

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: P853490

Luminaire Tested: SQ2-BBM-025U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853490
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G3-2104-222-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBM-025U-050D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

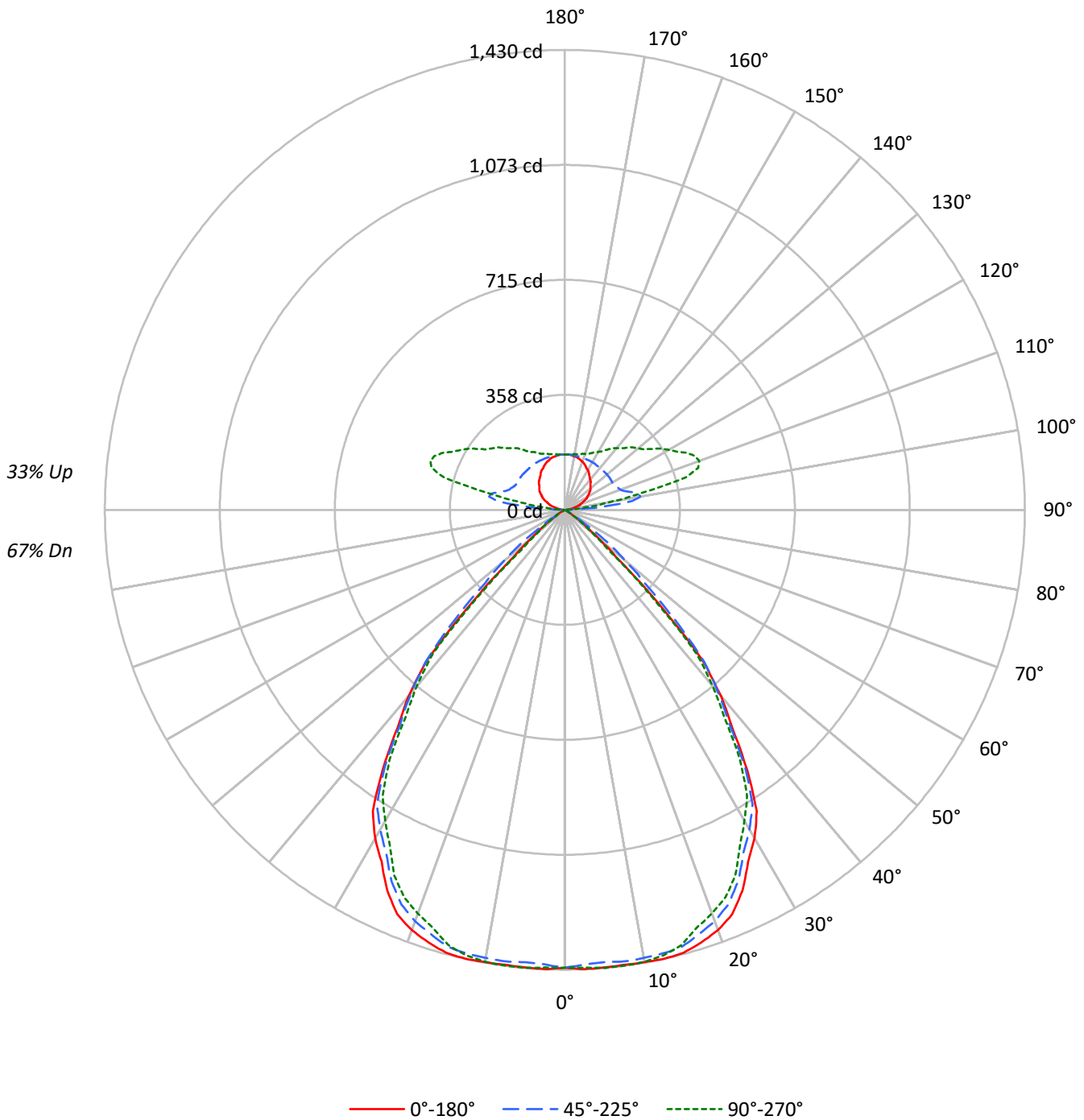
Lumens per Lamp: N/A
Luminaire Lumens: 3194.5 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.17 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 25.5
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: P853490

CATALOG NUMBER: SQ2-BBM-025U-050D-940-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853490

CATALOG NUMBER: SQ2-BBM-025U-050D-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 | 50 | 30 | 10 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 81 | 81 | 81 | 71 | 71 | 71 | 67 | 67 | 67 |
| 1 | 104 | 101 | 98 | 95 | 98 | 95 | 93 | 90 | 85 | 83 | 81 | 76 | 74 | 73 | 67 | 66 | 65 | 61 | 61 | 61 |
| 2 | 97 | 91 | 86 | 82 | 92 | 87 | 82 | 79 | 78 | 75 | 72 | 70 | 68 | 66 | 63 | 61 | 59 | 56 | 56 | 56 |
| 3 | 91 | 83 | 77 | 72 | 86 | 79 | 74 | 69 | 71 | 67 | 64 | 64 | 61 | 59 | 58 | 56 | 54 | 51 | 51 | 51 |
| 4 | 84 | 75 | 69 | 64 | 80 | 72 | 66 | 62 | 66 | 61 | 57 | 59 | 56 | 53 | 54 | 51 | 49 | 46 | 46 | 46 |
| 5 | 79 | 69 | 62 | 57 | 75 | 66 | 60 | 55 | 60 | 55 | 52 | 55 | 51 | 48 | 50 | 47 | 45 | 42 | 42 | 42 |
| 6 | 73 | 63 | 56 | 51 | 70 | 60 | 54 | 50 | 55 | 50 | 47 | 51 | 47 | 44 | 46 | 43 | 41 | 39 | 39 | 39 |
| 7 | 69 | 58 | 51 | 46 | 65 | 56 | 49 | 45 | 51 | 46 | 42 | 47 | 43 | 40 | 43 | 40 | 37 | 35 | 35 | 35 |
| 8 | 64 | 53 | 47 | 42 | 61 | 51 | 45 | 41 | 47 | 42 | 39 | 44 | 40 | 36 | 40 | 37 | 34 | 32 | 32 | 32 |
| 9 | 60 | 49 | 43 | 38 | 57 | 48 | 41 | 37 | 44 | 39 | 35 | 41 | 37 | 34 | 38 | 34 | 32 | 30 | 30 | 30 |
| 10 | 57 | 46 | 39 | 35 | 54 | 44 | 38 | 34 | 41 | 36 | 33 | 38 | 34 | 31 | 35 | 32 | 29 | 28 | 28 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 22985 | 22985 | 22985 |
| 5° | 23141 | 22883 | 23175 |
| 10° | 23409 | 23200 | 23391 |
| 15° | 23831 | 23512 | 23407 |
| 20° | 23897 | 23386 | 22950 |
| 25° | 23268 | 22702 | 22344 |
| 30° | 21983 | 21390 | 20817 |
| 35° | 19486 | 19255 | 18713 |
| 40° | 15907 | 15683 | 15057 |
| 45° | 9378 | 11070 | 8725 |
| 50° | 3165 | 6169 | 2818 |
| 55° | 1072 | 2204 | 1132 |
| 60° | 103 | 649 | 36 |
| 65° | 0 | 42 | 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: 11070 cd/sqm



TEST NUMBER: P853490

CATALOG NUMBER: SQ2-BBM-025U-050D-940-UNV-STD-W-4

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 136.0 | 4.3 |
| 10°-20° | 398.2 | 12.5 |
| 20°-30° | 585.9 | 18.3 |
| 30°-40° | 598.6 | 18.7 |
| 40°-50° | 344.2 | 10.8 |
| 50°-60° | 60.2 | 1.9 |
| 60°-70° | 2.2 | 0.1 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.5 | 0.0 |
| 90°-100° | 69.7 | 2.2 |
| 100°-110° | 216.8 | 6.8 |
| 110°-120° | 212.1 | 6.6 |
| 120°-130° | 173.1 | 5.4 |
| 130°-140° | 141.6 | 4.4 |
| 140°-150° | 110.5 | 3.5 |
| 150°-160° | 79.8 | 2.5 |
| 160°-170° | 48.8 | 1.5 |
| 170°-180° | 16.4 | 0.5 |
| 0°-30° | 1120.1 | 35.1 |
| 0°-40° | 1718.7 | 53.8 |
| 0°-60° | 2123.1 | 66.5 |
| 0°-90° | 2125.8 | 66.5 |
| 90°-120° | 498.5 | 15.6 |
| 90°-150° | 923.8 | 28.9 |
| 90°-180° | 1069.0 | 33.5 |
| 0°-180° | 3194.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1424 | 1424 | 1424 | 1424 | 1424 | |
| 5° | 1428 | 1425 | 1412 | 1432 | 1430 | 136 |
| 15° | 1426 | 1438 | 1407 | 1408 | 1400 | 402 |
| 25° | 1306 | 1318 | 1274 | 1260 | 1254 | 597 |
| 35° | 989 | 994 | 977 | 961 | 949 | 610 |
| 45° | 411 | 478 | 485 | 460 | 382 | 321 |
| 55° | 38 | 45 | 78 | 44 | 40 | 43 |
| 65° | 0 | 0 | 1 | 0 | 0 | 1 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 1 | 3 | 3 | 3 | 0 |
| 95° | 10 | 28 | 128 | 47 | 31 | 11 |
| 105° | 38 | 54 | 213 | 407 | 389 | 40 |
| 115° | 68 | 80 | 173 | 357 | 418 | 67 |
| 125° | 94 | 104 | 171 | 281 | 330 | 83 |
| 135° | 113 | 125 | 170 | 243 | 273 | 87 |
| 145° | 132 | 142 | 170 | 210 | 228 | 83 |
| 155° | 151 | 156 | 171 | 188 | 194 | 70 |
| 165° | 166 | 167 | 172 | 178 | 180 | 47 |
| 175° | 172 | 172 | 172 | 173 | 172 | 16 |
| 180° | 172 | 172 | 172 | 172 | 172 | |



TEST NUMBER: P853490

CATALOG NUMBER: SQ2-BBM-025U-050D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1423.6 | 1423.6 | 1423.6 | 1423.6 | 1423.6 |
| 2.5° | 1429.5 | 1426.2 | 1415.1 | 1427.7 | 1424.4 |
| 5° | 1427.8 | 1424.7 | 1411.9 | 1432.0 | 1429.9 |
| 7.5° | 1427.0 | 1424.5 | 1416.0 | 1433.4 | 1429.3 |
| 10° | 1427.8 | 1427.8 | 1415.1 | 1430.9 | 1426.7 |
| 12.5° | 1429.5 | 1433.6 | 1412.6 | 1424.9 | 1419.1 |
| 15° | 1425.7 | 1438.1 | 1406.6 | 1407.5 | 1400.3 |
| 17.5° | 1410.2 | 1427.0 | 1384.0 | 1373.8 | 1362.8 |
| 20° | 1390.8 | 1408.4 | 1361.1 | 1345.0 | 1335.7 |
| 22.5° | 1361.1 | 1377.9 | 1328.1 | 1314.5 | 1304.4 |
| 25° | 1306.1 | 1317.5 | 1274.3 | 1260.4 | 1254.2 |
| 27.5° | 1234.1 | 1239.9 | 1202.4 | 1187.9 | 1177.6 |
| 30° | 1179.1 | 1179.1 | 1147.3 | 1131.1 | 1116.6 |
| 32.5° | 1110.5 | 1107.2 | 1086.4 | 1067.6 | 1054.0 |
| 35° | 988.6 | 993.7 | 976.9 | 960.8 | 949.4 |
| 37.5° | 853.7 | 858.7 | 841.4 | 823.1 | 815.2 |
| 40° | 754.7 | 758.8 | 744.1 | 724.8 | 714.4 |
| 42.5° | 632.7 | 655.1 | 641.6 | 620.6 | 606.9 |
| 45° | 410.7 | 477.9 | 484.8 | 459.7 | 382.1 |
| 47.5° | 214.0 | 284.4 | 336.2 | 256.7 | 179.9 |
| 50° | 126.0 | 171.5 | 245.6 | 140.1 | 112.2 |
| 52.5° | 81.1 | 100.9 | 172.7 | 89.7 | 75.8 |
| 55° | 38.1 | 45.3 | 78.3 | 44.4 | 40.2 |
| 57.5° | 14.2 | 21.2 | 35.4 | 21.5 | 15.5 |
| 60° | 3.2 | 9.4 | 20.1 | 6.2 | 1.1 |
| 62.5° | 0.6 | 2.7 | 11.6 | 1.2 | 0.2 |
| 65° | 0.0 | 0.0 | 1.1 | 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 | 1.0 | 3.2 | 3.2 | 3.2 |
| 92.5° | 3.4 | 11.9 | 40.4 | 13.3 | 10.8 |
| 95° | 9.5 | 28.1 | 127.8 | 47.2 | 30.6 |
| 97.5° | 17.3 | 36.5 | 211.7 | 131.8 | 83.0 |
| 100° | 23.2 | 40.8 | 238.8 | 223.3 | 149.0 |
| 102.5° | 29.2 | 45.9 | 233.7 | 319.0 | 250.4 |
| 105° | 38.0 | 53.5 | 213.4 | 407.4 | 388.8 |
| 107.5° | 46.9 | 61.4 | 194.0 | 414.2 | 434.6 |
| 110° | 52.8 | 67.3 | 183.8 | 404.5 | 444.8 |



TEST NUMBER: P853490

CATALOG NUMBER: SQ2-BBM-025U-050D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 58.7 | 72.4 | 178.8 | 387.0 | 438.0 |
| 115° | 67.6 | 80.0 | 173.3 | 357.4 | 418.4 |
| 117.5° | 76.3 | 87.6 | 170.9 | 329.1 | 391.5 |
| 120° | 81.3 | 92.7 | 170.1 | 313.0 | 372.9 |
| 122.5° | 86.4 | 97.8 | 170.9 | 299.4 | 354.3 |
| 125° | 94.0 | 104.4 | 171.1 | 281.1 | 329.6 |
| 127.5° | 100.2 | 110.7 | 171.1 | 267.4 | 308.7 |
| 130° | 103.5 | 114.9 | 171.1 | 259.7 | 296.9 |
| 132.5° | 107.8 | 119.1 | 170.3 | 252.9 | 287.6 |
| 135° | 113.0 | 125.4 | 170.1 | 242.6 | 272.6 |
| 137.5° | 119.2 | 130.5 | 170.1 | 232.4 | 259.7 |
| 140° | 122.6 | 133.9 | 170.1 | 225.6 | 250.4 |
| 142.5° | 126.8 | 137.3 | 170.1 | 218.8 | 241.1 |
| 145° | 132.1 | 142.4 | 170.1 | 209.6 | 228.2 |
| 147.5° | 138.4 | 147.3 | 171.1 | 201.1 | 215.7 |
| 150° | 142.6 | 149.9 | 171.1 | 196.8 | 208.1 |
| 152.5° | 146.0 | 152.4 | 171.1 | 192.5 | 202.2 |
| 155° | 151.1 | 156.2 | 171.1 | 188.2 | 194.4 |
| 157.5° | 156.1 | 160.1 | 171.1 | 184.3 | 188.3 |
| 160° | 159.5 | 162.6 | 171.1 | 181.8 | 184.9 |
| 162.5° | 162.1 | 164.3 | 171.1 | 180.1 | 182.3 |
| 165° | 165.9 | 166.9 | 172.2 | 177.5 | 179.6 |
| 167.5° | 168.2 | 168.4 | 171.1 | 176.0 | 177.1 |
| 170° | 169.0 | 170.1 | 171.1 | 174.3 | 175.4 |
| 172.5° | 170.7 | 170.9 | 172.0 | 173.5 | 173.7 |
| 175° | 172.2 | 172.2 | 172.2 | 173.2 | 172.2 |
| 177.5° | 172.2 | 172.2 | 172.2 | 172.2 | 172.2 |
| 180° | 172.2 | 172.2 | 172.2 | 172.2 | 172.2 |



TEST NUMBER: P853490

CATALOG NUMBER: SQ2-BBM-025U-050D-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 | 0.18 | 0.98 | 1.02 | 1.81 | 2.84 | 0.00 | 0.57 | 0.62 | 1.40 | 2.43 |
| | 3H | 0.00 | 0.70 | 0.85 | 1.54 | 2.60 | 0.00 | 0.29 | 0.44 | 1.13 | 2.19 |
| | 4H | 0.00 | 0.55 | 0.76 | 1.40 | 2.47 | 0.00 | 0.14 | 0.36 | 0.99 | 2.06 |
| | 6H | 0.00 | 0.39 | 0.66 | 1.24 | 2.32 | 0.00 | 0.00 | 0.26 | 0.84 | 1.92 |
| | 8H | 0.00 | 0.29 | 0.61 | 1.17 | 2.25 | 0.00 | 0.00 | 0.21 | 0.76 | 1.84 |
| | 12H | 0.00 | 0.21 | 0.56 | 1.07 | 2.17 | 0.00 | 0.00 | 0.15 | 0.67 | 1.77 |
| 4H | 2H | 0.00 | 0.56 | 0.78 | 1.41 | 2.48 | 0.00 | 0.15 | 0.37 | 1.00 | 2.07 |
| | 3H | 0.00 | 0.24 | 0.59 | 1.13 | 2.21 | 0.00 | 0.00 | 0.18 | 0.72 | 1.80 |
| | 4H | 0.00 | 0.08 | 0.48 | 0.96 | 2.07 | 0.00 | 0.00 | 0.08 | 0.55 | 1.67 |
| | 6H | 0.00 | 0.00 | 0.39 | 0.80 | 1.92 | 0.00 | 0.00 | 0.00 | 0.40 | 1.51 |
| | 8H | 0.00 | 0.00 | 0.33 | 0.70 | 1.83 | 0.00 | 0.00 | 0.00 | 0.30 | 1.42 |
| | 12H | 0.00 | 0.00 | 0.27 | 0.61 | 1.74 | 0.00 | 0.00 | 0.00 | 0.21 | 1.33 |
| 8H | 4H | 0.00 | 0.00 | 0.33 | 0.70 | 1.83 | 0.00 | 0.00 | 0.00 | 0.30 | 1.42 |
| | 6H | 0.00 | 0.00 | 0.23 | 0.56 | 1.68 | 0.00 | 0.00 | 0.00 | 0.15 | 1.28 |
| | 8H | 0.00 | 0.00 | 0.18 | 0.45 | 1.59 | 0.00 | 0.00 | 0.00 | 0.05 | 1.19 |
| | 12H | 0.00 | 0.00 | 0.11 | 0.34 | 1.54 | 0.00 | 0.00 | 0.00 | 0.00 | 1.13 |
| 12H | 4H | 0.00 | 0.00 | 0.27 | 0.61 | 1.74 | 0.00 | 0.00 | 0.00 | 0.21 | 1.33 |
| | 6H | 0.00 | 0.00 | 0.18 | 0.45 | 1.59 | 0.00 | 0.00 | 0.00 | 0.05 | 1.19 |
| | 8H | 0.00 | 0.00 | 0.11 | 0.34 | 1.54 | 0.00 | 0.00 | 0.00 | 0.00 | 1.13 |