

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: HALO COMMERCIAL

Report Number: P345424

Luminaire Tested: **PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P345424
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1908-453-7)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K
Description: PR4 WALLWASH ASSEMBLY WITH, MATTE WHITE FINISH
Light Source: ARRAY OF HIGH LUMEN LEDs 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3056.0 lumens
Efficiency: N/A
Efficacy: 67.9 lumens/watt
Spacing Criteria (0/90/45): 0.95 / 1.12 / 1.11
Luminous Opening: Circular (Dia: 0.4' x H: 0')
CIE Type: Direct

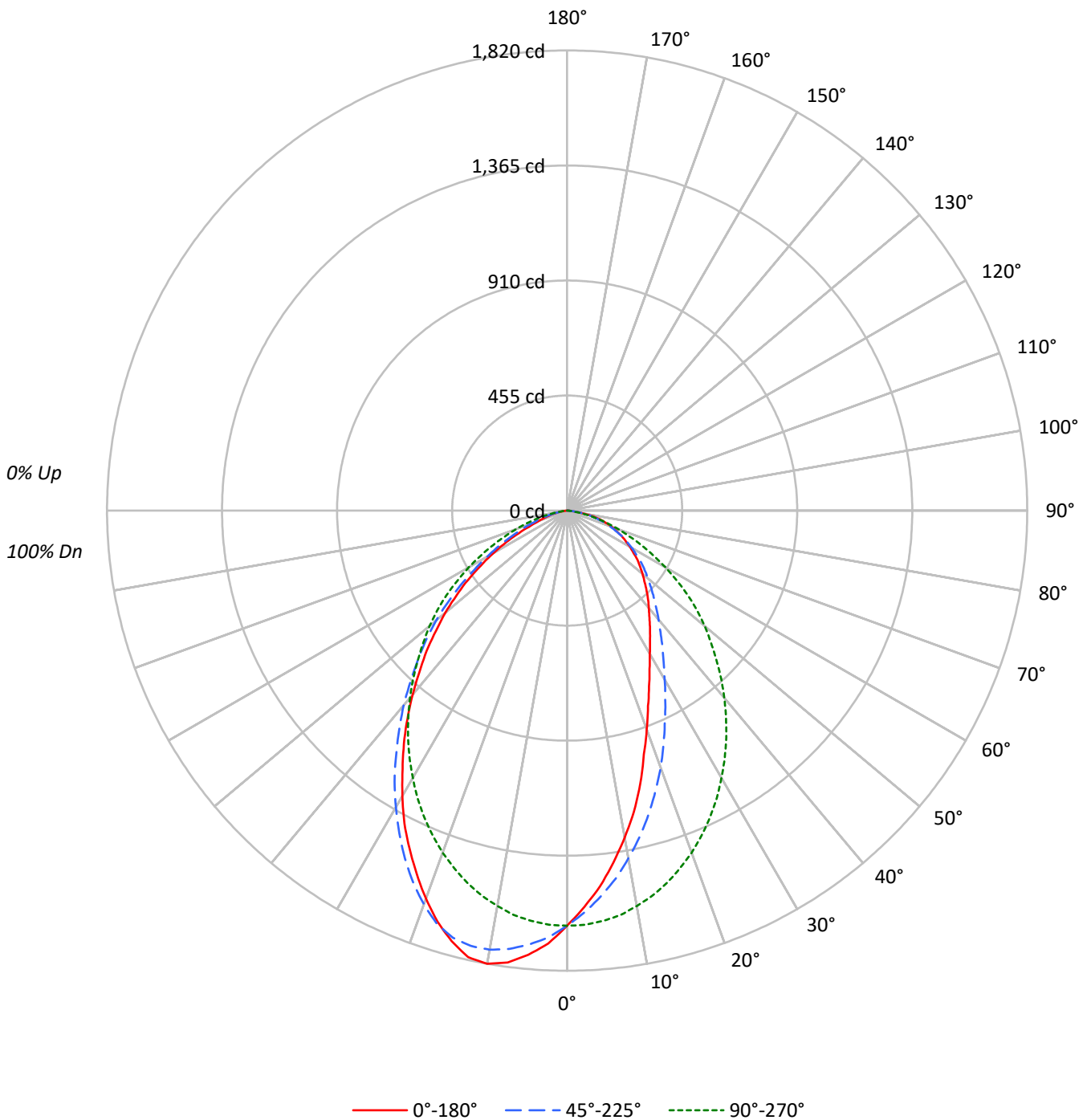
Input Watts (W): 45
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P345424

CATALOG NUMBER: PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K

Luminous Intensity Polar Plot





TEST NUMBER: P345424

CATALOG NUMBER: PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K

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 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 111 | 106 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | | | | | 87 | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | | | | | 75 | | | | |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | | | | | 66 | | | | |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 59 | | | | | 57 | | | | |
| 5 | 80 | 69 | 61 | 55 | 78 | 68 | 60 | 54 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 53 | | | | | 51 | | | | |
| 6 | 75 | 63 | 54 | 49 | 73 | 62 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | | | | | 45 | | | | |
| 7 | 70 | 57 | 49 | 44 | 68 | 57 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 43 | 52 | 47 | 43 | | | | | 41 | | | | |
| 8 | 65 | 53 | 45 | 39 | 64 | 52 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 39 | 48 | 43 | 39 | | | | | 37 | | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | | | | | 34 | | | | |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 33 | 42 | 36 | 32 | | | | | 31 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 143625 | 143625 | 143625 |
| 5° | 131012 | 143032 | 154850 |
| 10° | 116521 | 141018 | 161659 |
| 15° | 101295 | 138069 | 159703 |
| 20° | 85720 | 134040 | 152033 |
| 25° | 73996 | 129123 | 142336 |
| 30° | 66034 | 123282 | 131625 |
| 35° | 60993 | 117117 | 120139 |
| 40° | 57286 | 110358 | 108623 |
| 45° | 54812 | 103166 | 97266 |
| 50° | 52907 | 96643 | 85716 |
| 55° | 51666 | 88769 | 73199 |
| 60° | 50155 | 78653 | 59269 |
| 65° | 48990 | 66976 | 43609 |
| 70° | 47773 | 54985 | 29999 |
| 75° | 45523 | 41839 | 22744 |
| 80° | 31734 | 24078 | 13147 |
| 85° | 13047 | 8731 | 4315 |



TEST NUMBER: P345424

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 153.8 | 5.0 |
| 10°-20° | 417.1 | 13.6 |
| 20°-30° | 563.5 | 18.4 |
| 30°-40° | 593.2 | 19.4 |
| 40°-50° | 534.4 | 17.5 |
| 50°-60° | 412.6 | 13.5 |
| 60°-70° | 254.0 | 8.3 |
| 70°-80° | 111.6 | 3.7 |
| 80°-90° | 16.0 | 0.5 |
| 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° | 1134.4 | 37.1 |
| 0°-40° | 1727.5 | 56.5 |
| 0°-60° | 2674.5 | 87.5 |
| 0°-90° | 3056.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3056.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1642 | 1642 | 1642 | 1642 | 1642 | |
| 5° | 1492 | 1531 | 1629 | 1722 | 1764 | 137 |
| 15° | 1119 | 1244 | 1525 | 1748 | 1764 | 311 |
| 25° | 767 | 914 | 1338 | 1518 | 1475 | 355 |
| 35° | 571 | 656 | 1097 | 1179 | 1125 | 358 |
| 45° | 443 | 484 | 834 | 834 | 786 | 343 |
| 55° | 339 | 356 | 582 | 515 | 480 | 302 |
| 65° | 237 | 237 | 324 | 245 | 211 | 234 |
| 75° | 135 | 120 | 124 | 80 | 67 | 138 |
| 85° | 13 | 11 | 9 | 6 | 4 | 23 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P345424

CATALOG NUMBER: PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 |
| 2.5° | 1568.2 | 1570.3 | 1570.3 | 1570.3 | 1572.5 | 1574.7 | 1574.7 | 1579.0 | 1581.2 | 1585.5 | 1589.9 |
| 5° | 1492.1 | 1490.0 | 1490.0 | 1494.3 | 1498.7 | 1500.8 | 1500.8 | 1509.5 | 1516.0 | 1522.6 | 1531.2 |
| 7.5° | 1403.1 | 1400.9 | 1407.4 | 1409.6 | 1414.0 | 1420.5 | 1424.8 | 1433.5 | 1440.0 | 1455.2 | 1468.3 |
| 10° | 1311.9 | 1311.9 | 1316.2 | 1322.7 | 1329.2 | 1335.8 | 1340.1 | 1351.0 | 1364.0 | 1379.2 | 1396.6 |
| 12.5° | 1220.6 | 1214.1 | 1220.6 | 1229.3 | 1235.9 | 1242.4 | 1248.9 | 1261.9 | 1281.5 | 1301.0 | 1322.7 |
| 15° | 1118.6 | 1116.4 | 1120.7 | 1129.4 | 1144.6 | 1149.0 | 1155.5 | 1175.0 | 1194.6 | 1220.6 | 1244.5 |
| 17.5° | 1010.0 | 1016.5 | 1018.7 | 1031.7 | 1046.9 | 1053.4 | 1059.9 | 1079.5 | 1107.7 | 1133.8 | 1162.0 |
| 20° | 920.9 | 916.6 | 925.3 | 933.9 | 947.0 | 957.8 | 966.5 | 988.2 | 1018.7 | 1046.9 | 1081.6 |
| 22.5° | 836.2 | 834.0 | 840.6 | 851.4 | 862.3 | 871.0 | 879.6 | 901.4 | 925.3 | 957.8 | 996.9 |
| 25° | 766.7 | 764.5 | 771.0 | 777.6 | 790.6 | 797.1 | 803.6 | 825.3 | 851.4 | 877.5 | 914.4 |
| 27.5° | 705.9 | 705.9 | 710.2 | 714.6 | 725.4 | 732.0 | 740.6 | 758.0 | 779.7 | 805.8 | 840.6 |
| 30° | 653.8 | 653.8 | 658.1 | 662.5 | 673.3 | 677.7 | 684.2 | 697.2 | 714.6 | 742.8 | 771.0 |
| 32.5° | 610.3 | 610.3 | 612.5 | 619.0 | 623.4 | 627.7 | 634.2 | 645.1 | 662.5 | 684.2 | 710.2 |
| 35° | 571.2 | 571.2 | 573.4 | 577.7 | 584.3 | 586.4 | 590.8 | 601.6 | 614.7 | 632.0 | 655.9 |
| 37.5° | 534.3 | 536.5 | 536.5 | 540.8 | 545.2 | 547.3 | 551.7 | 560.4 | 571.2 | 586.4 | 606.0 |
| 40° | 501.7 | 503.9 | 503.9 | 508.2 | 512.6 | 514.8 | 516.9 | 521.3 | 534.3 | 545.2 | 562.5 |
| 42.5° | 473.5 | 473.5 | 473.5 | 475.7 | 480.0 | 482.2 | 484.3 | 490.9 | 497.4 | 508.2 | 521.3 |
| 45° | 443.1 | 443.1 | 445.3 | 447.4 | 451.8 | 451.8 | 453.9 | 460.5 | 464.8 | 473.5 | 484.3 |
| 47.5° | 414.8 | 414.8 | 417.0 | 417.0 | 421.4 | 421.4 | 423.5 | 427.9 | 432.2 | 440.9 | 449.6 |
| 50° | 388.8 | 388.8 | 388.8 | 391.0 | 393.1 | 395.3 | 395.3 | 399.6 | 404.0 | 410.5 | 417.0 |
| 52.5° | 362.7 | 362.7 | 362.7 | 362.7 | 364.9 | 367.1 | 367.1 | 371.4 | 375.8 | 380.1 | 386.6 |
| 55° | 338.8 | 336.7 | 338.8 | 338.8 | 338.8 | 341.0 | 341.0 | 345.3 | 345.3 | 349.7 | 356.2 |
| 57.5° | 310.6 | 312.8 | 312.8 | 310.6 | 312.8 | 314.9 | 314.9 | 314.9 | 317.1 | 321.5 | 323.6 |
| 60° | 286.7 | 286.7 | 286.7 | 286.7 | 288.9 | 288.9 | 288.9 | 288.9 | 291.0 | 291.0 | 295.4 |
| 62.5° | 260.6 | 260.6 | 262.8 | 262.8 | 260.6 | 262.8 | 262.8 | 262.8 | 265.0 | 265.0 | 265.0 |
| 65° | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 | 236.7 |
| 67.5° | 210.7 | 210.7 | 210.7 | 210.7 | 210.7 | 210.7 | 210.7 | 208.5 | 208.5 | 208.5 | 206.3 |
| 70° | 186.8 | 186.8 | 186.8 | 184.6 | 184.6 | 184.6 | 184.6 | 182.4 | 182.4 | 180.3 | 178.1 |
| 72.5° | 160.7 | 160.7 | 160.7 | 158.6 | 158.6 | 158.6 | 156.4 | 154.2 | 152.0 | 149.9 | 149.9 |
| 75° | 134.7 | 134.7 | 132.5 | 130.3 | 130.3 | 128.1 | 128.1 | 126.0 | 126.0 | 121.6 | 119.5 |
| 77.5° | 104.3 | 102.1 | 102.1 | 102.1 | 99.9 | 97.7 | 97.7 | 95.6 | 93.4 | 93.4 | 91.2 |
| 80° | 63.0 | 63.0 | 65.2 | 63.0 | 65.2 | 63.0 | 63.0 | 65.2 | 63.0 | 60.8 | 60.8 |
| 82.5° | 30.4 | 30.4 | 32.6 | 30.4 | 32.6 | 32.6 | 32.6 | 30.4 | 30.4 | 30.4 | 30.4 |
| 85° | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 10.9 | 10.9 | 10.9 |
| 87.5° | 8.7 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 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: P345424

CATALOG NUMBER: PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K

CANDELA DISTRIBUTION (continued):

| | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° | 95° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 |
| 2.5° | 1594.2 | 1600.7 | 1602.9 | 1609.4 | 1611.6 | 1615.9 | 1620.3 | 1626.8 | 1633.3 | 1639.8 | 1644.2 |
| 5° | 1539.9 | 1550.8 | 1559.5 | 1570.3 | 1576.9 | 1581.2 | 1594.2 | 1605.1 | 1618.1 | 1629.0 | 1639.8 |
| 7.5° | 1481.3 | 1494.3 | 1513.9 | 1526.9 | 1533.4 | 1544.3 | 1559.5 | 1576.9 | 1594.2 | 1613.8 | 1629.0 |
| 10° | 1414.0 | 1433.5 | 1453.0 | 1476.9 | 1487.8 | 1498.7 | 1518.2 | 1542.1 | 1566.0 | 1587.7 | 1611.6 |
| 12.5° | 1342.3 | 1368.3 | 1394.4 | 1418.3 | 1433.5 | 1446.5 | 1476.9 | 1503.0 | 1531.2 | 1559.5 | 1585.5 |
| 15° | 1272.8 | 1301.0 | 1331.4 | 1361.8 | 1379.2 | 1394.4 | 1424.8 | 1457.4 | 1492.1 | 1524.7 | 1555.1 |
| 17.5° | 1196.8 | 1229.3 | 1264.1 | 1298.8 | 1316.2 | 1335.8 | 1374.9 | 1409.6 | 1448.7 | 1483.5 | 1520.4 |
| 20° | 1118.6 | 1155.5 | 1192.4 | 1235.9 | 1253.2 | 1274.9 | 1314.0 | 1357.5 | 1398.7 | 1440.0 | 1479.1 |
| 22.5° | 1038.2 | 1079.5 | 1120.7 | 1166.3 | 1190.2 | 1212.0 | 1257.6 | 1301.0 | 1346.6 | 1390.1 | 1433.5 |
| 25° | 955.7 | 1003.5 | 1051.2 | 1096.8 | 1122.9 | 1144.6 | 1194.6 | 1244.5 | 1292.3 | 1337.9 | 1383.5 |
| 27.5° | 879.6 | 925.3 | 977.4 | 1027.3 | 1053.4 | 1077.3 | 1131.6 | 1179.4 | 1231.5 | 1281.5 | 1327.1 |
| 30° | 810.1 | 853.6 | 905.7 | 960.0 | 986.1 | 1012.1 | 1066.4 | 1120.7 | 1168.5 | 1220.6 | 1270.6 |
| 32.5° | 745.0 | 784.1 | 836.2 | 890.5 | 920.9 | 944.8 | 1001.3 | 1053.4 | 1107.7 | 1159.8 | 1209.8 |
| 35° | 684.2 | 723.3 | 768.9 | 823.2 | 849.2 | 877.5 | 936.1 | 990.4 | 1042.5 | 1096.8 | 1142.5 |
| 37.5° | 632.0 | 662.5 | 703.7 | 755.8 | 784.1 | 812.3 | 871.0 | 925.3 | 977.4 | 1031.7 | 1079.5 |
| 40° | 582.1 | 610.3 | 647.2 | 692.9 | 721.1 | 749.3 | 805.8 | 860.1 | 912.2 | 966.5 | 1016.5 |
| 42.5° | 540.8 | 562.5 | 592.9 | 636.4 | 660.3 | 688.5 | 745.0 | 797.1 | 849.2 | 901.4 | 949.2 |
| 45° | 499.6 | 519.1 | 545.2 | 579.9 | 603.8 | 629.9 | 684.2 | 738.5 | 786.3 | 834.0 | 881.8 |
| 47.5° | 460.5 | 475.7 | 499.6 | 530.0 | 549.5 | 573.4 | 625.5 | 677.7 | 725.4 | 771.0 | 814.5 |
| 50° | 425.7 | 438.7 | 460.5 | 482.2 | 499.6 | 521.3 | 566.9 | 619.0 | 664.6 | 710.2 | 749.3 |
| 52.5° | 393.1 | 404.0 | 419.2 | 440.9 | 453.9 | 471.3 | 514.8 | 560.4 | 606.0 | 647.2 | 684.2 |
| 55° | 362.7 | 369.2 | 382.3 | 397.5 | 408.3 | 423.5 | 460.5 | 503.9 | 545.2 | 582.1 | 612.5 |
| 57.5° | 328.0 | 336.7 | 345.3 | 356.2 | 367.1 | 375.8 | 404.0 | 443.1 | 480.0 | 512.6 | 543.0 |
| 60° | 297.6 | 304.1 | 308.4 | 319.3 | 323.6 | 332.3 | 354.0 | 386.6 | 421.4 | 449.6 | 471.3 |
| 62.5° | 267.2 | 269.3 | 273.7 | 282.4 | 284.5 | 291.0 | 306.2 | 332.3 | 358.4 | 384.4 | 406.2 |
| 65° | 236.7 | 236.7 | 241.1 | 243.3 | 247.6 | 249.8 | 260.6 | 280.2 | 304.1 | 323.6 | 336.7 |
| 67.5° | 206.3 | 206.3 | 208.5 | 208.5 | 212.9 | 212.9 | 219.4 | 234.6 | 249.8 | 267.2 | 278.0 |
| 70° | 175.9 | 175.9 | 175.9 | 175.9 | 175.9 | 178.1 | 182.4 | 191.1 | 202.0 | 215.0 | 221.5 |
| 72.5° | 147.7 | 145.5 | 145.5 | 143.4 | 143.4 | 143.4 | 145.5 | 149.9 | 158.6 | 167.2 | 173.8 |
| 75° | 117.3 | 115.1 | 112.9 | 112.9 | 110.8 | 110.8 | 110.8 | 115.1 | 119.5 | 123.8 | 126.0 |
| 77.5° | 86.9 | 86.9 | 84.7 | 80.4 | 80.4 | 78.2 | 78.2 | 78.2 | 80.4 | 84.7 | 82.5 |
| 80° | 60.8 | 56.5 | 54.3 | 54.3 | 52.1 | 52.1 | 50.0 | 47.8 | 47.8 | 47.8 | 45.6 |
| 82.5° | 28.2 | 28.2 | 28.2 | 26.1 | 26.1 | 26.1 | 26.1 | 23.9 | 23.9 | 21.7 | 21.7 |
| 85° | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 8.7 | 8.7 | 8.7 | 8.7 |
| 87.5° | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 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: P345424

CATALOG NUMBER: PR4FS24D010 PR4M24WW8FSMW 4000Lm3000K

CANDELA DISTRIBUTION (continued):

| | 100° | 105° | 110° | 112.5° | 115° | 120° | 125° | 130° | 135° | 140° | 145° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 |
| 2.5° | 1650.7 | 1657.2 | 1663.7 | 1665.9 | 1668.1 | 1674.6 | 1678.9 | 1685.4 | 1689.8 | 1692.0 | 1696.3 |
| 5° | 1652.9 | 1663.7 | 1674.6 | 1681.1 | 1685.4 | 1696.3 | 1705.0 | 1715.9 | 1722.4 | 1733.2 | 1739.7 |
| 7.5° | 1646.4 | 1663.7 | 1678.9 | 1687.6 | 1696.3 | 1711.5 | 1724.5 | 1737.6 | 1748.4 | 1759.3 | 1770.2 |
| 10° | 1633.3 | 1655.0 | 1676.8 | 1685.4 | 1696.3 | 1713.7 | 1733.2 | 1748.4 | 1763.6 | 1776.7 | 1789.7 |
| 12.5° | 1613.8 | 1639.8 | 1665.9 | 1676.8 | 1687.6 | 1711.5 | 1731.1 | 1748.4 | 1763.6 | 1776.7 | 1785.4 |
| 15° | 1587.7 | 1618.1 | 1646.4 | 1661.6 | 1674.6 | 1698.5 | 1718.0 | 1735.4 | 1748.4 | 1757.1 | 1763.6 |
| 17.5° | 1555.1 | 1589.9 | 1622.5 | 1635.5 | 1650.7 | 1672.4 | 1692.0 | 1705.0 | 1713.7 | 1713.7 | 1715.9 |
| 20° | 1518.2 | 1555.1 | 1587.7 | 1602.9 | 1618.1 | 1635.5 | 1650.7 | 1657.2 | 1657.2 | 1657.2 | 1652.9 |
| 22.5° | 1474.8 | 1513.9 | 1546.4 | 1561.6 | 1574.7 | 1587.7 | 1596.4 | 1596.4 | 1592.1 | 1585.5 | 1579.0 |
| 25° | 1424.8 | 1466.1 | 1496.5 | 1511.7 | 1518.2 | 1529.1 | 1526.9 | 1524.7 | 1518.2 | 1511.7 | 1503.0 |
| 27.5° | 1370.5 | 1411.8 | 1444.4 | 1450.9 | 1455.2 | 1457.4 | 1450.9 | 1446.5 | 1437.8 | 1429.2 | 1422.6 |
| 30° | 1314.0 | 1353.1 | 1379.2 | 1381.4 | 1385.7 | 1383.5 | 1374.9 | 1364.0 | 1355.3 | 1344.4 | 1335.8 |
| 32.5° | 1253.2 | 1290.2 | 1307.5 | 1311.9 | 1309.7 | 1301.0 | 1292.3 | 1281.5 | 1270.6 | 1257.6 | 1246.7 |
| 35° | 1188.1 | 1222.8 | 1233.7 | 1231.5 | 1229.3 | 1218.5 | 1205.4 | 1194.6 | 1179.4 | 1170.7 | 1155.5 |
| 37.5° | 1120.7 | 1153.3 | 1157.7 | 1151.1 | 1144.6 | 1131.6 | 1118.6 | 1107.7 | 1090.3 | 1081.6 | 1070.8 |
| 40° | 1053.4 | 1075.1 | 1075.1 | 1068.6 | 1064.3 | 1051.2 | 1033.9 | 1018.7 | 1005.6 | 990.4 | 983.9 |
| 42.5° | 983.9 | 1001.3 | 992.6 | 988.2 | 981.7 | 962.2 | 949.2 | 933.9 | 916.6 | 907.9 | 897.0 |
| 45° | 914.4 | 925.3 | 914.4 | 905.7 | 899.2 | 881.8 | 868.8 | 849.2 | 834.0 | 825.3 | 812.3 |
| 47.5° | 842.7 | 847.1 | 838.4 | 825.3 | 821.0 | 801.5 | 786.3 | 771.0 | 755.8 | 740.6 | 729.8 |
| 50° | 777.6 | 773.2 | 760.2 | 751.5 | 745.0 | 723.3 | 705.9 | 688.5 | 675.5 | 662.5 | 651.6 |
| 52.5° | 703.7 | 699.4 | 682.0 | 671.1 | 660.3 | 642.9 | 621.2 | 608.2 | 592.9 | 582.1 | 571.2 |
| 55° | 627.7 | 614.7 | 601.6 | 590.8 | 579.9 | 562.5 | 543.0 | 525.6 | 514.8 | 501.7 | 495.2 |
| 57.5° | 549.5 | 540.8 | 519.1 | 510.4 | 501.7 | 484.3 | 464.8 | 449.6 | 434.4 | 425.7 | 421.4 |
| 60° | 480.0 | 464.8 | 447.4 | 436.6 | 427.9 | 410.5 | 393.1 | 377.9 | 367.1 | 362.7 | 356.2 |
| 62.5° | 406.2 | 393.1 | 373.6 | 364.9 | 358.4 | 341.0 | 325.8 | 312.8 | 304.1 | 295.4 | 291.0 |
| 65° | 338.8 | 323.6 | 308.4 | 299.7 | 291.0 | 275.8 | 265.0 | 256.3 | 245.4 | 238.9 | 234.6 |
| 67.5° | 273.7 | 260.6 | 247.6 | 241.1 | 234.6 | 221.5 | 210.7 | 204.2 | 195.5 | 189.0 | 180.3 |
| 70° | 215.0 | 204.2 | 195.5 | 189.0 | 182.4 | 171.6 | 162.9 | 156.4 | 149.9 | 143.4 | 136.8 |
| 72.5° | 167.2 | 156.4 | 145.5 | 143.4 | 139.0 | 130.3 | 123.8 | 117.3 | 110.8 | 106.4 | 102.1 |
| 75° | 119.5 | 115.1 | 106.4 | 102.1 | 99.9 | 93.4 | 86.9 | 82.5 | 80.4 | 76.0 | 73.8 |
| 77.5° | 78.2 | 73.8 | 67.3 | 67.3 | 65.2 | 63.0 | 58.6 | 54.3 | 54.3 | 52.1 | 52.1 |
| 80° | 43.4 | 41.3 | 39.1 | 36.9 | 39.1 | 36.9 | 34.8 | 32.6 | 32.6 | 32.6 | 30.4 |
| 82.5° | 19.5 | 19.5 | 17.4 | 17.4 | 17.4 | 17.4 | 17.4 | 15.2 | 15.2 | 15.2 | 15.2 |
| 85° | 8.7 | 8.7 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 87.5° | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 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: P345424

CATALOG NUMBER: PR4FS24D010 PR4M24WW8FSMW 4000lm3000K

CANDELA DISTRIBUTION (continued):

| | 150° | 155° | 157.5° | 160° | 165° | 170° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 | 1642.0 |
| 2.5° | 1700.7 | 1702.8 | 1705.0 | 1707.2 | 1709.3 | 1709.3 | 1711.5 | 1713.7 |
| 5° | 1744.1 | 1750.6 | 1752.8 | 1755.0 | 1759.3 | 1761.5 | 1761.5 | 1763.6 |
| 7.5° | 1778.8 | 1787.5 | 1789.7 | 1794.0 | 1798.4 | 1800.6 | 1802.7 | 1802.7 |
| 10° | 1798.4 | 1804.9 | 1807.1 | 1811.4 | 1815.8 | 1817.9 | 1820.1 | 1820.1 |
| 12.5° | 1791.9 | 1798.4 | 1800.6 | 1802.7 | 1807.1 | 1809.3 | 1809.3 | 1809.3 |
| 15° | 1768.0 | 1768.0 | 1768.0 | 1768.0 | 1765.8 | 1768.0 | 1768.0 | 1763.6 |
| 17.5° | 1713.7 | 1711.5 | 1713.7 | 1709.3 | 1707.2 | 1707.2 | 1705.0 | 1705.0 |
| 20° | 1648.5 | 1646.4 | 1644.2 | 1644.2 | 1642.0 | 1637.7 | 1635.5 | 1633.3 |
| 22.5° | 1574.7 | 1570.3 | 1568.2 | 1568.2 | 1563.8 | 1561.6 | 1559.5 | 1555.1 |
| 25° | 1498.7 | 1487.8 | 1487.8 | 1487.8 | 1483.5 | 1483.5 | 1479.1 | 1474.8 |
| 27.5° | 1411.8 | 1405.3 | 1405.3 | 1400.9 | 1396.6 | 1394.4 | 1392.2 | 1394.4 |
| 30° | 1329.2 | 1320.6 | 1316.2 | 1314.0 | 1311.9 | 1311.9 | 1305.4 | 1303.2 |
| 32.5° | 1238.0 | 1231.5 | 1227.2 | 1225.0 | 1220.6 | 1218.5 | 1216.3 | 1212.0 |
| 35° | 1149.0 | 1142.5 | 1138.1 | 1138.1 | 1129.4 | 1127.3 | 1125.1 | 1125.1 |
| 37.5° | 1057.7 | 1053.4 | 1051.2 | 1044.7 | 1042.5 | 1040.4 | 1040.4 | 1038.2 |
| 40° | 973.0 | 966.5 | 964.4 | 957.8 | 955.7 | 955.7 | 949.2 | 951.3 |
| 42.5° | 886.2 | 877.5 | 875.3 | 873.1 | 871.0 | 866.6 | 868.8 | 864.4 |
| 45° | 803.6 | 797.1 | 792.8 | 792.8 | 790.6 | 786.3 | 784.1 | 786.3 |
| 47.5° | 723.3 | 714.6 | 714.6 | 712.4 | 710.2 | 708.1 | 708.1 | 703.7 |
| 50° | 647.2 | 640.7 | 636.4 | 632.0 | 634.2 | 632.0 | 627.7 | 629.9 |
| 52.5° | 564.7 | 558.2 | 556.0 | 556.0 | 553.9 | 553.9 | 551.7 | 551.7 |
| 55° | 490.9 | 484.3 | 484.3 | 482.2 | 482.2 | 482.2 | 480.0 | 480.0 |
| 57.5° | 417.0 | 412.7 | 410.5 | 410.5 | 406.2 | 408.3 | 406.2 | 404.0 |
| 60° | 351.9 | 345.3 | 341.0 | 343.2 | 341.0 | 341.0 | 336.7 | 338.8 |
| 62.5° | 284.5 | 280.2 | 278.0 | 278.0 | 273.7 | 273.7 | 269.3 | 271.5 |
| 65° | 228.1 | 221.5 | 219.4 | 217.2 | 212.9 | 210.7 | 210.7 | 210.7 |
| 67.5° | 175.9 | 171.6 | 169.4 | 165.1 | 160.7 | 158.6 | 156.4 | 154.2 |
| 70° | 132.5 | 128.1 | 126.0 | 123.8 | 121.6 | 119.5 | 119.5 | 117.3 |
| 72.5° | 99.9 | 95.6 | 95.6 | 93.4 | 93.4 | 91.2 | 91.2 | 91.2 |
| 75° | 71.7 | 71.7 | 69.5 | 69.5 | 67.3 | 69.5 | 67.3 | 67.3 |
| 77.5° | 50.0 | 47.8 | 50.0 | 47.8 | 45.6 | 45.6 | 45.6 | 45.6 |
| 80° | 28.2 | 28.2 | 28.2 | 28.2 | 28.2 | 28.2 | 28.2 | 26.1 |
| 82.5° | 15.2 | 15.2 | 15.2 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| 85° | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 87.5° | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)