

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: P853546

Luminaire Tested: SQ2-BBM-100U-125D-935-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853546  
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-935-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

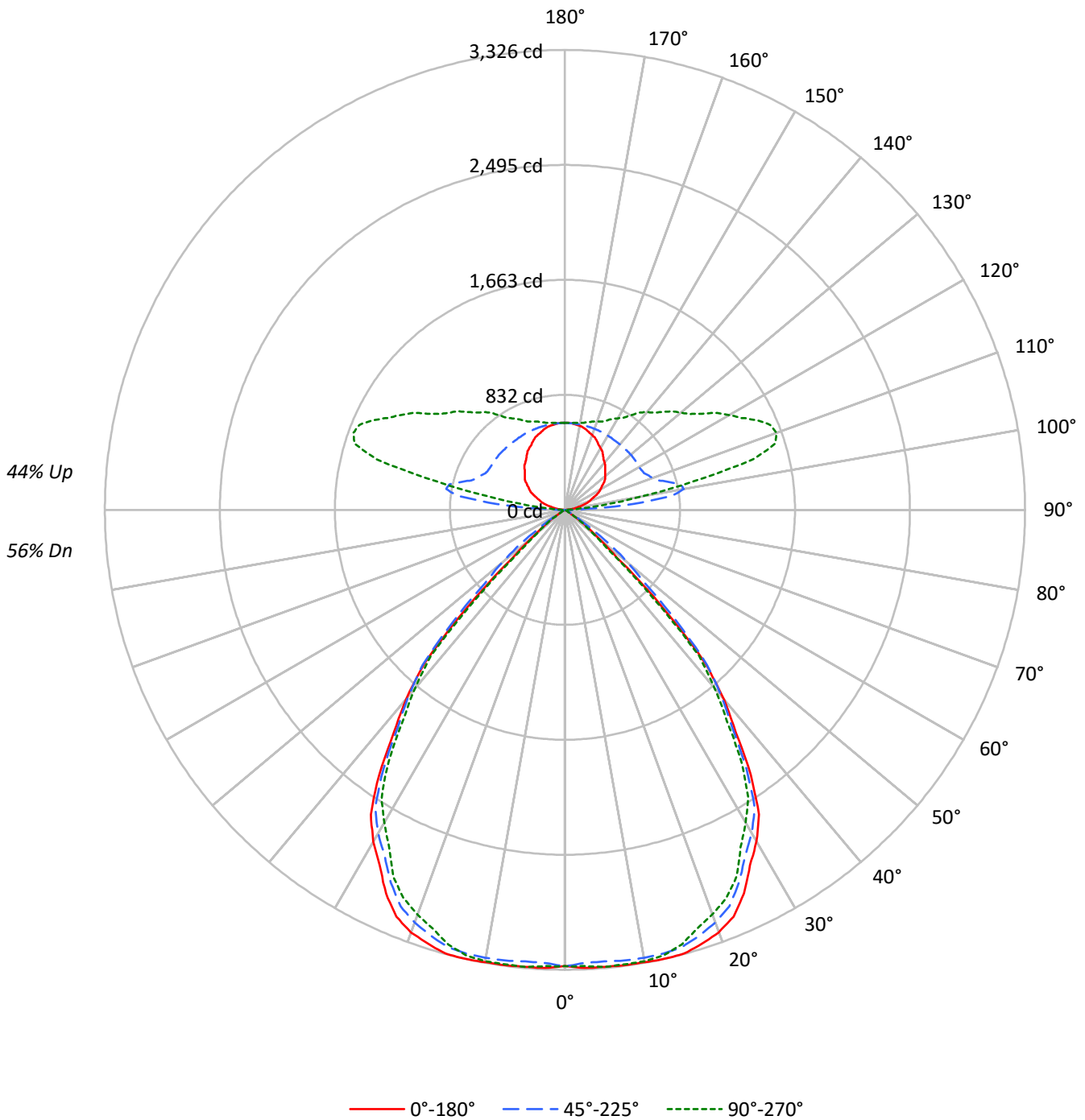
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8898.2 lumens  
Efficiency: N/A  
Efficacy: 108.0 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

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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 |    |    |  |  |
| 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°  | 53294 | 53294 | 53294 |
| 5°  | 53772 | 53109 | 53772 |
| 10° | 54459 | 53936 | 54344 |
| 15° | 55557 | 54708 | 54407 |
| 20° | 55874 | 54572 | 53527 |
| 25° | 54523 | 53012 | 52212 |
| 30° | 51630 | 50328 | 48692 |
| 35° | 46172 | 45090 | 43832 |
| 40° | 37601 | 37055 | 35542 |
| 45° | 22952 | 26003 | 20676 |
| 50° | 7490  | 14554 | 6589  |
| 55° | 2553  | 5137  | 2638  |
| 60° | 194   | 1482  | 65    |
| 65° | 38    | 76    | 0     |
| 70° | 0     | 47    | 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: 26046 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 315.9  | 3.5       |
| 10°-20°   | 927.5  | 10.4      |
| 20°-30°   | 1370.8 | 15.4      |
| 30°-40°   | 1408.8 | 15.8      |
| 40°-50°   | 813.7  | 9.1       |
| 50°-60°   | 141.0  | 1.6       |
| 60°-70°   | 5.3    | 0.1       |
| 70°-80°   | 0.1    | 0.0       |
| 80°-90°   | 1.5    | 0.0       |
| 90°-100°  | 262.6  | 3.0       |
| 100°-110° | 794.4  | 8.9       |
| 110°-120° | 775.4  | 8.7       |
| 120°-130° | 633.7  | 7.1       |
| 130°-140° | 517.2  | 5.8       |
| 140°-150° | 402.6  | 4.5       |
| 150°-160° | 290.3  | 3.3       |
| 160°-170° | 177.7  | 2.0       |
| 170°-180° | 60.0   | 0.7       |
| 0°-30°    | 2614.2 | 29.4      |
| 0°-40°    | 4023.0 | 45.2      |
| 0°-60°    | 4977.7 | 55.9      |
| 0°-90°    | 4984.6 | 56.0      |
| 90°-120°  | 1832.4 | 20.6      |
| 90°-150°  | 3386.0 | 38.1      |
| 90°-180°  | 3914.0 | 44.0      |
| 0°-180°   | 8898.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 3301 | 3301  | 3301 | 3301  | 3301 |      |
| 5°   | 3318 | 3308  | 3277 | 3325  | 3318 | 317  |
| 15°  | 3324 | 3348  | 3273 | 3278  | 3255 | 936  |
| 25°  | 3060 | 3088  | 2976 | 2942  | 2931 | 1399 |
| 35°  | 2342 | 2343  | 2288 | 2252  | 2224 | 1441 |
| 45°  | 1005 | 1141  | 1139 | 1078  | 906  | 768  |
| 55°  | 91   | 105   | 182  | 104   | 94   | 102  |
| 65°  | 1    | 1     | 2    | 1     | 0    | 1    |
| 75°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 85°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 90°  | 0    | 2     | 12   | 7     | 6    | 2    |
| 95°  | 33   | 103   | 496  | 183   | 116  | 39   |
| 105° | 138  | 194   | 780  | 1481  | 1408 | 145  |
| 115° | 246  | 293   | 631  | 1305  | 1533 | 243  |
| 125° | 344  | 381   | 622  | 1031  | 1213 | 305  |
| 135° | 412  | 455   | 618  | 889   | 1000 | 319  |
| 145° | 481  | 516   | 618  | 765   | 836  | 301  |
| 155° | 548  | 566   | 622  | 686   | 712  | 252  |
| 165° | 599  | 606   | 625  | 649   | 656  | 169  |
| 175° | 627  | 627   | 628  | 633   | 631  | 59   |
| 180° | 629  | 629   | 629  | 629   | 629  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 3300.8 | 3300.8 | 3300.8 | 3300.8 | 3300.8 |
| 2.5°   | 3315.9 | 3306.6 | 3280.0 | 3310.2 | 3303.2 |
| 5°     | 3317.7 | 3308.0 | 3276.8 | 3324.6 | 3317.7 |
| 7.5°   | 3320.9 | 3314.9 | 3288.2 | 3325.7 | 3314.7 |
| 10°    | 3321.7 | 3322.7 | 3289.8 | 3322.5 | 3314.7 |
| 12.5°  | 3326.5 | 3336.1 | 3286.6 | 3312.8 | 3299.6 |
| 15°    | 3323.7 | 3348.1 | 3272.9 | 3278.3 | 3254.9 |
| 17.5°  | 3290.2 | 3325.3 | 3228.8 | 3205.2 | 3175.9 |
| 20°    | 3251.9 | 3287.0 | 3176.1 | 3144.6 | 3115.3 |
| 22.5°  | 3184.1 | 3222.3 | 3103.5 | 3068.8 | 3041.9 |
| 25°    | 3060.5 | 3087.8 | 2975.7 | 2941.5 | 2930.8 |
| 27.5°  | 2897.7 | 2907.5 | 2820.7 | 2775.7 | 2750.5 |
| 30°    | 2769.3 | 2767.3 | 2699.5 | 2647.8 | 2611.7 |
| 32.5°  | 2610.5 | 2620.3 | 2551.9 | 2503.4 | 2466.5 |
| 35°    | 2342.5 | 2343.4 | 2287.6 | 2252.1 | 2223.8 |
| 37.5°  | 2029.7 | 2024.9 | 1986.3 | 1938.4 | 1922.4 |
| 40°    | 1784.0 | 1790.8 | 1758.1 | 1703.8 | 1686.3 |
| 42.5°  | 1499.2 | 1544.3 | 1521.2 | 1457.2 | 1435.8 |
| 45°    | 1005.2 | 1140.7 | 1138.8 | 1078.1 | 905.5  |
| 47.5°  | 514.4  | 684.0  | 786.0  | 615.7  | 413.0  |
| 50°    | 298.2  | 405.4  | 579.4  | 319.8  | 262.3  |
| 52.5°  | 188.9  | 240.0  | 411.8  | 207.9  | 174.5  |
| 55°    | 90.7   | 105.4  | 182.5  | 103.5  | 93.7   |
| 57.5°  | 33.1   | 49.3   | 81.0   | 50.3   | 35.5   |
| 60°    | 6.0    | 20.6   | 45.9   | 13.7   | 2.0    |
| 62.5°  | 2.0    | 5.7    | 26.7   | 3.5    | 1.2    |
| 65°    | 1.0    | 1.0    | 2.0    | 1.0    | 0.0    |
| 67.5°  | 0.0    | 1.0    | 1.0    | 0.0    | 0.0    |
| 70°    | 0.0    | 1.0    | 1.0    | 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    | 2.4    | 1.4    | 1.2    |
| 90°    | 0.0    | 1.9    | 11.8   | 6.9    | 5.9    |
| 92.5°  | 11.1   | 44.7   | 160.3  | 53.2   | 38.3   |
| 95°    | 32.6   | 103.0  | 495.6  | 183.1  | 115.5  |
| 97.5°  | 63.0   | 131.1  | 781.1  | 516.9  | 314.7  |
| 100°   | 81.9   | 148.5  | 872.7  | 843.7  | 566.7  |
| 102.5° | 103.3  | 167.6  | 853.8  | 1183.4 | 943.4  |
| 105°   | 138.2  | 194.2  | 779.9  | 1481.2 | 1407.8 |
| 107.5° | 171.4  | 224.9  | 708.9  | 1510.7 | 1595.6 |
| 110°   | 193.5  | 244.7  | 673.3  | 1473.5 | 1628.0 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 214.8 | 264.4 | 652.0 | 1411.3 | 1606.7 |
| 115°   | 245.8 | 293.1 | 630.9 | 1305.4 | 1533.2 |
| 117.5° | 276.6 | 321.4 | 623.4 | 1206.2 | 1439.4 |
| 120°   | 297.2 | 339.6 | 621.0 | 1148.3 | 1372.3 |
| 122.5° | 316.1 | 356.3 | 621.0 | 1097.4 | 1304.4 |
| 125°   | 343.6 | 381.2 | 622.0 | 1030.9 | 1213.3 |
| 127.5° | 365.9 | 404.9 | 621.0 | 980.7  | 1136.3 |
| 130°   | 380.1 | 420.6 | 621.0 | 952.0  | 1092.9 |
| 132.5° | 392.7 | 434.0 | 620.2 | 925.7  | 1055.8 |
| 135°   | 411.7 | 455.1 | 618.0 | 889.1  | 1000.1 |
| 137.5° | 432.8 | 474.1 | 618.0 | 850.0  | 952.9  |
| 140°   | 446.2 | 486.8 | 618.0 | 824.6  | 922.1  |
| 142.5° | 459.7 | 498.7 | 617.2 | 801.4  | 886.6  |
| 145°   | 480.8 | 516.5 | 618.0 | 764.8  | 836.2  |
| 147.5° | 501.9 | 532.2 | 619.2 | 734.6  | 789.4  |
| 150°   | 515.4 | 543.3 | 620.0 | 717.8  | 764.1  |
| 152.5° | 528.0 | 552.9 | 620.8 | 703.4  | 741.2  |
| 155°   | 547.9 | 566.3 | 622.0 | 685.8  | 711.8  |
| 157.5° | 565.3 | 580.2 | 623.2 | 672.7  | 690.9  |
| 160°   | 575.6 | 588.1 | 623.9 | 664.7  | 678.2  |
| 162.5° | 585.8 | 595.3 | 624.7 | 657.6  | 668.8  |
| 165°   | 599.3 | 606.0 | 624.9 | 648.8  | 656.5  |
| 167.5° | 610.7 | 614.2 | 626.1 | 642.0  | 645.3  |
| 170°   | 617.0 | 619.0 | 626.9 | 638.8  | 639.7  |
| 172.5° | 621.0 | 622.1 | 626.9 | 635.6  | 635.8  |
| 175°   | 626.9 | 626.9 | 627.9 | 632.8  | 630.9  |
| 177.5° | 629.7 | 628.9 | 628.1 | 630.4  | 628.9  |
| 180°   | 628.9 | 628.9 | 628.9 | 628.9  | 628.9  |

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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 | 2.11             | 2.84 | 3.05 | 3.77 | 4.97 | 1.72           | 2.45 | 2.66 | 3.38 | 4.58 |
|                 | 3H   | 1.92             | 2.57 | 2.87 | 3.51 | 4.73 | 1.53           | 2.18 | 2.48 | 3.12 | 4.34 |
|                 | 4H   | 1.81             | 2.42 | 2.78 | 3.37 | 4.60 | 1.42           | 2.03 | 2.39 | 2.98 | 4.21 |
|                 | 6H   | 1.70             | 2.26 | 2.68 | 3.21 | 4.45 | 1.31           | 1.87 | 2.29 | 2.82 | 4.06 |
|                 | 8H   | 1.64             | 2.17 | 2.63 | 3.14 | 4.38 | 1.25           | 1.78 | 2.24 | 2.75 | 3.99 |
|                 | 12H  | 1.58             | 2.09 | 2.57 | 3.04 | 4.31 | 1.19           | 1.70 | 2.18 | 2.65 | 3.92 |
| 4H              | 2H   | 1.82             | 2.43 | 2.79 | 3.37 | 4.61 | 1.43           | 2.04 | 2.40 | 2.99 | 4.22 |
|                 | 3H   | 1.62             | 2.12 | 2.60 | 3.10 | 4.34 | 1.23           | 1.73 | 2.21 | 2.71 | 3.95 |
|                 | 4H   | 1.51             | 1.96 | 2.49 | 2.93 | 4.20 | 1.12           | 1.57 | 2.10 | 2.54 | 3.81 |
|                 | 6H   | 1.40             | 1.79 | 2.40 | 2.78 | 4.05 | 1.01           | 1.40 | 2.01 | 2.39 | 3.66 |
|                 | 8H   | 1.33             | 1.70 | 2.33 | 2.68 | 3.96 | 0.94           | 1.31 | 1.94 | 2.29 | 3.57 |
|                 | 12H  | 1.26             | 1.59 | 2.28 | 2.59 | 3.87 | 0.87           | 1.20 | 1.89 | 2.20 | 3.48 |
| 8H              | 4H   | 1.33             | 1.70 | 2.33 | 2.68 | 3.96 | 0.94           | 1.31 | 1.94 | 2.29 | 3.57 |
|                 | 6H   | 1.21             | 1.51 | 2.24 | 2.54 | 3.82 | 0.83           | 1.12 | 1.85 | 2.15 | 3.43 |
|                 | 8H   | 1.15             | 1.41 | 2.18 | 2.43 | 3.73 | 0.76           | 1.02 | 1.79 | 2.04 | 3.34 |
|                 | 12H  | 1.09             | 1.32 | 2.11 | 2.32 | 3.67 | 0.70           | 0.93 | 1.73 | 1.93 | 3.28 |
| 12H             | 4H   | 1.26             | 1.59 | 2.28 | 2.59 | 3.87 | 0.87           | 1.20 | 1.89 | 2.20 | 3.48 |
|                 | 6H   | 1.15             | 1.41 | 2.18 | 2.43 | 3.73 | 0.76           | 1.02 | 1.79 | 2.04 | 3.34 |
|                 | 8H   | 1.09             | 1.32 | 2.11 | 2.32 | 3.67 | 0.70           | 0.93 | 1.73 | 1.93 | 3.28 |