

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-30L835-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-30L835-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

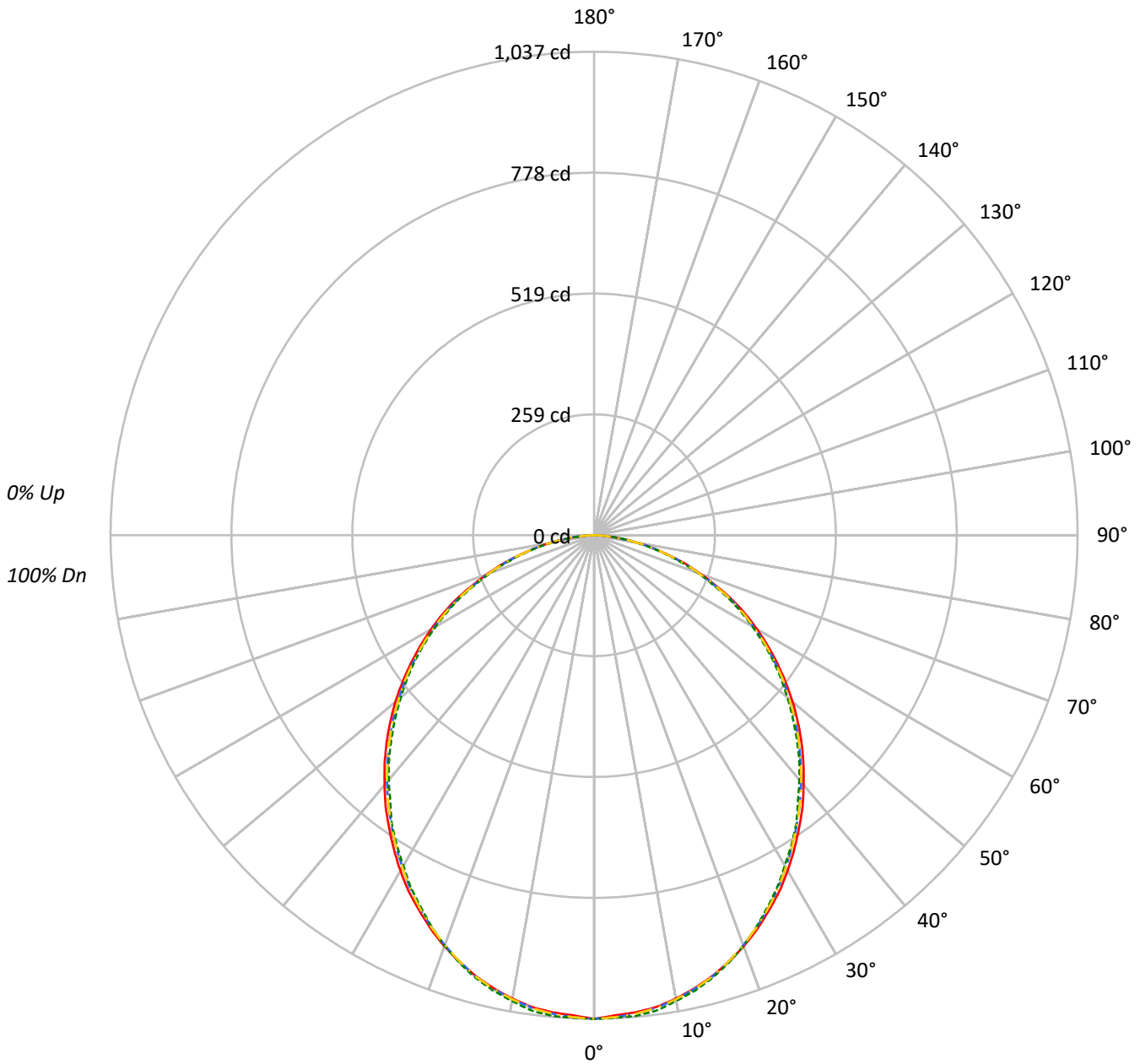
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2698.3 lumens
Efficiency: N/A
Efficacy: 83.0 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): 32.5
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: P
CATALOG NUMBER: 4APN-X-30L835-UNV-NP

Luminous Intensity Polar Plot



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



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-30L835-UNV-NP

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	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°	9569	9569	9569	9569
5°	9512	9582	9512	9582
10°	9456	9503	9456	9503
15°	9350	9386	9350	9386
20°	9213	9201	9213	9201
25°	9037	8959	9037	8959
30°	8850	8716	8850	8716
35°	8630	8515	8630	8515
40°	8420	8250	8420	8250
45°	8212	8013	8212	8013
50°	7981	7762	7981	7762
55°	7719	7538	7719	7538
60°	7453	7244	7453	7244
65°	7134	6912	7134	6912
70°	6593	6388	6593	6388
75°	5960	5778	5960	5778
80°	5117	4978	5117	4978
85°	3885	3885	3885	3885



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-30L835-UNV-NP

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.6
10°-20°	276.4	10.2
20°-30°	407.4	15.1
30°-40°	475.6	17.6
40°-50°	479.5	17.8
50°-60°	423.8	15.7
60°-70°	316.9	11.7
70°-80°	175.7	6.5
80°-90°	45.0	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°	781.7	29.0
0°-40°	1257.4	46.6
0°-60°	2160.7	80.1
0°-90°	2698.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2698.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1037	1037	1037	1037	1037	
5°	1027	1035	1027	1035	1027	98
15°	979	983	979	983	979	276
25°	888	880	888	880	888	409
35°	766	756	766	756	766	480
45°	629	614	629	614	629	485
55°	480	469	480	469	480	429
65°	327	317	327	317	327	322
75°	167	162	167	162	167	178
85°	37	37	37	37	37	44
90°	0	0	0	0	0	



TEST NUMBER: P

CATALOG NUMBER: 4APN-X-30L835-UNV-NP

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2
2.5°	1030.8	1035.9	1040.9	1039.6	1035.9	1033.4	1034.6	1034.6	1035.9	1035.9	1035.9
5°	1027.0	1032.1	1035.9	1034.6	1030.8	1029.5	1029.5	1029.5	1032.1	1034.6	1032.1
7.5°	1020.7	1024.4	1028.3	1027.0	1023.2	1021.9	1021.9	1023.2	1025.7	1028.3	1025.7
10°	1009.3	1014.4	1018.2	1015.6	1011.8	1009.3	1009.3	1009.3	1011.8	1014.4	1011.8
12.5°	995.3	999.2	1003.0	1001.7	997.9	995.3	995.3	995.3	997.9	1000.4	997.9
15°	978.9	982.7	986.4	985.2	981.4	978.9	978.9	978.9	981.4	982.7	981.4
17.5°	959.9	963.7	967.5	965.0	959.9	957.3	957.3	957.3	959.9	961.2	959.9
20°	938.3	942.2	944.7	942.2	937.1	934.5	933.2	933.2	935.8	937.1	935.8
22.5°	914.3	916.8	919.3	916.8	911.8	909.3	908.0	906.7	908.0	909.3	908.0
25°	887.7	890.3	892.8	890.3	885.2	881.3	880.1	878.9	880.1	880.1	880.1
27.5°	861.1	862.3	864.9	861.1	856.1	852.2	851.0	849.7	851.0	851.0	851.0
30°	830.7	832.0	834.5	830.7	824.4	820.6	819.3	818.1	818.1	818.1	818.1
32.5°	799.1	801.6	804.2	799.1	792.7	789.0	787.7	786.4	787.7	787.7	787.7
35°	766.2	767.4	770.0	766.2	759.8	756.0	753.5	752.2	754.7	756.0	754.7
37.5°	734.5	735.8	737.0	733.2	726.9	723.1	720.5	719.3	718.1	718.1	718.1
40°	699.1	700.3	702.8	699.1	692.7	688.9	686.3	685.0	685.0	685.0	685.0
42.5°	664.9	666.1	667.3	663.6	657.2	653.4	650.9	649.6	650.9	650.9	650.9
45°	629.4	629.4	630.6	626.9	621.8	618.0	615.4	614.1	614.1	614.1	614.1
47.5°	592.7	594.0	595.2	591.4	586.3	582.5	579.9	577.4	577.4	577.4	577.4
50°	556.0	556.0	557.2	553.4	548.3	544.5	543.2	542.0	540.8	540.8	540.8
52.5°	517.9	519.2	520.5	516.7	512.9	509.0	506.5	505.3	505.3	505.3	505.3
55°	479.9	479.9	481.2	478.7	474.9	471.0	468.6	467.3	468.6	468.6	468.6
57.5°	441.9	443.2	444.5	440.7	436.8	433.1	431.9	430.6	430.6	430.6	430.6
60°	403.9	403.9	405.2	402.7	398.9	395.1	393.8	392.6	392.6	392.6	392.6
62.5°	365.9	365.9	367.2	364.7	360.9	357.1	355.8	354.6	354.6	354.6	354.6
65°	326.8	326.8	326.8	324.2	321.7	320.4	319.1	317.8	316.6	316.6	316.6
67.5°	283.7	283.7	284.9	282.4	279.8	278.6	277.3	276.0	274.8	274.8	274.8
70°	244.4	244.4	245.7	244.4	241.8	240.6	239.4	238.1	236.8	236.8	236.8
72.5°	206.4	206.4	206.4	205.1	203.9	202.7	201.4	200.1	198.8	198.8	198.8
75°	167.2	167.2	168.4	167.2	165.9	164.7	163.4	163.4	162.1	162.1	162.1
77.5°	130.5	131.7	133.0	131.7	130.5	129.2	127.9	127.9	126.6	126.6	126.6
80°	96.3	97.5	98.7	97.5	96.3	95.0	93.7	93.7	93.7	93.7	93.7
82.5°	64.5	65.8	67.1	65.8	64.5	64.5	63.3	63.3	63.3	63.3	63.3
85°	36.7	38.0	39.3	39.3	38.0	38.0	36.7	36.7	36.7	36.7	36.7
87.5°	13.9	15.2	16.5	16.5	15.2	15.2	15.2	15.2	15.2	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: P

CATALOG NUMBER: 4APN-X-30L835-UNV-NP

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2
2.5°	1034.6	1034.6	1033.4	1035.9	1039.6	1040.9	1035.9	1030.8	1035.9	1040.9	1039.6
5°	1029.5	1029.5	1029.5	1030.8	1034.6	1035.9	1032.1	1027.0	1032.1	1035.9	1034.6
7.5°	1023.2	1021.9	1021.9	1023.2	1027.0	1028.3	1024.4	1020.7	1024.4	1028.3	1027.0
10°	1009.3	1009.3	1009.3	1011.8	1015.6	1018.2	1014.4	1009.3	1014.4	1018.2	1015.6
12.5°	995.3	995.3	995.3	997.9	1001.7	1003.0	999.2	995.3	999.2	1003.0	1001.7
15°	978.9	978.9	978.9	981.4	985.2	986.4	982.7	978.9	982.7	986.4	985.2
17.5°	957.3	957.3	957.3	959.9	965.0	967.5	963.7	959.9	963.7	967.5	965.0
20°	933.2	933.2	934.5	937.1	942.2	944.7	942.2	938.3	942.2	944.7	942.2
22.5°	906.7	908.0	909.3	911.8	916.8	919.3	916.8	914.3	916.8	919.3	916.8
25°	878.9	880.1	881.3	885.2	890.3	892.8	890.3	887.7	890.3	892.8	890.3
27.5°	849.7	851.0	852.2	856.1	861.1	864.9	862.3	861.1	862.3	864.9	861.1
30°	818.1	819.3	820.6	824.4	830.7	834.5	832.0	830.7	832.0	834.5	830.7
32.5°	786.4	787.7	789.0	792.7	799.1	804.2	801.6	799.1	801.6	804.2	799.1
35°	752.2	753.5	756.0	759.8	766.2	770.0	767.4	766.2	767.4	770.0	766.2
37.5°	719.3	720.5	723.1	726.9	733.2	737.0	735.8	734.5	735.8	737.0	733.2
40°	685.0	686.3	688.9	692.7	699.1	702.8	700.3	699.1	700.3	702.8	699.1
42.5°	649.6	650.9	653.4	657.2	663.6	667.3	666.1	664.9	666.1	667.3	663.6
45°	614.1	615.4	618.0	621.8	626.9	630.6	629.4	629.4	629.4	630.6	626.9
47.5°	577.4	579.9	582.5	586.3	591.4	595.2	594.0	592.7	594.0	595.2	591.4
50°	542.0	543.2	544.5	548.3	553.4	557.2	556.0	556.0	556.0	557.2	553.4
52.5°	505.3	506.5	509.0	512.9	516.7	520.5	519.2	517.9	519.2	520.5	516.7
55°	467.3	468.6	471.0	474.9	478.7	481.2	479.9	479.9	479.9	481.2	478.7
57.5°	430.6	431.9	433.1	436.8	440.7	444.5	443.2	441.9	443.2	444.5	440.7
60°	392.6	393.8	395.1	398.9	402.7	405.2	403.9	403.9	403.9	405.2	402.7
62.5°	354.6	355.8	357.1	360.9	364.7	367.2	365.9	365.9	365.9	367.2	364.7
65°	317.8	319.1	320.4	321.7	324.2	326.8	326.8	326.8	326.8	326.8	324.2
67.5°	276.0	277.3	278.6	279.8	282.4	284.9	283.7	283.7	283.7	284.9	282.4
70°	238.1	239.4	240.6	241.8	244.4	245.7	244.4	244.4	244.4	245.7	244.4
72.5°	200.1	201.4	202.7	203.9	205.1	206.4	206.4	206.4	206.4	206.4	205.1
75°	163.4	163.4	164.7	165.9	167.2	168.4	167.2	167.2	167.2	168.4	167.2
77.5°	127.9	127.9	129.2	130.5	131.7	133.0	131.7	130.5	131.7	133.0	131.7
80°	93.7	93.7	95.0	96.3	97.5	98.7	97.5	96.3	97.5	98.7	97.5
82.5°	63.3	63.3	64.5	64.5	65.8	67.1	65.8	64.5	65.8	67.1	65.8
85°	36.7	36.7	38.0	38.0	39.3	39.3	38.0	36.7	38.0	39.3	39.3
87.5°	15.2	15.2	15.2	15.2	16.5	16.5	15.2	13.9	15.2	16.5	16.5
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-30L835-UNV-NP

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2	1037.2
2.5°	1035.9	1033.4	1034.6	1034.6	1035.9	1035.9	1035.9	1034.6	1034.6	1033.4	1035.9
5°	1030.8	1029.5	1029.5	1029.5	1032.1	1034.6	1032.1	1029.5	1029.5	1029.5	1030.8
7.5°	1023.2	1021.9	1021.9	1023.2	1025.7	1028.3	1025.7	1023.2	1021.9	1021.9	1023.2
10°	1011.8	1009.3	1009.3	1009.3	1011.8	1014.4	1011.8	1009.3	1009.3	1009.3	1011.8
12.5°	997.9	995.3	995.3	995.3	997.9	1000.4	997.9	995.3	995.3	995.3	997.9
15°	981.4	978.9	978.9	978.9	981.4	982.7	981.4	978.9	978.9	978.9	981.4
17.5°	959.9	957.3	957.3	957.3	959.9	961.2	959.9	957.3	957.3	957.3	959.9
20°	937.1	934.5	933.2	933.2	935.8	937.1	935.8	933.2	933.2	934.5	937.1
22.5°	911.8	909.3	908.0	906.7	908.0	909.3	908.0	906.7	908.0	909.3	911.8
25°	885.2	881.3	880.1	878.9	880.1	880.1	880.1	878.9	880.1	881.3	885.2
27.5°	856.1	852.2	851.0	849.7	851.0	851.0	851.0	849.7	851.0	852.2	856.1
30°	824.4	820.6	819.3	818.1	818.1	818.1	818.1	818.1	819.3	820.6	824.4
32.5°	792.7	789.0	787.7	786.4	787.7	787.7	787.7	786.4	787.7	789.0	792.7
35°	759.8	756.0	753.5	752.2	754.7	756.0	754.7	752.2	753.5	756.0	759.8
37.5°	726.9	723.1	720.5	719.3	718.1	718.1	718.1	719.3	720.5	723.1	726.9
40°	692.7	688.9	686.3	685.0	685.0	685.0	685.0	685.0	686.3	688.9	692.7
42.5°	657.2	653.4	650.9	649.6	650.9	650.9	650.9	649.6	650.9	653.4	657.2
45°	621.8	618.0	615.4	614.1	614.1	614.1	614.1	614.1	615.4	618.0	621.8
47.5°	586.3	582.5	579.9	577.4	577.4	577.4	577.4	577.4	579.9	582.5	586.3
50°	548.3	544.5	543.2	542.0	540.8	540.8	540.8	542.0	543.2	544.5	548.3
52.5°	512.9	509.0	506.5	505.3	505.3	505.3	505.3	505.3	506.5	509.0	512.9
55°	474.9	471.0	468.6	467.3	468.6	468.6	468.6	467.3	468.6	471.0	474.9
57.5°	436.8	433.1	431.9	430.6	430.6	430.6	430.6	430.6	431.9	433.1	436.8
60°	398.9	395.1	393.8	392.6	392.6	392.6	392.6	392.6	393.8	395.1	398.9
62.5°	360.9	357.1	355.8	354.6	354.6	354.6	354.6	354.6	355.8	357.1	360.9
65°	321.7	320.4	319.1	317.8	316.6	316.6	316.6	317.8	319.1	320.4	321.7
67.5°	279.8	278.6	277.3	276.0	274.8	274.8	274.8	276.0	277.3	278.6	279.8
70°	241.8	240.6	239.4	238.1	236.8	236.8	236.8	238.1	239.4	240.6	241.8
72.5°	203.9	202.7	201.4	200.1	198.8	198.8	198.8	200.1	201.4	202.7	203.9
75°	165.9	164.7	163.4	163.4	162.1	162.1	162.1	163.4	163.4	164.7	165.9
77.5°	130.5	129.2	127.9	127.9	126.6	126.6	126.6	127.9	127.9	129.2	130.5
80°	96.3	95.0	93.7	93.7	93.7	93.7	93.7	93.7	93.7	95.0	96.3
82.5°	64.5	64.5	63.3	63.3	63.3	63.3	63.3	63.3	63.3	64.5	64.5
85°	38.0	38.0	36.7	36.7	36.7	36.7	36.7	36.7	36.7	38.0	38.0
87.5°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	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: P
 CATALOG NUMBER: 4APN-X-30L835-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1037.2	1037.2	1037.2	1037.2
2.5°	1039.6	1040.9	1035.9	1030.8
5°	1034.6	1035.9	1032.1	1027.0
7.5°	1027.0	1028.3	1024.4	1020.7
10°	1015.6	1018.2	1014.4	1009.3
12.5°	1001.7	1003.0	999.2	995.3
15°	985.2	986.4	982.7	978.9
17.5°	965.0	967.5	963.7	959.9
20°	942.2	944.7	942.2	938.3
22.5°	916.8	919.3	916.8	914.3
25°	890.3	892.8	890.3	887.7
27.5°	861.1	864.9	862.3	861.1
30°	830.7	834.5	832.0	830.7
32.5°	799.1	804.2	801.6	799.1
35°	766.2	770.0	767.4	766.2
37.5°	733.2	737.0	735.8	734.5
40°	699.1	702.8	700.3	699.1
42.5°	663.6	667.3	666.1	664.9
45°	626.9	630.6	629.4	629.4
47.5°	591.4	595.2	594.0	592.7
50°	553.4	557.2	556.0	556.0
52.5°	516.7	520.5	519.2	517.9
55°	478.7	481.2	479.9	479.9
57.5°	440.7	444.5	443.2	441.9
60°	402.7	405.2	403.9	403.9
62.5°	364.7	367.2	365.9	365.9
65°	324.2	326.8	326.8	326.8
67.5°	282.4	284.9	283.7	283.7
70°	244.4	245.7	244.4	244.4
72.5°	205.1	206.4	206.4	206.4
75°	167.2	168.4	167.2	167.2
77.5°	131.7	133.0	131.7	130.5
80°	97.5	98.7	97.5	96.3
82.5°	65.8	67.1	65.8	64.5
85°	39.3	39.3	38.0	36.7
87.5°	16.5	16.5	15.2	13.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)