

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: P854448

Luminaire Tested: SQ2-WBN-050D-930-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854448  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-130-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-WBN-050D-930-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

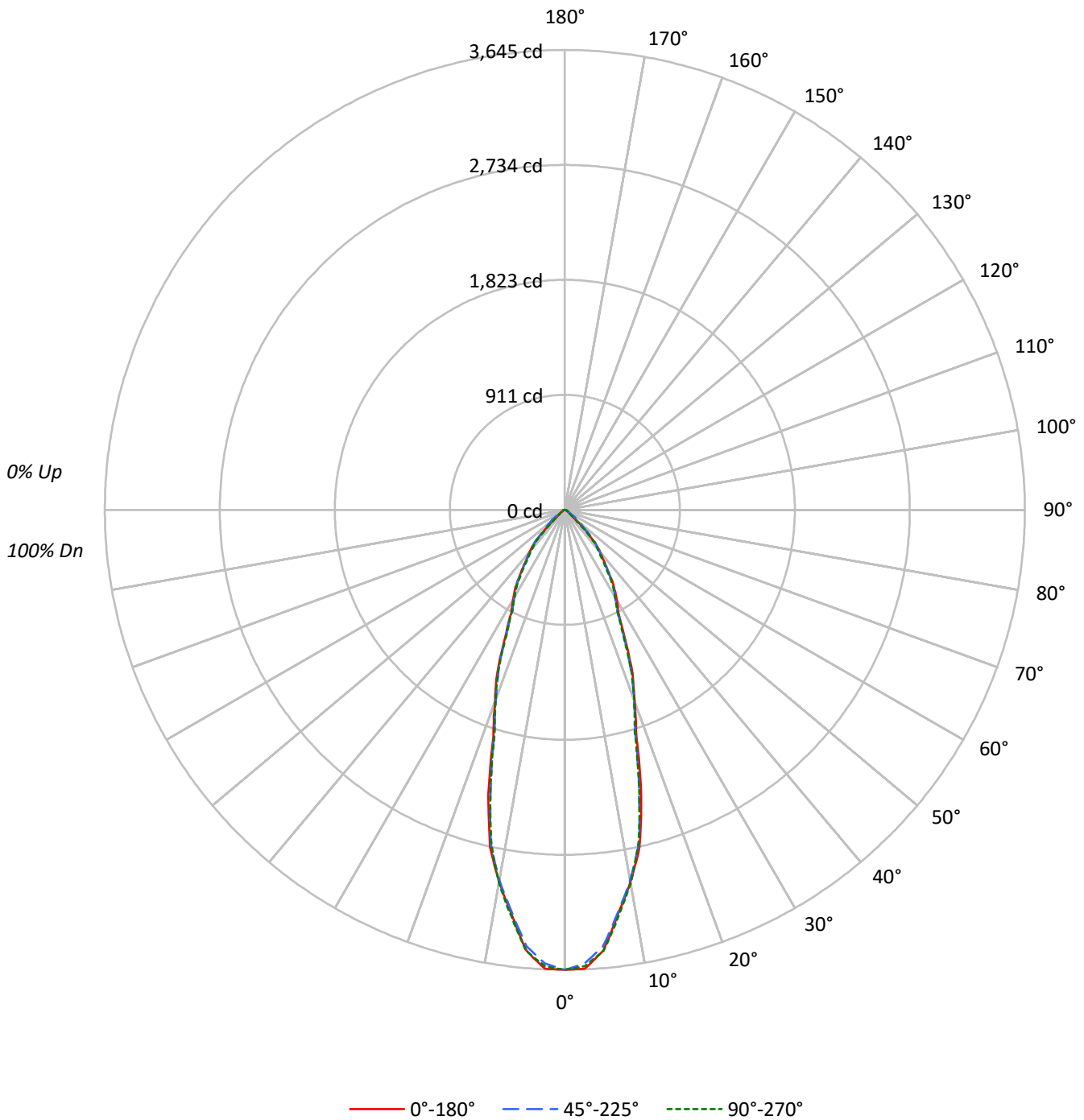
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2116.7 lumens  
Efficiency: N/A  
Efficacy: 116.9 lumens/watt  
Spacing Criteria (0/90/45): 0.59 / 0.58 / 0.63  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 18.1  
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 |  |  |  |  |  |  |  |  |    |   |
| 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 | 50 | 30 | 10 | 0 |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 1   | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 | 101 | 99  | 98  | 97  | 96  | 95  | 93  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 2   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 94  | 98  | 95  | 92  | 95  | 92  | 90  | 92  | 90  | 88  | 87  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 3   | 102 | 96  | 91  | 87  | 100 | 94  | 90  | 86  | 92  | 88  | 85  | 89  | 86  | 83  | 87  | 84  | 82  | 81  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 4   | 97  | 90  | 84  | 80  | 95  | 88  | 83  | 79  | 86  | 82  | 78  | 84  | 81  | 78  | 82  | 79  | 77  | 75  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 5   | 92  | 84  | 78  | 74  | 91  | 83  | 78  | 74  | 81  | 77  | 73  | 80  | 76  | 72  | 78  | 75  | 72  | 70  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 6   | 88  | 79  | 73  | 69  | 86  | 78  | 73  | 69  | 77  | 72  | 68  | 75  | 71  | 68  | 74  | 70  | 67  | 66  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 7   | 84  | 75  | 69  | 64  | 82  | 74  | 68  | 64  | 73  | 68  | 64  | 71  | 67  | 64  | 70  | 66  | 63  | 62  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 8   | 80  | 71  | 65  | 61  | 79  | 70  | 64  | 60  | 69  | 64  | 60  | 68  | 63  | 60  | 67  | 63  | 60  | 58  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 9   | 76  | 67  | 61  | 57  | 75  | 66  | 61  | 57  | 65  | 60  | 57  | 65  | 60  | 57  | 64  | 60  | 57  | 55  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 10  | 73  | 64  | 58  | 54  | 72  | 63  | 58  | 54  | 62  | 57  | 54  | 62  | 57  | 54  | 61  | 57  | 54  | 52  |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 58855 | 58855 | 58855 |
| 5°  | 56825 | 56260 | 56888 |
| 10° | 49118 | 48885 | 49234 |
| 15° | 39086 | 37854 | 38004 |
| 20° | 27766 | 27398 | 27600 |
| 25° | 19976 | 19584 | 19445 |
| 30° | 15264 | 14853 | 14816 |
| 35° | 11982 | 11777 | 11471 |
| 40° | 9078  | 8953  | 8519  |
| 45° | 5078  | 6069  | 4532  |
| 50° | 1786  | 3735  | 1575  |
| 55° | 1092  | 2038  | 1039  |
| 60° | 836   | 1066  | 772   |
| 65° | 764   | 791   | 718   |
| 70° | 732   | 732   | 670   |
| 75° | 686   | 686   | 643   |
| 80° | 604   | 604   | 604   |
| 85° | 593   | 482   | 482   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 6069 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 316.4  | 14.9      |
| 10°-20°   | 628.9  | 29.7      |
| 20°-30°   | 520.8  | 24.6      |
| 30°-40°   | 374.7  | 17.7      |
| 40°-50°   | 190.9  | 9.0       |
| 50°-60°   | 49.7   | 2.3       |
| 60°-70°   | 20.6   | 1.0       |
| 70°-80°   | 11.4   | 0.5       |
| 80°-90°   | 3.4    | 0.2       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1466.0 | 69.3      |
| 0°-40°    | 1840.7 | 87.0      |
| 0°-60°    | 2081.2 | 98.3      |
| 0°-90°    | 2116.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2116.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3645 | 3645  | 3645 | 3645  | 3645 |      |
| 5°  | 3506 | 3501  | 3471 | 3521  | 3510 | 316  |
| 15° | 2338 | 2312  | 2265 | 2281  | 2274 | 635  |
| 25° | 1121 | 1119  | 1099 | 1090  | 1092 | 527  |
| 35° | 608  | 612   | 598  | 588   | 582  | 381  |
| 45° | 222  | 256   | 266  | 247   | 198  | 178  |
| 55° | 39   | 45    | 72   | 42    | 37   | 38   |
| 65° | 20   | 21    | 21   | 19    | 19   | 20   |
| 75° | 11   | 11    | 11   | 10    | 10   | 12   |
| 85° | 3    | 3     | 3    | 3     | 3    | 3    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3645.2 | 3645.2 | 3645.2 | 3645.2 | 3645.2 |
| 2.5°  | 3639.5 | 3633.4 | 3598.6 | 3627.4 | 3620.3 |
| 5°    | 3506.1 | 3501.1 | 3471.2 | 3521.4 | 3510.0 |
| 7.5°  | 3230.8 | 3235.1 | 3217.6 | 3261.9 | 3249.8 |
| 10°   | 2995.9 | 3007.3 | 2981.7 | 3046.0 | 3003.0 |
| 12.5° | 2736.8 | 2729.4 | 2711.7 | 2721.6 | 2697.8 |
| 15°   | 2338.3 | 2311.7 | 2264.6 | 2280.6 | 2273.6 |
| 17.5° | 1883.4 | 1893.7 | 1852.8 | 1851.1 | 1843.2 |
| 20°   | 1616.0 | 1619.1 | 1594.6 | 1607.5 | 1606.3 |
| 22.5° | 1400.8 | 1401.4 | 1370.1 | 1389.0 | 1377.6 |
| 25°   | 1121.3 | 1119.4 | 1099.3 | 1089.6 | 1091.5 |
| 27.5° | 919.5  | 911.7  | 896.5  | 902.9  | 898.2  |
| 30°   | 818.7  | 812.3  | 796.7  | 800.4  | 794.7  |
| 32.5° | 728.1  | 728.4  | 712.4  | 710.4  | 706.3  |
| 35°   | 607.9  | 611.6  | 597.5  | 587.7  | 582.0  |
| 37.5° | 500.5  | 504.0  | 492.1  | 477.8  | 473.0  |
| 40°   | 430.7  | 433.2  | 424.8  | 408.0  | 404.2  |
| 42.5° | 354.6  | 365.2  | 357.1  | 341.1  | 332.8  |
| 45°   | 222.4  | 256.0  | 265.8  | 247.2  | 198.5  |
| 47.5° | 112.5  | 158.9  | 189.6  | 140.0  | 92.2   |
| 50°   | 71.1   | 103.4  | 148.7  | 84.2   | 62.7   |
| 52.5° | 54.6   | 71.1   | 118.7  | 62.2   | 50.3   |
| 55°   | 38.8   | 45.1   | 72.4   | 41.9   | 36.9   |
| 57.5° | 30.0   | 33.5   | 43.3   | 31.7   | 28.6   |
| 60°   | 25.9   | 28.4   | 33.0   | 27.1   | 23.9   |
| 62.5° | 23.3   | 24.8   | 26.8   | 23.0   | 21.9   |
| 65°   | 20.0   | 20.7   | 20.7   | 19.4   | 18.8   |
| 67.5° | 17.1   | 17.7   | 17.6   | 16.9   | 16.3   |
| 70°   | 15.5   | 16.2   | 15.5   | 14.9   | 14.2   |
| 72.5° | 13.5   | 14.1   | 13.5   | 13.3   | 12.7   |
| 75°   | 11.0   | 11.0   | 11.0   | 10.3   | 10.3   |
| 77.5° | 8.5    | 8.7    | 8.0    | 8.0    | 7.5    |
| 80°   | 6.5    | 7.1    | 6.5    | 6.5    | 6.5    |
| 82.5° | 5.4    | 5.6    | 4.9    | 4.9    | 4.9    |
| 85°   | 3.2    | 3.2    | 2.6    | 3.2    | 2.6    |
| 87.5° | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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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 | 5.35             | 6.41 | 5.72 | 6.73 | 7.04  | 4.97           | 6.03 | 5.33 | 6.34 | 6.66 |
|                 | 3H   | 6.41             | 7.34 | 6.79 | 7.68 | 8.05  | 5.98           | 6.91 | 6.36 | 7.24 | 7.61 |
|                 | 4H   | 6.85             | 7.71 | 7.26 | 8.07 | 8.45  | 6.41           | 7.27 | 6.82 | 7.63 | 8.01 |
|                 | 6H   | 7.17             | 7.96 | 7.59 | 8.34 | 8.73  | 6.75           | 7.54 | 7.17 | 7.91 | 8.31 |
|                 | 8H   | 7.28             | 8.02 | 7.71 | 8.41 | 8.82  | 6.86           | 7.60 | 7.30 | 7.99 | 8.40 |
|                 | 12H  | 7.35             | 8.05 | 7.78 | 8.44 | 8.87  | 6.91           | 7.62 | 7.35 | 8.01 | 8.44 |
| 4H              | 2H   | 5.60             | 6.46 | 6.00 | 6.81 | 7.20  | 5.27           | 6.13 | 5.67 | 6.48 | 6.87 |
|                 | 3H   | 6.90             | 7.60 | 7.32 | 8.01 | 8.42  | 6.52           | 7.22 | 6.94 | 7.63 | 8.04 |
|                 | 4H   | 7.47             | 8.09 | 7.90 | 8.51 | 8.96  | 7.07           | 7.70 | 7.51 | 8.12 | 8.57 |
|                 | 6H   | 7.93             | 8.46 | 8.40 | 8.91 | 9.38  | 7.54           | 8.08 | 8.01 | 8.53 | 9.00 |
|                 | 8H   | 8.08             | 8.57 | 8.55 | 9.03 | 9.50  | 7.69           | 8.19 | 8.17 | 8.64 | 9.12 |
|                 | 12H  | 8.19             | 8.62 | 8.68 | 9.11 | 9.59  | 7.79           | 8.22 | 8.28 | 8.71 | 9.19 |
| 8H              | 4H   | 7.61             | 8.11 | 8.08 | 8.56 | 9.03  | 7.26           | 7.75 | 7.73 | 8.20 | 8.68 |
|                 | 6H   | 8.19             | 8.59 | 8.70 | 9.09 | 9.58  | 7.84           | 8.24 | 8.35 | 8.74 | 9.23 |
|                 | 8H   | 8.43             | 8.78 | 8.96 | 9.30 | 9.80  | 8.07           | 8.43 | 8.61 | 8.95 | 9.45 |
|                 | 12H  | 8.62             | 8.93 | 9.14 | 9.43 | 10.01 | 8.25           | 8.56 | 8.78 | 9.06 | 9.64 |
| 12H             | 4H   | 7.59             | 8.03 | 8.08 | 8.51 | 8.99  | 7.25           | 7.68 | 7.74 | 8.17 | 8.65 |
|                 | 6H   | 8.20             | 8.56 | 8.74 | 9.08 | 9.58  | 7.87           | 8.22 | 8.40 | 8.74 | 9.24 |
|                 | 8H   | 8.49             | 8.80 | 9.01 | 9.30 | 9.87  | 8.15           | 8.46 | 8.67 | 8.96 | 9.54 |