

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242857

Luminaire Tested: S125DRP-S1090D930-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-17)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-S1090D930-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

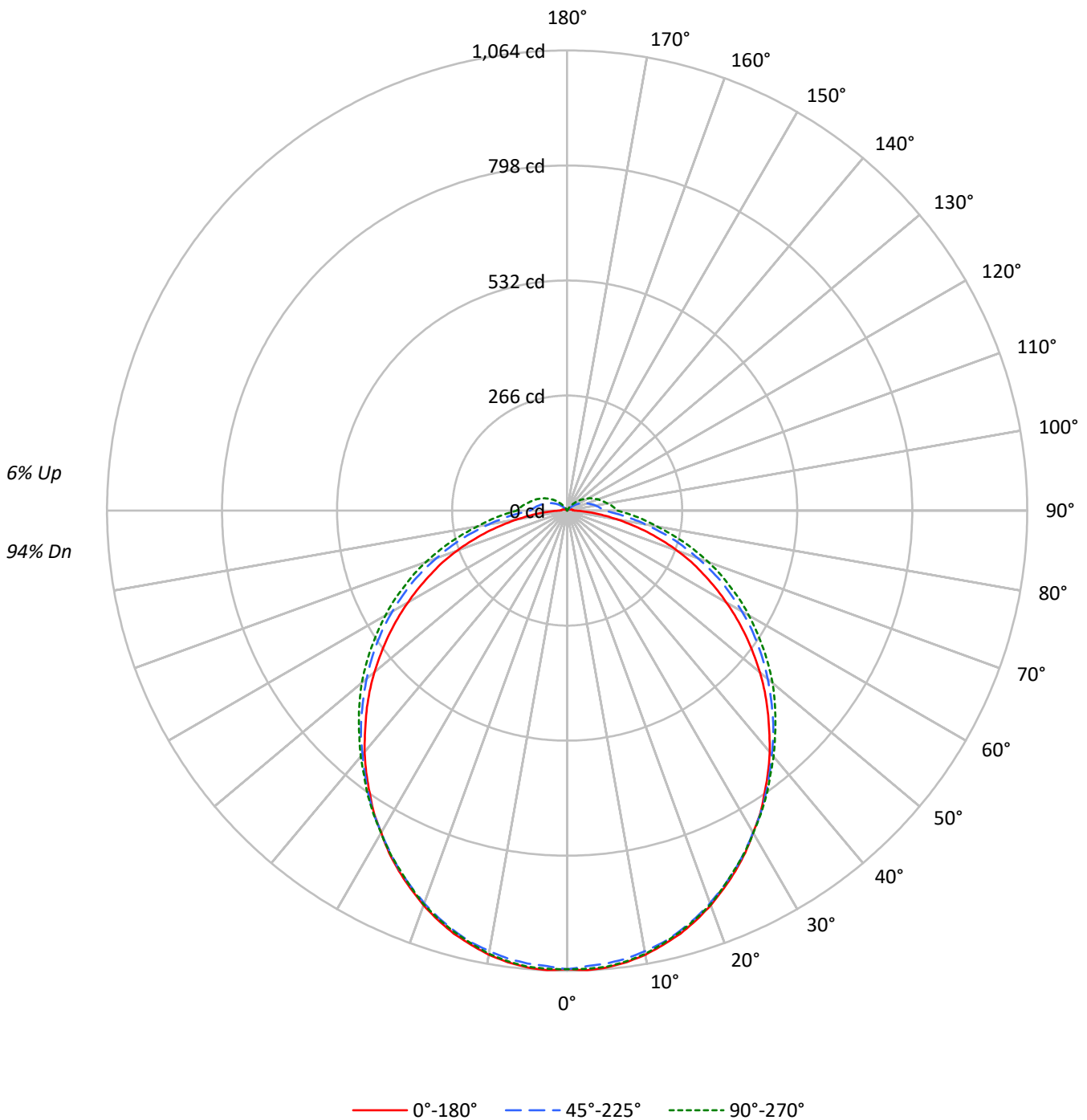
Lumens per Lamp: N/A
Luminaire Lumens: 3285.3 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 34.8
Input Voltage (V): 120
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 118 | 118 | 118 | 118 | 114 | 114 | 114 | 114 | 108 | 108 | 108 | 102 | 102 | 102 | 96 | 96 | 96 | 94 |
| 1 | 106 | 101 | 96 | 92 | 103 | 98 | 94 | 90 | 93 | 89 | 86 | 88 | 85 | 82 | 83 | 81 | 79 | 76 |
| 2 | 96 | 88 | 80 | 74 | 93 | 85 | 78 | 73 | 81 | 75 | 70 | 76 | 72 | 68 | 72 | 69 | 65 | 63 |
| 3 | 88 | 77 | 68 | 61 | 84 | 75 | 67 | 60 | 71 | 64 | 59 | 67 | 61 | 57 | 64 | 59 | 55 | 53 |
| 4 | 80 | 68 | 59 | 52 | 77 | 66 | 58 | 51 | 63 | 55 | 50 | 60 | 53 | 48 | 57 | 51 | 47 | 45 |
| 5 | 74 | 60 | 51 | 44 | 71 | 59 | 50 | 44 | 56 | 49 | 43 | 53 | 47 | 42 | 51 | 45 | 41 | 39 |
| 6 | 68 | 54 | 45 | 39 | 66 | 53 | 45 | 38 | 51 | 43 | 38 | 48 | 42 | 37 | 46 | 40 | 36 | 34 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 46 | 39 | 33 | 44 | 37 | 33 | 42 | 36 | 32 | 30 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 40 | 33 | 27 | 39 | 32 | 27 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |
| 10 | 51 | 38 | 30 | 25 | 50 | 37 | 30 | 25 | 36 | 29 | 24 | 35 | 28 | 24 | 33 | 28 | 23 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7537 | 7537 | 7537 |
| 5° | 7552 | 7392 | 7413 |
| 10° | 7497 | 7254 | 7239 |
| 15° | 7409 | 7090 | 7020 |
| 20° | 7288 | 6889 | 6801 |
| 25° | 7144 | 6675 | 6534 |
| 30° | 6970 | 6439 | 6291 |
| 35° | 6807 | 6223 | 6067 |
| 40° | 6642 | 5995 | 5843 |
| 45° | 6456 | 5799 | 5642 |
| 50° | 6277 | 5586 | 5464 |
| 55° | 6063 | 5384 | 5254 |
| 60° | 5827 | 5154 | 5040 |
| 65° | 5583 | 4913 | 4800 |
| 70° | 5304 | 4586 | 4551 |
| 75° | 4863 | 4266 | 4245 |
| 80° | 4286 | 3879 | 3911 |
| 85° | 3744 | 3600 | 3775 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6456 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.4 | 3.1 |
| 10°-20° | 284.9 | 8.7 |
| 20°-30° | 423.6 | 12.9 |
| 30°-40° | 501.7 | 15.3 |
| 40°-50° | 518.7 | 15.8 |
| 50°-60° | 477.8 | 14.5 |
| 60°-70° | 386.2 | 11.8 |
| 70°-80° | 258.4 | 7.9 |
| 80°-90° | 133.6 | 4.1 |
| 90°-100° | 75.2 | 2.3 |
| 100°-110° | 55.5 | 1.7 |
| 110°-120° | 37.1 | 1.1 |
| 120°-130° | 21.0 | 0.6 |
| 130°-140° | 9.2 | 0.3 |
| 140°-150° | 1.8 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 808.9 | 24.6 |
| 0°-40° | 1310.6 | 39.9 |
| 0°-60° | 2307.1 | 70.2 |
| 0°-90° | 3085.3 | 93.9 |
| 90°-120° | 167.9 | 5.1 |
| 90°-150° | 199.9 | 6.1 |
| 90°-180° | 200.0 | 6.1 |
| 0°-180° | 3285.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1060 | 1060 | 1060 | 1060 | 1060 | |
| 5° | 1060 | 1058 | 1051 | 1060 | 1058 | 101 |
| 15° | 1013 | 1014 | 1006 | 1013 | 1008 | 285 |
| 25° | 920 | 923 | 917 | 921 | 916 | 424 |
| 35° | 796 | 804 | 801 | 804 | 804 | 499 |
| 45° | 656 | 668 | 673 | 680 | 681 | 506 |
| 55° | 504 | 521 | 538 | 549 | 553 | 451 |
| 65° | 347 | 371 | 396 | 412 | 416 | 345 |
| 75° | 191 | 218 | 252 | 272 | 278 | 203 |
| 85° | 57 | 92 | 128 | 151 | 159 | 60 |
| 90° | 17 | 50 | 85 | 109 | 116 | 12 |
| 95° | 14 | 40 | 76 | 99 | 106 | 11 |
| 105° | 9 | 26 | 57 | 78 | 85 | 10 |
| 115° | 6 | 14 | 40 | 59 | 66 | 6 |
| 125° | 4 | 3 | 24 | 40 | 46 | 4 |
| 135° | 2 | 1 | 8 | 22 | 27 | 2 |
| 145° | 1 | 0 | 0 | 5 | 9 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P242857

CATALOG NUMBER: S125DRP-S1090D930-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1060.5 | 1060.5 | 1060.5 | 1060.5 | 1060.5 |
| 2.5° | 1063.6 | 1061.5 | 1054.3 | 1061.5 | 1060.5 |
| 5° | 1060.5 | 1058.4 | 1051.1 | 1059.5 | 1058.4 |
| 7.5° | 1053.2 | 1052.2 | 1044.9 | 1052.2 | 1051.1 |
| 10° | 1042.8 | 1042.8 | 1034.5 | 1041.8 | 1040.7 |
| 12.5° | 1028.3 | 1029.3 | 1023.1 | 1028.3 | 1025.2 |
| 15° | 1012.7 | 1013.7 | 1006.4 | 1012.7 | 1008.5 |
| 17.5° | 992.9 | 995.0 | 987.7 | 992.9 | 989.8 |
| 20° | 971.1 | 973.2 | 965.9 | 969.0 | 969.0 |
| 22.5° | 946.1 | 950.3 | 942.0 | 946.1 | 943.0 |
| 25° | 920.1 | 923.3 | 917.0 | 921.2 | 916.0 |
| 27.5° | 892.1 | 896.2 | 888.9 | 892.1 | 890.0 |
| 30° | 859.8 | 866.1 | 859.8 | 861.9 | 860.9 |
| 32.5° | 830.7 | 835.9 | 831.8 | 833.8 | 832.8 |
| 35° | 796.4 | 803.7 | 800.6 | 803.7 | 803.7 |
| 37.5° | 763.1 | 769.4 | 768.3 | 772.5 | 771.5 |
| 40° | 728.8 | 737.2 | 736.1 | 740.3 | 742.4 |
| 42.5° | 691.4 | 702.8 | 706.0 | 711.2 | 711.2 |
| 45° | 656.1 | 667.5 | 672.7 | 680.0 | 681.0 |
| 47.5° | 619.7 | 630.1 | 638.4 | 648.8 | 650.9 |
| 50° | 582.2 | 593.7 | 605.1 | 616.5 | 619.7 |
| 52.5° | 542.7 | 557.3 | 571.8 | 584.3 | 586.4 |
| 55° | 504.3 | 520.9 | 537.5 | 549.0 | 553.1 |
| 57.5° | 464.7 | 484.5 | 503.2 | 515.7 | 518.8 |
| 60° | 425.2 | 446.0 | 466.8 | 482.4 | 485.5 |
| 62.5° | 386.8 | 407.6 | 430.4 | 448.1 | 452.3 |
| 65° | 347.3 | 371.2 | 396.1 | 411.7 | 415.9 |
| 67.5° | 310.9 | 333.7 | 358.7 | 377.4 | 382.6 |
| 70° | 270.3 | 294.2 | 321.3 | 341.0 | 347.3 |
| 72.5° | 230.8 | 255.8 | 285.9 | 307.8 | 311.9 |
| 75° | 191.3 | 218.3 | 251.6 | 272.4 | 277.6 |
| 77.5° | 152.8 | 184.0 | 215.2 | 238.1 | 242.3 |
| 80° | 117.5 | 148.7 | 184.0 | 206.9 | 211.1 |
| 82.5° | 85.3 | 118.5 | 154.9 | 176.8 | 185.1 |
| 85° | 57.2 | 91.5 | 127.9 | 150.8 | 159.1 |
| 87.5° | 36.4 | 69.7 | 105.0 | 128.9 | 136.2 |
| 90° | 16.6 | 49.9 | 85.3 | 109.2 | 116.4 |
| 92.5° | 14.6 | 44.7 | 81.1 | 104.0 | 111.2 |
| 95° | 13.5 | 40.5 | 75.9 | 98.8 | 106.1 |
| 97.5° | 12.5 | 37.4 | 71.7 | 93.6 | 100.9 |
| 100° | 11.4 | 33.3 | 66.5 | 88.4 | 94.6 |
| 102.5° | 10.4 | 30.2 | 62.4 | 83.2 | 89.4 |
| 105° | 9.4 | 26.0 | 57.2 | 78.0 | 85.3 |
| 107.5° | 8.3 | 22.9 | 53.0 | 73.8 | 80.1 |
| 110° | 7.3 | 19.8 | 48.9 | 68.6 | 75.9 |



TEST NUMBER: P242857

CATALOG NUMBER: S125DRP-S1090D930-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 7.3 | 16.6 | 44.7 | 63.4 | 70.7 |
| 115° | 6.2 | 13.5 | 40.5 | 59.3 | 65.5 |
| 117.5° | 5.2 | 10.4 | 36.4 | 54.1 | 61.3 |
| 120° | 5.2 | 8.3 | 32.2 | 49.9 | 56.1 |
| 122.5° | 4.2 | 5.2 | 28.1 | 44.7 | 50.9 |
| 125° | 4.2 | 3.1 | 23.9 | 40.5 | 45.7 |
| 127.5° | 3.1 | 2.1 | 19.8 | 35.4 | 41.6 |
| 130° | 3.1 | 2.1 | 16.6 | 31.2 | 36.4 |
| 132.5° | 2.1 | 2.1 | 12.5 | 27.0 | 31.2 |
| 135° | 2.1 | 1.0 | 8.3 | 21.8 | 27.0 |
| 137.5° | 2.1 | 1.0 | 5.2 | 17.7 | 21.8 |
| 140° | 1.0 | 1.0 | 2.1 | 13.5 | 17.7 |
| 142.5° | 1.0 | 0.0 | 0.0 | 9.4 | 13.5 |
| 145° | 1.0 | 0.0 | 0.0 | 5.2 | 9.4 |
| 147.5° | 0.0 | 0.0 | 0.0 | 2.1 | 4.2 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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 | 16.94 | 18.47 | 17.39 | 18.91 | 19.37 | 17.98 | 19.51 | 18.44 | 19.95 | 20.41 |
| | 3H | 18.59 | 19.98 | 19.06 | 20.43 | 20.93 | 20.16 | 21.55 | 20.63 | 22.00 | 22.50 |
| | 4H | 19.16 | 20.47 | 19.65 | 20.94 | 21.46 | 21.12 | 22.44 | 21.61 | 22.90 | 23.42 |
| | 6H | 19.54 | 20.76 | 20.04 | 21.24 | 21.78 | 22.02 | 23.24 | 22.52 | 23.72 | 24.26 |
| | 8H | 19.64 | 20.81 | 20.16 | 21.32 | 21.86 | 22.45 | 23.62 | 22.97 | 24.13 | 24.67 |
| | 12H | 19.70 | 20.82 | 20.22 | 21.32 | 21.89 | 22.91 | 24.03 | 23.43 | 24.53 | 25.10 |
| 4H | 2H | 17.70 | 19.02 | 18.19 | 19.48 | 20.00 | 18.51 | 19.83 | 19.00 | 20.30 | 20.82 |
| | 3H | 19.58 | 20.69 | 20.08 | 21.21 | 21.75 | 20.90 | 22.02 | 21.41 | 22.53 | 23.08 |
| | 4H | 20.28 | 21.30 | 20.80 | 21.82 | 22.40 | 22.02 | 23.04 | 22.54 | 23.56 | 24.13 |
| | 6H | 20.79 | 21.68 | 21.33 | 22.23 | 22.82 | 23.08 | 23.98 | 23.63 | 24.53 | 25.12 |
| | 8H | 20.94 | 21.78 | 21.49 | 22.33 | 22.93 | 23.60 | 24.44 | 24.15 | 24.99 | 25.59 |
| | 12H | 21.04 | 21.80 | 21.61 | 22.38 | 22.99 | 24.16 | 24.92 | 24.73 | 25.50 | 26.11 |
| 8H | 4H | 20.76 | 21.60 | 21.31 | 22.15 | 22.75 | 22.28 | 23.12 | 22.83 | 23.67 | 24.27 |
| | 6H | 21.43 | 22.14 | 22.01 | 22.73 | 23.34 | 23.50 | 24.21 | 24.08 | 24.80 | 25.41 |
| | 8H | 21.67 | 22.30 | 22.26 | 22.91 | 23.53 | 24.14 | 24.78 | 24.73 | 25.38 | 26.00 |
| | 12H | 21.85 | 22.42 | 22.44 | 23.01 | 23.69 | 24.85 | 25.42 | 25.45 | 26.01 | 26.70 |
| 12H | 4H | 20.86 | 21.62 | 21.43 | 22.20 | 22.81 | 22.30 | 23.06 | 22.87 | 23.64 | 24.24 |
| | 6H | 21.59 | 22.23 | 22.18 | 22.83 | 23.45 | 23.55 | 24.19 | 24.14 | 24.79 | 25.41 |
| | 8H | 21.91 | 22.48 | 22.50 | 23.07 | 23.75 | 24.25 | 24.82 | 24.85 | 25.41 | 26.10 |