

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: P709064

Luminaire Tested: **4APN-X-26L830-UNV**

Issue Date: 09/12/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P709064  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 09/12/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-X-26L830-UNV  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

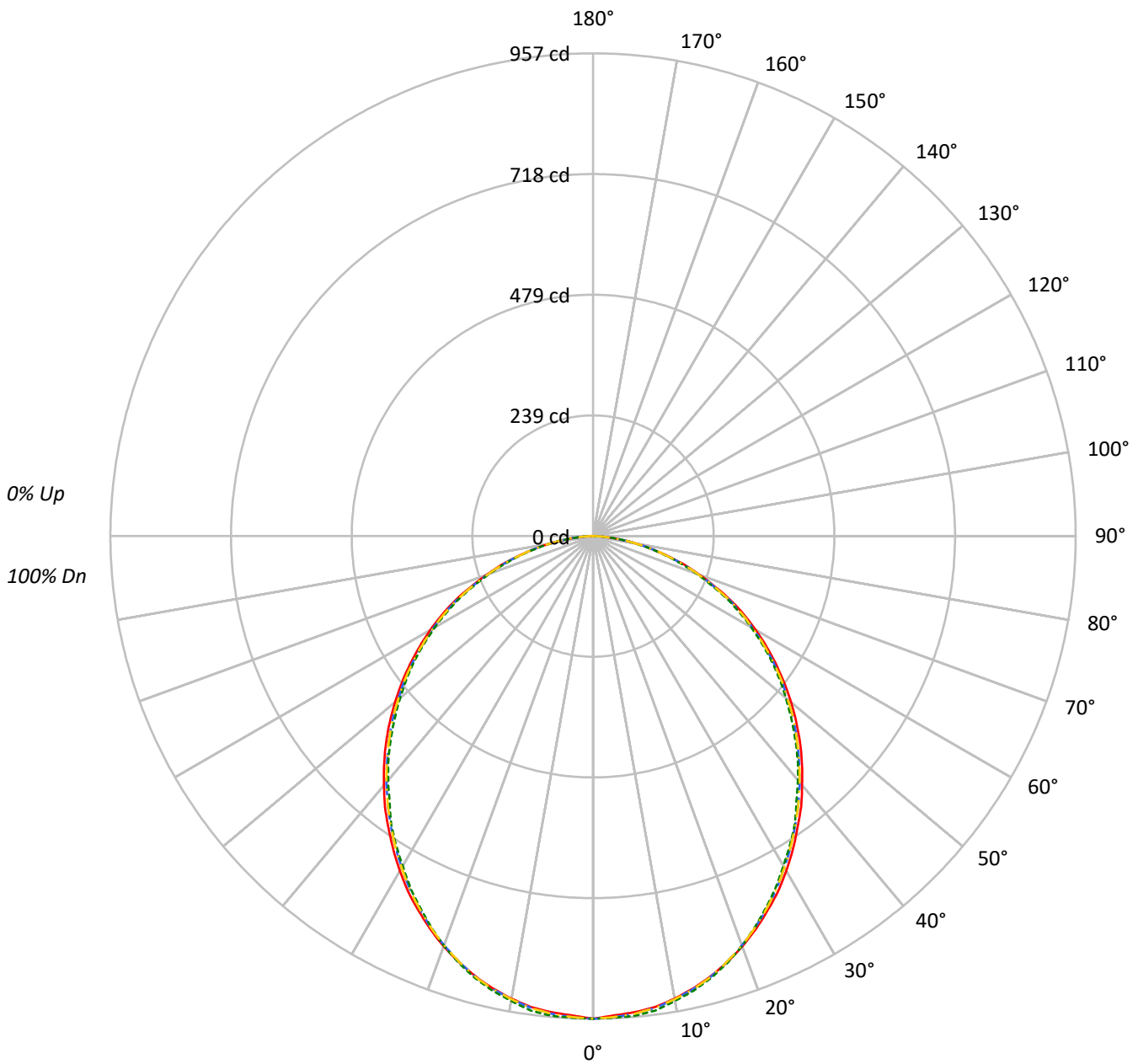
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2489.5 lumens  
Efficiency: N/A  
Efficacy: 88.3 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): 28.2  
Input Voltage (V): 120  
Input Current (Ain): 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

TEST NUMBER: P709064  
CATALOG NUMBER: 4APN-X-26L830-UNV

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - - - 90°-270°    - · - 135°-315°



TEST NUMBER: P709064  
 CATALOG NUMBER: 4APN-X-26L830-UNV

**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	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70	70	70	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60	60	60	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51	51	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	44	44	44	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39	39	39	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34	34	34	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31	31	31	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28	28	28	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25	25	25	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	8829	8829	8829	8829
5°	8775	8840	8775	8840
10°	8724	8767	8724	8767
15°	8626	8660	8626	8660
20°	8500	8489	8500	8489
25°	8337	8266	8337	8266
30°	8165	8040	8165	8040
35°	7961	7856	7961	7856
40°	7767	7613	7767	7613
45°	7577	7393	7577	7393
50°	7362	7161	7362	7161
55°	7123	6954	7123	6954
60°	6877	6683	6877	6683
65°	6580	6377	6580	6377
70°	6083	5894	6083	5894
75°	5497	5329	5497	5329
80°	4718	4596	4718	4596
85°	3589	3589	3589	3589



TEST NUMBER: P709064  
 CATALOG NUMBER: 4APN-X-26L830-UNV

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.3	3.6
10°-20°	255.0	10.2
20°-30°	375.9	15.1
30°-40°	438.8	17.6
40°-50°	442.4	17.8
50°-60°	391.0	15.7
60°-70°	292.4	11.7
70°-80°	162.1	6.5
80°-90°	41.6	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°	721.2	29.0
0°-40°	1160.0	46.6
0°-60°	1993.5	80.1
0°-90°	2489.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2489.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	957	957	957	957	957	
5°	948	954	948	954	948	90
15°	903	907	903	907	903	255
25°	819	812	819	812	819	377
35°	707	698	707	698	707	443
45°	581	567	581	567	581	448
55°	443	432	443	432	443	396
65°	301	292	301	292	301	297
75°	154	150	154	150	154	164
85°	34	34	34	34	34	41
90°	0	0	0	0	0	



TEST NUMBER: P709064

CATALOG NUMBER: 4APN-X-26L830-UNV

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9
2.5°	951.0	955.7	960.4	959.2	955.7	953.4	954.5	954.5	955.7	955.7	955.7
5°	947.5	952.2	955.7	954.5	951.0	949.8	949.8	949.8	952.2	954.5	952.2
7.5°	941.7	945.2	948.7	947.5	944.0	942.8	942.8	944.0	946.3	948.7	946.3
10°	931.2	935.8	939.3	937.0	933.5	931.2	931.2	931.2	933.5	935.8	933.5
12.5°	918.3	921.8	925.3	924.1	920.6	918.3	918.3	918.3	920.6	923.0	920.6
15°	903.1	906.6	910.1	909.0	905.5	903.1	903.1	903.1	905.5	906.6	905.5
17.5°	885.6	889.1	892.6	890.3	885.6	883.3	883.3	883.3	885.6	886.8	885.6
20°	865.7	869.2	871.6	869.2	864.6	862.2	861.1	861.1	863.4	864.6	863.4
22.5°	843.5	845.9	848.2	845.9	841.2	838.9	837.7	836.5	837.7	838.9	837.7
25°	819.0	821.3	823.7	821.3	816.7	813.2	812.0	810.8	812.0	812.0	812.0
27.5°	794.5	795.6	798.0	794.5	789.8	786.3	785.1	783.9	785.1	785.1	785.1
30°	766.4	767.6	769.9	766.4	760.6	757.1	755.9	754.7	754.7	754.7	754.7
32.5°	737.2	739.5	741.9	737.2	731.4	727.9	726.7	725.5	726.7	726.7	726.7
35°	706.8	708.0	710.3	706.8	701.0	697.5	695.2	694.0	696.3	697.5	696.3
37.5°	677.6	678.8	680.0	676.5	670.6	667.1	664.8	663.6	662.4	662.4	662.4
40°	644.9	646.1	648.4	644.9	639.1	635.6	633.2	632.1	632.1	632.1	632.1
42.5°	613.4	614.5	615.7	612.2	606.4	602.9	600.5	599.4	600.5	600.5	600.5
45°	580.7	580.7	581.8	578.3	573.6	570.1	567.8	566.6	566.6	566.6	566.6
47.5°	546.8	547.9	549.1	545.6	540.9	537.4	535.1	532.8	532.8	532.8	532.8
50°	512.9	512.9	514.1	510.6	505.9	502.4	501.2	500.0	498.9	498.9	498.9
52.5°	477.8	479.0	480.2	476.7	473.2	469.7	467.3	466.2	466.2	466.2	466.2
55°	442.8	442.8	444.0	441.6	438.1	434.6	432.3	431.1	432.3	432.3	432.3
57.5°	407.7	408.9	410.1	406.6	403.1	399.6	398.4	397.2	397.2	397.2	397.2
60°	372.7	372.7	373.9	371.5	368.0	364.5	363.3	362.2	362.2	362.2	362.2
62.5°	337.6	337.6	338.8	336.5	333.0	329.5	328.3	327.1	327.1	327.1	327.1
65°	301.4	301.4	301.4	299.1	296.8	295.6	294.4	293.2	292.1	292.1	292.1
67.5°	261.7	261.7	262.9	260.5	258.2	257.0	255.9	254.7	253.5	253.5	253.5
70°	225.5	225.5	226.7	225.5	223.2	222.0	220.8	219.6	218.5	218.5	218.5
72.5°	190.4	190.4	190.4	189.3	188.1	186.9	185.8	184.6	183.4	183.4	183.4
75°	154.2	154.2	155.4	154.2	153.1	151.9	150.7	150.7	149.5	149.5	149.5
77.5°	120.3	121.5	122.7	121.5	120.3	119.2	118.0	118.0	116.8	116.8	116.8
80°	88.8	90.0	91.1	90.0	88.8	87.6	86.5	86.5	86.5	86.5	86.5
82.5°	59.6	60.8	61.9	60.8	59.6	59.6	58.4	58.4	58.4	58.4	58.4
85°	33.9	35.0	36.2	36.2	35.0	35.0	33.9	33.9	33.9	33.9	33.9
87.5°	12.9	14.0	15.2	15.2	14.0	14.0	14.0	14.0	14.0	14.0	14.0
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: P709064

CATALOG NUMBER: 4APN-X-26L830-UNV

**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9
2.5°	954.5	954.5	953.4	955.7	959.2	960.4	955.7	951.0	955.7	960.4	959.2
5°	949.8	949.8	949.8	951.0	954.5	955.7	952.2	947.5	952.2	955.7	954.5
7.5°	944.0	942.8	942.8	944.0	947.5	948.7	945.2	941.7	945.2	948.7	947.5
10°	931.2	931.2	931.2	933.5	937.0	939.3	935.8	931.2	935.8	939.3	937.0
12.5°	918.3	918.3	918.3	920.6	924.1	925.3	921.8	918.3	921.8	925.3	924.1
15°	903.1	903.1	903.1	905.5	909.0	910.1	906.6	903.1	906.6	910.1	909.0
17.5°	883.3	883.3	883.3	885.6	890.3	892.6	889.1	885.6	889.1	892.6	890.3
20°	861.1	861.1	862.2	864.6	869.2	871.6	869.2	865.7	869.2	871.6	869.2
22.5°	836.5	837.7	838.9	841.2	845.9	848.2	845.9	843.5	845.9	848.2	845.9
25°	810.8	812.0	813.2	816.7	821.3	823.7	821.3	819.0	821.3	823.7	821.3
27.5°	783.9	785.1	786.3	789.8	794.5	798.0	795.6	794.5	795.6	798.0	794.5
30°	754.7	755.9	757.1	760.6	766.4	769.9	767.6	766.4	767.6	769.9	766.4
32.5°	725.5	726.7	727.9	731.4	737.2	741.9	739.5	737.2	739.5	741.9	737.2
35°	694.0	695.2	697.5	701.0	706.8	710.3	708.0	706.8	708.0	710.3	706.8
37.5°	663.6	664.8	667.1	670.6	676.5	680.0	678.8	677.6	678.8	680.0	676.5
40°	632.1	633.2	635.6	639.1	644.9	648.4	646.1	644.9	646.1	648.4	644.9
42.5°	599.4	600.5	602.9	606.4	612.2	615.7	614.5	613.4	614.5	615.7	612.2
45°	566.6	567.8	570.1	573.6	578.3	581.8	580.7	580.7	580.7	581.8	578.3
47.5°	532.8	535.1	537.4	540.9	545.6	549.1	547.9	546.8	547.9	549.1	545.6
50°	500.0	501.2	502.4	505.9	510.6	514.1	512.9	512.9	512.9	514.1	510.6
52.5°	466.2	467.3	469.7	473.2	476.7	480.2	479.0	477.8	479.0	480.2	476.7
55°	431.1	432.3	434.6	438.1	441.6	444.0	442.8	442.8	442.8	444.0	441.6
57.5°	397.2	398.4	399.6	403.1	406.6	410.1	408.9	407.7	408.9	410.1	406.6
60°	362.2	363.3	364.5	368.0	371.5	373.9	372.7	372.7	372.7	373.9	371.5
62.5°	327.1	328.3	329.5	333.0	336.5	338.8	337.6	337.6	337.6	338.8	336.5
65°	293.2	294.4	295.6	296.8	299.1	301.4	301.4	301.4	301.4	301.4	299.1
67.5°	254.7	255.9	257.0	258.2	260.5	262.9	261.7	261.7	261.7	262.9	260.5
70°	219.6	220.8	222.0	223.2	225.5	226.7	225.5	225.5	225.5	226.7	225.5
72.5°	184.6	185.8	186.9	188.1	189.3	190.4	190.4	190.4	190.4	190.4	189.3
75°	150.7	150.7	151.9	153.1	154.2	155.4	154.2	154.2	154.2	155.4	154.2
77.5°	118.0	118.0	119.2	120.3	121.5	122.7	121.5	120.3	121.5	122.7	121.5
80°	86.5	86.5	87.6	88.8	90.0	91.1	90.0	88.8	90.0	91.1	90.0
82.5°	58.4	58.4	59.6	59.6	60.8	61.9	60.8	59.6	60.8	61.9	60.8
85°	33.9	33.9	35.0	35.0	36.2	36.2	35.0	33.9	35.0	36.2	36.2
87.5°	14.0	14.0	14.0	14.0	15.2	15.2	14.0	12.9	14.0	15.2	15.2
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: P709064

CATALOG NUMBER: 4APN-X-26L830-UNV

**CANDELA DISTRIBUTION (continued):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9	956.9
2.5°	955.7	953.4	954.5	954.5	955.7	955.7	955.7	954.5	954.5	953.4	955.7
5°	951.0	949.8	949.8	949.8	952.2	954.5	952.2	949.8	949.8	949.8	951.0
7.5°	944.0	942.8	942.8	944.0	946.3	948.7	946.3	944.0	942.8	942.8	944.0
10°	933.5	931.2	931.2	931.2	933.5	935.8	933.5	931.2	931.2	931.2	933.5
12.5°	920.6	918.3	918.3	918.3	920.6	923.0	920.6	918.3	918.3	918.3	920.6
15°	905.5	903.1	903.1	903.1	905.5	906.6	905.5	903.1	903.1	903.1	905.5
17.5°	885.6	883.3	883.3	883.3	885.6	886.8	885.6	883.3	883.3	883.3	885.6
20°	864.6	862.2	861.1	861.1	863.4	864.6	863.4	861.1	861.1	862.2	864.6
22.5°	841.2	838.9	837.7	836.5	837.7	838.9	837.7	836.5	837.7	838.9	841.2
25°	816.7	813.2	812.0	810.8	812.0	812.0	812.0	810.8	812.0	813.2	816.7
27.5°	789.8	786.3	785.1	783.9	785.1	785.1	785.1	783.9	785.1	786.3	789.8
30°	760.6	757.1	755.9	754.7	754.7	754.7	754.7	754.7	755.9	757.1	760.6
32.5°	731.4	727.9	726.7	725.5	726.7	726.7	726.7	725.5	726.7	727.9	731.4
35°	701.0	697.5	695.2	694.0	696.3	697.5	696.3	694.0	695.2	697.5	701.0
37.5°	670.6	667.1	664.8	663.6	662.4	662.4	662.4	663.6	664.8	667.1	670.6
40°	639.1	635.6	633.2	632.1	632.1	632.1	632.1	632.1	633.2	635.6	639.1
42.5°	606.4	602.9	600.5	599.4	600.5	600.5	600.5	599.4	600.5	602.9	606.4
45°	573.6	570.1	567.8	566.6	566.6	566.6	566.6	566.6	567.8	570.1	573.6
47.5°	540.9	537.4	535.1	532.8	532.8	532.8	532.8	532.8	535.1	537.4	540.9
50°	505.9	502.4	501.2	500.0	498.9	498.9	498.9	500.0	501.2	502.4	505.9
52.5°	473.2	469.7	467.3	466.2	466.2	466.2	466.2	466.2	467.3	469.7	473.2
55°	438.1	434.6	432.3	431.1	432.3	432.3	432.3	431.1	432.3	434.6	438.1
57.5°	403.1	399.6	398.4	397.2	397.2	397.2	397.2	397.2	398.4	399.6	403.1
60°	368.0	364.5	363.3	362.2	362.2	362.2	362.2	362.2	363.3	364.5	368.0
62.5°	333.0	329.5	328.3	327.1	327.1	327.1	327.1	327.1	328.3	329.5	333.0
65°	296.8	295.6	294.4	293.2	292.1	292.1	292.1	293.2	294.4	295.6	296.8
67.5°	258.2	257.0	255.9	254.7	253.5	253.5	253.5	254.7	255.9	257.0	258.2
70°	223.2	222.0	220.8	219.6	218.5	218.5	218.5	219.6	220.8	222.0	223.2
72.5°	188.1	186.9	185.8	184.6	183.4	183.4	183.4	184.6	185.8	186.9	188.1
75°	153.1	151.9	150.7	150.7	149.5	149.5	149.5	150.7	150.7	151.9	153.1
77.5°	120.3	119.2	118.0	118.0	116.8	116.8	116.8	118.0	118.0	119.2	120.3
80°	88.8	87.6	86.5	86.5	86.5	86.5	86.5	86.5	86.5	87.6	88.8
82.5°	59.6	59.6	58.4	58.4	58.4	58.4	58.4	58.4	58.4	59.6	59.6
85°	35.0	35.0	33.9	33.9	33.9	33.9	33.9	33.9	33.9	35.0	35.0
87.5°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
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: P709064  
 CATALOG NUMBER: 4APN-X-26L830-UNV

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	956.9	956.9	956.9	956.9
2.5°	959.2	960.4	955.7	951.0
5°	954.5	955.7	952.2	947.5
7.5°	947.5	948.7	945.2	941.7
10°	937.0	939.3	935.8	931.2
12.5°	924.1	925.3	921.8	918.3
15°	909.0	910.1	906.6	903.1
17.5°	890.3	892.6	889.1	885.6
20°	869.2	871.6	869.2	865.7
22.5°	845.9	848.2	845.9	843.5
25°	821.3	823.7	821.3	819.0
27.5°	794.5	798.0	795.6	794.5
30°	766.4	769.9	767.6	766.4
32.5°	737.2	741.9	739.5	737.2
35°	706.8	710.3	708.0	706.8
37.5°	676.5	680.0	678.8	677.6
40°	644.9	648.4	646.1	644.9
42.5°	612.2	615.7	614.5	613.4
45°	578.3	581.8	580.7	580.7
47.5°	545.6	549.1	547.9	546.8
50°	510.6	514.1	512.9	512.9
52.5°	476.7	480.2	479.0	477.8
55°	441.6	444.0	442.8	442.8
57.5°	406.6	410.1	408.9	407.7
60°	371.5	373.9	372.7	372.7
62.5°	336.5	338.8	337.6	337.6
65°	299.1	301.4	301.4	301.4
67.5°	260.5	262.9	261.7	261.7
70°	225.5	226.7	225.5	225.5
72.5°	189.3	190.4	190.4	190.4
75°	154.2	155.4	154.2	154.2
77.5°	121.5	122.7	121.5	120.3
80°	90.0	91.1	90.0	88.8
82.5°	60.8	61.9	60.8	59.6
85°	36.2	36.2	35.0	33.9
87.5°	15.2	15.2	14.0	12.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)