

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: P837952

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2HI-27-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P837952
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2R-LD4-2HI-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

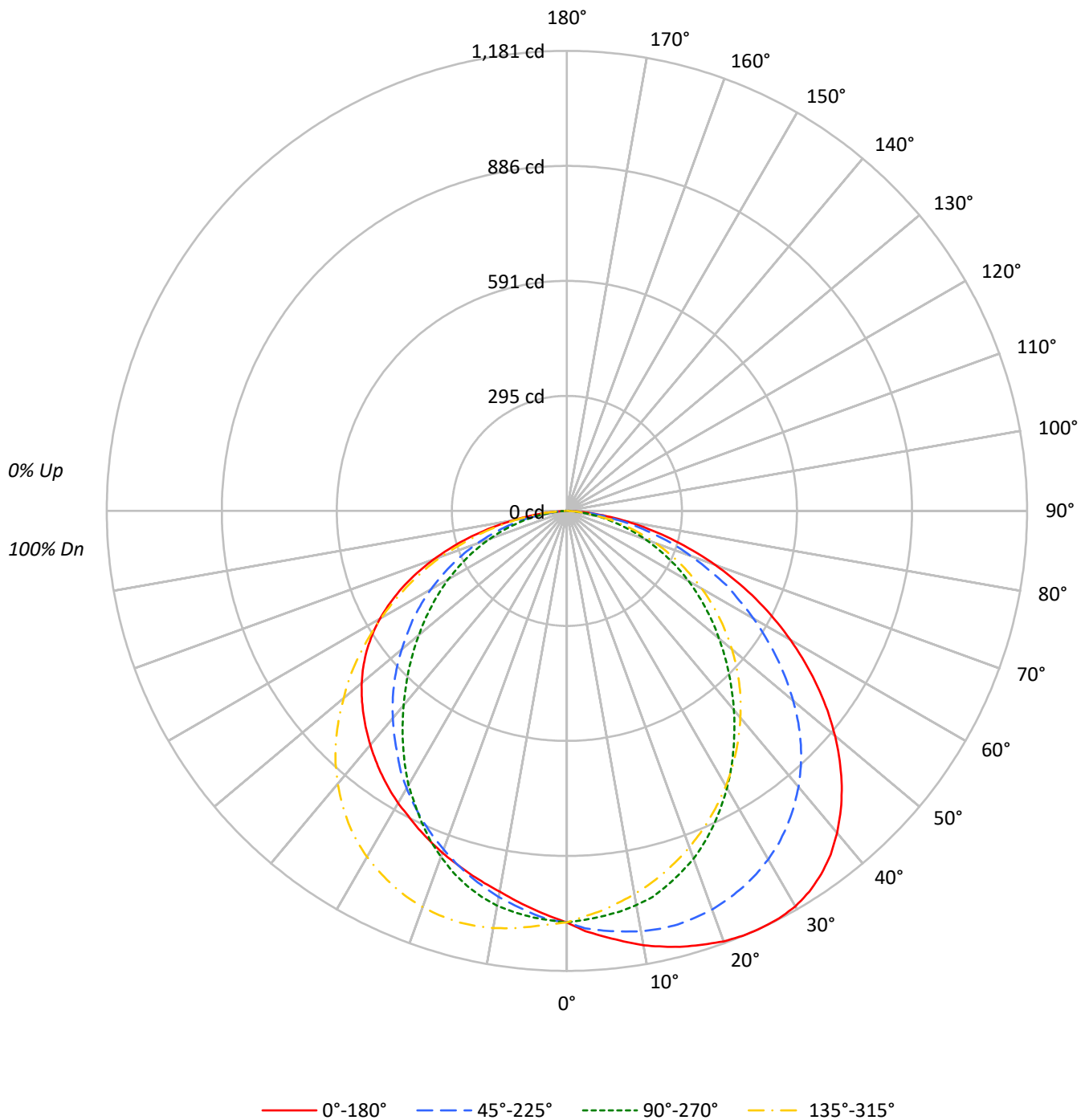
Lumens per Lamp: N/A
Luminaire Lumens: 3099.1 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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°	2842	2842	2842	2842
5°	2962	2822	2769	2827
10°	3095	2808	2713	2812
15°	3227	2772	2686	2773
20°	3368	2722	2674	2706
25°	3507	2646	2674	2619
30°	3643	2553	2692	2525
35°	3740	2449	2719	2410
40°	3789	2343	2757	2290
45°	3797	2237	2810	2180
50°	3761	2134	2879	2078
55°	3683	2039	2943	1983
60°	3567	1940	2983	1890
65°	3408	1826	2967	1784
70°	3183	1692	2862	1662
75°	2864	1509	2626	1501
80°	2428	1265	2207	1283
85°	1689	837	1399	858

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.3	3.2
10°-20°	290.4	9.4
20°-30°	445.1	14.4
30°-40°	541.2	17.5
40°-50°	562.6	18.2
50°-60°	508.2	16.4
60°-70°	386.4	12.5
70°-80°	215.4	7.0
80°-90°	49.6	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°	835.8	27.0
0°-40°	1377.0	44.4
0°-60°	2447.8	79.0
0°-90°	3099.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3099.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1056	1056	1056	1056	1056	
5°	1097	1045	1025	1046	1097	106
15°	1158	995	964	995	1158	328
25°	1181	891	901	882	1181	546
35°	1138	745	828	734	1138	711
45°	998	588	738	573	998	768
55°	785	435	627	423	785	701
65°	535	287	466	280	535	529
75°	276	145	253	144	276	293
85°	55	27	45	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°	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3
2.5°	1079.7	1064.0	1064.2	1078.0	1067.4	1072.6	1057.8	1063.5	1061.7	1063.0	1050.9
5°	1096.7	1079.7	1079.5	1091.3	1079.5	1081.7	1063.0	1066.7	1061.2	1057.8	1044.7
7.5°	1114.7	1097.7	1096.0	1106.3	1090.8	1089.1	1068.4	1068.4	1058.5	1049.9	1037.6
10°	1132.5	1115.0	1112.7	1120.6	1101.4	1095.7	1070.6	1066.7	1053.6	1040.8	1027.5
12.5°	1145.8	1128.0	1126.3	1131.2	1109.5	1099.2	1070.6	1063.0	1043.8	1025.8	1015.4
15°	1158.3	1140.1	1135.4	1137.9	1113.0	1099.2	1067.2	1055.3	1030.7	1007.0	995.0
17.5°	1167.2	1149.7	1145.0	1144.8	1114.7	1095.0	1059.8	1043.5	1013.9	985.4	973.3
20°	1176.1	1158.6	1152.7	1148.2	1114.2	1089.3	1048.9	1027.0	992.5	960.5	950.4
22.5°	1180.5	1162.5	1156.1	1149.5	1111.0	1079.0	1035.6	1007.8	968.4	930.2	921.8
25°	1181.2	1162.8	1155.9	1146.3	1104.6	1066.7	1018.4	984.6	940.5	898.1	891.0
27.5°	1179.3	1159.1	1152.2	1140.6	1095.0	1051.6	997.9	958.3	910.9	864.1	856.5
30°	1172.4	1151.9	1145.3	1130.2	1081.5	1033.2	975.5	928.9	878.2	828.4	821.7
32.5°	1158.6	1138.6	1133.2	1118.2	1066.7	1011.7	949.4	897.4	842.0	794.4	784.5
35°	1138.4	1118.4	1115.0	1099.2	1046.0	986.1	920.8	862.9	803.5	755.0	745.4
37.5°	1112.0	1095.3	1090.1	1074.6	1021.6	957.0	888.0	825.4	764.3	712.1	706.2
40°	1078.7	1063.0	1059.0	1045.2	993.2	924.7	852.5	786.8	723.9	675.4	667.0
42.5°	1040.8	1026.0	1023.8	1009.5	958.3	889.0	814.1	746.6	681.8	635.0	626.6
45°	997.7	983.4	982.9	969.3	920.1	849.3	773.7	705.9	640.6	592.1	587.7
47.5°	950.1	937.3	937.3	924.7	877.4	805.7	732.1	663.6	599.2	556.4	548.5
50°	898.4	886.3	882.6	876.4	830.4	758.2	688.2	622.2	558.3	517.4	509.8
52.5°	843.2	832.8	835.3	824.0	779.4	708.6	643.8	575.6	517.2	480.0	472.4
55°	785.0	770.2	772.5	768.3	726.1	657.6	594.1	537.2	476.8	441.8	434.7
57.5°	724.7	705.4	713.3	710.9	669.5	605.4	548.5	493.5	436.6	404.3	397.4
60°	662.8	644.3	652.5	650.3	611.3	553.2	501.4	450.4	396.7	367.4	360.5
62.5°	599.2	582.2	589.6	587.9	552.2	499.7	454.6	407.8	356.5	330.2	323.8
65°	535.2	518.9	525.6	524.3	491.3	451.4	406.6	363.7	316.1	293.2	286.8
67.5°	469.6	454.6	460.8	460.8	430.5	392.3	358.3	319.1	276.5	256.7	250.8
70°	404.6	390.5	396.0	395.5	369.8	338.8	309.5	274.5	236.3	220.0	215.1
72.5°	339.0	326.7	331.7	331.2	309.7	289.8	260.7	230.4	197.1	184.1	179.6
75°	275.5	263.9	268.6	268.1	250.6	231.9	212.4	187.3	158.7	149.6	145.1
77.5°	214.9	203.0	207.0	207.0	194.2	180.6	165.1	145.6	125.4	115.6	112.4
80°	156.7	151.0	149.1	149.3	140.7	131.8	123.9	105.2	90.4	83.8	81.6
82.5°	103.0	98.3	96.3	96.8	91.9	86.5	81.6	68.5	58.6	54.7	53.5
85°	54.7	51.3	49.5	50.8	49.8	46.8	44.4	35.5	29.3	27.8	27.1
87.5°	17.2	15.0	13.8	18.2	15.5	13.8	13.3	10.6	8.1	8.1	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°	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3
2.5°	1054.8	1054.8	1045.2	1043.0	1042.0	1043.3	1033.7	1031.9	1045.7	1041.0	1030.4
5°	1046.5	1046.0	1032.4	1030.0	1030.0	1028.5	1017.6	1015.2	1029.0	1025.0	1013.4
7.5°	1036.1	1034.6	1018.6	1016.9	1014.4	1013.4	1001.4	999.6	1011.5	1009.0	998.2
10°	1023.5	1022.1	1003.1	1001.9	999.2	997.2	985.8	984.6	996.7	992.7	984.1
12.5°	1007.0	1004.3	984.9	983.6	981.4	980.7	969.6	969.1	982.4	978.5	969.3
15°	985.4	983.1	961.5	961.9	962.2	962.2	953.3	952.8	965.9	964.2	954.3
17.5°	961.5	958.5	937.8	939.3	941.0	943.0	936.1	937.3	951.1	948.9	940.0
20°	934.4	931.4	911.2	915.4	919.1	923.0	918.6	922.0	934.8	933.9	927.2
22.5°	904.0	901.1	882.4	888.8	894.9	902.3	900.3	904.3	917.8	917.6	911.7
25°	867.1	867.8	851.3	859.2	869.5	879.9	880.6	887.0	902.1	900.6	895.2
27.5°	832.6	833.6	816.1	829.4	843.2	856.5	859.7	868.6	883.8	882.6	877.9
30°	796.4	797.6	780.6	798.8	815.6	831.8	838.7	850.8	866.3	866.3	861.4
32.5°	758.7	760.9	743.1	767.5	787.0	806.0	818.1	830.6	848.4	847.9	843.7
35°	720.0	722.4	706.2	737.2	756.7	779.9	794.9	811.6	827.4	827.7	824.5
37.5°	680.6	683.5	668.7	702.7	724.9	752.3	771.5	788.2	805.7	806.7	803.8
40°	641.4	644.6	631.8	664.5	692.6	723.2	745.4	765.1	784.3	784.8	782.8
42.5°	602.2	605.7	596.0	628.1	659.9	692.6	718.8	741.2	760.9	762.1	759.9
45°	564.0	567.0	560.1	595.1	625.6	661.3	691.4	716.8	736.7	738.5	737.7
47.5°	526.1	528.8	522.6	554.6	589.9	627.8	662.6	690.7	711.9	713.8	713.3
50°	488.9	491.1	484.4	517.9	552.9	593.3	629.6	662.1	685.7	687.7	687.5
52.5°	451.9	454.1	448.4	483.7	515.5	558.1	597.5	632.8	656.2	659.1	659.6
55°	416.2	417.2	412.7	446.5	477.3	521.9	567.2	601.5	624.9	627.3	628.8
57.5°	380.4	380.7	377.0	409.3	438.8	484.4	532.0	568.0	590.1	592.6	594.8
60°	345.0	344.7	340.5	371.8	400.2	445.2	494.8	530.5	551.9	554.2	557.1
62.5°	309.7	309.0	305.3	334.1	360.7	405.3	455.1	489.6	510.0	511.5	515.5
65°	274.7	274.0	270.5	297.2	321.3	363.9	412.7	445.5	464.0	465.9	465.2
67.5°	240.2	238.8	236.1	260.0	281.9	321.3	368.1	399.4	414.7	416.4	421.1
70°	205.7	204.0	197.9	223.2	242.5	277.7	321.3	349.1	362.0	363.7	362.9
72.5°	171.7	170.0	163.4	186.8	203.0	233.8	272.8	295.9	307.0	308.5	308.5
75°	138.7	137.7	133.5	151.3	164.8	190.0	223.0	242.2	250.8	252.6	252.1
77.5°	106.9	106.2	102.0	117.3	127.9	146.6	173.2	188.3	194.7	196.6	200.8
80°	76.6	76.4	69.7	84.8	89.4	105.2	124.7	136.3	139.7	142.4	145.4
82.5°	49.0	49.3	42.6	55.4	57.4	67.5	79.6	86.7	89.2	91.4	93.6
85°	23.9	24.9	21.2	29.3	29.6	34.7	39.9	42.6	43.6	45.3	47.3
87.5°	6.2	7.1	3.9	8.4	7.4	9.6	11.1	11.8	11.6	12.8	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°	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3
2.5°	1033.9	1041.8	1037.8	1050.7	1055.6	1047.7	1061.5	1061.7	1051.9	1063.5	1069.9
5°	1017.9	1026.0	1023.5	1036.9	1043.0	1036.1	1052.9	1056.1	1046.5	1059.5	1069.9
7.5°	1001.6	1011.2	1008.0	1021.6	1029.0	1023.5	1041.5	1046.7	1039.3	1053.6	1067.4
10°	987.6	995.7	992.3	1006.5	1013.0	1008.5	1026.3	1035.9	1029.0	1046.5	1063.0
12.5°	973.8	980.4	976.5	988.3	994.5	988.8	1010.5	1019.4	1014.4	1032.7	1053.9
15°	956.0	963.4	958.0	968.6	973.3	968.4	986.1	1001.4	995.2	1015.2	1038.6
17.5°	942.5	946.7	939.3	947.7	950.4	943.7	961.7	976.7	972.3	994.0	1021.1
20°	927.5	930.9	920.6	925.2	925.0	916.6	933.1	947.9	944.9	968.8	999.6
22.5°	910.7	912.4	900.3	901.3	900.8	887.0	901.8	916.9	915.6	939.8	974.3
25°	893.0	893.2	877.7	877.2	871.8	855.5	868.6	885.6	881.9	908.0	944.2
27.5°	875.5	873.0	854.3	849.8	841.2	821.7	833.3	848.6	846.4	872.0	912.2
30°	856.7	853.5	830.6	822.5	809.9	787.5	797.1	811.4	812.6	835.1	877.2
32.5°	839.0	830.9	805.5	793.7	777.9	751.8	756.9	771.5	773.5	796.1	839.5
35°	816.1	810.7	779.4	759.2	743.6	715.1	720.5	730.6	733.5	755.7	799.8
37.5°	794.4	785.8	752.5	727.9	707.9	677.8	679.3	689.7	692.6	715.1	758.7
40°	772.0	759.7	723.9	695.1	672.2	640.6	638.9	649.8	652.0	673.9	713.3
42.5°	748.1	733.3	693.1	661.6	635.2	603.2	599.7	609.1	611.6	633.0	671.7
45°	723.9	706.2	661.6	627.1	598.3	565.5	562.0	569.2	572.9	593.1	630.3
47.5°	698.3	677.6	629.1	590.6	560.8	528.0	523.8	531.0	534.0	553.9	589.1
50°	671.4	646.3	595.6	553.2	523.6	491.3	485.2	493.5	496.3	515.0	549.5
52.5°	641.9	614.0	559.8	515.5	485.9	455.1	447.7	455.8	459.0	477.3	509.1
55°	610.6	580.5	523.8	480.7	448.7	418.6	412.5	415.7	422.6	439.8	469.4
57.5°	575.3	545.5	485.9	442.0	411.2	382.4	377.2	380.2	386.6	403.4	430.0
60°	537.9	506.4	447.2	403.4	373.5	346.2	341.5	344.2	351.1	366.4	391.0
62.5°	500.9	465.5	407.3	363.7	336.6	311.2	310.0	309.0	315.4	330.2	351.9
65°	456.1	422.1	365.7	324.3	299.6	276.7	271.8	274.0	280.2	293.7	316.4
67.5°	408.0	377.2	323.0	284.8	262.9	242.5	238.3	239.3	245.7	257.5	277.2
70°	357.0	329.9	279.4	245.2	226.7	207.5	204.8	205.0	211.2	221.5	238.8
72.5°	303.6	279.2	235.3	206.0	190.7	176.9	174.5	171.5	177.2	186.0	200.8
75°	249.1	227.7	191.5	167.6	155.5	143.9	141.7	138.7	144.4	152.0	163.6
77.5°	194.2	176.9	148.8	130.3	121.0	112.4	110.4	107.2	112.9	118.5	127.6
80°	140.4	127.9	111.1	91.7	88.5	82.8	80.8	77.4	82.8	86.5	93.4
82.5°	90.7	82.3	72.7	59.1	58.6	54.5	53.5	49.5	54.5	56.7	61.8
85°	45.8	41.9	39.4	30.1	31.0	28.3	28.1	23.9	27.8	28.8	31.8
87.5°	13.1	13.8	12.3	7.4	9.4	8.9	8.9	6.4	8.9	8.9	10.1
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: P837952

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2HI-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3	1056.3
2.5°	1057.3	1061.5	1062.5	1062.2	1064.9	1079.7	1074.8	1079.7
5°	1059.8	1069.1	1071.6	1075.0	1079.5	1096.2	1090.8	1096.7
7.5°	1061.2	1075.3	1080.7	1087.4	1094.5	1113.2	1108.8	1114.7
10°	1061.2	1079.5	1087.4	1098.5	1108.1	1129.7	1125.6	1132.5
12.5°	1056.8	1080.2	1091.3	1106.8	1119.2	1142.6	1140.8	1145.8
15°	1047.7	1076.5	1091.8	1111.8	1127.0	1153.2	1152.4	1158.3
17.5°	1035.4	1070.1	1088.6	1113.7	1133.0	1162.3	1164.0	1167.2
20°	1019.9	1058.0	1082.2	1113.0	1137.1	1169.4	1171.6	1176.1
22.5°	999.4	1043.5	1072.6	1109.8	1137.6	1172.4	1176.3	1180.5
25°	975.3	1026.0	1060.0	1103.6	1135.2	1172.1	1177.5	1181.2
27.5°	947.7	1003.3	1044.0	1093.8	1128.3	1168.2	1174.8	1179.3
30°	915.6	979.2	1025.8	1081.0	1118.9	1160.8	1167.9	1172.4
32.5°	882.6	952.6	1004.1	1064.5	1105.4	1149.0	1155.1	1158.6
35°	846.6	920.3	978.0	1043.3	1087.9	1130.0	1134.7	1138.4
37.5°	807.5	885.3	948.1	1019.4	1063.2	1103.6	1107.8	1112.0
40°	767.0	848.6	914.6	990.0	1033.9	1071.3	1075.8	1078.7
42.5°	726.4	807.9	878.9	955.5	999.2	1035.1	1037.8	1040.8
45°	685.2	765.8	838.7	917.3	960.5	994.2	995.2	997.7
47.5°	643.4	722.2	794.6	873.7	916.4	947.2	948.1	950.1
50°	601.2	678.6	747.6	826.7	868.3	900.8	896.4	898.4
52.5°	559.8	632.8	703.2	775.9	817.1	845.9	847.1	843.2
55°	519.2	587.9	652.7	722.7	761.9	784.3	783.6	785.0
57.5°	478.0	542.6	602.0	666.0	704.2	725.4	729.8	724.7
60°	436.1	496.7	550.0	607.9	644.8	662.6	667.7	662.8
62.5°	394.5	450.2	498.5	549.0	583.2	605.2	604.7	599.2
65°	352.8	403.4	446.5	489.4	519.2	541.1	540.1	535.2
67.5°	314.4	356.0	394.7	429.5	455.3	470.4	475.6	469.6
70°	272.0	308.0	342.0	369.8	391.3	404.8	409.8	404.6
72.5°	229.6	260.2	284.1	311.0	327.5	338.8	344.0	339.0
75°	187.8	212.9	232.4	253.3	264.9	274.5	280.4	275.5
77.5°	147.1	166.6	182.1	197.4	210.7	212.9	218.1	214.9
80°	108.4	122.5	133.8	143.9	153.5	154.5	158.7	156.7
82.5°	72.2	81.6	84.5	95.1	101.3	100.3	104.5	103.0
85°	38.2	43.9	49.0	52.2	55.7	52.5	56.2	54.7
87.5°	12.8	13.6	11.8	16.8	18.5	15.8	18.0	17.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)