

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: IRiS

Report Number: P1339042

Luminaire Tested: P3A05R409840DE010 E3CA451MW

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1339042  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A05R409840DE010 E3CA451MW  
Description: 3in Adjustable LED luminaire with, R40 optic, 4000K CCT AND, 98CRI , E3CA451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

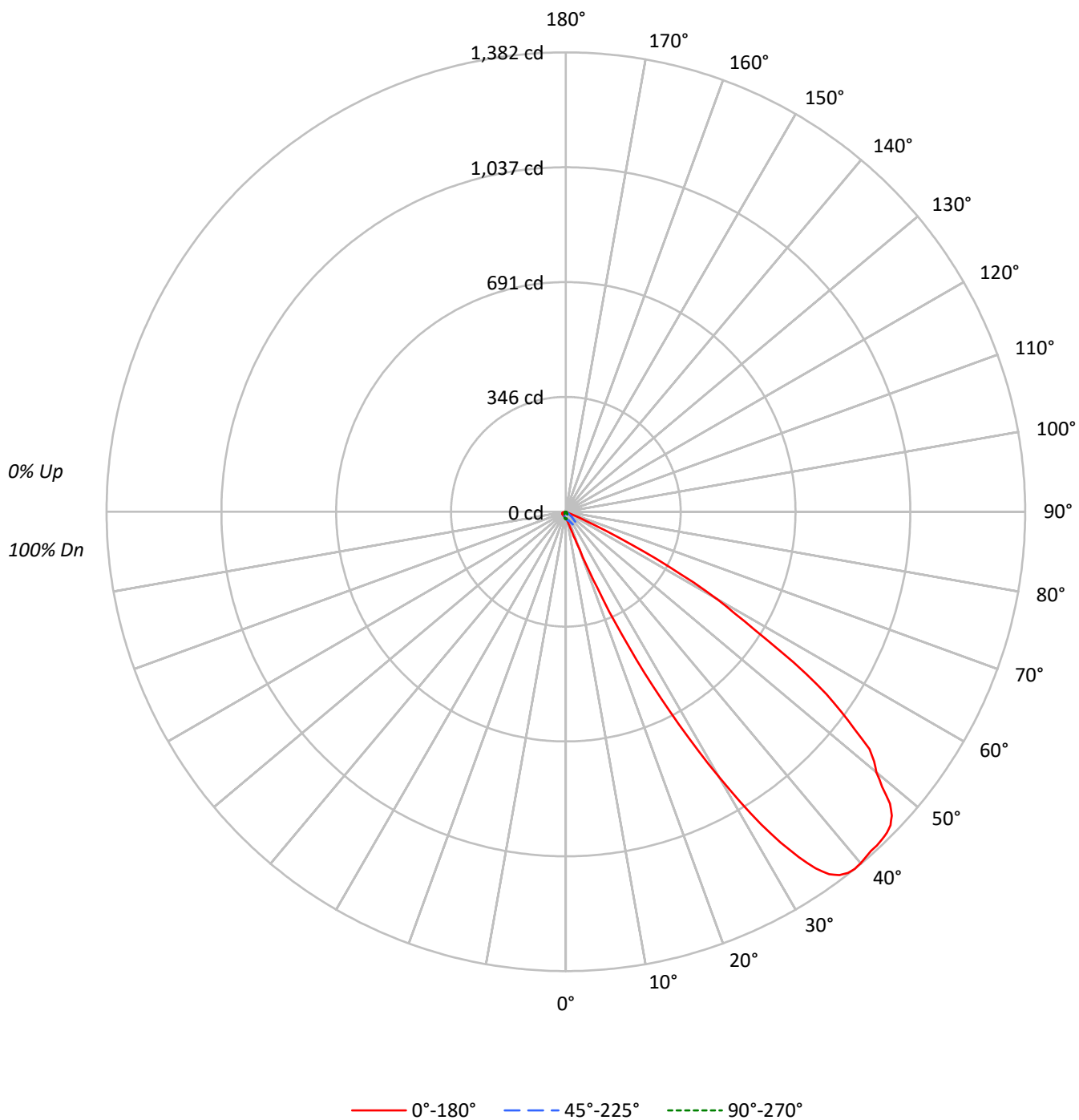
Lumens per Lamp: N/A  
Luminaire Lumens: 427.0 lumens  
Efficiency: N/A  
Efficacy: 59.3 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 7.2  
Input Voltage (V): NR  
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: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

### Luminous Intensity Polar Plot



TEST NUMBER: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

**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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  |  | 96  | 93  | 91  |  | 92  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  |  | 84  | 80  | 76  |  | 81  |
| 3   | 91  | 81  | 73  | 66  | 89  | 79  | 72  | 66  | 76  | 70  | 65  |  | 73  | 68  | 64  |  | 71  |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 54  |  | 64  | 58  | 53  |  | 62  |
| 5   | 75  | 62  | 52  | 46  | 73  | 60  | 52  | 45  | 58  | 51  | 45  |  | 56  | 50  | 44  |  | 54  |
| 6   | 68  | 54  | 45  | 38  | 66  | 53  | 44  | 38  | 51  | 43  | 38  |  | 50  | 43  | 37  |  | 48  |
| 7   | 62  | 48  | 39  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 32  |  | 44  | 37  | 31  |  | 42  |
| 8   | 57  | 42  | 33  | 27  | 55  | 42  | 33  | 27  | 40  | 32  | 27  |  | 39  | 32  | 27  |  | 38  |
| 9   | 52  | 38  | 29  | 23  | 51  | 37  | 29  | 23  | 36  | 28  | 23  |  | 35  | 28  | 23  |  | 34  |
| 10  | 48  | 34  | 25  | 20  | 47  | 33  | 25  | 20  | 32  | 25  | 20  |  | 31  | 24  | 20  |  | 30  |

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

|     | 0°     | 45°   | 90°  | 135° | 180° |
|-----|--------|-------|------|------|------|
| 0°  | 4824   | 4824  | 4824 | 4824 | 4824 |
| 5°  | 5349   | 5173  | 4755 | 4314 | 4226 |
| 10° | 6457   | 5500  | 4364 | 3919 | 3852 |
| 15° | 10602  | 5971  | 3746 | 3473 | 3564 |
| 20° | 28002  | 7047  | 3104 | 3104 | 3384 |
| 25° | 107982 | 8734  | 2468 | 2855 | 3315 |
| 30° | 232947 | 11622 | 1975 | 2785 | 3266 |
| 35° | 350597 | 13759 | 1686 | 2730 | 3346 |
| 40° | 394997 | 13797 | 1460 | 2805 | 3578 |
| 45° | 423548 | 10699 | 1333 | 2915 | 3876 |
| 50° | 416293 | 6686  | 1194 | 3070 | 4264 |
| 55° | 366247 | 3288  | 1185 | 3441 | 4779 |
| 60° | 231824 | 702   | 1360 | 3772 | 5350 |
| 65° | 47424  | 208   | 1401 | 4047 | 5915 |
| 70° | 1026   | 256   | 1539 | 4552 | 6796 |
| 75° | 1017   | 678   | 1694 | 4999 | 7625 |
| 80° | 1010   | 505   | 2020 | 5430 | 8966 |
| 85° | 1006   | 1006  | 4026 | 6038 | 9812 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 431199 cd/sqm

TEST NUMBER: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2.1    | 0.5       |
| 10°-20°   | 6.8    | 1.6       |
| 20°-30°   | 33.2   | 7.8       |
| 30°-40°   | 107.9  | 25.3      |
| 40°-50°   | 148.7  | 34.8      |
| 50°-60°   | 103.6  | 24.3      |
| 60°-70°   | 19.6   | 4.6       |
| 70°-80°   | 3.6    | 0.8       |
| 80°-90°   | 1.7    | 0.4       |
| 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°    | 42.0   | 9.8       |
| 0°-40°    | 149.9  | 35.1      |
| 0°-60°    | 402.2  | 94.2      |
| 0°-90°    | 427.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 427.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 22   | 22  | 22  | 22   | 22   |      |
| 5°  | 24   | 24  | 22  | 20   | 19   | 2    |
| 15° | 47   | 26  | 16  | 15   | 16   | 17   |
| 25° | 446  | 36  | 10  | 12   | 14   | 230  |
| 35° | 1310 | 51  | 6   | 10   | 12   | 791  |
| 45° | 1366 | 34  | 4   | 9    | 12   | 1039 |
| 55° | 958  | 9   | 3   | 9    | 12   | 819  |
| 65° | 91   | 0   | 3   | 8    | 11   | 162  |
| 75° | 1    | 1   | 2   | 6    | 9    | 1    |
| 85° | 0    | 0   | 2   | 2    | 4    | 0    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°   | 25°   | 30°   | 35°   | 45°  | 67.5° | 90°  |
|-------|--------|--------|--------|--------|-------|-------|-------|-------|------|-------|------|
| 0°    | 22.0   | 22.0   | 22.0   | 22.0   | 22.0  | 22.0  | 22.0  | 22.0  | 22.0 | 22.0  | 22.0 |
| 2.5°  | 22.7   | 22.7   | 22.7   | 22.7   | 22.7  | 22.7  | 22.7  | 22.7  | 22.7 | 22.4  | 22.0 |
| 5°    | 24.3   | 24.3   | 24.3   | 24.3   | 23.9  | 23.9  | 23.9  | 23.5  | 23.5 | 22.7  | 21.6 |
| 7.5°  | 25.9   | 25.9   | 25.9   | 25.9   | 25.5  | 25.1  | 24.7  | 24.7  | 24.3 | 22.4  | 20.8 |
| 10°   | 29.0   | 29.0   | 28.6   | 28.2   | 27.8  | 27.1  | 26.7  | 25.9  | 24.7 | 22.0  | 19.6 |
| 12.5° | 35.3   | 34.5   | 34.1   | 33.3   | 32.2  | 30.6  | 29.0  | 27.8  | 25.1 | 21.2  | 18.4 |
| 15°   | 46.7   | 45.9   | 44.3   | 42.0   | 39.6  | 36.5  | 33.7  | 31.0  | 26.3 | 20.0  | 16.5 |
| 17.5° | 66.7   | 64.3   | 62.0   | 58.0   | 52.2  | 46.7  | 40.8  | 35.7  | 27.8 | 18.8  | 14.9 |
| 20°   | 120.0  | 118.4  | 104.3  | 93.3   | 75.7  | 63.1  | 51.4  | 42.7  | 30.2 | 17.6  | 13.3 |
| 22.5° | 247.4  | 231.0  | 207.8  | 170.2  | 132.5 | 97.6  | 71.0  | 53.7  | 32.5 | 16.1  | 11.8 |
| 25°   | 446.3  | 420.4  | 370.6  | 298.0  | 220.0 | 155.7 | 102.7 | 70.2  | 36.1 | 14.5  | 10.2 |
| 27.5° | 675.7  | 649.4  | 572.1  | 472.1  | 344.7 | 234.9 | 146.7 | 92.9  | 40.8 | 12.9  | 9.0  |
| 30°   | 920.0  | 897.6  | 799.6  | 661.1  | 485.9 | 329.0 | 196.5 | 116.1 | 45.9 | 11.4  | 7.8  |
| 31°   | 1018.4 | 989.8  | 883.9  | 736.4  | 552.1 | 367.8 | 216.5 | 125.9 | 47.8 | 11.0  | 7.5  |
| 32°   | 1109.0 | 1076.4 | 966.6  | 808.6  | 605.9 | 409.8 | 238.4 | 134.5 | 49.4 | 10.2  | 7.1  |
| 33°   | 1187.0 | 1149.0 | 1043.1 | 876.8  | 665.1 | 449.0 | 261.2 | 142.7 | 50.6 | 9.4   | 6.7  |
| 34°   | 1253.3 | 1220.3 | 1106.6 | 945.4  | 717.6 | 486.6 | 283.5 | 151.0 | 51.4 | 9.0   | 6.3  |
| 35°   | 1309.7 | 1279.9 | 1167.4 | 997.6  | 769.0 | 523.1 | 303.9 | 158.8 | 51.4 | 8.2   | 6.3  |
| 36°   | 1347.8 | 1321.9 | 1219.9 | 1050.9 | 812.1 | 554.1 | 321.2 | 165.9 | 51.4 | 7.5   | 5.9  |
| 37°   | 1368.6 | 1343.5 | 1254.5 | 1094.9 | 854.5 | 584.7 | 336.8 | 171.4 | 51.0 | 7.1   | 5.5  |
| 38°   | 1379.2 | 1357.2 | 1279.9 | 1130.5 | 883.9 | 606.6 | 350.6 | 175.7 | 50.6 | 6.3   | 5.5  |
| 39°   | 1381.9 | 1363.5 | 1296.0 | 1156.4 | 912.5 | 628.6 | 360.4 | 178.0 | 49.4 | 5.9   | 5.1  |
| 40°   | 1379.9 | 1363.9 | 1304.7 | 1179.6 | 934.5 | 645.9 | 367.4 | 178.8 | 48.2 | 5.1   | 5.1  |
| 41°   | 1376.0 | 1363.5 | 1310.9 | 1195.6 | 952.1 | 656.8 | 370.2 | 177.2 | 46.7 | 4.3   | 4.7  |
| 42°   | 1372.5 | 1358.8 | 1313.7 | 1206.6 | 964.3 | 662.3 | 369.8 | 174.1 | 44.3 | 3.9   | 4.7  |
| 43°   | 1372.5 | 1356.8 | 1314.1 | 1213.7 | 970.2 | 662.7 | 365.1 | 168.2 | 41.2 | 3.5   | 4.3  |
| 44°   | 1370.1 | 1355.6 | 1316.0 | 1218.4 | 971.7 | 659.2 | 357.6 | 162.0 | 37.6 | 3.1   | 4.3  |
| 45°   | 1365.8 | 1350.5 | 1315.6 | 1218.8 | 969.0 | 650.6 | 345.5 | 153.7 | 34.5 | 2.4   | 4.3  |
| 46°   | 1357.6 | 1343.9 | 1312.1 | 1216.0 | 960.7 | 638.0 | 331.0 | 145.5 | 31.0 | 2.0   | 3.9  |
| 47°   | 1341.1 | 1330.5 | 1302.7 | 1206.6 | 948.2 | 619.6 | 313.7 | 136.1 | 28.2 | 1.6   | 3.9  |
| 48°   | 1312.9 | 1305.4 | 1286.6 | 1185.8 | 924.3 | 596.8 | 295.3 | 125.9 | 25.5 | 1.6   | 3.9  |
| 49°   | 1261.1 | 1255.2 | 1244.3 | 1152.5 | 893.7 | 569.0 | 275.3 | 114.5 | 22.7 | 1.2   | 3.9  |
| 50°   | 1220.3 | 1214.1 | 1191.7 | 1096.4 | 849.8 | 533.7 | 253.3 | 103.1 | 19.6 | 0.8   | 3.5  |
| 51°   | 1193.3 | 1183.1 | 1147.8 | 1031.3 | 785.8 | 486.6 | 229.4 | 91.8  | 16.5 | 0.8   | 3.5  |
| 52°   | 1159.2 | 1143.9 | 1100.0 | 972.9  | 727.4 | 439.6 | 203.5 | 80.4  | 14.5 | 0.8   | 3.5  |
| 53°   | 1087.8 | 1082.3 | 1038.8 | 910.2  | 669.0 | 394.5 | 176.9 | 71.0  | 12.5 | 0.8   | 3.5  |
| 54°   | 1025.4 | 1017.2 | 958.0  | 823.1  | 605.5 | 344.3 | 149.4 | 62.7  | 10.6 | 0.8   | 3.5  |
| 55°   | 958.0  | 941.9  | 889.4  | 749.8  | 531.0 | 298.0 | 123.1 | 54.1  | 8.6  | 0.8   | 3.1  |
| 56°   | 872.9  | 858.8  | 802.3  | 671.3  | 462.3 | 251.0 | 103.1 | 44.3  | 6.7  | 0.8   | 3.1  |
| 57°   | 769.4  | 756.4  | 712.9  | 574.9  | 391.0 | 205.1 | 83.9  | 35.7  | 5.1  | 0.8   | 3.1  |
| 58°   | 669.4  | 654.9  | 605.1  | 482.3  | 315.7 | 162.7 | 70.2  | 29.0  | 3.9  | 0.8   | 3.1  |
| 59°   | 592.5  | 572.9  | 508.6  | 405.1  | 247.0 | 123.5 | 55.7  | 23.1  | 2.7  | 0.8   | 3.1  |
| 60°   | 528.6  | 512.5  | 445.9  | 337.2  | 193.7 | 91.0  | 41.2  | 17.6  | 1.6  | 0.8   | 3.1  |
| 62.5° | 306.3  | 301.9  | 242.0  | 173.7  | 91.4  | 42.4  | 20.4  | 8.2   | 0.8  | 1.2   | 3.1  |
| 65°   | 91.4   | 79.6   | 62.0   | 36.9   | 23.5  | 14.1  | 7.5   | 2.7   | 0.4  | 1.2   | 2.7  |



TEST NUMBER: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 1.6 | 0.8 | 0.4 | 1.2   | 2.7 |
| 70°   | 1.6 | 1.2 | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.4 | 0.4 | 1.2   | 2.4 |
| 72.5° | 1.2 | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 | 0.4 | 0.8 | 1.2   | 2.0 |
| 75°   | 1.2 | 0.8 | 0.8 | 0.8 | 0.8 | 0.4 | 0.4 | 0.4 | 0.8 | 1.2   | 2.0 |
| 77.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.4 | 0.4 | 0.4 | 0.4 | 0.8 | 1.2   | 2.0 |
| 80°   | 0.8 | 0.8 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 1.2   | 1.6 |
| 82.5° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 1.2   | 1.6 |
| 85°   | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 1.2   | 1.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 1.2   | 1.2 |
| 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: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 22.0   | 22.0 | 22.0   | 22.0 |
| 2.5°  | 21.2   | 20.8 | 20.4   | 20.4 |
| 5°    | 20.4   | 19.6 | 19.6   | 19.2 |
| 7.5°  | 19.2   | 18.4 | 18.4   | 18.4 |
| 10°   | 18.0   | 17.6 | 17.6   | 17.3 |
| 12.5° | 16.5   | 16.5 | 16.5   | 16.5 |
| 15°   | 15.3   | 15.3 | 15.7   | 15.7 |
| 17.5° | 13.7   | 14.1 | 14.9   | 15.3 |
| 20°   | 12.5   | 13.3 | 14.1   | 14.5 |
| 22.5° | 11.8   | 12.5 | 13.7   | 14.1 |
| 25°   | 10.6   | 11.8 | 13.3   | 13.7 |
| 27.5° | 9.8    | 11.4 | 12.5   | 13.3 |
| 30°   | 9.0    | 11.0 | 12.2   | 12.9 |
| 31°   | 9.0    | 10.6 | 12.2   | 12.9 |
| 32°   | 8.6    | 10.2 | 12.2   | 12.5 |
| 33°   | 8.6    | 10.2 | 12.2   | 12.5 |
| 34°   | 8.2    | 10.2 | 11.8   | 12.5 |
| 35°   | 8.2    | 10.2 | 11.8   | 12.5 |
| 36°   | 7.8    | 9.8  | 11.8   | 12.5 |
| 37°   | 7.8    | 9.8  | 11.8   | 12.5 |
| 38°   | 7.5    | 9.8  | 11.8   | 12.5 |
| 39°   | 7.5    | 9.8  | 11.8   | 12.5 |
| 40°   | 7.5    | 9.8  | 11.8   | 12.5 |
| 41°   | 7.1    | 9.8  | 11.8   | 12.5 |
| 42°   | 7.1    | 9.8  | 11.8   | 12.5 |
| 43°   | 7.1    | 9.4  | 11.8   | 12.5 |
| 44°   | 7.1    | 9.4  | 11.8   | 12.5 |
| 45°   | 6.7    | 9.4  | 11.8   | 12.5 |
| 46°   | 6.7    | 9.4  | 11.8   | 12.5 |
| 47°   | 6.7    | 9.4  | 11.8   | 12.5 |
| 48°   | 6.7    | 9.4  | 11.8   | 12.5 |
| 49°   | 6.7    | 9.4  | 11.8   | 12.5 |
| 50°   | 6.3    | 9.0  | 11.8   | 12.5 |
| 51°   | 6.3    | 9.0  | 11.8   | 12.5 |
| 52°   | 6.3    | 9.0  | 11.8   | 12.5 |
| 53°   | 6.3    | 9.0  | 11.8   | 12.5 |
| 54°   | 5.9    | 9.0  | 11.8   | 12.5 |
| 55°   | 5.9    | 9.0  | 11.8   | 12.5 |
| 56°   | 5.9    | 9.0  | 11.8   | 12.2 |
| 57°   | 5.9    | 9.0  | 11.4   | 12.2 |
| 58°   | 5.9    | 8.6  | 11.4   | 12.2 |
| 59°   | 5.9    | 8.6  | 11.4   | 12.2 |
| 60°   | 5.9    | 8.6  | 11.4   | 12.2 |
| 62.5° | 5.5    | 8.6  | 11.0   | 11.8 |
| 65°   | 5.1    | 7.8  | 11.0   | 11.4 |



TEST NUMBER: P1339042

CATALOG NUMBER: P3A05R409840DE010 E3CA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 5.1    | 7.5  | 10.2   | 11.0 |
| 70°   | 4.7    | 7.1  | 9.8    | 10.6 |
| 72.5° | 3.9    | 6.7  | 9.0    | 9.8  |
| 75°   | 3.5    | 5.9  | 8.2    | 9.0  |
| 77.5° | 3.1    | 5.1  | 7.5    | 7.8  |
| 80°   | 2.7    | 4.3  | 6.3    | 7.1  |
| 82.5° | 2.0    | 3.1  | 5.1    | 5.5  |
| 85°   | 1.6    | 2.4  | 3.5    | 3.9  |
| 87.5° | 1.2    | 1.2  | 2.0    | 2.0  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)