

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: P855206

Luminaire Tested: SQ2-F-050U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855206
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-050U-050D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

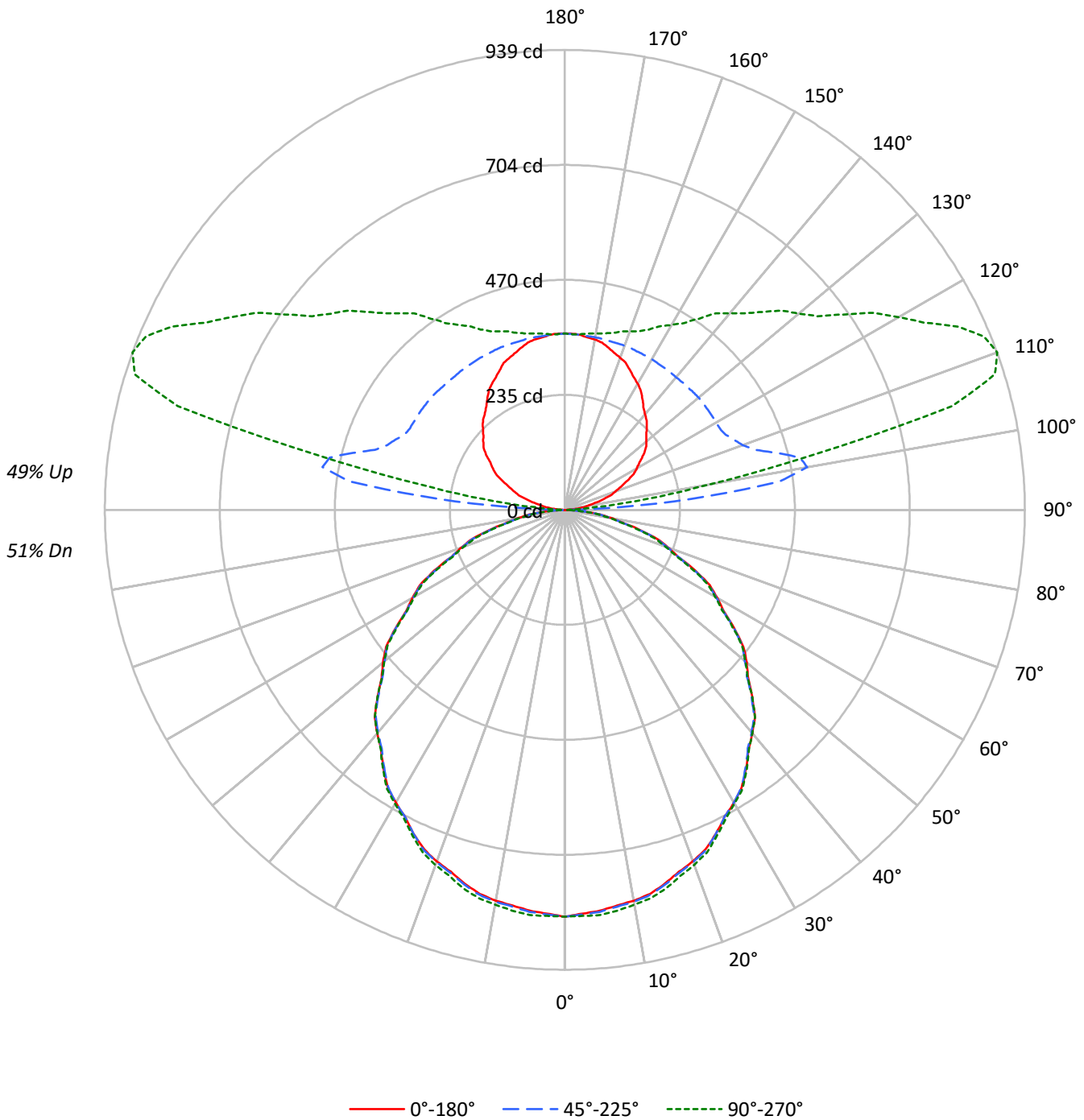
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4566.8 lumens
Efficiency: N/A
Efficacy: 140.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.6
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 | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 84 | 84 | 84 | 70 | 70 | 70 | 57 | 57 | 57 | 51 |
| 1 | 98 | 93 | 90 | 86 | 90 | 86 | 83 | 80 | 73 | 71 | 69 | 61 | 60 | 58 | 50 | 49 | 48 | 43 |
| 2 | 89 | 81 | 75 | 70 | 82 | 75 | 70 | 65 | 64 | 60 | 57 | 54 | 51 | 48 | 44 | 42 | 40 | 36 |
| 3 | 81 | 71 | 64 | 58 | 75 | 66 | 60 | 54 | 56 | 51 | 47 | 47 | 44 | 41 | 39 | 36 | 34 | 30 |
| 4 | 74 | 63 | 55 | 49 | 68 | 59 | 51 | 46 | 50 | 45 | 40 | 42 | 38 | 35 | 35 | 32 | 29 | 25 |
| 5 | 68 | 56 | 48 | 42 | 62 | 52 | 45 | 39 | 45 | 39 | 35 | 38 | 33 | 30 | 31 | 28 | 25 | 22 |
| 6 | 63 | 50 | 42 | 36 | 58 | 47 | 39 | 34 | 40 | 34 | 30 | 34 | 29 | 26 | 28 | 25 | 22 | 19 |
| 7 | 58 | 45 | 37 | 32 | 53 | 42 | 35 | 30 | 36 | 31 | 26 | 31 | 26 | 23 | 26 | 22 | 20 | 17 |
| 8 | 54 | 41 | 33 | 28 | 49 | 38 | 31 | 26 | 33 | 27 | 23 | 28 | 24 | 20 | 24 | 20 | 18 | 15 |
| 9 | 50 | 38 | 30 | 25 | 46 | 35 | 28 | 24 | 30 | 25 | 21 | 26 | 22 | 18 | 22 | 18 | 16 | 14 |
| 10 | 47 | 34 | 27 | 22 | 43 | 32 | 26 | 21 | 28 | 23 | 19 | 24 | 20 | 17 | 20 | 17 | 14 | 12 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13411 | 13411 | 13411 |
| 5° | 13316 | 13353 | 13462 |
| 10° | 13285 | 13321 | 13414 |
| 15° | 13203 | 13242 | 13374 |
| 20° | 13125 | 13144 | 13261 |
| 25° | 13003 | 13003 | 13083 |
| 30° | 12870 | 12870 | 12913 |
| 35° | 12713 | 12670 | 12759 |
| 40° | 12547 | 12499 | 12547 |
| 45° | 12351 | 12300 | 12351 |
| 50° | 12167 | 12052 | 12082 |
| 55° | 11882 | 11851 | 11786 |
| 60° | 11583 | 11512 | 11438 |
| 65° | 11240 | 11110 | 10980 |
| 70° | 10579 | 10523 | 10310 |
| 75° | 9956 | 9744 | 9457 |
| 80° | 8842 | 8629 | 8312 |
| 85° | 7132 | 6502 | 6076 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12426 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.5 | 1.7 |
| 10°-20° | 224.4 | 4.9 |
| 20°-30° | 337.5 | 7.4 |
| 30°-40° | 403.9 | 8.8 |
| 40°-50° | 416.7 | 9.1 |
| 50°-60° | 375.9 | 8.2 |
| 60°-70° | 286.9 | 6.3 |
| 70°-80° | 164.9 | 3.6 |
| 80°-90° | 43.5 | 1.0 |
| 90°-100° | 143.3 | 3.1 |
| 100°-110° | 454.6 | 10.0 |
| 110°-120° | 445.8 | 9.8 |
| 120°-130° | 362.7 | 7.9 |
| 130°-140° | 295.8 | 6.5 |
| 140°-150° | 230.6 | 5.0 |
| 150°-160° | 166.1 | 3.6 |
| 160°-170° | 101.5 | 2.2 |
| 170°-180° | 34.3 | 0.8 |
| 0°-30° | 640.4 | 14.0 |
| 0°-40° | 1044.3 | 22.9 |
| 0°-60° | 1836.9 | 40.2 |
| 0°-90° | 2332.2 | 51.1 |
| 90°-120° | 1043.6 | 22.9 |
| 90°-150° | 1932.7 | 42.3 |
| 90°-180° | 2235.0 | 48.9 |
| 0°-180° | 4566.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 831 | 831 | 831 | 831 | 831 | |
| 5° | 822 | 833 | 824 | 825 | 831 | 78 |
| 15° | 790 | 800 | 792 | 796 | 800 | 223 |
| 25° | 730 | 738 | 730 | 731 | 734 | 336 |
| 35° | 645 | 650 | 643 | 645 | 647 | 403 |
| 45° | 541 | 544 | 539 | 540 | 541 | 417 |
| 55° | 422 | 424 | 421 | 419 | 419 | 377 |
| 65° | 294 | 293 | 291 | 289 | 287 | 289 |
| 75° | 160 | 158 | 156 | 153 | 152 | 168 |
| 85° | 38 | 36 | 35 | 32 | 33 | 45 |
| 90° | 0 | 1 | 3 | 3 | 3 | 2 |
| 95° | 19 | 58 | 260 | 96 | 62 | 22 |
| 105° | 79 | 111 | 448 | 854 | 818 | 84 |
| 115° | 142 | 168 | 362 | 752 | 885 | 140 |
| 125° | 196 | 219 | 356 | 590 | 695 | 174 |
| 135° | 236 | 260 | 354 | 507 | 572 | 183 |
| 145° | 276 | 297 | 354 | 438 | 476 | 173 |
| 155° | 315 | 326 | 355 | 391 | 406 | 145 |
| 165° | 343 | 346 | 356 | 370 | 373 | 97 |
| 175° | 359 | 358 | 359 | 361 | 360 | 34 |
| 180° | 360 | 360 | 360 | 360 | 360 | |



TEST NUMBER: P855206

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 830.6 | 830.6 | 830.6 | 830.6 | 830.6 |
| 2.5° | 825.2 | 834.9 | 827.0 | 828.8 | 829.7 |
| 5° | 821.6 | 832.7 | 823.9 | 825.1 | 830.6 |
| 7.5° | 814.8 | 826.8 | 817.1 | 819.2 | 825.4 |
| 10° | 810.3 | 821.4 | 812.5 | 813.8 | 818.2 |
| 12.5° | 803.0 | 814.1 | 805.3 | 807.4 | 811.9 |
| 15° | 789.9 | 799.9 | 792.2 | 795.7 | 800.1 |
| 17.5° | 774.7 | 785.4 | 776.8 | 779.8 | 783.6 |
| 20° | 763.9 | 772.7 | 765.0 | 766.2 | 771.8 |
| 22.5° | 750.3 | 759.1 | 752.3 | 752.7 | 757.3 |
| 25° | 729.9 | 737.6 | 729.9 | 731.2 | 734.4 |
| 27.5° | 706.6 | 713.3 | 706.6 | 707.9 | 710.7 |
| 30° | 690.3 | 697.0 | 690.3 | 691.4 | 692.6 |
| 32.5° | 672.2 | 678.0 | 671.3 | 672.5 | 675.4 |
| 35° | 645.0 | 649.5 | 642.8 | 645.0 | 647.3 |
| 37.5° | 616.1 | 619.4 | 613.8 | 614.9 | 617.0 |
| 40° | 595.3 | 598.5 | 593.0 | 594.1 | 595.3 |
| 42.5° | 574.4 | 576.9 | 571.3 | 572.4 | 574.4 |
| 45° | 540.9 | 544.2 | 538.7 | 539.8 | 540.9 |
| 47.5° | 507.0 | 509.0 | 504.3 | 503.4 | 505.4 |
| 50° | 484.4 | 485.5 | 479.8 | 479.8 | 481.0 |
| 52.5° | 459.9 | 461.0 | 457.2 | 455.4 | 456.5 |
| 55° | 422.1 | 424.4 | 421.0 | 418.7 | 418.7 |
| 57.5° | 384.1 | 386.1 | 381.8 | 380.7 | 380.5 |
| 60° | 358.7 | 359.9 | 356.5 | 355.3 | 354.2 |
| 62.5° | 333.4 | 333.6 | 330.2 | 329.1 | 328.0 |
| 65° | 294.2 | 293.1 | 290.8 | 288.6 | 287.4 |
| 67.5° | 250.3 | 251.5 | 249.2 | 245.6 | 245.6 |
| 70° | 224.1 | 225.2 | 222.9 | 218.4 | 218.4 |
| 72.5° | 198.7 | 198.0 | 196.7 | 193.1 | 191.3 |
| 75° | 159.6 | 158.4 | 156.2 | 152.8 | 151.6 |
| 77.5° | 120.4 | 119.3 | 118.1 | 113.8 | 114.8 |
| 80° | 95.1 | 93.9 | 92.8 | 89.4 | 89.4 |
| 82.5° | 72.4 | 70.4 | 69.3 | 65.9 | 65.9 |
| 85° | 38.5 | 36.2 | 35.1 | 31.7 | 32.8 |
| 87.5° | 10.9 | 10.2 | 9.7 | 7.9 | 7.9 |
| 90° | 0.0 | 1.1 | 3.4 | 3.4 | 3.4 |
| 92.5° | 6.3 | 25.1 | 80.3 | 26.7 | 18.8 |
| 95° | 19.2 | 57.9 | 260.3 | 96.5 | 62.2 |
| 97.5° | 35.8 | 75.1 | 440.9 | 275.4 | 169.1 |
| 100° | 47.5 | 85.1 | 502.5 | 458.0 | 297.6 |
| 102.5° | 60.2 | 96.1 | 491.6 | 672.7 | 514.9 |
| 105° | 79.2 | 111.2 | 448.1 | 853.5 | 818.1 |
| 107.5° | 98.2 | 127.9 | 406.7 | 872.4 | 920.2 |
| 110° | 110.9 | 139.6 | 385.9 | 850.7 | 939.2 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 123.6 | 150.5 | 374.1 | 813.2 | 925.6 |
| 115° | 141.5 | 168.1 | 362.1 | 752.1 | 884.8 |
| 117.5° | 158.9 | 184.1 | 357.4 | 693.3 | 827.1 |
| 120° | 169.7 | 194.1 | 356.5 | 656.9 | 786.4 |
| 122.5° | 180.6 | 204.0 | 356.5 | 627.8 | 748.4 |
| 125° | 195.8 | 219.0 | 356.5 | 589.7 | 694.7 |
| 127.5° | 209.1 | 231.4 | 356.5 | 560.2 | 649.7 |
| 130° | 217.3 | 240.5 | 356.5 | 542.7 | 623.4 |
| 132.5° | 225.4 | 248.6 | 355.6 | 528.9 | 601.8 |
| 135° | 236.5 | 259.7 | 354.2 | 507.2 | 571.5 |
| 137.5° | 247.4 | 271.7 | 354.0 | 486.5 | 543.9 |
| 140° | 254.6 | 279.0 | 353.1 | 471.9 | 524.0 |
| 142.5° | 263.7 | 287.1 | 354.0 | 457.3 | 505.9 |
| 145° | 276.1 | 297.2 | 354.2 | 437.6 | 476.4 |
| 147.5° | 288.6 | 306.5 | 354.4 | 420.3 | 452.0 |
| 150° | 297.6 | 312.0 | 355.3 | 410.2 | 435.7 |
| 152.5° | 304.9 | 317.4 | 355.3 | 402.0 | 423.0 |
| 155° | 314.6 | 325.7 | 355.3 | 390.8 | 406.3 |
| 157.5° | 325.0 | 332.5 | 356.5 | 383.9 | 394.5 |
| 160° | 330.4 | 337.0 | 356.5 | 379.2 | 388.2 |
| 162.5° | 335.9 | 340.7 | 356.5 | 375.6 | 381.8 |
| 165° | 342.9 | 346.2 | 356.5 | 370.1 | 373.4 |
| 167.5° | 349.5 | 350.4 | 357.6 | 366.2 | 369.1 |
| 170° | 353.1 | 353.1 | 357.6 | 364.4 | 365.5 |
| 172.5° | 354.9 | 355.8 | 357.6 | 362.6 | 362.8 |
| 175° | 358.7 | 357.6 | 358.7 | 360.9 | 359.9 |
| 177.5° | 359.9 | 359.0 | 359.0 | 360.7 | 359.0 |
| 180° | 359.9 | 359.9 | 359.9 | 359.9 | 359.9 |



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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 | 17.09 | 17.97 | 18.03 | 18.93 | 20.19 | 17.01 | 17.89 | 17.95 | 18.85 | 20.11 |
| | 3H | 18.87 | 19.66 | 19.83 | 20.63 | 21.91 | 18.75 | 19.54 | 19.70 | 20.51 | 21.79 |
| | 4H | 19.53 | 20.28 | 20.50 | 21.26 | 22.54 | 19.38 | 20.12 | 20.35 | 21.10 | 22.39 |
| | 6H | 20.00 | 20.69 | 20.98 | 21.67 | 22.97 | 19.81 | 20.50 | 20.79 | 21.49 | 22.79 |
| | 8H | 20.14 | 20.80 | 21.13 | 21.80 | 23.09 | 19.93 | 20.59 | 20.92 | 21.59 | 22.89 |
| | 12H | 20.21 | 20.84 | 21.21 | 21.83 | 23.15 | 19.99 | 20.61 | 20.98 | 21.61 | 22.93 |
| 4H | 2H | 17.64 | 18.39 | 18.62 | 19.37 | 20.65 | 17.58 | 18.33 | 18.55 | 19.30 | 20.59 |
| | 3H | 19.63 | 20.26 | 20.62 | 21.26 | 22.56 | 19.52 | 20.15 | 20.51 | 21.15 | 22.45 |
| | 4H | 20.42 | 20.99 | 21.41 | 21.99 | 23.32 | 20.28 | 20.85 | 21.27 | 21.85 | 23.17 |
| | 6H | 21.01 | 21.50 | 22.02 | 22.53 | 23.85 | 20.83 | 21.32 | 21.84 | 22.35 | 23.67 |
| | 8H | 21.20 | 21.66 | 22.21 | 22.68 | 24.01 | 21.00 | 21.46 | 22.01 | 22.47 | 23.81 |
| | 12H | 21.30 | 21.72 | 22.33 | 22.75 | 24.09 | 21.07 | 21.49 | 22.10 | 22.52 | 23.86 |
| 8H | 4H | 20.67 | 21.13 | 21.68 | 22.15 | 23.48 | 20.54 | 21.00 | 21.55 | 22.02 | 23.36 |
| | 6H | 21.39 | 21.77 | 22.42 | 22.83 | 24.16 | 21.22 | 21.60 | 22.25 | 22.66 | 23.99 |
| | 8H | 21.65 | 21.99 | 22.70 | 23.03 | 24.39 | 21.46 | 21.80 | 22.50 | 22.84 | 24.19 |
| | 12H | 21.82 | 22.12 | 22.87 | 23.16 | 24.55 | 21.60 | 21.89 | 22.64 | 22.93 | 24.33 |
| 12H | 4H | 20.66 | 21.08 | 21.69 | 22.11 | 23.45 | 20.54 | 20.96 | 21.57 | 21.99 | 23.33 |
| | 6H | 21.43 | 21.77 | 22.47 | 22.81 | 24.16 | 21.27 | 21.61 | 22.31 | 22.65 | 24.00 |
| | 8H | 21.72 | 22.02 | 22.77 | 23.06 | 24.46 | 21.54 | 21.83 | 22.58 | 22.87 | 24.27 |