

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-32L850-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-32L850-X-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

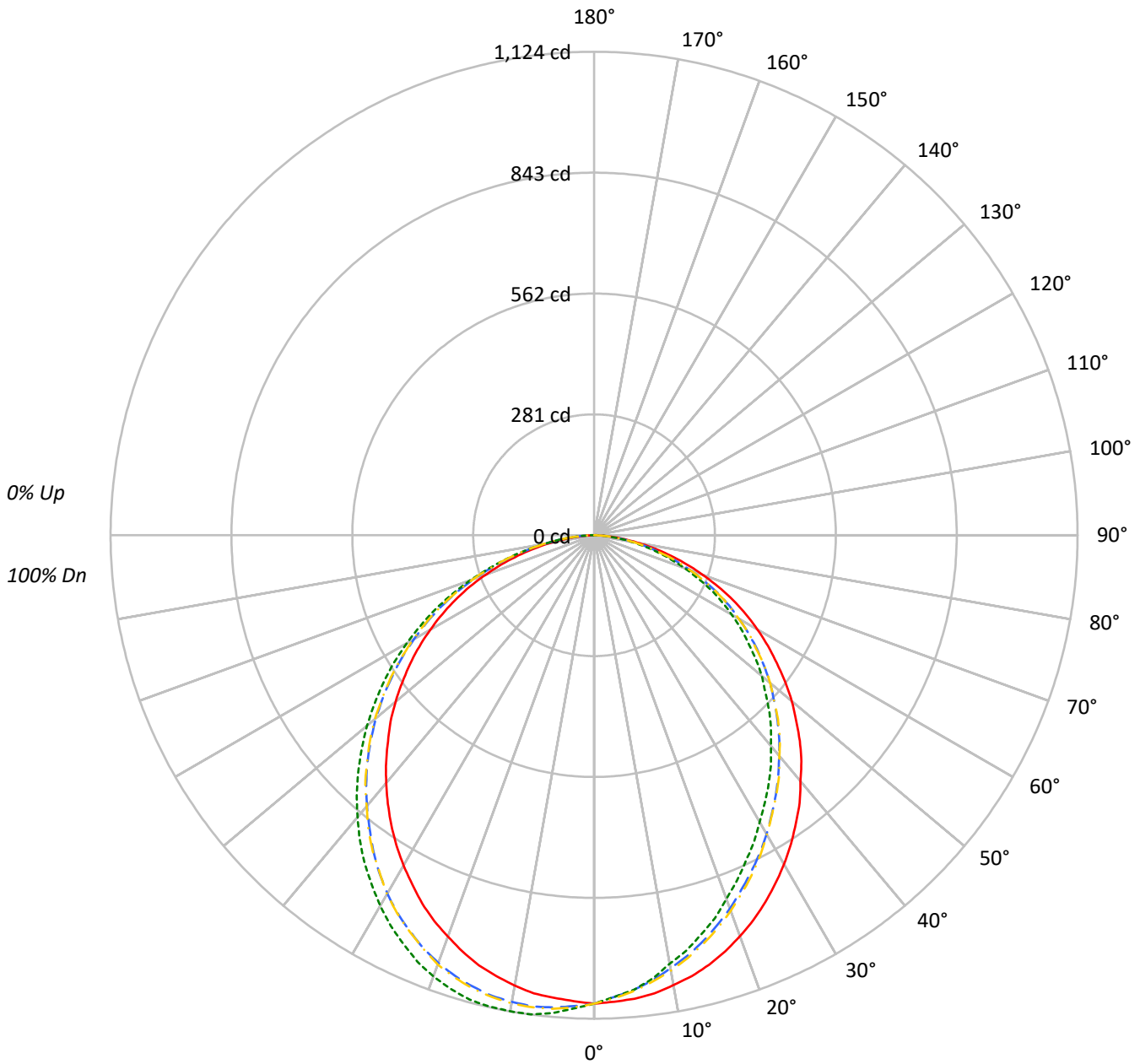
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2920.9 lumens  
Efficiency: N/A  
Efficacy: 80.2 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): 36.4  
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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### 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	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°	10048	10048	10048	10048
5°	10018	9825	9996	10327
10°	9949	9476	9962	10526
15°	9874	9179	9885	10674
20°	9738	8831	9750	10718
25°	9582	8503	9620	10673
30°	9411	8204	9438	10593
35°	9214	7965	9256	10477
40°	8992	7701	9051	10299
45°	8826	7506	8841	10111
50°	8612	7304	8647	9885
55°	8343	7036	8403	9611
60°	8093	6820	8115	9276
65°	7774	6536	7774	8877
70°	7246	6048	7213	8273
75°	6588	5490	6502	7422
80°	5696	4713	5494	6349
85°	4435	3525	4181	5219



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.9	3.5
10°-20°	292.1	10.0
20°-30°	434.2	14.9
30°-40°	511.8	17.5
40°-50°	521.1	17.8
50°-60°	464.2	15.9
60°-70°	349.7	12.0
70°-80°	194.5	6.7
80°-90°	50.5	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°	829.2	28.4
0°-40°	1340.9	45.9
0°-60°	2326.2	79.6
0°-90°	2920.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2920.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1089	1089	1089	1089	1089	
5°	1082	1061	1079	1115	1082	103
15°	1034	961	1035	1118	1034	291
25°	941	835	945	1048	941	434
35°	818	707	822	930	818	512
45°	676	575	678	775	676	521
55°	519	437	522	598	519	465
65°	356	299	356	407	356	351
75°	185	154	182	208	185	196
85°	42	33	40	49	42	50
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°	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1
2.5°	1085.4	1085.4	1086.7	1081.7	1075.5	1073.1	1071.8	1070.6	1073.1	1074.3	1073.1
5°	1081.7	1079.3	1076.8	1070.6	1063.3	1058.3	1055.9	1054.6	1057.1	1060.8	1057.1
7.5°	1074.3	1069.4	1064.4	1055.9	1047.2	1039.8	1036.1	1033.7	1036.1	1039.8	1037.3
10°	1062.0	1055.9	1048.4	1038.6	1026.3	1017.6	1013.9	1010.2	1011.5	1011.5	1011.5
12.5°	1049.7	1041.0	1032.5	1020.1	1006.5	996.7	990.5	985.6	988.1	989.3	989.3
15°	1033.7	1022.6	1010.2	996.7	983.1	972.1	964.7	959.7	961.0	961.0	962.2
17.5°	1013.9	1001.7	989.3	973.3	957.3	945.0	936.4	930.2	932.6	933.9	935.1
20°	991.8	978.2	964.7	947.4	930.2	916.7	908.0	900.6	899.4	899.4	900.6
22.5°	968.4	953.6	937.6	919.0	900.6	885.9	877.2	869.8	868.6	868.6	869.8
25°	941.3	925.2	909.3	890.7	871.0	856.3	845.2	837.8	836.5	835.3	837.8
27.5°	913.0	896.9	880.9	862.4	841.5	826.7	815.6	808.2	805.7	804.5	806.9
30°	883.4	864.8	847.6	828.0	809.4	794.7	783.6	774.9	772.5	770.1	772.5
32.5°	851.3	832.8	814.4	794.7	776.1	761.4	750.3	741.7	739.3	738.0	740.5
35°	818.1	799.6	782.3	762.6	744.1	729.4	718.2	710.9	708.4	707.2	708.4
37.5°	784.8	766.3	749.0	729.4	710.9	696.1	685.0	677.6	676.4	675.2	676.4
40°	746.6	730.6	713.4	694.8	676.4	661.6	653.0	644.4	641.9	639.4	643.1
42.5°	713.4	697.3	680.1	662.8	644.4	629.5	619.7	612.3	609.8	608.6	609.8
45°	676.4	659.1	641.9	625.9	608.6	595.1	585.2	577.8	576.6	575.3	576.6
47.5°	636.9	622.2	607.4	591.4	574.1	560.6	551.9	544.5	542.1	539.6	542.1
50°	600.0	585.2	570.4	555.6	539.6	527.3	518.7	511.2	510.1	508.9	510.1
52.5°	560.6	545.8	532.3	517.4	503.9	491.6	482.9	476.8	475.6	474.4	475.6
55°	518.7	506.4	494.0	481.7	468.2	457.0	449.7	442.3	439.8	437.4	439.8
57.5°	479.3	468.2	455.8	443.6	431.2	421.4	414.0	407.8	406.6	405.3	406.6
60°	438.6	428.7	417.7	406.6	394.2	384.4	378.2	373.3	370.8	369.6	370.8
62.5°	397.9	388.1	379.5	368.3	357.3	349.9	343.7	338.8	336.3	335.1	336.3
65°	356.1	347.4	338.8	329.0	320.3	312.9	306.7	301.9	300.6	299.4	299.4
67.5°	312.9	305.6	298.2	289.5	279.6	272.3	266.1	262.4	261.2	259.9	261.2
70°	268.6	262.4	255.0	247.6	240.3	234.1	230.4	226.7	225.4	224.2	224.2
72.5°	226.7	221.7	215.6	209.5	203.3	197.1	193.4	190.9	189.7	188.5	188.5
75°	184.8	179.9	176.2	171.2	165.1	161.3	157.7	155.3	154.0	154.0	154.0
77.5°	145.4	141.7	138.0	133.0	129.4	125.7	123.2	122.0	120.8	120.8	120.8
80°	107.2	104.7	102.2	99.8	96.1	92.4	91.2	89.9	88.7	88.7	88.7
82.5°	72.7	71.5	69.0	66.6	64.1	62.8	61.6	60.4	60.4	60.4	60.4
85°	41.9	40.7	39.5	38.2	37.0	37.0	35.8	34.5	33.3	33.3	33.3
87.5°	17.2	17.2	17.2	16.0	14.8	14.8	14.8	14.8	14.8	14.8	14.8
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°	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1
2.5°	1070.6	1073.1	1075.5	1079.3	1083.0	1086.7	1085.4	1084.2	1089.1	1095.2	1096.5
5°	1054.6	1057.1	1060.8	1066.9	1073.1	1078.0	1079.3	1079.3	1089.1	1097.7	1100.2
7.5°	1034.9	1038.6	1043.5	1049.7	1058.3	1065.7	1069.4	1074.3	1084.2	1095.2	1100.2
10°	1010.2	1016.4	1023.8	1032.5	1041.0	1049.7	1057.1	1063.3	1075.5	1087.9	1095.2
12.5°	988.1	994.3	1001.7	1011.5	1022.6	1033.7	1041.0	1049.7	1064.4	1079.3	1087.9
15°	963.4	969.6	978.2	988.1	1000.4	1012.7	1023.8	1034.9	1049.7	1065.7	1075.5
17.5°	936.4	942.5	951.1	963.4	977.0	990.5	1002.9	1015.2	1032.5	1049.7	1060.8
20°	903.1	911.7	922.8	935.1	951.1	967.2	979.4	993.0	1011.5	1030.0	1042.3
22.5°	871.0	879.7	891.9	906.8	924.0	941.3	956.0	970.9	990.5	1009.0	1022.6
25°	840.2	850.1	862.4	877.2	893.2	910.5	927.7	945.0	964.7	984.4	998.0
27.5°	809.4	818.1	830.4	845.2	863.6	880.9	898.1	915.4	936.4	957.3	972.1
30°	774.9	784.8	795.9	810.7	830.4	850.1	867.3	885.9	906.8	927.7	942.5
32.5°	742.9	751.5	762.6	777.4	797.2	816.8	835.3	855.1	874.7	895.7	910.5
35°	710.9	719.5	730.6	745.3	765.1	784.8	803.2	821.8	841.5	861.1	876.0
37.5°	678.9	687.4	698.6	713.4	731.8	751.5	768.8	787.3	806.9	826.7	840.2
40°	645.6	654.2	662.8	677.6	696.1	715.8	733.1	751.5	771.3	791.0	804.5
42.5°	612.3	621.0	632.0	646.8	664.0	681.3	698.6	715.8	734.3	752.7	766.3
45°	579.0	586.5	597.5	611.1	628.3	644.4	661.6	677.6	696.1	713.4	726.9
47.5°	544.5	551.9	560.6	574.1	591.4	608.6	625.9	641.9	657.9	675.2	687.4
50°	511.2	518.7	528.6	540.8	556.9	572.9	587.7	602.4	618.5	634.5	645.6
52.5°	476.8	484.1	492.8	505.2	518.7	533.5	547.0	561.8	576.6	591.4	602.4
55°	442.3	447.3	454.6	465.7	480.5	495.3	508.9	522.4	536.0	548.2	559.4
57.5°	407.8	414.0	422.6	432.4	444.8	457.0	469.4	481.7	494.0	506.4	516.2
60°	373.3	378.2	384.4	393.0	405.3	416.5	428.7	439.8	451.0	462.0	470.6
62.5°	337.5	342.5	348.7	357.3	367.1	377.0	388.1	397.9	407.8	417.7	426.2
65°	300.6	305.6	311.7	319.1	327.7	336.3	346.2	356.1	363.5	370.8	379.5
67.5°	262.4	267.4	273.5	279.6	287.0	295.7	304.4	312.9	320.3	327.7	333.9
70°	225.4	229.1	235.3	240.3	246.5	252.5	259.9	267.4	272.3	278.4	285.8
72.5°	189.7	193.4	198.3	203.3	207.0	211.9	219.3	225.4	231.6	239.0	242.7
75°	155.3	157.7	161.3	165.1	168.8	172.5	177.4	182.4	187.3	190.9	195.9
77.5°	120.8	123.2	126.9	129.4	131.8	134.3	138.0	141.7	145.4	147.9	152.8
80°	88.7	91.2	93.7	96.1	98.6	101.1	102.2	103.4	108.4	112.1	114.6
82.5°	60.4	61.6	62.8	65.3	66.6	67.8	69.0	69.0	71.5	73.9	77.6
85°	34.5	35.8	37.0	37.0	37.0	37.0	38.2	39.5	40.7	43.1	45.5
87.5°	13.6	13.6	14.8	14.8	14.8	14.8	14.8	14.8	16.0	18.4	19.7
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°	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1	1089.1
2.5°	1095.2	1096.5	1098.9	1100.2	1101.4	1101.4	1102.6	1103.9	1101.4	1098.9	1097.7
5°	1101.4	1102.6	1106.4	1110.1	1112.5	1115.0	1113.8	1112.5	1110.1	1106.4	1103.9
7.5°	1102.6	1106.4	1110.1	1115.0	1118.7	1123.6	1121.2	1118.7	1113.8	1108.8	1105.1
10°	1098.9	1103.9	1110.1	1116.2	1120.0	1123.6	1121.2	1118.7	1113.8	1107.6	1102.6
12.5°	1094.0	1100.2	1107.6	1113.8	1117.5	1122.4	1118.7	1115.0	1108.8	1102.6	1096.5
15°	1083.0	1090.4	1098.9	1106.4	1112.5	1117.5	1113.8	1111.3	1103.9	1095.2	1086.7
17.5°	1069.4	1079.3	1087.9	1096.5	1101.4	1106.4	1103.9	1101.4	1092.8	1083.0	1073.1
20°	1053.4	1063.3	1071.8	1080.5	1086.7	1091.6	1087.9	1084.2	1075.5	1066.9	1057.1
22.5°	1033.7	1043.5	1053.4	1062.0	1068.1	1073.1	1068.1	1062.0	1053.4	1044.7	1034.9
25°	1009.0	1020.1	1031.2	1039.8	1043.5	1048.4	1043.5	1038.6	1030.0	1021.4	1010.2
27.5°	984.4	995.5	1006.5	1015.2	1018.9	1023.8	1018.9	1013.9	1005.3	996.7	985.6
30°	956.0	967.2	978.2	986.8	990.5	994.3	989.3	984.4	977.0	968.4	957.3
32.5°	924.0	935.1	943.8	952.3	957.3	962.2	957.3	953.6	945.0	933.9	922.8
35°	889.5	900.6	911.7	920.3	925.2	930.2	924.0	917.9	910.5	901.8	891.9
37.5°	851.3	863.6	876.0	885.9	889.5	894.4	889.5	883.4	876.0	867.3	856.3
40°	815.6	826.7	837.8	847.6	851.3	855.1	850.1	845.2	836.5	828.0	816.8
42.5°	778.6	789.7	799.6	808.2	811.9	816.8	811.9	805.7	799.6	792.2	782.3
45°	739.3	750.3	758.9	767.6	771.3	774.9	770.1	763.9	757.7	751.5	741.7
47.5°	698.6	708.4	717.0	725.7	728.1	731.8	726.9	723.2	717.0	710.9	702.3
50°	656.6	666.5	675.2	682.6	685.0	688.7	683.8	678.9	673.9	669.0	661.6
52.5°	613.6	622.2	630.8	638.2	640.7	643.1	638.2	633.2	628.3	623.4	616.0
55°	569.2	577.8	586.5	592.6	595.1	597.5	592.6	588.9	584.0	580.3	572.9
57.5°	524.8	533.5	540.8	547.0	549.5	551.9	547.0	542.1	538.4	534.7	528.6
60°	479.3	487.9	494.0	499.0	501.5	502.7	497.7	494.0	491.6	489.1	482.9
62.5°	434.9	441.1	447.3	451.0	453.3	454.6	451.0	448.5	446.0	443.6	438.6
65°	388.1	395.4	400.4	404.1	405.3	406.6	402.9	400.4	397.9	395.4	391.8
67.5°	341.2	347.4	351.1	354.8	356.1	356.1	356.1	354.8	352.4	348.7	345.0
70°	294.5	299.4	303.1	305.6	306.7	306.7	304.4	301.9	301.9	300.6	298.2
72.5°	246.5	250.1	252.5	255.0	255.0	255.0	255.0	256.2	255.0	252.5	248.8
75°	200.8	204.5	207.0	208.2	208.2	208.2	208.2	209.5	208.2	207.0	204.5
77.5°	157.7	160.2	161.3	162.6	162.6	162.6	163.8	165.1	163.8	162.6	161.3
80°	117.0	118.3	119.5	120.8	119.5	119.5	120.8	123.2	122.0	120.8	119.5
82.5°	80.1	81.3	82.5	82.5	83.8	85.0	85.0	85.0	85.0	83.8	82.5
85°	48.0	49.3	49.3	49.3	49.3	49.3	50.5	51.7	51.7	50.5	50.5
87.5°	22.2	23.4	22.2	20.9	19.7	19.7	22.2	24.6	24.6	23.4	23.4
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-32L850-X-UNV-NP

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1089.1	1089.1	1089.1	1089.1
2.5°	1098.9	1097.7	1091.6	1085.4
5°	1102.6	1098.9	1090.4	1081.7
7.5°	1102.6	1097.7	1085.4	1074.3
10°	1096.5	1089.1	1075.5	1062.0
12.5°	1089.1	1080.5	1064.4	1049.7
15°	1078.0	1068.1	1050.9	1033.7
17.5°	1062.0	1049.7	1032.5	1013.9
20°	1046.0	1032.5	1011.5	991.8
22.5°	1023.8	1011.5	989.3	968.4
25°	999.2	985.6	963.4	941.3
27.5°	973.3	957.3	935.1	913.0
30°	943.8	927.7	905.5	883.4
32.5°	911.7	896.9	874.7	851.3
35°	879.7	863.6	841.5	818.1
37.5°	843.9	829.2	806.9	784.8
40°	805.7	791.0	768.8	746.6
42.5°	770.1	756.5	734.3	713.4
45°	730.6	717.0	696.1	676.4
47.5°	689.9	676.4	656.6	636.9
50°	650.5	636.9	618.5	600.0
52.5°	606.1	595.1	577.8	560.6
55°	563.1	551.9	534.7	518.7
57.5°	519.9	510.1	494.0	479.3
60°	474.4	464.5	452.1	438.6
62.5°	431.2	422.6	410.3	397.9
65°	385.6	378.2	367.1	356.1
67.5°	338.8	332.7	322.8	312.9
70°	292.0	284.6	277.2	268.6
72.5°	245.2	241.5	234.1	226.7
75°	200.8	197.1	190.9	184.8
77.5°	159.0	155.3	150.3	145.4
80°	117.0	114.6	110.9	107.2
82.5°	81.3	78.8	76.3	72.7
85°	49.3	46.8	44.3	41.9
87.5°	22.2	20.9	18.4	17.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)