

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: P837758

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-50-120-EDD**

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: P837758
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-LD4-1LO-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

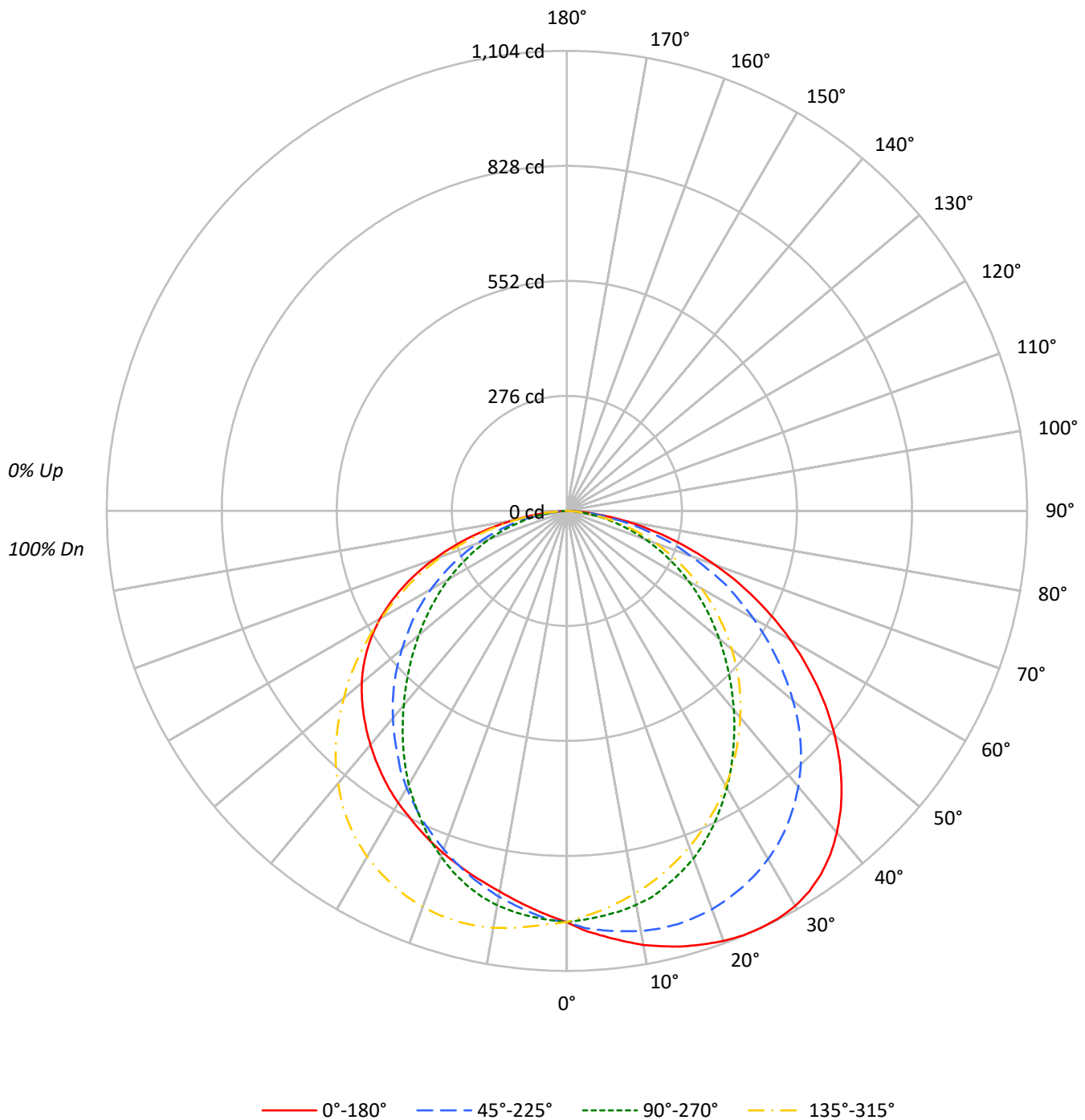
Lumens per Lamp: N/A
Luminaire Lumens: 2895.0 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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	30	10	50	30	10
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	94	97	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2655	2655	2655	2655
5°	2767	2636	2586	2641
10°	2891	2623	2534	2626
15°	3015	2589	2509	2590
20°	3146	2542	2498	2528
25°	3276	2471	2498	2446
30°	3403	2385	2515	2359
35°	3493	2287	2540	2251
40°	3540	2189	2575	2139
45°	3547	2089	2625	2037
50°	3513	1994	2689	1941
55°	3440	1905	2749	1852
60°	3333	1812	2786	1765
65°	3183	1706	2772	1666
70°	2973	1581	2673	1552
75°	2675	1410	2453	1403
80°	2269	1181	2061	1198
85°	1578	781	1309	803

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.7	3.2
10°-20°	271.3	9.4
20°-30°	415.8	14.4
30°-40°	505.6	17.5
40°-50°	525.5	18.2
50°-60°	474.7	16.4
60°-70°	360.9	12.5
70°-80°	201.2	7.0
80°-90°	46.3	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°	780.8	27.0
0°-40°	1286.3	44.4
0°-60°	2286.6	79.0
0°-90°	2895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2895.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	987	987	987	987	987	
5°	1024	976	958	978	1024	99
15°	1082	929	901	930	1082	307
25°	1104	832	841	824	1104	510
35°	1063	696	773	685	1063	664
45°	932	549	690	535	932	718
55°	733	406	586	395	733	655
65°	500	268	435	262	500	494
75°	257	136	236	135	257	273
85°	51	25	42	26	51	64
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°	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8
2.5°	1008.6	993.9	994.1	1007.0	997.1	1002.0	988.1	993.4	991.8	993.0	981.7
5°	1024.5	1008.6	1008.4	1019.4	1008.4	1010.5	993.0	996.4	991.4	988.1	975.9
7.5°	1041.3	1025.4	1023.8	1033.5	1019.0	1017.4	998.0	998.0	988.8	980.8	969.3
10°	1057.9	1041.5	1039.5	1046.8	1028.9	1023.6	1000.1	996.4	984.2	972.3	959.8
12.5°	1070.3	1053.7	1052.1	1056.7	1036.5	1026.8	1000.1	993.0	975.0	958.2	948.6
15°	1082.1	1065.0	1060.6	1063.0	1039.7	1026.8	996.9	985.8	962.8	940.7	929.4
17.5°	1090.3	1074.0	1069.6	1069.4	1041.3	1022.9	990.0	974.8	947.2	920.5	909.2
20°	1098.6	1082.3	1076.8	1072.6	1040.9	1017.6	979.9	959.4	927.1	897.2	887.8
22.5°	1102.8	1086.0	1080.0	1073.8	1037.9	1007.9	967.4	941.4	904.6	868.9	861.1
25°	1103.5	1086.2	1079.8	1070.8	1031.9	996.4	951.3	919.8	878.6	839.0	832.3
27.5°	1101.6	1082.7	1076.3	1065.5	1022.9	982.4	932.2	895.2	851.0	807.2	800.1
30°	1095.2	1076.1	1069.9	1055.8	1010.2	965.1	911.3	867.8	820.3	773.8	767.6
32.5°	1082.3	1063.6	1058.6	1044.5	996.4	945.1	886.9	838.3	786.5	742.1	732.9
35°	1063.4	1044.8	1041.5	1026.8	977.1	921.2	860.2	806.1	750.6	705.3	696.3
37.5°	1038.8	1023.1	1018.3	1003.8	954.3	894.0	829.6	771.1	714.0	665.2	659.7
40°	1007.7	993.0	989.3	976.4	927.8	863.8	796.4	735.0	676.3	630.9	623.1
42.5°	972.3	958.5	956.4	943.0	895.2	830.5	760.5	697.4	636.9	593.2	585.3
45°	932.0	918.6	918.2	905.5	859.5	793.4	722.8	659.5	598.5	553.1	549.0
47.5°	887.6	875.6	875.6	863.8	819.7	752.7	683.9	619.9	559.8	519.7	512.4
50°	839.2	827.9	824.5	818.7	775.7	708.2	642.9	581.2	521.6	483.4	476.2
52.5°	787.7	778.0	780.3	769.7	728.0	662.0	601.4	537.7	483.1	448.4	441.2
55°	733.3	719.5	721.6	717.7	678.3	614.3	555.0	501.8	445.4	412.7	406.0
57.5°	676.9	659.0	666.4	664.1	625.4	565.5	512.4	461.0	407.9	377.7	371.3
60°	619.2	601.9	609.5	607.4	571.1	516.7	468.4	420.8	370.6	343.2	336.7
62.5°	559.8	543.9	550.8	549.2	515.8	466.8	424.7	380.9	333.1	308.4	302.5
65°	499.9	484.7	491.0	489.8	459.0	421.7	379.8	339.7	295.3	273.9	267.9
67.5°	438.7	424.7	430.4	430.4	402.1	366.4	334.7	298.1	258.3	239.8	234.3
70°	377.9	364.8	369.9	369.4	345.5	316.5	289.1	256.4	220.7	205.5	200.9
72.5°	316.7	305.2	309.8	309.4	289.3	270.7	243.5	215.2	184.1	171.9	167.8
75°	257.3	246.5	250.9	250.4	234.1	216.6	198.4	174.9	148.2	139.7	135.6
77.5°	200.7	189.7	193.3	193.3	181.4	168.7	154.2	136.0	117.2	108.0	105.0
80°	146.4	141.1	139.3	139.5	131.4	123.1	115.8	98.3	84.5	78.3	76.2
82.5°	96.2	91.8	90.0	90.5	85.9	80.8	76.2	64.0	54.8	51.1	49.9
85°	51.1	47.9	46.3	47.4	46.5	43.7	41.4	33.1	27.4	26.0	25.3
87.5°	16.1	14.0	12.9	17.0	14.5	12.9	12.4	9.9	7.6	7.6	7.4
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8
2.5°	985.4	985.4	976.4	974.3	973.4	974.6	965.6	964.0	976.9	972.5	962.6
5°	977.6	977.1	964.4	962.1	962.1	960.8	950.6	948.3	961.2	957.5	946.7
7.5°	967.9	966.5	951.5	949.9	947.6	946.7	935.4	933.8	944.9	942.6	932.4
10°	956.1	954.8	937.0	935.9	933.4	931.5	920.9	919.8	931.1	927.4	919.3
12.5°	940.7	938.2	920.0	918.9	916.8	916.1	905.7	905.3	917.7	914.0	905.5
15°	920.5	918.4	898.1	898.6	898.8	898.8	890.5	890.1	902.3	900.7	891.5
17.5°	898.1	895.4	876.0	877.4	879.0	880.9	874.4	875.6	888.5	886.4	878.1
20°	872.8	870.1	851.2	855.1	858.6	862.2	858.1	861.3	873.3	872.4	866.2
22.5°	844.5	841.8	824.3	830.2	836.0	842.9	841.1	844.7	857.4	857.2	851.6
25°	810.0	810.7	795.3	802.6	812.3	822.0	822.6	828.6	842.7	841.3	836.2
27.5°	777.8	778.7	762.3	774.8	787.7	800.1	803.1	811.4	825.6	824.5	820.1
30°	743.9	745.1	729.2	746.2	761.9	777.1	783.5	794.8	809.3	809.3	804.7
32.5°	708.7	710.8	694.2	717.0	735.2	752.9	764.2	775.9	792.5	792.0	788.1
35°	672.6	674.9	659.7	688.7	706.9	728.5	742.5	758.2	772.9	773.2	770.2
37.5°	635.7	638.5	624.7	656.5	677.2	702.7	720.7	736.3	752.7	753.6	750.8
40°	599.1	602.1	590.2	620.8	647.0	675.6	696.3	714.7	732.6	733.1	731.3
42.5°	562.5	565.8	556.8	586.7	616.4	647.0	671.4	692.4	710.8	711.9	709.9
45°	526.9	529.6	523.2	555.9	584.4	617.8	645.9	669.6	688.2	689.8	689.1
47.5°	491.4	494.0	488.2	518.1	551.0	586.5	618.9	645.2	665.0	666.8	666.4
50°	456.7	458.7	452.5	483.8	516.5	554.3	588.1	618.5	640.6	642.4	642.2
52.5°	422.1	424.2	418.9	451.8	481.5	521.3	558.2	591.1	613.0	615.7	616.2
55°	388.8	389.7	385.5	417.1	445.8	487.5	529.9	561.9	583.7	586.0	587.4
57.5°	355.4	355.6	352.2	382.3	409.9	452.5	496.9	530.6	551.3	553.6	555.6
60°	322.2	322.0	318.1	347.3	373.8	415.9	462.2	495.6	515.6	517.7	520.4
62.5°	289.3	288.6	285.2	312.1	337.0	378.6	425.1	457.4	476.5	477.8	481.5
65°	256.6	256.0	252.7	277.6	300.1	340.0	385.5	416.2	433.4	435.3	434.6
67.5°	224.4	223.0	220.5	242.8	263.3	300.1	343.9	373.1	387.4	389.0	393.4
70°	192.2	190.6	184.8	208.5	226.5	259.4	300.1	326.2	338.1	339.7	339.0
72.5°	160.4	158.8	152.6	174.5	189.7	218.4	254.8	276.4	286.8	288.2	288.2
75°	129.6	128.7	124.8	141.3	154.0	177.5	208.3	226.3	234.3	235.9	235.5
77.5°	99.9	99.2	95.3	109.6	119.5	137.0	161.8	175.9	181.8	183.7	187.6
80°	71.6	71.4	65.1	79.2	83.6	98.3	116.5	127.3	130.5	133.0	135.8
82.5°	45.8	46.0	39.8	51.8	53.6	63.1	74.3	81.0	83.3	85.4	87.5
85°	22.3	23.2	19.8	27.4	27.6	32.5	37.3	39.8	40.7	42.4	44.2
87.5°	5.8	6.7	3.7	7.8	6.9	9.0	10.4	11.0	10.8	12.0	12.7
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8
2.5°	965.8	973.2	969.5	981.5	986.1	978.7	991.6	991.8	982.6	993.4	999.4
5°	950.9	958.5	956.1	968.6	974.3	967.9	983.5	986.5	977.6	989.8	999.4
7.5°	935.7	944.6	941.6	954.3	961.2	956.1	973.0	977.8	970.9	984.2	997.1
10°	922.5	930.1	926.9	940.3	946.3	942.1	958.7	967.7	961.2	977.6	993.0
12.5°	909.7	915.9	912.2	923.2	929.0	923.7	943.9	952.2	947.6	964.7	984.5
15°	893.1	900.0	894.9	904.8	909.2	904.6	921.2	935.4	929.7	948.3	970.2
17.5°	880.4	884.3	877.4	885.3	887.8	881.6	898.4	912.4	908.3	928.5	953.8
20°	866.4	869.6	859.9	864.3	864.1	856.3	871.7	885.5	882.7	905.0	933.8
22.5°	850.7	852.3	841.1	842.0	841.5	828.6	842.4	856.5	855.3	877.9	910.1
25°	834.2	834.4	819.9	819.4	814.4	799.2	811.4	827.3	823.8	848.2	882.0
27.5°	817.8	815.5	798.0	793.9	785.8	767.6	778.5	792.7	790.7	814.6	852.1
30°	800.3	797.3	775.9	768.3	756.6	735.6	744.6	758.0	759.1	780.1	819.4
32.5°	783.7	776.2	752.4	741.4	726.7	702.3	707.1	720.7	722.5	743.7	784.2
35°	762.3	757.3	728.0	709.2	694.7	668.0	673.0	682.5	685.2	705.9	747.1
37.5°	742.1	734.0	703.0	679.9	661.3	633.2	634.6	644.3	647.0	668.0	708.7
40°	721.1	709.6	676.3	649.3	627.9	598.5	596.8	607.0	609.0	629.5	666.4
42.5°	698.8	685.0	647.5	618.0	593.4	563.5	560.2	569.0	571.3	591.3	627.5
45°	676.3	659.7	618.0	585.8	558.9	528.3	525.0	531.7	535.2	554.0	588.8
47.5°	652.3	633.0	587.6	551.7	523.9	493.3	489.4	496.0	498.8	517.4	550.3
50°	627.2	603.8	556.3	516.7	489.1	459.0	453.2	461.0	463.6	481.1	513.3
52.5°	599.6	573.6	523.0	481.5	453.9	425.1	418.2	425.8	428.8	445.8	475.5
55°	570.4	542.3	489.4	449.1	419.1	391.1	385.3	388.3	394.8	410.9	438.5
57.5°	537.5	509.6	453.9	412.9	384.2	357.2	352.4	355.2	361.1	376.8	401.7
60°	502.5	473.0	417.8	376.8	348.9	323.4	319.0	321.6	328.0	342.3	365.3
62.5°	467.9	434.8	380.5	339.7	314.4	290.7	289.6	288.6	294.6	308.4	328.7
65°	426.1	394.3	341.6	302.9	279.9	258.5	253.9	256.0	261.7	274.4	295.5
67.5°	381.2	352.4	301.8	266.1	245.6	226.5	222.6	223.5	229.5	240.5	258.9
70°	333.5	308.2	261.0	229.0	211.8	193.8	191.3	191.5	197.3	206.9	223.0
72.5°	283.6	260.8	219.8	192.4	178.2	165.3	163.0	160.2	165.5	173.8	187.6
75°	232.7	212.7	178.8	156.5	145.2	134.4	132.4	129.6	134.9	142.0	152.8
77.5°	181.4	165.3	139.0	121.8	113.0	105.0	103.1	100.1	105.4	110.7	119.2
80°	131.2	119.5	103.8	85.6	82.6	77.3	75.5	72.3	77.3	80.8	87.2
82.5°	84.7	76.9	67.9	55.2	54.8	50.9	49.9	46.3	50.9	52.9	57.8
85°	42.8	39.1	36.8	28.1	29.0	26.5	26.2	22.3	26.0	26.9	29.7
87.5°	12.2	12.9	11.5	6.9	8.7	8.3	8.3	6.0	8.3	8.3	9.4
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: P837758

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-50-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	986.8	986.8	986.8	986.8	986.8	986.8	986.8	986.8
2.5°	987.7	991.6	992.5	992.3	994.8	1008.6	1004.0	1008.6
5°	990.0	998.7	1001.0	1004.3	1008.4	1024.1	1019.0	1024.5
7.5°	991.4	1004.5	1009.5	1015.8	1022.4	1039.9	1035.8	1041.3
10°	991.4	1008.4	1015.8	1026.1	1035.1	1055.4	1051.4	1057.9
12.5°	987.2	1009.1	1019.4	1033.9	1045.5	1067.3	1065.7	1070.3
15°	978.7	1005.6	1019.9	1038.6	1052.8	1077.2	1076.5	1082.1
17.5°	967.2	999.7	1016.9	1040.4	1058.3	1085.7	1087.3	1090.3
20°	952.7	988.4	1010.9	1039.7	1062.3	1092.4	1094.5	1098.6
22.5°	933.6	974.8	1002.0	1036.7	1062.7	1095.2	1098.9	1102.8
25°	911.0	958.5	990.2	1031.0	1060.4	1094.9	1100.0	1103.5
27.5°	885.3	937.3	975.3	1021.7	1054.0	1091.3	1097.5	1101.6
30°	855.3	914.7	958.2	1009.8	1045.2	1084.4	1091.0	1095.2
32.5°	824.5	889.9	938.0	994.4	1032.6	1073.3	1079.1	1082.3
35°	790.9	859.7	913.6	974.6	1016.2	1055.6	1060.0	1063.4
37.5°	754.3	827.0	885.7	952.2	993.2	1031.0	1034.9	1038.8
40°	716.5	792.7	854.4	924.8	965.8	1000.8	1004.9	1007.7
42.5°	678.6	754.7	821.0	892.6	933.4	967.0	969.5	972.3
45°	640.1	715.4	783.5	856.9	897.2	928.8	929.7	932.0
47.5°	601.0	674.6	742.3	816.2	856.0	884.8	885.7	887.6
50°	561.6	633.9	698.4	772.2	811.1	841.5	837.4	839.2
52.5°	523.0	591.1	656.9	724.8	763.3	790.2	791.3	787.7
55°	485.0	549.2	609.7	675.1	711.7	732.6	732.0	733.3
57.5°	446.5	506.8	562.3	622.2	657.8	677.6	681.8	676.9
60°	407.4	464.0	513.8	567.8	602.4	618.9	623.8	619.2
62.5°	368.5	420.5	465.6	512.8	544.8	565.3	564.9	559.8
65°	329.6	376.8	417.1	457.1	485.0	505.5	504.5	499.9
67.5°	293.7	332.6	368.7	401.2	425.4	439.4	444.2	438.7
70°	254.1	287.7	319.5	345.5	365.5	378.2	382.8	377.9
72.5°	214.5	243.1	265.4	290.5	305.9	316.5	321.3	316.7
75°	175.4	198.9	217.1	236.6	247.4	256.4	261.9	257.3
77.5°	137.4	155.6	170.1	184.4	196.8	198.9	203.7	200.7
80°	101.3	114.4	125.0	134.4	143.4	144.3	148.2	146.4
82.5°	67.4	76.2	79.0	88.8	94.6	93.7	97.6	96.2
85°	35.7	41.0	45.8	48.8	52.0	49.0	52.5	51.1
87.5°	12.0	12.7	11.0	15.7	17.3	14.7	16.8	16.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)