

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: P853568

Luminaire Tested: SQ2-BBM-150U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853568
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G3-2104-222-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBM-150U-100D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

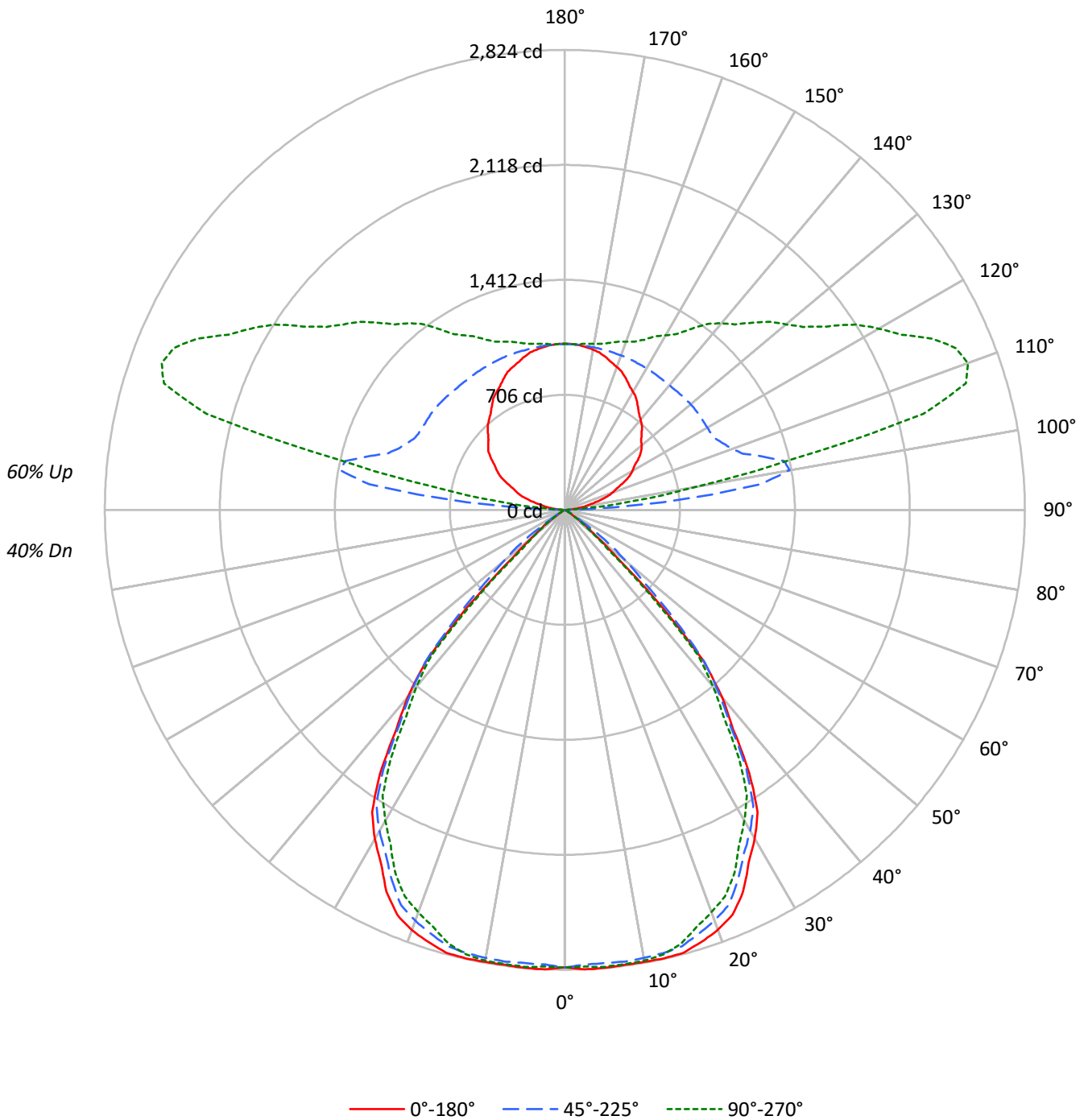
Lumens per Lamp: N/A
Luminaire Lumens: 10494.3 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 94.3
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 | 105 | 105 | 105 | 105 | 95 | 95 | 95 | 95 | 78 | 78 | 78 | 62 | 62 | 62 | 47 | 47 | 47 | 40 |
| 1 | 97 | 93 | 90 | 87 | 88 | 85 | 83 | 80 | 70 | 69 | 67 | 57 | 56 | 54 | 44 | 43 | 43 | 37 |
| 2 | 90 | 84 | 78 | 74 | 82 | 77 | 72 | 69 | 64 | 61 | 58 | 52 | 50 | 48 | 41 | 40 | 39 | 34 |
| 3 | 83 | 75 | 69 | 64 | 76 | 69 | 64 | 59 | 58 | 54 | 51 | 47 | 45 | 43 | 38 | 36 | 35 | 31 |
| 4 | 77 | 68 | 61 | 56 | 70 | 62 | 56 | 52 | 52 | 48 | 45 | 43 | 40 | 38 | 35 | 33 | 32 | 28 |
| 5 | 71 | 61 | 54 | 49 | 65 | 56 | 50 | 46 | 48 | 43 | 40 | 40 | 37 | 34 | 32 | 30 | 29 | 25 |
| 6 | 66 | 55 | 48 | 43 | 60 | 51 | 45 | 41 | 44 | 39 | 36 | 37 | 33 | 31 | 30 | 28 | 26 | 23 |
| 7 | 61 | 50 | 43 | 38 | 56 | 47 | 41 | 36 | 40 | 35 | 32 | 34 | 30 | 28 | 28 | 26 | 24 | 21 |
| 8 | 57 | 46 | 39 | 34 | 53 | 43 | 37 | 33 | 37 | 32 | 29 | 31 | 28 | 25 | 26 | 24 | 22 | 20 |
| 9 | 54 | 42 | 36 | 31 | 49 | 40 | 34 | 29 | 34 | 30 | 26 | 29 | 26 | 23 | 24 | 22 | 20 | 18 |
| 10 | 50 | 39 | 33 | 28 | 46 | 37 | 31 | 27 | 32 | 27 | 24 | 27 | 24 | 21 | 23 | 20 | 19 | 17 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 45368 | 45368 | 45368 |
| 5° | 45764 | 45269 | 45644 |
| 10° | 46207 | 45793 | 46086 |
| 15° | 47057 | 46370 | 46089 |
| 20° | 47177 | 46127 | 45187 |
| 25° | 46119 | 44751 | 43869 |
| 30° | 43477 | 42437 | 41081 |
| 35° | 38950 | 38266 | 36730 |
| 40° | 31598 | 31065 | 29845 |
| 45° | 19231 | 21804 | 17260 |
| 50° | 6136 | 12323 | 5606 |
| 55° | 2134 | 4476 | 2193 |
| 60° | 171 | 1292 | 36 |
| 65° | 0 | 80 | 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: 21804 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 268.5 | 2.6 |
| 10°-20° | 785.3 | 7.5 |
| 20°-30° | 1157.5 | 11.0 |
| 30°-40° | 1185.3 | 11.3 |
| 40°-50° | 683.0 | 6.5 |
| 50°-60° | 119.6 | 1.1 |
| 60°-70° | 4.6 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 1.5 | 0.0 |
| 90°-100° | 388.3 | 3.7 |
| 100°-110° | 1271.3 | 12.1 |
| 110°-120° | 1256.9 | 12.0 |
| 120°-130° | 1027.5 | 9.8 |
| 130°-140° | 838.5 | 8.0 |
| 140°-150° | 652.5 | 6.2 |
| 150°-160° | 469.8 | 4.5 |
| 160°-170° | 287.4 | 2.7 |
| 170°-180° | 97.1 | 0.9 |
| 0°-30° | 2211.3 | 21.1 |
| 0°-40° | 3396.6 | 32.4 |
| 0°-60° | 4199.2 | 40.0 |
| 0°-90° | 4205.3 | 40.1 |
| 90°-120° | 2916.5 | 27.8 |
| 90°-150° | 5435.0 | 51.8 |
| 90°-180° | 6289.0 | 59.9 |
| 0°-180° | 10494.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2810 | 2810 | 2810 | 2810 | 2810 | |
| 5° | 2824 | 2817 | 2793 | 2826 | 2816 | 269 |
| 15° | 2815 | 2838 | 2774 | 2774 | 2757 | 793 |
| 25° | 2589 | 2608 | 2512 | 2489 | 2462 | 1182 |
| 35° | 1976 | 1965 | 1941 | 1894 | 1864 | 1213 |
| 45° | 842 | 942 | 955 | 907 | 756 | 645 |
| 55° | 76 | 91 | 159 | 86 | 78 | 85 |
| 65° | 0 | 1 | 2 | 1 | 0 | 1 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 1 | 3 | 8 | 7 | 8 | 3 |
| 95° | 54 | 158 | 706 | 251 | 163 | 62 |
| 105° | 221 | 315 | 1262 | 2398 | 2278 | 233 |
| 115° | 398 | 476 | 1025 | 2119 | 2487 | 393 |
| 125° | 554 | 618 | 1011 | 1671 | 1963 | 493 |
| 135° | 667 | 738 | 1002 | 1441 | 1624 | 516 |
| 145° | 780 | 838 | 1000 | 1240 | 1358 | 489 |
| 155° | 889 | 919 | 1006 | 1109 | 1152 | 409 |
| 165° | 971 | 980 | 1011 | 1050 | 1061 | 274 |
| 175° | 1015 | 1015 | 1016 | 1023 | 1021 | 96 |
| 180° | 1019 | 1019 | 1019 | 1019 | 1019 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2809.9 | 2809.9 | 2809.9 | 2809.9 | 2809.9 |
| 2.5° | 2824.2 | 2816.8 | 2794.8 | 2817.3 | 2807.4 |
| 5° | 2823.6 | 2817.4 | 2793.1 | 2826.5 | 2816.2 |
| 7.5° | 2818.4 | 2816.9 | 2798.1 | 2824.4 | 2812.7 |
| 10° | 2818.4 | 2823.5 | 2793.1 | 2820.2 | 2811.0 |
| 12.5° | 2820.0 | 2831.8 | 2788.0 | 2809.2 | 2795.8 |
| 15° | 2815.2 | 2837.8 | 2774.1 | 2773.8 | 2757.3 |
| 17.5° | 2783.6 | 2810.4 | 2730.1 | 2708.4 | 2686.3 |
| 20° | 2745.7 | 2776.6 | 2684.6 | 2653.6 | 2629.9 |
| 22.5° | 2691.0 | 2721.0 | 2627.4 | 2592.1 | 2568.4 |
| 25° | 2588.8 | 2608.4 | 2512.0 | 2489.3 | 2462.5 |
| 27.5° | 2444.0 | 2455.5 | 2380.6 | 2341.3 | 2317.2 |
| 30° | 2332.0 | 2340.2 | 2276.2 | 2233.4 | 2203.5 |
| 32.5° | 2202.3 | 2199.0 | 2152.3 | 2108.8 | 2080.5 |
| 35° | 1976.1 | 1964.8 | 1941.4 | 1894.3 | 1863.5 |
| 37.5° | 1698.0 | 1695.9 | 1672.7 | 1632.0 | 1599.6 |
| 40° | 1499.2 | 1497.1 | 1473.9 | 1437.6 | 1416.0 |
| 42.5° | 1258.3 | 1297.4 | 1270.1 | 1225.6 | 1212.2 |
| 45° | 842.2 | 942.1 | 954.9 | 907.2 | 755.9 |
| 47.5° | 434.6 | 568.0 | 665.0 | 517.9 | 358.8 |
| 50° | 244.3 | 343.1 | 490.6 | 277.8 | 223.2 |
| 52.5° | 159.2 | 206.9 | 342.4 | 177.3 | 149.9 |
| 55° | 75.8 | 91.2 | 159.0 | 86.1 | 77.9 |
| 57.5° | 27.2 | 42.0 | 69.5 | 42.6 | 26.3 |
| 60° | 5.3 | 17.6 | 40.0 | 12.4 | 1.1 |
| 62.5° | 1.9 | 5.2 | 23.2 | 3.3 | 1.1 |
| 65° | 0.0 | 1.0 | 2.1 | 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° | 0.2 | 0.6 | 1.7 | 1.5 | 1.7 |
| 90° | 1.0 | 3.1 | 8.4 | 7.4 | 8.4 |
| 92.5° | 17.8 | 64.9 | 199.4 | 64.8 | 51.9 |
| 95° | 54.5 | 157.9 | 705.9 | 251.4 | 163.4 |
| 97.5° | 98.9 | 208.2 | 1211.1 | 732.6 | 454.1 |
| 100° | 129.9 | 234.3 | 1401.2 | 1251.3 | 829.4 |
| 102.5° | 165.0 | 267.0 | 1380.3 | 1843.8 | 1429.3 |
| 105° | 221.0 | 315.2 | 1262.0 | 2397.6 | 2277.8 |
| 107.5° | 276.1 | 362.5 | 1146.5 | 2449.4 | 2581.1 |
| 110° | 312.1 | 396.1 | 1091.3 | 2389.1 | 2633.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 346.4 | 427.9 | 1057.7 | 2284.3 | 2597.8 |
| 115° | 398.0 | 475.8 | 1025.3 | 2118.6 | 2487.3 |
| 117.5° | 448.0 | 520.7 | 1012.9 | 1955.8 | 2330.2 |
| 120° | 480.7 | 549.3 | 1009.6 | 1860.9 | 2225.4 |
| 122.5° | 510.0 | 577.0 | 1009.6 | 1779.0 | 2117.4 |
| 125° | 554.0 | 617.5 | 1010.6 | 1670.7 | 1962.6 |
| 127.5° | 591.3 | 656.0 | 1009.4 | 1590.9 | 1844.9 |
| 130° | 614.7 | 680.3 | 1008.5 | 1542.6 | 1772.0 |
| 132.5° | 635.7 | 702.9 | 1006.0 | 1501.1 | 1709.1 |
| 135° | 667.1 | 737.8 | 1002.2 | 1441.0 | 1624.3 |
| 137.5° | 700.2 | 770.2 | 999.9 | 1378.4 | 1544.1 |
| 140° | 723.7 | 791.2 | 999.1 | 1338.8 | 1495.5 |
| 142.5° | 747.1 | 810.6 | 999.1 | 1296.6 | 1438.5 |
| 145° | 780.2 | 837.6 | 1000.1 | 1239.5 | 1358.3 |
| 147.5° | 815.0 | 862.7 | 1001.6 | 1189.8 | 1279.5 |
| 150° | 836.8 | 878.7 | 1003.3 | 1161.0 | 1236.8 |
| 152.5° | 858.5 | 895.6 | 1004.1 | 1137.3 | 1200.0 |
| 155° | 889.1 | 918.8 | 1006.4 | 1109.0 | 1152.0 |
| 157.5° | 916.6 | 938.1 | 1008.7 | 1086.7 | 1117.9 |
| 160° | 934.2 | 951.6 | 1009.6 | 1074.0 | 1098.6 |
| 162.5° | 949.2 | 963.4 | 1009.6 | 1063.8 | 1081.8 |
| 165° | 970.8 | 980.0 | 1010.6 | 1049.6 | 1060.9 |
| 167.5° | 989.0 | 993.5 | 1011.9 | 1038.6 | 1044.8 |
| 170° | 999.1 | 1001.1 | 1012.7 | 1032.7 | 1034.7 |
| 172.5° | 1006.6 | 1007.9 | 1015.2 | 1028.4 | 1028.8 |
| 175° | 1014.8 | 1014.8 | 1015.8 | 1023.1 | 1021.1 |
| 177.5° | 1019.0 | 1018.2 | 1017.3 | 1022.3 | 1019.0 |
| 180° | 1019.0 | 1019.0 | 1019.0 | 1019.0 | 1019.0 |

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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 | 0.04 | 0.70 | 1.11 | 1.75 | 3.17 | 0.00 | 0.17 | 0.58 | 1.22 | 2.64 |
| | 3H | 0.00 | 0.43 | 0.92 | 1.49 | 2.92 | 0.00 | 0.00 | 0.39 | 0.96 | 2.39 |
| | 4H | 0.00 | 0.29 | 0.82 | 1.35 | 2.79 | 0.00 | 0.00 | 0.29 | 0.82 | 2.26 |
| | 6H | 0.00 | 0.13 | 0.72 | 1.19 | 2.65 | 0.00 | 0.00 | 0.19 | 0.66 | 2.12 |
| | 8H | 0.00 | 0.04 | 0.66 | 1.12 | 2.57 | 0.00 | 0.00 | 0.13 | 0.59 | 2.04 |
| | 12H | 0.00 | 0.00 | 0.60 | 1.03 | 2.50 | 0.00 | 0.00 | 0.07 | 0.50 | 1.97 |
| 4H | 2H | 0.00 | 0.30 | 0.84 | 1.36 | 2.80 | 0.00 | 0.00 | 0.31 | 0.83 | 2.27 |
| | 3H | 0.00 | 0.00 | 0.64 | 1.08 | 2.54 | 0.00 | 0.00 | 0.11 | 0.56 | 2.01 |
| | 4H | 0.00 | 0.00 | 0.53 | 0.92 | 2.40 | 0.00 | 0.00 | 0.00 | 0.39 | 1.87 |
| | 6H | 0.00 | 0.00 | 0.42 | 0.77 | 2.24 | 0.00 | 0.00 | 0.00 | 0.24 | 1.71 |
| | 8H | 0.00 | 0.00 | 0.36 | 0.67 | 2.16 | 0.00 | 0.00 | 0.00 | 0.15 | 1.63 |
| | 12H | 0.00 | 0.00 | 0.30 | 0.58 | 2.07 | 0.00 | 0.00 | 0.00 | 0.05 | 1.54 |
| 8H | 4H | 0.00 | 0.00 | 0.36 | 0.67 | 2.16 | 0.00 | 0.00 | 0.00 | 0.15 | 1.63 |
| | 6H | 0.00 | 0.00 | 0.26 | 0.54 | 2.02 | 0.00 | 0.00 | 0.00 | 0.01 | 1.49 |
| | 8H | 0.00 | 0.00 | 0.21 | 0.43 | 1.93 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 |
| | 12H | 0.00 | 0.00 | 0.14 | 0.32 | 1.86 | 0.00 | 0.00 | 0.00 | 0.00 | 1.34 |
| 12H | 4H | 0.00 | 0.00 | 0.30 | 0.58 | 2.07 | 0.00 | 0.00 | 0.00 | 0.05 | 1.54 |
| | 6H | 0.00 | 0.00 | 0.21 | 0.43 | 1.93 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 |
| | 8H | 0.00 | 0.00 | 0.14 | 0.32 | 1.86 | 0.00 | 0.00 | 0.00 | 0.00 | 1.34 |