

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-37L835-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-37L835-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

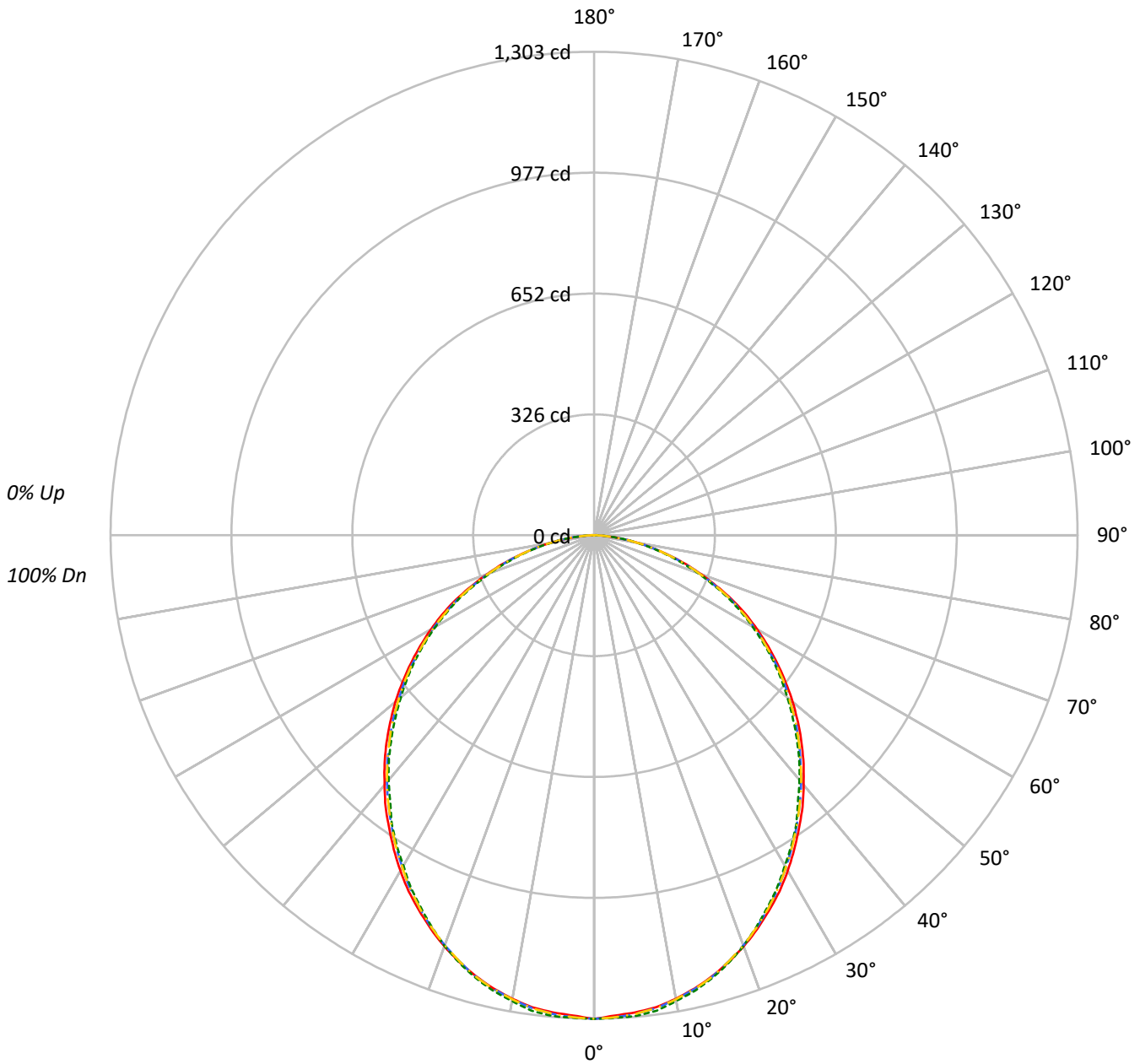
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3391.3 lumens
Efficiency: N/A
Efficacy: 83.1 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): 40.8
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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	12025	12025	12025	12025
5°	11954	12043	11954	12043
10°	11884	11943	11884	11943
15°	11750	11796	11750	11796
20°	11579	11564	11579	11564
25°	11357	11260	11357	11260
30°	11123	10953	11123	10953
35°	10844	10701	10844	10701
40°	10581	10371	10581	10371
45°	10321	10072	10321	10072
50°	10029	9755	10029	9755
55°	9703	9473	9703	9473
60°	9368	9104	9368	9104
65°	8966	8684	8966	8684
70°	8287	8028	8287	8028
75°	7489	7265	7489	7265
80°	6429	6254	6429	6254
85°	4891	4891	4891	4891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.6
10°-20°	347.4	10.2
20°-30°	512.1	15.1
30°-40°	597.8	17.6
40°-50°	602.7	17.8
50°-60°	532.6	15.7
60°-70°	398.3	11.7
70°-80°	220.8	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°	982.5	29.0
0°-40°	1580.2	46.6
0°-60°	2715.5	80.1
0°-90°	3391.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3391.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1303	1303	1303	1303	1303	
5°	1291	1300	1291	1300	1291	123
15°	1230	1235	1230	1235	1230	347
25°	1116	1106	1116	1106	1116	514
35°	963	950	963	950	963	603
45°	791	772	791	772	791	610
55°	603	589	603	589	603	540
65°	411	398	411	398	411	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°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1295.5	1301.9	1308.2	1306.7	1301.9	1298.7	1300.3	1300.3	1301.9	1301.9	1301.9
5°	1290.7	1297.1	1301.9	1300.3	1295.5	1293.9	1293.9	1293.9	1297.1	1300.3	1297.1
7.5°	1282.8	1287.6	1292.4	1290.7	1285.9	1284.3	1284.3	1285.9	1289.1	1292.4	1289.1
10°	1268.5	1274.8	1279.6	1276.4	1271.6	1268.5	1268.5	1268.5	1271.6	1274.8	1271.6
12.5°	1251.0	1255.8	1260.5	1258.9	1254.1	1251.0	1251.0	1251.0	1254.1	1257.3	1254.1
15°	1230.2	1235.0	1239.8	1238.2	1233.5	1230.2	1230.2	1230.2	1233.5	1235.0	1233.5
17.5°	1206.3	1211.1	1215.9	1212.7	1206.3	1203.2	1203.2	1203.2	1206.3	1208.0	1206.3
20°	1179.3	1184.1	1187.3	1184.1	1177.8	1174.5	1173.0	1173.0	1176.1	1177.8	1176.1
22.5°	1149.1	1152.3	1155.5	1152.3	1145.9	1142.7	1141.2	1139.5	1141.2	1142.7	1141.2
25°	1115.6	1118.8	1122.1	1118.8	1112.5	1107.7	1106.1	1104.6	1106.1	1106.1	1106.1
27.5°	1082.2	1083.8	1087.0	1082.2	1075.9	1071.1	1069.5	1068.0	1069.5	1069.5	1069.5
30°	1044.1	1045.6	1048.8	1044.1	1036.1	1031.3	1029.7	1028.1	1028.1	1028.1	1028.1
32.5°	1004.2	1007.5	1010.6	1004.2	996.3	991.5	990.0	988.4	990.0	990.0	990.0
35°	962.8	964.5	967.6	962.8	954.9	950.1	947.0	945.3	948.6	950.1	948.6
37.5°	923.1	924.7	926.2	921.5	913.5	908.7	905.6	904.0	902.4	902.4	902.4
40°	878.5	880.1	883.3	878.5	870.6	865.8	862.6	861.1	861.1	861.1	861.1
42.5°	835.5	837.2	838.7	833.9	826.0	821.2	818.1	816.4	818.1	818.1	818.1
45°	791.0	791.0	792.6	787.8	781.5	776.7	773.5	771.9	771.9	771.9	771.9
47.5°	744.9	746.5	748.0	743.2	736.9	732.1	728.9	725.7	725.7	725.7	725.7
50°	698.7	698.7	700.3	695.5	689.1	684.4	682.7	681.2	679.6	679.6	679.6
52.5°	650.9	652.5	654.2	649.4	644.6	639.8	636.6	635.0	635.0	635.0	635.0
55°	603.2	603.2	604.7	601.6	596.8	592.0	588.9	587.3	588.9	588.9	588.9
57.5°	555.4	557.1	558.6	553.8	549.1	544.3	542.7	541.1	541.1	541.1	541.1
60°	507.7	507.7	509.3	506.1	501.3	496.6	494.9	493.4	493.4	493.4	493.4
62.5°	460.0	460.0	461.6	458.3	453.6	448.8	447.3	445.6	445.6	445.6	445.6
65°	410.7	410.7	410.7	407.4	404.2	402.6	401.1	399.5	397.8	397.8	397.8
67.5°	356.5	356.5	358.1	354.9	351.7	350.2	348.5	346.9	345.4	345.4	345.4
70°	307.2	307.2	308.8	307.2	304.0	302.4	300.8	299.2	297.6	297.6	297.6
72.5°	259.5	259.5	259.5	257.8	256.2	254.7	253.1	251.4	249.9	249.9	249.9
75°	210.1	210.1	211.7	210.1	208.5	206.9	205.3	205.3	203.8	203.8	203.8
77.5°	163.9	165.5	167.1	165.5	163.9	162.4	160.7	160.7	159.1	159.1	159.1
80°	121.0	122.5	124.1	122.5	121.0	119.4	117.7	117.7	117.7	117.7	117.7
82.5°	81.1	82.8	84.4	82.8	81.1	81.1	79.6	79.6	79.6	79.6	79.6
85°	46.2	47.8	49.3	49.3	47.8	47.8	46.2	46.2	46.2	46.2	46.2
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°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1300.3	1300.3	1298.7	1301.9	1306.7	1308.2	1301.9	1295.5	1301.9	1308.2	1306.7
5°	1293.9	1293.9	1293.9	1295.5	1300.3	1301.9	1297.1	1290.7	1297.1	1301.9	1300.3
7.5°	1285.9	1284.3	1284.3	1285.9	1290.7	1292.4	1287.6	1282.8	1287.6	1292.4	1290.7
10°	1268.5	1268.5	1268.5	1271.6	1276.4	1279.6	1274.8	1268.5	1274.8	1279.6	1276.4
12.5°	1251.0	1251.0	1251.0	1254.1	1258.9	1260.5	1255.8	1251.0	1255.8	1260.5	1258.9
15°	1230.2	1230.2	1230.2	1233.5	1238.2	1239.8	1235.0	1230.2	1235.0	1239.8	1238.2
17.5°	1203.2	1203.2	1203.2	1206.3	1212.7	1215.9	1211.1	1206.3	1211.1	1215.9	1212.7
20°	1173.0	1173.0	1174.5	1177.8	1184.1	1187.3	1184.1	1179.3	1184.1	1187.3	1184.1
22.5°	1139.5	1141.2	1142.7	1145.9	1152.3	1155.5	1152.3	1149.1	1152.3	1155.5	1152.3
25°	1104.6	1106.1	1107.7	1112.5	1118.8	1122.1	1118.8	1115.6	1118.8	1122.1	1118.8
27.5°	1068.0	1069.5	1071.1	1075.9	1082.2	1087.0	1083.8	1082.2	1083.8	1087.0	1082.2
30°	1028.1	1029.7	1031.3	1036.1	1044.1	1048.8	1045.6	1044.1	1045.6	1048.8	1044.1
32.5°	988.4	990.0	991.5	996.3	1004.2	1010.6	1007.5	1004.2	1007.5	1010.6	1004.2
35°	945.3	947.0	950.1	954.9	962.8	967.6	964.5	962.8	964.5	967.6	962.8
37.5°	904.0	905.6	908.7	913.5	921.5	926.2	924.7	923.1	924.7	926.2	921.5
40°	861.1	862.6	865.8	870.6	878.5	883.3	880.1	878.5	880.1	883.3	878.5
42.5°	816.4	818.1	821.2	826.0	833.9	838.7	837.2	835.5	837.2	838.7	833.9
45°	771.9	773.5	776.7	781.5	787.8	792.6	791.0	791.0	791.0	792.6	787.8
47.5°	725.7	728.9	732.1	736.9	743.2	748.0	746.5	744.9	746.5	748.0	743.2
50°	681.2	682.7	684.4	689.1	695.5	700.3	698.7	698.7	698.7	700.3	695.5
52.5°	635.0	636.6	639.8	644.6	649.4	654.2	652.5	650.9	652.5	654.2	649.4
55°	587.3	588.9	592.0	596.8	601.6	604.7	603.2	603.2	603.2	604.7	601.6
57.5°	541.1	542.7	544.3	549.1	553.8	558.6	557.1	555.4	557.1	558.6	553.8
60°	493.4	494.9	496.6	501.3	506.1	509.3	507.7	507.7	507.7	509.3	506.1
62.5°	445.6	447.3	448.8	453.6	458.3	461.6	460.0	460.0	460.0	461.6	458.3
65°	399.5	401.1	402.6	404.2	407.4	410.7	410.7	410.7	410.7	410.7	407.4
67.5°	346.9	348.5	350.2	351.7	354.9	358.1	356.5	356.5	356.5	358.1	354.9
70°	299.2	300.8	302.4	304.0	307.2	308.8	307.2	307.2	307.2	308.8	307.2
72.5°	251.4	253.1	254.7	256.2	257.8	259.5	259.5	259.5	259.5	259.5	257.8
75°	205.3	205.3	206.9	208.5	210.1	211.7	210.1	210.1	210.1	211.7	210.1
77.5°	160.7	160.7	162.4	163.9	165.5	167.1	165.5	163.9	165.5	167.1	165.5
80°	117.7	117.7	119.4	121.0	122.5	124.1	122.5	121.0	122.5	124.1	122.5
82.5°	79.6	79.6	81.1	81.1	82.8	84.4	82.8	81.1	82.8	84.4	82.8
85°	46.2	46.2	47.8	47.8	49.3	49.3	47.8	46.2	47.8	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°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1301.9	1298.7	1300.3	1300.3	1301.9	1301.9	1301.9	1300.3	1300.3	1298.7	1301.9
5°	1295.5	1293.9	1293.9	1293.9	1297.1	1300.3	1297.1	1293.9	1293.9	1293.9	1295.5
7.5°	1285.9	1284.3	1284.3	1285.9	1289.1	1292.4	1289.1	1285.9	1284.3	1284.3	1285.9
10°	1271.6	1268.5	1268.5	1268.5	1271.6	1274.8	1271.6	1268.5	1268.5	1268.5	1271.6
12.5°	1254.1	1251.0	1251.0	1251.0	1254.1	1257.3	1254.1	1251.0	1251.0	1251.0	1254.1
15°	1233.5	1230.2	1230.2	1230.2	1233.5	1235.0	1233.5	1230.2	1230.2	1230.2	1233.5
17.5°	1206.3	1203.2	1203.2	1203.2	1206.3	1208.0	1206.3	1203.2	1203.2	1203.2	1206.3
20°	1177.8	1174.5	1173.0	1173.0	1176.1	1177.8	1176.1	1173.0	1173.0	1174.5	1177.8
22.5°	1145.9	1142.7	1141.2	1139.5	1141.2	1142.7	1141.2	1139.5	1141.2	1142.7	1145.9
25°	1112.5	1107.7	1106.1	1104.6	1106.1	1106.1	1106.1	1104.6	1106.1	1107.7	1112.5
27.5°	1075.9	1071.1	1069.5	1068.0	1069.5	1069.5	1069.5	1068.0	1069.5	1071.1	1075.9
30°	1036.1	1031.3	1029.7	1028.1	1028.1	1028.1	1028.1	1028.1	1029.7	1031.3	1036.1
32.5°	996.3	991.5	990.0	988.4	990.0	990.0	990.0	988.4	990.0	991.5	996.3
35°	954.9	950.1	947.0	945.3	948.6	950.1	948.6	945.3	947.0	950.1	954.9
37.5°	913.5	908.7	905.6	904.0	902.4	902.4	902.4	904.0	905.6	908.7	913.5
40°	870.6	865.8	862.6	861.1	861.1	861.1	861.1	861.1	862.6	865.8	870.6
42.5°	826.0	821.2	818.1	816.4	818.1	818.1	818.1	816.4	818.1	821.2	826.0
45°	781.5	776.7	773.5	771.9	771.9	771.9	771.9	771.9	773.5	776.7	781.5
47.5°	736.9	732.1	728.9	725.7	725.7	725.7	725.7	725.7	728.9	732.1	736.9
50°	689.1	684.4	682.7	681.2	679.6	679.6	679.6	681.2	682.7	684.4	689.1
52.5°	644.6	639.8	636.6	635.0	635.0	635.0	635.0	635.0	636.6	639.8	644.6
55°	596.8	592.0	588.9	587.3	588.9	588.9	588.9	587.3	588.9	592.0	596.8
57.5°	549.1	544.3	542.7	541.1	541.1	541.1	541.1	541.1	542.7	544.3	549.1
60°	501.3	496.6	494.9	493.4	493.4	493.4	493.4	493.4	494.9	496.6	501.3
62.5°	453.6	448.8	447.3	445.6	445.6	445.6	445.6	445.6	447.3	448.8	453.6
65°	404.2	402.6	401.1	399.5	397.8	397.8	397.8	399.5	401.1	402.6	404.2
67.5°	351.7	350.2	348.5	346.9	345.4	345.4	345.4	346.9	348.5	350.2	351.7
70°	304.0	302.4	300.8	299.2	297.6	297.6	297.6	299.2	300.8	302.4	304.0
72.5°	256.2	254.7	253.1	251.4	249.9	249.9	249.9	251.4	253.1	254.7	256.2
75°	208.5	206.9	205.3	205.3	203.8	203.8	203.8	205.3	205.3	206.9	208.5
77.5°	163.9	162.4	160.7	160.7	159.1	159.1	159.1	160.7	160.7	162.4	163.9
80°	121.0	119.4	117.7	117.7	117.7	117.7	117.7	117.7	117.7	119.4	121.0
82.5°	81.1	81.1	79.6	79.6	79.6	79.6	79.6	79.6	79.6	81.1	81.1
85°	47.8	47.8	46.2	46.2	46.2	46.2	46.2	46.2	46.2	47.8	47.8
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: P
 CATALOG NUMBER: 4APN-X-37L835-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1303.4	1303.4	1303.4	1303.4
2.5°	1306.7	1308.2	1301.9	1295.5
5°	1300.3	1301.9	1297.1	1290.7
7.5°	1290.7	1292.4	1287.6	1282.8
10°	1276.4	1279.6	1274.8	1268.5
12.5°	1258.9	1260.5	1255.8	1251.0
15°	1238.2	1239.8	1235.0	1230.2
17.5°	1212.7	1215.9	1211.1	1206.3
20°	1184.1	1187.3	1184.1	1179.3
22.5°	1152.3	1155.5	1152.3	1149.1
25°	1118.8	1122.1	1118.8	1115.6
27.5°	1082.2	1087.0	1083.8	1082.2
30°	1044.1	1048.8	1045.6	1044.1
32.5°	1004.2	1010.6	1007.5	1004.2
35°	962.8	967.6	964.5	962.8
37.5°	921.5	926.2	924.7	923.1
40°	878.5	883.3	880.1	878.5
42.5°	833.9	838.7	837.2	835.5
45°	787.8	792.6	791.0	791.0
47.5°	743.2	748.0	746.5	744.9
50°	695.5	700.3	698.7	698.7
52.5°	649.4	654.2	652.5	650.9
55°	601.6	604.7	603.2	603.2
57.5°	553.8	558.6	557.1	555.4
60°	506.1	509.3	507.7	507.7
62.5°	458.3	461.6	460.0	460.0
65°	407.4	410.7	410.7	410.7
67.5°	354.9	358.1	356.5	356.5
70°	307.2	308.8	307.2	307.2
72.5°	257.8	259.5	259.5	259.5
75°	210.1	211.7	210.1	210.1
77.5°	165.5	167.1	165.5	163.9
80°	122.5	124.1	122.5	121.0
82.5°	82.8	84.4	82.8	81.1
85°	49.3	49.3	47.8	46.2
87.5°	20.7	20.7	19.1	17.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)