

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: NEO-RAY

Report Number: P998048

Luminaire Tested: SA2XXDIP-B1005D925UB30-4F0-XX-W2A-D

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998048  
REPORT IS A COMBINATION OF REPORTS P983785 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B1005D925UB30-4F0-XX-W2A-D  
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

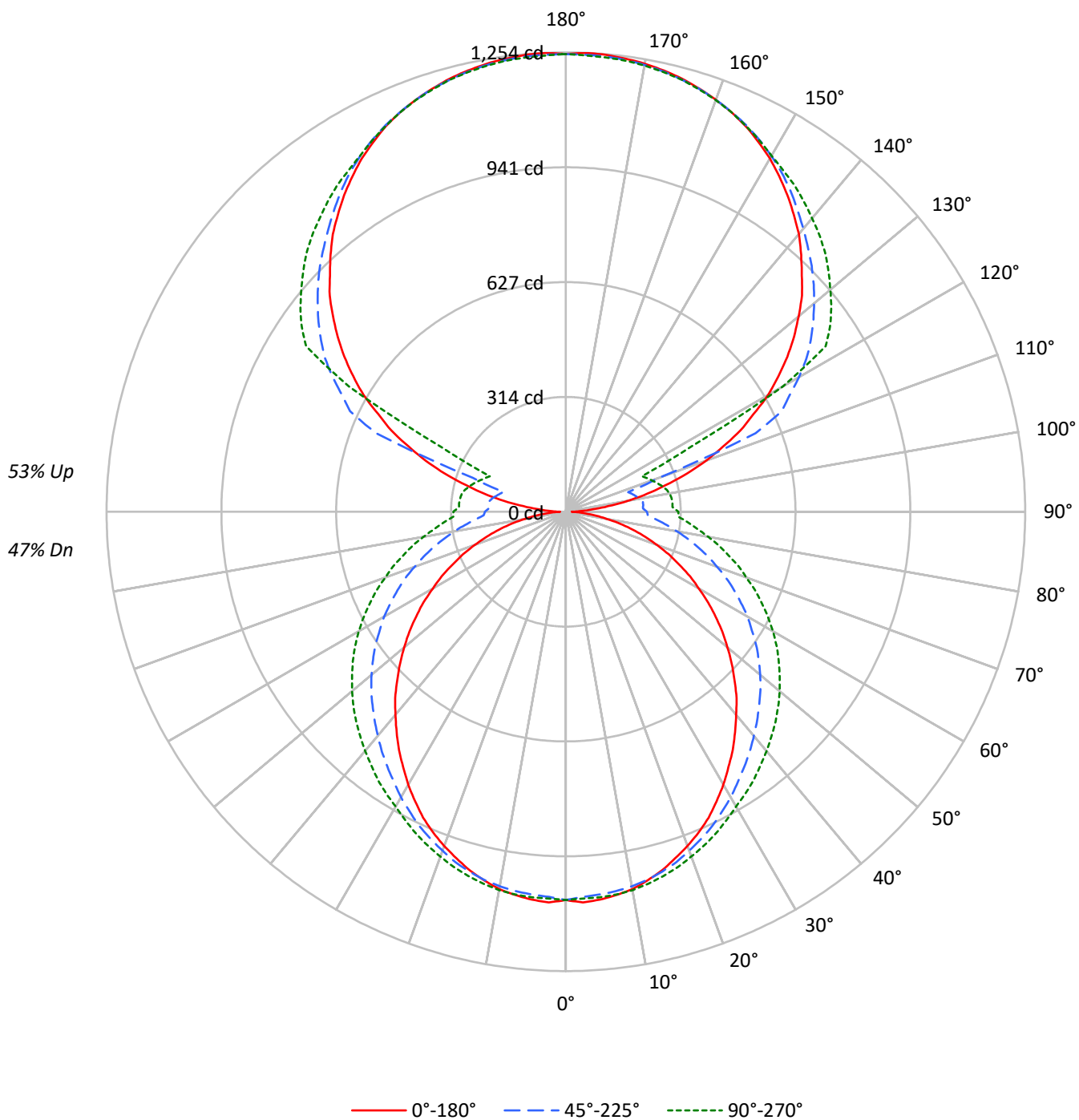
Lumens per Lamp: N/A  
Luminaire Lumens: 7709.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 89.8  
Input Voltage (V):  
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 |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 106 | 106 | 106 | 106 | 98 | 98 | 98 | 98 | 81 | 81 | 81 | 67 | 67 | 67 | 53 | 53 | 53 |
| 1   | 96  | 91  | 86  | 82  | 87 | 83 | 79 | 76 | 69 | 67 | 64 | 56 | 54 | 53 | 45 | 43 | 42 |
| 2   | 86  | 78  | 72  | 66  | 79 | 72 | 66 | 61 | 60 | 56 | 52 | 49 | 46 | 43 | 38 | 36 | 34 |
| 3   | 79  | 68  | 61  | 54  | 72 | 63 | 56 | 51 | 52 | 47 | 43 | 43 | 39 | 36 | 34 | 31 | 29 |
| 4   | 72  | 60  | 52  | 46  | 65 | 55 | 48 | 42 | 46 | 41 | 36 | 38 | 34 | 30 | 30 | 27 | 24 |
| 5   | 66  | 53  | 45  | 39  | 60 | 49 | 42 | 36 | 41 | 35 | 31 | 34 | 29 | 26 | 27 | 23 | 21 |
| 6   | 60  | 48  | 39  | 33  | 55 | 44 | 37 | 31 | 37 | 31 | 27 | 30 | 26 | 22 | 24 | 21 | 18 |
| 7   | 56  | 43  | 35  | 29  | 51 | 40 | 32 | 27 | 33 | 28 | 23 | 27 | 23 | 20 | 22 | 19 | 16 |
| 8   | 52  | 39  | 31  | 26  | 47 | 36 | 29 | 24 | 30 | 25 | 21 | 25 | 21 | 17 | 20 | 17 | 14 |
| 9   | 48  | 35  | 28  | 23  | 44 | 33 | 26 | 21 | 28 | 22 | 18 | 23 | 19 | 16 | 19 | 15 | 13 |
| 10  | 45  | 32  | 25  | 20  | 41 | 30 | 23 | 19 | 26 | 20 | 16 | 21 | 17 | 14 | 17 | 14 | 12 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16776 | 16776 | 16776 |
| 5°  | 16852 | 16061 | 15970 |
| 10° | 16739 | 15504 | 15278 |
| 15° | 16503 | 14928 | 14568 |
| 20° | 16206 | 14325 | 13895 |
| 25° | 15911 | 13746 | 13284 |
| 30° | 15499 | 13158 | 12680 |
| 35° | 15081 | 12591 | 12236 |
| 40° | 14643 | 12101 | 11794 |
| 45° | 14224 | 11657 | 11410 |
| 50° | 13774 | 11247 | 11030 |
| 55° | 13302 | 10812 | 10643 |
| 60° | 12723 | 10358 | 10237 |
| 65° | 12122 | 9838  | 9768  |
| 70° | 11442 | 9278  | 9266  |
| 75° | 10567 | 8720  | 8791  |
| 80° | 9197  | 8135  | 8300  |
| 85° | 7811  | 7586  | 7873  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14224 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 100.5  | 1.3       |
| 10°-20°   | 288.2  | 3.7       |
| 20°-30°   | 436.6  | 5.7       |
| 30°-40°   | 531.7  | 6.9       |
| 40°-50°   | 572.0  | 7.4       |
| 50°-60°   | 555.5  | 7.2       |
| 60°-70°   | 485.2  | 6.3       |
| 70°-80°   | 373.4  | 4.8       |
| 80°-90°   | 252.3  | 3.3       |
| 90°-100°  | 213.7  | 2.8       |
| 100°-110° | 279.6  | 3.6       |
| 110°-120° | 490.5  | 6.4       |
| 120°-130° | 721.9  | 9.4       |
| 130°-140° | 737.0  | 9.6       |
| 140°-150° | 670.2  | 8.7       |
| 150°-160° | 536.2  | 7.0       |
| 160°-170° | 345.5  | 4.5       |
| 170°-180° | 118.9  | 1.5       |
| 0°-30°    | 825.2  | 10.7      |
| 0°-40°    | 1356.9 | 17.6      |
| 0°-60°    | 2484.5 | 32.2      |
| 0°-90°    | 3595.4 | 46.6      |
| 90°-120°  | 983.8  | 12.8      |
| 90°-150°  | 3113.0 | 40.4      |
| 90°-180°  | 4114.0 | 53.4      |
| 0°-180°   | 7709.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1060 | 1060  | 1060 | 1060  | 1060 |      |
| 5°   | 1063 | 1058  | 1049 | 1058  | 1057 | 101  |
| 15°  | 1014 | 1017  | 1017 | 1031  | 1029 | 286  |
| 25°  | 922  | 932   | 946  | 965   | 969  | 424  |
| 35°  | 794  | 820   | 849  | 883   | 894  | 496  |
| 45°  | 651  | 693   | 746  | 794   | 810  | 503  |
| 55°  | 499  | 554   | 634  | 690   | 710  | 447  |
| 65°  | 341  | 416   | 507  | 570   | 590  | 339  |
| 75°  | 189  | 275   | 373  | 439   | 459  | 200  |
| 85°  | 55   | 150   | 249  | 313   | 335  | 58   |
| 90°  | 16   | 115   | 221  | 287   | 307  | 14   |
| 95°  | 71   | 113   | 212  | 275   | 292  | 79   |
| 105° | 282  | 354   | 187  | 251   | 272  | 302  |
| 115° | 526  | 558   | 650  | 277   | 229  | 517  |
| 125° | 738  | 750   | 816  | 864   | 880  | 659  |
| 135° | 911  | 925   | 949  | 990   | 1001 | 704  |
| 145° | 1055 | 1054  | 1070 | 1085  | 1088 | 660  |
| 155° | 1162 | 1154  | 1164 | 1170  | 1163 | 535  |
| 165° | 1224 | 1219  | 1221 | 1228  | 1221 | 346  |
| 175° | 1252 | 1246  | 1248 | 1254  | 1245 | 119  |
| 180° | 1249 | 1249  | 1249 | 1249  | 1249 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1059.8 | 1059.8 | 1059.8 | 1059.8 | 1059.8 |
| 2.5°   | 1067.5 | 1062.9 | 1052.2 | 1059.8 | 1056.8 |
| 5°     | 1062.9 | 1058.3 | 1049.1 | 1058.3 | 1056.8 |
| 7.5°   | 1055.2 | 1052.2 | 1044.5 | 1055.2 | 1053.7 |
| 10°    | 1046.0 | 1042.9 | 1038.3 | 1050.6 | 1049.1 |
| 12.5°  | 1030.7 | 1032.2 | 1029.1 | 1041.4 | 1039.9 |
| 15°    | 1013.8 | 1016.8 | 1016.8 | 1030.7 | 1029.1 |
| 17.5°  | 992.3  | 998.4  | 1003.0 | 1016.8 | 1016.8 |
| 20°    | 970.8  | 978.4  | 984.6  | 1001.5 | 1001.5 |
| 22.5°  | 947.7  | 956.9  | 966.1  | 983.0  | 986.1  |
| 25°    | 921.6  | 932.4  | 946.2  | 964.6  | 969.2  |
| 27.5°  | 890.9  | 907.8  | 923.1  | 946.2  | 949.3  |
| 30°    | 860.2  | 880.1  | 900.1  | 924.7  | 929.3  |
| 32.5°  | 826.4  | 849.4  | 874.0  | 903.2  | 912.4  |
| 35°    | 794.1  | 820.2  | 849.4  | 883.2  | 894.0  |
| 37.5°  | 758.8  | 788.0  | 824.8  | 861.7  | 872.5  |
| 40°    | 723.5  | 757.3  | 798.7  | 838.7  | 852.5  |
| 42.5°  | 689.7  | 723.5  | 772.6  | 817.2  | 831.0  |
| 45°    | 651.3  | 692.7  | 746.5  | 794.1  | 809.5  |
| 47.5°  | 614.4  | 658.9  | 720.4  | 769.5  | 786.4  |
| 50°    | 576.0  | 623.6  | 692.7  | 745.0  | 761.9  |
| 52.5°  | 539.1  | 589.8  | 663.6  | 717.3  | 735.7  |
| 55°    | 499.2  | 554.5  | 634.4  | 689.7  | 709.6  |
| 57.5°  | 460.8  | 522.2  | 602.1  | 662.0  | 682.0  |
| 60°    | 419.3  | 485.4  | 572.9  | 631.3  | 652.8  |
| 62.5°  | 382.5  | 451.6  | 539.1  | 602.1  | 622.1  |
| 65°    | 341.0  | 416.3  | 506.9  | 569.9  | 589.8  |
| 67.5°  | 304.1  | 382.5  | 474.6  | 537.6  | 559.1  |
| 70°    | 264.2  | 344.1  | 439.3  | 505.3  | 523.8  |
| 72.5°  | 227.3  | 310.3  | 407.0  | 471.6  | 494.6  |
| 75°    | 188.9  | 274.9  | 373.3  | 439.3  | 459.3  |
| 77.5°  | 152.1  | 241.2  | 341.0  | 407.0  | 428.5  |
| 80°    | 115.2  | 208.9  | 308.7  | 373.3  | 394.8  |
| 82.5°  | 84.5   | 176.6  | 278.0  | 342.5  | 362.5  |
| 85°    | 55.3   | 150.5  | 248.8  | 313.3  | 334.8  |
| 87.5°  | 33.8   | 126.0  | 224.3  | 287.2  | 307.2  |
| 90°    | 16.3   | 115.2  | 220.9  | 286.8  | 307.0  |
| 92.5°  | 36.4   | 114.2  | 210.6  | 272.3  | 291.7  |
| 95°    | 71.1   | 113.4  | 211.9  | 274.8  | 292.3  |
| 97.5°  | 116.6  | 108.4  | 212.0  | 271.5  | 290.9  |
| 100°   | 170.8  | 103.8  | 205.1  | 269.2  | 287.9  |
| 102.5° | 228.9  | 277.8  | 196.1  | 261.4  | 281.0  |
| 105°   | 282.5  | 354.2  | 187.2  | 251.0  | 271.5  |
| 107.5° | 346.7  | 406.1  | 178.3  | 240.5  | 261.0  |
| 110°   | 406.6  | 456.4  | 270.3  | 229.1  | 249.6  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 464.5  | 505.3  | 560.7  | 220.1  | 239.7  |
| 115°   | 525.9  | 558.2  | 650.0  | 277.4  | 229.2  |
| 117.5° | 577.8  | 608.1  | 688.0  | 604.8  | 383.3  |
| 120°   | 637.4  | 657.2  | 734.9  | 788.7  | 683.6  |
| 122.5° | 688.1  | 704.0  | 779.0  | 825.8  | 840.6  |
| 125°   | 738.1  | 749.8  | 816.1  | 864.0  | 880.5  |
| 127.5° | 785.1  | 796.2  | 851.2  | 898.7  | 913.4  |
| 130°   | 829.4  | 842.3  | 884.5  | 931.4  | 942.7  |
| 132.5° | 874.6  | 884.8  | 917.8  | 961.2  | 972.6  |
| 135°   | 911.0  | 925.4  | 949.0  | 990.3  | 1000.7 |
| 137.5° | 950.8  | 961.6  | 978.3  | 1016.6 | 1024.7 |
| 140°   | 989.6  | 995.4  | 1008.4 | 1041.0 | 1045.8 |
| 142.5° | 1022.2 | 1027.0 | 1038.8 | 1064.4 | 1067.6 |
| 145°   | 1055.0 | 1054.1 | 1069.5 | 1085.0 | 1088.2 |
| 147.5° | 1084.9 | 1082.2 | 1097.5 | 1103.5 | 1104.5 |
| 150°   | 1113.8 | 1107.5 | 1121.9 | 1127.4 | 1122.8 |
| 152.5° | 1138.2 | 1131.0 | 1144.5 | 1150.0 | 1143.6 |
| 155°   | 1161.7 | 1153.6 | 1164.4 | 1169.8 | 1162.6 |
| 157.5° | 1180.7 | 1173.5 | 1181.6 | 1187.9 | 1180.7 |
| 160°   | 1197.0 | 1191.5 | 1197.0 | 1202.4 | 1196.1 |
| 162.5° | 1211.4 | 1206.0 | 1210.5 | 1216.9 | 1208.7 |
| 165°   | 1224.1 | 1218.7 | 1221.4 | 1227.7 | 1221.4 |
| 167.5° | 1234.0 | 1228.6 | 1231.3 | 1237.6 | 1229.5 |
| 170°   | 1242.2 | 1236.7 | 1238.6 | 1244.9 | 1236.7 |
| 172.5° | 1247.6 | 1242.2 | 1244.0 | 1250.3 | 1242.2 |
| 175°   | 1252.1 | 1245.8 | 1247.6 | 1253.9 | 1244.9 |
| 177.5° | 1253.9 | 1247.6 | 1248.5 | 1254.8 | 1246.7 |
| 180°   | 1249.4 | 1249.4 | 1249.4 | 1249.4 | 1249.4 |

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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 | 14.69            | 15.57 | 15.67 | 16.57 | 17.88 | 17.77          | 18.65 | 18.74 | 19.64 | 20.96 |
|                 | 3H   | 16.15            | 16.95 | 17.14 | 17.95 | 19.29 | 20.36          | 21.15 | 21.34 | 22.16 | 23.49 |
|                 | 4H   | 16.63            | 17.38 | 17.63 | 18.39 | 19.74 | 21.61          | 22.37 | 22.61 | 23.37 | 24.72 |
|                 | 6H   | 16.92            | 17.61 | 17.92 | 18.63 | 19.98 | 22.91          | 23.61 | 23.92 | 24.62 | 25.98 |
|                 | 8H   | 16.97            | 17.64 | 17.99 | 18.67 | 20.02 | 23.57          | 24.24 | 24.58 | 25.27 | 26.62 |
|                 | 12H  | 16.99            | 17.63 | 18.01 | 18.65 | 20.03 | 24.29          | 24.93 | 25.31 | 25.95 | 27.33 |
| 4H              | 2H   | 15.74            | 16.50 | 16.75 | 17.51 | 18.85 | 18.10          | 18.85 | 19.10 | 19.86 | 21.20 |
|                 | 3H   | 17.45            | 18.09 | 18.47 | 19.13 | 20.49 | 20.89          | 21.53 | 21.90 | 22.57 | 23.92 |
|                 | 4H   | 18.08            | 18.67 | 19.10 | 19.69 | 21.07 | 22.31          | 22.90 | 23.33 | 23.93 | 25.30 |
|                 | 6H   | 18.49            | 19.01 | 19.52 | 20.06 | 21.43 | 23.78          | 24.29 | 24.81 | 25.34 | 26.72 |
|                 | 8H   | 18.60            | 19.08 | 19.63 | 20.13 | 21.52 | 24.54          | 25.02 | 25.57 | 26.06 | 27.45 |
|                 | 12H  | 18.65            | 19.08 | 19.70 | 20.14 | 21.54 | 25.37          | 25.80 | 26.42 | 26.86 | 28.26 |
| 8H              | 4H   | 18.87            | 19.35 | 19.90 | 20.39 | 21.78 | 22.45          | 22.94 | 23.49 | 23.98 | 25.37 |
|                 | 6H   | 19.50            | 19.91 | 20.56 | 20.99 | 22.38 | 24.08          | 24.49 | 25.14 | 25.57 | 26.96 |
|                 | 8H   | 19.72            | 20.08 | 20.79 | 21.15 | 22.56 | 24.97          | 25.33 | 26.04 | 26.40 | 27.81 |
|                 | 12H  | 19.86            | 20.18 | 20.92 | 21.24 | 22.69 | 25.97          | 26.29 | 27.04 | 27.35 | 28.80 |
| 12H             | 4H   | 19.07            | 19.50 | 20.12 | 20.56 | 21.96 | 22.43          | 22.87 | 23.48 | 23.93 | 25.32 |
|                 | 6H   | 19.84            | 20.19 | 20.90 | 21.26 | 22.67 | 24.11          | 24.47 | 25.17 | 25.54 | 26.94 |
|                 | 8H   | 20.14            | 20.46 | 21.21 | 21.52 | 22.97 | 25.04          | 25.36 | 26.11 | 26.42 | 27.87 |