

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: P853547

Luminaire Tested: SQ2-BBM-100U-125D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853547  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G3-2104-222-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-BBM-100U-125D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

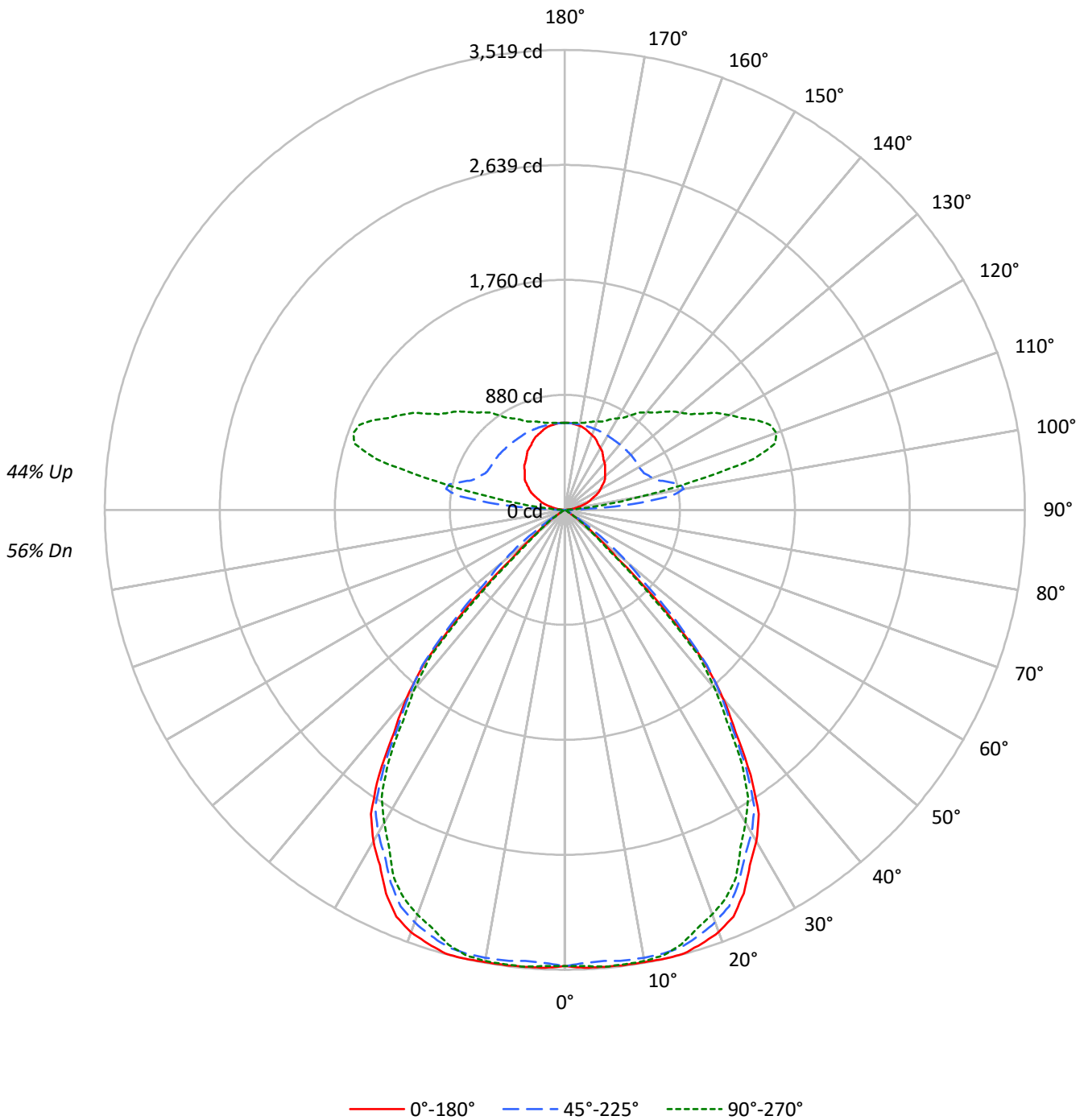
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9412.2 lumens  
Efficiency: N/A  
Efficacy: 114.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.18 / 1.17  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 82.4  
Input Voltage (V): 120  
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

TEST NUMBER: P853547

CATALOG NUMBER: SQ2-BBM-100U-125D-940-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P853547

CATALOG NUMBER: SQ2-BBM-100U-125D-940-UNV-STD-W-4

**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 | 0  |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |
| 0   | 109 | 109 | 109 | 109 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 74 | 74 | 74 | 62 | 62 | 62 | 56 |
| 1   | 101 | 98  | 95  | 92  | 94  | 91  | 89  | 86  | 79 | 77 | 76 | 68 | 67 | 66 | 58 | 57 | 56 | 52 |
| 2   | 94  | 88  | 83  | 79  | 88  | 83  | 78  | 75  | 72 | 69 | 66 | 63 | 61 | 59 | 54 | 52 | 51 | 47 |
| 3   | 88  | 80  | 74  | 69  | 82  | 75  | 70  | 65  | 66 | 62 | 59 | 58 | 55 | 52 | 50 | 48 | 46 | 43 |
| 4   | 81  | 72  | 66  | 60  | 76  | 68  | 62  | 58  | 60 | 56 | 52 | 53 | 50 | 47 | 46 | 44 | 42 | 39 |
| 5   | 76  | 66  | 59  | 54  | 71  | 62  | 56  | 51  | 55 | 51 | 47 | 49 | 45 | 43 | 43 | 40 | 38 | 35 |
| 6   | 70  | 60  | 53  | 48  | 66  | 57  | 51  | 46  | 51 | 46 | 42 | 45 | 41 | 39 | 40 | 37 | 35 | 32 |
| 7   | 66  | 55  | 48  | 43  | 62  | 52  | 46  | 41  | 47 | 42 | 38 | 42 | 38 | 35 | 37 | 34 | 32 | 30 |
| 8   | 62  | 51  | 44  | 39  | 58  | 48  | 42  | 37  | 43 | 38 | 35 | 39 | 35 | 32 | 35 | 32 | 29 | 27 |
| 9   | 58  | 47  | 40  | 35  | 54  | 44  | 38  | 34  | 40 | 35 | 32 | 36 | 32 | 29 | 32 | 29 | 27 | 25 |
| 10  | 54  | 43  | 37  | 32  | 51  | 41  | 35  | 31  | 37 | 32 | 29 | 34 | 30 | 27 | 30 | 27 | 25 | 23 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 56373 | 56373 | 56373 |
| 5°  | 56879 | 56177 | 56879 |
| 10° | 57605 | 57053 | 57484 |
| 15° | 58766 | 57867 | 57549 |
| 20° | 59103 | 57725 | 56620 |
| 25° | 57671 | 56074 | 55228 |
| 30° | 54611 | 53235 | 51505 |
| 35° | 48839 | 47695 | 46365 |
| 40° | 39774 | 39195 | 37595 |
| 45° | 24279 | 27505 | 21870 |
| 50° | 7922  | 15395 | 6968  |
| 55° | 2702  | 5433  | 2792  |
| 60° | 203   | 1566  | 68    |
| 65° | 42    | 80    | 0     |
| 70° | 0     | 52    | 0     |
| 75° | 0     | 0     | 0     |
| 80° | 0     | 0     | 0     |
| 85° | 0     | 0     | 0     |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 27551 cd/sqm



TEST NUMBER: P853547

CATALOG NUMBER: SQ2-BBM-100U-125D-940-UNV-STD-W-4

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 334.1  | 3.5       |
| 10°-20°   | 981.1  | 10.4      |
| 20°-30°   | 1450.0 | 15.4      |
| 30°-40°   | 1490.2 | 15.8      |
| 40°-50°   | 860.7  | 9.1       |
| 50°-60°   | 149.1  | 1.6       |
| 60°-70°   | 5.6    | 0.1       |
| 70°-80°   | 0.1    | 0.0       |
| 80°-90°   | 1.5    | 0.0       |
| 90°-100°  | 277.8  | 3.0       |
| 100°-110° | 840.2  | 8.9       |
| 110°-120° | 820.3  | 8.7       |
| 120°-130° | 670.3  | 7.1       |
| 130°-140° | 547.1  | 5.8       |
| 140°-150° | 425.9  | 4.5       |
| 150°-160° | 307.0  | 3.3       |
| 160°-170° | 187.9  | 2.0       |
| 170°-180° | 63.5   | 0.7       |
| 0°-30°    | 2765.2 | 29.4      |
| 0°-40°    | 4255.4 | 45.2      |
| 0°-60°    | 5265.3 | 55.9      |
| 0°-90°    | 5272.5 | 56.0      |
| 90°-120°  | 1938.3 | 20.6      |
| 90°-150°  | 3581.6 | 38.1      |
| 90°-180°  | 4140.0 | 44.0      |
| 0°-180°   | 9412.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 3492 | 3492  | 3492 | 3492  | 3492 |      |
| 5°   | 3509 | 3499  | 3466 | 3517  | 3509 | 335  |
| 15°  | 3516 | 3542  | 3462 | 3468  | 3443 | 990  |
| 25°  | 3237 | 3266  | 3148 | 3112  | 3100 | 1480 |
| 35°  | 2478 | 2479  | 2420 | 2382  | 2352 | 1525 |
| 45°  | 1063 | 1207  | 1205 | 1140  | 958  | 813  |
| 55°  | 96   | 112   | 193  | 110   | 99   | 108  |
| 65°  | 1    | 1     | 2    | 1     | 0    | 2    |
| 75°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 85°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 90°  | 0    | 2     | 12   | 7     | 6    | 2    |
| 95°  | 34   | 109   | 524  | 194   | 122  | 41   |
| 105° | 146  | 205   | 825  | 1567  | 1489 | 154  |
| 115° | 260  | 310   | 667  | 1381  | 1622 | 257  |
| 125° | 363  | 403   | 658  | 1090  | 1283 | 323  |
| 135° | 436  | 481   | 654  | 940   | 1058 | 337  |
| 145° | 509  | 546   | 654  | 809   | 884  | 319  |
| 155° | 580  | 599   | 658  | 725   | 753  | 267  |
| 165° | 634  | 641   | 661  | 686   | 694  | 179  |
| 175° | 663  | 663   | 664  | 669   | 667  | 63   |
| 180° | 665  | 665   | 665  | 665   | 665  |      |



TEST NUMBER: P853547

CATALOG NUMBER: SQ2-BBM-100U-125D-940-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 |
| 2.5°   | 3507.5 | 3497.6 | 3469.5 | 3501.4 | 3494.0 |
| 5°     | 3509.4 | 3499.1 | 3466.1 | 3516.6 | 3509.4 |
| 7.5°   | 3512.8 | 3506.4 | 3478.2 | 3517.8 | 3506.2 |
| 10°    | 3513.6 | 3514.6 | 3479.9 | 3514.5 | 3506.2 |
| 12.5°  | 3518.7 | 3528.8 | 3476.5 | 3504.2 | 3490.2 |
| 15°    | 3515.7 | 3541.5 | 3461.9 | 3467.7 | 3442.9 |
| 17.5°  | 3480.3 | 3517.4 | 3415.3 | 3390.3 | 3359.4 |
| 20°    | 3439.8 | 3476.9 | 3359.6 | 3326.2 | 3295.3 |
| 22.5°  | 3368.0 | 3408.5 | 3282.8 | 3246.1 | 3217.6 |
| 25°    | 3237.2 | 3266.1 | 3147.6 | 3111.5 | 3100.1 |
| 27.5°  | 3065.1 | 3075.4 | 2983.7 | 2936.0 | 2909.4 |
| 30°    | 2929.2 | 2927.2 | 2855.4 | 2800.7 | 2762.6 |
| 32.5°  | 2761.3 | 2771.6 | 2699.3 | 2648.0 | 2609.0 |
| 35°    | 2477.8 | 2478.8 | 2419.8 | 2382.2 | 2352.3 |
| 37.5°  | 2147.0 | 2141.8 | 2101.0 | 2050.4 | 2033.5 |
| 40°    | 1887.1 | 1894.3 | 1859.6 | 1802.3 | 1783.7 |
| 42.5°  | 1585.8 | 1633.5 | 1609.0 | 1541.4 | 1518.7 |
| 45°    | 1063.3 | 1206.6 | 1204.6 | 1140.3 | 957.8  |
| 47.5°  | 544.1  | 723.5  | 831.4  | 651.2  | 436.9  |
| 50°    | 315.4  | 428.8  | 612.9  | 338.3  | 277.4  |
| 52.5°  | 199.8  | 253.8  | 435.6  | 219.9  | 184.6  |
| 55°    | 96.0   | 111.5  | 193.0  | 109.5  | 99.2   |
| 57.5°  | 35.0   | 52.1   | 85.7   | 53.2   | 37.6   |
| 60°    | 6.3    | 21.8   | 48.5   | 14.5   | 2.1    |
| 62.5°  | 2.1    | 6.0    | 28.3   | 3.7    | 1.3    |
| 65°    | 1.1    | 1.1    | 2.1    | 1.0    | 0.0    |
| 67.5°  | 0.0    | 1.0    | 1.1    | 0.0    | 0.0    |
| 70°    | 0.0    | 1.0    | 1.1    | 0.0    | 0.0    |
| 72.5°  | 0.0    | 0.2    | 0.2    | 0.0    | 0.0    |
| 75°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 0.0    | 0.4    | 2.5    | 1.5    | 1.3    |
| 90°    | 0.0    | 2.0    | 12.5   | 7.3    | 6.3    |
| 92.5°  | 11.7   | 47.2   | 169.6  | 56.2   | 40.5   |
| 95°    | 34.5   | 109.0  | 524.2  | 193.7  | 122.2  |
| 97.5°  | 66.6   | 138.7  | 826.2  | 546.7  | 332.9  |
| 100°   | 86.7   | 157.1  | 923.2  | 892.5  | 599.4  |
| 102.5° | 109.2  | 177.2  | 903.1  | 1251.8 | 997.9  |
| 105°   | 146.2  | 205.4  | 825.0  | 1566.8 | 1489.2 |
| 107.5° | 181.3  | 237.9  | 749.8  | 1597.9 | 1687.8 |
| 110°   | 204.7  | 258.8  | 712.2  | 1558.7 | 1722.0 |



TEST NUMBER: P853547

CATALOG NUMBER: SQ2-BBM-100U-125D-940-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 227.2 | 279.7 | 689.7 | 1492.8 | 1699.5 |
| 115°   | 260.0 | 310.1 | 667.3 | 1380.8 | 1621.8 |
| 117.5° | 292.6 | 340.0 | 659.4 | 1275.9 | 1522.6 |
| 120°   | 314.3 | 359.3 | 656.9 | 1214.7 | 1451.6 |
| 122.5° | 334.4 | 376.9 | 656.9 | 1160.8 | 1379.7 |
| 125°   | 363.4 | 403.2 | 657.9 | 1090.4 | 1283.4 |
| 127.5° | 387.0 | 428.3 | 656.9 | 1037.4 | 1202.0 |
| 130°   | 402.1 | 444.9 | 656.9 | 1007.0 | 1156.0 |
| 132.5° | 415.4 | 459.1 | 656.0 | 979.1  | 1116.8 |
| 135°   | 435.5 | 481.4 | 653.7 | 940.4  | 1057.9 |
| 137.5° | 457.8 | 501.5 | 653.7 | 899.1  | 1008.0 |
| 140°   | 472.0 | 514.9 | 653.7 | 872.2  | 975.4  |
| 142.5° | 486.2 | 527.5 | 652.9 | 847.7  | 937.8  |
| 145°   | 508.6 | 546.4 | 653.7 | 809.0  | 884.5  |
| 147.5° | 530.9 | 563.0 | 655.0 | 777.0  | 835.0  |
| 150°   | 545.1 | 574.7 | 655.8 | 759.3  | 808.3  |
| 152.5° | 558.5 | 584.8 | 656.7 | 744.0  | 784.1  |
| 155°   | 579.6 | 599.0 | 657.9 | 725.4  | 752.9  |
| 157.5° | 598.0 | 613.7 | 659.2 | 711.6  | 730.8  |
| 160°   | 608.8 | 622.1 | 660.0 | 703.1  | 717.4  |
| 162.5° | 619.7 | 629.7 | 660.8 | 695.6  | 707.4  |
| 165°   | 633.9 | 641.0 | 661.0 | 686.3  | 694.5  |
| 167.5° | 646.0 | 649.7 | 662.3 | 679.1  | 682.5  |
| 170°   | 652.7 | 654.7 | 663.1 | 675.7  | 676.7  |
| 172.5° | 656.9 | 658.1 | 663.1 | 672.3  | 672.5  |
| 175°   | 663.1 | 663.1 | 664.2 | 669.3  | 667.3  |
| 177.5° | 666.0 | 665.2 | 664.4 | 666.8  | 665.2  |
| 180°   | 665.2 | 665.2 | 665.2 | 665.2  | 665.2  |

-----



TEST NUMBER: P853547

CATALOG NUMBER: SQ2-BBM-100U-125D-940-UNV-STD-W-4

**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 | 2.30             | 3.04 | 3.25 | 3.97 | 5.17 | 1.92           | 2.65 | 2.86 | 3.58 | 4.78 |
|                 | 3H   | 2.11             | 2.76 | 3.07 | 3.70 | 4.93 | 1.72           | 2.37 | 2.68 | 3.31 | 4.54 |
|                 | 4H   | 2.01             | 2.62 | 2.97 | 3.56 | 4.80 | 1.62           | 2.23 | 2.59 | 3.17 | 4.41 |
|                 | 6H   | 1.90             | 2.46 | 2.87 | 3.41 | 4.65 | 1.51           | 2.07 | 2.49 | 3.02 | 4.26 |
|                 | 8H   | 1.84             | 2.37 | 2.82 | 3.33 | 4.57 | 1.45           | 1.98 | 2.43 | 2.95 | 4.18 |
|                 | 12H  | 1.78             | 2.28 | 2.76 | 3.24 | 4.50 | 1.39           | 1.89 | 2.37 | 2.85 | 4.11 |
| 4H              | 2H   | 2.01             | 2.63 | 2.99 | 3.57 | 4.80 | 1.63           | 2.24 | 2.60 | 3.18 | 4.41 |
|                 | 3H   | 1.82             | 2.32 | 2.80 | 3.29 | 4.54 | 1.43           | 1.93 | 2.41 | 2.90 | 4.15 |
|                 | 4H   | 1.70             | 2.16 | 2.69 | 3.13 | 4.40 | 1.31           | 1.77 | 2.30 | 2.74 | 4.01 |
|                 | 6H   | 1.59             | 1.98 | 2.59 | 2.97 | 4.24 | 1.21           | 1.59 | 2.20 | 2.59 | 3.86 |
|                 | 8H   | 1.53             | 1.89 | 2.53 | 2.88 | 4.16 | 1.14           | 1.50 | 2.14 | 2.49 | 3.77 |
|                 | 12H  | 1.46             | 1.78 | 2.47 | 2.78 | 4.07 | 1.07           | 1.39 | 2.08 | 2.40 | 3.68 |
| 8H              | 4H   | 1.53             | 1.89 | 2.53 | 2.88 | 4.16 | 1.14           | 1.50 | 2.14 | 2.49 | 3.77 |
|                 | 6H   | 1.41             | 1.71 | 2.43 | 2.74 | 4.01 | 1.02           | 1.32 | 2.04 | 2.35 | 3.62 |
|                 | 8H   | 1.35             | 1.61 | 2.38 | 2.63 | 3.92 | 0.96           | 1.22 | 1.99 | 2.24 | 3.53 |
|                 | 12H  | 1.28             | 1.51 | 2.31 | 2.52 | 3.86 | 0.89           | 1.12 | 1.92 | 2.13 | 3.47 |
| 12H             | 4H   | 1.46             | 1.78 | 2.47 | 2.78 | 4.07 | 1.07           | 1.39 | 2.08 | 2.40 | 3.68 |
|                 | 6H   | 1.35             | 1.61 | 2.38 | 2.63 | 3.92 | 0.96           | 1.22 | 1.99 | 2.24 | 3.53 |
|                 | 8H   | 1.28             | 1.51 | 2.31 | 2.52 | 3.86 | 0.89           | 1.12 | 1.92 | 2.13 | 3.47 |