

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: P999263

Luminaire Tested: SA2XXDIP-B865D925UB50-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999263  
REPORT IS A COMBINATION OF REPORTS P985012 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B865D925UB50-4F0-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**

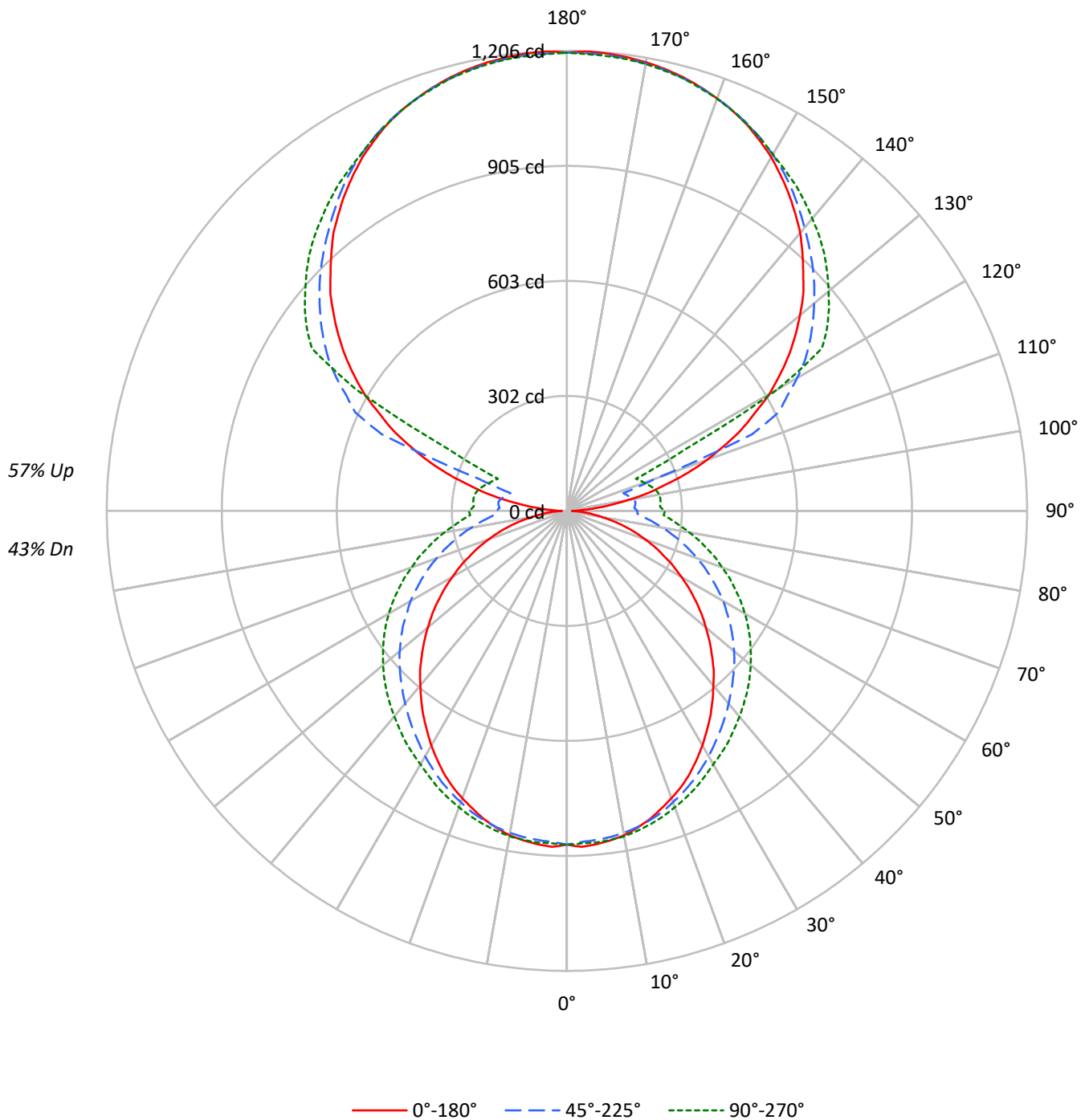
Lumens per Lamp: N/A  
Luminaire Lumens: 6863.0 lumens  
Efficiency: N/A  
Efficacy: 91.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 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 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 106 | 106 | 106 | 106 | 96 | 96 | 96 | 96 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 |
| 1   | 95  | 90  | 86  | 82  | 86 | 82 | 79 | 75 | 68 | 65 | 63 | 54 | 52 | 51 | 42 | 41 | 40 |
| 2   | 86  | 78  | 71  | 66  | 78 | 71 | 66 | 61 | 59 | 54 | 51 | 47 | 44 | 41 | 36 | 34 | 32 |
| 3   | 78  | 68  | 60  | 54  | 71 | 62 | 55 | 50 | 51 | 46 | 42 | 41 | 37 | 34 | 32 | 29 | 27 |
| 4   | 71  | 60  | 52  | 45  | 65 | 55 | 48 | 42 | 45 | 40 | 35 | 36 | 32 | 29 | 28 | 25 | 23 |
| 5   | 65  | 53  | 45  | 39  | 59 | 49 | 41 | 36 | 40 | 35 | 30 | 32 | 28 | 25 | 25 | 22 | 20 |
| 6   | 60  | 47  | 39  | 33  | 54 | 44 | 36 | 31 | 36 | 30 | 26 | 29 | 25 | 22 | 23 | 20 | 17 |
| 7   | 55  | 43  | 35  | 29  | 50 | 39 | 32 | 27 | 33 | 27 | 23 | 26 | 22 | 19 | 21 | 18 | 15 |
| 8   | 51  | 39  | 31  | 25  | 47 | 36 | 29 | 24 | 30 | 24 | 20 | 24 | 20 | 17 | 19 | 16 | 13 |
| 9   | 48  | 35  | 28  | 22  | 43 | 32 | 26 | 21 | 27 | 22 | 18 | 22 | 18 | 15 | 17 | 14 | 12 |
| 10  | 44  | 32  | 25  | 20  | 40 | 30 | 23 | 19 | 25 | 20 | 16 | 20 | 16 | 13 | 16 | 13 | 11 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13852 | 13852 | 13852 |
| 5°  | 13914 | 13261 | 13185 |
| 10° | 13822 | 12801 | 12614 |
| 15° | 13625 | 12327 | 12029 |
| 20° | 13380 | 11827 | 11473 |
| 25° | 13136 | 11349 | 10969 |
| 30° | 12796 | 10864 | 10469 |
| 35° | 12453 | 10396 | 10102 |
| 40° | 12089 | 9992  | 9738  |
| 45° | 11743 | 9625  | 9421  |
| 50° | 11373 | 9287  | 9106  |
| 55° | 10984 | 8927  | 8787  |
| 60° | 10505 | 8554  | 8452  |
| 65° | 10007 | 8122  | 8066  |
| 70° | 9445  | 7660  | 7651  |
| 75° | 8727  | 7199  | 7258  |
| 80° | 7593  | 6717  | 6851  |
| 85° | 6455  | 6266  | 6502  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 11743 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.0   | 1.2       |
| 10°-20°   | 237.9  | 3.5       |
| 20°-30°   | 360.5  | 5.3       |
| 30°-40°   | 439.0  | 6.4       |
| 40°-50°   | 472.3  | 6.9       |
| 50°-60°   | 458.7  | 6.7       |
| 60°-70°   | 400.6  | 5.8       |
| 70°-80°   | 308.3  | 4.5       |
| 80°-90°   | 208.6  | 3.0       |
| 90°-100°  | 182.1  | 2.7       |
| 100°-110° | 251.7  | 3.7       |
| 110°-120° | 460.3  | 6.7       |
| 120°-130° | 687.8  | 10.0      |
| 130°-140° | 706.1  | 10.3      |
| 140°-150° | 644.0  | 9.4       |
| 150°-160° | 515.6  | 7.5       |
| 160°-170° | 332.2  | 4.8       |
| 170°-180° | 114.3  | 1.7       |
| <hr/>     |        |           |
| 0°-30°    | 681.4  | 9.9       |
| 0°-40°    | 1120.4 | 16.3      |
| 0°-60°    | 2051.4 | 29.9      |
| 0°-90°    | 2968.9 | 43.3      |
| 90°-120°  | 894.1  | 13.0      |
| 90°-150°  | 2932.0 | 42.7      |
| 90°-180°  | 3894.0 | 56.7      |
| 0°-180°   | 6863.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 875  | 875   | 875  | 875   | 875  |      |
| 5°   | 878  | 874   | 866  | 874   | 872  | 83   |
| 15°  | 837  | 840   | 840  | 851   | 850  | 236  |
| 25°  | 761  | 770   | 781  | 796   | 800  | 350  |
| 35°  | 656  | 677   | 701  | 729   | 738  | 410  |
| 45°  | 538  | 572   | 616  | 656   | 668  | 415  |
| 55°  | 412  | 458   | 524  | 569   | 586  | 369  |
| 65°  | 282  | 344   | 418  | 470   | 487  | 280  |
| 75°  | 156  | 227   | 308  | 363   | 379  | 165  |
| 85°  | 46   | 124   | 206  | 259   | 276  | 48   |
| 90°  | 14   | 97    | 185  | 240   | 257  | 12   |
| 95°  | 67   | 98    | 180  | 232   | 247  | 75   |
| 105° | 271  | 333   | 162  | 216   | 234  | 290  |
| 115° | 505  | 534   | 612  | 248   | 199  | 497  |
| 125° | 709  | 720   | 778  | 818   | 832  | 633  |
| 135° | 876  | 890   | 910  | 946   | 954  | 677  |
| 145° | 1014 | 1014  | 1028 | 1042  | 1044 | 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°     | 875.1 | 875.1 | 875.1 | 875.1 | 875.1 |
| 2.5°   | 881.4 | 877.6 | 868.7 | 875.1 | 872.5 |
| 5°     | 877.6 | 873.8 | 866.2 | 873.8 | 872.5 |
| 7.5°   | 871.3 | 868.7 | 862.4 | 871.3 | 870.0 |
| 10°    | 863.7 | 861.1 | 857.3 | 867.5 | 866.2 |
| 12.5°  | 851.0 | 852.3 | 849.7 | 859.9 | 858.6 |
| 15°    | 837.0 | 839.6 | 839.6 | 851.0 | 849.7 |
| 17.5°  | 819.3 | 824.4 | 828.2 | 839.6 | 839.6 |
| 20°    | 801.5 | 807.9 | 812.9 | 826.9 | 826.9 |
| 22.5°  | 782.5 | 790.1 | 797.7 | 811.7 | 814.2 |
| 25°    | 760.9 | 769.8 | 781.2 | 796.5 | 800.3 |
| 27.5°  | 735.6 | 749.5 | 762.2 | 781.2 | 783.8 |
| 30°    | 710.2 | 726.7 | 743.2 | 763.5 | 767.3 |
| 32.5°  | 682.3 | 701.3 | 721.6 | 745.7 | 753.3 |
| 35°    | 655.7 | 677.2 | 701.3 | 729.2 | 738.1 |
| 37.5°  | 626.5 | 650.6 | 681.0 | 711.5 | 720.4 |
| 40°    | 597.3 | 625.2 | 659.5 | 692.5 | 703.9 |
| 42.5°  | 569.4 | 597.3 | 637.9 | 674.7 | 686.1 |
| 45°    | 537.7 | 572.0 | 616.4 | 655.7 | 668.4 |
| 47.5°  | 507.3 | 544.1 | 594.8 | 635.4 | 649.3 |
| 50°    | 475.6 | 514.9 | 572.0 | 615.1 | 629.0 |
| 52.5°  | 445.1 | 487.0 | 547.9 | 592.3 | 607.5 |
| 55°    | 412.2 | 457.8 | 523.8 | 569.4 | 585.9 |
| 57.5°  | 380.5 | 431.2 | 497.1 | 546.6 | 563.1 |
| 60°    | 346.2 | 400.8 | 473.1 | 521.2 | 539.0 |
| 62.5°  | 315.8 | 372.9 | 445.1 | 497.1 | 513.6 |
| 65°    | 281.5 | 343.7 | 418.5 | 470.5 | 487.0 |
| 67.5°  | 251.1 | 315.8 | 391.9 | 443.9 | 461.6 |
| 70°    | 218.1 | 284.1 | 362.7 | 417.2 | 432.5 |
| 72.5°  | 187.7 | 256.2 | 336.1 | 389.3 | 408.4 |
| 75°    | 156.0 | 227.0 | 308.2 | 362.7 | 379.2 |
| 77.5°  | 125.6 | 199.1 | 281.5 | 336.1 | 353.8 |
| 80°    | 95.1  | 172.5 | 254.9 | 308.2 | 325.9 |
| 82.5°  | 69.8  | 145.8 | 229.6 | 282.8 | 299.3 |
| 85°    | 45.7  | 124.3 | 205.5 | 258.7 | 276.5 |
| 87.5°  | 27.9  | 104.0 | 185.2 | 237.2 | 253.6 |
| 90°    | 13.6  | 96.6  | 184.8 | 239.8 | 256.9 |
| 92.5°  | 33.1  | 96.9  | 176.9 | 228.1 | 244.2 |
| 95°    | 66.6  | 97.6  | 179.7 | 232.2 | 246.7 |
| 97.5°  | 110.6 | 93.8  | 181.3 | 230.8 | 246.9 |
| 100°   | 162.8 | 90.6  | 176.3 | 230.2 | 245.9 |
| 102.5° | 218.8 | 259.0 | 169.2 | 224.4 | 241.1 |
| 105°   | 270.6 | 333.4 | 162.1 | 216.1 | 233.5 |
| 107.5° | 332.3 | 384.5 | 155.0 | 207.6 | 225.1 |
| 110°   | 390.2 | 433.7 | 244.7 | 198.4 | 215.8 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 445.8  | 481.8  | 525.3  | 191.2  | 207.7  |
| 115°   | 504.9  | 533.6  | 612.4  | 248.0  | 199.4  |
| 117.5° | 554.9  | 582.5  | 650.5  | 564.3  | 349.1  |
| 120°   | 612.3  | 630.4  | 696.8  | 742.7  | 639.4  |
| 122.5° | 661.0  | 676.2  | 740.5  | 779.9  | 792.2  |
| 125°   | 709.2  | 720.5  | 777.6  | 818.0  | 832.0  |
| 127.5° | 754.4  | 765.4  | 812.6  | 853.0  | 865.3  |
| 130°   | 797.0  | 809.7  | 845.9  | 885.8  | 895.2  |
| 132.5° | 840.5  | 850.6  | 879.1  | 916.2  | 925.4  |
| 135°   | 875.8  | 889.7  | 910.2  | 945.5  | 953.9  |
| 137.5° | 914.0  | 924.5  | 939.5  | 972.3  | 978.5  |
| 140°   | 951.4  | 957.1  | 969.1  | 997.3  | 1000.5 |
| 142.5° | 982.7  | 987.5  | 998.8  | 1020.9 | 1023.0 |
| 145°   | 1014.4 | 1013.6 | 1028.3 | 1042.0 | 1044.1 |
| 147.5° | 1043.1 | 1040.5 | 1055.3 | 1060.9 | 1061.3 |
| 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 | 13.69            | 14.54 | 14.70 | 15.56 | 16.92 | 16.77          | 17.62 | 17.77 | 18.64 | 20.00 |
|                 | 3H   | 15.15            | 15.92 | 16.17 | 16.95 | 18.33 | 19.36          | 20.12 | 20.37 | 21.15 | 22.53 |
|                 | 4H   | 15.63            | 16.36 | 16.65 | 17.39 | 18.77 | 20.61          | 21.34 | 21.63 | 22.37 | 23.76 |
|                 | 6H   | 15.91            | 16.58 | 16.95 | 17.62 | 19.02 | 21.91          | 22.58 | 22.94 | 23.61 | 25.01 |
|                 | 8H   | 15.97            | 16.61 | 17.01 | 17.67 | 19.06 | 22.56          | 23.21 | 23.60 | 24.26 | 25.66 |
|                 | 12H  | 15.99            | 16.60 | 17.03 | 17.65 | 19.07 | 23.29          | 23.90 | 24.34 | 24.95 | 26.37 |
| 4H              | 2H   | 14.74            | 15.47 | 15.77 | 16.50 | 17.89 | 17.10          | 17.82 | 18.13 | 18.86 | 20.24 |
|                 | 3H   | 16.45            | 17.06 | 17.49 | 18.12 | 19.52 | 19.89          | 20.50 | 20.93 | 21.56 | 22.96 |
|                 | 4H   | 17.07            | 17.64 | 18.12 | 18.69 | 20.11 | 21.30          | 21.87 | 22.35 | 22.92 | 24.34 |
|                 | 6H   | 17.49            | 17.98 | 18.54 | 19.05 | 20.47 | 22.77          | 23.26 | 23.83 | 24.34 | 25.75 |
|                 | 8H   | 17.59            | 18.06 | 18.65 | 19.12 | 20.56 | 23.53          | 23.99 | 24.58 | 25.06 | 26.49 |
|                 | 12H  | 17.64            | 18.06 | 18.71 | 19.14 | 20.58 | 24.36          | 24.78 | 25.43 | 25.86 | 27.30 |
| 8H              | 4H   | 17.86            | 18.32 | 18.92 | 19.39 | 20.82 | 21.45          | 21.91 | 22.50 | 22.98 | 24.41 |
|                 | 6H   | 18.49            | 18.88 | 19.57 | 19.99 | 21.42 | 23.08          | 23.46 | 24.15 | 24.57 | 26.00 |
|                 | 8H   | 18.71            | 19.06 | 19.80 | 20.15 | 21.60 | 23.97          | 24.31 | 25.05 | 25.40 | 26.85 |
|                 | 12H  | 18.85            | 19.15 | 19.94 | 20.24 | 21.73 | 24.96          | 25.26 | 26.05 | 26.35 | 27.84 |
| 12H             | 4H   | 18.06            | 18.48 | 19.13 | 19.56 | 21.00 | 21.42          | 21.84 | 22.49 | 22.92 | 24.36 |
|                 | 6H   | 18.83            | 19.17 | 19.91 | 20.26 | 21.71 | 23.10          | 23.44 | 24.19 | 24.53 | 25.98 |
|                 | 8H   | 19.13            | 19.43 | 20.22 | 20.52 | 22.01 | 24.03          | 24.33 | 25.12 | 25.42 | 26.91 |