

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: P853578

Luminaire Tested: SQ2-BBN-025U-100D-930-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P853578  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G3-2308-130-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-BBN-025U-100D-930-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

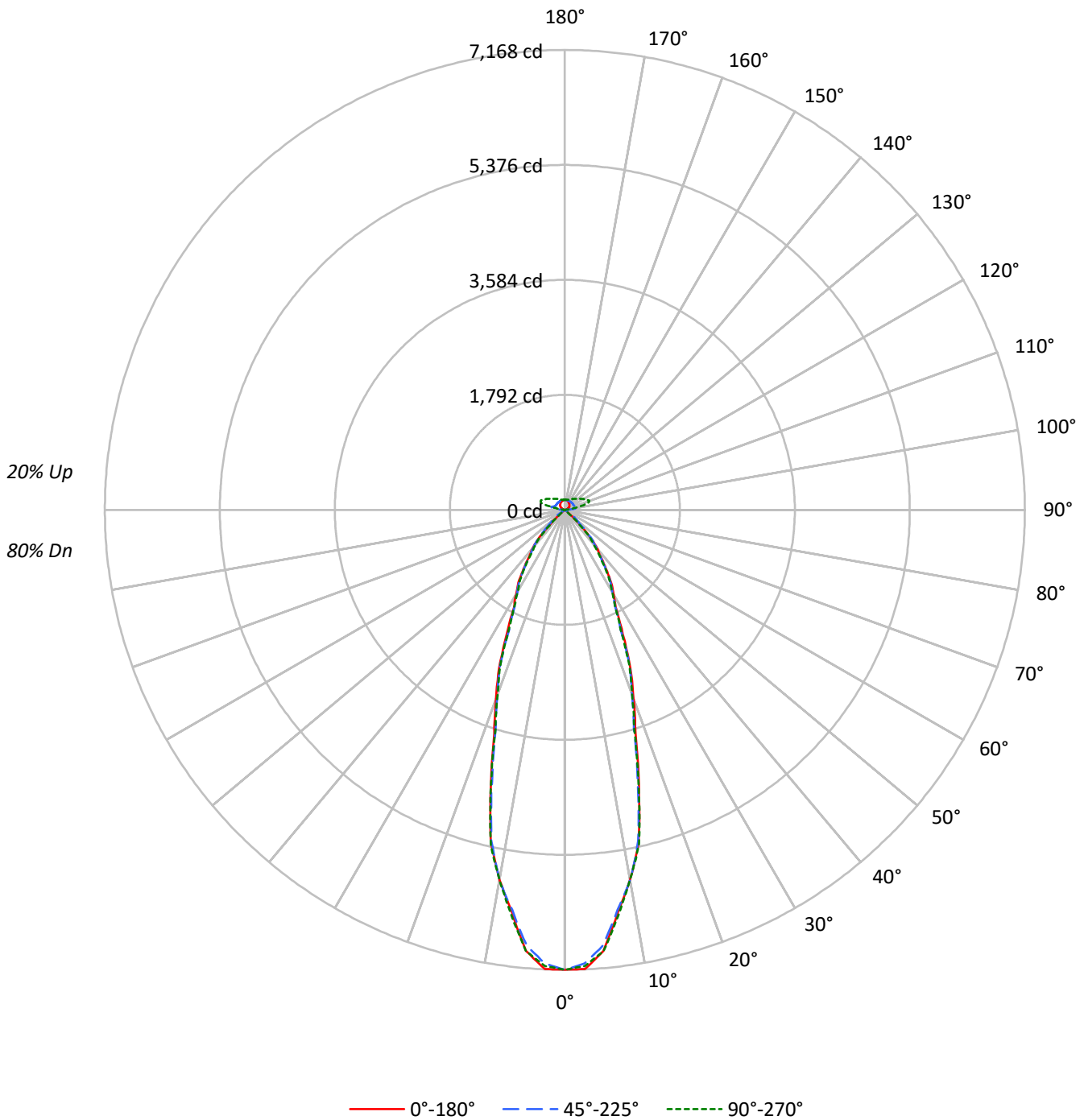
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4839.9 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.62  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 45.6  
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   | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 100 | 100 | 100 | 92 | 92 | 92 | 84 | 84 | 84 | 80 |
| 1   | 108 | 105 | 103 | 100 | 104 | 101 | 99  | 97  | 94  | 92  | 90  | 87 | 85 | 84 | 80 | 79 | 78 | 75 |
| 2   | 103 | 97  | 93  | 90  | 98  | 94  | 90  | 87  | 88  | 85  | 82  | 82 | 80 | 78 | 76 | 75 | 73 | 71 |
| 3   | 97  | 90  | 85  | 81  | 93  | 88  | 83  | 79  | 82  | 79  | 76  | 77 | 74 | 72 | 72 | 70 | 68 | 66 |
| 4   | 92  | 84  | 79  | 74  | 89  | 82  | 77  | 73  | 77  | 73  | 70  | 73 | 69 | 67 | 69 | 66 | 64 | 62 |
| 5   | 87  | 79  | 73  | 68  | 84  | 76  | 71  | 67  | 72  | 68  | 65  | 69 | 65 | 62 | 65 | 62 | 60 | 58 |
| 6   | 83  | 74  | 68  | 63  | 80  | 72  | 66  | 62  | 68  | 64  | 60  | 65 | 61 | 58 | 62 | 59 | 57 | 55 |
| 7   | 78  | 69  | 63  | 59  | 76  | 68  | 62  | 58  | 64  | 60  | 56  | 62 | 58 | 55 | 59 | 56 | 53 | 52 |
| 8   | 75  | 65  | 59  | 55  | 72  | 64  | 58  | 54  | 61  | 56  | 53  | 59 | 55 | 52 | 56 | 53 | 50 | 49 |
| 9   | 71  | 62  | 56  | 52  | 69  | 60  | 55  | 51  | 58  | 53  | 50  | 56 | 52 | 49 | 54 | 50 | 48 | 46 |
| 10  | 68  | 58  | 53  | 49  | 66  | 57  | 52  | 48  | 55  | 51  | 47  | 53 | 49 | 46 | 51 | 48 | 45 | 44 |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 115737 | 115737 | 115737 |
| 5°  | 111866 | 110483 | 111929 |
| 10° | 96004  | 96068  | 96004  |
| 15° | 74517  | 73329  | 74345  |
| 20° | 53780  | 52670  | 52627  |
| 25° | 38133  | 36615  | 36683  |
| 30° | 28370  | 27648  | 27384  |
| 35° | 22076  | 21516  | 21057  |
| 40° | 16337  | 15928  | 14920  |
| 45° | 8348   | 10236  | 6725   |
| 50° | 1816   | 5647   | 1331   |
| 55° | 510    | 2291   | 400    |
| 60° | 84     | 459    | 42     |
| 65° | 0      | 50     | 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: 10236 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 619.8  | 12.8      |
| 10°-20°   | 1222.0 | 25.2      |
| 20°-30°   | 985.8  | 20.4      |
| 30°-40°   | 684.8  | 14.1      |
| 40°-50°   | 316.4  | 6.5       |
| 50°-60°   | 44.4   | 0.9       |
| 60°-70°   | 1.5    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.5    | 0.0       |
| 90°-100°  | 62.9   | 1.3       |
| 100°-110° | 195.6  | 4.0       |
| 110°-120° | 191.4  | 4.0       |
| 120°-130° | 156.3  | 3.2       |
| 130°-140° | 127.8  | 2.6       |
| 140°-150° | 99.8   | 2.1       |
| 150°-160° | 72.0   | 1.5       |
| 160°-170° | 44.0   | 0.9       |
| 170°-180° | 14.8   | 0.3       |
| 0°-30°    | 2827.6 | 58.4      |
| 0°-40°    | 3512.5 | 72.6      |
| 0°-60°    | 3873.3 | 80.0      |
| 0°-90°    | 3875.3 | 80.1      |
| 90°-120°  | 450.0  | 9.3       |
| 90°-150°  | 833.8  | 17.2      |
| 90°-180°  | 965.0  | 19.9      |
| 0°-180°   | 4839.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 7168 | 7168  | 7168 | 7168  | 7168 |      |
| 5°   | 6902 | 6865  | 6817 | 6901  | 6906 | 620  |
| 15°  | 4458 | 4515  | 4387 | 4449  | 4448 | 1227 |
| 25°  | 2140 | 2092  | 2055 | 2086  | 2059 | 1002 |
| 35°  | 1120 | 1120  | 1092 | 1072  | 1068 | 701  |
| 45°  | 366  | 436   | 448  | 407   | 294  | 295  |
| 55°  | 18   | 28    | 81   | 23    | 14   | 23   |
| 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    | 0    |
| 95°  | 9    | 25    | 115  | 43    | 28   | 10   |
| 105° | 34   | 48    | 193  | 368   | 351  | 36   |
| 115° | 61   | 72    | 156  | 323   | 378  | 60   |
| 125° | 85   | 94    | 154  | 254   | 298  | 75   |
| 135° | 102  | 113   | 154  | 219   | 246  | 79   |
| 145° | 119  | 128   | 154  | 189   | 206  | 75   |
| 155° | 136  | 141   | 154  | 170   | 176  | 63   |
| 165° | 150  | 151   | 155  | 160   | 162  | 42   |
| 175° | 155  | 155   | 155  | 156   | 155  | 15   |
| 180° | 155  | 155   | 155  | 155   | 155  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 7168.2 | 7168.2 | 7168.2 | 7168.2 | 7168.2 |
| 2.5°   | 7164.1 | 7137.8 | 7075.2 | 7131.6 | 7114.5 |
| 5°     | 6902.1 | 6865.4 | 6816.8 | 6900.9 | 6906.0 |
| 7.5°   | 6323.9 | 6335.7 | 6290.5 | 6383.3 | 6373.5 |
| 10°    | 5855.7 | 5864.6 | 5859.6 | 5889.8 | 5855.7 |
| 12.5°  | 5313.2 | 5348.3 | 5281.9 | 5328.7 | 5343.1 |
| 15°    | 4458.0 | 4514.8 | 4386.9 | 4448.9 | 4447.7 |
| 17.5°  | 3656.0 | 3650.2 | 3584.2 | 3595.8 | 3592.0 |
| 20°    | 3130.0 | 3121.2 | 3065.4 | 3056.5 | 3062.9 |
| 22.5°  | 2679.4 | 2664.5 | 2644.8 | 2622.5 | 2630.9 |
| 25°    | 2140.5 | 2092.5 | 2055.3 | 2085.7 | 2059.1 |
| 27.5°  | 1718.1 | 1717.3 | 1686.6 | 1690.0 | 1695.1 |
| 30°    | 1521.7 | 1512.9 | 1483.0 | 1483.9 | 1468.8 |
| 32.5°  | 1347.1 | 1353.4 | 1316.6 | 1309.3 | 1294.1 |
| 35°    | 1120.0 | 1120.0 | 1091.6 | 1072.1 | 1068.3 |
| 37.5°  | 909.4  | 907.2  | 886.9  | 859.3  | 849.5  |
| 40°    | 775.1  | 768.8  | 755.7  | 721.8  | 707.9  |
| 42.5°  | 622.1  | 639.1  | 626.5  | 592.5  | 571.5  |
| 45°    | 365.6  | 436.3  | 448.3  | 406.9  | 294.5  |
| 47.5°  | 157.1  | 234.9  | 299.2  | 195.0  | 101.5  |
| 50°    | 72.3   | 133.0  | 224.8  | 95.9   | 53.0   |
| 52.5°  | 42.4   | 72.7   | 166.9  | 56.1   | 33.3   |
| 55°    | 18.1   | 28.2   | 81.4   | 23.1   | 14.2   |
| 57.5°  | 6.7    | 12.3   | 30.7   | 10.0   | 5.4    |
| 60°    | 2.6    | 5.1    | 14.2   | 3.8    | 1.3    |
| 62.5°  | 0.5    | 2.0    | 7.0    | 1.8    | 0.3    |
| 65°    | 0.0    | 0.0    | 1.3    | 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°  | 3.1    | 10.7   | 36.4   | 12.0   | 9.7    |
| 95°    | 8.6    | 25.4   | 115.4  | 42.6   | 27.7   |
| 97.5°  | 15.6   | 33.0   | 191.1  | 119.0  | 75.0   |
| 100°   | 21.0   | 36.8   | 215.5  | 201.6  | 134.5  |
| 102.5° | 26.3   | 41.4   | 210.9  | 287.9  | 226.0  |
| 105°   | 34.3   | 48.3   | 192.6  | 367.7  | 350.9  |
| 107.5° | 42.3   | 55.4   | 175.1  | 373.8  | 392.3  |
| 110°   | 47.7   | 60.7   | 165.9  | 365.1  | 401.5  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 53.0  | 65.3  | 161.3 | 349.3 | 395.4 |
| 115°   | 61.0  | 72.2  | 156.4 | 322.6 | 377.6 |
| 117.5° | 68.8  | 79.1  | 154.3 | 297.1 | 353.4 |
| 120°   | 73.4  | 83.7  | 153.5 | 282.5 | 336.6 |
| 122.5° | 78.0  | 88.3  | 154.3 | 270.2 | 319.8 |
| 125°   | 84.9  | 94.2  | 154.5 | 253.7 | 297.5 |
| 127.5° | 90.4  | 99.9  | 154.5 | 241.3 | 278.6 |
| 130°   | 93.5  | 103.7 | 154.5 | 234.4 | 268.0 |
| 132.5° | 97.3  | 107.5 | 153.7 | 228.2 | 259.6 |
| 135°   | 102.0 | 113.2 | 153.5 | 219.0 | 246.0 |
| 137.5° | 107.6 | 117.8 | 153.5 | 209.8 | 234.4 |
| 140°   | 110.6 | 120.9 | 153.5 | 203.6 | 226.0 |
| 142.5° | 114.4 | 123.9 | 153.5 | 197.5 | 217.6 |
| 145°   | 119.2 | 128.5 | 153.5 | 189.2 | 206.0 |
| 147.5° | 124.9 | 132.9 | 154.5 | 181.5 | 194.7 |
| 150°   | 128.7 | 135.3 | 154.5 | 177.6 | 187.9 |
| 152.5° | 131.8 | 137.6 | 154.5 | 173.8 | 182.5 |
| 155°   | 136.4 | 141.0 | 154.5 | 169.9 | 175.5 |
| 157.5° | 140.9 | 144.5 | 154.5 | 166.4 | 169.9 |
| 160°   | 144.0 | 146.8 | 154.5 | 164.1 | 166.9 |
| 162.5° | 146.3 | 148.3 | 154.5 | 162.5 | 164.6 |
| 165°   | 149.7 | 150.6 | 155.4 | 160.2 | 162.1 |
| 167.5° | 151.8 | 152.0 | 154.5 | 158.9 | 159.8 |
| 170°   | 152.6 | 153.5 | 154.5 | 157.4 | 158.3 |
| 172.5° | 154.1 | 154.3 | 155.2 | 156.6 | 156.8 |
| 175°   | 155.4 | 155.4 | 155.4 | 156.4 | 155.4 |
| 177.5° | 155.4 | 155.4 | 155.4 | 155.4 | 155.4 |
| 180°   | 155.4 | 155.4 | 155.4 | 155.4 | 155.4 |

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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 | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 3H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 4H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H              | 2H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 3H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 4H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H              | 4H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 12H  | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H             | 4H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 6H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |
|                 | 8H   | 0.00             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00           | 0.00 | 0.00 | 0.00 | 0.00 |