

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: P837786

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1STD-30-120-EDD-90**

Issue Date: 5/21/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P837786
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-1STD-30-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

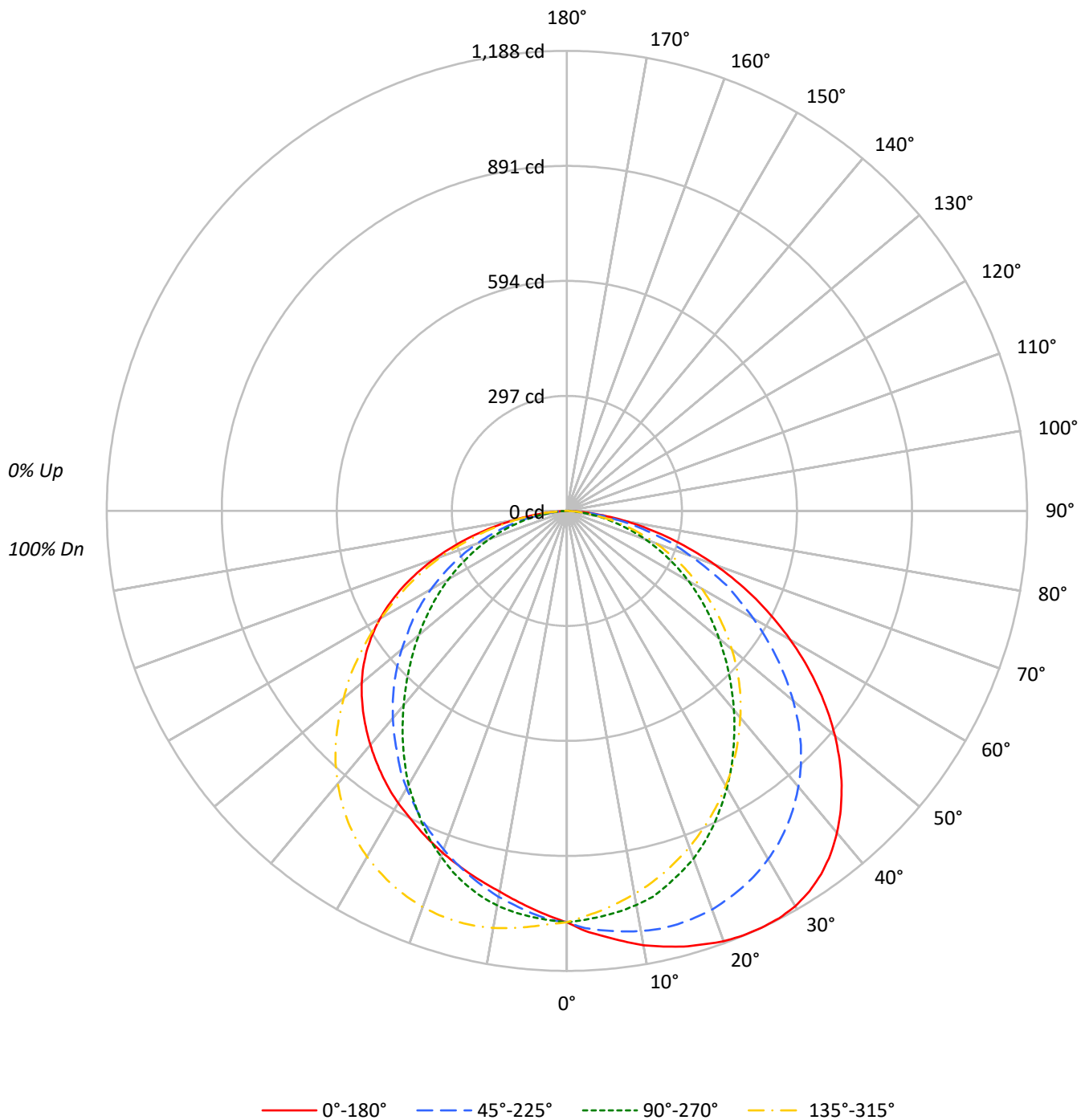
Lumens per Lamp: N/A
Luminaire Lumens: 3116.7 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	94	97	94	91		94	91	89		90
2	99	91	84	78	96	89	82	77	85	80	75		82	77	73		79
3	90	79	71	65	88	78	70	64	75	68	63		72	66	62		69
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		62
5	76	63	54	47	74	62	53	47	59	52	46		57	51	46		56
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50
7	65	51	42	36	63	50	42	36	49	41	36		47	40	35		46
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2859	2859	2859	2859
5°	2979	2838	2784	2843
10°	3112	2823	2728	2828
15°	3245	2788	2701	2788
20°	3387	2737	2690	2721
25°	3527	2660	2689	2633
30°	3663	2568	2707	2539
35°	3761	2462	2734	2423
40°	3811	2356	2772	2303
45°	3818	2249	2826	2192
50°	3782	2146	2895	2089
55°	3704	2051	2960	1994
60°	3588	1951	2999	1900
65°	3427	1836	2984	1794
70°	3201	1702	2878	1671
75°	2880	1518	2641	1510
80°	2442	1271	2219	1291
85°	1698	843	1408	865

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.9	3.2
10°-20°	292.1	9.4
20°-30°	447.6	14.4
30°-40°	544.3	17.5
40°-50°	565.8	18.2
50°-60°	511.1	16.4
60°-70°	388.6	12.5
70°-80°	216.6	7.0
80°-90°	49.9	1.6
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°	840.5	27.0
0°-40°	1384.8	44.4
0°-60°	2461.6	79.0
0°-90°	3116.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3116.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1062	1062	1062	1062	1062	
5°	1103	1051	1031	1052	1103	106
15°	1165	1001	970	1001	1165	330
25°	1188	896	906	887	1188	549
35°	1145	750	832	738	1145	715
45°	1003	591	743	576	1003	772
55°	790	437	631	425	790	705
65°	538	288	469	282	538	532
75°	277	146	254	145	277	294
85°	55	27	46	28	55	69
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3
2.5°	1085.9	1070.0	1070.2	1084.1	1073.5	1078.7	1063.8	1069.5	1067.8	1069.0	1056.9
5°	1103.0	1085.9	1085.6	1097.5	1085.6	1087.8	1069.0	1072.7	1067.3	1063.8	1050.7
7.5°	1121.0	1103.9	1102.2	1112.6	1097.0	1095.3	1074.5	1074.5	1064.5	1055.9	1043.5
10°	1138.9	1121.3	1119.1	1127.0	1107.7	1102.0	1076.7	1072.7	1059.6	1046.7	1033.3
12.5°	1152.3	1134.4	1132.7	1137.6	1115.8	1105.4	1076.7	1069.0	1049.7	1031.6	1021.2
15°	1164.9	1146.6	1141.9	1144.3	1119.3	1105.4	1073.2	1061.3	1036.5	1012.8	1000.6
17.5°	1173.8	1156.2	1151.5	1151.3	1121.0	1101.2	1065.8	1049.4	1019.7	990.9	978.8
20°	1182.7	1165.2	1159.2	1154.7	1120.5	1095.5	1054.9	1032.8	998.1	965.9	955.8
22.5°	1187.2	1169.1	1162.7	1156.0	1117.3	1085.1	1041.5	1013.5	973.8	935.4	927.0
25°	1187.9	1169.4	1162.4	1152.8	1110.9	1072.7	1024.2	990.2	945.8	903.2	896.0
27.5°	1186.0	1165.6	1158.7	1147.1	1101.2	1057.6	1003.6	963.7	916.1	869.0	861.3
30°	1179.0	1158.5	1151.8	1136.7	1087.6	1039.0	981.0	934.2	883.2	833.1	826.4
32.5°	1165.2	1145.1	1139.6	1124.5	1072.7	1017.5	954.8	902.5	846.7	798.9	789.0
35°	1144.8	1124.8	1121.3	1105.4	1051.9	991.7	926.0	867.8	808.1	759.3	749.6
37.5°	1118.3	1101.5	1096.3	1080.7	1027.4	962.5	893.1	830.1	768.7	716.1	710.2
40°	1084.9	1069.0	1065.0	1051.2	998.9	930.0	857.4	791.2	728.0	679.2	670.8
42.5°	1046.7	1031.8	1029.6	1015.2	963.7	894.1	818.7	750.8	685.7	638.6	630.2
45°	1003.3	989.0	988.5	974.8	925.3	854.2	778.1	709.9	644.3	595.5	591.0
47.5°	955.5	942.6	942.6	930.0	882.4	810.3	736.2	667.3	602.6	559.5	551.6
50°	903.5	891.3	887.6	881.4	835.1	762.5	692.1	625.7	561.5	520.4	512.7
52.5°	848.0	837.6	840.0	828.6	783.8	712.7	647.5	578.9	520.1	482.7	475.0
55°	789.5	774.6	776.8	772.6	730.3	661.4	597.4	540.2	479.5	444.3	437.1
57.5°	728.8	709.4	717.4	714.9	673.3	608.8	551.6	496.3	439.1	406.6	399.7
60°	666.6	648.0	656.2	653.9	614.8	556.3	504.3	453.0	399.0	369.5	362.5
62.5°	602.6	585.5	593.0	591.2	555.3	502.5	457.2	410.1	358.6	332.1	325.6
65°	538.2	521.9	528.6	527.3	494.1	454.0	408.9	365.8	317.9	294.9	288.4
67.5°	472.3	457.2	463.4	463.4	432.9	394.5	360.3	320.9	278.0	258.2	252.3
70°	406.9	392.8	398.2	397.7	371.9	340.7	311.2	276.0	237.6	221.3	216.3
72.5°	341.0	328.6	333.5	333.0	311.5	291.4	262.2	231.7	198.2	185.1	180.6
75°	277.0	265.4	270.1	269.6	252.0	233.2	213.6	188.3	159.6	150.4	146.0
77.5°	216.1	204.2	208.2	208.2	195.3	181.6	166.0	146.4	126.1	116.2	113.0
80°	157.6	151.9	149.9	150.2	141.5	132.6	124.6	105.8	90.9	84.3	82.0
82.5°	103.6	98.9	96.9	97.4	92.4	87.0	82.0	68.9	59.0	55.0	53.8
85°	55.0	51.5	49.8	51.0	50.1	47.1	44.6	35.7	29.5	28.0	27.3
87.5°	17.3	15.1	13.9	18.3	15.6	13.9	13.4	10.7	8.2	8.2	7.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3
2.5°	1060.8	1060.8	1051.2	1048.9	1047.9	1049.2	1039.5	1037.8	1051.7	1047.0	1036.3
5°	1052.4	1051.9	1038.3	1035.8	1035.8	1034.3	1023.4	1020.9	1034.8	1030.8	1019.2
7.5°	1042.0	1040.5	1024.4	1022.7	1020.2	1019.2	1007.1	1005.3	1017.2	1014.7	1003.8
10°	1029.4	1027.9	1008.8	1007.6	1004.8	1002.8	991.4	990.2	1002.3	998.4	989.7
12.5°	1012.8	1010.0	990.5	989.2	987.0	986.2	975.1	974.6	988.0	984.0	974.8
15°	990.9	988.7	966.9	967.4	967.7	967.7	958.7	958.2	971.4	969.6	959.7
17.5°	966.9	963.9	943.1	944.6	946.3	948.3	941.4	942.6	956.5	954.3	945.4
20°	939.7	936.7	916.4	920.6	924.3	928.3	923.8	927.3	940.1	939.2	932.5
22.5°	909.2	906.2	887.4	893.8	900.0	907.4	905.5	909.4	923.1	922.8	916.9
25°	872.0	872.7	856.1	864.1	874.5	884.9	885.6	892.1	907.2	905.7	900.3
27.5°	837.3	838.3	820.7	834.1	848.0	861.3	864.6	873.5	888.9	887.6	882.9
30°	800.9	802.1	785.0	803.4	820.2	836.6	843.5	855.6	871.3	871.3	866.3
32.5°	763.0	765.2	747.4	771.9	791.5	810.6	822.7	835.3	853.2	852.7	848.5
35°	724.1	726.5	710.2	741.4	761.0	784.3	799.4	816.2	832.1	832.4	829.1
37.5°	684.4	687.4	672.5	706.7	729.0	756.5	775.9	792.7	810.3	811.3	808.3
40°	645.0	648.2	635.4	668.3	696.6	727.3	749.6	769.4	788.7	789.2	787.3
42.5°	605.6	609.1	599.4	631.6	663.6	696.6	722.8	745.4	765.2	766.4	764.2
45°	567.2	570.2	563.2	598.4	629.2	665.1	695.3	720.8	740.9	742.7	741.9
47.5°	529.1	531.8	525.6	557.8	593.2	631.4	666.3	694.6	715.9	717.9	717.4
50°	491.6	493.9	487.2	520.9	556.1	596.7	633.1	665.8	689.6	691.6	691.4
52.5°	454.5	456.7	451.0	486.4	518.4	561.3	600.9	636.3	659.9	662.9	663.4
55°	418.5	419.5	415.1	449.0	480.0	524.8	570.4	604.9	628.4	630.9	632.4
57.5°	382.6	382.8	379.1	411.6	441.3	487.2	535.0	571.2	593.5	596.0	598.2
60°	346.9	346.7	342.5	373.9	402.4	447.8	497.6	533.5	555.1	557.3	560.3
62.5°	311.5	310.7	307.0	336.0	362.8	407.6	457.7	492.4	512.9	514.4	518.4
65°	276.3	275.6	272.1	298.8	323.1	366.0	415.1	448.0	466.6	468.6	467.8
67.5°	241.6	240.1	237.4	261.4	283.5	323.1	370.2	401.7	417.0	418.8	423.5
70°	206.9	205.2	199.0	224.5	243.8	279.3	323.1	351.1	364.0	365.8	365.0
72.5°	172.7	171.0	164.3	187.8	204.2	235.2	274.3	297.6	308.8	310.2	310.2
75°	139.5	138.5	134.3	152.1	165.8	191.1	224.3	243.6	252.3	254.0	253.5
77.5°	107.5	106.8	102.6	118.0	128.6	147.4	174.2	189.3	195.8	197.7	202.0
80°	77.1	76.8	70.1	85.2	90.0	105.8	125.4	137.0	140.5	143.2	146.2
82.5°	49.3	49.6	42.9	55.8	57.7	67.9	80.0	87.2	89.7	91.9	94.2
85°	24.0	25.0	21.3	29.5	29.7	34.9	40.1	42.9	43.9	45.6	47.6
87.5°	6.2	7.2	4.0	8.4	7.4	9.7	11.2	11.9	11.6	12.9	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

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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3
2.5°	1039.8	1047.7	1043.7	1056.6	1061.6	1053.6	1067.5	1067.8	1057.9	1069.5	1075.9
5°	1023.7	1031.8	1029.4	1042.7	1048.9	1042.0	1058.8	1062.1	1052.4	1065.5	1075.9
7.5°	1007.3	1017.0	1013.7	1027.4	1034.8	1029.4	1047.4	1052.6	1045.2	1059.6	1073.5
10°	993.2	1001.4	997.9	1012.3	1018.7	1014.2	1032.1	1041.7	1034.8	1052.4	1069.0
12.5°	979.3	986.0	982.0	993.9	1000.1	994.4	1016.2	1025.1	1020.2	1038.5	1059.8
15°	961.5	968.9	963.4	974.1	978.8	973.8	991.7	1007.1	1000.9	1020.9	1044.5
17.5°	947.8	952.0	944.6	953.0	955.8	949.1	967.2	982.3	977.8	999.6	1026.9
20°	932.7	936.2	925.8	930.5	930.2	921.8	938.4	953.3	950.3	974.3	1005.3
22.5°	915.9	917.6	905.5	906.4	906.0	892.1	906.9	922.1	920.8	945.1	979.8
25°	898.0	898.3	882.7	882.2	876.7	860.4	873.5	890.6	886.9	913.1	949.6
27.5°	880.4	878.0	859.1	854.7	846.0	826.4	838.1	853.4	851.2	877.0	917.4
30°	861.6	858.4	835.3	827.2	814.5	792.0	801.6	816.0	817.2	839.8	882.2
32.5°	843.8	835.6	810.1	798.2	782.3	756.0	761.2	775.9	777.8	800.6	844.3
35°	820.7	815.3	783.8	763.5	747.9	719.1	724.6	734.7	737.7	760.0	804.4
37.5°	798.9	790.2	756.8	732.0	711.9	681.7	683.2	693.6	696.6	719.1	763.0
40°	776.4	764.0	728.0	699.0	676.0	644.3	642.5	653.4	655.7	677.7	717.4
42.5°	752.3	737.4	697.1	665.3	638.8	606.6	603.1	612.6	615.0	636.6	675.5
45°	728.0	710.2	665.3	630.6	601.7	568.7	565.2	572.4	576.1	596.5	633.9
47.5°	702.3	681.4	632.6	594.0	564.0	531.0	526.8	534.0	537.0	557.1	592.5
50°	675.3	650.0	598.9	556.3	526.6	494.1	487.9	496.3	499.1	517.9	552.6
52.5°	645.5	617.5	563.0	518.4	488.7	457.7	450.3	458.4	461.6	480.0	512.0
55°	614.0	583.8	526.8	483.5	451.2	421.0	414.8	418.0	425.0	442.3	472.1
57.5°	578.6	548.6	488.7	444.6	413.6	384.6	379.4	382.4	388.8	405.6	432.4
60°	540.9	509.2	449.8	405.6	375.7	348.2	343.4	346.2	353.1	368.5	393.3
62.5°	503.8	468.1	409.6	365.8	338.5	313.0	311.7	310.7	317.2	332.1	353.9
65°	458.7	424.5	367.7	326.1	301.3	278.3	273.3	275.6	281.7	295.4	318.2
67.5°	410.4	379.4	324.9	286.5	264.4	243.8	239.6	240.6	247.1	258.9	278.8
70°	359.1	331.8	281.0	246.6	228.0	208.6	205.9	206.2	212.4	222.8	240.1
72.5°	305.3	280.8	236.6	207.2	191.8	177.9	175.4	172.5	178.2	187.1	202.0
75°	250.5	229.0	192.5	168.5	156.4	144.7	142.5	139.5	145.2	152.9	164.5
77.5°	195.3	177.9	149.7	131.1	121.7	113.0	111.0	107.8	113.5	119.2	128.4
80°	141.2	128.6	111.8	92.2	89.0	83.3	81.3	77.8	83.3	87.0	93.9
82.5°	91.2	82.8	73.1	59.5	59.0	54.8	53.8	49.8	54.8	57.0	62.2
85°	46.1	42.1	39.6	30.2	31.2	28.5	28.2	24.0	28.0	29.0	32.0
87.5°	13.1	13.9	12.4	7.4	9.4	8.9	8.9	6.4	8.9	8.9	10.2
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: P837786

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1STD-30-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3	1062.3
2.5°	1063.3	1067.5	1068.5	1068.3	1071.0	1085.9	1080.9	1085.9
5°	1065.8	1075.2	1077.7	1081.1	1085.6	1102.5	1097.0	1103.0
7.5°	1067.3	1081.4	1086.8	1093.5	1100.7	1119.6	1115.1	1121.0
10°	1067.3	1085.6	1093.5	1104.7	1114.4	1136.2	1131.9	1138.9
12.5°	1062.8	1086.4	1097.5	1113.1	1125.5	1149.0	1147.3	1152.3
15°	1053.6	1082.6	1098.0	1118.1	1133.4	1159.7	1159.0	1164.9
17.5°	1041.3	1076.2	1094.8	1120.1	1139.4	1168.9	1170.6	1173.8
20°	1025.6	1064.0	1088.3	1119.3	1143.6	1176.1	1178.3	1182.7
22.5°	1005.1	1049.4	1078.7	1116.1	1144.1	1179.0	1183.0	1187.2
25°	980.8	1031.8	1066.0	1109.9	1141.6	1178.8	1184.2	1187.9
27.5°	953.0	1009.0	1049.9	1100.0	1134.7	1174.8	1181.5	1186.0
30°	920.8	984.8	1031.6	1087.1	1125.3	1167.4	1174.6	1179.0
32.5°	887.6	958.0	1009.8	1070.5	1111.6	1155.5	1161.7	1165.2
35°	851.4	925.5	983.5	1049.2	1094.0	1136.4	1141.1	1144.8
37.5°	812.0	890.3	953.5	1025.1	1069.3	1109.9	1114.1	1118.3
40°	771.4	853.4	919.8	995.7	1039.8	1077.4	1081.9	1084.9
42.5°	730.5	812.5	883.9	961.0	1004.8	1041.0	1043.7	1046.7
45°	689.1	770.2	843.5	922.6	965.9	999.9	1000.9	1003.3
47.5°	647.0	726.3	799.2	878.7	921.6	952.5	953.5	955.5
50°	604.6	682.4	751.8	831.4	873.2	906.0	901.5	903.5
52.5°	563.0	636.3	707.2	780.3	821.7	850.7	851.9	848.0
55°	522.1	591.2	656.4	726.8	766.2	788.7	788.0	789.5
57.5°	480.7	545.7	605.4	669.8	708.2	729.5	734.0	728.8
60°	438.6	499.6	553.1	611.3	648.5	666.3	671.5	666.6
62.5°	396.7	452.7	501.3	552.1	586.5	608.6	608.1	602.6
65°	354.8	405.6	449.0	492.1	522.1	544.2	543.2	538.2
67.5°	316.2	358.1	397.0	431.9	457.9	473.0	478.3	472.3
70°	273.6	309.7	343.9	371.9	393.5	407.1	412.1	406.9
72.5°	230.9	261.7	285.7	312.7	329.3	340.7	345.9	341.0
75°	188.8	214.1	233.7	254.7	266.4	276.0	282.0	277.0
77.5°	147.9	167.5	183.1	198.5	211.9	214.1	219.3	216.1
80°	109.0	123.2	134.6	144.7	154.4	155.4	159.6	157.6
82.5°	72.6	82.0	85.0	95.7	101.8	100.9	105.1	103.6
85°	38.4	44.1	49.3	52.5	56.0	52.8	56.5	55.0
87.5°	12.9	13.6	11.9	16.9	18.6	15.9	18.1	17.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)