

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: P709085

Luminaire Tested: **4APN-X-37L930-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709085
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-37L930-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

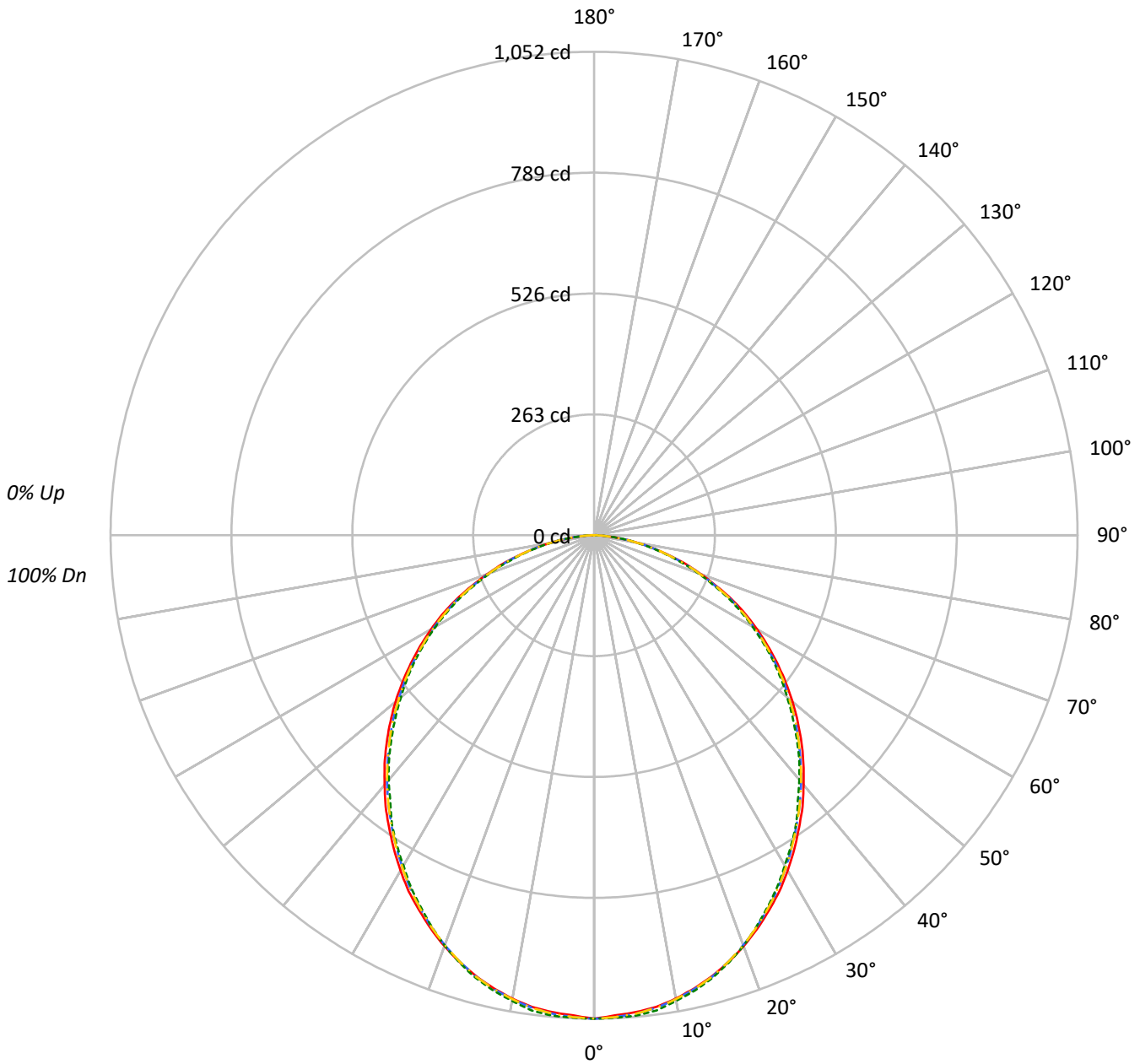
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2737.0 lumens
Efficiency: N/A
Efficacy: 67.1 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): 40.8
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: P709085
CATALOG NUMBER: 4APN-X-37L930-UNV

Luminous Intensity Polar Plot



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



TEST NUMBER: P709085
 CATALOG NUMBER: 4APN-X-37L930-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	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°	9706	9706	9706	9706
5°	9648	9719	9648	9719
10°	9591	9639	9591	9639
15°	9484	9521	9484	9521
20°	9345	9332	9345	9332
25°	9166	9088	9166	9088
30°	8977	8840	8977	8840
35°	8753	8637	8753	8637
40°	8539	8369	8539	8369
45°	8330	8129	8330	8129
50°	8094	7873	8094	7873
55°	7830	7645	7830	7645
60°	7562	7348	7562	7348
65°	7235	7010	7235	7010
70°	6687	6480	6687	6480
75°	6046	5860	6046	5860
80°	5186	5053	5186	5053
85°	3949	3949	3949	3949



TEST NUMBER: P709085
 CATALOG NUMBER: 4APN-X-37L930-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.3	3.6
10°-20°	280.4	10.2
20°-30°	413.3	15.1
30°-40°	482.4	17.6
40°-50°	486.4	17.8
50°-60°	429.9	15.7
60°-70°	321.5	11.7
70°-80°	178.2	6.5
80°-90°	45.7	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°	792.9	29.0
0°-40°	1275.4	46.6
0°-60°	2191.6	80.1
0°-90°	2737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2737.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1052	1052	1052	1052	1052	
5°	1042	1049	1042	1049	1042	99
15°	993	997	993	997	993	280
25°	900	893	900	893	900	415
35°	777	767	777	767	777	487
45°	638	623	638	623	638	492
55°	487	475	487	475	487	435
65°	331	321	331	321	331	326
75°	170	164	170	164	170	180
85°	37	37	37	37	37	45
90°	0	0	0	0	0	



TEST NUMBER: P709085

CATALOG NUMBER: 4APN-X-37L930-UNV

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0
2.5°	1045.6	1050.7	1055.8	1054.6	1050.7	1048.1	1049.4	1049.4	1050.7	1050.7	1050.7
5°	1041.7	1046.9	1050.7	1049.4	1045.6	1044.3	1044.3	1044.3	1046.9	1049.4	1046.9
7.5°	1035.3	1039.1	1043.0	1041.7	1037.9	1036.6	1036.6	1037.9	1040.4	1043.0	1040.4
10°	1023.7	1028.9	1032.7	1030.2	1026.3	1023.7	1023.7	1023.7	1026.3	1028.9	1026.3
12.5°	1009.6	1013.5	1017.3	1016.0	1012.2	1009.6	1009.6	1009.6	1012.2	1014.7	1012.2
15°	992.9	996.8	1000.6	999.3	995.5	992.9	992.9	992.9	995.5	996.8	995.5
17.5°	973.6	977.5	981.3	978.8	973.6	971.1	971.1	971.1	973.6	974.9	973.6
20°	951.8	955.7	958.2	955.7	950.5	948.0	946.7	946.7	949.2	950.5	949.2
22.5°	927.4	930.0	932.5	930.0	924.8	922.3	921.0	919.7	921.0	922.3	921.0
25°	900.4	903.0	905.6	903.0	897.9	894.0	892.7	891.4	892.7	892.7	892.7
27.5°	873.5	874.7	877.3	873.5	868.3	864.5	863.2	861.9	863.2	863.2	863.2
30°	842.6	843.9	846.5	842.6	836.2	832.3	831.1	829.8	829.8	829.8	829.8
32.5°	810.5	813.1	815.6	810.5	804.1	800.2	798.9	797.7	798.9	798.9	798.9
35°	777.1	778.4	781.0	777.1	770.7	766.8	764.3	763.0	765.6	766.8	765.6
37.5°	745.0	746.3	747.6	743.7	737.3	733.4	730.9	729.6	728.3	728.3	728.3
40°	709.0	710.3	712.9	709.0	702.6	698.8	696.2	694.9	694.9	694.9	694.9
42.5°	674.4	675.6	676.9	673.1	666.6	662.8	660.2	658.9	660.2	660.2	660.2
45°	638.4	638.4	639.7	635.8	630.7	626.8	624.3	623.0	623.0	623.0	623.0
47.5°	601.1	602.4	603.7	599.9	594.7	590.9	588.3	585.7	585.7	585.7	585.7
50°	563.9	563.9	565.2	561.3	556.2	552.3	551.0	549.8	548.5	548.5	548.5
52.5°	525.4	526.6	527.9	524.1	520.2	516.4	513.8	512.5	512.5	512.5	512.5
55°	486.8	486.8	488.1	485.5	481.7	477.8	475.3	474.0	475.3	475.3	475.3
57.5°	448.3	449.6	450.9	447.0	443.1	439.3	438.0	436.7	436.7	436.7	436.7
60°	409.8	409.8	411.0	408.5	404.6	400.8	399.5	398.2	398.2	398.2	398.2
62.5°	371.2	371.2	372.5	369.9	366.1	362.2	360.9	359.7	359.7	359.7	359.7
65°	331.4	331.4	331.4	328.8	326.3	325.0	323.7	322.4	321.1	321.1	321.1
67.5°	287.7	287.7	289.0	286.4	283.9	282.6	281.3	280.0	278.7	278.7	278.7
70°	247.9	247.9	249.2	247.9	245.3	244.1	242.8	241.5	240.2	240.2	240.2
72.5°	209.4	209.4	209.4	208.1	206.8	205.5	204.2	202.9	201.7	201.7	201.7
75°	169.6	169.6	170.8	169.6	168.3	167.0	165.7	165.7	164.4	164.4	164.4
77.5°	132.3	133.6	134.9	133.6	132.3	131.0	129.7	129.7	128.4	128.4	128.4
80°	97.6	98.9	100.2	98.9	97.6	96.3	95.1	95.1	95.1	95.1	95.1
82.5°	65.5	66.8	68.1	66.8	65.5	65.5	64.2	64.2	64.2	64.2	64.2
85°	37.3	38.5	39.8	39.8	38.5	38.5	37.3	37.3	37.3	37.3	37.3
87.5°	14.1	15.4	16.7	16.7	15.4	15.4	15.4	15.4	15.4	15.4	15.4
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: P709085

CATALOG NUMBER: 4APN-X-37L930-UNV

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0
2.5°	1049.4	1049.4	1048.1	1050.7	1054.6	1055.8	1050.7	1045.6	1050.7	1055.8	1054.6
5°	1044.3	1044.3	1044.3	1045.6	1049.4	1050.7	1046.9	1041.7	1046.9	1050.7	1049.4
7.5°	1037.9	1036.6	1036.6	1037.9	1041.7	1043.0	1039.1	1035.3	1039.1	1043.0	1041.7
10°	1023.7	1023.7	1023.7	1026.3	1030.2	1032.7	1028.9	1023.7	1028.9	1032.7	1030.2
12.5°	1009.6	1009.6	1009.6	1012.2	1016.0	1017.3	1013.5	1009.6	1013.5	1017.3	1016.0
15°	992.9	992.9	992.9	995.5	999.3	1000.6	996.8	992.9	996.8	1000.6	999.3
17.5°	971.1	971.1	971.1	973.6	978.8	981.3	977.5	973.6	977.5	981.3	978.8
20°	946.7	946.7	948.0	950.5	955.7	958.2	955.7	951.8	955.7	958.2	955.7
22.5°	919.7	921.0	922.3	924.8	930.0	932.5	930.0	927.4	930.0	932.5	930.0
25°	891.4	892.7	894.0	897.9	903.0	905.6	903.0	900.4	903.0	905.6	903.0
27.5°	861.9	863.2	864.5	868.3	873.5	877.3	874.7	873.5	874.7	877.3	873.5
30°	829.8	831.1	832.3	836.2	842.6	846.5	843.9	842.6	843.9	846.5	842.6
32.5°	797.7	798.9	800.2	804.1	810.5	815.6	813.1	810.5	813.1	815.6	810.5
35°	763.0	764.3	766.8	770.7	777.1	781.0	778.4	777.1	778.4	781.0	777.1
37.5°	729.6	730.9	733.4	737.3	743.7	747.6	746.3	745.0	746.3	747.6	743.7
40°	694.9	696.2	698.8	702.6	709.0	712.9	710.3	709.0	710.3	712.9	709.0
42.5°	658.9	660.2	662.8	666.6	673.1	676.9	675.6	674.4	675.6	676.9	673.1
45°	623.0	624.3	626.8	630.7	635.8	639.7	638.4	638.4	638.4	639.7	635.8
47.5°	585.7	588.3	590.9	594.7	599.9	603.7	602.4	601.1	602.4	603.7	599.9
50°	549.8	551.0	552.3	556.2	561.3	565.2	563.9	563.9	563.9	565.2	561.3
52.5°	512.5	513.8	516.4	520.2	524.1	527.9	526.6	525.4	526.6	527.9	524.1
55°	474.0	475.3	477.8	481.7	485.5	488.1	486.8	486.8	486.8	488.1	485.5
57.5°	436.7	438.0	439.3	443.1	447.0	450.9	449.6	448.3	449.6	450.9	447.0
60°	398.2	399.5	400.8	404.6	408.5	411.0	409.8	409.8	409.8	411.0	408.5
62.5°	359.7	360.9	362.2	366.1	369.9	372.5	371.2	371.2	371.2	372.5	369.9
65°	322.4	323.7	325.0	326.3	328.8	331.4	331.4	331.4	331.4	331.4	328.8
67.5°	280.0	281.3	282.6	283.9	286.4	289.0	287.7	287.7	287.7	289.0	286.4
70°	241.5	242.8	244.1	245.3	247.9	249.2	247.9	247.9	247.9	249.2	247.9
72.5°	202.9	204.2	205.5	206.8	208.1	209.4	209.4	209.4	209.4	209.4	208.1
75°	165.7	165.7	167.0	168.3	169.6	170.8	169.6	169.6	169.6	170.8	169.6
77.5°	129.7	129.7	131.0	132.3	133.6	134.9	133.6	132.3	133.6	134.9	133.6
80°	95.1	95.1	96.3	97.6	98.9	100.2	98.9	97.6	98.9	100.2	98.9
82.5°	64.2	64.2	65.5	65.5	66.8	68.1	66.8	65.5	66.8	68.1	66.8
85°	37.3	37.3	38.5	38.5	39.8	39.8	38.5	37.3	38.5	39.8	39.8
87.5°	15.4	15.4	15.4	15.4	16.7	16.7	15.4	14.1	15.4	16.7	16.7
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: P709085

CATALOG NUMBER: 4APN-X-37L930-UNV

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0	1052.0
2.5°	1050.7	1048.1	1049.4	1049.4	1050.7	1050.7	1050.7	1049.4	1049.4	1048.1	1050.7
5°	1045.6	1044.3	1044.3	1044.3	1046.9	1049.4	1046.9	1044.3	1044.3	1044.3	1045.6
7.5°	1037.9	1036.6	1036.6	1037.9	1040.4	1043.0	1040.4	1037.9	1036.6	1036.6	1037.9
10°	1026.3	1023.7	1023.7	1023.7	1026.3	1028.9	1026.3	1023.7	1023.7	1023.7	1026.3
12.5°	1012.2	1009.6	1009.6	1009.6	1012.2	1014.7	1012.2	1009.6	1009.6	1009.6	1012.2
15°	995.5	992.9	992.9	992.9	995.5	996.8	995.5	992.9	992.9	992.9	995.5
17.5°	973.6	971.1	971.1	971.1	973.6	974.9	973.6	971.1	971.1	971.1	973.6
20°	950.5	948.0	946.7	946.7	949.2	950.5	949.2	946.7	946.7	948.0	950.5
22.5°	924.8	922.3	921.0	919.7	921.0	922.3	921.0	919.7	921.0	922.3	924.8
25°	897.9	894.0	892.7	891.4	892.7	892.7	892.7	891.4	892.7	894.0	897.9
27.5°	868.3	864.5	863.2	861.9	863.2	863.2	863.2	861.9	863.2	864.5	868.3
30°	836.2	832.3	831.1	829.8	829.8	829.8	829.8	829.8	831.1	832.3	836.2
32.5°	804.1	800.2	798.9	797.7	798.9	798.9	798.9	797.7	798.9	800.2	804.1
35°	770.7	766.8	764.3	763.0	765.6	766.8	765.6	763.0	764.3	766.8	770.7
37.5°	737.3	733.4	730.9	729.6	728.3	728.3	728.3	729.6	730.9	733.4	737.3
40°	702.6	698.8	696.2	694.9	694.9	694.9	694.9	694.9	696.2	698.8	702.6
42.5°	666.6	662.8	660.2	658.9	660.2	660.2	660.2	658.9	660.2	662.8	666.6
45°	630.7	626.8	624.3	623.0	623.0	623.0	623.0	623.0	624.3	626.8	630.7
47.5°	594.7	590.9	588.3	585.7	585.7	585.7	585.7	585.7	588.3	590.9	594.7
50°	556.2	552.3	551.0	549.8	548.5	548.5	548.5	549.8	551.0	552.3	556.2
52.5°	520.2	516.4	513.8	512.5	512.5	512.5	512.5	512.5	513.8	516.4	520.2
55°	481.7	477.8	475.3	474.0	475.3	475.3	475.3	474.0	475.3	477.8	481.7
57.5°	443.1	439.3	438.0	436.7	436.7	436.7	436.7	436.7	438.0	439.3	443.1
60°	404.6	400.8	399.5	398.2	398.2	398.2	398.2	398.2	399.5	400.8	404.6
62.5°	366.1	362.2	360.9	359.7	359.7	359.7	359.7	359.7	360.9	362.2	366.1
65°	326.3	325.0	323.7	322.4	321.1	321.1	321.1	322.4	323.7	325.0	326.3
67.5°	283.9	282.6	281.3	280.0	278.7	278.7	278.7	280.0	281.3	282.6	283.9
70°	245.3	244.1	242.8	241.5	240.2	240.2	240.2	241.5	242.8	244.1	245.3
72.5°	206.8	205.5	204.2	202.9	201.7	201.7	201.7	202.9	204.2	205.5	206.8
75°	168.3	167.0	165.7	165.7	164.4	164.4	164.4	165.7	165.7	167.0	168.3
77.5°	132.3	131.0	129.7	129.7	128.4	128.4	128.4	129.7	129.7	131.0	132.3
80°	97.6	96.3	95.1	95.1	95.1	95.1	95.1	95.1	95.1	96.3	97.6
82.5°	65.5	65.5	64.2	64.2	64.2	64.2	64.2	64.2	64.2	65.5	65.5
85°	38.5	38.5	37.3	37.3	37.3	37.3	37.3	37.3	37.3	38.5	38.5
87.5°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
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: P709085

CATALOG NUMBER: 4APN-X-37L930-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1052.0	1052.0	1052.0	1052.0
2.5°	1054.6	1055.8	1050.7	1045.6
5°	1049.4	1050.7	1046.9	1041.7
7.5°	1041.7	1043.0	1039.1	1035.3
10°	1030.2	1032.7	1028.9	1023.7
12.5°	1016.0	1017.3	1013.5	1009.6
15°	999.3	1000.6	996.8	992.9
17.5°	978.8	981.3	977.5	973.6
20°	955.7	958.2	955.7	951.8
22.5°	930.0	932.5	930.0	927.4
25°	903.0	905.6	903.0	900.4
27.5°	873.5	877.3	874.7	873.5
30°	842.6	846.5	843.9	842.6
32.5°	810.5	815.6	813.1	810.5
35°	777.1	781.0	778.4	777.1
37.5°	743.7	747.6	746.3	745.0
40°	709.0	712.9	710.3	709.0
42.5°	673.1	676.9	675.6	674.4
45°	635.8	639.7	638.4	638.4
47.5°	599.9	603.7	602.4	601.1
50°	561.3	565.2	563.9	563.9
52.5°	524.1	527.9	526.6	525.4
55°	485.5	488.1	486.8	486.8
57.5°	447.0	450.9	449.6	448.3
60°	408.5	411.0	409.8	409.8
62.5°	369.9	372.5	371.2	371.2
65°	328.8	331.4	331.4	331.4
67.5°	286.4	289.0	287.7	287.7
70°	247.9	249.2	247.9	247.9
72.5°	208.1	209.4	209.4	209.4
75°	169.6	170.8	169.6	169.6
77.5°	133.6	134.9	133.6	132.3
80°	98.9	100.2	98.9	97.6
82.5°	66.8	68.1	66.8	65.5
85°	39.8	39.8	38.5	37.3
87.5°	16.7	16.7	15.4	14.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)