

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: P392712

Luminaire Tested: **MWL-4-66-73-UNV-L830-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392712  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-4-66-73-UNV-L830-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

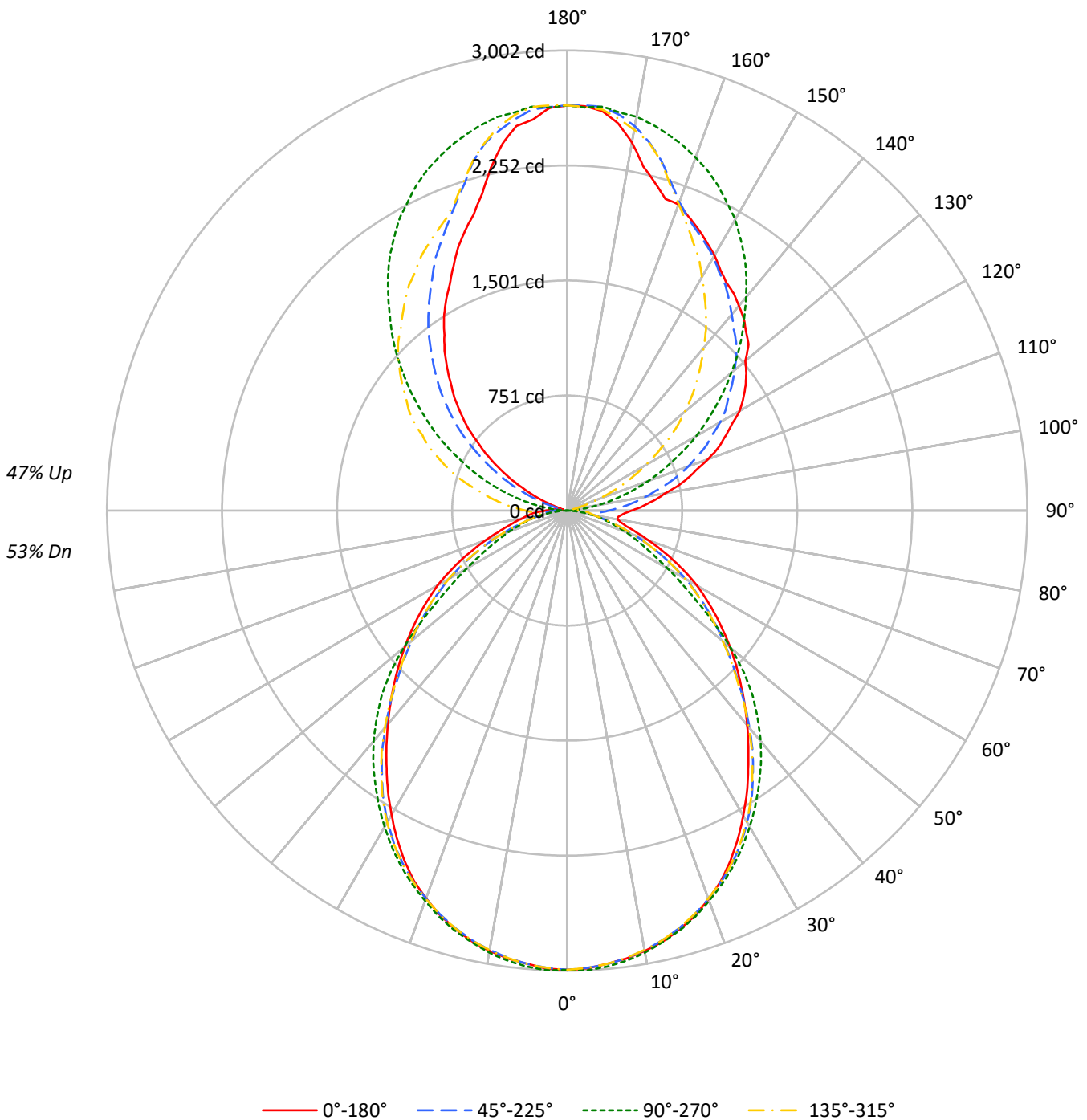
Lumens per Lamp: N/A  
Luminaire Lumens: 13334.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: General Diffuse

Input Watts (W): 169.7  
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: 25 FT



TEST NUMBER: P392712  
CATALOG NUMBER: MWL-4-66-73-UNV-L830-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P392712

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**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 | 0  |   |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 0   | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 71 | 71 | 71 | 58 | 58 | 58 | 53 |    |    |    |   |
| 1   | 98  | 94  | 90  | 87  | 91  | 87  | 84  | 81  | 74 | 72 | 70 | 63 | 61 | 59 | 52 | 51 | 50 | 44 |    |    |    |   |
| 2   | 90  | 83  | 77  | 71  | 83  | 77  | 71  | 67  | 66 | 62 | 58 | 55 | 53 | 50 | 46 | 44 | 42 | 38 |    |    |    |   |
| 3   | 82  | 73  | 66  | 60  | 76  | 68  | 61  | 56  | 58 | 53 | 49 | 49 | 46 | 43 | 41 | 39 | 36 | 32 |    |    |    |   |
| 4   | 75  | 65  | 57  | 51  | 70  | 60  | 53  | 48  | 52 | 47 | 42 | 44 | 40 | 37 | 37 | 34 | 32 | 28 |    |    |    |   |
| 5   | 69  | 58  | 50  | 44  | 64  | 54  | 47  | 42  | 47 | 41 | 37 | 40 | 36 | 32 | 33 | 30 | 28 | 25 |    |    |    |   |
| 6   | 64  | 52  | 44  | 38  | 59  | 49  | 41  | 36  | 42 | 37 | 32 | 36 | 32 | 28 | 30 | 27 | 25 | 22 |    |    |    |   |
| 7   | 59  | 47  | 39  | 34  | 55  | 44  | 37  | 32  | 38 | 33 | 29 | 33 | 29 | 25 | 28 | 25 | 22 | 19 |    |    |    |   |
| 8   | 55  | 43  | 35  | 30  | 51  | 40  | 33  | 28  | 35 | 29 | 25 | 30 | 26 | 23 | 26 | 22 | 20 | 17 |    |    |    |   |
| 9   | 51  | 39  | 32  | 27  | 48  | 37  | 30  | 25  | 32 | 27 | 23 | 28 | 24 | 20 | 24 | 20 | 18 | 16 |    |    |    |   |
| 10  | 48  | 36  | 29  | 24  | 44  | 34  | 27  | 23  | 30 | 24 | 21 | 26 | 22 | 19 | 22 | 19 | 16 | 14 |    |    |    |   |

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

|     | 0°    | 90°   | 180°  | 270°  |
|-----|-------|-------|-------|-------|
| 0°  | 19352 | 19352 | 19352 | 19352 |
| 5°  | 19073 | 17806 | 19073 | 17806 |
| 10° | 18784 | 16325 | 18784 | 16325 |
| 15° | 18404 | 14951 | 18368 | 14951 |
| 20° | 17858 | 13649 | 17821 | 13649 |
| 25° | 17128 | 12446 | 17090 | 12446 |
| 30° | 16169 | 11259 | 16117 | 11259 |
| 35° | 15134 | 10112 | 15093 | 10112 |
| 40° | 14167 | 9002  | 14109 | 9002  |
| 45° | 13242 | 7819  | 13195 | 7819  |
| 50° | 12403 | 6389  | 12353 | 6389  |
| 55° | 11541 | 4806  | 11505 | 4806  |
| 60° | 10702 | 3580  | 10680 | 3580  |
| 65° | 9518  | 2696  | 9518  | 2696  |
| 70° | 8271  | 2031  | 8298  | 2031  |
| 75° | 7225  | 1452  | 7326  | 1452  |
| 80° | 7821  | 936   | 6991  | 936   |
| 85° | 11931 | 423   | 7824  | 423   |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 282.5   | 2.1       |
| 10°-20°   | 796.7   | 6.0       |
| 20°-30°   | 1168.5  | 8.8       |
| 30°-40°   | 1323.1  | 9.9       |
| 40°-50°   | 1246.9  | 9.4       |
| 50°-60°   | 998.1   | 7.5       |
| 60°-70°   | 657.6   | 4.9       |
| 70°-80°   | 337.5   | 2.5       |
| 80°-90°   | 190.4   | 1.4       |
| 90°-100°  | 230.7   | 1.7       |
| 100°-110° | 412.3   | 3.1       |
| 110°-120° | 702.7   | 5.3       |
| 120°-130° | 954.5   | 7.2       |
| 130°-140° | 1088.5  | 8.2       |
| 140°-150° | 1085.8  | 8.1       |
| 150°-160° | 945.3   | 7.1       |
| 160°-170° | 665.0   | 5.0       |
| 170°-180° | 247.7   | 1.9       |
| 0°-30°    | 2247.7  | 16.9      |
| 0°-40°    | 3570.8  | 26.8      |
| 0°-60°    | 5815.8  | 43.6      |
| 0°-90°    | 7001.4  | 52.5      |
| 90°-120°  | 1345.8  | 10.1      |
| 90°-150°  | 4474.6  | 33.6      |
| 90°-180°  | 6333.0  | 47.5      |
| 0°-180°   | 13334.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 90°  | 180° | 270° | 360° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 2996 | 2996 | 2996 | 2996 | 2996 |      |
| 5°   | 2969 | 2987 | 2969 | 2987 | 2969 | 282  |
| 15°  | 2829 | 2835 | 2824 | 2835 | 2829 | 797  |
| 25°  | 2520 | 2561 | 2515 | 2561 | 2520 | 1157 |
| 35°  | 2060 | 2181 | 2054 | 2181 | 2060 | 1289 |
| 45°  | 1601 | 1712 | 1595 | 1712 | 1601 | 1238 |
| 55°  | 1178 | 1036 | 1174 | 1036 | 1178 | 1055 |
| 65°  | 762  | 555  | 762  | 555  | 762  | 757  |
| 75°  | 402  | 275  | 408  | 275  | 402  | 444  |
| 85°  | 353  | 71   | 231  | 71   | 353  | 284  |
| 90°  | 420  | 3    | 140  | 3    | 420  | 232  |
| 95°  | 527  | 76   | 85   | 76   | 527  | 458  |
| 105° | 814  | 370  | 28   | 370  | 814  | 858  |
| 115° | 1135 | 755  | 262  | 755  | 1135 | 1127 |
| 125° | 1421 | 1182 | 647  | 1182 | 1421 | 1269 |
| 135° | 1650 | 1614 | 1038 | 1614 | 1650 | 1274 |
| 145° | 1813 | 2019 | 1397 | 2019 | 1813 | 1143 |
| 155° | 2025 | 2335 | 1757 | 2335 | 2025 | 934  |
| 165° | 2214 | 2541 | 2141 | 2541 | 2214 | 628  |
| 175° | 2617 | 2646 | 2561 | 2646 | 2617 | 244  |
| 180° | 2643 | 2643 | 2643 | 2643 | 2643 |      |



TEST NUMBER: P392712

CATALOG NUMBER: MWL-4-66-73-UNV-L830-EDD

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 |
| 2.5°   | 2989.9 | 2991.8 | 2985.8 | 3003.1 | 3002.1 | 3001.2 | 2985.8 | 2991.8 | 2991.8 | 2991.8 | 2985.8 |
| 5°     | 2968.8 | 2976.4 | 2971.4 | 2987.7 | 2986.8 | 2987.7 | 2969.6 | 2976.4 | 2968.8 | 2976.4 | 2969.6 |
| 7.5°   | 2947.6 | 2957.1 | 2944.6 | 2964.7 | 2962.8 | 2962.9 | 2942.8 | 2955.3 | 2947.6 | 2955.3 | 2942.8 |
| 10°    | 2916.9 | 2920.6 | 2912.0 | 2929.3 | 2928.3 | 2927.5 | 2910.2 | 2916.9 | 2916.9 | 2916.9 | 2910.2 |
| 12.5°  | 2880.2 | 2878.4 | 2870.8 | 2886.2 | 2883.3 | 2886.2 | 2870.8 | 2874.7 | 2876.6 | 2874.7 | 2870.8 |
| 15°    | 2829.3 | 2826.6 | 2820.9 | 2836.3 | 2835.3 | 2834.3 | 2819.0 | 2822.8 | 2823.8 | 2822.8 | 2819.0 |
| 17.5°  | 2770.8 | 2767.0 | 2763.3 | 2778.7 | 2778.7 | 2778.7 | 2761.4 | 2765.2 | 2765.2 | 2765.2 | 2761.4 |
| 20°    | 2696.9 | 2698.8 | 2695.2 | 2710.5 | 2708.7 | 2708.7 | 2693.2 | 2695.2 | 2691.3 | 2695.2 | 2693.2 |
| 22.5°  | 2617.2 | 2620.1 | 2623.2 | 2643.3 | 2638.6 | 2641.5 | 2621.2 | 2616.4 | 2613.6 | 2616.4 | 2621.2 |
| 25°    | 2520.3 | 2526.0 | 2542.4 | 2562.7 | 2560.9 | 2560.9 | 2538.7 | 2520.4 | 2514.7 | 2520.4 | 2538.7 |
| 27.5°  | 2412.7 | 2428.1 | 2450.3 | 2477.3 | 2475.4 | 2475.3 | 2446.5 | 2422.5 | 2407.2 | 2422.5 | 2446.5 |
| 30°    | 2298.5 | 2314.8 | 2349.4 | 2387.9 | 2381.4 | 2384.1 | 2343.8 | 2309.3 | 2291.1 | 2309.3 | 2343.8 |
| 32.5°  | 2182.4 | 2198.7 | 2238.0 | 2284.2 | 2286.2 | 2280.5 | 2232.5 | 2191.3 | 2175.0 | 2191.3 | 2232.5 |
| 35°    | 2059.6 | 2067.3 | 2112.4 | 2183.4 | 2180.7 | 2177.9 | 2106.8 | 2061.7 | 2054.0 | 2061.7 | 2106.8 |
| 37.5°  | 1941.5 | 1943.4 | 1988.6 | 2063.4 | 2077.9 | 2057.9 | 1983.0 | 1937.9 | 1936.0 | 1937.9 | 1983.0 |
| 40°    | 1827.3 | 1817.7 | 1849.4 | 1932.0 | 1963.7 | 1928.3 | 1841.9 | 1810.2 | 1819.8 | 1810.2 | 1841.9 |
| 42.5°  | 1714.0 | 1702.5 | 1715.1 | 1797.6 | 1839.9 | 1793.9 | 1709.4 | 1695.0 | 1706.5 | 1695.0 | 1709.4 |
| 45°    | 1600.8 | 1579.7 | 1576.9 | 1659.4 | 1712.2 | 1655.7 | 1569.4 | 1574.1 | 1595.2 | 1574.1 | 1569.4 |
| 47.5°  | 1494.3 | 1469.3 | 1454.9 | 1517.3 | 1565.3 | 1515.5 | 1447.5 | 1463.7 | 1488.6 | 1463.7 | 1447.5 |
| 50°    | 1387.7 | 1363.8 | 1330.2 | 1373.3 | 1393.6 | 1369.6 | 1322.7 | 1356.3 | 1382.1 | 1356.3 | 1322.7 |
| 52.5°  | 1282.2 | 1263.9 | 1219.8 | 1235.1 | 1210.3 | 1231.4 | 1214.2 | 1256.4 | 1276.5 | 1256.4 | 1214.2 |
| 55°    | 1177.5 | 1161.2 | 1108.4 | 1087.4 | 1036.5 | 1083.6 | 1102.8 | 1155.6 | 1173.8 | 1155.6 | 1102.8 |
| 57.5°  | 1075.8 | 1066.2 | 1000.9 | 940.5  | 885.8  | 936.8  | 995.3  | 1060.6 | 1072.0 | 1060.6 | 995.3  |
| 60°    | 978.0  | 967.4  | 891.6  | 798.5  | 757.2  | 796.6  | 887.8  | 963.7  | 976.0  | 963.7  | 887.8  |
| 62.5°  | 868.5  | 863.7  | 778.3  | 673.7  | 645.9  | 671.8  | 774.6  | 860.0  | 866.6  | 860.0  | 774.6  |
| 65°    | 762.0  | 747.6  | 667.9  | 566.2  | 554.7  | 564.3  | 666.1  | 745.8  | 762.0  | 745.8  | 666.1  |
| 67.5°  | 660.2  | 639.1  | 565.2  | 472.2  | 475.1  | 472.2  | 563.4  | 637.3  | 660.2  | 637.3  | 563.4  |
| 70°    | 563.4  | 530.7  | 464.5  | 390.6  | 403.1  | 390.6  | 464.5  | 532.6  | 565.2  | 532.6  | 464.5  |
| 72.5°  | 474.1  | 433.8  | 373.3  | 318.6  | 333.0  | 316.7  | 373.3  | 435.6  | 477.8  | 435.6  | 373.3  |
| 75°    | 402.1  | 351.2  | 289.8  | 253.3  | 275.4  | 253.3  | 291.7  | 353.1  | 407.7  | 353.1  | 291.7  |
| 77.5°  | 358.4  | 296.3  | 226.4  | 195.7  | 222.6  | 195.7  | 228.4  | 290.7  | 351.0  | 290.7  | 228.4  |
| 80°    | 334.5  | 271.6  | 185.1  | 144.9  | 167.9  | 144.9  | 181.3  | 241.7  | 299.0  | 241.7  | 181.3  |
| 82.5°  | 332.2  | 273.2  | 176.7  | 104.5  | 118.0  | 104.5  | 154.4  | 206.1  | 261.4  | 206.1  | 154.4  |
| 85°    | 352.7  | 298.4  | 192.8  | 87.2   | 70.9   | 83.4   | 138.7  | 184.7  | 231.3  | 184.7  | 138.7  |
| 87.5°  | 377.5  | 337.7  | 223.9  | 97.8   | 25.9   | 71.7   | 117.5  | 158.7  | 185.5  | 158.7  | 117.5  |
| 90°    | 419.6  | 387.5  | 272.8  | 118.7  | 2.8    | 47.9   | 88.1   | 124.5  | 139.8  | 124.5  | 88.1   |
| 92.5°  | 476.7  | 448.6  | 326.5  | 158.4  | 31.8   | 29.7   | 70.8   | 103.5  | 111.1  | 103.5  | 70.8   |
| 95°    | 527.4  | 514.3  | 390.4  | 202.6  | 76.5   | 16.1   | 54.5   | 81.5   | 85.2   | 81.5   | 54.5   |
| 97.5°  | 591.3  | 581.9  | 453.3  | 263.1  | 134.4  | 24.3   | 41.0   | 68.9   | 68.9   | 68.9   | 41.0   |
| 100°   | 647.8  | 643.0  | 521.8  | 343.4  | 205.2  | 63.5   | 27.5   | 57.1   | 60.0   | 57.1   | 27.5   |
| 102.5° | 737.7  | 711.5  | 588.7  | 419.8  | 281.7  | 117.6  | 32.8   | 39.8   | 43.7   | 39.8   | 32.8   |
| 105°   | 813.8  | 782.9  | 678.3  | 500.0  | 369.5  | 190.4  | 75.6   | 32.9   | 28.4   | 32.9   | 75.6   |
| 107.5° | 885.4  | 864.9  | 760.3  | 583.1  | 462.7  | 275.3  | 139.1  | 73.8   | 49.6   | 73.8   | 139.1  |
| 110°   | 976.8  | 954.4  | 840.5  | 665.1  | 560.7  | 364.8  | 211.9  | 133.5  | 103.7  | 133.5  | 211.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 1066.4 | 1049.6 | 915.2  | 751.0  | 661.5  | 461.8  | 301.4  | 208.1  | 180.2  | 208.1  | 301.4  |
| 115°   | 1135.4 | 1125.1 | 1002.0 | 831.2  | 754.7  | 571.9  | 401.2  | 294.9  | 262.2  | 294.9  | 401.2  |
| 117.5° | 1208.1 | 1205.3 | 1065.4 | 913.3  | 866.6  | 670.8  | 492.6  | 382.5  | 348.1  | 382.5  | 492.6  |
| 120°   | 1299.5 | 1283.7 | 1153.0 | 995.4  | 973.0  | 775.2  | 593.4  | 483.3  | 448.9  | 483.3  | 593.4  |
| 122.5° | 1363.0 | 1353.7 | 1227.6 | 1074.7 | 1073.8 | 882.5  | 690.4  | 581.2  | 544.0  | 581.2  | 690.4  |
| 125°   | 1420.8 | 1417.0 | 1283.7 | 1153.0 | 1181.9 | 981.4  | 798.6  | 687.6  | 646.6  | 687.6  | 798.6  |
| 127.5° | 1473.0 | 1478.7 | 1357.4 | 1238.9 | 1293.0 | 1082.2 | 905.9  | 782.7  | 739.8  | 782.7  | 905.9  |
| 130°   | 1517.8 | 1536.4 | 1426.4 | 1317.2 | 1397.4 | 1192.2 | 1001.0 | 877.9  | 849.9  | 877.9  | 1001.0 |
| 132.5° | 1605.5 | 1594.3 | 1497.3 | 1397.4 | 1509.4 | 1293.0 | 1101.8 | 973.1  | 941.3  | 973.1  | 1101.8 |
| 135°   | 1650.3 | 1654.0 | 1558.9 | 1466.5 | 1613.9 | 1393.7 | 1196.9 | 1070.0 | 1038.3 | 1070.0 | 1196.9 |
| 137.5° | 1704.3 | 1693.2 | 1607.4 | 1551.4 | 1710.9 | 1491.7 | 1290.2 | 1172.6 | 1122.3 | 1172.6 | 1290.2 |
| 140°   | 1743.6 | 1741.7 | 1670.8 | 1626.0 | 1815.4 | 1586.8 | 1385.3 | 1265.9 | 1219.3 | 1265.9 | 1385.3 |
| 142.5° | 1785.5 | 1796.8 | 1734.2 | 1708.1 | 1919.8 | 1687.6 | 1488.0 | 1358.4 | 1313.5 | 1358.4 | 1488.0 |
| 145°   | 1812.6 | 1837.8 | 1797.6 | 1810.7 | 2018.7 | 1799.6 | 1577.5 | 1446.0 | 1396.6 | 1446.0 | 1577.5 |
| 147.5° | 1860.2 | 1890.9 | 1844.3 | 1883.4 | 2104.5 | 1898.4 | 1667.1 | 1536.4 | 1494.5 | 1536.4 | 1667.1 |
| 150°   | 1922.6 | 1937.6 | 1909.6 | 1984.2 | 2192.2 | 2008.4 | 1758.5 | 1624.2 | 1581.3 | 1624.2 | 1758.5 |
| 152.5° | 1973.0 | 1991.6 | 1960.0 | 2094.2 | 2261.3 | 2109.2 | 1859.3 | 1710.0 | 1659.6 | 1710.0 | 1859.3 |
| 155°   | 2025.2 | 2032.7 | 2010.3 | 2200.6 | 2335.0 | 2208.1 | 1939.4 | 1805.1 | 1756.6 | 1805.1 | 1939.4 |
| 157.5° | 2073.8 | 2088.7 | 2062.6 | 2280.9 | 2398.3 | 2293.9 | 2030.9 | 1900.2 | 1857.3 | 1900.2 | 2030.9 |
| 160°   | 2126.0 | 2126.0 | 2140.9 | 2374.2 | 2450.7 | 2368.5 | 2127.8 | 2004.8 | 1945.1 | 2004.8 | 2127.8 |
| 162.5° | 2131.6 | 2167.0 | 2247.3 | 2439.4 | 2501.0 | 2433.9 | 2232.4 | 2079.4 | 2027.1 | 2079.4 | 2232.4 |
| 165°   | 2213.7 | 2245.4 | 2366.7 | 2497.2 | 2541.1 | 2491.6 | 2361.1 | 2202.5 | 2140.9 | 2202.5 | 2361.1 |
| 167.5° | 2298.5 | 2365.7 | 2463.7 | 2563.5 | 2578.4 | 2546.7 | 2460.0 | 2348.9 | 2292.9 | 2348.9 | 2460.0 |
| 170°   | 2437.5 | 2497.2 | 2545.8 | 2587.7 | 2608.3 | 2589.7 | 2521.5 | 2467.4 | 2430.0 | 2467.4 | 2521.5 |
| 172.5° | 2547.6 | 2586.8 | 2605.5 | 2632.6 | 2619.5 | 2612.0 | 2577.5 | 2551.4 | 2530.8 | 2551.4 | 2577.5 |
| 175°   | 2616.6 | 2625.9 | 2642.7 | 2634.4 | 2645.6 | 2625.1 | 2625.9 | 2639.0 | 2560.7 | 2639.0 | 2625.9 |
| 177.5° | 2640.8 | 2655.8 | 2646.5 | 2630.6 | 2632.6 | 2628.8 | 2635.3 | 2642.7 | 2629.7 | 2642.7 | 2635.3 |
| 180°   | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 |



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CATALOG NUMBER: MWL-4-66-73-UNV-L830-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 | 2996.5 |
| 2.5°   | 3001.2 | 3002.1 | 3003.1 | 2985.8 | 2991.8 | 2989.9 |
| 5°     | 2987.7 | 2986.8 | 2987.7 | 2971.4 | 2976.4 | 2968.8 |
| 7.5°   | 2962.9 | 2962.8 | 2964.7 | 2944.6 | 2957.1 | 2947.6 |
| 10°    | 2927.5 | 2928.3 | 2929.3 | 2912.0 | 2920.6 | 2916.9 |
| 12.5°  | 2886.2 | 2883.3 | 2886.2 | 2870.8 | 2878.4 | 2880.2 |
| 15°    | 2834.3 | 2835.3 | 2836.3 | 2820.9 | 2826.6 | 2829.3 |
| 17.5°  | 2778.7 | 2778.7 | 2778.7 | 2763.3 | 2767.0 | 2770.8 |
| 20°    | 2708.7 | 2708.7 | 2710.5 | 2695.2 | 2698.8 | 2696.9 |
| 22.5°  | 2641.5 | 2638.6 | 2643.3 | 2623.2 | 2620.1 | 2617.2 |
| 25°    | 2560.9 | 2560.9 | 2562.7 | 2542.4 | 2526.0 | 2520.3 |
| 27.5°  | 2475.3 | 2475.4 | 2477.3 | 2450.3 | 2428.1 | 2412.7 |
| 30°    | 2384.1 | 2381.4 | 2387.9 | 2349.4 | 2314.8 | 2298.5 |
| 32.5°  | 2280.5 | 2286.2 | 2284.2 | 2238.0 | 2198.7 | 2182.4 |
| 35°    | 2177.9 | 2180.7 | 2183.4 | 2112.4 | 2067.3 | 2059.6 |
| 37.5°  | 2057.9 | 2077.9 | 2063.4 | 1988.6 | 1943.4 | 1941.5 |
| 40°    | 1928.3 | 1963.7 | 1932.0 | 1849.4 | 1817.7 | 1827.3 |
| 42.5°  | 1793.9 | 1839.9 | 1797.6 | 1715.1 | 1702.5 | 1714.0 |
| 45°    | 1655.7 | 1712.2 | 1659.4 | 1576.9 | 1579.7 | 1600.8 |
| 47.5°  | 1515.5 | 1565.3 | 1517.3 | 1454.9 | 1469.3 | 1494.3 |
| 50°    | 1369.6 | 1393.6 | 1373.3 | 1330.2 | 1363.8 | 1387.7 |
| 52.5°  | 1231.4 | 1210.3 | 1235.1 | 1219.8 | 1263.9 | 1282.2 |
| 55°    | 1083.6 | 1036.5 | 1087.4 | 1108.4 | 1161.2 | 1177.5 |
| 57.5°  | 936.8  | 885.8  | 940.5  | 1000.9 | 1066.2 | 1075.8 |
| 60°    | 796.6  | 757.2  | 798.5  | 891.6  | 967.4  | 978.0  |
| 62.5°  | 671.8  | 645.9  | 673.7  | 778.3  | 863.7  | 868.5  |
| 65°    | 564.3  | 554.7  | 566.2  | 667.9  | 747.6  | 762.0  |
| 67.5°  | 472.2  | 475.1  | 472.2  | 565.2  | 639.1  | 660.2  |
| 70°    | 390.6  | 403.1  | 390.6  | 464.5  | 530.7  | 563.4  |
| 72.5°  | 316.7  | 333.0  | 318.6  | 373.3  | 433.8  | 474.1  |
| 75°    | 253.3  | 275.4  | 253.3  | 289.8  | 351.2  | 402.1  |
| 77.5°  | 195.7  | 222.6  | 195.7  | 226.4  | 296.3  | 358.4  |
| 80°    | 144.9  | 167.9  | 144.9  | 185.1  | 271.6  | 334.5  |
| 82.5°  | 104.5  | 118.0  | 104.5  | 176.7  | 273.2  | 332.2  |
| 85°    | 83.4   | 70.9   | 87.2   | 192.8  | 298.4  | 352.7  |
| 87.5°  | 71.7   | 25.9   | 97.8   | 223.9  | 337.7  | 377.5  |
| 90°    | 47.9   | 2.8    | 118.7  | 272.8  | 387.5  | 419.6  |
| 92.5°  | 29.7   | 31.8   | 158.4  | 326.5  | 448.6  | 476.7  |
| 95°    | 16.1   | 76.5   | 202.6  | 390.4  | 514.3  | 527.4  |
| 97.5°  | 24.3   | 134.4  | 263.1  | 453.3  | 581.9  | 591.3  |
| 100°   | 63.5   | 205.2  | 343.4  | 521.8  | 643.0  | 647.8  |
| 102.5° | 117.6  | 281.7  | 419.8  | 588.7  | 711.5  | 737.7  |
| 105°   | 190.4  | 369.5  | 500.0  | 678.3  | 782.9  | 813.8  |
| 107.5° | 275.3  | 462.7  | 583.1  | 760.3  | 864.9  | 885.4  |
| 110°   | 364.8  | 560.7  | 665.1  | 840.5  | 954.4  | 976.8  |





TEST NUMBER: P392712

CATALOG NUMBER: MWL-4-66-73-UNV-L830-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 461.8  | 661.5  | 751.0  | 915.2  | 1049.6 | 1066.4 |
| 115°   | 571.9  | 754.7  | 831.2  | 1002.0 | 1125.1 | 1135.4 |
| 117.5° | 670.8  | 866.6  | 913.3  | 1065.4 | 1205.3 | 1208.1 |
| 120°   | 775.2  | 973.0  | 995.4  | 1153.0 | 1283.7 | 1299.5 |
| 122.5° | 882.5  | 1073.8 | 1074.7 | 1227.6 | 1353.7 | 1363.0 |
| 125°   | 981.4  | 1181.9 | 1153.0 | 1283.7 | 1417.0 | 1420.8 |
| 127.5° | 1082.2 | 1293.0 | 1238.9 | 1357.4 | 1478.7 | 1473.0 |
| 130°   | 1192.2 | 1397.4 | 1317.2 | 1426.4 | 1536.4 | 1517.8 |
| 132.5° | 1293.0 | 1509.4 | 1397.4 | 1497.3 | 1594.3 | 1605.5 |
| 135°   | 1393.7 | 1613.9 | 1466.5 | 1558.9 | 1654.0 | 1650.3 |
| 137.5° | 1491.7 | 1710.9 | 1551.4 | 1607.4 | 1693.2 | 1704.3 |
| 140°   | 1586.8 | 1815.4 | 1626.0 | 1670.8 | 1741.7 | 1743.6 |
| 142.5° | 1687.6 | 1919.8 | 1708.1 | 1734.2 | 1796.8 | 1785.5 |
| 145°   | 1799.6 | 2018.7 | 1810.7 | 1797.6 | 1837.8 | 1812.6 |
| 147.5° | 1898.4 | 2104.5 | 1883.4 | 1844.3 | 1890.9 | 1860.2 |
| 150°   | 2008.4 | 2192.2 | 1984.2 | 1909.6 | 1937.6 | 1922.6 |
| 152.5° | 2109.2 | 2261.3 | 2094.2 | 1960.0 | 1991.6 | 1973.0 |
| 155°   | 2208.1 | 2335.0 | 2200.6 | 2010.3 | 2032.7 | 2025.2 |
| 157.5° | 2293.9 | 2398.3 | 2280.9 | 2062.6 | 2088.7 | 2073.8 |
| 160°   | 2368.5 | 2450.7 | 2374.2 | 2140.9 | 2126.0 | 2126.0 |
| 162.5° | 2433.9 | 2501.0 | 2439.4 | 2247.3 | 2167.0 | 2131.6 |
| 165°   | 2491.6 | 2541.1 | 2497.2 | 2366.7 | 2245.4 | 2213.7 |
| 167.5° | 2546.7 | 2578.4 | 2563.5 | 2463.7 | 2365.7 | 2298.5 |
| 170°   | 2589.7 | 2608.3 | 2587.7 | 2545.8 | 2497.2 | 2437.5 |
| 172.5° | 2612.0 | 2619.5 | 2632.6 | 2605.5 | 2586.8 | 2547.6 |
| 175°   | 2625.1 | 2645.6 | 2634.4 | 2642.7 | 2625.9 | 2616.6 |
| 177.5° | 2628.8 | 2632.6 | 2630.6 | 2646.5 | 2655.8 | 2640.8 |
| 180°   | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 | 2642.7 |

(END OF REPORT)