

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: P997981

Luminaire Tested: SA2XXDIP-B1005D725UB2750-4F0-XX-W2A-F\_3000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P997981  
REPORT IS A COMBINATION OF REPORTS P983718 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B1005D725UB2750-4F0-XX-W2A-F\_3000K  
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

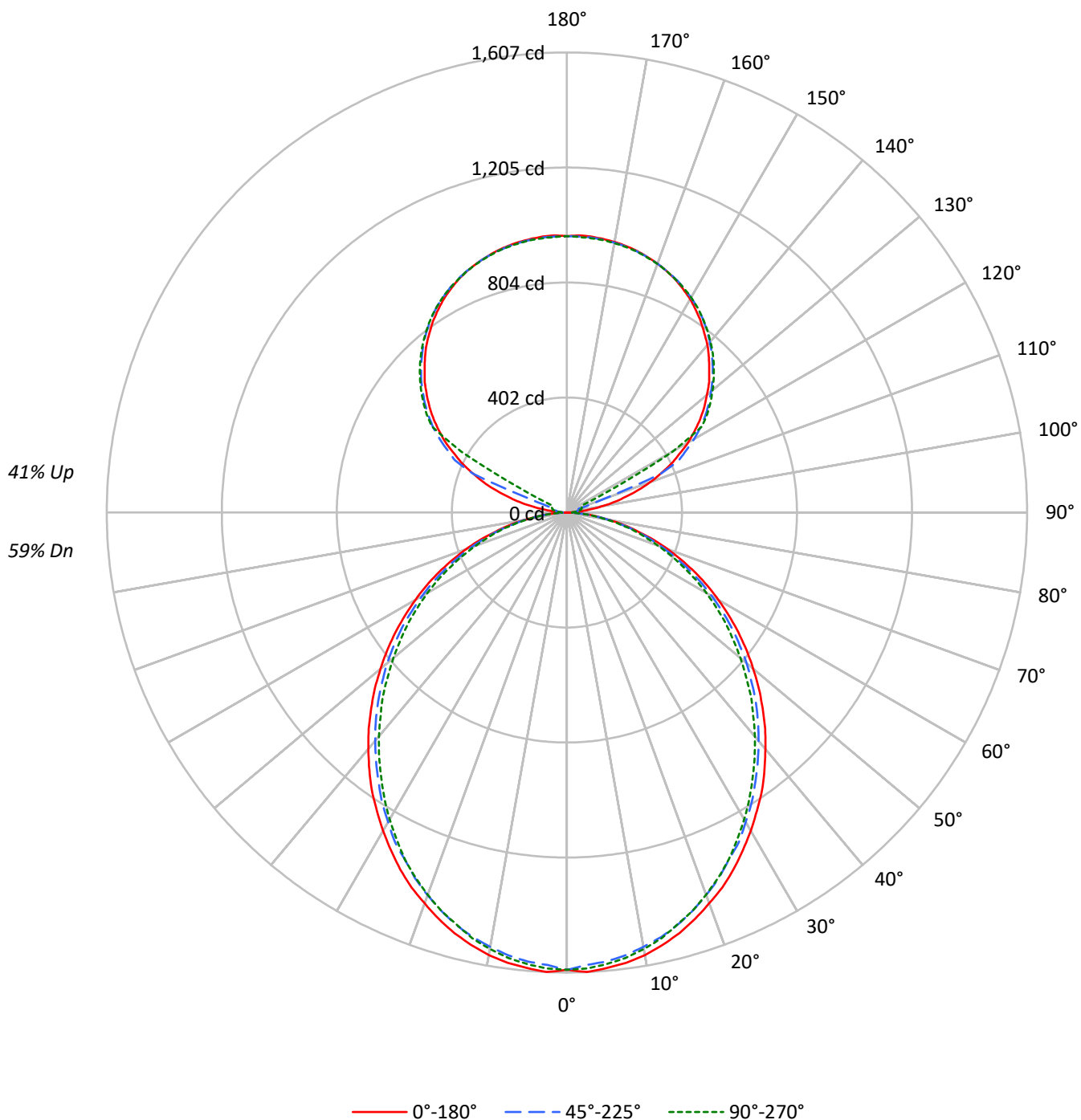
Lumens per Lamp: N/A  
Luminaire Lumens: 6896.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 82.4  
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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 76 | 76 | 76 | 64 | 64 | 64 |
| 1   | 100 | 95  | 91  | 88  | 93  | 89  | 86  | 83  | 78 | 75 | 73 | 67 | 65 | 63 | 57 | 56 | 54 |
| 2   | 91  | 83  | 77  | 72  | 85  | 78  | 73  | 68  | 68 | 64 | 60 | 59 | 56 | 53 | 50 | 48 | 46 |
| 3   | 83  | 73  | 66  | 60  | 77  | 69  | 62  | 57  | 60 | 55 | 51 | 52 | 48 | 45 | 44 | 41 | 39 |
| 4   | 76  | 65  | 57  | 51  | 71  | 61  | 54  | 48  | 53 | 48 | 43 | 46 | 42 | 38 | 40 | 36 | 34 |
| 5   | 70  | 58  | 50  | 44  | 65  | 54  | 47  | 41  | 48 | 42 | 37 | 42 | 37 | 33 | 36 | 32 | 29 |
| 6   | 64  | 52  | 44  | 38  | 60  | 49  | 41  | 36  | 43 | 37 | 33 | 38 | 33 | 29 | 32 | 29 | 26 |
| 7   | 59  | 47  | 39  | 33  | 55  | 44  | 37  | 32  | 39 | 33 | 29 | 34 | 29 | 26 | 30 | 26 | 23 |
| 8   | 55  | 43  | 35  | 29  | 51  | 40  | 33  | 28  | 36 | 30 | 26 | 31 | 27 | 23 | 27 | 23 | 21 |
| 9   | 51  | 39  | 31  | 26  | 48  | 37  | 30  | 25  | 33 | 27 | 23 | 29 | 24 | 21 | 25 | 21 | 19 |
| 10  | 48  | 36  | 29  | 24  | 45  | 34  | 27  | 23  | 30 | 25 | 21 | 27 | 22 | 19 | 23 | 20 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 25286 | 25286 | 25286 |
| 5°  | 25327 | 24101 | 23931 |
| 10° | 25120 | 23004 | 22546 |
| 15° | 24753 | 21896 | 21092 |
| 20° | 24255 | 20693 | 19713 |
| 25° | 23759 | 19436 | 18336 |
| 30° | 23137 | 18254 | 16892 |
| 35° | 22549 | 17008 | 15473 |
| 40° | 21822 | 15778 | 14131 |
| 45° | 21100 | 14558 | 12816 |
| 50° | 20312 | 13317 | 11451 |
| 55° | 19481 | 11990 | 10160 |
| 60° | 18550 | 10553 | 8816  |
| 65° | 17526 | 9093  | 7403  |
| 70° | 16232 | 7493  | 5978  |
| 75° | 14433 | 5777  | 4615  |
| 80° | 12263 | 3926  | 2971  |
| 85° | 8899  | 1826  | 1265  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 21100 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 150.3  | 2.2       |
| 10°-20°   | 423.0  | 6.1       |
| 20°-30°   | 621.6  | 9.0       |
| 30°-40°   | 722.0  | 10.5      |
| 40°-50°   | 721.1  | 10.5      |
| 50°-60°   | 628.8  | 9.1       |
| 60°-70°   | 464.8  | 6.7       |
| 70°-80°   | 263.0  | 3.8       |
| 80°-90°   | 71.1   | 1.0       |
| 90°-100°  | 31.8   | 0.5       |
| 100°-110° | 118.7  | 1.7       |
| 110°-120° | 314.7  | 4.6       |
| 120°-130° | 522.0  | 7.6       |
| 130°-140° | 554.5  | 8.0       |
| 140°-150° | 515.4  | 7.5       |
| 150°-160° | 414.3  | 6.0       |
| 160°-170° | 267.0  | 3.9       |
| 170°-180° | 91.9   | 1.3       |
| 0°-30°    | 1195.0 | 17.3      |
| 0°-40°    | 1917.0 | 27.8      |
| 0°-60°    | 3266.8 | 47.4      |
| 0°-90°    | 4065.7 | 59.0      |
| 90°-120°  | 465.3  | 6.7       |
| 90°-150°  | 2057.1 | 29.8      |
| 90°-180°  | 2830.0 | 41.0      |
| 0°-180°   | 6896.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1597 | 1597  | 1597 | 1597  | 1597 |      |
| 5°   | 1597 | 1591  | 1574 | 1587  | 1584 | 152  |
| 15°  | 1521 | 1511  | 1491 | 1498  | 1490 | 428  |
| 25°  | 1376 | 1364  | 1338 | 1341  | 1338 | 633  |
| 35°  | 1187 | 1172  | 1147 | 1138  | 1130 | 741  |
| 45°  | 966  | 955   | 932  | 915   | 909  | 746  |
| 55°  | 731  | 722   | 704  | 685   | 677  | 654  |
| 65°  | 493  | 484   | 468  | 455   | 447  | 487  |
| 75°  | 258  | 255   | 247  | 238   | 241  | 275  |
| 85°  | 63   | 61    | 60   | 55    | 54   | 70   |
| 90°  | 1    | 8     | 14   | 18    | 19   | 6    |
| 95°  | 45   | 22    | 27   | 31    | 30   | 54   |
| 105° | 212  | 233   | 43   | 50    | 53   | 227  |
| 115° | 402  | 414   | 431  | 108   | 57   | 395  |
| 125° | 568  | 577   | 590  | 595   | 597  | 507  |
| 135° | 703  | 714   | 720  | 727   | 726  | 543  |
| 145° | 815  | 814   | 826  | 831   | 828  | 510  |
| 155° | 898  | 891   | 900  | 904   | 898  | 414  |
| 165° | 946  | 942   | 944  | 949   | 944  | 267  |
| 175° | 968  | 963   | 964  | 969   | 962  | 92   |
| 180° | 965  | 965   | 965  | 965   | 965  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1597.4 | 1597.4 | 1597.4 | 1597.4 | 1597.4 |
| 2.5°   | 1606.6 | 1598.9 | 1582.0 | 1597.4 | 1594.3 |
| 5°     | 1597.4 | 1591.2 | 1574.3 | 1586.6 | 1583.6 |
| 7.5°   | 1586.6 | 1577.4 | 1560.5 | 1572.8 | 1569.7 |
| 10°    | 1569.7 | 1559.0 | 1540.6 | 1552.8 | 1548.2 |
| 12.5°  | 1546.7 | 1537.5 | 1519.1 | 1526.7 | 1523.7 |
| 15°    | 1520.6 | 1511.4 | 1491.4 | 1497.5 | 1489.9 |
| 17.5°  | 1488.3 | 1479.1 | 1459.1 | 1466.8 | 1459.1 |
| 20°    | 1453.0 | 1443.8 | 1422.3 | 1426.9 | 1420.8 |
| 22.5°  | 1417.7 | 1403.9 | 1383.9 | 1383.9 | 1380.8 |
| 25°    | 1376.2 | 1363.9 | 1337.8 | 1340.9 | 1337.8 |
| 27.5°  | 1330.1 | 1319.4 | 1299.4 | 1294.8 | 1287.1 |
| 30°    | 1284.1 | 1271.8 | 1248.7 | 1244.1 | 1238.0 |
| 32.5°  | 1234.9 | 1225.7 | 1201.1 | 1191.9 | 1185.8 |
| 35°    | 1187.3 | 1171.9 | 1147.4 | 1138.1 | 1130.5 |
| 37.5°  | 1133.5 | 1119.7 | 1095.1 | 1084.4 | 1076.7 |
| 40°    | 1078.2 | 1065.9 | 1041.4 | 1027.5 | 1021.4 |
| 42.5°  | 1024.5 | 1012.2 | 987.6  | 972.3  | 963.0  |
| 45°    | 966.1  | 955.4  | 932.3  | 915.4  | 909.3  |
| 47.5°  | 909.3  | 898.5  | 874.0  | 857.1  | 847.8  |
| 50°    | 849.4  | 841.7  | 820.2  | 798.7  | 791.0  |
| 52.5°  | 791.0  | 780.3  | 760.3  | 743.4  | 732.6  |
| 55°    | 731.1  | 721.9  | 703.5  | 685.0  | 677.4  |
| 57.5°  | 671.2  | 663.5  | 643.6  | 625.1  | 619.0  |
| 60°    | 611.3  | 605.2  | 583.7  | 566.8  | 562.2  |
| 62.5°  | 552.9  | 542.2  | 526.8  | 511.5  | 505.3  |
| 65°    | 493.0  | 483.8  | 468.5  | 454.6  | 447.0  |
| 67.5°  | 431.6  | 423.9  | 410.1  | 399.3  | 393.2  |
| 70°    | 374.8  | 368.6  | 354.8  | 344.1  | 337.9  |
| 72.5°  | 316.4  | 310.3  | 302.6  | 291.8  | 287.2  |
| 75°    | 258.0  | 255.0  | 247.3  | 238.1  | 241.1  |
| 77.5°  | 205.8  | 199.7  | 196.6  | 192.0  | 187.4  |
| 80°    | 153.6  | 152.1  | 149.0  | 144.4  | 141.3  |
| 82.5°  | 104.4  | 104.4  | 102.9  | 96.8   | 96.8   |
| 85°    | 63.0   | 61.4   | 59.9   | 55.3   | 53.8   |
| 87.5°  | 27.6   | 24.6   | 21.5   | 16.9   | 15.4   |
| 90°    | 0.7    | 8.4    | 14.0   | 17.5   | 18.9   |
| 92.5°  | 17.5   | 14.7   | 16.8   | 18.2   | 18.9   |
| 95°    | 45.4   | 22.4   | 27.2   | 30.7   | 30.0   |
| 97.5°  | 81.7   | 24.5   | 35.6   | 37.7   | 38.4   |
| 100°   | 123.6  | 27.9   | 39.8   | 45.4   | 46.8   |
| 102.5° | 169.8  | 168.4  | 41.2   | 48.9   | 51.0   |
| 105°   | 212.4  | 233.3  | 42.6   | 50.3   | 53.1   |
| 107.5° | 262.0  | 279.4  | 44.0   | 51.7   | 54.5   |
| 110°   | 309.5  | 324.1  | 122.3  | 52.4   | 55.2   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 354.2 | 366.8 | 354.9 | 53.8  | 55.9  |
| 115°   | 401.7 | 413.6 | 431.0 | 107.6 | 57.3  |
| 117.5° | 442.9 | 456.9 | 468.7 | 368.8 | 185.8 |
| 120°   | 489.0 | 499.5 | 512.1 | 520.4 | 426.1 |
| 122.5° | 528.1 | 539.3 | 553.3 | 557.5 | 558.2 |
| 125°   | 567.9 | 577.0 | 590.3 | 595.2 | 597.3 |
| 127.5° | 604.3 | 614.0 | 624.5 | 631.5 | 632.2 |
| 130°   | 638.5 | 649.7 | 657.4 | 665.0 | 664.3 |
| 132.5° | 673.4 | 682.5 | 690.2 | 696.5 | 695.8 |
| 135°   | 702.8 | 713.9 | 720.2 | 727.2 | 725.8 |
| 137.5° | 733.5 | 741.9 | 748.9 | 755.9 | 753.8 |
| 140°   | 763.5 | 769.1 | 776.8 | 783.1 | 779.6 |
| 142.5° | 788.7 | 793.6 | 802.7 | 808.3 | 804.8 |
| 145°   | 815.2 | 814.5 | 826.4 | 831.3 | 827.8 |
| 147.5° | 838.3 | 836.2 | 848.1 | 851.6 | 848.8 |
| 150°   | 860.6 | 855.8 | 866.9 | 871.1 | 867.6 |
| 152.5° | 879.5 | 873.9 | 884.4 | 888.6 | 883.7 |
| 155°   | 897.7 | 891.4 | 899.8 | 904.0 | 898.4 |
| 157.5° | 912.3 | 906.7 | 913.0 | 917.9 | 912.3 |
| 160°   | 924.9 | 920.7 | 924.9 | 929.1 | 924.2 |
| 162.5° | 936.1 | 931.9 | 935.4 | 940.3 | 934.0 |
| 165°   | 945.9 | 941.7 | 943.8 | 948.7 | 943.8 |
| 167.5° | 953.6 | 949.4 | 951.5 | 956.3 | 950.1 |
| 170°   | 959.8 | 955.6 | 957.0 | 961.9 | 955.6 |
| 172.5° | 964.0 | 959.8 | 961.2 | 966.1 | 959.8 |
| 175°   | 967.5 | 962.6 | 964.0 | 968.9 | 961.9 |
| 177.5° | 968.9 | 964.0 | 964.7 | 969.6 | 963.3 |
| 180°   | 965.4 | 965.4 | 965.4 | 965.4 | 965.4 |

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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 | 17.25            | 18.19 | 18.12 | 19.09 | 20.23 | 18.03          | 18.98 | 18.90 | 19.87 | 21.01 |
|                 | 3H   | 18.59            | 19.44 | 19.48 | 20.35 | 21.51 | 19.66          | 20.51 | 20.55 | 21.42 | 22.58 |
|                 | 4H   | 19.00            | 19.80 | 19.90 | 20.72 | 21.89 | 20.26          | 21.06 | 21.16 | 21.97 | 23.15 |
|                 | 6H   | 19.22            | 19.97 | 20.14 | 20.88 | 22.07 | 20.67          | 21.41 | 21.58 | 22.33 | 23.51 |
|                 | 8H   | 19.26            | 19.96 | 20.18 | 20.90 | 22.08 | 20.78          | 21.48 | 21.70 | 22.42 | 23.60 |
|                 | 12H  | 19.25            | 19.92 | 20.18 | 20.85 | 22.06 | 20.82          | 21.50 | 21.75 | 22.43 | 23.64 |
| 4H              | 2H   | 17.73            | 18.53 | 18.64 | 19.44 | 20.62 | 18.37          | 19.17 | 19.28 | 20.09 | 21.26 |
|                 | 3H   | 19.25            | 19.92 | 20.17 | 20.87 | 22.05 | 20.16          | 20.83 | 21.08 | 21.77 | 22.96 |
|                 | 4H   | 19.76            | 20.37 | 20.69 | 21.31 | 22.53 | 20.84          | 21.46 | 21.77 | 22.39 | 23.61 |
|                 | 6H   | 20.07            | 20.60 | 21.01 | 21.56 | 22.77 | 21.34          | 21.87 | 22.29 | 22.84 | 24.05 |
|                 | 8H   | 20.13            | 20.62 | 21.07 | 21.58 | 22.81 | 21.49          | 21.98 | 22.44 | 22.94 | 24.17 |
|                 | 12H  | 20.13            | 20.58 | 21.10 | 21.55 | 22.78 | 21.55          | 22.00 | 22.52 | 22.97 | 24.21 |
| 8H              | 4H   | 19.94            | 20.44 | 20.89 | 21.39 | 22.62 | 20.94          | 21.43 | 21.88 | 22.39 | 23.61 |
|                 | 6H   | 20.33            | 20.74 | 21.30 | 21.74 | 22.96 | 21.51          | 21.92 | 22.48 | 22.92 | 24.14 |
|                 | 8H   | 20.43            | 20.80 | 21.42 | 21.78 | 23.03 | 21.70          | 22.06 | 22.68 | 23.05 | 24.29 |
|                 | 12H  | 20.47            | 20.79 | 21.46 | 21.77 | 23.06 | 21.80          | 22.12 | 22.79 | 23.10 | 24.39 |
| 12H             | 4H   | 19.93            | 20.38 | 20.90 | 21.35 | 22.58 | 20.90          | 21.35 | 21.87 | 22.32 | 23.56 |
|                 | 6H   | 20.35            | 20.71 | 21.33 | 21.70 | 22.94 | 21.50          | 21.86 | 22.48 | 22.85 | 24.09 |
|                 | 8H   | 20.47            | 20.78 | 21.45 | 21.77 | 23.06 | 21.70          | 22.02 | 22.69 | 23.00 | 24.29 |