

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: P854033

Luminaire Tested: SQ2-PH1-0U-075D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

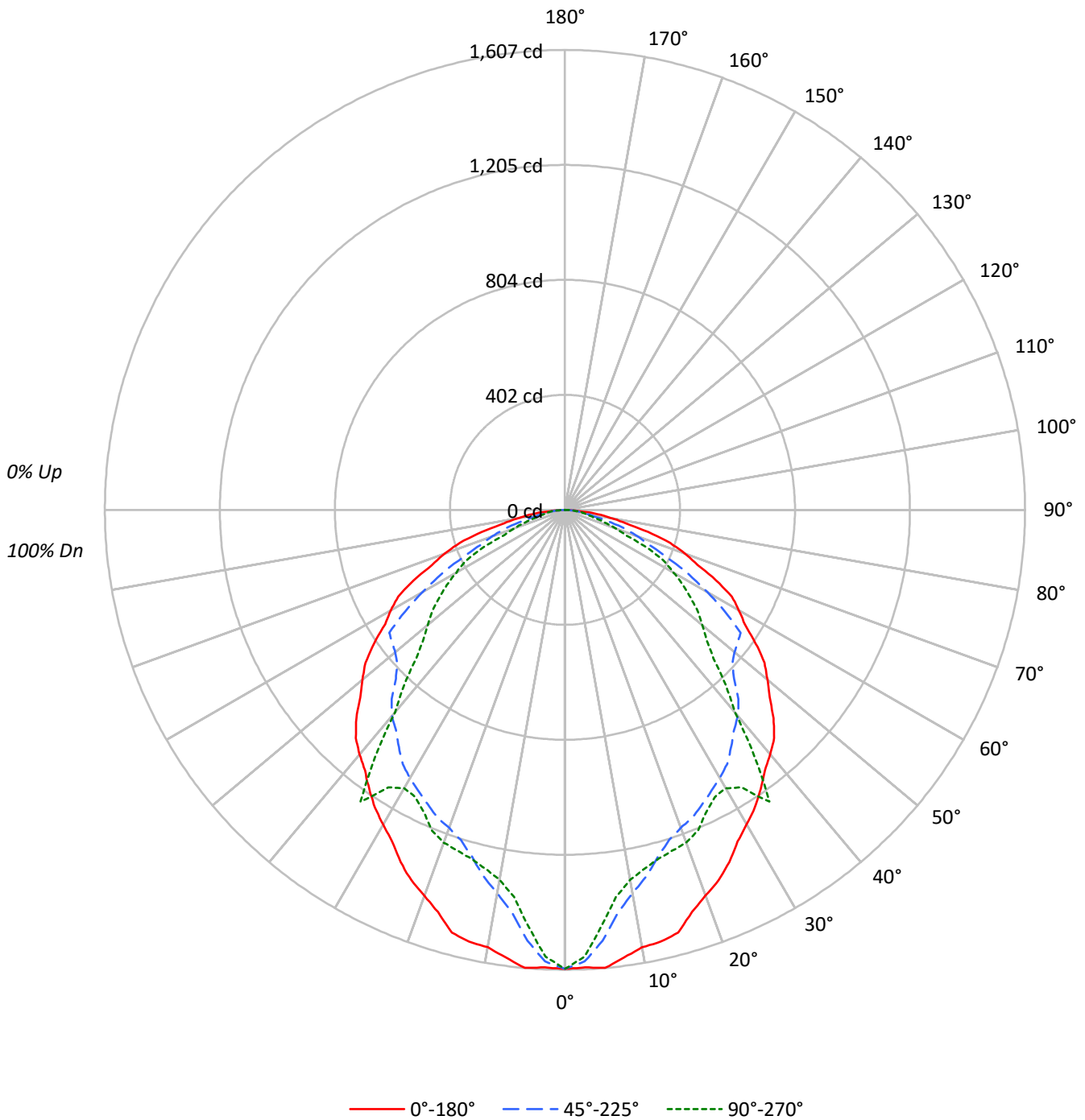
Test Method: LM-79-2019  
Report Number: P854033  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-0U-075D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 750 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3547.3 lumens  
Efficiency: N/A  
Efficacy: 132.9 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): 26.7  
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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 86  | 80  | 97  | 90  | 84  | 79  | 87  | 82  | 77  | 84  | 79  | 76  | 81  | 77  | 74  | 72  |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 67  | 77  | 71  | 65  | 74  | 69  | 64  | 72  | 67  | 63  | 61  |
| 4   | 84  | 72  | 64  | 57  | 82  | 71  | 63  | 57  | 69  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 53  |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 55  | 49  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 46  |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9   | 58  | 45  | 37  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 28  | 26  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 25893 | 25893 | 25893 |
| 5°  | 26042 | 24485 | 23668 |
| 10° | 25443 | 22291 | 21515 |
| 15° | 25558 | 20966 | 21093 |
| 20° | 24646 | 20319 | 21263 |
| 25° | 24195 | 20225 | 20769 |
| 30° | 23670 | 20171 | 20939 |
| 35° | 23489 | 19941 | 24541 |
| 40° | 23509 | 19812 | 19458 |
| 45° | 23519 | 19059 | 16760 |
| 50° | 23189 | 19432 | 15714 |
| 55° | 22894 | 21090 | 15077 |
| 60° | 22666 | 18477 | 14141 |
| 65° | 22269 | 14984 | 12302 |
| 70° | 21036 | 12751 | 8790  |
| 75° | 18752 | 9613  | 6662  |
| 80° | 15323 | 6239  | 6239  |
| 85° | 9615  | 5650  | 4242  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 23519 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 141.1  | 4.0       |
| 10°-20°   | 371.2  | 10.5      |
| 20°-30°   | 544.3  | 15.3      |
| 30°-40°   | 659.1  | 18.6      |
| 40°-50°   | 648.2  | 18.3      |
| 50°-60°   | 564.2  | 15.9      |
| 60°-70°   | 392.3  | 11.1      |
| 70°-80°   | 186.0  | 5.2       |
| 80°-90°   | 41.0   | 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°    | 1056.6 | 29.8      |
| 0°-40°    | 1715.7 | 48.4      |
| 0°-60°    | 2928.1 | 82.5      |
| 0°-90°    | 3547.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3547.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1604 | 1604  | 1604 | 1604  | 1604 |      |
| 5°  | 1607 | 1605  | 1511 | 1463  | 1460 | 151  |
| 15° | 1529 | 1362  | 1254 | 1246  | 1262 | 426  |
| 25° | 1358 | 1155  | 1135 | 1170  | 1166 | 625  |
| 35° | 1192 | 964   | 1012 | 1099  | 1245 | 746  |
| 45° | 1030 | 763   | 835  | 864   | 734  | 792  |
| 55° | 813  | 594   | 749  | 540   | 536  | 727  |
| 65° | 583  | 408   | 392  | 322   | 322  | 573  |
| 75° | 301  | 208   | 154  | 110   | 107  | 319  |
| 85° | 52   | 34    | 30   | 24    | 23   | 71   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1603.7 | 1603.7 | 1603.7 | 1603.7 | 1603.7 |
| 2.5°  | 1600.1 | 1616.8 | 1579.3 | 1564.6 | 1562.2 |
| 5°    | 1606.8 | 1605.3 | 1510.7 | 1463.3 | 1460.3 |
| 7.5°  | 1577.5 | 1531.2 | 1418.2 | 1365.9 | 1363.6 |
| 10°   | 1551.9 | 1481.7 | 1359.6 | 1312.3 | 1312.3 |
| 12.5° | 1545.7 | 1435.0 | 1312.0 | 1277.0 | 1284.2 |
| 15°   | 1529.0 | 1361.9 | 1254.3 | 1245.5 | 1261.9 |
| 17.5° | 1473.4 | 1293.5 | 1209.4 | 1229.4 | 1248.5 |
| 20°   | 1434.4 | 1256.8 | 1182.6 | 1219.6 | 1237.5 |
| 22.5° | 1401.4 | 1221.5 | 1163.1 | 1203.6 | 1213.1 |
| 25°   | 1358.1 | 1155.1 | 1135.3 | 1170.3 | 1165.8 |
| 27.5° | 1306.2 | 1094.3 | 1107.5 | 1128.9 | 1131.6 |
| 30°   | 1269.6 | 1057.7 | 1081.9 | 1103.7 | 1123.1 |
| 32.5° | 1234.2 | 1015.1 | 1053.8 | 1105.5 | 1149.9 |
| 35°   | 1191.7 | 963.5  | 1011.7 | 1098.9 | 1245.1 |
| 37.5° | 1147.2 | 902.5  | 969.3  | 1042.6 | 1089.2 |
| 40°   | 1115.4 | 858.8  | 940.0  | 1030.6 | 923.2  |
| 42.5° | 1081.3 | 824.6  | 896.0  | 1013.0 | 831.6  |
| 45°   | 1030.0 | 762.9  | 834.7  | 863.8  | 734.0  |
| 47.5° | 969.6  | 715.0  | 793.2  | 720.3  | 669.6  |
| 50°   | 923.2  | 683.0  | 773.6  | 658.4  | 625.6  |
| 52.5° | 878.0  | 649.7  | 760.2  | 607.4  | 585.3  |
| 55°   | 813.3  | 594.0  | 749.2  | 540.1  | 535.6  |
| 57.5° | 744.6  | 537.3  | 662.6  | 481.4  | 489.2  |
| 60°   | 701.9  | 500.5  | 572.2  | 446.9  | 437.9  |
| 62.5° | 656.8  | 464.9  | 488.0  | 402.9  | 394.0  |
| 65°   | 582.9  | 408.3  | 392.2  | 322.0  | 322.0  |
| 67.5° | 501.7  | 349.5  | 317.7  | 263.5  | 227.7  |
| 70°   | 445.6  | 311.3  | 270.1  | 210.0  | 186.2  |
| 72.5° | 385.8  | 270.6  | 221.3  | 172.1  | 144.7  |
| 75°   | 300.6  | 208.1  | 154.1  | 109.8  | 106.8  |
| 77.5° | 217.3  | 149.9  | 103.8  | 81.5   | 81.8   |
| 80°   | 164.8  | 114.1  | 67.1   | 65.6   | 67.1   |
| 82.5° | 116.0  | 78.4   | 50.0   | 52.2   | 52.5   |
| 85°   | 51.9   | 34.0   | 30.5   | 24.4   | 22.9   |
| 87.5° | 11.0   | 9.8    | 6.1    | 6.1    | 6.1    |
| 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 | 22.47            | 24.07 | 22.84 | 24.38 | 24.69 | 21.15          | 22.74 | 21.51 | 23.05 | 23.37 |
|                 | 3H   | 24.55            | 25.98 | 24.93 | 26.31 | 26.67 | 22.23          | 23.66 | 22.61 | 23.99 | 24.35 |
|                 | 4H   | 25.32            | 26.66 | 25.71 | 27.01 | 27.38 | 22.48          | 23.82 | 22.88 | 24.17 | 24.55 |
|                 | 6H   | 25.84            | 27.08 | 26.25 | 27.45 | 27.84 | 22.66          | 23.90 | 23.07 | 24.27 | 24.66 |
|                 | 8H   | 25.98            | 27.17 | 26.41 | 27.56 | 27.96 | 22.71          | 23.90 | 23.14 | 24.29 | 24.69 |
|                 | 12H  | 26.05            | 27.18 | 26.48 | 27.57 | 28.00 | 22.73          | 23.87 | 23.16 | 24.25 | 24.68 |
| 4H              | 2H   | 22.93            | 24.28 | 23.33 | 24.63 | 25.00 | 21.87          | 23.22 | 22.27 | 23.57 | 23.94 |
|                 | 3H   | 25.11            | 26.22 | 25.52 | 26.62 | 27.02 | 23.12          | 24.24 | 23.53 | 24.64 | 25.04 |
|                 | 4H   | 25.95            | 26.96 | 26.38 | 27.37 | 27.81 | 23.42          | 24.43 | 23.85 | 24.85 | 25.28 |
|                 | 6H   | 26.57            | 27.45 | 27.03 | 27.89 | 28.35 | 23.67          | 24.55 | 24.13 | 24.99 | 25.45 |
|                 | 8H   | 26.76            | 27.58 | 27.22 | 28.02 | 28.49 | 23.74          | 24.56 | 24.20 | 25.01 | 25.47 |
|                 | 12H  | 26.86            | 27.60 | 27.34 | 28.07 | 28.54 | 23.78          | 24.52 | 24.27 | 25.00 | 25.47 |
| 8H              | 4H   | 26.02            | 26.84 | 26.48 | 27.29 | 27.75 | 23.69          | 24.51 | 24.16 | 24.96 | 25.42 |
|                 | 6H   | 26.70            | 27.38 | 27.20 | 27.87 | 28.35 | 24.00          | 24.67 | 24.49 | 25.16 | 25.64 |
|                 | 8H   | 26.94            | 27.54 | 27.45 | 28.05 | 28.54 | 24.10          | 24.71 | 24.62 | 25.22 | 25.71 |
|                 | 12H  | 27.08            | 27.62 | 27.59 | 28.11 | 28.67 | 24.18          | 24.72 | 24.69 | 25.21 | 25.77 |
| 12H             | 4H   | 26.01            | 26.74 | 26.49 | 27.22 | 27.69 | 23.73          | 24.46 | 24.21 | 24.94 | 25.41 |
|                 | 6H   | 26.68            | 27.29 | 27.19 | 27.80 | 28.29 | 24.03          | 24.64 | 24.54 | 25.15 | 25.63 |
|                 | 8H   | 26.95            | 27.49 | 27.46 | 27.98 | 28.54 | 24.18          | 24.72 | 24.69 | 25.21 | 25.77 |