

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P854486

Luminaire Tested: SQ2-WBN-150U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854486
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G3-2308-130-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-WBN-150U-050D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

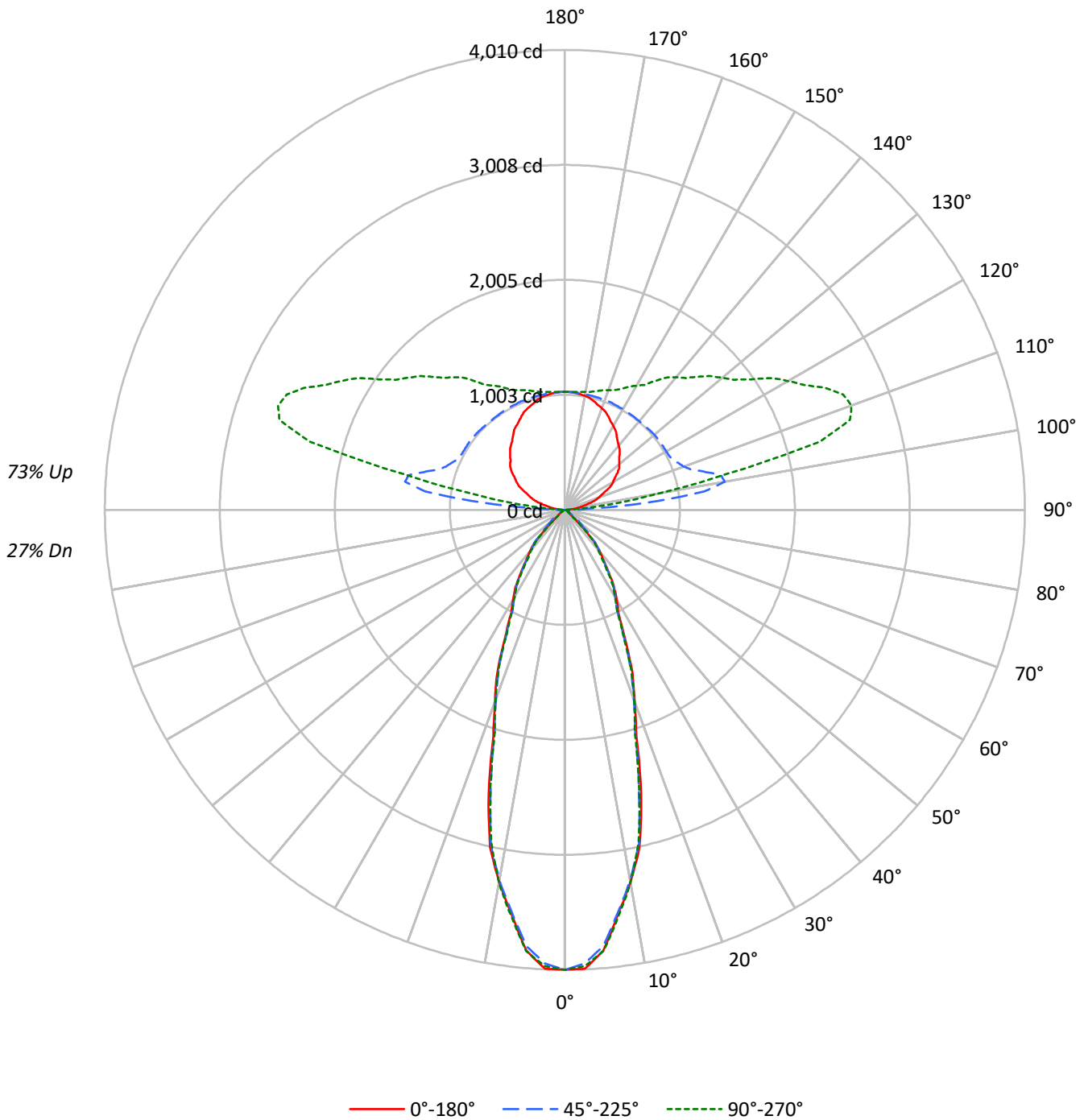
Lumens per Lamp: N/A
Luminaire Lumens: 8681.5 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 0.59 / 0.58 / 0.63
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 74.7
Input Voltage (V): 120
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: 24 FT

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Luminous Intensity Polar Plot





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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 102 | 102 | 102 | 102 | 91 | 91 | 91 | 91 | 70 | 70 | 70 | 52 | 52 | 52 | 35 | 35 | 35 | 27 |
| 1 | 94 | 90 | 87 | 84 | 84 | 81 | 78 | 76 | 63 | 62 | 60 | 47 | 46 | 45 | 33 | 32 | 32 | 25 |
| 2 | 87 | 80 | 75 | 71 | 77 | 72 | 68 | 64 | 57 | 54 | 52 | 43 | 42 | 40 | 30 | 30 | 29 | 23 |
| 3 | 80 | 72 | 66 | 61 | 72 | 65 | 60 | 56 | 52 | 48 | 46 | 40 | 38 | 36 | 28 | 27 | 26 | 22 |
| 4 | 74 | 65 | 58 | 53 | 66 | 59 | 53 | 49 | 47 | 43 | 40 | 37 | 34 | 32 | 27 | 25 | 24 | 20 |
| 5 | 69 | 59 | 52 | 46 | 62 | 53 | 47 | 43 | 43 | 39 | 36 | 34 | 31 | 29 | 25 | 24 | 22 | 19 |
| 6 | 64 | 53 | 46 | 41 | 57 | 49 | 43 | 38 | 40 | 35 | 32 | 31 | 29 | 26 | 23 | 22 | 21 | 18 |
| 7 | 59 | 49 | 42 | 37 | 53 | 45 | 39 | 34 | 37 | 32 | 29 | 29 | 26 | 24 | 22 | 21 | 19 | 17 |
| 8 | 55 | 45 | 38 | 33 | 50 | 41 | 35 | 31 | 34 | 30 | 27 | 27 | 24 | 22 | 21 | 19 | 18 | 16 |
| 9 | 52 | 41 | 35 | 30 | 47 | 38 | 32 | 28 | 31 | 27 | 25 | 25 | 23 | 21 | 20 | 18 | 17 | 15 |
| 10 | 49 | 38 | 32 | 28 | 44 | 35 | 30 | 26 | 29 | 25 | 23 | 24 | 21 | 19 | 19 | 17 | 16 | 14 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 64742 | 64742 | 64742 |
| 5° | 62509 | 61887 | 62579 |
| 10° | 54031 | 53774 | 54159 |
| 15° | 42995 | 41640 | 41805 |
| 20° | 30543 | 30139 | 30359 |
| 25° | 21973 | 21544 | 21390 |
| 30° | 16789 | 16339 | 16298 |
| 35° | 13178 | 12956 | 12619 |
| 40° | 9984 | 9849 | 9371 |
| 45° | 5587 | 6677 | 4987 |
| 50° | 1964 | 4109 | 1733 |
| 55° | 1202 | 2244 | 1140 |
| 60° | 920 | 1172 | 849 |
| 65° | 844 | 871 | 787 |
| 70° | 807 | 807 | 736 |
| 75° | 755 | 755 | 711 |
| 80° | 660 | 660 | 660 |
| 85° | 667 | 519 | 519 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6677 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 348.1 | 4.0 |
| 10°-20° | 691.8 | 8.0 |
| 20°-30° | 572.9 | 6.6 |
| 30°-40° | 412.1 | 4.7 |
| 40°-50° | 210.0 | 2.4 |
| 50°-60° | 54.7 | 0.6 |
| 60°-70° | 22.7 | 0.3 |
| 70°-80° | 12.6 | 0.1 |
| 80°-90° | 4.9 | 0.1 |
| 90°-100° | 392.1 | 4.5 |
| 100°-110° | 1284.0 | 14.8 |
| 110°-120° | 1269.4 | 14.6 |
| 120°-130° | 1037.7 | 12.0 |
| 130°-140° | 846.8 | 9.8 |
| 140°-150° | 659.0 | 7.6 |
| 150°-160° | 474.5 | 5.5 |
| 160°-170° | 290.3 | 3.3 |
| 170°-180° | 98.1 | 1.1 |
| 0°-30° | 1612.7 | 18.6 |
| 0°-40° | 2024.8 | 23.3 |
| 0°-60° | 2289.4 | 26.4 |
| 0°-90° | 2329.5 | 26.8 |
| 90°-120° | 2945.6 | 33.9 |
| 90°-150° | 5489.1 | 63.2 |
| 90°-180° | 6352.0 | 73.2 |
| 0°-180° | 8681.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 4010 | 4010 | 4010 | 4010 | 4010 | |
| 5° | 3857 | 3851 | 3818 | 3874 | 3861 | 348 |
| 15° | 2572 | 2543 | 2491 | 2509 | 2501 | 698 |
| 25° | 1233 | 1231 | 1209 | 1199 | 1201 | 580 |
| 35° | 669 | 673 | 657 | 646 | 640 | 420 |
| 45° | 245 | 282 | 292 | 272 | 218 | 196 |
| 55° | 43 | 50 | 80 | 46 | 40 | 42 |
| 65° | 22 | 23 | 23 | 21 | 21 | 22 |
| 75° | 12 | 12 | 12 | 11 | 11 | 13 |
| 85° | 4 | 4 | 3 | 4 | 3 | 4 |
| 90° | 1 | 3 | 8 | 7 | 8 | 3 |
| 95° | 55 | 160 | 713 | 254 | 165 | 62 |
| 105° | 223 | 318 | 1274 | 2422 | 2300 | 235 |
| 115° | 402 | 480 | 1036 | 2140 | 2512 | 397 |
| 125° | 560 | 624 | 1021 | 1687 | 1982 | 498 |
| 135° | 674 | 745 | 1012 | 1455 | 1640 | 521 |
| 145° | 788 | 846 | 1010 | 1252 | 1372 | 494 |
| 155° | 898 | 928 | 1016 | 1120 | 1164 | 413 |
| 165° | 980 | 990 | 1021 | 1060 | 1071 | 276 |
| 175° | 1025 | 1025 | 1026 | 1033 | 1031 | 97 |
| 180° | 1029 | 1029 | 1029 | 1029 | 1029 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 4009.8 | 4009.8 | 4009.8 | 4009.8 | 4009.8 |
| 2.5° | 4003.5 | 3996.8 | 3958.5 | 3990.2 | 3982.4 |
| 5° | 3856.8 | 3851.3 | 3818.4 | 3873.6 | 3861.1 |
| 7.5° | 3553.9 | 3558.7 | 3539.4 | 3588.2 | 3574.9 |
| 10° | 3295.6 | 3308.1 | 3279.9 | 3350.7 | 3303.4 |
| 12.5° | 3010.5 | 3002.4 | 2982.9 | 2993.8 | 2967.7 |
| 15° | 2572.2 | 2543.0 | 2491.1 | 2508.7 | 2501.0 |
| 17.5° | 2071.8 | 2083.1 | 2038.1 | 2036.2 | 2027.6 |
| 20° | 1777.6 | 1781.1 | 1754.1 | 1768.3 | 1766.9 |
| 22.5° | 1540.9 | 1541.6 | 1507.2 | 1527.9 | 1515.4 |
| 25° | 1233.4 | 1231.4 | 1209.3 | 1198.6 | 1200.7 |
| 27.5° | 1011.5 | 1002.9 | 986.2 | 993.2 | 988.0 |
| 30° | 900.5 | 893.6 | 876.4 | 880.5 | 874.2 |
| 32.5° | 801.0 | 801.2 | 783.6 | 781.5 | 776.9 |
| 35° | 668.6 | 672.8 | 657.3 | 646.5 | 640.2 |
| 37.5° | 550.6 | 554.5 | 541.3 | 525.6 | 520.3 |
| 40° | 473.7 | 476.5 | 467.3 | 448.8 | 444.6 |
| 42.5° | 390.1 | 401.8 | 392.8 | 375.2 | 366.1 |
| 45° | 244.7 | 281.6 | 292.4 | 271.9 | 218.4 |
| 47.5° | 123.8 | 174.8 | 208.6 | 154.0 | 101.4 |
| 50° | 78.2 | 113.7 | 163.6 | 92.6 | 69.0 |
| 52.5° | 60.0 | 78.3 | 130.6 | 68.4 | 55.3 |
| 55° | 42.7 | 49.6 | 79.7 | 46.1 | 40.5 |
| 57.5° | 33.0 | 36.9 | 47.7 | 34.9 | 31.4 |
| 60° | 28.5 | 31.2 | 36.3 | 29.8 | 26.3 |
| 62.5° | 25.6 | 27.3 | 29.4 | 25.3 | 24.0 |
| 65° | 22.1 | 22.7 | 22.8 | 21.3 | 20.6 |
| 67.5° | 18.8 | 19.5 | 19.3 | 18.6 | 17.9 |
| 70° | 17.1 | 17.8 | 17.1 | 16.3 | 15.6 |
| 72.5° | 14.8 | 15.5 | 14.8 | 14.6 | 13.9 |
| 75° | 12.1 | 12.1 | 12.1 | 11.4 | 11.4 |
| 77.5° | 9.4 | 9.5 | 8.8 | 8.8 | 8.3 |
| 80° | 7.1 | 7.8 | 7.1 | 7.1 | 7.1 |
| 82.5° | 6.0 | 6.1 | 5.4 | 5.4 | 5.4 |
| 85° | 3.6 | 3.6 | 2.8 | 3.5 | 2.8 |
| 87.5° | 1.3 | 1.8 | 2.8 | 2.6 | 2.8 |
| 90° | 1.1 | 3.1 | 8.5 | 7.4 | 8.5 |
| 92.5° | 18.0 | 65.6 | 201.4 | 65.5 | 52.5 |
| 95° | 55.0 | 159.5 | 712.9 | 253.9 | 165.0 |
| 97.5° | 99.8 | 210.3 | 1223.1 | 739.9 | 458.6 |
| 100° | 131.2 | 236.6 | 1415.2 | 1263.8 | 837.7 |
| 102.5° | 166.7 | 269.7 | 1394.0 | 1862.2 | 1443.5 |
| 105° | 223.2 | 318.3 | 1274.5 | 2421.5 | 2300.5 |
| 107.5° | 278.8 | 366.1 | 1158.0 | 2473.8 | 2606.8 |
| 110° | 315.2 | 400.0 | 1102.1 | 2412.9 | 2660.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 349.9 | 432.2 | 1068.3 | 2307.0 | 2623.7 |
| 115° | 401.9 | 480.5 | 1035.5 | 2139.7 | 2512.0 |
| 117.5° | 452.5 | 525.9 | 1023.0 | 1975.3 | 2353.4 |
| 120° | 485.5 | 554.8 | 1019.6 | 1879.4 | 2247.6 |
| 122.5° | 515.1 | 582.7 | 1019.6 | 1796.7 | 2138.4 |
| 125° | 559.5 | 623.6 | 1020.7 | 1687.4 | 1982.1 |
| 127.5° | 597.2 | 662.5 | 1019.4 | 1606.7 | 1863.2 |
| 130° | 620.9 | 687.1 | 1018.6 | 1558.0 | 1789.6 |
| 132.5° | 642.0 | 709.9 | 1016.0 | 1516.0 | 1726.1 |
| 135° | 673.7 | 745.1 | 1012.2 | 1455.4 | 1640.5 |
| 137.5° | 707.2 | 777.9 | 1009.9 | 1392.1 | 1559.5 |
| 140° | 730.9 | 799.1 | 1009.0 | 1352.2 | 1510.4 |
| 142.5° | 754.6 | 818.7 | 1009.0 | 1309.5 | 1452.8 |
| 145° | 788.0 | 845.9 | 1010.1 | 1251.9 | 1371.8 |
| 147.5° | 823.1 | 871.3 | 1011.6 | 1201.7 | 1292.3 |
| 150° | 845.1 | 887.5 | 1013.3 | 1172.6 | 1249.1 |
| 152.5° | 867.1 | 904.5 | 1014.1 | 1148.6 | 1211.9 |
| 155° | 898.0 | 928.0 | 1016.4 | 1120.0 | 1163.5 |
| 157.5° | 925.7 | 947.4 | 1018.8 | 1097.5 | 1129.0 |
| 160° | 943.5 | 961.0 | 1019.6 | 1084.7 | 1109.5 |
| 162.5° | 958.7 | 973.0 | 1019.6 | 1074.4 | 1092.6 |
| 165° | 980.5 | 989.8 | 1020.7 | 1060.1 | 1071.4 |
| 167.5° | 998.9 | 1003.4 | 1021.9 | 1048.9 | 1055.2 |
| 170° | 1009.0 | 1011.1 | 1022.8 | 1042.9 | 1045.0 |
| 172.5° | 1016.7 | 1017.9 | 1025.3 | 1038.7 | 1039.1 |
| 175° | 1024.9 | 1024.9 | 1026.0 | 1033.3 | 1031.2 |
| 177.5° | 1029.1 | 1028.3 | 1027.4 | 1032.4 | 1029.1 |
| 180° | 1029.1 | 1029.1 | 1029.1 | 1029.1 | 1029.1 |



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CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 0.00 | 0.00 | 0.00 | 0.33 | 1.91 | 0.00 | 0.00 | 0.00 | 0.00 | 1.52 |
| | 3H | 0.00 | 0.18 | 0.81 | 1.32 | 2.91 | 0.00 | 0.00 | 0.37 | 0.88 | 2.47 |
| | 4H | 0.07 | 0.58 | 1.24 | 1.71 | 3.31 | 0.00 | 0.13 | 0.80 | 1.27 | 2.87 |
| | 6H | 0.38 | 0.84 | 1.55 | 1.98 | 3.59 | 0.00 | 0.42 | 1.13 | 1.56 | 3.17 |
| | 8H | 0.47 | 0.92 | 1.65 | 2.07 | 3.67 | 0.05 | 0.50 | 1.23 | 1.65 | 3.25 |
| | 12H | 0.54 | 0.96 | 1.72 | 2.11 | 3.73 | 0.10 | 0.52 | 1.28 | 1.66 | 3.28 |
| 4H | 2H | 0.00 | 0.00 | 0.00 | 0.46 | 2.06 | 0.00 | 0.00 | 0.00 | 0.13 | 1.73 |
| | 3H | 0.11 | 0.53 | 1.29 | 1.69 | 3.30 | 0.00 | 0.14 | 0.90 | 1.30 | 2.91 |
| | 4H | 0.67 | 1.06 | 1.85 | 2.21 | 3.84 | 0.28 | 0.67 | 1.46 | 1.82 | 3.44 |
| | 6H | 1.12 | 1.45 | 2.31 | 2.62 | 4.24 | 0.73 | 1.07 | 1.92 | 2.24 | 3.86 |
| | 8H | 1.28 | 1.59 | 2.46 | 2.75 | 4.38 | 0.89 | 1.20 | 2.07 | 2.36 | 4.00 |
| | 12H | 1.38 | 1.66 | 2.58 | 2.84 | 4.47 | 0.97 | 1.25 | 2.17 | 2.42 | 4.06 |
| 8H | 4H | 0.81 | 1.12 | 2.00 | 2.29 | 3.92 | 0.46 | 0.77 | 1.64 | 1.93 | 3.56 |
| | 6H | 1.40 | 1.65 | 2.60 | 2.86 | 4.49 | 1.04 | 1.30 | 2.25 | 2.50 | 4.13 |
| | 8H | 1.64 | 1.86 | 2.85 | 3.05 | 4.70 | 1.29 | 1.51 | 2.49 | 2.69 | 4.34 |
| | 12H | 1.83 | 2.03 | 3.04 | 3.21 | 4.89 | 1.45 | 1.64 | 2.66 | 2.82 | 4.51 |
| 12H | 4H | 0.78 | 1.06 | 1.98 | 2.24 | 3.87 | 0.44 | 0.72 | 1.64 | 1.89 | 3.53 |
| | 6H | 1.42 | 1.64 | 2.63 | 2.83 | 4.48 | 1.08 | 1.30 | 2.29 | 2.49 | 4.14 |
| | 8H | 1.69 | 1.88 | 2.90 | 3.06 | 4.75 | 1.34 | 1.54 | 2.55 | 2.72 | 4.40 |