

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: HALO

Report Number: P640219

Luminaire Tested: LCR830RD9FSE010-33W-5000K

Issue Date: 2/13/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640219  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2208047C001)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: LCR830RD9FSE010-33W-5000K  
Description: LCR 8  
Light Source: 5000K CCT, 93 CRI LEDS  
Ballast/Driver: -

**Summary**

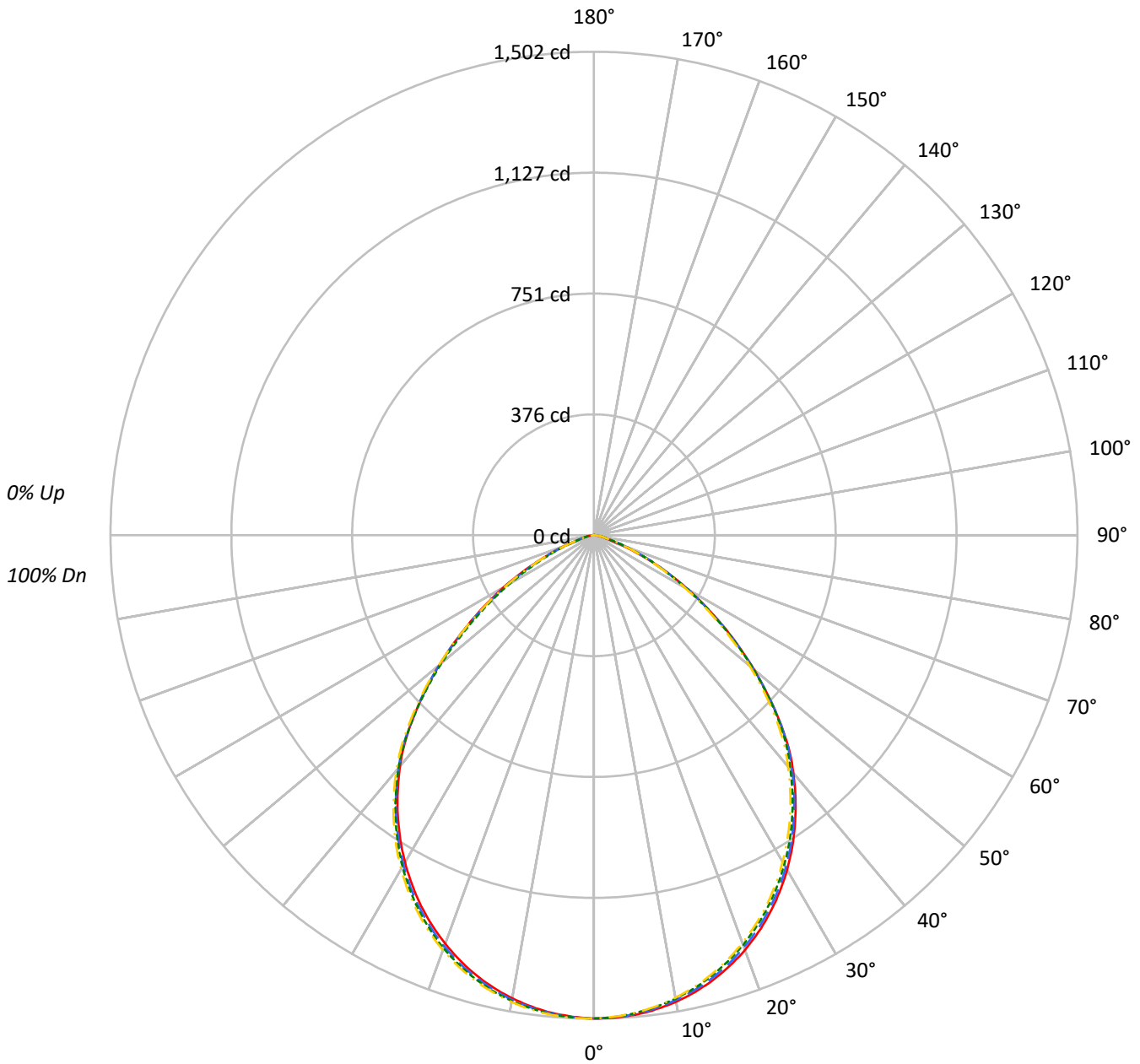
Lumens per Lamp: N/A  
Luminaire Lumens: 3105.0 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.26  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.8  
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: 24 FT



TEST NUMBER: P640219  
CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - - - 90°-270°    - · - 135°-315°



TEST NUMBER: P640219  
 CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  |     | 0  |    |
| 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   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 84  | 91  | 86  | 82  | 87  | 84  | 81  | 84  | 82  | 79  | 77  |    |    |
| 3   | 95  | 86  | 79  | 73  | 93  | 84  | 78  | 73  | 81  | 76  | 71  | 79  | 74  | 70  | 76  | 72  | 69  | 67  |    |    |
| 4   | 88  | 77  | 70  | 64  | 86  | 76  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 62  | 69  | 65  | 61  | 59  |    |    |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 52  |    |    |
| 6   | 75  | 63  | 55  | 50  | 74  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 46  |    |    |
| 7   | 70  | 58  | 50  | 44  | 69  | 57  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 44  | 53  | 47  | 43  | 41  |    |    |
| 8   | 66  | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 45  | 40  | 36  | 34  |    |    |
| 10  | 58  | 45  | 38  | 33  | 57  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 42  | 37  | 33  | 31  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 90°   | 180°  | 270°  |
|-----|-------|-------|-------|-------|
| 0°  | 46288 | 46288 | 46288 | 46288 |
| 5°  | 46276 | 46122 | 46109 | 46252 |
| 10° | 46079 | 45759 | 45734 | 45994 |
| 15° | 45655 | 45211 | 45153 | 45524 |
| 20° | 45003 | 44494 | 44320 | 44816 |
| 25° | 44034 | 43418 | 43217 | 43765 |
| 30° | 42728 | 42094 | 41795 | 42336 |
| 35° | 41017 | 40396 | 39982 | 40445 |
| 40° | 38801 | 38241 | 37718 | 38008 |
| 45° | 35524 | 35302 | 34355 | 34381 |
| 50° | 31120 | 30976 | 30031 | 29614 |
| 55° | 26198 | 25892 | 25176 | 24263 |
| 60° | 20926 | 20506 | 19963 | 18705 |
| 65° | 15053 | 15148 | 14214 | 13061 |
| 70° | 8953  | 10062 | 8565  | 7799  |
| 75° | 4790  | 6041  | 4742  | 4551  |
| 80° | 3996  | 4937  | 3889  | 3800  |
| 85° | 2901  | 4670  | 2795  | 2654  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 35594 cd/sqm



TEST NUMBER: P640219  
 CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 141.6  | 4.6       |
| 10°-20°   | 400.6  | 12.9      |
| 20°-30°   | 589.5  | 19.0      |
| 30°-40°   | 670.6  | 21.6      |
| 40°-50°   | 614.2  | 19.8      |
| 50°-60°   | 422.8  | 13.6      |
| 60°-70°   | 199.5  | 6.4       |
| 70°-80°   | 52.6   | 1.7       |
| 80°-90°   | 11.1   | 0.4       |
| 90°-100°  | 0.1    | 0.0       |
| 100°-110° | 0.2    | 0.0       |
| 110°-120° | 0.3    | 0.0       |
| 120°-130° | 0.4    | 0.0       |
| 130°-140° | 0.4    | 0.0       |
| 140°-150° | 0.4    | 0.0       |
| 150°-160° | 0.4    | 0.0       |
| 160°-170° | 0.2    | 0.0       |
| 170°-180° | 0.1    | 0.0       |
| 0°-30°    | 1131.7 | 36.4      |
| 0°-40°    | 1802.3 | 58.0      |
| 0°-60°    | 2839.3 | 91.4      |
| 0°-90°    | 3102.6 | 99.9      |
| 90°-120°  | 0.6    | 0.0       |
| 90°-150°  | 1.8    | 0.1       |
| 90°-180°  | 2.0    | 0.1       |
| 0°-180°   | 3105.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 90°  | 180° | 270° | 360° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 1501 | 1501 | 1501 | 1501 | 1501 |      |
| 5°   | 1495 | 1490 | 1490 | 1494 | 1495 | 142  |
| 15°  | 1430 | 1416 | 1414 | 1426 | 1430 | 403  |
| 25°  | 1294 | 1276 | 1270 | 1286 | 1294 | 595  |
| 35°  | 1090 | 1073 | 1062 | 1074 | 1090 | 680  |
| 45°  | 815  | 810  | 788  | 788  | 815  | 625  |
| 55°  | 487  | 482  | 468  | 451  | 487  | 436  |
| 65°  | 206  | 208  | 195  | 179  | 206  | 207  |
| 75°  | 40   | 51   | 40   | 38   | 40   | 50   |
| 85°  | 8    | 13   | 8    | 8    | 8    | 10   |
| 90°  | 0    | 1    | 0    | 0    | 0    | 0    |
| 95°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 105° | 0    | 0    | 0    | 0    | 0    | 0    |
| 115° | 0    | 0    | 0    | 0    | 0    | 0    |
| 125° | 0    | 0    | 0    | 0    | 0    | 0    |
| 135° | 1    | 0    | 1    | 0    | 1    | 0    |
| 145° | 1    | 1    | 1    | 1    | 1    | 0    |
| 155° | 1    | 1    | 1    | 1    | 1    | 0    |
| 165° | 1    | 1    | 1    | 1    | 1    | 0    |
| 175° | 1    | 1    | 1    | 1    | 1    | 0    |
| 180° | 1    | 1    | 1    | 1    | 1    |      |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 |
| 0.5°  | 1501.6 | 1501.1 | 1501.1 | 1500.9 | 1500.9 | 1500.9 | 1500.7 | 1500.7 | 1500.8 | 1500.8 | 1500.9 |
| 1°    | 1501.2 | 1501.0 | 1500.7 | 1500.4 | 1500.4 | 1500.4 | 1500.1 | 1500.1 | 1500.3 | 1500.4 | 1500.6 |
| 1.5°  | 1501.0 | 1500.9 | 1500.2 | 1499.8 | 1499.4 | 1499.3 | 1499.4 | 1499.3 | 1499.4 | 1499.8 | 1500.1 |
| 2°    | 1500.9 | 1500.5 | 1499.6 | 1499.1 | 1498.7 | 1498.5 | 1498.4 | 1498.2 | 1498.3 | 1498.8 | 1499.5 |
| 2.5°  | 1500.0 | 1499.7 | 1498.8 | 1498.2 | 1497.6 | 1497.4 | 1497.0 | 1497.0 | 1497.4 | 1497.6 | 1498.8 |
| 3°    | 1499.1 | 1498.9 | 1498.0 | 1497.0 | 1496.4 | 1496.1 | 1495.7 | 1495.6 | 1495.9 | 1496.8 | 1497.8 |
| 3.5°  | 1498.4 | 1498.2 | 1496.9 | 1495.7 | 1495.2 | 1494.7 | 1494.3 | 1494.1 | 1494.5 | 1495.8 | 1496.7 |
| 4°    | 1497.4 | 1496.8 | 1495.5 | 1494.3 | 1493.7 | 1493.0 | 1492.7 | 1492.7 | 1493.0 | 1494.2 | 1495.3 |
| 4.5°  | 1496.3 | 1495.5 | 1494.0 | 1492.6 | 1491.9 | 1491.0 | 1490.7 | 1491.1 | 1491.5 | 1492.9 | 1493.7 |
| 5°    | 1495.0 | 1493.9 | 1492.3 | 1490.7 | 1490.0 | 1489.2 | 1488.8 | 1489.0 | 1489.6 | 1490.7 | 1492.1 |
| 5.5°  | 1493.4 | 1492.1 | 1490.6 | 1488.5 | 1487.7 | 1487.0 | 1486.4 | 1486.6 | 1487.9 | 1488.6 | 1490.2 |
| 6°    | 1491.8 | 1490.4 | 1488.8 | 1486.6 | 1485.5 | 1484.8 | 1484.2 | 1484.3 | 1485.2 | 1486.6 | 1488.1 |
| 6.5°  | 1490.0 | 1488.3 | 1486.5 | 1484.4 | 1483.1 | 1482.3 | 1481.6 | 1481.6 | 1482.7 | 1484.3 | 1486.0 |
| 7°    | 1488.2 | 1486.3 | 1484.1 | 1482.0 | 1480.5 | 1479.6 | 1478.8 | 1479.1 | 1480.2 | 1481.7 | 1483.6 |
| 7.5°  | 1485.1 | 1483.9 | 1481.1 | 1479.4 | 1477.7 | 1476.8 | 1476.0 | 1476.0 | 1477.3 | 1478.8 | 1480.9 |
| 8°    | 1483.0 | 1481.3 | 1478.6 | 1476.6 | 1474.8 | 1473.7 | 1472.8 | 1472.8 | 1474.3 | 1476.0 | 1478.1 |
| 8.5°  | 1480.3 | 1478.6 | 1475.7 | 1473.7 | 1471.6 | 1470.5 | 1469.8 | 1469.9 | 1471.1 | 1472.9 | 1475.0 |
| 9°    | 1477.7 | 1475.7 | 1472.7 | 1470.3 | 1468.4 | 1467.1 | 1466.3 | 1466.6 | 1467.7 | 1469.7 | 1471.9 |
| 9.5°  | 1474.8 | 1472.7 | 1469.4 | 1467.0 | 1465.0 | 1463.5 | 1462.7 | 1463.0 | 1464.2 | 1466.2 | 1469.0 |
| 10°   | 1471.6 | 1469.6 | 1466.2 | 1463.5 | 1461.4 | 1459.8 | 1458.9 | 1459.2 | 1460.6 | 1462.6 | 1465.8 |
| 10.5° | 1468.2 | 1466.2 | 1462.7 | 1459.8 | 1457.6 | 1455.6 | 1454.9 | 1455.4 | 1456.7 | 1458.9 | 1462.1 |
| 11°   | 1464.7 | 1462.6 | 1459.2 | 1456.0 | 1453.8 | 1451.5 | 1450.8 | 1451.6 | 1452.7 | 1455.1 | 1458.1 |
| 11.5° | 1461.2 | 1458.7 | 1455.3 | 1452.1 | 1449.7 | 1447.3 | 1446.4 | 1447.4 | 1448.7 | 1451.0 | 1454.1 |
| 12°   | 1457.3 | 1454.8 | 1451.1 | 1447.4 | 1445.4 | 1442.7 | 1441.8 | 1443.0 | 1444.4 | 1446.7 | 1450.0 |
| 12.5° | 1453.5 | 1450.7 | 1446.9 | 1443.2 | 1441.0 | 1438.4 | 1437.4 | 1438.4 | 1439.8 | 1442.3 | 1445.6 |
| 13°   | 1448.9 | 1446.5 | 1442.5 | 1438.6 | 1436.3 | 1433.5 | 1432.7 | 1433.5 | 1435.2 | 1437.7 | 1441.0 |
| 13.5° | 1444.3 | 1442.1 | 1437.9 | 1434.0 | 1431.6 | 1428.7 | 1427.6 | 1428.5 | 1430.1 | 1432.8 | 1436.4 |
| 14°   | 1439.8 | 1437.5 | 1433.2 | 1429.1 | 1426.6 | 1423.8 | 1422.6 | 1423.3 | 1425.2 | 1427.6 | 1431.5 |
| 14.5° | 1435.3 | 1432.8 | 1428.4 | 1423.9 | 1421.3 | 1418.8 | 1417.4 | 1418.0 | 1419.9 | 1422.5 | 1426.4 |
| 15°   | 1430.1 | 1427.6 | 1423.2 | 1418.6 | 1416.2 | 1413.2 | 1411.8 | 1412.7 | 1414.4 | 1417.2 | 1421.2 |
| 15.5° | 1425.0 | 1422.4 | 1417.8 | 1413.1 | 1410.8 | 1407.9 | 1406.3 | 1406.9 | 1408.8 | 1411.7 | 1415.8 |
| 16°   | 1419.8 | 1417.1 | 1412.4 | 1407.7 | 1405.0 | 1402.3 | 1400.2 | 1401.2 | 1403.1 | 1406.1 | 1410.3 |
| 16.5° | 1414.6 | 1411.6 | 1407.0 | 1401.9 | 1399.0 | 1396.2 | 1394.4 | 1395.4 | 1397.0 | 1400.3 | 1404.7 |
| 17°   | 1408.9 | 1405.8 | 1401.0 | 1395.9 | 1393.0 | 1390.3 | 1388.3 | 1388.9 | 1391.1 | 1394.3 | 1398.6 |
| 17.5° | 1403.0 | 1399.7 | 1395.2 | 1390.0 | 1387.2 | 1383.9 | 1381.9 | 1382.6 | 1384.6 | 1387.9 | 1392.3 |
| 18°   | 1397.1 | 1393.6 | 1388.8 | 1383.7 | 1381.1 | 1377.5 | 1375.6 | 1376.3 | 1378.2 | 1381.5 | 1385.9 |
| 18.5° | 1390.8 | 1387.0 | 1382.6 | 1377.2 | 1374.6 | 1370.7 | 1368.9 | 1369.5 | 1371.5 | 1374.9 | 1379.6 |
| 19°   | 1384.6 | 1380.7 | 1376.2 | 1370.4 | 1367.7 | 1364.1 | 1362.1 | 1362.4 | 1364.7 | 1368.2 | 1372.8 |
| 19.5° | 1378.2 | 1374.4 | 1369.8 | 1364.1 | 1361.1 | 1357.3 | 1355.1 | 1355.4 | 1357.7 | 1361.6 | 1366.2 |
| 20°   | 1371.4 | 1367.9 | 1362.8 | 1357.1 | 1355.9 | 1350.2 | 1348.2 | 1348.5 | 1350.6 | 1354.5 | 1359.2 |
| 20.5° | 1364.1 | 1361.0 | 1355.9 | 1350.2 | 1347.1 | 1343.3 | 1340.6 | 1341.3 | 1343.5 | 1347.1 | 1352.0 |
| 21°   | 1357.0 | 1353.8 | 1348.6 | 1343.1 | 1339.8 | 1336.0 | 1333.2 | 1333.8 | 1335.9 | 1339.8 | 1344.5 |
| 21.5° | 1349.9 | 1346.6 | 1341.4 | 1335.6 | 1332.3 | 1328.2 | 1325.3 | 1326.2 | 1328.1 | 1332.3 | 1336.9 |
| 22°   | 1342.2 | 1339.2 | 1333.8 | 1328.3 | 1325.0 | 1320.5 | 1317.9 | 1318.6 | 1320.3 | 1324.7 | 1329.4 |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22.5° | 1334.6 | 1331.5 | 1326.5 | 1320.5 | 1317.3 | 1312.9 | 1310.2 | 1310.7 | 1312.4 | 1316.6 | 1321.4 |
| 23°   | 1327.2 | 1323.8 | 1318.5 | 1312.6 | 1309.4 | 1304.8 | 1302.3 | 1302.4 | 1304.5 | 1308.6 | 1313.4 |
| 23.5° | 1319.1 | 1315.9 | 1310.4 | 1304.3 | 1301.3 | 1296.5 | 1294.0 | 1293.9 | 1296.0 | 1300.3 | 1305.1 |
| 24°   | 1310.8 | 1307.6 | 1302.1 | 1296.2 | 1292.9 | 1288.1 | 1285.5 | 1285.4 | 1287.4 | 1291.9 | 1296.8 |
| 24.5° | 1302.8 | 1299.5 | 1293.9 | 1287.6 | 1284.8 | 1279.8 | 1277.1 | 1276.7 | 1278.8 | 1283.1 | 1288.3 |
| 25°   | 1294.2 | 1291.0 | 1285.4 | 1279.0 | 1276.1 | 1271.1 | 1267.9 | 1268.0 | 1270.2 | 1274.3 | 1279.3 |
| 25.5° | 1285.3 | 1282.5 | 1276.5 | 1270.4 | 1267.3 | 1262.1 | 1259.3 | 1259.2 | 1261.1 | 1265.7 | 1270.9 |
| 26°   | 1276.6 | 1273.8 | 1267.7 | 1261.8 | 1258.5 | 1252.9 | 1250.2 | 1250.0 | 1252.0 | 1256.5 | 1262.1 |
| 26.5° | 1267.6 | 1264.6 | 1258.9 | 1252.9 | 1249.6 | 1244.5 | 1240.9 | 1240.7 | 1242.6 | 1247.1 | 1252.5 |
| 27°   | 1258.1 | 1255.6 | 1249.7 | 1243.8 | 1240.1 | 1234.6 | 1231.3 | 1231.3 | 1233.4 | 1237.6 | 1243.1 |
| 27.5° | 1248.9 | 1246.0 | 1240.3 | 1234.4 | 1231.4 | 1225.5 | 1222.3 | 1221.7 | 1223.7 | 1227.8 | 1233.6 |
| 28°   | 1239.4 | 1236.6 | 1230.3 | 1225.0 | 1221.6 | 1216.0 | 1212.1 | 1211.9 | 1214.0 | 1218.4 | 1223.7 |
| 28.5° | 1229.7 | 1226.9 | 1221.2 | 1215.1 | 1212.5 | 1206.2 | 1202.5 | 1202.2 | 1204.0 | 1208.2 | 1213.8 |
| 29°   | 1220.1 | 1217.3 | 1211.6 | 1205.5 | 1202.4 | 1196.5 | 1192.5 | 1191.8 | 1194.2 | 1198.3 | 1203.8 |
| 29.5° | 1210.0 | 1207.3 | 1201.4 | 1195.6 | 1192.5 | 1186.6 | 1182.4 | 1182.0 | 1184.1 | 1188.2 | 1193.7 |
| 30°   | 1200.0 | 1197.2 | 1191.5 | 1185.4 | 1182.2 | 1176.6 | 1172.0 | 1171.8 | 1173.8 | 1177.9 | 1183.1 |
| 30.5° | 1189.6 | 1186.8 | 1180.9 | 1175.2 | 1171.9 | 1166.1 | 1161.8 | 1161.2 | 1163.1 | 1167.1 | 1172.4 |
| 31°   | 1178.9 | 1176.5 | 1170.6 | 1164.8 | 1161.5 | 1155.6 | 1151.0 | 1150.7 | 1152.4 | 1156.6 | 1162.0 |
| 31.5° | 1168.3 | 1165.7 | 1160.2 | 1154.1 | 1151.1 | 1144.7 | 1140.0 | 1139.8 | 1141.6 | 1145.8 | 1151.1 |
| 32°   | 1157.8 | 1155.2 | 1149.6 | 1143.7 | 1140.3 | 1134.0 | 1129.0 | 1129.0 | 1130.8 | 1135.0 | 1140.2 |
| 32.5° | 1146.5 | 1144.2 | 1138.4 | 1132.7 | 1129.6 | 1123.5 | 1118.8 | 1118.1 | 1119.7 | 1123.8 | 1129.1 |
| 33°   | 1135.6 | 1133.3 | 1127.6 | 1121.7 | 1118.8 | 1112.1 | 1107.6 | 1107.0 | 1108.6 | 1112.6 | 1117.3 |
| 33.5° | 1124.7 | 1121.9 | 1116.3 | 1110.5 | 1107.5 | 1100.9 | 1096.3 | 1095.6 | 1097.0 | 1100.9 | 1105.8 |
| 34°   | 1113.2 | 1110.7 | 1105.4 | 1099.5 | 1096.3 | 1089.5 | 1085.0 | 1084.0 | 1085.6 | 1089.5 | 1094.3 |
| 34.5° | 1101.3 | 1098.8 | 1093.5 | 1088.1 | 1084.7 | 1078.4 | 1073.5 | 1072.4 | 1073.9 | 1077.5 | 1082.5 |
| 35°   | 1089.6 | 1087.5 | 1082.2 | 1076.4 | 1073.1 | 1066.7 | 1061.8 | 1060.7 | 1062.1 | 1065.9 | 1071.0 |
| 35.5° | 1077.5 | 1075.5 | 1070.5 | 1064.8 | 1061.6 | 1055.1 | 1050.3 | 1048.8 | 1050.4 | 1053.8 | 1058.8 |
| 36°   | 1065.7 | 1063.9 | 1058.6 | 1052.9 | 1049.6 | 1042.8 | 1038.0 | 1036.6 | 1038.4 | 1041.7 | 1046.6 |
| 36.5° | 1053.5 | 1051.6 | 1046.4 | 1040.9 | 1037.7 | 1031.2 | 1025.9 | 1024.7 | 1026.1 | 1029.5 | 1034.3 |
| 37°   | 1041.1 | 1039.4 | 1034.6 | 1028.5 | 1025.3 | 1018.6 | 1013.6 | 1012.3 | 1013.6 | 1016.9 | 1021.9 |
| 37.5° | 1028.5 | 1026.8 | 1022.4 | 1016.2 | 1013.1 | 1006.6 | 1001.5 | 1000.2 | 1001.1 | 1004.3 | 1009.1 |
| 38°   | 1015.9 | 1014.3 | 1009.5 | 1003.8 | 1000.4 | 994.0  | 988.7  | 987.9  | 988.5  | 991.8  | 996.3  |
| 38.5° | 1003.2 | 1001.3 | 996.8  | 991.2  | 987.8  | 981.5  | 976.2  | 975.2  | 976.0  | 978.7  | 983.4  |
| 39°   | 990.4  | 988.7  | 984.6  | 978.8  | 975.6  | 968.6  | 963.6  | 962.2  | 963.1  | 966.0  | 970.6  |
| 39.5° | 977.2  | 975.6  | 971.8  | 965.7  | 962.8  | 956.3  | 950.8  | 949.5  | 950.1  | 952.9  | 957.3  |
| 40°   | 963.9  | 962.8  | 958.7  | 952.8  | 950.0  | 943.2  | 937.7  | 936.5  | 937.0  | 940.1  | 944.2  |
| 40.5° | 950.8  | 949.7  | 945.4  | 939.8  | 937.0  | 930.2  | 925.1  | 923.6  | 924.2  | 926.7  | 930.5  |
| 41°   | 937.6  | 936.7  | 932.4  | 926.6  | 923.9  | 917.0  | 912.0  | 910.4  | 910.8  | 912.9  | 916.7  |
| 41.5° | 923.4  | 923.2  | 919.2  | 913.3  | 910.9  | 904.3  | 898.9  | 897.4  | 896.8  | 898.3  | 901.9  |
| 42°   | 909.2  | 909.5  | 905.9  | 900.1  | 897.8  | 891.0  | 885.7  | 883.3  | 881.9  | 883.4  | 887.4  |
| 42.5° | 894.3  | 894.7  | 892.3  | 886.4  | 884.5  | 877.5  | 871.5  | 868.7  | 867.1  | 868.1  | 871.7  |
| 43°   | 878.8  | 880.0  | 877.3  | 872.2  | 870.2  | 863.5  | 857.0  | 853.5  | 851.6  | 852.7  | 856.3  |
| 43.5° | 862.8  | 864.6  | 862.0  | 857.2  | 855.8  | 848.6  | 841.9  | 838.2  | 836.0  | 837.0  | 840.4  |
| 44°   | 847.1  | 848.4  | 846.5  | 841.4  | 840.3  | 833.3  | 826.5  | 822.2  | 820.0  | 821.4  | 824.6  |
| 44.5° | 830.8  | 832.1  | 830.9  | 825.8  | 825.2  | 817.8  | 810.9  | 806.5  | 804.1  | 805.1  | 808.2  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45°   | 814.6 | 816.2 | 814.8 | 809.9 | 809.5 | 802.2  | 795.0 | 790.8  | 787.8 | 788.9  | 792.1 |
| 45.5° | 798.3 | 799.8 | 798.4 | 794.2 | 793.4 | 786.3  | 779.5 | 774.6  | 771.9 | 772.7  | 775.9 |
| 46°   | 781.9 | 783.3 | 782.0 | 777.6 | 778.0 | 770.2  | 763.2 | 758.2  | 755.7 | 756.4  | 759.6 |
| 46.5° | 764.9 | 766.8 | 765.5 | 761.5 | 761.0 | 753.9  | 746.8 | 742.2  | 739.5 | 740.1  | 742.8 |
| 47°   | 748.4 | 750.3 | 748.9 | 744.5 | 744.8 | 737.5  | 730.4 | 726.1  | 722.8 | 723.6  | 726.2 |
| 47.5° | 731.5 | 733.6 | 732.0 | 727.6 | 728.3 | 721.1  | 714.3 | 710.0  | 706.9 | 707.4  | 709.7 |
| 48°   | 715.2 | 717.0 | 715.3 | 710.9 | 712.1 | 704.7  | 697.6 | 694.0  | 691.0 | 691.2  | 693.3 |
| 48.5° | 698.8 | 700.2 | 698.5 | 694.5 | 695.5 | 688.2  | 680.8 | 677.9  | 675.1 | 675.0  | 676.8 |
| 49°   | 682.0 | 683.6 | 681.5 | 677.3 | 678.9 | 671.7  | 664.1 | 661.8  | 659.2 | 658.8  | 660.3 |
| 49.5° | 665.6 | 666.9 | 665.6 | 661.0 | 662.3 | 655.2  | 647.3 | 645.7  | 643.2 | 642.6  | 643.9 |
| 50°   | 648.7 | 650.3 | 648.2 | 643.9 | 645.7 | 638.8  | 632.1 | 628.7  | 626.0 | 625.5  | 626.8 |
| 50.5° | 632.0 | 633.8 | 631.5 | 627.0 | 628.8 | 622.3  | 615.7 | 612.1  | 609.9 | 609.1  | 610.2 |
| 51°   | 615.7 | 617.0 | 615.0 | 610.3 | 612.3 | 605.2  | 599.4 | 595.8  | 593.7 | 592.8  | 593.2 |
| 51.5° | 599.2 | 600.7 | 598.4 | 594.0 | 595.7 | 588.9  | 583.2 | 579.7  | 578.1 | 576.9  | 576.8 |
| 52°   | 582.9 | 584.5 | 582.3 | 577.3 | 579.5 | 572.6  | 566.7 | 563.9  | 561.7 | 560.8  | 560.6 |
| 52.5° | 566.7 | 568.4 | 565.6 | 560.9 | 562.7 | 556.1  | 550.4 | 547.7  | 545.7 | 544.5  | 544.2 |
| 53°   | 550.7 | 551.9 | 549.3 | 544.5 | 546.2 | 539.8  | 534.4 | 531.7  | 530.2 | 528.6  | 527.6 |
| 53.5° | 534.5 | 535.8 | 533.1 | 528.3 | 529.6 | 523.3  | 518.7 | 516.1  | 514.4 | 512.6  | 511.4 |
| 54°   | 518.4 | 519.7 | 516.7 | 512.0 | 513.4 | 507.4  | 502.8 | 500.5  | 498.6 | 497.0  | 495.6 |
| 54.5° | 503.0 | 504.2 | 501.2 | 496.1 | 497.3 | 491.7  | 486.9 | 485.2  | 483.1 | 481.5  | 479.6 |
| 55°   | 487.3 | 488.4 | 485.4 | 480.1 | 481.6 | 476.2  | 471.6 | 470.0  | 468.3 | 465.9  | 464.0 |
| 55.5° | 471.1 | 473.3 | 469.7 | 464.2 | 465.5 | 460.6  | 456.1 | 454.7  | 452.8 | 450.8  | 448.0 |
| 56°   | 456.7 | 457.8 | 454.4 | 449.0 | 450.0 | 445.2  | 441.2 | 439.6  | 437.8 | 435.4  | 432.6 |
| 56.5° | 441.3 | 442.7 | 439.3 | 433.8 | 434.5 | 429.8  | 425.9 | 424.6  | 422.8 | 420.4  | 417.5 |
| 57°   | 426.0 | 427.4 | 423.9 | 418.3 | 419.3 | 414.7  | 411.1 | 410.0  | 408.4 | 405.3  | 402.4 |
| 57.5° | 410.7 | 412.9 | 409.0 | 403.2 | 404.1 | 399.8  | 396.3 | 395.6  | 393.6 | 390.6  | 387.4 |
| 58°   | 396.9 | 398.0 | 394.3 | 388.7 | 389.5 | 385.3  | 382.1 | 381.6  | 379.4 | 376.3  | 372.5 |
| 58.5° | 382.2 | 383.7 | 379.9 | 374.1 | 375.0 | 370.7  | 367.6 | 367.1  | 365.3 | 362.1  | 358.3 |
| 59°   | 367.7 | 369.0 | 365.5 | 359.2 | 360.6 | 356.7  | 353.7 | 353.0  | 351.7 | 347.9  | 343.7 |
| 59.5° | 353.0 | 355.1 | 351.4 | 345.5 | 346.5 | 342.5  | 339.5 | 339.2  | 337.3 | 334.0  | 329.5 |
| 60°   | 339.3 | 341.1 | 337.4 | 331.7 | 332.5 | 328.6  | 326.0 | 325.7  | 323.7 | 320.0  | 315.4 |
| 60.5° | 324.6 | 327.7 | 322.0 | 318.4 | 318.8 | 315.3  | 312.4 | 312.3  | 310.4 | 306.6  | 301.8 |
| 61°   | 311.3 | 314.4 | 309.1 | 305.1 | 305.4 | 301.8  | 299.3 | 298.9  | 297.5 | 293.3  | 287.9 |
| 61.5° | 298.0 | 301.1 | 296.1 | 291.7 | 292.3 | 288.6  | 286.4 | 286.2  | 284.1 | 280.2  | 274.7 |
| 62°   | 284.7 | 287.7 | 283.2 | 278.4 | 279.5 | 276.1  | 273.7 | 273.5  | 271.6 | 267.2  | 261.8 |
| 62.5° | 271.3 | 274.4 | 270.2 | 265.1 | 266.8 | 263.4  | 261.0 | 261.0  | 258.5 | 254.5  | 248.8 |
| 63°   | 258.2 | 261.0 | 257.7 | 252.2 | 254.2 | 250.9  | 248.8 | 248.5  | 245.2 | 241.8  | 235.9 |
| 63.5° | 245.3 | 248.5 | 245.4 | 240.5 | 242.1 | 238.8  | 236.7 | 236.3  | 232.4 | 229.6  | 223.9 |
| 64°   | 232.0 | 236.3 | 233.3 | 228.7 | 230.4 | 227.1  | 225.1 | 224.8  | 219.9 | 217.5  | 211.7 |
| 64.5° | 219.2 | 224.4 | 221.6 | 217.0 | 218.8 | 215.7  | 213.4 | 213.0  | 207.1 | 205.4  | 200.0 |
| 65°   | 206.3 | 212.4 | 210.2 | 205.7 | 207.6 | 204.5  | 202.5 | 201.8  | 194.8 | 193.5  | 188.6 |
| 65.5° | 193.8 | 200.7 | 198.7 | 194.8 | 196.6 | 193.5  | 191.4 | 190.6  | 182.9 | 182.1  | 177.5 |
| 66°   | 181.1 | 189.0 | 187.7 | 183.8 | 185.7 | 182.8  | 180.8 | 179.2  | 171.4 | 170.6  | 166.3 |
| 66.5° | 169.4 | 177.8 | 177.0 | 173.4 | 175.3 | 172.7  | 170.4 | 168.4  | 160.6 | 159.7  | 155.7 |
| 67°   | 158.0 | 166.6 | 166.6 | 163.3 | 165.3 | 162.7  | 160.5 | 157.9  | 150.2 | 149.0  | 145.8 |





TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 67.5° | 147.6 | 155.9 | 156.6 | 153.6 | 155.6 | 153.0  | 150.6 | 147.6  | 140.0 | 139.0  | 136.1 |
| 68°   | 137.3 | 145.6 | 146.7 | 144.2 | 145.9 | 143.4  | 141.2 | 137.6  | 130.2 | 129.1  | 126.3 |
| 68.5° | 127.6 | 135.4 | 137.2 | 134.9 | 137.1 | 134.7  | 132.2 | 127.9  | 120.9 | 119.9  | 117.3 |
| 69°   | 118.0 | 125.8 | 128.1 | 126.2 | 128.2 | 125.8  | 123.4 | 118.9  | 111.9 | 110.9  | 108.5 |
| 69.5° | 108.5 | 116.5 | 119.4 | 117.6 | 119.7 | 117.4  | 114.8 | 110.3  | 103.2 | 102.3  | 100.2 |
| 70°   | 99.3  | 107.8 | 111.0 | 109.5 | 111.6 | 109.5  | 106.7 | 102.1  | 95.0  | 94.2   | 92.2  |
| 70.5° | 90.7  | 99.5  | 102.8 | 101.8 | 103.9 | 102.0  | 99.2  | 94.3   | 88.1  | 87.4   | 85.3  |
| 71°   | 82.5  | 91.3  | 95.0  | 94.4  | 96.5  | 94.4   | 91.9  | 87.8   | 81.1  | 80.7   | 78.5  |
| 71.5° | 74.9  | 83.8  | 87.8  | 87.3  | 89.5  | 88.2   | 85.7  | 81.3   | 74.1  | 73.9   | 71.6  |
| 72°   | 67.7  | 76.8  | 80.9  | 80.7  | 83.3  | 81.9   | 79.4  | 74.8   | 67.1  | 67.1   | 64.8  |
| 72.5° | 61.4  | 70.1  | 74.1  | 74.4  | 77.1  | 75.7   | 73.2  | 68.4   | 60.2  | 60.4   | 59.4  |
| 73°   | 55.5  | 64.0  | 68.2  | 68.5  | 70.9  | 69.5   | 67.0  | 61.9   | 54.5  | 55.2   | 54.2  |
| 73.5° | 50.3  | 58.5  | 62.6  | 63.0  | 64.8  | 63.3   | 60.8  | 56.6   | 50.0  | 50.6   | 49.6  |
| 74°   | 46.5  | 53.6  | 57.4  | 58.1  | 59.7  | 58.3   | 55.9  | 52.0   | 46.4  | 46.4   | 45.6  |
| 74.5° | 43.0  | 49.2  | 52.6  | 53.3  | 55.0  | 53.7   | 51.3  | 47.7   | 42.7  | 42.7   | 42.1  |
| 75°   | 40.2  | 45.3  | 48.3  | 49.1  | 50.7  | 49.5   | 47.2  | 43.9   | 39.8  | 39.5   | 39.4  |
| 75.5° | 38.1  | 41.8  | 44.6  | 45.4  | 46.8  | 45.7   | 43.6  | 40.5   | 37.6  | 37.2   | 37.4  |
| 76°   | 36.2  | 38.6  | 41.2  | 42.0  | 43.3  | 42.3   | 40.4  | 37.8   | 35.7  | 35.3   | 35.5  |
| 76.5° | 34.3  | 36.4  | 38.5  | 39.2  | 40.3  | 39.5   | 38.1  | 35.8   | 33.8  | 33.4   | 33.6  |
| 77°   | 32.5  | 34.5  | 36.6  | 37.2  | 38.1  | 37.5   | 36.2  | 33.9   | 32.0  | 31.5   | 31.9  |
| 77.5° | 30.8  | 32.5  | 34.8  | 35.5  | 36.3  | 35.7   | 34.4  | 32.1   | 30.2  | 29.7   | 30.1  |
| 78°   | 29.1  | 30.8  | 33.1  | 33.7  | 34.5  | 33.9   | 32.7  | 30.3   | 28.5  | 28.0   | 28.4  |
| 78.5° | 27.4  | 29.1  | 31.4  | 32.1  | 32.7  | 32.2   | 30.9  | 28.6   | 26.8  | 26.3   | 26.8  |
| 79°   | 25.7  | 27.4  | 29.7  | 30.5  | 31.1  | 30.5   | 29.3  | 26.9   | 25.1  | 24.6   | 25.1  |
| 79.5° | 24.0  | 25.7  | 28.1  | 28.8  | 29.4  | 28.9   | 27.6  | 25.2   | 23.5  | 23.0   | 23.6  |
| 80°   | 22.5  | 24.1  | 26.4  | 27.2  | 27.8  | 27.3   | 26.0  | 23.6   | 21.9  | 21.4   | 22.0  |
| 80.5° | 20.9  | 22.5  | 24.8  | 25.6  | 26.2  | 25.7   | 24.4  | 22.0   | 20.4  | 19.9   | 20.5  |
| 81°   | 19.4  | 20.9  | 23.2  | 24.1  | 24.7  | 24.1   | 22.8  | 20.5   | 18.8  | 18.3   | 19.0  |
| 81.5° | 17.9  | 19.4  | 21.6  | 22.5  | 23.1  | 22.7   | 21.3  | 19.0   | 17.3  | 16.8   | 17.5  |
| 82°   | 16.4  | 17.9  | 20.1  | 21.1  | 21.7  | 21.1   | 19.8  | 17.4   | 15.8  | 15.3   | 16.1  |
| 82.5° | 15.0  | 16.4  | 18.7  | 19.6  | 20.2  | 19.7   | 18.3  | 15.9   | 14.4  | 13.9   | 14.7  |
| 83°   | 13.6  | 14.9  | 17.2  | 18.1  | 18.7  | 18.2   | 16.8  | 14.5   | 13.0  | 12.5   | 13.3  |
| 83.5° | 12.2  | 13.5  | 15.8  | 16.7  | 17.3  | 16.8   | 15.4  | 13.1   | 11.6  | 11.1   | 11.9  |
| 84°   | 10.8  | 12.2  | 14.4  | 15.3  | 15.9  | 15.4   | 14.0  | 11.7   | 10.3  | 9.8    | 10.7  |
| 84.5° | 9.5   | 10.8  | 13.1  | 14.0  | 14.5  | 14.1   | 12.7  | 10.4   | 9.1   | 8.6    | 9.4   |
| 85°   | 8.2   | 9.4   | 11.8  | 12.6  | 13.2  | 12.7   | 11.3  | 9.2    | 7.9   | 7.5    | 8.2   |
| 85.5° | 7.0   | 8.2   | 10.5  | 11.3  | 11.8  | 11.4   | 10.1  | 8.0    | 6.7   | 6.4    | 7.0   |
| 86°   | 6.0   | 7.1   | 9.3   | 10.0  | 10.5  | 10.1   | 8.9   | 6.8    | 5.5   | 5.3    | 5.8   |
| 86.5° | 4.9   | 6.0   | 8.0   | 8.7   | 9.3   | 8.8    | 7.7   | 5.7    | 4.3   | 4.1    | 4.5   |
| 87°   | 4.0   | 5.1   | 6.9   | 7.4   | 8.0   | 7.6    | 6.5   | 4.5    | 3.4   | 3.2    | 3.4   |
| 87.5° | 3.2   | 4.1   | 5.7   | 6.2   | 6.7   | 6.3    | 5.3   | 3.6    | 2.6   | 2.3    | 2.3   |
| 88°   | 2.5   | 3.2   | 4.5   | 5.0   | 5.5   | 5.1    | 4.1   | 2.7    | 1.8   | 1.4    | 1.1   |
| 88.5° | 1.7   | 2.5   | 3.4   | 3.8   | 4.2   | 3.8    | 3.0   | 1.8    | 1.0   | 0.6    | 0.3   |
| 89°   | 1.0   | 1.7   | 2.6   | 2.9   | 3.1   | 2.7    | 1.9   | 1.0    | 0.3   | 0.2    | 0.1   |
| 89.5° | 0.3   | 1.0   | 1.8   | 2.0   | 1.9   | 1.5    | 0.8   | 0.3    | 0.2   | 0.2    | 0.1   |



TEST NUMBER: P640219  
 CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 90°    | 0.1 | 0.2   | 1.0 | 1.0   | 0.8 | 0.5    | 0.2  | 0.2    | 0.2  | 0.2    | 0.1  |
| 90.5°  | 0.1 | 0.2   | 0.1 | 0.1   | 0.2 | 0.1    | 0.1  | 0.2    | 0.1  | 0.2    | 0.1  |
| 91°    | 0.1 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.2    | 0.1  | 0.2    | 0.1  |
| 91.5°  | 0.1 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.2    | 0.1  | 0.2    | 0.1  |
| 92°    | 0.1 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.2    | 0.1  | 0.1    | 0.1  |
| 92.5°  | 0.1 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.2    | 0.1  | 0.1    | 0.1  |
| 93°    | 0.1 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.2    | 0.1  | 0.1    | 0.1  |
| 93.5°  | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 94°    | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 94.5°  | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 95°    | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 95.5°  | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 96°    | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 96.5°  | 0.1 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 97°    | 0.2 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 97.5°  | 0.2 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 98°    | 0.2 | 0.1   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 98.5°  | 0.2 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 99°    | 0.2 | 0.2   | 0.1 | 0.1   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 99.5°  | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 100°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 100.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 101°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 101.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 102°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 102.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 103°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.1    | 0.1  |
| 103.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.2    | 0.1  |
| 104°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.2    | 0.1  |
| 104.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.2    | 0.1  |
| 105°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.1    | 0.2  | 0.2    | 0.1  |
| 105.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.2    | 0.2  | 0.2    | 0.1  |
| 106°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.2    | 0.2  | 0.2    | 0.1  |
| 106.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.2    | 0.2  | 0.2    | 0.2  |
| 107°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.2    | 0.2  | 0.2    | 0.2  |
| 107.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.1 | 0.1    | 0.1  | 0.2    | 0.2  | 0.2    | 0.2  |
| 108°   | 0.2 | 0.2   | 0.2 | 0.2   | 0.2 | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 108.5° | 0.2 | 0.2   | 0.2 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 109°   | 0.3 | 0.2   | 0.2 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 109.5° | 0.3 | 0.2   | 0.2 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 110°   | 0.3 | 0.2   | 0.2 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 110.5° | 0.3 | 0.3   | 0.2 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 111°   | 0.3 | 0.3   | 0.2 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 111.5° | 0.3 | 0.3   | 0.3 | 0.2   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 112°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 112.5° | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 113°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 113.5° | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 114°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.3  | 0.2    | 0.2  |
| 114.5° | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.3  | 0.2    | 0.2  |
| 115°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.3  | 0.2    | 0.2  |
| 115.5° | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.3  | 0.3    | 0.2  |
| 116°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.2    | 0.3  | 0.3    | 0.2  |
| 116.5° | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.3    | 0.3  | 0.3    | 0.2  |
| 117°   | 0.3 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.2  | 0.3    | 0.3  | 0.3    | 0.3  |
| 117.5° | 0.4 | 0.3   | 0.3 | 0.3   | 0.2 | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 118°   | 0.4 | 0.3   | 0.3 | 0.3   | 0.3 | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 118.5° | 0.4 | 0.3   | 0.3 | 0.3   | 0.3 | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 119°   | 0.4 | 0.4   | 0.3 | 0.3   | 0.3 | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 119.5° | 0.4 | 0.4   | 0.3 | 0.3   | 0.3 | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 120°   | 0.4 | 0.4   | 0.3 | 0.3   | 0.3 | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 120.5° | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 121°   | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.3    | 0.4  | 0.3    | 0.3  |
| 121.5° | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.3    | 0.4  | 0.3    | 0.3  |
| 122°   | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.3    | 0.4  | 0.3    | 0.3  |
| 122.5° | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.3    | 0.4  | 0.4    | 0.3  |
| 123°   | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.3    | 0.4  | 0.4    | 0.3  |
| 123.5° | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.4    | 0.4  | 0.4    | 0.3  |
| 124°   | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.3  | 0.4    | 0.4  | 0.4    | 0.4  |
| 124.5° | 0.4 | 0.4   | 0.4 | 0.4   | 0.3 | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 125°   | 0.5 | 0.4   | 0.4 | 0.4   | 0.4 | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 125.5° | 0.5 | 0.4   | 0.4 | 0.4   | 0.4 | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 126°   | 0.5 | 0.4   | 0.4 | 0.4   | 0.4 | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 126.5° | 0.5 | 0.5   | 0.4 | 0.4   | 0.4 | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 127°   | 0.5 | 0.5   | 0.4 | 0.4   | 0.4 | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 127.5° | 0.5 | 0.5   | 0.4 | 0.4   | 0.4 | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 128°   | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.4    | 0.5  | 0.4    | 0.4  |
| 128.5° | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.4    | 0.5  | 0.4    | 0.4  |
| 129°   | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.4    | 0.5  | 0.5    | 0.4  |
| 129.5° | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.4    | 0.5  | 0.5    | 0.4  |
| 130°   | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.4    | 0.5  | 0.5    | 0.4  |
| 130.5° | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.5    | 0.5  | 0.5    | 0.4  |
| 131°   | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.4  | 0.5    | 0.5  | 0.5    | 0.4  |
| 131.5° | 0.5 | 0.5   | 0.5 | 0.5   | 0.4 | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 132°   | 0.5 | 0.5   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 132.5° | 0.6 | 0.5   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 133°   | 0.6 | 0.5   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 133.5° | 0.6 | 0.5   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 134°   | 0.6 | 0.6   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 134.5° | 0.6 | 0.6   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.6  | 0.5    | 0.5  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 135°   | 0.6 | 0.6   | 0.5 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.6  | 0.5    | 0.5  |
| 135.5° | 0.6 | 0.6   | 0.6 | 0.5   | 0.5 | 0.5    | 0.5  | 0.5    | 0.6  | 0.6    | 0.5  |
| 136°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.5 | 0.5    | 0.5  | 0.5    | 0.6  | 0.6    | 0.5  |
| 136.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.5 | 0.5    | 0.5  | 0.5    | 0.6  | 0.6    | 0.5  |
| 137°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.5 | 0.5    | 0.5  | 0.6    | 0.6  | 0.6    | 0.5  |
| 137.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.5 | 0.5    | 0.5  | 0.6    | 0.6  | 0.6    | 0.5  |
| 138°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.5 | 0.5    | 0.5  | 0.6    | 0.6  | 0.6    | 0.6  |
| 138.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 139°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 139.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 140°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 140.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 141°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 141.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 142°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.7  | 0.6    | 0.6  |
| 142.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.7  | 0.6    | 0.6  |
| 143°   | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.7  | 0.6    | 0.6  |
| 143.5° | 0.6 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.6    | 0.7  | 0.6    | 0.6  |
| 144°   | 0.7 | 0.6   | 0.6 | 0.6   | 0.6 | 0.6    | 0.6  | 0.7    | 0.7  | 0.7    | 0.7  |
| 144.5° | 0.7 | 0.7   | 0.6 | 0.6   | 0.6 | 0.6    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 145°   | 0.7 | 0.7   | 0.6 | 0.6   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 145.5° | 0.7 | 0.7   | 0.7 | 0.6   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 146°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 146.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 147°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 147.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 148°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 148.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 149°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 149.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 150°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.7    | 0.8  | 0.7    | 0.7  |
| 150.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.8    | 0.8  | 0.8    | 0.7  |
| 151°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.7    | 0.7  | 0.8    | 0.8  | 0.8    | 0.8  |
| 151.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 152°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 152.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 153°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 153.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 154°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 154.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 155°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 155.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 156°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 156.5° | 0.8 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 157°   | 0.8 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 157.5° | 0.8 | 0.7   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.8    | 0.9  | 0.9    | 0.8  |
| 158°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.9    | 0.9  | 0.9    | 0.9  |
| 158.5° | 0.8 | 0.8   | 0.7 | 0.7   | 0.8 | 0.8    | 0.8  | 0.9    | 0.9  | 0.9    | 0.9  |
| 159°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.8 | 0.8    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 159.5° | 0.8 | 0.8   | 0.7 | 0.7   | 0.8 | 0.8    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 160°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 160.5° | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 161°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 161.5° | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 162°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 162.5° | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 163°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 163.5° | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 164°   | 0.8 | 0.8   | 0.7 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 164.5° | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 165°   | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 165.5° | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 166°   | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 166.5° | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 167°   | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 167.5° | 0.8 | 0.8   | 0.8 | 0.7   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 168°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 168.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 169°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 169.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 170°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 170.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 171°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 171.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 172°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 172.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 173°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 173.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 174°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 174.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 175°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 175.5° | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 176°   | 0.8 | 0.8   | 0.8 | 0.8   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 176.5° | 0.8 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 177°   | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 177.5° | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 178°   | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 178.5° | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 179°   | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 179.5° | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |



TEST NUMBER: P640219  
CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|      |     |       |     |       |     |        |      |        |      |        |      |
|------|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
|      | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
| 180° | 0.9 | 0.9   | 0.9 | 0.9   | 0.9 | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |

TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|-------|--------|--------|--------|--------|--------|--------|
| 0°    | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 | 1501.1 |
| 0.5°  | 1501.6 | 1501.1 | 1500.9 | 1501.3 | 1501.5 | 1501.6 |
| 1°    | 1501.2 | 1500.9 | 1501.1 | 1501.5 | 1501.7 | 1501.2 |
| 1.5°  | 1500.8 | 1500.2 | 1500.9 | 1501.5 | 1501.5 | 1501.0 |
| 2°    | 1500.3 | 1499.8 | 1500.7 | 1501.3 | 1501.2 | 1500.9 |
| 2.5°  | 1499.7 | 1499.6 | 1500.1 | 1500.9 | 1500.7 | 1500.0 |
| 3°    | 1499.0 | 1498.8 | 1499.3 | 1500.3 | 1500.1 | 1499.1 |
| 3.5°  | 1498.2 | 1497.8 | 1498.6 | 1499.2 | 1499.3 | 1498.4 |
| 4°    | 1496.7 | 1496.8 | 1498.0 | 1498.3 | 1498.4 | 1497.4 |
| 4.5°  | 1495.4 | 1495.5 | 1496.4 | 1497.1 | 1497.3 | 1496.3 |
| 5°    | 1493.7 | 1494.2 | 1494.9 | 1495.8 | 1495.9 | 1495.0 |
| 5.5°  | 1491.9 | 1492.4 | 1493.4 | 1494.3 | 1494.5 | 1493.4 |
| 6°    | 1489.9 | 1490.5 | 1491.7 | 1492.7 | 1492.7 | 1491.8 |
| 6.5°  | 1487.9 | 1488.1 | 1489.7 | 1490.8 | 1490.7 | 1490.0 |
| 7°    | 1485.6 | 1485.6 | 1487.5 | 1488.7 | 1488.6 | 1488.2 |
| 7.5°  | 1483.0 | 1483.6 | 1485.4 | 1486.6 | 1486.4 | 1485.1 |
| 8°    | 1480.3 | 1480.8 | 1482.9 | 1484.1 | 1484.1 | 1483.0 |
| 8.5°  | 1477.9 | 1478.4 | 1480.4 | 1481.5 | 1481.2 | 1480.3 |
| 9°    | 1474.7 | 1475.4 | 1477.3 | 1478.9 | 1478.4 | 1477.7 |
| 9.5°  | 1471.7 | 1472.2 | 1474.3 | 1475.9 | 1475.7 | 1474.8 |
| 10°   | 1468.2 | 1468.9 | 1471.1 | 1472.6 | 1472.5 | 1471.6 |
| 10.5° | 1464.9 | 1465.7 | 1467.7 | 1468.9 | 1469.3 | 1468.2 |
| 11°   | 1461.4 | 1462.0 | 1464.2 | 1465.6 | 1466.0 | 1464.7 |
| 11.5° | 1457.3 | 1458.2 | 1460.1 | 1461.9 | 1462.1 | 1461.2 |
| 12°   | 1453.2 | 1454.3 | 1456.1 | 1458.1 | 1458.3 | 1457.3 |
| 12.5° | 1449.0 | 1449.9 | 1452.2 | 1454.0 | 1454.0 | 1453.5 |
| 13°   | 1444.4 | 1445.3 | 1448.0 | 1450.0 | 1449.9 | 1448.9 |
| 13.5° | 1440.2 | 1440.9 | 1443.6 | 1445.6 | 1445.6 | 1444.3 |
| 14°   | 1435.6 | 1436.1 | 1439.0 | 1441.0 | 1440.9 | 1439.8 |
| 14.5° | 1430.8 | 1431.3 | 1434.1 | 1436.2 | 1436.2 | 1435.3 |
| 15°   | 1425.4 | 1426.0 | 1428.9 | 1431.5 | 1431.5 | 1430.1 |
| 15.5° | 1420.3 | 1421.2 | 1423.7 | 1426.0 | 1426.2 | 1425.0 |
| 16°   | 1414.9 | 1415.6 | 1418.7 | 1420.9 | 1421.1 | 1419.8 |
| 16.5° | 1409.0 | 1410.1 | 1413.1 | 1415.2 | 1415.6 | 1414.6 |
| 17°   | 1403.3 | 1404.0 | 1407.2 | 1409.5 | 1410.0 | 1408.9 |
| 17.5° | 1397.5 | 1398.1 | 1401.2 | 1403.6 | 1404.2 | 1403.0 |
| 18°   | 1391.1 | 1392.1 | 1395.1 | 1397.7 | 1398.2 | 1397.1 |
| 18.5° | 1384.8 | 1385.5 | 1388.7 | 1391.4 | 1392.0 | 1390.8 |
| 19°   | 1378.2 | 1379.1 | 1382.3 | 1384.9 | 1385.4 | 1384.6 |
| 19.5° | 1371.6 | 1372.4 | 1375.4 | 1378.3 | 1378.7 | 1378.2 |
| 20°   | 1364.8 | 1365.7 | 1368.6 | 1371.7 | 1372.3 | 1371.4 |
| 20.5° | 1357.6 | 1358.5 | 1361.7 | 1364.7 | 1365.1 | 1364.1 |
| 21°   | 1350.3 | 1350.9 | 1354.4 | 1357.7 | 1358.0 | 1357.0 |
| 21.5° | 1342.8 | 1343.7 | 1346.9 | 1350.0 | 1351.3 | 1349.9 |
| 22°   | 1335.0 | 1336.1 | 1339.2 | 1342.7 | 1343.2 | 1342.2 |

TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|-------|--------|--------|--------|--------|--------|--------|
| 22.5° | 1327.2 | 1328.1 | 1331.5 | 1335.2 | 1335.4 | 1334.6 |
| 23°   | 1319.4 | 1320.1 | 1323.5 | 1327.0 | 1327.9 | 1327.2 |
| 23.5° | 1311.3 | 1311.7 | 1315.4 | 1319.2 | 1320.1 | 1319.1 |
| 24°   | 1302.9 | 1303.5 | 1307.2 | 1310.7 | 1311.8 | 1310.8 |
| 24.5° | 1294.5 | 1294.8 | 1298.5 | 1302.4 | 1303.0 | 1302.8 |
| 25°   | 1285.7 | 1286.3 | 1289.9 | 1293.7 | 1294.8 | 1294.2 |
| 25.5° | 1277.0 | 1277.1 | 1280.9 | 1284.8 | 1286.1 | 1285.3 |
| 26°   | 1267.9 | 1269.3 | 1271.9 | 1276.1 | 1277.3 | 1276.6 |
| 26.5° | 1258.6 | 1258.8 | 1263.0 | 1266.7 | 1268.1 | 1267.6 |
| 27°   | 1249.3 | 1249.6 | 1253.3 | 1257.6 | 1259.1 | 1258.1 |
| 27.5° | 1239.9 | 1239.6 | 1243.7 | 1248.0 | 1249.9 | 1248.9 |
| 28°   | 1230.0 | 1229.8 | 1233.6 | 1238.3 | 1239.9 | 1239.4 |
| 28.5° | 1219.9 | 1219.9 | 1223.7 | 1228.2 | 1230.3 | 1229.7 |
| 29°   | 1209.9 | 1209.7 | 1214.0 | 1218.3 | 1220.1 | 1220.1 |
| 29.5° | 1199.5 | 1199.3 | 1203.3 | 1208.1 | 1210.3 | 1210.0 |
| 30°   | 1189.3 | 1189.0 | 1193.0 | 1197.8 | 1199.7 | 1200.0 |
| 30.5° | 1178.7 | 1178.5 | 1182.1 | 1187.3 | 1189.2 | 1189.6 |
| 31°   | 1168.2 | 1167.5 | 1171.4 | 1176.4 | 1179.1 | 1178.9 |
| 31.5° | 1157.1 | 1156.4 | 1160.4 | 1165.6 | 1168.4 | 1168.3 |
| 32°   | 1146.0 | 1145.4 | 1148.8 | 1154.6 | 1157.4 | 1157.8 |
| 32.5° | 1135.0 | 1134.2 | 1137.6 | 1143.5 | 1146.4 | 1146.5 |
| 33°   | 1123.6 | 1122.5 | 1126.4 | 1131.8 | 1135.3 | 1135.6 |
| 33.5° | 1112.1 | 1110.8 | 1114.8 | 1120.4 | 1123.9 | 1124.7 |
| 34°   | 1100.3 | 1098.9 | 1102.8 | 1108.7 | 1112.2 | 1113.2 |
| 34.5° | 1088.6 | 1086.8 | 1090.7 | 1096.9 | 1100.6 | 1101.3 |
| 35°   | 1076.4 | 1074.4 | 1078.7 | 1084.5 | 1088.7 | 1089.6 |
| 35.5° | 1064.2 | 1062.2 | 1066.4 | 1072.5 | 1076.9 | 1077.5 |
| 36°   | 1052.0 | 1049.9 | 1053.5 | 1060.1 | 1064.4 | 1065.7 |
| 36.5° | 1039.3 | 1037.2 | 1041.2 | 1047.7 | 1052.2 | 1053.5 |
| 37°   | 1026.6 | 1024.3 | 1028.4 | 1034.6 | 1039.6 | 1041.1 |
| 37.5° | 1014.0 | 1011.3 | 1015.3 | 1021.9 | 1026.8 | 1028.5 |
| 38°   | 1001.0 | 998.1  | 1001.5 | 1008.9 | 1013.9 | 1015.9 |
| 38.5° | 987.8  | 984.8  | 988.6  | 995.6  | 1001.2 | 1003.2 |
| 39°   | 974.6  | 971.8  | 975.4  | 982.6  | 988.3  | 990.4  |
| 39.5° | 961.4  | 958.1  | 961.8  | 969.1  | 974.8  | 977.2  |
| 40°   | 948.2  | 944.2  | 948.1  | 955.5  | 961.5  | 963.9  |
| 40.5° | 934.5  | 930.1  | 934.4  | 941.9  | 948.2  | 950.8  |
| 41°   | 920.1  | 915.7  | 919.6  | 927.9  | 934.7  | 937.6  |
| 41.5° | 905.3  | 900.5  | 904.8  | 913.3  | 920.4  | 923.4  |
| 42°   | 890.2  | 885.3  | 889.4  | 898.2  | 905.6  | 909.2  |
| 42.5° | 875.0  | 870.0  | 874.0  | 882.9  | 890.1  | 894.3  |
| 43°   | 859.6  | 854.1  | 857.7  | 867.2  | 874.4  | 878.8  |
| 43.5° | 843.4  | 837.9  | 842.1  | 851.1  | 858.6  | 862.8  |
| 44°   | 827.4  | 821.2  | 824.7  | 834.8  | 842.4  | 847.1  |
| 44.5° | 811.3  | 805.2  | 808.7  | 818.4  | 826.3  | 830.8  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|-------|--------|-------|--------|-------|--------|-------|
| 45°   | 794.9  | 788.4 | 791.8  | 801.7 | 809.9  | 814.6 |
| 45.5° | 778.6  | 771.4 | 774.8  | 785.0 | 793.5  | 798.3 |
| 46°   | 761.6  | 754.6 | 757.7  | 768.2 | 776.9  | 781.9 |
| 46.5° | 745.0  | 737.6 | 740.9  | 750.9 | 760.1  | 764.9 |
| 47°   | 728.5  | 720.1 | 723.4  | 733.9 | 743.4  | 748.4 |
| 47.5° | 712.1  | 703.4 | 706.3  | 716.7 | 726.5  | 731.5 |
| 48°   | 695.1  | 685.9 | 689.1  | 699.8 | 709.8  | 715.2 |
| 48.5° | 678.2  | 668.7 | 671.7  | 682.6 | 693.2  | 698.8 |
| 49°   | 661.2  | 651.3 | 654.7  | 665.1 | 676.4  | 682.0 |
| 49.5° | 644.2  | 634.5 | 637.1  | 648.1 | 659.3  | 665.6 |
| 50°   | 627.5  | 617.3 | 619.6  | 630.8 | 642.5  | 648.7 |
| 50.5° | 610.3  | 599.7 | 603.1  | 613.8 | 625.9  | 632.0 |
| 51°   | 593.4  | 582.8 | 586.0  | 596.6 | 609.3  | 615.7 |
| 51.5° | 576.3  | 566.0 | 569.1  | 579.9 | 592.2  | 599.2 |
| 52°   | 560.0  | 549.1 | 551.9  | 563.4 | 576.0  | 582.9 |
| 52.5° | 542.9  | 532.4 | 535.5  | 546.8 | 559.4  | 566.7 |
| 53°   | 526.4  | 515.6 | 519.0  | 530.1 | 543.0  | 550.7 |
| 53.5° | 509.7  | 498.9 | 502.8  | 513.4 | 526.3  | 534.5 |
| 54°   | 493.7  | 482.8 | 485.7  | 497.1 | 510.4  | 518.4 |
| 54.5° | 477.1  | 467.0 | 470.2  | 481.3 | 494.4  | 503.0 |
| 55°   | 461.2  | 451.3 | 454.4  | 465.4 | 478.6  | 487.3 |
| 55.5° | 445.7  | 435.0 | 438.8  | 449.3 | 462.7  | 471.1 |
| 56°   | 429.4  | 419.6 | 423.1  | 433.9 | 447.5  | 456.7 |
| 56.5° | 413.6  | 404.5 | 408.1  | 418.7 | 431.7  | 441.3 |
| 57°   | 398.3  | 389.0 | 392.7  | 403.5 | 416.9  | 426.0 |
| 57.5° | 383.8  | 374.0 | 377.5  | 388.3 | 401.7  | 410.7 |
| 58°   | 368.3  | 359.5 | 363.4  | 373.9 | 387.0  | 396.9 |
| 58.5° | 353.7  | 344.9 | 348.7  | 359.1 | 371.8  | 382.2 |
| 59°   | 339.1  | 330.8 | 334.8  | 344.5 | 358.0  | 367.7 |
| 59.5° | 325.2  | 317.1 | 326.5  | 330.4 | 343.5  | 353.0 |
| 60°   | 310.6  | 303.3 | 311.5  | 316.8 | 329.7  | 339.3 |
| 60.5° | 296.9  | 289.6 | 296.4  | 303.3 | 316.0  | 324.6 |
| 61°   | 283.4  | 275.9 | 281.4  | 289.8 | 302.3  | 311.3 |
| 61.5° | 270.5  | 262.1 | 266.4  | 276.3 | 288.6  | 298.0 |
| 62°   | 257.1  | 249.8 | 253.6  | 262.7 | 275.0  | 284.7 |
| 62.5° | 244.3  | 237.1 | 240.7  | 249.8 | 261.3  | 271.3 |
| 63°   | 231.7  | 224.9 | 228.8  | 237.6 | 248.7  | 258.2 |
| 63.5° | 219.5  | 213.0 | 216.8  | 225.3 | 236.2  | 245.3 |
| 64°   | 207.5  | 201.4 | 205.2  | 213.4 | 224.0  | 232.0 |
| 64.5° | 196.0  | 189.9 | 193.7  | 201.9 | 211.9  | 219.2 |
| 65°   | 184.7  | 179.0 | 182.7  | 190.6 | 200.4  | 206.3 |
| 65.5° | 173.8  | 168.2 | 171.9  | 179.3 | 189.0  | 193.8 |
| 66°   | 163.1  | 157.6 | 161.4  | 168.6 | 177.6  | 181.1 |
| 66.5° | 152.6  | 147.4 | 151.2  | 158.2 | 166.5  | 169.4 |
| 67°   | 142.7  | 137.8 | 141.2  | 148.1 | 155.3  | 158.0 |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|-------|--------|-------|--------|-------|--------|-------|
| 67.5° | 133.1  | 128.3 | 131.7  | 138.4 | 144.8  | 147.6 |
| 68°   | 123.8  | 119.2 | 122.7  | 128.9 | 134.7  | 137.3 |
| 68.5° | 114.9  | 110.4 | 113.8  | 119.8 | 125.0  | 127.6 |
| 69°   | 106.2  | 102.1 | 105.3  | 111.0 | 115.8  | 118.0 |
| 69.5° | 98.0   | 94.1  | 97.1   | 102.6 | 106.8  | 108.5 |
| 70°   | 90.3   | 86.5  | 89.4   | 94.8  | 98.5   | 99.3  |
| 70.5° | 83.6   | 79.4  | 82.2   | 87.1  | 90.5   | 90.7  |
| 71°   | 76.9   | 72.7  | 75.4   | 79.9  | 82.7   | 82.5  |
| 71.5° | 70.2   | 66.5  | 69.0   | 73.2  | 75.8   | 74.9  |
| 72°   | 63.5   | 60.9  | 63.1   | 67.0  | 69.1   | 67.7  |
| 72.5° | 58.1   | 55.6  | 57.6   | 61.2  | 63.0   | 61.4  |
| 73°   | 53.1   | 50.9  | 52.6   | 55.8  | 57.5   | 55.5  |
| 73.5° | 48.7   | 46.8  | 48.3   | 51.0  | 52.6   | 50.3  |
| 74°   | 45.0   | 43.3  | 44.5   | 46.7  | 48.0   | 46.5  |
| 74.5° | 41.7   | 40.3  | 41.2   | 43.0  | 44.0   | 43.0  |
| 75°   | 39.2   | 38.2  | 38.7   | 39.8  | 40.4   | 40.2  |
| 75.5° | 37.2   | 36.3  | 36.9   | 37.7  | 37.7   | 38.1  |
| 76°   | 35.3   | 34.5  | 35.0   | 35.8  | 35.6   | 36.2  |
| 76.5° | 33.5   | 32.5  | 33.2   | 33.9  | 33.7   | 34.3  |
| 77°   | 31.8   | 30.9  | 31.5   | 32.2  | 32.0   | 32.5  |
| 77.5° | 30.1   | 29.3  | 29.9   | 30.5  | 30.2   | 30.8  |
| 78°   | 28.4   | 27.6  | 28.2   | 28.8  | 28.5   | 29.1  |
| 78.5° | 26.7   | 26.0  | 26.6   | 27.1  | 26.8   | 27.4  |
| 79°   | 25.1   | 24.5  | 24.9   | 25.4  | 25.0   | 25.7  |
| 79.5° | 23.6   | 22.9  | 23.3   | 23.8  | 23.4   | 24.0  |
| 80°   | 22.1   | 21.4  | 21.8   | 22.2  | 21.8   | 22.5  |
| 80.5° | 20.6   | 19.9  | 20.4   | 20.8  | 20.3   | 20.9  |
| 81°   | 19.1   | 18.4  | 18.9   | 19.3  | 18.7   | 19.4  |
| 81.5° | 17.6   | 17.0  | 17.4   | 17.8  | 17.2   | 17.9  |
| 82°   | 16.2   | 15.5  | 16.0   | 16.3  | 15.8   | 16.4  |
| 82.5° | 14.8   | 14.1  | 14.6   | 15.0  | 14.3   | 15.0  |
| 83°   | 13.4   | 12.8  | 13.2   | 13.5  | 12.9   | 13.6  |
| 83.5° | 12.0   | 11.4  | 11.9   | 12.2  | 11.5   | 12.2  |
| 84°   | 10.7   | 10.1  | 10.5   | 10.9  | 10.2   | 10.8  |
| 84.5° | 9.5    | 8.9   | 9.3    | 9.7   | 8.9    | 9.5   |
| 85°   | 8.2    | 7.5   | 8.0    | 8.4   | 7.7    | 8.2   |
| 85.5° | 6.9    | 6.3   | 6.7    | 7.3   | 6.6    | 7.0   |
| 86°   | 5.7    | 5.1   | 5.5    | 6.0   | 5.6    | 6.0   |
| 86.5° | 4.4    | 3.9   | 4.3    | 4.9   | 4.7    | 4.9   |
| 87°   | 3.2    | 2.9   | 3.1    | 3.7   | 3.7    | 4.0   |
| 87.5° | 2.0    | 2.0   | 2.3    | 2.8   | 2.9    | 3.2   |
| 88°   | 0.9    | 1.1   | 1.6    | 2.0   | 2.0    | 2.5   |
| 88.5° | 0.2    | 0.2   | 0.9    | 1.1   | 1.2    | 1.7   |
| 89°   | 0.1    | 0.1   | 0.1    | 0.2   | 0.4    | 1.0   |
| 89.5° | 0.1    | 0.1   | 0.1    | 0.1   | 0.2    | 0.3   |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 90°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.2    | 0.1  |
| 90.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.2    | 0.1  |
| 91°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.2    | 0.1  |
| 91.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.2    | 0.1  |
| 92°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.2    | 0.1  |
| 92.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.2    | 0.1  |
| 93°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 93.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 94°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 94.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 95°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 95.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 96°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 96.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.1  |
| 97°    | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.2  |
| 97.5°  | 0.1    | 0.1  | 0.1    | 0.1  | 0.1    | 0.2  |
| 98°    | 0.1    | 0.2  | 0.1    | 0.1  | 0.1    | 0.2  |
| 98.5°  | 0.1    | 0.2  | 0.1    | 0.1  | 0.1    | 0.2  |
| 99°    | 0.1    | 0.2  | 0.2    | 0.1  | 0.2    | 0.2  |
| 99.5°  | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 100°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 100.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 101°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 101.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 102°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 102.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 103°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 103.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 104°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 104.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 105°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 105.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 106°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 106.5° | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 107°   | 0.1    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 107.5° | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 108°   | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 108.5° | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |
| 109°   | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.3  |
| 109.5° | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.3  |
| 110°   | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.3  |
| 110.5° | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.3  |
| 111°   | 0.2    | 0.3  | 0.2    | 0.2  | 0.3    | 0.3  |
| 111.5° | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 112°   | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 112.5° | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 113°   | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 113.5° | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 114°   | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 114.5° | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 115°   | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 115.5° | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 116°   | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 116.5° | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 117°   | 0.2    | 0.3  | 0.3    | 0.3  | 0.3    | 0.3  |
| 117.5° | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.4  |
| 118°   | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.4  |
| 118.5° | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.4  |
| 119°   | 0.3    | 0.3  | 0.3    | 0.3  | 0.3    | 0.4  |
| 119.5° | 0.3    | 0.3  | 0.3    | 0.3  | 0.4    | 0.4  |
| 120°   | 0.3    | 0.4  | 0.3    | 0.3  | 0.4    | 0.4  |
| 120.5° | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 121°   | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 121.5° | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 122°   | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 122.5° | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 123°   | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 123.5° | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 124°   | 0.3    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 124.5° | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.4  |
| 125°   | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.5  |
| 125.5° | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.5  |
| 126°   | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.5  |
| 126.5° | 0.4    | 0.4  | 0.4    | 0.4  | 0.4    | 0.5  |
| 127°   | 0.4    | 0.4  | 0.4    | 0.4  | 0.5    | 0.5  |
| 127.5° | 0.4    | 0.5  | 0.4    | 0.4  | 0.5    | 0.5  |
| 128°   | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 128.5° | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 129°   | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 129.5° | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 130°   | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 130.5° | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 131°   | 0.4    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 131.5° | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 132°   | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.5  |
| 132.5° | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.6  |
| 133°   | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.6  |
| 133.5° | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.6  |
| 134°   | 0.5    | 0.5  | 0.5    | 0.5  | 0.5    | 0.6  |
| 134.5° | 0.5    | 0.5  | 0.5    | 0.5  | 0.6    | 0.6  |



TEST NUMBER: P640219  
 CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 135°   | 0.5    | 0.5  | 0.5    | 0.5  | 0.6    | 0.6  |
| 135.5° | 0.5    | 0.6  | 0.5    | 0.5  | 0.6    | 0.6  |
| 136°   | 0.5    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 136.5° | 0.5    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 137°   | 0.5    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 137.5° | 0.5    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 138°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 138.5° | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 139°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 139.5° | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 140°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 140.5° | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 141°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 141.5° | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 142°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 142.5° | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 143°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 143.5° | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.6  |
| 144°   | 0.6    | 0.6  | 0.6    | 0.6  | 0.6    | 0.7  |
| 144.5° | 0.7    | 0.6  | 0.6    | 0.6  | 0.6    | 0.7  |
| 145°   | 0.7    | 0.6  | 0.6    | 0.6  | 0.7    | 0.7  |
| 145.5° | 0.7    | 0.6  | 0.6    | 0.6  | 0.7    | 0.7  |
| 146°   | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 146.5° | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 147°   | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 147.5° | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 148°   | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 148.5° | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 149°   | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 149.5° | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 150°   | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 150.5° | 0.7    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 151°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 151.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 152°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 152.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 153°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 153.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 154°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 154.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 155°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 155.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 156°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.7  |
| 156.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.8  |
| 157°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.8  |



TEST NUMBER: P640219

CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 157.5° | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.8  |
| 158°   | 0.8    | 0.7  | 0.7    | 0.7  | 0.7    | 0.8  |
| 158.5° | 0.9    | 0.7  | 0.7    | 0.7  | 0.7    | 0.8  |
| 159°   | 0.9    | 0.7  | 0.7    | 0.7  | 0.8    | 0.8  |
| 159.5° | 0.9    | 0.7  | 0.7    | 0.7  | 0.8    | 0.8  |
| 160°   | 0.9    | 0.7  | 0.7    | 0.7  | 0.8    | 0.8  |
| 160.5° | 0.9    | 0.7  | 0.7    | 0.7  | 0.8    | 0.8  |
| 161°   | 0.9    | 0.7  | 0.7    | 0.7  | 0.8    | 0.8  |
| 161.5° | 0.9    | 0.7  | 0.7    | 0.7  | 0.8    | 0.8  |
| 162°   | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 162.5° | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 163°   | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 163.5° | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 164°   | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 164.5° | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 165°   | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 165.5° | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 166°   | 0.9    | 0.7  | 0.7    | 0.8  | 0.8    | 0.8  |
| 166.5° | 0.9    | 0.7  | 0.8    | 0.8  | 0.8    | 0.8  |
| 167°   | 0.9    | 0.7  | 0.8    | 0.8  | 0.8    | 0.8  |
| 167.5° | 0.9    | 0.7  | 0.8    | 0.8  | 0.8    | 0.8  |
| 168°   | 0.9    | 0.7  | 0.8    | 0.8  | 0.8    | 0.8  |
| 168.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 169°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 169.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 170°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 170.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 171°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 171.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 172°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 172.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 173°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 173.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 174°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 174.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 175°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 175.5° | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 176°   | 0.9    | 0.8  | 0.8    | 0.8  | 0.8    | 0.8  |
| 176.5° | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.8  |
| 177°   | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 177.5° | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 178°   | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 178.5° | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 179°   | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |
| 179.5° | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |



TEST NUMBER: P640219  
CATALOG NUMBER: LCR830RD9FSE010-33W-5000K

**CANDELA DISTRIBUTION (continued):**

|      | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|------|--------|------|--------|------|--------|------|
| 180° | 0.9    | 0.9  | 0.9    | 0.9  | 0.9    | 0.9  |

(END OF REPORT)