

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: P243703

Luminaire Tested: S125DRP-H1090D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243703
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-56)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-H1090D830-X4F0-XX-UDD-D-W
Description: DEFINE 5 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

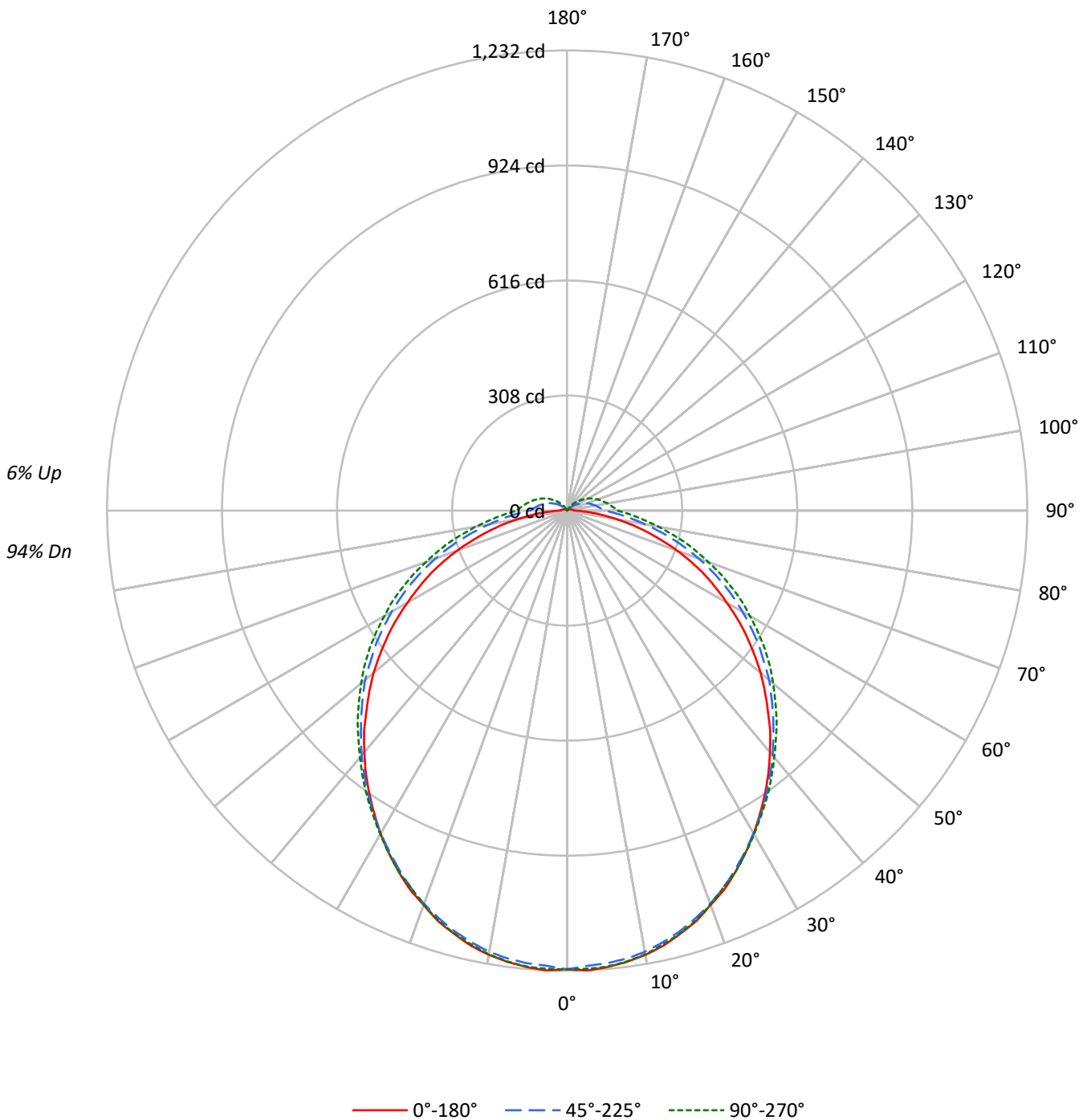
Lumens per Lamp: N/A
Luminaire Lumens: 3812.8 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.39' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 31.5
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° | 8728 | 8728 | 8728 |
| 5° | 8736 | 8556 | 8585 |
| 10° | 8682 | 8411 | 8391 |
| 15° | 8577 | 8211 | 8152 |
| 20° | 8432 | 7990 | 7878 |
| 25° | 8283 | 7732 | 7609 |
| 30° | 8096 | 7471 | 7315 |
| 35° | 7896 | 7217 | 7051 |
| 40° | 7695 | 6969 | 6788 |
| 45° | 7482 | 6721 | 6572 |
| 50° | 7292 | 6516 | 6344 |
| 55° | 7055 | 6264 | 6134 |
| 60° | 6766 | 5990 | 5867 |
| 65° | 6532 | 5700 | 5605 |
| 70° | 6145 | 5345 | 5265 |
| 75° | 5626 | 4926 | 4964 |
| 80° | 5009 | 4474 | 4584 |
| 85° | 4458 | 4186 | 4363 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7482 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 116.2 | 3.0 |
| 10°-20° | 330.1 | 8.7 |
| 20°-30° | 491.4 | 12.9 |
| 30°-40° | 582.2 | 15.3 |
| 40°-50° | 602.4 | 15.8 |
| 50°-60° | 555.6 | 14.6 |
| 60°-70° | 449.0 | 11.8 |
| 70°-80° | 300.0 | 7.9 |
| 80°-90° | 154.8 | 4.1 |
| 90°-100° | 86.8 | 2.3 |
| 100°-110° | 64.4 | 1.7 |
| 110°-120° | 42.9 | 1.1 |
| 120°-130° | 24.0 | 0.6 |
| 130°-140° | 10.8 | 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° | 937.8 | 24.6 |
| 0°-40° | 1520.0 | 39.9 |
| 0°-60° | 2677.9 | 70.2 |
| 0°-90° | 3581.7 | 93.9 |
| 90°-120° | 194.1 | 5.1 |
| 90°-150° | 231.1 | 6.1 |
| 90°-180° | 231.0 | 6.1 |
| 0°-180° | 3812.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1228 | 1228 | 1228 | 1228 | 1228 | |
| 5° | 1227 | 1226 | 1217 | 1226 | 1226 | 116 |
| 15° | 1172 | 1176 | 1166 | 1172 | 1171 | 331 |
| 25° | 1067 | 1071 | 1062 | 1068 | 1067 | 491 |
| 35° | 924 | 931 | 928 | 933 | 934 | 578 |
| 45° | 760 | 773 | 780 | 792 | 793 | 588 |
| 55° | 587 | 605 | 625 | 640 | 646 | 524 |
| 65° | 406 | 430 | 460 | 480 | 486 | 401 |
| 75° | 221 | 254 | 290 | 316 | 325 | 235 |
| 85° | 68 | 107 | 149 | 175 | 184 | 70 |
| 90° | 19 | 57 | 99 | 126 | 135 | 13 |
| 95° | 16 | 48 | 87 | 114 | 121 | 13 |
| 105° | 11 | 31 | 67 | 91 | 99 | 12 |
| 115° | 8 | 16 | 46 | 68 | 76 | 7 |
| 125° | 4 | 4 | 27 | 44 | 52 | 4 |
| 135° | 2 | 2 | 10 | 26 | 31 | 2 |
| 145° | 1 | 0 | 0 | 7 | 10 | 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: P243703

CATALOG NUMBER: S125DRP-H1090D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1228.0 | 1228.0 | 1228.0 | 1228.0 | 1228.0 |
| 2.5° | 1232.5 | 1229.1 | 1220.0 | 1229.1 | 1228.0 |
| 5° | 1226.8 | 1225.7 | 1216.6 | 1225.7 | 1225.7 |
| 7.5° | 1218.9 | 1217.8 | 1209.8 | 1218.9 | 1217.8 |
| 10° | 1207.5 | 1207.5 | 1199.6 | 1206.4 | 1206.4 |
| 12.5° | 1192.8 | 1192.8 | 1183.7 | 1191.7 | 1189.4 |
| 15° | 1172.4 | 1175.8 | 1165.6 | 1172.4 | 1171.2 |
| 17.5° | 1151.9 | 1151.9 | 1144.0 | 1149.7 | 1149.7 |
| 20° | 1123.6 | 1128.1 | 1120.2 | 1125.8 | 1122.4 |
| 22.5° | 1098.6 | 1100.9 | 1092.9 | 1098.6 | 1092.9 |
| 25° | 1066.8 | 1071.4 | 1062.3 | 1068.0 | 1066.8 |
| 27.5° | 1033.9 | 1037.3 | 1030.5 | 1037.3 | 1033.9 |
| 30° | 998.7 | 1002.1 | 997.6 | 1002.1 | 1001.0 |
| 32.5° | 961.3 | 968.1 | 964.7 | 968.1 | 966.9 |
| 35° | 923.8 | 930.6 | 928.4 | 932.9 | 934.0 |
| 37.5° | 885.2 | 892.0 | 892.0 | 897.7 | 898.9 |
| 40° | 844.4 | 853.5 | 855.7 | 863.7 | 862.5 |
| 42.5° | 804.7 | 813.7 | 817.1 | 827.4 | 827.4 |
| 45° | 760.4 | 772.9 | 779.7 | 792.2 | 793.3 |
| 47.5° | 718.4 | 732.0 | 742.2 | 753.6 | 755.9 |
| 50° | 676.4 | 688.9 | 705.9 | 717.3 | 719.5 |
| 52.5° | 631.0 | 646.9 | 663.9 | 679.8 | 684.4 |
| 55° | 586.8 | 604.9 | 625.3 | 640.1 | 645.8 |
| 57.5° | 541.4 | 560.6 | 583.3 | 601.5 | 606.0 |
| 60° | 493.7 | 516.4 | 542.5 | 560.6 | 565.2 |
| 62.5° | 449.4 | 474.4 | 501.6 | 520.9 | 527.7 |
| 65° | 406.3 | 430.1 | 459.6 | 480.1 | 485.7 |
| 67.5° | 359.8 | 385.9 | 416.5 | 439.2 | 444.9 |
| 70° | 313.2 | 341.6 | 374.5 | 396.1 | 401.8 |
| 72.5° | 265.6 | 297.3 | 332.5 | 356.4 | 363.2 |
| 75° | 221.3 | 254.2 | 290.5 | 315.5 | 324.6 |
| 77.5° | 179.3 | 213.4 | 249.7 | 275.8 | 283.7 |
| 80° | 137.3 | 172.5 | 212.2 | 239.5 | 247.4 |
| 82.5° | 99.9 | 137.3 | 178.2 | 205.4 | 213.4 |
| 85° | 68.1 | 106.7 | 148.7 | 174.8 | 183.9 |
| 87.5° | 42.0 | 79.4 | 122.6 | 148.7 | 157.8 |
| 90° | 19.3 | 56.7 | 98.7 | 126.0 | 135.1 |
| 92.5° | 17.0 | 52.2 | 93.1 | 120.3 | 128.2 |
| 95° | 15.9 | 47.7 | 87.4 | 113.5 | 121.4 |
| 97.5° | 14.8 | 43.1 | 81.7 | 107.8 | 115.8 |
| 100° | 13.6 | 38.6 | 77.2 | 102.1 | 110.1 |
| 102.5° | 12.5 | 35.2 | 71.5 | 96.5 | 103.3 |
| 105° | 11.3 | 30.6 | 67.0 | 90.8 | 98.7 |
| 107.5° | 10.2 | 26.1 | 62.4 | 85.1 | 93.1 |
| 110° | 9.1 | 22.7 | 56.7 | 79.4 | 87.4 |



TEST NUMBER: P243703

CATALOG NUMBER: S125DRP-H1090D830-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 7.9 | 19.3 | 52.2 | 73.8 | 81.7 |
| 115° | 7.9 | 15.9 | 46.5 | 68.1 | 76.0 |
| 117.5° | 6.8 | 12.5 | 40.9 | 62.4 | 70.4 |
| 120° | 5.7 | 9.1 | 36.3 | 56.7 | 64.7 |
| 122.5° | 5.7 | 6.8 | 31.8 | 51.1 | 59.0 |
| 125° | 4.5 | 4.5 | 27.2 | 44.3 | 52.2 |
| 127.5° | 4.5 | 3.4 | 22.7 | 39.7 | 45.4 |
| 130° | 3.4 | 2.3 | 19.3 | 35.2 | 40.9 |
| 132.5° | 3.4 | 2.3 | 14.8 | 30.6 | 36.3 |
| 135° | 2.3 | 2.3 | 10.2 | 26.1 | 30.6 |
| 137.5° | 2.3 | 1.1 | 6.8 | 20.4 | 26.1 |
| 140° | 1.1 | 1.1 | 2.3 | 15.9 | 20.4 |
| 142.5° | 1.1 | 1.1 | 1.1 | 11.3 | 15.9 |
| 145° | 1.1 | 0.0 | 0.0 | 6.8 | 10.2 |
| 147.5° | 1.1 | 0.0 | 0.0 | 2.3 | 5.7 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 |
| 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 | 17.44 | 18.97 | 17.90 | 19.41 | 19.88 | 18.53 | 20.06 | 18.99 | 20.50 | 20.97 |
| | 3H | 19.09 | 20.48 | 19.56 | 20.93 | 21.44 | 20.70 | 22.09 | 21.16 | 22.54 | 23.04 |
| | 4H | 19.66 | 20.98 | 20.15 | 21.45 | 21.96 | 21.66 | 22.98 | 22.15 | 23.44 | 23.96 |
| | 6H | 20.05 | 21.27 | 20.55 | 21.75 | 22.29 | 22.56 | 23.79 | 23.06 | 24.27 | 24.80 |
| | 8H | 20.15 | 21.33 | 20.67 | 21.83 | 22.37 | 22.99 | 24.16 | 23.51 | 24.67 | 25.21 |
| | 12H | 20.22 | 21.34 | 20.74 | 21.84 | 22.41 | 23.44 | 24.57 | 23.96 | 25.06 | 25.64 |
| 4H | 2H | 18.21 | 19.52 | 18.70 | 19.99 | 20.51 | 19.06 | 20.38 | 19.55 | 20.84 | 21.36 |
| | 3H | 20.09 | 21.20 | 20.59 | 21.72 | 22.26 | 21.44 | 22.56 | 21.94 | 23.07 | 23.61 |
| | 4H | 20.79 | 21.81 | 21.31 | 22.33 | 22.91 | 22.55 | 23.57 | 23.07 | 24.09 | 24.67 |
| | 6H | 21.30 | 22.20 | 21.85 | 22.75 | 23.34 | 23.62 | 24.52 | 24.16 | 25.06 | 25.65 |
| | 8H | 21.46 | 22.30 | 22.01 | 22.85 | 23.45 | 24.13 | 24.98 | 24.68 | 25.53 | 26.13 |
| | 12H | 21.56 | 22.32 | 22.13 | 22.90 | 23.51 | 24.69 | 25.45 | 25.26 | 26.03 | 26.63 |
| 8H | 4H | 21.27 | 22.12 | 21.82 | 22.66 | 23.27 | 22.81 | 23.65 | 23.36 | 24.20 | 24.80 |
| | 6H | 21.94 | 22.65 | 22.52 | 23.24 | 23.85 | 24.03 | 24.74 | 24.61 | 25.33 | 25.94 |
| | 8H | 22.18 | 22.82 | 22.78 | 23.42 | 24.04 | 24.67 | 25.30 | 25.26 | 25.91 | 26.53 |
| | 12H | 22.37 | 22.94 | 22.96 | 23.53 | 24.21 | 25.37 | 25.94 | 25.97 | 26.53 | 27.22 |
| 12H | 4H | 21.37 | 22.13 | 21.94 | 22.71 | 23.32 | 22.83 | 23.59 | 23.40 | 24.17 | 24.77 |
| | 6H | 22.10 | 22.74 | 22.70 | 23.35 | 23.97 | 24.08 | 24.72 | 24.67 | 25.32 | 25.94 |
| | 8H | 22.42 | 22.99 | 23.02 | 23.58 | 24.27 | 24.78 | 25.35 | 25.38 | 25.94 | 26.63 |