

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-34L850-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-34L850-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

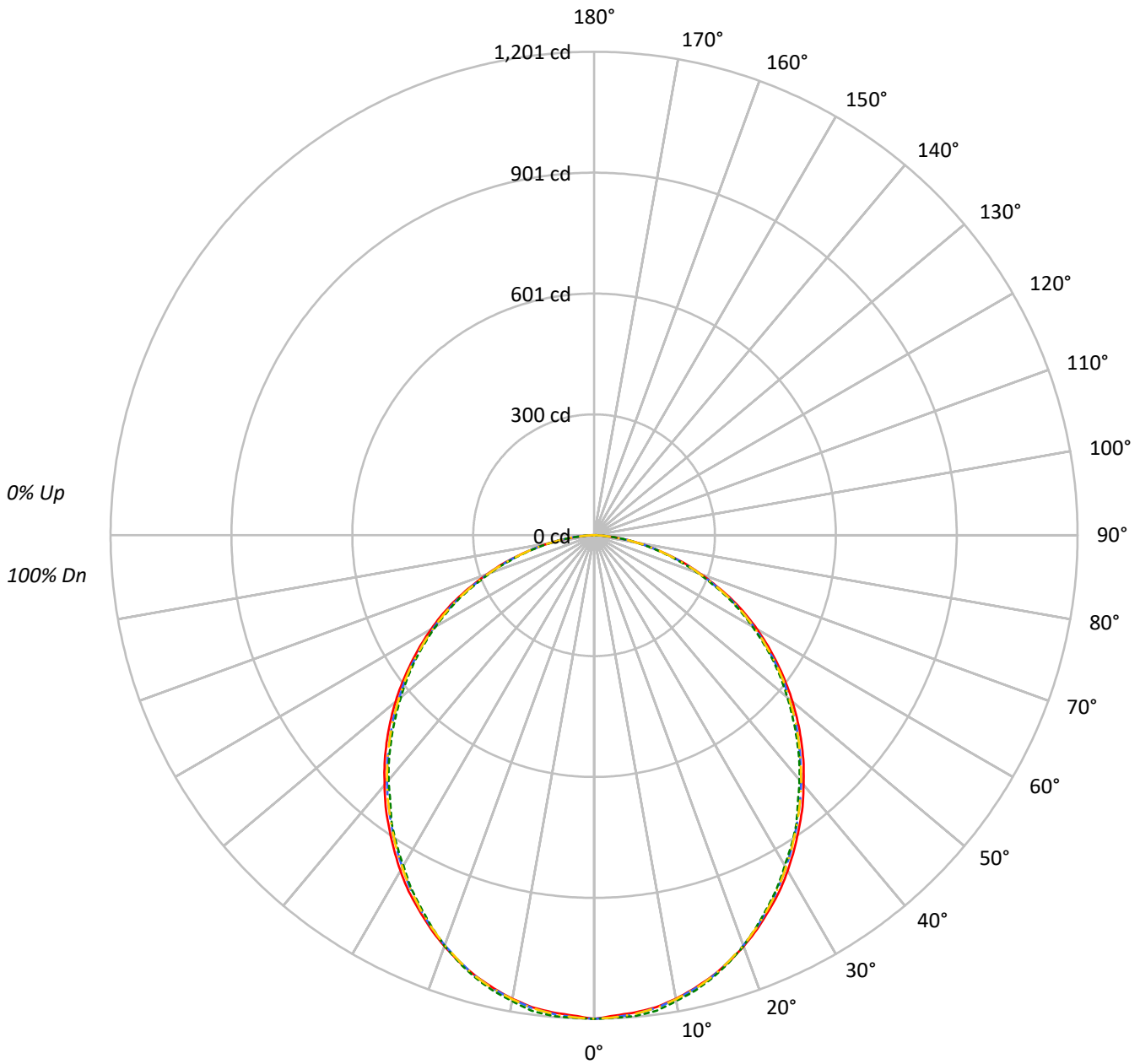
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3125.4 lumens
Efficiency: N/A
Efficacy: 84.9 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 (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

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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				
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°	11083	11083	11083	11083
5°	11017	11099	11017	11099
10°	10952	11007	10952	11007
15°	10831	10872	10831	10872
20°	10672	10658	10672	10658
25°	10467	10378	10467	10378
30°	10251	10094	10251	10094
35°	9995	9863	9995	9863
40°	9752	9558	9752	9558
45°	9512	9282	9512	9282
50°	9242	8990	9242	8990
55°	8942	8730	8942	8730
60°	8634	8390	8634	8390
65°	8261	8005	8261	8005
70°	7637	7399	7637	7399
75°	6901	6691	6901	6691
80°	5924	5765	5924	5765
85°	4499	4499	4499	4499



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.4	3.6
10°-20°	320.2	10.2
20°-30°	471.9	15.1
30°-40°	550.9	17.6
40°-50°	555.4	17.8
50°-60°	490.9	15.7
60°-70°	367.1	11.7
70°-80°	203.5	6.5
80°-90°	52.2	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°	905.5	29.0
0°-40°	1456.4	46.6
0°-60°	2502.7	80.1
0°-90°	3125.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3125.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1201	1201	1201	1201	1201	
5°	1190	1198	1190	1198	1190	113
15°	1134	1138	1134	1138	1134	320
25°	1028	1020	1028	1020	1028	474
35°	887	876	887	876	887	556
45°	729	711	729	711	729	562
55°	556	543	556	543	556	497
65°	378	367	378	367	378	373
75°	194	188	194	188	194	206
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°	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3
2.5°	1194.0	1199.8	1205.7	1204.2	1199.8	1196.9	1198.4	1198.4	1199.8	1199.8	1199.8
5°	1189.6	1195.5	1199.8	1198.4	1194.0	1192.5	1192.5	1192.5	1195.5	1198.4	1195.5
7.5°	1182.3	1186.6	1191.0	1189.6	1185.1	1183.7	1183.7	1185.1	1188.1	1191.0	1188.1
10°	1169.0	1174.9	1179.3	1176.4	1172.0	1169.0	1169.0	1169.0	1172.0	1174.9	1172.0
12.5°	1152.9	1157.3	1161.7	1160.2	1155.8	1152.9	1152.9	1152.9	1155.8	1158.8	1155.8
15°	1133.9	1138.2	1142.6	1141.2	1136.7	1133.9	1133.9	1133.9	1136.7	1138.2	1136.7
17.5°	1111.8	1116.3	1120.6	1117.7	1111.8	1108.9	1108.9	1108.9	1111.8	1113.3	1111.8
20°	1086.9	1091.3	1094.2	1091.3	1085.5	1082.5	1081.0	1081.0	1084.0	1085.5	1084.0
22.5°	1059.0	1062.0	1064.9	1062.0	1056.1	1053.2	1051.7	1050.3	1051.7	1053.2	1051.7
25°	1028.2	1031.2	1034.1	1031.2	1025.3	1020.9	1019.5	1018.0	1019.5	1019.5	1019.5
27.5°	997.4	998.9	1001.8	997.4	991.5	987.2	985.7	984.2	985.7	985.7	985.7
30°	962.2	963.7	966.6	962.2	954.9	950.5	949.0	947.5	947.5	947.5	947.5
32.5°	925.5	928.5	931.4	925.5	918.2	913.8	912.3	910.8	912.3	912.3	912.3
35°	887.4	888.9	891.9	887.4	880.0	875.7	872.8	871.3	874.2	875.7	874.2
37.5°	850.7	852.2	853.7	849.3	842.0	837.5	834.6	833.1	831.6	831.6	831.6
40°	809.7	811.2	814.0	809.7	802.3	797.9	795.0	793.6	793.6	793.6	793.6
42.5°	770.1	771.5	773.0	768.6	761.3	756.9	753.9	752.4	753.9	753.9	753.9
45°	729.0	729.0	730.5	726.1	720.2	715.8	712.9	711.4	711.4	711.4	711.4
47.5°	686.4	687.9	689.4	685.0	679.1	674.7	671.8	668.8	668.8	668.8	668.8
50°	643.9	643.9	645.4	641.0	635.2	630.7	629.3	627.8	626.3	626.3	626.3
52.5°	599.9	601.4	602.9	598.5	594.0	589.6	586.8	585.3	585.3	585.3	585.3
55°	555.9	555.9	557.3	554.5	550.1	545.6	542.7	541.2	542.7	542.7	542.7
57.5°	511.9	513.4	514.8	510.4	506.1	501.7	500.2	498.7	498.7	498.7	498.7
60°	467.9	467.9	469.4	466.4	462.0	457.7	456.2	454.7	454.7	454.7	454.7
62.5°	423.9	423.9	425.4	422.5	418.0	413.6	412.1	410.7	410.7	410.7	410.7
65°	378.4	378.4	378.4	375.5	372.6	371.1	369.6	368.2	366.7	366.7	366.7
67.5°	328.6	328.6	330.0	327.1	324.2	322.7	321.2	319.7	318.3	318.3	318.3
70°	283.1	283.1	284.5	283.1	280.2	278.7	277.2	275.8	274.3	274.3	274.3
72.5°	239.1	239.1	239.1	237.6	236.1	234.6	233.3	231.8	230.3	230.3	230.3
75°	193.6	193.6	195.1	193.6	192.1	190.7	189.2	189.2	187.7	187.7	187.7
77.5°	151.1	152.6	154.0	152.6	151.1	149.6	148.2	148.2	146.7	146.7	146.7
80°	111.5	112.9	114.4	112.9	111.5	110.0	108.5	108.5	108.5	108.5	108.5
82.5°	74.8	76.2	77.7	76.2	74.8	74.8	73.3	73.3	73.3	73.3	73.3
85°	42.5	44.0	45.5	45.5	44.0	44.0	42.5	42.5	42.5	42.5	42.5
87.5°	16.1	17.6	19.1	19.1	17.6	17.6	17.6	17.6	17.6	17.6	17.6
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°	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3
2.5°	1198.4	1198.4	1196.9	1199.8	1204.2	1205.7	1199.8	1194.0	1199.8	1205.7	1204.2
5°	1192.5	1192.5	1192.5	1194.0	1198.4	1199.8	1195.5	1189.6	1195.5	1199.8	1198.4
7.5°	1185.1	1183.7	1183.7	1185.1	1189.6	1191.0	1186.6	1182.3	1186.6	1191.0	1189.6
10°	1169.0	1169.0	1169.0	1172.0	1176.4	1179.3	1174.9	1169.0	1174.9	1179.3	1176.4
12.5°	1152.9	1152.9	1152.9	1155.8	1160.2	1161.7	1157.3	1152.9	1157.3	1161.7	1160.2
15°	1133.9	1133.9	1133.9	1136.7	1141.2	1142.6	1138.2	1133.9	1138.2	1142.6	1141.2
17.5°	1108.9	1108.9	1108.9	1111.8	1117.7	1120.6	1116.3	1111.8	1116.3	1120.6	1117.7
20°	1081.0	1081.0	1082.5	1085.5	1091.3	1094.2	1091.3	1086.9	1091.3	1094.2	1091.3
22.5°	1050.3	1051.7	1053.2	1056.1	1062.0	1064.9	1062.0	1059.0	1062.0	1064.9	1062.0
25°	1018.0	1019.5	1020.9	1025.3	1031.2	1034.1	1031.2	1028.2	1031.2	1034.1	1031.2
27.5°	984.2	985.7	987.2	991.5	997.4	1001.8	998.9	997.4	998.9	1001.8	997.4
30°	947.5	949.0	950.5	954.9	962.2	966.6	963.7	962.2	963.7	966.6	962.2
32.5°	910.8	912.3	913.8	918.2	925.5	931.4	928.5	925.5	928.5	931.4	925.5
35°	871.3	872.8	875.7	880.0	887.4	891.9	888.9	887.4	888.9	891.9	887.4
37.5°	833.1	834.6	837.5	842.0	849.3	853.7	852.2	850.7	852.2	853.7	849.3
40°	793.6	795.0	797.9	802.3	809.7	814.0	811.2	809.7	811.2	814.0	809.7
42.5°	752.4	753.9	756.9	761.3	768.6	773.0	771.5	770.1	771.5	773.0	768.6
45°	711.4	712.9	715.8	720.2	726.1	730.5	729.0	729.0	729.0	730.5	726.1
47.5°	668.8	671.8	674.7	679.1	685.0	689.4	687.9	686.4	687.9	689.4	685.0
50°	627.8	629.3	630.7	635.2	641.0	645.4	643.9	643.9	643.9	645.4	641.0
52.5°	585.3	586.8	589.6	594.0	598.5	602.9	601.4	599.9	601.4	602.9	598.5
55°	541.2	542.7	545.6	550.1	554.5	557.3	555.9	555.9	555.9	557.3	554.5
57.5°	498.7	500.2	501.7	506.1	510.4	514.8	513.4	511.9	513.4	514.8	510.4
60°	454.7	456.2	457.7	462.0	466.4	469.4	467.9	467.9	467.9	469.4	466.4
62.5°	410.7	412.1	413.6	418.0	422.5	425.4	423.9	423.9	423.9	425.4	422.5
65°	368.2	369.6	371.1	372.6	375.5	378.4	378.4	378.4	378.4	378.4	375.5
67.5°	319.7	321.2	322.7	324.2	327.1	330.0	328.6	328.6	328.6	330.0	327.1
70°	275.8	277.2	278.7	280.2	283.1	284.5	283.1	283.1	283.1	284.5	283.1
72.5°	231.8	233.3	234.6	236.1	237.6	239.1	239.1	239.1	239.1	239.1	237.6
75°	189.2	189.2	190.7	192.1	193.6	195.1	193.6	193.6	193.6	195.1	193.6
77.5°	148.2	148.2	149.6	151.1	152.6	154.0	152.6	151.1	152.6	154.0	152.6
80°	108.5	108.5	110.0	111.5	112.9	114.4	112.9	111.5	112.9	114.4	112.9
82.5°	73.3	73.3	74.8	74.8	76.2	77.7	76.2	74.8	76.2	77.7	76.2
85°	42.5	42.5	44.0	44.0	45.5	45.5	44.0	42.5	44.0	45.5	45.5
87.5°	17.6	17.6	17.6	17.6	19.1	19.1	17.6	16.1	17.6	19.1	19.1
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°	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3	1201.3
2.5°	1199.8	1196.9	1198.4	1198.4	1199.8	1199.8	1199.8	1198.4	1198.4	1196.9	1199.8
5°	1194.0	1192.5	1192.5	1192.5	1195.5	1198.4	1195.5	1192.5	1192.5	1192.5	1194.0
7.5°	1185.1	1183.7	1183.7	1185.1	1188.1	1191.0	1188.1	1185.1	1183.7	1183.7	1185.1
10°	1172.0	1169.0	1169.0	1169.0	1172.0	1174.9	1172.0	1169.0	1169.0	1169.0	1172.0
12.5°	1155.8	1152.9	1152.9	1152.9	1155.8	1158.8	1155.8	1152.9	1152.9	1152.9	1155.8
15°	1136.7	1133.9	1133.9	1133.9	1136.7	1138.2	1136.7	1133.9	1133.9	1133.9	1136.7
17.5°	1111.8	1108.9	1108.9	1108.9	1111.8	1113.3	1111.8	1108.9	1108.9	1108.9	1111.8
20°	1085.5	1082.5	1081.0	1081.0	1084.0	1085.5	1084.0	1081.0	1081.0	1082.5	1085.5
22.5°	1056.1	1053.2	1051.7	1050.3	1051.7	1053.2	1051.7	1050.3	1051.7	1053.2	1056.1
25°	1025.3	1020.9	1019.5	1018.0	1019.5	1019.5	1019.5	1018.0	1019.5	1020.9	1025.3
27.5°	991.5	987.2	985.7	984.2	985.7	985.7	985.7	984.2	985.7	987.2	991.5
30°	954.9	950.5	949.0	947.5	947.5	947.5	947.5	947.5	949.0	950.5	954.9
32.5°	918.2	913.8	912.3	910.8	912.3	912.3	912.3	910.8	912.3	913.8	918.2
35°	880.0	875.7	872.8	871.3	874.2	875.7	874.2	871.3	872.8	875.7	880.0
37.5°	842.0	837.5	834.6	833.1	831.6	831.6	831.6	833.1	834.6	837.5	842.0
40°	802.3	797.9	795.0	793.6	793.6	793.6	793.6	793.6	795.0	797.9	802.3
42.5°	761.3	756.9	753.9	752.4	753.9	753.9	753.9	752.4	753.9	756.9	761.3
45°	720.2	715.8	712.9	711.4	711.4	711.4	711.4	711.4	712.9	715.8	720.2
47.5°	679.1	674.7	671.8	668.8	668.8	668.8	668.8	668.8	671.8	674.7	679.1
50°	635.2	630.7	629.3	627.8	626.3	626.3	626.3	627.8	629.3	630.7	635.2
52.5°	594.0	589.6	586.8	585.3	585.3	585.3	585.3	585.3	586.8	589.6	594.0
55°	550.1	545.6	542.7	541.2	542.7	542.7	542.7	541.2	542.7	545.6	550.1
57.5°	506.1	501.7	500.2	498.7	498.7	498.7	498.7	498.7	500.2	501.7	506.1
60°	462.0	457.7	456.2	454.7	454.7	454.7	454.7	454.7	456.2	457.7	462.0
62.5°	418.0	413.6	412.1	410.7	410.7	410.7	410.7	410.7	412.1	413.6	418.0
65°	372.6	371.1	369.6	368.2	366.7	366.7	366.7	368.2	369.6	371.1	372.6
67.5°	324.2	322.7	321.2	319.7	318.3	318.3	318.3	319.7	321.2	322.7	324.2
70°	280.2	278.7	277.2	275.8	274.3	274.3	274.3	275.8	277.2	278.7	280.2
72.5°	236.1	234.6	233.3	231.8	230.3	230.3	230.3	231.8	233.3	234.6	236.1
75°	192.1	190.7	189.2	189.2	187.7	187.7	187.7	189.2	189.2	190.7	192.1
77.5°	151.1	149.6	148.2	148.2	146.7	146.7	146.7	148.2	148.2	149.6	151.1
80°	111.5	110.0	108.5	108.5	108.5	108.5	108.5	108.5	108.5	110.0	111.5
82.5°	74.8	74.8	73.3	73.3	73.3	73.3	73.3	73.3	73.3	74.8	74.8
85°	44.0	44.0	42.5	42.5	42.5	42.5	42.5	42.5	42.5	44.0	44.0
87.5°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
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-34L850-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1201.3	1201.3	1201.3	1201.3
2.5°	1204.2	1205.7	1199.8	1194.0
5°	1198.4	1199.8	1195.5	1189.6
7.5°	1189.6	1191.0	1186.6	1182.3
10°	1176.4	1179.3	1174.9	1169.0
12.5°	1160.2	1161.7	1157.3	1152.9
15°	1141.2	1142.6	1138.2	1133.9
17.5°	1117.7	1120.6	1116.3	1111.8
20°	1091.3	1094.2	1091.3	1086.9
22.5°	1062.0	1064.9	1062.0	1059.0
25°	1031.2	1034.1	1031.2	1028.2
27.5°	997.4	1001.8	998.9	997.4
30°	962.2	966.6	963.7	962.2
32.5°	925.5	931.4	928.5	925.5
35°	887.4	891.9	888.9	887.4
37.5°	849.3	853.7	852.2	850.7
40°	809.7	814.0	811.2	809.7
42.5°	768.6	773.0	771.5	770.1
45°	726.1	730.5	729.0	729.0
47.5°	685.0	689.4	687.9	686.4
50°	641.0	645.4	643.9	643.9
52.5°	598.5	602.9	601.4	599.9
55°	554.5	557.3	555.9	555.9
57.5°	510.4	514.8	513.4	511.9
60°	466.4	469.4	467.9	467.9
62.5°	422.5	425.4	423.9	423.9
65°	375.5	378.4	378.4	378.4
67.5°	327.1	330.0	328.6	328.6
70°	283.1	284.5	283.1	283.1
72.5°	237.6	239.1	239.1	239.1
75°	193.6	195.1	193.6	193.6
77.5°	152.6	154.0	152.6	151.1
80°	112.9	114.4	112.9	111.5
82.5°	76.2	77.7	76.2	74.8
85°	45.5	45.5	44.0	42.5
87.5°	19.1	19.1	17.6	16.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)