

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: P999232

Luminaire Tested: SA2XXDIP-B865D925UB2750-4F0-XX-W2A-F\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999232  
REPORT IS A COMBINATION OF REPORTS P984981 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B865D925UB2750-4F0-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**

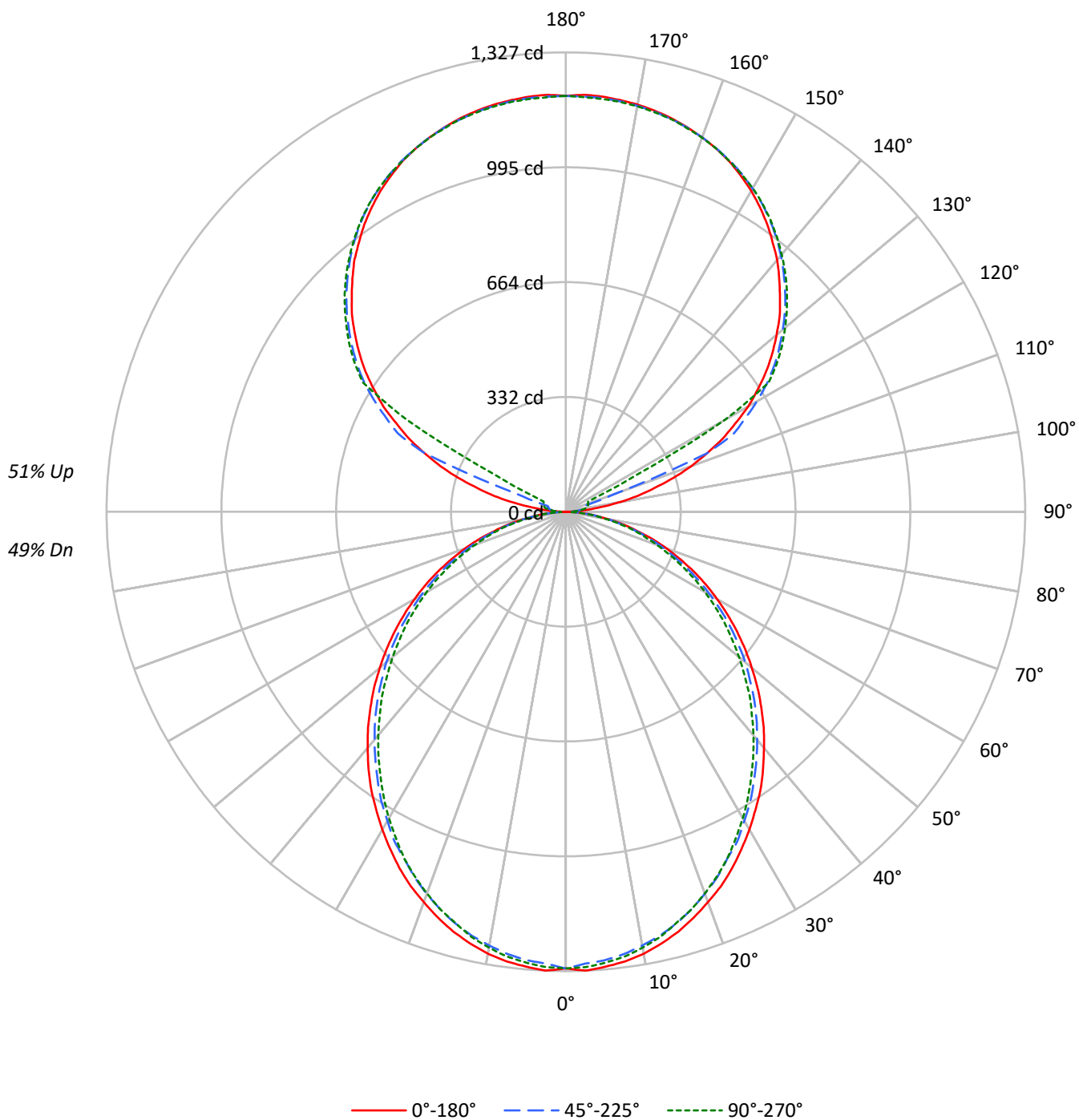
Lumens per Lamp: N/A  
Luminaire Lumens: 6880.0 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 75.3  
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 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |  |    |    |    |  |    |
| 0   | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 83 | 83 | 83 |  | 68 | 68 | 68 |  | 55 |
| 1   | 98  | 93  | 89  | 86  | 90 | 86 | 83 | 80 | 72 | 70 | 68 |  | 60 | 58 | 57 |  | 49 |
| 2   | 89  | 81  | 75  | 70  | 82 | 75 | 70 | 65 | 64 | 60 | 56 |  | 53 | 50 | 47 |  | 43 |
| 3   | 81  | 72  | 64  | 58  | 74 | 66 | 60 | 55 | 56 | 51 | 47 |  | 47 | 43 | 40 |  | 38 |
| 4   | 74  | 63  | 55  | 49  | 68 | 59 | 52 | 46 | 50 | 44 | 40 |  | 42 | 38 | 34 |  | 34 |
| 5   | 68  | 56  | 48  | 42  | 62 | 52 | 45 | 40 | 45 | 39 | 35 |  | 37 | 33 | 30 |  | 31 |
| 6   | 63  | 51  | 42  | 37  | 58 | 47 | 40 | 35 | 40 | 34 | 30 |  | 34 | 29 | 26 |  | 28 |
| 7   | 58  | 46  | 38  | 32  | 53 | 42 | 35 | 30 | 36 | 31 | 27 |  | 31 | 26 | 23 |  | 25 |
| 8   | 54  | 41  | 34  | 28  | 49 | 39 | 32 | 27 | 33 | 28 | 24 |  | 28 | 24 | 21 |  | 23 |
| 9   | 50  | 38  | 30  | 25  | 46 | 35 | 29 | 24 | 30 | 25 | 21 |  | 26 | 22 | 19 |  | 21 |
| 10  | 47  | 35  | 27  | 23  | 43 | 32 | 26 | 21 | 28 | 23 | 19 |  | 24 | 20 | 17 |  | 20 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 20880 | 20880 | 20880 |
| 5°  | 20914 | 19903 | 19762 |
| 10° | 20745 | 18996 | 18619 |
| 15° | 20441 | 18082 | 17417 |
| 20° | 20030 | 17088 | 16278 |
| 25° | 19621 | 16049 | 15141 |
| 30° | 19106 | 15074 | 13949 |
| 35° | 18619 | 14045 | 12776 |
| 40° | 18021 | 13030 | 11670 |
| 45° | 17424 | 12022 | 10584 |
| 50° | 16773 | 10997 | 9456  |
| 55° | 16086 | 9900  | 8388  |
| 60° | 15318 | 8714  | 7279  |
| 65° | 14472 | 7509  | 6113  |
| 70° | 13404 | 6188  | 4936  |
| 75° | 11921 | 4770  | 3811  |
| 80° | 10123 | 3241  | 2453  |
| 85° | 7345  | 1509  | 1044  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 17424 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 124.1  | 1.8       |
| 10°-20°   | 349.3  | 5.1       |
| 20°-30°   | 513.3  | 7.5       |
| 30°-40°   | 596.2  | 8.7       |
| 40°-50°   | 595.5  | 8.7       |
| 50°-60°   | 519.2  | 7.5       |
| 60°-70°   | 383.8  | 5.6       |
| 70°-80°   | 217.2  | 3.2       |
| 80°-90°   | 59.4   | 0.9       |
| 90°-100°  | 39.6   | 0.6       |
| 100°-110° | 147.7  | 2.1       |
| 110°-120° | 391.6  | 5.7       |
| 120°-130° | 649.6  | 9.4       |
| 130°-140° | 690.0  | 10.0      |
| 140°-150° | 641.3  | 9.3       |
| 150°-160° | 515.6  | 7.5       |
| 160°-170° | 332.2  | 4.8       |
| 170°-180° | 114.3  | 1.7       |
| 0°-30°    | 986.8  | 14.3      |
| 0°-40°    | 1583.0 | 23.0      |
| 0°-60°    | 2697.7 | 39.2      |
| 0°-90°    | 3358.1 | 48.8      |
| 90°-120°  | 578.9  | 8.4       |
| 90°-150°  | 2559.8 | 37.2      |
| 90°-180°  | 3522.0 | 51.2      |
| 0°-180°   | 6880.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1319 | 1319  | 1319 | 1319  | 1319 |      |
| 5°   | 1319 | 1314  | 1300 | 1310  | 1308 | 125  |
| 15°  | 1256 | 1248  | 1232 | 1237  | 1230 | 354  |
| 25°  | 1136 | 1126  | 1105 | 1107  | 1105 | 523  |
| 35°  | 980  | 968   | 948  | 940   | 934  | 612  |
| 45°  | 798  | 789   | 770  | 756   | 751  | 616  |
| 55°  | 604  | 596   | 581  | 566   | 559  | 540  |
| 65°  | 407  | 400   | 387  | 375   | 369  | 403  |
| 75°  | 213  | 210   | 204  | 197   | 199  | 227  |
| 85°  | 52   | 51    | 50   | 46    | 44   | 58   |
| 90°  | 1    | 10    | 17   | 22    | 24   | 6    |
| 95°  | 56   | 28    | 34   | 38    | 37   | 67   |
| 105° | 264  | 290   | 53   | 63    | 66   | 282  |
| 115° | 500  | 515   | 536  | 134   | 71   | 492  |
| 125° | 707  | 718   | 734  | 741   | 743  | 630  |
| 135° | 874  | 888   | 896  | 905   | 903  | 676  |
| 145° | 1014 | 1014  | 1028 | 1034  | 1030 | 634  |
| 155° | 1117 | 1109  | 1120 | 1125  | 1118 | 515  |
| 165° | 1177 | 1172  | 1174 | 1180  | 1174 | 333  |
| 175° | 1204 | 1198  | 1200 | 1206  | 1197 | 115  |
| 180° | 1201 | 1201  | 1201 | 1201  | 1201 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1319.1 | 1319.1 | 1319.1 | 1319.1 | 1319.1 |
| 2.5°   | 1326.7 | 1320.4 | 1306.4 | 1319.1 | 1316.6 |
| 5°     | 1319.1 | 1314.0 | 1300.1 | 1310.2 | 1307.7 |
| 7.5°   | 1310.2 | 1302.6 | 1288.7 | 1298.8 | 1296.3 |
| 10°    | 1296.3 | 1287.4 | 1272.2 | 1282.3 | 1278.5 |
| 12.5°  | 1277.2 | 1269.6 | 1254.4 | 1260.8 | 1258.2 |
| 15°    | 1255.7 | 1248.1 | 1231.6 | 1236.7 | 1230.3 |
| 17.5°  | 1229.0 | 1221.4 | 1204.9 | 1211.3 | 1204.9 |
| 20°    | 1199.9 | 1192.3 | 1174.5 | 1178.3 | 1173.2 |
| 22.5°  | 1170.7 | 1159.3 | 1142.8 | 1142.8 | 1140.3 |
| 25°    | 1136.5 | 1126.3 | 1104.7 | 1107.3 | 1104.7 |
| 27.5°  | 1098.4 | 1089.5 | 1073.0 | 1069.2 | 1062.9 |
| 30°    | 1060.4 | 1050.2 | 1031.2 | 1027.4 | 1022.3 |
| 32.5°  | 1019.8 | 1012.2 | 991.9  | 984.3  | 979.2  |
| 35°    | 980.4  | 967.8  | 947.5  | 939.9  | 933.5  |
| 37.5°  | 936.1  | 924.6  | 904.3  | 895.5  | 889.1  |
| 40°    | 890.4  | 880.2  | 860.0  | 848.5  | 843.5  |
| 42.5°  | 846.0  | 835.9  | 815.6  | 802.9  | 795.3  |
| 45°    | 797.8  | 788.9  | 769.9  | 755.9  | 750.9  |
| 47.5°  | 750.9  | 742.0  | 721.7  | 707.7  | 700.1  |
| 50°    | 701.4  | 695.1  | 677.3  | 659.5  | 653.2  |
| 52.5°  | 653.2  | 644.3  | 627.8  | 613.9  | 605.0  |
| 55°    | 603.7  | 596.1  | 580.9  | 565.7  | 559.3  |
| 57.5°  | 554.3  | 547.9  | 531.4  | 516.2  | 511.2  |
| 60°    | 504.8  | 499.7  | 482.0  | 468.0  | 464.2  |
| 62.5°  | 456.6  | 447.7  | 435.0  | 422.4  | 417.3  |
| 65°    | 407.1  | 399.5  | 386.9  | 375.4  | 369.1  |
| 67.5°  | 356.4  | 350.1  | 338.7  | 329.8  | 324.7  |
| 70°    | 309.5  | 304.4  | 293.0  | 284.1  | 279.0  |
| 72.5°  | 261.3  | 256.2  | 249.9  | 241.0  | 237.2  |
| 75°    | 213.1  | 210.5  | 204.2  | 196.6  | 199.1  |
| 77.5°  | 170.0  | 164.9  | 162.4  | 158.5  | 154.7  |
| 80°    | 126.8  | 125.6  | 123.0  | 119.2  | 116.7  |
| 82.5°  | 86.2   | 86.2   | 85.0   | 79.9   | 79.9   |
| 85°    | 52.0   | 50.7   | 49.5   | 45.7   | 44.4   |
| 87.5°  | 22.8   | 20.3   | 17.8   | 14.0   | 12.7   |
| 90°    | 0.9    | 10.4   | 17.4   | 21.7   | 23.5   |
| 92.5°  | 21.7   | 18.3   | 20.9   | 22.6   | 23.5   |
| 95°    | 56.5   | 27.8   | 33.9   | 38.2   | 37.4   |
| 97.5°  | 101.7  | 30.4   | 44.3   | 46.9   | 47.8   |
| 100°   | 153.9  | 34.8   | 49.5   | 56.5   | 58.2   |
| 102.5° | 211.2  | 209.5  | 51.3   | 60.8   | 63.5   |
| 105°   | 264.3  | 290.3  | 53.0   | 62.6   | 66.1   |
| 107.5° | 326.0  | 347.7  | 54.8   | 64.3   | 67.8   |
| 110°   | 385.1  | 403.3  | 152.1  | 65.2   | 68.7   |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 440.7  | 456.4  | 441.6  | 66.9   | 69.5   |
| 115°   | 499.8  | 514.6  | 536.3  | 133.9  | 71.3   |
| 117.5° | 551.1  | 568.5  | 583.3  | 459.0  | 231.2  |
| 120°   | 608.5  | 621.5  | 637.2  | 647.6  | 530.3  |
| 122.5° | 657.2  | 671.1  | 688.5  | 693.7  | 694.5  |
| 125°   | 706.7  | 718.0  | 734.5  | 740.6  | 743.2  |
| 127.5° | 751.9  | 764.1  | 777.1  | 785.8  | 786.7  |
| 130°   | 794.5  | 808.4  | 818.0  | 827.5  | 826.7  |
| 132.5° | 838.0  | 849.3  | 858.8  | 866.7  | 865.8  |
| 135°   | 874.5  | 888.4  | 896.2  | 904.9  | 903.2  |
| 137.5° | 912.7  | 923.2  | 931.9  | 940.6  | 937.9  |
| 140°   | 950.1  | 957.1  | 966.6  | 974.5  | 970.1  |
| 142.5° | 981.4  | 987.5  | 998.8  | 1005.7 | 1001.4 |
| 145°   | 1014.4 | 1013.6 | 1028.3 | 1034.4 | 1030.1 |
| 147.5° | 1043.1 | 1040.5 | 1055.3 | 1059.6 | 1056.2 |
| 150°   | 1070.9 | 1064.9 | 1078.8 | 1084.0 | 1079.6 |
| 152.5° | 1094.4 | 1087.5 | 1100.5 | 1105.7 | 1099.6 |
| 155°   | 1117.0 | 1109.2 | 1119.6 | 1124.8 | 1117.9 |
| 157.5° | 1135.3 | 1128.3 | 1136.1 | 1142.2 | 1135.3 |
| 160°   | 1150.9 | 1145.7 | 1150.9 | 1156.1 | 1150.0 |
| 162.5° | 1164.8 | 1159.6 | 1164.0 | 1170.0 | 1162.2 |
| 165°   | 1177.0 | 1171.8 | 1174.4 | 1180.5 | 1174.4 |
| 167.5° | 1186.6 | 1181.3 | 1183.9 | 1190.0 | 1182.2 |
| 170°   | 1194.4 | 1189.2 | 1190.9 | 1197.0 | 1189.2 |
| 172.5° | 1199.6 | 1194.4 | 1196.1 | 1202.2 | 1194.4 |
| 175°   | 1203.9 | 1197.9 | 1199.6 | 1205.7 | 1197.0 |
| 177.5° | 1205.7 | 1199.6 | 1200.5 | 1206.5 | 1198.7 |
| 180°   | 1201.3 | 1201.3 | 1201.3 | 1201.3 | 1201.3 |

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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 | 15.68            | 16.53 | 16.65 | 17.52 | 18.80 | 16.46          | 17.32 | 17.43 | 18.30 | 19.59 |
|                 | 3H   | 17.02            | 17.78 | 18.00 | 18.77 | 20.08 | 18.09          | 18.85 | 19.07 | 19.84 | 21.15 |
|                 | 4H   | 17.42            | 18.15 | 18.42 | 19.14 | 20.46 | 18.68          | 19.40 | 19.67 | 20.40 | 21.72 |
|                 | 6H   | 17.64            | 18.31 | 18.65 | 19.31 | 20.64 | 19.08          | 19.75 | 20.09 | 20.75 | 22.08 |
|                 | 8H   | 17.67            | 18.31 | 18.68 | 19.32 | 20.65 | 19.19          | 19.83 | 20.20 | 20.84 | 22.17 |
|                 | 12H  | 17.66            | 18.27 | 18.68 | 19.28 | 20.63 | 19.24          | 19.84 | 20.25 | 20.85 | 22.20 |
| 4H              | 2H   | 16.15            | 16.87 | 17.15 | 17.87 | 19.19 | 16.79          | 17.52 | 17.79 | 18.51 | 19.83 |
|                 | 3H   | 17.67            | 18.27 | 18.67 | 19.29 | 20.63 | 18.57          | 19.18 | 19.58 | 20.20 | 21.53 |
|                 | 4H   | 18.17            | 18.72 | 19.19 | 19.74 | 21.10 | 19.25          | 19.81 | 20.27 | 20.82 | 22.18 |
|                 | 6H   | 18.47            | 18.95 | 19.50 | 19.99 | 21.34 | 19.75          | 20.22 | 20.78 | 21.26 | 22.62 |
|                 | 8H   | 18.53            | 18.97 | 19.56 | 20.01 | 21.37 | 19.89          | 20.34 | 20.92 | 21.37 | 22.73 |
|                 | 12H  | 18.53            | 18.93 | 19.58 | 19.98 | 21.35 | 19.95          | 20.35 | 21.00 | 21.40 | 22.77 |
| 8H              | 4H   | 18.35            | 18.79 | 19.37 | 19.82 | 21.19 | 19.34          | 19.78 | 20.37 | 20.81 | 22.18 |
|                 | 6H   | 18.73            | 19.10 | 19.78 | 20.17 | 21.54 | 19.91          | 20.27 | 20.96 | 21.35 | 22.71 |
|                 | 8H   | 18.83            | 19.16 | 19.89 | 20.21 | 21.60 | 20.10          | 20.42 | 21.15 | 21.48 | 22.86 |
|                 | 12H  | 18.86            | 19.15 | 19.93 | 20.20 | 21.63 | 20.19          | 20.48 | 21.26 | 21.53 | 22.96 |
| 12H             | 4H   | 18.33            | 18.73 | 19.37 | 19.78 | 21.15 | 19.30          | 19.70 | 20.35 | 20.75 | 22.12 |
|                 | 6H   | 18.75            | 19.07 | 19.81 | 20.13 | 21.51 | 19.90          | 20.22 | 20.96 | 21.28 | 22.66 |
|                 | 8H   | 18.86            | 19.14 | 19.92 | 20.20 | 21.62 | 20.09          | 20.38 | 21.16 | 21.43 | 22.86 |