

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: P854384

Luminaire Tested: SQ2-WBM-100U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854384
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G3-2104-222-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-WBM-100U-100D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1000 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

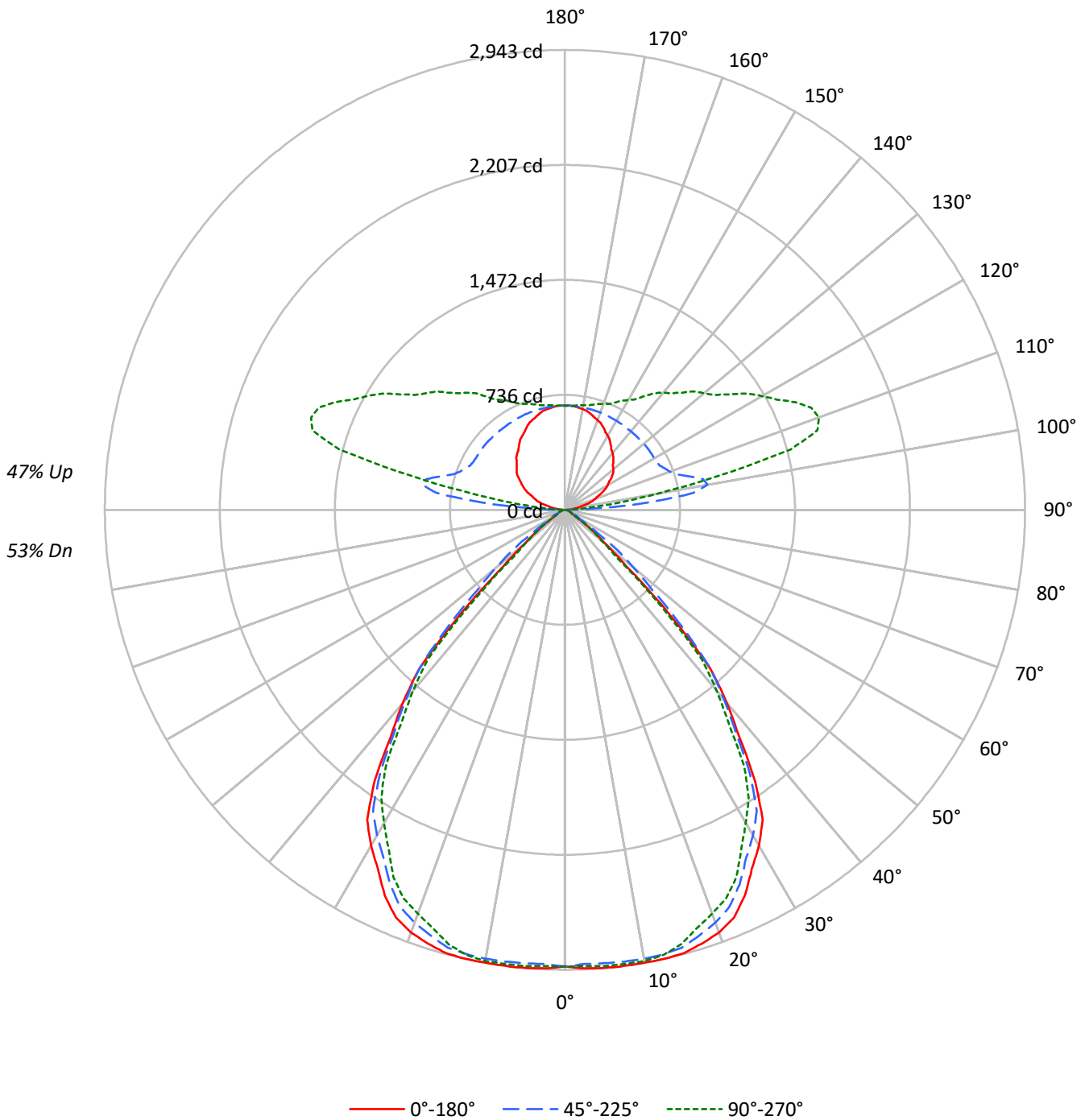
Lumens per Lamp: N/A
Luminaire Lumens: 8767.1 lumens
Efficiency: N/A
Efficacy: 124.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.18 / 1.17
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 70.7
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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 71 | 71 | 71 | 59 | 59 | 59 | 53 | | | | |
| 1 | 100 | 97 | 93 | 91 | 93 | 90 | 87 | 85 | 77 | 75 | 73 | 65 | 64 | 63 | 55 | 54 | 53 | 48 | | | | |
| 2 | 93 | 87 | 82 | 77 | 86 | 81 | 76 | 73 | 70 | 67 | 64 | 60 | 58 | 56 | 51 | 49 | 48 | 44 | | | | |
| 3 | 86 | 78 | 72 | 67 | 80 | 73 | 68 | 63 | 64 | 60 | 56 | 55 | 52 | 50 | 47 | 45 | 43 | 39 | | | | |
| 4 | 80 | 71 | 64 | 59 | 74 | 66 | 60 | 56 | 58 | 53 | 50 | 50 | 47 | 44 | 43 | 41 | 39 | 36 | | | | |
| 5 | 74 | 64 | 57 | 52 | 69 | 60 | 54 | 49 | 53 | 48 | 44 | 46 | 43 | 40 | 40 | 37 | 35 | 32 | | | | |
| 6 | 69 | 58 | 51 | 46 | 64 | 55 | 49 | 44 | 49 | 44 | 40 | 43 | 39 | 36 | 37 | 34 | 32 | 30 | | | | |
| 7 | 64 | 53 | 46 | 41 | 60 | 50 | 44 | 39 | 45 | 40 | 36 | 39 | 35 | 33 | 34 | 32 | 29 | 27 | | | | |
| 8 | 60 | 49 | 42 | 37 | 56 | 46 | 40 | 36 | 41 | 36 | 33 | 36 | 33 | 30 | 32 | 29 | 27 | 25 | | | | |
| 9 | 56 | 45 | 38 | 34 | 52 | 43 | 36 | 32 | 38 | 33 | 30 | 34 | 30 | 27 | 30 | 27 | 25 | 23 | | | | |
| 10 | 53 | 42 | 35 | 31 | 49 | 39 | 33 | 29 | 35 | 31 | 27 | 32 | 28 | 25 | 28 | 25 | 23 | 21 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 47180 | 47180 | 47180 |
| 5° | 47686 | 47188 | 47496 |
| 10° | 48237 | 47803 | 48063 |
| 15° | 49091 | 48455 | 48084 |
| 20° | 49462 | 48318 | 47245 |
| 25° | 48515 | 47101 | 46198 |
| 30° | 46236 | 44836 | 43121 |
| 35° | 41837 | 40627 | 39356 |
| 40° | 33970 | 33280 | 31809 |
| 45° | 21758 | 24172 | 19559 |
| 50° | 8528 | 14318 | 7676 |
| 55° | 4020 | 6550 | 4020 |
| 60° | 1912 | 3178 | 1741 |
| 65° | 1738 | 1819 | 1616 |
| 70° | 1648 | 1699 | 1548 |
| 75° | 1647 | 1647 | 1516 |
| 80° | 1571 | 1571 | 1478 |
| 85° | 1371 | 1371 | 1371 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 24332 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 279.9 | 3.2 |
| 10°-20° | 820.3 | 9.4 |
| 20°-30° | 1217.4 | 13.9 |
| 30°-40° | 1264.5 | 14.4 |
| 40°-50° | 761.0 | 8.7 |
| 50°-60° | 182.4 | 2.1 |
| 60°-70° | 49.5 | 0.6 |
| 70°-80° | 27.8 | 0.3 |
| 80°-90° | 9.9 | 0.1 |
| 90°-100° | 278.8 | 3.2 |
| 100°-110° | 843.2 | 9.6 |
| 110°-120° | 823.1 | 9.4 |
| 120°-130° | 672.6 | 7.7 |
| 130°-140° | 549.0 | 6.3 |
| 140°-150° | 427.4 | 4.9 |
| 150°-160° | 308.1 | 3.5 |
| 160°-170° | 188.6 | 2.2 |
| 170°-180° | 63.7 | 0.7 |
| 0°-30° | 2317.6 | 26.4 |
| 0°-40° | 3582.1 | 40.9 |
| 0°-60° | 4525.6 | 51.6 |
| 0°-90° | 4612.7 | 52.6 |
| 90°-120° | 1945.0 | 22.2 |
| 90°-150° | 3594.0 | 41.0 |
| 90°-180° | 4154.0 | 47.4 |
| 0°-180° | 8767.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2922 | 2922 | 2922 | 2922 | 2922 | |
| 5° | 2942 | 2935 | 2912 | 2942 | 2930 | 281 |
| 15° | 2937 | 2958 | 2899 | 2897 | 2877 | 828 |
| 25° | 2723 | 2742 | 2644 | 2609 | 2593 | 1246 |
| 35° | 2123 | 2103 | 2061 | 2020 | 1997 | 1300 |
| 45° | 953 | 1066 | 1059 | 1008 | 857 | 728 |
| 55° | 143 | 161 | 233 | 155 | 143 | 147 |
| 65° | 46 | 46 | 48 | 45 | 42 | 45 |
| 75° | 26 | 28 | 26 | 25 | 24 | 27 |
| 85° | 7 | 8 | 7 | 7 | 7 | 8 |
| 90° | 0 | 2 | 13 | 7 | 6 | 2 |
| 95° | 35 | 109 | 526 | 194 | 123 | 41 |
| 105° | 147 | 206 | 828 | 1572 | 1494 | 154 |
| 115° | 261 | 311 | 670 | 1386 | 1627 | 258 |
| 125° | 365 | 405 | 660 | 1094 | 1288 | 324 |
| 135° | 437 | 483 | 656 | 944 | 1062 | 338 |
| 145° | 510 | 548 | 656 | 812 | 888 | 320 |
| 155° | 582 | 601 | 660 | 728 | 756 | 268 |
| 165° | 636 | 643 | 663 | 689 | 697 | 179 |
| 175° | 665 | 665 | 666 | 672 | 670 | 63 |
| 180° | 668 | 668 | 668 | 668 | 668 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2922.1 | 2922.1 | 2922.1 | 2922.1 | 2922.1 |
| 2.5° | 2936.5 | 2929.9 | 2908.6 | 2932.0 | 2922.1 |
| 5° | 2942.2 | 2934.9 | 2911.5 | 2941.9 | 2930.5 |
| 7.5° | 2943.0 | 2943.4 | 2915.7 | 2942.5 | 2929.9 |
| 10° | 2942.2 | 2948.4 | 2915.7 | 2940.9 | 2931.6 |
| 12.5° | 2943.0 | 2953.4 | 2912.4 | 2930.6 | 2916.4 |
| 15° | 2936.9 | 2957.6 | 2898.8 | 2897.3 | 2876.6 |
| 17.5° | 2910.0 | 2935.7 | 2856.1 | 2831.6 | 2807.2 |
| 20° | 2878.7 | 2903.5 | 2812.1 | 2776.6 | 2749.7 |
| 22.5° | 2824.6 | 2850.2 | 2749.5 | 2711.6 | 2692.2 |
| 25° | 2723.3 | 2741.9 | 2643.9 | 2608.7 | 2593.2 |
| 27.5° | 2590.0 | 2596.0 | 2510.7 | 2469.7 | 2443.2 |
| 30° | 2480.0 | 2485.2 | 2404.9 | 2358.4 | 2312.9 |
| 32.5° | 2354.0 | 2345.1 | 2283.9 | 2233.2 | 2186.0 |
| 35° | 2122.6 | 2102.9 | 2061.2 | 2019.5 | 1996.7 |
| 37.5° | 1829.2 | 1824.2 | 1793.9 | 1743.7 | 1716.4 |
| 40° | 1611.7 | 1628.3 | 1579.0 | 1542.3 | 1509.2 |
| 42.5° | 1379.1 | 1419.6 | 1376.8 | 1324.9 | 1296.8 |
| 45° | 952.9 | 1065.6 | 1058.6 | 1007.6 | 856.6 |
| 47.5° | 529.8 | 671.7 | 757.0 | 593.8 | 439.3 |
| 50° | 339.5 | 436.7 | 570.0 | 358.4 | 305.6 |
| 52.5° | 238.0 | 291.3 | 421.1 | 254.0 | 225.3 |
| 55° | 142.8 | 161.4 | 232.7 | 155.2 | 142.8 |
| 57.5° | 86.3 | 104.3 | 132.2 | 104.0 | 84.4 |
| 60° | 59.2 | 74.7 | 98.4 | 69.4 | 53.9 |
| 62.5° | 51.6 | 57.2 | 76.4 | 54.4 | 48.9 |
| 65° | 45.5 | 46.5 | 47.6 | 45.4 | 42.3 |
| 67.5° | 39.1 | 41.2 | 40.2 | 39.3 | 37.0 |
| 70° | 34.9 | 37.0 | 36.0 | 35.9 | 32.8 |
| 72.5° | 31.5 | 33.6 | 32.6 | 31.7 | 29.4 |
| 75° | 26.4 | 27.5 | 26.4 | 25.4 | 24.3 |
| 77.5° | 20.3 | 21.3 | 21.2 | 20.3 | 19.2 |
| 80° | 16.9 | 18.0 | 16.9 | 16.9 | 15.9 |
| 82.5° | 13.5 | 13.7 | 13.5 | 12.7 | 12.5 |
| 85° | 7.4 | 8.4 | 7.4 | 7.4 | 7.4 |
| 87.5° | 2.5 | 2.9 | 5.1 | 4.0 | 3.8 |
| 90° | 0.0 | 2.0 | 12.6 | 7.3 | 6.3 |
| 92.5° | 11.7 | 47.4 | 170.2 | 56.4 | 40.7 |
| 95° | 34.6 | 109.4 | 526.1 | 194.3 | 122.6 |
| 97.5° | 66.9 | 139.2 | 829.1 | 548.6 | 334.1 |
| 100° | 87.0 | 157.7 | 926.4 | 895.6 | 601.5 |
| 102.5° | 109.6 | 177.9 | 906.2 | 1256.1 | 1001.4 |
| 105° | 146.7 | 206.1 | 827.9 | 1572.2 | 1494.3 |
| 107.5° | 181.9 | 238.7 | 752.4 | 1603.5 | 1693.7 |
| 110° | 205.4 | 259.7 | 714.7 | 1564.1 | 1728.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 228.0 | 280.7 | 692.1 | 1498.0 | 1705.4 |
| 115° | 260.9 | 311.1 | 669.6 | 1385.6 | 1627.4 |
| 117.5° | 293.6 | 341.2 | 661.7 | 1280.3 | 1527.9 |
| 120° | 315.4 | 360.5 | 659.1 | 1218.9 | 1456.6 |
| 122.5° | 335.5 | 378.2 | 659.1 | 1164.8 | 1384.5 |
| 125° | 364.7 | 404.6 | 660.2 | 1094.2 | 1287.9 |
| 127.5° | 388.4 | 429.8 | 659.1 | 1041.0 | 1206.2 |
| 130° | 403.5 | 446.5 | 659.1 | 1010.5 | 1160.1 |
| 132.5° | 416.9 | 460.7 | 658.3 | 982.5 | 1120.7 |
| 135° | 437.0 | 483.1 | 656.0 | 943.7 | 1061.5 |
| 137.5° | 459.4 | 503.3 | 656.0 | 902.2 | 1011.5 |
| 140° | 473.7 | 516.7 | 656.0 | 875.3 | 978.8 |
| 142.5° | 487.9 | 529.3 | 655.2 | 850.7 | 941.0 |
| 145° | 510.3 | 548.3 | 656.0 | 811.8 | 887.6 |
| 147.5° | 532.8 | 564.9 | 657.3 | 779.7 | 837.9 |
| 150° | 547.0 | 576.7 | 658.1 | 761.9 | 811.1 |
| 152.5° | 560.4 | 586.9 | 658.9 | 746.6 | 786.8 |
| 155° | 581.6 | 601.1 | 660.2 | 727.9 | 755.6 |
| 157.5° | 600.0 | 615.8 | 661.5 | 714.1 | 733.3 |
| 160° | 610.9 | 624.3 | 662.3 | 705.6 | 719.9 |
| 162.5° | 621.8 | 631.9 | 663.1 | 698.0 | 709.9 |
| 165° | 636.1 | 643.3 | 663.3 | 688.7 | 696.9 |
| 167.5° | 648.2 | 651.9 | 664.6 | 681.4 | 684.9 |
| 170° | 655.0 | 657.0 | 665.4 | 678.0 | 679.1 |
| 172.5° | 659.1 | 660.4 | 665.4 | 674.7 | 674.9 |
| 175° | 665.4 | 665.4 | 666.5 | 671.7 | 669.6 |
| 177.5° | 668.4 | 667.5 | 666.7 | 669.2 | 667.5 |
| 180° | 667.5 | 667.5 | 667.5 | 667.5 | 667.5 |



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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 | 6.52 | 7.25 | 7.49 | 8.21 | 9.46 | 6.24 | 6.97 | 7.21 | 7.93 | 9.17 |
| | 3H | 7.03 | 7.68 | 8.01 | 8.65 | 9.92 | 6.74 | 7.39 | 7.72 | 8.36 | 9.63 |
| | 4H | 7.30 | 7.91 | 8.29 | 8.88 | 10.16 | 6.98 | 7.60 | 7.98 | 8.57 | 9.85 |
| | 6H | 7.53 | 8.09 | 8.53 | 9.06 | 10.35 | 7.20 | 7.76 | 8.20 | 8.74 | 10.02 |
| | 8H | 7.60 | 8.13 | 8.60 | 9.12 | 10.41 | 7.27 | 7.80 | 8.27 | 8.79 | 10.08 |
| | 12H | 7.63 | 8.14 | 8.64 | 9.12 | 10.43 | 7.31 | 7.81 | 8.32 | 8.80 | 10.10 |
| 4H | 2H | 6.53 | 7.14 | 7.52 | 8.11 | 9.39 | 6.27 | 6.88 | 7.27 | 7.85 | 9.13 |
| | 3H | 7.25 | 7.75 | 8.25 | 8.76 | 10.05 | 6.99 | 7.49 | 7.99 | 8.49 | 9.78 |
| | 4H | 7.66 | 8.12 | 8.67 | 9.11 | 10.43 | 7.37 | 7.82 | 8.38 | 8.82 | 10.13 |
| | 6H | 8.03 | 8.43 | 9.06 | 9.44 | 10.76 | 7.72 | 8.11 | 8.74 | 9.13 | 10.44 |
| | 8H | 8.17 | 8.53 | 9.19 | 9.54 | 10.87 | 7.85 | 8.21 | 8.87 | 9.22 | 10.55 |
| | 12H | 8.24 | 8.57 | 9.28 | 9.59 | 10.92 | 7.92 | 8.25 | 8.96 | 9.28 | 10.60 |
| 8H | 4H | 7.74 | 8.11 | 8.76 | 9.12 | 10.44 | 7.47 | 7.84 | 8.49 | 8.85 | 10.17 |
| | 6H | 8.25 | 8.55 | 9.29 | 9.60 | 10.92 | 7.95 | 8.25 | 9.00 | 9.30 | 10.63 |
| | 8H | 8.46 | 8.73 | 9.52 | 9.77 | 11.11 | 8.16 | 8.42 | 9.21 | 9.46 | 10.80 |
| | 12H | 8.62 | 8.85 | 9.67 | 9.88 | 11.27 | 8.31 | 8.54 | 9.36 | 9.57 | 10.96 |
| 12H | 4H | 7.71 | 8.04 | 8.75 | 9.07 | 10.40 | 7.45 | 7.78 | 8.49 | 8.80 | 10.13 |
| | 6H | 8.27 | 8.53 | 9.32 | 9.57 | 10.91 | 7.98 | 8.24 | 9.03 | 9.28 | 10.62 |
| | 8H | 8.51 | 8.74 | 9.56 | 9.77 | 11.16 | 8.21 | 8.45 | 9.27 | 9.48 | 10.87 |