

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: P709080

Luminaire Tested: **4APN-X-34L850-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709080
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-34L850-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

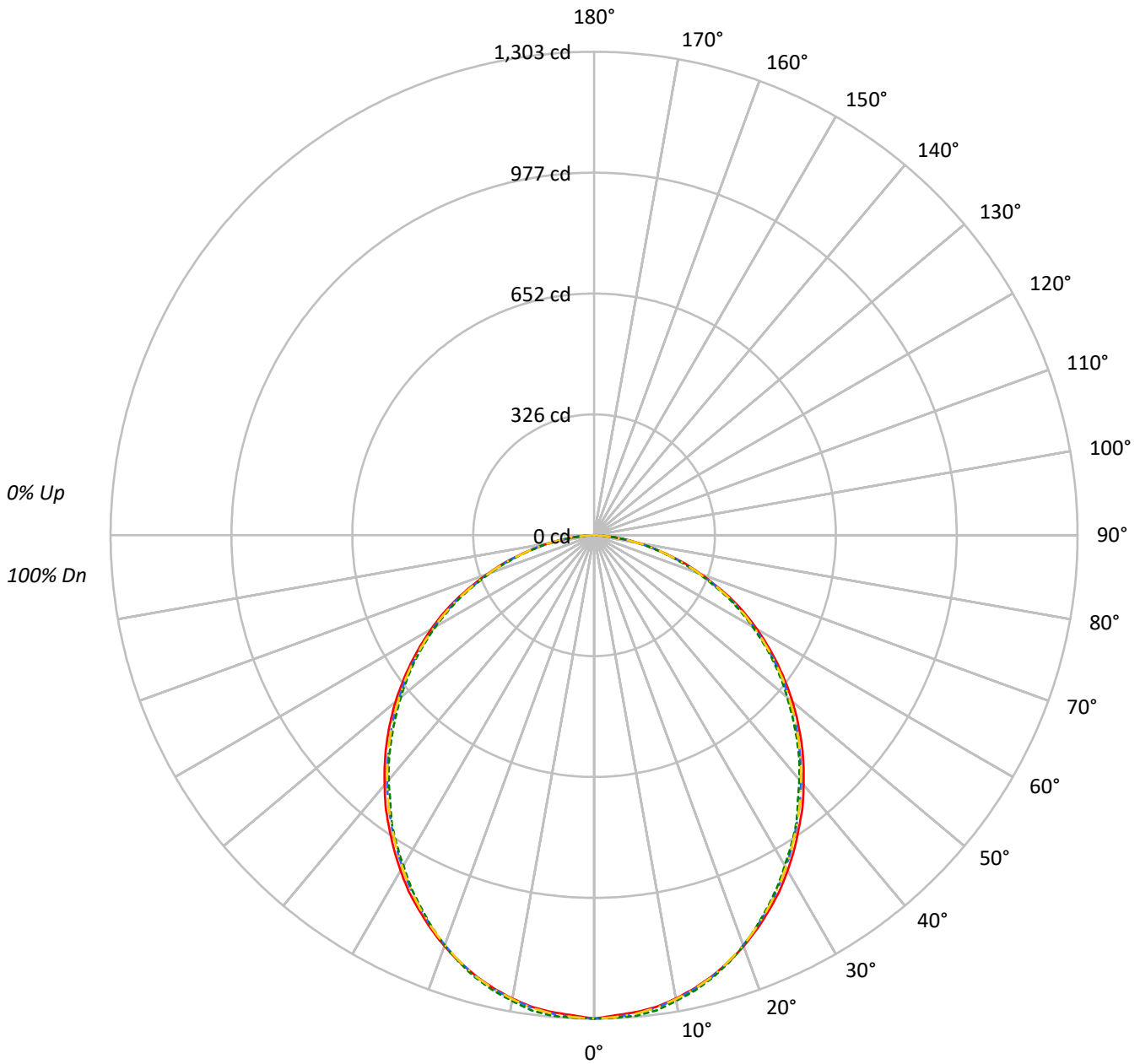
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3389.9 lumens
Efficiency: N/A
Efficacy: 92.1 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°	12021	12021	12021	12021
5°	11949	12038	11949	12038
10°	11878	11938	11878	11938
15°	11747	11792	11747	11792
20°	11574	11559	11574	11559
25°	11353	11256	11353	11256
30°	11118	10949	11118	10949
35°	10841	10698	10841	10698
40°	10577	10366	10577	10366
45°	10317	10068	10317	10068
50°	10024	9750	10024	9750
55°	9698	9468	9698	9468
60°	9365	9101	9365	9101
65°	8959	8682	8959	8682
70°	8282	8025	8282	8025
75°	7486	7258	7486	7258
80°	6424	6254	6424	6254
85°	4880	4880	4880	4880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.6
10°-20°	347.3	10.2
20°-30°	511.9	15.1
30°-40°	597.5	17.6
40°-50°	602.4	17.8
50°-60°	532.4	15.7
60°-70°	398.1	11.7
70°-80°	220.7	6.5
80°-90°	56.6	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°	982.1	29.0
0°-40°	1579.6	46.6
0°-60°	2714.4	80.1
0°-90°	3389.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3389.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1303	1303	1303	1303	1303	
5°	1290	1300	1290	1300	1290	123
15°	1230	1234	1230	1234	1230	347
25°	1115	1106	1115	1106	1115	514
35°	962	950	962	950	962	603
45°	791	772	791	772	791	610
55°	603	589	603	589	603	539
65°	410	398	410	398	410	404
75°	210	204	210	204	210	223
85°	46	46	46	46	46	56
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°	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9
2.5°	1295.0	1301.3	1307.7	1306.1	1301.3	1298.2	1299.8	1299.8	1301.3	1301.3	1301.3
5°	1290.2	1296.6	1301.3	1299.8	1295.0	1293.4	1293.4	1293.4	1296.6	1299.8	1296.6
7.5°	1282.3	1287.0	1291.8	1290.2	1285.4	1283.8	1283.8	1285.4	1288.6	1291.8	1288.6
10°	1267.9	1274.3	1279.1	1275.9	1271.1	1267.9	1267.9	1267.9	1271.1	1274.3	1271.1
12.5°	1250.4	1255.2	1260.0	1258.4	1253.6	1250.4	1250.4	1250.4	1253.6	1256.8	1253.6
15°	1229.8	1234.5	1239.3	1237.7	1232.9	1229.8	1229.8	1229.8	1232.9	1234.5	1232.9
17.5°	1205.9	1210.7	1215.4	1212.3	1205.9	1202.7	1202.7	1202.7	1205.9	1207.5	1205.9
20°	1178.8	1183.6	1186.8	1183.6	1177.3	1174.1	1172.5	1172.5	1175.7	1177.3	1175.7
22.5°	1148.6	1151.8	1155.0	1151.8	1145.4	1142.3	1140.7	1139.1	1140.7	1142.3	1140.7
25°	1115.2	1118.4	1121.6	1118.4	1112.0	1107.3	1105.7	1104.1	1105.7	1105.7	1105.7
27.5°	1081.8	1083.4	1086.6	1081.8	1075.4	1070.7	1069.1	1067.5	1069.1	1069.1	1069.1
30°	1043.6	1045.2	1048.4	1043.6	1035.7	1030.9	1029.3	1027.7	1027.7	1027.7	1027.7
32.5°	1003.8	1007.0	1010.2	1003.8	995.9	991.1	989.5	987.9	989.5	989.5	989.5
35°	962.5	964.1	967.3	962.5	954.5	949.8	946.6	945.0	948.2	949.8	948.2
37.5°	922.7	924.3	925.9	921.1	913.2	908.4	905.2	903.6	902.0	902.0	902.0
40°	878.2	879.8	882.9	878.2	870.2	865.4	862.3	860.7	860.7	860.7	860.7
42.5°	835.2	836.8	838.4	833.6	825.7	820.9	817.7	816.1	817.7	817.7	817.7
45°	790.7	790.7	792.3	787.5	781.1	776.4	773.2	771.6	771.6	771.6	771.6
47.5°	744.5	746.1	747.7	742.9	736.6	731.8	728.6	725.4	725.4	725.4	725.4
50°	698.4	698.4	700.0	695.2	688.9	684.1	682.5	680.9	679.3	679.3	679.3
52.5°	650.7	652.3	653.9	649.1	644.3	639.5	636.4	634.8	634.8	634.8	634.8
55°	602.9	602.9	604.5	601.4	596.6	591.8	588.6	587.0	588.6	588.6	588.6
57.5°	555.2	556.8	558.4	553.6	548.9	544.1	542.5	540.9	540.9	540.9	540.9
60°	507.5	507.5	509.1	505.9	501.1	496.4	494.8	493.2	493.2	493.2	493.2
62.5°	459.8	459.8	461.4	458.2	453.4	448.6	447.0	445.4	445.4	445.4	445.4
65°	410.4	410.4	410.4	407.3	404.1	402.5	400.9	399.3	397.7	397.7	397.7
67.5°	356.4	356.4	357.9	354.8	351.6	350.0	348.4	346.8	345.2	345.2	345.2
70°	307.0	307.0	308.6	307.0	303.9	302.3	300.7	299.1	297.5	297.5	297.5
72.5°	259.3	259.3	259.3	257.7	256.1	254.5	253.0	251.4	249.8	249.8	249.8
75°	210.0	210.0	211.6	210.0	208.4	206.8	205.2	205.2	203.6	203.6	203.6
77.5°	163.9	165.5	167.0	165.5	163.9	162.3	160.7	160.7	159.1	159.1	159.1
80°	120.9	122.5	124.1	122.5	120.9	119.3	117.7	117.7	117.7	117.7	117.7
82.5°	81.1	82.7	84.3	82.7	81.1	81.1	79.5	79.5	79.5	79.5	79.5
85°	46.1	47.7	49.3	49.3	47.7	47.7	46.1	46.1	46.1	46.1	46.1
87.5°	17.5	19.1	20.7	20.7	19.1	19.1	19.1	19.1	19.1	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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9
2.5°	1299.8	1299.8	1298.2	1301.3	1306.1	1307.7	1301.3	1295.0	1301.3	1307.7	1306.1
5°	1293.4	1293.4	1293.4	1295.0	1299.8	1301.3	1296.6	1290.2	1296.6	1301.3	1299.8
7.5°	1285.4	1283.8	1283.8	1285.4	1290.2	1291.8	1287.0	1282.3	1287.0	1291.8	1290.2
10°	1267.9	1267.9	1267.9	1271.1	1275.9	1279.1	1274.3	1267.9	1274.3	1279.1	1275.9
12.5°	1250.4	1250.4	1250.4	1253.6	1258.4	1260.0	1255.2	1250.4	1255.2	1260.0	1258.4
15°	1229.8	1229.8	1229.8	1232.9	1237.7	1239.3	1234.5	1229.8	1234.5	1239.3	1237.7
17.5°	1202.7	1202.7	1202.7	1205.9	1212.3	1215.4	1210.7	1205.9	1210.7	1215.4	1212.3
20°	1172.5	1172.5	1174.1	1177.3	1183.6	1186.8	1183.6	1178.8	1183.6	1186.8	1183.6
22.5°	1139.1	1140.7	1142.3	1145.4	1151.8	1155.0	1151.8	1148.6	1151.8	1155.0	1151.8
25°	1104.1	1105.7	1107.3	1112.0	1118.4	1121.6	1118.4	1115.2	1118.4	1121.6	1118.4
27.5°	1067.5	1069.1	1070.7	1075.4	1081.8	1086.6	1083.4	1081.8	1083.4	1086.6	1081.8
30°	1027.7	1029.3	1030.9	1035.7	1043.6	1048.4	1045.2	1043.6	1045.2	1048.4	1043.6
32.5°	987.9	989.5	991.1	995.9	1003.8	1010.2	1007.0	1003.8	1007.0	1010.2	1003.8
35°	945.0	946.6	949.8	954.5	962.5	967.3	964.1	962.5	964.1	967.3	962.5
37.5°	903.6	905.2	908.4	913.2	921.1	925.9	924.3	922.7	924.3	925.9	921.1
40°	860.7	862.3	865.4	870.2	878.2	882.9	879.8	878.2	879.8	882.9	878.2
42.5°	816.1	817.7	820.9	825.7	833.6	838.4	836.8	835.2	836.8	838.4	833.6
45°	771.6	773.2	776.4	781.1	787.5	792.3	790.7	790.7	790.7	792.3	787.5
47.5°	725.4	728.6	731.8	736.6	742.9	747.7	746.1	744.5	746.1	747.7	742.9
50°	680.9	682.5	684.1	688.9	695.2	700.0	698.4	698.4	698.4	700.0	695.2
52.5°	634.8	636.4	639.5	644.3	649.1	653.9	652.3	650.7	652.3	653.9	649.1
55°	587.0	588.6	591.8	596.6	601.4	604.5	602.9	602.9	602.9	604.5	601.4
57.5°	540.9	542.5	544.1	548.9	553.6	558.4	556.8	555.2	556.8	558.4	553.6
60°	493.2	494.8	496.4	501.1	505.9	509.1	507.5	507.5	507.5	509.1	505.9
62.5°	445.4	447.0	448.6	453.4	458.2	461.4	459.8	459.8	459.8	461.4	458.2
65°	399.3	400.9	402.5	404.1	407.3	410.4	410.4	410.4	410.4	410.4	407.3
67.5°	346.8	348.4	350.0	351.6	354.8	357.9	356.4	356.4	356.4	357.9	354.8
70°	299.1	300.7	302.3	303.9	307.0	308.6	307.0	307.0	307.0	308.6	307.0
72.5°	251.4	253.0	254.5	256.1	257.7	259.3	259.3	259.3	259.3	259.3	257.7
75°	205.2	205.2	206.8	208.4	210.0	211.6	210.0	210.0	210.0	211.6	210.0
77.5°	160.7	160.7	162.3	163.9	165.5	167.0	165.5	163.9	165.5	167.0	165.5
80°	117.7	117.7	119.3	120.9	122.5	124.1	122.5	120.9	122.5	124.1	122.5
82.5°	79.5	79.5	81.1	81.1	82.7	84.3	82.7	81.1	82.7	84.3	82.7
85°	46.1	46.1	47.7	47.7	49.3	49.3	47.7	46.1	47.7	49.3	49.3
87.5°	19.1	19.1	19.1	19.1	20.7	20.7	19.1	17.5	19.1	20.7	20.7
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°	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9	1302.9
2.5°	1301.3	1298.2	1299.8	1299.8	1301.3	1301.3	1301.3	1299.8	1299.8	1298.2	1301.3
5°	1295.0	1293.4	1293.4	1293.4	1296.6	1299.8	1296.6	1293.4	1293.4	1293.4	1295.0
7.5°	1285.4	1283.8	1283.8	1285.4	1288.6	1291.8	1288.6	1285.4	1283.8	1283.8	1285.4
10°	1271.1	1267.9	1267.9	1267.9	1271.1	1274.3	1271.1	1267.9	1267.9	1267.9	1271.1
12.5°	1253.6	1250.4	1250.4	1250.4	1253.6	1256.8	1253.6	1250.4	1250.4	1250.4	1253.6
15°	1232.9	1229.8	1229.8	1229.8	1232.9	1234.5	1232.9	1229.8	1229.8	1229.8	1232.9
17.5°	1205.9	1202.7	1202.7	1202.7	1205.9	1207.5	1205.9	1202.7	1202.7	1202.7	1205.9
20°	1177.3	1174.1	1172.5	1172.5	1175.7	1177.3	1175.7	1172.5	1172.5	1174.1	1177.3
22.5°	1145.4	1142.3	1140.7	1139.1	1140.7	1142.3	1140.7	1139.1	1140.7	1142.3	1145.4
25°	1112.0	1107.3	1105.7	1104.1	1105.7	1105.7	1105.7	1104.1	1105.7	1107.3	1112.0
27.5°	1075.4	1070.7	1069.1	1067.5	1069.1	1069.1	1069.1	1067.5	1069.1	1070.7	1075.4
30°	1035.7	1030.9	1029.3	1027.7	1027.7	1027.7	1027.7	1027.7	1029.3	1030.9	1035.7
32.5°	995.9	991.1	989.5	987.9	989.5	989.5	989.5	987.9	989.5	991.1	995.9
35°	954.5	949.8	946.6	945.0	948.2	949.8	948.2	945.0	946.6	949.8	954.5
37.5°	913.2	908.4	905.2	903.6	902.0	902.0	902.0	903.6	905.2	908.4	913.2
40°	870.2	865.4	862.3	860.7	860.7	860.7	860.7	860.7	862.3	865.4	870.2
42.5°	825.7	820.9	817.7	816.1	817.7	817.7	817.7	816.1	817.7	820.9	825.7
45°	781.1	776.4	773.2	771.6	771.6	771.6	771.6	771.6	773.2	776.4	781.1
47.5°	736.6	731.8	728.6	725.4	725.4	725.4	725.4	725.4	728.6	731.8	736.6
50°	688.9	684.1	682.5	680.9	679.3	679.3	679.3	680.9	682.5	684.1	688.9
52.5°	644.3	639.5	636.4	634.8	634.8	634.8	634.8	634.8	636.4	639.5	644.3
55°	596.6	591.8	588.6	587.0	588.6	588.6	588.6	587.0	588.6	591.8	596.6
57.5°	548.9	544.1	542.5	540.9	540.9	540.9	540.9	540.9	542.5	544.1	548.9
60°	501.1	496.4	494.8	493.2	493.2	493.2	493.2	493.2	494.8	496.4	501.1
62.5°	453.4	448.6	447.0	445.4	445.4	445.4	445.4	445.4	447.0	448.6	453.4
65°	404.1	402.5	400.9	399.3	397.7	397.7	397.7	399.3	400.9	402.5	404.1
67.5°	351.6	350.0	348.4	346.8	345.2	345.2	345.2	346.8	348.4	350.0	351.6
70°	303.9	302.3	300.7	299.1	297.5	297.5	297.5	299.1	300.7	302.3	303.9
72.5°	256.1	254.5	253.0	251.4	249.8	249.8	249.8	251.4	253.0	254.5	256.1
75°	208.4	206.8	205.2	205.2	203.6	203.6	203.6	205.2	205.2	206.8	208.4
77.5°	163.9	162.3	160.7	160.7	159.1	159.1	159.1	160.7	160.7	162.3	163.9
80°	120.9	119.3	117.7	117.7	117.7	117.7	117.7	117.7	117.7	119.3	120.9
82.5°	81.1	81.1	79.5	79.5	79.5	79.5	79.5	79.5	79.5	81.1	81.1
85°	47.7	47.7	46.1	46.1	46.1	46.1	46.1	46.1	46.1	47.7	47.7
87.5°	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	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



TEST NUMBER: P709080
 CATALOG NUMBER: 4APN-X-34L850-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1302.9	1302.9	1302.9	1302.9
2.5°	1306.1	1307.7	1301.3	1295.0
5°	1299.8	1301.3	1296.6	1290.2
7.5°	1290.2	1291.8	1287.0	1282.3
10°	1275.9	1279.1	1274.3	1267.9
12.5°	1258.4	1260.0	1255.2	1250.4
15°	1237.7	1239.3	1234.5	1229.8
17.5°	1212.3	1215.4	1210.7	1205.9
20°	1183.6	1186.8	1183.6	1178.8
22.5°	1151.8	1155.0	1151.8	1148.6
25°	1118.4	1121.6	1118.4	1115.2
27.5°	1081.8	1086.6	1083.4	1081.8
30°	1043.6	1048.4	1045.2	1043.6
32.5°	1003.8	1010.2	1007.0	1003.8
35°	962.5	967.3	964.1	962.5
37.5°	921.1	925.9	924.3	922.7
40°	878.2	882.9	879.8	878.2
42.5°	833.6	838.4	836.8	835.2
45°	787.5	792.3	790.7	790.7
47.5°	742.9	747.7	746.1	744.5
50°	695.2	700.0	698.4	698.4
52.5°	649.1	653.9	652.3	650.7
55°	601.4	604.5	602.9	602.9
57.5°	553.6	558.4	556.8	555.2
60°	505.9	509.1	507.5	507.5
62.5°	458.2	461.4	459.8	459.8
65°	407.3	410.4	410.4	410.4
67.5°	354.8	357.9	356.4	356.4
70°	307.0	308.6	307.0	307.0
72.5°	257.7	259.3	259.3	259.3
75°	210.0	211.6	210.0	210.0
77.5°	165.5	167.0	165.5	163.9
80°	122.5	124.1	122.5	120.9
82.5°	82.7	84.3	82.7	81.1
85°	49.3	49.3	47.7	46.1
87.5°	20.7	20.7	19.1	17.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)