

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: P853503

Luminaire Tested: SQ2-BBM-050U-075D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853503
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2104-222-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBM-050U-075D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

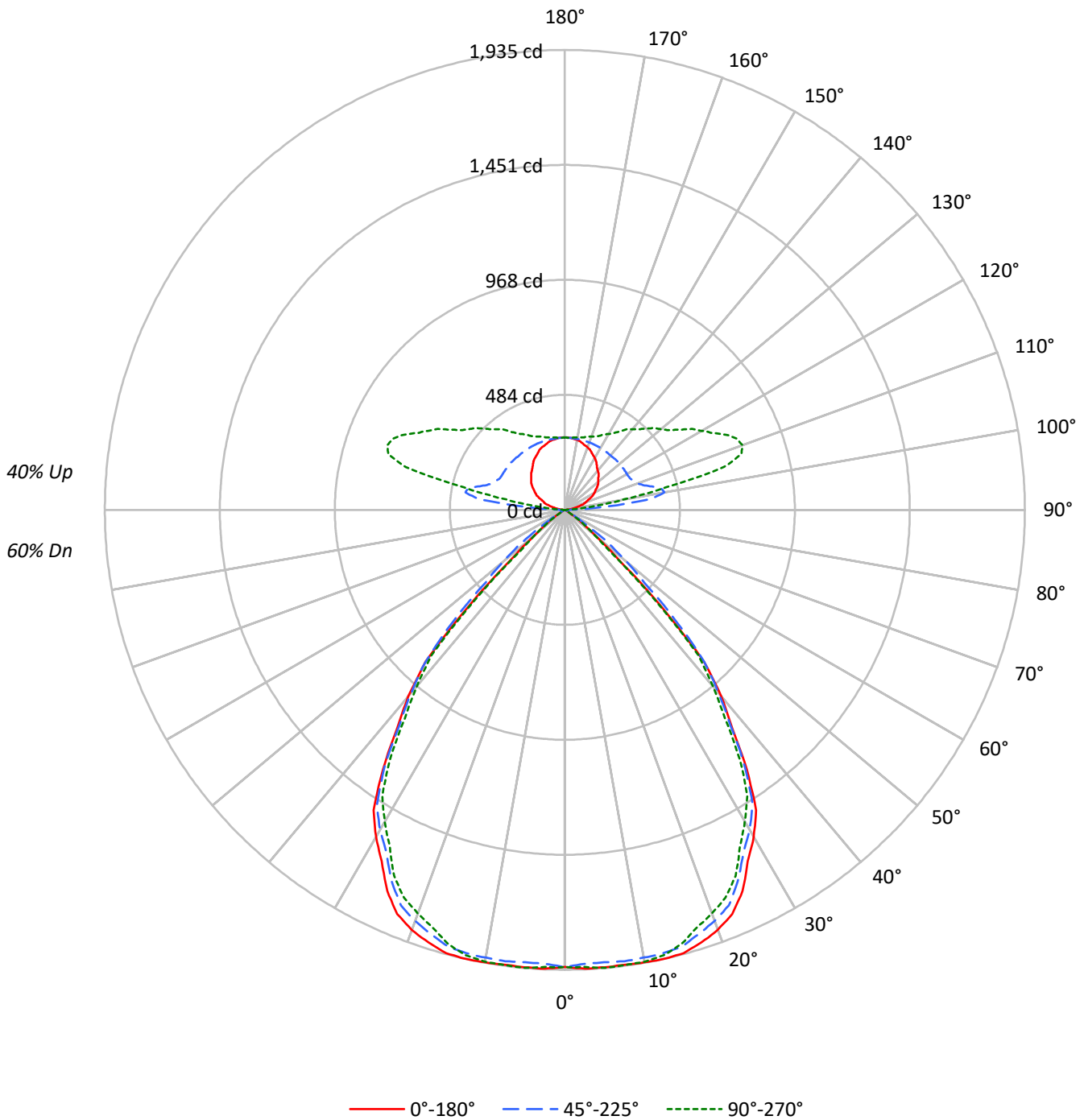
Lumens per Lamp: N/A
Luminaire Lumens: 4766.6 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 42.4
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 | | | | 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 | 110 | 110 | 110 | 110 | 102 | 102 | 102 | 102 | 89 | 89 | 89 | 77 | 77 | 77 | 66 | 66 | 66 | 60 |
| 1 | 102 | 99 | 96 | 93 | 96 | 93 | 90 | 88 | 82 | 80 | 78 | 71 | 70 | 69 | 62 | 61 | 60 | 56 |
| 2 | 95 | 89 | 84 | 80 | 89 | 84 | 80 | 76 | 75 | 71 | 69 | 66 | 63 | 61 | 57 | 56 | 55 | 51 |
| 3 | 89 | 81 | 75 | 70 | 83 | 77 | 71 | 67 | 68 | 64 | 61 | 60 | 58 | 55 | 53 | 51 | 50 | 46 |
| 4 | 83 | 74 | 67 | 62 | 78 | 70 | 64 | 59 | 62 | 58 | 54 | 56 | 52 | 50 | 49 | 47 | 45 | 42 |
| 5 | 77 | 67 | 60 | 55 | 72 | 64 | 58 | 53 | 57 | 53 | 49 | 51 | 48 | 45 | 46 | 43 | 41 | 38 |
| 6 | 72 | 61 | 54 | 49 | 68 | 58 | 52 | 47 | 53 | 48 | 44 | 48 | 44 | 41 | 43 | 40 | 37 | 35 |
| 7 | 67 | 56 | 49 | 44 | 63 | 54 | 47 | 43 | 49 | 44 | 40 | 44 | 40 | 37 | 40 | 37 | 34 | 32 |
| 8 | 63 | 52 | 45 | 40 | 59 | 49 | 43 | 39 | 45 | 40 | 36 | 41 | 37 | 34 | 37 | 34 | 31 | 29 |
| 9 | 59 | 48 | 41 | 36 | 56 | 46 | 40 | 35 | 42 | 37 | 33 | 38 | 34 | 31 | 35 | 31 | 29 | 27 |
| 10 | 55 | 44 | 38 | 33 | 52 | 42 | 36 | 32 | 39 | 34 | 31 | 36 | 31 | 29 | 32 | 29 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 31061 | 31061 | 31061 |
| 5° | 31305 | 30961 | 31352 |
| 10° | 31698 | 31367 | 31650 |
| 15° | 32269 | 31788 | 31626 |
| 20° | 32311 | 31632 | 31055 |
| 25° | 31513 | 30706 | 30278 |
| 30° | 29623 | 28976 | 28241 |
| 35° | 26292 | 26083 | 25304 |
| 40° | 21562 | 21197 | 20407 |
| 45° | 12855 | 15118 | 12063 |
| 50° | 4014 | 8387 | 3795 |
| 55° | 1517 | 2981 | 1517 |
| 60° | 94 | 840 | 32 |
| 65° | 0 | 38 | 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: 15118 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 183.9 | 3.9 |
| 10°-20° | 538.8 | 11.3 |
| 20°-30° | 792.7 | 16.6 |
| 30°-40° | 810.2 | 17.0 |
| 40°-50° | 466.7 | 9.8 |
| 50°-60° | 80.4 | 1.7 |
| 60°-70° | 2.9 | 0.1 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.5 | 0.0 |
| 90°-100° | 121.3 | 2.5 |
| 100°-110° | 384.6 | 8.1 |
| 110°-120° | 377.1 | 7.9 |
| 120°-130° | 306.9 | 6.4 |
| 130°-140° | 250.2 | 5.2 |
| 140°-150° | 195.1 | 4.1 |
| 150°-160° | 140.6 | 2.9 |
| 160°-170° | 85.9 | 1.8 |
| 170°-180° | 29.0 | 0.6 |
| 0°-30° | 1515.4 | 31.8 |
| 0°-40° | 2325.6 | 48.8 |
| 0°-60° | 2872.8 | 60.3 |
| 0°-90° | 2876.2 | 60.3 |
| 90°-120° | 883.0 | 18.5 |
| 90°-150° | 1635.1 | 34.3 |
| 90°-180° | 1891.0 | 39.7 |
| 0°-180° | 4766.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1924 | 1924 | 1924 | 1924 | 1924 | |
| 5° | 1932 | 1927 | 1910 | 1936 | 1934 | 184 |
| 15° | 1930 | 1946 | 1902 | 1904 | 1892 | 544 |
| 25° | 1769 | 1785 | 1724 | 1706 | 1700 | 807 |
| 35° | 1334 | 1344 | 1323 | 1298 | 1284 | 824 |
| 45° | 563 | 647 | 662 | 625 | 528 | 436 |
| 55° | 54 | 61 | 106 | 60 | 54 | 57 |
| 65° | 0 | 0 | 1 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 1 | 3 | 3 | 3 | 1 |
| 95° | 16 | 49 | 220 | 82 | 53 | 19 |
| 105° | 67 | 94 | 379 | 722 | 692 | 71 |
| 115° | 120 | 142 | 306 | 636 | 749 | 118 |
| 125° | 166 | 185 | 302 | 499 | 588 | 147 |
| 135° | 200 | 220 | 300 | 429 | 483 | 154 |
| 145° | 234 | 251 | 300 | 370 | 403 | 146 |
| 155° | 266 | 276 | 301 | 331 | 344 | 123 |
| 165° | 290 | 293 | 302 | 313 | 316 | 82 |
| 175° | 304 | 302 | 304 | 305 | 304 | 29 |
| 180° | 304 | 304 | 304 | 304 | 304 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1923.8 | 1923.8 | 1923.8 | 1923.8 | 1923.8 |
| 2.5° | 1932.3 | 1927.0 | 1911.5 | 1929.1 | 1925.3 |
| 5° | 1931.5 | 1926.8 | 1910.3 | 1936.3 | 1934.4 |
| 7.5° | 1930.3 | 1927.1 | 1915.5 | 1936.8 | 1932.1 |
| 10° | 1933.4 | 1932.5 | 1913.2 | 1935.2 | 1930.5 |
| 12.5° | 1935.0 | 1940.8 | 1910.9 | 1928.2 | 1919.8 |
| 15° | 1930.5 | 1946.5 | 1901.7 | 1904.3 | 1892.0 |
| 17.5° | 1909.0 | 1931.6 | 1871.8 | 1860.9 | 1843.5 |
| 20° | 1880.5 | 1906.8 | 1841.0 | 1822.4 | 1807.4 |
| 22.5° | 1840.5 | 1864.5 | 1801.8 | 1778.6 | 1766.5 |
| 25° | 1768.9 | 1784.9 | 1723.6 | 1706.2 | 1699.6 |
| 27.5° | 1667.4 | 1671.9 | 1625.8 | 1604.1 | 1595.6 |
| 30° | 1588.9 | 1588.9 | 1554.2 | 1530.8 | 1514.8 |
| 32.5° | 1497.3 | 1495.0 | 1470.3 | 1444.6 | 1428.6 |
| 35° | 1333.9 | 1344.2 | 1323.3 | 1297.9 | 1283.8 |
| 37.5° | 1157.0 | 1160.9 | 1145.0 | 1117.8 | 1106.0 |
| 40° | 1023.0 | 1024.0 | 1005.7 | 986.0 | 968.2 |
| 42.5° | 866.7 | 885.7 | 868.6 | 837.7 | 830.3 |
| 45° | 563.0 | 646.7 | 662.1 | 625.3 | 528.3 |
| 47.5° | 282.9 | 387.2 | 452.5 | 351.4 | 248.9 |
| 50° | 159.8 | 221.9 | 333.9 | 185.9 | 151.1 |
| 52.5° | 106.6 | 134.1 | 231.5 | 121.6 | 101.8 |
| 55° | 53.9 | 61.4 | 105.9 | 59.5 | 53.9 |
| 57.5° | 18.3 | 28.4 | 46.0 | 29.4 | 20.2 |
| 60° | 2.9 | 12.3 | 26.0 | 9.4 | 1.0 |
| 62.5° | 0.6 | 3.2 | 16.0 | 2.6 | 0.2 |
| 65° | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 0.0 | 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 | 0.2 | 0.6 | 0.6 | 0.6 |
| 90° | 0.0 | 0.9 | 2.9 | 2.9 | 2.9 |
| 92.5° | 5.4 | 21.3 | 68.0 | 22.6 | 15.9 |
| 95° | 16.3 | 49.0 | 220.2 | 81.7 | 52.7 |
| 97.5° | 30.3 | 63.6 | 373.0 | 233.1 | 143.0 |
| 100° | 40.2 | 72.0 | 425.1 | 387.5 | 251.8 |
| 102.5° | 50.9 | 81.3 | 415.9 | 569.1 | 435.6 |
| 105° | 67.0 | 94.2 | 379.1 | 722.1 | 692.1 |
| 107.5° | 83.1 | 108.2 | 344.1 | 738.1 | 778.5 |
| 110° | 93.8 | 118.2 | 326.4 | 719.7 | 794.6 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 104.5 | 127.4 | 316.5 | 688.0 | 783.1 |
| 115° | 119.7 | 142.1 | 306.3 | 636.3 | 748.6 |
| 117.5° | 134.4 | 155.8 | 302.3 | 586.5 | 699.8 |
| 120° | 143.6 | 164.2 | 301.6 | 555.8 | 665.3 |
| 122.5° | 152.8 | 172.6 | 301.6 | 531.1 | 633.2 |
| 125° | 165.6 | 185.3 | 301.6 | 498.9 | 587.8 |
| 127.5° | 176.9 | 195.8 | 301.6 | 473.9 | 549.7 |
| 130° | 183.8 | 203.5 | 301.6 | 459.2 | 527.5 |
| 132.5° | 190.7 | 210.4 | 300.8 | 447.5 | 509.1 |
| 135° | 200.1 | 219.7 | 299.6 | 429.2 | 483.4 |
| 137.5° | 209.3 | 229.9 | 299.5 | 411.6 | 460.1 |
| 140° | 215.4 | 236.0 | 298.7 | 399.2 | 443.2 |
| 142.5° | 223.1 | 242.9 | 299.5 | 386.9 | 427.9 |
| 145° | 233.6 | 251.4 | 299.6 | 370.3 | 403.0 |
| 147.5° | 244.1 | 259.3 | 299.8 | 355.6 | 382.4 |
| 150° | 251.8 | 263.9 | 300.6 | 347.0 | 368.6 |
| 152.5° | 257.9 | 268.6 | 300.6 | 340.1 | 357.8 |
| 155° | 266.1 | 275.5 | 300.6 | 330.6 | 343.7 |
| 157.5° | 274.9 | 281.3 | 301.6 | 324.7 | 333.7 |
| 160° | 279.5 | 285.2 | 301.6 | 320.9 | 328.4 |
| 162.5° | 284.1 | 288.3 | 301.6 | 317.8 | 323.0 |
| 165° | 290.1 | 292.9 | 301.6 | 313.1 | 315.9 |
| 167.5° | 295.6 | 296.4 | 302.5 | 309.8 | 312.3 |
| 170° | 298.7 | 298.7 | 302.5 | 308.3 | 309.2 |
| 172.5° | 300.2 | 301.0 | 302.5 | 306.7 | 306.9 |
| 175° | 303.5 | 302.5 | 303.5 | 305.4 | 304.4 |
| 177.5° | 304.4 | 303.7 | 303.7 | 305.2 | 303.7 |
| 180° | 304.4 | 304.4 | 304.4 | 304.4 | 304.4 |



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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 | 0.68 | 1.43 | 1.58 | 2.33 | 3.46 | 0.29 | 1.05 | 1.19 | 1.94 | 3.07 |
| | 3H | 0.49 | 1.16 | 1.40 | 2.06 | 3.22 | 0.10 | 0.77 | 1.01 | 1.67 | 2.83 |
| | 4H | 0.38 | 1.01 | 1.31 | 1.92 | 3.09 | 0.00 | 0.62 | 0.92 | 1.53 | 2.70 |
| | 6H | 0.27 | 0.85 | 1.21 | 1.76 | 2.94 | 0.00 | 0.46 | 0.83 | 1.38 | 2.55 |
| | 8H | 0.21 | 0.76 | 1.16 | 1.69 | 2.86 | 0.00 | 0.37 | 0.77 | 1.30 | 2.48 |
| | 12H | 0.15 | 0.67 | 1.10 | 1.59 | 2.79 | 0.00 | 0.29 | 0.72 | 1.21 | 2.41 |
| 4H | 2H | 0.39 | 1.02 | 1.32 | 1.92 | 3.09 | 0.00 | 0.63 | 0.94 | 1.54 | 2.71 |
| | 3H | 0.19 | 0.70 | 1.13 | 1.64 | 2.82 | 0.00 | 0.32 | 0.75 | 1.26 | 2.44 |
| | 4H | 0.08 | 0.54 | 1.03 | 1.48 | 2.69 | 0.00 | 0.16 | 0.64 | 1.09 | 2.30 |
| | 6H | 0.00 | 0.37 | 0.93 | 1.32 | 2.53 | 0.00 | 0.00 | 0.55 | 0.94 | 2.15 |
| | 8H | 0.00 | 0.27 | 0.87 | 1.23 | 2.44 | 0.00 | 0.00 | 0.48 | 0.84 | 2.06 |
| | 12H | 0.00 | 0.16 | 0.81 | 1.13 | 2.36 | 0.00 | 0.00 | 0.43 | 0.75 | 1.97 |
| 8H | 4H | 0.00 | 0.27 | 0.87 | 1.23 | 2.44 | 0.00 | 0.00 | 0.48 | 0.84 | 2.06 |
| | 6H | 0.00 | 0.09 | 0.77 | 1.08 | 2.30 | 0.00 | 0.00 | 0.38 | 0.70 | 1.91 |
| | 8H | 0.00 | 0.00 | 0.72 | 0.97 | 2.21 | 0.00 | 0.00 | 0.33 | 0.59 | 1.82 |
| | 12H | 0.00 | 0.00 | 0.65 | 0.87 | 2.15 | 0.00 | 0.00 | 0.26 | 0.48 | 1.77 |
| 12H | 4H | 0.00 | 0.16 | 0.81 | 1.13 | 2.36 | 0.00 | 0.00 | 0.43 | 0.75 | 1.97 |
| | 6H | 0.00 | 0.00 | 0.72 | 0.97 | 2.21 | 0.00 | 0.00 | 0.33 | 0.59 | 1.82 |
| | 8H | 0.00 | 0.00 | 0.65 | 0.87 | 2.15 | 0.00 | 0.00 | 0.26 | 0.48 | 1.77 |