

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: P854114

Luminaire Tested: SQ2-PP3-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

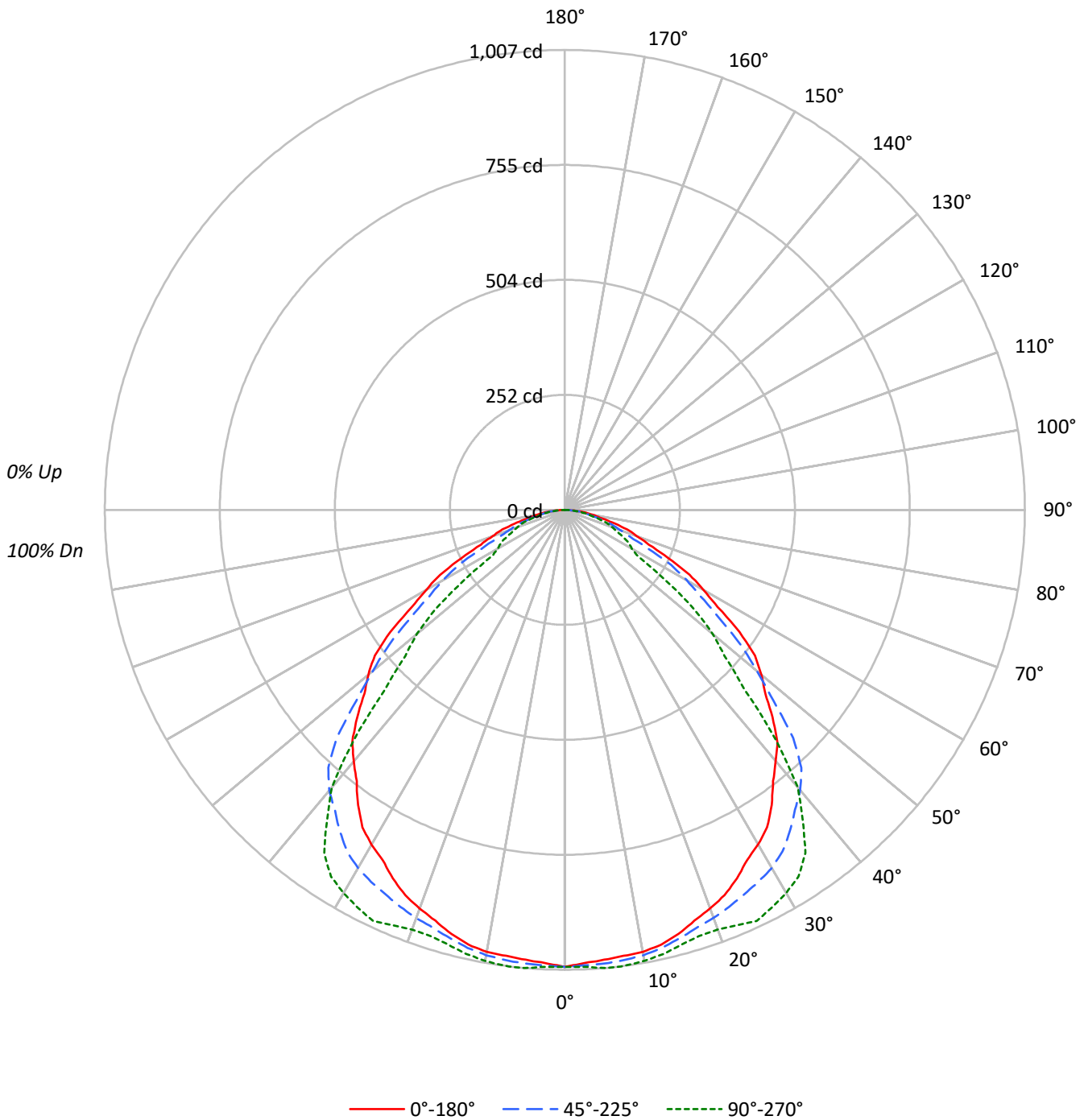
Test Method: LM-79-2019  
Report Number: P854114  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PP3-050D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2520.1 lumens  
Efficiency: N/A  
Efficacy: 141.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.41 / 1.4  
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 |    |    |    | 100 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  | 87  |    |    |    | 87  |
| 2   | 101 | 94  | 88  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 80  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |    |    |    | 74  |
| 3   | 93  | 83  | 76  | 70  | 91  | 82  | 75  | 69  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 69  | 66  | 64  |    |    |    | 64  |
| 4   | 86  | 74  | 66  | 60  | 83  | 73  | 66  | 60  | 71  | 64  | 59  | 68  | 63  | 58  | 66  | 61  | 57  | 55  |    |    |    | 55  |
| 5   | 79  | 67  | 59  | 52  | 77  | 66  | 58  | 52  | 64  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 50  | 48  |    |    |    | 48  |
| 6   | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  | 58  | 51  | 46  | 56  | 50  | 45  | 55  | 49  | 45  | 43  |    |    |    | 43  |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 46  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    | 38  |
| 8   | 63  | 50  | 42  | 37  | 62  | 50  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 34  |    |    |    | 34  |
| 9   | 59  | 46  | 38  | 33  | 58  | 46  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 31  |    |    |    | 31  |
| 10  | 56  | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 40  | 34  | 30  | 28  |    |    |    | 28  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16157 | 16157 | 16157 |
| 5°  | 16029 | 16167 | 16321 |
| 10° | 16111 | 16233 | 16441 |
| 15° | 16072 | 16231 | 16478 |
| 20° | 15957 | 16338 | 16811 |
| 25° | 15866 | 16545 | 17696 |
| 30° | 15776 | 16882 | 18064 |
| 35° | 15554 | 16929 | 18096 |
| 40° | 15137 | 16899 | 16720 |
| 45° | 14684 | 16134 | 12727 |
| 50° | 14109 | 13762 | 10603 |
| 55° | 13132 | 11583 | 7623  |
| 60° | 11305 | 9939  | 5464  |
| 65° | 9536  | 7679  | 5375  |
| 70° | 7940  | 6043  | 5146  |
| 75° | 6731  | 5215  | 4816  |
| 80° | 5709  | 4528  | 4324  |
| 85° | 4502  | 3724  | 2353  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 16134 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 95.3   | 3.8       |
| 10°-20°   | 275.8  | 10.9      |
| 20°-30°   | 432.0  | 17.1      |
| 30°-40°   | 532.9  | 21.1      |
| 40°-50°   | 501.8  | 19.9      |
| 50°-60°   | 355.3  | 14.1      |
| 60°-70°   | 202.4  | 8.0       |
| 70°-80°   | 100.2  | 4.0       |
| 80°-90°   | 24.5   | 1.0       |
| 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°    | 803.0  | 31.9      |
| 0°-40°    | 1336.0 | 53.0      |
| 0°-60°    | 2193.0 | 87.0      |
| 0°-90°    | 2520.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2520.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1001 | 1001  | 1001 | 1001  | 1001 |      |
| 5°  | 989  | 1007  | 998  | 1000  | 1007 | 94   |
| 15° | 962  | 975   | 971  | 981   | 986  | 271  |
| 25° | 891  | 913   | 929  | 966   | 993  | 410  |
| 35° | 789  | 811   | 859  | 908   | 918  | 492  |
| 45° | 643  | 692   | 707  | 599   | 557  | 495  |
| 55° | 466  | 494   | 412  | 310   | 271  | 412  |
| 65° | 250  | 263   | 201  | 142   | 141  | 251  |
| 75° | 108  | 119   | 84   | 78    | 77   | 117  |
| 85° | 24   | 22    | 20   | 16    | 13   | 30   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1000.7 | 1000.7 | 1000.7 | 1000.7 | 1000.7 |
| 2.5°  | 993.0  | 1007.1 | 998.1  | 999.8  | 1001.5 |
| 5°    | 989.0  | 1006.6 | 997.5  | 999.8  | 1007.0 |
| 7.5°  | 985.2  | 1003.2 | 994.3  | 998.1  | 1007.0 |
| 10°   | 982.7  | 998.2  | 990.1  | 995.5  | 1002.8 |
| 12.5° | 975.1  | 989.7  | 982.5  | 989.6  | 996.0  |
| 15°   | 961.5  | 975.0  | 971.0  | 980.7  | 985.8  |
| 17.5° | 943.1  | 959.5  | 959.4  | 973.1  | 978.4  |
| 20°   | 928.7  | 948.4  | 950.9  | 968.1  | 978.4  |
| 22.5° | 913.5  | 936.5  | 940.8  | 966.6  | 984.4  |
| 25°   | 890.6  | 913.4  | 928.7  | 966.4  | 993.3  |
| 27.5° | 864.0  | 886.5  | 918.1  | 960.3  | 981.6  |
| 30°   | 846.2  | 867.9  | 905.5  | 949.3  | 968.9  |
| 32.5° | 824.2  | 846.8  | 886.8  | 934.0  | 952.0  |
| 35°   | 789.1  | 810.8  | 858.9  | 907.8  | 918.1  |
| 37.5° | 748.7  | 773.3  | 827.2  | 854.5  | 855.1  |
| 40°   | 718.2  | 750.3  | 801.8  | 806.8  | 793.3  |
| 42.5° | 688.6  | 729.8  | 766.3  | 743.9  | 684.2  |
| 45°   | 643.1  | 691.7  | 706.6  | 598.8  | 557.4  |
| 47.5° | 594.7  | 642.7  | 619.0  | 502.2  | 473.7  |
| 50°   | 561.7  | 607.2  | 547.9  | 448.9  | 422.1  |
| 52.5° | 524.4  | 565.0  | 484.5  | 397.9  | 356.9  |
| 55°   | 466.5  | 494.4  | 411.5  | 310.1  | 270.8  |
| 57.5° | 396.7  | 416.3  | 351.8  | 232.8  | 188.7  |
| 60°   | 350.1  | 365.6  | 307.8  | 191.0  | 169.2  |
| 62.5° | 307.8  | 321.7  | 262.1  | 165.9  | 158.2  |
| 65°   | 249.6  | 263.1  | 201.0  | 141.7  | 140.7  |
| 67.5° | 198.7  | 213.3  | 154.2  | 123.7  | 122.5  |
| 70°   | 168.2  | 183.7  | 128.0  | 111.0  | 109.0  |
| 72.5° | 142.8  | 157.5  | 108.5  | 97.5   | 96.3   |
| 75°   | 107.9  | 119.3  | 83.6   | 78.3   | 77.2   |
| 77.5° | 78.3   | 85.5   | 62.2   | 59.4   | 58.4   |
| 80°   | 61.4   | 64.5   | 48.7   | 47.6   | 46.5   |
| 82.5° | 46.1   | 45.1   | 36.8   | 35.7   | 33.8   |
| 85°   | 24.3   | 22.3   | 20.1   | 15.8   | 12.7   |
| 87.5° | 7.6    | 7.6    | 3.4    | 2.5    | 2.5    |
| 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 | 21.11            | 22.63 | 21.47 | 22.94 | 23.26 | 17.50          | 19.03 | 17.87 | 19.34 | 19.66 |
|                 | 3H   | 22.25            | 23.62 | 22.63 | 23.94 | 24.31 | 18.66          | 20.02 | 19.04 | 20.35 | 20.71 |
|                 | 4H   | 22.63            | 23.90 | 23.03 | 24.25 | 24.63 | 19.15          | 20.43 | 19.55 | 20.78 | 21.16 |
|                 | 6H   | 22.87            | 24.05 | 23.29 | 24.42 | 24.81 | 19.53          | 20.71 | 19.94 | 21.07 | 21.47 |
|                 | 8H   | 22.94            | 24.06 | 23.37 | 24.45 | 24.85 | 19.63          | 20.75 | 20.06 | 21.14 | 21.54 |
|                 | 12H  | 22.97            | 24.05 | 23.40 | 24.43 | 24.86 | 19.67          | 20.74 | 20.10 | 21.12 | 21.55 |
| 4H              | 2H   | 21.30            | 22.57 | 21.70 | 22.92 | 23.30 | 18.30          | 19.57 | 18.70 | 19.92 | 20.30 |
|                 | 3H   | 22.67            | 23.72 | 23.08 | 24.12 | 24.52 | 19.61          | 20.66 | 20.02 | 21.06 | 21.46 |
|                 | 4H   | 23.16            | 24.11 | 23.60 | 24.53 | 24.97 | 20.19          | 21.14 | 20.62 | 21.55 | 21.99 |
|                 | 6H   | 23.54            | 24.36 | 23.99 | 24.80 | 25.26 | 20.66          | 21.49 | 21.12 | 21.93 | 22.39 |
|                 | 8H   | 23.64            | 24.41 | 24.11 | 24.85 | 25.32 | 20.80          | 21.56 | 21.26 | 22.01 | 22.48 |
|                 | 12H  | 23.71            | 24.39 | 24.19 | 24.87 | 25.34 | 20.85          | 21.54 | 21.33 | 22.02 | 22.49 |
| 8H              | 4H   | 23.23            | 24.00 | 23.69 | 24.44 | 24.91 | 20.51          | 21.28 | 20.97 | 21.72 | 22.19 |
|                 | 6H   | 23.68            | 24.32 | 24.18 | 24.81 | 25.29 | 21.07          | 21.71 | 21.57 | 22.20 | 22.68 |
|                 | 8H   | 23.84            | 24.41 | 24.35 | 24.92 | 25.41 | 21.26          | 21.83 | 21.78 | 22.34 | 22.83 |
|                 | 12H  | 23.95            | 24.46 | 24.46 | 24.95 | 25.52 | 21.36          | 21.87 | 21.87 | 22.36 | 22.93 |
| 12H             | 4H   | 23.22            | 23.90 | 23.70 | 24.38 | 24.85 | 20.54          | 21.23 | 21.03 | 21.71 | 22.18 |
|                 | 6H   | 23.67            | 24.24 | 24.18 | 24.75 | 25.24 | 21.13          | 21.70 | 21.64 | 22.21 | 22.70 |
|                 | 8H   | 23.87            | 24.38 | 24.38 | 24.87 | 25.43 | 21.36          | 21.87 | 21.87 | 22.36 | 22.93 |