

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-42L835-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-42L835-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

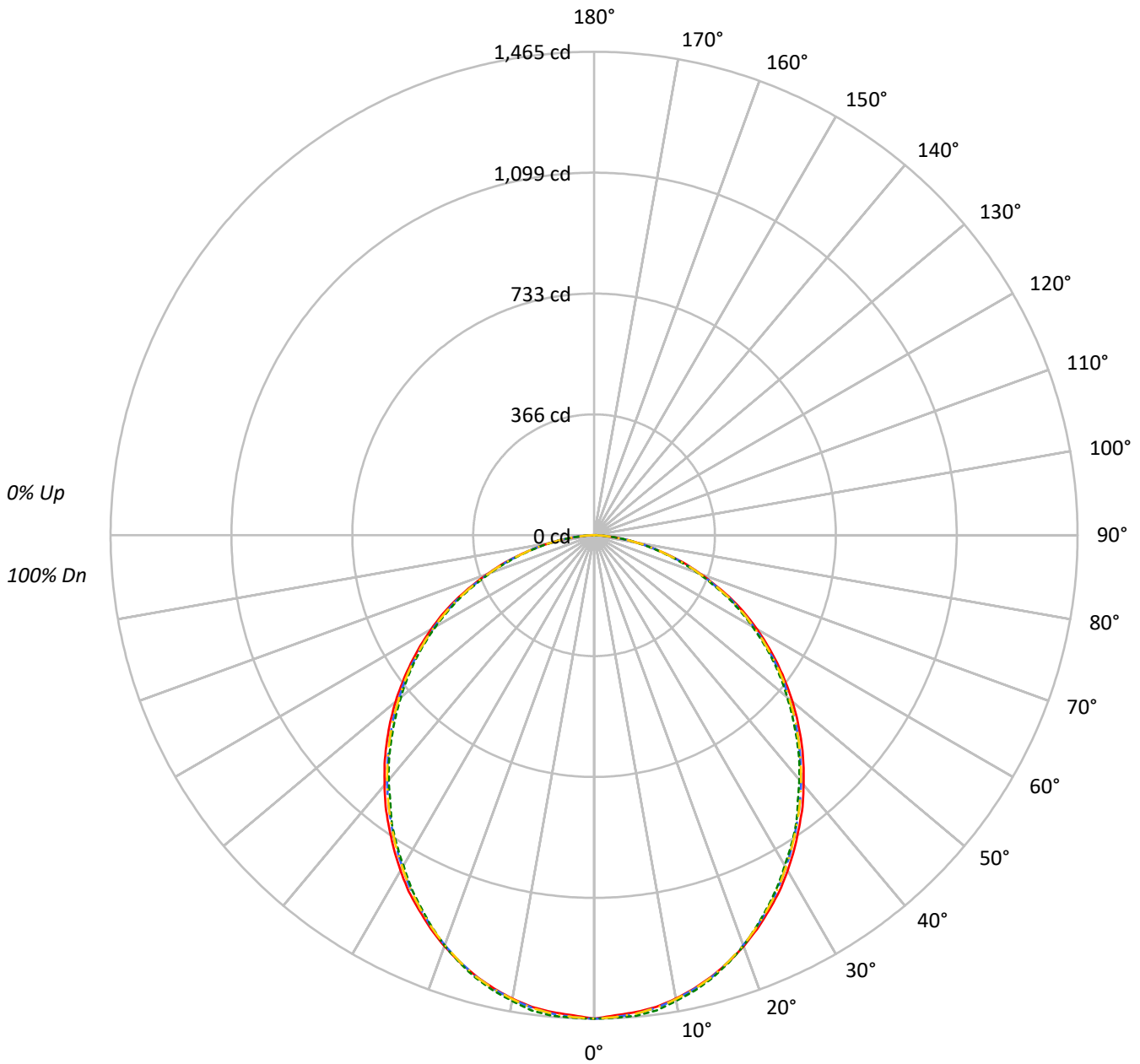
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3811.5 lumens
Efficiency: N/A
Efficacy: 82.5 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): 46.2
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				
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°	13516	13516	13516	13516
5°	13436	13536	13436	13536
10°	13357	13423	13357	13423
15°	13207	13259	13207	13259
20°	13014	12997	13014	12997
25°	12765	12656	12765	12656
30°	12501	12310	12501	12310
35°	12189	12028	12189	12028
40°	11892	11655	11892	11655
45°	11600	11320	11600	11320
50°	11272	10963	11272	10963
55°	10904	10645	10904	10645
60°	10529	10232	10529	10232
65°	10075	9763	10075	9763
70°	9312	9023	9312	9023
75°	8416	8160	8416	8160
80°	7221	7035	7221	7035
85°	5494	5494	5494	5494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	3.6
10°-20°	390.5	10.2
20°-30°	575.5	15.1
30°-40°	671.8	17.6
40°-50°	677.4	17.8
50°-60°	598.6	15.7
60°-70°	447.7	11.7
70°-80°	248.1	6.5
80°-90°	63.6	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°	1104.2	29.0
0°-40°	1776.1	46.6
0°-60°	3052.1	80.1
0°-90°	3811.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3811.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1465	1465	1465	1465	1465	
5°	1451	1462	1451	1462	1451	138
15°	1383	1388	1383	1388	1383	390
25°	1254	1243	1254	1243	1254	578
35°	1082	1068	1082	1068	1082	678
45°	889	868	889	868	889	685
55°	678	662	678	662	678	606
65°	462	447	462	447	462	454
75°	236	229	236	229	236	251
85°	52	52	52	52	52	63
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°	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0
2.5°	1456.0	1463.2	1470.4	1468.6	1463.2	1459.6	1461.5	1461.5	1463.2	1463.2	1463.2
5°	1450.7	1457.9	1463.2	1461.5	1456.0	1454.3	1454.3	1454.3	1457.9	1461.5	1457.9
7.5°	1441.7	1447.1	1452.5	1450.7	1445.3	1443.6	1443.6	1445.3	1448.9	1452.5	1448.9
10°	1425.7	1432.8	1438.1	1434.6	1429.2	1425.7	1425.7	1425.7	1429.2	1432.8	1429.2
12.5°	1406.0	1411.3	1416.7	1414.9	1409.6	1406.0	1406.0	1406.0	1409.6	1413.1	1409.6
15°	1382.7	1388.1	1393.4	1391.7	1386.3	1382.7	1382.7	1382.7	1386.3	1388.1	1386.3
17.5°	1355.9	1361.2	1366.6	1363.1	1355.9	1352.3	1352.3	1352.3	1355.9	1357.6	1355.9
20°	1325.5	1330.8	1334.4	1330.8	1323.7	1320.1	1318.4	1318.4	1321.9	1323.7	1321.9
22.5°	1291.5	1295.0	1298.6	1295.0	1287.9	1284.3	1282.6	1280.8	1282.6	1284.3	1282.6
25°	1253.9	1257.5	1261.1	1257.5	1250.3	1245.0	1243.2	1241.4	1243.2	1243.2	1243.2
27.5°	1216.4	1218.1	1221.7	1216.4	1209.2	1203.9	1202.0	1200.3	1202.0	1202.0	1202.0
30°	1173.4	1175.2	1178.8	1173.4	1164.5	1159.1	1157.3	1155.5	1155.5	1155.5	1155.5
32.5°	1128.7	1132.3	1135.9	1128.7	1119.8	1114.4	1112.6	1110.8	1112.6	1112.6	1112.6
35°	1082.2	1084.0	1087.6	1082.2	1073.3	1067.9	1064.4	1062.5	1066.1	1067.9	1066.1
37.5°	1037.5	1039.3	1041.0	1035.7	1026.7	1021.4	1017.8	1016.0	1014.2	1014.2	1014.2
40°	987.4	989.2	992.8	987.4	978.4	973.1	969.5	967.7	967.7	967.7	967.7
42.5°	939.1	940.9	942.7	937.3	928.4	923.0	919.4	917.7	919.4	919.4	919.4
45°	889.0	889.0	890.8	885.5	878.3	872.9	869.4	867.6	867.6	867.6	867.6
47.5°	837.2	838.9	840.7	835.3	828.2	822.8	819.3	815.7	815.7	815.7	815.7
50°	785.3	785.3	787.0	781.7	774.6	769.1	767.4	765.6	763.8	763.8	763.8
52.5°	731.6	733.4	735.2	729.9	724.4	719.1	715.5	713.7	713.7	713.7	713.7
55°	677.9	677.9	679.7	676.2	670.8	665.4	661.8	660.1	661.8	661.8	661.8
57.5°	624.3	626.0	627.9	622.5	617.1	611.7	610.0	608.2	608.2	608.2	608.2
60°	570.6	570.6	572.4	568.9	563.4	558.1	556.3	554.5	554.5	554.5	554.5
62.5°	517.0	517.0	518.7	515.1	509.8	504.4	502.7	500.8	500.8	500.8	500.8
65°	461.5	461.5	461.5	458.0	454.4	452.5	450.8	449.0	447.2	447.2	447.2
67.5°	400.7	400.7	402.5	398.9	395.4	393.5	391.8	389.9	388.2	388.2	388.2
70°	345.2	345.2	347.0	345.2	341.7	339.8	338.1	336.3	334.5	334.5	334.5
72.5°	291.5	291.5	291.5	289.8	288.0	286.2	284.4	282.6	280.8	280.8	280.8
75°	236.1	236.1	237.9	236.1	234.4	232.5	230.8	230.8	228.9	228.9	228.9
77.5°	184.2	186.1	187.8	186.1	184.2	182.5	180.7	180.7	178.9	178.9	178.9
80°	135.9	137.7	139.5	137.7	135.9	134.2	132.4	132.4	132.4	132.4	132.4
82.5°	91.2	93.0	94.8	93.0	91.2	91.2	89.4	89.4	89.4	89.4	89.4
85°	51.9	53.7	55.4	55.4	53.7	53.7	51.9	51.9	51.9	51.9	51.9
87.5°	19.6	21.5	23.2	23.2	21.5	21.5	21.5	21.5	21.5	21.5	21.5
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°	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0
2.5°	1461.5	1461.5	1459.6	1463.2	1468.6	1470.4	1463.2	1456.0	1463.2	1470.4	1468.6
5°	1454.3	1454.3	1454.3	1456.0	1461.5	1463.2	1457.9	1450.7	1457.9	1463.2	1461.5
7.5°	1445.3	1443.6	1443.6	1445.3	1450.7	1452.5	1447.1	1441.7	1447.1	1452.5	1450.7
10°	1425.7	1425.7	1425.7	1429.2	1434.6	1438.1	1432.8	1425.7	1432.8	1438.1	1434.6
12.5°	1406.0	1406.0	1406.0	1409.6	1414.9	1416.7	1411.3	1406.0	1411.3	1416.7	1414.9
15°	1382.7	1382.7	1382.7	1386.3	1391.7	1393.4	1388.1	1382.7	1388.1	1393.4	1391.7
17.5°	1352.3	1352.3	1352.3	1355.9	1363.1	1366.6	1361.2	1355.9	1361.2	1366.6	1363.1
20°	1318.4	1318.4	1320.1	1323.7	1330.8	1334.4	1330.8	1325.5	1330.8	1334.4	1330.8
22.5°	1280.8	1282.6	1284.3	1287.9	1295.0	1298.6	1295.0	1291.5	1295.0	1298.6	1295.0
25°	1241.4	1243.2	1245.0	1250.3	1257.5	1261.1	1257.5	1253.9	1257.5	1261.1	1257.5
27.5°	1200.3	1202.0	1203.9	1209.2	1216.4	1221.7	1218.1	1216.4	1218.1	1221.7	1216.4
30°	1155.5	1157.3	1159.1	1164.5	1173.4	1178.8	1175.2	1173.4	1175.2	1178.8	1173.4
32.5°	1110.8	1112.6	1114.4	1119.8	1128.7	1135.9	1132.3	1128.7	1132.3	1135.9	1128.7
35°	1062.5	1064.4	1067.9	1073.3	1082.2	1087.6	1084.0	1082.2	1084.0	1087.6	1082.2
37.5°	1016.0	1017.8	1021.4	1026.7	1035.7	1041.0	1039.3	1037.5	1039.3	1041.0	1035.7
40°	967.7	969.5	973.1	978.4	987.4	992.8	989.2	987.4	989.2	992.8	987.4
42.5°	917.7	919.4	923.0	928.4	937.3	942.7	940.9	939.1	940.9	942.7	937.3
45°	867.6	869.4	872.9	878.3	885.5	890.8	889.0	889.0	889.0	890.8	885.5
47.5°	815.7	819.3	822.8	828.2	835.3	840.7	838.9	837.2	838.9	840.7	835.3
50°	765.6	767.4	769.1	774.6	781.7	787.0	785.3	785.3	785.3	787.0	781.7
52.5°	713.7	715.5	719.1	724.4	729.9	735.2	733.4	731.6	733.4	735.2	729.9
55°	660.1	661.8	665.4	670.8	676.2	679.7	677.9	677.9	677.9	679.7	676.2
57.5°	608.2	610.0	611.7	617.1	622.5	627.9	626.0	624.3	626.0	627.9	622.5
60°	554.5	556.3	558.1	563.4	568.9	572.4	570.6	570.6	570.6	572.4	568.9
62.5°	500.8	502.7	504.4	509.8	515.1	518.7	517.0	517.0	517.0	518.7	515.1
65°	449.0	450.8	452.5	454.4	458.0	461.5	461.5	461.5	461.5	461.5	458.0
67.5°	389.9	391.8	393.5	395.4	398.9	402.5	400.7	400.7	400.7	402.5	398.9
70°	336.3	338.1	339.8	341.7	345.2	347.0	345.2	345.2	345.2	347.0	345.2
72.5°	282.6	284.4	286.2	288.0	289.8	291.5	291.5	291.5	291.5	291.5	289.8
75°	230.8	230.8	232.5	234.4	236.1	237.9	236.1	236.1	236.1	237.9	236.1
77.5°	180.7	180.7	182.5	184.2	186.1	187.8	186.1	184.2	186.1	187.8	186.1
80°	132.4	132.4	134.2	135.9	137.7	139.5	137.7	135.9	137.7	139.5	137.7
82.5°	89.4	89.4	91.2	91.2	93.0	94.8	93.0	91.2	93.0	94.8	93.0
85°	51.9	51.9	53.7	53.7	55.4	55.4	53.7	51.9	53.7	55.4	55.4
87.5°	21.5	21.5	21.5	21.5	23.2	23.2	21.5	19.6	21.5	23.2	23.2
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°	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0	1465.0
2.5°	1463.2	1459.6	1461.5	1461.5	1463.2	1463.2	1463.2	1461.5	1461.5	1459.6	1463.2
5°	1456.0	1454.3	1454.3	1454.3	1457.9	1461.5	1457.9	1454.3	1454.3	1454.3	1456.0
7.5°	1445.3	1443.6	1443.6	1445.3	1448.9	1452.5	1448.9	1445.3	1443.6	1443.6	1445.3
10°	1429.2	1425.7	1425.7	1425.7	1429.2	1432.8	1429.2	1425.7	1425.7	1425.7	1429.2
12.5°	1409.6	1406.0	1406.0	1406.0	1409.6	1413.1	1409.6	1406.0	1406.0	1406.0	1409.6
15°	1386.3	1382.7	1382.7	1382.7	1386.3	1388.1	1386.3	1382.7	1382.7	1382.7	1386.3
17.5°	1355.9	1352.3	1352.3	1352.3	1355.9	1357.6	1355.9	1352.3	1352.3	1352.3	1355.9
20°	1323.7	1320.1	1318.4	1318.4	1321.9	1323.7	1321.9	1318.4	1318.4	1320.1	1323.7
22.5°	1287.9	1284.3	1282.6	1280.8	1282.6	1284.3	1282.6	1280.8	1282.6	1284.3	1287.9
25°	1250.3	1245.0	1243.2	1241.4	1243.2	1243.2	1243.2	1241.4	1243.2	1245.0	1250.3
27.5°	1209.2	1203.9	1202.0	1200.3	1202.0	1202.0	1202.0	1200.3	1202.0	1203.9	1209.2
30°	1164.5	1159.1	1157.3	1155.5	1155.5	1155.5	1155.5	1155.5	1157.3	1159.1	1164.5
32.5°	1119.8	1114.4	1112.6	1110.8	1112.6	1112.6	1112.6	1110.8	1112.6	1114.4	1119.8
35°	1073.3	1067.9	1064.4	1062.5	1066.1	1067.9	1066.1	1062.5	1064.4	1067.9	1073.3
37.5°	1026.7	1021.4	1017.8	1016.0	1014.2	1014.2	1014.2	1016.0	1017.8	1021.4	1026.7
40°	978.4	973.1	969.5	967.7	967.7	967.7	967.7	967.7	969.5	973.1	978.4
42.5°	928.4	923.0	919.4	917.7	919.4	919.4	919.4	917.7	919.4	923.0	928.4
45°	878.3	872.9	869.4	867.6	867.6	867.6	867.6	867.6	869.4	872.9	878.3
47.5°	828.2	822.8	819.3	815.7	815.7	815.7	815.7	815.7	819.3	822.8	828.2
50°	774.6	769.1	767.4	765.6	763.8	763.8	763.8	765.6	767.4	769.1	774.6
52.5°	724.4	719.1	715.5	713.7	713.7	713.7	713.7	715.5	719.1	724.4	724.4
55°	670.8	665.4	661.8	660.1	661.8	661.8	661.8	660.1	661.8	665.4	670.8
57.5°	617.1	611.7	610.0	608.2	608.2	608.2	608.2	608.2	610.0	611.7	617.1
60°	563.4	558.1	556.3	554.5	554.5	554.5	554.5	554.5	556.3	558.1	563.4
62.5°	509.8	504.4	502.7	500.8	500.8	500.8	500.8	500.8	502.7	504.4	509.8
65°	454.4	452.5	450.8	449.0	447.2	447.2	447.2	449.0	450.8	452.5	454.4
67.5°	395.4	393.5	391.8	389.9	388.2	388.2	388.2	389.9	391.8	393.5	395.4
70°	341.7	339.8	338.1	336.3	334.5	334.5	334.5	336.3	338.1	339.8	341.7
72.5°	288.0	286.2	284.4	282.6	280.8	280.8	280.8	282.6	284.4	286.2	288.0
75°	234.4	232.5	230.8	230.8	228.9	228.9	228.9	230.8	230.8	232.5	234.4
77.5°	184.2	182.5	180.7	180.7	178.9	178.9	178.9	180.7	180.7	182.5	184.2
80°	135.9	134.2	132.4	132.4	132.4	132.4	132.4	132.4	132.4	134.2	135.9
82.5°	91.2	91.2	89.4	89.4	89.4	89.4	89.4	89.4	89.4	91.2	91.2
85°	53.7	53.7	51.9	51.9	51.9	51.9	51.9	51.9	51.9	53.7	53.7
87.5°	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
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-42L835-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1465.0	1465.0	1465.0	1465.0
2.5°	1468.6	1470.4	1463.2	1456.0
5°	1461.5	1463.2	1457.9	1450.7
7.5°	1450.7	1452.5	1447.1	1441.7
10°	1434.6	1438.1	1432.8	1425.7
12.5°	1414.9	1416.7	1411.3	1406.0
15°	1391.7	1393.4	1388.1	1382.7
17.5°	1363.1	1366.6	1361.2	1355.9
20°	1330.8	1334.4	1330.8	1325.5
22.5°	1295.0	1298.6	1295.0	1291.5
25°	1257.5	1261.1	1257.5	1253.9
27.5°	1216.4	1221.7	1218.1	1216.4
30°	1173.4	1178.8	1175.2	1173.4
32.5°	1128.7	1135.9	1132.3	1128.7
35°	1082.2	1087.6	1084.0	1082.2
37.5°	1035.7	1041.0	1039.3	1037.5
40°	987.4	992.8	989.2	987.4
42.5°	937.3	942.7	940.9	939.1
45°	885.5	890.8	889.0	889.0
47.5°	835.3	840.7	838.9	837.2
50°	781.7	787.0	785.3	785.3
52.5°	729.9	735.2	733.4	731.6
55°	676.2	679.7	677.9	677.9
57.5°	622.5	627.9	626.0	624.3
60°	568.9	572.4	570.6	570.6
62.5°	515.1	518.7	517.0	517.0
65°	458.0	461.5	461.5	461.5
67.5°	398.9	402.5	400.7	400.7
70°	345.2	347.0	345.2	345.2
72.5°	289.8	291.5	291.5	291.5
75°	236.1	237.9	236.1	236.1
77.5°	186.1	187.8	186.1	184.2
80°	137.7	139.5	137.7	135.9
82.5°	93.0	94.8	93.0	91.2
85°	55.4	55.4	53.7	51.9
87.5°	23.2	23.2	21.5	19.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)