

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: P1357181

Luminaire Tested: 4ASL4-20HE-2-92765-UNV_5000K

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357181
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-7)
Test Lab: INNOVATION CENTER
Issue Date: 2/17/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: 4ASL4-20HE-2-92765-UNV_5000K
Description: 4FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 5000K LEDS 2 ROW
Light Source: -
Ballast/Driver: -

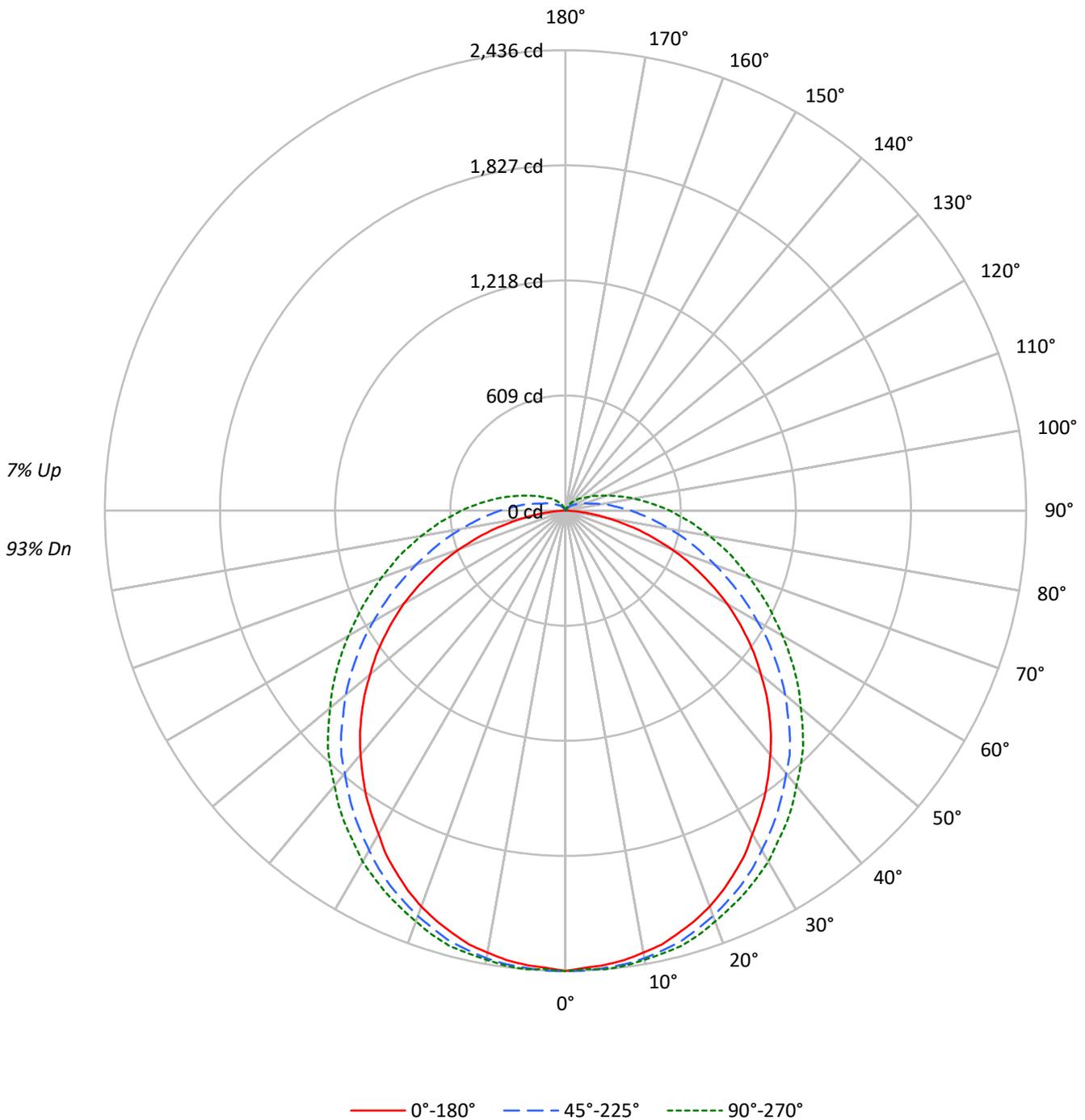
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8363.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 74.9
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 | | | | 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 | 95 | 95 | 95 | 95 | 95 | 95 | 93 |
| 1 | 105 | 100 | 95 | 90 | 102 | 97 | 92 | 88 | 91 | 87 | 84 | 86 | 83 | 80 | 81 | 79 | 77 | 77 | 77 | 77 | 74 |
| 2 | 95 | 86 | 79 | 72 | 92 | 84 | 77 | 71 | 79 | 73 | 68 | 74 | 70 | 65 | 70 | 66 | 63 | 63 | 63 | 63 | 60 |
| 3 | 86 | 75 | 66 | 59 | 83 | 73 | 65 | 58 | 69 | 62 | 56 | 65 | 59 | 55 | 62 | 57 | 53 | 53 | 53 | 53 | 50 |
| 4 | 79 | 66 | 57 | 50 | 76 | 64 | 56 | 49 | 61 | 54 | 48 | 58 | 51 | 46 | 55 | 49 | 45 | 45 | 45 | 45 | 42 |
| 5 | 72 | 59 | 50 | 43 | 70 | 57 | 49 | 42 | 54 | 47 | 41 | 52 | 45 | 40 | 49 | 43 | 39 | 39 | 39 | 39 | 36 |
| 6 | 67 | 53 | 44 | 37 | 64 | 52 | 43 | 37 | 49 | 41 | 36 | 47 | 40 | 35 | 44 | 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 | 34 | 29 | 41 | 33 | 28 | 39 | 32 | 28 | 37 | 31 | 27 | 27 | 27 | 27 | 25 |
| 9 | 54 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 37 | 30 | 25 | 36 | 29 | 25 | 34 | 29 | 24 | 24 | 24 | 24 | 22 |
| 10 | 50 | 37 | 29 | 24 | 49 | 36 | 28 | 23 | 35 | 28 | 23 | 33 | 27 | 22 | 32 | 26 | 22 | 22 | 22 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 19770 | 19770 | 19770 |
| 5° | 19613 | 19376 | 19317 |
| 10° | 19480 | 19019 | 18847 |
| 15° | 19302 | 18627 | 18469 |
| 20° | 19070 | 18134 | 17939 |
| 25° | 18704 | 17647 | 17482 |
| 30° | 18245 | 17091 | 17028 |
| 35° | 17886 | 16573 | 16500 |
| 40° | 17470 | 16016 | 15945 |
| 45° | 17049 | 15534 | 15540 |
| 50° | 16507 | 14898 | 14939 |
| 55° | 15986 | 14215 | 14464 |
| 60° | 15343 | 13446 | 13956 |
| 65° | 14345 | 12731 | 13563 |
| 70° | 13226 | 12060 | 13203 |
| 75° | 11597 | 11542 | 13083 |
| 80° | 9042 | 11082 | 13043 |
| 85° | 5490 | 11069 | 13417 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17049 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 231.0 | 2.8 |
| 10°-20° | 664.1 | 7.9 |
| 20°-30° | 1006.2 | 12.0 |
| 30°-40° | 1217.0 | 14.6 |
| 40°-50° | 1283.0 | 15.3 |
| 50°-60° | 1197.5 | 14.3 |
| 60°-70° | 988.7 | 11.8 |
| 70°-80° | 717.2 | 8.6 |
| 80°-90° | 453.1 | 5.4 |
| 90°-100° | 270.5 | 3.2 |
| 100°-110° | 155.1 | 1.9 |
| 110°-120° | 88.1 | 1.1 |
| 120°-130° | 50.2 | 0.6 |
| 130°-140° | 27.2 | 0.3 |
| 140°-150° | 11.9 | 0.1 |
| 150°-160° | 2.2 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1901.3 | 22.7 |
| 0°-40° | 3118.4 | 37.3 |
| 0°-60° | 5598.9 | 66.9 |
| 0°-90° | 7757.9 | 92.8 |
| 90°-120° | 513.6 | 6.1 |
| 90°-150° | 602.9 | 7.2 |
| 90°-180° | 605.0 | 7.2 |
| 0°-180° | 8363.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2436 | 2436 | 2436 | 2436 | 2436 | |
| 5° | 2413 | 2436 | 2428 | 2428 | 2436 | 229 |
| 15° | 2314 | 2344 | 2359 | 2367 | 2382 | 653 |
| 25° | 2114 | 2145 | 2191 | 2222 | 2237 | 974 |
| 35° | 1838 | 1884 | 1953 | 2007 | 2030 | 1149 |
| 45° | 1524 | 1586 | 1678 | 1747 | 1777 | 1176 |
| 55° | 1172 | 1241 | 1348 | 1440 | 1478 | 1048 |
| 65° | 789 | 873 | 1004 | 1126 | 1180 | 784 |
| 75° | 406 | 513 | 697 | 843 | 904 | 427 |
| 85° | 77 | 238 | 444 | 598 | 659 | 94 |
| 90° | 0 | 146 | 345 | 490 | 552 | 3 |
| 95° | 0 | 92 | 260 | 398 | 452 | 0 |
| 105° | 0 | 31 | 146 | 253 | 291 | 0 |
| 115° | 0 | 15 | 84 | 153 | 184 | 0 |
| 125° | 0 | 8 | 54 | 100 | 115 | 0 |
| 135° | 0 | 0 | 31 | 61 | 77 | 0 |
| 145° | 0 | 0 | 15 | 38 | 46 | 0 |
| 155° | 0 | 0 | 0 | 8 | 15 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P1357181
 CATALOG NUMBER: 4ASL4-20HE-2-92765-UNV_5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2436.1 | 2436.1 | 2436.1 | 2436.1 | 2436.1 |
| 2.5° | 2420.7 | 2443.7 | 2436.1 | 2428.4 | 2428.4 |
| 5° | 2413.1 | 2436.1 | 2428.4 | 2428.4 | 2436.1 |
| 7.5° | 2397.8 | 2420.7 | 2420.7 | 2420.7 | 2428.4 |
| 10° | 2374.8 | 2405.4 | 2405.4 | 2405.4 | 2413.1 |
| 12.5° | 2351.8 | 2374.8 | 2382.4 | 2390.1 | 2397.8 |
| 15° | 2313.5 | 2344.1 | 2359.4 | 2367.1 | 2382.4 |
| 17.5° | 2275.2 | 2298.2 | 2321.1 | 2344.1 | 2351.8 |
| 20° | 2229.2 | 2259.9 | 2282.8 | 2305.8 | 2313.5 |
| 22.5° | 2175.6 | 2206.2 | 2236.9 | 2259.9 | 2275.2 |
| 25° | 2114.3 | 2145.0 | 2190.9 | 2221.6 | 2236.9 |
| 27.5° | 2053.0 | 2083.7 | 2137.3 | 2175.6 | 2190.9 |
| 30° | 1976.4 | 2022.4 | 2076.0 | 2122.0 | 2145.0 |
| 32.5° | 1907.5 | 1953.4 | 2014.7 | 2068.3 | 2083.7 |
| 35° | 1838.5 | 1884.5 | 1953.4 | 2007.1 | 2030.0 |
| 37.5° | 1761.9 | 1815.6 | 1884.5 | 1945.8 | 1968.8 |
| 40° | 1685.3 | 1738.9 | 1815.6 | 1884.5 | 1899.8 |
| 42.5° | 1608.7 | 1662.3 | 1754.3 | 1815.6 | 1838.5 |
| 45° | 1524.4 | 1585.7 | 1677.7 | 1746.6 | 1777.2 |
| 47.5° | 1440.2 | 1501.5 | 1593.4 | 1670.0 | 1700.6 |
| 50° | 1348.3 | 1417.2 | 1516.8 | 1593.4 | 1624.0 |
| 52.5° | 1264.0 | 1332.9 | 1432.5 | 1516.8 | 1555.1 |
| 55° | 1172.1 | 1241.0 | 1348.3 | 1440.2 | 1478.5 |
| 57.5° | 1080.1 | 1149.1 | 1264.0 | 1363.6 | 1401.9 |
| 60° | 988.2 | 1057.2 | 1172.1 | 1287.0 | 1325.3 |
| 62.5° | 888.6 | 965.2 | 1087.8 | 1202.7 | 1248.7 |
| 65° | 789.0 | 873.3 | 1003.5 | 1126.1 | 1179.7 |
| 67.5° | 697.1 | 781.4 | 919.3 | 1057.2 | 1103.1 |
| 70° | 597.5 | 689.4 | 842.7 | 980.6 | 1034.2 |
| 72.5° | 497.9 | 597.5 | 766.1 | 911.6 | 965.2 |
| 75° | 406.0 | 513.3 | 697.1 | 842.7 | 903.9 |
| 77.5° | 306.4 | 436.7 | 628.2 | 781.4 | 835.0 |
| 80° | 222.2 | 360.0 | 559.2 | 720.1 | 773.7 |
| 82.5° | 145.6 | 291.1 | 497.9 | 658.8 | 712.4 |
| 85° | 76.6 | 237.5 | 444.3 | 597.5 | 658.8 |
| 87.5° | 23.0 | 183.9 | 390.7 | 543.9 | 597.5 |
| 90° | 0.0 | 145.6 | 344.7 | 490.3 | 551.6 |
| 92.5° | 0.0 | 114.9 | 298.8 | 444.3 | 497.9 |
| 95° | 0.0 | 91.9 | 260.5 | 398.3 | 452.0 |
| 97.5° | 0.0 | 76.6 | 229.8 | 360.0 | 406.0 |
| 100° | 0.0 | 61.3 | 199.2 | 321.7 | 367.7 |
| 102.5° | 0.0 | 46.0 | 168.5 | 283.4 | 329.4 |
| 105° | 0.0 | 30.6 | 145.6 | 252.8 | 291.1 |
| 107.5° | 0.0 | 23.0 | 122.6 | 222.2 | 260.5 |
| 110° | 0.0 | 23.0 | 114.9 | 191.5 | 229.8 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|-------|
| 112.5° | 0.0 | 15.3 | 99.6 | 176.2 | 206.8 |
| 115° | 0.0 | 15.3 | 84.3 | 153.2 | 183.9 |
| 117.5° | 0.0 | 15.3 | 76.6 | 137.9 | 168.5 |
| 120° | 0.0 | 15.3 | 68.9 | 122.6 | 145.6 |
| 122.5° | 0.0 | 7.7 | 61.3 | 107.2 | 130.2 |
| 125° | 0.0 | 7.7 | 53.6 | 99.6 | 114.9 |
| 127.5° | 0.0 | 7.7 | 46.0 | 91.9 | 107.2 |
| 130° | 0.0 | 7.7 | 46.0 | 84.3 | 99.6 |
| 132.5° | 0.0 | 0.0 | 38.3 | 76.6 | 91.9 |
| 135° | 0.0 | 0.0 | 30.6 | 61.3 | 76.6 |
| 137.5° | 0.0 | 0.0 | 30.6 | 53.6 | 68.9 |
| 140° | 0.0 | 0.0 | 23.0 | 53.6 | 61.3 |
| 142.5° | 0.0 | 0.0 | 15.3 | 46.0 | 53.6 |
| 145° | 0.0 | 0.0 | 15.3 | 38.3 | 46.0 |
| 147.5° | 0.0 | 0.0 | 7.7 | 30.6 | 38.3 |
| 150° | 0.0 | 0.0 | 7.7 | 23.0 | 30.6 |
| 152.5° | 0.0 | 0.0 | 0.0 | 15.3 | 23.0 |
| 155° | 0.0 | 0.0 | 0.0 | 7.7 | 15.3 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 7.7 |
| 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 | 19.68 | 21.22 | 20.15 | 21.68 | 22.17 | 21.74 | 23.27 | 22.21 | 23.74 | 24.23 |
| | 3H | 21.18 | 22.58 | 21.67 | 23.05 | 23.58 | 24.19 | 25.59 | 24.68 | 26.06 | 26.59 |
| | 4H | 21.66 | 22.99 | 22.17 | 23.48 | 24.02 | 25.40 | 26.73 | 25.91 | 27.22 | 27.76 |
| | 6H | 21.94 | 23.17 | 22.46 | 23.67 | 24.24 | 26.67 | 27.91 | 27.19 | 28.41 | 28.97 |
| | 8H | 21.99 | 23.18 | 22.52 | 23.70 | 24.27 | 27.33 | 28.52 | 27.86 | 29.04 | 29.61 |
| | 12H | 22.01 | 23.14 | 22.54 | 23.66 | 24.26 | 28.06 | 29.20 | 28.60 | 29.71 | 30.31 |
| 4H | 2H | 20.56 | 21.89 | 21.07 | 22.37 | 22.92 | 22.17 | 23.50 | 22.68 | 23.99 | 24.53 |
| | 3H | 22.30 | 23.43 | 22.82 | 23.96 | 24.53 | 24.85 | 25.98 | 25.37 | 26.51 | 27.08 |
| | 4H | 22.91 | 23.95 | 23.45 | 24.49 | 25.09 | 26.24 | 27.27 | 26.77 | 27.81 | 28.41 |
| | 6H | 23.31 | 24.23 | 23.87 | 24.79 | 25.41 | 27.70 | 28.62 | 28.26 | 29.19 | 29.80 |
| | 8H | 23.41 | 24.27 | 23.97 | 24.84 | 25.46 | 28.47 | 29.33 | 29.04 | 29.90 | 30.53 |
| | 12H | 23.46 | 24.24 | 24.04 | 24.83 | 25.47 | 29.33 | 30.11 | 29.91 | 30.70 | 31.33 |
| 8H | 4H | 23.61 | 24.47 | 24.17 | 25.03 | 25.66 | 26.46 | 27.32 | 27.02 | 27.88 | 28.51 |
| | 6H | 24.19 | 24.92 | 24.79 | 25.53 | 26.16 | 28.10 | 28.83 | 28.70 | 29.44 | 30.07 |
| | 8H | 24.38 | 25.04 | 24.99 | 25.66 | 26.30 | 29.01 | 29.67 | 29.62 | 30.29 | 30.93 |
| | 12H | 24.50 | 25.09 | 25.11 | 25.70 | 26.41 | 30.05 | 30.64 | 30.66 | 31.25 | 31.96 |
| 12H | 4H | 23.81 | 24.59 | 24.39 | 25.18 | 25.81 | 26.46 | 27.25 | 27.05 | 27.84 | 28.47 |
| | 6H | 24.50 | 25.16 | 25.10 | 25.78 | 26.42 | 28.14 | 28.80 | 28.75 | 29.42 | 30.06 |
| | 8H | 24.78 | 25.37 | 25.39 | 25.98 | 26.69 | 29.12 | 29.71 | 29.73 | 30.32 | 31.03 |