

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-37L840-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-37L840-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

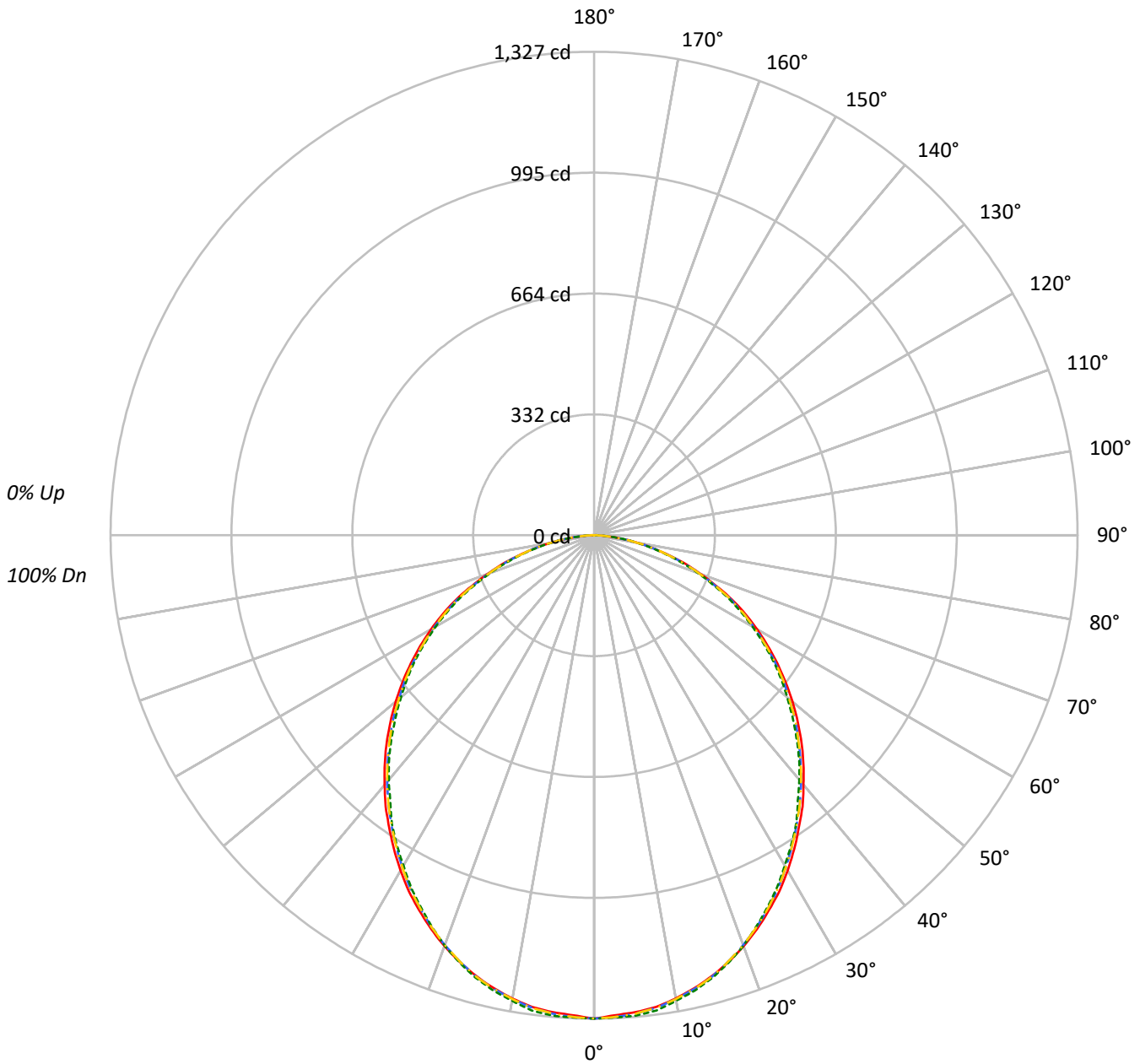
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3451.7 lumens
Efficiency: N/A
Efficacy: 84.6 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	
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				
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°	12240	12240	12240	12240
5°	12168	12257	12168	12257
10°	12096	12156	12096	12156
15°	11961	12007	11961	12007
20°	11786	11769	11786	11769
25°	11559	11462	11559	11462
30°	11320	11149	11320	11149
35°	11038	10893	11038	10893
40°	10770	10555	10770	10555
45°	10505	10250	10505	10250
50°	10207	9928	10207	9928
55°	9876	9642	9876	9642
60°	9536	9265	9536	9265
65°	9123	8839	9123	8839
70°	8435	8171	8435	8171
75°	7621	7393	7621	7393
80°	6540	6370	6540	6370
85°	4975	4975	4975	4975



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.2	3.6
10°-20°	353.6	10.2
20°-30°	521.2	15.1
30°-40°	608.4	17.6
40°-50°	613.4	17.8
50°-60°	542.1	15.7
60°-70°	405.4	11.7
70°-80°	224.7	6.5
80°-90°	57.6	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°	1000.0	29.0
0°-40°	1608.4	46.6
0°-60°	2763.9	80.1
0°-90°	3451.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3451.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1327	1327	1327	1327	1327	
5°	1314	1323	1314	1323	1314	125
15°	1252	1257	1252	1257	1252	353
25°	1136	1126	1136	1126	1136	523
35°	980	967	980	967	980	614
45°	805	786	805	786	805	621
55°	614	599	614	599	614	549
65°	418	405	418	405	418	412
75°	214	207	214	207	214	227
85°	47	47	47	47	47	57
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°	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7
2.5°	1318.6	1325.1	1331.6	1329.9	1325.1	1321.8	1323.4	1323.4	1325.1	1325.1	1325.1
5°	1313.8	1320.2	1325.1	1323.4	1318.6	1317.0	1317.0	1317.0	1320.2	1323.4	1320.2
7.5°	1305.6	1310.4	1315.3	1313.8	1308.9	1307.2	1307.2	1308.9	1312.1	1315.3	1312.1
10°	1291.1	1297.5	1302.4	1299.2	1294.3	1291.1	1291.1	1291.1	1294.3	1297.5	1294.3
12.5°	1273.2	1278.1	1283.0	1281.3	1276.5	1273.2	1273.2	1273.2	1276.5	1279.7	1276.5
15°	1252.2	1257.1	1261.8	1260.3	1255.4	1252.2	1252.2	1252.2	1255.4	1257.1	1255.4
17.5°	1227.8	1232.7	1237.6	1234.4	1227.8	1224.6	1224.6	1224.6	1227.8	1229.5	1227.8
20°	1200.4	1205.1	1208.5	1205.1	1198.7	1195.5	1193.9	1193.9	1197.1	1198.7	1197.1
22.5°	1169.6	1172.8	1176.0	1172.8	1166.3	1163.1	1161.4	1159.9	1161.4	1163.1	1161.4
25°	1135.5	1138.8	1142.0	1138.8	1132.3	1127.4	1125.9	1124.2	1125.9	1125.9	1125.9
27.5°	1101.5	1103.2	1106.4	1101.5	1095.1	1090.2	1088.6	1086.9	1088.6	1088.6	1088.6
30°	1062.6	1064.3	1067.5	1062.6	1054.6	1049.7	1048.0	1046.5	1046.5	1046.5	1046.5
32.5°	1022.1	1025.4	1028.6	1022.1	1014.0	1009.2	1007.6	1005.9	1007.6	1007.6	1007.6
35°	980.0	981.7	984.9	980.0	972.0	967.1	963.9	962.2	965.4	967.1	965.4
37.5°	939.5	941.2	942.7	938.0	929.8	925.0	921.7	920.1	918.5	918.5	918.5
40°	894.2	895.8	899.0	894.2	886.0	881.2	878.0	876.4	876.4	876.4	876.4
42.5°	850.5	852.0	853.7	848.8	840.7	835.9	832.7	831.0	832.7	832.7	832.7
45°	805.1	805.1	806.7	801.9	795.3	790.5	787.3	785.6	785.6	785.6	785.6
47.5°	758.1	759.7	761.4	756.5	750.0	745.2	741.9	738.7	738.7	738.7	738.7
50°	711.1	711.1	712.7	707.9	701.4	696.6	694.9	693.3	691.7	691.7	691.7
52.5°	662.5	664.1	665.8	660.9	656.1	651.2	648.0	646.3	646.3	646.3	646.3
55°	614.0	614.0	615.5	612.3	607.4	602.6	599.4	597.7	599.4	599.4	599.4
57.5°	565.4	566.9	568.6	563.7	558.8	554.0	552.4	550.8	550.8	550.8	550.8
60°	516.8	516.8	518.3	515.1	510.2	505.4	503.8	502.1	502.1	502.1	502.1
62.5°	468.2	468.2	469.8	466.5	461.6	456.9	455.2	453.5	453.5	453.5	453.5
65°	417.9	417.9	417.9	414.7	411.5	409.8	408.2	406.6	404.9	404.9	404.9
67.5°	362.9	362.9	364.5	361.2	358.0	356.4	354.8	353.1	351.6	351.6	351.6
70°	312.7	312.7	314.2	312.7	309.4	307.8	306.2	304.5	302.9	302.9	302.9
72.5°	264.1	264.1	264.1	262.4	260.8	259.2	257.6	255.9	254.3	254.3	254.3
75°	213.8	213.8	215.5	213.8	212.2	210.6	208.9	208.9	207.4	207.4	207.4
77.5°	166.9	168.4	170.1	168.4	166.9	165.2	163.6	163.6	162.0	162.0	162.0
80°	123.1	124.7	126.3	124.7	123.1	121.5	119.9	119.9	119.9	119.9	119.9
82.5°	82.6	84.3	85.8	84.3	82.6	82.6	81.0	81.0	81.0	81.0	81.0
85°	47.0	48.6	50.2	50.2	48.6	48.6	47.0	47.0	47.0	47.0	47.0
87.5°	17.8	19.5	21.0	21.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5
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°	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7
2.5°	1323.4	1323.4	1321.8	1325.1	1329.9	1331.6	1325.1	1318.6	1325.1	1331.6	1329.9
5°	1317.0	1317.0	1317.0	1318.6	1323.4	1325.1	1320.2	1313.8	1320.2	1325.1	1323.4
7.5°	1308.9	1307.2	1307.2	1308.9	1313.8	1315.3	1310.4	1305.6	1310.4	1315.3	1313.8
10°	1291.1	1291.1	1291.1	1294.3	1299.2	1302.4	1297.5	1291.1	1297.5	1302.4	1299.2
12.5°	1273.2	1273.2	1273.2	1276.5	1281.3	1283.0	1278.1	1273.2	1278.1	1283.0	1281.3
15°	1252.2	1252.2	1252.2	1255.4	1260.3	1261.8	1257.1	1252.2	1257.1	1261.8	1260.3
17.5°	1224.6	1224.6	1224.6	1227.8	1234.4	1237.6	1232.7	1227.8	1232.7	1237.6	1234.4
20°	1193.9	1193.9	1195.5	1198.7	1205.1	1208.5	1205.1	1200.4	1205.1	1208.5	1205.1
22.5°	1159.9	1161.4	1163.1	1166.3	1172.8	1176.0	1172.8	1169.6	1172.8	1176.0	1172.8
25°	1124.2	1125.9	1127.4	1132.3	1138.8	1142.0	1138.8	1135.5	1138.8	1142.0	1138.8
27.5°	1086.9	1088.6	1090.2	1095.1	1101.5	1106.4	1103.2	1101.5	1103.2	1106.4	1101.5
30°	1046.5	1048.0	1049.7	1054.6	1062.6	1067.5	1064.3	1062.6	1064.3	1067.5	1062.6
32.5°	1005.9	1007.6	1009.2	1014.0	1022.1	1028.6	1025.4	1022.1	1025.4	1028.6	1022.1
35°	962.2	963.9	967.1	972.0	980.0	984.9	981.7	980.0	981.7	984.9	980.0
37.5°	920.1	921.7	925.0	929.8	938.0	942.7	941.2	939.5	941.2	942.7	938.0
40°	876.4	878.0	881.2	886.0	894.2	899.0	895.8	894.2	895.8	899.0	894.2
42.5°	831.0	832.7	835.9	840.7	848.8	853.7	852.0	850.5	852.0	853.7	848.8
45°	785.6	787.3	790.5	795.3	801.9	806.7	805.1	805.1	805.1	806.7	801.9
47.5°	738.7	741.9	745.2	750.0	756.5	761.4	759.7	758.1	759.7	761.4	756.5
50°	693.3	694.9	696.6	701.4	707.9	712.7	711.1	711.1	711.1	712.7	707.9
52.5°	646.3	648.0	651.2	656.1	660.9	665.8	664.1	662.5	664.1	665.8	660.9
55°	597.7	599.4	602.6	607.4	612.3	615.5	614.0	614.0	614.0	615.5	612.3
57.5°	550.8	552.4	554.0	558.8	563.7	568.6	566.9	565.4	566.9	568.6	563.7
60°	502.1	503.8	505.4	510.2	515.1	518.3	516.8	516.8	516.8	518.3	515.1
62.5°	453.5	455.2	456.9	461.6	466.5	469.8	468.2	468.2	468.2	469.8	466.5
65°	406.6	408.2	409.8	411.5	414.7	417.9	417.9	417.9	417.9	417.9	414.7
67.5°	353.1	354.8	356.4	358.0	361.2	364.5	362.9	362.9	362.9	364.5	361.2
70°	304.5	306.2	307.8	309.4	312.7	314.2	312.7	312.7	312.7	314.2	312.7
72.5°	255.9	257.6	259.2	260.8	262.4	264.1	264.1	264.1	264.1	264.1	262.4
75°	208.9	208.9	210.6	212.2	213.8	215.5	213.8	213.8	213.8	215.5	213.8
77.5°	163.6	163.6	165.2	166.9	168.4	170.1	168.4	166.9	168.4	170.1	168.4
80°	119.9	119.9	121.5	123.1	124.7	126.3	124.7	123.1	124.7	126.3	124.7
82.5°	81.0	81.0	82.6	82.6	84.3	85.8	84.3	82.6	84.3	85.8	84.3
85°	47.0	47.0	48.6	48.6	50.2	50.2	48.6	47.0	48.6	50.2	50.2
87.5°	19.5	19.5	19.5	19.5	21.0	21.0	19.5	17.8	19.5	21.0	21.0
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°	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7	1326.7
2.5°	1325.1	1321.8	1323.4	1323.4	1325.1	1325.1	1325.1	1323.4	1323.4	1321.8	1325.1
5°	1318.6	1317.0	1317.0	1317.0	1320.2	1323.4	1320.2	1317.0	1317.0	1317.0	1318.6
7.5°	1308.9	1307.2	1307.2	1308.9	1312.1	1315.3	1312.1	1308.9	1307.2	1307.2	1308.9
10°	1294.3	1291.1	1291.1	1291.1	1294.3	1297.5	1294.3	1291.1	1291.1	1291.1	1294.3
12.5°	1276.5	1273.2	1273.2	1273.2	1276.5	1279.7	1276.5	1273.2	1273.2	1273.2	1276.5
15°	1255.4	1252.2	1252.2	1252.2	1255.4	1257.1	1255.4	1252.2	1252.2	1252.2	1255.4
17.5°	1227.8	1224.6	1224.6	1224.6	1227.8	1229.5	1227.8	1224.6	1224.6	1224.6	1227.8
20°	1198.7	1195.5	1193.9	1193.9	1197.1	1198.7	1197.1	1193.9	1193.9	1195.5	1198.7
22.5°	1166.3	1163.1	1161.4	1159.9	1161.4	1163.1	1161.4	1159.9	1161.4	1163.1	1166.3
25°	1132.3	1127.4	1125.9	1124.2	1125.9	1125.9	1125.9	1124.2	1125.9	1127.4	1132.3
27.5°	1095.1	1090.2	1088.6	1086.9	1088.6	1088.6	1088.6	1086.9	1088.6	1090.2	1095.1
30°	1054.6	1049.7	1048.0	1046.5	1046.5	1046.5	1046.5	1046.5	1048.0	1049.7	1054.6
32.5°	1014.0	1009.2	1007.6	1005.9	1007.6	1007.6	1007.6	1005.9	1007.6	1009.2	1014.0
35°	972.0	967.1	963.9	962.2	965.4	967.1	965.4	962.2	963.9	967.1	972.0
37.5°	929.8	925.0	921.7	920.1	918.5	918.5	918.5	920.1	921.7	925.0	929.8
40°	886.0	881.2	878.0	876.4	876.4	876.4	876.4	876.4	878.0	881.2	886.0
42.5°	840.7	835.9	832.7	831.0	832.7	832.7	832.7	831.0	832.7	835.9	840.7
45°	795.3	790.5	787.3	785.6	785.6	785.6	785.6	785.6	787.3	790.5	795.3
47.5°	750.0	745.2	741.9	738.7	738.7	738.7	738.7	738.7	741.9	745.2	750.0
50°	701.4	696.6	694.9	693.3	691.7	691.7	691.7	693.3	694.9	696.6	701.4
52.5°	656.1	651.2	648.0	646.3	646.3	646.3	646.3	648.0	651.2	656.1	656.1
55°	607.4	602.6	599.4	597.7	599.4	599.4	599.4	597.7	599.4	602.6	607.4
57.5°	558.8	554.0	552.4	550.8	550.8	550.8	550.8	552.4	554.0	558.8	558.8
60°	510.2	505.4	503.8	502.1	502.1	502.1	502.1	503.8	505.4	510.2	510.2
62.5°	461.6	456.9	455.2	453.5	453.5	453.5	453.5	455.2	456.9	461.6	461.6
65°	411.5	409.8	408.2	406.6	404.9	404.9	404.9	406.6	408.2	409.8	411.5
67.5°	358.0	356.4	354.8	353.1	351.6	351.6	351.6	353.1	354.8	356.4	358.0
70°	309.4	307.8	306.2	304.5	302.9	302.9	302.9	304.5	306.2	307.8	309.4
72.5°	260.8	259.2	257.6	255.9	254.3	254.3	254.3	255.9	257.6	259.2	260.8
75°	212.2	210.6	208.9	208.9	207.4	207.4	207.4	208.9	208.9	210.6	212.2
77.5°	166.9	165.2	163.6	163.6	162.0	162.0	162.0	163.6	163.6	165.2	166.9
80°	123.1	121.5	119.9	119.9	119.9	119.9	119.9	119.9	119.9	121.5	123.1
82.5°	82.6	82.6	81.0	81.0	81.0	81.0	81.0	81.0	81.0	82.6	82.6
85°	48.6	48.6	47.0	47.0	47.0	47.0	47.0	47.0	47.0	48.6	48.6
87.5°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
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-37L840-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1326.7	1326.7	1326.7	1326.7
2.5°	1329.9	1331.6	1325.1	1318.6
5°	1323.4	1325.1	1320.2	1313.8
7.5°	1313.8	1315.3	1310.4	1305.6
10°	1299.2	1302.4	1297.5	1291.1
12.5°	1281.3	1283.0	1278.1	1273.2
15°	1260.3	1261.8	1257.1	1252.2
17.5°	1234.4	1237.6	1232.7	1227.8
20°	1205.1	1208.5	1205.1	1200.4
22.5°	1172.8	1176.0	1172.8	1169.6
25°	1138.8	1142.0	1138.8	1135.5
27.5°	1101.5	1106.4	1103.2	1101.5
30°	1062.6	1067.5	1064.3	1062.6
32.5°	1022.1	1028.6	1025.4	1022.1
35°	980.0	984.9	981.7	980.0
37.5°	938.0	942.7	941.2	939.5
40°	894.2	899.0	895.8	894.2
42.5°	848.8	853.7	852.0	850.5
45°	801.9	806.7	805.1	805.1
47.5°	756.5	761.4	759.7	758.1
50°	707.9	712.7	711.1	711.1
52.5°	660.9	665.8	664.1	662.5
55°	612.3	615.5	614.0	614.0
57.5°	563.7	568.6	566.9	565.4
60°	515.1	518.3	516.8	516.8
62.5°	466.5	469.8	468.2	468.2
65°	414.7	417.9	417.9	417.9
67.5°	361.2	364.5	362.9	362.9
70°	312.7	314.2	312.7	312.7
72.5°	262.4	264.1	264.1	264.1
75°	213.8	215.5	213.8	213.8
77.5°	168.4	170.1	168.4	166.9
80°	124.7	126.3	124.7	123.1
82.5°	84.3	85.8	84.3	82.6
85°	50.2	50.2	48.6	47.0
87.5°	21.0	21.0	19.5	17.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)