

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: P854035

Luminaire Tested: SQ2-PH1-100D-935-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

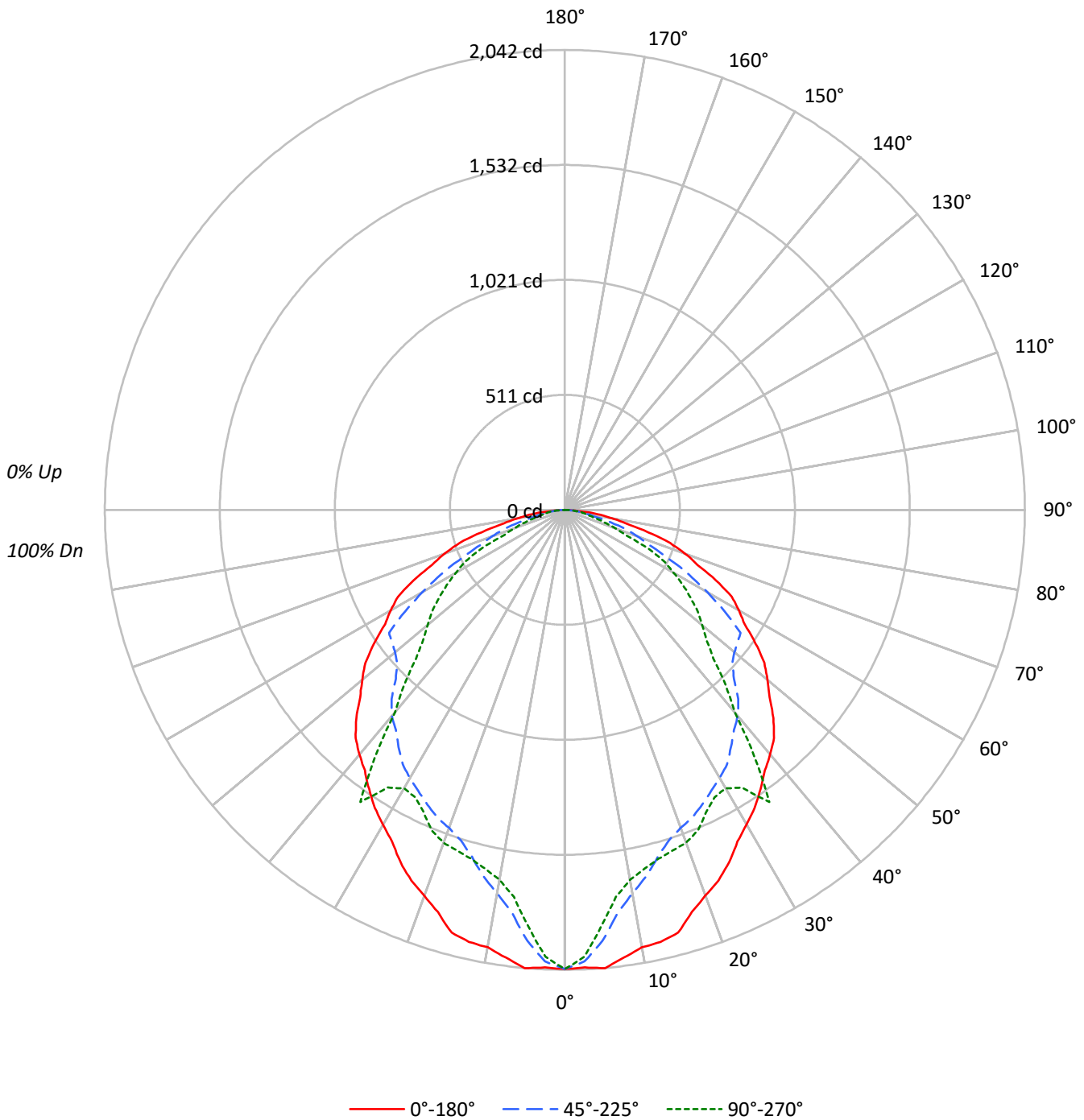
Test Method: LM-79-2019  
Report Number: P854035  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-100D-935-UNV-STD-W-4  
Description: CORELITE SQ2 SURFACE LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4508.9 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.6  
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  | 50  | 30  | 10  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 |   |
| 1   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  | 85  | 85  |   |
| 2   | 100 | 92  | 86  | 80  | 97  | 90  | 84  | 79  | 87  | 82  | 77  | 84  | 79  | 76  | 81  | 77  | 74  | 72  | 72  | 72  |   |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 67  | 77  | 71  | 65  | 74  | 69  | 64  | 72  | 67  | 63  | 61  | 61  | 61  |   |
| 4   | 84  | 72  | 64  | 57  | 82  | 71  | 63  | 57  | 69  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 53  | 53  | 53  |   |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 55  | 49  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 46  | 46  | 46  |   |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  | 40  | 40  |   |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  | 36  | 36  |   |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  | 32  | 32  |   |
| 9   | 58  | 45  | 37  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  | 29  | 29  |   |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 28  | 26  | 26  | 26  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 32913 | 32913 | 32913 |
| 5°  | 33102 | 31122 | 30084 |
| 10° | 32339 | 28334 | 27347 |
| 15° | 32485 | 26649 | 26812 |
| 20° | 31326 | 25828 | 27027 |
| 25° | 30752 | 25707 | 26398 |
| 30° | 30085 | 25639 | 26614 |
| 35° | 29857 | 25346 | 31196 |
| 40° | 29883 | 25183 | 24732 |
| 45° | 29894 | 24224 | 21302 |
| 50° | 29474 | 24702 | 19974 |
| 55° | 29101 | 26807 | 19164 |
| 60° | 28811 | 23486 | 17977 |
| 65° | 28306 | 19045 | 15633 |
| 70° | 26738 | 16206 | 11169 |
| 75° | 23836 | 12221 | 8472  |
| 80° | 19479 | 7931  | 7931  |
| 85° | 12208 | 7188  | 5391  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 29894 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 179.4  | 4.0       |
| 10°-20°   | 471.8  | 10.5      |
| 20°-30°   | 691.8  | 15.3      |
| 30°-40°   | 837.8  | 18.6      |
| 40°-50°   | 823.9  | 18.3      |
| 50°-60°   | 717.2  | 15.9      |
| 60°-70°   | 498.6  | 11.1      |
| 70°-80°   | 236.4  | 5.2       |
| 80°-90°   | 52.1   | 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°    | 1343.0 | 29.8      |
| 0°-40°    | 2180.8 | 48.4      |
| 0°-60°    | 3721.8 | 82.5      |
| 0°-90°    | 4508.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4508.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2038 | 2038  | 2038 | 2038  | 2038 |      |
| 5°  | 2042 | 2040  | 1920 | 1860  | 1856 | 192  |
| 15° | 1943 | 1731  | 1594 | 1583  | 1604 | 542  |
| 25° | 1726 | 1468  | 1443 | 1488  | 1482 | 794  |
| 35° | 1515 | 1225  | 1286 | 1397  | 1583 | 949  |
| 45° | 1309 | 970   | 1061 | 1098  | 933  | 1006 |
| 55° | 1034 | 755   | 952  | 686   | 681  | 924  |
| 65° | 741  | 519   | 498  | 409   | 409  | 728  |
| 75° | 382  | 264   | 196  | 140   | 136  | 405  |
| 85° | 66   | 43    | 39   | 31    | 29   | 90   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2038.5 | 2038.5 | 2038.5 | 2038.5 | 2038.5 |
| 2.5°  | 2033.8 | 2055.1 | 2007.4 | 1988.8 | 1985.7 |
| 5°    | 2042.4 | 2040.5 | 1920.2 | 1860.0 | 1856.2 |
| 7.5°  | 2005.1 | 1946.3 | 1802.6 | 1736.2 | 1733.2 |
| 10°   | 1972.5 | 1883.4 | 1728.2 | 1668.0 | 1668.0 |
| 12.5° | 1964.8 | 1824.1 | 1667.6 | 1623.2 | 1632.3 |
| 15°   | 1943.4 | 1731.0 | 1594.3 | 1583.2 | 1604.0 |
| 17.5° | 1872.8 | 1644.1 | 1537.3 | 1562.7 | 1587.0 |
| 20°   | 1823.2 | 1597.5 | 1503.2 | 1550.2 | 1573.0 |
| 22.5° | 1781.3 | 1552.6 | 1478.3 | 1529.8 | 1542.0 |
| 25°   | 1726.2 | 1468.3 | 1443.0 | 1487.5 | 1481.8 |
| 27.5° | 1660.3 | 1391.0 | 1407.7 | 1435.0 | 1438.4 |
| 30°   | 1613.7 | 1344.4 | 1375.2 | 1402.9 | 1427.5 |
| 32.5° | 1568.7 | 1290.3 | 1339.5 | 1405.1 | 1461.7 |
| 35°   | 1514.8 | 1224.6 | 1285.9 | 1396.8 | 1582.7 |
| 37.5° | 1458.2 | 1147.1 | 1232.0 | 1325.3 | 1384.5 |
| 40°   | 1417.8 | 1091.6 | 1194.8 | 1310.0 | 1173.4 |
| 42.5° | 1374.4 | 1048.2 | 1138.9 | 1287.7 | 1057.1 |
| 45°   | 1309.2 | 969.7  | 1060.9 | 1097.9 | 932.9  |
| 47.5° | 1232.4 | 908.9  | 1008.2 | 915.6  | 851.1  |
| 50°   | 1173.4 | 868.1  | 983.4  | 836.9  | 795.2  |
| 52.5° | 1116.0 | 825.9  | 966.3  | 772.1  | 744.0  |
| 55°   | 1033.8 | 755.0  | 952.3  | 686.5  | 680.8  |
| 57.5° | 946.5  | 682.9  | 842.2  | 612.0  | 621.8  |
| 60°   | 892.2  | 636.2  | 727.3  | 568.0  | 556.7  |
| 62.5° | 834.8  | 590.9  | 620.3  | 512.2  | 500.8  |
| 65°   | 740.9  | 519.0  | 498.5  | 409.2  | 409.2  |
| 67.5° | 637.7  | 444.3  | 403.8  | 334.9  | 289.4  |
| 70°   | 566.4  | 395.7  | 343.3  | 267.0  | 236.6  |
| 72.5° | 490.3  | 343.9  | 281.2  | 218.8  | 183.9  |
| 75°   | 382.1  | 264.5  | 195.9  | 139.6  | 135.8  |
| 77.5° | 276.2  | 190.5  | 131.9  | 103.6  | 104.0  |
| 80°   | 209.5  | 145.0  | 85.3   | 83.4   | 85.3   |
| 82.5° | 147.4  | 99.6   | 63.6   | 66.3   | 66.7   |
| 85°   | 65.9   | 43.2   | 38.8   | 31.0   | 29.1   |
| 87.5° | 14.0   | 12.4   | 7.8    | 7.8    | 7.8    |
| 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 | 23.31            | 24.90 | 23.67 | 25.21 | 25.53 | 21.98          | 23.57 | 22.35 | 23.89 | 24.20 |
|                 | 3H   | 25.39            | 26.82 | 25.76 | 27.14 | 27.50 | 23.07          | 24.50 | 23.44 | 24.82 | 25.19 |
|                 | 4H   | 26.15            | 27.49 | 26.55 | 27.84 | 28.22 | 23.31          | 24.66 | 23.71 | 25.01 | 25.38 |
|                 | 6H   | 26.67            | 27.91 | 27.08 | 28.28 | 28.67 | 23.49          | 24.74 | 23.90 | 25.10 | 25.49 |
|                 | 8H   | 26.81            | 28.00 | 27.24 | 28.39 | 28.79 | 23.55          | 24.73 | 23.97 | 25.12 | 25.52 |
|                 | 12H  | 26.88            | 28.02 | 27.31 | 28.40 | 28.83 | 23.57          | 24.70 | 24.00 | 25.08 | 25.51 |
| 4H              | 2H   | 23.77            | 25.11 | 24.17 | 25.46 | 25.84 | 22.71          | 24.05 | 23.11 | 24.40 | 24.78 |
|                 | 3H   | 25.94            | 27.06 | 26.35 | 27.46 | 27.86 | 23.95          | 25.07 | 24.36 | 25.47 | 25.87 |
|                 | 4H   | 26.78            | 27.79 | 27.21 | 28.21 | 28.64 | 24.26          | 25.26 | 24.69 | 25.68 | 26.12 |
|                 | 6H   | 27.41            | 28.29 | 27.86 | 28.73 | 29.19 | 24.50          | 25.38 | 24.96 | 25.82 | 26.28 |
|                 | 8H   | 27.59            | 28.41 | 28.06 | 28.86 | 29.32 | 24.58          | 25.40 | 25.04 | 25.84 | 26.31 |
|                 | 12H  | 27.70            | 28.43 | 28.18 | 28.91 | 29.38 | 24.62          | 25.35 | 25.10 | 25.83 | 26.30 |
| 8H              | 4H   | 26.86            | 27.68 | 27.32 | 28.12 | 28.59 | 24.53          | 25.35 | 24.99 | 25.79 | 26.26 |
|                 | 6H   | 27.54            | 28.22 | 28.03 | 28.71 | 29.18 | 24.83          | 25.51 | 25.32 | 26.00 | 26.47 |
|                 | 8H   | 27.77            | 28.38 | 28.28 | 28.88 | 29.37 | 24.94          | 25.55 | 25.45 | 26.05 | 26.54 |
|                 | 12H  | 27.92            | 28.45 | 28.42 | 28.94 | 29.51 | 25.01          | 25.55 | 25.52 | 26.04 | 26.60 |
| 12H             | 4H   | 26.84            | 27.58 | 27.32 | 28.05 | 28.52 | 24.56          | 25.29 | 25.04 | 25.77 | 26.24 |
|                 | 6H   | 27.52            | 28.13 | 28.03 | 28.63 | 29.12 | 24.86          | 25.47 | 25.38 | 25.98 | 26.47 |
|                 | 8H   | 27.78            | 28.32 | 28.29 | 28.81 | 29.37 | 25.01          | 25.55 | 25.52 | 26.04 | 26.60 |