

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: P242868

Luminaire Tested: S125DRP-S1270D940-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242868
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-S1270D940-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

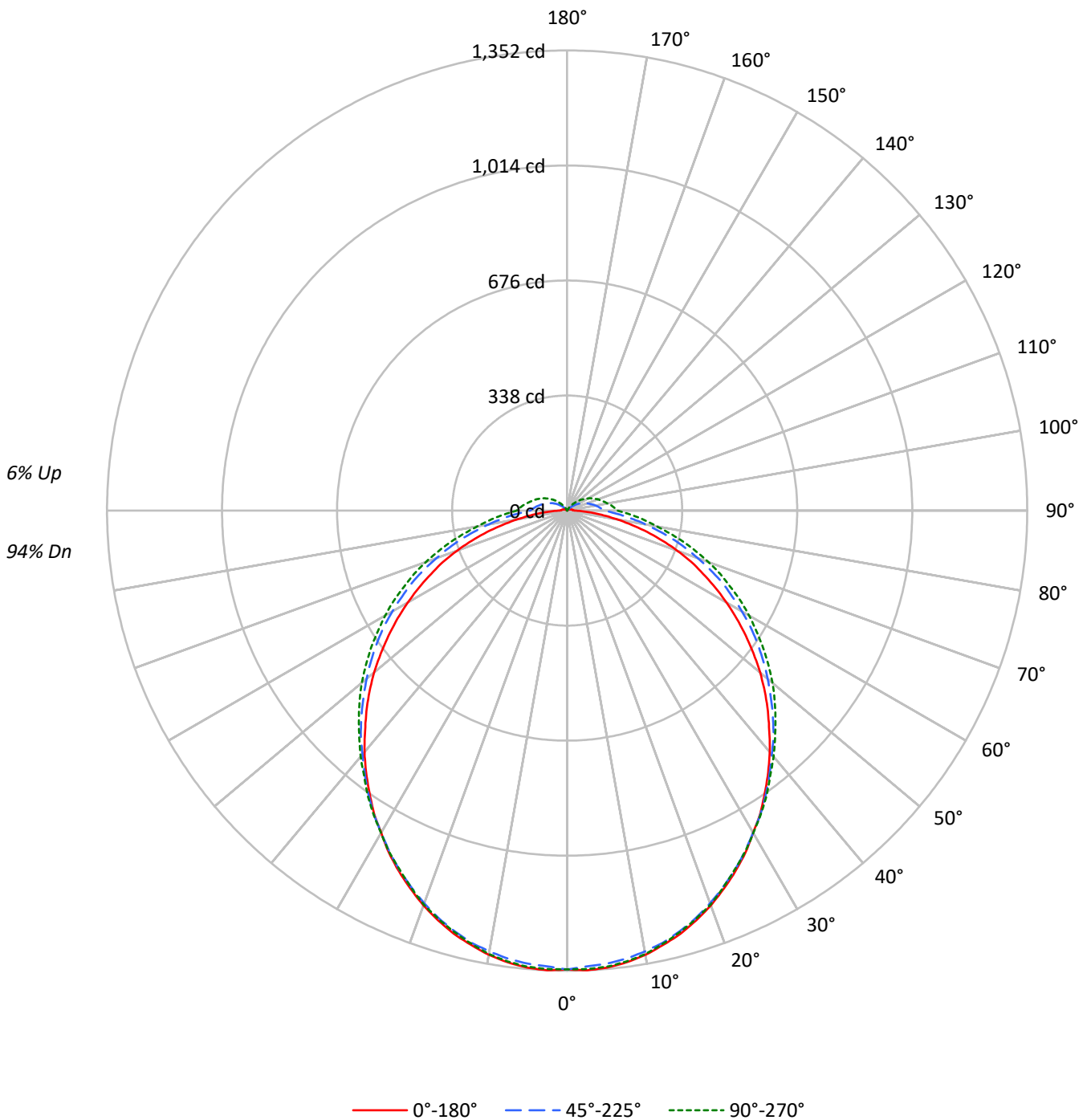
Lumens per Lamp: N/A
Luminaire Lumens: 4175.9 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 41.1
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 | 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° | 9581 | 9581 | 9581 |
| 5° | 9599 | 9396 | 9423 |
| 10° | 9530 | 9221 | 9201 |
| 15° | 9417 | 9012 | 8923 |
| 20° | 9264 | 8757 | 8645 |
| 25° | 9081 | 8484 | 8305 |
| 30° | 8859 | 8185 | 7996 |
| 35° | 8653 | 7910 | 7712 |
| 40° | 8443 | 7620 | 7426 |
| 45° | 8205 | 7371 | 7171 |
| 50° | 7979 | 7101 | 6945 |
| 55° | 7706 | 6845 | 6679 |
| 60° | 7407 | 6552 | 6407 |
| 65° | 7096 | 6245 | 6100 |
| 70° | 6742 | 5829 | 5784 |
| 75° | 6182 | 5423 | 5397 |
| 80° | 5447 | 4932 | 4971 |
| 85° | 4759 | 4577 | 4797 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8205 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.6 | 3.1 |
| 10°-20° | 362.1 | 8.7 |
| 20°-30° | 538.5 | 12.9 |
| 30°-40° | 637.7 | 15.3 |
| 40°-50° | 659.3 | 15.8 |
| 50°-60° | 607.3 | 14.5 |
| 60°-70° | 491.0 | 11.8 |
| 70°-80° | 328.5 | 7.9 |
| 80°-90° | 169.8 | 4.1 |
| 90°-100° | 95.7 | 2.3 |
| 100°-110° | 70.5 | 1.7 |
| 110°-120° | 47.2 | 1.1 |
| 120°-130° | 26.7 | 0.6 |
| 130°-140° | 11.7 | 0.3 |
| 140°-150° | 2.3 | 0.1 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1028.2 | 24.6 |
| 0°-40° | 1665.9 | 39.9 |
| 0°-60° | 2932.5 | 70.2 |
| 0°-90° | 3921.8 | 93.9 |
| 90°-120° | 213.4 | 5.1 |
| 90°-150° | 254.1 | 6.1 |
| 90°-180° | 254.0 | 6.1 |
| 0°-180° | 4175.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1348 | 1348 | 1348 | 1348 | 1348 | |
| 5° | 1348 | 1345 | 1336 | 1347 | 1345 | 128 |
| 15° | 1287 | 1288 | 1279 | 1287 | 1282 | 363 |
| 25° | 1170 | 1174 | 1166 | 1171 | 1164 | 538 |
| 35° | 1012 | 1022 | 1018 | 1022 | 1022 | 634 |
| 45° | 834 | 848 | 855 | 864 | 866 | 644 |
| 55° | 641 | 662 | 683 | 698 | 703 | 573 |
| 65° | 441 | 472 | 504 | 523 | 529 | 438 |
| 75° | 243 | 278 | 320 | 346 | 353 | 258 |
| 85° | 73 | 116 | 163 | 192 | 202 | 76 |
| 90° | 21 | 63 | 108 | 139 | 148 | 15 |
| 95° | 17 | 52 | 96 | 126 | 135 | 14 |
| 105° | 12 | 33 | 73 | 99 | 108 | 13 |
| 115° | 8 | 17 | 52 | 75 | 83 | 8 |
| 125° | 5 | 4 | 30 | 52 | 58 | 4 |
| 135° | 3 | 1 | 11 | 28 | 34 | 2 |
| 145° | 1 | 0 | 0 | 7 | 12 | 1 |
| 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: P242868

CATALOG NUMBER: S125DRP-S1270D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1348.0 | 1348.0 | 1348.0 | 1348.0 | 1348.0 |
| 2.5° | 1352.0 | 1349.3 | 1340.1 | 1349.3 | 1348.0 |
| 5° | 1348.0 | 1345.4 | 1336.1 | 1346.7 | 1345.4 |
| 7.5° | 1338.8 | 1337.4 | 1328.2 | 1337.4 | 1336.1 |
| 10° | 1325.5 | 1325.5 | 1315.0 | 1324.2 | 1322.9 |
| 12.5° | 1307.0 | 1308.4 | 1300.4 | 1307.0 | 1303.1 |
| 15° | 1287.2 | 1288.5 | 1279.3 | 1287.2 | 1281.9 |
| 17.5° | 1262.1 | 1264.8 | 1255.5 | 1262.1 | 1258.1 |
| 20° | 1234.4 | 1237.0 | 1227.8 | 1231.7 | 1231.7 |
| 22.5° | 1202.6 | 1207.9 | 1197.4 | 1202.6 | 1198.7 |
| 25° | 1169.6 | 1173.6 | 1165.6 | 1170.9 | 1164.3 |
| 27.5° | 1133.9 | 1139.2 | 1130.0 | 1133.9 | 1131.3 |
| 30° | 1092.9 | 1100.9 | 1092.9 | 1095.6 | 1094.3 |
| 32.5° | 1055.9 | 1062.6 | 1057.3 | 1059.9 | 1058.6 |
| 35° | 1012.3 | 1021.6 | 1017.6 | 1021.6 | 1021.6 |
| 37.5° | 970.0 | 978.0 | 976.7 | 981.9 | 980.6 |
| 40° | 926.4 | 937.0 | 935.7 | 941.0 | 943.6 |
| 42.5° | 878.9 | 893.4 | 897.4 | 904.0 | 904.0 |
| 45° | 833.9 | 848.5 | 855.1 | 864.3 | 865.6 |
| 47.5° | 787.7 | 800.9 | 811.5 | 824.7 | 827.3 |
| 50° | 740.1 | 754.6 | 769.2 | 783.7 | 787.7 |
| 52.5° | 689.9 | 708.4 | 726.9 | 742.7 | 745.4 |
| 55° | 641.0 | 662.1 | 683.3 | 697.8 | 703.1 |
| 57.5° | 590.7 | 615.9 | 639.6 | 655.5 | 659.5 |
| 60° | 540.5 | 567.0 | 593.4 | 613.2 | 617.2 |
| 62.5° | 491.6 | 518.1 | 547.1 | 569.6 | 574.9 |
| 65° | 441.4 | 471.8 | 503.5 | 523.3 | 528.6 |
| 67.5° | 395.2 | 424.2 | 455.9 | 479.7 | 486.3 |
| 70° | 343.6 | 374.0 | 408.4 | 433.5 | 441.4 |
| 72.5° | 293.4 | 325.1 | 363.4 | 391.2 | 396.5 |
| 75° | 243.2 | 277.5 | 319.8 | 346.3 | 352.9 |
| 77.5° | 194.3 | 233.9 | 273.6 | 302.6 | 307.9 |
| 80° | 149.3 | 189.0 | 233.9 | 263.0 | 268.3 |
| 82.5° | 108.4 | 150.7 | 196.9 | 224.7 | 235.2 |
| 85° | 72.7 | 116.3 | 162.6 | 191.6 | 202.2 |
| 87.5° | 46.3 | 88.5 | 133.5 | 163.9 | 173.1 |
| 90° | 21.1 | 63.4 | 108.4 | 138.8 | 148.0 |
| 92.5° | 18.5 | 56.8 | 103.1 | 132.2 | 141.4 |
| 95° | 17.2 | 51.5 | 96.5 | 125.6 | 134.8 |
| 97.5° | 15.9 | 47.6 | 91.2 | 118.9 | 128.2 |
| 100° | 14.5 | 42.3 | 84.6 | 112.3 | 120.3 |
| 102.5° | 13.2 | 38.3 | 79.3 | 105.7 | 113.7 |
| 105° | 11.9 | 33.0 | 72.7 | 99.1 | 108.4 |
| 107.5° | 10.6 | 29.1 | 67.4 | 93.8 | 101.8 |
| 110° | 9.3 | 25.1 | 62.1 | 87.2 | 96.5 |



TEST NUMBER: P242868

CATALOG NUMBER: S125DRP-S1270D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 9.3 | 21.1 | 56.8 | 80.6 | 89.9 |
| 115° | 7.9 | 17.2 | 51.5 | 75.3 | 83.3 |
| 117.5° | 6.6 | 13.2 | 46.3 | 68.7 | 78.0 |
| 120° | 6.6 | 10.6 | 41.0 | 63.4 | 71.4 |
| 122.5° | 5.3 | 6.6 | 35.7 | 56.8 | 64.8 |
| 125° | 5.3 | 4.0 | 30.4 | 51.5 | 58.1 |
| 127.5° | 4.0 | 2.6 | 25.1 | 44.9 | 52.9 |
| 130° | 4.0 | 2.6 | 21.1 | 39.6 | 46.3 |
| 132.5° | 2.6 | 2.6 | 15.9 | 34.4 | 39.6 |
| 135° | 2.6 | 1.3 | 10.6 | 27.8 | 34.4 |
| 137.5° | 2.6 | 1.3 | 6.6 | 22.5 | 27.8 |
| 140° | 1.3 | 1.3 | 2.6 | 17.2 | 22.5 |
| 142.5° | 1.3 | 0.0 | 0.0 | 11.9 | 17.2 |
| 145° | 1.3 | 0.0 | 0.0 | 6.6 | 11.9 |
| 147.5° | 0.0 | 0.0 | 0.0 | 2.6 | 5.3 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| 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 | 17.77 | 19.30 | 18.23 | 19.74 | 20.21 | 18.81 | 20.34 | 19.27 | 20.78 | 21.25 |
| | 3H | 19.42 | 20.81 | 19.89 | 21.26 | 21.77 | 20.99 | 22.38 | 21.46 | 22.83 | 23.34 |
| | 4H | 19.99 | 21.31 | 20.48 | 21.78 | 22.29 | 21.95 | 23.27 | 22.44 | 23.74 | 24.26 |
| | 6H | 20.37 | 21.59 | 20.87 | 22.08 | 22.61 | 22.85 | 24.07 | 23.35 | 24.56 | 25.09 |
| | 8H | 20.47 | 21.65 | 20.99 | 22.15 | 22.69 | 23.28 | 24.46 | 23.80 | 24.96 | 25.50 |
| | 12H | 20.53 | 21.66 | 21.06 | 22.16 | 22.73 | 23.74 | 24.87 | 24.26 | 25.36 | 25.94 |
| 4H | 2H | 18.53 | 19.85 | 19.02 | 20.32 | 20.84 | 19.35 | 20.66 | 19.84 | 21.13 | 21.65 |
| | 3H | 20.41 | 21.53 | 20.91 | 22.04 | 22.58 | 21.74 | 22.86 | 22.24 | 23.37 | 23.91 |
| | 4H | 21.11 | 22.13 | 21.64 | 22.65 | 23.23 | 22.85 | 23.87 | 23.38 | 24.39 | 24.97 |
| | 6H | 21.62 | 22.52 | 22.17 | 23.07 | 23.66 | 23.92 | 24.81 | 24.46 | 25.36 | 25.95 |
| | 8H | 21.77 | 22.61 | 22.32 | 23.16 | 23.76 | 24.44 | 25.28 | 24.99 | 25.83 | 26.43 |
| | 12H | 21.87 | 22.63 | 22.44 | 23.21 | 23.82 | 24.99 | 25.75 | 25.56 | 26.33 | 26.94 |
| 8H | 4H | 21.60 | 22.44 | 22.15 | 22.99 | 23.59 | 23.11 | 23.95 | 23.66 | 24.50 | 25.10 |
| | 6H | 22.26 | 22.97 | 22.84 | 23.56 | 24.17 | 24.33 | 25.04 | 24.91 | 25.63 | 26.24 |
| | 8H | 22.50 | 23.14 | 23.10 | 23.74 | 24.36 | 24.97 | 25.61 | 25.57 | 26.21 | 26.83 |
| | 12H | 22.68 | 23.25 | 23.28 | 23.84 | 24.53 | 25.68 | 26.25 | 26.28 | 26.84 | 27.53 |
| 12H | 4H | 21.69 | 22.46 | 22.27 | 23.04 | 23.64 | 23.13 | 23.89 | 23.70 | 24.47 | 25.08 |
| | 6H | 22.42 | 23.06 | 23.02 | 23.67 | 24.29 | 24.38 | 25.02 | 24.98 | 25.62 | 26.25 |
| | 8H | 22.74 | 23.31 | 23.34 | 23.90 | 24.59 | 25.09 | 25.66 | 25.68 | 26.25 | 26.94 |