

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-37L830-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-37L830-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

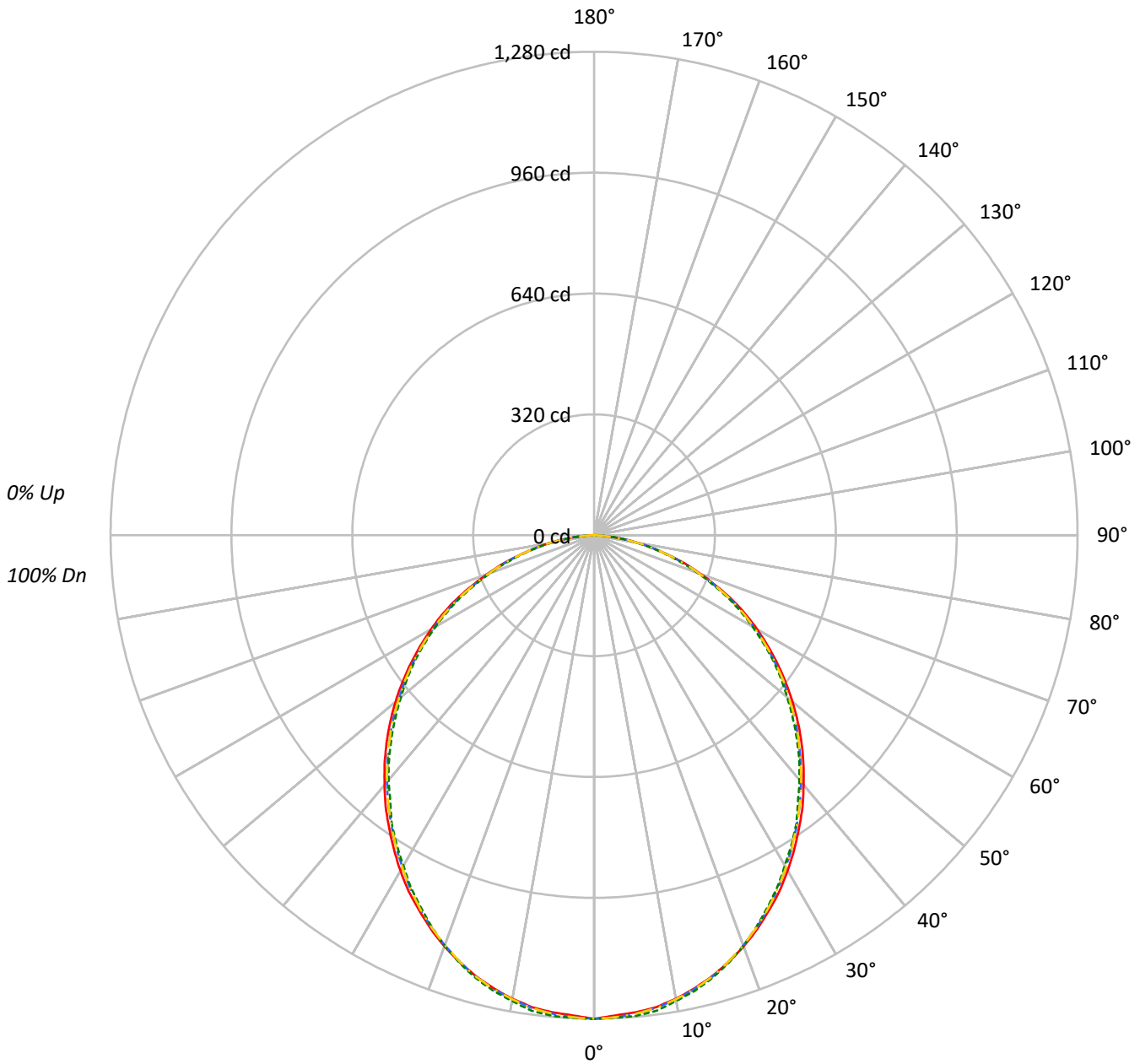
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3330.8 lumens
Efficiency: N/A
Efficacy: 81.6 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 (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

TEST NUMBER: P
CATALOG NUMBER: 4APN-X-37L830-UNV-NP

Luminous Intensity Polar Plot



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



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-37L830-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°	11812	11812	11812	11812
5°	11742	11829	11742	11829
10°	11672	11730	11672	11730
15°	11542	11587	11542	11587
20°	11373	11357	11373	11357
25°	11155	11060	11155	11060
30°	10924	10758	10924	10758
35°	10652	10511	10652	10511
40°	10393	10186	10393	10186
45°	10137	9893	10137	9893
50°	9849	9579	9849	9579
55°	9531	9304	9531	9304
60°	9200	8942	9200	8942
65°	8804	8532	8804	8532
70°	8139	7885	8139	7885
75°	7354	7133	7354	7133
80°	6312	6147	6312	6147
85°	4806	4806	4806	4806



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-37L830-UNV-NP

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.8	3.6
10°-20°	341.2	10.2
20°-30°	502.9	15.1
30°-40°	587.1	17.6
40°-50°	591.9	17.8
50°-60°	523.1	15.7
60°-70°	391.2	11.7
70°-80°	216.8	6.5
80°-90°	55.6	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°	965.0	29.0
0°-40°	1552.1	46.6
0°-60°	2667.2	80.1
0°-90°	3330.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3330.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1280	1280	1280	1280	1280	
5°	1268	1277	1268	1277	1268	120
15°	1208	1213	1208	1213	1208	341
25°	1096	1086	1096	1086	1096	505
35°	946	933	946	933	946	592
45°	777	758	777	758	777	599
55°	592	578	592	578	592	530
65°	403	391	403	391	403	397
75°	206	200	206	200	206	219
85°	45	45	45	45	45	55
90°	0	0	0	0	0	



TEST NUMBER: P

CATALOG NUMBER: 4APN-X-37L830-UNV-NP

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3
2.5°	1272.5	1278.7	1284.9	1283.3	1278.7	1275.6	1277.2	1277.2	1278.7	1278.7	1278.7
5°	1267.8	1274.0	1278.7	1277.2	1272.5	1270.9	1270.9	1270.9	1274.0	1277.2	1274.0
7.5°	1259.9	1264.6	1269.3	1267.8	1263.0	1261.5	1261.5	1263.0	1266.2	1269.3	1266.2
10°	1245.9	1252.1	1256.8	1253.6	1248.9	1245.9	1245.9	1245.9	1248.9	1252.1	1248.9
12.5°	1228.7	1233.4	1238.1	1236.5	1231.8	1228.7	1228.7	1228.7	1231.8	1234.9	1231.8
15°	1208.4	1213.1	1217.7	1216.1	1211.5	1208.4	1208.4	1208.4	1211.5	1213.1	1211.5
17.5°	1184.9	1189.6	1194.3	1191.1	1184.9	1181.7	1181.7	1181.7	1184.9	1186.4	1184.9
20°	1158.3	1163.0	1166.1	1163.0	1156.7	1153.6	1152.0	1152.0	1155.2	1156.7	1155.2
22.5°	1128.6	1131.8	1134.9	1131.8	1125.5	1122.4	1120.8	1119.2	1120.8	1122.4	1120.8
25°	1095.8	1098.9	1102.1	1098.9	1092.7	1088.0	1086.4	1084.8	1086.4	1086.4	1086.4
27.5°	1063.0	1064.5	1067.7	1063.0	1056.7	1052.0	1050.4	1048.9	1050.4	1050.4	1050.4
30°	1025.4	1027.0	1030.2	1025.4	1017.6	1012.9	1011.3	1009.8	1009.8	1009.8	1009.8
32.5°	986.4	989.5	992.6	986.4	978.5	973.9	972.3	970.8	972.3	972.3	972.3
35°	945.7	947.3	950.4	945.7	938.0	933.2	930.1	928.5	931.7	933.2	931.7
37.5°	906.6	908.2	909.7	905.1	897.3	892.6	889.5	887.9	886.3	886.3	886.3
40°	862.9	864.5	867.6	862.9	855.1	850.4	847.2	845.7	845.7	845.7	845.7
42.5°	820.7	822.2	823.8	819.1	811.3	806.6	803.5	802.0	803.5	803.5	803.5
45°	776.9	776.9	778.4	773.7	767.6	762.9	759.7	758.2	758.2	758.2	758.2
47.5°	731.6	733.2	734.7	730.0	723.8	719.1	715.9	712.8	712.8	712.8	712.8
50°	686.2	686.2	687.8	683.1	676.8	672.1	670.6	669.0	667.4	667.4	667.4
52.5°	639.3	640.9	642.4	637.7	633.0	628.4	625.3	623.7	623.7	623.7	623.7
55°	592.5	592.5	594.0	590.9	586.2	581.5	578.4	576.8	578.4	578.4	578.4
57.5°	545.5	547.1	548.7	544.0	539.3	534.6	533.0	531.4	531.4	531.4	531.4
60°	498.6	498.6	500.2	497.1	492.4	487.7	486.2	484.6	484.6	484.6	484.6
62.5°	451.8	451.8	453.3	450.2	445.5	440.8	439.2	437.7	437.7	437.7	437.7
65°	403.3	403.3	403.3	400.1	397.0	395.4	393.9	392.4	390.8	390.8	390.8
67.5°	350.2	350.2	351.7	348.6	345.5	343.9	342.3	340.8	339.2	339.2	339.2
70°	301.7	301.7	303.2	301.7	298.5	297.0	295.4	293.8	292.3	292.3	292.3
72.5°	254.8	254.8	254.8	253.3	251.7	250.1	248.6	247.0	245.4	245.4	245.4
75°	206.3	206.3	207.9	206.3	204.8	203.2	201.6	201.6	200.1	200.1	200.1
77.5°	161.0	162.5	164.1	162.5	161.0	159.4	157.8	157.8	156.3	156.3	156.3
80°	118.8	120.3	121.9	120.3	118.8	117.3	115.7	115.7	115.7	115.7	115.7
82.5°	79.8	81.3	82.9	81.3	79.8	79.8	78.2	78.2	78.2	78.2	78.2
85°	45.4	46.9	48.5	48.5	46.9	46.9	45.4	45.4	45.4	45.4	45.4
87.5°	17.1	18.7	20.3	20.3	18.7	18.7	18.7	18.7	18.7	18.7	18.7
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: P

CATALOG NUMBER: 4APN-X-37L830-UNV-NP

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3
2.5°	1277.2	1277.2	1275.6	1278.7	1283.3	1284.9	1278.7	1272.5	1278.7	1284.9	1283.3
5°	1270.9	1270.9	1270.9	1272.5	1277.2	1278.7	1274.0	1267.8	1274.0	1278.7	1277.2
7.5°	1263.0	1261.5	1261.5	1263.0	1267.8	1269.3	1264.6	1259.9	1264.6	1269.3	1267.8
10°	1245.9	1245.9	1245.9	1248.9	1253.6	1256.8	1252.1	1245.9	1252.1	1256.8	1253.6
12.5°	1228.7	1228.7	1228.7	1231.8	1236.5	1238.1	1233.4	1228.7	1233.4	1238.1	1236.5
15°	1208.4	1208.4	1208.4	1211.5	1216.1	1217.7	1213.1	1208.4	1213.1	1217.7	1216.1
17.5°	1181.7	1181.7	1181.7	1184.9	1191.1	1194.3	1189.6	1184.9	1189.6	1194.3	1191.1
20°	1152.0	1152.0	1153.6	1156.7	1163.0	1166.1	1163.0	1158.3	1163.0	1166.1	1163.0
22.5°	1119.2	1120.8	1122.4	1125.5	1131.8	1134.9	1131.8	1128.6	1131.8	1134.9	1131.8
25°	1084.8	1086.4	1088.0	1092.7	1098.9	1102.1	1098.9	1095.8	1098.9	1102.1	1098.9
27.5°	1048.9	1050.4	1052.0	1056.7	1063.0	1067.7	1064.5	1063.0	1064.5	1067.7	1063.0
30°	1009.8	1011.3	1012.9	1017.6	1025.4	1030.2	1027.0	1025.4	1027.0	1030.2	1025.4
32.5°	970.8	972.3	973.9	978.5	986.4	992.6	989.5	986.4	989.5	992.6	986.4
35°	928.5	930.1	933.2	938.0	945.7	950.4	947.3	945.7	947.3	950.4	945.7
37.5°	887.9	889.5	892.6	897.3	905.1	909.7	908.2	906.6	908.2	909.7	905.1
40°	845.7	847.2	850.4	855.1	862.9	867.6	864.5	862.9	864.5	867.6	862.9
42.5°	802.0	803.5	806.6	811.3	819.1	823.8	822.2	820.7	822.2	823.8	819.1
45°	758.2	759.7	762.9	767.6	773.7	778.4	776.9	776.9	776.9	778.4	773.7
47.5°	712.8	715.9	719.1	723.8	730.0	734.7	733.2	731.6	733.2	734.7	730.0
50°	669.0	670.6	672.1	676.8	683.1	687.8	686.2	686.2	686.2	687.8	683.1
52.5°	623.7	625.3	628.4	633.0	637.7	642.4	640.9	639.3	640.9	642.4	637.7
55°	576.8	578.4	581.5	586.2	590.9	594.0	592.5	592.5	592.5	594.0	590.9
57.5°	531.4	533.0	534.6	539.3	544.0	548.7	547.1	545.5	547.1	548.7	544.0
60°	484.6	486.2	487.7	492.4	497.1	500.2	498.6	498.6	498.6	500.2	497.1
62.5°	437.7	439.2	440.8	445.5	450.2	453.3	451.8	451.8	451.8	453.3	450.2
65°	392.4	393.9	395.4	397.0	400.1	403.3	403.3	403.3	403.3	403.3	400.1
67.5°	340.8	342.3	343.9	345.5	348.6	351.7	350.2	350.2	350.2	351.7	348.6
70°	293.8	295.4	297.0	298.5	301.7	303.2	301.7	301.7	301.7	303.2	301.7
72.5°	247.0	248.6	250.1	251.7	253.3	254.8	254.8	254.8	254.8	254.8	253.3
75°	201.6	201.6	203.2	204.8	206.3	207.9	206.3	206.3	206.3	207.9	206.3
77.5°	157.8	157.8	159.4	161.0	162.5	164.1	162.5	161.0	162.5	164.1	162.5
80°	115.7	115.7	117.3	118.8	120.3	121.9	120.3	118.8	120.3	121.9	120.3
82.5°	78.2	78.2	79.8	79.8	81.3	82.9	81.3	79.8	81.3	82.9	81.3
85°	45.4	45.4	46.9	46.9	48.5	48.5	46.9	45.4	46.9	48.5	48.5
87.5°	18.7	18.7	18.7	18.7	20.3	20.3	18.7	17.1	18.7	20.3	20.3
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-37L830-UNV-NP

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3	1280.3
2.5°	1278.7	1275.6	1277.2	1277.2	1278.7	1278.7	1278.7	1277.2	1277.2	1275.6	1278.7
5°	1272.5	1270.9	1270.9	1270.9	1274.0	1277.2	1274.0	1270.9	1270.9	1270.9	1272.5
7.5°	1263.0	1261.5	1261.5	1263.0	1266.2	1269.3	1266.2	1263.0	1261.5	1261.5	1263.0
10°	1248.9	1245.9	1245.9	1245.9	1248.9	1252.1	1248.9	1245.9	1245.9	1245.9	1248.9
12.5°	1231.8	1228.7	1228.7	1228.7	1231.8	1234.9	1231.8	1228.7	1228.7	1228.7	1231.8
15°	1211.5	1208.4	1208.4	1208.4	1211.5	1213.1	1211.5	1208.4	1208.4	1208.4	1211.5
17.5°	1184.9	1181.7	1181.7	1181.7	1184.9	1186.4	1184.9	1181.7	1181.7	1181.7	1184.9
20°	1156.7	1153.6	1152.0	1152.0	1155.2	1156.7	1155.2	1152.0	1152.0	1153.6	1156.7
22.5°	1125.5	1122.4	1120.8	1119.2	1120.8	1122.4	1120.8	1119.2	1120.8	1122.4	1125.5
25°	1092.7	1088.0	1086.4	1084.8	1086.4	1086.4	1086.4	1084.8	1086.4	1088.0	1092.7
27.5°	1056.7	1052.0	1050.4	1048.9	1050.4	1050.4	1050.4	1048.9	1050.4	1052.0	1056.7
30°	1017.6	1012.9	1011.3	1009.8	1009.8	1009.8	1009.8	1009.8	1011.3	1012.9	1017.6
32.5°	978.5	973.9	972.3	970.8	972.3	972.3	972.3	970.8	972.3	973.9	978.5
35°	938.0	933.2	930.1	928.5	931.7	933.2	931.7	928.5	930.1	933.2	938.0
37.5°	897.3	892.6	889.5	887.9	886.3	886.3	886.3	887.9	889.5	892.6	897.3
40°	855.1	850.4	847.2	845.7	845.7	845.7	845.7	845.7	847.2	850.4	855.1
42.5°	811.3	806.6	803.5	802.0	803.5	803.5	803.5	802.0	803.5	806.6	811.3
45°	767.6	762.9	759.7	758.2	758.2	758.2	758.2	758.2	759.7	762.9	767.6
47.5°	723.8	719.1	715.9	712.8	712.8	712.8	712.8	712.8	715.9	719.1	723.8
50°	676.8	672.1	670.6	669.0	667.4	667.4	667.4	669.0	670.6	672.1	676.8
52.5°	633.0	628.4	625.3	623.7	623.7	623.7	623.7	623.7	625.3	628.4	633.0
55°	586.2	581.5	578.4	576.8	578.4	578.4	578.4	576.8	578.4	581.5	586.2
57.5°	539.3	534.6	533.0	531.4	531.4	531.4	531.4	531.4	533.0	534.6	539.3
60°	492.4	487.7	486.2	484.6	484.6	484.6	484.6	484.6	486.2	487.7	492.4
62.5°	445.5	440.8	439.2	437.7	437.7	437.7	437.7	437.7	439.2	440.8	445.5
65°	397.0	395.4	393.9	392.4	390.8	390.8	390.8	392.4	393.9	395.4	397.0
67.5°	345.5	343.9	342.3	340.8	339.2	339.2	339.2	340.8	342.3	343.9	345.5
70°	298.5	297.0	295.4	293.8	292.3	292.3	292.3	293.8	295.4	297.0	298.5
72.5°	251.7	250.1	248.6	247.0	245.4	245.4	245.4	247.0	248.6	250.1	251.7
75°	204.8	203.2	201.6	201.6	200.1	200.1	200.1	201.6	201.6	203.2	204.8
77.5°	161.0	159.4	157.8	157.8	156.3	156.3	156.3	157.8	157.8	159.4	161.0
80°	118.8	117.3	115.7	115.7	115.7	115.7	115.7	115.7	115.7	117.3	118.8
82.5°	79.8	79.8	78.2	78.2	78.2	78.2	78.2	78.2	78.2	79.8	79.8
85°	46.9	46.9	45.4	45.4	45.4	45.4	45.4	45.4	45.4	46.9	46.9
87.5°	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7
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: P
 CATALOG NUMBER: 4APN-X-37L830-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1280.3	1280.3	1280.3	1280.3
2.5°	1283.3	1284.9	1278.7	1272.5
5°	1277.2	1278.7	1274.0	1267.8
7.5°	1267.8	1269.3	1264.6	1259.9
10°	1253.6	1256.8	1252.1	1245.9
12.5°	1236.5	1238.1	1233.4	1228.7
15°	1216.1	1217.7	1213.1	1208.4
17.5°	1191.1	1194.3	1189.6	1184.9
20°	1163.0	1166.1	1163.0	1158.3
22.5°	1131.8	1134.9	1131.8	1128.6
25°	1098.9	1102.1	1098.9	1095.8
27.5°	1063.0	1067.7	1064.5	1063.0
30°	1025.4	1030.2	1027.0	1025.4
32.5°	986.4	992.6	989.5	986.4
35°	945.7	950.4	947.3	945.7
37.5°	905.1	909.7	908.2	906.6
40°	862.9	867.6	864.5	862.9
42.5°	819.1	823.8	822.2	820.7
45°	773.7	778.4	776.9	776.9
47.5°	730.0	734.7	733.2	731.6
50°	683.1	687.8	686.2	686.2
52.5°	637.7	642.4	640.9	639.3
55°	590.9	594.0	592.5	592.5
57.5°	544.0	548.7	547.1	545.5
60°	497.1	500.2	498.6	498.6
62.5°	450.2	453.3	451.8	451.8
65°	400.1	403.3	403.3	403.3
67.5°	348.6	351.7	350.2	350.2
70°	301.7	303.2	301.7	301.7
72.5°	253.3	254.8	254.8	254.8
75°	206.3	207.9	206.3	206.3
77.5°	162.5	164.1	162.5	161.0
80°	120.3	121.9	120.3	118.8
82.5°	81.3	82.9	81.3	79.8
85°	48.5	48.5	46.9	45.4
87.5°	20.3	20.3	18.7	17.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)