

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: P837879

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2STD-35-120-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: P837879
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-LD4-2STD-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

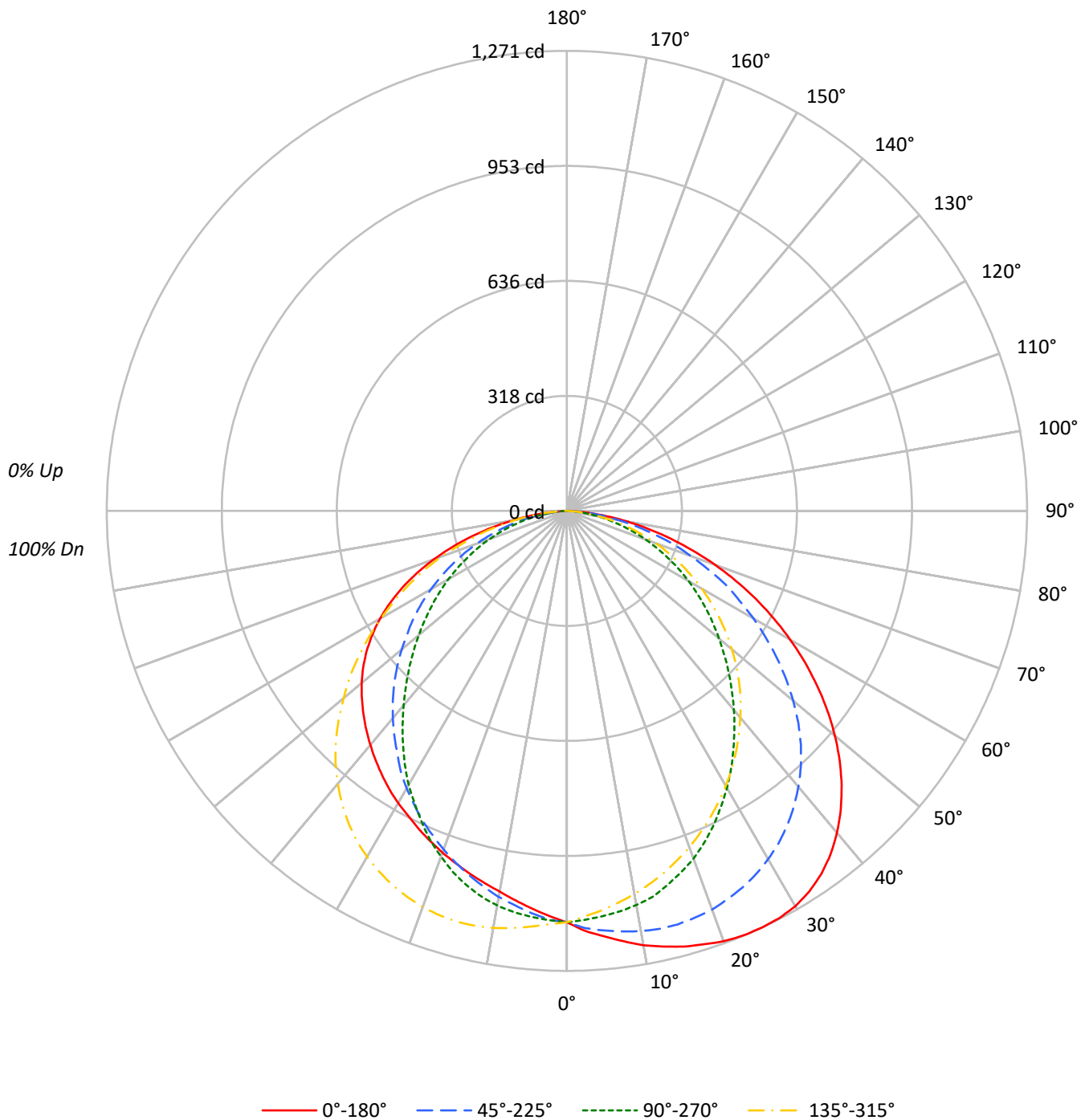
Lumens per Lamp: N/A
Luminaire Lumens: 3334.5 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	3058	3058	3058	3058
5°	3187	3036	2979	3041
10°	3330	3021	2919	3025
15°	3472	2982	2890	2983
20°	3624	2928	2877	2912
25°	3774	2846	2877	2817
30°	3920	2747	2896	2717
35°	4024	2635	2925	2593
40°	4077	2521	2966	2464
45°	4085	2406	3024	2346
50°	4047	2296	3098	2235
55°	3963	2194	3167	2133
60°	3838	2088	3209	2033
65°	3666	1965	3192	1919
70°	3425	1821	3079	1788
75°	3082	1624	2825	1616
80°	2613	1361	2374	1381
85°	1819	902	1507	926

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.9	3.2
10°-20°	312.5	9.4
20°-30°	478.9	14.4
30°-40°	582.3	17.5
40°-50°	605.3	18.2
50°-60°	546.8	16.4
60°-70°	415.7	12.5
70°-80°	231.7	7.0
80°-90°	53.4	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°	899.3	27.0
0°-40°	1481.5	44.4
0°-60°	2633.6	79.0
0°-90°	3334.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3334.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1136	1136	1136	1136	1136	
5°	1180	1124	1103	1126	1180	114
15°	1246	1070	1037	1071	1246	353
25°	1271	959	969	949	1271	587
35°	1225	802	890	789	1225	765
45°	1073	632	794	616	1073	826
55°	845	468	675	455	845	754
65°	576	309	501	301	576	569
75°	296	156	272	155	296	315
85°	59	29	49	30	59	74
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°	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5
2.5°	1161.7	1144.8	1145.0	1159.9	1148.5	1154.0	1138.1	1144.2	1142.4	1143.7	1130.7
5°	1180.0	1161.7	1161.5	1174.2	1161.5	1163.8	1143.7	1147.7	1141.8	1138.1	1124.1
7.5°	1199.4	1181.1	1179.2	1190.4	1173.7	1171.8	1149.5	1149.5	1138.9	1129.6	1116.4
10°	1218.5	1199.6	1197.2	1205.7	1185.1	1179.0	1151.9	1147.7	1133.6	1119.8	1105.5
12.5°	1232.8	1213.7	1211.8	1217.1	1193.8	1182.7	1151.9	1143.7	1123.0	1103.7	1092.5
15°	1246.3	1226.7	1221.6	1224.3	1197.5	1182.7	1148.2	1135.5	1109.0	1083.5	1070.5
17.5°	1255.8	1237.0	1232.0	1231.7	1199.4	1178.2	1140.3	1122.8	1090.9	1060.2	1047.2
20°	1265.4	1246.6	1240.2	1235.4	1198.8	1172.1	1128.6	1105.0	1067.9	1033.4	1022.5
22.5°	1270.2	1250.8	1243.9	1236.8	1195.4	1160.9	1114.3	1084.3	1041.9	1000.8	991.8
25°	1271.0	1251.1	1243.6	1233.3	1188.5	1147.7	1095.7	1059.4	1011.9	966.3	958.6
27.5°	1268.8	1247.1	1239.7	1227.2	1178.2	1131.5	1073.7	1031.0	980.1	929.8	921.5
30°	1261.4	1239.4	1232.2	1216.1	1163.6	1111.6	1049.6	999.5	944.9	891.3	884.2
32.5°	1246.6	1225.1	1219.3	1203.1	1147.7	1088.6	1021.5	965.5	905.9	854.7	844.1
35°	1224.8	1203.3	1199.6	1182.7	1125.4	1061.0	990.7	928.4	864.5	812.3	802.0
37.5°	1196.5	1178.4	1172.9	1156.2	1099.2	1029.7	955.5	888.1	822.4	766.2	759.8
40°	1160.7	1143.7	1139.5	1124.6	1068.7	995.0	917.3	846.5	778.9	726.7	717.7
42.5°	1119.8	1103.9	1101.5	1086.2	1031.0	956.5	875.9	803.3	733.6	683.2	674.2
45°	1073.4	1058.1	1057.5	1043.0	989.9	913.8	832.5	759.5	689.3	637.1	632.3
47.5°	1022.3	1008.5	1008.5	995.0	944.1	866.9	787.7	713.9	644.8	598.6	590.1
50°	966.6	953.6	949.6	943.0	893.4	815.8	740.5	669.4	600.7	556.7	548.5
52.5°	907.2	896.1	898.7	886.5	838.6	762.5	692.7	619.3	556.5	516.4	508.2
55°	844.6	828.7	831.1	826.6	781.3	707.6	639.2	577.9	513.0	475.3	467.7
57.5°	779.7	759.0	767.5	764.9	720.3	651.4	590.1	531.0	469.8	435.1	427.6
60°	713.2	693.3	702.0	699.6	657.7	595.2	539.5	484.6	426.8	395.3	387.9
62.5°	644.8	626.5	634.4	632.6	594.1	537.6	489.1	438.8	383.6	355.3	348.4
65°	575.8	558.3	565.5	564.2	528.6	485.7	437.4	391.3	340.1	315.5	308.6
67.5°	505.3	489.1	495.8	495.8	463.2	422.1	385.5	343.3	297.5	276.2	269.9
70°	435.3	420.2	426.0	425.5	397.9	364.5	333.0	295.3	254.2	236.7	231.4
72.5°	364.8	351.5	356.8	356.3	333.2	311.8	280.5	247.9	212.1	198.0	193.3
75°	296.4	283.9	289.0	288.4	269.6	249.5	228.5	201.5	170.7	160.9	156.2
77.5°	231.2	218.5	222.7	222.7	208.9	194.3	177.6	156.7	134.9	124.3	120.9
80°	168.6	162.5	160.4	160.7	151.4	141.8	133.4	113.2	97.3	90.1	87.8
82.5°	110.8	105.8	103.7	104.2	98.9	93.1	87.8	73.7	63.1	58.9	57.5
85°	58.9	55.1	53.3	54.6	53.6	50.4	47.7	38.2	31.5	30.0	29.2
87.5°	18.6	16.2	14.8	19.6	16.7	14.8	14.3	11.4	8.7	8.7	8.5
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5
2.5°	1134.9	1134.9	1124.6	1122.2	1121.2	1122.5	1112.1	1110.3	1125.1	1120.1	1108.7
5°	1125.9	1125.4	1110.8	1108.2	1108.2	1106.6	1094.9	1092.3	1107.1	1102.9	1090.4
7.5°	1114.8	1113.2	1096.0	1094.1	1091.5	1090.4	1077.4	1075.6	1088.3	1085.6	1074.0
10°	1101.3	1099.7	1079.3	1077.9	1075.0	1072.9	1060.7	1059.4	1072.4	1068.1	1058.9
12.5°	1083.5	1080.6	1059.7	1058.3	1055.9	1055.1	1043.2	1042.7	1057.0	1052.8	1043.0
15°	1060.2	1057.8	1034.5	1035.0	1035.3	1035.3	1025.7	1025.2	1039.2	1037.4	1026.8
17.5°	1034.5	1031.3	1009.0	1010.6	1012.5	1014.6	1007.2	1008.5	1023.3	1020.9	1011.4
20°	1005.3	1002.1	980.4	984.9	988.9	993.1	988.3	992.1	1005.8	1004.8	997.6
22.5°	972.7	969.5	949.4	956.3	962.9	970.8	968.7	973.0	987.5	987.3	980.9
25°	932.9	933.7	916.0	924.4	935.6	946.7	947.5	954.4	970.6	969.0	963.2
27.5°	895.8	896.9	878.1	892.4	907.2	921.5	925.0	934.5	951.0	949.6	944.6
30°	856.8	858.2	839.9	859.5	877.5	895.0	902.4	915.4	932.1	932.1	926.8
32.5°	816.3	818.7	799.6	825.8	846.8	867.2	880.2	893.7	912.8	912.3	907.7
35°	774.7	777.3	759.8	793.2	814.2	839.1	855.3	873.3	890.2	890.5	887.1
37.5°	732.2	735.4	719.5	756.1	780.0	809.4	830.1	848.1	866.9	868.0	864.8
40°	690.1	693.5	679.7	715.0	745.2	778.1	802.0	823.2	843.9	844.4	842.3
42.5°	647.9	651.6	641.3	675.8	710.0	745.2	773.3	797.5	818.7	820.0	817.6
45°	606.8	610.0	602.6	640.2	673.1	711.6	743.9	771.2	792.7	794.5	793.7
47.5°	566.0	568.9	562.3	596.8	634.7	675.5	712.9	743.1	765.9	768.0	767.5
50°	526.0	528.4	521.2	557.3	594.9	638.4	677.4	712.4	737.8	739.9	739.7
52.5°	486.2	488.6	482.5	520.4	554.6	600.5	642.9	680.8	706.0	709.2	709.7
55°	447.8	448.8	444.1	480.4	513.5	561.5	610.3	647.1	672.3	675.0	676.6
57.5°	409.3	409.6	405.6	440.4	472.2	521.2	572.4	611.1	634.9	637.6	640.0
60°	371.2	370.9	366.4	400.1	430.5	479.1	532.3	570.8	593.9	596.2	599.4
62.5°	333.2	332.5	328.5	359.5	388.1	436.1	489.7	526.8	548.8	550.4	554.6
65°	295.6	294.8	291.1	319.7	345.7	391.6	444.1	479.3	499.2	501.3	500.5
67.5°	258.5	256.9	254.0	279.7	303.3	345.7	396.1	429.7	446.2	448.0	453.1
70°	221.4	219.5	212.9	240.2	260.9	298.8	345.7	375.7	389.5	391.3	390.5
72.5°	184.8	182.9	175.8	201.0	218.5	251.6	293.5	318.4	330.3	331.9	331.9
75°	149.3	148.2	143.7	162.8	177.4	204.4	239.9	260.6	269.9	271.7	271.2
77.5°	115.1	114.3	109.8	126.2	137.6	157.7	186.4	202.5	209.4	211.6	216.1
80°	82.5	82.2	75.0	91.2	96.2	113.2	134.1	146.6	150.3	153.2	156.4
82.5°	52.8	53.0	45.9	59.7	61.8	72.6	85.6	93.3	96.0	98.4	100.7
85°	25.7	26.8	22.8	31.5	31.8	37.4	42.9	45.9	46.9	48.8	50.9
87.5°	6.6	7.7	4.2	9.0	8.0	10.3	11.9	12.7	12.5	13.8	14.6
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°	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5
2.5°	1112.4	1120.9	1116.7	1130.4	1135.7	1127.3	1142.1	1142.4	1131.8	1144.2	1151.1
5°	1095.2	1103.9	1101.3	1115.6	1122.2	1114.8	1132.8	1136.3	1125.9	1140.0	1151.1
7.5°	1077.7	1088.0	1084.6	1099.2	1107.1	1101.3	1120.6	1126.2	1118.2	1133.6	1148.5
10°	1062.6	1071.3	1067.6	1083.0	1089.9	1085.1	1104.2	1114.5	1107.1	1125.9	1143.7
12.5°	1047.7	1054.9	1050.6	1063.4	1070.0	1063.9	1087.2	1096.8	1091.5	1111.1	1133.9
15°	1028.6	1036.6	1030.8	1042.2	1047.2	1041.9	1061.0	1077.4	1070.8	1092.3	1117.5
17.5°	1014.1	1018.6	1010.6	1019.6	1022.5	1015.4	1034.7	1050.9	1046.1	1069.5	1098.6
20°	997.9	1001.6	990.5	995.5	995.2	986.2	1004.0	1019.9	1016.7	1042.4	1075.6
22.5°	979.9	981.7	968.7	969.8	969.3	954.4	970.3	986.5	985.2	1011.1	1048.3
25°	960.8	961.0	944.3	943.8	938.0	920.5	934.5	952.8	948.8	976.9	1015.9
27.5°	941.9	939.3	919.1	914.4	905.1	884.2	896.6	913.0	910.7	938.2	981.4
30°	921.8	918.4	893.7	884.9	871.4	847.3	857.6	873.0	874.3	898.5	943.8
32.5°	902.7	894.0	866.7	853.9	837.0	808.9	814.4	830.1	832.2	856.6	903.2
35°	878.1	872.2	838.6	816.8	800.1	769.4	775.2	786.1	789.2	813.1	860.6
37.5°	854.7	845.4	809.7	783.1	761.7	729.3	730.9	742.1	745.2	769.4	816.3
40°	830.6	817.3	778.9	747.9	723.2	689.3	687.4	699.1	701.5	725.1	767.5
42.5°	804.9	789.0	745.8	711.8	683.5	649.0	645.3	655.4	658.0	681.1	722.7
45°	778.9	759.8	711.8	674.7	643.7	608.4	604.7	612.4	616.4	638.1	678.2
47.5°	751.3	729.1	676.8	635.5	603.4	568.1	563.6	571.3	574.5	596.0	633.9
50°	722.4	695.4	640.8	595.2	563.4	528.6	522.0	531.0	533.9	554.1	591.2
52.5°	690.6	660.7	602.3	554.6	522.8	489.7	481.7	490.5	493.9	513.5	547.7
55°	656.9	624.6	563.6	517.2	482.8	450.4	443.8	447.2	454.7	473.2	505.0
57.5°	619.0	587.0	522.8	475.6	442.5	411.5	405.9	409.1	416.0	434.0	462.6
60°	578.7	544.8	481.2	434.0	401.9	372.5	367.4	370.4	377.8	394.2	420.7
62.5°	539.0	500.8	438.2	391.3	362.1	334.8	333.5	332.5	339.3	355.3	378.6
65°	490.7	454.1	393.4	348.9	322.4	297.7	292.4	294.8	301.4	316.0	340.4
67.5°	439.0	405.9	347.6	306.5	282.9	260.9	256.4	257.4	264.3	277.0	298.3
70°	384.1	355.0	300.6	263.8	243.9	223.2	220.3	220.6	227.2	238.3	256.9
72.5°	326.6	300.4	253.2	221.6	205.2	190.4	187.7	184.5	190.6	200.2	216.1
75°	268.0	245.0	206.0	180.3	167.3	154.8	152.4	149.3	155.4	163.6	176.0
77.5°	208.9	190.4	160.1	140.2	130.2	120.9	118.8	115.3	121.4	127.5	137.3
80°	151.1	137.6	119.6	98.6	95.2	89.1	87.0	83.2	89.1	93.1	100.5
82.5°	97.6	88.5	78.2	63.6	63.1	58.6	57.5	53.3	58.6	61.0	66.5
85°	49.3	45.1	42.4	32.3	33.4	30.5	30.2	25.7	30.0	31.0	34.2
87.5°	14.1	14.8	13.3	8.0	10.1	9.5	9.5	6.9	9.5	9.5	10.9
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: P837879

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2STD-35-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5	1136.5
2.5°	1137.6	1142.1	1143.2	1142.9	1145.8	1161.7	1156.4	1161.7
5°	1140.3	1150.3	1153.0	1156.7	1161.5	1179.5	1173.7	1180.0
7.5°	1141.8	1157.0	1162.8	1169.9	1177.6	1197.8	1193.0	1199.4
10°	1141.8	1161.5	1169.9	1181.9	1192.2	1215.5	1211.0	1218.5
12.5°	1137.1	1162.3	1174.2	1190.9	1204.1	1229.3	1227.5	1232.8
15°	1127.3	1158.3	1174.7	1196.2	1212.6	1240.7	1239.9	1246.3
17.5°	1114.0	1151.4	1171.3	1198.3	1219.0	1250.5	1252.4	1255.8
20°	1097.3	1138.4	1164.4	1197.5	1223.5	1258.2	1260.6	1265.4
22.5°	1075.3	1122.8	1154.0	1194.1	1224.0	1261.4	1265.6	1270.2
25°	1049.3	1103.9	1140.5	1187.4	1221.4	1261.1	1267.0	1271.0
27.5°	1019.6	1079.5	1123.3	1176.8	1214.0	1256.9	1264.1	1268.8
30°	985.2	1053.6	1103.7	1163.1	1203.9	1248.9	1256.6	1261.4
32.5°	949.6	1024.9	1080.3	1145.3	1189.3	1236.2	1242.8	1246.6
35°	910.9	990.2	1052.2	1122.5	1170.5	1215.8	1220.8	1224.8
37.5°	868.8	952.6	1020.2	1096.8	1144.0	1187.4	1191.9	1196.5
40°	825.3	913.0	984.1	1065.2	1112.4	1152.7	1157.5	1160.7
42.5°	781.6	869.3	945.7	1028.1	1075.0	1113.7	1116.7	1119.8
45°	737.3	824.0	902.4	987.0	1033.4	1069.7	1070.8	1073.4
47.5°	692.2	777.0	855.0	940.1	986.0	1019.1	1020.2	1022.3
50°	646.9	730.1	804.4	889.5	934.3	969.3	964.5	966.6
52.5°	602.3	680.8	756.6	834.8	879.1	910.1	911.5	907.2
55°	558.6	632.6	702.3	777.6	819.7	843.9	843.1	844.6
57.5°	514.3	583.8	647.7	716.6	757.7	780.5	785.3	779.7
60°	469.2	534.5	591.7	654.0	693.8	712.9	718.5	713.2
62.5°	424.4	484.4	536.3	590.7	627.5	651.1	650.6	644.8
65°	379.6	434.0	480.4	526.5	558.6	582.2	581.1	575.8
67.5°	338.3	383.1	424.7	462.1	489.9	506.1	511.7	505.3
70°	292.7	331.4	368.0	397.9	421.0	435.6	440.9	435.3
72.5°	247.1	280.0	305.7	334.6	352.3	364.5	370.1	364.8
75°	202.0	229.1	250.0	272.5	285.0	295.3	301.7	296.4
77.5°	158.3	179.2	195.9	212.4	226.7	229.1	234.6	231.2
80°	116.6	131.8	144.0	154.8	165.2	166.2	170.7	168.6
82.5°	77.7	87.8	90.9	102.3	109.0	107.9	112.4	110.8
85°	41.1	47.2	52.8	56.2	59.9	56.5	60.4	58.9
87.5°	13.8	14.6	12.7	18.0	19.9	17.0	19.4	18.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)