

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-39L935-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-39L935-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

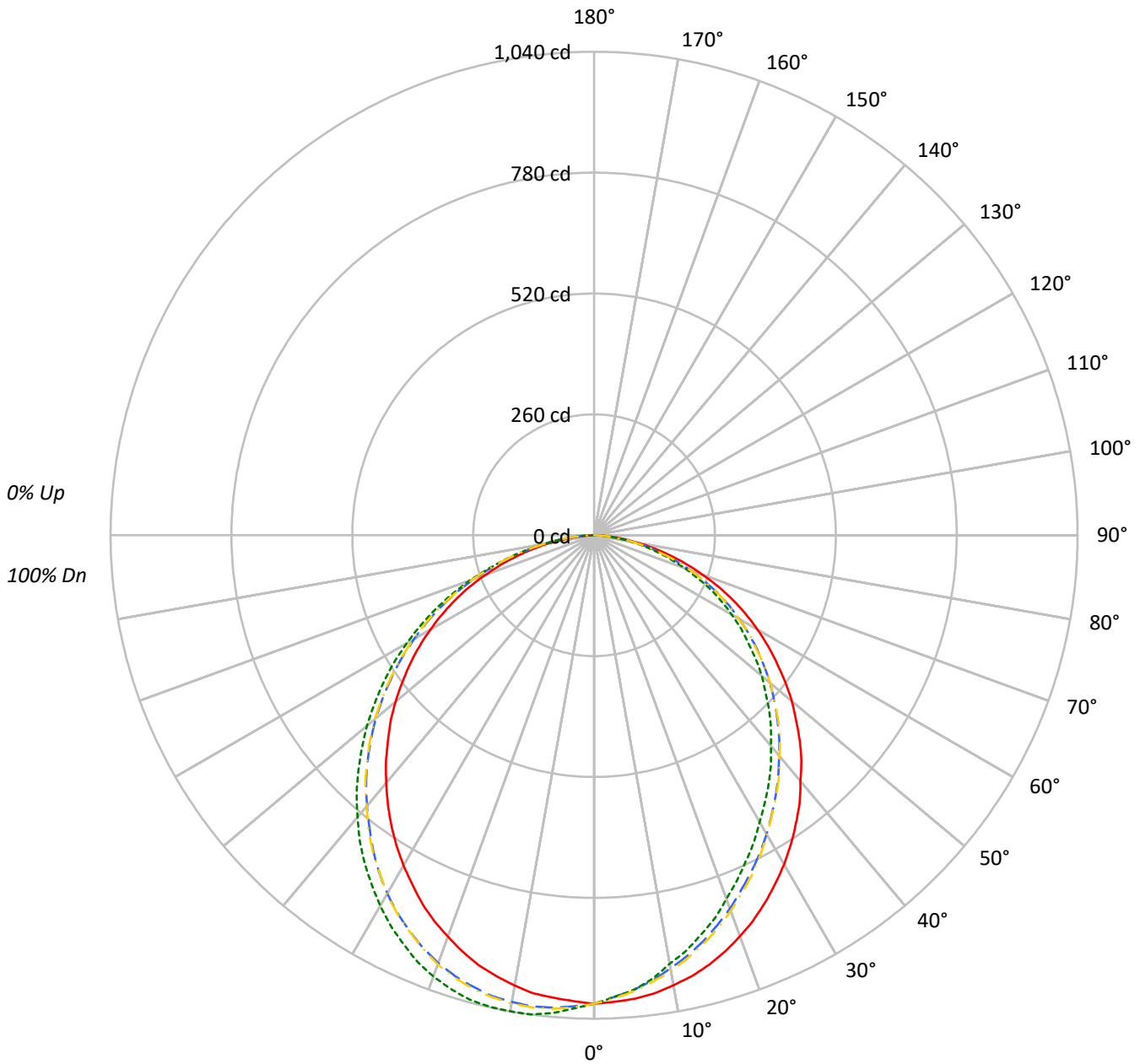
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2702.9 lumens
Efficiency: N/A
Efficacy: 59.0 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

TEST NUMBER: P
CATALOG NUMBER: 4APN-39L935-X-UNV-NP

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - · - 135°-315°



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 CATALOG NUMBER: 4APN-39L935-X-UNV-NP

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	94	92	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9298	9298	9298	9298
5°	9271	9091	9249	9555
10°	9207	8769	9218	9740
15°	9136	8494	9148	9876
20°	9011	8172	9022	9917
25°	8867	7869	8901	9877
30°	8708	7591	8734	9802
35°	8526	7371	8566	9695
40°	8321	7125	8377	9529
45°	8167	6948	8182	9357
50°	7969	6759	8002	9147
55°	7721	6511	7776	8894
60°	7490	6313	7510	8582
65°	7193	6049	7193	8213
70°	6706	5597	6674	7658
75°	6096	5080	6014	6869
80°	5271	4362	5090	5871
85°	4097	3260	3864	4827



TEST NUMBER: P
 CATALOG NUMBER: 4APN-39L935-X-UNV-NP

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	3.5
10°-20°	270.3	10.0
20°-30°	401.8	14.9
30°-40°	473.6	17.5
40°-50°	482.2	17.8
50°-60°	429.6	15.9
60°-70°	323.6	12.0
70°-80°	180.0	6.7
80°-90°	46.7	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°	767.3	28.4
0°-40°	1240.8	45.9
0°-60°	2152.6	79.6
0°-90°	2702.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2702.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1008	1008	1008	1008	1008	
5°	1001	982	999	1032	1001	95
15°	956	889	958	1034	956	270
25°	871	773	874	970	871	401
35°	757	654	760	861	757	474
45°	626	532	627	717	626	482
55°	480	405	483	553	480	430
65°	330	277	330	376	330	325
75°	171	142	169	193	171	182
85°	39	31	36	46	39	47
90°	0	0	0	0	0	



TEST NUMBER: P

CATALOG NUMBER: 4APN-39L935-X-UNV-NP

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8
2.5°	1004.4	1004.4	1005.5	1001.0	995.3	993.0	991.9	990.7	993.0	994.1	993.0
5°	1001.0	998.7	996.4	990.7	983.9	979.3	977.0	975.9	978.1	981.6	978.1
7.5°	994.1	989.6	985.0	977.0	969.0	962.2	958.8	956.5	958.8	962.2	959.9
10°	982.8	977.0	970.2	961.1	949.7	941.7	938.2	934.8	936.0	936.0	936.0
12.5°	971.3	963.4	955.4	943.9	931.4	922.3	916.7	912.0	914.3	915.5	915.5
15°	956.5	946.2	934.8	922.3	909.7	899.5	892.7	888.1	889.3	889.3	890.4
17.5°	938.2	926.9	915.5	900.6	885.9	874.4	866.4	860.8	863.0	864.2	865.3
20°	917.8	905.2	892.7	876.7	860.8	848.2	840.2	833.4	832.3	832.3	833.4
22.5°	896.1	882.4	867.6	850.5	833.4	819.8	811.7	804.9	803.7	803.7	804.9
25°	871.0	856.2	841.3	824.3	806.0	792.4	782.0	775.2	774.1	773.0	775.2
27.5°	844.8	830.0	815.1	798.1	778.6	765.0	754.7	747.9	745.6	744.4	746.7
30°	817.4	800.3	784.3	766.1	749.0	735.3	725.1	717.1	714.8	712.5	714.8
32.5°	787.8	770.7	753.6	735.3	718.2	704.6	694.3	686.3	684.0	682.9	685.1
35°	757.0	739.9	724.0	705.7	688.6	674.9	664.7	657.8	655.5	654.4	655.5
37.5°	726.3	709.1	693.2	674.9	657.8	644.1	633.9	627.1	625.9	624.7	625.9
40°	690.9	676.1	660.1	643.0	625.9	612.2	604.3	596.3	594.0	591.6	595.2
42.5°	660.1	645.3	629.4	613.3	596.3	582.6	573.5	566.6	564.4	563.2	564.4
45°	625.9	609.9	594.0	579.1	563.2	550.6	541.5	534.7	533.6	532.5	533.6
47.5°	589.4	575.7	562.1	547.2	531.3	518.7	510.8	503.9	501.7	499.4	501.7
50°	555.2	541.5	527.8	514.2	499.4	487.9	480.0	473.2	472.0	470.9	472.0
52.5°	518.7	505.1	492.5	478.8	466.3	454.9	446.9	441.2	440.1	439.0	440.1
55°	480.0	468.6	457.1	445.8	433.2	422.9	416.1	409.3	407.0	404.8	407.0
57.5°	443.5	433.2	421.8	410.4	399.0	389.9	383.1	377.4	376.2	375.1	376.2
60°	405.9	396.7	386.5	376.2	364.8	355.7	350.0	345.5	343.2	342.1	343.2
62.5°	368.2	359.1	351.1	340.9	330.6	323.8	318.1	313.5	311.3	310.1	311.3
65°	329.5	321.5	313.5	304.4	296.4	289.6	283.9	279.3	278.2	277.1	277.1
67.5°	289.6	282.8	275.9	267.9	258.8	252.0	246.3	242.9	241.7	240.5	241.7
70°	248.6	242.9	236.0	229.1	222.3	216.6	213.2	209.8	208.6	207.5	207.5
72.5°	209.8	205.2	199.5	193.8	188.1	182.4	179.0	176.7	175.5	174.4	174.4
75°	171.0	166.4	163.0	158.5	152.8	149.4	146.0	143.6	142.5	142.5	142.5
77.5°	134.5	131.1	127.7	123.1	119.7	116.3	114.1	112.9	111.7	111.7	111.7
80°	99.2	96.9	94.6	92.4	88.9	85.5	84.4	83.3	82.1	82.1	82.1
82.5°	67.3	66.1	63.8	61.6	59.3	58.2	57.0	55.9	55.9	55.9	55.9
85°	38.7	37.6	36.5	35.3	34.2	34.2	33.1	31.9	30.8	30.8	30.8
87.5°	16.0	16.0	16.0	14.8	13.6	13.6	13.6	13.6	13.6	13.6	13.6
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-39L935-X-UNV-NP

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8
2.5°	990.7	993.0	995.3	998.7	1002.1	1005.5	1004.4	1003.2	1007.8	1013.6	1014.7
5°	975.9	978.1	981.6	987.3	993.0	997.5	998.7	998.7	1007.8	1015.8	1018.1
7.5°	957.7	961.1	965.6	971.3	979.3	986.2	989.6	994.1	1003.2	1013.6	1018.1
10°	934.8	940.5	947.4	955.4	963.4	971.3	978.1	983.9	995.3	1006.6	1013.6
12.5°	914.3	920.1	926.9	936.0	946.2	956.5	963.4	971.3	985.0	998.7	1006.6
15°	891.6	897.2	905.2	914.3	925.7	937.1	947.4	957.7	971.3	986.2	995.3
17.5°	866.4	872.1	880.1	891.6	904.1	916.7	928.0	939.4	955.4	971.3	981.6
20°	835.7	843.6	853.9	865.3	880.1	895.0	906.3	918.9	936.0	953.1	964.5
22.5°	806.0	814.0	825.4	839.1	855.1	871.0	884.7	898.4	916.7	933.7	946.2
25°	777.5	786.7	798.1	811.7	826.6	842.5	858.5	874.4	892.7	910.9	923.5
27.5°	749.0	757.0	768.4	782.0	799.2	815.1	831.1	847.0	866.4	885.9	899.5
30°	717.1	726.3	736.5	750.1	768.4	786.7	802.6	819.8	839.1	858.5	872.1
32.5°	687.4	695.5	705.7	719.3	737.6	755.9	773.0	791.2	809.4	828.8	842.5
35°	657.8	665.8	676.1	689.7	708.0	726.3	743.3	760.5	778.6	796.9	810.6
37.5°	628.2	636.2	646.4	660.1	677.2	695.5	711.4	728.5	746.7	765.0	777.5
40°	597.4	605.4	613.3	627.1	644.1	662.4	678.3	695.5	713.7	731.9	744.4
42.5°	566.6	574.6	584.8	598.6	614.5	630.5	646.4	662.4	679.5	696.6	709.1
45°	535.9	542.7	552.9	565.5	581.4	596.3	612.2	627.1	644.1	660.1	672.6
47.5°	503.9	510.8	518.7	531.3	547.2	563.2	579.1	594.0	608.8	624.7	636.2
50°	473.2	480.0	489.1	500.5	515.3	530.1	543.8	557.5	572.3	587.1	597.4
52.5°	441.2	448.0	456.0	467.5	480.0	493.6	506.2	519.8	533.6	547.2	557.5
55°	409.3	413.9	420.7	430.9	444.6	458.3	470.9	483.4	495.9	507.3	517.6
57.5°	377.4	383.1	391.0	400.1	411.6	422.9	434.4	445.8	457.1	468.6	477.7
60°	345.5	350.0	355.7	363.6	375.1	385.3	396.7	407.0	417.3	427.5	435.5
62.5°	312.4	317.0	322.6	330.6	339.8	348.9	359.1	368.2	377.4	386.5	394.4
65°	278.2	282.8	288.4	295.3	303.2	311.3	320.4	329.5	336.3	343.2	351.1
67.5°	242.9	247.4	253.1	258.8	265.6	273.6	281.6	289.6	296.4	303.2	309.0
70°	208.6	212.1	217.8	222.3	228.0	233.7	240.5	247.4	252.0	257.7	264.5
72.5°	175.5	179.0	183.6	188.1	191.5	196.1	202.9	208.6	214.4	221.2	224.6
75°	143.6	146.0	149.4	152.8	156.2	159.6	164.2	168.7	173.2	176.7	181.3
77.5°	111.7	114.1	117.5	119.7	122.0	124.3	127.7	131.1	134.5	136.8	141.3
80°	82.1	84.4	86.7	88.9	91.2	93.5	94.6	95.8	100.3	103.7	106.0
82.5°	55.9	57.0	58.2	60.4	61.6	62.7	63.8	63.8	66.1	68.4	71.8
85°	31.9	33.1	34.2	34.2	34.2	34.2	35.3	36.5	37.6	39.9	42.2
87.5°	12.5	12.5	13.6	13.6	13.6	13.6	13.6	13.6	14.8	17.1	18.3
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-39L935-X-UNV-NP

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8	1007.8
2.5°	1013.6	1014.7	1017.0	1018.1	1019.2	1019.2	1020.4	1021.5	1019.2	1017.0	1015.8
5°	1019.2	1020.4	1023.8	1027.2	1029.5	1031.7	1030.6	1029.5	1027.2	1023.8	1021.5
7.5°	1020.4	1023.8	1027.2	1031.7	1035.2	1039.7	1037.4	1035.2	1030.6	1026.1	1022.7
10°	1017.0	1021.5	1027.2	1032.9	1036.3	1039.7	1037.4	1035.2	1030.6	1024.9	1020.4
12.5°	1012.4	1018.1	1024.9	1030.6	1034.0	1038.6	1035.2	1031.7	1026.1	1020.4	1014.7
15°	1002.1	1008.9	1017.0	1023.8	1029.5	1034.0	1030.6	1028.3	1021.5	1013.6	1005.5
17.5°	989.6	998.7	1006.6	1014.7	1019.2	1023.8	1021.5	1019.2	1011.2	1002.1	993.0
20°	974.7	983.9	991.9	999.8	1005.5	1010.1	1006.6	1003.2	995.3	987.3	978.1
22.5°	956.5	965.6	974.7	982.8	988.5	993.0	988.5	982.8	974.7	966.8	957.7
25°	933.7	943.9	954.3	962.2	965.6	970.2	965.6	961.1	953.1	945.1	934.8
27.5°	910.9	921.2	931.4	939.4	942.8	947.4	942.8	938.2	930.3	922.3	912.0
30°	884.7	895.0	905.2	913.1	916.7	920.1	915.5	910.9	904.1	896.1	885.9
32.5°	855.1	865.3	873.3	881.2	885.9	890.4	885.9	882.4	874.4	864.2	853.9
35°	823.2	833.4	843.6	851.7	856.2	860.8	855.1	849.3	842.5	834.5	825.4
37.5°	787.8	799.2	810.6	819.8	823.2	827.7	823.2	817.4	810.6	802.6	792.4
40°	754.7	765.0	775.2	784.3	787.8	791.2	786.7	782.0	774.1	766.1	755.9
42.5°	720.5	730.8	739.9	747.9	751.3	755.9	751.3	745.6	739.9	733.1	724.0
45°	684.0	694.3	702.3	710.2	713.7	717.1	712.5	706.8	701.2	695.5	686.3
47.5°	646.4	655.5	663.5	671.5	673.8	677.2	672.6	669.2	663.5	657.8	649.8
50°	607.7	616.8	624.7	631.6	633.9	637.3	632.8	628.2	623.6	619.0	612.2
52.5°	567.8	575.7	583.7	590.5	592.8	595.2	590.5	586.0	581.4	576.9	570.1
55°	526.7	534.7	542.7	548.4	550.6	552.9	548.4	545.0	540.4	537.0	530.1
57.5°	485.7	493.6	500.5	506.2	508.5	510.8	506.2	501.7	498.2	494.7	489.1
60°	443.5	451.5	457.1	461.7	464.0	465.1	460.6	457.1	454.9	452.6	446.9
62.5°	402.5	408.2	413.9	417.3	419.5	420.7	417.3	415.0	412.7	410.4	405.9
65°	359.1	365.9	370.6	374.0	375.1	376.2	372.8	370.6	368.2	365.9	362.5
67.5°	315.8	321.5	324.9	328.3	329.5	329.5	329.5	328.3	326.0	322.6	319.2
70°	272.5	277.1	280.5	282.8	283.9	283.9	281.6	279.3	279.3	278.2	275.9
72.5°	228.0	231.4	233.7	236.0	236.0	236.0	236.0	237.1	236.0	233.7	230.3
75°	185.9	189.3	191.5	192.7	192.7	192.7	192.7	193.8	192.7	191.5	189.3
77.5°	146.0	148.2	149.4	150.5	150.5	150.5	151.7	152.8	151.7	150.5	149.4
80°	108.3	109.4	110.5	111.7	110.5	110.5	111.7	114.1	112.9	111.7	110.5
82.5°	74.1	75.2	76.3	76.3	77.5	78.6	78.6	78.6	78.6	77.5	76.3
85°	44.4	45.6	45.6	45.6	45.6	45.6	46.7	47.9	47.9	46.7	46.7
87.5°	20.6	21.7	20.6	19.4	18.3	18.3	20.6	22.8	22.8	21.7	21.7
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-39L935-X-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1007.8	1007.8	1007.8	1007.8
2.5°	1017.0	1015.8	1010.1	1004.4
5°	1020.4	1017.0	1008.9	1001.0
7.5°	1020.4	1015.8	1004.4	994.1
10°	1014.7	1007.8	995.3	982.8
12.5°	1007.8	999.8	985.0	971.3
15°	997.5	988.5	972.4	956.5
17.5°	982.8	971.3	955.4	938.2
20°	967.9	955.4	936.0	917.8
22.5°	947.4	936.0	915.5	896.1
25°	924.6	912.0	891.6	871.0
27.5°	900.6	885.9	865.3	844.8
30°	873.3	858.5	837.9	817.4
32.5°	843.6	830.0	809.4	787.8
35°	814.0	799.2	778.6	757.0
37.5°	780.9	767.3	746.7	726.3
40°	745.6	731.9	711.4	690.9
42.5°	712.5	700.0	679.5	660.1
45°	676.1	663.5	644.1	625.9
47.5°	638.4	625.9	607.7	589.4
50°	602.0	589.4	572.3	555.2
52.5°	560.9	550.6	534.7	518.7
55°	521.0	510.8	494.7	480.0
57.5°	481.1	472.0	457.1	443.5
60°	439.0	429.8	418.4	405.9
62.5°	399.0	391.0	379.7	368.2
65°	356.8	350.0	339.8	329.5
67.5°	313.5	307.9	298.7	289.6
70°	270.2	263.3	256.5	248.6
72.5°	226.9	223.5	216.6	209.8
75°	185.9	182.4	176.7	171.0
77.5°	147.1	143.6	139.1	134.5
80°	108.3	106.0	102.6	99.2
82.5°	75.2	72.9	70.7	67.3
85°	45.6	43.3	41.0	38.7
87.5°	20.6	19.4	17.1	16.0
90°	0.0	0.0	0.0	0.0

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