

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: P855322

Luminaire Tested: SQ2-PR1-025U-125D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855322
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-025U-125D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

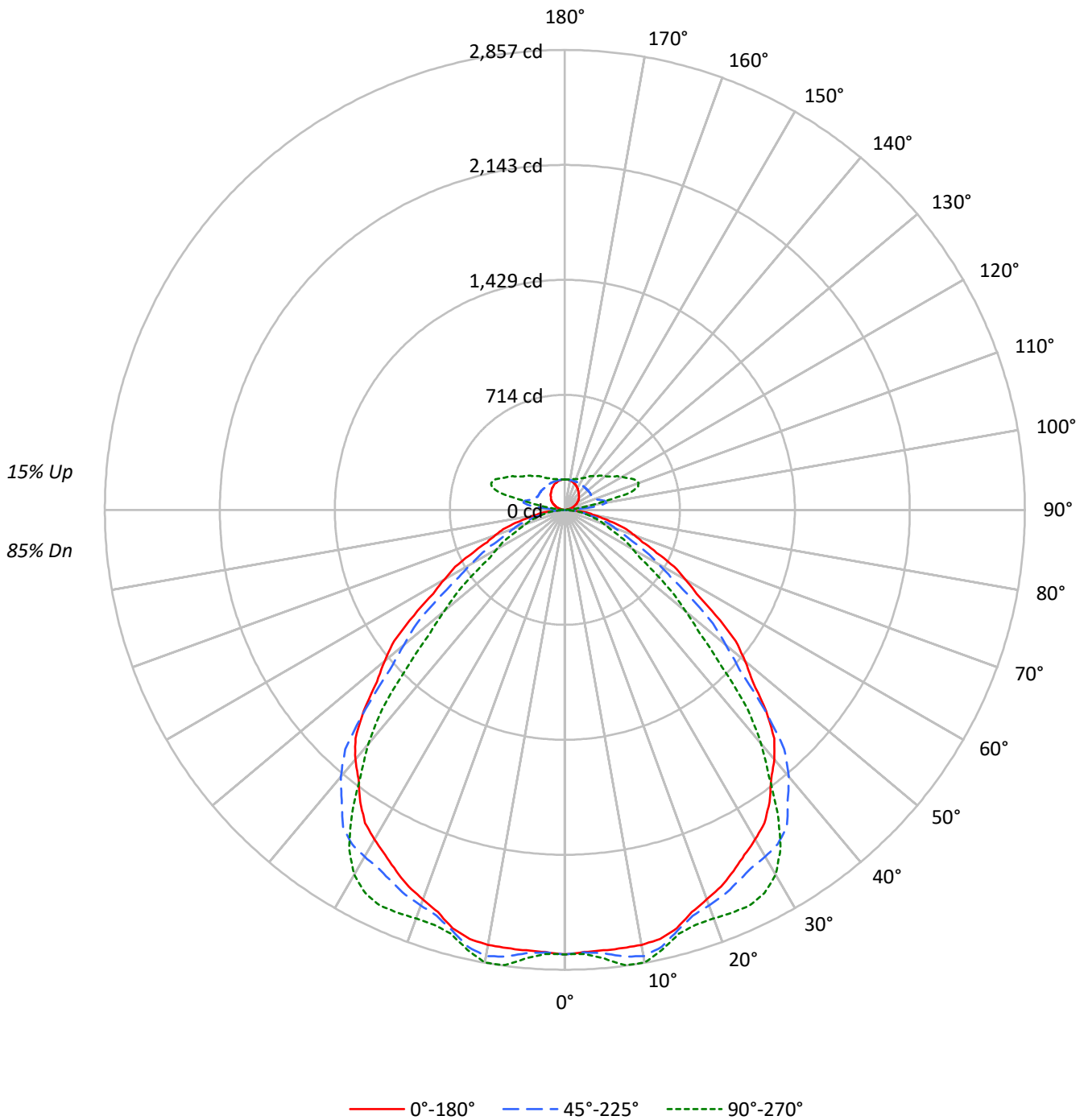
Lumens per Lamp: N/A
Luminaire Lumens: 7813.4 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 56.6
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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 115 | 115 | 115 | 115 | 111 | 111 | 111 | 111 | 103 | 103 | 103 | 95 | 95 | 95 | 88 | 88 | 88 | 85 | | |
| 1 | 107 | 103 | 99 | 96 | 103 | 99 | 96 | 93 | 92 | 89 | 87 | 86 | 84 | 82 | 80 | 78 | 77 | 74 | | |
| 2 | 98 | 91 | 85 | 80 | 94 | 88 | 82 | 78 | 82 | 78 | 74 | 76 | 73 | 70 | 71 | 69 | 66 | 63 | | |
| 3 | 90 | 81 | 74 | 68 | 87 | 78 | 72 | 66 | 73 | 68 | 63 | 69 | 64 | 60 | 64 | 61 | 58 | 55 | | |
| 4 | 83 | 72 | 64 | 58 | 80 | 70 | 63 | 57 | 66 | 60 | 55 | 62 | 57 | 53 | 58 | 54 | 50 | 48 | | |
| 5 | 77 | 65 | 57 | 51 | 74 | 63 | 56 | 50 | 59 | 53 | 48 | 56 | 50 | 46 | 53 | 48 | 44 | 42 | | |
| 6 | 71 | 59 | 51 | 45 | 68 | 57 | 50 | 44 | 54 | 47 | 43 | 51 | 45 | 41 | 48 | 43 | 40 | 37 | | |
| 7 | 66 | 54 | 45 | 40 | 63 | 52 | 45 | 39 | 49 | 43 | 38 | 47 | 41 | 37 | 44 | 39 | 35 | 33 | | |
| 8 | 62 | 49 | 41 | 36 | 59 | 48 | 40 | 35 | 45 | 39 | 34 | 43 | 37 | 33 | 41 | 36 | 32 | 30 | | |
| 9 | 57 | 45 | 37 | 32 | 55 | 44 | 37 | 32 | 42 | 35 | 31 | 40 | 34 | 30 | 38 | 33 | 29 | 27 | | |
| 10 | 54 | 42 | 34 | 29 | 52 | 40 | 33 | 29 | 39 | 32 | 28 | 37 | 31 | 27 | 35 | 30 | 26 | 25 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 44580 | 44580 | 44580 |
| 5° | 44522 | 44796 | 45344 |
| 10° | 44991 | 46145 | 46835 |
| 15° | 44976 | 45212 | 45588 |
| 20° | 44249 | 44926 | 46426 |
| 25° | 44122 | 45376 | 48336 |
| 30° | 44075 | 46385 | 48800 |
| 35° | 43659 | 47376 | 45433 |
| 40° | 42651 | 45619 | 39981 |
| 45° | 40361 | 40039 | 31618 |
| 50° | 36691 | 32734 | 24531 |
| 55° | 32245 | 26936 | 19094 |
| 60° | 27900 | 21542 | 15723 |
| 65° | 24088 | 17849 | 13761 |
| 70° | 21659 | 15810 | 12227 |
| 75° | 19838 | 13699 | 11241 |
| 80° | 17276 | 10990 | 10990 |
| 85° | 12523 | 9911 | 5224 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 43626 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 266.6 | 3.4 |
| 10°-20° | 771.8 | 9.9 |
| 20°-30° | 1193.1 | 15.3 |
| 30°-40° | 1435.1 | 18.4 |
| 40°-50° | 1288.5 | 16.5 |
| 50°-60° | 863.3 | 11.0 |
| 60°-70° | 502.1 | 6.4 |
| 70°-80° | 257.9 | 3.3 |
| 80°-90° | 64.1 | 0.8 |
| 90°-100° | 76.3 | 1.0 |
| 100°-110° | 237.5 | 3.0 |
| 110°-120° | 232.3 | 3.0 |
| 120°-130° | 189.6 | 2.4 |
| 130°-140° | 155.2 | 2.0 |
| 140°-150° | 121.1 | 1.5 |
| 150°-160° | 87.4 | 1.1 |
| 160°-170° | 53.4 | 0.7 |
| 170°-180° | 18.0 | 0.2 |
| 0°-30° | 2231.6 | 28.6 |
| 0°-40° | 3666.6 | 46.9 |
| 0°-60° | 5818.4 | 74.5 |
| 0°-90° | 6642.5 | 85.0 |
| 90°-120° | 546.1 | 7.0 |
| 90°-150° | 1012.0 | 13.0 |
| 90°-180° | 1171.0 | 15.0 |
| 0°-180° | 7813.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2761 | 2761 | 2761 | 2761 | 2761 | |
| 5° | 2747 | 2794 | 2764 | 2770 | 2798 | 262 |
| 15° | 2691 | 2801 | 2705 | 2714 | 2727 | 756 |
| 25° | 2477 | 2576 | 2547 | 2642 | 2713 | 1142 |
| 35° | 2215 | 2234 | 2404 | 2357 | 2305 | 1381 |
| 45° | 1768 | 1911 | 1754 | 1478 | 1385 | 1352 |
| 55° | 1146 | 1190 | 957 | 739 | 678 | 1029 |
| 65° | 630 | 644 | 467 | 380 | 360 | 638 |
| 75° | 318 | 310 | 220 | 186 | 180 | 337 |
| 85° | 68 | 54 | 54 | 36 | 28 | 84 |
| 90° | 0 | 1 | 4 | 4 | 4 | 3 |
| 95° | 10 | 31 | 140 | 52 | 34 | 12 |
| 105° | 42 | 59 | 234 | 446 | 426 | 44 |
| 115° | 74 | 88 | 190 | 392 | 458 | 73 |
| 125° | 103 | 114 | 188 | 308 | 361 | 91 |
| 135° | 124 | 137 | 186 | 266 | 299 | 96 |
| 145° | 145 | 156 | 186 | 230 | 250 | 91 |
| 155° | 166 | 171 | 188 | 206 | 213 | 76 |
| 165° | 182 | 183 | 189 | 194 | 197 | 51 |
| 175° | 189 | 189 | 189 | 190 | 189 | 18 |
| 180° | 189 | 189 | 189 | 189 | 189 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2761.1 | 2761.1 | 2761.1 | 2761.1 | 2761.1 |
| 2.5° | 2749.8 | 2782.7 | 2752.0 | 2754.4 | 2761.1 |
| 5° | 2747.0 | 2793.7 | 2763.9 | 2770.2 | 2797.7 |
| 7.5° | 2746.4 | 2813.0 | 2798.7 | 2815.8 | 2852.2 |
| 10° | 2744.2 | 2824.0 | 2814.6 | 2818.2 | 2856.7 |
| 12.5° | 2730.7 | 2823.7 | 2780.8 | 2777.3 | 2798.1 |
| 15° | 2690.7 | 2800.7 | 2704.8 | 2713.5 | 2727.3 |
| 17.5° | 2620.3 | 2735.3 | 2643.9 | 2674.9 | 2702.0 |
| 20° | 2575.3 | 2688.1 | 2614.7 | 2655.1 | 2702.0 |
| 22.5° | 2534.7 | 2647.6 | 2587.7 | 2644.3 | 2708.7 |
| 25° | 2476.7 | 2575.9 | 2547.1 | 2641.6 | 2713.2 |
| 27.5° | 2416.0 | 2474.3 | 2508.3 | 2635.0 | 2685.1 |
| 30° | 2364.1 | 2402.7 | 2488.0 | 2598.3 | 2617.5 |
| 32.5° | 2307.8 | 2331.0 | 2461.0 | 2518.4 | 2493.6 |
| 35° | 2215.0 | 2234.3 | 2403.6 | 2357.4 | 2305.0 |
| 37.5° | 2104.7 | 2144.3 | 2274.6 | 2141.7 | 2081.6 |
| 40° | 2023.6 | 2089.7 | 2164.4 | 1965.8 | 1896.9 |
| 42.5° | 1924.5 | 2030.2 | 2018.0 | 1765.0 | 1680.9 |
| 45° | 1767.6 | 1910.6 | 1753.5 | 1478.3 | 1384.7 |
| 47.5° | 1582.3 | 1729.2 | 1472.0 | 1226.2 | 1138.7 |
| 50° | 1460.7 | 1579.1 | 1303.2 | 1073.0 | 976.6 |
| 52.5° | 1336.9 | 1422.3 | 1159.0 | 929.1 | 841.5 |
| 55° | 1145.5 | 1189.5 | 956.9 | 738.9 | 678.3 |
| 57.5° | 969.8 | 997.9 | 781.9 | 596.8 | 552.2 |
| 60° | 864.0 | 883.4 | 667.1 | 522.7 | 486.9 |
| 62.5° | 767.2 | 782.1 | 574.8 | 459.9 | 432.8 |
| 65° | 630.5 | 644.2 | 467.2 | 379.6 | 360.2 |
| 67.5° | 521.9 | 529.0 | 384.5 | 315.4 | 297.2 |
| 70° | 458.8 | 461.5 | 334.9 | 272.7 | 259.0 |
| 72.5° | 402.5 | 398.6 | 287.6 | 236.8 | 227.4 |
| 75° | 318.0 | 309.8 | 219.6 | 185.6 | 180.2 |
| 77.5° | 237.5 | 228.8 | 154.2 | 143.0 | 143.0 |
| 80° | 185.8 | 174.7 | 118.2 | 118.2 | 118.2 |
| 82.5° | 138.4 | 123.1 | 91.1 | 91.1 | 88.9 |
| 85° | 67.6 | 53.8 | 53.5 | 36.4 | 28.2 |
| 87.5° | 18.1 | 18.3 | 7.5 | 7.5 | 7.5 |
| 90° | 0.0 | 1.2 | 3.5 | 3.5 | 3.5 |
| 92.5° | 3.7 | 12.9 | 44.2 | 14.6 | 11.8 |
| 95° | 10.4 | 30.8 | 140.1 | 51.6 | 33.6 |
| 97.5° | 19.0 | 40.0 | 231.9 | 144.4 | 91.0 |
| 100° | 25.4 | 44.8 | 261.5 | 244.6 | 163.2 |
| 102.5° | 31.9 | 50.2 | 256.0 | 349.4 | 274.3 |
| 105° | 41.7 | 58.6 | 233.8 | 446.2 | 426.0 |
| 107.5° | 51.4 | 67.2 | 212.5 | 453.7 | 476.2 |
| 110° | 57.9 | 73.7 | 201.4 | 443.1 | 487.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 64.3 | 79.2 | 195.8 | 424.0 | 479.8 |
| 115° | 74.1 | 87.6 | 189.8 | 391.6 | 458.4 |
| 117.5° | 83.6 | 96.0 | 187.3 | 360.6 | 428.9 |
| 120° | 89.2 | 101.6 | 186.3 | 342.9 | 408.6 |
| 122.5° | 94.6 | 107.1 | 187.3 | 327.9 | 388.2 |
| 125° | 103.0 | 114.3 | 187.5 | 307.9 | 361.0 |
| 127.5° | 109.7 | 121.3 | 187.5 | 292.9 | 338.2 |
| 130° | 113.4 | 125.9 | 187.5 | 284.5 | 325.3 |
| 132.5° | 118.1 | 130.5 | 186.6 | 277.0 | 315.0 |
| 135° | 123.9 | 137.4 | 186.3 | 265.8 | 298.6 |
| 137.5° | 130.5 | 143.0 | 186.3 | 254.6 | 284.5 |
| 140° | 134.3 | 146.7 | 186.3 | 247.2 | 274.3 |
| 142.5° | 138.9 | 150.5 | 186.3 | 239.7 | 264.1 |
| 145° | 144.6 | 155.9 | 186.3 | 229.6 | 250.0 |
| 147.5° | 151.6 | 161.3 | 187.5 | 220.3 | 236.3 |
| 150° | 156.3 | 164.2 | 187.5 | 215.6 | 228.0 |
| 152.5° | 159.9 | 167.0 | 187.5 | 210.9 | 221.5 |
| 155° | 165.5 | 171.2 | 187.5 | 206.2 | 212.9 |
| 157.5° | 171.1 | 175.4 | 187.5 | 202.0 | 206.3 |
| 160° | 174.8 | 178.2 | 187.5 | 199.2 | 202.5 |
| 162.5° | 177.5 | 180.1 | 187.5 | 197.3 | 199.7 |
| 165° | 181.7 | 182.9 | 188.7 | 194.5 | 196.7 |
| 167.5° | 184.2 | 184.5 | 187.5 | 192.9 | 193.9 |
| 170° | 185.2 | 186.3 | 187.5 | 191.0 | 192.2 |
| 172.5° | 187.0 | 187.3 | 188.4 | 190.1 | 190.3 |
| 175° | 188.7 | 188.7 | 188.7 | 189.7 | 188.7 |
| 177.5° | 188.7 | 188.7 | 188.7 | 188.7 | 188.7 |
| 180° | 188.7 | 188.7 | 188.7 | 188.7 | 188.7 |



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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 | 22.81 | 24.02 | 23.40 | 24.61 | 25.28 | 19.53 | 20.74 | 20.12 | 21.33 | 22.00 |
| | 3H | 24.07 | 25.15 | 24.67 | 25.75 | 26.46 | 20.62 | 21.70 | 21.23 | 22.31 | 23.01 |
| | 4H | 24.53 | 25.55 | 25.16 | 26.17 | 26.89 | 21.04 | 22.05 | 21.67 | 22.67 | 23.39 |
| | 6H | 24.87 | 25.80 | 25.51 | 26.43 | 27.17 | 21.39 | 22.32 | 22.03 | 22.95 | 23.69 |
| | 8H | 24.96 | 25.85 | 25.61 | 26.50 | 27.24 | 21.48 | 22.37 | 22.13 | 23.02 | 23.76 |
| | 12H | 25.00 | 25.85 | 25.66 | 26.49 | 27.26 | 21.50 | 22.35 | 22.16 | 22.99 | 23.76 |
| 4H | 2H | 22.93 | 23.94 | 23.56 | 24.56 | 25.28 | 20.14 | 21.16 | 20.77 | 21.77 | 22.49 |
| | 3H | 24.43 | 25.27 | 25.07 | 25.93 | 26.66 | 21.44 | 22.28 | 22.08 | 22.94 | 23.67 |
| | 4H | 25.04 | 25.79 | 25.70 | 26.46 | 27.23 | 21.96 | 22.72 | 22.62 | 23.38 | 24.15 |
| | 6H | 25.51 | 26.16 | 26.19 | 26.85 | 27.63 | 22.41 | 23.07 | 23.09 | 23.76 | 24.54 |
| | 8H | 25.65 | 26.26 | 26.33 | 26.94 | 27.74 | 22.54 | 23.15 | 23.23 | 23.84 | 24.63 |
| | 12H | 25.72 | 26.26 | 26.42 | 26.98 | 27.77 | 22.58 | 23.13 | 23.28 | 23.84 | 24.63 |
| 8H | 4H | 25.09 | 25.70 | 25.77 | 26.39 | 27.18 | 22.29 | 22.90 | 22.97 | 23.59 | 24.38 |
| | 6H | 25.65 | 26.15 | 26.36 | 26.88 | 27.68 | 22.84 | 23.34 | 23.55 | 24.07 | 24.87 |
| | 8H | 25.85 | 26.30 | 26.58 | 27.03 | 27.84 | 23.02 | 23.47 | 23.75 | 24.21 | 25.02 |
| | 12H | 25.96 | 26.36 | 26.69 | 27.09 | 27.96 | 23.10 | 23.50 | 23.83 | 24.22 | 25.09 |
| 12H | 4H | 25.06 | 25.61 | 25.77 | 26.32 | 27.12 | 22.32 | 22.87 | 23.03 | 23.58 | 24.38 |
| | 6H | 25.63 | 26.09 | 26.36 | 26.82 | 27.63 | 22.90 | 23.35 | 23.62 | 24.08 | 24.89 |
| | 8H | 25.86 | 26.26 | 26.59 | 26.98 | 27.86 | 23.12 | 23.52 | 23.85 | 24.24 | 25.11 |