	253.8	255.2	257.3	259.4	260.7	260.0	260.0	260.0	260.7	259.4
57.5°	233.3	234.0	234.6	236.7	238.8	240.8	240.1	239.4	240.1	240.8	238.8
60°	212.7	213.4	214.1	216.1	218.1	219.5	218.9	218.9	218.9	219.5	218.1
62.5°	192.1	192.8	193.4	195.6	197.6	199.0	198.3	198.3	198.3	199.0	197.6
65°	172.2	172.9	173.6	174.3	175.6	177.0	177.0	177.0	177.0	177.0	175.6
67.5°	149.5	150.3	150.9	151.7	153.0	154.3	153.7	153.7	153.7	154.3	153.0
70°	129.0	129.6	130.4	131.0	132.4	133.1	132.4	132.4	132.4	133.1	132.4
72.5°	108.4	109.1	109.8	110.5	111.2	111.8	111.8	111.8	111.8	111.8	111.2
75°	88.5	88.5	89.2	89.9	90.5	91.3	90.5	90.5	90.5	91.3	90.5
77.5°	69.3	69.3	70.0	70.6	71.4	72.0	71.4	70.6	71.4	72.0	71.4
80°	50.8	50.8	51.4	52.2	52.8	53.5	52.8	52.2	52.8	53.5	52.8
82.5°	34.3	34.3	35.0	35.0	35.7	36.3	35.7	35.0	35.7	36.3	35.7
85°	19.9	19.9	20.6	20.6	21.3	21.3	20.6	19.9	20.6	21.3	21.3
87.5°	8.2	8.2	8.2	8.2	8.9	8.9	8.2	7.6	8.2	8.9	8.9
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°	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9	561.9
2.5°	561.2	559.8	560.6	560.6	561.2	561.2	561.2	560.6	560.6	559.8	561.2
5°	558.5	557.8	557.8	557.8	559.2	560.6	559.2	557.8	557.8	557.8	558.5
7.5°	554.4	553.7	553.7	554.4	555.8	557.1	555.8	554.4	553.7	553.7	554.4
10°	548.2	546.8	546.8	546.8	548.2	549.6	548.2	546.8	546.8	546.8	548.2
12.5°	540.7	539.3	539.3	539.3	540.7	542.0	540.7	539.3	539.3	539.3	540.7
15°	531.7	530.3	530.3	530.3	531.7	532.5	531.7	530.3	530.3	530.3	531.7
17.5°	520.1	518.7	518.7	518.7	520.1	520.7	520.1	518.7	518.7	518.7	520.1
20°	507.7	506.4	505.6	505.6	507.0	507.7	507.0	505.6	505.6	506.4	507.7
22.5°	494.0	492.6	491.9	491.2	491.9	492.6	491.9	491.2	491.9	492.6	494.0
25°	479.6	477.5	476.9	476.1	476.9	476.9	476.9	476.1	476.9	477.5	479.6
27.5°	463.8	461.7	461.1	460.4	461.1	461.1	461.1	460.4	461.1	461.7	463.8
30°	446.6	444.6	443.9	443.2	443.2	443.2	443.2	443.2	443.9	444.6	446.6
32.5°	429.5	427.4	426.8	426.1	426.8	426.8	426.8	426.1	426.8	427.4	429.5
35°	411.7	409.6	408.3	407.5	408.9	409.6	408.9	407.5	408.3	409.6	411.7
37.5°	393.8	391.8	390.4	389.7	389.0	389.0	389.0	389.7	390.4	391.8	393.8
40°	375.3	373.2	371.8	371.2	371.2	371.2	371.2	371.2	371.8	373.2	375.3
42.5°	356.1	354.0	352.7	351.9	352.7	352.7	352.7	351.9	352.7	354.0	356.1
45°	336.9	334.8	333.5	332.7	332.7	332.7	332.7	332.7	333.5	334.8	336.9
47.5°	317.6	315.6	314.2	312.8	312.8	312.8	312.8	312.8	314.2	315.6	317.6
50°	297.1	295.0	294.3	293.7	292.9	292.9	292.9	293.7	294.3	295.0	297.1
52.5°	277.9	275.8	274.5	273.7	273.7	273.7	273.7	273.7	274.5	275.8	277.9
55°	257.3	255.2	253.8	253.2	253.8	253.8	253.8	253.2	253.8	255.2	257.3
57.5°	236.7	234.6	234.0	233.3	233.3	233.3	233.3	233.3	234.0	234.6	236.7
60°	216.1	214.1	213.4	212.7	212.7	212.7	212.7	212.7	213.4	214.1	216.1
62.5°	195.6	193.4	192.8	192.1	192.1	192.1	192.1	192.1	192.8	193.4	195.6
65°	174.3	173.6	172.9	172.2	171.5	171.5	171.5	172.2	172.9	173.6	174.3
67.5°	151.7	150.9	150.3	149.5	148.9	148.9	148.9	149.5	150.3	150.9	151.7
70°	131.0	130.4	129.6	129.0	128.3	128.3	128.3	129.0	129.6	130.4	131.0
72.5°	110.5	109.8	109.1	108.4	107.7	107.7	107.7	108.4	109.1	109.8	110.5
75°	89.9	89.2	88.5	88.5	87.8	87.8	87.8	88.5	88.5	89.2	89.9
77.5°	70.6	70.0	69.3	69.3	68.6	68.6	68.6	69.3	69.3	70.0	70.6
80°	52.2	51.4	50.8	50.8	50.8	50.8	50.8	50.8	50.8	51.4	52.2
82.5°	35.0	35.0	34.3	34.3	34.3	34.3	34.3	34.3	34.3	35.0	35.0
85°	20.6	20.6	19.9	19.9	19.9	19.9	19.9	19.9	19.9	20.6	20.6
87.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-22L930-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	561.9	561.9	561.9	561.9
2.5°	563.2	564.0	561.2	558.5
5°	560.6	561.2	559.2	556.4
7.5°	556.4	557.1	555.0	553.0
10°	550.2	551.6	549.6	546.8
12.5°	542.7	543.4	541.3	539.3
15°	533.7	534.5	532.5	530.3
17.5°	522.8	524.2	522.1	520.1
20°	510.4	511.8	510.4	508.4
22.5°	496.8	498.1	496.8	495.4
25°	482.3	483.7	482.3	480.9
27.5°	466.5	468.6	467.3	466.5
30°	450.1	452.1	450.8	450.1
32.5°	433.0	435.6	434.3	433.0
35°	415.1	417.1	415.7	415.1
37.5°	397.3	399.3	398.6	397.9
40°	378.8	380.8	379.4	378.8
42.5°	359.5	361.6	360.9	360.2
45°	339.6	341.7	341.0	341.0
47.5°	320.4	322.4	321.8	321.1
50°	299.8	301.9	301.2	301.2
52.5°	279.9	281.9	281.3	280.7
55°	259.4	260.7	260.0	260.0
57.5°	238.8	240.8	240.1	239.4
60°	218.1	219.5	218.9	218.9
62.5°	197.6	199.0	198.3	198.3
65°	175.6	177.0	177.0	177.0
67.5°	153.0	154.3	153.7	153.7
70°	132.4	133.1	132.4	132.4
72.5°	111.2	111.8	111.8	111.8
75°	90.5	91.3	90.5	90.5
77.5°	71.4	72.0	71.4	70.6
80°	52.8	53.5	52.8	52.2
82.5°	35.7	36.3	35.7	35.0
85°	21.3	21.3	20.6	19.9
87.5°	8.9	8.9	8.2	7.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)