

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1439782

Luminaire Tested: S123DR-H485D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439782  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DR-H485D927-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

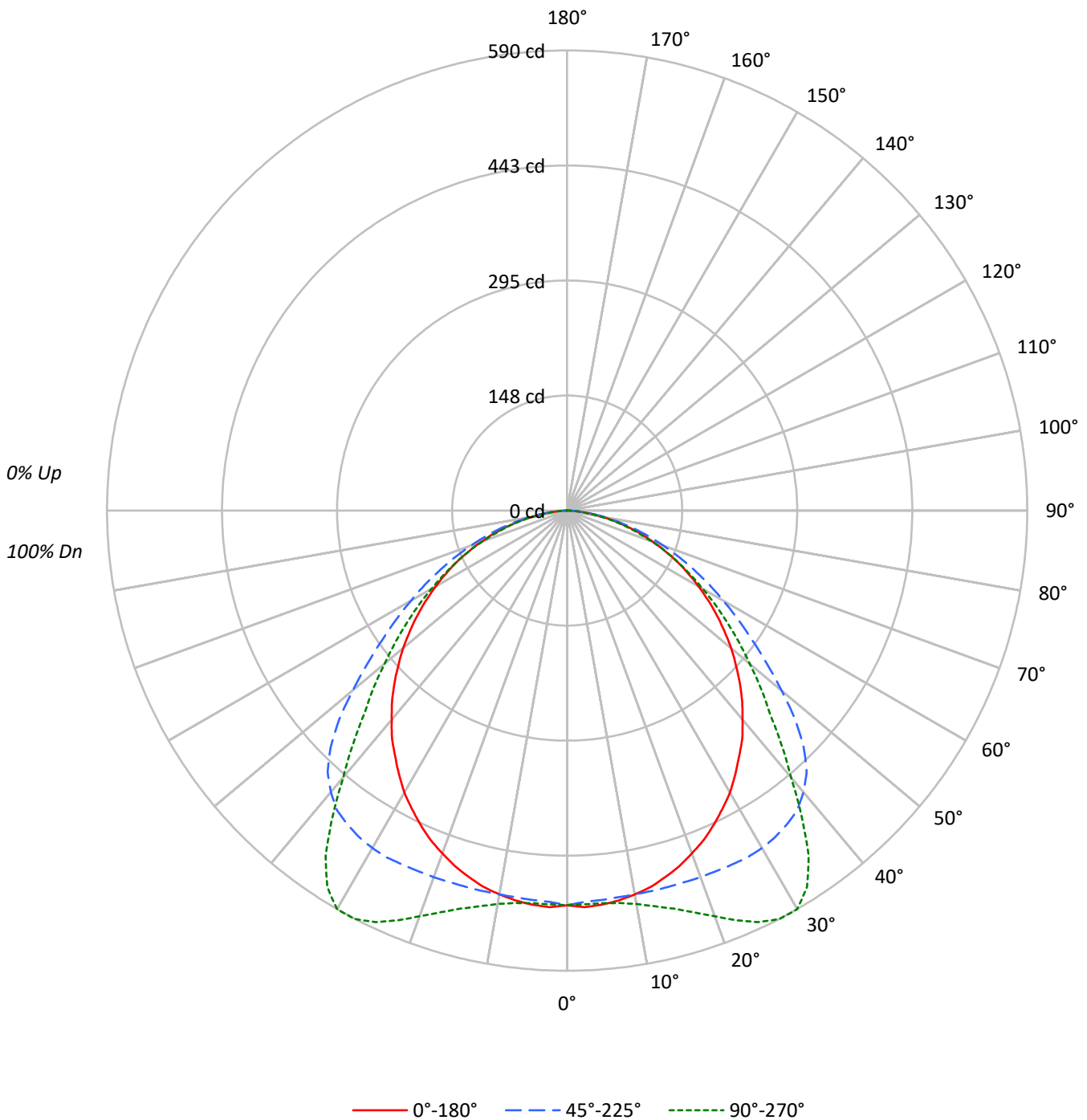
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1530.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P1439782

CATALOG NUMBER: S123DR-H485D927-X4F0-XX-UDD-FLB-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1439782

CATALOG NUMBER: S123DR-H485D927-X4F0-XX-UDD-FLB-W

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |    |    |    |    |    |    |    | 20 |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 70  |     |     |     |     |     |     |     |     | 50 |    |    |    |    |    |    |    |    | 30 |    |   |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 109 | 105 | 100 | 97  | 106 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 100 | 92  | 85  | 79  | 97  | 90  | 84  | 78  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 76  | 73  | 71  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 91  | 81  | 73  | 66  | 88  | 79  | 72  | 66  | 76  | 70  | 65  | 73  | 68  | 63  | 71  | 66  | 62  | 60  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 83  | 72  | 63  | 56  | 81  | 70  | 62  | 56  | 68  | 61  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 54  | 48  | 61  | 53  | 48  | 59  | 52  | 47  | 57  | 51  | 47  | 45  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 71  | 58  | 49  | 42  | 69  | 57  | 48  | 42  | 55  | 47  | 42  | 53  | 47  | 41  | 52  | 46  | 41  | 39  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 66  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 36  | 34  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 61  | 48  | 39  | 33  | 59  | 47  | 39  | 33  | 46  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 57  | 44  | 35  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 29  | 28  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 25  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6099 | 6099 | 6099 |
| 5°  | 6141 | 6066 | 6115 |
| 10° | 6116 | 6116 | 6269 |
| 15° | 6072 | 6236 | 6595 |
| 20° | 6001 | 6416 | 7101 |
| 25° | 5916 | 6659 | 7745 |
| 30° | 5812 | 6955 | 8215 |
| 35° | 5659 | 7230 | 7946 |
| 40° | 5508 | 7418 | 7032 |
| 45° | 5344 | 7315 | 6261 |
| 50° | 5151 | 6732 | 5730 |
| 55° | 4927 | 6092 | 5268 |
| 60° | 4692 | 5575 | 4844 |
| 65° | 4462 | 5104 | 4476 |
| 70° | 4131 | 4628 | 4057 |
| 75° | 3727 | 4118 | 3629 |
| 80° | 3124 | 3451 | 2979 |
| 85° | 2393 | 2531 | 2241 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 7315 cd/sqm



TEST NUMBER: P1439782

CATALOG NUMBER: S123DR-H485D927-X4F0-XX-UDD-FLB-W

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 48.2   | 3.1       |
| 10°-20°   | 143.1  | 9.4       |
| 20°-30°   | 234.6  | 15.3      |
| 30°-40°   | 296.7  | 19.4      |
| 40°-50°   | 289.9  | 18.9      |
| 50°-60°   | 238.2  | 15.6      |
| 60°-70°   | 168.0  | 11.0      |
| 70°-80°   | 89.5   | 5.9       |
| 80°-90°   | 21.8   | 1.4       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 425.9  | 27.8      |
| 0°-40°    | 722.6  | 47.2      |
| 0°-60°    | 1250.7 | 81.7      |
| 0°-90°    | 1530.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1530.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 506 | 506   | 506 | 506   | 506 |      |
| 5°  | 507 | 505   | 501 | 506   | 505 | 48   |
| 15° | 486 | 489   | 500 | 522   | 528 | 137  |
| 25° | 445 | 458   | 501 | 561   | 582 | 205  |
| 35° | 384 | 411   | 491 | 548   | 540 | 241  |
| 45° | 313 | 349   | 429 | 387   | 367 | 241  |
| 55° | 234 | 269   | 290 | 260   | 251 | 210  |
| 65° | 156 | 179   | 179 | 163   | 157 | 154  |
| 75° | 80  | 90    | 88  | 80    | 78  | 85   |
| 85° | 17  | 19    | 18  | 17    | 16  | 21   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

TEST NUMBER: P1439782

CATALOG NUMBER: S123DR-H485D927-X4F0-XX-UDD-FLB-W

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 505.9 | 505.9 | 505.9 | 505.9 | 505.9 |
| 2.5°  | 509.0 | 507.4 | 502.2 | 506.9 | 505.3 |
| 5°    | 507.4 | 505.3 | 501.2 | 506.4 | 505.3 |
| 7.5°  | 504.3 | 503.2 | 500.1 | 508.0 | 507.4 |
| 10°   | 499.6 | 499.1 | 499.6 | 511.1 | 512.1 |
| 12.5° | 494.4 | 494.9 | 499.6 | 515.8 | 519.5 |
| 15°   | 486.5 | 489.1 | 499.6 | 522.1 | 528.4 |
| 17.5° | 478.1 | 482.3 | 499.6 | 530.5 | 539.9 |
| 20°   | 467.7 | 475.0 | 500.1 | 539.3 | 553.5 |
| 22.5° | 457.2 | 466.1 | 500.1 | 551.4 | 568.6 |
| 25°   | 444.7 | 457.7 | 500.6 | 561.3 | 582.2 |
| 27.5° | 431.1 | 446.8 | 501.2 | 569.2 | 590.1 |
| 30°   | 417.5 | 436.3 | 499.6 | 572.3 | 590.1 |
| 32.5° | 401.2 | 424.3 | 496.4 | 567.1 | 572.3 |
| 35°   | 384.5 | 411.2 | 491.2 | 548.2 | 539.9 |
| 37.5° | 368.8 | 397.1 | 484.4 | 513.7 | 493.8 |
| 40°   | 350.0 | 381.9 | 471.3 | 469.8 | 446.8 |
| 42.5° | 332.2 | 365.7 | 454.6 | 425.3 | 406.5 |
| 45°   | 313.4 | 348.9 | 429.0 | 387.1 | 367.2 |
| 47.5° | 293.5 | 330.6 | 396.5 | 351.0 | 336.9 |
| 50°   | 274.6 | 311.8 | 358.9 | 318.1 | 305.5 |
| 52.5° | 254.2 | 291.9 | 322.8 | 288.8 | 277.8 |
| 55°   | 234.4 | 269.4 | 289.8 | 260.5 | 250.6 |
| 57.5° | 214.5 | 247.4 | 259.5 | 233.8 | 226.0 |
| 60°   | 194.6 | 224.4 | 231.2 | 209.3 | 200.9 |
| 62.5° | 175.2 | 203.0 | 205.1 | 185.7 | 178.4 |
| 65°   | 156.4 | 178.9 | 178.9 | 163.2 | 156.9 |
| 67.5° | 136.5 | 155.9 | 154.8 | 140.2 | 136.5 |
| 70°   | 117.2 | 133.4 | 131.3 | 119.3 | 115.1 |
| 72.5° | 98.9  | 110.9 | 109.3 | 99.9  | 95.2  |
| 75°   | 80.0  | 90.0  | 88.4  | 80.0  | 77.9  |
| 77.5° | 62.3  | 69.1  | 67.5  | 61.7  | 60.2  |
| 80°   | 45.0  | 50.2  | 49.7  | 45.5  | 42.9  |
| 82.5° | 30.3  | 33.0  | 32.4  | 29.8  | 28.2  |
| 85°   | 17.3  | 18.8  | 18.3  | 16.7  | 16.2  |
| 87.5° | 6.8   | 7.8   | 8.4   | 7.8   | 7.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

TEST NUMBER: P1439782

CATALOG NUMBER: S123DR-H485D927-X4F0-XX-UDD-FLB-W

**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 | 17.92            | 19.52 | 18.28 | 19.84 | 20.15 | 17.65          | 19.25 | 18.01 | 19.57 | 19.88 |
|                 | 3H   | 19.49            | 20.94 | 19.87 | 21.26 | 21.62 | 19.16          | 20.61 | 19.54 | 20.93 | 21.30 |
|                 | 4H   | 20.04            | 21.40 | 20.44 | 21.75 | 22.13 | 19.70          | 21.06 | 20.10 | 21.40 | 21.78 |
|                 | 6H   | 20.41            | 21.66 | 20.82 | 22.03 | 22.42 | 20.05          | 21.31 | 20.47 | 21.68 | 22.07 |
|                 | 8H   | 20.51            | 21.71 | 20.93 | 22.10 | 22.49 | 20.15          | 21.35 | 20.57 | 21.74 | 22.14 |
|                 | 12H  | 20.56            | 21.71 | 20.99 | 22.09 | 22.52 | 20.20          | 21.35 | 20.63 | 21.73 | 22.16 |
| 4H              | 2H   | 18.56            | 19.92 | 18.96 | 20.27 | 20.64 | 18.35          | 19.71 | 18.74 | 20.05 | 20.43 |
|                 | 3H   | 20.37            | 21.50 | 20.78 | 21.90 | 22.30 | 20.06          | 21.20 | 20.47 | 21.59 | 21.99 |
|                 | 4H   | 21.05            | 22.08 | 21.49 | 22.49 | 22.93 | 20.70          | 21.72 | 21.13 | 22.14 | 22.57 |
|                 | 6H   | 21.54            | 22.43 | 21.99 | 22.87 | 23.33 | 21.16          | 22.05 | 21.61 | 22.49 | 22.95 |
|                 | 8H   | 21.67            | 22.50 | 22.13 | 22.95 | 23.41 | 21.28          | 22.12 | 21.74 | 22.56 | 23.03 |
|                 | 12H  | 21.75            | 22.50 | 22.23 | 22.98 | 23.45 | 21.36          | 22.11 | 21.84 | 22.59 | 23.06 |
| 8H              | 4H   | 21.32            | 22.15 | 21.78 | 22.60 | 23.06 | 21.01          | 21.84 | 21.47 | 22.28 | 22.75 |
|                 | 6H   | 21.91            | 22.60 | 22.40 | 23.09 | 23.57 | 21.57          | 22.26 | 22.06 | 22.75 | 23.22 |
|                 | 8H   | 22.10            | 22.73 | 22.61 | 23.23 | 23.72 | 21.74          | 22.37 | 22.26 | 22.87 | 23.36 |
|                 | 12H  | 22.24            | 22.79 | 22.75 | 23.29 | 23.85 | 21.87          | 22.42 | 22.38 | 22.91 | 23.48 |
| 12H             | 4H   | 21.34            | 22.08 | 21.82 | 22.56 | 23.03 | 21.03          | 21.78 | 21.51 | 22.26 | 22.73 |
|                 | 6H   | 21.94            | 22.56 | 22.45 | 23.07 | 23.56 | 21.61          | 22.23 | 22.12 | 22.74 | 23.23 |
|                 | 8H   | 22.19            | 22.74 | 22.69 | 23.23 | 23.79 | 21.84          | 22.39 | 22.35 | 22.88 | 23.44 |