

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: P382217

Luminaire Tested: **MWL-2-18-31-UNV-L830-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P382217
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-2-18-31-UNV-L830-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

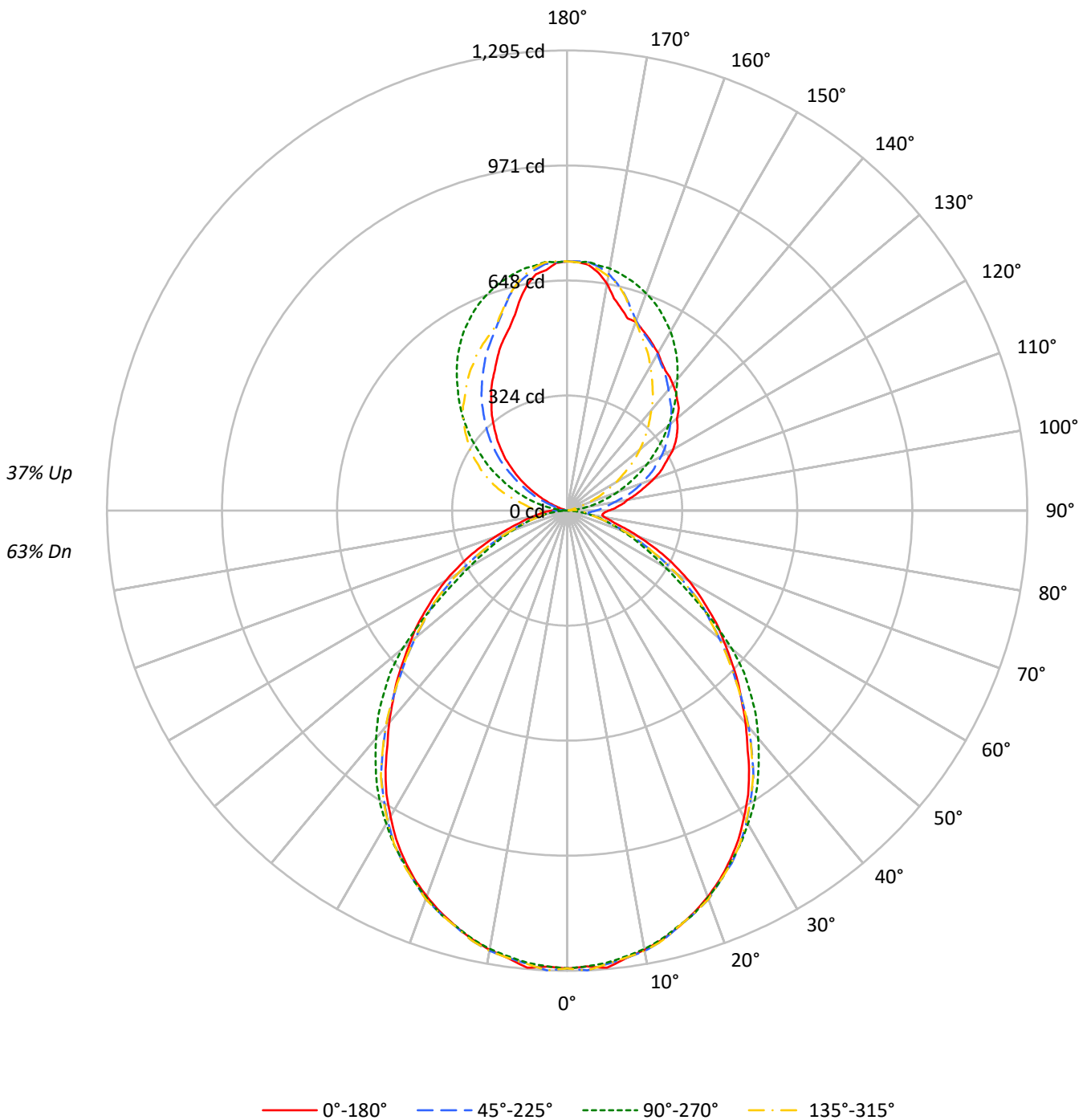
Lumens per Lamp: N/A
Luminaire Lumens: 4614.0 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')
CIE Type: Semi-Direct

Input Watts (W): 49.4
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: P382217
CATALOG NUMBER: MWL-2-18-31-UNV-L830-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P382217

CATALOG NUMBER: MWL-2-18-31-UNV-L830-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 | 110 | 110 | 110 | 110 | 104 | 104 | 104 | 104 | 91 | 91 | 91 | 79 | 79 | 79 | 68 | 68 | 68 | 63 |
| 1 | 101 | 97 | 93 | 90 | 95 | 91 | 88 | 85 | 80 | 78 | 75 | 70 | 68 | 67 | 61 | 60 | 59 | 54 |
| 2 | 93 | 85 | 79 | 74 | 87 | 80 | 75 | 70 | 71 | 67 | 63 | 62 | 59 | 57 | 54 | 52 | 50 | 46 |
| 3 | 85 | 75 | 68 | 62 | 79 | 71 | 65 | 60 | 63 | 58 | 54 | 56 | 52 | 49 | 49 | 46 | 43 | 40 |
| 4 | 78 | 67 | 59 | 53 | 73 | 63 | 56 | 51 | 56 | 51 | 46 | 50 | 46 | 42 | 44 | 41 | 38 | 35 |
| 5 | 72 | 60 | 52 | 46 | 67 | 57 | 50 | 44 | 51 | 45 | 40 | 45 | 40 | 37 | 40 | 36 | 33 | 30 |
| 6 | 66 | 54 | 46 | 40 | 62 | 51 | 44 | 39 | 46 | 40 | 36 | 41 | 36 | 33 | 36 | 32 | 30 | 27 |
| 7 | 61 | 49 | 41 | 36 | 58 | 47 | 39 | 34 | 42 | 36 | 32 | 37 | 33 | 29 | 33 | 29 | 26 | 24 |
| 8 | 57 | 45 | 37 | 32 | 54 | 43 | 36 | 31 | 38 | 32 | 28 | 34 | 30 | 26 | 31 | 27 | 24 | 22 |
| 9 | 53 | 41 | 34 | 29 | 50 | 39 | 32 | 28 | 35 | 30 | 26 | 32 | 27 | 24 | 28 | 24 | 22 | 20 |
| 10 | 50 | 38 | 31 | 26 | 47 | 36 | 29 | 25 | 33 | 27 | 23 | 29 | 25 | 21 | 26 | 23 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 16641 | 16641 | 16641 | 16641 |
| 5° | 16446 | 15233 | 16446 | 15233 |
| 10° | 15880 | 13970 | 15880 | 13970 |
| 15° | 15361 | 12769 | 15342 | 12769 |
| 20° | 14780 | 11679 | 14761 | 11679 |
| 25° | 14097 | 10602 | 14079 | 10602 |
| 30° | 13255 | 9625 | 13228 | 9625 |
| 35° | 12280 | 8670 | 12260 | 8670 |
| 40° | 11214 | 7668 | 11185 | 7668 |
| 45° | 10265 | 6675 | 10244 | 6675 |
| 50° | 9293 | 5549 | 9269 | 5549 |
| 55° | 8405 | 4119 | 8388 | 4119 |
| 60° | 7517 | 3007 | 7510 | 3007 |
| 65° | 6403 | 2234 | 6403 | 2234 |
| 70° | 5137 | 1657 | 5149 | 1657 |
| 75° | 3962 | 1157 | 4001 | 1157 |
| 80° | 3608 | 734 | 3287 | 734 |
| 85° | 4436 | 306 | 3029 | 306 |



TEST NUMBER: P382217

CATALOG NUMBER: MWL-2-18-31-UNV-L830-EDD

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 121.5 | 2.6 |
| 10°-20° | 341.9 | 7.4 |
| 20°-30° | 501.3 | 10.9 |
| 30°-40° | 568.6 | 12.3 |
| 40°-50° | 530.4 | 11.5 |
| 50°-60° | 416.1 | 9.0 |
| 60°-70° | 259.6 | 5.6 |
| 70°-80° | 125.4 | 2.7 |
| 80°-90° | 63.5 | 1.4 |
| 90°-100° | 64.6 | 1.4 |
| 100°-110° | 108.9 | 2.4 |
| 110°-120° | 186.9 | 4.1 |
| 120°-130° | 253.9 | 5.5 |
| 130°-140° | 289.4 | 6.3 |
| 140°-150° | 288.6 | 6.3 |
| 150°-160° | 251.2 | 5.4 |
| 160°-170° | 176.6 | 3.8 |
| 170°-180° | 65.7 | 1.4 |
| 0°-30° | 964.7 | 20.9 |
| 0°-40° | 1533.3 | 33.2 |
| 0°-60° | 2479.8 | 53.7 |
| 0°-90° | 2928.3 | 63.5 |
| 90°-120° | 360.4 | 7.8 |
| 90°-150° | 1192.2 | 25.8 |
| 90°-180° | 1686.0 | 36.5 |
| 0°-180° | 4614.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|------|------|------|------|------|------|------|
| 0° | 1288 | 1288 | 1288 | 1288 | 1288 | |
| 5° | 1292 | 1278 | 1292 | 1278 | 1292 | 122 |
| 15° | 1213 | 1211 | 1211 | 1211 | 1213 | 342 |
| 25° | 1085 | 1091 | 1084 | 1091 | 1085 | 499 |
| 35° | 892 | 935 | 891 | 935 | 892 | 557 |
| 45° | 679 | 731 | 678 | 731 | 679 | 523 |
| 55° | 484 | 444 | 483 | 444 | 484 | 435 |
| 65° | 303 | 230 | 303 | 230 | 303 | 299 |
| 75° | 141 | 110 | 142 | 110 | 141 | 158 |
| 85° | 101 | 26 | 69 | 26 | 101 | 84 |
| 90° | 117 | 1 | 43 | 1 | 117 | 65 |
| 95° | 146 | 21 | 29 | 21 | 146 | 125 |
| 105° | 213 | 98 | 5 | 98 | 213 | 226 |
| 115° | 301 | 201 | 70 | 201 | 301 | 299 |
| 125° | 378 | 314 | 173 | 314 | 378 | 337 |
| 135° | 438 | 429 | 276 | 429 | 438 | 338 |
| 145° | 482 | 536 | 371 | 536 | 482 | 304 |
| 155° | 539 | 620 | 468 | 620 | 539 | 248 |
| 165° | 589 | 674 | 569 | 674 | 589 | 167 |
| 175° | 694 | 703 | 679 | 703 | 694 | 65 |
| 180° | 701 | 701 | 701 | 701 | 701 | |



TEST NUMBER: P382217

CATALOG NUMBER: MWL-2-18-31-UNV-L830-EDD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 |
| 2.5° | 1284.1 | 1291.6 | 1295.3 | 1282.8 | 1283.8 | 1282.3 | 1295.3 | 1291.6 | 1284.5 | 1291.6 | 1295.3 |
| 5° | 1291.5 | 1282.3 | 1281.3 | 1280.4 | 1277.6 | 1280.4 | 1280.9 | 1282.3 | 1291.5 | 1282.3 | 1280.9 |
| 7.5° | 1270.5 | 1276.2 | 1269.7 | 1268.3 | 1265.5 | 1267.8 | 1269.2 | 1275.7 | 1270.5 | 1275.7 | 1269.2 |
| 10° | 1255.2 | 1259.4 | 1258.5 | 1251.9 | 1252.9 | 1251.5 | 1258.0 | 1258.4 | 1255.2 | 1258.4 | 1258.0 |
| 12.5° | 1236.5 | 1239.8 | 1239.3 | 1231.9 | 1234.1 | 1231.9 | 1239.3 | 1238.8 | 1235.6 | 1238.8 | 1239.3 |
| 15° | 1212.8 | 1212.7 | 1212.2 | 1209.4 | 1210.7 | 1208.9 | 1211.7 | 1211.7 | 1211.3 | 1211.7 | 1211.7 |
| 17.5° | 1186.7 | 1189.4 | 1188.9 | 1189.3 | 1189.3 | 1189.3 | 1188.3 | 1188.9 | 1185.2 | 1188.9 | 1188.3 |
| 20° | 1156.8 | 1161.8 | 1163.7 | 1158.5 | 1158.9 | 1158.0 | 1163.1 | 1160.9 | 1155.3 | 1160.9 | 1163.1 |
| 22.5° | 1123.5 | 1124.5 | 1127.3 | 1120.2 | 1128.1 | 1119.7 | 1126.7 | 1123.5 | 1122.6 | 1123.5 | 1126.7 |
| 25° | 1085.2 | 1086.2 | 1095.1 | 1091.2 | 1090.8 | 1090.8 | 1094.0 | 1084.7 | 1083.8 | 1084.7 | 1094.0 |
| 27.5° | 1044.2 | 1044.2 | 1055.8 | 1052.6 | 1057.1 | 1052.0 | 1054.8 | 1042.7 | 1042.7 | 1042.7 | 1054.8 |
| 30° | 995.6 | 1004.0 | 1010.5 | 1024.1 | 1017.9 | 1023.1 | 1009.1 | 1002.5 | 993.6 | 1002.5 | 1009.1 |
| 32.5° | 948.0 | 952.6 | 962.0 | 971.8 | 979.2 | 970.8 | 960.5 | 950.7 | 946.0 | 950.7 | 960.5 |
| 35° | 892.4 | 892.4 | 913.9 | 931.6 | 934.8 | 930.1 | 912.4 | 890.9 | 890.9 | 890.9 | 912.4 |
| 37.5° | 832.7 | 834.5 | 853.2 | 880.3 | 885.8 | 878.8 | 851.7 | 833.0 | 831.2 | 833.0 | 851.7 |
| 40° | 781.3 | 777.6 | 795.3 | 830.3 | 836.3 | 829.3 | 793.3 | 775.6 | 779.3 | 775.6 | 793.3 |
| 42.5° | 727.1 | 721.5 | 730.4 | 773.4 | 787.7 | 772.3 | 728.9 | 719.6 | 725.2 | 719.6 | 728.9 |
| 45° | 679.0 | 667.8 | 669.7 | 709.9 | 730.8 | 708.8 | 667.8 | 666.4 | 677.6 | 666.4 | 667.8 |
| 47.5° | 625.8 | 622.1 | 614.6 | 641.1 | 674.8 | 640.7 | 612.7 | 620.6 | 624.3 | 620.6 | 612.7 |
| 50° | 577.3 | 569.8 | 558.6 | 580.4 | 605.2 | 579.5 | 556.6 | 567.8 | 575.8 | 567.8 | 556.6 |
| 52.5° | 534.3 | 527.8 | 506.7 | 519.7 | 524.9 | 518.8 | 505.3 | 525.8 | 532.8 | 525.8 | 505.3 |
| 55° | 484.3 | 483.3 | 461.9 | 455.8 | 444.1 | 454.8 | 460.5 | 481.9 | 483.3 | 481.9 | 460.5 |
| 57.5° | 439.4 | 437.6 | 406.8 | 396.0 | 374.1 | 395.1 | 405.4 | 436.2 | 438.5 | 436.2 | 405.4 |
| 60° | 396.0 | 389.5 | 355.9 | 329.3 | 318.0 | 328.8 | 354.9 | 388.5 | 395.6 | 388.5 | 354.9 |
| 62.5° | 347.5 | 343.7 | 302.6 | 274.2 | 271.8 | 273.7 | 301.7 | 342.8 | 347.0 | 342.8 | 301.7 |
| 65° | 303.1 | 289.1 | 254.6 | 228.4 | 229.8 | 227.9 | 254.1 | 288.6 | 303.1 | 288.6 | 254.1 |
| 67.5° | 255.5 | 241.5 | 211.6 | 187.8 | 195.3 | 187.8 | 211.1 | 241.0 | 255.5 | 241.0 | 211.1 |
| 70° | 213.9 | 195.3 | 172.8 | 153.2 | 164.4 | 153.2 | 172.8 | 195.7 | 214.4 | 195.7 | 172.8 |
| 72.5° | 175.6 | 156.0 | 139.2 | 125.2 | 134.9 | 124.7 | 139.2 | 156.5 | 176.6 | 156.5 | 139.2 |
| 75° | 141.1 | 123.4 | 107.9 | 100.4 | 109.7 | 100.4 | 108.4 | 123.8 | 142.5 | 123.8 | 108.4 |
| 77.5° | 122.6 | 102.0 | 81.7 | 78.0 | 89.2 | 78.0 | 82.3 | 100.5 | 120.6 | 100.5 | 82.3 |
| 80° | 105.8 | 92.1 | 64.5 | 58.4 | 65.8 | 58.4 | 63.6 | 84.1 | 96.4 | 84.1 | 63.6 |
| 82.5° | 99.9 | 90.8 | 60.2 | 41.6 | 45.3 | 41.6 | 54.3 | 73.0 | 81.1 | 73.0 | 54.3 |
| 85° | 101.2 | 95.3 | 61.7 | 32.8 | 25.7 | 31.8 | 47.4 | 65.2 | 69.1 | 65.2 | 47.4 |
| 87.5° | 106.8 | 105.2 | 69.5 | 32.8 | 7.5 | 25.8 | 41.4 | 57.8 | 55.9 | 57.8 | 41.4 |
| 90° | 116.7 | 116.5 | 80.8 | 35.7 | 1.4 | 16.9 | 31.8 | 46.9 | 42.7 | 46.9 | 31.8 |
| 92.5° | 132.9 | 129.8 | 93.5 | 42.6 | 8.9 | 8.5 | 25.8 | 38.4 | 36.0 | 38.4 | 25.8 |
| 95° | 145.6 | 142.7 | 107.2 | 52.3 | 20.7 | 2.9 | 18.3 | 28.1 | 28.6 | 28.1 | 18.3 |
| 97.5° | 160.8 | 156.5 | 118.7 | 70.1 | 36.0 | 6.8 | 9.5 | 20.6 | 22.5 | 20.6 | 9.5 |
| 100° | 171.7 | 168.4 | 135.3 | 91.3 | 54.8 | 17.3 | 4.4 | 13.3 | 16.1 | 13.3 | 4.4 |
| 102.5° | 193.3 | 184.6 | 155.6 | 111.6 | 75.0 | 31.6 | 8.3 | 6.7 | 9.5 | 6.7 | 8.3 |
| 105° | 213.3 | 206.4 | 179.8 | 132.8 | 98.2 | 50.8 | 20.2 | 7.8 | 5.3 | 7.8 | 20.2 |
| 107.5° | 234.5 | 229.5 | 202.4 | 154.5 | 123.0 | 73.0 | 37.9 | 20.2 | 13.3 | 20.2 | 37.9 |
| 110° | 259.2 | 253.2 | 223.6 | 176.3 | 148.7 | 96.7 | 57.1 | 36.0 | 28.0 | 36.0 | 57.1 |



TEST NUMBER: P382217

CATALOG NUMBER: MWL-2-18-31-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 112.5° | 282.9 | 278.5 | 243.4 | 199.9 | 175.3 | 123.4 | 80.9 | 55.7 | 48.3 | 55.7 | 80.9 |
| 115° | 301.1 | 298.7 | 266.1 | 221.2 | 201.0 | 152.5 | 107.1 | 78.9 | 70.0 | 78.9 | 107.1 |
| 117.5° | 320.5 | 319.9 | 282.9 | 242.9 | 230.6 | 178.7 | 131.3 | 102.2 | 92.7 | 102.2 | 131.3 |
| 120° | 344.7 | 340.7 | 306.1 | 264.6 | 258.8 | 206.4 | 157.9 | 128.8 | 119.4 | 128.8 | 157.9 |
| 122.5° | 362.4 | 358.9 | 325.9 | 285.4 | 285.4 | 234.5 | 183.7 | 154.4 | 145.6 | 154.4 | 183.7 |
| 125° | 377.7 | 376.7 | 341.7 | 306.1 | 314.0 | 260.7 | 213.2 | 183.6 | 172.8 | 183.6 | 213.2 |
| 127.5° | 391.5 | 393.0 | 360.9 | 329.8 | 344.1 | 288.3 | 241.4 | 208.8 | 197.4 | 208.8 | 241.4 |
| 130° | 403.4 | 408.3 | 379.2 | 350.5 | 371.7 | 317.4 | 266.6 | 234.0 | 226.5 | 234.0 | 266.6 |
| 132.5° | 426.6 | 423.7 | 398.0 | 371.7 | 401.4 | 344.1 | 293.2 | 259.1 | 250.7 | 259.1 | 293.2 |
| 135° | 438.4 | 439.4 | 414.2 | 390.0 | 429.1 | 370.8 | 318.4 | 284.8 | 276.4 | 284.8 | 318.4 |
| 137.5° | 452.8 | 449.8 | 427.1 | 412.3 | 454.8 | 396.5 | 343.1 | 312.0 | 298.6 | 312.0 | 343.1 |
| 140° | 463.2 | 462.7 | 443.9 | 432.1 | 482.4 | 421.7 | 368.3 | 336.7 | 324.3 | 336.7 | 368.3 |
| 142.5° | 474.0 | 477.0 | 460.6 | 453.7 | 510.0 | 448.3 | 395.5 | 360.9 | 349.0 | 360.9 | 395.5 |
| 145° | 481.5 | 488.7 | 477.4 | 480.9 | 536.3 | 478.0 | 419.2 | 385.1 | 371.3 | 385.1 | 419.2 |
| 147.5° | 494.7 | 503.1 | 490.7 | 500.2 | 559.0 | 504.2 | 443.8 | 409.3 | 397.9 | 409.3 | 443.8 |
| 150° | 511.5 | 515.5 | 508.1 | 526.8 | 582.2 | 533.3 | 468.0 | 432.4 | 421.1 | 432.4 | 468.0 |
| 152.5° | 524.8 | 529.7 | 521.3 | 556.0 | 600.4 | 560.0 | 494.7 | 455.2 | 441.9 | 455.2 | 494.7 |
| 155° | 538.7 | 540.7 | 534.7 | 584.2 | 619.8 | 586.1 | 515.9 | 480.3 | 467.5 | 480.3 | 515.9 |
| 157.5° | 551.5 | 555.4 | 547.6 | 605.4 | 636.5 | 608.8 | 539.2 | 505.6 | 494.3 | 505.6 | 539.2 |
| 160° | 565.3 | 565.3 | 568.4 | 630.1 | 650.4 | 628.6 | 564.9 | 533.2 | 517.4 | 533.2 | 564.9 |
| 162.5° | 566.8 | 576.2 | 596.5 | 647.4 | 663.6 | 645.9 | 592.6 | 553.0 | 539.2 | 553.0 | 592.6 |
| 165° | 588.6 | 596.0 | 628.2 | 662.7 | 674.0 | 661.2 | 626.7 | 584.6 | 569.3 | 584.6 | 626.7 |
| 167.5° | 611.3 | 628.2 | 653.8 | 680.0 | 683.9 | 675.5 | 652.8 | 623.7 | 609.8 | 623.7 | 652.8 |
| 170° | 647.4 | 662.7 | 675.5 | 686.4 | 691.8 | 686.9 | 669.2 | 654.8 | 645.4 | 654.8 | 669.2 |
| 172.5° | 675.6 | 686.4 | 691.4 | 698.3 | 694.8 | 692.8 | 683.9 | 677.0 | 671.1 | 677.0 | 683.9 |
| 175° | 693.9 | 696.8 | 701.2 | 699.7 | 702.7 | 697.3 | 696.8 | 700.2 | 679.0 | 700.2 | 696.8 |
| 177.5° | 700.2 | 703.7 | 702.2 | 698.7 | 699.2 | 698.2 | 699.2 | 700.2 | 697.4 | 700.2 | 699.2 |
| 180° | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 |



TEST NUMBER: P382217

CATALOG NUMBER: MWL-2-18-31-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 | 1288.3 |
| 2.5° | 1282.3 | 1283.8 | 1282.8 | 1295.3 | 1291.6 | 1284.1 |
| 5° | 1280.4 | 1277.6 | 1280.4 | 1281.3 | 1282.3 | 1291.5 |
| 7.5° | 1267.8 | 1265.5 | 1268.3 | 1269.7 | 1276.2 | 1270.5 |
| 10° | 1251.5 | 1252.9 | 1251.9 | 1258.5 | 1259.4 | 1255.2 |
| 12.5° | 1231.9 | 1234.1 | 1231.9 | 1239.3 | 1239.8 | 1236.5 |
| 15° | 1208.9 | 1210.7 | 1209.4 | 1212.2 | 1212.7 | 1212.8 |
| 17.5° | 1189.3 | 1189.3 | 1189.3 | 1188.9 | 1189.4 | 1186.7 |
| 20° | 1158.0 | 1158.9 | 1158.5 | 1163.7 | 1161.8 | 1156.8 |
| 22.5° | 1119.7 | 1128.1 | 1120.2 | 1127.3 | 1124.5 | 1123.5 |
| 25° | 1090.8 | 1090.8 | 1091.2 | 1095.1 | 1086.2 | 1085.2 |
| 27.5° | 1052.0 | 1057.1 | 1052.6 | 1055.8 | 1044.2 | 1044.2 |
| 30° | 1023.1 | 1017.9 | 1024.1 | 1010.5 | 1004.0 | 995.6 |
| 32.5° | 970.8 | 979.2 | 971.8 | 962.0 | 952.6 | 948.0 |
| 35° | 930.1 | 934.8 | 931.6 | 913.9 | 892.4 | 892.4 |
| 37.5° | 878.8 | 885.8 | 880.3 | 853.2 | 834.5 | 832.7 |
| 40° | 829.3 | 836.3 | 830.3 | 795.3 | 777.6 | 781.3 |
| 42.5° | 772.3 | 787.7 | 773.4 | 730.4 | 721.5 | 727.1 |
| 45° | 708.8 | 730.8 | 709.9 | 669.7 | 667.8 | 679.0 |
| 47.5° | 640.7 | 674.8 | 641.1 | 614.6 | 622.1 | 625.8 |
| 50° | 579.5 | 605.2 | 580.4 | 558.6 | 569.8 | 577.3 |
| 52.5° | 518.8 | 524.9 | 519.7 | 506.7 | 527.8 | 534.3 |
| 55° | 454.8 | 444.1 | 455.8 | 461.9 | 483.3 | 484.3 |
| 57.5° | 395.1 | 374.1 | 396.0 | 406.8 | 437.6 | 439.4 |
| 60° | 328.8 | 318.0 | 329.3 | 355.9 | 389.5 | 396.0 |
| 62.5° | 273.7 | 271.8 | 274.2 | 302.6 | 343.7 | 347.5 |
| 65° | 227.9 | 229.8 | 228.4 | 254.6 | 289.1 | 303.1 |
| 67.5° | 187.8 | 195.3 | 187.8 | 211.6 | 241.5 | 255.5 |
| 70° | 153.2 | 164.4 | 153.2 | 172.8 | 195.3 | 213.9 |
| 72.5° | 124.7 | 134.9 | 125.2 | 139.2 | 156.0 | 175.6 |
| 75° | 100.4 | 109.7 | 100.4 | 107.9 | 123.4 | 141.1 |
| 77.5° | 78.0 | 89.2 | 78.0 | 81.7 | 102.0 | 122.6 |
| 80° | 58.4 | 65.8 | 58.4 | 64.5 | 92.1 | 105.8 |
| 82.5° | 41.6 | 45.3 | 41.6 | 60.2 | 90.8 | 99.9 |
| 85° | 31.8 | 25.7 | 32.8 | 61.7 | 95.3 | 101.2 |
| 87.5° | 25.8 | 7.5 | 32.8 | 69.5 | 105.2 | 106.8 |
| 90° | 16.9 | 1.4 | 35.7 | 80.8 | 116.5 | 116.7 |
| 92.5° | 8.5 | 8.9 | 42.6 | 93.5 | 129.8 | 132.9 |
| 95° | 2.9 | 20.7 | 52.3 | 107.2 | 142.7 | 145.6 |
| 97.5° | 6.8 | 36.0 | 70.1 | 118.7 | 156.5 | 160.8 |
| 100° | 17.3 | 54.8 | 91.3 | 135.3 | 168.4 | 171.7 |
| 102.5° | 31.6 | 75.0 | 111.6 | 155.6 | 184.6 | 193.3 |
| 105° | 50.8 | 98.2 | 132.8 | 179.8 | 206.4 | 213.3 |
| 107.5° | 73.0 | 123.0 | 154.5 | 202.4 | 229.5 | 234.5 |
| 110° | 96.7 | 148.7 | 176.3 | 223.6 | 253.2 | 259.2 |



TEST NUMBER: P382217

CATALOG NUMBER: MWL-2-18-31-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|-------|--------|-------|--------|-------|
| 112.5° | 123.4 | 175.3 | 199.9 | 243.4 | 278.5 | 282.9 |
| 115° | 152.5 | 201.0 | 221.2 | 266.1 | 298.7 | 301.1 |
| 117.5° | 178.7 | 230.6 | 242.9 | 282.9 | 319.9 | 320.5 |
| 120° | 206.4 | 258.8 | 264.6 | 306.1 | 340.7 | 344.7 |
| 122.5° | 234.5 | 285.4 | 285.4 | 325.9 | 358.9 | 362.4 |
| 125° | 260.7 | 314.0 | 306.1 | 341.7 | 376.7 | 377.7 |
| 127.5° | 288.3 | 344.1 | 329.8 | 360.9 | 393.0 | 391.5 |
| 130° | 317.4 | 371.7 | 350.5 | 379.2 | 408.3 | 403.4 |
| 132.5° | 344.1 | 401.4 | 371.7 | 398.0 | 423.7 | 426.6 |
| 135° | 370.8 | 429.1 | 390.0 | 414.2 | 439.4 | 438.4 |
| 137.5° | 396.5 | 454.8 | 412.3 | 427.1 | 449.8 | 452.8 |
| 140° | 421.7 | 482.4 | 432.1 | 443.9 | 462.7 | 463.2 |
| 142.5° | 448.3 | 510.0 | 453.7 | 460.6 | 477.0 | 474.0 |
| 145° | 478.0 | 536.3 | 480.9 | 477.4 | 488.7 | 481.5 |
| 147.5° | 504.2 | 559.0 | 500.2 | 490.7 | 503.1 | 494.7 |
| 150° | 533.3 | 582.2 | 526.8 | 508.1 | 515.5 | 511.5 |
| 152.5° | 560.0 | 600.4 | 556.0 | 521.3 | 529.7 | 524.8 |
| 155° | 586.1 | 619.8 | 584.2 | 534.7 | 540.7 | 538.7 |
| 157.5° | 608.8 | 636.5 | 605.4 | 547.6 | 555.4 | 551.5 |
| 160° | 628.6 | 650.4 | 630.1 | 568.4 | 565.3 | 565.3 |
| 162.5° | 645.9 | 663.6 | 647.4 | 596.5 | 576.2 | 566.8 |
| 165° | 661.2 | 674.0 | 662.7 | 628.2 | 596.0 | 588.6 |
| 167.5° | 675.5 | 683.9 | 680.0 | 653.8 | 628.2 | 611.3 |
| 170° | 686.9 | 691.8 | 686.4 | 675.5 | 662.7 | 647.4 |
| 172.5° | 692.8 | 694.8 | 698.3 | 691.4 | 686.4 | 675.6 |
| 175° | 697.3 | 702.7 | 699.7 | 701.2 | 696.8 | 693.9 |
| 177.5° | 698.2 | 699.2 | 698.7 | 702.2 | 703.7 | 700.2 |
| 180° | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 | 701.2 |

(END OF REPORT)