

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: P855243

Luminaire Tested: SQ2-FB-025U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855243
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FB-025U-050D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

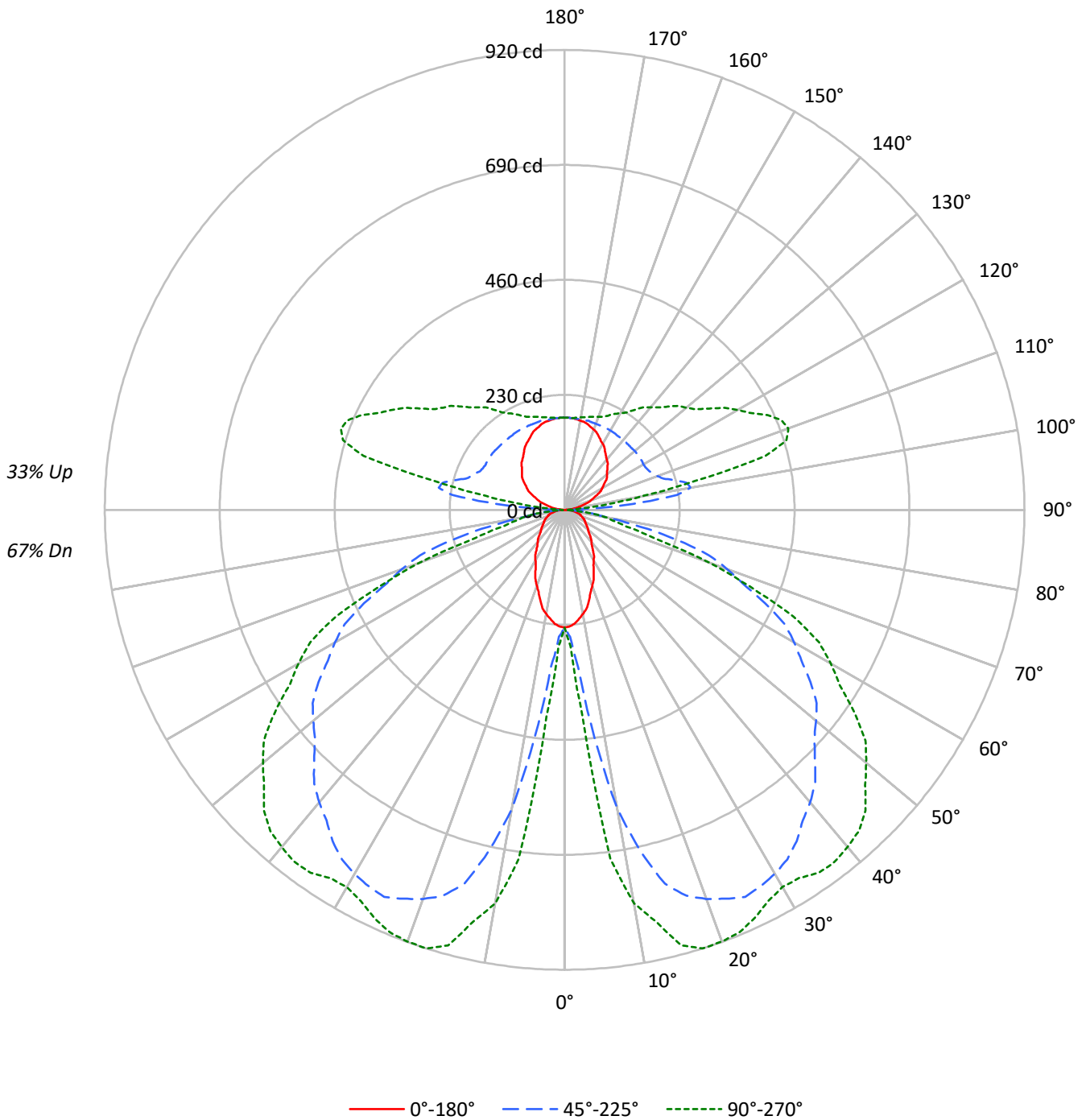
Lumens per Lamp: N/A
Luminaire Lumens: 3470.8 lumens
Efficiency: N/A
Efficacy: 137.7 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 25.2
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

TEST NUMBER: P855243

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Luminous Intensity Polar Plot





TEST NUMBER: P855243

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 82 | 82 | 82 | 72 | 72 | 72 | 67 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 101 | 97 | 93 | 89 | 95 | 91 | 88 | 85 | 81 | 78 | 76 | 72 | 70 | 68 | 63 | 62 | 60 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 92 | 84 | 77 | 72 | 86 | 79 | 74 | 69 | 71 | 66 | 62 | 62 | 59 | 56 | 55 | 52 | 50 | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 83 | 73 | 65 | 59 | 78 | 69 | 62 | 57 | 62 | 56 | 51 | 55 | 50 | 47 | 48 | 45 | 42 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 76 | 64 | 56 | 50 | 71 | 61 | 53 | 47 | 54 | 48 | 43 | 48 | 43 | 39 | 42 | 39 | 35 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 70 | 57 | 48 | 42 | 65 | 54 | 46 | 40 | 48 | 42 | 37 | 43 | 38 | 34 | 38 | 34 | 30 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 64 | 51 | 42 | 36 | 60 | 48 | 40 | 35 | 43 | 37 | 32 | 38 | 33 | 29 | 34 | 30 | 26 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 59 | 46 | 37 | 31 | 55 | 43 | 36 | 30 | 39 | 32 | 28 | 35 | 29 | 25 | 31 | 26 | 23 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 54 | 41 | 33 | 27 | 51 | 39 | 32 | 26 | 35 | 29 | 24 | 32 | 26 | 22 | 28 | 24 | 20 | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 51 | 38 | 30 | 24 | 48 | 36 | 28 | 23 | 32 | 26 | 22 | 29 | 24 | 20 | 26 | 21 | 18 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 47 | 34 | 27 | 22 | 44 | 33 | 26 | 21 | 30 | 23 | 19 | 27 | 21 | 18 | 24 | 19 | 16 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 3801 | 3801 | 3801 |
| 5° | 3705 | 5136 | 6731 |
| 10° | 3469 | 9945 | 13100 |
| 15° | 3141 | 12939 | 15076 |
| 20° | 2780 | 14234 | 15789 |
| 25° | 2460 | 15221 | 16048 |
| 30° | 2174 | 15676 | 16246 |
| 35° | 1941 | 15948 | 17465 |
| 40° | 1764 | 16101 | 18556 |
| 45° | 1628 | 16175 | 19431 |
| 50° | 1535 | 16488 | 19783 |
| 55° | 1498 | 16915 | 19941 |
| 60° | 1534 | 17140 | 19843 |
| 65° | 1601 | 16905 | 19282 |
| 70° | 1657 | 16348 | 14582 |
| 75° | 1834 | 14685 | 8047 |
| 80° | 1897 | 7578 | 7466 |
| 85° | 1890 | 5243 | 3149 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 52.5°
 Luminance: 20123 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 39.4 | 1.1 |
| 10°-20° | 180.0 | 5.2 |
| 20°-30° | 316.7 | 9.1 |
| 30°-40° | 410.0 | 11.8 |
| 40°-50° | 452.1 | 13.0 |
| 50°-60° | 422.2 | 12.2 |
| 60°-70° | 326.3 | 9.4 |
| 70°-80° | 150.5 | 4.3 |
| 80°-90° | 29.2 | 0.8 |
| 90°-100° | 74.6 | 2.1 |
| 100°-110° | 232.1 | 6.7 |
| 110°-120° | 227.1 | 6.5 |
| 120°-130° | 185.4 | 5.3 |
| 130°-140° | 151.7 | 4.4 |
| 140°-150° | 118.4 | 3.4 |
| 150°-160° | 85.4 | 2.5 |
| 160°-170° | 52.2 | 1.5 |
| 170°-180° | 17.6 | 0.5 |
| 0°-30° | 536.2 | 15.4 |
| 0°-40° | 946.1 | 27.3 |
| 0°-60° | 1820.4 | 52.5 |
| 0°-90° | 2326.4 | 67.0 |
| 90°-120° | 533.8 | 15.4 |
| 90°-150° | 989.2 | 28.5 |
| 90°-180° | 1144.0 | 33.0 |
| 0°-180° | 3470.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 235 | 235 | 235 | 235 | 235 | |
| 5° | 229 | 262 | 317 | 387 | 415 | 21 |
| 15° | 188 | 370 | 774 | 866 | 902 | 52 |
| 25° | 138 | 498 | 854 | 892 | 901 | 63 |
| 35° | 98 | 480 | 809 | 837 | 886 | 62 |
| 45° | 71 | 368 | 708 | 813 | 851 | 55 |
| 55° | 53 | 219 | 601 | 691 | 708 | 48 |
| 65° | 42 | 124 | 442 | 496 | 505 | 41 |
| 75° | 29 | 76 | 235 | 127 | 129 | 30 |
| 85° | 10 | 22 | 28 | 19 | 17 | 11 |
| 90° | 0 | 1 | 3 | 3 | 3 | 1 |
| 95° | 10 | 30 | 137 | 50 | 33 | 12 |
| 105° | 41 | 57 | 228 | 436 | 416 | 43 |
| 115° | 72 | 86 | 186 | 383 | 448 | 71 |
| 125° | 101 | 112 | 183 | 301 | 353 | 89 |
| 135° | 121 | 134 | 182 | 260 | 292 | 94 |
| 145° | 142 | 152 | 182 | 224 | 244 | 89 |
| 155° | 162 | 167 | 183 | 202 | 208 | 75 |
| 165° | 178 | 179 | 184 | 190 | 192 | 50 |
| 175° | 184 | 184 | 184 | 186 | 184 | 17 |
| 180° | 184 | 184 | 184 | 184 | 184 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 235.4 | 235.4 | 235.4 | 235.4 | 235.4 |
| 2.5° | 233.6 | 243.3 | 254.4 | 267.2 | 272.5 |
| 5° | 228.6 | 261.8 | 316.9 | 386.6 | 415.3 |
| 7.5° | 219.8 | 287.2 | 460.8 | 647.3 | 704.8 |
| 10° | 211.6 | 305.7 | 606.6 | 767.9 | 799.0 |
| 12.5° | 202.6 | 330.2 | 698.0 | 811.4 | 843.3 |
| 15° | 187.9 | 370.4 | 774.1 | 866.5 | 901.9 |
| 17.5° | 172.7 | 415.7 | 809.4 | 900.6 | 919.8 |
| 20° | 161.8 | 447.3 | 828.4 | 906.8 | 918.9 |
| 22.5° | 151.9 | 471.0 | 842.0 | 901.4 | 914.4 |
| 25° | 138.1 | 497.7 | 854.4 | 892.0 | 900.8 |
| 27.5° | 124.7 | 504.7 | 849.0 | 873.6 | 882.2 |
| 30° | 116.6 | 502.7 | 840.8 | 859.3 | 871.4 |
| 32.5° | 109.3 | 497.3 | 829.1 | 846.8 | 873.2 |
| 35° | 98.5 | 480.2 | 809.1 | 837.4 | 886.1 |
| 37.5° | 89.2 | 452.8 | 782.9 | 840.7 | 887.7 |
| 40° | 83.7 | 432.3 | 763.9 | 840.6 | 880.4 |
| 42.5° | 78.3 | 408.3 | 742.1 | 831.5 | 871.4 |
| 45° | 71.3 | 367.8 | 708.4 | 813.4 | 851.0 |
| 47.5° | 64.7 | 322.3 | 677.2 | 788.3 | 815.7 |
| 50° | 61.1 | 291.3 | 656.4 | 765.5 | 787.6 |
| 52.5° | 57.5 | 261.1 | 635.5 | 738.3 | 758.7 |
| 55° | 53.2 | 219.2 | 600.9 | 690.8 | 708.4 |
| 57.5° | 49.3 | 183.2 | 561.5 | 638.1 | 652.5 |
| 60° | 47.5 | 163.8 | 530.8 | 600.1 | 614.5 |
| 62.5° | 44.8 | 146.0 | 496.3 | 560.3 | 573.8 |
| 65° | 41.9 | 123.8 | 442.5 | 495.9 | 504.7 |
| 67.5° | 37.8 | 107.3 | 385.2 | 417.9 | 401.3 |
| 70° | 35.1 | 99.2 | 346.3 | 356.5 | 308.9 |
| 72.5° | 33.3 | 90.4 | 303.7 | 276.8 | 186.7 |
| 75° | 29.4 | 75.9 | 235.4 | 126.7 | 129.0 |
| 77.5° | 24.0 | 58.7 | 154.8 | 97.3 | 99.4 |
| 80° | 20.4 | 48.0 | 81.5 | 79.2 | 80.3 |
| 82.5° | 16.7 | 37.3 | 56.1 | 58.4 | 56.8 |
| 85° | 10.2 | 22.4 | 28.3 | 19.2 | 17.0 |
| 87.5° | 3.6 | 8.3 | 5.2 | 5.2 | 5.2 |
| 90° | 0.0 | 1.1 | 3.4 | 3.4 | 3.4 |
| 92.5° | 3.6 | 12.7 | 43.2 | 14.1 | 11.5 |
| 95° | 10.2 | 30.1 | 136.9 | 50.5 | 32.8 |
| 97.5° | 18.6 | 39.2 | 226.7 | 141.1 | 88.9 |
| 100° | 24.9 | 43.7 | 255.6 | 239.1 | 159.6 |
| 102.5° | 31.2 | 49.1 | 250.2 | 341.5 | 268.1 |
| 105° | 40.7 | 57.4 | 228.5 | 436.3 | 416.3 |
| 107.5° | 50.2 | 65.7 | 207.7 | 443.5 | 465.5 |
| 110° | 56.6 | 72.1 | 196.8 | 433.1 | 476.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 62.9 | 77.5 | 191.4 | 414.4 | 469.1 |
| 115° | 72.4 | 85.7 | 185.5 | 382.7 | 448.0 |
| 117.5° | 81.7 | 93.8 | 183.0 | 352.4 | 419.3 |
| 120° | 87.1 | 99.2 | 182.1 | 335.2 | 399.4 |
| 122.5° | 92.6 | 104.7 | 183.0 | 320.6 | 379.4 |
| 125° | 100.7 | 111.7 | 183.2 | 301.0 | 353.0 |
| 127.5° | 107.3 | 118.5 | 183.2 | 286.3 | 330.6 |
| 130° | 110.9 | 123.0 | 183.2 | 278.0 | 317.9 |
| 132.5° | 115.4 | 127.5 | 182.3 | 270.8 | 307.9 |
| 135° | 121.1 | 134.3 | 182.1 | 259.8 | 291.9 |
| 137.5° | 127.7 | 139.8 | 182.1 | 248.9 | 278.0 |
| 140° | 131.3 | 143.4 | 182.1 | 241.6 | 268.1 |
| 142.5° | 135.8 | 147.0 | 182.1 | 234.3 | 258.1 |
| 145° | 141.5 | 152.4 | 182.1 | 224.4 | 244.3 |
| 147.5° | 148.2 | 157.8 | 183.2 | 215.4 | 231.0 |
| 150° | 152.8 | 160.5 | 183.2 | 210.7 | 222.8 |
| 152.5° | 156.4 | 163.2 | 183.2 | 206.1 | 216.5 |
| 155° | 161.8 | 167.3 | 183.2 | 201.5 | 208.1 |
| 157.5° | 167.3 | 171.4 | 183.2 | 197.4 | 201.5 |
| 160° | 170.9 | 174.2 | 183.2 | 194.6 | 197.9 |
| 162.5° | 173.5 | 176.0 | 183.2 | 192.8 | 195.2 |
| 165° | 177.6 | 178.7 | 184.3 | 190.1 | 192.3 |
| 167.5° | 180.0 | 180.3 | 183.2 | 188.5 | 189.6 |
| 170° | 181.0 | 182.1 | 183.2 | 186.7 | 187.7 |
| 172.5° | 182.8 | 183.0 | 184.1 | 185.8 | 185.9 |
| 175° | 184.3 | 184.3 | 184.3 | 185.5 | 184.3 |
| 177.5° | 184.3 | 184.3 | 184.3 | 184.3 | 184.3 |
| 180° | 184.3 | 184.3 | 184.3 | 184.3 | 184.3 |

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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 | 13.13 | 14.20 | 13.91 | 15.02 | 16.02 | 21.86 | 22.94 | 22.65 | 23.76 | 24.76 |
| | 3H | 13.87 | 14.84 | 14.68 | 15.67 | 16.70 | 23.50 | 24.47 | 24.30 | 25.29 | 26.33 |
| | 4H | 14.18 | 15.10 | 15.00 | 15.93 | 16.97 | 23.69 | 24.61 | 24.51 | 25.44 | 26.48 |
| | 6H | 14.41 | 15.26 | 15.24 | 16.10 | 17.15 | 23.79 | 24.63 | 24.62 | 25.47 | 26.53 |
| | 8H | 14.48 | 15.28 | 15.32 | 16.14 | 17.20 | 23.80 | 24.60 | 24.64 | 25.46 | 26.52 |
| | 12H | 14.51 | 15.28 | 15.36 | 16.13 | 17.22 | 23.78 | 24.54 | 24.63 | 25.40 | 26.48 |
| 4H | 2H | 17.55 | 18.47 | 18.37 | 19.30 | 20.34 | 22.33 | 23.25 | 23.16 | 24.08 | 25.12 |
| | 3H | 18.50 | 19.27 | 19.34 | 20.14 | 21.19 | 24.18 | 24.94 | 25.01 | 25.81 | 26.87 |
| | 4H | 18.80 | 19.49 | 19.65 | 20.36 | 21.44 | 24.42 | 25.12 | 25.28 | 25.98 | 27.07 |
| | 6H | 18.94 | 19.54 | 19.81 | 20.43 | 21.52 | 24.58 | 25.18 | 25.45 | 26.07 | 27.16 |
| | 8H | 18.97 | 19.53 | 19.84 | 20.41 | 21.52 | 24.61 | 25.17 | 25.48 | 26.06 | 27.16 |
| | 12H | 18.97 | 19.48 | 19.86 | 20.38 | 21.49 | 24.60 | 25.10 | 25.49 | 26.01 | 27.12 |
| 8H | 4H | 19.99 | 20.55 | 20.86 | 21.44 | 22.54 | 24.56 | 25.12 | 25.43 | 26.01 | 27.11 |
| | 6H | 20.24 | 20.70 | 21.14 | 21.63 | 22.73 | 24.78 | 25.24 | 25.68 | 26.17 | 27.27 |
| | 8H | 20.31 | 20.72 | 21.22 | 21.64 | 22.76 | 24.84 | 25.25 | 25.75 | 26.17 | 27.29 |
| | 12H | 20.35 | 20.71 | 21.26 | 21.62 | 22.79 | 24.84 | 25.20 | 25.76 | 26.12 | 27.29 |
| 12H | 4H | 20.02 | 20.52 | 20.91 | 21.43 | 22.54 | 24.52 | 25.03 | 25.42 | 25.93 | 27.04 |
| | 6H | 20.33 | 20.75 | 21.24 | 21.67 | 22.79 | 24.76 | 25.17 | 25.67 | 26.09 | 27.21 |
| | 8H | 20.45 | 20.81 | 21.36 | 21.72 | 22.90 | 24.84 | 25.20 | 25.75 | 26.11 | 27.29 |