

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: P392508

Luminaire Tested: **MWL-2-22-23-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392508  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-25 &  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-2-22-23-UNV-L930-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

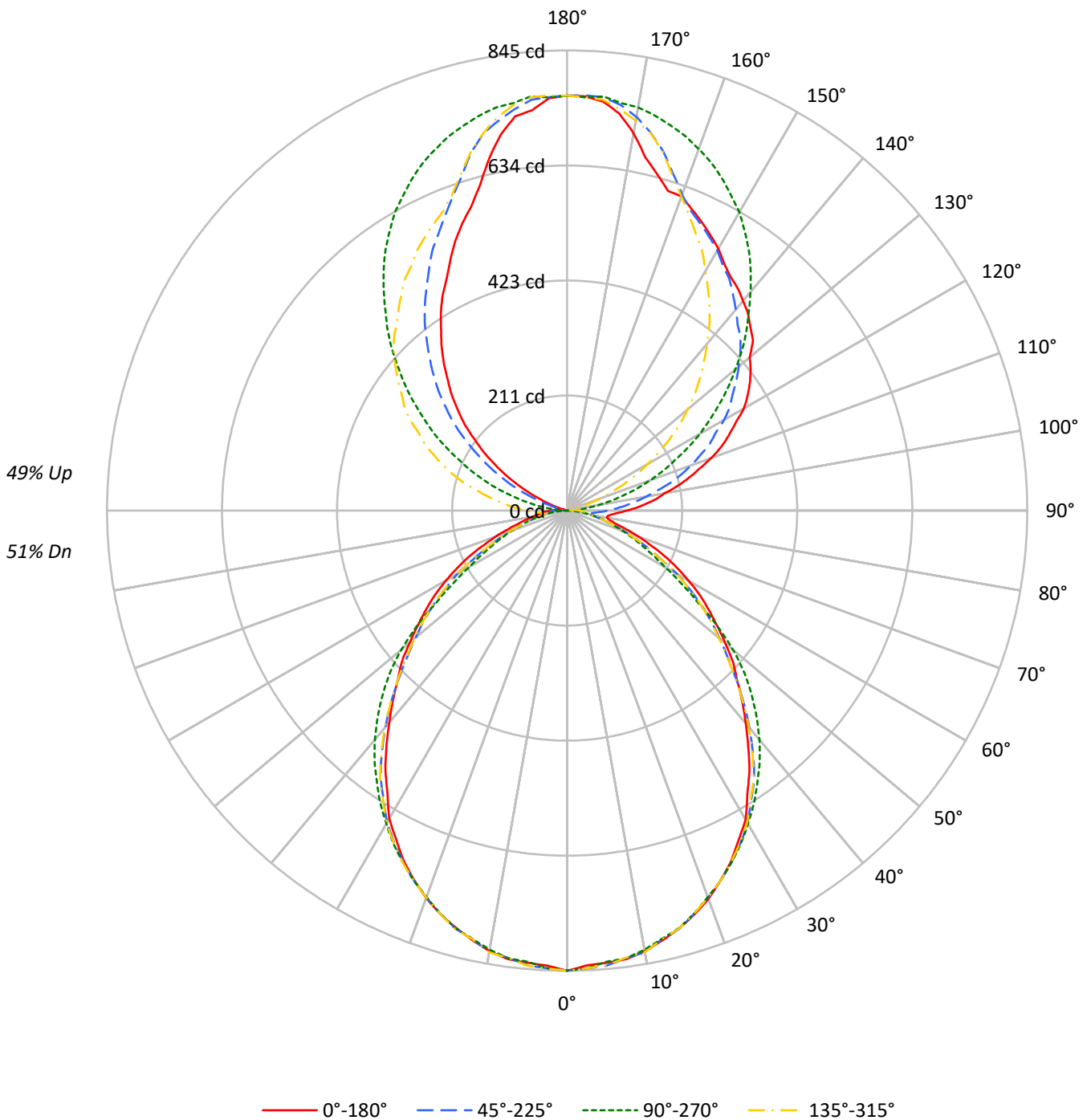
Lumens per Lamp: N/A  
Luminaire Lumens: 3739.5 lumens  
Efficiency: N/A  
Efficacy: 83.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')  
CIE Type: General Diffuse

Input Watts (W): 44.743  
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: P392508  
CATALOG NUMBER: MWL-2-22-23-UNV-L930-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P392508

CATALOG NUMBER: MWL-2-22-23-UNV-L930-EDD

**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 | 0  |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 84 | 84 | 84 | 70 | 70 | 70 | 57 | 57 | 57 | 51 |
| 1   | 98  | 94  | 90  | 87  | 91 | 87 | 84 | 81 | 74 | 72 | 70 | 62 | 60 | 59 | 51 | 50 | 49 | 44 |
| 2   | 90  | 83  | 77  | 72  | 83 | 77 | 72 | 67 | 65 | 62 | 58 | 55 | 52 | 50 | 45 | 44 | 42 | 37 |
| 3   | 82  | 73  | 66  | 60  | 76 | 68 | 62 | 57 | 58 | 53 | 50 | 49 | 46 | 43 | 41 | 38 | 36 | 32 |
| 4   | 75  | 65  | 57  | 51  | 70 | 60 | 54 | 48 | 52 | 47 | 43 | 44 | 40 | 37 | 37 | 34 | 31 | 28 |
| 5   | 69  | 58  | 50  | 44  | 64 | 54 | 47 | 42 | 47 | 41 | 37 | 40 | 36 | 32 | 33 | 30 | 28 | 25 |
| 6   | 64  | 52  | 44  | 39  | 59 | 49 | 42 | 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 | 24 | 22 | 19 |
| 8   | 55  | 43  | 35  | 30  | 51 | 40 | 33 | 29 | 35 | 30 | 26 | 30 | 26 | 23 | 26 | 22 | 20 | 17 |
| 9   | 51  | 39  | 32  | 27  | 48 | 37 | 30 | 26 | 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°  | 10913 | 10913 | 10913 | 10913 |
| 5°  | 10612 | 9914  | 10612 | 9914  |
| 10° | 10390 | 9127  | 10390 | 9127  |
| 15° | 10059 | 8371  | 10037 | 8371  |
| 20° | 9695  | 7612  | 9675  | 7612  |
| 25° | 9241  | 6934  | 9222  | 6934  |
| 30° | 8727  | 6280  | 8698  | 6280  |
| 35° | 8030  | 5648  | 8006  | 5648  |
| 40° | 7323  | 5038  | 7293  | 5038  |
| 45° | 6674  | 4380  | 6650  | 4380  |
| 50° | 6101  | 3645  | 6075  | 3645  |
| 55° | 5498  | 2707  | 5479  | 2707  |
| 60° | 4879  | 1968  | 4871  | 1968  |
| 65° | 4168  | 1473  | 4168  | 1473  |
| 70° | 3343  | 1087  | 3358  | 1087  |
| 75° | 2547  | 769   | 2594  | 769   |
| 80° | 2516  | 474   | 2165  | 474   |
| 85° | 3590  | 203   | 2056  | 203   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 79.4   | 2.1       |
| 10°-20°   | 223.5  | 6.0       |
| 20°-30°   | 328.0  | 8.8       |
| 30°-40°   | 372.0  | 9.9       |
| 40°-50°   | 347.0  | 9.3       |
| 50°-60°   | 271.4  | 7.3       |
| 60°-70°   | 168.3  | 4.5       |
| 70°-80°   | 81.7   | 2.2       |
| 80°-90°   | 46.7   | 1.2       |
| 90°-100°  | 62.6   | 1.7       |
| 100°-110° | 117.5  | 3.1       |
| 110°-120° | 202.5  | 5.4       |
| 120°-130° | 275.5  | 7.4       |
| 130°-140° | 314.0  | 8.4       |
| 140°-150° | 313.3  | 8.4       |
| 150°-160° | 272.8  | 7.3       |
| 160°-170° | 191.8  | 5.1       |
| 170°-180° | 71.4   | 1.9       |
| 0°-30°    | 630.9  | 16.9      |
| 0°-40°    | 1003.0 | 26.8      |
| 0°-60°    | 1621.4 | 43.4      |
| 0°-90°    | 1918.2 | 51.3      |
| 90°-120°  | 382.6  | 10.2      |
| 90°-150°  | 1285.3 | 34.4      |
| 90°-180°  | 1821.0 | 48.7      |
| 0°-180°   | 3739.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 90° | 180° | 270° | 360° | Flux |
|------|-----|-----|------|------|------|------|
| 0°   | 845 | 845 | 845  | 845  | 845  |      |
| 5°   | 833 | 832 | 833  | 832  | 833  | 79   |
| 15°  | 794 | 794 | 792  | 794  | 794  | 224  |
| 25°  | 711 | 713 | 710  | 713  | 711  | 327  |
| 35°  | 584 | 609 | 582  | 609  | 584  | 364  |
| 45°  | 442 | 480 | 440  | 480  | 442  | 342  |
| 55°  | 317 | 292 | 316  | 292  | 317  | 284  |
| 65°  | 197 | 152 | 197  | 152  | 197  | 195  |
| 75°  | 91  | 73  | 92   | 73   | 91   | 103  |
| 85°  | 82  | 17  | 47   | 17   | 82   | 66   |
| 90°  | 109 | 1   | 28   | 1    | 109  | 60   |
| 95°  | 146 | 22  | 19   | 22   | 146  | 127  |
| 105° | 231 | 107 | 5    | 107  | 231  | 244  |
| 115° | 328 | 218 | 76   | 218  | 328  | 325  |
| 125° | 410 | 342 | 187  | 342  | 410  | 366  |
| 135° | 476 | 466 | 300  | 466  | 476  | 367  |
| 145° | 524 | 582 | 404  | 582  | 524  | 330  |
| 155° | 585 | 673 | 507  | 673  | 585  | 270  |
| 165° | 639 | 732 | 618  | 732  | 639  | 181  |
| 175° | 754 | 763 | 738  | 763  | 754  | 70   |
| 180° | 762 | 762 | 762  | 762  | 762  |      |



TEST NUMBER: P392508

CATALOG NUMBER: MWL-2-22-23-UNV-L930-EDD

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0°     | 844.9 | 844.9 | 844.9 | 844.9 | 844.9 | 844.9  | 844.9 | 844.9  | 844.9 | 844.9  | 844.9 |
| 2.5°   | 835.9 | 845.2 | 841.3 | 841.1 | 841.1 | 840.5  | 841.3 | 845.2  | 836.5 | 845.2  | 841.3 |
| 5°     | 833.4 | 840.3 | 838.9 | 838.1 | 831.5 | 838.1  | 838.3 | 840.3  | 833.4 | 840.3  | 838.3 |
| 7.5°   | 830.8 | 834.3 | 828.5 | 830.7 | 829.0 | 830.1  | 827.9 | 833.7  | 830.8 | 833.7  | 827.9 |
| 10°    | 821.3 | 822.7 | 823.5 | 819.5 | 818.6 | 818.9  | 823.0 | 821.7  | 821.3 | 821.7  | 823.0 |
| 12.5°  | 808.4 | 809.6 | 805.7 | 808.2 | 805.2 | 808.2  | 805.7 | 808.5  | 807.3 | 808.5  | 805.7 |
| 15°    | 794.2 | 798.1 | 795.0 | 792.5 | 793.7 | 792.1  | 794.6 | 797.0  | 792.5 | 797.0  | 794.6 |
| 17.5°  | 777.7 | 779.2 | 776.1 | 775.6 | 775.6 | 775.6  | 775.6 | 778.5  | 776.1 | 778.5  | 775.6 |
| 20°    | 758.8 | 759.1 | 756.3 | 755.0 | 755.3 | 754.5  | 755.9 | 758.0  | 757.2 | 758.0  | 755.9 |
| 22.5°  | 735.2 | 739.4 | 735.8 | 737.8 | 735.6 | 737.2  | 735.3 | 738.3  | 734.2 | 738.3  | 735.3 |
| 25°    | 711.4 | 713.9 | 713.4 | 716.5 | 713.4 | 715.8  | 712.3 | 712.3  | 709.9 | 712.3  | 712.3 |
| 27.5°  | 681.8 | 685.1 | 688.7 | 691.5 | 690.3 | 690.9  | 687.7 | 683.5  | 680.3 | 683.5  | 687.7 |
| 30°    | 655.5 | 653.9 | 662.9 | 664.9 | 664.1 | 663.8  | 661.3 | 652.3  | 653.3 | 652.3  | 661.3 |
| 32.5°  | 616.0 | 620.9 | 629.2 | 638.5 | 638.3 | 637.5  | 627.6 | 618.8  | 613.9 | 618.8  | 627.6 |
| 35°    | 583.5 | 586.8 | 599.1 | 609.7 | 609.0 | 608.2  | 597.4 | 585.1  | 581.8 | 585.1  | 597.4 |
| 37.5°  | 546.4 | 547.3 | 560.4 | 578.5 | 580.8 | 576.9  | 558.8 | 545.6  | 544.9 | 545.6  | 558.8 |
| 40°    | 510.2 | 509.5 | 521.0 | 541.8 | 549.5 | 540.7  | 518.9 | 507.3  | 508.1 | 507.3  | 518.9 |
| 42.5°  | 475.7 | 472.5 | 480.1 | 507.3 | 515.0 | 506.2  | 478.6 | 470.4  | 473.6 | 470.4  | 478.6 |
| 45°    | 441.5 | 437.3 | 439.8 | 464.5 | 479.6 | 463.4  | 437.7 | 435.8  | 439.9 | 435.8  | 437.7 |
| 47.5°  | 413.5 | 402.8 | 400.4 | 421.2 | 441.8 | 420.7  | 398.3 | 401.2  | 412.0 | 401.2  | 398.3 |
| 50°    | 379.0 | 373.2 | 365.0 | 380.1 | 397.6 | 379.1  | 362.9 | 371.0  | 377.4 | 371.0  | 362.9 |
| 52.5°  | 346.9 | 344.5 | 332.5 | 339.0 | 346.7 | 337.9  | 330.8 | 342.3  | 345.3 | 342.3  | 330.8 |
| 55°    | 316.8 | 312.7 | 299.5 | 297.3 | 291.9 | 296.3  | 297.9 | 311.1  | 315.7 | 311.1  | 297.9 |
| 57.5°  | 288.9 | 283.1 | 265.0 | 257.9 | 248.3 | 256.8  | 263.4 | 281.5  | 287.7 | 281.5  | 263.4 |
| 60°    | 257.0 | 252.1 | 233.2 | 215.5 | 208.1 | 214.8  | 232.1 | 251.0  | 256.6 | 251.0  | 232.1 |
| 62.5°  | 227.4 | 219.2 | 196.2 | 179.3 | 177.1 | 178.7  | 195.1 | 218.1  | 226.9 | 218.1  | 195.1 |
| 65°    | 197.3 | 185.0 | 165.3 | 148.8 | 151.5 | 148.3  | 164.7 | 184.5  | 197.3 | 184.5  | 164.7 |
| 67.5°  | 165.3 | 154.6 | 137.4 | 121.9 | 128.6 | 121.9  | 136.7 | 154.0  | 165.3 | 154.0  | 136.7 |
| 70°    | 139.2 | 126.1 | 112.1 | 100.6 | 107.9 | 100.6  | 112.1 | 126.6  | 139.8 | 126.6  | 112.1 |
| 72.5°  | 112.9 | 101.3 | 89.9  | 82.5  | 87.7  | 82.0   | 89.9  | 102.0  | 113.9 | 102.0  | 89.9  |
| 75°    | 90.7  | 80.0  | 70.4  | 64.7  | 72.9  | 64.7   | 71.0  | 80.6   | 92.4  | 80.6   | 71.0  |
| 77.5°  | 79.3  | 66.5  | 53.2  | 51.6  | 58.1  | 51.6   | 53.7  | 65.0   | 77.2  | 65.0   | 53.7  |
| 80°    | 73.8  | 63.4  | 42.4  | 38.4  | 42.5  | 38.4   | 41.4  | 54.8   | 63.5  | 54.8   | 41.4  |
| 82.5°  | 75.1  | 67.0  | 42.4  | 27.7  | 30.2  | 27.7   | 35.8  | 47.6   | 54.7  | 47.6   | 35.8  |
| 85°    | 81.9  | 76.5  | 48.3  | 21.8  | 17.0  | 20.8   | 32.8  | 43.8   | 46.9  | 43.8   | 32.8  |
| 87.5°  | 93.9  | 91.5  | 59.9  | 25.0  | 4.1   | 17.5   | 29.2  | 39.9   | 38.5  | 39.9   | 29.2  |
| 90°    | 109.1 | 107.0 | 75.2  | 31.4  | 0.6   | 10.9   | 21.8  | 31.2   | 28.4  | 31.2   | 21.8  |
| 92.5°  | 128.6 | 124.7 | 90.9  | 42.3  | 8.6   | 5.2    | 17.3  | 25.2   | 23.2  | 25.2   | 17.3  |
| 95°    | 146.3 | 143.1 | 108.3 | 56.7  | 21.6  | 3.0    | 11.5  | 18.3   | 18.9  | 18.3   | 11.5  |
| 97.5°  | 165.9 | 161.5 | 126.2 | 76.1  | 39.0  | 7.2    | 7.3   | 13.6   | 15.3  | 13.6   | 7.3   |
| 100°   | 181.0 | 178.1 | 147.1 | 99.2  | 59.4  | 18.6   | 4.6   | 9.2    | 11.7  | 9.2    | 4.6   |
| 102.5° | 206.8 | 199.4 | 169.1 | 121.2 | 81.4  | 34.2   | 8.9   | 5.9    | 6.8   | 5.9    | 8.9   |
| 105°   | 231.0 | 223.4 | 195.5 | 144.4 | 106.7 | 55.1   | 21.7  | 7.2    | 4.6   | 7.2    | 21.7  |
| 107.5° | 254.1 | 248.7 | 219.2 | 168.1 | 133.6 | 79.3   | 40.1  | 20.7   | 13.1  | 20.7   | 40.1  |
| 110°   | 281.0 | 274.5 | 242.2 | 191.7 | 161.6 | 105.1  | 61.0  | 37.9   | 29.3  | 37.9   | 61.0  |



TEST NUMBER: P392508

CATALOG NUMBER: MWL-2-22-23-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 112.5° | 306.8 | 301.9 | 263.8 | 216.4 | 190.6 | 133.1  | 86.8  | 59.4   | 51.4  | 59.4   | 86.8  |
| 115°   | 327.5 | 323.9 | 288.5 | 239.5 | 217.5 | 164.7  | 115.3 | 84.7   | 75.8  | 84.7   | 115.3 |
| 117.5° | 348.5 | 347.9 | 306.8 | 263.2 | 249.8 | 193.3  | 141.7 | 110.8  | 100.6 | 110.8  | 141.7 |
| 120°   | 374.7 | 370.5 | 332.8 | 287.7 | 281.2 | 224.3  | 171.5 | 139.8  | 129.6 | 139.8  | 171.5 |
| 122.5° | 393.1 | 390.4 | 354.4 | 310.2 | 310.2 | 254.9  | 199.4 | 167.8  | 157.1 | 167.8  | 199.4 |
| 125°   | 409.7 | 408.6 | 370.5 | 332.8 | 341.5 | 283.4  | 230.7 | 198.4  | 186.6 | 198.4  | 230.7 |
| 127.5° | 424.8 | 426.4 | 391.5 | 357.6 | 373.2 | 312.5  | 261.3 | 225.8  | 213.4 | 225.8  | 261.3 |
| 130°   | 437.7 | 443.1 | 411.4 | 380.2 | 403.3 | 344.1  | 288.8 | 253.2  | 245.2 | 253.2  | 288.8 |
| 132.5° | 463.0 | 459.7 | 431.8 | 403.3 | 435.6 | 373.2  | 317.8 | 280.7  | 271.5 | 280.7  | 317.8 |
| 135°   | 475.9 | 477.0 | 449.5 | 423.2 | 465.6 | 402.2  | 345.2 | 308.7  | 299.5 | 308.7  | 345.2 |
| 137.5° | 491.5 | 488.2 | 463.5 | 447.4 | 493.6 | 430.2  | 372.1 | 338.3  | 323.8 | 338.3  | 372.1 |
| 140°   | 502.7 | 502.2 | 481.7 | 469.0 | 523.8 | 457.6  | 399.6 | 365.1  | 351.7 | 365.1  | 399.6 |
| 142.5° | 514.6 | 517.8 | 500.1 | 492.6 | 553.8 | 486.6  | 429.2 | 391.5  | 378.5 | 391.5  | 429.2 |
| 145°   | 523.5 | 530.4 | 519.1 | 522.1 | 582.3 | 518.9  | 455.7 | 417.5  | 403.5 | 417.5  | 455.7 |
| 147.5° | 536.9 | 546.1 | 532.6 | 543.9 | 607.1 | 548.2  | 481.5 | 443.9  | 431.5 | 443.9  | 481.5 |
| 150°   | 555.2 | 559.6 | 551.4 | 572.1 | 632.3 | 579.1  | 507.9 | 469.1  | 456.8 | 469.1  | 507.9 |
| 152.5° | 569.8 | 575.1 | 566.0 | 603.8 | 652.2 | 608.2  | 536.9 | 494.0  | 479.3 | 494.0  | 536.9 |
| 155°   | 584.7 | 586.9 | 580.5 | 634.5 | 673.1 | 636.7  | 560.0 | 521.3  | 507.3 | 521.3  | 560.0 |
| 157.5° | 598.7 | 603.1 | 594.7 | 657.6 | 691.5 | 661.4  | 585.6 | 548.7  | 536.3 | 548.7  | 585.6 |
| 160°   | 613.8 | 613.8 | 617.2 | 684.5 | 706.5 | 682.9  | 613.5 | 578.8  | 561.7 | 578.8  | 613.5 |
| 162.5° | 615.5 | 625.7 | 648.0 | 703.3 | 721.0 | 701.7  | 643.6 | 600.4  | 585.3 | 600.4  | 643.6 |
| 165°   | 639.1 | 647.4 | 682.4 | 720.0 | 732.4 | 718.4  | 680.7 | 635.0  | 618.1 | 635.0  | 680.7 |
| 167.5° | 663.8 | 682.4 | 710.3 | 738.8 | 743.1 | 733.9  | 709.2 | 677.5  | 662.2 | 677.5  | 709.2 |
| 170°   | 703.3 | 720.0 | 733.9 | 745.8 | 751.7 | 746.3  | 726.9 | 711.4  | 701.1 | 711.4  | 726.9 |
| 172.5° | 735.0 | 745.8 | 751.2 | 758.7 | 754.9 | 752.7  | 743.1 | 735.6  | 730.2 | 735.6  | 743.1 |
| 175°   | 754.1 | 757.1 | 761.9 | 760.0 | 763.3 | 757.4  | 757.1 | 760.8  | 737.9 | 760.8  | 757.1 |
| 177.5° | 761.1 | 765.7 | 763.0 | 759.0 | 759.5 | 758.5  | 759.8 | 761.9  | 757.8 | 761.9  | 759.8 |
| 180°   | 761.9 | 761.9 | 761.9 | 761.9 | 761.9 | 761.9  | 761.9 | 761.9  | 761.9 | 761.9  | 761.9 |



TEST NUMBER: P392508

CATALOG NUMBER: MWL-2-22-23-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|--------|--------|-------|--------|-------|--------|-------|
| 0°     | 844.9  | 844.9 | 844.9  | 844.9 | 844.9  | 844.9 |
| 2.5°   | 840.5  | 841.1 | 841.1  | 841.3 | 845.2  | 835.9 |
| 5°     | 838.1  | 831.5 | 838.1  | 838.9 | 840.3  | 833.4 |
| 7.5°   | 830.1  | 829.0 | 830.7  | 828.5 | 834.3  | 830.8 |
| 10°    | 818.9  | 818.6 | 819.5  | 823.5 | 822.7  | 821.3 |
| 12.5°  | 808.2  | 805.2 | 808.2  | 805.7 | 809.6  | 808.4 |
| 15°    | 792.1  | 793.7 | 792.5  | 795.0 | 798.1  | 794.2 |
| 17.5°  | 775.6  | 775.6 | 775.6  | 776.1 | 779.2  | 777.7 |
| 20°    | 754.5  | 755.3 | 755.0  | 756.3 | 759.1  | 758.8 |
| 22.5°  | 737.2  | 735.6 | 737.8  | 735.8 | 739.4  | 735.2 |
| 25°    | 715.8  | 713.4 | 716.5  | 713.4 | 713.9  | 711.4 |
| 27.5°  | 690.9  | 690.3 | 691.5  | 688.7 | 685.1  | 681.8 |
| 30°    | 663.8  | 664.1 | 664.9  | 662.9 | 653.9  | 655.5 |
| 32.5°  | 637.5  | 638.3 | 638.5  | 629.2 | 620.9  | 616.0 |
| 35°    | 608.2  | 609.0 | 609.7  | 599.1 | 586.8  | 583.5 |
| 37.5°  | 576.9  | 580.8 | 578.5  | 560.4 | 547.3  | 546.4 |
| 40°    | 540.7  | 549.5 | 541.8  | 521.0 | 509.5  | 510.2 |
| 42.5°  | 506.2  | 515.0 | 507.3  | 480.1 | 472.5  | 475.7 |
| 45°    | 463.4  | 479.6 | 464.5  | 439.8 | 437.3  | 441.5 |
| 47.5°  | 420.7  | 441.8 | 421.2  | 400.4 | 402.8  | 413.5 |
| 50°    | 379.1  | 397.6 | 380.1  | 365.0 | 373.2  | 379.0 |
| 52.5°  | 337.9  | 346.7 | 339.0  | 332.5 | 344.5  | 346.9 |
| 55°    | 296.3  | 291.9 | 297.3  | 299.5 | 312.7  | 316.8 |
| 57.5°  | 256.8  | 248.3 | 257.9  | 265.0 | 283.1  | 288.9 |
| 60°    | 214.8  | 208.1 | 215.5  | 233.2 | 252.1  | 257.0 |
| 62.5°  | 178.7  | 177.1 | 179.3  | 196.2 | 219.2  | 227.4 |
| 65°    | 148.3  | 151.5 | 148.8  | 165.3 | 185.0  | 197.3 |
| 67.5°  | 121.9  | 128.6 | 121.9  | 137.4 | 154.6  | 165.3 |
| 70°    | 100.6  | 107.9 | 100.6  | 112.1 | 126.1  | 139.2 |
| 72.5°  | 82.0   | 87.7  | 82.5   | 89.9  | 101.3  | 112.9 |
| 75°    | 64.7   | 72.9  | 64.7   | 70.4  | 80.0   | 90.7  |
| 77.5°  | 51.6   | 58.1  | 51.6   | 53.2  | 66.5   | 79.3  |
| 80°    | 38.4   | 42.5  | 38.4   | 42.4  | 63.4   | 73.8  |
| 82.5°  | 27.7   | 30.2  | 27.7   | 42.4  | 67.0   | 75.1  |
| 85°    | 20.8   | 17.0  | 21.8   | 48.3  | 76.5   | 81.9  |
| 87.5°  | 17.5   | 4.1   | 25.0   | 59.9  | 91.5   | 93.9  |
| 90°    | 10.9   | 0.6   | 31.4   | 75.2  | 107.0  | 109.1 |
| 92.5°  | 5.2    | 8.6   | 42.3   | 90.9  | 124.7  | 128.6 |
| 95°    | 3.0    | 21.6  | 56.7   | 108.3 | 143.1  | 146.3 |
| 97.5°  | 7.2    | 39.0  | 76.1   | 126.2 | 161.5  | 165.9 |
| 100°   | 18.6   | 59.4  | 99.2   | 147.1 | 178.1  | 181.0 |
| 102.5° | 34.2   | 81.4  | 121.2  | 169.1 | 199.4  | 206.8 |
| 105°   | 55.1   | 106.7 | 144.4  | 195.5 | 223.4  | 231.0 |
| 107.5° | 79.3   | 133.6 | 168.1  | 219.2 | 248.7  | 254.1 |
| 110°   | 105.1  | 161.6 | 191.7  | 242.2 | 274.5  | 281.0 |





TEST NUMBER: P392508

CATALOG NUMBER: MWL-2-22-23-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|--------|--------|-------|--------|-------|--------|-------|
| 112.5° | 133.1  | 190.6 | 216.4  | 263.8 | 301.9  | 306.8 |
| 115°   | 164.7  | 217.5 | 239.5  | 288.5 | 323.9  | 327.5 |
| 117.5° | 193.3  | 249.8 | 263.2  | 306.8 | 347.9  | 348.5 |
| 120°   | 224.3  | 281.2 | 287.7  | 332.8 | 370.5  | 374.7 |
| 122.5° | 254.9  | 310.2 | 310.2  | 354.4 | 390.4  | 393.1 |
| 125°   | 283.4  | 341.5 | 332.8  | 370.5 | 408.6  | 409.7 |
| 127.5° | 312.5  | 373.2 | 357.6  | 391.5 | 426.4  | 424.8 |
| 130°   | 344.1  | 403.3 | 380.2  | 411.4 | 443.1  | 437.7 |
| 132.5° | 373.2  | 435.6 | 403.3  | 431.8 | 459.7  | 463.0 |
| 135°   | 402.2  | 465.6 | 423.2  | 449.5 | 477.0  | 475.9 |
| 137.5° | 430.2  | 493.6 | 447.4  | 463.5 | 488.2  | 491.5 |
| 140°   | 457.6  | 523.8 | 469.0  | 481.7 | 502.2  | 502.7 |
| 142.5° | 486.6  | 553.8 | 492.6  | 500.1 | 517.8  | 514.6 |
| 145°   | 518.9  | 582.3 | 522.1  | 519.1 | 530.4  | 523.5 |
| 147.5° | 548.2  | 607.1 | 543.9  | 532.6 | 546.1  | 536.9 |
| 150°   | 579.1  | 632.3 | 572.1  | 551.4 | 559.6  | 555.2 |
| 152.5° | 608.2  | 652.2 | 603.8  | 566.0 | 575.1  | 569.8 |
| 155°   | 636.7  | 673.1 | 634.5  | 580.5 | 586.9  | 584.7 |
| 157.5° | 661.4  | 691.5 | 657.6  | 594.7 | 603.1  | 598.7 |
| 160°   | 682.9  | 706.5 | 684.5  | 617.2 | 613.8  | 613.8 |
| 162.5° | 701.7  | 721.0 | 703.3  | 648.0 | 625.7  | 615.5 |
| 165°   | 718.4  | 732.4 | 720.0  | 682.4 | 647.4  | 639.1 |
| 167.5° | 733.9  | 743.1 | 738.8  | 710.3 | 682.4  | 663.8 |
| 170°   | 746.3  | 751.7 | 745.8  | 733.9 | 720.0  | 703.3 |
| 172.5° | 752.7  | 754.9 | 758.7  | 751.2 | 745.8  | 735.0 |
| 175°   | 757.4  | 763.3 | 760.0  | 761.9 | 757.1  | 754.1 |
| 177.5° | 758.5  | 759.5 | 759.0  | 763.0 | 765.7  | 761.1 |
| 180°   | 761.9  | 761.9 | 761.9  | 761.9 | 761.9  | 761.9 |

(END OF REPORT)