

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: P998642

Luminaire Tested: SA2XXDIP-B485D925UB30-4F0-XX-W2A-D

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998642  
REPORT IS A COMBINATION OF REPORTS P984385 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B485D925UB30-4F0-XX-W2A-D  
Description: Define 2 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

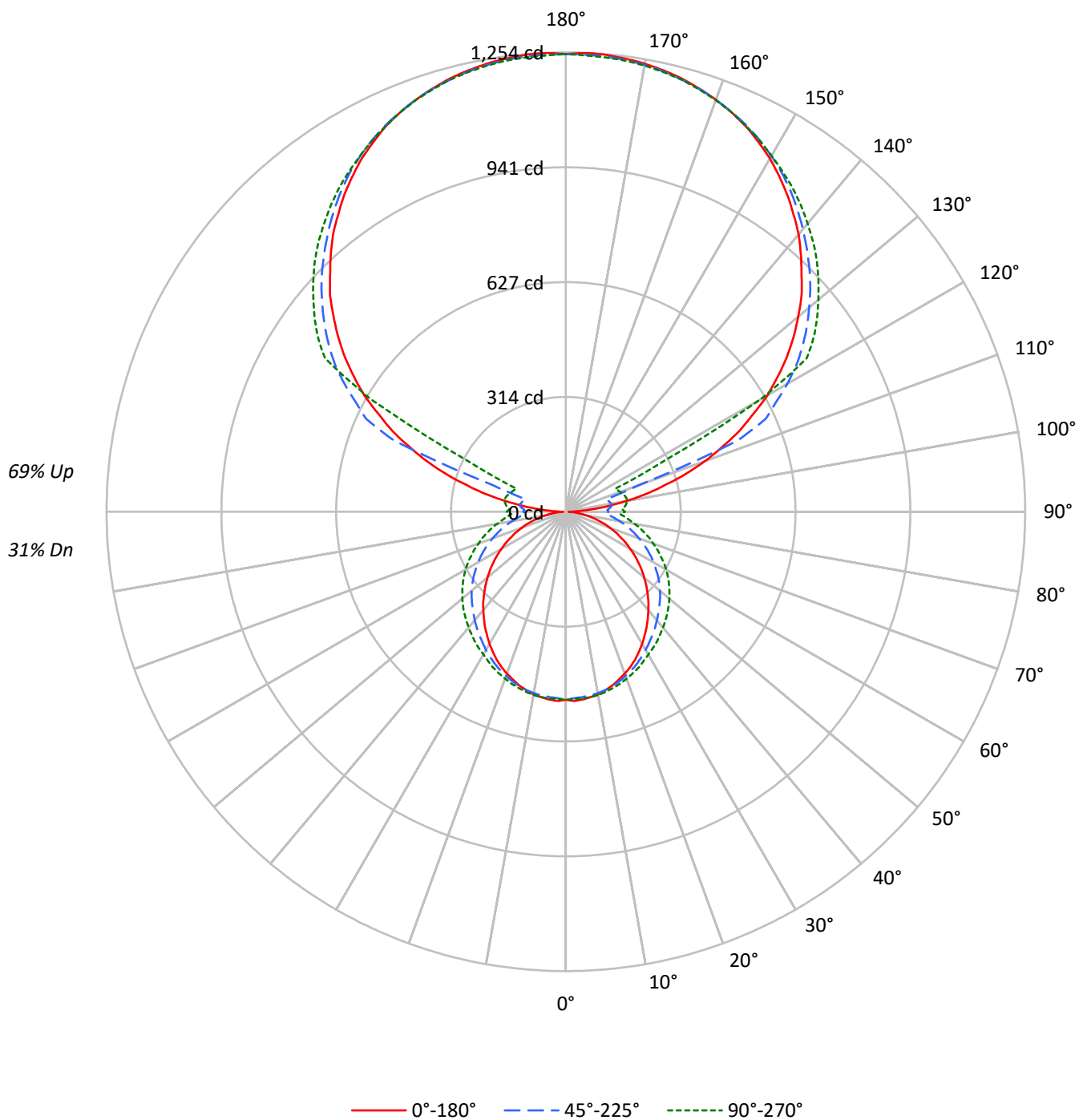
Lumens per Lamp: N/A  
Luminaire Lumens: 5623.0 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 52.5  
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   | 103 | 103 | 103 | 103 | 92 | 92 | 92 | 92 | 73 | 73 | 73 | 55 | 55 | 55 | 39 | 39 | 39 |
| 1   | 93  | 88  | 84  | 80  | 83 | 79 | 76 | 72 | 62 | 60 | 58 | 47 | 45 | 44 | 33 | 32 | 31 |
| 2   | 84  | 76  | 70  | 65  | 75 | 69 | 63 | 59 | 54 | 50 | 47 | 41 | 38 | 36 | 28 | 27 | 25 |
| 3   | 76  | 67  | 59  | 53  | 68 | 60 | 54 | 48 | 47 | 43 | 39 | 36 | 32 | 30 | 25 | 23 | 21 |
| 4   | 70  | 59  | 51  | 45  | 62 | 53 | 46 | 41 | 42 | 37 | 33 | 31 | 28 | 25 | 22 | 20 | 18 |
| 5   | 64  | 52  | 44  | 38  | 57 | 47 | 40 | 35 | 37 | 32 | 28 | 28 | 24 | 22 | 20 | 17 | 15 |
| 6   | 58  | 46  | 38  | 33  | 52 | 42 | 35 | 30 | 33 | 28 | 24 | 25 | 22 | 19 | 18 | 15 | 13 |
| 7   | 54  | 42  | 34  | 28  | 48 | 38 | 31 | 26 | 30 | 25 | 21 | 23 | 19 | 16 | 16 | 14 | 12 |
| 8   | 50  | 38  | 30  | 25  | 45 | 34 | 27 | 23 | 27 | 22 | 19 | 21 | 17 | 14 | 15 | 12 | 10 |
| 9   | 46  | 34  | 27  | 22  | 41 | 31 | 25 | 20 | 25 | 20 | 16 | 19 | 15 | 13 | 14 | 11 | 9  |
| 10  | 43  | 31  | 24  | 19  | 39 | 28 | 22 | 18 | 23 | 18 | 15 | 17 | 14 | 12 | 12 | 10 | 8  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8122 | 8122 | 8122 |
| 5°  | 8159 | 7775 | 7733 |
| 10° | 8105 | 7506 | 7397 |
| 15° | 7990 | 7228 | 7054 |
| 20° | 7846 | 6935 | 6728 |
| 25° | 7703 | 6655 | 6432 |
| 30° | 7505 | 6371 | 6139 |
| 35° | 7302 | 6097 | 5924 |
| 40° | 7090 | 5859 | 5711 |
| 45° | 6886 | 5643 | 5524 |
| 50° | 6669 | 5445 | 5341 |
| 55° | 6440 | 5234 | 5153 |
| 60° | 6160 | 5015 | 4957 |
| 65° | 5869 | 4763 | 4730 |
| 70° | 5539 | 4492 | 4486 |
| 75° | 5119 | 4221 | 4257 |
| 80° | 4455 | 3940 | 4018 |
| 85° | 3786 | 3674 | 3812 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6886 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 48.6   | 0.9       |
| 10°-20°   | 139.5  | 2.5       |
| 20°-30°   | 211.4  | 3.8       |
| 30°-40°   | 257.4  | 4.6       |
| 40°-50°   | 277.0  | 4.9       |
| 50°-60°   | 269.0  | 4.8       |
| 60°-70°   | 234.9  | 4.2       |
| 70°-80°   | 180.8  | 3.2       |
| 80°-90°   | 123.3  | 2.2       |
| 90°-100°  | 124.7  | 2.2       |
| 100°-110° | 214.6  | 3.8       |
| 110°-120° | 447.6  | 8.0       |
| 120°-130° | 698.0  | 12.4      |
| 130°-140° | 727.0  | 12.9      |
| 140°-150° | 668.5  | 11.9      |
| 150°-160° | 536.2  | 9.5       |
| 160°-170° | 345.5  | 6.1       |
| 170°-180° | 118.9  | 2.1       |
| <hr/>     |        |           |
| 0°-30°    | 399.6  | 7.1       |
| 0°-40°    | 657.0  | 11.7      |
| 0°-60°    | 1202.9 | 21.4      |
| 0°-90°    | 1741.9 | 31.0      |
| 90°-120°  | 786.9  | 14.0      |
| 90°-150°  | 2880.5 | 51.2      |
| 90°-180°  | 3881.0 | 69.0      |
| 0°-180°   | 5623.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 513  | 513   | 513  | 513   | 513  |      |
| 5°   | 515  | 512   | 508  | 512   | 512  | 49   |
| 15°  | 491  | 492   | 492  | 499   | 498  | 138  |
| 25°  | 446  | 451   | 458  | 467   | 469  | 205  |
| 35°  | 384  | 397   | 411  | 428   | 433  | 240  |
| 45°  | 315  | 335   | 361  | 384   | 392  | 243  |
| 55°  | 242  | 268   | 307  | 334   | 344  | 216  |
| 65°  | 165  | 202   | 245  | 276   | 286  | 164  |
| 75°  | 92   | 133   | 181  | 213   | 222  | 97   |
| 85°  | 27   | 73    | 120  | 152   | 162  | 28   |
| 90°  | 8    | 61    | 116  | 150   | 161  | 9    |
| 95°  | 65   | 70    | 121  | 154   | 162  | 74   |
| 105° | 278  | 327   | 119  | 155   | 167  | 298  |
| 115° | 523  | 546   | 602  | 206   | 149  | 514  |
| 125° | 736  | 748   | 789  | 816   | 825  | 657  |
| 135° | 910  | 925   | 940  | 965   | 969  | 703  |
| 145° | 1055 | 1054  | 1070 | 1080  | 1080 | 660  |
| 155° | 1162 | 1154  | 1164 | 1170  | 1163 | 535  |
| 165° | 1224 | 1219  | 1221 | 1228  | 1221 | 346  |
| 175° | 1252 | 1246  | 1248 | 1254  | 1245 | 119  |
| 180° | 1249 | 1249  | 1249 | 1249  | 1249 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 513.1 | 513.1 | 513.1 | 513.1 | 513.1 |
| 2.5°   | 516.9 | 514.6 | 509.4 | 513.1 | 511.7 |
| 5°     | 514.6 | 512.4 | 507.9 | 512.4 | 511.7 |
| 7.5°   | 510.9 | 509.4 | 505.7 | 510.9 | 510.2 |
| 10°    | 506.5 | 505.0 | 502.7 | 508.7 | 507.9 |
| 12.5°  | 499.0 | 499.8 | 498.3 | 504.2 | 503.5 |
| 15°    | 490.8 | 492.3 | 492.3 | 499.0 | 498.3 |
| 17.5°  | 480.4 | 483.4 | 485.6 | 492.3 | 492.3 |
| 20°    | 470.0 | 473.7 | 476.7 | 484.9 | 484.9 |
| 22.5°  | 458.9 | 463.3 | 467.8 | 476.0 | 477.5 |
| 25°    | 446.2 | 451.4 | 458.1 | 467.0 | 469.3 |
| 27.5°  | 431.3 | 439.5 | 447.0 | 458.1 | 459.6 |
| 30°    | 416.5 | 426.1 | 435.8 | 447.7 | 449.9 |
| 32.5°  | 400.1 | 411.3 | 423.2 | 437.3 | 441.8 |
| 35°    | 384.5 | 397.1 | 411.3 | 427.6 | 432.8 |
| 37.5°  | 367.4 | 381.5 | 399.4 | 417.2 | 422.4 |
| 40°    | 350.3 | 366.6 | 386.7 | 406.1 | 412.8 |
| 42.5°  | 333.9 | 350.3 | 374.1 | 395.6 | 402.3 |
| 45°    | 315.3 | 335.4 | 361.4 | 384.5 | 391.9 |
| 47.5°  | 297.5 | 319.0 | 348.8 | 372.6 | 380.8 |
| 50°    | 278.9 | 301.9 | 335.4 | 360.7 | 368.9 |
| 52.5°  | 261.0 | 285.6 | 321.3 | 347.3 | 356.2 |
| 55°    | 241.7 | 268.5 | 307.1 | 333.9 | 343.6 |
| 57.5°  | 223.1 | 252.9 | 291.5 | 320.5 | 330.2 |
| 60°    | 203.0 | 235.0 | 277.4 | 305.7 | 316.1 |
| 62.5°  | 185.2 | 218.6 | 261.0 | 291.5 | 301.2 |
| 65°    | 165.1 | 201.5 | 245.4 | 275.9 | 285.6 |
| 67.5°  | 147.3 | 185.2 | 229.8 | 260.3 | 270.7 |
| 70°    | 127.9 | 166.6 | 212.7 | 244.7 | 253.6 |
| 72.5°  | 110.1 | 150.2 | 197.1 | 228.3 | 239.5 |
| 75°    | 91.5  | 133.1 | 180.7 | 212.7 | 222.4 |
| 77.5°  | 73.6  | 116.8 | 165.1 | 197.1 | 207.5 |
| 80°    | 55.8  | 101.1 | 149.5 | 180.7 | 191.1 |
| 82.5°  | 40.9  | 85.5  | 134.6 | 165.8 | 175.5 |
| 85°    | 26.8  | 72.9  | 120.5 | 151.7 | 162.1 |
| 87.5°  | 16.4  | 61.0  | 108.6 | 139.1 | 148.7 |
| 90°    | 8.3   | 61.4  | 116.3 | 150.5 | 161.2 |
| 92.5°  | 29.3  | 65.1  | 113.2 | 144.0 | 153.8 |
| 95°    | 64.7  | 69.8  | 120.8 | 153.6 | 161.6 |
| 97.5°  | 111.0 | 68.8  | 126.4 | 156.6 | 166.5 |
| 100°   | 165.2 | 68.9  | 125.9 | 160.7 | 170.7 |
| 102.5° | 224.2 | 246.9 | 122.5 | 159.2 | 170.1 |
| 105°   | 278.5 | 327.3 | 119.1 | 155.1 | 166.9 |
| 107.5° | 342.7 | 383.2 | 115.8 | 150.9 | 162.7 |
| 110°   | 403.5 | 437.3 | 212.5 | 145.9 | 157.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 461.4  | 489.5  | 508.4  | 142.5  | 153.4  |
| 115°   | 522.8  | 546.4  | 602.4  | 206.1  | 149.2  |
| 117.5° | 575.4  | 599.4  | 646.0  | 539.0  | 309.7  |
| 120°   | 635.0  | 651.6  | 697.7  | 729.3  | 615.5  |
| 122.5° | 685.7  | 700.9  | 746.5  | 772.0  | 779.6  |
| 125°   | 736.5  | 748.2  | 789.2  | 815.7  | 825.1  |
| 127.5° | 783.5  | 795.4  | 829.0  | 856.7  | 864.3  |
| 130°   | 827.8  | 841.5  | 867.1  | 894.9  | 900.0  |
| 132.5° | 873.0  | 884.0  | 905.1  | 930.3  | 935.4  |
| 135°   | 910.2  | 924.6  | 940.3  | 964.9  | 969.0  |
| 137.5° | 950.0  | 960.8  | 973.6  | 996.8  | 999.3  |
| 140°   | 988.8  | 995.4  | 1006.8 | 1026.8 | 1026.7 |
| 142.5° | 1021.4 | 1027.0 | 1038.8 | 1054.9 | 1054.1 |
| 145°   | 1055.0 | 1054.1 | 1069.5 | 1080.3 | 1079.5 |
| 147.5° | 1084.9 | 1082.2 | 1097.5 | 1102.7 | 1101.4 |
| 150°   | 1113.8 | 1107.5 | 1121.9 | 1127.4 | 1122.8 |
| 152.5° | 1138.2 | 1131.0 | 1144.5 | 1150.0 | 1143.6 |
| 155°   | 1161.7 | 1153.6 | 1164.4 | 1169.8 | 1162.6 |
| 157.5° | 1180.7 | 1173.5 | 1181.6 | 1187.9 | 1180.7 |
| 160°   | 1197.0 | 1191.5 | 1197.0 | 1202.4 | 1196.1 |
| 162.5° | 1211.4 | 1206.0 | 1210.5 | 1216.9 | 1208.7 |
| 165°   | 1224.1 | 1218.7 | 1221.4 | 1227.7 | 1221.4 |
| 167.5° | 1234.0 | 1228.6 | 1231.3 | 1237.6 | 1229.5 |
| 170°   | 1242.2 | 1236.7 | 1238.6 | 1244.9 | 1236.7 |
| 172.5° | 1247.6 | 1242.2 | 1244.0 | 1250.3 | 1242.2 |
| 175°   | 1252.1 | 1245.8 | 1247.6 | 1253.9 | 1244.9 |
| 177.5° | 1253.9 | 1247.6 | 1248.5 | 1254.8 | 1246.7 |
| 180°   | 1249.4 | 1249.4 | 1249.4 | 1249.4 | 1249.4 |

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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 | 10.43            | 11.17 | 11.53 | 12.27 | 13.79 | 13.51          | 14.25 | 14.60 | 15.35 | 16.86 |
|                 | 3H   | 11.89            | 12.55 | 12.99 | 13.66 | 15.19 | 16.09          | 16.76 | 17.19 | 17.86 | 19.40 |
|                 | 4H   | 12.36            | 12.99 | 13.47 | 14.10 | 15.64 | 17.34          | 17.97 | 18.45 | 19.08 | 20.62 |
|                 | 6H   | 12.63            | 13.22 | 13.76 | 14.33 | 15.88 | 18.63          | 19.21 | 19.75 | 20.33 | 21.88 |
|                 | 8H   | 12.69            | 13.25 | 13.82 | 14.38 | 15.92 | 19.28          | 19.84 | 20.41 | 20.97 | 22.51 |
|                 | 12H  | 12.70            | 13.23 | 13.83 | 14.36 | 15.92 | 20.00          | 20.54 | 21.14 | 21.66 | 23.23 |
| 4H              | 2H   | 11.47            | 12.11 | 12.59 | 13.21 | 14.75 | 13.82          | 14.46 | 14.95 | 15.57 | 17.11 |
|                 | 3H   | 13.17            | 13.70 | 14.30 | 14.84 | 16.39 | 16.61          | 17.14 | 17.73 | 18.28 | 19.83 |
|                 | 4H   | 13.79            | 14.28 | 14.92 | 15.41 | 16.98 | 18.02          | 18.51 | 19.15 | 19.64 | 21.21 |
|                 | 6H   | 14.20            | 14.62 | 15.33 | 15.77 | 17.33 | 19.48          | 19.91 | 20.62 | 21.06 | 22.62 |
|                 | 8H   | 14.30            | 14.70 | 15.44 | 15.84 | 17.42 | 20.23          | 20.63 | 21.37 | 21.77 | 23.35 |
|                 | 12H  | 14.34            | 14.70 | 15.49 | 15.85 | 17.44 | 21.06          | 21.42 | 22.21 | 22.57 | 24.16 |
| 8H              | 4H   | 14.57            | 14.97 | 15.70 | 16.11 | 17.68 | 18.15          | 18.55 | 19.29 | 19.69 | 21.27 |
|                 | 6H   | 15.19            | 15.53 | 16.35 | 16.71 | 18.28 | 19.78          | 20.11 | 20.94 | 21.29 | 22.87 |
|                 | 8H   | 15.41            | 15.71 | 16.58 | 16.87 | 18.46 | 20.67          | 20.96 | 21.83 | 22.12 | 23.71 |
|                 | 12H  | 15.54            | 15.80 | 16.71 | 16.96 | 18.59 | 21.65          | 21.91 | 22.82 | 23.07 | 24.70 |
| 12H             | 4H   | 14.76            | 15.12 | 15.91 | 16.27 | 17.86 | 18.12          | 18.49 | 19.28 | 19.64 | 21.22 |
|                 | 6H   | 15.53            | 15.82 | 16.69 | 16.98 | 18.58 | 19.80          | 20.10 | 20.96 | 21.25 | 22.85 |
|                 | 8H   | 15.83            | 16.09 | 16.99 | 17.24 | 18.87 | 20.72          | 20.98 | 21.89 | 22.14 | 23.77 |