

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: P853588

Luminaire Tested: SQ2-BBN-050U-075D-935-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853588
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G3-2308-130-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-BBN-050U-075D-935-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

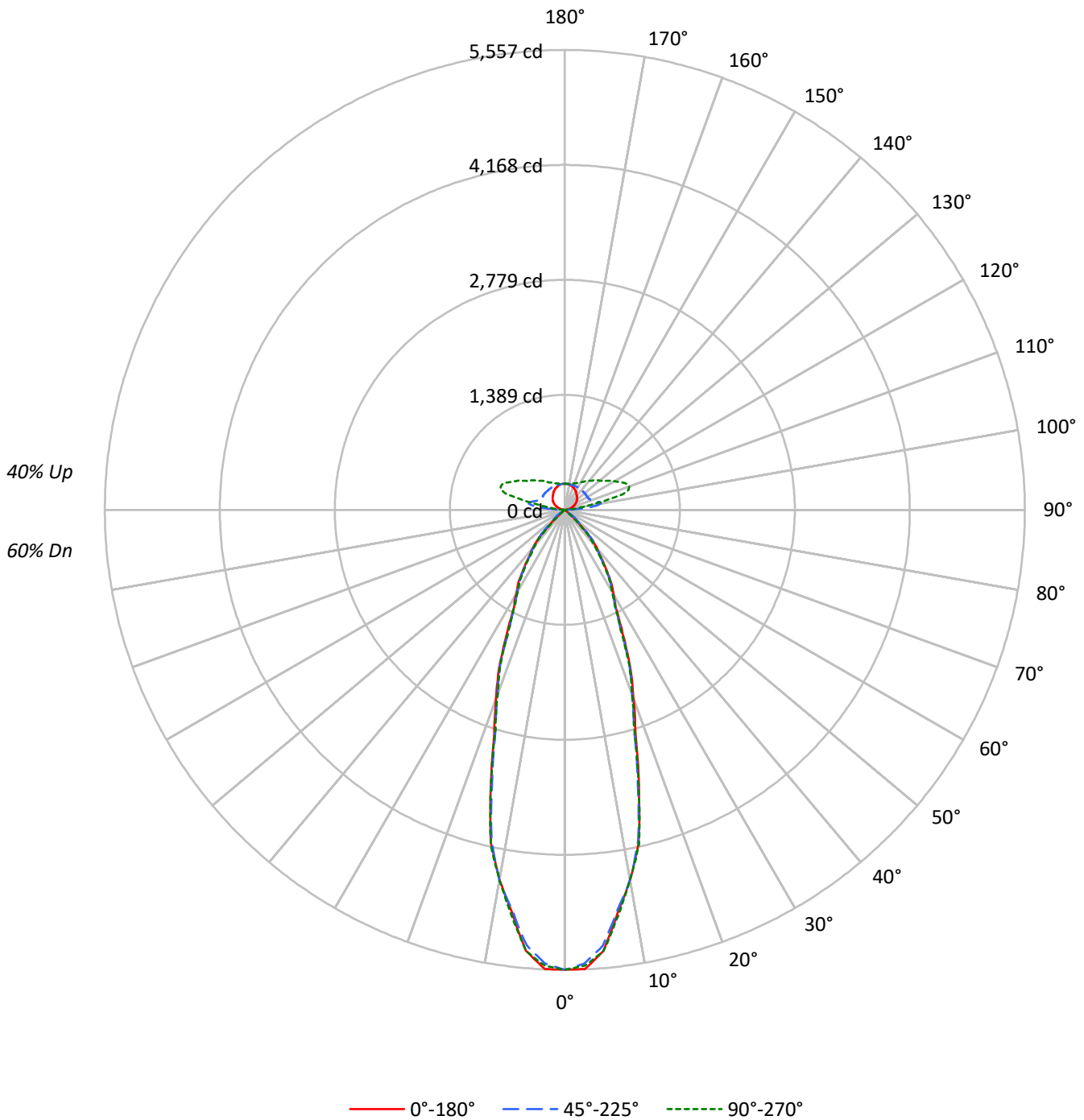
Lumens per Lamp: N/A
Luminaire Lumens: 4969.6 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.62
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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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CATALOG NUMBER: SQ2-BBN-050U-075D-935-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853588

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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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 110 | 110 | 110 | 110 | 102 | 102 | 102 | 102 | 89 | 89 | 89 | 77 | 77 | 77 | 66 | 66 | 66 | 66 | 66 | 66 | 60 | |
| 1 | 103 | 100 | 97 | 94 | 97 | 94 | 91 | 89 | 83 | 81 | 79 | 72 | 71 | 70 | 63 | 62 | 61 | 61 | 61 | 61 | 57 | |
| 2 | 97 | 91 | 87 | 83 | 91 | 86 | 82 | 79 | 77 | 74 | 71 | 68 | 66 | 64 | 59 | 58 | 57 | 57 | 57 | 57 | 53 | |
| 3 | 91 | 84 | 78 | 74 | 85 | 79 | 75 | 71 | 71 | 68 | 65 | 63 | 61 | 59 | 56 | 55 | 53 | 53 | 53 | 53 | 50 | |
| 4 | 85 | 77 | 71 | 67 | 80 | 73 | 68 | 64 | 66 | 62 | 59 | 60 | 57 | 54 | 53 | 51 | 50 | 50 | 50 | 50 | 47 | |
| 5 | 80 | 71 | 65 | 60 | 76 | 68 | 63 | 58 | 62 | 58 | 54 | 56 | 53 | 50 | 51 | 48 | 46 | 46 | 46 | 46 | 44 | |
| 6 | 76 | 66 | 60 | 55 | 72 | 63 | 58 | 54 | 58 | 54 | 50 | 53 | 49 | 47 | 48 | 46 | 44 | 44 | 44 | 44 | 41 | |
| 7 | 72 | 62 | 56 | 51 | 68 | 59 | 54 | 50 | 54 | 50 | 47 | 50 | 46 | 44 | 46 | 43 | 41 | 41 | 41 | 41 | 39 | |
| 8 | 68 | 58 | 52 | 47 | 64 | 56 | 50 | 46 | 51 | 47 | 44 | 47 | 44 | 41 | 43 | 41 | 39 | 39 | 39 | 39 | 37 | |
| 9 | 64 | 54 | 48 | 44 | 61 | 52 | 47 | 43 | 48 | 44 | 41 | 45 | 41 | 39 | 41 | 39 | 37 | 37 | 37 | 37 | 35 | |
| 10 | 61 | 51 | 45 | 41 | 58 | 49 | 44 | 40 | 46 | 41 | 38 | 43 | 39 | 37 | 39 | 37 | 35 | 35 | 35 | 35 | 33 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 89716 | 89716 | 89716 |
| 5° | 86715 | 85645 | 86764 |
| 10° | 74420 | 74469 | 74420 |
| 15° | 57763 | 56844 | 57630 |
| 20° | 41689 | 40830 | 40795 |
| 25° | 29560 | 28383 | 28436 |
| 30° | 21992 | 21433 | 21228 |
| 35° | 17113 | 16679 | 16322 |
| 40° | 12663 | 12347 | 11567 |
| 45° | 6471 | 7935 | 5213 |
| 50° | 1409 | 4376 | 1032 |
| 55° | 394 | 1776 | 310 |
| 60° | 65 | 355 | 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: 7935 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 480.5 | 9.7 |
| 10°-20° | 947.3 | 19.1 |
| 20°-30° | 764.2 | 15.4 |
| 30°-40° | 530.9 | 10.7 |
| 40°-50° | 245.2 | 4.9 |
| 50°-60° | 34.4 | 0.7 |
| 60°-70° | 1.2 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.5 | 0.0 |
| 90°-100° | 126.1 | 2.5 |
| 100°-110° | 399.9 | 8.0 |
| 110°-120° | 392.1 | 7.9 |
| 120°-130° | 319.0 | 6.4 |
| 130°-140° | 260.1 | 5.2 |
| 140°-150° | 202.8 | 4.1 |
| 150°-160° | 146.1 | 2.9 |
| 160°-170° | 89.3 | 1.8 |
| 170°-180° | 30.1 | 0.6 |
| 0°-30° | 2191.9 | 44.1 |
| 0°-40° | 2722.8 | 54.8 |
| 0°-60° | 3002.5 | 60.4 |
| 0°-90° | 3004.2 | 60.5 |
| 90°-120° | 918.0 | 18.5 |
| 90°-150° | 1700.0 | 34.2 |
| 90°-180° | 1966.0 | 39.6 |
| 0°-180° | 4969.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 5557 | 5557 | 5557 | 5557 | 5557 | |
| 5° | 5350 | 5322 | 5284 | 5349 | 5353 | 481 |
| 15° | 3456 | 3500 | 3401 | 3449 | 3448 | 951 |
| 25° | 1659 | 1622 | 1593 | 1617 | 1596 | 777 |
| 35° | 868 | 868 | 846 | 831 | 828 | 543 |
| 45° | 283 | 338 | 348 | 316 | 228 | 229 |
| 55° | 14 | 22 | 63 | 18 | 11 | 18 |
| 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° | 17 | 51 | 229 | 85 | 55 | 20 |
| 105° | 70 | 98 | 394 | 751 | 720 | 73 |
| 115° | 124 | 148 | 318 | 662 | 778 | 123 |
| 125° | 172 | 193 | 314 | 519 | 611 | 153 |
| 135° | 208 | 228 | 312 | 446 | 503 | 161 |
| 145° | 243 | 261 | 312 | 385 | 419 | 152 |
| 155° | 277 | 286 | 312 | 344 | 357 | 128 |
| 165° | 302 | 304 | 314 | 326 | 328 | 85 |
| 175° | 316 | 315 | 316 | 318 | 316 | 30 |
| 180° | 316 | 316 | 316 | 316 | 316 | |



TEST NUMBER: P853588

CATALOG NUMBER: SQ2-BBN-050U-075D-935-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 5556.6 | 5556.6 | 5556.6 | 5556.6 | 5556.6 |
| 2.5° | 5553.4 | 5533.1 | 5484.5 | 5528.3 | 5515.0 |
| 5° | 5350.3 | 5321.9 | 5284.3 | 5349.4 | 5353.3 |
| 7.5° | 4902.1 | 4911.3 | 4876.3 | 4948.2 | 4940.6 |
| 10° | 4539.2 | 4546.1 | 4542.2 | 4565.7 | 4539.2 |
| 12.5° | 4118.7 | 4145.9 | 4094.4 | 4130.7 | 4141.9 |
| 15° | 3455.7 | 3499.8 | 3400.7 | 3448.7 | 3447.7 |
| 17.5° | 2834.1 | 2829.6 | 2778.4 | 2787.4 | 2784.4 |
| 20° | 2426.3 | 2419.5 | 2376.3 | 2369.4 | 2374.3 |
| 22.5° | 2077.1 | 2065.5 | 2050.2 | 2032.9 | 2039.4 |
| 25° | 1659.3 | 1622.1 | 1593.2 | 1616.8 | 1596.2 |
| 27.5° | 1331.8 | 1331.2 | 1307.4 | 1310.1 | 1314.0 |
| 30° | 1179.6 | 1172.8 | 1149.6 | 1150.3 | 1138.6 |
| 32.5° | 1044.2 | 1049.1 | 1020.6 | 1014.9 | 1003.2 |
| 35° | 868.2 | 868.2 | 846.2 | 831.1 | 828.1 |
| 37.5° | 705.0 | 703.2 | 687.5 | 666.1 | 658.5 |
| 40° | 600.8 | 595.9 | 585.8 | 559.5 | 548.8 |
| 42.5° | 482.3 | 495.4 | 485.7 | 459.3 | 443.0 |
| 45° | 283.4 | 338.2 | 347.5 | 315.5 | 228.3 |
| 47.5° | 121.8 | 182.1 | 231.9 | 151.2 | 78.7 |
| 50° | 56.1 | 103.1 | 174.2 | 74.3 | 41.1 |
| 52.5° | 32.8 | 56.3 | 129.4 | 43.5 | 25.8 |
| 55° | 14.0 | 21.9 | 63.1 | 17.9 | 11.0 |
| 57.5° | 5.2 | 9.5 | 23.8 | 7.7 | 4.2 |
| 60° | 2.0 | 4.0 | 11.0 | 3.0 | 1.0 |
| 62.5° | 0.4 | 1.6 | 5.4 | 1.4 | 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 | 1.0 | 3.0 | 3.0 | 3.0 |
| 92.5° | 5.6 | 22.1 | 70.7 | 23.5 | 16.5 |
| 95° | 16.9 | 51.0 | 228.9 | 84.9 | 54.7 |
| 97.5° | 31.5 | 66.1 | 387.8 | 242.3 | 148.7 |
| 100° | 41.8 | 74.9 | 441.9 | 402.9 | 261.8 |
| 102.5° | 53.0 | 84.5 | 432.4 | 591.7 | 452.9 |
| 105° | 69.7 | 97.9 | 394.2 | 750.8 | 719.6 |
| 107.5° | 86.4 | 112.5 | 357.7 | 767.4 | 809.4 |
| 110° | 97.5 | 122.8 | 339.4 | 748.3 | 826.1 |



TEST NUMBER: P853588

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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 108.7 | 132.4 | 329.1 | 715.3 | 814.2 |
| 115° | 124.4 | 147.8 | 318.5 | 661.6 | 778.4 |
| 117.5° | 139.7 | 161.9 | 314.3 | 609.8 | 727.6 |
| 120° | 149.3 | 170.7 | 313.5 | 577.9 | 691.8 |
| 122.5° | 158.9 | 179.5 | 313.5 | 552.2 | 658.3 |
| 125° | 172.2 | 192.6 | 313.5 | 518.7 | 611.1 |
| 127.5° | 183.9 | 203.6 | 313.5 | 492.7 | 571.5 |
| 130° | 191.1 | 211.5 | 313.5 | 477.4 | 548.4 |
| 132.5° | 198.3 | 218.7 | 312.7 | 465.3 | 529.3 |
| 135° | 208.0 | 228.5 | 311.5 | 446.2 | 502.7 |
| 137.5° | 217.6 | 239.0 | 311.3 | 428.0 | 478.4 |
| 140° | 224.0 | 245.4 | 310.5 | 415.1 | 460.8 |
| 142.5° | 231.9 | 252.5 | 311.3 | 402.3 | 444.9 |
| 145° | 242.9 | 261.4 | 311.5 | 385.0 | 419.0 |
| 147.5° | 253.8 | 269.6 | 311.7 | 369.7 | 397.5 |
| 150° | 261.8 | 274.4 | 312.5 | 360.8 | 383.2 |
| 152.5° | 268.1 | 279.2 | 312.5 | 353.6 | 372.1 |
| 155° | 276.7 | 286.4 | 312.5 | 343.7 | 357.3 |
| 157.5° | 285.9 | 292.5 | 313.5 | 337.6 | 347.0 |
| 160° | 290.6 | 296.5 | 313.5 | 333.6 | 341.4 |
| 162.5° | 295.4 | 299.7 | 313.5 | 330.4 | 335.8 |
| 165° | 301.6 | 304.5 | 313.5 | 325.5 | 328.5 |
| 167.5° | 307.4 | 308.1 | 314.5 | 322.2 | 324.7 |
| 170° | 310.5 | 310.5 | 314.5 | 320.5 | 321.5 |
| 172.5° | 312.1 | 312.9 | 314.5 | 318.9 | 319.1 |
| 175° | 315.5 | 314.6 | 315.5 | 317.5 | 316.5 |
| 177.5° | 316.5 | 315.7 | 315.7 | 317.3 | 315.7 |
| 180° | 316.5 | 316.5 | 316.5 | 316.5 | 316.5 |



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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 |