

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: P855018

Luminaire Tested: SQ2-FB-0U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855018  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FB-0U-050D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

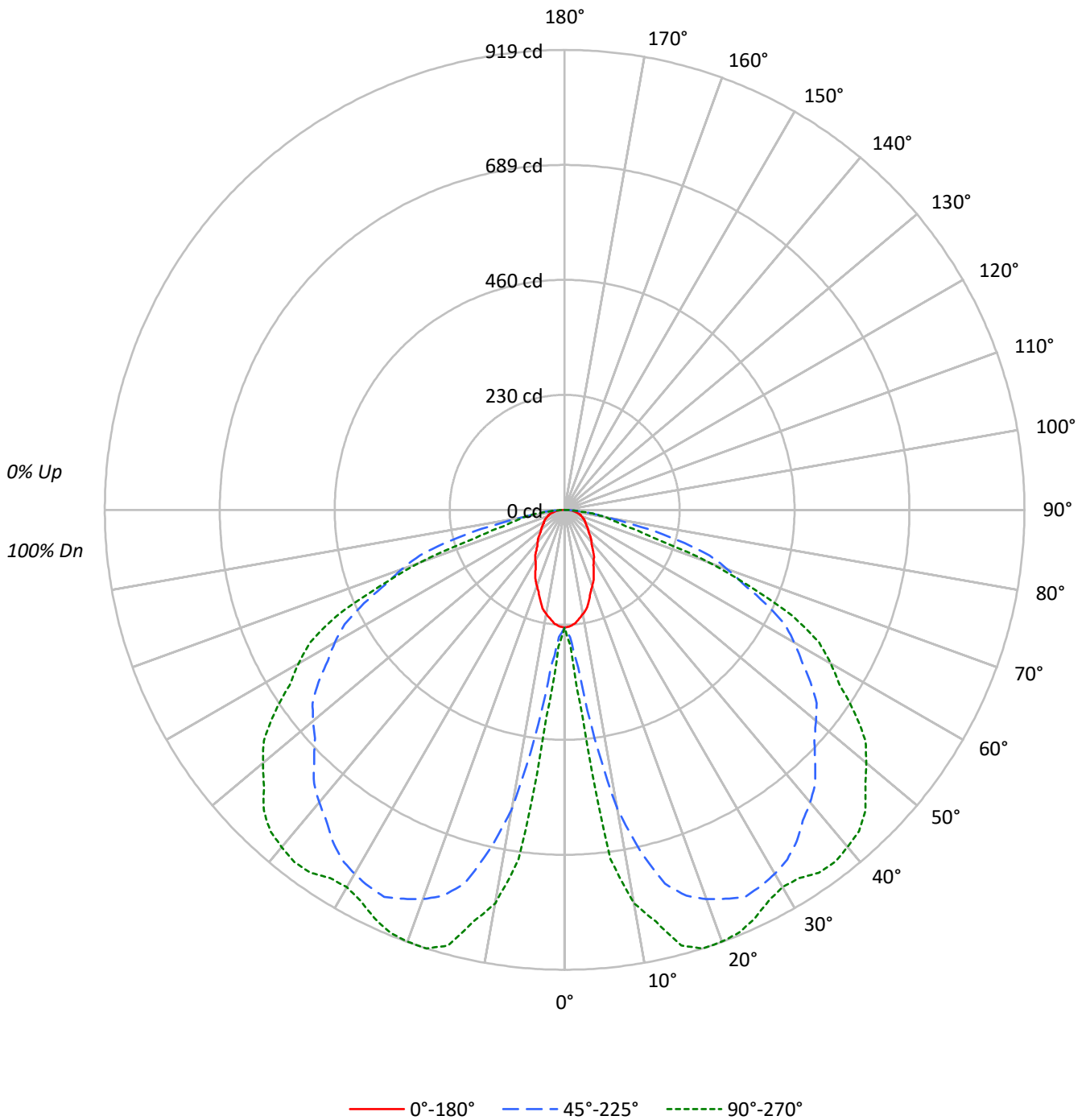
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2323.9 lumens  
Efficiency: N/A  
Efficacy: 130.6 lumens/watt  
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.8  
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  | 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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 88  | 86  | 84  |    |    |    |   |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |    |    |    |   |
| 3   | 89  | 78  | 70  | 63  | 87  | 77  | 69  | 63  | 74  | 67  | 61  | 71  | 65  | 60  | 68  | 63  | 59  | 57  |    |    |    |   |
| 4   | 81  | 69  | 60  | 53  | 79  | 67  | 59  | 52  | 65  | 57  | 52  | 63  | 56  | 51  | 60  | 55  | 50  | 48  |    |    |    |   |
| 5   | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 45  | 58  | 50  | 44  | 56  | 49  | 43  | 54  | 48  | 43  | 41  |    |    |    |   |
| 6   | 68  | 54  | 45  | 39  | 66  | 53  | 45  | 38  | 52  | 44  | 38  | 50  | 43  | 38  | 48  | 42  | 37  | 35  |    |    |    |   |
| 7   | 63  | 49  | 40  | 34  | 61  | 48  | 40  | 33  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 31  |    |    |    |   |
| 8   | 58  | 44  | 36  | 30  | 57  | 44  | 35  | 29  | 42  | 35  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |    |    |    |   |
| 9   | 54  | 40  | 32  | 26  | 53  | 40  | 32  | 26  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 24  |    |    |    |   |
| 10  | 51  | 37  | 29  | 23  | 49  | 37  | 29  | 23  | 36  | 28  | 23  | 35  | 28  | 23  | 34  | 28  | 23  | 21  |    |    |    |   |

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

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 3798 | 3798  | 3798  |
| 5°  | 3702 | 5131  | 6724  |
| 10° | 3466 | 9935  | 13086 |
| 15° | 3137 | 12928 | 15062 |
| 20° | 2778 | 14220 | 15775 |
| 25° | 2457 | 15207 | 16033 |
| 30° | 2172 | 15662 | 16231 |
| 35° | 1940 | 15934 | 17450 |
| 40° | 1764 | 16086 | 18539 |
| 45° | 1626 | 16162 | 19413 |
| 50° | 1535 | 16473 | 19766 |
| 55° | 1495 | 16901 | 19924 |
| 60° | 1534 | 17124 | 19824 |
| 65° | 1597 | 16890 | 19266 |
| 70° | 1652 | 16334 | 14573 |
| 75° | 1834 | 14672 | 8041  |
| 80° | 1897 | 7569  | 7466  |
| 85° | 1890 | 5243  | 3149  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 20104 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 39.4   | 1.7       |
| 10°-20°   | 179.9  | 7.7       |
| 20°-30°   | 316.4  | 13.6      |
| 30°-40°   | 409.6  | 17.6      |
| 40°-50°   | 451.7  | 19.4      |
| 50°-60°   | 421.8  | 18.1      |
| 60°-70°   | 326.0  | 14.0      |
| 70°-80°   | 150.4  | 6.5       |
| 80°-90°   | 28.7   | 1.2       |
| 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°    | 535.7  | 23.1      |
| 0°-40°    | 945.3  | 40.7      |
| 0°-60°    | 1818.8 | 78.3      |
| 0°-90°    | 2323.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2323.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 235 | 235   | 235 | 235   | 235 |      |
| 5°  | 228 | 262   | 317 | 386   | 415 | 21   |
| 15° | 188 | 370   | 773 | 866   | 901 | 52   |
| 25° | 138 | 497   | 854 | 891   | 900 | 63   |
| 35° | 98  | 480   | 808 | 837   | 885 | 62   |
| 45° | 71  | 368   | 708 | 813   | 850 | 55   |
| 55° | 53  | 219   | 600 | 690   | 708 | 48   |
| 65° | 42  | 124   | 442 | 495   | 504 | 41   |
| 75° | 29  | 76    | 235 | 127   | 129 | 30   |
| 85° | 10  | 22    | 28  | 19    | 17  | 11   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 235.2 | 235.2 | 235.2 | 235.2 | 235.2 |
| 2.5°  | 233.4 | 243.1 | 254.2 | 266.9 | 272.3 |
| 5°    | 228.4 | 261.5 | 316.6 | 386.2 | 414.9 |
| 7.5°  | 219.6 | 287.0 | 460.4 | 646.7 | 704.2 |
| 10°   | 211.4 | 305.4 | 606.0 | 767.3 | 798.2 |
| 12.5° | 202.4 | 329.9 | 697.4 | 810.7 | 842.6 |
| 15°   | 187.7 | 370.1 | 773.4 | 865.7 | 901.1 |
| 17.5° | 172.5 | 415.3 | 808.6 | 899.8 | 919.0 |
| 20°   | 161.7 | 446.9 | 827.6 | 906.0 | 918.1 |
| 22.5° | 151.7 | 470.6 | 841.2 | 900.6 | 913.6 |
| 25°   | 137.9 | 497.3 | 853.6 | 891.2 | 900.0 |
| 27.5° | 124.6 | 504.3 | 848.2 | 872.9 | 881.4 |
| 30°   | 116.5 | 502.2 | 840.1 | 858.5 | 870.6 |
| 32.5° | 109.2 | 496.8 | 828.3 | 846.1 | 872.4 |
| 35°   | 98.4  | 479.7 | 808.4 | 836.7 | 885.3 |
| 37.5° | 89.1  | 452.4 | 782.2 | 840.0 | 886.9 |
| 40°   | 83.7  | 431.9 | 763.2 | 839.8 | 879.6 |
| 42.5° | 78.2  | 407.9 | 741.5 | 830.8 | 870.6 |
| 45°   | 71.2  | 367.5 | 707.8 | 812.7 | 850.2 |
| 47.5° | 64.7  | 322.0 | 676.6 | 787.6 | 815.0 |
| 50°   | 61.1  | 291.0 | 655.8 | 764.8 | 786.9 |
| 52.5° | 57.4  | 260.8 | 635.0 | 737.6 | 758.0 |
| 55°   | 53.1  | 219.0 | 600.4 | 690.1 | 707.8 |
| 57.5° | 49.3  | 183.1 | 561.0 | 637.6 | 651.9 |
| 60°   | 47.5  | 163.6 | 530.3 | 599.6 | 613.9 |
| 62.5° | 44.8  | 145.9 | 495.9 | 559.8 | 573.2 |
| 65°   | 41.8  | 123.7 | 442.1 | 495.4 | 504.3 |
| 67.5° | 37.8  | 107.2 | 384.9 | 417.5 | 400.9 |
| 70°   | 35.0  | 99.2  | 346.0 | 356.2 | 308.7 |
| 72.5° | 33.2  | 90.3  | 303.5 | 276.6 | 186.6 |
| 75°   | 29.4  | 75.9  | 235.2 | 126.6 | 128.9 |
| 77.5° | 24.0  | 58.7  | 154.7 | 97.2  | 99.3  |
| 80°   | 20.4  | 47.9  | 81.4  | 79.1  | 80.3  |
| 82.5° | 16.7  | 37.3  | 56.1  | 58.3  | 56.8  |
| 85°   | 10.2  | 22.4  | 28.3  | 19.2  | 17.0  |
| 87.5° | 3.6   | 8.0   | 4.5   | 4.5   | 4.5   |
| 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 | 15.46            | 17.14 | 15.82 | 17.46 | 17.77 | 24.19          | 25.88 | 24.56 | 26.19 | 26.51 |
|                 | 3H   | 16.25            | 17.77 | 16.62 | 18.10 | 18.46 | 25.88          | 27.40 | 26.25 | 27.73 | 28.09 |
|                 | 4H   | 16.59            | 18.02 | 16.98 | 18.37 | 18.74 | 26.09          | 27.53 | 26.49 | 27.88 | 28.25 |
|                 | 6H   | 16.84            | 18.17 | 17.25 | 18.54 | 18.93 | 26.22          | 27.55 | 26.63 | 27.91 | 28.30 |
|                 | 8H   | 16.93            | 18.20 | 17.35 | 18.59 | 18.98 | 26.25          | 27.52 | 26.67 | 27.91 | 28.31 |
|                 | 12H  | 16.98            | 18.20 | 17.41 | 18.58 | 19.01 | 26.25          | 27.47 | 26.68 | 27.85 | 28.28 |
| 4H              | 2H   | 19.95            | 21.39 | 20.35 | 21.74 | 22.11 | 24.73          | 26.17 | 25.13 | 26.52 | 26.89 |
|                 | 3H   | 20.96            | 22.16 | 21.37 | 22.56 | 22.96 | 26.63          | 27.84 | 27.04 | 28.23 | 28.63 |
|                 | 4H   | 21.28            | 22.37 | 21.71 | 22.78 | 23.21 | 26.91          | 27.99 | 27.34 | 28.41 | 28.84 |
|                 | 6H   | 21.46            | 22.41 | 21.91 | 22.85 | 23.30 | 27.10          | 28.05 | 27.55 | 28.49 | 28.94 |
|                 | 8H   | 21.50            | 22.39 | 21.96 | 22.83 | 23.29 | 27.15          | 28.03 | 27.61 | 28.47 | 28.94 |
|                 | 12H  | 21.53            | 22.33 | 22.01 | 22.80 | 23.27 | 27.16          | 27.96 | 27.64 | 28.43 | 28.90 |
| 8H              | 4H   | 22.53            | 23.41 | 22.98 | 23.85 | 24.32 | 27.10          | 27.98 | 27.55 | 28.42 | 28.89 |
|                 | 6H   | 22.80            | 23.53 | 23.29 | 24.02 | 24.49 | 27.34          | 28.07 | 27.83 | 28.56 | 29.03 |
|                 | 8H   | 22.88            | 23.54 | 23.39 | 24.04 | 24.53 | 27.41          | 28.07 | 27.92 | 28.57 | 29.06 |
|                 | 12H  | 22.95            | 23.53 | 23.45 | 24.02 | 24.58 | 27.44          | 28.02 | 27.95 | 28.51 | 29.07 |
| 12H             | 4H   | 22.58            | 23.38 | 23.06 | 23.85 | 24.32 | 27.09          | 27.88 | 27.57 | 28.36 | 28.83 |
|                 | 6H   | 22.90            | 23.56 | 23.41 | 24.07 | 24.55 | 27.33          | 27.99 | 27.84 | 28.49 | 28.98 |
|                 | 8H   | 23.05            | 23.63 | 23.55 | 24.12 | 24.68 | 27.44          | 28.02 | 27.94 | 28.51 | 29.07 |