

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: P998075

Luminaire Tested: SA2XXDIP-B1005D925UB50-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998075  
REPORT IS A COMBINATION OF REPORTS P983812 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B1005D925UB50-4F0-XX-W2A-D  
Description: Define 2 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

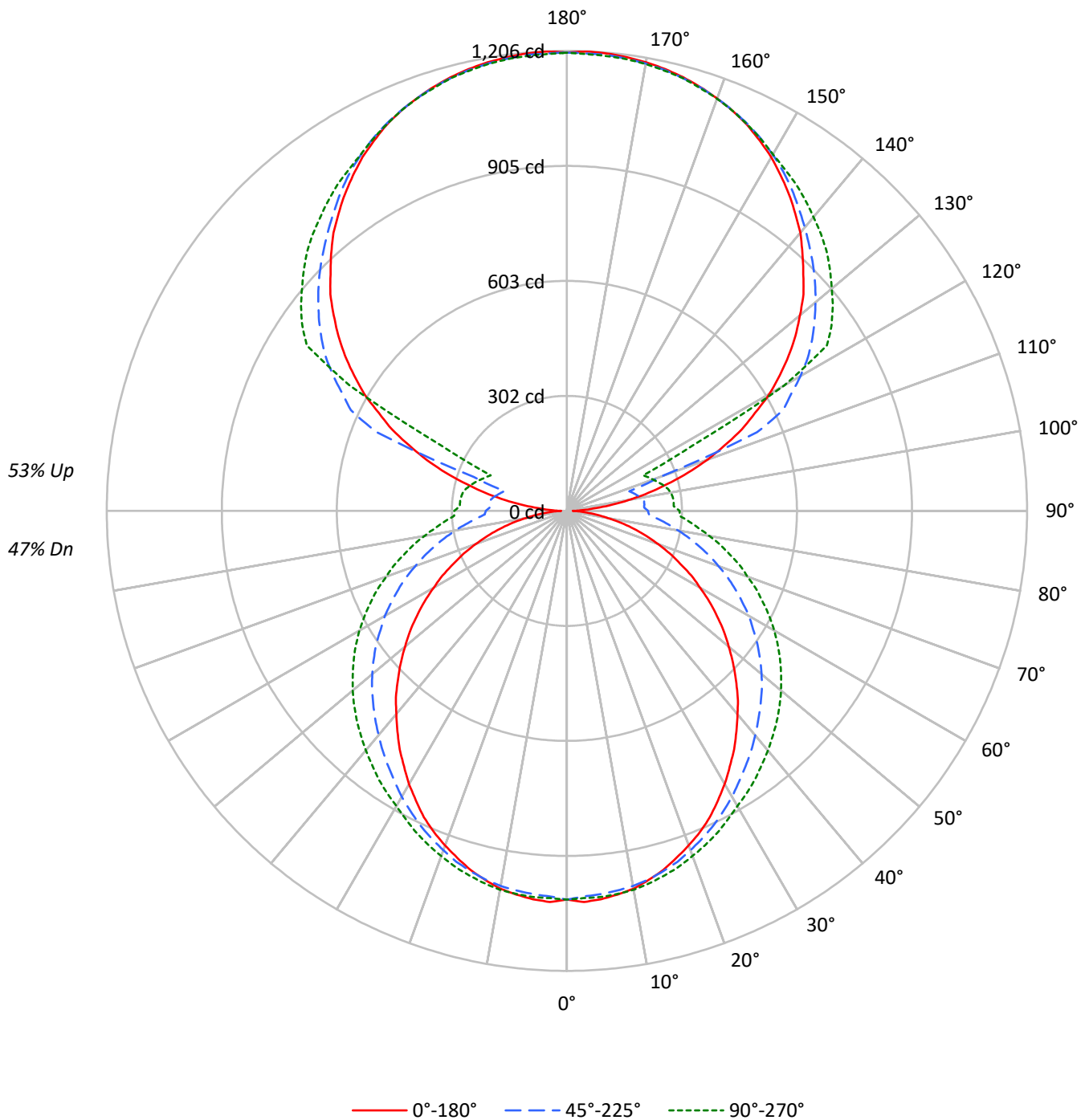
Lumens per Lamp: N/A  
Luminaire Lumens: 7412.0 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

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 |    |    |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 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 | 47 |    |    |
| 1   | 96  | 91  | 86  | 82  | 87 | 83 | 79 | 76 | 69 | 67 | 64 | 56 | 54 | 53 | 45 | 43 | 42 | 36 |    |    |
| 2   | 86  | 78  | 72  | 66  | 79 | 72 | 66 | 61 | 60 | 56 | 52 | 49 | 46 | 43 | 38 | 36 | 34 | 29 |    |    |
| 3   | 79  | 68  | 61  | 54  | 72 | 63 | 56 | 51 | 52 | 47 | 43 | 43 | 39 | 36 | 34 | 31 | 29 | 24 |    |    |
| 4   | 72  | 60  | 52  | 46  | 65 | 55 | 48 | 42 | 46 | 41 | 36 | 38 | 34 | 30 | 30 | 27 | 24 | 20 |    |    |
| 5   | 66  | 53  | 45  | 39  | 60 | 49 | 42 | 36 | 41 | 35 | 31 | 34 | 29 | 26 | 27 | 23 | 21 | 17 |    |    |
| 6   | 60  | 48  | 39  | 33  | 55 | 44 | 37 | 31 | 37 | 31 | 27 | 30 | 26 | 22 | 24 | 21 | 18 | 15 |    |    |
| 7   | 56  | 43  | 35  | 29  | 51 | 40 | 32 | 27 | 33 | 28 | 23 | 27 | 23 | 20 | 22 | 19 | 16 | 13 |    |    |
| 8   | 52  | 39  | 31  | 26  | 47 | 36 | 29 | 24 | 30 | 25 | 21 | 25 | 21 | 17 | 20 | 17 | 14 | 12 |    |    |
| 9   | 48  | 35  | 28  | 23  | 44 | 33 | 26 | 21 | 28 | 22 | 18 | 23 | 19 | 16 | 19 | 15 | 13 | 11 |    |    |
| 10  | 45  | 32  | 25  | 20  | 41 | 30 | 23 | 19 | 26 | 20 | 16 | 21 | 17 | 14 | 17 | 14 | 12 | 10 |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16130 | 16130 | 16130 |
| 5°  | 16202 | 15441 | 15354 |
| 10° | 16094 | 14906 | 14688 |
| 15° | 15867 | 14353 | 14006 |
| 20° | 15580 | 13772 | 13358 |
| 25° | 15298 | 13216 | 12771 |
| 30° | 14901 | 12651 | 12190 |
| 35° | 14500 | 12105 | 11764 |
| 40° | 14078 | 11634 | 11339 |
| 45° | 13674 | 11207 | 10970 |
| 50° | 13243 | 10813 | 10604 |
| 55° | 12787 | 10395 | 10233 |
| 60° | 12235 | 9958  | 9842  |
| 65° | 11653 | 9457  | 9392  |
| 70° | 11000 | 8921  | 8909  |
| 75° | 10159 | 8383  | 8452  |
| 80° | 8846  | 7821  | 7978  |
| 85° | 7515  | 7294  | 7570  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13674 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.6   | 1.3       |
| 10°-20°   | 277.0  | 3.7       |
| 20°-30°   | 419.8  | 5.7       |
| 30°-40°   | 511.2  | 6.9       |
| 40°-50°   | 550.0  | 7.4       |
| 50°-60°   | 534.1  | 7.2       |
| 60°-70°   | 466.4  | 6.3       |
| 70°-80°   | 359.0  | 4.8       |
| 80°-90°   | 242.6  | 3.3       |
| 90°-100°  | 205.5  | 2.8       |
| 100°-110° | 268.8  | 3.6       |
| 110°-120° | 471.6  | 6.4       |
| 120°-130° | 694.1  | 9.4       |
| 130°-140° | 708.7  | 9.6       |
| 140°-150° | 644.4  | 8.7       |
| 150°-160° | 515.6  | 7.0       |
| 160°-170° | 332.2  | 4.5       |
| 170°-180° | 114.3  | 1.5       |
| 0°-30°    | 793.4  | 10.7      |
| 0°-40°    | 1304.6 | 17.6      |
| 0°-60°    | 2388.7 | 32.2      |
| 0°-90°    | 3456.7 | 46.6      |
| 90°-120°  | 945.9  | 12.8      |
| 90°-150°  | 2993.2 | 40.4      |
| 90°-180°  | 3955.0 | 53.4      |
| 0°-180°   | 7412.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1019 | 1019  | 1019 | 1019  | 1019 |      |
| 5°   | 1022 | 1018  | 1009 | 1018  | 1016 | 97   |
| 15°  | 975  | 978   | 978  | 991   | 989  | 275  |
| 25°  | 886  | 896   | 910  | 927   | 932  | 407  |
| 35°  | 764  | 789   | 817  | 849   | 860  | 477  |
| 45°  | 626  | 666   | 718  | 764   | 778  | 483  |
| 55°  | 480  | 533   | 610  | 663   | 682  | 429  |
| 65°  | 328  | 400   | 487  | 548   | 567  | 326  |
| 75°  | 182  | 264   | 359  | 422   | 442  | 192  |
| 85°  | 53   | 145   | 239  | 301   | 322  | 56   |
| 90°  | 16   | 111   | 212  | 276   | 295  | 14   |
| 95°  | 68   | 109   | 204  | 264   | 281  | 76   |
| 105° | 272  | 340   | 180  | 241   | 261  | 291  |
| 115° | 506  | 537   | 625  | 267   | 220  | 497  |
| 125° | 710  | 721   | 785  | 831   | 847  | 633  |
| 135° | 876  | 890   | 912  | 952   | 962  | 677  |
| 145° | 1014 | 1014  | 1028 | 1043  | 1046 | 635  |
| 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°     | 1019.0 | 1019.0 | 1019.0 | 1019.0 | 1019.0 |
| 2.5°   | 1026.3 | 1021.9 | 1011.6 | 1019.0 | 1016.0 |
| 5°     | 1021.9 | 1017.5 | 1008.6 | 1017.5 | 1016.0 |
| 7.5°   | 1014.5 | 1011.6 | 1004.2 | 1014.5 | 1013.1 |
| 10°    | 1005.7 | 1002.7 | 998.3  | 1010.1 | 1008.6 |
| 12.5°  | 990.9  | 992.4  | 989.4  | 1001.2 | 999.8  |
| 15°    | 974.7  | 977.6  | 977.6  | 990.9  | 989.4  |
| 17.5°  | 954.0  | 959.9  | 964.3  | 977.6  | 977.6  |
| 20°    | 933.3  | 940.7  | 946.6  | 962.8  | 962.8  |
| 22.5°  | 911.2  | 920.0  | 928.9  | 945.1  | 948.1  |
| 25°    | 886.1  | 896.4  | 909.7  | 927.4  | 931.8  |
| 27.5°  | 856.5  | 872.8  | 887.5  | 909.7  | 912.6  |
| 30°    | 827.0  | 846.2  | 865.4  | 889.0  | 893.4  |
| 32.5°  | 794.5  | 816.6  | 840.3  | 868.3  | 877.2  |
| 35°    | 763.5  | 788.6  | 816.6  | 849.1  | 859.5  |
| 37.5°  | 729.5  | 757.6  | 793.0  | 828.5  | 838.8  |
| 40°    | 695.6  | 728.0  | 767.9  | 806.3  | 819.6  |
| 42.5°  | 663.1  | 695.6  | 742.8  | 785.6  | 798.9  |
| 45°    | 626.1  | 666.0  | 717.7  | 763.5  | 778.3  |
| 47.5°  | 590.7  | 633.5  | 692.6  | 739.9  | 756.1  |
| 50°    | 553.8  | 599.6  | 666.0  | 716.2  | 732.5  |
| 52.5°  | 518.3  | 567.1  | 638.0  | 689.6  | 707.4  |
| 55°    | 479.9  | 533.1  | 609.9  | 663.1  | 682.3  |
| 57.5°  | 443.0  | 502.1  | 578.9  | 636.5  | 655.7  |
| 60°    | 403.2  | 466.7  | 550.8  | 606.9  | 627.6  |
| 62.5°  | 367.7  | 434.2  | 518.3  | 578.9  | 598.1  |
| 65°    | 327.8  | 400.2  | 487.3  | 547.9  | 567.1  |
| 67.5°  | 292.4  | 367.7  | 456.3  | 516.9  | 537.5  |
| 70°    | 254.0  | 330.8  | 422.4  | 485.9  | 503.6  |
| 72.5°  | 218.6  | 298.3  | 391.3  | 453.4  | 475.5  |
| 75°    | 181.6  | 264.3  | 358.9  | 422.4  | 441.6  |
| 77.5°  | 146.2  | 231.9  | 327.8  | 391.3  | 412.0  |
| 80°    | 110.8  | 200.8  | 296.8  | 358.9  | 379.5  |
| 82.5°  | 81.2   | 169.8  | 267.3  | 329.3  | 348.5  |
| 85°    | 53.2   | 144.7  | 239.2  | 301.3  | 321.9  |
| 87.5°  | 32.5   | 121.1  | 215.6  | 276.2  | 295.4  |
| 90°    | 15.7   | 110.8  | 212.3  | 275.7  | 295.2  |
| 92.5°  | 35.0   | 109.9  | 202.5  | 261.8  | 280.5  |
| 95°    | 68.3   | 109.0  | 203.7  | 264.1  | 281.1  |
| 97.5°  | 112.0  | 104.2  | 203.8  | 261.0  | 279.7  |
| 100°   | 164.2  | 99.8   | 197.2  | 258.8  | 276.8  |
| 102.5° | 220.1  | 267.1  | 188.6  | 251.3  | 270.2  |
| 105°   | 271.7  | 340.5  | 180.0  | 241.3  | 261.0  |
| 107.5° | 333.4  | 390.5  | 171.5  | 231.2  | 250.9  |
| 110°   | 391.0  | 438.7  | 259.9  | 220.3  | 240.0  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 446.6  | 485.9  | 539.1  | 211.6  | 230.5  |
| 115°   | 505.7  | 536.8  | 624.9  | 266.8  | 220.5  |
| 117.5° | 555.5  | 584.7  | 661.6  | 581.6  | 368.5  |
| 120°   | 612.9  | 631.8  | 706.6  | 758.4  | 657.3  |
| 122.5° | 661.6  | 677.0  | 749.0  | 794.1  | 808.2  |
| 125°   | 709.7  | 721.0  | 784.7  | 830.7  | 846.6  |
| 127.5° | 754.9  | 765.6  | 818.4  | 864.1  | 878.3  |
| 130°   | 797.5  | 809.9  | 850.5  | 895.4  | 906.4  |
| 132.5° | 841.0  | 850.8  | 882.4  | 924.3  | 935.2  |
| 135°   | 876.0  | 889.9  | 912.4  | 952.2  | 962.3  |
| 137.5° | 914.2  | 924.7  | 940.8  | 977.5  | 985.2  |
| 140°   | 951.6  | 957.1  | 969.6  | 1001.1 | 1005.5 |
| 142.5° | 982.9  | 987.5  | 998.8  | 1023.4 | 1026.5 |
| 145°   | 1014.4 | 1013.6 | 1028.3 | 1043.3 | 1046.3 |
| 147.5° | 1043.1 | 1040.5 | 1055.3 | 1061.1 | 1062.1 |
| 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 | 14.56            | 15.43 | 15.53 | 16.43 | 17.74 | 17.63          | 18.51 | 18.61 | 19.50 | 20.82 |
|                 | 3H   | 16.02            | 16.81 | 17.00 | 17.82 | 19.15 | 20.22          | 21.01 | 21.21 | 22.02 | 23.35 |
|                 | 4H   | 16.49            | 17.25 | 17.49 | 18.26 | 19.60 | 21.47          | 22.23 | 22.47 | 23.24 | 24.58 |
|                 | 6H   | 16.78            | 17.48 | 17.79 | 18.49 | 19.85 | 22.77          | 23.47 | 23.78 | 24.48 | 25.84 |
|                 | 8H   | 16.84            | 17.50 | 17.85 | 18.53 | 19.89 | 23.43          | 24.10 | 24.45 | 25.13 | 26.48 |
|                 | 12H  | 16.85            | 17.49 | 17.87 | 18.51 | 19.89 | 24.16          | 24.79 | 25.18 | 25.82 | 27.20 |
| 4H              | 2H   | 15.61            | 16.36 | 16.61 | 17.37 | 18.71 | 17.96          | 18.72 | 18.97 | 19.73 | 21.07 |
|                 | 3H   | 17.32            | 17.96 | 18.33 | 18.99 | 20.35 | 20.76          | 21.39 | 21.77 | 22.43 | 23.79 |
|                 | 4H   | 17.94            | 18.53 | 18.96 | 19.56 | 20.94 | 22.17          | 22.76 | 23.19 | 23.79 | 25.17 |
|                 | 6H   | 18.36            | 18.87 | 19.39 | 19.92 | 21.29 | 23.64          | 24.15 | 24.67 | 25.21 | 26.58 |
|                 | 8H   | 18.46            | 18.95 | 19.50 | 19.99 | 21.38 | 24.40          | 24.88 | 25.43 | 25.92 | 27.31 |
|                 | 12H  | 18.51            | 18.95 | 19.56 | 20.01 | 21.40 | 25.23          | 25.67 | 26.28 | 26.73 | 28.12 |
| 8H              | 4H   | 18.73            | 19.21 | 19.76 | 20.26 | 21.65 | 22.32          | 22.80 | 23.35 | 23.84 | 25.23 |
|                 | 6H   | 19.36            | 19.77 | 20.42 | 20.85 | 22.24 | 23.95          | 24.35 | 25.00 | 25.44 | 26.82 |
|                 | 8H   | 19.59            | 19.94 | 20.65 | 21.01 | 22.42 | 24.84          | 25.20 | 25.90 | 26.27 | 27.67 |
|                 | 12H  | 19.72            | 20.04 | 20.79 | 21.10 | 22.55 | 25.83          | 26.15 | 26.90 | 27.22 | 28.66 |
| 12H             | 4H   | 18.93            | 19.37 | 19.98 | 20.43 | 21.82 | 22.29          | 22.73 | 23.34 | 23.79 | 25.19 |
|                 | 6H   | 19.70            | 20.06 | 20.76 | 21.13 | 22.53 | 23.97          | 24.33 | 25.03 | 25.40 | 26.81 |
|                 | 8H   | 20.00            | 20.32 | 21.07 | 21.39 | 22.83 | 24.90          | 25.22 | 25.97 | 26.29 | 27.73 |