

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: FAIL-SAFE

Report Number: P1356888

Luminaire Tested: 2ASL4-20VHE-3-92765-UNV_3500K

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356888
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-12)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 2ASL4-20VHE-3-92765-UNV_3500K
Description: 2FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS 3 ROW
Light Source: -
Ballast/Driver: -

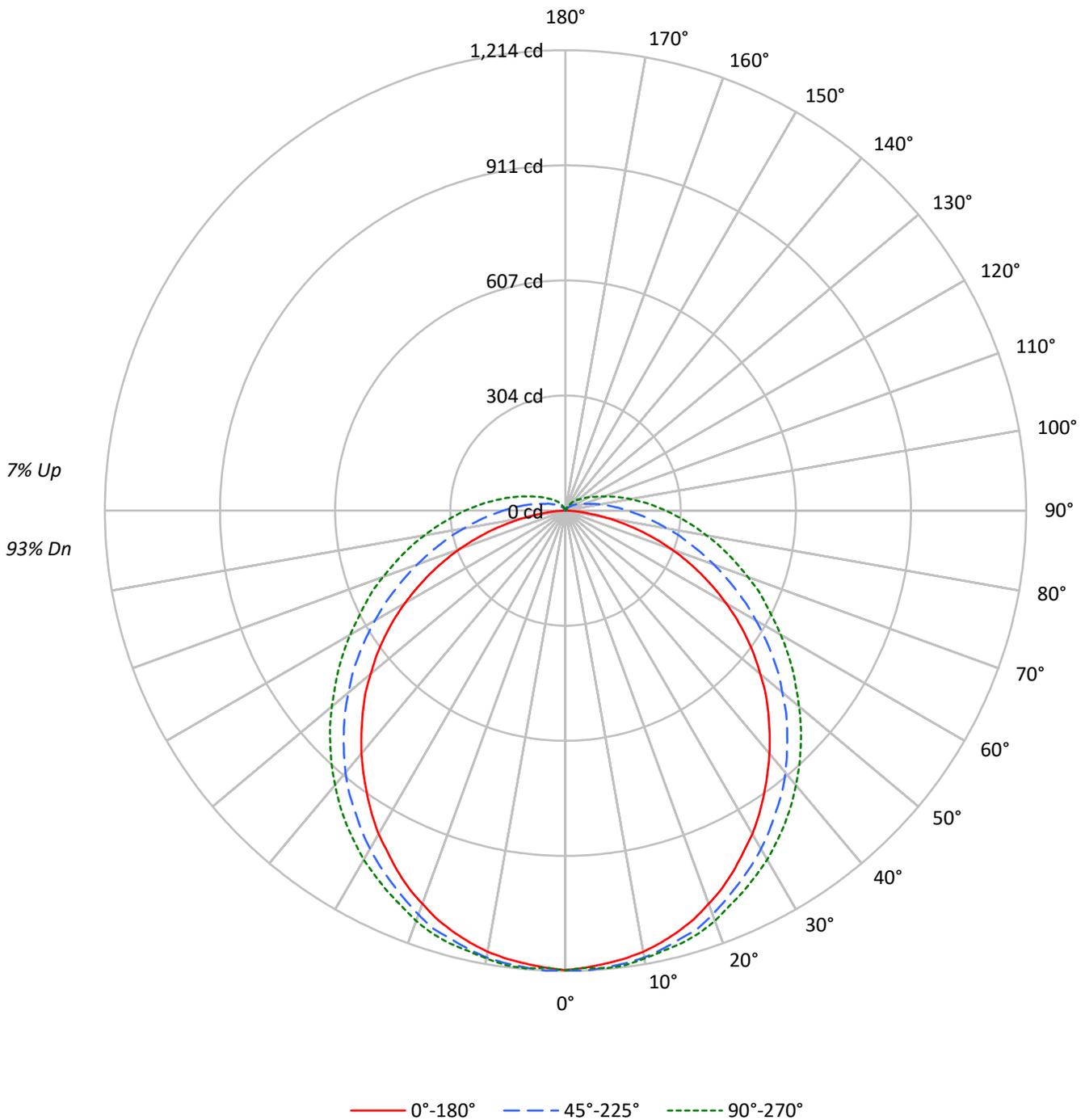
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4120.0 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 36.5
Input Voltage (V): NR
Input Current (A_{in}): 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 | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 96 | 96 | 96 | 96 | 96 | 96 | 93 |
| 1 | 105 | 100 | 95 | 91 | 102 | 97 | 92 | 88 | 91 | 88 | 84 | 86 | 83 | 80 | 81 | 79 | 77 | 77 | 77 | 77 | 74 |
| 2 | 95 | 86 | 79 | 72 | 92 | 84 | 77 | 71 | 79 | 73 | 68 | 75 | 70 | 66 | 71 | 67 | 63 | 63 | 63 | 63 | 61 |
| 3 | 86 | 75 | 67 | 60 | 83 | 73 | 65 | 59 | 69 | 62 | 57 | 65 | 60 | 55 | 62 | 57 | 53 | 53 | 53 | 53 | 50 |
| 4 | 79 | 66 | 57 | 50 | 76 | 65 | 56 | 49 | 61 | 54 | 48 | 58 | 52 | 47 | 55 | 50 | 45 | 45 | 45 | 45 | 43 |
| 5 | 73 | 59 | 50 | 43 | 70 | 58 | 49 | 42 | 55 | 47 | 41 | 52 | 45 | 40 | 49 | 44 | 39 | 39 | 39 | 39 | 37 |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 42 | 36 | 47 | 40 | 35 | 45 | 39 | 34 | 34 | 34 | 34 | 32 |
| 7 | 62 | 48 | 39 | 33 | 60 | 47 | 38 | 32 | 45 | 37 | 32 | 43 | 36 | 31 | 41 | 35 | 30 | 30 | 30 | 30 | 28 |
| 8 | 58 | 44 | 35 | 29 | 56 | 43 | 35 | 29 | 41 | 34 | 28 | 39 | 32 | 28 | 37 | 32 | 27 | 27 | 27 | 27 | 25 |
| 9 | 54 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 24 | 24 | 24 | 24 | 22 |
| 10 | 50 | 37 | 29 | 24 | 49 | 36 | 29 | 23 | 35 | 28 | 23 | 33 | 27 | 23 | 32 | 26 | 22 | 22 | 22 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 19770 | 19770 | 19770 |
| 5° | 19551 | 19367 | 19317 |
| 10° | 19395 | 18962 | 18830 |
| 15° | 19135 | 18467 | 18415 |
| 20° | 18798 | 17994 | 17949 |
| 25° | 18415 | 17407 | 17418 |
| 30° | 18010 | 16894 | 16968 |
| 35° | 17520 | 16319 | 16468 |
| 40° | 17061 | 15789 | 15941 |
| 45° | 16568 | 15154 | 15413 |
| 50° | 16005 | 14474 | 14863 |
| 55° | 15396 | 13823 | 14370 |
| 60° | 14615 | 13065 | 13868 |
| 65° | 13634 | 12332 | 13451 |
| 70° | 12391 | 11601 | 13126 |
| 75° | 10617 | 10919 | 12903 |
| 80° | 8018 | 10375 | 12808 |
| 85° | 4418 | 10144 | 12996 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16568 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------------|---------------|--------------|
| 0°-10° | 114.9 | 2.8 |
| 10°-20° | 329.9 | 8.0 |
| 20°-30° | 498.8 | 12.1 |
| 30°-40° | 604.0 | 14.7 |
| 40°-50° | 634.4 | 15.4 |
| 50°-60° | 591.8 | 14.4 |
| 60°-70° | 489.1 | 11.9 |
| 70°-80° | 352.2 | 8.5 |
| 80°-90° | 218.8 | 5.3 |
| 90°-100° | 128.2 | 3.1 |
| 100°-110° | 73.3 | 1.8 |
| 110°-120° | 41.4 | 1.0 |
| 120°-130° | 23.8 | 0.6 |
| 130°-140° | 12.8 | 0.3 |
| 140°-150° | 5.4 | 0.1 |
| 150°-160° | 1.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 943.6 | 22.9 |
| 0°-40° | 1547.6 | 37.6 |
| 0°-60° | 2773.8 | 67.3 |
| 0°-90° | 3833.9 | 93.1 |
| 90°-120° | 243.0 | 5.9 |
| 90°-150° | 285.1 | 6.9 |
| 90°-180° | 286.0 | 6.9 |
| 0°-180° | 4120.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1212 | 1212 | 1212 | 1212 | 1212 | |
| 5° | 1199 | 1209 | 1209 | 1209 | 1212 | 114 |
| 15° | 1149 | 1164 | 1169 | 1176 | 1182 | 324 |
| 25° | 1048 | 1066 | 1083 | 1098 | 1108 | 483 |
| 35° | 912 | 937 | 967 | 995 | 1008 | 571 |
| 45° | 756 | 784 | 826 | 862 | 877 | 583 |
| 55° | 582 | 615 | 665 | 713 | 731 | 520 |
| 65° | 393 | 431 | 496 | 559 | 582 | 389 |
| 75° | 202 | 252 | 340 | 413 | 443 | 213 |
| 85° | 38 | 113 | 214 | 290 | 317 | 46 |
| 90° | 0 | 68 | 164 | 234 | 264 | 2 |
| 95° | 0 | 43 | 123 | 189 | 217 | 0 |
| 105° | 0 | 15 | 68 | 118 | 139 | 0 |
| 115° | 0 | 8 | 40 | 73 | 86 | 0 |
| 125° | 0 | 5 | 25 | 48 | 55 | 0 |
| 135° | 0 | 0 | 15 | 30 | 38 | 0 |
| 145° | 0 | 0 | 8 | 18 | 20 | 0 |
| 155° | 0 | 0 | 0 | 5 | 8 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1211.7 | 1211.7 | 1211.7 | 1211.7 | 1211.7 |
| 2.5° | 1206.7 | 1214.3 | 1214.3 | 1206.7 | 1206.7 |
| 5° | 1199.2 | 1209.2 | 1209.2 | 1209.2 | 1211.7 |
| 7.5° | 1191.6 | 1204.2 | 1204.2 | 1204.2 | 1209.2 |
| 10° | 1181.5 | 1194.1 | 1196.6 | 1196.6 | 1199.2 |
| 12.5° | 1166.4 | 1181.5 | 1184.0 | 1186.6 | 1189.1 |
| 15° | 1148.8 | 1163.9 | 1168.9 | 1176.5 | 1181.5 |
| 17.5° | 1128.6 | 1146.2 | 1156.3 | 1163.9 | 1168.9 |
| 20° | 1103.4 | 1121.1 | 1133.7 | 1143.7 | 1151.3 |
| 22.5° | 1078.2 | 1093.3 | 1108.5 | 1121.1 | 1128.6 |
| 25° | 1048.0 | 1065.6 | 1083.3 | 1098.4 | 1108.5 |
| 27.5° | 1015.2 | 1035.4 | 1058.1 | 1075.7 | 1085.8 |
| 30° | 985.0 | 1005.2 | 1030.4 | 1053.0 | 1063.1 |
| 32.5° | 949.7 | 972.4 | 1000.1 | 1022.8 | 1035.4 |
| 35° | 912.0 | 937.2 | 967.4 | 995.1 | 1007.7 |
| 37.5° | 874.2 | 899.4 | 937.2 | 964.9 | 977.5 |
| 40° | 836.4 | 861.6 | 901.9 | 932.1 | 944.7 |
| 42.5° | 796.1 | 821.3 | 864.1 | 896.8 | 912.0 |
| 45° | 755.8 | 783.5 | 826.3 | 861.6 | 876.7 |
| 47.5° | 715.5 | 743.2 | 788.5 | 826.3 | 841.4 |
| 50° | 670.1 | 700.3 | 745.7 | 788.5 | 803.6 |
| 52.5° | 627.3 | 657.5 | 707.9 | 750.7 | 765.8 |
| 55° | 581.9 | 614.7 | 665.1 | 712.9 | 730.6 |
| 57.5° | 536.6 | 569.3 | 622.2 | 672.6 | 692.8 |
| 60° | 488.7 | 524.0 | 579.4 | 632.3 | 655.0 |
| 62.5° | 440.9 | 478.7 | 539.1 | 594.5 | 617.2 |
| 65° | 393.0 | 430.8 | 496.3 | 559.3 | 581.9 |
| 67.5° | 345.1 | 385.4 | 456.0 | 521.5 | 549.2 |
| 70° | 297.3 | 340.1 | 415.7 | 483.7 | 511.4 |
| 72.5° | 249.4 | 294.7 | 377.9 | 448.4 | 476.1 |
| 75° | 201.5 | 251.9 | 340.1 | 413.2 | 443.4 |
| 77.5° | 153.7 | 211.6 | 307.3 | 380.4 | 410.6 |
| 80° | 110.8 | 176.3 | 272.1 | 347.7 | 377.9 |
| 82.5° | 70.5 | 141.1 | 241.8 | 317.4 | 347.7 |
| 85° | 37.8 | 113.4 | 214.1 | 289.7 | 317.4 |
| 87.5° | 12.6 | 88.2 | 186.4 | 262.0 | 289.7 |
| 90° | 0.0 | 68.0 | 163.7 | 234.3 | 264.5 |
| 92.5° | 0.0 | 52.9 | 143.6 | 211.6 | 239.3 |
| 95° | 0.0 | 42.8 | 123.4 | 188.9 | 216.7 |
| 97.5° | 0.0 | 35.3 | 108.3 | 168.8 | 194.0 |
| 100° | 0.0 | 27.7 | 93.2 | 151.2 | 173.8 |
| 102.5° | 0.0 | 22.7 | 80.6 | 133.5 | 156.2 |
| 105° | 0.0 | 15.1 | 68.0 | 118.4 | 138.6 |
| 107.5° | 0.0 | 12.6 | 57.9 | 105.8 | 123.4 |
| 110° | 0.0 | 10.1 | 52.9 | 90.7 | 108.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 0.0 | 7.6 | 47.9 | 80.6 | 98.2 |
| 115° | 0.0 | 7.6 | 40.3 | 73.1 | 85.7 |
| 117.5° | 0.0 | 7.6 | 35.3 | 65.5 | 78.1 |
| 120° | 0.0 | 5.0 | 32.7 | 57.9 | 70.5 |
| 122.5° | 0.0 | 5.0 | 27.7 | 52.9 | 63.0 |
| 125° | 0.0 | 5.0 | 25.2 | 47.9 | 55.4 |
| 127.5° | 0.0 | 2.5 | 22.7 | 42.8 | 50.4 |
| 130° | 0.0 | 2.5 | 20.2 | 37.8 | 45.3 |
| 132.5° | 0.0 | 2.5 | 17.6 | 35.3 | 42.8 |
| 135° | 0.0 | 0.0 | 15.1 | 30.2 | 37.8 |
| 137.5° | 0.0 | 0.0 | 12.6 | 27.7 | 32.7 |
| 140° | 0.0 | 0.0 | 10.1 | 22.7 | 30.2 |
| 142.5° | 0.0 | 0.0 | 7.6 | 20.2 | 25.2 |
| 145° | 0.0 | 0.0 | 7.6 | 17.6 | 20.2 |
| 147.5° | 0.0 | 0.0 | 5.0 | 12.6 | 17.6 |
| 150° | 0.0 | 0.0 | 2.5 | 10.1 | 12.6 |
| 152.5° | 0.0 | 0.0 | 0.0 | 7.6 | 10.1 |
| 155° | 0.0 | 0.0 | 0.0 | 5.0 | 7.6 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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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 | 19.67 | 21.21 | 20.14 | 21.66 | 22.15 | 21.61 | 23.15 | 22.08 | 23.61 | 24.09 |
| | 3H | 21.17 | 22.57 | 21.65 | 23.04 | 23.56 | 24.04 | 25.44 | 24.52 | 25.91 | 26.43 |
| | 4H | 21.65 | 22.98 | 22.15 | 23.46 | 24.00 | 25.21 | 26.54 | 25.71 | 27.02 | 27.56 |
| | 6H | 21.93 | 23.17 | 22.44 | 23.66 | 24.22 | 26.41 | 27.65 | 26.93 | 28.15 | 28.70 |
| | 8H | 21.98 | 23.17 | 22.51 | 23.69 | 24.25 | 27.02 | 28.21 | 27.55 | 28.73 | 29.29 |
| | 12H | 21.99 | 23.13 | 22.53 | 23.65 | 24.24 | 27.67 | 28.81 | 28.20 | 29.32 | 29.91 |
| 4H | 2H | 20.53 | 21.86 | 21.03 | 22.34 | 22.88 | 22.05 | 23.38 | 22.56 | 23.87 | 24.40 |
| | 3H | 22.27 | 23.40 | 22.78 | 23.93 | 24.49 | 24.71 | 25.84 | 25.22 | 26.37 | 26.93 |
| | 4H | 22.87 | 23.91 | 23.41 | 24.45 | 25.04 | 26.04 | 27.08 | 26.58 | 27.62 | 28.21 |
| | 6H | 23.27 | 24.19 | 23.83 | 24.75 | 25.36 | 27.44 | 28.36 | 28.00 | 28.92 | 29.53 |
| | 8H | 23.37 | 24.23 | 23.93 | 24.79 | 25.41 | 28.16 | 29.02 | 28.72 | 29.58 | 30.20 |
| | 12H | 23.41 | 24.19 | 23.99 | 24.78 | 25.41 | 28.93 | 29.71 | 29.51 | 30.30 | 30.93 |
| 8H | 4H | 23.53 | 24.40 | 24.09 | 24.96 | 25.58 | 26.26 | 27.13 | 26.82 | 27.69 | 28.31 |
| | 6H | 24.11 | 24.84 | 24.71 | 25.45 | 26.07 | 27.83 | 28.56 | 28.42 | 29.17 | 29.79 |
| | 8H | 24.29 | 24.96 | 24.90 | 25.57 | 26.21 | 28.69 | 29.35 | 29.29 | 29.96 | 30.60 |
| | 12H | 24.41 | 25.00 | 25.02 | 25.60 | 26.31 | 29.65 | 30.24 | 30.25 | 30.84 | 31.54 |
| 12H | 4H | 23.72 | 24.50 | 24.30 | 25.09 | 25.72 | 26.27 | 27.06 | 26.86 | 27.65 | 28.27 |
| | 6H | 24.39 | 25.06 | 25.00 | 25.67 | 26.31 | 27.87 | 28.53 | 28.47 | 29.15 | 29.78 |
| | 8H | 24.67 | 25.26 | 25.28 | 25.87 | 26.57 | 28.80 | 29.39 | 29.40 | 29.99 | 30.69 |