

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-39L835-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-39L835-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

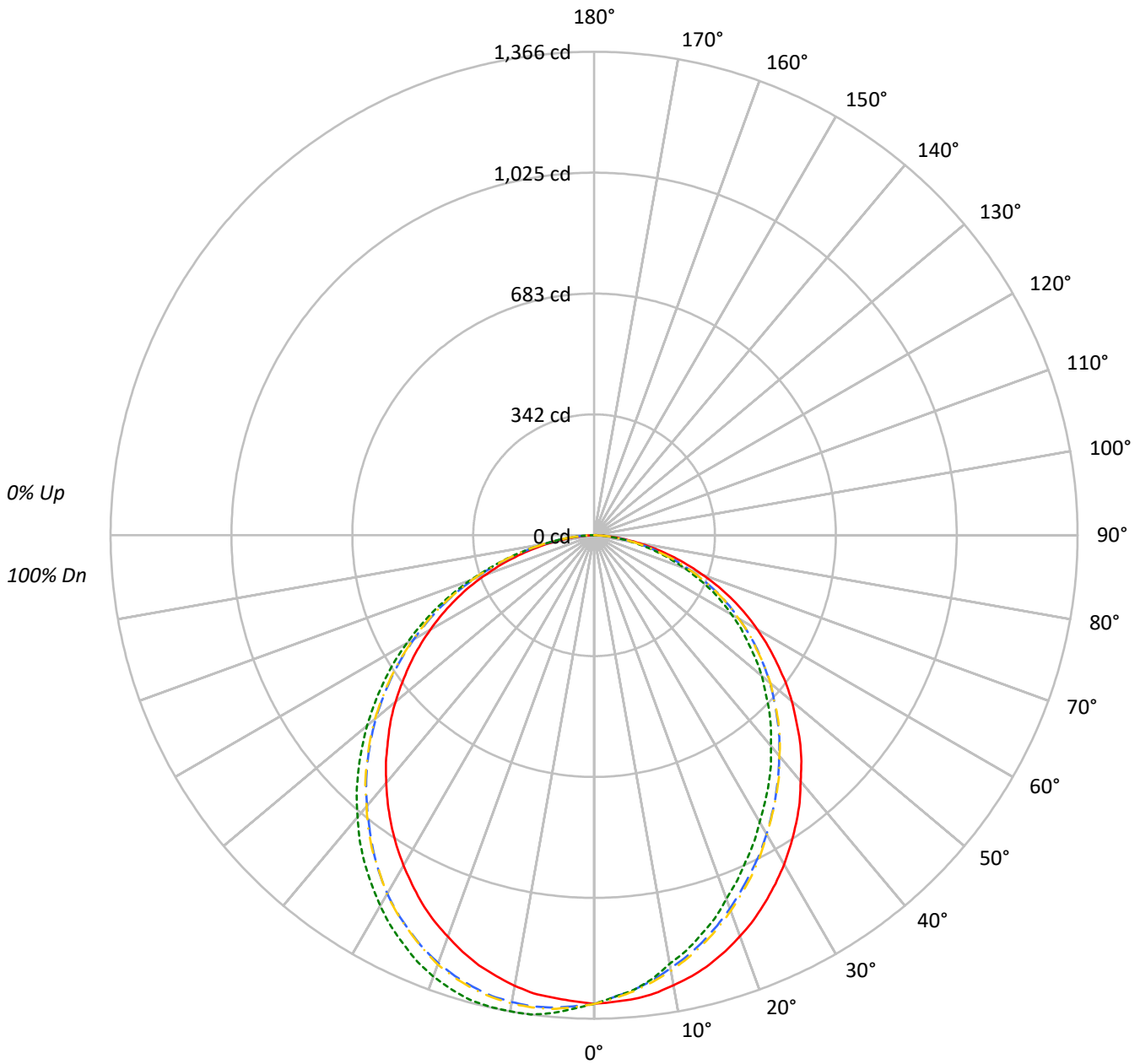
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3550.7 lumens
Efficiency: N/A
Efficacy: 77.5 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): 45.8
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	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°	12215	12215	12215	12215
5°	12179	11943	12151	12553
10°	12095	11520	12109	12796
15°	12003	11158	12017	12975
20°	11837	10734	11852	13028
25°	11648	10337	11694	12974
30°	11441	9972	11472	12876
35°	11201	9683	11252	12735
40°	10931	9362	11003	12518
45°	10728	9126	10747	12291
50°	10469	8879	10511	12017
55°	10143	8553	10214	11684
60°	9839	8291	9867	11274
65°	9448	7944	9448	10789
70°	8808	7351	8767	10059
75°	8010	6673	7899	9022
80°	6923	5733	6684	7720
85°	5388	4287	5071	6341



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	3.5
10°-20°	355.0	10.0
20°-30°	527.8	14.9
30°-40°	622.1	17.5
40°-50°	633.4	17.8
50°-60°	564.3	15.9
60°-70°	425.1	12.0
70°-80°	236.4	6.7
80°-90°	61.4	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°	1007.9	28.4
0°-40°	1630.0	45.9
0°-60°	2827.8	79.6
0°-90°	3550.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3550.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1324	1324	1324	1324	1324	
5°	1315	1290	1312	1355	1315	125
15°	1257	1168	1258	1358	1257	354
25°	1144	1015	1149	1274	1144	527
35°	994	860	999	1131	994	622
45°	822	699	824	942	822	634
55°	631	532	635	726	631	565
65°	433	364	433	494	433	427
75°	225	187	222	253	225	239
85°	51	40	48	60	51	61
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°	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0
2.5°	1319.5	1319.5	1320.9	1315.0	1307.5	1304.4	1303.0	1301.5	1304.4	1306.0	1304.4
5°	1315.0	1312.0	1309.0	1301.5	1292.5	1286.5	1283.5	1282.0	1285.0	1289.5	1285.0
7.5°	1306.0	1300.0	1294.0	1283.5	1273.0	1264.1	1259.5	1256.6	1259.5	1264.1	1261.0
10°	1291.0	1283.5	1274.5	1262.6	1247.6	1237.0	1232.6	1228.1	1229.6	1229.6	1229.6
12.5°	1276.0	1265.5	1255.0	1240.1	1223.6	1211.6	1204.1	1198.1	1201.2	1202.7	1202.7
15°	1256.6	1243.0	1228.1	1211.6	1195.2	1181.6	1172.7	1166.7	1168.2	1168.2	1169.6
17.5°	1232.6	1217.6	1202.7	1183.2	1163.7	1148.7	1138.2	1130.7	1133.8	1135.3	1136.7
20°	1205.6	1189.2	1172.7	1151.7	1130.7	1114.2	1103.8	1094.8	1093.3	1093.3	1094.8
22.5°	1177.2	1159.2	1139.8	1117.3	1094.8	1076.8	1066.4	1057.3	1055.9	1055.9	1057.3
25°	1144.2	1124.7	1105.3	1082.8	1058.8	1040.8	1027.4	1018.4	1017.0	1015.4	1018.4
27.5°	1109.8	1090.3	1070.8	1048.4	1023.0	1005.0	991.4	982.5	979.4	978.0	981.0
30°	1073.9	1051.4	1030.4	1006.5	984.0	966.0	952.5	942.0	939.1	936.0	939.1
32.5°	1034.9	1012.4	990.0	966.0	943.6	925.6	912.0	901.6	898.6	897.1	900.1
35°	994.5	972.0	951.0	927.1	904.6	886.6	873.1	864.2	861.1	859.7	861.1
37.5°	954.0	931.6	910.6	886.6	864.2	846.2	832.8	823.7	822.2	820.8	822.2
40°	907.6	888.2	867.1	844.6	822.2	804.3	793.7	783.2	780.3	777.3	781.8
42.5°	867.1	847.7	826.8	805.7	783.2	765.4	753.4	744.3	741.4	739.8	741.4
45°	822.2	801.2	780.3	760.8	739.8	723.4	711.4	702.4	700.9	699.4	700.9
47.5°	774.3	756.3	738.3	718.9	698.0	681.5	670.9	662.0	659.0	656.0	659.0
50°	729.4	711.4	693.4	675.5	656.0	641.0	630.6	621.5	620.0	618.6	620.0
52.5°	681.5	663.5	647.0	629.0	612.6	597.5	587.1	579.6	578.1	576.6	578.1
55°	630.6	615.5	600.6	585.6	569.2	555.6	546.7	537.7	534.7	531.7	534.7
57.5°	582.6	569.2	554.1	539.2	524.2	512.2	503.2	495.8	494.2	492.7	494.2
60°	533.2	521.2	507.7	494.2	479.3	467.3	459.8	453.8	450.8	449.3	450.8
62.5°	483.8	471.8	461.3	447.8	434.4	425.3	417.9	411.9	408.9	407.3	408.9
65°	432.8	422.4	411.9	399.9	389.4	380.4	372.9	367.0	365.4	363.9	363.9
67.5°	380.4	371.4	362.4	351.9	339.9	331.0	323.5	319.0	317.5	316.0	317.5
70°	326.5	319.0	310.0	301.0	292.1	284.5	280.1	275.6	274.1	272.5	272.5
72.5°	275.6	269.6	262.1	254.6	247.1	239.6	235.1	232.2	230.7	229.1	229.1
75°	224.7	218.7	214.2	208.2	200.7	196.2	191.7	188.7	187.2	187.2	187.2
77.5°	176.7	172.2	167.7	161.7	157.3	152.8	149.7	148.3	146.8	146.8	146.8
80°	130.3	127.3	124.3	121.3	116.8	112.3	110.8	109.3	107.9	107.9	107.9
82.5°	88.3	86.9	83.9	80.9	77.9	76.3	74.9	73.4	73.4	73.4	73.4
85°	50.9	49.4	47.9	46.5	44.9	44.9	43.4	42.0	40.5	40.5	40.5
87.5°	20.9	20.9	20.9	19.5	18.0	18.0	18.0	18.0	18.0	18.0	18.0
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°	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0
2.5°	1301.5	1304.4	1307.5	1312.0	1316.4	1320.9	1319.5	1318.0	1324.0	1331.5	1332.9
5°	1282.0	1285.0	1289.5	1297.0	1304.4	1310.4	1312.0	1312.0	1324.0	1334.4	1337.5
7.5°	1258.1	1262.6	1268.5	1276.0	1286.5	1295.5	1300.0	1306.0	1318.0	1331.5	1337.5
10°	1228.1	1235.6	1244.6	1255.0	1265.5	1276.0	1285.0	1292.5	1307.5	1322.4	1331.5
12.5°	1201.2	1208.6	1217.6	1229.6	1243.0	1256.6	1265.5	1276.0	1294.0	1312.0	1322.4
15°	1171.2	1178.7	1189.2	1201.2	1216.1	1231.1	1244.6	1258.1	1276.0	1295.5	1307.5
17.5°	1138.2	1145.7	1156.2	1171.2	1187.6	1204.1	1219.1	1234.1	1255.0	1276.0	1289.5
20°	1097.8	1108.2	1121.8	1136.7	1156.2	1175.6	1190.7	1207.1	1229.6	1252.1	1267.0
22.5°	1058.8	1069.3	1084.3	1102.3	1123.3	1144.2	1162.2	1180.2	1204.1	1226.6	1243.0
25°	1021.4	1033.4	1048.4	1066.4	1085.8	1106.8	1127.8	1148.7	1172.7	1196.7	1213.1
27.5°	984.0	994.5	1009.4	1027.4	1049.9	1070.8	1091.8	1112.8	1138.2	1163.7	1181.6
30°	942.0	954.0	967.5	985.4	1009.4	1033.4	1054.4	1076.8	1102.3	1127.8	1145.7
32.5°	903.1	913.6	927.1	945.1	969.0	993.0	1015.4	1039.4	1063.3	1088.8	1106.8
35°	864.2	874.6	888.2	906.0	930.0	954.0	976.5	999.0	1023.0	1046.8	1064.8
37.5°	825.2	835.7	849.2	867.1	889.6	913.6	934.5	957.0	981.0	1005.0	1021.4
40°	784.8	795.2	805.7	823.7	846.2	870.2	891.1	913.6	937.6	961.6	978.0
42.5°	744.3	754.8	768.3	786.3	807.2	828.2	849.2	870.2	892.6	915.1	931.6
45°	703.9	712.9	726.4	742.9	763.8	783.2	804.3	823.7	846.2	867.1	883.6
47.5°	662.0	670.9	681.5	698.0	718.9	739.8	760.8	780.3	799.7	820.8	835.7
50°	621.5	630.6	642.5	657.5	676.9	696.4	714.4	732.3	751.8	771.3	784.8
52.5°	579.6	588.6	599.1	614.1	630.6	648.5	664.9	682.9	700.9	718.9	732.3
55°	537.7	543.6	552.6	566.1	584.1	602.1	618.6	635.0	651.5	666.4	680.0
57.5°	495.8	503.2	513.7	525.7	540.7	555.6	570.6	585.6	600.6	615.5	627.5
60°	453.8	459.8	467.3	477.8	492.7	506.2	521.2	534.7	548.1	561.6	572.1
62.5°	410.4	416.4	423.8	434.4	446.3	458.3	471.8	483.8	495.8	507.7	518.2
65°	365.4	371.4	378.9	387.9	398.4	408.9	420.9	432.8	441.8	450.8	461.3
67.5°	319.0	325.0	332.5	339.9	349.0	359.5	369.9	380.4	389.4	398.4	405.9
70°	274.1	278.5	286.1	292.1	299.6	307.0	316.0	325.0	331.0	338.5	347.5
72.5°	230.7	235.1	241.1	247.1	251.6	257.6	266.6	274.1	281.6	290.5	295.0
75°	188.7	191.7	196.2	200.7	205.1	209.7	215.7	221.6	227.6	232.2	238.2
77.5°	146.8	149.7	154.3	157.3	160.2	163.3	167.7	172.2	176.7	179.7	185.7
80°	107.9	110.8	113.9	116.8	119.9	122.8	124.3	125.8	131.8	136.3	139.3
82.5°	73.4	74.9	76.3	79.4	80.9	82.3	83.9	83.9	86.9	89.9	94.3
85°	42.0	43.4	44.9	44.9	44.9	44.9	46.5	47.9	49.4	52.5	55.4
87.5°	16.5	16.5	18.0	18.0	18.0	18.0	18.0	18.0	19.5	22.5	24.0
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°	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0	1324.0
2.5°	1331.5	1332.9	1335.9	1337.5	1338.9	1338.9	1340.4	1341.9	1338.9	1335.9	1334.4
5°	1338.9	1340.4	1344.9	1349.4	1352.4	1355.4	1353.9	1352.4	1349.4	1344.9	1341.9
7.5°	1340.4	1344.9	1349.4	1355.4	1359.9	1365.9	1362.9	1359.9	1353.9	1347.9	1343.4
10°	1335.9	1341.9	1349.4	1356.9	1361.4	1365.9	1362.9	1359.9	1353.9	1346.4	1340.4
12.5°	1329.9	1337.5	1346.4	1353.9	1358.4	1364.4	1359.9	1355.4	1347.9	1340.4	1332.9
15°	1316.4	1325.5	1335.9	1344.9	1352.4	1358.4	1353.9	1350.9	1341.9	1331.5	1320.9
17.5°	1300.0	1312.0	1322.4	1332.9	1338.9	1344.9	1341.9	1338.9	1328.4	1316.4	1304.4
20°	1280.5	1292.5	1303.0	1313.5	1320.9	1326.9	1322.4	1318.0	1307.5	1297.0	1285.0
22.5°	1256.6	1268.5	1280.5	1291.0	1298.5	1304.4	1298.5	1291.0	1280.5	1270.1	1258.1
25°	1226.6	1240.1	1253.6	1264.1	1268.5	1274.5	1268.5	1262.6	1252.1	1241.6	1228.1
27.5°	1196.7	1210.1	1223.6	1234.1	1238.6	1244.6	1238.6	1232.6	1222.1	1211.6	1198.1
30°	1162.2	1175.6	1189.2	1199.6	1204.1	1208.6	1202.7	1196.7	1187.6	1177.2	1163.7
32.5°	1123.3	1136.7	1147.2	1157.7	1163.7	1169.6	1163.7	1159.2	1148.7	1135.3	1121.8
35°	1081.3	1094.8	1108.2	1118.8	1124.7	1130.7	1123.3	1115.8	1106.8	1096.3	1084.3
37.5°	1034.9	1049.9	1064.8	1076.8	1081.3	1087.3	1081.3	1073.9	1064.8	1054.4	1040.8
40°	991.4	1005.0	1018.4	1030.4	1034.9	1039.4	1033.4	1027.4	1017.0	1006.5	993.0
42.5°	946.5	960.0	972.0	982.5	987.0	993.0	987.0	979.4	972.0	963.0	951.0
45°	898.6	912.0	922.6	933.1	937.6	942.0	936.0	928.5	921.1	913.6	901.6
47.5°	849.2	861.1	871.7	882.2	885.1	889.6	883.6	879.1	871.7	864.2	853.7
50°	798.3	810.3	820.8	829.7	832.8	837.2	831.2	825.2	819.2	813.2	804.3
52.5°	745.8	756.3	766.8	775.8	778.8	781.8	775.8	769.8	763.8	757.8	748.8
55°	692.0	702.4	712.9	720.4	723.4	726.4	720.4	715.9	709.9	705.4	696.4
57.5°	638.0	648.5	657.5	664.9	668.0	670.9	664.9	659.0	654.5	650.0	642.5
60°	582.6	593.1	600.6	606.6	609.5	611.0	605.0	600.6	597.5	594.6	587.1
62.5°	528.7	536.1	543.6	548.1	551.2	552.6	548.1	545.2	542.1	539.2	533.2
65°	471.8	480.7	486.7	491.2	492.7	494.2	489.8	486.7	483.8	480.7	476.3
67.5°	414.9	422.4	426.8	431.3	432.8	432.8	432.8	431.3	428.4	423.8	419.3
70°	357.9	363.9	368.4	371.4	372.9	372.9	369.9	367.0	367.0	365.4	362.4
72.5°	299.6	304.0	307.0	310.0	310.0	310.0	310.0	311.5	310.0	307.0	302.5
75°	244.1	248.6	251.6	253.1	253.1	253.1	253.1	254.6	253.1	251.6	248.6
77.5°	191.7	194.7	196.2	197.7	197.7	197.7	199.2	200.7	199.2	197.7	196.2
80°	142.3	143.7	145.3	146.8	145.3	145.3	146.8	149.7	148.3	146.8	145.3
82.5°	97.4	98.8	100.3	100.3	101.9	103.4	103.4	103.4	103.4	101.9	100.3
85°	58.5	59.9	59.9	59.9	59.9	59.9	61.4	62.9	62.9	61.4	61.4
87.5°	26.9	28.5	26.9	25.4	24.0	24.0	26.9	30.0	30.0	28.5	28.5
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-39L835-X-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1324.0	1324.0	1324.0	1324.0
2.5°	1335.9	1334.4	1326.9	1319.5
5°	1340.4	1335.9	1325.5	1315.0
7.5°	1340.4	1334.4	1319.5	1306.0
10°	1332.9	1324.0	1307.5	1291.0
12.5°	1324.0	1313.5	1294.0	1276.0
15°	1310.4	1298.5	1277.5	1256.6
17.5°	1291.0	1276.0	1255.0	1232.6
20°	1271.5	1255.0	1229.6	1205.6
22.5°	1244.6	1229.6	1202.7	1177.2
25°	1214.6	1198.1	1171.2	1144.2
27.5°	1183.2	1163.7	1136.7	1109.8
30°	1147.2	1127.8	1100.8	1073.9
32.5°	1108.2	1090.3	1063.3	1034.9
35°	1069.3	1049.9	1023.0	994.5
37.5°	1025.9	1007.9	981.0	954.0
40°	979.4	961.6	934.5	907.6
42.5°	936.0	919.6	892.6	867.1
45°	888.2	871.7	846.2	822.2
47.5°	838.7	822.2	798.3	774.3
50°	790.8	774.3	751.8	729.4
52.5°	736.9	723.4	702.4	681.5
55°	684.4	670.9	650.0	630.6
57.5°	632.0	620.0	600.6	582.6
60°	576.6	564.6	549.6	533.2
62.5°	524.2	513.7	498.7	483.8
65°	468.7	459.8	446.3	432.8
67.5°	411.9	404.4	392.4	380.4
70°	355.0	345.9	337.0	326.5
72.5°	298.1	293.6	284.5	275.6
75°	244.1	239.6	232.2	224.7
77.5°	193.2	188.7	182.7	176.7
80°	142.3	139.3	134.8	130.3
82.5°	98.8	95.9	92.8	88.3
85°	59.9	56.9	53.9	50.9
87.5°	26.9	25.4	22.5	20.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)