

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-34L840-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-34L840-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

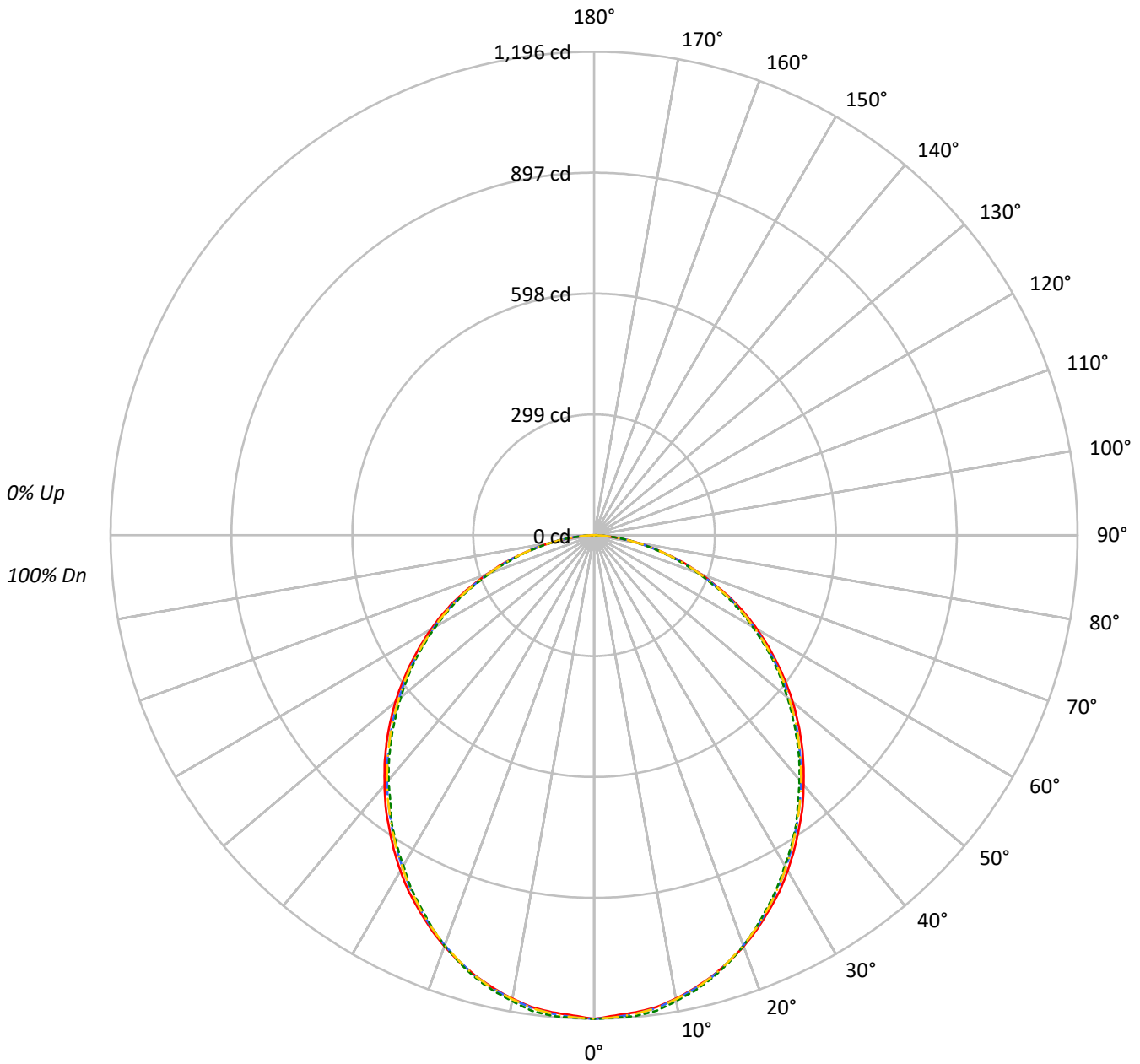
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3112.4 lumens
Efficiency: N/A
Efficacy: 84.6 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): 36.8
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

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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			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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	11037	11037	11037	11037
5°	10971	11052	10971	11052
10°	10906	10961	10906	10961
15°	10785	10827	10785	10827
20°	10626	10613	10626	10613
25°	10423	10334	10423	10334
30°	10208	10053	10208	10053
35°	9953	9821	9953	9821
40°	9711	9517	9711	9517
45°	9473	9244	9473	9244
50°	9205	8952	9205	8952
55°	8905	8694	8905	8694
60°	8599	8355	8599	8355
65°	8226	7973	8226	7973
70°	7604	7370	7604	7370
75°	6873	6666	6873	6666
80°	5898	5744	5898	5744
85°	4478	4478	4478	4478



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.9	3.6
10°-20°	318.8	10.2
20°-30°	469.9	15.1
30°-40°	548.6	17.6
40°-50°	553.1	17.8
50°-60°	488.8	15.7
60°-70°	365.6	11.7
70°-80°	202.6	6.5
80°-90°	51.9	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°	901.7	29.0
0°-40°	1450.3	46.6
0°-60°	2492.3	80.1
0°-90°	3112.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3112.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1196	1196	1196	1196	1196	
5°	1185	1193	1185	1193	1185	112
15°	1129	1134	1129	1134	1129	318
25°	1024	1015	1024	1015	1024	472
35°	884	872	884	872	884	553
45°	726	708	726	708	726	560
55°	554	540	554	540	554	495
65°	377	365	377	365	377	371
75°	193	187	193	187	193	205
85°	42	42	42	42	42	51
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°	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3
2.5°	1189.0	1194.8	1200.6	1199.2	1194.8	1191.9	1193.3	1193.3	1194.8	1194.8	1194.8
5°	1184.6	1190.4	1194.8	1193.3	1189.0	1187.5	1187.5	1187.5	1190.4	1193.3	1190.4
7.5°	1177.3	1181.6	1186.1	1184.6	1180.3	1178.8	1178.8	1180.3	1183.1	1186.1	1183.1
10°	1164.1	1170.0	1174.4	1171.5	1167.1	1164.1	1164.1	1164.1	1167.1	1170.0	1167.1
12.5°	1148.1	1152.5	1156.8	1155.4	1151.0	1148.1	1148.1	1148.1	1151.0	1153.9	1151.0
15°	1129.1	1133.5	1137.8	1136.4	1132.0	1129.1	1129.1	1129.1	1132.0	1133.5	1132.0
17.5°	1107.1	1111.6	1116.0	1113.0	1107.1	1104.3	1104.3	1104.3	1107.1	1108.6	1107.1
20°	1082.3	1086.8	1089.6	1086.8	1080.9	1078.0	1076.5	1076.5	1079.4	1080.9	1079.4
22.5°	1054.6	1057.5	1060.5	1057.5	1051.6	1048.8	1047.3	1045.8	1047.3	1048.8	1047.3
25°	1023.9	1026.8	1029.8	1026.8	1021.0	1016.6	1015.1	1013.7	1015.1	1015.1	1015.1
27.5°	993.3	994.7	997.6	993.3	987.4	983.0	981.6	980.1	981.6	981.6	981.6
30°	958.2	959.6	962.6	958.2	950.9	946.5	945.1	943.6	943.6	943.6	943.6
32.5°	921.7	924.6	927.5	921.7	914.3	910.0	908.5	907.1	908.5	908.5	908.5
35°	883.7	885.1	888.1	883.7	876.4	872.0	869.1	867.6	870.6	872.0	870.6
37.5°	847.2	848.6	850.1	845.8	838.4	834.0	831.1	829.6	828.2	828.2	828.2
40°	806.3	807.8	810.6	806.3	799.0	794.6	791.7	790.2	790.2	790.2	790.2
42.5°	766.8	768.3	769.8	765.4	758.1	753.7	750.8	749.3	750.8	750.8	750.8
45°	726.0	726.0	727.4	723.0	717.2	712.8	709.8	708.5	708.5	708.5	708.5
47.5°	683.6	685.0	686.5	682.1	676.3	671.9	669.0	666.1	666.1	666.1	666.1
50°	641.3	641.3	642.7	638.3	632.5	628.1	626.6	625.2	623.7	623.7	623.7
52.5°	597.5	598.8	600.3	596.0	591.6	587.2	584.3	582.8	582.8	582.8	582.8
55°	553.6	553.6	555.0	552.1	547.8	543.3	540.5	539.0	540.5	540.5	540.5
57.5°	509.8	511.2	512.7	508.3	504.0	499.5	498.1	496.6	496.6	496.6	496.6
60°	466.0	466.0	467.5	464.5	460.1	455.7	454.3	452.8	452.8	452.8	452.8
62.5°	422.1	422.1	423.6	420.7	416.3	411.9	410.5	409.0	409.0	409.0	409.0
65°	376.8	376.8	376.8	374.0	371.0	369.5	368.1	366.6	365.2	365.2	365.2
67.5°	327.2	327.2	328.7	325.7	322.8	321.3	319.8	318.5	317.0	317.0	317.0
70°	281.9	281.9	283.3	281.9	279.0	277.5	276.0	274.6	273.2	273.2	273.2
72.5°	238.1	238.1	238.1	236.6	235.2	233.7	232.3	230.8	229.3	229.3	229.3
75°	192.8	192.8	194.3	192.8	191.3	189.9	188.5	188.5	187.0	187.0	187.0
77.5°	150.5	151.9	153.3	151.9	150.5	149.0	147.5	147.5	146.0	146.0	146.0
80°	111.0	112.5	114.0	112.5	111.0	109.5	108.1	108.1	108.1	108.1	108.1
82.5°	74.5	76.0	77.4	76.0	74.5	74.5	73.0	73.0	73.0	73.0	73.0
85°	42.3	43.8	45.3	45.3	43.8	43.8	42.3	42.3	42.3	42.3	42.3
87.5°	16.0	17.5	19.0	19.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5
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°	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3
2.5°	1193.3	1193.3	1191.9	1194.8	1199.2	1200.6	1194.8	1189.0	1194.8	1200.6	1199.2
5°	1187.5	1187.5	1187.5	1189.0	1193.3	1194.8	1190.4	1184.6	1190.4	1194.8	1193.3
7.5°	1180.3	1178.8	1178.8	1180.3	1184.6	1186.1	1181.6	1177.3	1181.6	1186.1	1184.6
10°	1164.1	1164.1	1164.1	1167.1	1171.5	1174.4	1170.0	1164.1	1170.0	1174.4	1171.5
12.5°	1148.1	1148.1	1148.1	1151.0	1155.4	1156.8	1152.5	1148.1	1152.5	1156.8	1155.4
15°	1129.1	1129.1	1129.1	1132.0	1136.4	1137.8	1133.5	1129.1	1133.5	1137.8	1136.4
17.5°	1104.3	1104.3	1104.3	1107.1	1113.0	1116.0	1111.6	1107.1	1111.6	1116.0	1113.0
20°	1076.5	1076.5	1078.0	1080.9	1086.8	1089.6	1086.8	1082.3	1086.8	1089.6	1086.8
22.5°	1045.8	1047.3	1048.8	1051.6	1057.5	1060.5	1057.5	1054.6	1057.5	1060.5	1057.5
25°	1013.7	1015.1	1016.6	1021.0	1026.8	1029.8	1026.8	1023.9	1026.8	1029.8	1026.8
27.5°	980.1	981.6	983.0	987.4	993.3	997.6	994.7	993.3	994.7	997.6	993.3
30°	943.6	945.1	946.5	950.9	958.2	962.6	959.6	958.2	959.6	962.6	958.2
32.5°	907.1	908.5	910.0	914.3	921.7	927.5	924.6	921.7	924.6	927.5	921.7
35°	867.6	869.1	872.0	876.4	883.7	888.1	885.1	883.7	885.1	888.1	883.7
37.5°	829.6	831.1	834.0	838.4	845.8	850.1	848.6	847.2	848.6	850.1	845.8
40°	790.2	791.7	794.6	799.0	806.3	810.6	807.8	806.3	807.8	810.6	806.3
42.5°	749.3	750.8	753.7	758.1	765.4	769.8	768.3	766.8	768.3	769.8	765.4
45°	708.5	709.8	712.8	717.2	723.0	727.4	726.0	726.0	726.0	727.4	723.0
47.5°	666.1	669.0	671.9	676.3	682.1	686.5	685.0	683.6	685.0	686.5	682.1
50°	625.2	626.6	628.1	632.5	638.3	642.7	641.3	641.3	641.3	642.7	638.3
52.5°	582.8	584.3	587.2	591.6	596.0	600.3	598.8	597.5	598.8	600.3	596.0
55°	539.0	540.5	543.3	547.8	552.1	555.0	553.6	553.6	553.6	555.0	552.1
57.5°	496.6	498.1	499.5	504.0	508.3	512.7	511.2	509.8	511.2	512.7	508.3
60°	452.8	454.3	455.7	460.1	464.5	467.5	466.0	466.0	466.0	467.5	464.5
62.5°	409.0	410.5	411.9	416.3	420.7	423.6	422.1	422.1	422.1	423.6	420.7
65°	366.6	368.1	369.5	371.0	374.0	376.8	376.8	376.8	376.8	376.8	374.0
67.5°	318.5	319.8	321.3	322.8	325.7	328.7	327.2	327.2	327.2	328.7	325.7
70°	274.6	276.0	277.5	279.0	281.9	283.3	281.9	281.9	281.9	283.3	281.9
72.5°	230.8	232.3	233.7	235.2	236.6	238.1	238.1	238.1	238.1	238.1	236.6
75°	188.5	188.5	189.9	191.3	192.8	194.3	192.8	192.8	192.8	194.3	192.8
77.5°	147.5	147.5	149.0	150.5	151.9	153.3	151.9	150.5	151.9	153.3	151.9
80°	108.1	108.1	109.5	111.0	112.5	114.0	112.5	111.0	112.5	114.0	112.5
82.5°	73.0	73.0	74.5	74.5	76.0	77.4	76.0	74.5	76.0	77.4	76.0
85°	42.3	42.3	43.8	43.8	45.3	45.3	43.8	42.3	43.8	45.3	45.3
87.5°	17.5	17.5	17.5	17.5	19.0	19.0	17.5	16.0	17.5	19.0	19.0
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°	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3	1196.3
2.5°	1194.8	1191.9	1193.3	1193.3	1194.8	1194.8	1194.8	1193.3	1193.3	1191.9	1194.8
5°	1189.0	1187.5	1187.5	1187.5	1190.4	1193.3	1190.4	1187.5	1187.5	1187.5	1189.0
7.5°	1180.3	1178.8	1178.8	1180.3	1183.1	1186.1	1183.1	1180.3	1178.8	1178.8	1180.3
10°	1167.1	1164.1	1164.1	1164.1	1167.1	1170.0	1167.1	1164.1	1164.1	1164.1	1167.1
12.5°	1151.0	1148.1	1148.1	1148.1	1151.0	1153.9	1151.0	1148.1	1148.1	1148.1	1151.0
15°	1132.0	1129.1	1129.1	1129.1	1132.0	1133.5	1132.0	1129.1	1129.1	1129.1	1132.0
17.5°	1107.1	1104.3	1104.3	1104.3	1107.1	1108.6	1107.1	1104.3	1104.3	1104.3	1107.1
20°	1080.9	1078.0	1076.5	1076.5	1079.4	1080.9	1079.4	1076.5	1076.5	1078.0	1080.9
22.5°	1051.6	1048.8	1047.3	1045.8	1047.3	1048.8	1047.3	1045.8	1047.3	1048.8	1051.6
25°	1021.0	1016.6	1015.1	1013.7	1015.1	1015.1	1015.1	1013.7	1015.1	1016.6	1021.0
27.5°	987.4	983.0	981.6	980.1	981.6	981.6	981.6	980.1	981.6	983.0	987.4
30°	950.9	946.5	945.1	943.6	943.6	943.6	943.6	943.6	945.1	946.5	950.9
32.5°	914.3	910.0	908.5	907.1	908.5	908.5	908.5	907.1	908.5	910.0	914.3
35°	876.4	872.0	869.1	867.6	870.6	872.0	870.6	867.6	869.1	872.0	876.4
37.5°	838.4	834.0	831.1	829.6	828.2	828.2	828.2	829.6	831.1	834.0	838.4
40°	799.0	794.6	791.7	790.2	790.2	790.2	790.2	790.2	791.7	794.6	799.0
42.5°	758.1	753.7	750.8	749.3	750.8	750.8	750.8	749.3	750.8	753.7	758.1
45°	717.2	712.8	709.8	708.5	708.5	708.5	708.5	708.5	709.8	712.8	717.2
47.5°	676.3	671.9	669.0	666.1	666.1	666.1	666.1	666.1	669.0	671.9	676.3
50°	632.5	628.1	626.6	625.2	623.7	623.7	623.7	625.2	626.6	628.1	632.5
52.5°	591.6	587.2	584.3	582.8	582.8	582.8	582.8	582.8	584.3	587.2	591.6
55°	547.8	543.3	540.5	539.0	540.5	540.5	540.5	539.0	540.5	543.3	547.8
57.5°	504.0	499.5	498.1	496.6	496.6	496.6	496.6	496.6	498.1	499.5	504.0
60°	460.1	455.7	454.3	452.8	452.8	452.8	452.8	452.8	454.3	455.7	460.1
62.5°	416.3	411.9	410.5	409.0	409.0	409.0	409.0	409.0	410.5	411.9	416.3
65°	371.0	369.5	368.1	366.6	365.2	365.2	365.2	366.6	368.1	369.5	371.0
67.5°	322.8	321.3	319.8	318.5	317.0	317.0	317.0	318.5	319.8	321.3	322.8
70°	279.0	277.5	276.0	274.6	273.2	273.2	273.2	274.6	276.0	277.5	279.0
72.5°	235.2	233.7	232.3	230.8	229.3	229.3	229.3	230.8	232.3	233.7	235.2
75°	191.3	189.9	188.5	188.5	187.0	187.0	187.0	188.5	188.5	189.9	191.3
77.5°	150.5	149.0	147.5	147.5	146.0	146.0	146.0	147.5	147.5	149.0	150.5
80°	111.0	109.5	108.1	108.1	108.1	108.1	108.1	108.1	108.1	109.5	111.0
82.5°	74.5	74.5	73.0	73.0	73.0	73.0	73.0	73.0	73.0	74.5	74.5
85°	43.8	43.8	42.3	42.3	42.3	42.3	42.3	42.3	42.3	43.8	43.8
87.5°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
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-34L840-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1196.3	1196.3	1196.3	1196.3
2.5°	1199.2	1200.6	1194.8	1189.0
5°	1193.3	1194.8	1190.4	1184.6
7.5°	1184.6	1186.1	1181.6	1177.3
10°	1171.5	1174.4	1170.0	1164.1
12.5°	1155.4	1156.8	1152.5	1148.1
15°	1136.4	1137.8	1133.5	1129.1
17.5°	1113.0	1116.0	1111.6	1107.1
20°	1086.8	1089.6	1086.8	1082.3
22.5°	1057.5	1060.5	1057.5	1054.6
25°	1026.8	1029.8	1026.8	1023.9
27.5°	993.3	997.6	994.7	993.3
30°	958.2	962.6	959.6	958.2
32.5°	921.7	927.5	924.6	921.7
35°	883.7	888.1	885.1	883.7
37.5°	845.8	850.1	848.6	847.2
40°	806.3	810.6	807.8	806.3
42.5°	765.4	769.8	768.3	766.8
45°	723.0	727.4	726.0	726.0
47.5°	682.1	686.5	685.0	683.6
50°	638.3	642.7	641.3	641.3
52.5°	596.0	600.3	598.8	597.5
55°	552.1	555.0	553.6	553.6
57.5°	508.3	512.7	511.2	509.8
60°	464.5	467.5	466.0	466.0
62.5°	420.7	423.6	422.1	422.1
65°	374.0	376.8	376.8	376.8
67.5°	325.7	328.7	327.2	327.2
70°	281.9	283.3	281.9	281.9
72.5°	236.6	238.1	238.1	238.1
75°	192.8	194.3	192.8	192.8
77.5°	151.9	153.3	151.9	150.5
80°	112.5	114.0	112.5	111.0
82.5°	76.0	77.4	76.0	74.5
85°	45.3	45.3	43.8	42.3
87.5°	19.0	19.0	17.5	16.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)