

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: P853555

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

Issue Date: 7/12/2024

**Test Information**

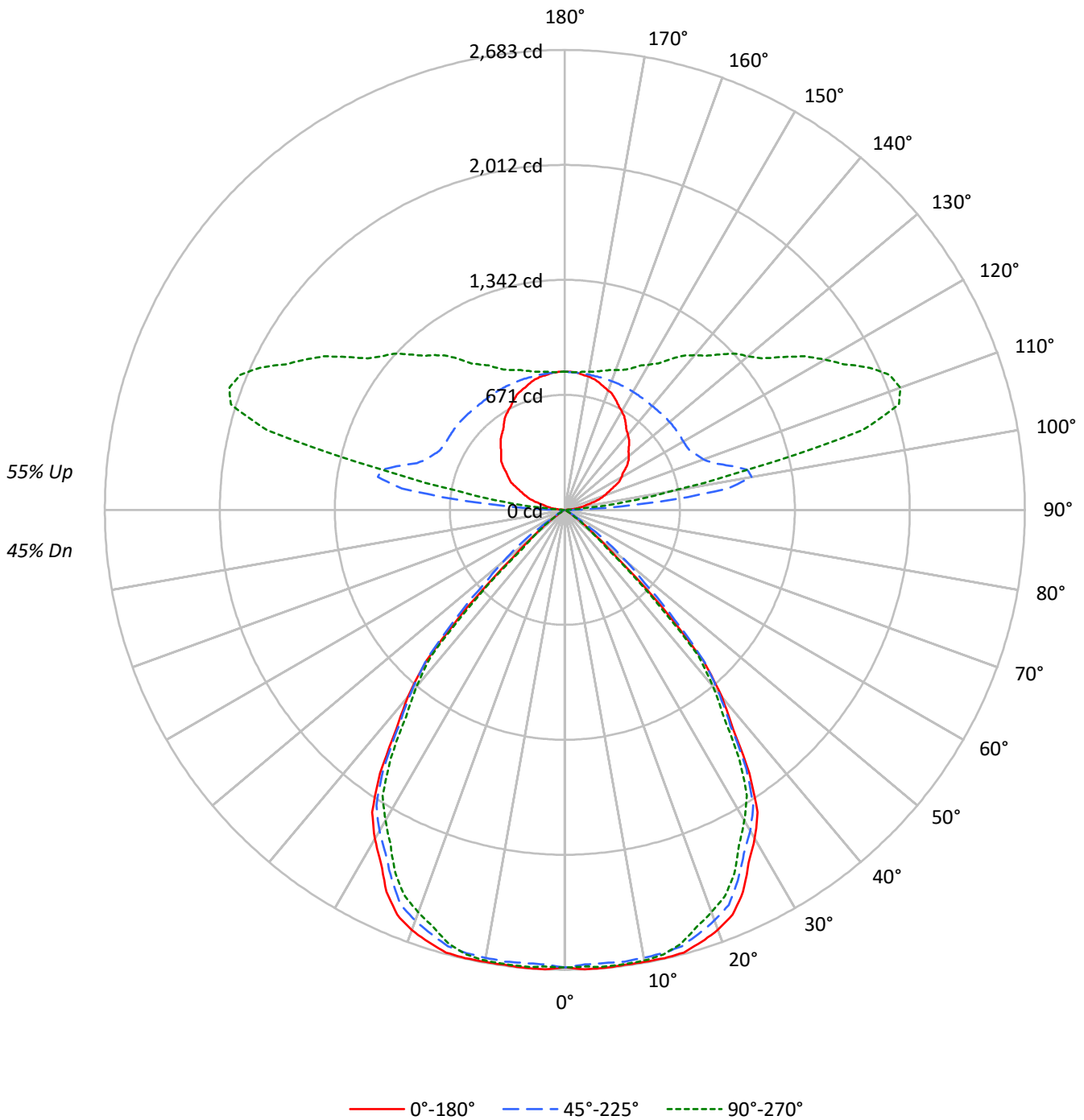
Test Method: LM-79-2019  
Report Number: P853555  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G3-2104-222-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-BBM-125U-100D-935-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8964.6 lumens  
Efficiency: N/A  
Efficacy: 109.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 82  
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 |    |    |    | 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   | 106 | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 80 | 80 | 80 | 65 | 65 | 65 | 51 | 51 | 51 | 45 |
| 1   | 98  | 95  | 91  | 89  | 90 | 87 | 84 | 82 | 73 | 71 | 69 | 60 | 59 | 58 | 48 | 47 | 47 | 41 |
| 2   | 91  | 85  | 80  | 75  | 84 | 78 | 74 | 70 | 66 | 63 | 61 | 55 | 53 | 51 | 44 | 43 | 42 | 37 |
| 3   | 84  | 76  | 70  | 65  | 77 | 71 | 65 | 61 | 60 | 56 | 53 | 50 | 48 | 46 | 41 | 40 | 38 | 34 |
| 4   | 78  | 69  | 62  | 57  | 72 | 64 | 58 | 54 | 55 | 50 | 47 | 46 | 43 | 41 | 38 | 36 | 35 | 31 |
| 5   | 72  | 62  | 55  | 50  | 67 | 58 | 52 | 47 | 50 | 45 | 42 | 42 | 39 | 37 | 35 | 33 | 31 | 28 |
| 6   | 67  | 57  | 50  | 44  | 62 | 53 | 47 | 42 | 46 | 41 | 38 | 39 | 36 | 33 | 33 | 30 | 29 | 26 |
| 7   | 63  | 52  | 45  | 40  | 58 | 48 | 42 | 38 | 42 | 37 | 34 | 36 | 33 | 30 | 30 | 28 | 26 | 24 |
| 8   | 58  | 47  | 40  | 36  | 54 | 44 | 38 | 34 | 39 | 34 | 31 | 33 | 30 | 27 | 28 | 26 | 24 | 22 |
| 9   | 55  | 44  | 37  | 32  | 51 | 41 | 35 | 31 | 36 | 31 | 28 | 31 | 27 | 25 | 26 | 24 | 22 | 20 |
| 10  | 51  | 40  | 34  | 29  | 47 | 38 | 32 | 28 | 33 | 29 | 25 | 29 | 25 | 23 | 25 | 22 | 20 | 18 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 43100 | 43100 | 43100 |
| 5°  | 43475 | 43005 | 43362 |
| 10° | 43896 | 43502 | 43781 |
| 15° | 44704 | 44052 | 43784 |
| 20° | 44818 | 43821 | 42928 |
| 25° | 43814 | 42512 | 41675 |
| 30° | 41301 | 40313 | 39027 |
| 35° | 37002 | 36352 | 34893 |
| 40° | 30018 | 29512 | 28353 |
| 45° | 18269 | 20712 | 16397 |
| 50° | 5827  | 11708 | 5325  |
| 55° | 2027  | 4251  | 2083  |
| 60° | 161   | 1227  | 32    |
| 65° | 0     | 76    | 0     |
| 70° | 0     | 0     | 0     |
| 75° | 0     | 0     | 0     |
| 80° | 0     | 0     | 0     |
| 85° | 0     | 0     | 0     |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 20712 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 255.1  | 2.8       |
| 10°-20°   | 746.0  | 8.3       |
| 20°-30°   | 1099.6 | 12.3      |
| 30°-40°   | 1126.0 | 12.6      |
| 40°-50°   | 648.9  | 7.2       |
| 50°-60°   | 113.6  | 1.3       |
| 60°-70°   | 4.4    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 1.2    | 0.0       |
| 90°-100°  | 308.2  | 3.4       |
| 100°-110° | 1003.2 | 11.2      |
| 110°-120° | 992.4  | 11.1      |
| 120°-130° | 811.0  | 9.0       |
| 130°-140° | 662.8  | 7.4       |
| 140°-150° | 516.3  | 5.8       |
| 150°-160° | 372.1  | 4.2       |
| 160°-170° | 227.4  | 2.5       |
| 170°-180° | 76.7   | 0.9       |
| 0°-30°    | 2100.7 | 23.4      |
| 0°-40°    | 3226.7 | 36.0      |
| 0°-60°    | 3989.2 | 44.5      |
| 0°-90°    | 3994.7 | 44.6      |
| 90°-120°  | 2303.8 | 25.7      |
| 90°-150°  | 4293.8 | 47.9      |
| 90°-180°  | 4970.0 | 55.4      |
| 0°-180°   | 8964.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2669 | 2669  | 2669 | 2669  | 2669 |      |
| 5°   | 2682 | 2676  | 2653 | 2685  | 2675 | 256  |
| 15°  | 2674 | 2696  | 2635 | 2635  | 2619 | 753  |
| 25°  | 2459 | 2478  | 2386 | 2365  | 2339 | 1122 |
| 35°  | 1877 | 1866  | 1844 | 1800  | 1770 | 1152 |
| 45°  | 800  | 895   | 907  | 862   | 718  | 612  |
| 55°  | 72   | 87    | 151  | 82    | 74   | 80   |
| 65°  | 0    | 1     | 2    | 1     | 0    | 1    |
| 75°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 85°  | 0    | 0     | 0    | 0     | 0    | 0    |
| 90°  | 0    | 3     | 7    | 6     | 6    | 2    |
| 95°  | 42   | 127   | 565  | 201   | 124  | 48   |
| 105° | 170  | 246   | 994  | 1898  | 1797 | 182  |
| 115° | 315  | 376   | 810  | 1668  | 1963 | 312  |
| 125° | 438  | 488   | 799  | 1317  | 1553 | 390  |
| 135° | 529  | 584   | 795  | 1137  | 1282 | 409  |
| 145° | 618  | 664   | 793  | 979   | 1072 | 387  |
| 155° | 706  | 729   | 798  | 877   | 910  | 325  |
| 165° | 770  | 777   | 800  | 830   | 839  | 217  |
| 175° | 803  | 803   | 803  | 808   | 806  | 76   |
| 180° | 806  | 806   | 806  | 806   | 806  |      |



TEST NUMBER: P853555

CATALOG NUMBER: SQ2-BBM-125U-100D-935-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2669.4 | 2669.4 | 2669.4 | 2669.4 | 2669.4 |
| 2.5°   | 2683.0 | 2675.9 | 2655.0 | 2676.4 | 2667.0 |
| 5°     | 2682.4 | 2676.5 | 2653.4 | 2685.2 | 2675.4 |
| 7.5°   | 2677.4 | 2676.0 | 2658.2 | 2683.1 | 2672.0 |
| 10°    | 2677.4 | 2682.3 | 2653.4 | 2679.2 | 2670.4 |
| 12.5°  | 2679.0 | 2690.1 | 2648.6 | 2668.7 | 2656.0 |
| 15°    | 2674.4 | 2695.9 | 2635.4 | 2635.0 | 2619.4 |
| 17.5°  | 2644.4 | 2669.8 | 2593.6 | 2572.9 | 2552.0 |
| 20°    | 2608.4 | 2637.7 | 2550.4 | 2520.9 | 2498.4 |
| 22.5°  | 2556.4 | 2584.9 | 2496.0 | 2462.4 | 2439.9 |
| 25°    | 2459.4 | 2477.9 | 2386.3 | 2364.8 | 2339.3 |
| 27.5°  | 2321.7 | 2332.7 | 2261.5 | 2224.2 | 2201.3 |
| 30°    | 2215.3 | 2223.1 | 2162.3 | 2121.7 | 2093.3 |
| 32.5°  | 2092.1 | 2089.0 | 2044.7 | 2003.3 | 1976.5 |
| 35°    | 1877.3 | 1866.5 | 1844.3 | 1799.6 | 1770.3 |
| 37.5°  | 1613.0 | 1611.1 | 1589.0 | 1550.3 | 1519.6 |
| 40°    | 1424.2 | 1422.2 | 1400.2 | 1365.7 | 1345.2 |
| 42.5°  | 1195.4 | 1232.5 | 1206.6 | 1164.3 | 1151.6 |
| 45°    | 800.1  | 895.0  | 907.1  | 861.9  | 718.1  |
| 47.5°  | 412.9  | 539.6  | 631.7  | 492.0  | 340.8  |
| 50°    | 232.0  | 325.9  | 466.1  | 263.9  | 212.0  |
| 52.5°  | 151.2  | 196.6  | 325.2  | 168.4  | 142.4  |
| 55°    | 72.0   | 86.7   | 151.0  | 81.8   | 74.0   |
| 57.5°  | 25.8   | 39.9   | 66.0   | 40.5   | 25.0   |
| 60°    | 5.0    | 16.7   | 38.0   | 11.8   | 1.0    |
| 62.5°  | 1.8    | 4.9    | 22.0   | 3.2    | 1.0    |
| 65°    | 0.0    | 1.0    | 2.0    | 1.0    | 0.0    |
| 67.5°  | 0.0    | 0.8    | 0.8    | 0.0    | 0.0    |
| 70°    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 72.5°  | 0.0    | 0.0    | 0.0    | 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    | 0.6    | 1.4    | 1.2    | 1.2    |
| 90°    | 0.0    | 2.9    | 6.9    | 5.9    | 5.9    |
| 92.5°  | 14.3   | 51.3   | 163.9  | 54.0   | 41.6   |
| 95°    | 41.6   | 126.9  | 564.8  | 201.4  | 123.9  |
| 97.5°  | 78.3   | 165.1  | 958.5  | 583.8  | 356.3  |
| 100°   | 102.1  | 187.3  | 1106.8 | 986.9  | 640.1  |
| 102.5° | 129.0  | 211.2  | 1088.5 | 1460.1 | 1110.1 |
| 105°   | 170.4  | 246.0  | 993.8  | 1898.2 | 1797.4 |
| 107.5° | 215.2  | 286.3  | 903.9  | 1936.2 | 2042.9 |
| 110°   | 247.7  | 312.6  | 861.0  | 1889.0 | 2081.8 |



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CATALOG NUMBER: SQ2-BBM-125U-100D-935-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 274.7 | 338.8 | 834.1 | 1803.8 | 2052.4 |
| 115°   | 315.1 | 376.1 | 809.5 | 1668.3 | 1962.9 |
| 117.5° | 356.7 | 411.7 | 800.0 | 1544.3 | 1837.4 |
| 120°   | 380.5 | 434.7 | 797.6 | 1468.0 | 1751.8 |
| 122.5° | 403.5 | 457.0 | 798.4 | 1401.7 | 1666.2 |
| 125°   | 438.0 | 488.3 | 798.6 | 1317.2 | 1552.7 |
| 127.5° | 467.5 | 519.0 | 798.4 | 1253.9 | 1450.2 |
| 130°   | 486.5 | 538.8 | 797.6 | 1217.8 | 1393.1 |
| 132.5° | 503.2 | 557.8 | 796.8 | 1184.2 | 1348.7 |
| 135°   | 529.1 | 584.3 | 794.7 | 1136.8 | 1282.2 |
| 137.5° | 554.5 | 610.1 | 792.5 | 1088.7 | 1217.8 |
| 140°   | 572.7 | 626.0 | 791.7 | 1056.0 | 1178.1 |
| 142.5° | 590.1 | 641.1 | 791.7 | 1024.8 | 1133.7 |
| 145°   | 618.3 | 663.8 | 792.7 | 979.1  | 1072.1 |
| 147.5° | 645.6 | 685.2 | 794.1 | 940.2  | 1012.1 |
| 150°   | 663.9 | 698.7 | 795.7 | 916.9  | 978.0  |
| 152.5° | 682.1 | 710.8 | 796.4 | 899.2  | 947.8  |
| 155°   | 705.5 | 728.7 | 797.6 | 876.7  | 909.6  |
| 157.5° | 727.7 | 744.3 | 798.8 | 860.0  | 883.0  |
| 160°   | 741.2 | 754.7 | 799.6 | 849.6  | 868.0  |
| 162.5° | 753.0 | 763.5 | 799.6 | 840.7  | 854.5  |
| 165°   | 769.9 | 776.7 | 799.6 | 829.6  | 839.2  |
| 167.5° | 781.8 | 786.0 | 799.8 | 821.1  | 826.2  |
| 170°   | 789.7 | 791.6 | 800.6 | 815.5  | 817.4  |
| 172.5° | 795.3 | 796.4 | 802.2 | 812.3  | 811.9  |
| 175°   | 802.6 | 802.6 | 802.6 | 808.5  | 806.5  |
| 177.5° | 805.6 | 804.8 | 804.0 | 807.9  | 804.8  |
| 180°   | 805.6 | 805.6 | 805.6 | 805.6  | 805.6  |

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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 | 0.35             | 1.03 | 1.39 | 2.05 | 3.41 | 0.00           | 0.50 | 0.86 | 1.52 | 2.88 |
|                 | 3H   | 0.15             | 0.76 | 1.20 | 1.78 | 3.17 | 0.00           | 0.23 | 0.67 | 1.26 | 2.64 |
|                 | 4H   | 0.05             | 0.61 | 1.10 | 1.65 | 3.03 | 0.00           | 0.08 | 0.57 | 1.12 | 2.50 |
|                 | 6H   | 0.00             | 0.46 | 1.00 | 1.49 | 2.89 | 0.00           | 0.00 | 0.47 | 0.96 | 2.36 |
|                 | 8H   | 0.00             | 0.37 | 0.94 | 1.42 | 2.81 | 0.00           | 0.00 | 0.41 | 0.89 | 2.28 |
|                 | 12H  | 0.00             | 0.28 | 0.88 | 1.32 | 2.74 | 0.00           | 0.00 | 0.36 | 0.79 | 2.21 |
| 4H              | 2H   | 0.06             | 0.62 | 1.12 | 1.65 | 3.04 | 0.00           | 0.10 | 0.59 | 1.13 | 2.52 |
|                 | 3H   | 0.00             | 0.32 | 0.92 | 1.38 | 2.78 | 0.00           | 0.00 | 0.39 | 0.85 | 2.25 |
|                 | 4H   | 0.00             | 0.17 | 0.81 | 1.22 | 2.64 | 0.00           | 0.00 | 0.28 | 0.69 | 2.11 |
|                 | 6H   | 0.00             | 0.00 | 0.71 | 1.07 | 2.48 | 0.00           | 0.00 | 0.18 | 0.54 | 1.96 |
|                 | 8H   | 0.00             | 0.00 | 0.64 | 0.97 | 2.40 | 0.00           | 0.00 | 0.12 | 0.44 | 1.87 |
|                 | 12H  | 0.00             | 0.00 | 0.59 | 0.88 | 2.31 | 0.00           | 0.00 | 0.06 | 0.35 | 1.78 |
| 8H              | 4H   | 0.00             | 0.00 | 0.64 | 0.97 | 2.40 | 0.00           | 0.00 | 0.12 | 0.44 | 1.87 |
|                 | 6H   | 0.00             | 0.00 | 0.55 | 0.83 | 2.26 | 0.00           | 0.00 | 0.02 | 0.30 | 1.73 |
|                 | 8H   | 0.00             | 0.00 | 0.49 | 0.72 | 2.17 | 0.00           | 0.00 | 0.00 | 0.19 | 1.64 |
|                 | 12H  | 0.00             | 0.00 | 0.43 | 0.62 | 2.10 | 0.00           | 0.00 | 0.00 | 0.09 | 1.58 |
| 12H             | 4H   | 0.00             | 0.00 | 0.59 | 0.88 | 2.31 | 0.00           | 0.00 | 0.06 | 0.35 | 1.78 |
|                 | 6H   | 0.00             | 0.00 | 0.49 | 0.72 | 2.17 | 0.00           | 0.00 | 0.00 | 0.19 | 1.64 |
|                 | 8H   | 0.00             | 0.00 | 0.43 | 0.62 | 2.10 | 0.00           | 0.00 | 0.00 | 0.09 | 1.58 |