

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: P838236

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-1STD-50-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P838236
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2R-LD4-1STD-50-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RfI grid
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

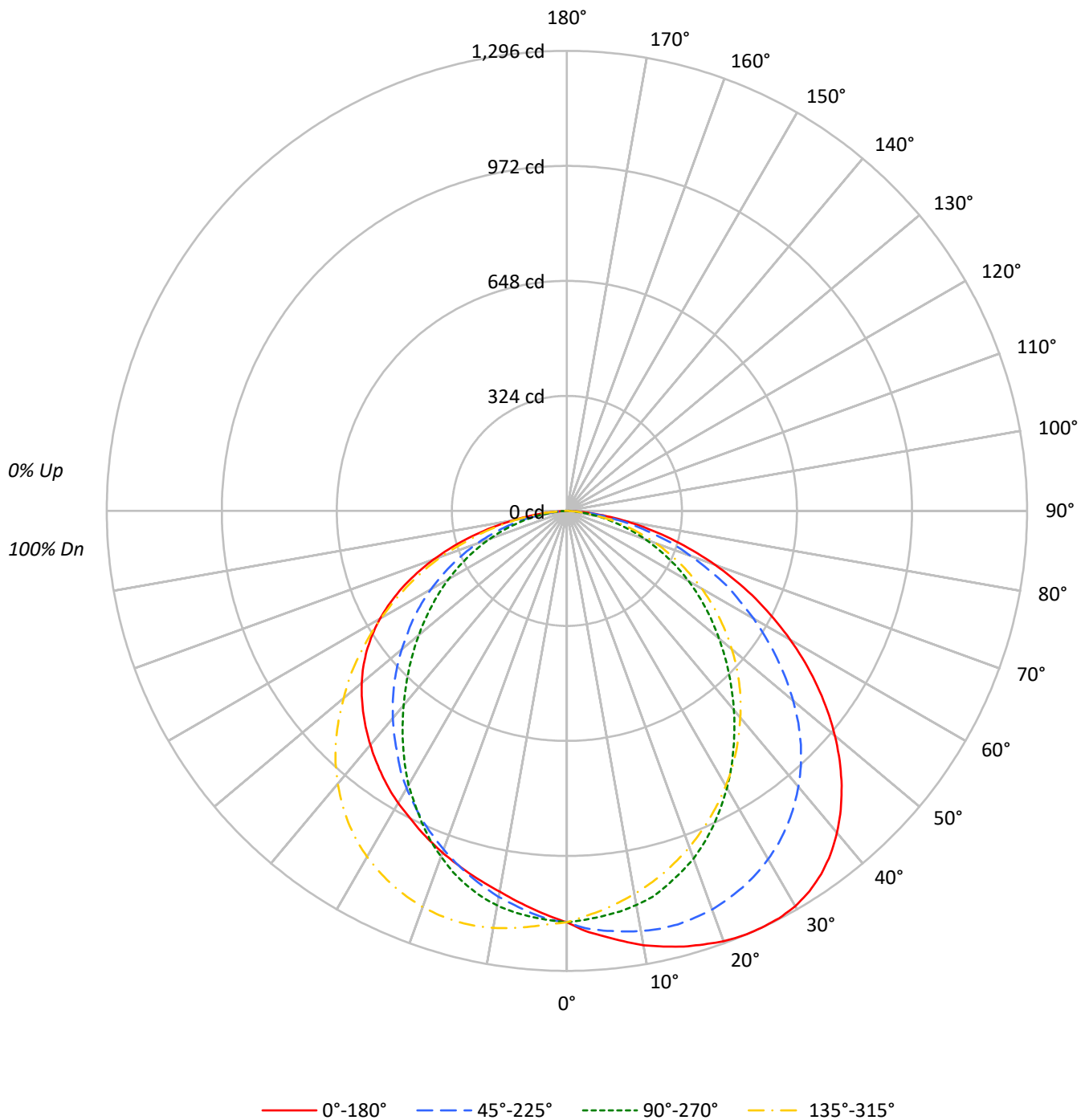
Lumens per Lamp: N/A
Luminaire Lumens: 3400.1 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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°	1559	1559	1559	1559
5°	1625	1548	1519	1551
10°	1697	1540	1488	1542
15°	1770	1521	1473	1521
20°	1848	1493	1467	1484
25°	1924	1451	1467	1436
30°	1998	1401	1477	1385
35°	2051	1343	1491	1322
40°	2079	1285	1512	1256
45°	2083	1227	1542	1196
50°	2063	1171	1579	1140
55°	2020	1119	1615	1088
60°	1957	1064	1636	1037
65°	1869	1002	1628	979
70°	1746	928	1570	911
75°	1571	828	1441	823
80°	1332	693	1211	704
85°	926	459	767	471

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°	110.0	3.2
10°-20°	318.6	9.4
20°-30°	488.3	14.4
30°-40°	593.8	17.5
40°-50°	617.2	18.2
50°-60°	557.5	16.4
60°-70°	423.9	12.5
70°-80°	236.3	7.0
80°-90°	54.4	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°	917.0	27.0
0°-40°	1510.7	44.4
0°-60°	2685.5	79.0
0°-90°	3400.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3400.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1159	1159	1159	1159	1159	
5°	1203	1146	1125	1148	1203	116
15°	1271	1092	1058	1092	1271	360
25°	1296	978	988	968	1296	599
35°	1249	818	908	805	1249	780
45°	1095	645	810	628	1095	843
55°	861	477	688	464	861	769
65°	587	315	511	307	587	580
75°	302	159	277	158	302	321
85°	60	30	50	30	60	76
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°	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9
2.5°	1184.6	1167.3	1167.6	1182.7	1171.1	1176.8	1160.5	1166.8	1164.9	1166.2	1153.0
5°	1203.2	1184.6	1184.3	1197.3	1184.3	1186.8	1166.2	1170.3	1164.3	1160.5	1146.2
7.5°	1223.0	1204.3	1202.4	1213.8	1196.8	1194.9	1172.2	1172.2	1161.3	1151.9	1138.4
10°	1242.4	1223.3	1220.8	1229.5	1208.4	1202.2	1174.6	1170.3	1155.9	1141.9	1127.3
12.5°	1257.0	1237.6	1235.7	1241.1	1217.3	1206.0	1174.6	1166.2	1145.1	1125.4	1114.0
15°	1270.8	1250.8	1245.7	1248.4	1221.1	1206.0	1170.8	1157.8	1130.8	1104.8	1091.6
17.5°	1280.6	1261.4	1256.2	1256.0	1223.0	1201.4	1162.7	1144.9	1112.4	1081.1	1067.8
20°	1290.3	1271.1	1264.6	1259.7	1222.4	1195.1	1150.8	1126.7	1088.9	1053.8	1042.7
22.5°	1295.2	1275.4	1268.4	1261.1	1218.9	1183.8	1136.2	1105.7	1062.4	1020.5	1011.3
25°	1296.0	1275.7	1268.1	1257.6	1211.9	1170.3	1117.3	1080.2	1031.9	985.4	977.5
27.5°	1293.8	1271.6	1264.1	1251.4	1201.4	1153.8	1094.8	1051.3	999.4	948.1	939.7
30°	1286.2	1263.8	1256.5	1240.0	1186.5	1133.5	1070.2	1019.2	963.5	908.9	901.6
32.5°	1271.1	1249.2	1243.3	1226.8	1170.3	1110.0	1041.6	984.5	923.7	871.5	860.7
35°	1248.9	1227.0	1223.3	1206.0	1147.6	1081.9	1010.2	946.7	881.6	828.3	817.8
37.5°	1220.0	1201.6	1195.9	1178.9	1120.8	1050.0	974.3	905.6	838.6	781.3	774.8
40°	1183.5	1166.2	1161.9	1146.7	1089.7	1014.6	935.3	863.2	794.2	741.0	731.8
42.5°	1141.9	1125.7	1123.2	1107.5	1051.3	975.4	893.2	819.1	748.0	696.6	687.5
45°	1094.6	1078.9	1078.4	1063.5	1009.4	931.8	848.8	774.5	702.9	649.6	644.7
47.5°	1042.4	1028.3	1028.3	1014.6	962.7	884.0	803.2	728.0	657.4	610.4	601.8
50°	985.6	972.4	968.3	961.6	911.0	831.8	755.0	682.6	612.6	567.7	559.3
52.5°	925.1	913.7	916.4	904.0	855.1	777.5	706.4	631.5	567.4	526.6	518.2
55°	861.3	845.1	847.5	842.9	796.7	721.5	651.8	589.3	523.1	484.7	476.9
57.5°	795.0	774.0	782.6	779.9	734.5	664.2	601.8	541.5	479.0	443.6	436.0
60°	727.2	706.9	715.8	713.4	670.7	606.9	550.1	494.2	435.2	403.1	395.5
62.5°	657.4	638.8	646.9	645.0	605.8	548.2	498.8	447.4	391.2	362.2	355.2
65°	587.2	569.3	576.6	575.3	539.0	495.2	446.0	399.0	346.8	321.7	314.7
67.5°	515.3	498.8	505.5	505.5	472.3	430.4	393.1	350.1	303.3	281.7	275.2
70°	443.9	428.5	434.4	433.9	405.8	371.7	339.5	301.1	259.2	241.4	236.0
72.5°	372.0	358.5	363.9	363.3	339.8	317.9	286.0	252.8	216.3	201.9	197.1
75°	302.2	289.5	294.7	294.1	274.9	254.4	233.0	205.5	174.1	164.1	159.2
77.5°	235.7	222.8	227.1	227.1	213.0	198.2	181.1	159.8	137.6	126.8	123.3
80°	171.9	165.7	163.6	163.8	154.4	144.6	136.0	115.4	99.2	91.9	89.5
82.5°	113.0	107.9	105.7	106.2	100.8	94.9	89.5	75.2	64.3	60.0	58.7
85°	60.0	56.2	54.3	55.7	54.6	51.4	48.7	38.9	32.2	30.5	29.7
87.5°	18.9	16.5	15.1	20.0	17.0	15.1	14.6	11.6	8.9	8.9	8.7
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9
2.5°	1157.3	1157.3	1146.7	1144.3	1143.2	1144.6	1134.0	1132.1	1147.3	1142.2	1130.5
5°	1148.1	1147.6	1132.7	1130.0	1130.0	1128.4	1116.5	1113.8	1128.9	1124.6	1111.9
7.5°	1136.7	1135.1	1117.6	1115.7	1113.0	1111.9	1098.6	1096.7	1109.7	1107.0	1095.1
10°	1123.0	1121.3	1100.5	1099.2	1096.2	1094.0	1081.6	1080.2	1093.5	1089.2	1079.7
12.5°	1104.8	1101.9	1080.5	1079.2	1076.7	1075.9	1063.8	1063.2	1077.8	1073.5	1063.5
15°	1081.1	1078.6	1054.8	1055.4	1055.6	1055.6	1045.9	1045.4	1059.7	1057.8	1047.0
17.5°	1054.8	1051.6	1028.9	1030.5	1032.4	1034.6	1027.0	1028.3	1043.5	1041.0	1031.3
20°	1025.1	1021.9	999.7	1004.3	1008.3	1012.7	1007.8	1011.6	1025.6	1024.6	1017.3
22.5°	991.8	988.6	968.1	975.1	981.8	990.0	987.8	992.1	1007.0	1006.7	1000.2
25°	951.3	952.1	934.0	942.6	954.0	965.4	966.2	973.2	989.7	988.1	982.1
27.5°	913.5	914.5	895.3	909.9	925.1	939.7	943.2	952.9	969.7	968.3	963.2
30°	873.7	875.1	856.4	876.4	894.8	912.6	920.2	933.5	950.5	950.5	945.1
32.5°	832.4	834.8	815.3	842.1	863.4	884.3	897.5	911.3	930.8	930.2	925.6
35°	789.9	792.6	774.8	808.8	830.2	855.6	872.1	890.5	907.8	908.0	904.5
37.5°	746.7	749.9	733.7	771.0	795.3	825.3	846.4	864.8	884.0	885.1	881.8
40°	703.7	707.2	693.1	729.1	759.9	793.4	817.8	839.4	860.5	861.0	858.8
42.5°	660.7	664.5	653.9	689.1	723.9	759.9	788.6	813.2	834.8	836.1	833.7
45°	618.8	622.0	614.5	652.9	686.4	725.6	758.6	786.4	808.3	810.2	809.4
47.5°	577.2	580.1	573.4	608.5	647.2	688.8	726.9	757.7	781.0	783.2	782.6
50°	536.3	538.8	531.5	568.2	606.6	651.0	690.7	726.4	752.3	754.5	754.2
52.5°	495.8	498.2	492.0	530.7	565.5	612.3	655.6	694.2	719.9	723.1	723.7
55°	456.6	457.7	452.8	489.8	523.6	572.6	622.3	659.9	685.6	688.3	689.9
57.5°	417.4	417.7	413.6	449.0	481.5	531.5	583.6	623.1	647.4	650.1	652.6
60°	378.5	378.2	373.6	407.9	439.0	488.5	542.8	582.0	605.5	608.0	611.2
62.5°	339.8	339.0	334.9	366.6	395.8	444.7	499.3	537.1	559.6	561.2	565.5
65°	301.4	300.6	296.8	326.0	352.5	399.3	452.8	488.8	509.0	511.2	510.4
67.5°	263.6	262.0	259.0	285.2	309.3	352.5	403.9	438.2	455.0	456.9	462.0
70°	225.7	223.8	217.1	244.9	266.0	304.7	352.5	383.1	397.1	399.0	398.2
72.5°	188.4	186.5	179.2	204.9	222.8	256.5	299.3	324.7	336.8	338.5	338.5
75°	152.2	151.1	146.5	166.0	180.9	208.4	244.7	265.7	275.2	277.1	276.5
77.5°	117.3	116.5	111.9	128.7	140.3	160.8	190.0	206.5	213.6	215.7	220.3
80°	84.1	83.8	76.5	93.0	98.1	115.4	136.8	149.5	153.3	156.3	159.5
82.5°	53.8	54.1	46.8	60.8	63.0	74.1	87.3	95.2	97.9	100.3	102.7
85°	26.2	27.3	23.2	32.2	32.4	38.1	43.8	46.8	47.8	49.7	51.9
87.5°	6.8	7.8	4.3	9.2	8.1	10.5	12.2	13.0	12.7	14.1	14.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9
2.5°	1134.3	1143.0	1138.6	1152.7	1158.1	1149.5	1164.6	1164.9	1154.0	1166.8	1173.8
5°	1116.7	1125.7	1123.0	1137.6	1144.3	1136.7	1155.1	1158.6	1148.1	1162.4	1173.8
7.5°	1098.9	1109.4	1105.9	1120.8	1128.9	1123.0	1142.7	1148.4	1140.3	1155.9	1171.1
10°	1083.5	1092.4	1088.6	1104.3	1111.3	1106.5	1125.9	1136.5	1128.9	1148.1	1166.2
12.5°	1068.4	1075.7	1071.3	1084.3	1091.1	1084.8	1108.6	1118.4	1113.0	1133.0	1156.2
15°	1048.9	1057.0	1051.1	1062.7	1067.8	1062.4	1081.9	1098.6	1091.9	1113.8	1139.4
17.5°	1034.0	1038.6	1030.5	1039.7	1042.7	1035.4	1055.1	1071.6	1066.7	1090.5	1120.3
20°	1017.5	1021.3	1010.0	1015.1	1014.8	1005.6	1023.7	1040.0	1036.7	1062.9	1096.7
22.5°	999.1	1001.0	987.8	988.9	988.3	973.2	989.4	1005.9	1004.6	1031.0	1068.9
25°	979.7	980.0	962.9	962.4	956.4	938.6	952.9	971.6	967.5	996.2	1035.9
27.5°	960.5	957.8	937.2	932.4	922.9	901.6	914.3	931.0	928.6	956.7	1000.8
30°	939.9	936.4	911.3	902.4	888.6	864.0	874.5	890.2	891.6	916.2	962.4
32.5°	920.5	911.6	883.7	870.7	853.4	824.8	830.5	846.4	848.6	873.4	921.0
35°	895.3	889.4	855.1	832.9	815.9	784.5	790.5	801.5	804.8	829.1	877.5
37.5°	871.5	862.1	825.6	798.6	776.7	743.7	745.3	756.7	759.9	784.5	832.4
40°	846.9	833.4	794.2	762.6	737.5	702.9	701.0	712.9	715.3	739.4	782.6
42.5°	820.7	804.5	760.4	725.8	696.9	661.8	658.0	668.3	671.0	694.5	736.9
45°	794.2	774.8	725.8	688.0	656.4	620.4	616.6	624.5	628.5	650.7	691.5
47.5°	766.1	743.4	690.2	648.0	615.3	579.3	574.7	582.6	585.8	607.7	646.4
50°	736.7	709.1	653.4	606.9	574.5	539.0	532.3	541.5	544.4	565.0	602.8
52.5°	704.2	673.7	614.2	565.5	533.1	499.3	491.2	500.1	503.6	523.6	558.5
55°	669.9	636.9	574.7	527.4	492.3	459.3	452.5	456.0	463.6	482.5	515.0
57.5°	631.2	598.5	533.1	485.0	451.2	419.6	413.9	417.1	424.2	442.5	471.7
60°	590.1	555.5	490.7	442.5	409.8	379.8	374.7	377.7	385.2	402.0	429.0
62.5°	549.6	510.7	446.9	399.0	369.3	341.4	340.1	339.0	346.0	362.2	386.0
65°	500.4	463.1	401.2	355.8	328.7	303.6	298.2	300.6	307.4	322.2	347.1
67.5°	447.7	413.9	354.4	312.5	288.4	266.0	261.4	262.5	269.5	282.5	304.1
70°	391.7	362.0	306.6	269.0	248.7	227.6	224.6	224.9	231.7	243.0	262.0
72.5°	333.0	306.3	258.2	226.0	209.2	194.1	191.4	188.2	194.4	204.1	220.3
75°	273.3	249.8	210.0	183.8	170.6	157.9	155.4	152.2	158.4	166.8	179.5
77.5°	213.0	194.1	163.3	143.0	132.7	123.3	121.1	117.6	123.8	130.0	140.0
80°	154.1	140.3	121.9	100.6	97.0	90.8	88.7	84.9	90.8	94.9	102.5
82.5°	99.5	90.3	79.7	64.9	64.3	59.7	58.7	54.3	59.7	62.2	67.9
85°	50.3	46.0	43.3	33.0	34.1	31.1	30.8	26.2	30.5	31.6	34.9
87.5°	14.3	15.1	13.5	8.1	10.3	9.7	9.7	7.0	9.7	9.7	11.1
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: P838236

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-1STD-50-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9	1158.9
2.5°	1160.0	1164.6	1165.7	1165.4	1168.4	1184.6	1179.2	1184.6
5°	1162.7	1173.0	1175.7	1179.5	1184.3	1202.7	1196.8	1203.2
7.5°	1164.3	1179.7	1185.7	1193.0	1200.8	1221.4	1216.5	1223.0
10°	1164.3	1184.3	1193.0	1205.1	1215.7	1239.5	1234.9	1242.4
12.5°	1159.5	1185.1	1197.3	1214.3	1227.8	1253.5	1251.6	1257.0
15°	1149.5	1181.1	1197.8	1219.7	1236.5	1265.2	1264.3	1270.8
17.5°	1135.9	1174.1	1194.3	1221.9	1243.0	1275.2	1277.0	1280.6
20°	1118.9	1160.8	1187.3	1221.1	1247.6	1283.0	1285.4	1290.3
22.5°	1096.5	1144.9	1176.8	1217.6	1248.1	1286.2	1290.6	1295.2
25°	1070.0	1125.7	1163.0	1210.8	1245.4	1286.0	1291.9	1296.0
27.5°	1039.7	1100.8	1145.4	1200.0	1237.8	1281.6	1288.9	1293.8
30°	1004.6	1074.3	1125.4	1185.9	1227.6	1273.5	1281.4	1286.2
32.5°	968.3	1045.1	1101.6	1167.8	1212.7	1260.6	1267.3	1271.1
35°	928.9	1009.7	1072.9	1144.6	1193.5	1239.7	1244.9	1248.9
37.5°	885.9	971.3	1040.2	1118.4	1166.5	1210.8	1215.4	1220.0
40°	841.5	931.0	1003.5	1086.2	1134.3	1175.4	1180.3	1183.5
42.5°	796.9	886.4	964.3	1048.3	1096.2	1135.7	1138.6	1141.9
45°	751.8	840.2	920.2	1006.4	1053.8	1090.8	1091.9	1094.6
47.5°	705.8	792.3	871.8	958.6	1005.4	1039.2	1040.2	1042.4
50°	659.6	744.5	820.2	907.0	952.6	988.3	983.5	985.6
52.5°	614.2	694.2	771.5	851.3	896.4	928.0	929.4	925.1
55°	569.6	645.0	716.1	792.9	835.9	860.5	859.7	861.3
57.5°	524.4	595.3	660.4	730.7	772.6	795.9	800.7	795.0
60°	478.5	545.0	603.4	666.9	707.5	726.9	732.6	727.2
62.5°	432.8	493.9	546.9	602.3	639.9	663.9	663.4	657.4
65°	387.1	442.5	489.8	536.9	569.6	593.6	592.6	587.2
67.5°	344.9	390.6	433.1	471.2	499.6	516.1	521.7	515.3
70°	298.4	337.9	375.2	405.8	429.3	444.2	449.6	443.9
72.5°	251.9	285.5	311.7	341.2	359.3	371.7	377.4	372.0
75°	206.0	233.6	254.9	277.9	290.6	301.1	307.6	302.2
77.5°	161.4	182.7	199.8	216.5	231.1	233.6	239.2	235.7
80°	118.9	134.4	146.8	157.9	168.4	169.5	174.1	171.9
82.5°	79.2	89.5	92.7	104.3	111.1	110.0	114.6	113.0
85°	41.9	48.1	53.8	57.3	61.1	57.6	61.6	60.0
87.5°	14.1	14.9	13.0	18.4	20.3	17.3	19.7	18.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)