

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-35L830-X-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-35L830-X-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

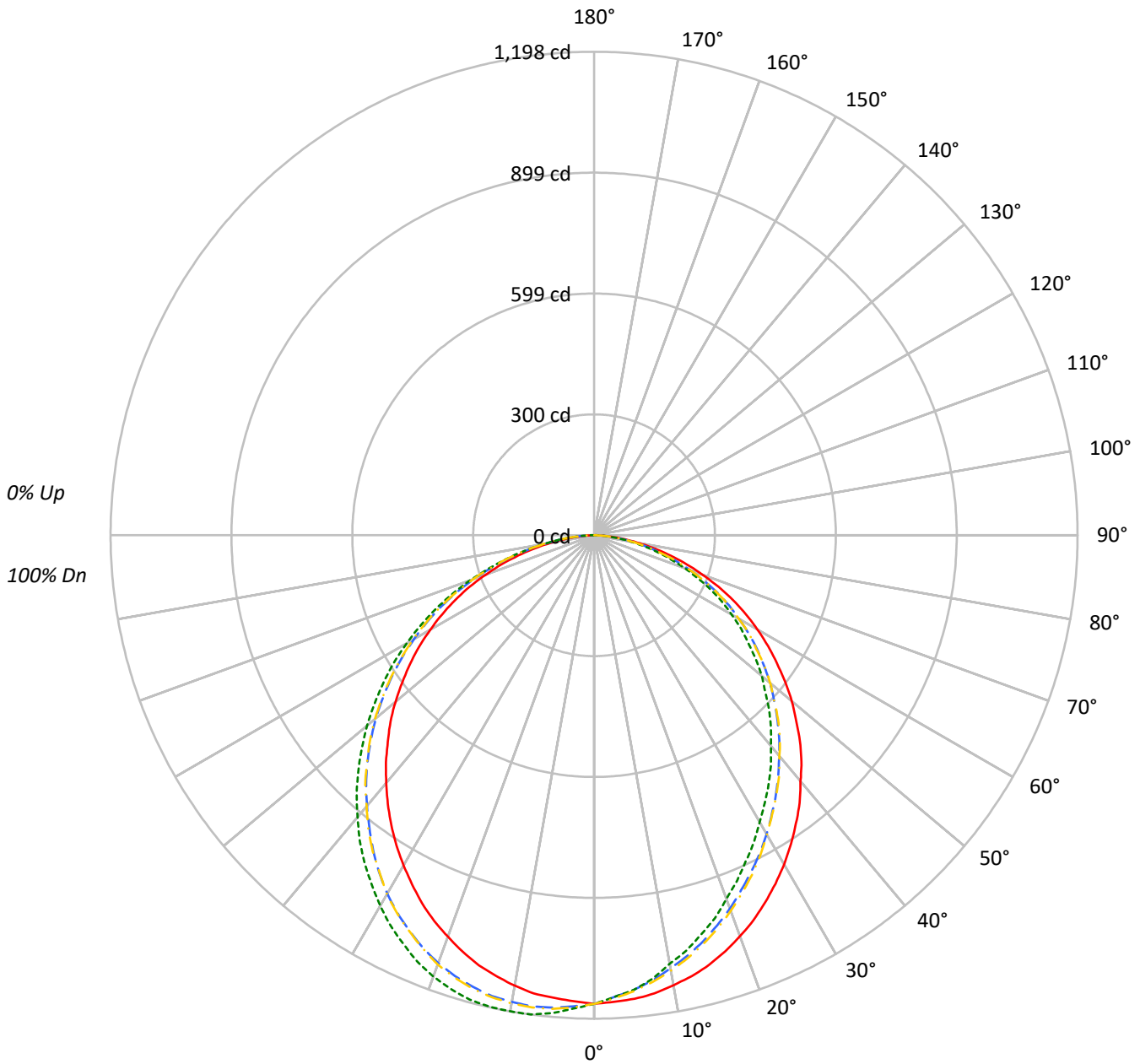
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3113.8 lumens  
Efficiency: N/A  
Efficacy: 77.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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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CATALOG NUMBER: 4APN-35L830-X-UNV-NP

### Luminous Intensity Polar Plot



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



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 CATALOG NUMBER: 4APN-35L830-X-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	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	72	72	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	61	61	61	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	53	53	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	41	41	41	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	36	36	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	32	32	32	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	29	29	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	27	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	10713	10713	10713	10713
5°	10679	10473	10656	11008
10°	10606	10102	10618	11222
15°	10526	9785	10538	11378
20°	10381	9414	10394	11426
25°	10215	9065	10255	11378
30°	10032	8745	10060	11292
35°	9823	8491	9866	11169
40°	9586	8209	9648	10978
45°	9409	8002	9426	10779
50°	9180	7785	9219	10538
55°	8894	7501	8958	10246
60°	8626	7272	8650	9889
65°	8287	6968	8287	9462
70°	7723	6450	7688	8821
75°	7023	5853	6930	7910
80°	6068	5026	5866	6769
85°	4721	3758	4446	5568



TEST NUMBER: P  
 CATALOG NUMBER: 4APN-35L830-X-UNV-NP

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.7	3.5
10°-20°	311.3	10.0
20°-30°	462.9	14.9
30°-40°	545.5	17.5
40°-50°	555.5	17.8
50°-60°	494.9	15.9
60°-70°	372.8	12.0
70°-80°	207.3	6.7
80°-90°	53.9	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°	883.9	28.4
0°-40°	1429.5	45.9
0°-60°	2479.8	79.6
0°-90°	3113.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3113.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1161	1161	1161	1161	1161	
5°	1153	1131	1151	1189	1153	109
15°	1102	1024	1103	1191	1102	310
25°	1003	890	1007	1118	1003	462
35°	872	754	876	992	872	546
45°	721	613	722	826	721	556
55°	553	466	557	637	553	495
65°	380	319	380	433	380	375
75°	197	164	194	222	197	209
85°	45	36	42	53	45	54
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°	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1
2.5°	1157.1	1157.1	1158.4	1153.1	1146.6	1143.9	1142.6	1141.3	1143.9	1145.3	1143.9
5°	1153.1	1150.6	1147.9	1141.3	1133.4	1128.2	1125.6	1124.3	1126.9	1130.8	1126.9
7.5°	1145.3	1140.1	1134.8	1125.6	1116.4	1108.5	1104.6	1102.0	1104.6	1108.5	1105.8
10°	1132.1	1125.6	1117.7	1107.2	1094.0	1084.8	1081.0	1077.0	1078.3	1078.3	1078.3
12.5°	1119.0	1109.8	1100.6	1087.5	1073.0	1062.5	1056.0	1050.7	1053.4	1054.7	1054.7
15°	1102.0	1090.1	1077.0	1062.5	1048.1	1036.2	1028.4	1023.1	1024.4	1024.4	1025.7
17.5°	1081.0	1067.8	1054.7	1037.6	1020.5	1007.4	998.2	991.6	994.2	995.6	996.9
20°	1057.3	1042.9	1028.4	1010.0	991.6	977.1	968.0	960.1	958.8	958.8	960.1
22.5°	1032.4	1016.6	999.4	979.8	960.1	944.3	935.1	927.3	926.0	926.0	927.3
25°	1003.4	986.4	969.3	949.6	928.5	912.8	901.0	893.1	891.8	890.5	893.1
27.5°	973.3	956.1	939.1	919.4	897.0	881.2	869.4	861.6	858.9	857.6	860.3
30°	941.7	922.0	903.7	882.6	862.9	847.1	835.3	826.1	823.5	820.9	823.5
32.5°	907.5	887.9	868.2	847.1	827.4	811.6	799.8	790.7	788.0	786.7	789.3
35°	872.1	852.4	834.0	813.0	793.3	777.5	765.7	757.8	755.2	753.9	755.2
37.5°	836.6	816.9	798.5	777.5	757.8	742.0	730.2	722.4	721.1	719.7	721.1
40°	795.9	778.8	760.5	740.7	721.1	705.3	696.1	686.9	684.3	681.6	685.6
42.5°	760.5	743.4	725.0	706.6	686.9	671.1	660.6	652.8	650.1	648.8	650.1
45°	721.1	702.7	684.3	667.2	648.8	634.3	623.8	616.0	614.7	613.3	614.7
47.5°	679.1	663.3	647.5	630.5	612.0	597.5	588.4	580.5	577.9	575.2	577.9
50°	639.6	623.8	608.1	592.4	575.2	562.1	552.9	545.1	543.7	542.4	543.7
52.5°	597.5	581.9	567.4	551.6	537.2	524.1	514.8	508.3	507.0	505.6	507.0
55°	552.9	539.8	526.6	513.6	499.1	487.3	479.3	471.5	468.8	466.3	468.8
57.5°	510.9	499.1	486.0	472.8	459.7	449.2	441.3	434.7	433.4	432.1	433.4
60°	467.5	457.0	445.2	433.4	420.2	409.7	403.2	397.9	395.4	394.1	395.4
62.5°	424.2	413.7	404.5	392.7	380.9	373.0	366.4	361.1	358.6	357.3	358.6
65°	379.6	370.4	361.1	350.6	341.5	333.6	327.0	321.8	320.5	319.2	319.2
67.5°	333.6	325.7	317.8	308.7	298.2	290.2	283.7	279.7	278.4	277.2	278.4
70°	286.3	279.7	271.9	264.0	256.1	249.6	245.6	241.7	240.4	239.1	239.1
72.5°	241.7	236.4	229.9	223.3	216.7	210.1	206.2	203.6	202.3	200.9	200.9
75°	197.0	191.8	187.8	182.6	176.0	172.0	168.1	165.5	164.2	164.2	164.2
77.5°	155.0	151.0	147.1	141.8	137.9	134.0	131.4	130.0	128.7	128.7	128.7
80°	114.2	111.7	109.0	106.4	102.4	98.5	97.2	95.9	94.6	94.6	94.6
82.5°	77.4	76.2	73.6	70.9	68.3	66.9	65.6	64.4	64.4	64.4	64.4
85°	44.6	43.3	42.0	40.8	39.4	39.4	38.1	36.8	35.5	35.5	35.5
87.5°	18.3	18.3	18.3	17.1	15.8	15.8	15.8	15.8	15.8	15.8	15.8
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-35L830-X-UNV-NP

**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1
2.5°	1141.3	1143.9	1146.6	1150.6	1154.4	1158.4	1157.1	1155.8	1161.1	1167.6	1168.9
5°	1124.3	1126.9	1130.8	1137.4	1143.9	1149.2	1150.6	1150.6	1161.1	1170.2	1172.9
7.5°	1103.3	1107.2	1112.5	1119.0	1128.2	1136.1	1140.1	1145.3	1155.8	1167.6	1172.9
10°	1077.0	1083.5	1091.5	1100.6	1109.8	1119.0	1126.9	1133.4	1146.6	1159.7	1167.6
12.5°	1053.4	1059.9	1067.8	1078.3	1090.1	1102.0	1109.8	1119.0	1134.8	1150.6	1159.7
15°	1027.1	1033.7	1042.9	1053.4	1066.5	1079.6	1091.5	1103.3	1119.0	1136.1	1146.6
17.5°	998.2	1004.7	1013.9	1027.1	1041.5	1056.0	1069.1	1082.2	1100.6	1119.0	1130.8
20°	962.8	971.9	983.8	996.9	1013.9	1031.0	1044.2	1058.6	1078.3	1098.0	1111.1
22.5°	928.5	937.8	950.9	966.6	985.1	1003.4	1019.2	1034.9	1056.0	1075.7	1090.1
25°	895.7	906.2	919.4	935.1	952.2	970.6	989.0	1007.4	1028.4	1049.4	1063.8
27.5°	862.9	872.1	885.2	901.0	920.7	939.1	957.5	975.8	998.2	1020.5	1036.2
30°	826.1	836.6	848.4	864.2	885.2	906.2	924.7	944.3	966.6	989.0	1004.7
32.5°	792.0	801.1	813.0	828.8	849.8	870.7	890.5	911.5	932.5	954.8	970.6
35°	757.8	767.0	778.8	794.6	815.6	836.6	856.4	876.0	897.0	918.0	933.8
37.5°	723.7	732.9	744.7	760.5	780.2	801.1	819.6	839.3	860.3	881.2	895.7
40°	688.2	697.4	706.6	722.4	742.0	763.0	781.5	801.1	822.1	843.2	857.6
42.5°	652.8	662.0	673.8	689.6	707.9	726.4	744.7	763.0	782.8	802.5	816.9
45°	617.3	625.2	637.0	651.5	669.8	686.9	705.3	722.4	742.0	760.5	774.9
47.5°	580.5	588.4	597.5	612.0	630.5	648.8	667.2	684.3	701.4	719.7	732.9
50°	545.1	552.9	563.4	576.6	593.7	610.7	626.5	642.3	659.3	676.4	688.2
52.5°	508.3	516.1	525.4	538.4	552.9	568.7	583.2	598.9	614.7	630.5	642.3
55°	471.5	476.8	484.6	496.5	512.3	528.0	542.4	556.9	571.4	584.5	596.3
57.5°	434.7	441.3	450.5	461.0	474.1	487.3	500.4	513.6	526.6	539.8	550.3
60°	397.9	403.2	409.7	419.0	432.1	443.9	457.0	468.8	480.7	492.5	501.8
62.5°	359.9	365.1	371.7	380.9	391.4	401.9	413.7	424.2	434.7	445.2	454.5
65°	320.5	325.7	332.3	340.1	349.3	358.6	369.1	379.6	387.4	395.4	404.5
67.5°	279.7	285.0	291.5	298.2	306.0	315.2	324.5	333.6	341.5	349.3	355.9
70°	240.4	244.3	250.9	256.1	262.7	269.2	277.2	285.0	290.2	296.8	304.7
72.5°	202.3	206.2	211.4	216.7	220.6	225.9	233.8	240.4	246.9	254.8	258.7
75°	165.5	168.1	172.0	176.0	180.0	183.8	189.1	194.4	199.6	203.6	208.8
77.5°	128.7	131.4	135.3	137.9	140.5	143.2	147.1	151.0	155.0	157.6	162.8
80°	94.6	97.2	99.9	102.4	105.1	107.7	109.0	110.4	115.6	119.5	122.2
82.5°	64.4	65.6	66.9	69.6	70.9	72.2	73.6	73.6	76.2	78.8	82.7
85°	36.8	38.1	39.4	39.4	39.4	39.4	40.8	42.0	43.3	46.0	48.6
87.5°	14.5	14.5	15.8	15.8	15.8	15.8	15.8	15.8	17.1	19.7	21.0
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-35L830-X-UNV-NP

**CANDELA DISTRIBUTION (continued):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1	1161.1
2.5°	1167.6	1168.9	1171.6	1172.9	1174.2	1174.2	1175.5	1176.8	1174.2	1171.6	1170.2
5°	1174.2	1175.5	1179.4	1183.4	1186.0	1188.6	1187.4	1186.0	1183.4	1179.4	1176.8
7.5°	1175.5	1179.4	1183.4	1188.6	1192.6	1197.8	1195.2	1192.6	1187.4	1182.1	1178.1
10°	1171.6	1176.8	1183.4	1189.9	1193.9	1197.8	1195.2	1192.6	1187.4	1180.7	1175.5
12.5°	1166.3	1172.9	1180.7	1187.4	1191.2	1196.5	1192.6	1188.6	1182.1	1175.5	1168.9
15°	1154.4	1162.4	1171.6	1179.4	1186.0	1191.2	1187.4	1184.7	1176.8	1167.6	1158.4
17.5°	1140.1	1150.6	1159.7	1168.9	1174.2	1179.4	1176.8	1174.2	1164.9	1154.4	1143.9
20°	1123.0	1133.4	1142.6	1151.9	1158.4	1163.7	1159.7	1155.8	1146.6	1137.4	1126.9
22.5°	1102.0	1112.5	1123.0	1132.1	1138.7	1143.9	1138.7	1132.1	1123.0	1113.8	1103.3
25°	1075.7	1087.5	1099.3	1108.5	1112.5	1117.7	1112.5	1107.2	1098.0	1088.8	1077.0
27.5°	1049.4	1061.2	1073.0	1082.2	1086.2	1091.5	1086.2	1081.0	1071.7	1062.5	1050.7
30°	1019.2	1031.0	1042.9	1052.0	1056.0	1059.9	1054.7	1049.4	1041.5	1032.4	1020.5
32.5°	985.1	996.9	1006.1	1015.2	1020.5	1025.7	1020.5	1016.6	1007.4	995.6	983.8
35°	948.3	960.1	971.9	981.1	986.4	991.6	985.1	978.5	970.6	961.4	950.9
37.5°	907.5	920.7	933.8	944.3	948.3	953.5	948.3	941.7	933.8	924.7	912.8
40°	869.4	881.2	893.1	903.7	907.5	911.5	906.2	901.0	891.8	882.6	870.7
42.5°	830.1	841.9	852.4	861.6	865.5	870.7	865.5	858.9	852.4	844.6	834.0
45°	788.0	799.8	809.1	818.3	822.1	826.1	820.9	814.3	807.8	801.1	790.7
47.5°	744.7	755.2	764.4	773.6	776.2	780.2	774.9	771.0	764.4	757.8	748.7
50°	700.1	710.6	719.7	727.6	730.2	734.2	728.9	723.7	718.4	713.2	705.3
52.5°	654.1	663.3	672.4	680.3	682.9	685.6	680.3	675.1	669.8	664.6	656.7
55°	606.8	616.0	625.2	631.8	634.3	637.0	631.8	627.8	622.5	618.6	610.7
57.5°	559.5	568.7	576.6	583.2	585.7	588.4	583.2	577.9	573.9	570.0	563.4
60°	510.9	520.1	526.6	531.9	534.6	535.9	530.6	526.6	524.1	521.4	514.8
62.5°	463.7	470.2	476.8	480.7	483.3	484.6	480.7	478.1	475.5	472.8	467.5
65°	413.7	421.6	426.9	430.8	432.1	433.4	429.5	426.9	424.2	421.6	417.7
67.5°	363.8	370.4	374.3	378.3	379.6	379.6	379.6	378.3	375.6	371.7	367.8
70°	313.9	319.2	323.1	325.7	327.0	327.0	324.5	321.8	321.8	320.5	317.8
72.5°	262.7	266.6	269.2	271.9	271.9	271.9	271.9	273.2	271.9	269.2	265.3
75°	214.1	218.1	220.6	221.9	221.9	221.9	221.9	223.3	221.9	220.6	218.1
77.5°	168.1	170.8	172.0	173.3	173.3	173.3	174.7	176.0	174.7	173.3	172.0
80°	124.7	126.1	127.4	128.7	127.4	127.4	128.7	131.4	130.0	128.7	127.4
82.5°	85.4	86.7	88.0	88.0	89.3	90.6	90.6	90.6	90.6	89.3	88.0
85°	51.3	52.6	52.6	52.6	52.6	52.6	53.8	55.1	55.1	53.8	53.8
87.5°	23.6	25.0	23.6	22.3	21.0	21.0	23.6	26.3	26.3	25.0	25.0
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-35L830-X-UNV-NP

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1161.1	1161.1	1161.1	1161.1
2.5°	1171.6	1170.2	1163.7	1157.1
5°	1175.5	1171.6	1162.4	1153.1
7.5°	1175.5	1170.2	1157.1	1145.3
10°	1168.9	1161.1	1146.6	1132.1
12.5°	1161.1	1151.9	1134.8	1119.0
15°	1149.2	1138.7	1120.3	1102.0
17.5°	1132.1	1119.0	1100.6	1081.0
20°	1115.1	1100.6	1078.3	1057.3
22.5°	1091.5	1078.3	1054.7	1032.4
25°	1065.2	1050.7	1027.1	1003.4
27.5°	1037.6	1020.5	996.9	973.3
30°	1006.1	989.0	965.3	941.7
32.5°	971.9	956.1	932.5	907.5
35°	937.8	920.7	897.0	872.1
37.5°	899.7	883.9	860.3	836.6
40°	858.9	843.2	819.6	795.9
42.5°	820.9	806.4	782.8	760.5
45°	778.8	764.4	742.0	721.1
47.5°	735.5	721.1	700.1	679.1
50°	693.4	679.1	659.3	639.6
52.5°	646.2	634.3	616.0	597.5
55°	600.2	588.4	570.0	552.9
57.5°	554.2	543.7	526.6	510.9
60°	505.6	495.1	482.0	467.5
62.5°	459.7	450.5	437.4	424.2
65°	411.1	403.2	391.4	379.6
67.5°	361.1	354.6	344.1	333.6
70°	311.3	303.4	295.5	286.3
72.5°	261.4	257.4	249.6	241.7
75°	214.1	210.1	203.6	197.0
77.5°	169.5	165.5	160.2	155.0
80°	124.7	122.2	118.2	114.2
82.5°	86.7	84.1	81.4	77.4
85°	52.6	49.9	47.3	44.6
87.5°	23.6	22.3	19.7	18.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)