

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: P855114

Luminaire Tested: SQ2-PR1-050U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855114
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-050U-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

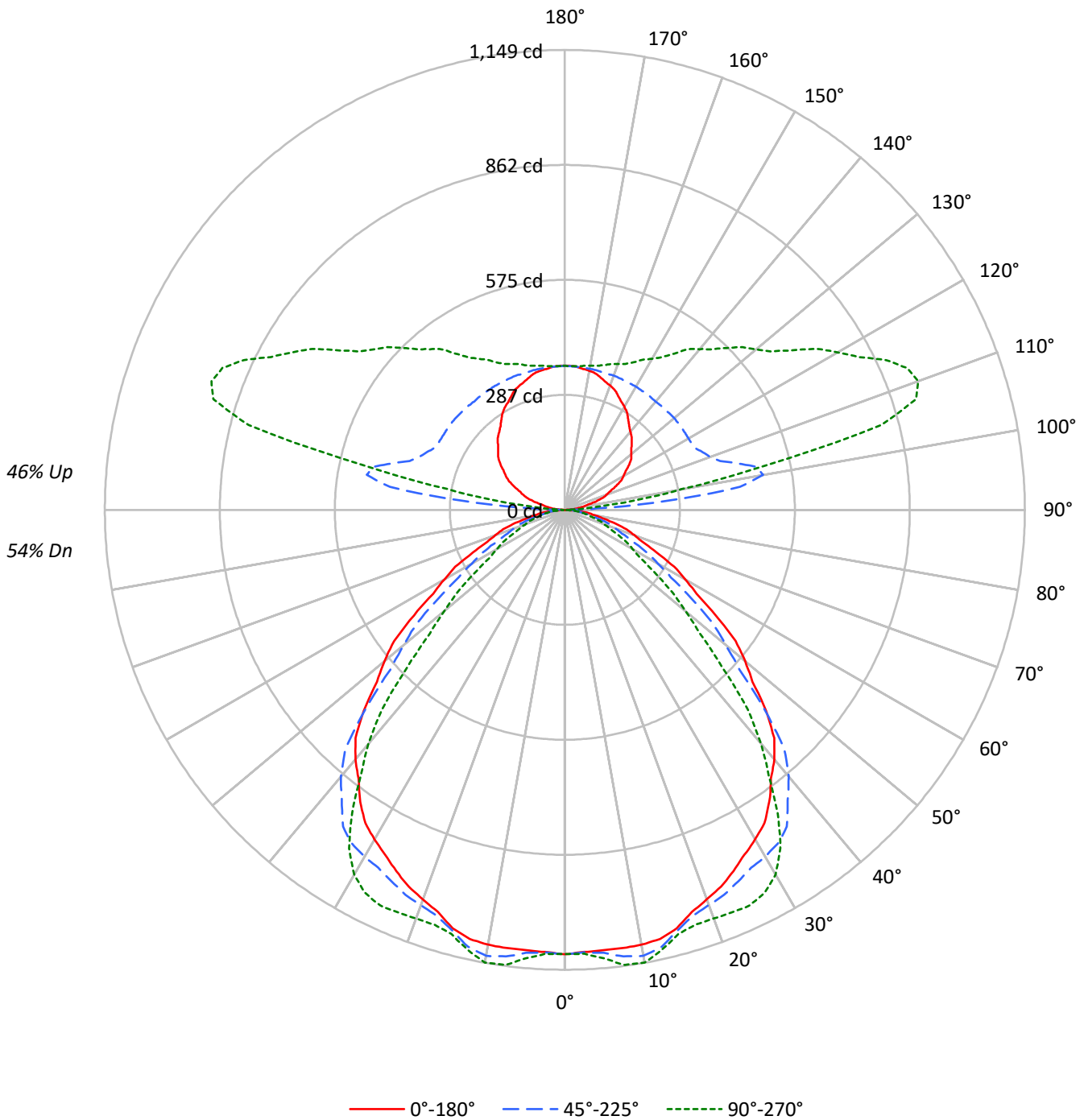
Lumens per Lamp: N/A
Luminaire Lumens: 4905.7 lumens
Efficiency: N/A
Efficacy: 150.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 86 | 86 | 86 | 72 | 72 | 72 | 60 | 60 | 60 | 54 | 54 | 54 | 54 | |
| 1 | 99 | 95 | 92 | 88 | 92 | 89 | 86 | 83 | 76 | 74 | 72 | 65 | 63 | 62 | 54 | 53 | 52 | 47 | 47 | 47 | 47 | |
| 2 | 91 | 84 | 78 | 73 | 84 | 78 | 73 | 69 | 68 | 64 | 61 | 58 | 55 | 53 | 49 | 47 | 45 | 41 | 41 | 41 | 41 | |
| 3 | 84 | 74 | 67 | 62 | 77 | 70 | 63 | 58 | 60 | 56 | 52 | 52 | 48 | 45 | 44 | 41 | 39 | 35 | 35 | 35 | 35 | |
| 4 | 77 | 66 | 59 | 53 | 71 | 62 | 55 | 50 | 54 | 49 | 45 | 46 | 42 | 39 | 39 | 36 | 34 | 31 | 31 | 31 | 31 | |
| 5 | 71 | 59 | 51 | 46 | 65 | 56 | 49 | 43 | 48 | 43 | 39 | 42 | 38 | 34 | 36 | 33 | 30 | 27 | 27 | 27 | 27 | |
| 6 | 65 | 53 | 46 | 40 | 60 | 50 | 43 | 38 | 44 | 38 | 34 | 38 | 34 | 30 | 33 | 29 | 27 | 24 | 24 | 24 | 24 | |
| 7 | 60 | 48 | 41 | 35 | 56 | 45 | 38 | 34 | 40 | 34 | 30 | 35 | 30 | 27 | 30 | 26 | 24 | 21 | 21 | 21 | 21 | |
| 8 | 56 | 44 | 36 | 31 | 52 | 41 | 35 | 30 | 36 | 31 | 27 | 32 | 27 | 24 | 27 | 24 | 21 | 19 | 19 | 19 | 19 | |
| 9 | 52 | 40 | 33 | 28 | 49 | 38 | 31 | 27 | 33 | 28 | 24 | 29 | 25 | 22 | 25 | 22 | 19 | 17 | 17 | 17 | 17 | |
| 10 | 49 | 37 | 30 | 25 | 46 | 35 | 28 | 24 | 31 | 26 | 22 | 27 | 23 | 20 | 24 | 20 | 18 | 16 | 16 | 16 | 16 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 17925 | 17925 | 17925 |
| 5° | 17901 | 18011 | 18232 |
| 10° | 18090 | 18554 | 18831 |
| 15° | 18084 | 18178 | 18330 |
| 20° | 17792 | 18063 | 18667 |
| 25° | 17742 | 18246 | 19434 |
| 30° | 17723 | 18651 | 19621 |
| 35° | 17554 | 19048 | 18268 |
| 40° | 17150 | 18341 | 16075 |
| 45° | 16228 | 16098 | 12714 |
| 50° | 14752 | 13162 | 9864 |
| 55° | 12966 | 10832 | 7676 |
| 60° | 11218 | 8661 | 6323 |
| 65° | 9685 | 7179 | 5536 |
| 70° | 8710 | 6359 | 4914 |
| 75° | 7979 | 5508 | 4517 |
| 80° | 6946 | 4417 | 4417 |
| 85° | 5039 | 3983 | 2093 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 17543 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 107.2 | 2.2 |
| 10°-20° | 310.3 | 6.3 |
| 20°-30° | 479.7 | 9.8 |
| 30°-40° | 577.0 | 11.8 |
| 40°-50° | 518.1 | 10.6 |
| 50°-60° | 347.1 | 7.1 |
| 60°-70° | 201.9 | 4.1 |
| 70°-80° | 103.7 | 2.1 |
| 80°-90° | 26.0 | 0.5 |
| 90°-100° | 143.3 | 2.9 |
| 100°-110° | 454.6 | 9.3 |
| 110°-120° | 445.8 | 9.1 |
| 120°-130° | 362.7 | 7.4 |
| 130°-140° | 295.8 | 6.0 |
| 140°-150° | 230.6 | 4.7 |
| 150°-160° | 166.1 | 3.4 |
| 160°-170° | 101.5 | 2.1 |
| 170°-180° | 34.3 | 0.7 |
| 0°-30° | 897.3 | 18.3 |
| 0°-40° | 1474.3 | 30.1 |
| 0°-60° | 2339.5 | 47.7 |
| 0°-90° | 2671.1 | 54.4 |
| 90°-120° | 1043.6 | 21.3 |
| 90°-150° | 1932.7 | 39.4 |
| 90°-180° | 2235.0 | 45.6 |
| 0°-180° | 4905.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1110 | 1110 | 1110 | 1110 | 1110 | |
| 5° | 1104 | 1123 | 1111 | 1114 | 1125 | 105 |
| 15° | 1082 | 1126 | 1088 | 1091 | 1097 | 304 |
| 25° | 996 | 1036 | 1024 | 1062 | 1091 | 459 |
| 35° | 891 | 898 | 966 | 948 | 927 | 555 |
| 45° | 711 | 768 | 705 | 594 | 557 | 544 |
| 55° | 461 | 478 | 385 | 297 | 273 | 414 |
| 65° | 254 | 259 | 188 | 152 | 145 | 256 |
| 75° | 128 | 125 | 88 | 75 | 72 | 136 |
| 85° | 27 | 22 | 22 | 15 | 11 | 34 |
| 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 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1110.2 | 1110.2 | 1110.2 | 1110.2 | 1110.2 |
| 2.5° | 1105.6 | 1118.9 | 1106.5 | 1107.6 | 1110.2 |
| 5° | 1104.5 | 1123.3 | 1111.3 | 1113.8 | 1124.9 |
| 7.5° | 1104.3 | 1131.1 | 1125.3 | 1132.2 | 1146.8 |
| 10° | 1103.4 | 1135.5 | 1131.7 | 1133.1 | 1148.6 |
| 12.5° | 1097.9 | 1135.4 | 1118.1 | 1116.7 | 1125.1 |
| 15° | 1081.9 | 1126.1 | 1087.5 | 1091.0 | 1096.6 |
| 17.5° | 1053.6 | 1099.9 | 1063.1 | 1075.5 | 1086.4 |
| 20° | 1035.5 | 1080.9 | 1051.3 | 1067.6 | 1086.4 |
| 22.5° | 1019.2 | 1064.6 | 1040.5 | 1063.2 | 1089.1 |
| 25° | 995.9 | 1035.7 | 1024.2 | 1062.2 | 1090.9 |
| 27.5° | 971.4 | 994.8 | 1008.5 | 1059.5 | 1079.6 |
| 30° | 950.6 | 966.1 | 1000.4 | 1044.8 | 1052.4 |
| 32.5° | 928.0 | 937.2 | 989.5 | 1012.6 | 1002.7 |
| 35° | 890.6 | 898.4 | 966.4 | 947.9 | 926.8 |
| 37.5° | 846.3 | 862.2 | 914.6 | 861.1 | 837.0 |
| 40° | 813.7 | 840.3 | 870.2 | 790.5 | 762.7 |
| 42.5° | 773.8 | 816.4 | 811.4 | 709.7 | 675.8 |
| 45° | 710.7 | 768.3 | 705.0 | 594.3 | 556.8 |
| 47.5° | 636.2 | 695.3 | 591.9 | 493.1 | 457.9 |
| 50° | 587.3 | 634.9 | 524.0 | 431.4 | 392.7 |
| 52.5° | 537.5 | 571.8 | 466.0 | 373.6 | 338.4 |
| 55° | 460.6 | 478.2 | 384.8 | 297.1 | 272.7 |
| 57.5° | 390.0 | 401.3 | 314.4 | 239.9 | 222.0 |
| 60° | 347.4 | 355.1 | 268.2 | 210.1 | 195.8 |
| 62.5° | 308.5 | 314.5 | 231.1 | 184.9 | 174.0 |
| 65° | 253.5 | 259.0 | 187.9 | 152.5 | 144.9 |
| 67.5° | 209.8 | 212.6 | 154.6 | 126.9 | 119.5 |
| 70° | 184.5 | 185.6 | 134.7 | 109.7 | 104.1 |
| 72.5° | 161.8 | 160.2 | 115.7 | 95.2 | 91.4 |
| 75° | 127.9 | 124.6 | 88.3 | 74.7 | 72.4 |
| 77.5° | 95.5 | 92.0 | 62.0 | 57.5 | 57.5 |
| 80° | 74.7 | 70.3 | 47.5 | 47.5 | 47.5 |
| 82.5° | 55.7 | 49.5 | 36.7 | 36.7 | 35.8 |
| 85° | 27.2 | 21.6 | 21.5 | 14.6 | 11.3 |
| 87.5° | 7.2 | 7.5 | 3.4 | 3.4 | 3.4 |
| 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 | 17.21 | 18.07 | 18.14 | 19.01 | 20.22 | 13.94 | 14.80 | 14.87 | 15.74 | 16.95 |
| | 3H | 18.45 | 19.21 | 19.39 | 20.16 | 21.40 | 15.01 | 15.77 | 15.94 | 16.72 | 17.95 |
| | 4H | 18.90 | 19.62 | 19.85 | 20.58 | 21.82 | 15.41 | 16.13 | 16.36 | 17.08 | 18.32 |
| | 6H | 19.22 | 19.88 | 20.18 | 20.84 | 22.10 | 15.74 | 16.40 | 16.70 | 17.36 | 18.61 |
| | 8H | 19.30 | 19.93 | 20.27 | 20.91 | 22.16 | 15.82 | 16.45 | 16.79 | 17.43 | 18.68 |
| | 12H | 19.33 | 19.93 | 20.30 | 20.90 | 22.18 | 15.83 | 16.43 | 16.81 | 17.40 | 18.68 |
| 4H | 2H | 17.29 | 18.01 | 18.25 | 18.97 | 20.21 | 14.51 | 15.23 | 15.47 | 16.18 | 17.43 |
| | 3H | 18.76 | 19.36 | 19.73 | 20.35 | 21.60 | 15.78 | 16.37 | 16.74 | 17.36 | 18.61 |
| | 4H | 19.36 | 19.91 | 20.34 | 20.88 | 22.16 | 16.28 | 16.83 | 17.26 | 17.80 | 19.09 |
| | 6H | 19.81 | 20.28 | 20.80 | 21.28 | 22.56 | 16.72 | 17.19 | 17.71 | 18.19 | 19.47 |
| | 8H | 19.95 | 20.38 | 20.94 | 21.38 | 22.67 | 16.84 | 17.28 | 17.83 | 18.27 | 19.56 |
| | 12H | 20.00 | 20.39 | 21.01 | 21.40 | 22.70 | 16.86 | 17.25 | 17.87 | 18.26 | 19.56 |
| 8H | 4H | 19.39 | 19.82 | 20.38 | 20.82 | 22.11 | 16.59 | 17.02 | 17.58 | 18.02 | 19.31 |
| | 6H | 19.94 | 20.30 | 20.95 | 21.33 | 22.62 | 17.12 | 17.48 | 18.14 | 18.52 | 19.81 |
| | 8H | 20.13 | 20.45 | 21.16 | 21.47 | 22.78 | 17.31 | 17.62 | 18.33 | 18.65 | 19.96 |
| | 12H | 20.24 | 20.52 | 21.26 | 21.53 | 22.89 | 17.37 | 17.65 | 18.40 | 18.67 | 20.02 |
| 12H | 4H | 19.34 | 19.74 | 20.35 | 20.75 | 22.05 | 16.60 | 17.00 | 17.61 | 18.01 | 19.31 |
| | 6H | 19.92 | 20.24 | 20.94 | 21.26 | 22.57 | 17.18 | 17.50 | 18.21 | 18.52 | 19.83 |
| | 8H | 20.13 | 20.41 | 21.16 | 21.43 | 22.79 | 17.39 | 17.67 | 18.42 | 18.69 | 20.04 |