

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: P392664

Luminaire Tested: **MWL-4-34-60-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392664  
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-4-34-60-UNV-L930-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

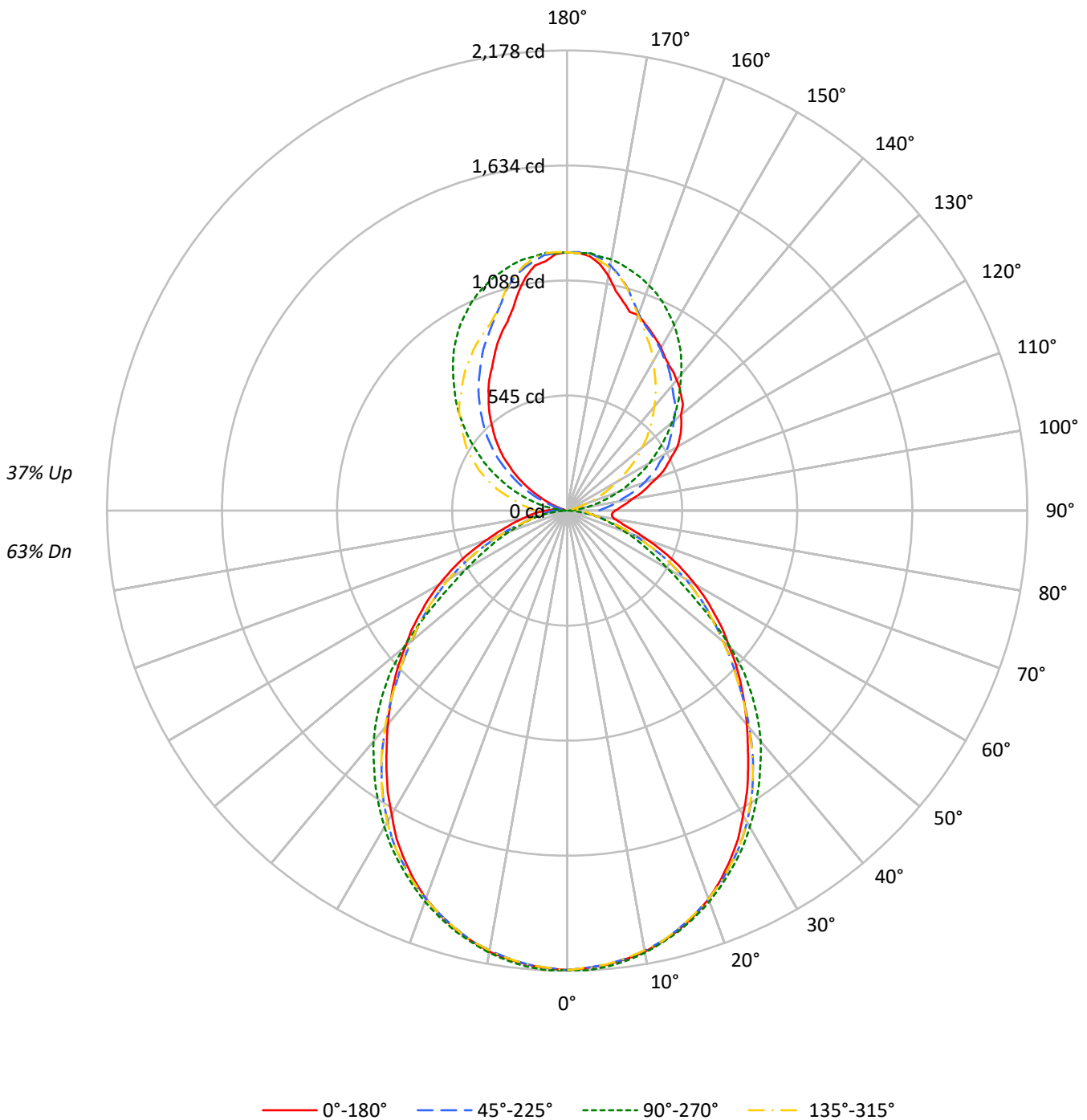
Lumens per Lamp: N/A  
Luminaire Lumens: 8005.5 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: Semi-Direct

Input Watts (W): 99.485  
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: P392664  
CATALOG NUMBER: MWL-4-34-60-UNV-L930-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P392664

CATALOG NUMBER: MWL-4-34-60-UNV-L930-EDD

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

|     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|
| RF  | 20  |     |     |     | 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 | 0  |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |
| 0   | 110 | 110 | 110 | 110 | 103 | 103 | 103 | 103 | 91 | 91 | 91 | 79 | 79 | 79 | 68 | 68 | 68 | 63 |
| 1   | 101 | 97  | 93  | 89  | 95  | 91  | 87  | 84  | 80 | 77 | 75 | 70 | 68 | 66 | 61 | 59 | 58 | 54 |
| 2   | 92  | 85  | 79  | 74  | 86  | 80  | 74  | 70  | 71 | 66 | 63 | 62 | 59 | 56 | 54 | 52 | 50 | 46 |
| 3   | 84  | 75  | 68  | 62  | 79  | 71  | 64  | 59  | 63 | 58 | 53 | 55 | 51 | 48 | 48 | 45 | 43 | 39 |
| 4   | 78  | 67  | 59  | 53  | 73  | 63  | 56  | 50  | 56 | 50 | 46 | 49 | 45 | 41 | 43 | 40 | 37 | 34 |
| 5   | 71  | 60  | 52  | 46  | 67  | 56  | 49  | 44  | 50 | 44 | 40 | 45 | 40 | 36 | 39 | 36 | 33 | 30 |
| 6   | 66  | 54  | 46  | 40  | 62  | 51  | 44  | 38  | 46 | 40 | 35 | 40 | 36 | 32 | 36 | 32 | 29 | 26 |
| 7   | 61  | 49  | 41  | 35  | 57  | 46  | 39  | 34  | 41 | 35 | 31 | 37 | 32 | 28 | 33 | 29 | 26 | 23 |
| 8   | 57  | 44  | 37  | 31  | 53  | 42  | 35  | 30  | 38 | 32 | 28 | 34 | 29 | 26 | 30 | 26 | 23 | 21 |
| 9   | 53  | 41  | 33  | 28  | 50  | 39  | 32  | 27  | 35 | 29 | 25 | 31 | 27 | 23 | 28 | 24 | 21 | 19 |
| 10  | 50  | 37  | 30  | 25  | 47  | 36  | 29  | 24  | 32 | 27 | 23 | 29 | 24 | 21 | 26 | 22 | 19 | 17 |

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

|     | 0°    | 90°   | 180°  | 270°  |
|-----|-------|-------|-------|-------|
| 0°  | 14045 | 14045 | 14045 | 14045 |
| 5°  | 13863 | 12920 | 13863 | 12920 |
| 10° | 13651 | 11846 | 13651 | 11846 |
| 15° | 13349 | 10853 | 13332 | 10853 |
| 20° | 12957 | 9923  | 12940 | 9923  |
| 25° | 12402 | 9032  | 12384 | 9032  |
| 30° | 11707 | 8176  | 11683 | 8176  |
| 35° | 10975 | 7337  | 10956 | 7337  |
| 40° | 10263 | 6537  | 10236 | 6537  |
| 45° | 9628  | 5647  | 9607  | 5647  |
| 50° | 8937  | 4630  | 8915  | 4630  |
| 55° | 8326  | 3489  | 8310  | 3489  |
| 60° | 7659  | 2590  | 7649  | 2590  |
| 65° | 6884  | 1963  | 6884  | 1963  |
| 70° | 5919  | 1452  | 5933  | 1452  |
| 75° | 5195  | 1056  | 5241  | 1056  |
| 80° | 5305  | 683   | 4924  | 683   |
| 85° | 7164  | 308   | 5270  | 308   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 205.0  | 2.6       |
| 10°-20°   | 578.2  | 7.2       |
| 20°-30°   | 847.8  | 10.6      |
| 30°-40°   | 959.8  | 12.0      |
| 40°-50°   | 904.2  | 11.3      |
| 50°-60°   | 723.0  | 9.0       |
| 60°-70°   | 474.8  | 5.9       |
| 70°-80°   | 242.7  | 3.0       |
| 80°-90°   | 124.1  | 1.5       |
| 90°-100°  | 119.5  | 1.5       |
| 100°-110° | 192.9  | 2.4       |
| 110°-120° | 325.6  | 4.1       |
| 120°-130° | 442.0  | 5.5       |
| 130°-140° | 503.9  | 6.3       |
| 140°-150° | 502.5  | 6.3       |
| 150°-160° | 437.4  | 5.5       |
| 160°-170° | 307.6  | 3.8       |
| 170°-180° | 114.6  | 1.4       |
| 0°-30°    | 1631.0 | 20.4      |
| 0°-40°    | 2590.8 | 32.4      |
| 0°-60°    | 4217.9 | 52.7      |
| 0°-90°    | 5059.6 | 63.2      |
| 90°-120°  | 638.0  | 8.0       |
| 90°-150°  | 2086.4 | 26.1      |
| 90°-180°  | 2946.0 | 36.8      |
| 0°-180°   | 8005.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 90°  | 180° | 270° | 360° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 2175 | 2175 | 2175 | 2175 | 2175 |      |
| 5°   | 2158 | 2167 | 2158 | 2167 | 2158 | 205  |
| 15°  | 2052 | 2058 | 2050 | 2058 | 2052 | 578  |
| 25°  | 1825 | 1859 | 1822 | 1859 | 1825 | 839  |
| 35°  | 1494 | 1582 | 1491 | 1582 | 1494 | 934  |
| 45°  | 1164 | 1237 | 1161 | 1237 | 1164 | 897  |
| 55°  | 850  | 752  | 848  | 752  | 850  | 762  |
| 65°  | 551  | 404  | 551  | 404  | 551  | 545  |
| 75°  | 289  | 200  | 292  | 200  | 289  | 318  |
| 85°  | 212  | 52   | 156  | 52   | 212  | 177  |
| 90°  | 227  | 2    | 98   | 2    | 227  | 126  |
| 95°  | 264  | 35   | 60   | 35   | 264  | 226  |
| 105° | 380  | 172  | 17   | 172  | 380  | 402  |
| 115° | 526  | 349  | 122  | 349  | 526  | 522  |
| 125° | 658  | 547  | 300  | 547  | 658  | 587  |
| 135° | 764  | 746  | 481  | 746  | 764  | 590  |
| 145° | 840  | 934  | 647  | 934  | 840  | 529  |
| 155° | 937  | 1080 | 813  | 1080 | 937  | 432  |
| 165° | 1024 | 1175 | 990  | 1175 | 1024 | 291  |
| 175° | 1210 | 1224 | 1184 | 1224 | 1210 | 113  |
| 180° | 1222 | 1222 | 1222 | 1222 | 1222 |      |



TEST NUMBER: P392664

CATALOG NUMBER: MWL-4-34-60-UNV-L930-EDD

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 |
| 2.5°   | 2166.3 | 2172.2 | 2165.5 | 2177.4 | 2178.2 | 2176.5 | 2165.5 | 2172.2 | 2167.1 | 2172.2 | 2165.5 |
| 5°     | 2157.8 | 2162.9 | 2156.3 | 2166.4 | 2167.2 | 2166.4 | 2155.3 | 2162.9 | 2157.8 | 2162.9 | 2155.3 |
| 7.5°   | 2140.9 | 2146.0 | 2137.6 | 2150.3 | 2149.5 | 2149.4 | 2136.7 | 2145.2 | 2140.9 | 2145.2 | 2136.7 |
| 10°    | 2119.8 | 2118.9 | 2113.9 | 2124.9 | 2124.9 | 2124.0 | 2113.0 | 2117.3 | 2119.8 | 2117.3 | 2113.0 |
| 12.5°  | 2088.6 | 2089.3 | 2086.0 | 2094.4 | 2092.8 | 2094.4 | 2086.0 | 2087.7 | 2086.9 | 2087.7 | 2086.0 |
| 15°    | 2052.3 | 2049.6 | 2047.1 | 2059.0 | 2058.1 | 2058.1 | 2046.3 | 2048.0 | 2049.6 | 2048.0 | 2046.3 |
| 17.5°  | 2007.5 | 2007.4 | 2004.0 | 2015.0 | 2015.8 | 2015.0 | 2003.1 | 2006.6 | 2004.9 | 2006.6 | 2003.1 |
| 20°    | 1956.7 | 1956.7 | 1956.6 | 1968.5 | 1969.3 | 1967.7 | 1955.9 | 1955.0 | 1954.2 | 1955.0 | 1955.9 |
| 22.5°  | 1894.2 | 1901.0 | 1902.6 | 1916.9 | 1915.3 | 1916.1 | 1901.7 | 1899.2 | 1892.5 | 1899.2 | 1901.7 |
| 25°    | 1824.9 | 1830.8 | 1842.6 | 1859.4 | 1858.6 | 1858.6 | 1840.9 | 1828.2 | 1822.3 | 1828.2 | 1840.9 |
| 27.5°  | 1752.2 | 1760.6 | 1778.3 | 1799.5 | 1798.6 | 1798.6 | 1776.7 | 1758.1 | 1749.6 | 1758.1 | 1776.7 |
| 30°    | 1664.3 | 1675.3 | 1702.4 | 1730.2 | 1729.3 | 1728.5 | 1699.7 | 1672.7 | 1660.9 | 1672.7 | 1699.7 |
| 32.5°  | 1583.2 | 1591.7 | 1622.9 | 1659.2 | 1658.3 | 1657.5 | 1620.3 | 1588.2 | 1579.7 | 1588.2 | 1620.3 |
| 35°    | 1493.5 | 1502.0 | 1534.1 | 1579.7 | 1582.3 | 1577.2 | 1531.5 | 1499.4 | 1491.0 | 1499.4 | 1531.5 |
| 37.5°  | 1404.7 | 1409.9 | 1442.0 | 1496.1 | 1503.6 | 1493.5 | 1439.4 | 1407.3 | 1402.3 | 1407.3 | 1439.4 |
| 40°    | 1323.7 | 1318.5 | 1340.6 | 1403.1 | 1425.9 | 1401.4 | 1337.1 | 1315.2 | 1320.2 | 1315.2 | 1337.1 |
| 42.5°  | 1242.5 | 1232.3 | 1242.5 | 1305.9 | 1334.7 | 1304.2 | 1240.0 | 1229.0 | 1239.1 | 1229.0 | 1240.0 |
| 45°    | 1163.9 | 1141.9 | 1142.8 | 1202.8 | 1236.6 | 1201.1 | 1139.3 | 1139.4 | 1161.4 | 1139.4 | 1139.3 |
| 47.5°  | 1084.4 | 1063.3 | 1054.8 | 1099.7 | 1136.8 | 1098.9 | 1051.4 | 1060.8 | 1082.0 | 1060.8 | 1051.4 |
| 50°    | 999.9  | 986.4  | 964.4  | 994.9  | 1010.1 | 993.2  | 961.0  | 982.9  | 997.4  | 982.9  | 961.0  |
| 52.5°  | 929.8  | 912.9  | 880.8  | 892.6  | 885.0  | 890.9  | 878.1  | 909.4  | 927.3  | 909.4  | 878.1  |
| 55°    | 849.5  | 840.2  | 803.8  | 786.1  | 752.3  | 784.3  | 801.3  | 837.5  | 847.8  | 837.5  | 801.3  |
| 57.5°  | 778.5  | 770.9  | 724.4  | 684.7  | 640.7  | 682.9  | 721.7  | 768.2  | 776.8  | 768.2  | 721.7  |
| 60°    | 699.9  | 699.9  | 644.1  | 580.7  | 547.8  | 579.8  | 642.3  | 698.1  | 699.0  | 698.1  | 642.3  |
| 62.5°  | 624.7  | 622.2  | 563.0  | 487.8  | 473.3  | 486.8  | 561.2  | 620.4  | 623.8  | 620.4  | 561.2  |
| 65°    | 551.1  | 539.3  | 481.8  | 408.3  | 404.0  | 407.4  | 480.9  | 538.3  | 551.1  | 538.3  | 480.9  |
| 67.5°  | 475.1  | 460.7  | 404.1  | 338.9  | 346.6  | 338.9  | 403.2  | 459.8  | 475.1  | 459.8  | 403.2  |
| 70°    | 403.2  | 382.8  | 336.4  | 279.7  | 288.2  | 279.7  | 336.4  | 383.8  | 404.1  | 383.8  | 336.4  |
| 72.5°  | 344.0  | 311.0  | 270.5  | 229.0  | 241.7  | 228.2  | 270.5  | 312.0  | 345.8  | 312.0  | 270.5  |
| 75°    | 289.1  | 251.8  | 209.6  | 183.4  | 200.3  | 183.4  | 210.4  | 252.8  | 291.7  | 252.8  | 210.4  |
| 77.5°  | 255.4  | 209.6  | 163.9  | 142.0  | 160.6  | 142.0  | 164.8  | 207.2  | 251.9  | 207.2  | 164.8  |
| 80°    | 226.9  | 184.6  | 132.8  | 105.7  | 122.6  | 105.7  | 131.0  | 170.8  | 210.6  | 170.8  | 131.0  |
| 82.5°  | 215.5  | 175.7  | 118.6  | 76.1   | 84.5   | 76.1   | 108.3  | 144.6  | 182.8  | 144.6  | 108.3  |
| 85°    | 211.8  | 178.7  | 120.7  | 60.9   | 51.6   | 59.2   | 95.7   | 126.1  | 155.8  | 126.1  | 95.7   |
| 87.5°  | 215.9  | 192.0  | 128.7  | 62.1   | 16.9   | 49.9   | 79.6   | 109.3  | 127.1  | 109.3  | 79.6   |
| 90°    | 227.4  | 208.7  | 147.1  | 66.6   | 1.7    | 33.8   | 61.8   | 87.2   | 98.1   | 87.2   | 61.8   |
| 92.5°  | 245.9  | 231.4  | 168.0  | 79.0   | 14.6   | 19.5   | 49.9   | 71.9   | 77.0   | 71.9   | 49.9   |
| 95°    | 264.4  | 259.2  | 192.5  | 95.6   | 35.3   | 9.4    | 37.2   | 59.2   | 60.1   | 59.2   | 37.2   |
| 97.5°  | 288.8  | 284.5  | 217.7  | 122.4  | 62.1   | 12.0   | 27.1   | 47.4   | 47.4   | 47.4   | 27.1   |
| 100°   | 310.6  | 308.0  | 244.6  | 159.5  | 95.7   | 30.2   | 16.1   | 37.3   | 39.0   | 37.3   | 16.1   |
| 102.5° | 347.9  | 335.0  | 273.2  | 194.9  | 131.0  | 55.1   | 16.3   | 24.7   | 27.2   | 24.7   | 16.3   |
| 105°   | 380.0  | 364.5  | 314.6  | 231.8  | 171.5  | 88.8   | 36.2   | 17.9   | 17.0   | 17.9   | 36.2   |
| 107.5° | 411.1  | 400.8  | 352.6  | 269.8  | 214.6  | 127.5  | 65.5   | 35.2   | 24.9   | 35.2   | 65.5   |
| 110°   | 452.5  | 442.2  | 389.6  | 307.7  | 259.5  | 169.0  | 99.1   | 62.9   | 49.1   | 62.9   | 99.1   |



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CATALOG NUMBER: MWL-4-34-60-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 494.0  | 486.1  | 424.1  | 347.4  | 306.1  | 213.8  | 140.4  | 97.4   | 84.4   | 97.4   | 140.4  |
| 115°   | 525.7  | 520.6  | 463.8  | 384.5  | 349.1  | 264.6  | 186.2  | 137.0  | 122.4  | 137.0  | 186.2  |
| 117.5° | 559.4  | 557.7  | 493.1  | 423.2  | 401.7  | 311.2  | 228.4  | 177.6  | 162.0  | 177.6  | 228.4  |
| 120°   | 601.6  | 594.8  | 533.6  | 461.1  | 450.8  | 359.4  | 275.0  | 224.9  | 208.6  | 224.9  | 275.0  |
| 122.5° | 631.0  | 626.7  | 568.0  | 497.4  | 497.4  | 408.6  | 319.8  | 269.8  | 252.5  | 269.8  | 319.8  |
| 125°   | 657.7  | 656.0  | 594.8  | 533.6  | 547.3  | 454.2  | 370.6  | 318.9  | 300.0  | 318.9  | 370.6  |
| 127.5° | 681.8  | 684.4  | 628.4  | 573.2  | 598.2  | 500.7  | 419.8  | 362.9  | 343.0  | 362.9  | 419.8  |
| 130°   | 702.6  | 711.1  | 660.3  | 609.5  | 646.5  | 551.6  | 463.8  | 406.9  | 393.9  | 406.9  | 463.8  |
| 132.5° | 743.0  | 737.9  | 693.0  | 647.3  | 698.2  | 599.1  | 510.2  | 450.8  | 436.1  | 450.8  | 510.2  |
| 135°   | 763.7  | 765.5  | 721.5  | 679.3  | 746.5  | 645.7  | 554.3  | 495.6  | 481.0  | 495.6  | 554.3  |
| 137.5° | 788.8  | 783.6  | 743.9  | 718.0  | 791.3  | 690.4  | 597.3  | 543.0  | 519.8  | 543.0  | 597.3  |
| 140°   | 806.8  | 805.9  | 773.2  | 752.6  | 839.6  | 734.3  | 641.4  | 586.1  | 564.6  | 586.1  | 641.4  |
| 142.5° | 825.8  | 831.8  | 802.5  | 790.4  | 887.9  | 780.9  | 688.7  | 629.2  | 607.7  | 629.2  | 688.7  |
| 145°   | 839.6  | 850.7  | 831.8  | 837.8  | 933.6  | 832.7  | 730.1  | 669.7  | 647.3  | 669.7  | 730.1  |
| 147.5° | 861.1  | 875.7  | 853.4  | 871.4  | 973.2  | 878.4  | 771.5  | 712.0  | 692.2  | 712.0  | 771.5  |
| 150°   | 889.6  | 896.5  | 883.6  | 918.0  | 1013.7 | 929.3  | 813.8  | 751.6  | 731.9  | 751.6  | 813.8  |
| 152.5° | 912.9  | 921.5  | 906.8  | 968.9  | 1045.7 | 975.8  | 860.3  | 791.3  | 768.1  | 791.3  | 860.3  |
| 155°   | 936.9  | 940.5  | 930.2  | 1018.0 | 1080.1 | 1021.5 | 897.3  | 835.3  | 812.9  | 835.3  | 897.3  |
| 157.5° | 959.5  | 966.3  | 954.2  | 1055.1 | 1109.3 | 1061.1 | 939.6  | 879.3  | 859.4  | 879.3  | 939.6  |
| 160°   | 983.5  | 983.5  | 990.5  | 1098.2 | 1133.6 | 1095.6 | 984.4  | 927.5  | 900.0  | 927.5  | 984.4  |
| 162.5° | 986.2  | 1002.5 | 1039.6 | 1128.4 | 1156.8 | 1125.8 | 1032.7 | 961.9  | 937.9  | 961.9  | 1032.7 |
| 165°   | 1024.1 | 1038.7 | 1094.7 | 1155.1 | 1174.9 | 1152.5 | 1092.2 | 1018.8 | 990.5  | 1018.8 | 1092.2 |
| 167.5° | 1063.7 | 1094.7 | 1139.5 | 1186.1 | 1193.1 | 1178.4 | 1137.9 | 1087.0 | 1061.1 | 1087.0 | 1137.9 |
| 170°   | 1127.6 | 1155.1 | 1177.5 | 1196.5 | 1206.8 | 1197.4 | 1166.3 | 1141.3 | 1124.1 | 1141.3 | 1166.3 |
| 172.5° | 1177.6 | 1196.5 | 1205.1 | 1218.0 | 1212.0 | 1208.5 | 1192.2 | 1180.1 | 1169.8 | 1180.1 | 1192.2 |
| 175°   | 1209.5 | 1214.6 | 1222.4 | 1219.0 | 1224.1 | 1214.6 | 1214.6 | 1220.6 | 1183.6 | 1220.6 | 1214.6 |
| 177.5° | 1220.7 | 1228.4 | 1224.1 | 1217.1 | 1218.0 | 1216.3 | 1219.0 | 1222.4 | 1215.4 | 1222.4 | 1219.0 |
| 180°   | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 |



TEST NUMBER: P392664

CATALOG NUMBER: MWL-4-34-60-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 | 2174.7 |
| 2.5°   | 2176.5 | 2178.2 | 2177.4 | 2165.5 | 2172.2 | 2166.3 |
| 5°     | 2166.4 | 2167.2 | 2166.4 | 2156.3 | 2162.9 | 2157.8 |
| 7.5°   | 2149.4 | 2149.5 | 2150.3 | 2137.6 | 2146.0 | 2140.9 |
| 10°    | 2124.0 | 2124.9 | 2124.9 | 2113.9 | 2118.9 | 2119.8 |
| 12.5°  | 2094.4 | 2092.8 | 2094.4 | 2086.0 | 2089.3 | 2088.6 |
| 15°    | 2058.1 | 2058.1 | 2059.0 | 2047.1 | 2049.6 | 2052.3 |
| 17.5°  | 2015.0 | 2015.8 | 2015.0 | 2004.0 | 2007.4 | 2007.5 |
| 20°    | 1967.7 | 1969.3 | 1968.5 | 1956.6 | 1956.7 | 1956.7 |
| 22.5°  | 1916.1 | 1915.3 | 1916.9 | 1902.6 | 1901.0 | 1894.2 |
| 25°    | 1858.6 | 1858.6 | 1859.4 | 1842.6 | 1830.8 | 1824.9 |
| 27.5°  | 1798.6 | 1798.6 | 1799.5 | 1778.3 | 1760.6 | 1752.2 |
| 30°    | 1728.5 | 1729.3 | 1730.2 | 1702.4 | 1675.3 | 1664.3 |
| 32.5°  | 1657.5 | 1658.3 | 1659.2 | 1622.9 | 1591.7 | 1583.2 |
| 35°    | 1577.2 | 1582.3 | 1579.7 | 1534.1 | 1502.0 | 1493.5 |
| 37.5°  | 1493.5 | 1503.6 | 1496.1 | 1442.0 | 1409.9 | 1404.7 |
| 40°    | 1401.4 | 1425.9 | 1403.1 | 1340.6 | 1318.5 | 1323.7 |
| 42.5°  | 1304.2 | 1334.7 | 1305.9 | 1242.5 | 1232.3 | 1242.5 |
| 45°    | 1201.1 | 1236.6 | 1202.8 | 1142.8 | 1141.9 | 1163.9 |
| 47.5°  | 1098.9 | 1136.8 | 1099.7 | 1054.8 | 1063.3 | 1084.4 |
| 50°    | 993.2  | 1010.1 | 994.9  | 964.4  | 986.4  | 999.9  |
| 52.5°  | 890.9  | 885.0  | 892.6  | 880.8  | 912.9  | 929.8  |
| 55°    | 784.3  | 752.3  | 786.1  | 803.8  | 840.2  | 849.5  |
| 57.5°  | 682.9  | 640.7  | 684.7  | 724.4  | 770.9  | 778.5  |
| 60°    | 579.8  | 547.8  | 580.7  | 644.1  | 699.9  | 699.9  |
| 62.5°  | 486.8  | 473.3  | 487.8  | 563.0  | 622.2  | 624.7  |
| 65°    | 407.4  | 404.0  | 408.3  | 481.8  | 539.3  | 551.1  |
| 67.5°  | 338.9  | 346.6  | 338.9  | 404.1  | 460.7  | 475.1  |
| 70°    | 279.7  | 288.2  | 279.7  | 336.4  | 382.8  | 403.2  |
| 72.5°  | 228.2  | 241.7  | 229.0  | 270.5  | 311.0  | 344.0  |
| 75°    | 183.4  | 200.3  | 183.4  | 209.6  | 251.8  | 289.1  |
| 77.5°  | 142.0  | 160.6  | 142.0  | 163.9  | 209.6  | 255.4  |
| 80°    | 105.7  | 122.6  | 105.7  | 132.8  | 184.6  | 226.9  |
| 82.5°  | 76.1   | 84.5   | 76.1   | 118.6  | 175.7  | 215.5  |
| 85°    | 59.2   | 51.6   | 60.9   | 120.7  | 178.7  | 211.8  |
| 87.5°  | 49.9   | 16.9   | 62.1   | 128.7  | 192.0  | 215.9  |
| 90°    | 33.8   | 1.7    | 66.6   | 147.1  | 208.7  | 227.4  |
| 92.5°  | 19.5   | 14.6   | 79.0   | 168.0  | 231.4  | 245.9  |
| 95°    | 9.4    | 35.3   | 95.6   | 192.5  | 259.2  | 264.4  |
| 97.5°  | 12.0   | 62.1   | 122.4  | 217.7  | 284.5  | 288.8  |
| 100°   | 30.2   | 95.7   | 159.5  | 244.6  | 308.0  | 310.6  |
| 102.5° | 55.1   | 131.0  | 194.9  | 273.2  | 335.0  | 347.9  |
| 105°   | 88.8   | 171.5  | 231.8  | 314.6  | 364.5  | 380.0  |
| 107.5° | 127.5  | 214.6  | 269.8  | 352.6  | 400.8  | 411.1  |
| 110°   | 169.0  | 259.5  | 307.7  | 389.6  | 442.2  | 452.5  |





TEST NUMBER: P392664

CATALOG NUMBER: MWL-4-34-60-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 213.8  | 306.1  | 347.4  | 424.1  | 486.1  | 494.0  |
| 115°   | 264.6  | 349.1  | 384.5  | 463.8  | 520.6  | 525.7  |
| 117.5° | 311.2  | 401.7  | 423.2  | 493.1  | 557.7  | 559.4  |
| 120°   | 359.4  | 450.8  | 461.1  | 533.6  | 594.8  | 601.6  |
| 122.5° | 408.6  | 497.4  | 497.4  | 568.0  | 626.7  | 631.0  |
| 125°   | 454.2  | 547.3  | 533.6  | 594.8  | 656.0  | 657.7  |
| 127.5° | 500.7  | 598.2  | 573.2  | 628.4  | 684.4  | 681.8  |
| 130°   | 551.6  | 646.5  | 609.5  | 660.3  | 711.1  | 702.6  |
| 132.5° | 599.1  | 698.2  | 647.3  | 693.0  | 737.9  | 743.0  |
| 135°   | 645.7  | 746.5  | 679.3  | 721.5  | 765.5  | 763.7  |
| 137.5° | 690.4  | 791.3  | 718.0  | 743.9  | 783.6  | 788.8  |
| 140°   | 734.3  | 839.6  | 752.6  | 773.2  | 805.9  | 806.8  |
| 142.5° | 780.9  | 887.9  | 790.4  | 802.5  | 831.8  | 825.8  |
| 145°   | 832.7  | 933.6  | 837.8  | 831.8  | 850.7  | 839.6  |
| 147.5° | 878.4  | 973.2  | 871.4  | 853.4  | 875.7  | 861.1  |
| 150°   | 929.3  | 1013.7 | 918.0  | 883.6  | 896.5  | 889.6  |
| 152.5° | 975.8  | 1045.7 | 968.9  | 906.8  | 921.5  | 912.9  |
| 155°   | 1021.5 | 1080.1 | 1018.0 | 930.2  | 940.5  | 936.9  |
| 157.5° | 1061.1 | 1109.3 | 1055.1 | 954.2  | 966.3  | 959.5  |
| 160°   | 1095.6 | 1133.6 | 1098.2 | 990.5  | 983.5  | 983.5  |
| 162.5° | 1125.8 | 1156.8 | 1128.4 | 1039.6 | 1002.5 | 986.2  |
| 165°   | 1152.5 | 1174.9 | 1155.1 | 1094.7 | 1038.7 | 1024.1 |
| 167.5° | 1178.4 | 1193.1 | 1186.1 | 1139.5 | 1094.7 | 1063.7 |
| 170°   | 1197.4 | 1206.8 | 1196.5 | 1177.5 | 1155.1 | 1127.6 |
| 172.5° | 1208.5 | 1212.0 | 1218.0 | 1205.1 | 1196.5 | 1177.6 |
| 175°   | 1214.6 | 1224.1 | 1219.0 | 1222.4 | 1214.6 | 1209.5 |
| 177.5° | 1216.3 | 1218.0 | 1217.1 | 1224.1 | 1228.4 | 1220.7 |
| 180°   | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 | 1222.4 |

(END OF REPORT)