

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-30L850-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-30L850-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

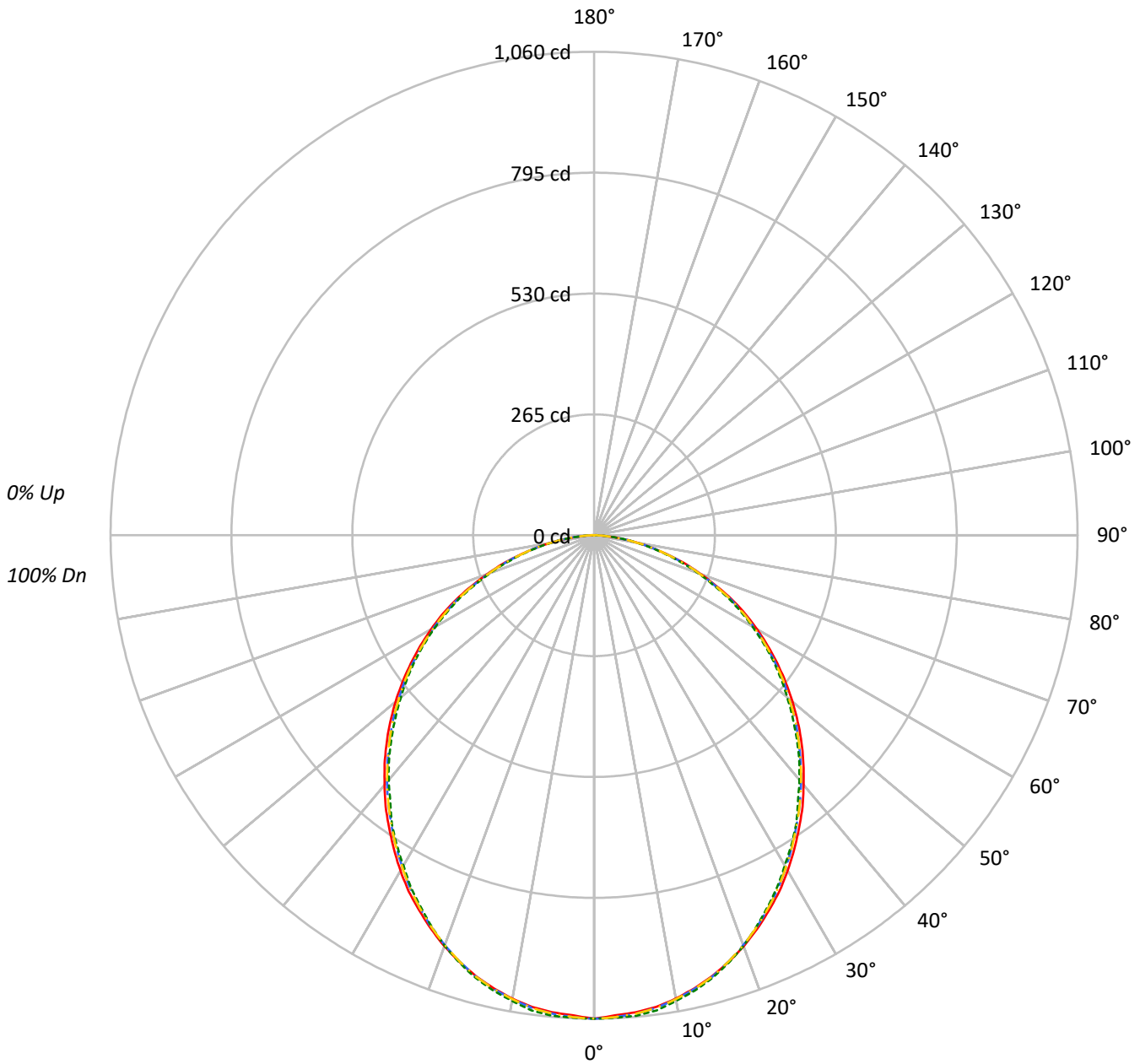
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2757.9 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): 32.5
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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70	70	70	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60	60	60	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51	51	51	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	44	44	44	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39	39	39	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34	34	34	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31	31	31	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28	28	28	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9780	9780	9780	9780
5°	9722	9793	9722	9793
10°	9664	9712	9664	9712
15°	9556	9594	9556	9594
20°	9417	9404	9417	9404
25°	9236	9157	9236	9157
30°	9046	8908	9046	8908
35°	8820	8703	8820	8703
40°	8605	8434	8605	8434
45°	8394	8190	8394	8190
50°	8156	7932	8156	7932
55°	7890	7703	7890	7703
60°	7619	7405	7619	7405
65°	7289	7065	7289	7065
70°	6739	6528	6739	6528
75°	6089	5907	6089	5907
80°	5228	5090	5228	5090
85°	3970	3970	3970	3970



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	3.6
10°-20°	282.5	10.2
20°-30°	416.4	15.1
30°-40°	486.1	17.6
40°-50°	490.1	17.8
50°-60°	433.2	15.7
60°-70°	323.9	11.7
70°-80°	179.6	6.5
80°-90°	46.0	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°	799.0	29.0
0°-40°	1285.1	46.6
0°-60°	2208.4	80.1
0°-90°	2757.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2757.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1060	1060	1060	1060	1060	
5°	1050	1057	1050	1057	1050	100
15°	1000	1004	1000	1004	1000	282
25°	907	900	907	900	907	418
35°	783	773	783	773	783	490
45°	643	628	643	628	643	496
55°	490	479	490	479	490	439
65°	334	324	334	324	334	329
75°	171	166	171	166	171	182
85°	38	38	38	38	38	45
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°	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0
2.5°	1053.6	1058.7	1063.9	1062.6	1058.7	1056.2	1057.4	1057.4	1058.7	1058.7	1058.7
5°	1049.7	1054.9	1058.7	1057.4	1053.6	1052.3	1052.3	1052.3	1054.9	1057.4	1054.9
7.5°	1043.2	1047.1	1051.0	1049.7	1045.8	1044.5	1044.5	1045.8	1048.4	1051.0	1048.4
10°	1031.5	1036.7	1040.7	1038.1	1034.1	1031.5	1031.5	1031.5	1034.1	1036.7	1034.1
12.5°	1017.3	1021.2	1025.1	1023.8	1019.9	1017.3	1017.3	1017.3	1019.9	1022.5	1019.9
15°	1000.5	1004.4	1008.3	1007.0	1003.1	1000.5	1000.5	1000.5	1003.1	1004.4	1003.1
17.5°	981.1	985.0	988.8	986.3	981.1	978.5	978.5	978.5	981.1	982.4	981.1
20°	959.1	962.9	965.5	962.9	957.8	955.2	953.9	953.9	956.5	957.8	956.5
22.5°	934.4	937.1	939.7	937.1	931.9	929.3	928.0	926.7	928.0	929.3	928.0
25°	907.3	909.9	912.5	909.9	904.8	900.8	899.5	898.2	899.5	899.5	899.5
27.5°	880.1	881.4	884.0	880.1	875.0	871.1	869.8	868.5	869.8	869.8	869.8
30°	849.1	850.4	852.9	849.1	842.6	838.7	837.5	836.2	836.2	836.2	836.2
32.5°	816.7	819.3	821.9	816.7	810.3	806.4	805.1	803.8	805.1	805.1	805.1
35°	783.1	784.3	786.9	783.1	776.6	772.7	770.1	768.9	771.4	772.7	771.4
37.5°	750.7	752.0	753.3	749.4	742.9	739.1	736.5	735.2	733.9	733.9	733.9
40°	714.5	715.7	718.3	714.5	708.0	704.1	701.5	700.3	700.3	700.3	700.3
42.5°	679.5	680.8	682.1	678.2	671.8	667.9	665.3	664.0	665.3	665.3	665.3
45°	643.3	643.3	644.6	640.7	635.5	631.7	629.0	627.7	627.7	627.7	627.7
47.5°	605.8	607.0	608.3	604.5	599.3	595.4	592.8	590.2	590.2	590.2	590.2
50°	568.2	568.2	569.5	565.6	560.4	556.5	555.2	553.9	552.6	552.6	552.6
52.5°	529.4	530.7	532.0	528.1	524.2	520.3	517.7	516.4	516.4	516.4	516.4
55°	490.5	490.5	491.8	489.2	485.3	481.5	478.9	477.6	478.9	478.9	478.9
57.5°	451.7	453.0	454.3	450.4	446.5	442.7	441.4	440.1	440.1	440.1	440.1
60°	412.9	412.9	414.2	411.6	407.7	403.8	402.5	401.3	401.3	401.3	401.3
62.5°	374.1	374.1	375.3	372.8	368.9	365.0	363.7	362.4	362.4	362.4	362.4
65°	333.9	333.9	333.9	331.4	328.8	327.5	326.2	324.9	323.6	323.6	323.6
67.5°	290.0	290.0	291.3	288.6	286.0	284.7	283.4	282.1	280.8	280.8	280.8
70°	249.8	249.8	251.1	249.8	247.2	245.9	244.6	243.3	242.0	242.0	242.0
72.5°	211.0	211.0	211.0	209.7	208.4	207.1	205.8	204.5	203.2	203.2	203.2
75°	170.8	170.8	172.1	170.8	169.6	168.3	167.0	167.0	165.7	165.7	165.7
77.5°	133.3	134.6	135.9	134.6	133.3	132.0	130.7	130.7	129.4	129.4	129.4
80°	98.4	99.7	101.0	99.7	98.4	97.1	95.8	95.8	95.8	95.8	95.8
82.5°	66.0	67.3	68.6	67.3	66.0	66.0	64.7	64.7	64.7	64.7	64.7
85°	37.5	38.8	40.1	40.1	38.8	38.8	37.5	37.5	37.5	37.5	37.5
87.5°	14.2	15.5	16.8	16.8	15.5	15.5	15.5	15.5	15.5	15.5	15.5
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°	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0
2.5°	1057.4	1057.4	1056.2	1058.7	1062.6	1063.9	1058.7	1053.6	1058.7	1063.9	1062.6
5°	1052.3	1052.3	1052.3	1053.6	1057.4	1058.7	1054.9	1049.7	1054.9	1058.7	1057.4
7.5°	1045.8	1044.5	1044.5	1045.8	1049.7	1051.0	1047.1	1043.2	1047.1	1051.0	1049.7
10°	1031.5	1031.5	1031.5	1034.1	1038.1	1040.7	1036.7	1031.5	1036.7	1040.7	1038.1
12.5°	1017.3	1017.3	1017.3	1019.9	1023.8	1025.1	1021.2	1017.3	1021.2	1025.1	1023.8
15°	1000.5	1000.5	1000.5	1003.1	1007.0	1008.3	1004.4	1000.5	1004.4	1008.3	1007.0
17.5°	978.5	978.5	978.5	981.1	986.3	988.8	985.0	981.1	985.0	988.8	986.3
20°	953.9	953.9	955.2	957.8	962.9	965.5	962.9	959.1	962.9	965.5	962.9
22.5°	926.7	928.0	929.3	931.9	937.1	939.7	937.1	934.4	937.1	939.7	937.1
25°	898.2	899.5	900.8	904.8	909.9	912.5	909.9	907.3	909.9	912.5	909.9
27.5°	868.5	869.8	871.1	875.0	880.1	884.0	881.4	880.1	881.4	884.0	880.1
30°	836.2	837.5	838.7	842.6	849.1	852.9	850.4	849.1	850.4	852.9	849.1
32.5°	803.8	805.1	806.4	810.3	816.7	821.9	819.3	816.7	819.3	821.9	816.7
35°	768.9	770.1	772.7	776.6	783.1	786.9	784.3	783.1	784.3	786.9	783.1
37.5°	735.2	736.5	739.1	742.9	749.4	753.3	752.0	750.7	752.0	753.3	749.4
40°	700.3	701.5	704.1	708.0	714.5	718.3	715.7	714.5	715.7	718.3	714.5
42.5°	664.0	665.3	667.9	671.8	678.2	682.1	680.8	679.5	680.8	682.1	678.2
45°	627.7	629.0	631.7	635.5	640.7	644.6	643.3	643.3	643.3	644.6	640.7
47.5°	590.2	592.8	595.4	599.3	604.5	608.3	607.0	605.8	607.0	608.3	604.5
50°	553.9	555.2	556.5	560.4	565.6	569.5	568.2	568.2	568.2	569.5	565.6
52.5°	516.4	517.7	520.3	524.2	528.1	532.0	530.7	529.4	530.7	532.0	528.1
55°	477.6	478.9	481.5	485.3	489.2	491.8	490.5	490.5	490.5	491.8	489.2
57.5°	440.1	441.4	442.7	446.5	450.4	454.3	453.0	451.7	453.0	454.3	450.4
60°	401.3	402.5	403.8	407.7	411.6	414.2	412.9	412.9	412.9	414.2	411.6
62.5°	362.4	363.7	365.0	368.9	372.8	375.3	374.1	374.1	374.1	375.3	372.8
65°	324.9	326.2	327.5	328.8	331.4	333.9	333.9	333.9	333.9	333.9	331.4
67.5°	282.1	283.4	284.7	286.0	288.6	291.3	290.0	290.0	290.0	291.3	288.6
70°	243.3	244.6	245.9	247.2	249.8	251.1	249.8	249.8	249.8	251.1	249.8
72.5°	204.5	205.8	207.1	208.4	209.7	211.0	211.0	211.0	211.0	211.0	209.7
75°	167.0	167.0	168.3	169.6	170.8	172.1	170.8	170.8	170.8	172.1	170.8
77.5°	130.7	130.7	132.0	133.3	134.6	135.9	134.6	133.3	134.6	135.9	134.6
80°	95.8	95.8	97.1	98.4	99.7	101.0	99.7	98.4	99.7	101.0	99.7
82.5°	64.7	64.7	66.0	66.0	67.3	68.6	67.3	66.0	67.3	68.6	67.3
85°	37.5	37.5	38.8	38.8	40.1	40.1	38.8	37.5	38.8	40.1	40.1
87.5°	15.5	15.5	15.5	15.5	16.8	16.8	15.5	14.2	15.5	16.8	16.8
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0	1060.0
2.5°	1058.7	1056.2	1057.4	1057.4	1058.7	1058.7	1058.7	1057.4	1057.4	1056.2	1058.7
5°	1053.6	1052.3	1052.3	1052.3	1054.9	1057.4	1054.9	1052.3	1052.3	1052.3	1053.6
7.5°	1045.8	1044.5	1044.5	1045.8	1048.4	1051.0	1048.4	1045.8	1044.5	1044.5	1045.8
10°	1034.1	1031.5	1031.5	1031.5	1034.1	1036.7	1034.1	1031.5	1031.5	1031.5	1034.1
12.5°	1019.9	1017.3	1017.3	1017.3	1019.9	1022.5	1019.9	1017.3	1017.3	1017.3	1019.9
15°	1003.1	1000.5	1000.5	1000.5	1003.1	1004.4	1003.1	1000.5	1000.5	1000.5	1003.1
17.5°	981.1	978.5	978.5	978.5	981.1	982.4	981.1	978.5	978.5	978.5	981.1
20°	957.8	955.2	953.9	953.9	956.5	957.8	956.5	953.9	953.9	955.2	957.8
22.5°	931.9	929.3	928.0	926.7	928.0	929.3	928.0	926.7	928.0	929.3	931.9
25°	904.8	900.8	899.5	898.2	899.5	899.5	899.5	898.2	899.5	900.8	904.8
27.5°	875.0	871.1	869.8	868.5	869.8	869.8	869.8	868.5	869.8	871.1	875.0
30°	842.6	838.7	837.5	836.2	836.2	836.2	836.2	836.2	837.5	838.7	842.6
32.5°	810.3	806.4	805.1	803.8	805.1	805.1	805.1	803.8	805.1	806.4	810.3
35°	776.6	772.7	770.1	768.9	771.4	772.7	771.4	768.9	770.1	772.7	776.6
37.5°	742.9	739.1	736.5	735.2	733.9	733.9	733.9	735.2	736.5	739.1	742.9
40°	708.0	704.1	701.5	700.3	700.3	700.3	700.3	700.3	701.5	704.1	708.0
42.5°	671.8	667.9	665.3	664.0	665.3	665.3	665.3	664.0	665.3	667.9	671.8
45°	635.5	631.7	629.0	627.7	627.7	627.7	627.7	627.7	629.0	631.7	635.5
47.5°	599.3	595.4	592.8	590.2	590.2	590.2	590.2	590.2	592.8	595.4	599.3
50°	560.4	556.5	555.2	553.9	552.6	552.6	552.6	553.9	555.2	556.5	560.4
52.5°	524.2	520.3	517.7	516.4	516.4	516.4	516.4	516.4	517.7	520.3	524.2
55°	485.3	481.5	478.9	477.6	478.9	478.9	478.9	477.6	478.9	481.5	485.3
57.5°	446.5	442.7	441.4	440.1	440.1	440.1	440.1	440.1	441.4	442.7	446.5
60°	407.7	403.8	402.5	401.3	401.3	401.3	401.3	401.3	402.5	403.8	407.7
62.5°	368.9	365.0	363.7	362.4	362.4	362.4	362.4	362.4	363.7	365.0	368.9
65°	328.8	327.5	326.2	324.9	323.6	323.6	323.6	324.9	326.2	327.5	328.8
67.5°	286.0	284.7	283.4	282.1	280.8	280.8	280.8	282.1	283.4	284.7	286.0
70°	247.2	245.9	244.6	243.3	242.0	242.0	242.0	243.3	244.6	245.9	247.2
72.5°	208.4	207.1	205.8	204.5	203.2	203.2	203.2	204.5	205.8	207.1	208.4
75°	169.6	168.3	167.0	167.0	165.7	165.7	165.7	167.0	167.0	168.3	169.6
77.5°	133.3	132.0	130.7	130.7	129.4	129.4	129.4	130.7	130.7	132.0	133.3
80°	98.4	97.1	95.8	95.8	95.8	95.8	95.8	95.8	95.8	97.1	98.4
82.5°	66.0	66.0	64.7	64.7	64.7	64.7	64.7	64.7	64.7	66.0	66.0
85°	38.8	38.8	37.5	37.5	37.5	37.5	37.5	37.5	37.5	38.8	38.8
87.5°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
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-30L850-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1060.0	1060.0	1060.0	1060.0
2.5°	1062.6	1063.9	1058.7	1053.6
5°	1057.4	1058.7	1054.9	1049.7
7.5°	1049.7	1051.0	1047.1	1043.2
10°	1038.1	1040.7	1036.7	1031.5
12.5°	1023.8	1025.1	1021.2	1017.3
15°	1007.0	1008.3	1004.4	1000.5
17.5°	986.3	988.8	985.0	981.1
20°	962.9	965.5	962.9	959.1
22.5°	937.1	939.7	937.1	934.4
25°	909.9	912.5	909.9	907.3
27.5°	880.1	884.0	881.4	880.1
30°	849.1	852.9	850.4	849.1
32.5°	816.7	821.9	819.3	816.7
35°	783.1	786.9	784.3	783.1
37.5°	749.4	753.3	752.0	750.7
40°	714.5	718.3	715.7	714.5
42.5°	678.2	682.1	680.8	679.5
45°	640.7	644.6	643.3	643.3
47.5°	604.5	608.3	607.0	605.8
50°	565.6	569.5	568.2	568.2
52.5°	528.1	532.0	530.7	529.4
55°	489.2	491.8	490.5	490.5
57.5°	450.4	454.3	453.0	451.7
60°	411.6	414.2	412.9	412.9
62.5°	372.8	375.3	374.1	374.1
65°	331.4	333.9	333.9	333.9
67.5°	288.6	291.3	290.0	290.0
70°	249.8	251.1	249.8	249.8
72.5°	209.7	211.0	211.0	211.0
75°	170.8	172.1	170.8	170.8
77.5°	134.6	135.9	134.6	133.3
80°	99.7	101.0	99.7	98.4
82.5°	67.3	68.6	67.3	66.0
85°	40.1	40.1	38.8	37.5
87.5°	16.8	16.8	15.5	14.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)