

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: P837795

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1STD-35-120-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: P837795
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-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

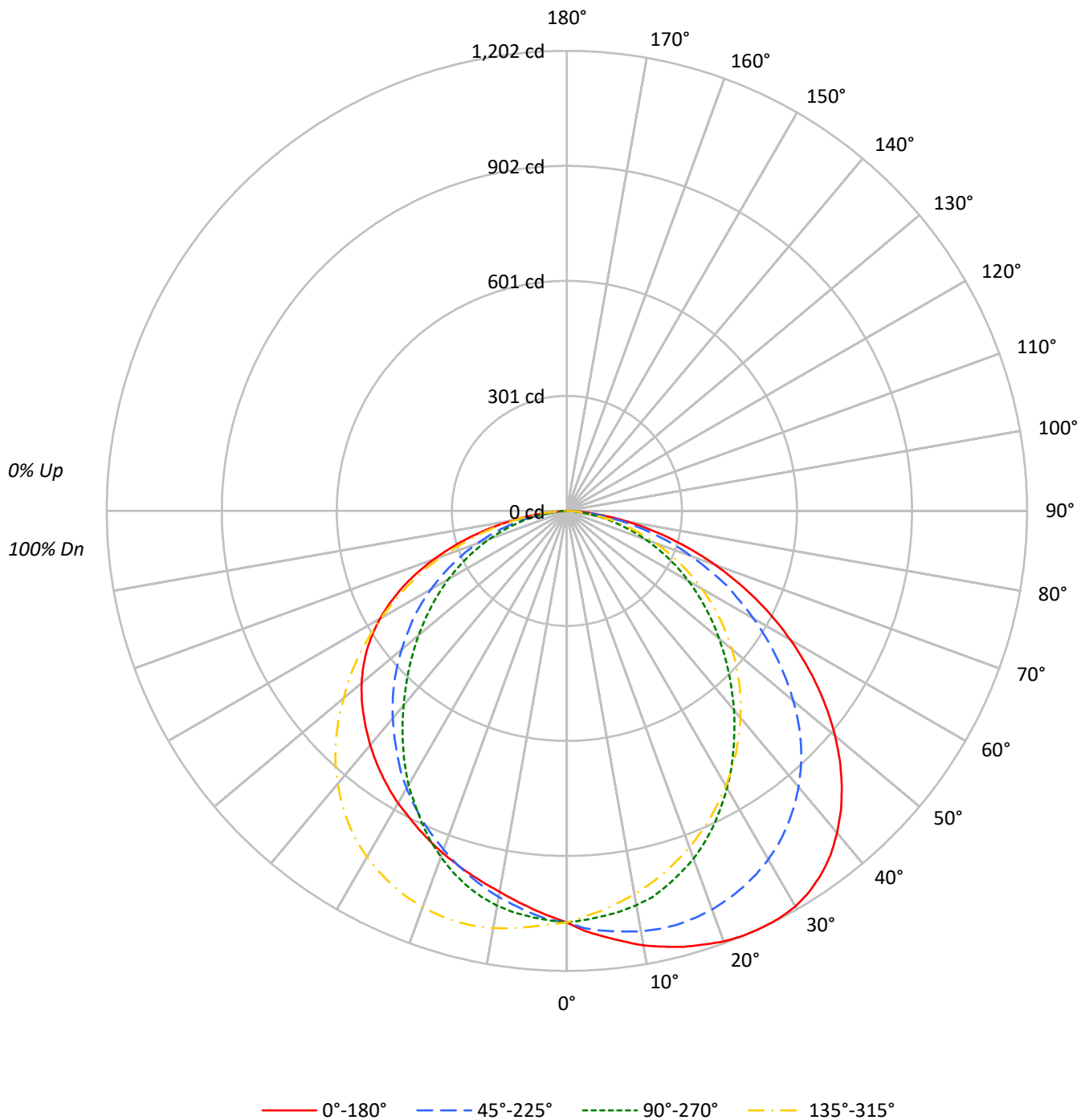
Lumens per Lamp: N/A
Luminaire Lumens: 3154.7 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2894	2894	2894	2894
5°	3016	2873	2818	2877
10°	3150	2858	2761	2862
15°	3285	2822	2734	2822
20°	3428	2770	2722	2755
25°	3570	2693	2722	2665
30°	3708	2599	2740	2570
35°	3807	2492	2768	2453
40°	3857	2385	2806	2331
45°	3865	2277	2861	2219
50°	3828	2172	2930	2115
55°	3749	2076	2996	2018
60°	3631	1975	3036	1924
65°	3469	1859	3020	1816
70°	3240	1723	2913	1692
75°	2915	1536	2673	1528
80°	2472	1286	2247	1306
85°	1720	852	1426	874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	3.2
10°-20°	295.6	9.4
20°-30°	453.1	14.4
30°-40°	550.9	17.5
40°-50°	572.7	18.2
50°-60°	517.3	16.4
60°-70°	393.3	12.5
70°-80°	219.3	7.0
80°-90°	50.5	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°	850.8	27.0
0°-40°	1401.7	44.4
0°-60°	2491.7	79.0
0°-90°	3154.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3154.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1075	1075	1075	1075	1075	
5°	1116	1064	1043	1065	1116	108
15°	1179	1013	982	1013	1179	334
25°	1202	907	917	898	1202	555
35°	1159	759	842	747	1159	724
45°	1016	598	752	583	1016	782
55°	799	442	639	430	799	713
65°	545	292	474	285	545	538
75°	280	148	257	147	280	298
85°	56	28	46	28	56	70
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°	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1099.1	1083.0	1083.3	1097.3	1086.6	1091.8	1076.8	1082.5	1080.8	1082.0	1069.8
5°	1116.4	1099.1	1098.8	1110.9	1098.8	1101.1	1082.0	1085.8	1080.3	1076.8	1063.5
7.5°	1134.7	1117.4	1115.7	1126.2	1110.4	1108.6	1087.6	1087.6	1077.5	1068.7	1056.2
10°	1152.8	1135.0	1132.7	1140.7	1121.2	1115.4	1089.8	1085.8	1072.5	1059.5	1045.9
12.5°	1166.3	1148.3	1146.5	1151.5	1129.4	1118.9	1089.8	1082.0	1062.5	1044.2	1033.6
15°	1179.1	1160.5	1155.8	1158.3	1133.0	1118.9	1086.3	1074.3	1049.2	1025.1	1012.8
17.5°	1188.1	1170.3	1165.6	1165.3	1134.7	1114.6	1078.8	1062.2	1032.1	1003.0	990.7
20°	1197.2	1179.4	1173.3	1168.8	1134.2	1108.9	1067.7	1045.4	1010.3	977.7	967.4
22.5°	1201.7	1183.4	1176.9	1170.1	1131.0	1098.3	1054.2	1025.9	985.7	946.8	938.3
25°	1202.4	1183.6	1176.6	1166.8	1124.4	1085.8	1036.6	1002.3	957.4	914.2	907.0
27.5°	1200.4	1179.9	1172.8	1161.0	1114.6	1070.5	1015.8	975.4	927.3	879.6	871.9
30°	1193.4	1172.6	1165.8	1150.5	1100.9	1051.7	993.0	945.6	893.9	843.3	836.5
32.5°	1179.4	1159.0	1153.5	1138.2	1085.8	1029.9	966.4	913.5	857.1	808.6	798.6
35°	1158.8	1138.5	1135.0	1118.9	1064.7	1003.8	937.3	878.4	817.9	768.5	758.7
37.5°	1132.0	1114.9	1109.6	1093.8	1039.9	974.2	904.0	840.2	778.0	724.9	718.9
40°	1098.1	1082.0	1078.0	1064.0	1011.1	941.3	867.8	800.9	736.9	687.5	679.0
42.5°	1059.5	1044.4	1042.2	1027.6	975.4	905.0	828.7	760.0	694.0	646.4	637.8
45°	1015.6	1001.0	1000.5	986.7	936.6	864.6	787.6	718.6	652.1	602.7	598.2
47.5°	967.2	954.1	954.1	941.3	893.2	820.2	745.2	675.5	610.0	566.4	558.3
50°	914.5	902.2	898.4	892.2	845.3	771.8	700.5	633.3	568.4	526.7	518.9
52.5°	858.3	847.8	850.3	838.7	793.3	721.4	655.4	585.9	526.5	488.6	480.8
55°	799.1	784.1	786.3	782.1	739.2	669.4	604.7	546.8	485.3	449.7	442.4
57.5°	737.7	718.1	726.1	723.6	681.5	616.3	558.3	502.4	444.5	411.6	404.6
60°	674.7	655.9	664.2	661.9	622.3	563.1	510.4	458.5	403.8	374.0	367.0
62.5°	610.0	592.7	600.2	598.5	562.1	508.7	462.8	415.1	362.9	336.1	329.6
65°	544.8	528.2	535.0	533.7	500.1	459.5	413.9	370.2	321.8	298.5	292.0
67.5°	478.1	462.8	469.0	469.0	438.2	399.3	364.7	324.8	281.4	261.4	255.3
70°	411.8	397.6	403.1	402.6	376.5	344.9	315.0	279.4	240.5	224.0	219.0
72.5°	345.1	332.6	337.6	337.1	315.3	295.0	265.4	234.5	200.7	187.4	182.8
75°	280.4	268.6	273.4	272.9	255.1	236.0	216.2	190.6	161.5	152.2	147.7
77.5°	218.7	206.7	210.7	210.7	197.6	183.9	168.0	148.2	127.7	117.6	114.4
80°	159.5	153.8	151.7	152.0	143.2	134.2	126.2	107.1	92.1	85.3	83.0
82.5°	104.8	100.1	98.1	98.6	93.6	88.0	83.0	69.7	59.7	55.7	54.4
85°	55.7	52.2	50.4	51.7	50.7	47.7	45.1	36.1	29.8	28.3	27.6
87.5°	17.6	15.3	14.0	18.6	15.8	14.0	13.5	10.8	8.3	8.3	8.0
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1073.8	1073.8	1064.0	1061.7	1060.7	1062.0	1052.2	1050.4	1064.5	1059.7	1048.9
5°	1065.2	1064.7	1050.9	1048.4	1048.4	1046.9	1035.9	1033.4	1047.4	1043.4	1031.6
7.5°	1054.7	1053.2	1036.9	1035.1	1032.6	1031.6	1019.3	1017.6	1029.6	1027.1	1016.1
10°	1041.9	1040.4	1021.1	1019.8	1017.1	1015.1	1003.5	1002.3	1014.6	1010.6	1001.8
12.5°	1025.1	1022.3	1002.5	1001.3	999.0	998.3	987.0	986.5	1000.0	996.0	986.7
15°	1003.0	1000.8	978.7	979.2	979.5	979.5	970.4	969.9	983.2	981.5	971.4
17.5°	978.7	975.7	954.6	956.1	957.9	959.9	952.9	954.1	968.2	965.9	956.9
20°	951.1	948.1	927.5	931.8	935.6	939.6	935.1	938.6	951.6	950.6	943.8
22.5°	920.3	917.3	898.2	904.7	911.0	918.5	916.5	920.5	934.3	934.1	928.0
25°	882.6	883.4	866.6	874.6	885.1	895.7	896.4	903.0	918.3	916.8	911.2
27.5°	847.5	848.5	830.7	844.3	858.3	871.9	875.1	884.1	899.7	898.4	893.7
30°	810.7	811.9	794.6	813.2	830.2	846.8	853.8	866.1	881.9	881.9	876.9
32.5°	772.3	774.5	756.5	781.3	801.1	820.4	832.7	845.5	863.6	863.1	858.8
35°	732.9	735.4	718.9	750.5	770.3	793.8	809.1	826.2	842.3	842.5	839.2
37.5°	692.8	695.8	680.7	715.3	737.9	765.8	785.3	802.4	820.2	821.2	818.2
40°	652.9	656.1	643.1	676.5	705.1	736.2	758.7	778.8	798.4	798.9	796.9
42.5°	613.0	616.5	606.7	639.3	671.7	705.1	731.6	754.5	774.5	775.8	773.5
45°	574.1	577.1	570.1	605.7	636.8	673.2	703.8	729.6	750.0	751.7	751.0
47.5°	535.5	538.3	532.0	564.6	600.5	639.1	674.5	703.1	724.6	726.6	726.1
50°	497.6	499.9	493.1	527.2	562.8	604.0	640.8	674.0	698.0	700.0	699.8
52.5°	460.0	462.3	456.5	492.4	524.7	568.1	608.2	644.1	667.9	670.9	671.4
55°	423.6	424.6	420.1	454.5	485.8	531.2	577.4	612.3	636.1	638.6	640.1
57.5°	387.3	387.5	383.8	416.6	446.7	493.1	541.5	578.1	600.7	603.2	605.5
60°	351.1	350.9	346.6	378.5	407.3	453.2	503.6	540.0	561.8	564.1	567.1
62.5°	315.3	314.5	310.8	340.1	367.2	412.6	463.3	498.4	519.2	520.7	524.7
65°	279.7	278.9	275.4	302.5	327.1	370.5	420.1	453.5	472.3	474.3	473.5
67.5°	244.6	243.0	240.3	264.6	286.9	327.1	374.7	406.6	422.1	423.9	428.7
70°	209.4	207.7	201.4	227.2	246.8	282.7	327.1	355.4	368.5	370.2	369.5
72.5°	174.8	173.1	166.3	190.1	206.7	238.0	277.7	301.2	312.5	314.0	314.0
75°	141.2	140.2	135.9	154.0	167.8	193.4	227.0	246.6	255.3	257.1	256.6
77.5°	108.9	108.1	103.8	119.4	130.2	149.2	176.3	191.6	198.1	200.2	204.4
80°	78.0	77.8	71.0	86.3	91.0	107.1	126.9	138.7	142.2	145.0	148.0
82.5°	49.9	50.2	43.4	56.4	58.4	68.7	81.0	88.3	90.8	93.1	95.3
85°	24.3	25.3	21.6	29.8	30.1	35.4	40.6	43.4	44.4	46.2	48.2
87.5°	6.3	7.3	4.0	8.5	7.5	9.8	11.3	12.0	11.8	13.0	13.8
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1052.4	1060.5	1056.5	1069.5	1074.5	1066.5	1080.5	1080.8	1070.8	1082.5	1089.1
5°	1036.1	1044.4	1041.9	1055.5	1061.7	1054.7	1071.8	1075.0	1065.2	1078.5	1089.1
7.5°	1019.6	1029.4	1026.1	1039.9	1047.4	1041.9	1060.2	1065.5	1058.0	1072.5	1086.6
10°	1005.3	1013.6	1010.1	1024.6	1031.1	1026.6	1044.7	1054.5	1047.4	1065.2	1082.0
12.5°	991.2	998.0	994.0	1006.0	1012.3	1006.5	1028.6	1037.6	1032.6	1051.2	1072.8
15°	973.2	980.7	975.2	986.0	990.7	985.7	1003.8	1019.3	1013.1	1033.4	1057.2
17.5°	959.4	963.7	956.1	964.7	967.4	960.6	979.0	994.3	989.7	1011.8	1039.4
20°	944.1	947.6	937.1	941.8	941.6	933.1	949.9	964.9	961.9	986.2	1017.6
22.5°	927.0	928.8	916.5	917.5	917.0	903.0	918.0	933.3	932.1	956.6	991.7
25°	909.0	909.2	893.4	892.9	887.4	870.8	884.1	901.4	897.7	924.3	961.1
27.5°	891.2	888.7	869.6	865.1	856.3	836.5	848.3	863.8	861.6	887.7	928.5
30°	872.1	868.8	845.5	837.2	824.4	801.6	811.4	826.0	827.2	850.0	892.9
32.5°	854.0	845.8	819.9	807.9	791.8	765.3	770.5	785.3	787.3	810.4	854.5
35°	830.7	825.2	793.3	772.8	757.0	727.9	733.4	743.7	746.7	769.3	814.2
37.5°	808.6	799.9	766.0	740.9	720.6	690.0	691.5	702.0	705.1	727.9	772.3
40°	785.8	773.3	736.9	707.6	684.2	652.1	650.4	661.4	663.7	686.0	726.1
42.5°	761.5	746.4	705.6	673.5	646.6	614.0	610.5	620.0	622.5	644.4	683.7
45°	736.9	718.9	673.5	638.3	609.0	575.6	572.1	579.4	583.2	603.7	641.6
47.5°	710.8	689.8	640.3	601.2	570.9	537.5	533.2	540.5	543.5	563.8	599.7
50°	683.5	657.9	606.2	563.1	533.0	500.1	493.9	502.4	505.2	524.2	559.3
52.5°	653.4	625.0	569.9	524.7	494.6	463.3	455.7	464.0	467.3	485.8	518.2
55°	621.5	590.9	533.2	489.4	456.7	426.1	419.9	423.1	430.2	447.7	477.8
57.5°	585.7	555.3	494.6	450.0	418.6	389.3	384.0	387.0	393.5	410.6	437.7
60°	547.5	515.4	455.2	410.6	380.2	352.4	347.6	350.4	357.4	373.0	398.1
62.5°	509.9	473.8	414.6	370.2	342.6	316.8	315.5	314.5	321.1	336.1	358.2
65°	464.3	429.7	372.2	330.1	305.0	281.7	276.7	278.9	285.2	299.0	322.1
67.5°	415.4	384.0	328.8	289.9	267.6	246.8	242.5	243.5	250.1	262.1	282.2
70°	363.4	335.8	284.4	249.6	230.8	211.2	208.4	208.7	215.0	225.5	243.0
72.5°	309.0	284.2	239.5	209.7	194.1	180.1	177.6	174.6	180.3	189.4	204.4
75°	253.6	231.8	194.9	170.6	158.3	146.5	144.2	141.2	147.0	154.8	166.5
77.5°	197.6	180.1	151.5	132.7	123.2	114.4	112.4	109.1	114.9	120.6	129.9
80°	143.0	130.2	113.1	93.3	90.0	84.3	82.3	78.8	84.3	88.0	95.1
82.5°	92.3	83.8	74.0	60.2	59.7	55.4	54.4	50.4	55.4	57.7	63.0
85°	46.7	42.6	40.1	30.6	31.6	28.8	28.6	24.3	28.3	29.3	32.4
87.5°	13.3	14.0	12.5	7.5	9.5	9.0	9.0	6.5	9.0	9.0	10.3
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: P837795

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1STD-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1076.3	1080.5	1081.5	1081.3	1084.0	1099.1	1094.1	1099.1
5°	1078.8	1088.3	1090.8	1094.3	1098.8	1115.9	1110.4	1116.4
7.5°	1080.3	1094.6	1100.1	1106.9	1114.1	1133.2	1128.7	1134.7
10°	1080.3	1098.8	1106.9	1118.2	1127.9	1150.0	1145.7	1152.8
12.5°	1075.8	1099.6	1110.9	1126.7	1139.2	1163.1	1161.3	1166.3
15°	1066.5	1095.8	1111.4	1131.7	1147.3	1173.8	1173.1	1179.1
17.5°	1053.9	1089.3	1108.1	1133.7	1153.3	1183.1	1184.9	1188.1
20°	1038.1	1077.0	1101.6	1133.0	1157.5	1190.4	1192.7	1197.2
22.5°	1017.3	1062.2	1091.8	1129.7	1158.0	1193.4	1197.4	1201.7
25°	992.7	1044.4	1079.0	1123.4	1155.5	1193.2	1198.7	1202.4
27.5°	964.7	1021.3	1062.7	1113.4	1148.5	1189.1	1195.9	1200.4
30°	932.1	996.8	1044.2	1100.4	1139.0	1181.6	1188.9	1193.4
32.5°	898.4	969.7	1022.1	1083.5	1125.2	1169.6	1175.8	1179.4
35°	861.8	936.8	995.5	1062.0	1107.4	1150.3	1155.0	1158.8
37.5°	821.9	901.2	965.2	1037.6	1082.3	1123.4	1127.7	1132.0
40°	780.8	863.8	931.0	1007.8	1052.4	1090.6	1095.1	1098.1
42.5°	739.4	822.4	894.7	972.7	1017.1	1053.7	1056.5	1059.5
45°	697.5	779.6	853.8	933.8	977.7	1012.1	1013.1	1015.6
47.5°	654.9	735.2	808.9	889.4	932.8	964.2	965.2	967.2
50°	612.0	690.8	761.0	841.5	883.9	917.0	912.5	914.5
52.5°	569.9	644.1	715.8	789.8	831.7	861.1	862.3	858.3
55°	528.5	598.5	664.4	735.7	775.5	798.4	797.6	799.1
57.5°	486.6	552.3	612.8	678.0	716.8	738.4	742.9	737.7
60°	444.0	505.7	559.8	618.8	656.4	674.5	679.7	674.7
62.5°	401.6	458.2	507.4	558.8	593.7	616.0	615.5	610.0
65°	359.2	410.6	454.5	498.1	528.5	550.8	549.8	544.8
67.5°	320.0	362.4	401.8	437.2	463.5	478.8	484.1	478.1
70°	276.9	313.5	348.1	376.5	398.3	412.1	417.1	411.8
72.5°	233.8	264.9	289.2	316.5	333.3	344.9	350.1	345.1
75°	191.1	216.7	236.5	257.8	269.6	279.4	285.4	280.4
77.5°	149.7	169.6	185.4	200.9	214.5	216.7	222.0	218.7
80°	110.4	124.7	136.2	146.5	156.3	157.3	161.5	159.5
82.5°	73.5	83.0	86.0	96.8	103.1	102.1	106.3	104.8
85°	38.9	44.6	49.9	53.2	56.7	53.4	57.2	55.7
87.5°	13.0	13.8	12.0	17.1	18.8	16.1	18.3	17.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)