

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: P1059757

Luminaire Tested: S123RDRP-H775D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059757  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-H775D840-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

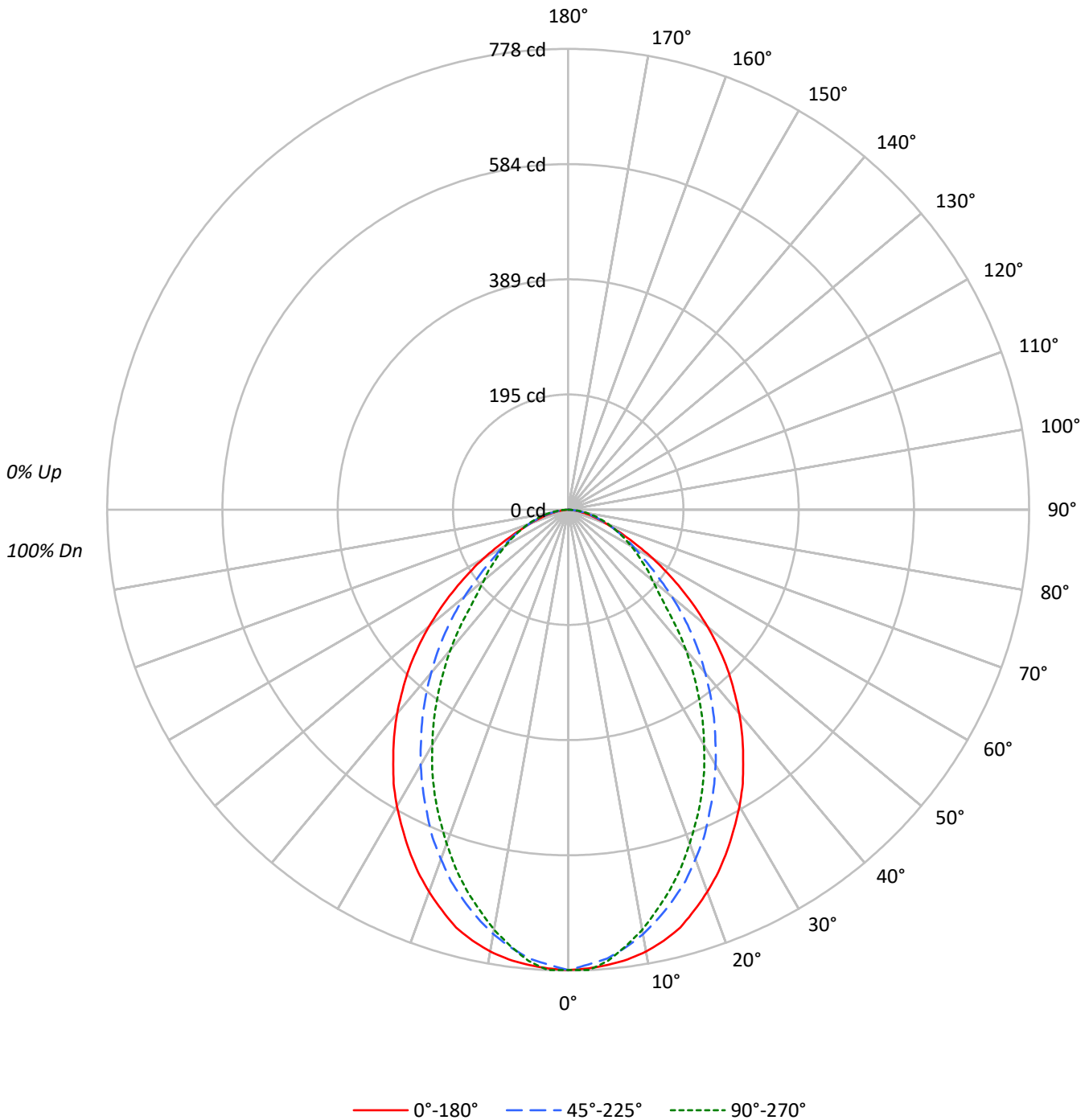
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1359.1 lumens  
Efficiency: N/A  
Efficacy: 57.8 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
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

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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 |  |  |  |  |  |  |  |  | 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 |    |    |    |    |    |    |    |    |    |    |    | 100 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 98  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 88  |    |    |    |    |    |    |    |    |    |    |    | 88  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |    |    |    |    |    |    |    |    |    | 76  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 94  | 85  | 78  | 73  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 73  | 69  | 76  | 72  | 68  | 66  |    |    |    |    |    |    |    |    |    |    |    | 66  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 87  | 77  | 69  | 63  | 85  | 76  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |    |    |    |    |    |    |    |    |    | 58  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |    |    |    |    |    |    |    |    | 52  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 48  | 47  |    |    |    |    |    |    |    |    |    |    |    | 47  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |    |    |    |    |    |    |    |    |    | 42  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    |    |    |    |    |    |    |    | 38  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 41  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    |    |    |    |    |    |    |    |    | 35  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 58  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    |    |    |    |    |    |    |    |    | 32  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9125 | 9125 | 9125 |
| 5°  | 9094 | 8962 | 9016 |
| 10° | 9032 | 8676 | 8586 |
| 15° | 8879 | 8299 | 8073 |
| 20° | 8579 | 7843 | 7493 |
| 25° | 8229 | 7309 | 6898 |
| 30° | 7838 | 6750 | 6218 |
| 35° | 7377 | 6145 | 5503 |
| 40° | 6886 | 5512 | 4738 |
| 45° | 6312 | 4871 | 3893 |
| 50° | 5595 | 4180 | 3378 |
| 55° | 4762 | 3499 | 3097 |
| 60° | 3882 | 3048 | 2875 |
| 65° | 2959 | 2698 | 2673 |
| 70° | 2307 | 2403 | 2503 |
| 75° | 1865 | 2160 | 2332 |
| 80° | 1386 | 1772 | 2150 |
| 85° | 754  | 1132 | 1886 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6312 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 72.1   | 5.3       |
| 10°-20°   | 194.1  | 14.3      |
| 20°-30°   | 263.8  | 19.4      |
| 30°-40°   | 273.5  | 20.1      |
| 40°-50°   | 230.7  | 17.0      |
| 50°-60°   | 163.7  | 12.0      |
| 60°-70°   | 100.1  | 7.4       |
| 70°-80°   | 49.8   | 3.7       |
| 80°-90°   | 11.3   | 0.8       |
| 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°    | 530.0  | 39.0      |
| 0°-40°    | 803.5  | 59.1      |
| 0°-60°    | 1197.9 | 88.1      |
| 0°-90°    | 1359.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1359.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 777 | 777   | 777 | 777   | 777 |      |
| 5°  | 772 | 772   | 760 | 765   | 765 | 73   |
| 15° | 730 | 716   | 683 | 671   | 664 | 205  |
| 25° | 635 | 607   | 564 | 544   | 532 | 292  |
| 35° | 515 | 475   | 429 | 399   | 384 | 322  |
| 45° | 380 | 340   | 293 | 253   | 234 | 292  |
| 55° | 233 | 208   | 171 | 156   | 151 | 209  |
| 65° | 106 | 103   | 97  | 97    | 96  | 109  |
| 75° | 41  | 44    | 48  | 50    | 51  | 44   |
| 85° | 6   | 6     | 8   | 12    | 14  | 8    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 777.1 | 777.1 | 777.1 | 777.1 | 777.1 |
| 2.5°  | 775.2 | 776.1 | 768.7 | 777.1 | 778.0 |
| 5°    | 771.5 | 771.5 | 760.3 | 764.9 | 764.9 |
| 7.5°  | 765.9 | 764.0 | 745.3 | 745.3 | 743.4 |
| 10°   | 757.5 | 751.9 | 727.6 | 722.9 | 720.1 |
| 12.5° | 745.3 | 736.0 | 706.1 | 697.7 | 692.1 |
| 15°   | 730.4 | 716.4 | 682.7 | 670.6 | 664.1 |
| 17.5° | 708.9 | 694.9 | 657.5 | 640.7 | 633.2 |
| 20°   | 686.5 | 665.9 | 627.6 | 610.8 | 599.6 |
| 22.5° | 662.2 | 636.0 | 598.7 | 578.1 | 566.0 |
| 25°   | 635.1 | 607.1 | 564.1 | 543.6 | 532.4 |
| 27.5° | 606.2 | 575.3 | 531.4 | 508.1 | 496.9 |
| 30°   | 578.1 | 542.6 | 497.8 | 471.7 | 458.6 |
| 32.5° | 548.2 | 508.1 | 462.3 | 435.2 | 422.2 |
| 35°   | 514.6 | 475.4 | 428.7 | 398.8 | 383.9 |
| 37.5° | 482.9 | 442.7 | 394.1 | 362.4 | 345.6 |
| 40°   | 449.2 | 409.1 | 359.6 | 326.9 | 309.1 |
| 42.5° | 413.8 | 375.5 | 326.9 | 288.6 | 271.8 |
| 45°   | 380.1 | 340.0 | 293.3 | 253.1 | 234.4 |
| 47.5° | 343.7 | 306.3 | 260.6 | 219.5 | 206.4 |
| 50°   | 306.3 | 271.8 | 228.8 | 191.5 | 184.9 |
| 52.5° | 269.9 | 241.0 | 197.1 | 172.8 | 170.0 |
| 55°   | 232.6 | 208.3 | 170.9 | 156.0 | 151.3 |
| 57.5° | 198.0 | 180.3 | 146.6 | 139.2 | 137.3 |
| 60°   | 165.3 | 150.4 | 129.8 | 125.2 | 122.4 |
| 62.5° | 133.6 | 125.2 | 113.0 | 111.1 | 109.3 |
| 65°   | 106.5 | 102.7 | 97.1  | 97.1  | 96.2  |
| 67.5° | 84.1  | 84.1  | 83.1  | 85.0  | 84.1  |
| 70°   | 67.2  | 68.2  | 70.0  | 71.9  | 72.9  |
| 72.5° | 53.2  | 56.0  | 57.9  | 60.7  | 61.6  |
| 75°   | 41.1  | 43.9  | 47.6  | 49.5  | 51.4  |
| 77.5° | 29.9  | 32.7  | 36.4  | 39.2  | 41.1  |
| 80°   | 20.5  | 22.4  | 26.2  | 29.9  | 31.8  |
| 82.5° | 13.1  | 14.0  | 16.8  | 20.5  | 22.4  |
| 85°   | 5.6   | 6.5   | 8.4   | 12.1  | 14.0  |
| 87.5° | 0.0   | 0.0   | 0.9   | 3.7   | 6.5   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

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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 | 16.49            | 17.94 | 16.86 | 18.26 | 18.57 | 14.59          | 16.04 | 14.95 | 16.35 | 16.67 |
|                 | 3H   | 17.39            | 18.68 | 17.77 | 19.01 | 19.38 | 16.16          | 17.46 | 16.54 | 17.79 | 18.15 |
|                 | 4H   | 17.67            | 18.88 | 18.07 | 19.23 | 19.61 | 16.76          | 17.97 | 17.16 | 18.32 | 18.70 |
|                 | 6H   | 17.82            | 18.94 | 18.23 | 19.31 | 19.70 | 17.21          | 18.33 | 17.62 | 18.69 | 19.09 |
|                 | 8H   | 17.84            | 18.91 | 18.27 | 19.30 | 19.70 | 17.36          | 18.42 | 17.79 | 18.81 | 19.21 |
|                 | 12H  | 17.84            | 18.85 | 18.27 | 19.24 | 19.67 | 17.46          | 18.47 | 17.89 | 18.85 | 19.28 |
| 4H              | 2H   | 16.74            | 17.95 | 17.14 | 18.30 | 18.68 | 15.13          | 16.34 | 15.53 | 16.69 | 17.07 |
|                 | 3H   | 17.85            | 18.85 | 18.26 | 19.25 | 19.65 | 16.90          | 17.90 | 17.31 | 18.31 | 18.71 |
|                 | 4H   | 18.24            | 19.14 | 18.67 | 19.55 | 19.99 | 17.62          | 18.51 | 18.05 | 18.93 | 19.37 |
|                 | 6H   | 18.48            | 19.26 | 18.94 | 19.70 | 20.16 | 18.19          | 18.97 | 18.65 | 19.41 | 19.87 |
|                 | 8H   | 18.52            | 19.25 | 18.99 | 19.70 | 20.16 | 18.38          | 19.11 | 18.84 | 19.55 | 20.02 |
|                 | 12H  | 18.53            | 19.18 | 19.02 | 19.66 | 20.13 | 18.52          | 19.16 | 19.00 | 19.64 | 20.12 |
| 8H              | 4H   | 18.40            | 19.12 | 18.86 | 19.57 | 20.04 | 17.82          | 18.55 | 18.29 | 19.00 | 19.47 |
|                 | 6H   | 18.71            | 19.31 | 19.21 | 19.80 | 20.28 | 18.50          | 19.10 | 19.00 | 19.59 | 20.07 |
|                 | 8H   | 18.78            | 19.32 | 19.30 | 19.83 | 20.32 | 18.76          | 19.29 | 19.27 | 19.81 | 20.30 |
|                 | 12H  | 18.82            | 19.29 | 19.33 | 19.79 | 20.35 | 18.96          | 19.44 | 19.48 | 19.93 | 20.50 |
| 12H             | 4H   | 18.40            | 19.05 | 18.88 | 19.53 | 20.00 | 17.82          | 18.47 | 18.31 | 18.95 | 19.42 |
|                 | 6H   | 18.72            | 19.26 | 19.24 | 19.77 | 20.26 | 18.51          | 19.05 | 19.03 | 19.56 | 20.05 |
|                 | 8H   | 18.84            | 19.31 | 19.35 | 19.81 | 20.37 | 18.81          | 19.29 | 19.32 | 19.78 | 20.35 |