

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-34L830-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-34L830-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

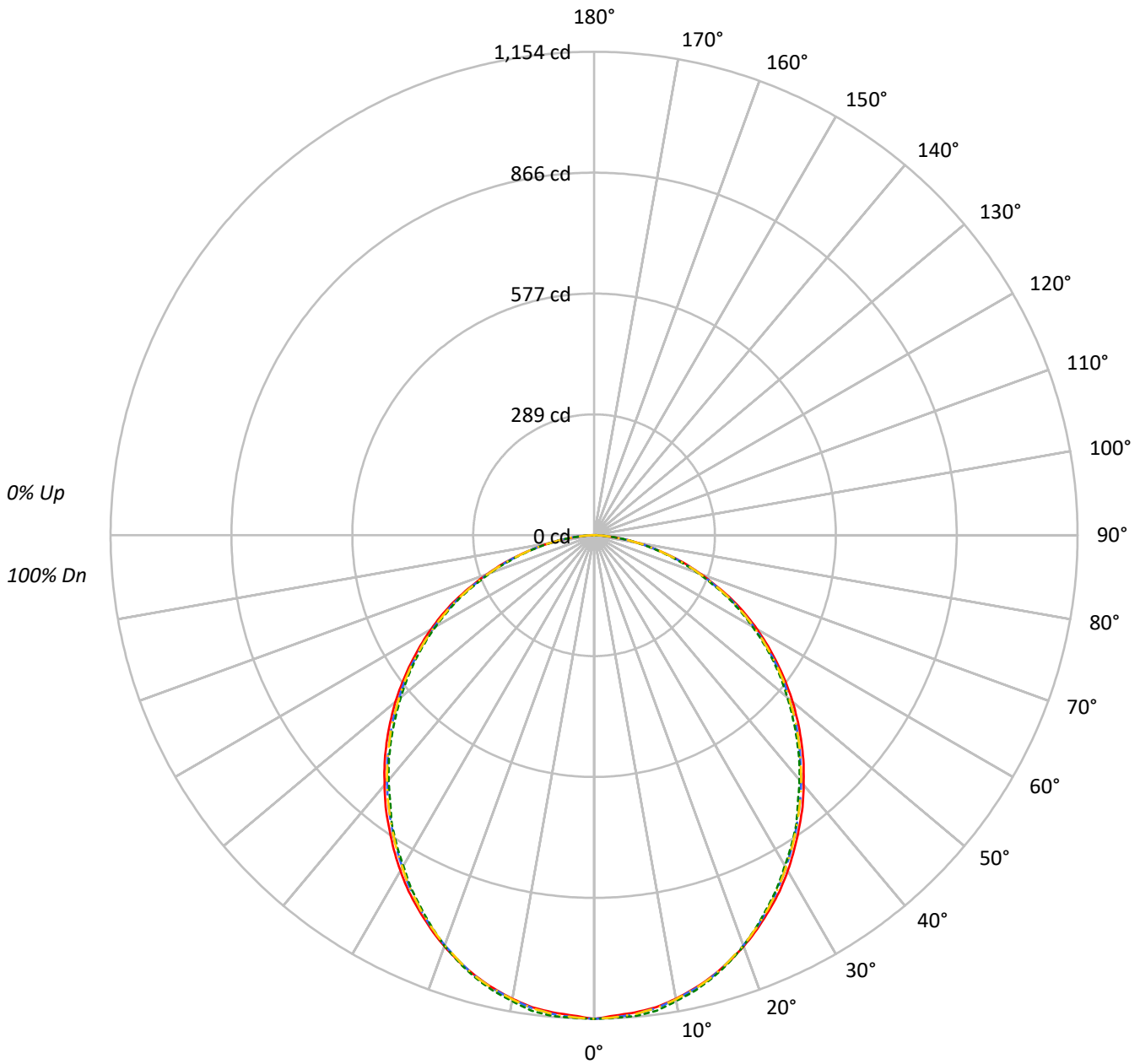
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3003.4 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): 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

TEST NUMBER: P
CATALOG NUMBER: 4APN-X-34L830-UNV-NP

Luminous Intensity Polar Plot



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



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 CATALOG NUMBER: 4APN-X-34L830-UNV-NP

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°	10651	10651	10651	10651
5°	10587	10665	10587	10665
10°	10525	10578	10525	10578
15°	10407	10448	10407	10448
20°	10254	10241	10254	10241
25°	10059	9972	10059	9972
30°	9851	9701	9851	9701
35°	9605	9478	9605	9478
40°	9371	9185	9371	9185
45°	9140	8921	9140	8921
50°	8882	8639	8882	8639
55°	8593	8390	8593	8390
60°	8298	8062	8298	8062
65°	7938	7693	7938	7693
70°	7340	7111	7340	7111
75°	6634	6431	6634	6431
80°	5690	5542	5690	5542
85°	4319	4319	4319	4319



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-34L830-UNV-NP

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.0	3.6
10°-20°	307.7	10.2
20°-30°	453.5	15.1
30°-40°	529.4	17.6
40°-50°	533.7	17.8
50°-60°	471.7	15.7
60°-70°	352.8	11.7
70°-80°	195.5	6.5
80°-90°	50.1	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°	870.1	29.0
0°-40°	1399.6	46.6
0°-60°	2405.0	80.1
0°-90°	3003.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3003.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1154	1154	1154	1154	1154	
5°	1143	1152	1143	1152	1143	109
15°	1090	1094	1090	1094	1090	307
25°	988	980	988	980	988	455
35°	853	842	853	842	853	534
45°	700	684	700	684	700	540
55°	534	522	534	522	534	478
65°	364	352	364	352	364	358
75°	186	180	186	180	186	198
85°	41	41	41	41	41	49
90°	0	0	0	0	0	



TEST NUMBER: P

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4
2.5°	1147.3	1153.0	1158.7	1157.2	1153.0	1150.2	1151.6	1151.6	1153.0	1153.0	1153.0
5°	1143.1	1148.8	1153.0	1151.6	1147.3	1146.0	1146.0	1146.0	1148.8	1151.6	1148.8
7.5°	1136.1	1140.3	1144.6	1143.1	1138.9	1137.5	1137.5	1138.9	1141.7	1144.6	1141.7
10°	1123.4	1129.1	1133.2	1130.5	1126.2	1123.4	1123.4	1123.4	1126.2	1129.1	1126.2
12.5°	1107.9	1112.1	1116.4	1115.0	1110.7	1107.9	1107.9	1107.9	1110.7	1113.5	1110.7
15°	1089.6	1093.8	1098.0	1096.6	1092.4	1089.6	1089.6	1089.6	1092.4	1093.8	1092.4
17.5°	1068.4	1072.7	1076.9	1074.0	1068.4	1065.6	1065.6	1065.6	1068.4	1069.8	1068.4
20°	1044.4	1048.7	1051.5	1048.7	1043.1	1040.2	1038.8	1038.8	1041.7	1043.1	1041.7
22.5°	1017.7	1020.5	1023.3	1020.5	1014.8	1012.1	1010.6	1009.2	1010.6	1012.1	1010.6
25°	988.1	990.9	993.7	990.9	985.2	981.0	979.6	978.2	979.6	979.6	979.6
27.5°	958.5	959.9	962.8	958.5	952.9	948.6	947.2	945.8	947.2	947.2	947.2
30°	924.7	926.1	928.9	924.7	917.6	913.4	912.0	910.6	910.6	910.6	910.6
32.5°	889.5	892.2	895.1	889.5	882.4	878.1	876.7	875.3	876.7	876.7	876.7
35°	852.8	854.1	857.0	852.8	845.8	841.5	838.7	837.3	840.1	841.5	840.1
37.5°	817.5	818.9	820.4	816.2	809.1	804.8	802.0	800.6	799.2	799.2	799.2
40°	778.1	779.5	782.3	778.1	771.0	766.8	764.0	762.6	762.6	762.6	762.6
42.5°	740.0	741.4	742.9	738.6	731.5	727.4	724.5	723.1	724.5	724.5	724.5
45°	700.5	700.5	701.9	697.7	692.1	687.8	685.0	683.7	683.7	683.7	683.7
47.5°	659.7	661.1	662.5	658.2	652.6	648.4	645.6	642.7	642.7	642.7	642.7
50°	618.8	618.8	620.2	616.0	610.4	606.1	604.6	603.3	601.9	601.9	601.9
52.5°	576.5	577.9	579.3	575.1	570.9	566.7	563.8	562.4	562.4	562.4	562.4
55°	534.2	534.2	535.6	532.8	528.6	524.3	521.6	520.1	521.6	521.6	521.6
57.5°	491.9	493.4	494.7	490.5	486.3	482.0	480.6	479.3	479.3	479.3	479.3
60°	449.7	449.7	451.0	448.3	444.0	439.8	438.4	436.9	436.9	436.9	436.9
62.5°	407.3	407.3	408.7	406.0	401.7	397.5	396.1	394.7	394.7	394.7	394.7
65°	363.6	363.6	363.6	360.9	358.0	356.6	355.2	353.8	352.4	352.4	352.4
67.5°	315.7	315.7	317.2	314.3	311.5	310.1	308.7	307.3	305.8	305.8	305.8
70°	272.1	272.1	273.5	272.1	269.2	267.8	266.4	265.0	263.6	263.6	263.6
72.5°	229.8	229.8	229.8	228.4	226.9	225.5	224.1	222.7	221.3	221.3	221.3
75°	186.1	186.1	187.4	186.1	184.7	183.2	181.8	181.8	180.4	180.4	180.4
77.5°	145.2	146.6	148.0	146.6	145.2	143.7	142.4	142.4	141.0	141.0	141.0
80°	107.1	108.5	109.9	108.5	107.1	105.8	104.3	104.3	104.3	104.3	104.3
82.5°	71.9	73.3	74.7	73.3	71.9	71.9	70.4	70.4	70.4	70.4	70.4
85°	40.8	42.3	43.7	43.7	42.3	42.3	40.8	40.8	40.8	40.8	40.8
87.5°	15.5	16.9	18.3	18.3	16.9	16.9	16.9	16.9	16.9	16.9	16.9
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-34L830-UNV-NP

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4
2.5°	1151.6	1151.6	1150.2	1153.0	1157.2	1158.7	1153.0	1147.3	1153.0	1158.7	1157.2
5°	1146.0	1146.0	1146.0	1147.3	1151.6	1153.0	1148.8	1143.1	1148.8	1153.0	1151.6
7.5°	1138.9	1137.5	1137.5	1138.9	1143.1	1144.6	1140.3	1136.1	1140.3	1144.6	1143.1
10°	1123.4	1123.4	1123.4	1126.2	1130.5	1133.2	1129.1	1123.4	1129.1	1133.2	1130.5
12.5°	1107.9	1107.9	1107.9	1110.7	1115.0	1116.4	1112.1	1107.9	1112.1	1116.4	1115.0
15°	1089.6	1089.6	1089.6	1092.4	1096.6	1098.0	1093.8	1089.6	1093.8	1098.0	1096.6
17.5°	1065.6	1065.6	1065.6	1068.4	1074.0	1076.9	1072.7	1068.4	1072.7	1076.9	1074.0
20°	1038.8	1038.8	1040.2	1043.1	1048.7	1051.5	1048.7	1044.4	1048.7	1051.5	1048.7
22.5°	1009.2	1010.6	1012.1	1014.8	1020.5	1023.3	1020.5	1017.7	1020.5	1023.3	1020.5
25°	978.2	979.6	981.0	985.2	990.9	993.7	990.9	988.1	990.9	993.7	990.9
27.5°	945.8	947.2	948.6	952.9	958.5	962.8	959.9	958.5	959.9	962.8	958.5
30°	910.6	912.0	913.4	917.6	924.7	928.9	926.1	924.7	926.1	928.9	924.7
32.5°	875.3	876.7	878.1	882.4	889.5	895.1	892.2	889.5	892.2	895.1	889.5
35°	837.3	838.7	841.5	845.8	852.8	857.0	854.1	852.8	854.1	857.0	852.8
37.5°	800.6	802.0	804.8	809.1	816.2	820.4	818.9	817.5	818.9	820.4	816.2
40°	762.6	764.0	766.8	771.0	778.1	782.3	779.5	778.1	779.5	782.3	778.1
42.5°	723.1	724.5	727.4	731.5	738.6	742.9	741.4	740.0	741.4	742.9	738.6
45°	683.7	685.0	687.8	692.1	697.7	701.9	700.5	700.5	700.5	701.9	697.7
47.5°	642.7	645.6	648.4	652.6	658.2	662.5	661.1	659.7	661.1	662.5	658.2
50°	603.3	604.6	606.1	610.4	616.0	620.2	618.8	618.8	618.8	620.2	616.0
52.5°	562.4	563.8	566.7	570.9	575.1	579.3	577.9	576.5	577.9	579.3	575.1
55°	520.1	521.6	524.3	528.6	532.8	535.6	534.2	534.2	534.2	535.6	532.8
57.5°	479.3	480.6	482.0	486.3	490.5	494.7	493.4	491.9	493.4	494.7	490.5
60°	436.9	438.4	439.8	444.0	448.3	451.0	449.7	449.7	449.7	451.0	448.3
62.5°	394.7	396.1	397.5	401.7	406.0	408.7	407.3	407.3	407.3	408.7	406.0
65°	353.8	355.2	356.6	358.0	360.9	363.6	363.6	363.6	363.6	363.6	360.9
67.5°	307.3	308.7	310.1	311.5	314.3	317.2	315.7	315.7	315.7	317.2	314.3
70°	265.0	266.4	267.8	269.2	272.1	273.5	272.1	272.1	272.1	273.5	272.1
72.5°	222.7	224.1	225.5	226.9	228.4	229.8	229.8	229.8	229.8	229.8	228.4
75°	181.8	181.8	183.2	184.7	186.1	187.4	186.1	186.1	186.1	187.4	186.1
77.5°	142.4	142.4	143.7	145.2	146.6	148.0	146.6	145.2	146.6	148.0	146.6
80°	104.3	104.3	105.8	107.1	108.5	109.9	108.5	107.1	108.5	109.9	108.5
82.5°	70.4	70.4	71.9	71.9	73.3	74.7	73.3	71.9	73.3	74.7	73.3
85°	40.8	40.8	42.3	42.3	43.7	43.7	42.3	40.8	42.3	43.7	43.7
87.5°	16.9	16.9	16.9	16.9	18.3	18.3	16.9	15.5	16.9	18.3	18.3
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-34L830-UNV-NP

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4	1154.4
2.5°	1153.0	1150.2	1151.6	1151.6	1153.0	1153.0	1153.0	1151.6	1151.6	1150.2	1153.0
5°	1147.3	1146.0	1146.0	1146.0	1148.8	1151.6	1148.8	1146.0	1146.0	1146.0	1147.3
7.5°	1138.9	1137.5	1137.5	1138.9	1141.7	1144.6	1141.7	1138.9	1137.5	1137.5	1138.9
10°	1126.2	1123.4	1123.4	1123.4	1126.2	1129.1	1126.2	1123.4	1123.4	1123.4	1126.2
12.5°	1110.7	1107.9	1107.9	1107.9	1110.7	1113.5	1110.7	1107.9	1107.9	1107.9	1110.7
15°	1092.4	1089.6	1089.6	1089.6	1092.4	1093.8	1092.4	1089.6	1089.6	1089.6	1092.4
17.5°	1068.4	1065.6	1065.6	1065.6	1068.4	1069.8	1068.4	1065.6	1065.6	1065.6	1068.4
20°	1043.1	1040.2	1038.8	1038.8	1041.7	1043.1	1041.7	1038.8	1038.8	1040.2	1043.1
22.5°	1014.8	1012.1	1010.6	1009.2	1010.6	1012.1	1010.6	1009.2	1010.6	1012.1	1014.8
25°	985.2	981.0	979.6	978.2	979.6	979.6	979.6	978.2	979.6	981.0	985.2
27.5°	952.9	948.6	947.2	945.8	947.2	947.2	947.2	945.8	947.2	948.6	952.9
30°	917.6	913.4	912.0	910.6	910.6	910.6	910.6	910.6	912.0	913.4	917.6
32.5°	882.4	878.1	876.7	875.3	876.7	876.7	876.7	875.3	876.7	878.1	882.4
35°	845.8	841.5	838.7	837.3	840.1	841.5	840.1	837.3	838.7	841.5	845.8
37.5°	809.1	804.8	802.0	800.6	799.2	799.2	799.2	800.6	802.0	804.8	809.1
40°	771.0	766.8	764.0	762.6	762.6	762.6	762.6	762.6	764.0	766.8	771.0
42.5°	731.5	727.4	724.5	723.1	724.5	724.5	724.5	723.1	724.5	727.4	731.5
45°	692.1	687.8	685.0	683.7	683.7	683.7	683.7	683.7	685.0	687.8	692.1
47.5°	652.6	648.4	645.6	642.7	642.7	642.7	642.7	642.7	645.6	648.4	652.6
50°	610.4	606.1	604.6	603.3	601.9	601.9	601.9	603.3	604.6	606.1	610.4
52.5°	570.9	566.7	563.8	562.4	562.4	562.4	562.4	563.8	566.7	569.9	570.9
55°	528.6	524.3	521.6	520.1	521.6	521.6	521.6	520.1	521.6	524.3	528.6
57.5°	486.3	482.0	480.6	479.3	479.3	479.3	479.3	480.6	482.0	486.3	486.3
60°	444.0	439.8	438.4	436.9	436.9	436.9	436.9	438.4	439.8	444.0	444.0
62.5°	401.7	397.5	396.1	394.7	394.7	394.7	394.7	396.1	397.5	401.7	401.7
65°	358.0	356.6	355.2	353.8	352.4	352.4	352.4	353.8	355.2	356.6	358.0
67.5°	311.5	310.1	308.7	307.3	305.8	305.8	305.8	307.3	308.7	310.1	311.5
70°	269.2	267.8	266.4	265.0	263.6	263.6	263.6	265.0	266.4	267.8	269.2
72.5°	226.9	225.5	224.1	222.7	221.3	221.3	221.3	222.7	224.1	225.5	226.9
75°	184.7	183.2	181.8	181.8	180.4	180.4	180.4	181.8	181.8	183.2	184.7
77.5°	145.2	143.7	142.4	142.4	141.0	141.0	141.0	142.4	142.4	143.7	145.2
80°	107.1	105.8	104.3	104.3	104.3	104.3	104.3	104.3	104.3	105.8	107.1
82.5°	71.9	71.9	70.4	70.4	70.4	70.4	70.4	70.4	70.4	71.9	71.9
85°	42.3	42.3	40.8	40.8	40.8	40.8	40.8	40.8	40.8	42.3	42.3
87.5°	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9
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-34L830-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1154.4	1154.4	1154.4	1154.4
2.5°	1157.2	1158.7	1153.0	1147.3
5°	1151.6	1153.0	1148.8	1143.1
7.5°	1143.1	1144.6	1140.3	1136.1
10°	1130.5	1133.2	1129.1	1123.4
12.5°	1115.0	1116.4	1112.1	1107.9
15°	1096.6	1098.0	1093.8	1089.6
17.5°	1074.0	1076.9	1072.7	1068.4
20°	1048.7	1051.5	1048.7	1044.4
22.5°	1020.5	1023.3	1020.5	1017.7
25°	990.9	993.7	990.9	988.1
27.5°	958.5	962.8	959.9	958.5
30°	924.7	928.9	926.1	924.7
32.5°	889.5	895.1	892.2	889.5
35°	852.8	857.0	854.1	852.8
37.5°	816.2	820.4	818.9	817.5
40°	778.1	782.3	779.5	778.1
42.5°	738.6	742.9	741.4	740.0
45°	697.7	701.9	700.5	700.5
47.5°	658.2	662.5	661.1	659.7
50°	616.0	620.2	618.8	618.8
52.5°	575.1	579.3	577.9	576.5
55°	532.8	535.6	534.2	534.2
57.5°	490.5	494.7	493.4	491.9
60°	448.3	451.0	449.7	449.7
62.5°	406.0	408.7	407.3	407.3
65°	360.9	363.6	363.6	363.6
67.5°	314.3	317.2	315.7	315.7
70°	272.1	273.5	272.1	272.1
72.5°	228.4	229.8	229.8	229.8
75°	186.1	187.4	186.1	186.1
77.5°	146.6	148.0	146.6	145.2
80°	108.5	109.9	108.5	107.1
82.5°	73.3	74.7	73.3	71.9
85°	43.7	43.7	42.3	40.8
87.5°	18.3	18.3	16.9	15.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)