

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-39L950-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-39L950-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

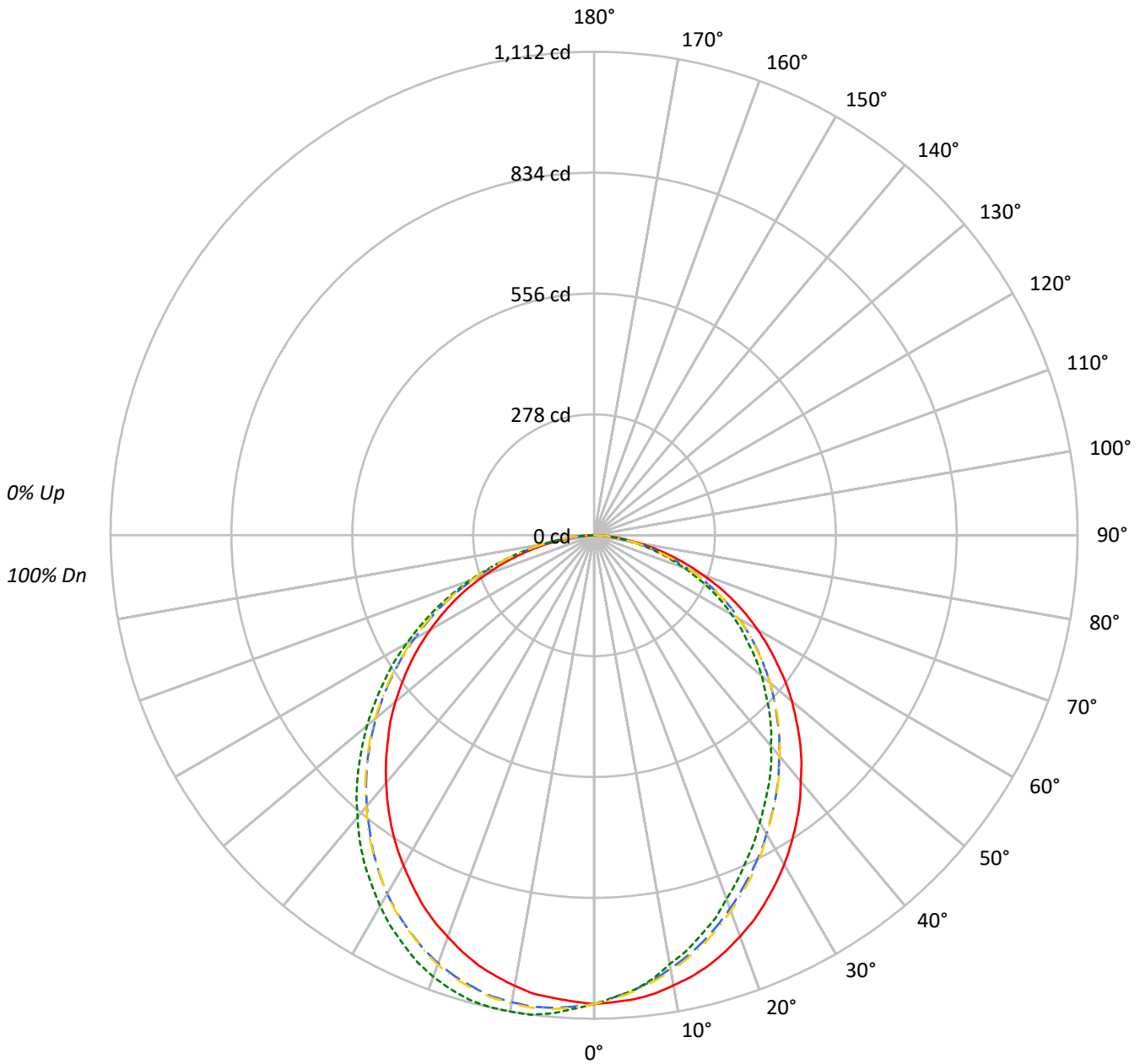
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2891.9 lumens
Efficiency: N/A
Efficacy: 63.1 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 (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	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°	9949	9949	9949	9949
5°	9919	9727	9896	10224
10°	9850	9383	9861	10422
15°	9775	9087	9787	10567
20°	9641	8743	9652	10612
25°	9488	8419	9524	10568
30°	9318	8122	9343	10486
35°	9123	7886	9164	10372
40°	8903	7624	8962	10195
45°	8737	7432	8752	10012
50°	8526	7231	8560	9786
55°	8261	6967	8318	9516
60°	8014	6752	8036	9184
65°	7695	6471	7695	8787
70°	7173	5989	7140	8192
75°	6520	5436	6434	7350
80°	5637	4670	5441	6285
85°	4393	3483	4128	5166



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.9	3.5
10°-20°	289.2	10.0
20°-30°	429.9	14.9
30°-40°	506.7	17.5
40°-50°	515.9	17.8
50°-60°	459.6	15.9
60°-70°	346.2	12.0
70°-80°	192.6	6.7
80°-90°	50.0	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°	820.9	28.4
0°-40°	1327.6	45.9
0°-60°	2303.1	79.6
0°-90°	2891.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2891.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1078	1078	1078	1078	1078	
5°	1071	1050	1068	1104	1071	102
15°	1023	951	1025	1106	1023	288
25°	932	827	936	1038	932	429
35°	810	700	814	921	810	507
45°	670	570	671	767	670	516
55°	514	433	517	592	514	460
65°	352	296	352	402	352	348
75°	183	152	180	206	183	194
85°	42	33	39	49	42	50
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°	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3
2.5°	1074.6	1074.6	1075.9	1071.0	1064.9	1062.4	1061.2	1060.0	1062.4	1063.6	1062.4
5°	1071.0	1068.5	1066.1	1060.0	1052.6	1047.8	1045.4	1044.2	1046.6	1050.3	1046.6
7.5°	1063.6	1058.7	1053.9	1045.4	1036.8	1029.5	1025.8	1023.4	1025.8	1029.5	1027.0
10°	1051.4	1045.4	1038.1	1028.3	1016.0	1007.6	1003.9	1000.2	1001.5	1001.5	1001.5
12.5°	1039.3	1030.7	1022.2	1010.0	996.6	986.8	980.7	975.8	978.2	979.5	979.5
15°	1023.4	1012.4	1000.2	986.8	973.4	962.4	955.1	950.2	951.4	951.4	952.6
17.5°	1003.9	991.7	979.5	963.7	947.8	935.6	927.1	920.9	923.4	924.6	925.8
20°	981.9	968.5	955.1	938.0	920.9	907.5	899.0	891.7	890.5	890.5	891.7
22.5°	958.8	944.1	928.3	909.9	891.7	877.0	868.5	861.1	859.9	859.9	861.1
25°	932.0	916.1	900.2	881.9	862.3	847.8	836.8	829.4	828.2	827.0	829.4
27.5°	903.8	888.0	872.1	853.9	833.1	818.5	807.5	800.2	797.7	796.5	799.0
30°	874.6	856.3	839.2	819.7	801.4	786.7	775.8	767.3	764.8	762.4	764.8
32.5°	842.9	824.5	806.3	786.7	768.5	753.8	742.9	734.3	731.9	730.7	733.1
35°	810.0	791.6	774.6	755.0	736.8	722.1	711.1	703.9	701.4	700.2	701.4
37.5°	777.0	758.7	741.7	722.1	703.9	689.2	678.2	670.8	669.6	668.5	669.6
40°	739.2	723.3	706.3	688.0	669.6	655.0	646.5	637.9	635.5	633.0	636.7
42.5°	706.3	690.4	673.3	656.3	637.9	623.3	613.6	606.2	603.8	602.6	603.8
45°	669.6	652.6	635.5	619.7	602.6	589.2	579.4	572.1	570.9	569.6	570.9
47.5°	630.6	616.0	601.3	585.5	568.4	555.0	546.5	539.2	536.7	534.3	536.7
50°	594.0	579.4	564.7	550.2	534.3	522.0	513.6	506.2	505.0	503.8	505.0
52.5°	555.0	540.4	526.9	512.4	498.9	486.7	478.1	472.1	470.9	469.6	470.9
55°	513.6	501.3	489.1	477.0	463.5	452.5	445.2	437.9	435.5	433.1	435.5
57.5°	474.5	463.5	451.3	439.1	426.9	417.2	409.8	403.7	402.5	401.3	402.5
60°	434.3	424.5	413.5	402.5	390.4	380.6	374.5	369.6	367.1	365.9	367.1
62.5°	394.0	384.2	375.7	364.7	353.8	346.4	340.3	335.4	333.0	331.8	333.0
65°	352.5	344.0	335.4	325.7	317.2	309.8	303.7	298.8	297.6	296.4	296.4
67.5°	309.8	302.5	295.2	286.6	276.9	269.6	263.5	259.8	258.6	257.3	258.6
70°	265.9	259.8	252.5	245.2	237.9	231.8	228.1	224.4	223.2	222.0	222.0
72.5°	224.4	219.5	213.4	207.4	201.3	195.2	191.5	189.1	187.8	186.6	186.6
75°	182.9	178.1	174.4	169.6	163.5	159.8	156.1	153.7	152.5	152.5	152.5
77.5°	143.9	140.2	136.6	131.8	128.1	124.4	122.0	120.8	119.6	119.6	119.6
80°	106.1	103.7	101.2	98.8	95.2	91.5	90.3	89.1	87.9	87.9	87.9
82.5°	72.0	70.7	68.3	65.8	63.4	62.2	60.9	59.7	59.7	59.7	59.7
85°	41.5	40.3	39.0	37.8	36.6	36.6	35.4	34.1	32.9	32.9	32.9
87.5°	17.1	17.1	17.1	15.9	14.7	14.7	14.7	14.7	14.7	14.7	14.7
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3
2.5°	1060.0	1062.4	1064.9	1068.5	1072.2	1075.9	1074.6	1073.4	1078.3	1084.4	1085.7
5°	1044.2	1046.6	1050.3	1056.3	1062.4	1067.3	1068.5	1068.5	1078.3	1086.9	1089.3
7.5°	1024.6	1028.3	1033.2	1039.3	1047.8	1055.1	1058.7	1063.6	1073.4	1084.4	1089.3
10°	1000.2	1006.4	1013.6	1022.2	1030.7	1039.3	1046.6	1052.6	1064.9	1077.1	1084.4
12.5°	978.2	984.3	991.7	1001.5	1012.4	1023.4	1030.7	1039.3	1053.9	1068.5	1077.1
15°	953.9	960.0	968.5	978.2	990.5	1002.7	1013.6	1024.6	1039.3	1055.1	1064.9
17.5°	927.1	933.2	941.6	953.9	967.3	980.7	992.9	1005.1	1022.2	1039.3	1050.3
20°	894.1	902.6	913.6	925.8	941.6	957.5	969.8	983.1	1001.5	1019.7	1031.9
22.5°	862.3	870.9	883.1	897.8	914.8	932.0	946.5	961.2	980.7	999.0	1012.4
25°	831.9	841.7	853.9	868.5	884.4	901.4	918.5	935.6	955.1	974.6	988.0
27.5°	801.4	810.0	822.1	836.8	855.1	872.1	889.3	906.3	927.1	947.8	962.4
30°	767.3	777.0	787.9	802.6	822.1	841.7	858.8	877.0	897.8	918.5	933.2
32.5°	735.6	744.1	755.0	769.7	789.2	808.7	827.0	846.5	866.0	886.8	901.4
35°	703.9	712.3	723.3	738.0	757.5	777.0	795.3	813.6	833.1	852.7	867.2
37.5°	672.1	680.6	691.6	706.3	724.5	744.1	761.1	779.5	799.0	818.5	831.9
40°	639.1	647.7	656.3	670.8	689.2	708.7	725.8	744.1	763.6	783.1	796.5
42.5°	606.2	614.8	625.8	640.4	657.5	674.5	691.6	708.7	727.0	745.3	758.7
45°	573.3	580.6	591.6	605.0	622.1	637.9	655.0	670.8	689.2	706.3	719.7
47.5°	539.2	546.5	555.0	568.4	585.5	602.6	619.7	635.5	651.4	668.5	680.6
50°	506.2	513.6	523.3	535.5	551.4	567.2	581.9	596.4	612.3	628.2	639.1
52.5°	472.1	479.3	487.9	500.1	513.6	528.2	541.6	556.2	570.9	585.5	596.4
55°	437.9	442.7	450.1	461.1	475.8	490.3	503.8	517.1	530.6	542.8	553.8
57.5°	403.7	409.8	418.4	428.2	440.3	452.5	464.8	477.0	489.1	501.3	511.1
60°	369.6	374.5	380.6	389.1	401.3	412.3	424.5	435.5	446.4	457.4	466.0
62.5°	334.2	339.1	345.2	353.8	363.5	373.2	384.2	394.0	403.7	413.5	422.1
65°	297.6	302.5	308.6	316.0	324.5	333.0	342.8	352.5	359.9	367.1	375.7
67.5°	259.8	264.7	270.8	276.9	284.3	292.7	301.3	309.8	317.2	324.5	330.5
70°	223.2	226.9	233.0	237.9	244.0	250.0	257.3	264.7	269.6	275.7	283.0
72.5°	187.8	191.5	196.4	201.3	205.0	209.8	217.1	223.2	229.3	236.7	240.3
75°	153.7	156.1	159.8	163.5	167.1	170.8	175.6	180.5	185.4	189.1	194.0
77.5°	119.6	122.0	125.7	128.1	130.6	133.0	136.6	140.2	143.9	146.4	151.2
80°	87.9	90.3	92.7	95.2	97.5	100.0	101.2	102.4	107.3	111.0	113.4
82.5°	59.7	60.9	62.2	64.6	65.8	67.1	68.3	68.3	70.7	73.2	76.8
85°	34.1	35.4	36.6	36.6	36.6	36.6	37.8	39.0	40.3	42.7	45.2
87.5°	13.5	13.5	14.7	14.7	14.7	14.7	14.7	14.7	15.9	18.3	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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3	1078.3
2.5°	1084.4	1085.7	1088.1	1089.3	1090.4	1090.4	1091.7	1092.9	1090.4	1088.1	1086.9
5°	1090.4	1091.7	1095.3	1099.0	1101.5	1103.9	1102.7	1101.5	1099.0	1095.3	1092.9
7.5°	1091.7	1095.3	1099.0	1103.9	1107.6	1112.5	1110.0	1107.6	1102.7	1097.8	1094.1
10°	1088.1	1092.9	1099.0	1105.1	1108.8	1112.5	1110.0	1107.6	1102.7	1096.6	1091.7
12.5°	1083.2	1089.3	1096.6	1102.7	1106.3	1111.2	1107.6	1103.9	1097.8	1091.7	1085.7
15°	1072.2	1079.5	1088.1	1095.3	1101.5	1106.3	1102.7	1100.2	1092.9	1084.4	1075.9
17.5°	1058.7	1068.5	1077.1	1085.7	1090.4	1095.3	1092.9	1090.4	1082.0	1072.2	1062.4
20°	1042.9	1052.6	1061.2	1069.8	1075.9	1080.8	1077.1	1073.4	1064.9	1056.3	1046.6
22.5°	1023.4	1033.2	1042.9	1051.4	1057.5	1062.4	1057.5	1051.4	1042.9	1034.4	1024.6
25°	999.0	1010.0	1020.9	1029.5	1033.2	1038.1	1033.2	1028.3	1019.7	1011.2	1000.2
27.5°	974.6	985.6	996.6	1005.1	1008.8	1013.6	1008.8	1003.9	995.4	986.8	975.8
30°	946.5	957.5	968.5	977.0	980.7	984.3	979.5	974.6	967.3	958.8	947.8
32.5°	914.8	925.8	934.4	942.9	947.8	952.6	947.8	944.1	935.6	924.6	913.6
35°	880.7	891.7	902.6	911.2	916.1	920.9	914.8	908.7	901.4	892.9	883.1
37.5°	842.9	855.1	867.2	877.0	880.7	885.6	880.7	874.6	867.2	858.8	847.8
40°	807.5	818.5	829.4	839.2	842.9	846.5	841.7	836.8	828.2	819.7	808.7
42.5°	770.9	781.9	791.6	800.2	803.8	808.7	803.8	797.7	791.6	784.3	774.6
45°	731.9	742.9	751.4	759.9	763.6	767.3	762.4	756.2	750.1	744.1	734.3
47.5°	691.6	701.4	709.9	718.4	720.9	724.5	719.7	716.0	709.9	703.9	695.3
50°	650.1	659.9	668.5	675.7	678.2	681.8	677.0	672.1	667.3	662.4	655.0
52.5°	607.4	616.0	624.6	631.8	634.2	636.7	631.8	627.0	622.1	617.2	609.9
55°	563.5	572.1	580.6	586.8	589.2	591.6	586.8	583.1	578.2	574.5	567.2
57.5°	519.6	528.2	535.5	541.6	544.0	546.5	541.6	536.7	533.0	529.4	523.3
60°	474.5	483.0	489.1	494.0	496.5	497.7	492.8	489.1	486.7	484.2	478.1
62.5°	430.6	436.7	442.7	446.4	448.9	450.1	446.4	444.0	441.5	439.1	434.3
65°	384.2	391.6	396.5	400.1	401.3	402.5	398.9	396.5	394.0	391.6	387.9
67.5°	337.9	344.0	347.6	351.3	352.5	352.5	352.5	351.3	348.9	345.2	341.5
70°	291.5	296.4	300.1	302.5	303.7	303.7	301.3	298.8	298.8	297.6	295.2
72.5°	244.0	247.6	250.0	252.5	252.5	252.5	252.5	253.7	252.5	250.0	246.4
75°	198.8	202.5	205.0	206.2	206.2	206.2	206.2	207.4	206.2	205.0	202.5
77.5°	156.1	158.6	159.8	161.0	161.0	161.0	162.3	163.5	162.3	161.0	159.8
80°	115.9	117.1	118.3	119.6	118.3	118.3	119.6	122.0	120.8	119.6	118.3
82.5°	79.3	80.5	81.7	81.7	83.0	84.2	84.2	84.2	84.2	83.0	81.7
85°	47.6	48.8	48.8	48.8	48.8	48.8	50.0	51.3	51.3	50.0	50.0
87.5°	21.9	23.1	21.9	20.7	19.5	19.5	21.9	24.4	24.4	23.1	23.1
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-39L950-X-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1078.3	1078.3	1078.3	1078.3
2.5°	1088.1	1086.9	1080.8	1074.6
5°	1091.7	1088.1	1079.5	1071.0
7.5°	1091.7	1086.9	1074.6	1063.6
10°	1085.7	1078.3	1064.9	1051.4
12.5°	1078.3	1069.8	1053.9	1039.3
15°	1067.3	1057.5	1040.5	1023.4
17.5°	1051.4	1039.3	1022.2	1003.9
20°	1035.6	1022.2	1001.5	981.9
22.5°	1013.6	1001.5	979.5	958.8
25°	989.2	975.8	953.9	932.0
27.5°	963.7	947.8	925.8	903.8
30°	934.4	918.5	896.6	874.6
32.5°	902.6	888.0	866.0	842.9
35°	870.9	855.1	833.1	810.0
37.5°	835.5	820.9	799.0	777.0
40°	797.7	783.1	761.1	739.2
42.5°	762.4	748.9	727.0	706.3
45°	723.3	709.9	689.2	669.6
47.5°	683.1	669.6	650.1	630.6
50°	644.0	630.6	612.3	594.0
52.5°	600.1	589.2	572.1	555.0
55°	557.4	546.5	529.4	513.6
57.5°	514.8	505.0	489.1	474.5
60°	469.6	459.9	447.6	434.3
62.5°	426.9	418.4	406.2	394.0
65°	381.8	374.5	363.5	352.5
67.5°	335.4	329.3	319.6	309.8
70°	289.0	281.8	274.5	265.9
72.5°	242.8	239.1	231.8	224.4
75°	198.8	195.2	189.1	182.9
77.5°	157.4	153.7	148.8	143.9
80°	115.9	113.4	109.8	106.1
82.5°	80.5	78.1	75.6	72.0
85°	48.8	46.4	43.9	41.5
87.5°	21.9	20.7	18.3	17.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)