

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: P837733

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1HI-30-120-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: P837733
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-LD4-1HI-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

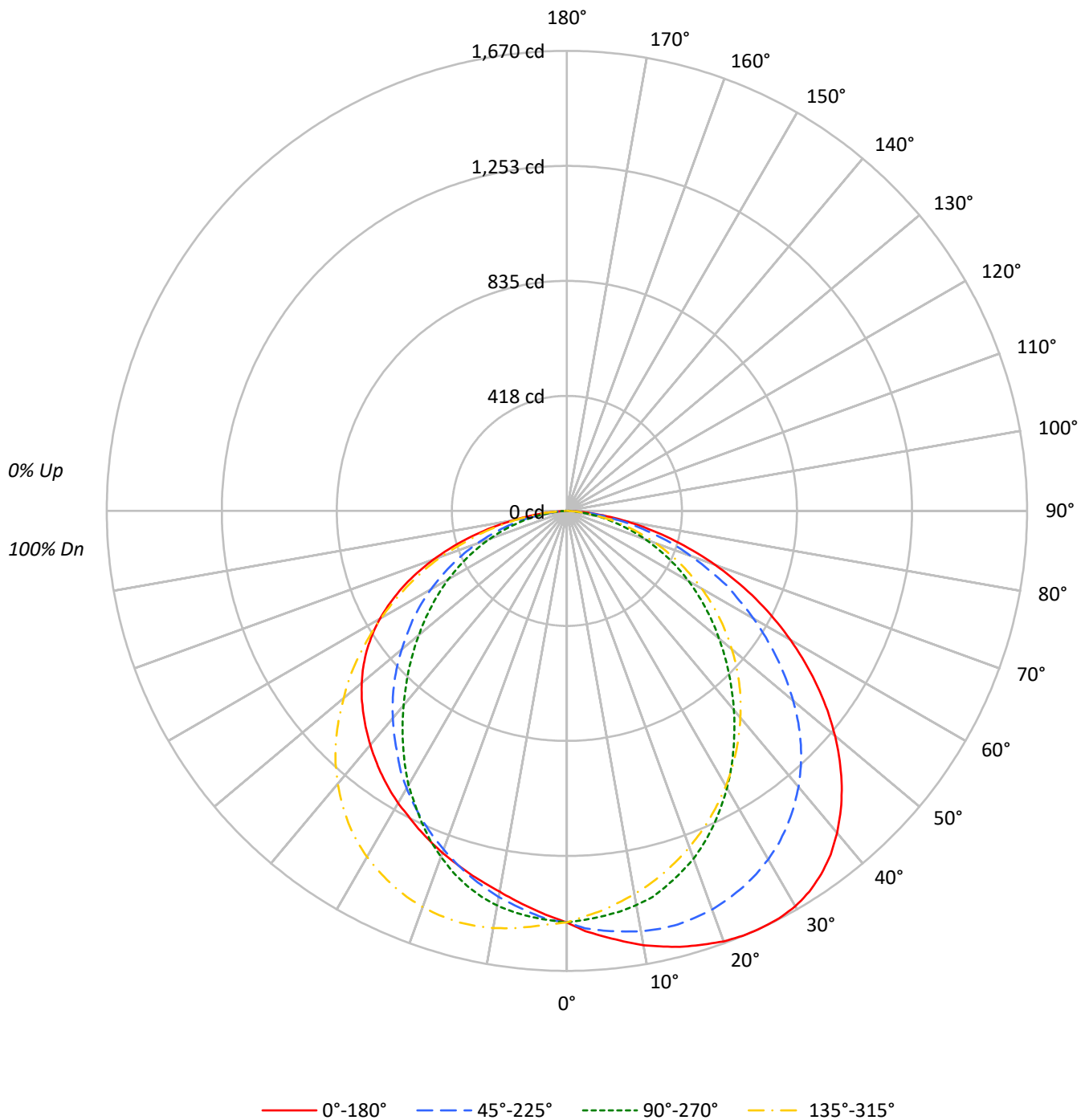
Lumens per Lamp: N/A
Luminaire Lumens: 4382.2 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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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°	4020	4020	4020	4020
5°	4189	3991	3915	3997
10°	4376	3970	3836	3976
15°	4563	3919	3798	3921
20°	4762	3848	3781	3826
25°	4959	3741	3781	3703
30°	5151	3611	3806	3571
35°	5288	3462	3845	3407
40°	5358	3313	3898	3238
45°	5369	3162	3974	3083
50°	5318	3018	4071	2938
55°	5208	2883	4162	2803
60°	5044	2743	4217	2672
65°	4819	2583	4195	2522
70°	4501	2393	4046	2349
75°	4050	2133	3713	2123
80°	3434	1787	3121	1815
85°	2387	1183	1979	1216

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.8	3.2
10°-20°	410.7	9.4
20°-30°	629.4	14.4
30°-40°	765.3	17.5
40°-50°	795.5	18.2
50°-60°	718.6	16.4
60°-70°	546.3	12.5
70°-80°	304.6	7.0
80°-90°	70.1	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°	1181.8	27.0
0°-40°	1947.1	44.4
0°-60°	3461.2	79.0
0°-90°	4382.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4382.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1494	1494	1494	1494	1494	
5°	1551	1477	1449	1480	1551	150
15°	1638	1407	1363	1407	1638	464
25°	1670	1260	1274	1247	1670	771
35°	1610	1054	1170	1037	1610	1005
45°	1411	831	1044	810	1411	1086
55°	1110	615	887	598	1110	991
65°	757	406	659	396	757	748
75°	390	205	357	204	390	414
85°	77	38	64	39	77	97
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°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7
2.5°	1526.8	1504.5	1504.8	1524.3	1509.3	1516.7	1495.8	1503.8	1501.3	1503.1	1486.0
5°	1550.8	1526.8	1526.4	1543.1	1526.4	1529.5	1503.1	1508.3	1500.6	1495.8	1477.3
7.5°	1576.2	1552.2	1549.8	1564.4	1542.4	1540.0	1510.7	1510.7	1496.8	1484.6	1467.2
10°	1601.3	1576.6	1573.4	1584.6	1557.4	1549.4	1513.9	1508.3	1489.8	1471.7	1452.9
12.5°	1620.1	1595.0	1592.6	1599.6	1568.9	1554.3	1513.9	1503.1	1475.9	1450.5	1435.8
15°	1637.9	1612.1	1605.5	1609.0	1573.8	1554.3	1509.0	1492.3	1457.4	1424.0	1406.9
17.5°	1650.4	1625.7	1619.1	1618.7	1576.2	1548.4	1498.5	1475.5	1433.7	1393.3	1376.2
20°	1663.0	1638.3	1629.9	1623.6	1575.5	1540.3	1483.2	1452.2	1403.4	1358.1	1343.8
22.5°	1669.3	1643.8	1634.8	1625.4	1571.0	1525.7	1464.4	1425.0	1369.3	1315.3	1303.4
25°	1670.3	1644.2	1634.4	1620.8	1561.9	1508.3	1440.0	1392.3	1329.9	1270.0	1259.9
27.5°	1667.5	1638.9	1629.2	1612.8	1548.4	1487.0	1411.1	1355.0	1288.1	1221.9	1211.1
30°	1657.8	1628.8	1619.4	1598.2	1529.2	1460.9	1379.4	1313.5	1241.8	1171.4	1162.0
32.5°	1638.3	1610.0	1602.4	1581.1	1508.3	1430.6	1342.4	1268.9	1190.5	1123.3	1109.4
35°	1609.7	1581.5	1576.6	1554.3	1479.0	1394.4	1302.0	1220.2	1136.2	1067.5	1054.0
37.5°	1572.4	1548.7	1541.4	1519.4	1444.5	1353.2	1255.7	1167.2	1080.8	1006.9	998.6
40°	1525.4	1503.1	1497.5	1478.0	1404.5	1307.6	1205.5	1112.5	1023.6	955.0	943.2
42.5°	1471.7	1450.8	1447.7	1427.5	1355.0	1257.1	1151.2	1055.7	964.1	897.9	886.0
45°	1410.7	1390.5	1389.8	1370.7	1301.0	1201.0	1094.0	998.2	905.9	837.2	831.0
47.5°	1343.5	1325.4	1325.4	1307.6	1240.7	1139.3	1035.1	938.3	847.3	786.7	775.6
50°	1270.3	1253.3	1248.0	1239.3	1174.2	1072.1	973.1	879.8	789.5	731.7	720.9
52.5°	1192.3	1177.6	1181.1	1165.1	1102.0	1002.0	910.4	813.9	731.3	678.7	667.9
55°	1110.1	1089.1	1092.3	1086.4	1026.8	929.9	840.0	759.5	674.2	624.7	614.6
57.5°	1024.7	997.5	1008.7	1005.2	946.6	856.1	775.6	697.9	617.4	571.8	562.0
60°	937.2	911.1	922.6	919.5	864.4	782.2	709.0	636.9	560.9	519.5	509.7
62.5°	847.3	823.3	833.8	831.3	780.8	706.6	642.8	576.6	504.2	466.9	457.8
65°	756.8	733.8	743.2	741.4	694.7	638.3	574.9	514.3	447.0	414.6	405.6
67.5°	664.1	642.8	651.5	651.5	608.7	554.7	506.6	451.2	390.9	363.0	354.7
70°	572.1	552.2	559.9	559.2	523.0	479.1	437.6	388.1	334.1	311.1	304.2
72.5°	479.4	462.0	469.0	468.3	438.0	409.7	368.6	325.8	278.7	260.3	254.0
75°	389.5	373.2	379.8	379.1	354.3	327.9	300.3	264.8	224.4	211.5	205.2
77.5°	303.8	287.1	292.7	292.7	274.6	255.4	233.4	205.9	177.3	163.4	158.9
80°	221.6	213.6	210.8	211.1	198.9	186.4	175.3	148.8	127.9	118.5	115.3
82.5°	145.6	139.0	136.2	136.9	130.0	122.3	115.3	96.9	82.9	77.3	75.6
85°	77.3	72.5	70.0	71.8	70.4	66.2	62.7	50.2	41.5	39.4	38.3
87.5°	24.4	21.3	19.5	25.8	22.0	19.5	18.8	15.0	11.5	11.5	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

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7
2.5°	1491.6	1491.6	1478.0	1474.8	1473.5	1475.2	1461.6	1459.2	1478.7	1472.1	1457.1
5°	1479.7	1479.0	1459.9	1456.4	1456.4	1454.3	1439.0	1435.5	1455.0	1449.4	1433.0
7.5°	1465.1	1463.0	1440.4	1437.9	1434.4	1433.0	1416.0	1413.5	1430.2	1426.8	1411.4
10°	1447.3	1445.2	1418.4	1416.7	1412.8	1410.0	1394.0	1392.3	1409.3	1403.8	1391.6
12.5°	1424.0	1420.1	1392.6	1390.9	1387.7	1386.7	1371.0	1370.3	1389.1	1383.6	1370.7
15°	1393.3	1390.2	1359.5	1360.2	1360.6	1360.6	1348.0	1347.3	1365.8	1363.4	1349.4
17.5°	1359.5	1355.3	1326.1	1328.2	1330.6	1333.4	1323.6	1325.4	1344.9	1341.8	1329.2
20°	1321.2	1317.0	1288.4	1294.4	1299.6	1305.2	1298.9	1303.8	1321.9	1320.5	1311.1
22.5°	1278.3	1274.2	1247.7	1256.7	1265.4	1275.9	1273.1	1278.7	1297.9	1297.5	1289.1
25°	1226.1	1227.1	1203.8	1214.9	1229.6	1244.2	1245.2	1254.3	1275.6	1273.5	1265.8
27.5°	1177.3	1178.7	1154.0	1172.8	1192.3	1211.1	1215.6	1228.2	1249.8	1248.0	1241.4
30°	1126.1	1127.8	1103.8	1129.6	1153.3	1176.3	1186.0	1203.1	1225.0	1225.0	1218.1
32.5°	1072.8	1075.9	1050.8	1085.3	1112.8	1139.7	1156.7	1174.5	1199.6	1198.9	1193.0
35°	1018.1	1021.6	998.6	1042.5	1070.0	1102.7	1124.0	1147.7	1170.0	1170.3	1165.8
37.5°	962.3	966.5	945.6	993.7	1025.0	1063.7	1090.9	1114.6	1139.3	1140.7	1136.5
40°	906.9	911.5	893.3	939.7	979.4	1022.6	1054.0	1081.8	1109.0	1109.7	1106.9
42.5°	851.5	856.4	842.8	888.1	933.1	979.4	1016.3	1048.0	1075.9	1077.7	1074.5
45°	797.5	801.7	791.9	841.4	884.6	935.1	977.7	1013.5	1041.8	1044.2	1043.2
47.5°	743.9	747.7	739.0	784.3	834.1	887.8	936.9	976.6	1006.6	1009.4	1008.7
50°	691.3	694.4	685.0	732.4	781.8	839.0	890.2	936.2	969.6	972.4	972.1
52.5°	639.0	642.1	634.1	683.9	728.9	789.2	844.9	894.7	927.8	932.0	932.7
55°	588.5	589.9	583.6	631.3	674.9	737.9	802.1	850.5	883.6	887.1	889.2
57.5°	538.0	538.3	533.1	578.7	620.5	685.0	752.2	803.1	834.5	837.9	841.1
60°	487.8	487.4	481.5	525.8	565.8	629.6	699.6	750.1	780.5	783.6	787.8
62.5°	438.0	436.9	431.7	472.5	510.1	573.1	643.5	692.3	721.2	723.3	728.9
65°	388.5	387.4	382.6	420.2	454.3	514.6	583.6	629.9	656.1	658.9	657.8
67.5°	339.7	337.6	333.8	367.6	398.6	454.3	520.5	564.8	586.4	588.8	595.4
70°	290.9	288.5	279.8	315.7	342.8	392.7	454.3	493.7	511.8	514.3	513.2
72.5°	242.8	240.4	231.0	264.1	287.1	330.6	385.7	418.4	434.1	436.2	436.2
75°	196.2	194.8	188.8	213.9	233.1	268.6	315.3	342.5	354.7	357.1	356.4
77.5°	151.2	150.2	144.2	165.8	180.8	207.3	244.9	266.2	275.2	278.0	284.0
80°	108.4	108.0	98.6	119.9	126.5	148.8	176.3	192.7	197.6	201.4	205.6
82.5°	69.3	69.7	60.3	78.4	81.2	95.5	112.5	122.6	126.1	129.3	132.4
85°	33.8	35.2	30.0	41.5	41.8	49.1	56.4	60.3	61.7	64.1	66.9
87.5°	8.7	10.1	5.6	11.8	10.5	13.6	15.7	16.7	16.4	18.1	19.2
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°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7
2.5°	1462.0	1473.1	1467.5	1485.6	1492.6	1481.5	1501.0	1501.3	1487.4	1503.8	1512.8
5°	1439.3	1450.8	1447.3	1466.1	1474.8	1465.1	1488.8	1493.3	1479.7	1498.2	1512.8
7.5°	1416.3	1429.9	1425.4	1444.5	1455.0	1447.3	1472.8	1480.1	1469.6	1489.8	1509.3
10°	1396.5	1407.9	1403.1	1423.3	1432.3	1426.1	1451.2	1464.7	1455.0	1479.7	1503.1
12.5°	1376.9	1386.3	1380.8	1397.5	1406.2	1398.2	1428.9	1441.4	1434.4	1460.2	1490.2
15°	1351.9	1362.3	1354.6	1369.6	1376.2	1369.3	1394.4	1416.0	1407.3	1435.5	1468.6
17.5°	1332.7	1338.6	1328.2	1340.0	1343.8	1334.4	1359.9	1381.1	1374.9	1405.5	1443.8
20°	1311.4	1316.3	1301.7	1308.3	1308.0	1296.1	1319.5	1340.4	1336.2	1370.0	1413.5
22.5°	1287.7	1290.2	1273.1	1274.5	1273.8	1254.3	1275.2	1296.5	1294.7	1328.9	1377.6
25°	1262.7	1263.0	1241.1	1240.4	1232.7	1209.7	1228.2	1252.2	1247.0	1283.9	1335.1
27.5°	1237.9	1234.4	1208.0	1201.7	1189.5	1162.0	1178.3	1199.9	1196.8	1233.0	1289.8
30°	1211.4	1206.9	1174.5	1163.0	1145.2	1113.5	1127.1	1147.3	1149.1	1180.8	1240.4
32.5°	1186.4	1174.9	1139.0	1122.2	1099.9	1063.0	1070.3	1090.9	1093.7	1125.7	1187.1
35°	1154.0	1146.3	1102.0	1073.5	1051.5	1011.1	1018.8	1033.1	1037.2	1068.6	1131.0
37.5°	1123.3	1111.1	1064.1	1029.2	1001.0	958.5	960.6	975.2	979.4	1011.1	1072.8
40°	1091.6	1074.2	1023.6	982.9	950.5	905.9	903.4	918.8	921.9	952.9	1008.7
42.5°	1057.8	1036.9	980.1	935.5	898.2	852.9	848.0	861.3	864.8	895.1	949.8
45°	1023.6	998.6	935.5	886.7	846.0	799.6	794.7	804.8	810.1	838.6	891.2
47.5°	987.4	958.1	889.5	835.2	793.0	746.7	740.7	750.8	755.0	783.2	833.1
50°	949.4	913.9	842.1	782.2	740.4	694.7	686.0	697.9	701.7	728.2	777.0
52.5°	907.6	868.3	791.6	728.9	687.1	643.5	633.1	644.6	649.1	674.9	719.8
55°	863.4	820.9	740.7	679.8	634.5	592.0	583.2	587.8	597.5	621.9	663.7
57.5°	813.6	771.4	687.1	625.1	581.5	540.7	533.4	537.6	546.7	570.4	608.0
60°	760.6	716.0	632.4	570.4	528.2	489.5	482.9	486.7	496.5	518.1	552.9
62.5°	708.3	658.2	575.9	514.3	475.9	440.0	438.3	436.9	446.0	466.9	497.5
65°	644.9	596.8	517.0	458.5	423.7	391.3	384.3	387.4	396.1	415.3	447.4
67.5°	577.0	533.4	456.8	402.8	371.8	342.8	336.9	338.3	347.4	364.1	392.0
70°	504.9	466.5	395.1	346.7	320.5	293.4	289.5	289.9	298.6	313.2	337.6
72.5°	429.2	394.8	332.7	291.3	269.7	250.2	246.7	242.5	250.5	263.1	284.0
75°	352.2	321.9	270.7	236.9	219.9	203.5	200.3	196.2	204.2	215.0	231.3
77.5°	274.6	250.2	210.4	184.3	171.1	158.9	156.1	151.6	159.6	167.6	180.5
80°	198.6	180.8	157.1	129.6	125.1	117.1	114.3	109.4	117.1	122.3	132.0
82.5°	128.2	116.4	102.8	83.6	82.9	77.0	75.6	70.0	77.0	80.1	87.5
85°	64.8	59.2	55.7	42.5	43.9	40.1	39.7	33.8	39.4	40.8	44.9
87.5°	18.5	19.5	17.4	10.5	13.2	12.5	12.5	9.1	12.5	12.5	14.3
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: P837733

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1HI-30-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7
2.5°	1495.1	1501.0	1502.4	1502.0	1505.9	1526.8	1519.8	1526.8
5°	1498.5	1511.8	1515.3	1520.1	1526.4	1550.1	1542.4	1550.8
7.5°	1500.6	1520.5	1528.2	1537.6	1547.7	1574.1	1567.9	1576.2
10°	1500.6	1526.4	1537.6	1553.2	1566.8	1597.5	1591.6	1601.3
12.5°	1494.4	1527.5	1543.1	1565.1	1582.5	1615.6	1613.2	1620.1
15°	1481.5	1522.2	1543.8	1572.1	1593.7	1630.6	1629.5	1637.9
17.5°	1464.0	1513.2	1539.3	1574.8	1602.0	1643.5	1645.9	1650.4
20°	1442.1	1496.1	1530.2	1573.8	1607.9	1653.6	1656.7	1663.0
22.5°	1413.2	1475.5	1516.7	1569.3	1608.6	1657.8	1663.3	1669.3
25°	1379.0	1450.8	1498.9	1560.6	1605.2	1657.4	1665.1	1670.3
27.5°	1340.0	1418.8	1476.2	1546.6	1595.4	1651.8	1661.2	1667.5
30°	1294.7	1384.6	1450.5	1528.5	1582.2	1641.4	1651.5	1657.8
32.5°	1248.0	1347.0	1419.8	1505.2	1563.0	1624.7	1633.4	1638.3
35°	1197.2	1301.3	1382.9	1475.2	1538.3	1597.8	1604.5	1609.7
37.5°	1141.8	1251.9	1340.7	1441.4	1503.4	1560.6	1566.5	1572.4
40°	1084.6	1199.9	1293.3	1399.9	1462.0	1514.9	1521.2	1525.4
42.5°	1027.1	1142.5	1242.8	1351.2	1412.8	1463.7	1467.5	1471.7
45°	968.9	1082.9	1186.0	1297.2	1358.1	1405.9	1407.3	1410.7
47.5°	909.7	1021.2	1123.6	1235.5	1295.8	1339.3	1340.7	1343.5
50°	850.1	959.5	1057.1	1168.9	1227.8	1273.8	1267.5	1270.3
52.5°	791.6	894.7	994.4	1097.2	1155.3	1196.1	1197.9	1192.3
55°	734.1	831.3	923.0	1021.9	1077.3	1109.0	1108.0	1110.1
57.5°	675.9	767.2	851.2	941.8	995.8	1025.7	1032.0	1024.7
60°	616.7	702.4	777.7	859.5	911.8	936.9	944.2	937.2
62.5°	557.8	636.6	704.8	776.3	824.7	855.7	855.0	847.3
65°	498.9	570.4	631.3	692.0	734.1	765.1	763.7	756.8
67.5°	444.6	503.5	558.2	607.3	643.9	665.1	672.4	664.1
70°	384.7	435.5	483.6	523.0	553.3	572.4	579.4	572.1
72.5°	324.7	367.9	401.7	439.7	463.0	479.1	486.4	479.4
75°	265.5	301.0	328.6	358.2	374.5	388.1	396.5	389.5
77.5°	208.0	235.5	257.5	279.1	297.9	301.0	308.3	303.8
80°	153.3	173.2	189.2	203.5	217.1	218.5	224.4	221.6
82.5°	102.1	115.3	119.5	134.5	143.2	141.8	147.7	145.6
85°	54.0	62.0	69.3	73.9	78.7	74.2	79.4	77.3
87.5°	18.1	19.2	16.7	23.7	26.1	22.3	25.4	24.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)