

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: P998961

Luminaire Tested: SA2XXDIP-B675D925UB40-4F0-XX-W2A-F1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998961  
REPORT IS A COMBINATION OF REPORTS P984707 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B675D925UB40-4F0-XX-W2A-F1  
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

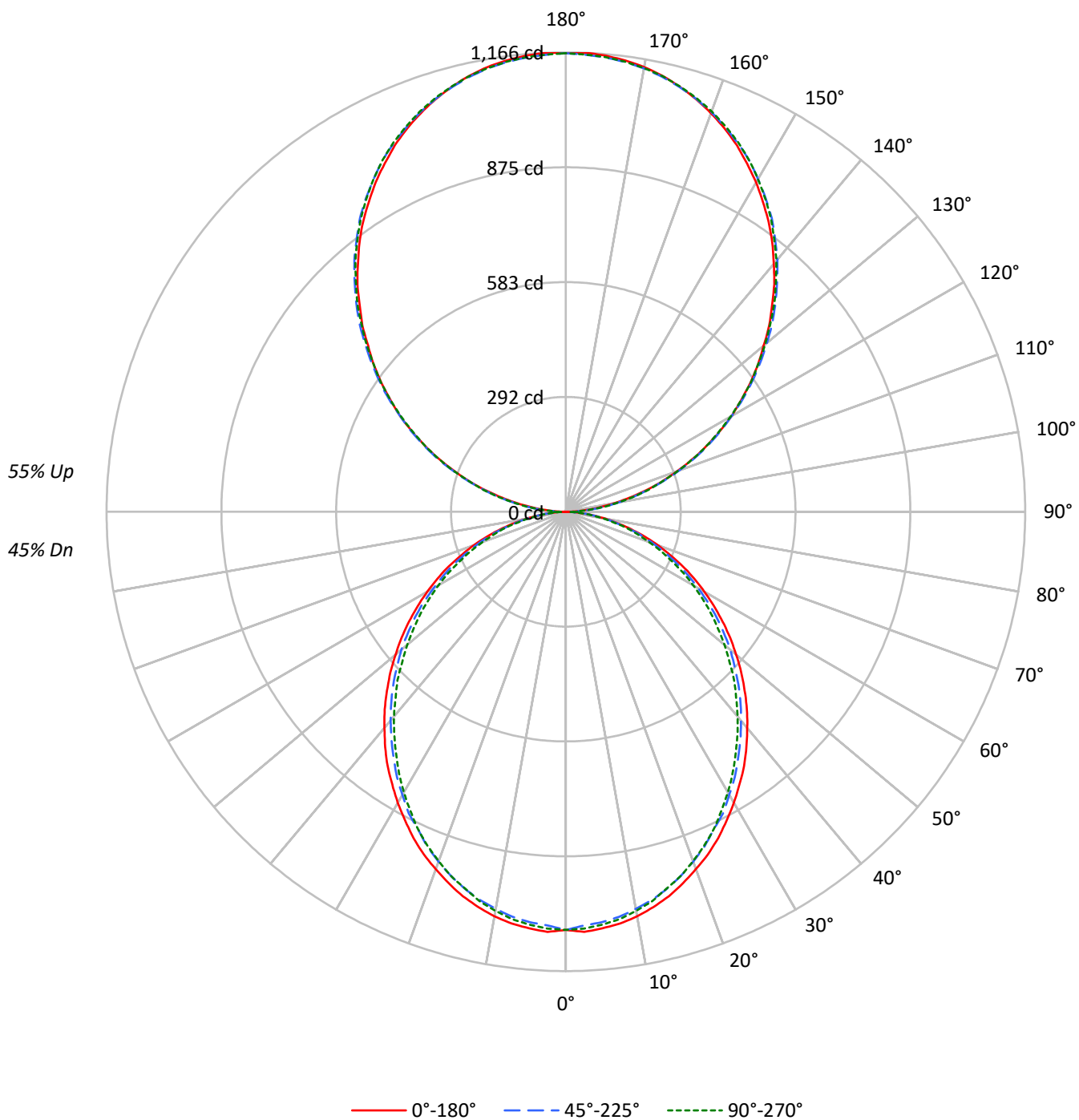
Lumens per Lamp: N/A  
Luminaire Lumens: 5958.0 lumens  
Efficiency: N/A  
Efficacy: 92.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 64.4  
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 | 97 | 97 | 97 | 97 | 81 | 81 | 81 | 66 | 66 | 66 | 52 | 52 | 52 |
| 1   | 97  | 92  | 89  | 85  | 89 | 85 | 82 | 79 | 71 | 68 | 66 | 58 | 56 | 55 | 46 | 45 | 44 |
| 2   | 88  | 81  | 75  | 69  | 80 | 74 | 69 | 64 | 62 | 58 | 55 | 51 | 48 | 46 | 40 | 39 | 37 |
| 3   | 80  | 71  | 64  | 58  | 73 | 65 | 59 | 54 | 55 | 50 | 46 | 45 | 41 | 39 | 36 | 33 | 31 |
| 4   | 73  | 63  | 55  | 49  | 67 | 58 | 51 | 46 | 49 | 43 | 39 | 40 | 36 | 33 | 32 | 29 | 27 |
| 5   | 67  | 56  | 48  | 42  | 62 | 52 | 44 | 39 | 43 | 38 | 34 | 36 | 32 | 29 | 29 | 26 | 24 |
| 6   | 62  | 50  | 42  | 36  | 57 | 46 | 39 | 34 | 39 | 34 | 29 | 32 | 28 | 25 | 26 | 23 | 21 |
| 7   | 57  | 45  | 37  | 32  | 52 | 42 | 35 | 30 | 35 | 30 | 26 | 29 | 25 | 22 | 24 | 21 | 18 |
| 8   | 53  | 41  | 33  | 28  | 49 | 38 | 31 | 26 | 32 | 27 | 23 | 27 | 23 | 20 | 22 | 19 | 17 |
| 9   | 50  | 37  | 30  | 25  | 45 | 35 | 28 | 24 | 30 | 24 | 21 | 25 | 21 | 18 | 20 | 17 | 15 |
| 10  | 46  | 34  | 27  | 22  | 42 | 32 | 25 | 21 | 27 | 22 | 19 | 23 | 19 | 16 | 19 | 16 | 14 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16800 | 16800 | 16800 |
| 5°  | 16827 | 16012 | 15899 |
| 10° | 16689 | 15283 | 14979 |
| 15° | 16445 | 14547 | 14012 |
| 20° | 16114 | 13747 | 13096 |
| 25° | 15785 | 12913 | 12182 |
| 30° | 15371 | 12127 | 11222 |
| 35° | 14981 | 11300 | 10279 |
| 40° | 14497 | 10483 | 9388  |
| 45° | 14019 | 9672  | 8515  |
| 50° | 13494 | 8847  | 7608  |
| 55° | 12942 | 7966  | 6749  |
| 60° | 12323 | 7011  | 5857  |
| 65° | 11646 | 6040  | 4917  |
| 70° | 10783 | 4978  | 3972  |
| 75° | 9588  | 3838  | 3066  |
| 80° | 8143  | 2609  | 1974  |
| 85° | 5905  | 1214  | 839   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14019 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.9   | 1.7       |
| 10°-20°   | 281.0  | 4.7       |
| 20°-30°   | 413.0  | 6.9       |
| 30°-40°   | 479.7  | 8.1       |
| 40°-50°   | 479.1  | 8.0       |
| 50°-60°   | 417.7  | 7.0       |
| 60°-70°   | 308.8  | 5.2       |
| 70°-80°   | 174.7  | 2.9       |
| 80°-90°   | 49.4   | 0.8       |
| 90°-100°  | 72.0   | 1.2       |
| 100°-110° | 228.9  | 3.8       |
| 110°-120° | 391.7  | 6.6       |
| 120°-130° | 515.2  | 8.6       |
| 130°-140° | 578.3  | 9.7       |
| 140°-150° | 567.1  | 9.5       |
| 150°-160° | 475.7  | 8.0       |
| 160°-170° | 315.5  | 5.3       |
| 170°-180° | 110.3  | 1.9       |
| 0°-30°    | 793.9  | 13.3      |
| 0°-40°    | 1273.6 | 21.4      |
| 0°-60°    | 2170.4 | 36.4      |
| 0°-90°    | 2703.3 | 45.4      |
| 90°-120°  | 692.7  | 11.6      |
| 90°-150°  | 2353.2 | 39.5      |
| 90°-180°  | 3255.0 | 54.6      |
| 0°-180°   | 5958.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1061 | 1061  | 1061 | 1061  | 1061 |      |
| 5°   | 1061 | 1057  | 1046 | 1054  | 1052 | 101  |
| 15°  | 1010 | 1004  | 991  | 995   | 990  | 285  |
| 25°  | 914  | 906   | 889  | 891   | 889  | 421  |
| 35°  | 789  | 779   | 762  | 756   | 751  | 493  |
| 45°  | 642  | 635   | 619  | 608   | 604  | 495  |
| 55°  | 486  | 480   | 467  | 455   | 450  | 434  |
| 65°  | 328  | 321   | 311  | 302   | 297  | 324  |
| 75°  | 171  | 169   | 164  | 158   | 160  | 183  |
| 85°  | 42   | 41    | 40   | 37    | 36   | 47   |
| 90°  | 1    | 13    | 34   | 32    | 33   | 6    |
| 95°  | 51   | 61    | 63   | 63    | 61   | 57   |
| 105° | 211  | 214   | 216  | 218   | 218  | 223  |
| 115° | 393  | 399   | 397  | 396   | 393  | 389  |
| 125° | 572  | 581   | 578  | 575   | 574  | 511  |
| 135° | 740  | 750   | 752  | 752   | 749  | 572  |
| 145° | 898  | 905   | 911  | 912   | 908  | 561  |
| 155° | 1027 | 1030  | 1032 | 1037  | 1034 | 473  |
| 165° | 1117 | 1116  | 1116 | 1123  | 1118 | 315  |
| 175° | 1162 | 1159  | 1157 | 1164  | 1158 | 110  |
| 180° | 1164 | 1164  | 1164 | 1164  | 1164 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1061.3 | 1061.3 | 1061.3 | 1061.3 | 1061.3 |
| 2.5°   | 1067.4 | 1062.3 | 1051.0 | 1061.3 | 1059.2 |
| 5°     | 1061.3 | 1057.2 | 1045.9 | 1054.1 | 1052.1 |
| 7.5°   | 1054.1 | 1048.0 | 1036.8 | 1044.9 | 1042.9 |
| 10°    | 1042.9 | 1035.7 | 1023.5 | 1031.7 | 1028.6 |
| 12.5°  | 1027.6 | 1021.5 | 1009.2 | 1014.3 | 1012.3 |
| 15°    | 1010.2 | 1004.1 | 990.8  | 994.9  | 989.8  |
| 17.5°  | 988.8  | 982.7  | 969.4  | 974.5  | 969.4  |
| 20°    | 965.3  | 959.2  | 944.9  | 948.0  | 943.9  |
| 22.5°  | 941.9  | 932.7  | 919.4  | 919.4  | 917.4  |
| 25°    | 914.3  | 906.1  | 888.8  | 890.8  | 888.8  |
| 27.5°  | 883.7  | 876.6  | 863.3  | 860.2  | 855.1  |
| 30°    | 853.1  | 844.9  | 829.6  | 826.6  | 822.5  |
| 32.5°  | 820.4  | 814.3  | 798.0  | 791.9  | 787.8  |
| 35°    | 788.8  | 778.6  | 762.3  | 756.1  | 751.0  |
| 37.5°  | 753.1  | 743.9  | 727.6  | 720.4  | 715.3  |
| 40°    | 716.3  | 708.2  | 691.9  | 682.7  | 678.6  |
| 42.5°  | 680.6  | 672.5  | 656.1  | 645.9  | 639.8  |
| 45°    | 641.9  | 634.7  | 619.4  | 608.2  | 604.1  |
| 47.5°  | 604.1  | 597.0  | 580.6  | 569.4  | 563.3  |
| 50°    | 564.3  | 559.2  | 544.9  | 530.6  | 525.5  |
| 52.5°  | 525.5  | 518.4  | 505.1  | 493.9  | 486.7  |
| 55°    | 485.7  | 479.6  | 467.4  | 455.1  | 450.0  |
| 57.5°  | 445.9  | 440.8  | 427.6  | 415.3  | 411.2  |
| 60°    | 406.1  | 402.1  | 387.8  | 376.5  | 373.5  |
| 62.5°  | 367.4  | 360.2  | 350.0  | 339.8  | 335.7  |
| 65°    | 327.6  | 321.4  | 311.2  | 302.0  | 296.9  |
| 67.5°  | 286.7  | 281.6  | 272.5  | 265.3  | 261.2  |
| 70°    | 249.0  | 244.9  | 235.7  | 228.6  | 224.5  |
| 72.5°  | 210.2  | 206.1  | 201.0  | 193.9  | 190.8  |
| 75°    | 171.4  | 169.4  | 164.3  | 158.2  | 160.2  |
| 77.5°  | 136.7  | 132.7  | 130.6  | 127.6  | 124.5  |
| 80°    | 102.0  | 101.0  | 99.0   | 95.9   | 93.9   |
| 82.5°  | 69.4   | 69.4   | 68.4   | 64.3   | 64.3   |
| 85°    | 41.8   | 40.8   | 39.8   | 36.7   | 35.7   |
| 87.5°  | 18.4   | 16.3   | 14.3   | 11.2   | 10.2   |
| 90°    | 1.0    | 12.8   | 34.4   | 32.4   | 33.4   |
| 92.5°  | 21.6   | 29.5   | 30.5   | 31.4   | 31.4   |
| 95°    | 51.1   | 60.9   | 62.9   | 62.9   | 60.9   |
| 97.5°  | 85.5   | 94.3   | 98.2   | 98.2   | 98.2   |
| 100°   | 124.8  | 132.6  | 135.6  | 135.6  | 134.6  |
| 102.5° | 166.0  | 171.9  | 175.8  | 176.8  | 175.8  |
| 105°   | 211.2  | 214.2  | 216.1  | 218.1  | 218.1  |
| 107.5° | 256.4  | 260.3  | 260.3  | 261.3  | 256.4  |
| 110°   | 299.6  | 305.5  | 305.5  | 305.5  | 302.6  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 346.8  | 352.7  | 351.7  | 348.7  | 346.8  |
| 115°   | 393.0  | 398.8  | 396.9  | 395.9  | 393.0  |
| 117.5° | 439.1  | 447.0  | 442.1  | 439.1  | 436.2  |
| 120°   | 485.3  | 493.2  | 485.3  | 485.3  | 482.4  |
| 122.5° | 527.5  | 537.4  | 532.5  | 529.5  | 527.5  |
| 125°   | 571.7  | 580.6  | 577.6  | 574.7  | 573.7  |
| 127.5° | 615.0  | 625.8  | 621.9  | 617.9  | 615.0  |
| 130°   | 655.3  | 668.0  | 666.1  | 664.1  | 660.2  |
| 132.5° | 700.4  | 710.3  | 711.2  | 706.3  | 703.4  |
| 135°   | 739.7  | 750.5  | 752.5  | 751.5  | 748.6  |
| 137.5° | 783.0  | 791.8  | 793.8  | 792.8  | 788.9  |
| 140°   | 821.3  | 830.1  | 835.0  | 835.0  | 831.1  |
| 142.5° | 860.6  | 869.4  | 872.4  | 873.3  | 869.4  |
| 145°   | 897.9  | 904.8  | 910.7  | 911.7  | 907.7  |
| 147.5° | 931.3  | 940.1  | 944.1  | 946.0  | 942.1  |
| 150°   | 965.7  | 971.6  | 975.5  | 978.5  | 975.5  |
| 152.5° | 996.1  | 1002.0 | 1006.9 | 1010.9 | 1006.9 |
| 155°   | 1026.6 | 1029.5 | 1032.5 | 1037.4 | 1034.5 |
| 157.5° | 1053.1 | 1055.1 | 1057.0 | 1063.9 | 1059.0 |
| 160°   | 1076.7 | 1078.7 | 1079.6 | 1085.5 | 1081.6 |
| 162.5° | 1098.3 | 1098.3 | 1099.3 | 1106.2 | 1101.3 |
| 165°   | 1117.0 | 1116.0 | 1116.0 | 1122.9 | 1118.0 |
| 167.5° | 1133.7 | 1130.7 | 1130.7 | 1137.6 | 1132.7 |
| 170°   | 1146.4 | 1143.5 | 1142.5 | 1149.4 | 1143.5 |
| 172.5° | 1155.3 | 1152.3 | 1151.4 | 1158.2 | 1152.3 |
| 175°   | 1162.2 | 1159.2 | 1157.3 | 1164.1 | 1158.2 |
| 177.5° | 1166.1 | 1163.1 | 1161.2 | 1167.1 | 1161.2 |
| 180°   | 1164.1 | 1164.1 | 1164.1 | 1164.1 | 1164.1 |

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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 | 14.59            | 15.41 | 15.59 | 16.42 | 17.76 | 15.37          | 16.20 | 16.37 | 17.20 | 18.54 |
|                 | 3H   | 15.93            | 16.66 | 16.93 | 17.68 | 19.04 | 17.00          | 17.73 | 18.00 | 18.75 | 20.11 |
|                 | 4H   | 16.33            | 17.03 | 17.35 | 18.05 | 19.41 | 17.59          | 18.29 | 18.61 | 19.30 | 20.67 |
|                 | 6H   | 16.55            | 17.19 | 17.58 | 18.21 | 19.59 | 17.99          | 18.63 | 19.02 | 19.66 | 21.03 |
|                 | 8H   | 16.58            | 17.19 | 17.61 | 18.23 | 19.60 | 18.10          | 18.71 | 19.13 | 19.75 | 21.12 |
|                 | 12H  | 16.57            | 17.15 | 17.61 | 18.18 | 19.58 | 18.14          | 18.72 | 19.18 | 19.76 | 21.15 |
| 4H              | 2H   | 15.06            | 15.75 | 16.08 | 16.77 | 18.14 | 15.70          | 16.40 | 16.73 | 17.42 | 18.78 |
|                 | 3H   | 16.57            | 17.15 | 17.60 | 18.20 | 19.58 | 17.48          | 18.06 | 18.51 | 19.11 | 20.48 |
|                 | 4H   | 17.07            | 17.61 | 18.12 | 18.65 | 20.05 | 18.16          | 18.69 | 19.20 | 19.73 | 21.13 |
|                 | 6H   | 17.37            | 17.83 | 18.43 | 18.90 | 20.29 | 18.65          | 19.11 | 19.70 | 20.17 | 21.57 |
|                 | 8H   | 17.43            | 17.86 | 18.48 | 18.91 | 20.33 | 18.79          | 19.22 | 19.84 | 20.28 | 21.69 |
|                 | 12H  | 17.43            | 17.82 | 18.50 | 18.89 | 20.30 | 18.85          | 19.24 | 19.92 | 20.31 | 21.73 |
| 8H              | 4H   | 17.25            | 17.67 | 18.30 | 18.73 | 20.14 | 18.24          | 18.67 | 19.29 | 19.72 | 21.13 |
|                 | 6H   | 17.63            | 17.98 | 18.70 | 19.08 | 20.49 | 18.81          | 19.16 | 19.88 | 20.26 | 21.67 |
|                 | 8H   | 17.73            | 18.04 | 18.81 | 19.12 | 20.55 | 18.99          | 19.31 | 20.08 | 20.39 | 21.81 |
|                 | 12H  | 17.76            | 18.03 | 18.85 | 19.11 | 20.58 | 19.09          | 19.37 | 20.18 | 20.44 | 21.91 |
| 12H             | 4H   | 17.23            | 17.61 | 18.30 | 18.68 | 20.10 | 18.20          | 18.59 | 19.27 | 19.66 | 21.07 |
|                 | 6H   | 17.65            | 17.96 | 18.73 | 19.04 | 20.47 | 18.80          | 19.11 | 19.88 | 20.19 | 21.62 |
|                 | 8H   | 17.76            | 18.03 | 18.84 | 19.11 | 20.58 | 18.99          | 19.27 | 20.08 | 20.34 | 21.81 |