

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-39L930-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-39L930-X-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/ Nature Pattern Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

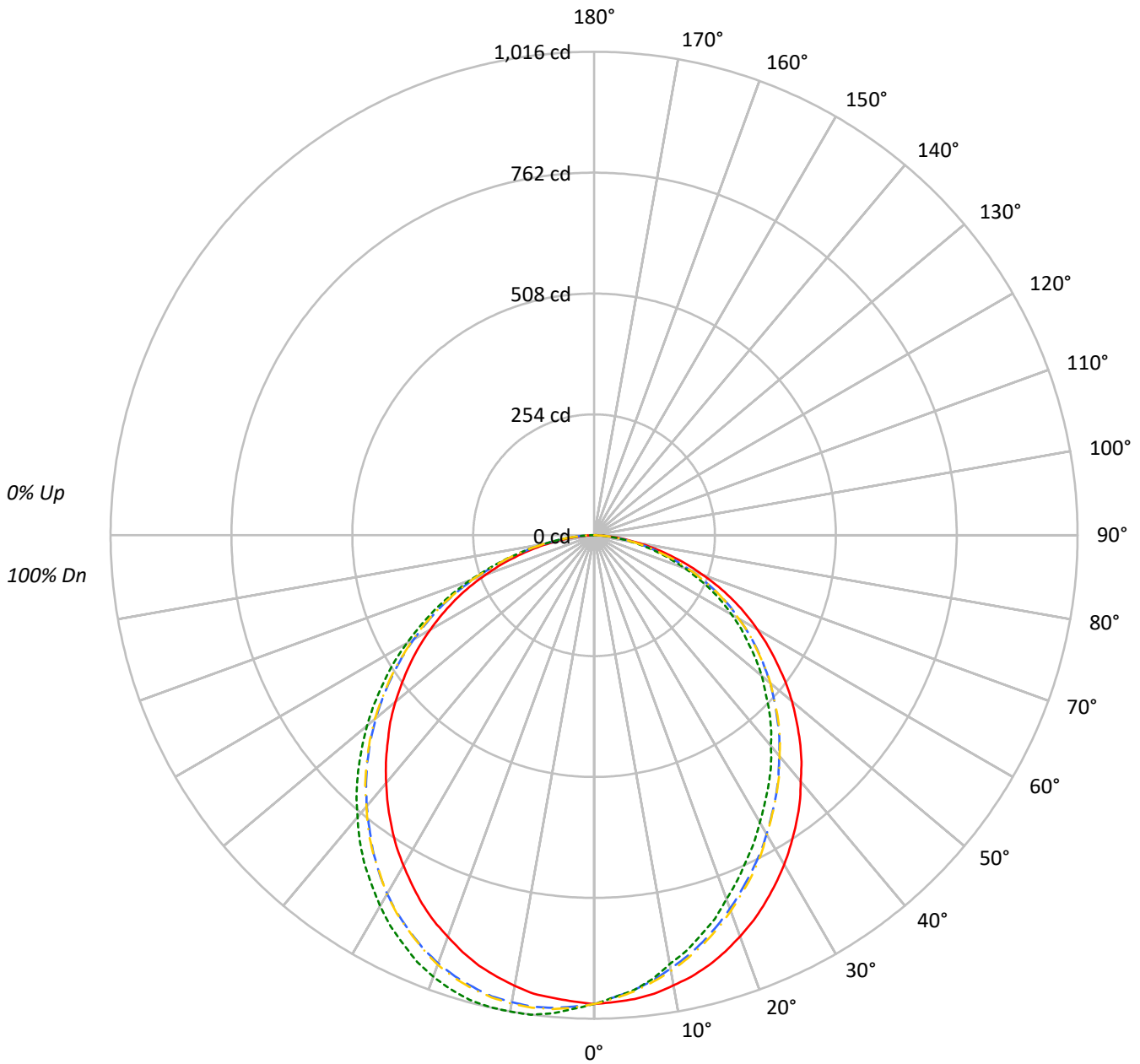
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2642.2 lumens
Efficiency: N/A
Efficacy: 57.7 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°	9090	9090	9090	9090
5°	9062	8886	9042	9341
10°	8999	8572	9010	9522
15°	8931	8303	8941	9655
20°	8808	7988	8819	9695
25°	8668	7692	8702	9655
30°	8513	7421	8537	9581
35°	8335	7205	8372	9477
40°	8134	6966	8187	9316
45°	7983	6791	7997	9147
50°	7791	6607	7823	8942
55°	7547	6363	7600	8694
60°	7320	6169	7340	8390
65°	7032	5912	7032	8029
70°	6552	5471	6523	7486
75°	5960	4966	5878	6716
80°	5154	4261	4973	5744
85°	4012	3186	3779	4711



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.1	3.5
10°-20°	264.2	10.0
20°-30°	392.8	14.9
30°-40°	462.9	17.5
40°-50°	471.3	17.8
50°-60°	419.9	15.9
60°-70°	316.4	12.0
70°-80°	175.9	6.7
80°-90°	45.7	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°	750.0	28.4
0°-40°	1212.9	45.9
0°-60°	2104.2	79.6
0°-90°	2642.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2642.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	985	985	985	985	985	
5°	978	960	976	1009	978	93
15°	935	869	936	1011	935	263
25°	852	756	855	948	852	392
35°	740	640	743	841	740	463
45°	612	520	613	701	612	471
55°	469	396	472	540	469	420
65°	322	271	322	368	322	318
75°	167	139	165	188	167	178
85°	38	30	36	44	38	46
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°	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2
2.5°	981.8	981.8	982.9	978.5	972.9	970.7	969.6	968.5	970.7	971.8	970.7
5°	978.5	976.3	974.0	968.5	961.7	957.3	955.1	954.0	956.2	959.5	956.2
7.5°	971.8	967.4	962.8	955.1	947.3	940.6	937.2	935.0	937.2	940.6	938.4
10°	960.6	955.1	948.4	939.5	928.4	920.5	917.2	913.9	915.0	915.0	915.0
12.5°	949.5	941.7	933.9	922.7	910.5	901.6	896.0	891.6	893.8	894.9	894.9
15°	935.0	925.0	913.9	901.6	889.4	879.3	872.6	868.2	869.3	869.3	870.4
17.5°	917.2	906.0	894.9	880.4	865.9	854.8	846.9	841.4	843.6	844.7	845.8
20°	897.1	884.8	872.6	857.0	841.4	829.2	821.3	814.7	813.6	813.6	814.7
22.5°	876.0	862.6	848.1	831.4	814.7	801.3	793.5	786.8	785.7	785.7	786.8
25°	851.5	837.0	822.4	805.7	787.9	774.6	764.5	757.8	756.7	755.6	757.8
27.5°	825.8	811.4	796.8	780.1	761.2	747.8	737.8	731.1	728.8	727.7	729.9
30°	799.1	782.3	766.7	748.9	732.2	718.8	708.8	701.0	698.8	696.6	698.8
32.5°	770.1	753.4	736.7	718.8	702.1	688.7	678.7	670.9	668.6	667.5	669.8
35°	740.0	723.3	707.6	689.8	673.2	659.8	649.7	643.0	640.8	639.7	640.8
37.5°	709.9	693.2	677.6	659.8	643.0	629.6	619.7	612.9	611.8	610.7	611.8
40°	675.4	660.9	645.3	628.5	611.8	598.5	590.6	582.9	580.7	578.4	581.8
42.5°	645.3	630.7	615.2	599.6	582.9	569.5	560.6	553.8	551.6	550.5	551.6
45°	611.8	596.3	580.7	566.1	550.5	538.3	529.3	522.7	521.6	520.5	521.6
47.5°	576.2	562.8	549.4	534.9	519.4	507.1	499.3	492.6	490.3	488.1	490.3
50°	542.8	529.3	516.0	502.6	488.1	477.0	469.2	462.5	461.4	460.3	461.4
52.5°	507.1	493.7	481.5	468.1	455.8	444.7	436.8	431.3	430.2	429.1	430.2
55°	469.2	458.0	446.9	435.7	423.5	413.4	406.8	400.1	397.8	395.6	397.8
57.5°	433.5	423.5	412.3	401.2	390.1	381.2	374.4	368.9	367.8	366.7	367.8
60°	396.7	387.8	377.8	367.8	356.6	347.7	342.2	337.6	335.4	334.3	335.4
62.5°	359.9	351.1	343.3	333.2	323.2	316.5	310.9	306.5	304.3	303.2	304.3
65°	322.1	314.3	306.5	297.5	289.8	283.1	277.5	273.0	271.9	270.8	270.8
67.5°	283.1	276.4	269.7	261.9	253.0	246.3	240.7	237.4	236.3	235.1	236.3
70°	242.9	237.4	230.7	224.0	217.3	211.8	208.4	205.1	203.9	202.8	202.8
72.5°	205.1	200.6	195.0	189.5	183.8	178.3	175.0	172.8	171.6	170.5	170.5
75°	167.2	162.7	159.3	154.9	149.4	146.0	142.6	140.4	139.3	139.3	139.3
77.5°	131.5	128.2	124.8	120.3	117.0	113.7	111.5	110.4	109.3	109.3	109.3
80°	97.0	94.7	92.5	90.3	86.9	83.6	82.4	81.3	80.2	80.2	80.2
82.5°	65.7	64.6	62.4	60.2	58.0	56.8	55.7	54.6	54.6	54.6	54.6
85°	37.9	36.8	35.7	34.6	33.5	33.5	32.4	31.2	30.1	30.1	30.1
87.5°	15.6	15.6	15.6	14.5	13.4	13.4	13.4	13.4	13.4	13.4	13.4
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°	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2
2.5°	968.5	970.7	972.9	976.3	979.6	982.9	981.8	980.7	985.2	990.8	991.9
5°	954.0	956.2	959.5	965.1	970.7	975.1	976.3	976.3	985.2	993.0	995.2
7.5°	936.1	939.5	943.9	949.5	957.3	964.0	967.4	971.8	980.7	990.8	995.2
10°	913.9	919.4	926.1	933.9	941.7	949.5	956.2	961.7	972.9	984.1	990.8
12.5°	893.8	899.3	906.0	915.0	925.0	935.0	941.7	949.5	962.8	976.3	984.1
15°	871.5	877.1	884.8	893.8	904.9	916.1	926.1	936.1	949.5	964.0	972.9
17.5°	846.9	852.6	860.3	871.5	883.7	896.0	907.2	918.3	933.9	949.5	959.5
20°	816.9	824.7	834.7	845.8	860.3	874.9	885.9	898.2	915.0	931.7	942.8
22.5°	787.9	795.7	806.8	820.2	835.9	851.5	864.8	878.2	896.0	912.8	925.0
25°	760.1	768.9	780.1	793.5	807.9	823.6	839.2	854.8	872.6	890.5	902.7
27.5°	732.2	740.0	751.2	764.5	781.2	796.8	812.5	828.0	846.9	865.9	879.3
30°	701.0	709.9	719.9	733.3	751.2	768.9	784.5	801.3	820.2	839.2	852.6
32.5°	672.0	679.8	689.8	703.2	721.1	738.9	755.6	773.5	791.3	810.3	823.6
35°	643.0	650.8	660.9	674.3	692.1	709.9	726.6	743.3	761.2	779.0	792.4
37.5°	614.1	621.9	631.9	645.3	662.0	679.8	695.5	712.2	729.9	747.8	760.1
40°	584.0	591.7	599.6	612.9	629.6	647.5	663.1	679.8	697.7	715.5	727.7
42.5°	553.8	561.7	571.7	585.1	600.7	616.3	631.9	647.5	664.2	680.9	693.2
45°	523.8	530.5	540.5	552.7	568.4	582.9	598.5	612.9	629.6	645.3	657.6
47.5°	492.6	499.3	507.1	519.4	534.9	550.5	566.1	580.7	595.2	610.7	621.9
50°	462.5	469.2	478.1	489.2	503.7	518.3	531.6	545.0	559.5	573.9	584.0
52.5°	431.3	438.0	445.8	456.9	469.2	482.6	494.8	508.2	521.6	534.9	545.0
55°	400.1	404.6	411.2	421.3	434.6	448.0	460.3	472.5	484.8	495.9	506.0
57.5°	368.9	374.4	382.3	391.2	402.4	413.4	424.6	435.7	446.9	458.0	467.0
60°	337.6	342.2	347.7	355.5	366.7	376.7	387.8	397.8	407.9	417.9	425.7
62.5°	305.4	309.8	315.4	323.2	332.1	341.0	351.1	359.9	368.9	377.8	385.6
65°	271.9	276.4	281.9	288.7	296.4	304.3	313.2	322.1	328.8	335.4	343.3
67.5°	237.4	241.8	247.4	253.0	259.6	267.5	275.3	283.1	289.8	296.4	302.0
70°	203.9	207.3	212.9	217.3	222.8	228.5	235.1	241.8	246.3	251.9	258.5
72.5°	171.6	175.0	179.4	183.8	187.3	191.7	198.4	203.9	209.5	216.2	219.5
75°	140.4	142.6	146.0	149.4	152.7	156.0	160.5	164.9	169.4	172.8	177.2
77.5°	109.3	111.5	114.8	117.0	119.2	121.5	124.8	128.2	131.5	133.7	138.2
80°	80.2	82.4	84.7	86.9	89.2	91.4	92.5	93.6	98.1	101.4	103.6
82.5°	54.6	55.7	56.8	59.1	60.2	61.3	62.4	62.4	64.6	66.8	70.3
85°	31.2	32.4	33.5	33.5	33.5	33.5	34.6	35.7	36.8	39.0	41.2
87.5°	12.3	12.3	13.4	13.4	13.4	13.4	13.4	13.4	14.5	16.7	17.8
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°	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2	985.2
2.5°	990.8	991.9	994.1	995.2	996.3	996.3	997.4	998.5	996.3	994.1	993.0
5°	996.3	997.4	1000.7	1004.2	1006.4	1008.6	1007.5	1006.4	1004.2	1000.7	998.5
7.5°	997.4	1000.7	1004.2	1008.6	1011.9	1016.4	1014.1	1011.9	1007.5	1003.0	999.6
10°	994.1	998.5	1004.2	1009.7	1013.0	1016.4	1014.1	1011.9	1007.5	1001.9	997.4
12.5°	989.7	995.2	1001.9	1007.5	1010.8	1015.3	1011.9	1008.6	1003.0	997.4	991.9
15°	979.6	986.3	994.1	1000.7	1006.4	1010.8	1007.5	1005.3	998.5	990.8	982.9
17.5°	967.4	976.3	984.1	991.9	996.3	1000.7	998.5	996.3	988.5	979.6	970.7
20°	952.9	961.7	969.6	977.4	982.9	987.4	984.1	980.7	972.9	965.1	956.2
22.5°	935.0	943.9	952.9	960.6	966.3	970.7	966.3	960.6	952.9	945.1	936.1
25°	912.8	922.7	932.8	940.6	943.9	948.4	943.9	939.5	931.7	923.8	913.9
27.5°	890.5	900.5	910.5	918.3	921.6	926.1	921.6	917.2	909.4	901.6	891.6
30°	864.8	874.9	884.8	892.7	896.0	899.3	894.9	890.5	883.7	876.0	865.9
32.5°	835.9	845.8	853.7	861.5	865.9	870.4	865.9	862.6	854.8	844.7	834.7
35°	804.6	814.7	824.7	832.5	837.0	841.4	835.9	830.3	823.6	815.8	806.8
37.5°	770.1	781.2	792.4	801.3	804.6	809.1	804.6	799.1	792.4	784.5	774.6
40°	737.8	747.8	757.8	766.7	770.1	773.5	768.9	764.5	756.7	748.9	738.9
42.5°	704.3	714.4	723.3	731.1	734.5	738.9	734.5	728.8	723.3	716.6	707.6
45°	668.6	678.7	686.5	694.3	697.7	701.0	696.6	690.9	685.4	679.8	670.9
47.5°	631.9	640.8	648.6	656.4	658.7	662.0	657.6	654.2	648.6	643.0	635.3
50°	594.0	602.9	610.7	617.4	619.7	623.0	618.5	614.1	609.6	605.1	598.5
52.5°	555.0	562.8	570.6	577.3	579.5	581.8	577.3	572.8	568.4	563.9	557.3
55°	514.8	522.7	530.5	536.1	538.3	540.5	536.1	532.7	528.2	524.9	518.3
57.5°	474.7	482.6	489.2	494.8	497.1	499.3	494.8	490.3	487.0	483.7	478.1
60°	433.5	441.4	446.9	451.3	453.6	454.7	450.2	446.9	444.7	442.5	436.8
62.5°	393.4	398.9	404.6	407.9	410.1	411.2	407.9	405.7	403.5	401.2	396.7
65°	351.1	357.7	362.2	365.6	366.7	367.8	364.5	362.2	359.9	357.7	354.4
67.5°	308.7	314.3	317.6	320.9	322.1	322.1	322.1	320.9	318.7	315.4	312.0
70°	266.4	270.8	274.1	276.4	277.5	277.5	275.3	273.0	273.0	271.9	269.7
72.5°	222.8	226.3	228.5	230.7	230.7	230.7	230.7	231.8	230.7	228.5	225.2
75°	181.6	185.0	187.3	188.4	188.4	188.4	188.4	189.5	188.4	187.3	185.0
77.5°	142.6	144.8	146.0	147.2	147.2	147.2	148.3	149.4	148.3	147.2	146.0
80°	105.8	107.0	108.1	109.3	108.1	108.1	109.3	111.5	110.4	109.3	108.1
82.5°	72.5	73.6	74.7	74.7	75.8	76.9	76.9	76.9	76.9	75.8	74.7
85°	43.4	44.5	44.5	44.5	44.5	44.5	45.7	46.8	46.8	45.7	45.7
87.5°	20.1	21.2	20.1	18.9	17.8	17.8	20.1	22.3	22.3	21.2	21.2
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-39L930-X-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	985.2	985.2	985.2	985.2
2.5°	994.1	993.0	987.4	981.8
5°	997.4	994.1	986.3	978.5
7.5°	997.4	993.0	981.8	971.8
10°	991.9	985.2	972.9	960.6
12.5°	985.2	977.4	962.8	949.5
15°	975.1	966.3	950.7	935.0
17.5°	960.6	949.5	933.9	917.2
20°	946.2	933.9	915.0	897.1
22.5°	926.1	915.0	894.9	876.0
25°	903.8	891.6	871.5	851.5
27.5°	880.4	865.9	845.8	825.8
30°	853.7	839.2	819.1	799.1
32.5°	824.7	811.4	791.3	770.1
35°	795.7	781.2	761.2	740.0
37.5°	763.4	750.0	729.9	709.9
40°	728.8	715.5	695.5	675.4
42.5°	696.6	684.3	664.2	645.3
45°	660.9	648.6	629.6	611.8
47.5°	624.1	611.8	594.0	576.2
50°	588.4	576.2	559.5	542.8
52.5°	548.3	538.3	522.7	507.1
55°	509.3	499.3	483.7	469.2
57.5°	470.3	461.4	446.9	433.5
60°	429.1	420.2	409.0	396.7
62.5°	390.1	382.3	371.1	359.9
65°	348.8	342.2	332.1	322.1
67.5°	306.5	300.9	292.0	283.1
70°	264.2	257.4	250.8	242.9
72.5°	221.7	218.4	211.8	205.1
75°	181.6	178.3	172.8	167.2
77.5°	143.7	140.4	136.0	131.5
80°	105.8	103.6	100.3	97.0
82.5°	73.6	71.4	69.1	65.7
85°	44.5	42.3	40.1	37.9
87.5°	20.1	18.9	16.7	15.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)