

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: P998815

Luminaire Tested: SA2XXDIP-B675D530UB2750-4F0-XX-W2A-F\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998815  
REPORT IS A COMBINATION OF REPORTS P984561 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B675D530UB2750-4F0-XX-W2A-F\_5000K  
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

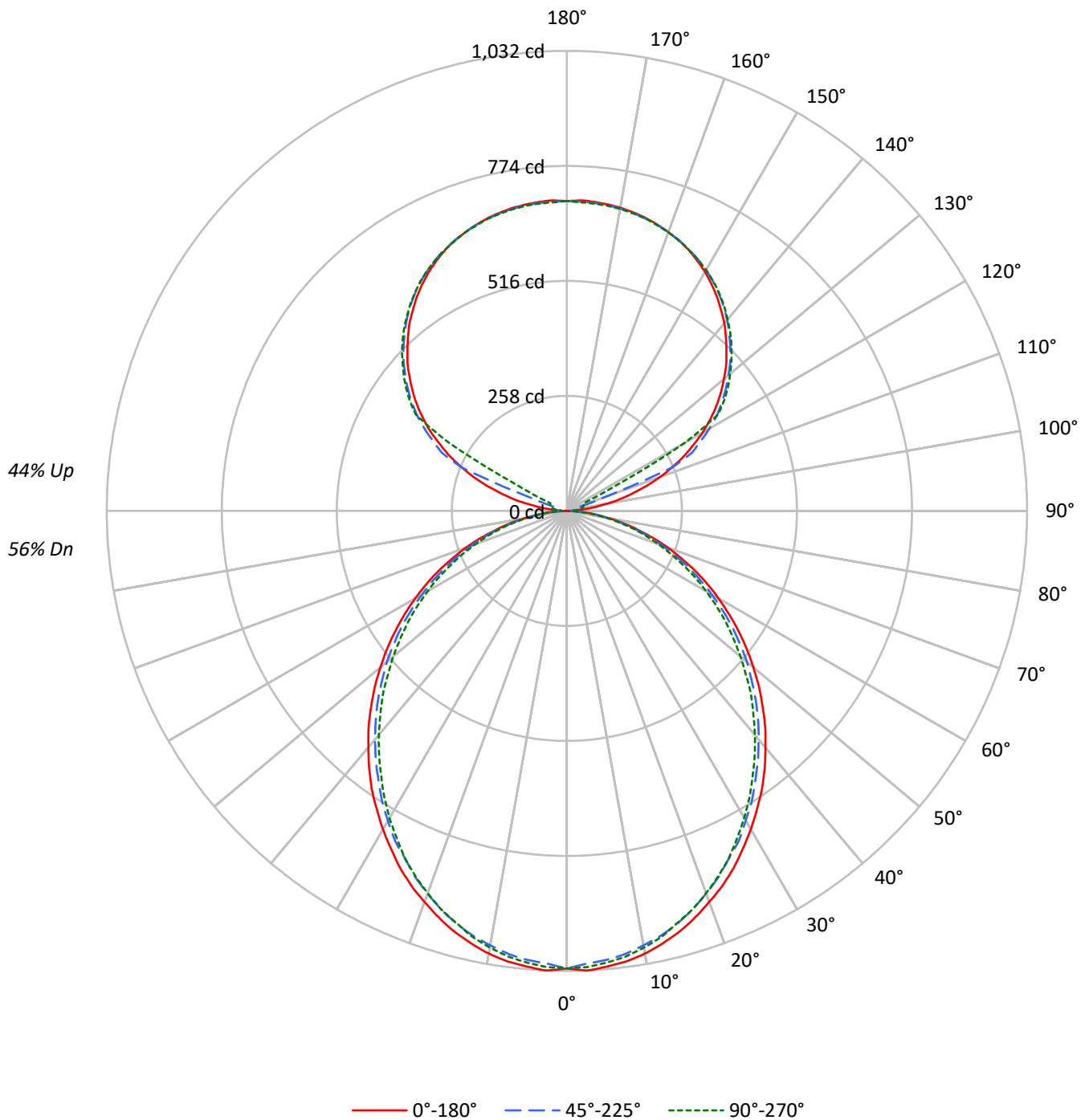
Lumens per Lamp: N/A  
Luminaire Lumens: 4649.0 lumens  
Efficiency: N/A  
Efficacy: 90.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 51.3  
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   | 109 | 109 | 109 | 109 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 74 | 74 | 74 | 62 | 62 | 62 |
| 1   | 99  | 95  | 91  | 87  | 92  | 88  | 85  | 82  | 76 | 74 | 71 | 65 | 63 | 61 | 55 | 53 | 52 |
| 2   | 90  | 83  | 77  | 71  | 84  | 77  | 72  | 67  | 67 | 63 | 59 | 57 | 54 | 51 | 48 | 46 | 44 |
| 3   | 82  | 73  | 65  | 59  | 76  | 68  | 61  | 56  | 59 | 54 | 50 | 50 | 47 | 43 | 43 | 40 | 37 |
| 4   | 75  | 64  | 56  | 50  | 70  | 60  | 53  | 48  | 52 | 47 | 42 | 45 | 41 | 37 | 38 | 35 | 32 |
| 5   | 69  | 57  | 49  | 43  | 64  | 54  | 46  | 41  | 47 | 41 | 37 | 40 | 36 | 32 | 34 | 31 | 28 |
| 6   | 64  | 52  | 43  | 38  | 59  | 48  | 41  | 36  | 42 | 36 | 32 | 37 | 32 | 28 | 31 | 28 | 25 |
| 7   | 59  | 47  | 39  | 33  | 55  | 44  | 37  | 31  | 38 | 32 | 28 | 33 | 29 | 25 | 28 | 25 | 22 |
| 8   | 55  | 42  | 35  | 29  | 51  | 40  | 33  | 28  | 35 | 29 | 25 | 30 | 26 | 22 | 26 | 23 | 20 |
| 9   | 51  | 39  | 31  | 26  | 47  | 36  | 30  | 25  | 32 | 26 | 23 | 28 | 23 | 20 | 24 | 21 | 18 |
| 10  | 48  | 36  | 28  | 23  | 44  | 34  | 27  | 22  | 30 | 24 | 20 | 26 | 21 | 18 | 22 | 19 | 16 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16246 | 16246 | 16246 |
| 5°  | 16272 | 15485 | 15375 |
| 10° | 16139 | 14779 | 14486 |
| 15° | 15903 | 14068 | 13550 |
| 20° | 15583 | 13295 | 12665 |
| 25° | 15265 | 12487 | 11780 |
| 30° | 14865 | 11728 | 10853 |
| 35° | 14487 | 10926 | 9941  |
| 40° | 14020 | 10138 | 9078  |
| 45° | 13556 | 9353  | 8234  |
| 50° | 13050 | 8556  | 7357  |
| 55° | 12516 | 7703  | 6527  |
| 60° | 11916 | 6780  | 5664  |
| 65° | 11262 | 5842  | 4757  |
| 70° | 10428 | 4815  | 3841  |
| 75° | 9275  | 3712  | 2965  |
| 80° | 7880  | 2522  | 1909  |
| 85° | 5721  | 1174  | 811   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13556 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.6   | 2.1       |
| 10°-20°   | 271.8  | 5.8       |
| 20°-30°   | 399.4  | 8.6       |
| 30°-40°   | 463.9  | 10.0      |
| 40°-50°   | 463.3  | 10.0      |
| 50°-60°   | 404.0  | 8.7       |
| 60°-70°   | 298.6  | 6.4       |
| 70°-80°   | 169.0  | 3.6       |
| 80°-90°   | 45.8   | 1.0       |
| 90°-100°  | 22.9   | 0.5       |
| 100°-110° | 85.4   | 1.8       |
| 110°-120° | 226.5  | 4.9       |
| 120°-130° | 375.7  | 8.1       |
| 130°-140° | 399.0  | 8.6       |
| 140°-150° | 370.9  | 8.0       |
| 150°-160° | 298.2  | 6.4       |
| 160°-170° | 192.1  | 4.1       |
| 170°-180° | 66.1   | 1.4       |
| 0°-30°    | 767.7  | 16.5      |
| 0°-40°    | 1231.6 | 26.5      |
| 0°-60°    | 2098.9 | 45.1      |
| 0°-90°    | 2612.3 | 56.2      |
| 90°-120°  | 334.8  | 7.2       |
| 90°-150°  | 1480.4 | 31.8      |
| 90°-180°  | 2037.0 | 43.8      |
| 0°-180°   | 4649.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1026 | 1026  | 1026 | 1026  | 1026 |      |
| 5°   | 1026 | 1022  | 1012 | 1019  | 1017 | 97   |
| 15°  | 977  | 971   | 958  | 962   | 957  | 275  |
| 25°  | 884  | 876   | 860  | 862   | 860  | 407  |
| 35°  | 763  | 753   | 737  | 731   | 726  | 476  |
| 45°  | 621  | 614   | 599  | 588   | 584  | 479  |
| 55°  | 470  | 464   | 452  | 440   | 435  | 420  |
| 65°  | 317  | 311   | 301  | 292   | 287  | 313  |
| 75°  | 166  | 164   | 159  | 153   | 155  | 177  |
| 85°  | 40   | 40    | 38   | 36    | 34   | 45   |
| 90°  | 0    | 6     | 10   | 13    | 14   | 4    |
| 95°  | 33   | 16    | 20   | 22    | 22   | 39   |
| 105° | 153  | 168   | 31   | 36    | 38   | 163  |
| 115° | 289  | 298   | 310  | 77    | 41   | 285  |
| 125° | 409  | 415   | 425  | 428   | 430  | 365  |
| 135° | 506  | 514   | 518  | 523   | 522  | 391  |
| 145° | 587  | 586   | 595  | 598   | 596  | 367  |
| 155° | 646  | 642   | 648  | 650   | 646  | 298  |
| 165° | 681  | 678   | 679  | 683   | 679  | 192  |
| 175° | 696  | 693   | 694  | 697   | 692  | 66   |
| 180° | 695  | 695   | 695  | 695   | 695  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1026.3 | 1026.3 | 1026.3 | 1026.3 | 1026.3 |
| 2.5°   | 1032.2 | 1027.3 | 1016.4 | 1026.3 | 1024.3 |
| 5°     | 1026.3 | 1022.3 | 1011.5 | 1019.4 | 1017.4 |
| 7.5°   | 1019.4 | 1013.4 | 1002.6 | 1010.5 | 1008.5 |
| 10°    | 1008.5 | 1001.6 | 989.8  | 997.7  | 994.7  |
| 12.5°  | 993.7  | 987.8  | 975.9  | 980.9  | 978.9  |
| 15°    | 976.9  | 971.0  | 958.2  | 962.1  | 957.2  |
| 17.5°  | 956.2  | 950.3  | 937.5  | 942.4  | 937.5  |
| 20°    | 933.5  | 927.6  | 913.8  | 916.7  | 912.8  |
| 22.5°  | 910.8  | 901.9  | 889.1  | 889.1  | 887.1  |
| 25°    | 884.2  | 876.3  | 859.5  | 861.5  | 859.5  |
| 27.5°  | 854.6  | 847.7  | 834.8  | 831.9  | 826.9  |
| 30°    | 825.0  | 817.1  | 802.3  | 799.3  | 795.4  |
| 32.5°  | 793.4  | 787.5  | 771.7  | 765.8  | 761.8  |
| 35°    | 762.8  | 752.9  | 737.1  | 731.2  | 726.3  |
| 37.5°  | 728.3  | 719.4  | 703.6  | 696.7  | 691.7  |
| 40°    | 692.7  | 684.8  | 669.1  | 660.2  | 656.2  |
| 42.5°  | 658.2  | 650.3  | 634.5  | 624.6  | 618.7  |
| 45°    | 620.7  | 613.8  | 599.0  | 588.1  | 584.2  |
| 47.5°  | 584.2  | 577.3  | 561.5  | 550.6  | 544.7  |
| 50°    | 545.7  | 540.8  | 527.0  | 513.1  | 508.2  |
| 52.5°  | 508.2  | 501.3  | 488.5  | 477.6  | 470.7  |
| 55°    | 469.7  | 463.8  | 452.0  | 440.1  | 435.2  |
| 57.5°  | 431.2  | 426.3  | 413.5  | 401.6  | 397.7  |
| 60°    | 392.7  | 388.8  | 375.0  | 364.1  | 361.2  |
| 62.5°  | 355.2  | 348.3  | 338.5  | 328.6  | 324.7  |
| 65°    | 316.8  | 310.8  | 301.0  | 292.1  | 287.2  |
| 67.5°  | 277.3  | 272.4  | 263.5  | 256.6  | 252.6  |
| 70°    | 240.8  | 236.8  | 228.0  | 221.0  | 217.1  |
| 72.5°  | 203.3  | 199.3  | 194.4  | 187.5  | 184.5  |
| 75°    | 165.8  | 163.8  | 158.9  | 153.0  | 154.9  |
| 77.5°  | 132.2  | 128.3  | 126.3  | 123.3  | 120.4  |
| 80°    | 98.7   | 97.7   | 95.7   | 92.8   | 90.8   |
| 82.5°  | 67.1   | 67.1   | 66.1   | 62.2   | 62.2   |
| 85°    | 40.5   | 39.5   | 38.5   | 35.5   | 34.5   |
| 87.5°  | 17.8   | 15.8   | 13.8   | 10.9   | 9.9    |
| 90°    | 0.5    | 6.0    | 10.1   | 12.6   | 13.6   |
| 92.5°  | 12.6   | 10.6   | 12.1   | 13.1   | 13.6   |
| 95°    | 32.7   | 16.1   | 19.6   | 22.1   | 21.6   |
| 97.5°  | 58.8   | 17.6   | 25.6   | 27.1   | 27.6   |
| 100°   | 89.0   | 20.1   | 28.7   | 32.7   | 33.7   |
| 102.5° | 122.2  | 121.2  | 29.7   | 35.2   | 36.7   |
| 105°   | 152.8  | 167.9  | 30.7   | 36.2   | 38.2   |
| 107.5° | 188.5  | 201.1  | 31.7   | 37.2   | 39.2   |
| 110°   | 222.7  | 233.3  | 88.0   | 37.7   | 39.7   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 254.9 | 263.9 | 255.4 | 38.7  | 40.2  |
| 115°   | 289.1 | 297.6 | 310.2 | 77.4  | 41.2  |
| 117.5° | 318.7 | 328.8 | 337.3 | 265.4 | 133.7 |
| 120°   | 351.9 | 359.4 | 368.5 | 374.5 | 306.7 |
| 122.5° | 380.1 | 388.1 | 398.2 | 401.2 | 401.7 |
| 125°   | 408.7 | 415.2 | 424.8 | 428.3 | 429.8 |
| 127.5° | 434.9 | 441.9 | 449.4 | 454.5 | 455.0 |
| 130°   | 459.5 | 467.5 | 473.1 | 478.6 | 478.1 |
| 132.5° | 484.6 | 491.2 | 496.7 | 501.2 | 500.7 |
| 135°   | 505.7 | 513.8 | 518.3 | 523.3 | 522.3 |
| 137.5° | 527.9 | 533.9 | 538.9 | 543.9 | 542.4 |
| 140°   | 549.5 | 553.5 | 559.0 | 563.5 | 561.0 |
| 142.5° | 567.6 | 571.1 | 577.6 | 581.6 | 579.1 |
| 145°   | 586.7 | 586.2 | 594.7 | 598.2 | 595.7 |
| 147.5° | 603.3 | 601.8 | 610.3 | 612.8 | 610.8 |
| 150°   | 619.3 | 615.8 | 623.9 | 626.9 | 624.4 |
| 152.5° | 632.9 | 628.9 | 636.4 | 639.5 | 635.9 |
| 155°   | 646.0 | 641.5 | 647.5 | 650.5 | 646.5 |
| 157.5° | 656.5 | 652.5 | 657.1 | 660.6 | 656.5 |
| 160°   | 665.6 | 662.6 | 665.6 | 668.6 | 665.1 |
| 162.5° | 673.6 | 670.6 | 673.1 | 676.7 | 672.1 |
| 165°   | 680.7 | 677.7 | 679.2 | 682.7 | 679.2 |
| 167.5° | 686.2 | 683.2 | 684.7 | 688.2 | 683.7 |
| 170°   | 690.7 | 687.7 | 688.7 | 692.2 | 687.7 |
| 172.5° | 693.7 | 690.7 | 691.7 | 695.3 | 690.7 |
| 175°   | 696.3 | 692.7 | 693.7 | 697.3 | 692.2 |
| 177.5° | 697.3 | 693.7 | 694.3 | 697.8 | 693.2 |
| 180°   | 694.8 | 694.8 | 694.8 | 694.8 | 694.8 |

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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 | 15.47            | 16.39 | 16.38 | 17.32 | 18.50 | 16.26          | 17.18 | 17.16 | 18.10 | 19.28 |
|                 | 3H   | 16.82            | 17.64 | 17.73 | 18.57 | 19.78 | 17.89          | 18.71 | 18.80 | 19.64 | 20.85 |
|                 | 4H   | 17.22            | 18.01 | 18.15 | 18.94 | 20.16 | 18.48          | 19.26 | 19.41 | 20.20 | 21.41 |
|                 | 6H   | 17.45            | 18.17 | 18.39 | 19.11 | 20.34 | 18.89          | 19.61 | 19.83 | 20.55 | 21.78 |
|                 | 8H   | 17.48            | 18.16 | 18.43 | 19.12 | 20.35 | 19.00          | 19.68 | 19.95 | 20.64 | 21.87 |
|                 | 12H  | 17.47            | 18.12 | 18.43 | 19.08 | 20.33 | 19.05          | 19.70 | 20.00 | 20.65 | 21.90 |
| 4H              | 2H   | 15.95            | 16.73 | 16.89 | 17.67 | 18.88 | 16.59          | 17.37 | 17.53 | 18.31 | 19.53 |
|                 | 3H   | 17.47            | 18.13 | 18.42 | 19.09 | 20.32 | 18.38          | 19.03 | 19.32 | 20.00 | 21.23 |
|                 | 4H   | 17.98            | 18.58 | 18.94 | 19.54 | 20.79 | 19.06          | 19.66 | 20.02 | 20.62 | 21.87 |
|                 | 6H   | 18.29            | 18.80 | 19.26 | 19.79 | 21.04 | 19.56          | 20.08 | 20.53 | 21.06 | 22.31 |
|                 | 8H   | 18.35            | 18.83 | 19.32 | 19.80 | 21.07 | 19.71          | 20.19 | 20.68 | 21.17 | 22.43 |
|                 | 12H  | 18.35            | 18.78 | 19.34 | 19.78 | 21.05 | 19.77          | 20.20 | 20.76 | 21.20 | 22.47 |
| 8H              | 4H   | 18.16            | 18.64 | 19.13 | 19.62 | 20.89 | 19.15          | 19.63 | 20.12 | 20.61 | 21.88 |
|                 | 6H   | 18.55            | 18.95 | 19.54 | 19.97 | 21.23 | 19.73          | 20.12 | 20.72 | 21.14 | 22.41 |
|                 | 8H   | 18.65            | 19.00 | 19.66 | 20.01 | 21.29 | 19.91          | 20.27 | 20.92 | 21.27 | 22.56 |
|                 | 12H  | 18.69            | 18.99 | 19.69 | 20.00 | 21.33 | 20.02          | 20.32 | 21.02 | 21.33 | 22.66 |
| 12H             | 4H   | 18.15            | 18.58 | 19.14 | 19.58 | 20.85 | 19.12          | 19.55 | 20.11 | 20.55 | 21.82 |
|                 | 6H   | 18.57            | 18.92 | 19.57 | 19.93 | 21.21 | 19.72          | 20.07 | 20.72 | 21.08 | 22.36 |
|                 | 8H   | 18.68            | 18.99 | 19.69 | 19.99 | 21.32 | 19.92          | 20.23 | 20.92 | 21.23 | 22.56 |