

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: P1055283

Luminaire Tested: S122R3DRP-H1005D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055283  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DRP-H1005D835-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

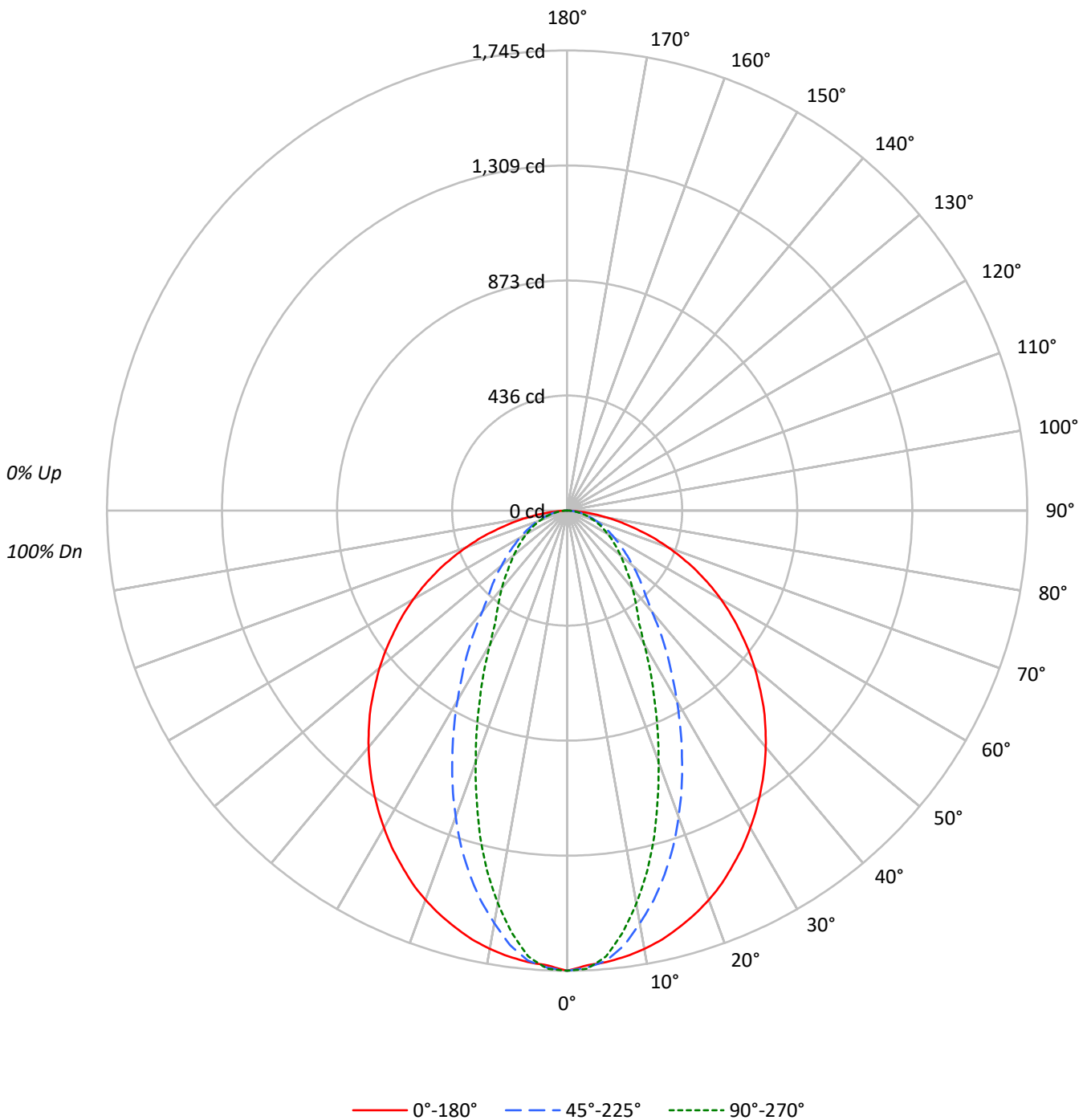
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2639.2 lumens  
Efficiency: N/A  
Efficacy: 72.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
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 |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 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   | 110 | 106 | 102 | 99  | 108 | 104 | 101 | 97  | 100 | 97  | 94  | 96  | 94  | 92  | 92  | 91  | 89  | 87  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 83  | 77  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 87  | 76  | 69  | 63  | 85  | 75  | 68  | 62  | 73  | 66  | 61  | 71  | 65  | 61  | 68  | 64  | 60  | 58  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 61  | 55  | 66  | 60  | 55  | 64  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 75  | 63  | 55  | 50  | 74  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 46  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 62  | 50  | 43  | 37  | 61  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 59  | 47  | 39  | 35  | 58  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 33057 | 33057 | 33057 |
| 5°  | 32685 | 32573 | 32268 |
| 10° | 32472 | 30564 | 29105 |
| 15° | 32106 | 28013 | 25038 |
| 20° | 31678 | 24914 | 20442 |
| 25° | 31045 | 21532 | 16316 |
| 30° | 30385 | 18193 | 12734 |
| 35° | 29693 | 15219 | 10697 |
| 40° | 28974 | 12339 | 9524  |
| 45° | 28222 | 10790 | 8520  |
| 50° | 27391 | 9547  | 7784  |
| 55° | 26455 | 8624  | 7227  |
| 60° | 25539 | 7851  | 6745  |
| 65° | 24329 | 7195  | 6343  |
| 70° | 22545 | 6708  | 5983  |
| 75° | 19969 | 6090  | 5658  |
| 80° | 17031 | 5728  | 5248  |
| 85° | 11738 | 5065  | 4761  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 28222 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 159.9  | 6.1       |
| 10°-20°   | 403.7  | 15.3      |
| 20°-30°   | 497.4  | 18.8      |
| 30°-40°   | 477.2  | 18.1      |
| 40°-50°   | 411.6  | 15.6      |
| 50°-60°   | 319.3  | 12.1      |
| 60°-70°   | 218.7  | 8.3       |
| 70°-80°   | 118.7  | 4.5       |
| 80°-90°   | 32.5   | 1.2       |
| 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°    | 1061.0 | 40.2      |
| 0°-40°    | 1538.2 | 58.3      |
| 0°-60°    | 2269.2 | 86.0      |
| 0°-90°    | 2639.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2639.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1745 | 1745  | 1745 | 1745  | 1745 |      |
| 5°  | 1719 | 1743  | 1713 | 1691  | 1697 | 163  |
| 15° | 1637 | 1587  | 1428 | 1312  | 1276 | 462  |
| 25° | 1485 | 1326  | 1030 | 840   | 780  | 685  |
| 35° | 1284 | 1018  | 658  | 490   | 462  | 803  |
| 45° | 1053 | 709   | 403  | 333   | 318  | 812  |
| 55° | 801  | 426   | 261  | 226   | 219  | 717  |
| 65° | 543  | 232   | 160  | 146   | 142  | 536  |
| 75° | 273  | 106   | 83   | 79    | 77   | 292  |
| 85° | 54   | 26    | 23   | 23    | 22   | 69   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1744.8 | 1744.8 | 1744.8 | 1744.8 | 1744.8 |
| 2.5°  | 1725.9 | 1755.0 | 1734.6 | 1734.6 | 1739.0 |
| 5°    | 1718.6 | 1743.4 | 1712.7 | 1690.8 | 1696.7 |
| 7.5°  | 1705.4 | 1722.9 | 1661.7 | 1615.0 | 1613.5 |
| 10°   | 1687.9 | 1689.4 | 1588.7 | 1527.5 | 1512.9 |
| 12.5° | 1666.0 | 1642.7 | 1514.3 | 1422.4 | 1400.5 |
| 15°   | 1636.9 | 1587.3 | 1428.2 | 1311.5 | 1276.5 |
| 17.5° | 1606.2 | 1530.4 | 1336.3 | 1190.4 | 1142.3 |
| 20°   | 1571.2 | 1461.8 | 1235.7 | 1069.4 | 1013.9 |
| 22.5° | 1531.8 | 1396.2 | 1135.0 | 952.7  | 894.3  |
| 25°   | 1485.1 | 1326.1 | 1030.0 | 840.3  | 780.5  |
| 27.5° | 1439.9 | 1254.6 | 929.3  | 741.1  | 679.8  |
| 30°   | 1388.9 | 1177.3 | 831.6  | 646.3  | 582.1  |
| 32.5° | 1337.8 | 1098.5 | 741.1  | 555.8  | 507.7  |
| 35°   | 1283.8 | 1018.3 | 658.0  | 490.2  | 462.5  |
| 37.5° | 1228.4 | 939.5  | 579.2  | 446.4  | 421.6  |
| 40°   | 1171.5 | 860.7  | 498.9  | 404.1  | 385.1  |
| 42.5° | 1113.1 | 783.4  | 443.5  | 369.1  | 351.6  |
| 45°   | 1053.3 | 709.0  | 402.7  | 332.6  | 318.0  |
| 47.5° | 989.1  | 634.6  | 363.3  | 302.0  | 288.9  |
| 50°   | 929.3  | 563.1  | 323.9  | 274.3  | 264.1  |
| 52.5° | 865.1  | 493.1  | 291.8  | 249.5  | 240.7  |
| 55°   | 800.9  | 426.0  | 261.1  | 226.1  | 218.8  |
| 57.5° | 738.2  | 361.8  | 232.0  | 204.2  | 198.4  |
| 60°   | 674.0  | 310.7  | 207.2  | 183.8  | 178.0  |
| 62.5° | 608.4  | 269.9  | 183.8  | 164.9  | 159.0  |
| 65°   | 542.7  | 232.0  | 160.5  | 145.9  | 141.5  |
| 67.5° | 474.1  | 195.5  | 140.1  | 128.4  | 125.5  |
| 70°   | 407.0  | 163.4  | 121.1  | 110.9  | 108.0  |
| 72.5° | 341.4  | 132.8  | 102.1  | 94.8   | 91.9   |
| 75°   | 272.8  | 106.5  | 83.2   | 78.8   | 77.3   |
| 77.5° | 213.0  | 83.2   | 67.1   | 64.2   | 62.7   |
| 80°   | 156.1  | 61.3   | 52.5   | 49.6   | 48.1   |
| 82.5° | 103.6  | 42.3   | 37.9   | 36.5   | 35.0   |
| 85°   | 54.0   | 26.3   | 23.3   | 23.3   | 21.9   |
| 87.5° | 17.5   | 11.7   | 11.7   | 11.7   | 10.2   |
| 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 | 21.76            | 23.23 | 22.13 | 23.54 | 23.86 | 16.57          | 18.04 | 16.93 | 18.35 | 18.66 |
|                 | 3H   | 24.09            | 25.41 | 24.47 | 25.74 | 26.10 | 18.22          | 19.53 | 18.59 | 19.86 | 20.22 |
|                 | 4H   | 24.99            | 26.22 | 25.39 | 26.57 | 26.95 | 18.85          | 20.09 | 19.25 | 20.43 | 20.81 |
|                 | 6H   | 25.65            | 26.79 | 26.06 | 27.16 | 27.55 | 19.34          | 20.48 | 19.76 | 20.85 | 21.24 |
|                 | 8H   | 25.86            | 26.94 | 26.29 | 27.33 | 27.73 | 19.51          | 20.60 | 19.94 | 20.99 | 21.39 |
|                 | 12H  | 25.97            | 27.01 | 26.41 | 27.39 | 27.82 | 19.63          | 20.67 | 20.06 | 21.05 | 21.48 |
| 4H              | 2H   | 21.78            | 23.01 | 22.18 | 23.36 | 23.74 | 17.28          | 18.52 | 17.68 | 18.87 | 19.25 |
|                 | 3H   | 24.19            | 25.22 | 24.60 | 25.62 | 26.02 | 19.13          | 20.16 | 19.54 | 20.56 | 20.96 |
|                 | 4H   | 25.12            | 26.04 | 25.55 | 26.46 | 26.90 | 19.88          | 20.80 | 20.31 | 21.22 | 21.66 |
|                 | 6H   | 25.90            | 26.70 | 26.36 | 27.14 | 27.61 | 20.49          | 21.30 | 20.95 | 21.74 | 22.20 |
|                 | 8H   | 26.17            | 26.92 | 26.63 | 27.36 | 27.83 | 20.71          | 21.46 | 21.17 | 21.90 | 22.37 |
|                 | 12H  | 26.35            | 27.01 | 26.83 | 27.49 | 27.97 | 20.87          | 21.54 | 21.35 | 22.02 | 22.49 |
| 8H              | 4H   | 25.11            | 25.86 | 25.58 | 26.31 | 26.78 | 20.26          | 21.01 | 20.72 | 21.45 | 21.92 |
|                 | 6H   | 25.92            | 26.54 | 26.42 | 27.03 | 27.51 | 21.00          | 21.61 | 21.49 | 22.11 | 22.58 |
|                 | 8H   | 26.22            | 26.78 | 26.74 | 27.29 | 27.78 | 21.29          | 21.84 | 21.81 | 22.36 | 22.84 |
|                 | 12H  | 26.45            | 26.94 | 26.97 | 27.44 | 28.00 | 21.54          | 22.02 | 22.05 | 22.52 | 23.08 |
| 12H             | 4H   | 25.09            | 25.76 | 25.58 | 26.24 | 26.71 | 20.32          | 20.98 | 20.80 | 21.46 | 21.93 |
|                 | 6H   | 25.90            | 26.45 | 26.41 | 26.96 | 27.45 | 21.08          | 21.64 | 21.60 | 22.15 | 22.64 |
|                 | 8H   | 26.23            | 26.72 | 26.74 | 27.21 | 27.78 | 21.44          | 21.93 | 21.95 | 22.42 | 22.99 |