

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: P853837

Luminaire Tested: SQ2-FB-050U-050D-935-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853837
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-050U-050D-935-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

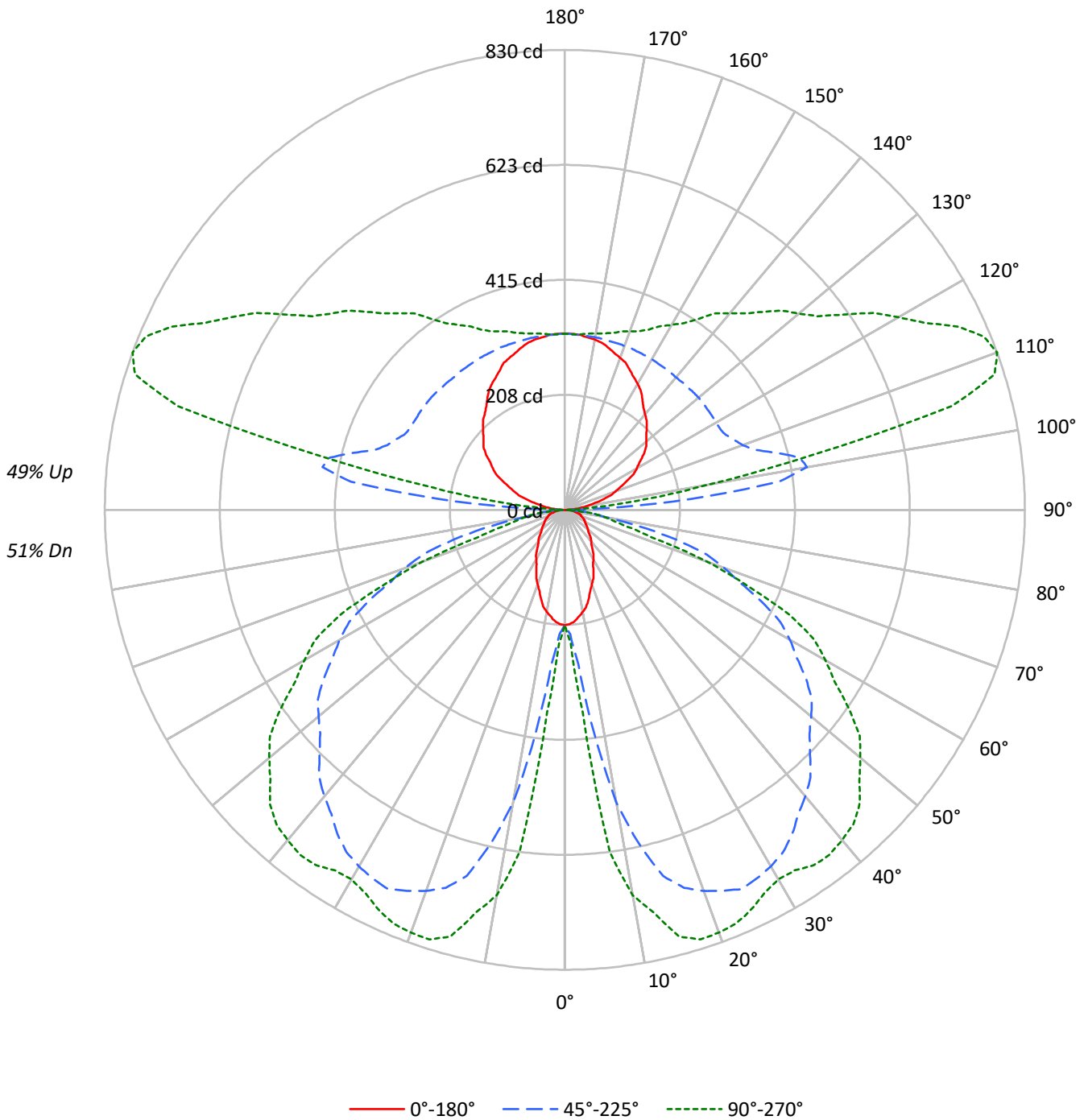
Lumens per Lamp: N/A
Luminaire Lumens: 4030.4 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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





TEST NUMBER: P853837

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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 | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 84 | 84 | 84 | 70 | 70 | 70 | 57 | 57 | 57 | 51 | | | | |
| 1 | 98 | 93 | 89 | 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 | 56 | 53 | 50 | 48 | 44 | 42 | 40 | 35 | | | | |
| 3 | 81 | 71 | 63 | 57 | 74 | 66 | 59 | 54 | 56 | 51 | 47 | 47 | 43 | 40 | 38 | 36 | 33 | 29 | | | | |
| 4 | 73 | 62 | 54 | 48 | 67 | 58 | 51 | 45 | 49 | 44 | 39 | 41 | 37 | 34 | 34 | 31 | 28 | 24 | | | | |
| 5 | 67 | 55 | 47 | 41 | 62 | 51 | 44 | 38 | 44 | 38 | 33 | 37 | 32 | 29 | 30 | 27 | 24 | 21 | | | | |
| 6 | 62 | 49 | 41 | 35 | 57 | 46 | 38 | 33 | 39 | 33 | 29 | 33 | 28 | 25 | 27 | 24 | 21 | 18 | | | | |
| 7 | 57 | 44 | 36 | 30 | 52 | 41 | 34 | 29 | 35 | 29 | 25 | 30 | 25 | 22 | 24 | 21 | 18 | 16 | | | | |
| 8 | 53 | 40 | 32 | 26 | 48 | 37 | 30 | 25 | 32 | 26 | 22 | 27 | 22 | 19 | 22 | 19 | 16 | 14 | | | | |
| 9 | 49 | 36 | 29 | 23 | 45 | 34 | 27 | 22 | 29 | 23 | 19 | 25 | 20 | 17 | 20 | 17 | 14 | 12 | | | | |
| 10 | 45 | 33 | 26 | 21 | 42 | 31 | 24 | 20 | 27 | 21 | 17 | 23 | 18 | 15 | 19 | 15 | 13 | 11 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 3358 | 3358 | 3358 |
| 5° | 3274 | 4538 | 5948 |
| 10° | 3066 | 8788 | 11575 |
| 15° | 2775 | 11433 | 13322 |
| 20° | 2457 | 12577 | 13952 |
| 25° | 2173 | 13450 | 14181 |
| 30° | 1920 | 13852 | 14356 |
| 35° | 1715 | 14093 | 15433 |
| 40° | 1560 | 14227 | 16398 |
| 45° | 1439 | 14294 | 17171 |
| 50° | 1356 | 14569 | 17482 |
| 55° | 1323 | 14947 | 17622 |
| 60° | 1356 | 15145 | 17534 |
| 65° | 1414 | 14938 | 17039 |
| 70° | 1463 | 14445 | 12888 |
| 75° | 1622 | 12976 | 7112 |
| 80° | 1674 | 6695 | 6602 |
| 85° | 1667 | 4631 | 2779 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 17781 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 34.8 | 0.9 |
| 10°-20° | 159.1 | 3.9 |
| 20°-30° | 279.9 | 6.9 |
| 30°-40° | 362.3 | 9.0 |
| 40°-50° | 399.5 | 9.9 |
| 50°-60° | 373.0 | 9.3 |
| 60°-70° | 288.3 | 7.2 |
| 70°-80° | 133.0 | 3.3 |
| 80°-90° | 25.8 | 0.6 |
| 90°-100° | 126.6 | 3.1 |
| 100°-110° | 401.7 | 10.0 |
| 110°-120° | 393.9 | 9.8 |
| 120°-130° | 320.5 | 8.0 |
| 130°-140° | 261.3 | 6.5 |
| 140°-150° | 203.8 | 5.1 |
| 150°-160° | 146.8 | 3.6 |
| 160°-170° | 89.7 | 2.2 |
| 170°-180° | 30.3 | 0.8 |
| 0°-30° | 473.8 | 11.8 |
| 0°-40° | 836.1 | 20.7 |
| 0°-60° | 1608.6 | 39.9 |
| 0°-90° | 2055.8 | 51.0 |
| 90°-120° | 922.2 | 22.9 |
| 90°-150° | 1707.8 | 42.4 |
| 90°-180° | 1975.0 | 49.0 |
| 0°-180° | 4030.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 208 | 208 | 208 | 208 | 208 | |
| 5° | 202 | 231 | 280 | 342 | 367 | 19 |
| 15° | 166 | 327 | 684 | 766 | 797 | 46 |
| 25° | 122 | 440 | 755 | 788 | 796 | 56 |
| 35° | 87 | 424 | 715 | 740 | 783 | 55 |
| 45° | 63 | 325 | 626 | 719 | 752 | 49 |
| 55° | 47 | 194 | 531 | 610 | 626 | 42 |
| 65° | 37 | 109 | 391 | 438 | 446 | 36 |
| 75° | 26 | 67 | 208 | 112 | 114 | 27 |
| 85° | 9 | 20 | 25 | 17 | 15 | 9 |
| 90° | 0 | 1 | 3 | 3 | 3 | 1 |
| 95° | 17 | 51 | 230 | 85 | 55 | 20 |
| 105° | 70 | 98 | 396 | 754 | 723 | 74 |
| 115° | 125 | 148 | 320 | 665 | 782 | 123 |
| 125° | 173 | 194 | 315 | 521 | 614 | 154 |
| 135° | 209 | 230 | 313 | 448 | 505 | 161 |
| 145° | 244 | 263 | 313 | 387 | 421 | 153 |
| 155° | 278 | 288 | 314 | 345 | 359 | 128 |
| 165° | 303 | 306 | 315 | 327 | 330 | 85 |
| 175° | 317 | 316 | 317 | 319 | 318 | 30 |
| 180° | 318 | 318 | 318 | 318 | 318 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 208.0 | 208.0 | 208.0 | 208.0 | 208.0 |
| 2.5° | 206.4 | 215.0 | 224.8 | 236.1 | 240.8 |
| 5° | 202.0 | 231.3 | 280.0 | 341.6 | 367.0 |
| 7.5° | 194.2 | 253.8 | 407.2 | 572.0 | 622.8 |
| 10° | 187.0 | 270.1 | 536.0 | 678.6 | 706.0 |
| 12.5° | 179.0 | 291.8 | 616.8 | 717.0 | 745.2 |
| 15° | 166.0 | 327.3 | 684.0 | 765.7 | 797.0 |
| 17.5° | 152.6 | 367.3 | 715.2 | 795.8 | 812.8 |
| 20° | 143.0 | 395.3 | 732.0 | 801.3 | 812.0 |
| 22.5° | 134.2 | 416.2 | 744.0 | 796.5 | 808.0 |
| 25° | 122.0 | 439.8 | 755.0 | 788.2 | 796.0 |
| 27.5° | 110.2 | 446.0 | 750.2 | 772.0 | 779.6 |
| 30° | 103.0 | 444.2 | 743.0 | 759.3 | 770.0 |
| 32.5° | 96.6 | 439.4 | 732.6 | 748.3 | 771.6 |
| 35° | 87.0 | 424.3 | 715.0 | 740.0 | 783.0 |
| 37.5° | 78.8 | 400.1 | 691.8 | 742.9 | 784.4 |
| 40° | 74.0 | 382.0 | 675.0 | 742.8 | 778.0 |
| 42.5° | 69.2 | 360.8 | 655.8 | 734.8 | 770.0 |
| 45° | 63.0 | 325.0 | 626.0 | 718.8 | 752.0 |
| 47.5° | 57.2 | 284.8 | 598.4 | 696.6 | 720.8 |
| 50° | 54.0 | 257.4 | 580.0 | 676.4 | 696.0 |
| 52.5° | 50.8 | 230.7 | 561.6 | 652.4 | 670.4 |
| 55° | 47.0 | 193.7 | 531.0 | 610.4 | 626.0 |
| 57.5° | 43.6 | 161.9 | 496.2 | 563.9 | 576.6 |
| 60° | 42.0 | 144.7 | 469.0 | 530.3 | 543.0 |
| 62.5° | 39.6 | 129.0 | 438.6 | 495.1 | 507.0 |
| 65° | 37.0 | 109.4 | 391.0 | 438.2 | 446.0 |
| 67.5° | 33.4 | 94.8 | 340.4 | 369.3 | 354.6 |
| 70° | 31.0 | 87.7 | 306.0 | 315.0 | 273.0 |
| 72.5° | 29.4 | 79.9 | 268.4 | 244.6 | 165.0 |
| 75° | 26.0 | 67.1 | 208.0 | 112.0 | 114.0 |
| 77.5° | 21.2 | 51.9 | 136.8 | 86.0 | 87.8 |
| 80° | 18.0 | 42.4 | 72.0 | 70.0 | 71.0 |
| 82.5° | 14.8 | 33.0 | 49.6 | 51.6 | 50.2 |
| 85° | 9.0 | 19.8 | 25.0 | 17.0 | 15.0 |
| 87.5° | 3.2 | 7.3 | 4.6 | 4.6 | 4.6 |
| 90° | 0.0 | 1.0 | 3.0 | 3.0 | 3.0 |
| 92.5° | 5.6 | 22.2 | 71.0 | 23.6 | 16.6 |
| 95° | 17.0 | 51.2 | 230.0 | 85.3 | 55.0 |
| 97.5° | 31.6 | 66.4 | 389.6 | 243.4 | 149.4 |
| 100° | 42.0 | 75.2 | 444.0 | 404.7 | 263.0 |
| 102.5° | 53.2 | 84.9 | 434.4 | 594.4 | 455.0 |
| 105° | 70.0 | 98.3 | 396.0 | 754.2 | 722.9 |
| 107.5° | 86.8 | 113.0 | 359.4 | 770.9 | 813.1 |
| 110° | 98.0 | 123.4 | 341.0 | 751.7 | 829.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 109.2 | 133.0 | 330.6 | 718.6 | 817.9 |
| 115° | 125.0 | 148.5 | 320.0 | 664.6 | 781.9 |
| 117.5° | 140.4 | 162.7 | 315.8 | 612.6 | 730.9 |
| 120° | 150.0 | 171.5 | 315.0 | 580.5 | 694.9 |
| 122.5° | 159.6 | 180.3 | 315.0 | 554.8 | 661.3 |
| 125° | 173.0 | 193.5 | 315.0 | 521.1 | 613.9 |
| 127.5° | 184.8 | 204.5 | 315.0 | 495.0 | 574.1 |
| 130° | 192.0 | 212.5 | 315.0 | 479.6 | 550.9 |
| 132.5° | 199.2 | 219.7 | 314.2 | 467.4 | 531.8 |
| 135° | 209.0 | 229.5 | 313.0 | 448.2 | 505.0 |
| 137.5° | 218.6 | 240.1 | 312.8 | 429.9 | 480.6 |
| 140° | 225.0 | 246.5 | 312.0 | 417.0 | 463.0 |
| 142.5° | 233.0 | 253.7 | 312.8 | 404.1 | 447.0 |
| 145° | 244.0 | 262.6 | 313.0 | 386.7 | 421.0 |
| 147.5° | 255.0 | 270.8 | 313.2 | 371.4 | 399.4 |
| 150° | 263.0 | 275.7 | 314.0 | 362.5 | 385.0 |
| 152.5° | 269.4 | 280.5 | 314.0 | 355.2 | 373.8 |
| 155° | 278.0 | 287.8 | 314.0 | 345.3 | 359.0 |
| 157.5° | 287.2 | 293.8 | 315.0 | 339.2 | 348.6 |
| 160° | 292.0 | 297.8 | 315.0 | 335.1 | 343.0 |
| 162.5° | 296.8 | 301.1 | 315.0 | 331.9 | 337.4 |
| 165° | 303.0 | 305.9 | 315.0 | 327.0 | 330.0 |
| 167.5° | 308.8 | 309.6 | 316.0 | 323.6 | 326.2 |
| 170° | 312.0 | 312.0 | 316.0 | 322.0 | 323.0 |
| 172.5° | 313.6 | 314.4 | 316.0 | 320.4 | 320.6 |
| 175° | 317.0 | 316.0 | 317.0 | 318.9 | 318.0 |
| 177.5° | 318.0 | 317.2 | 317.2 | 318.7 | 317.2 |
| 180° | 318.0 | 318.0 | 318.0 | 318.0 | 318.0 |



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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 | 11.36 | 12.26 | 12.31 | 13.23 | 14.48 | 20.10 | 21.00 | 21.04 | 21.96 | 23.22 |
| | 3H | 12.10 | 12.90 | 13.05 | 13.88 | 15.15 | 21.73 | 22.53 | 22.68 | 23.50 | 24.78 |
| | 4H | 12.40 | 13.16 | 13.37 | 14.14 | 15.43 | 21.91 | 22.67 | 22.88 | 23.65 | 24.93 |
| | 6H | 12.62 | 13.32 | 13.60 | 14.30 | 15.60 | 22.00 | 22.70 | 22.98 | 23.68 | 24.98 |
| | 8H | 12.68 | 13.35 | 13.66 | 14.35 | 15.64 | 22.00 | 22.67 | 22.99 | 23.67 | 24.97 |
| | 12H | 12.71 | 13.34 | 13.70 | 14.34 | 15.66 | 21.97 | 22.61 | 22.97 | 23.60 | 24.93 |
| 4H | 2H | 15.77 | 16.53 | 16.74 | 17.51 | 18.79 | 20.55 | 21.31 | 21.52 | 22.29 | 23.57 |
| | 3H | 16.70 | 17.34 | 17.69 | 18.35 | 19.65 | 22.38 | 23.01 | 23.36 | 24.02 | 25.32 |
| | 4H | 16.99 | 17.57 | 17.98 | 18.57 | 19.89 | 22.62 | 23.20 | 23.61 | 24.20 | 25.52 |
| | 6H | 17.12 | 17.62 | 18.13 | 18.65 | 19.97 | 22.77 | 23.26 | 23.77 | 24.29 | 25.61 |
| | 8H | 17.15 | 17.61 | 18.15 | 18.63 | 19.96 | 22.79 | 23.26 | 23.80 | 24.27 | 25.61 |
| | 12H | 17.14 | 17.56 | 18.17 | 18.59 | 19.93 | 22.77 | 23.19 | 23.79 | 24.22 | 25.56 |
| 8H | 4H | 18.17 | 18.63 | 19.18 | 19.65 | 20.99 | 22.74 | 23.20 | 23.75 | 24.22 | 25.56 |
| | 6H | 18.41 | 18.79 | 19.44 | 19.85 | 21.18 | 22.95 | 23.33 | 23.98 | 24.39 | 25.72 |
| | 8H | 18.48 | 18.82 | 19.52 | 19.86 | 21.21 | 23.01 | 23.35 | 24.05 | 24.39 | 25.74 |
| | 12H | 18.51 | 18.80 | 19.55 | 19.84 | 21.24 | 23.00 | 23.30 | 24.05 | 24.34 | 25.73 |
| 12H | 4H | 18.19 | 18.61 | 19.21 | 19.64 | 20.98 | 22.69 | 23.11 | 23.72 | 24.14 | 25.49 |
| | 6H | 18.50 | 18.84 | 19.54 | 19.88 | 21.24 | 22.93 | 23.27 | 23.97 | 24.31 | 25.66 |
| | 8H | 18.61 | 18.90 | 19.65 | 19.94 | 21.34 | 23.00 | 23.29 | 24.04 | 24.33 | 25.73 |