

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: CORELITE

Report Number: P572224

Luminaire Tested: 24ID-85-L835-DBR

Issue Date: 10/5/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P572224  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2109-397-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/5/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 24ID-85-L835-DBR  
Description: 8500 LUMEN, 2X4 INDEPTH TROFFER WITH 2IN REGRESSED DOUBLE BARRELL LENS AND 3500K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

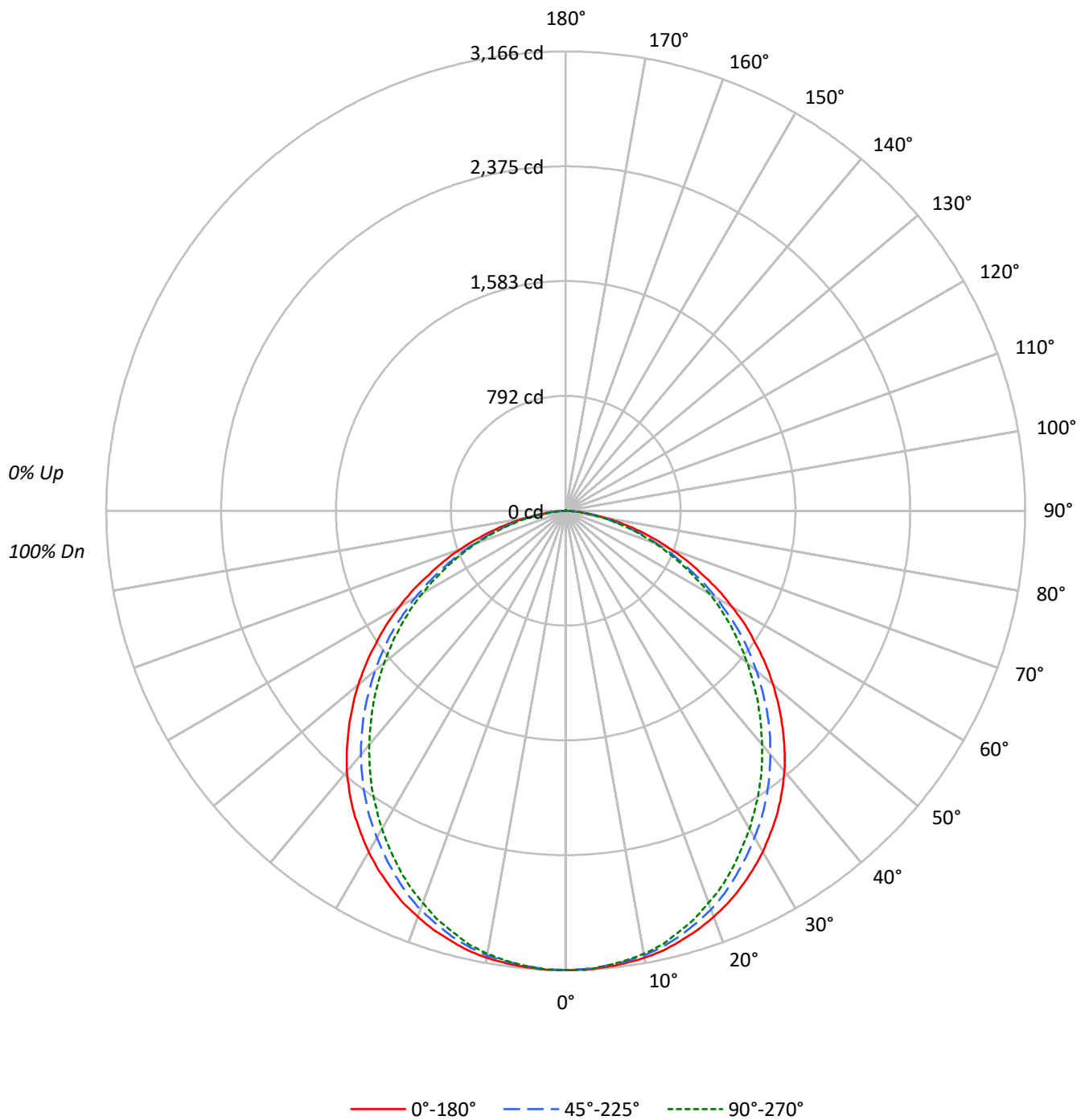
Lumens per Lamp: N/A  
Luminaire Lumens: 8322.0 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.19 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 82  
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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 95  | 98  | 95  | 92  |  | 94  | 92  | 90  |  | 91  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  |  | 83  | 79  | 75  |  | 80  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  |  | 74  | 68  | 64  |  | 71  |
| 4   | 84  | 72  | 63  | 57  | 81  | 71  | 63  | 56  | 68  | 61  | 56  |  | 66  | 60  | 55  |  | 64  |
| 5   | 77  | 64  | 56  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 48  |  | 59  | 53  | 48  |  | 57  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 49  | 43  | 55  | 48  | 42  |  | 54  | 47  | 42  |  | 52  |
| 7   | 66  | 53  | 44  | 38  | 64  | 52  | 44  | 38  | 50  | 43  | 38  |  | 49  | 42  | 37  |  | 48  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 34  |  | 45  | 38  | 33  |  | 44  |
| 9   | 57  | 44  | 36  | 31  | 56  | 44  | 36  | 31  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  |
| 10  | 54  | 41  | 33  | 28  | 53  | 40  | 33  | 28  | 39  | 32  | 28  |  | 38  | 32  | 27  |  | 37  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4260 | 4260 | 4260 |
| 5°  | 4266 | 4255 | 4255 |
| 10° | 4276 | 4254 | 4237 |
| 15° | 4275 | 4230 | 4190 |
| 20° | 4266 | 4191 | 4121 |
| 25° | 4248 | 4122 | 4037 |
| 30° | 4219 | 4042 | 3934 |
| 35° | 4180 | 3959 | 3826 |
| 40° | 4119 | 3855 | 3698 |
| 45° | 4022 | 3736 | 3566 |
| 50° | 3905 | 3590 | 3421 |
| 55° | 3747 | 3433 | 3261 |
| 60° | 3555 | 3216 | 3074 |
| 65° | 3300 | 2951 | 2834 |
| 70° | 3022 | 2655 | 2574 |
| 75° | 2620 | 2282 | 2219 |
| 80° | 2110 | 1795 | 1795 |
| 85° | 1067 | 1130 | 1067 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 4022 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 299.6  | 3.6       |
| 10°-20°   | 856.4  | 10.3      |
| 20°-30°   | 1282.2 | 15.4      |
| 30°-40°   | 1515.4 | 18.2      |
| 40°-50°   | 1525.4 | 18.3      |
| 50°-60°   | 1320.0 | 15.9      |
| 60°-70°   | 940.1  | 11.3      |
| 70°-80°   | 482.7  | 5.8       |
| 80°-90°   | 99.9   | 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° | 0.3    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 2438.1 | 29.3      |
| 0°-40°    | 3953.6 | 47.5      |
| 0°-60°    | 6799.0 | 81.7      |
| 0°-90°    | 8321.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 8322.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 3166 | 3166  | 3166 | 3166  | 3166 |      |
| 5°   | 3158 | 3154  | 3150 | 3146  | 3150 | 301  |
| 15°  | 3069 | 3057  | 3036 | 3012  | 3008 | 866  |
| 25°  | 2862 | 2837  | 2776 | 2732  | 2719 | 1319 |
| 35°  | 2545 | 2504  | 2410 | 2350  | 2329 | 1590 |
| 45°  | 2114 | 2069  | 1963 | 1894  | 1874 | 1630 |
| 55°  | 1598 | 1553  | 1463 | 1402  | 1390 | 1429 |
| 65°  | 1036 | 1000  | 927  | 894   | 890  | 1032 |
| 75°  | 504  | 480   | 439  | 423   | 427  | 538  |
| 85°  | 69   | 69    | 73   | 73    | 69   | 104  |
| 90°  | 0    | 0     | 0    | 0     | 0    | 4    |
| 95°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 105° | 0    | 0     | 0    | 0     | 0    | 0    |
| 115° | 0    | 0     | 0    | 0     | 0    | 0    |
| 125° | 0    | 0     | 0    | 0     | 0    | 0    |
| 135° | 0    | 0     | 0    | 0     | 0    | 0    |
| 145° | 0    | 0     | 0    | 0     | 0    | 0    |
| 155° | 0    | 0     | 0    | 0     | 0    | 0    |
| 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 175° | 0    | 0     | 0    | 0     | 4    | 0    |
| 180° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 3166.5 | 3166.5 | 3166.5 | 3166.5 | 3166.5 |
| 2.5°   | 3166.5 | 3162.4 | 3162.4 | 3158.4 | 3166.5 |
| 5°     | 3158.4 | 3154.3 | 3150.2 | 3146.2 | 3150.2 |
| 7.5°   | 3146.2 | 3138.0 | 3134.0 | 3125.8 | 3129.9 |
| 10°    | 3129.9 | 3121.8 | 3113.6 | 3101.5 | 3101.5 |
| 12.5°  | 3105.5 | 3097.4 | 3081.1 | 3064.9 | 3064.9 |
| 15°    | 3068.9 | 3056.7 | 3036.4 | 3012.0 | 3008.0 |
| 17.5°  | 3028.3 | 3012.0 | 2983.6 | 2955.1 | 2951.1 |
| 20°    | 2979.5 | 2963.2 | 2926.7 | 2890.1 | 2877.9 |
| 22.5°  | 2926.7 | 2906.3 | 2857.6 | 2816.9 | 2804.7 |
| 25°    | 2861.6 | 2837.2 | 2776.3 | 2731.6 | 2719.4 |
| 27.5°  | 2792.5 | 2760.0 | 2690.9 | 2642.1 | 2625.9 |
| 30°    | 2715.3 | 2682.8 | 2601.5 | 2552.7 | 2532.4 |
| 32.5°  | 2629.9 | 2593.3 | 2512.1 | 2451.1 | 2430.8 |
| 35°    | 2544.6 | 2503.9 | 2410.4 | 2349.5 | 2329.1 |
| 37.5°  | 2447.0 | 2402.3 | 2304.7 | 2239.7 | 2219.4 |
| 40°    | 2345.4 | 2300.7 | 2195.0 | 2130.0 | 2105.6 |
| 42.5°  | 2231.6 | 2186.9 | 2081.2 | 2012.1 | 1987.7 |
| 45°    | 2113.7 | 2069.0 | 1963.3 | 1894.2 | 1873.9 |
| 47.5°  | 1991.8 | 1938.9 | 1837.3 | 1772.3 | 1751.9 |
| 50°    | 1865.7 | 1812.9 | 1715.3 | 1650.3 | 1634.1 |
| 52.5°  | 1735.7 | 1682.8 | 1589.3 | 1524.3 | 1512.1 |
| 55°    | 1597.5 | 1552.8 | 1463.3 | 1402.4 | 1390.2 |
| 57.5°  | 1467.4 | 1418.6 | 1325.1 | 1280.4 | 1268.2 |
| 60°    | 1321.1 | 1280.4 | 1195.1 | 1154.4 | 1142.2 |
| 62.5°  | 1186.9 | 1146.3 | 1060.9 | 1016.2 | 1012.1 |
| 65°    | 1036.5 | 999.9  | 926.8  | 894.3  | 890.2  |
| 67.5°  | 906.5  | 865.8  | 804.8  | 772.3  | 772.3  |
| 70°    | 768.2  | 731.7  | 674.8  | 654.4  | 654.4  |
| 72.5°  | 630.0  | 605.7  | 556.9  | 536.6  | 540.6  |
| 75°    | 504.0  | 479.6  | 439.0  | 422.7  | 426.8  |
| 77.5°  | 386.2  | 357.7  | 333.3  | 321.1  | 325.2  |
| 80°    | 272.3  | 252.0  | 231.7  | 227.6  | 231.7  |
| 82.5°  | 162.6  | 150.4  | 146.3  | 146.3  | 146.3  |
| 85°    | 69.1   | 69.1   | 73.2   | 73.2   | 69.1   |
| 87.5°  | 28.5   | 24.4   | 24.4   | 28.5   | 28.5   |
| 90°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 100°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 102.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 105°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 115°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 117.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 120°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 122.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 125°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 127.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 130°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 132.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 135°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 137.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 140°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 142.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 145°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 147.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 150°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 152.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 155°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 157.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 160°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 162.5° | 4.1 | 0.0   | 4.1 | 4.1   | 4.1 |
| 165°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 167.5° | 0.0 | 0.0   | 0.0 | 4.1   | 0.0 |
| 170°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 172.5° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 |
| 175°   | 0.0 | 0.0   | 0.0 | 0.0   | 4.1 |
| 177.5° | 0.0 | 0.0   | 4.1 | 4.1   | 4.1 |
| 180°   | 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 | 16.76            | 18.37 | 17.13 | 18.68 | 19.00 | 16.00          | 17.60 | 16.36 | 17.91 | 18.23 |
|                 | 3H   | 18.39            | 19.83 | 18.77 | 20.16 | 20.52 | 17.55          | 18.99 | 17.93 | 19.32 | 19.68 |
|                 | 4H   | 18.94            | 20.30 | 19.34 | 20.65 | 21.02 | 18.07          | 19.43 | 18.47 | 19.78 | 20.15 |
|                 | 6H   | 19.29            | 20.55 | 19.70 | 20.91 | 21.31 | 18.40          | 19.66 | 18.81 | 20.02 | 20.41 |
|                 | 8H   | 19.37            | 20.57 | 19.80 | 20.96 | 21.36 | 18.48          | 19.68 | 18.91 | 20.07 | 20.47 |
|                 | 12H  | 19.39            | 20.54 | 19.82 | 20.92 | 21.35 | 18.51          | 19.66 | 18.94 | 20.04 | 20.47 |
| 4H              | 2H   | 17.23            | 18.58 | 17.63 | 18.93 | 19.31 | 16.60          | 17.96 | 17.00 | 18.31 | 18.69 |
|                 | 3H   | 19.06            | 20.19 | 19.47 | 20.59 | 20.99 | 18.35          | 19.49 | 18.76 | 19.88 | 20.28 |
|                 | 4H   | 19.73            | 20.75 | 20.16 | 21.16 | 21.60 | 18.97          | 20.00 | 19.41 | 20.41 | 20.85 |
|                 | 6H   | 20.19            | 21.08 | 20.64 | 21.52 | 21.97 | 19.40          | 20.29 | 19.86 | 20.73 | 21.19 |
|                 | 8H   | 20.29            | 21.12 | 20.75 | 21.57 | 22.03 | 19.51          | 20.35 | 19.98 | 20.79 | 21.25 |
|                 | 12H  | 20.34            | 21.08 | 20.82 | 21.56 | 22.03 | 19.57          | 20.31 | 20.05 | 20.79 | 21.26 |
| 8H              | 4H   | 19.92            | 20.75 | 20.38 | 21.19 | 21.66 | 19.23          | 20.07 | 19.70 | 20.51 | 20.97 |
|                 | 6H   | 20.45            | 21.14 | 20.95 | 21.63 | 22.10 | 19.74          | 20.43 | 20.24 | 20.92 | 21.40 |
|                 | 8H   | 20.60            | 21.21 | 21.11 | 21.72 | 22.21 | 19.90          | 20.52 | 20.41 | 21.02 | 21.51 |
|                 | 12H  | 20.67            | 21.22 | 21.18 | 21.71 | 22.27 | 19.99          | 20.54 | 20.50 | 21.03 | 21.59 |
| 12H             | 4H   | 19.92            | 20.67 | 20.40 | 21.14 | 21.61 | 19.25          | 20.00 | 19.73 | 20.47 | 20.94 |
|                 | 6H   | 20.46            | 21.08 | 20.97 | 21.59 | 22.07 | 19.77          | 20.39 | 20.28 | 20.90 | 21.38 |
|                 | 8H   | 20.65            | 21.19 | 21.15 | 21.68 | 22.24 | 19.97          | 20.51 | 20.47 | 21.00 | 21.57 |