

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: P837813

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1STD-50-120-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: P837813
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-50-120-EDD-90
Description: 1FT 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

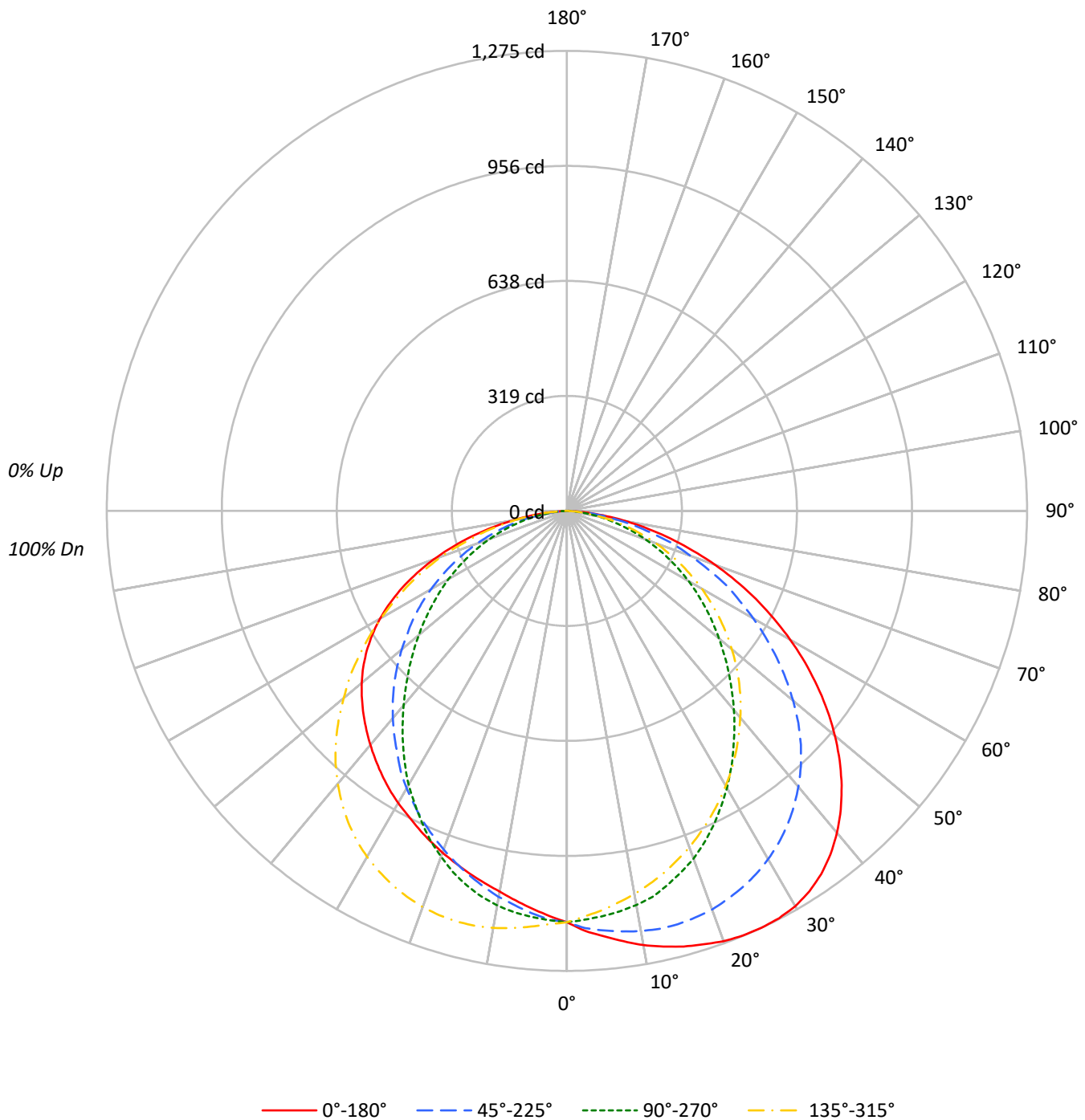
Lumens per Lamp: N/A
Luminaire Lumens: 3344.7 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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	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°	3068	3068	3068	3068
5°	3197	3046	2988	3051
10°	3340	3030	2928	3034
15°	3483	2992	2899	2992
20°	3635	2937	2886	2920
25°	3785	2855	2886	2826
30°	3932	2756	2905	2725
35°	4036	2643	2935	2601
40°	4090	2529	2975	2472
45°	4098	2414	3033	2353
50°	4059	2303	3107	2242
55°	3975	2201	3177	2140
60°	3850	2094	3219	2040
65°	3678	1971	3202	1926
70°	3436	1827	3088	1793
75°	3091	1628	2834	1620
80°	2620	1364	2382	1385
85°	1822	905	1510	929

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	3.2
10°-20°	313.4	9.4
20°-30°	480.4	14.4
30°-40°	584.1	17.5
40°-50°	607.2	18.2
50°-60°	548.5	16.4
60°-70°	417.0	12.5
70°-80°	232.5	7.0
80°-90°	53.5	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°	902.0	27.0
0°-40°	1486.1	44.4
0°-60°	2641.8	79.0
0°-90°	3344.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3344.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1140	1140	1140	1140	1140	
5°	1184	1128	1106	1129	1184	114
15°	1250	1074	1041	1074	1250	354
25°	1275	962	972	952	1275	589
35°	1229	804	893	792	1229	767
45°	1077	634	797	618	1077	829
55°	847	469	677	456	847	756
65°	578	310	503	302	578	571
75°	297	157	273	156	297	316
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°	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0
2.5°	1165.3	1148.3	1148.6	1163.4	1152.0	1157.6	1141.6	1147.8	1145.9	1147.2	1134.2
5°	1183.7	1165.3	1165.0	1177.8	1165.0	1167.4	1147.2	1151.2	1145.4	1141.6	1127.5
7.5°	1203.1	1184.7	1182.9	1194.0	1177.3	1175.4	1153.1	1153.1	1142.4	1133.1	1119.8
10°	1222.2	1203.3	1200.9	1209.5	1188.7	1182.6	1155.5	1151.2	1137.1	1123.3	1108.9
12.5°	1236.6	1217.4	1215.6	1220.9	1197.5	1186.3	1155.5	1147.2	1126.5	1107.1	1095.9
15°	1250.1	1230.5	1225.4	1228.1	1201.2	1186.3	1151.7	1139.0	1112.4	1086.9	1073.8
17.5°	1259.7	1240.8	1235.8	1235.5	1203.1	1181.8	1143.8	1126.2	1094.3	1063.5	1050.4
20°	1269.3	1250.4	1244.0	1239.2	1202.5	1175.7	1132.1	1108.4	1071.2	1036.6	1025.7
22.5°	1274.1	1254.7	1247.7	1240.6	1199.1	1164.5	1117.7	1087.7	1045.1	1003.9	994.8
25°	1274.9	1254.9	1247.5	1237.1	1192.2	1151.2	1099.1	1062.7	1015.1	969.3	961.6
27.5°	1272.7	1250.9	1243.5	1231.0	1181.8	1135.0	1077.0	1034.2	983.1	932.6	924.4
30°	1265.3	1243.2	1236.0	1219.8	1167.2	1115.0	1052.8	1002.6	947.8	894.1	886.9
32.5°	1250.4	1228.9	1223.0	1206.8	1151.2	1091.9	1024.6	968.5	908.7	857.4	846.7
35°	1228.6	1207.1	1203.3	1186.3	1128.9	1064.3	993.8	931.3	867.2	814.8	804.4
37.5°	1200.1	1182.1	1176.5	1159.7	1102.5	1032.9	958.4	890.9	824.9	768.5	762.2
40°	1164.2	1147.2	1143.0	1128.1	1072.0	998.0	920.1	849.1	781.3	728.9	719.9
42.5°	1123.3	1107.3	1104.9	1089.5	1034.2	959.5	878.6	805.8	735.8	685.3	676.3
45°	1076.8	1061.3	1060.8	1046.2	993.0	916.7	835.0	761.9	691.4	639.0	634.2
47.5°	1025.4	1011.6	1011.6	998.0	947.0	869.6	790.1	716.2	646.7	600.5	592.0
50°	969.6	956.6	952.6	945.9	896.2	818.3	742.7	671.5	602.6	558.5	550.2
52.5°	910.0	898.8	901.5	889.3	841.1	764.8	694.9	621.2	558.2	518.0	509.8
55°	847.3	831.3	833.7	829.2	783.7	709.8	641.2	579.7	514.6	476.8	469.1
57.5°	782.1	761.4	769.9	767.2	722.5	653.4	592.0	532.7	471.2	436.4	428.9
60°	715.4	695.4	704.2	701.8	659.8	597.0	541.2	486.1	428.1	396.5	389.1
62.5°	646.7	628.4	636.4	634.5	596.0	539.3	490.6	440.1	384.8	356.3	349.4
65°	577.6	560.0	567.2	565.9	530.3	487.2	438.8	392.5	341.2	316.5	309.5
67.5°	506.9	490.6	497.3	497.3	464.6	423.4	386.7	344.4	298.4	277.1	270.7
70°	436.7	421.5	427.4	426.8	399.2	365.7	334.0	296.2	255.0	237.5	232.2
72.5°	365.9	352.6	357.9	357.4	334.3	312.7	281.4	248.6	212.7	198.7	193.9
75°	297.3	284.8	289.9	289.3	270.5	250.2	229.2	202.1	171.3	161.4	156.6
77.5°	231.9	219.1	223.4	223.4	209.6	194.9	178.2	157.2	135.4	124.7	121.3
80°	169.1	163.0	160.9	161.2	151.8	142.3	133.8	113.6	97.6	90.4	88.0
82.5°	111.2	106.1	104.0	104.5	99.2	93.3	88.0	73.9	63.3	59.0	57.7
85°	59.0	55.3	53.5	54.8	53.7	50.5	47.9	38.3	31.6	30.1	29.3
87.5°	18.6	16.2	14.9	19.7	16.8	14.9	14.4	11.4	8.8	8.8	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°	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0
2.5°	1138.4	1138.4	1128.1	1125.7	1124.6	1125.9	1115.6	1113.7	1128.6	1123.6	1112.1
5°	1129.4	1128.9	1114.2	1111.6	1111.6	1110.0	1098.3	1095.6	1110.5	1106.3	1093.8
7.5°	1118.2	1116.6	1099.4	1097.5	1094.8	1093.8	1080.7	1078.9	1091.6	1089.0	1077.3
10°	1104.7	1103.1	1082.6	1081.3	1078.3	1076.2	1064.0	1062.7	1075.7	1071.4	1062.1
12.5°	1086.9	1083.9	1062.9	1061.6	1059.2	1058.4	1046.4	1045.9	1060.3	1056.0	1046.2
15°	1063.5	1061.1	1037.7	1038.2	1038.5	1038.5	1028.9	1028.4	1042.4	1040.6	1029.9
17.5°	1037.7	1034.5	1012.1	1013.7	1015.6	1017.7	1010.3	1011.6	1026.5	1024.1	1014.5
20°	1008.4	1005.2	983.4	987.9	991.9	996.2	991.4	995.1	1008.9	1007.9	1000.7
22.5°	975.7	972.5	952.3	959.2	965.9	973.8	971.7	976.0	990.6	990.3	983.9
25°	935.8	936.6	918.8	927.3	938.5	949.6	950.4	957.3	973.6	972.0	966.1
27.5°	898.6	899.6	880.8	895.1	910.0	924.4	927.8	937.4	953.9	952.6	947.5
30°	859.5	860.8	842.5	862.1	880.2	897.8	905.2	918.3	935.0	935.0	929.7
32.5°	818.8	821.2	802.0	828.4	849.4	869.9	882.9	896.5	915.6	915.1	910.5
35°	777.0	779.7	762.2	795.7	816.7	841.7	857.9	876.0	893.0	893.3	889.8
37.5°	734.5	737.7	721.7	758.4	782.4	811.9	832.6	850.7	869.6	870.7	867.5
40°	692.2	695.7	681.8	717.2	747.5	780.5	804.4	825.7	846.5	847.0	844.9
42.5°	649.9	653.7	643.3	677.9	712.2	747.5	775.7	799.9	821.2	822.5	820.1
45°	608.7	611.9	604.5	642.2	675.2	713.8	746.2	773.6	795.1	797.0	796.2
47.5°	567.8	570.7	564.0	598.6	636.6	677.6	715.1	745.4	768.3	770.4	769.9
50°	527.6	530.0	522.8	559.0	596.7	640.4	679.5	714.6	740.1	742.2	741.9
52.5°	487.7	490.1	484.0	522.0	556.3	602.3	644.9	682.9	708.2	711.4	711.9
55°	449.2	450.2	445.4	481.9	515.1	563.2	612.2	649.1	674.4	677.1	678.7
57.5°	410.6	410.9	406.9	441.7	473.6	522.8	574.1	613.0	636.9	639.6	642.0
60°	372.3	372.0	367.5	401.3	431.9	480.5	534.0	572.5	595.7	598.1	601.3
62.5°	334.3	333.5	329.5	360.6	389.3	437.5	491.2	528.4	550.5	552.1	556.3
65°	296.5	295.7	292.0	320.7	346.8	392.8	445.4	480.8	500.7	502.9	502.1
67.5°	259.3	257.7	254.8	280.6	304.2	346.8	397.3	431.1	447.6	449.4	454.5
70°	222.1	220.2	213.5	240.9	261.7	299.7	346.8	376.8	390.7	392.5	391.7
72.5°	185.4	183.5	176.3	201.6	219.1	252.4	294.4	319.4	331.3	332.9	332.9
75°	149.7	148.7	144.1	163.3	177.9	205.0	240.7	261.4	270.7	272.6	272.0
77.5°	115.4	114.6	110.1	126.6	138.0	158.2	186.9	203.2	210.1	212.2	216.7
80°	82.7	82.4	75.3	91.5	96.5	113.6	134.6	147.1	150.8	153.7	156.9
82.5°	52.9	53.2	46.0	59.8	62.0	72.9	85.9	93.6	96.3	98.7	101.1
85°	25.8	26.9	22.9	31.6	31.9	37.5	43.1	46.0	47.1	48.9	51.1
87.5°	6.6	7.7	4.3	9.0	8.0	10.4	12.0	12.8	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°	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0
2.5°	1115.8	1124.4	1120.1	1133.9	1139.2	1130.7	1145.6	1145.9	1135.3	1147.8	1154.7
5°	1098.6	1107.3	1104.7	1119.0	1125.7	1118.2	1136.3	1139.8	1129.4	1143.5	1154.7
7.5°	1081.0	1091.4	1087.9	1102.5	1110.5	1104.7	1124.1	1129.7	1121.7	1137.1	1152.0
10°	1065.8	1074.6	1070.9	1086.3	1093.2	1088.5	1107.6	1118.0	1110.5	1129.4	1147.2
12.5°	1051.0	1058.1	1053.9	1066.6	1073.3	1067.2	1090.6	1100.2	1094.8	1114.5	1137.4
15°	1031.8	1039.8	1033.9	1045.4	1050.4	1045.1	1064.3	1080.7	1074.1	1095.6	1120.9
17.5°	1017.2	1021.7	1013.7	1022.8	1025.7	1018.5	1037.9	1054.1	1049.4	1072.8	1102.0
20°	1001.0	1004.7	993.5	998.6	998.3	989.3	1007.1	1023.0	1019.8	1045.6	1078.9
22.5°	982.9	984.7	971.7	972.8	972.2	957.3	973.3	989.5	988.2	1014.3	1051.5
25°	963.7	964.0	947.2	946.7	940.9	923.3	937.4	955.8	951.8	980.0	1019.0
27.5°	944.9	942.2	922.0	917.2	907.9	886.9	899.4	915.9	913.5	941.1	984.5
30°	924.6	921.2	896.5	887.7	874.1	849.9	860.3	875.7	877.0	901.2	946.7
32.5°	905.5	896.7	869.3	856.6	839.5	811.4	816.9	832.6	834.8	859.2	906.0
35°	880.8	874.9	841.1	819.3	802.6	771.7	777.6	788.5	791.7	815.6	863.2
37.5°	857.4	848.1	812.2	785.6	764.0	731.6	733.2	744.3	747.5	771.7	818.8
40°	833.2	819.9	781.3	750.2	725.5	691.4	689.6	701.3	703.7	727.3	769.9
42.5°	807.4	791.4	748.1	714.0	685.6	651.0	647.3	657.4	660.0	683.2	724.9
45°	781.3	762.2	714.0	676.8	645.7	610.3	606.6	614.3	618.3	640.1	680.3
47.5°	753.6	731.3	678.9	637.4	605.3	569.9	565.4	573.1	576.3	597.8	635.8
50°	724.7	697.5	642.8	597.0	565.1	530.3	523.6	532.7	535.6	555.8	593.0
52.5°	692.7	662.7	604.2	556.3	524.4	491.2	483.2	492.0	495.4	515.1	549.4
55°	659.0	626.5	565.4	518.8	484.3	451.8	445.2	448.6	456.1	474.7	506.6
57.5°	620.9	588.8	524.4	477.1	443.8	412.7	407.1	410.3	417.2	435.3	464.0
60°	580.5	546.5	482.7	435.3	403.2	373.6	368.6	371.5	379.0	395.4	422.0
62.5°	540.6	502.3	439.6	392.5	363.3	335.9	334.5	333.5	340.4	356.3	379.7
65°	492.2	455.5	394.6	350.0	323.4	298.6	293.3	295.7	302.4	317.0	341.5
67.5°	440.4	407.1	348.6	307.4	283.7	261.7	257.2	258.2	265.1	277.9	299.2
70°	385.3	356.1	301.6	264.6	244.7	223.9	221.0	221.3	227.9	239.1	257.7
72.5°	327.6	301.3	254.0	222.3	205.8	190.9	188.3	185.1	191.2	200.8	216.7
75°	268.9	245.7	206.6	180.8	167.8	155.3	152.9	149.7	155.8	164.1	176.6
77.5°	209.6	190.9	160.6	140.7	130.6	121.3	119.1	115.7	121.8	127.9	137.8
80°	151.6	138.0	119.9	98.9	95.5	89.4	87.2	83.5	89.4	93.3	100.8
82.5°	97.9	88.8	78.4	63.8	63.3	58.8	57.7	53.5	58.8	61.2	66.7
85°	49.5	45.2	42.5	32.4	33.5	30.6	30.3	25.8	30.1	31.1	34.3
87.5°	14.1	14.9	13.3	8.0	10.1	9.6	9.6	6.9	9.6	9.6	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: P837813

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1STD-50-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0	1140.0
2.5°	1141.1	1145.6	1146.7	1146.4	1149.4	1165.3	1160.0	1165.3
5°	1143.8	1153.9	1156.5	1160.3	1165.0	1183.1	1177.3	1183.7
7.5°	1145.4	1160.5	1166.4	1173.6	1181.3	1201.5	1196.7	1203.1
10°	1145.4	1165.0	1173.6	1185.5	1195.9	1219.3	1214.8	1222.2
12.5°	1140.6	1165.8	1177.8	1194.6	1207.9	1233.1	1231.3	1236.6
15°	1130.7	1161.9	1178.3	1199.9	1216.4	1244.6	1243.8	1250.1
17.5°	1117.4	1154.9	1174.9	1202.0	1222.7	1254.4	1256.3	1259.7
20°	1100.7	1141.9	1168.0	1201.2	1227.3	1262.1	1264.5	1269.3
22.5°	1078.6	1126.2	1157.6	1197.8	1227.8	1265.3	1269.6	1274.1
25°	1052.6	1107.3	1144.0	1191.1	1225.1	1265.0	1270.9	1274.9
27.5°	1022.8	1082.9	1126.7	1180.5	1217.7	1260.8	1268.0	1272.7
30°	988.2	1056.8	1107.1	1166.6	1207.6	1252.8	1260.5	1265.3
32.5°	952.6	1028.1	1083.7	1148.8	1193.0	1240.0	1246.7	1250.4
35°	913.7	993.3	1055.5	1125.9	1174.1	1219.6	1224.6	1228.6
37.5°	871.5	955.5	1023.3	1100.2	1147.5	1191.1	1195.6	1200.1
40°	827.8	915.9	987.1	1068.5	1115.8	1156.3	1161.1	1164.2
42.5°	784.0	872.0	948.6	1031.3	1078.3	1117.2	1120.1	1123.3
45°	739.6	826.5	905.2	990.1	1036.6	1073.0	1074.1	1076.8
47.5°	694.3	779.4	857.6	943.0	989.0	1022.2	1023.3	1025.4
50°	648.9	732.4	806.8	892.2	937.1	972.2	967.5	969.6
52.5°	604.2	682.9	759.0	837.4	881.8	912.9	914.3	910.0
55°	560.3	634.5	704.4	780.0	822.3	846.5	845.7	847.3
57.5°	515.9	585.6	649.7	718.8	760.0	782.9	787.7	782.1
60°	470.7	536.1	593.6	656.1	695.9	715.1	720.7	715.4
62.5°	425.8	485.9	538.0	592.5	629.5	653.1	652.6	646.7
65°	380.8	435.3	481.9	528.1	560.3	584.0	582.9	577.6
67.5°	339.3	384.3	426.0	463.5	491.4	507.7	513.2	506.9
70°	293.6	332.4	369.1	399.2	422.3	436.9	442.2	436.7
72.5°	247.8	280.8	306.6	335.6	353.4	365.7	371.2	365.9
75°	202.6	229.8	250.8	273.4	285.9	296.2	302.6	297.3
77.5°	158.8	179.8	196.5	213.0	227.4	229.8	235.3	231.9
80°	117.0	132.2	144.4	155.3	165.7	166.7	171.3	169.1
82.5°	77.9	88.0	91.2	102.6	109.3	108.2	112.8	111.2
85°	41.2	47.3	52.9	56.4	60.1	56.6	60.6	59.0
87.5°	13.8	14.6	12.8	18.1	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)