

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: P837777

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1STD-27-120-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: P837777
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-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

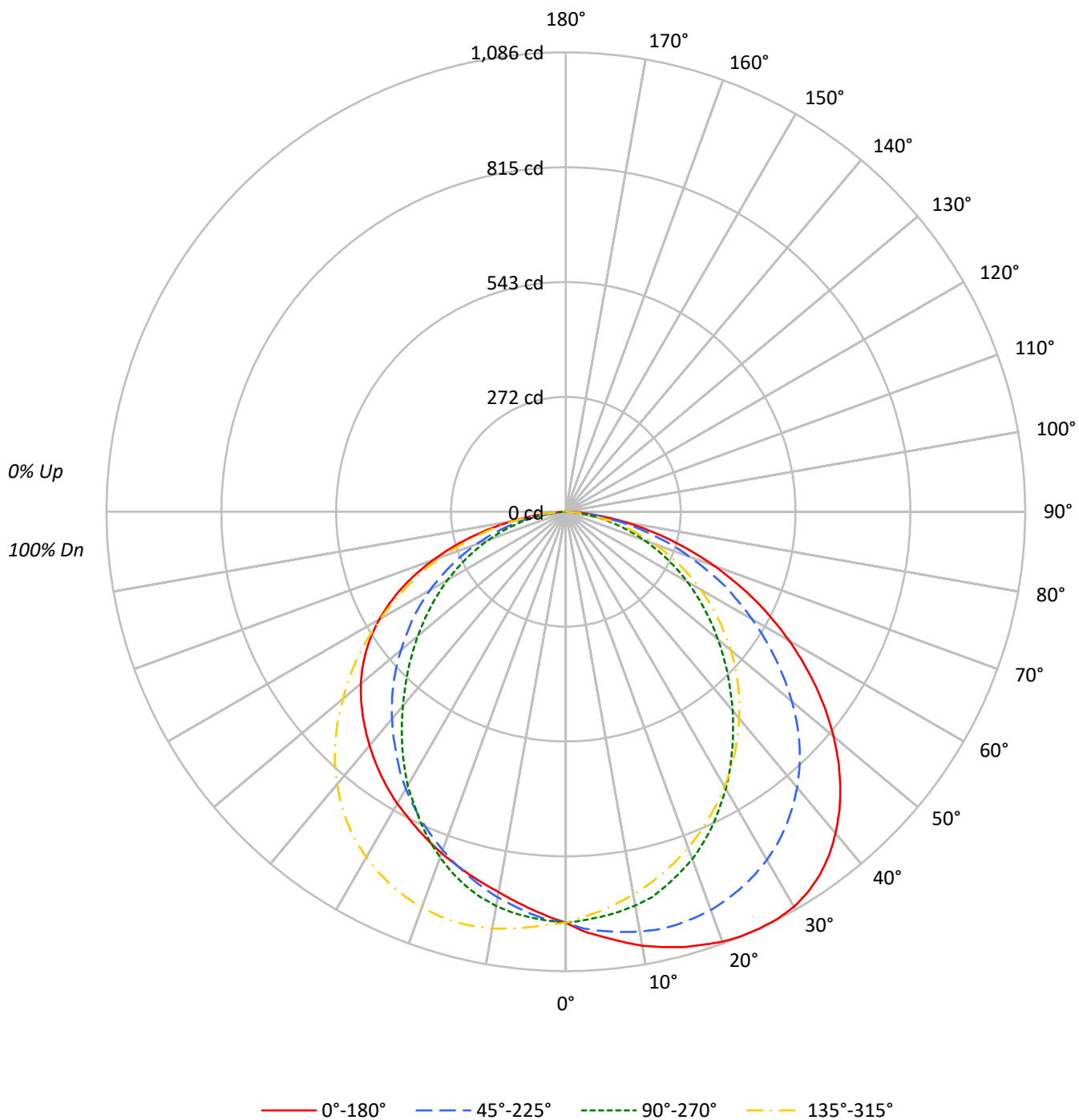
Lumens per Lamp: N/A
Luminaire Lumens: 2850.6 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2615	2615	2615	2615
5°	2725	2596	2547	2600
10°	2846	2582	2495	2586
15°	2968	2550	2471	2550
20°	3098	2503	2460	2489
25°	3226	2433	2460	2409
30°	3351	2349	2476	2323
35°	3440	2252	2501	2216
40°	3486	2155	2536	2107
45°	3492	2057	2585	2006
50°	3459	1963	2648	1911
55°	3388	1876	2707	1824
60°	3281	1785	2743	1738
65°	3135	1680	2729	1641
70°	2928	1557	2632	1528
75°	2635	1388	2415	1381
80°	2233	1162	2030	1181
85°	1553	769	1288	790

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	3.2
10°-20°	267.1	9.4
20°-30°	409.4	14.4
30°-40°	497.8	17.5
40°-50°	517.5	18.2
50°-60°	467.4	16.4
60°-70°	355.4	12.5
70°-80°	198.1	7.0
80°-90°	45.6	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°	768.8	27.0
0°-40°	1266.6	44.4
0°-60°	2251.5	79.0
0°-90°	2850.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2850.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	972	972	972	972	972	
5°	1009	961	943	963	1009	97
15°	1066	915	887	915	1066	302
25°	1086	820	828	811	1086	502
35°	1047	686	761	675	1047	654
45°	918	540	679	527	918	707
55°	722	400	577	389	722	645
65°	492	264	429	258	492	486
75°	253	134	232	133	253	269
85°	50	25	42	26	50	63
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°	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6
2.5°	993.2	978.7	978.9	991.6	981.8	986.6	973.0	978.2	976.6	977.7	966.6
5°	1008.8	993.2	992.9	1003.8	992.9	995.0	977.7	981.1	976.2	973.0	961.0
7.5°	1025.3	1009.7	1008.1	1017.6	1003.4	1001.8	982.7	982.7	973.7	965.7	954.4
10°	1041.7	1025.6	1023.5	1030.8	1013.1	1007.9	984.8	981.1	969.1	957.3	945.1
12.5°	1053.9	1037.6	1036.0	1040.5	1020.6	1011.1	984.8	977.7	960.1	943.5	934.0
15°	1065.5	1048.7	1044.4	1046.6	1023.8	1011.1	981.6	970.7	948.1	926.3	915.2
17.5°	1073.6	1057.5	1053.2	1053.0	1025.3	1007.2	974.8	959.8	932.6	906.4	895.2
20°	1081.8	1065.7	1060.2	1056.2	1024.9	1002.0	964.8	944.7	912.9	883.5	874.2
22.5°	1085.9	1069.3	1063.4	1057.3	1021.9	992.5	952.6	927.0	890.7	855.6	847.9
25°	1086.5	1069.5	1063.2	1054.4	1016.1	981.1	936.7	905.7	865.1	826.1	819.5
27.5°	1084.7	1066.1	1059.8	1049.1	1007.2	967.3	917.9	881.4	837.9	794.8	787.8
30°	1078.4	1059.6	1053.4	1039.6	994.7	950.3	897.3	854.5	807.8	762.0	755.9
32.5°	1065.7	1047.3	1042.3	1028.5	981.1	930.6	873.3	825.4	774.4	730.7	721.6
35°	1047.1	1028.7	1025.6	1011.1	962.1	907.0	847.0	793.7	739.1	694.4	685.6
37.5°	1022.9	1007.4	1002.7	988.4	939.7	880.3	816.8	759.3	703.1	655.0	649.6
40°	992.3	977.7	974.1	961.4	913.6	850.6	784.2	723.7	665.9	621.2	613.5
42.5°	957.3	943.8	941.7	928.6	881.4	817.7	748.8	686.7	627.1	584.1	576.4
45°	917.7	904.5	904.1	891.6	846.3	781.2	711.7	649.3	589.3	544.6	540.5
47.5°	873.9	862.2	862.2	850.6	807.1	741.1	673.4	610.4	551.2	511.8	504.5
50°	826.3	815.2	811.8	806.2	763.8	697.4	633.0	572.3	513.6	476.0	468.9
52.5°	775.6	766.1	768.3	757.9	716.9	651.8	592.2	529.4	475.7	441.5	434.5
55°	722.1	708.5	710.5	706.7	667.9	604.9	546.4	494.1	438.6	406.4	399.8
57.5°	666.6	648.9	656.1	653.9	615.8	556.9	504.5	454.0	401.6	371.9	365.6
60°	609.7	592.7	600.2	598.1	562.3	508.8	461.2	414.3	364.9	337.9	331.6
62.5°	551.2	535.6	542.4	540.8	507.9	459.6	418.2	375.1	328.0	303.7	297.8
65°	492.3	477.3	483.4	482.3	451.9	415.2	374.0	334.5	290.8	269.7	263.8
67.5°	432.0	418.2	423.8	423.8	395.9	360.8	329.5	293.5	254.3	236.2	230.7
70°	372.2	359.2	364.2	363.8	340.2	311.6	284.7	252.5	217.4	202.4	197.9
72.5°	311.9	300.5	305.1	304.6	284.9	266.5	239.8	211.9	181.3	169.3	165.2
75°	253.4	242.7	247.0	246.6	230.5	213.3	195.4	172.3	146.0	137.6	133.5
77.5°	197.6	186.8	190.4	190.4	178.6	166.1	151.9	133.9	115.4	106.3	103.4
80°	144.1	138.9	137.1	137.3	129.4	121.3	114.0	96.8	83.2	77.1	75.0
82.5°	94.7	90.4	88.6	89.1	84.5	79.6	75.0	63.0	53.9	50.3	49.2
85°	50.3	47.1	45.6	46.7	45.8	43.1	40.8	32.6	27.0	25.6	24.9
87.5°	15.9	13.8	12.7	16.8	14.3	12.7	12.2	9.7	7.5	7.5	7.3
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°	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6
2.5°	970.3	970.3	961.4	959.4	958.5	959.6	950.8	949.2	961.9	957.6	947.8
5°	962.6	962.1	949.6	947.4	947.4	946.0	936.0	933.8	946.5	942.8	932.2
7.5°	953.0	951.7	937.0	935.4	933.1	932.2	921.1	919.5	930.4	928.1	918.1
10°	941.5	940.1	922.7	921.5	919.0	917.2	906.8	905.7	916.8	913.2	905.2
12.5°	926.3	923.8	905.9	904.8	902.7	902.0	891.8	891.4	903.6	900.0	891.6
15°	906.4	904.3	884.4	884.8	885.0	885.0	876.9	876.4	888.4	886.9	877.8
17.5°	884.4	881.7	862.6	864.0	865.6	867.4	861.0	862.2	874.9	872.8	864.7
20°	859.4	856.7	838.1	842.0	845.4	849.0	844.9	848.1	859.9	859.0	852.9
22.5°	831.6	828.8	811.6	817.5	823.2	830.0	828.2	831.8	844.3	844.0	838.6
25°	797.6	798.2	783.1	790.3	799.8	809.4	810.0	815.9	829.7	828.4	823.4
27.5°	765.8	766.7	750.6	762.9	775.6	787.8	790.8	798.9	813.0	811.8	807.5
30°	732.5	733.7	718.0	734.8	750.2	765.2	771.5	782.6	796.9	796.9	792.4
32.5°	697.8	699.9	683.6	706.0	723.9	741.4	752.5	764.0	780.3	779.9	776.0
35°	662.3	664.5	649.6	678.1	696.0	717.3	731.2	746.6	761.1	761.3	758.4
37.5°	626.0	628.7	615.1	646.4	666.8	691.9	709.6	725.0	741.1	742.0	739.3
40°	590.0	592.9	581.1	611.3	637.1	665.2	685.6	703.7	721.4	721.9	720.1
42.5°	553.9	557.1	548.3	577.7	607.0	637.1	661.1	681.7	699.9	701.0	699.0
45°	518.8	521.5	515.2	547.3	575.5	608.3	636.0	659.3	677.7	679.3	678.6
47.5°	483.9	486.4	480.7	510.2	542.6	577.5	609.4	635.3	654.8	656.6	656.1
50°	449.7	451.7	445.6	476.4	508.6	545.8	579.1	609.0	630.8	632.6	632.3
52.5°	415.7	417.7	412.5	444.9	474.1	513.4	549.6	582.0	603.6	606.3	606.7
55°	382.8	383.7	379.6	410.7	439.0	480.0	521.7	553.2	574.8	577.0	578.4
57.5°	349.9	350.2	346.8	376.5	403.7	445.6	489.3	522.4	542.8	545.1	547.1
60°	317.3	317.1	313.2	342.0	368.1	409.5	455.1	488.0	507.7	509.7	512.4
62.5°	284.9	284.2	280.8	307.3	331.8	372.8	418.6	450.3	469.2	470.5	474.1
65°	252.7	252.0	248.9	273.3	295.5	334.8	379.6	409.8	426.8	428.6	427.9
67.5°	221.0	219.6	217.1	239.1	259.3	295.5	338.6	367.4	381.4	383.0	387.3
70°	189.2	187.7	182.0	205.3	223.0	255.4	295.5	321.2	332.9	334.5	333.8
72.5°	158.0	156.4	150.3	171.8	186.8	215.1	250.9	272.2	282.4	283.8	283.8
75°	127.6	126.7	122.8	139.2	151.6	174.7	205.1	222.8	230.7	232.3	231.9
77.5°	98.4	97.7	93.8	107.9	117.6	134.9	159.3	173.2	179.0	180.9	184.7
80°	70.5	70.3	64.1	78.0	82.3	96.8	114.7	125.3	128.5	131.0	133.7
82.5°	45.1	45.3	39.2	51.0	52.8	62.1	73.2	79.8	82.0	84.1	86.1
85°	22.0	22.9	19.5	27.0	27.2	32.0	36.7	39.2	40.1	41.7	43.5
87.5°	5.7	6.6	3.6	7.7	6.8	8.8	10.2	10.9	10.7	11.8	12.5
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°	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6
2.5°	951.0	958.3	954.6	966.4	970.9	963.7	976.4	976.6	967.5	978.2	984.1
5°	936.3	943.8	941.5	953.7	959.4	953.0	968.5	971.4	962.6	974.6	984.1
7.5°	921.3	930.2	927.2	939.7	946.5	941.5	958.0	962.8	956.0	969.1	981.8
10°	908.4	915.9	912.7	925.8	931.7	927.7	944.0	952.8	946.5	962.6	977.7
12.5°	895.7	901.8	898.2	909.1	914.7	909.5	929.5	937.6	933.1	949.9	969.4
15°	879.4	886.2	881.2	890.9	895.2	890.7	907.0	921.1	915.4	933.8	955.3
17.5°	866.9	870.8	864.0	871.7	874.2	868.1	884.6	898.4	894.3	914.3	939.2
20°	853.1	856.3	846.7	851.1	850.8	843.1	858.3	871.9	869.2	891.2	919.5
22.5°	837.7	839.3	828.2	829.1	828.6	815.9	829.5	843.3	842.2	864.4	896.2
25°	821.4	821.6	807.3	806.9	801.9	786.9	798.9	814.6	811.2	835.2	868.5
27.5°	805.3	803.0	785.8	781.7	773.8	755.9	766.5	780.6	778.5	802.1	839.0
30°	788.0	785.1	764.0	756.5	745.0	724.4	733.2	746.3	747.5	768.1	806.9
32.5°	771.7	764.2	740.9	730.0	715.5	691.5	696.3	709.6	711.4	732.3	772.2
35°	750.6	745.7	716.9	698.3	684.0	657.7	662.7	672.0	674.7	695.1	735.7
37.5°	730.7	722.8	692.2	669.5	651.2	623.5	624.9	634.4	637.1	657.7	697.8
40°	710.1	698.7	665.9	639.4	618.3	589.3	587.7	597.7	599.7	619.9	656.1
42.5°	688.1	674.5	637.6	608.5	584.3	554.8	551.7	560.3	562.5	582.3	617.8
45°	665.9	649.6	608.5	576.8	550.3	520.2	517.0	523.6	527.0	545.5	579.8
47.5°	642.3	623.3	578.6	543.3	515.8	485.7	481.8	488.4	491.1	509.5	541.9
50°	617.6	594.5	547.8	508.8	481.6	451.9	446.3	454.0	456.5	473.7	505.4
52.5°	590.4	564.8	514.9	474.1	446.9	418.6	411.8	419.3	422.2	439.0	468.2
55°	561.6	534.0	481.8	442.2	412.7	385.1	379.4	382.4	388.7	404.6	431.8
57.5°	529.2	501.8	446.9	406.6	378.3	351.8	347.0	349.7	355.6	371.0	395.5
60°	494.8	465.8	411.4	371.0	343.6	318.4	314.1	316.6	323.0	337.0	359.7
62.5°	460.8	428.1	374.6	334.5	309.6	286.3	285.1	284.2	290.1	303.7	323.6
65°	419.5	388.2	336.3	298.3	275.6	254.5	250.0	252.0	257.7	270.2	291.0
67.5°	375.3	347.0	297.1	262.0	241.8	223.0	219.2	220.1	226.0	236.8	255.0
70°	328.4	303.5	257.0	225.5	208.5	190.8	188.3	188.6	194.2	203.8	219.6
72.5°	279.2	256.8	216.4	189.5	175.4	162.7	160.5	157.7	163.0	171.1	184.7
75°	229.1	209.4	176.1	154.1	143.0	132.4	130.3	127.6	132.8	139.8	150.5
77.5°	178.6	162.7	136.9	119.9	111.3	103.4	101.5	98.6	103.8	109.0	117.4
80°	129.2	117.6	102.2	84.3	81.4	76.2	74.3	71.2	76.2	79.6	85.9
82.5°	83.4	75.7	66.9	54.4	53.9	50.1	49.2	45.6	50.1	52.1	56.9
85°	42.2	38.5	36.3	27.7	28.6	26.1	25.8	22.0	25.6	26.5	29.2
87.5°	12.0	12.7	11.3	6.8	8.6	8.2	8.2	5.9	8.2	8.2	9.3
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: P837777

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1STD-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	971.6	971.6	971.6	971.6	971.6	971.6	971.6	971.6
2.5°	972.5	976.4	977.3	977.1	979.6	993.2	988.6	993.2
5°	974.8	983.4	985.7	988.9	992.9	1008.3	1003.4	1008.8
7.5°	976.2	989.1	994.1	1000.2	1006.8	1024.0	1019.9	1025.3
10°	976.2	992.9	1000.2	1010.4	1019.2	1039.2	1035.3	1041.7
12.5°	972.1	993.6	1003.8	1018.1	1029.4	1051.0	1049.4	1053.9
15°	963.7	990.2	1004.3	1022.6	1036.7	1060.7	1060.0	1065.5
17.5°	952.4	984.3	1001.3	1024.4	1042.1	1069.1	1070.7	1073.6
20°	938.1	973.2	995.4	1023.8	1046.0	1075.7	1077.7	1081.8
22.5°	919.3	959.8	986.6	1020.8	1046.4	1078.4	1082.0	1085.9
25°	897.1	943.8	975.0	1015.1	1044.2	1078.2	1083.1	1086.5
27.5°	871.7	922.9	960.3	1006.1	1037.8	1074.5	1080.6	1084.7
30°	842.2	900.7	943.5	994.3	1029.2	1067.7	1074.3	1078.4
32.5°	811.8	876.2	923.6	979.1	1016.7	1056.8	1062.5	1065.7
35°	778.8	846.5	899.6	959.6	1000.6	1039.4	1043.7	1047.1
37.5°	742.7	814.3	872.1	937.6	978.0	1015.1	1019.0	1022.9
40°	705.5	780.6	841.3	910.7	951.0	985.5	989.5	992.3
42.5°	668.2	743.2	808.4	878.9	919.0	952.1	954.6	957.3
45°	630.3	704.4	771.5	843.8	883.5	914.5	915.4	917.7
47.5°	591.8	664.3	730.9	803.7	842.9	871.2	872.1	873.9
50°	553.0	624.2	687.6	760.4	798.7	828.6	824.5	826.3
52.5°	514.9	582.0	646.8	713.7	751.6	778.1	779.2	775.6
55°	477.5	540.8	600.4	664.8	700.8	721.4	720.7	722.1
57.5°	439.7	499.1	553.7	612.6	647.8	667.2	671.3	666.6
60°	401.2	456.9	505.9	559.1	593.1	609.4	614.2	609.7
62.5°	362.9	414.1	458.5	505.0	536.5	556.6	556.2	551.2
65°	324.6	371.0	410.7	450.1	477.5	497.7	496.8	492.3
67.5°	289.2	327.5	363.1	395.0	418.8	432.7	437.4	432.0
70°	250.2	283.3	314.6	340.2	359.9	372.4	376.9	372.2
72.5°	211.2	239.3	261.3	286.0	301.2	311.6	316.4	311.9
75°	172.7	195.8	213.7	233.0	243.6	252.5	257.9	253.4
77.5°	135.3	153.2	167.5	181.5	193.8	195.8	200.6	197.6
80°	99.7	112.6	123.1	132.4	141.2	142.1	146.0	144.1
82.5°	66.4	75.0	77.7	87.5	93.2	92.2	96.1	94.7
85°	35.1	40.3	45.1	48.0	51.2	48.3	51.7	50.3
87.5°	11.8	12.5	10.9	15.4	17.0	14.5	16.5	15.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)