

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P1036309

Luminaire Tested: SQ4R-PR1-100D-B2750-1D-UNV-W2A\_3000K

Issue Date: 8/14/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P1036309  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P564154)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/14/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4R-PR1-100D-B2750-1D-UNV-W2A\_3000K  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH, DIRECT ONLY 1000 LUMENS PER FOOT DC

Light Source: -  
Ballast/Driver: -

**Summary**

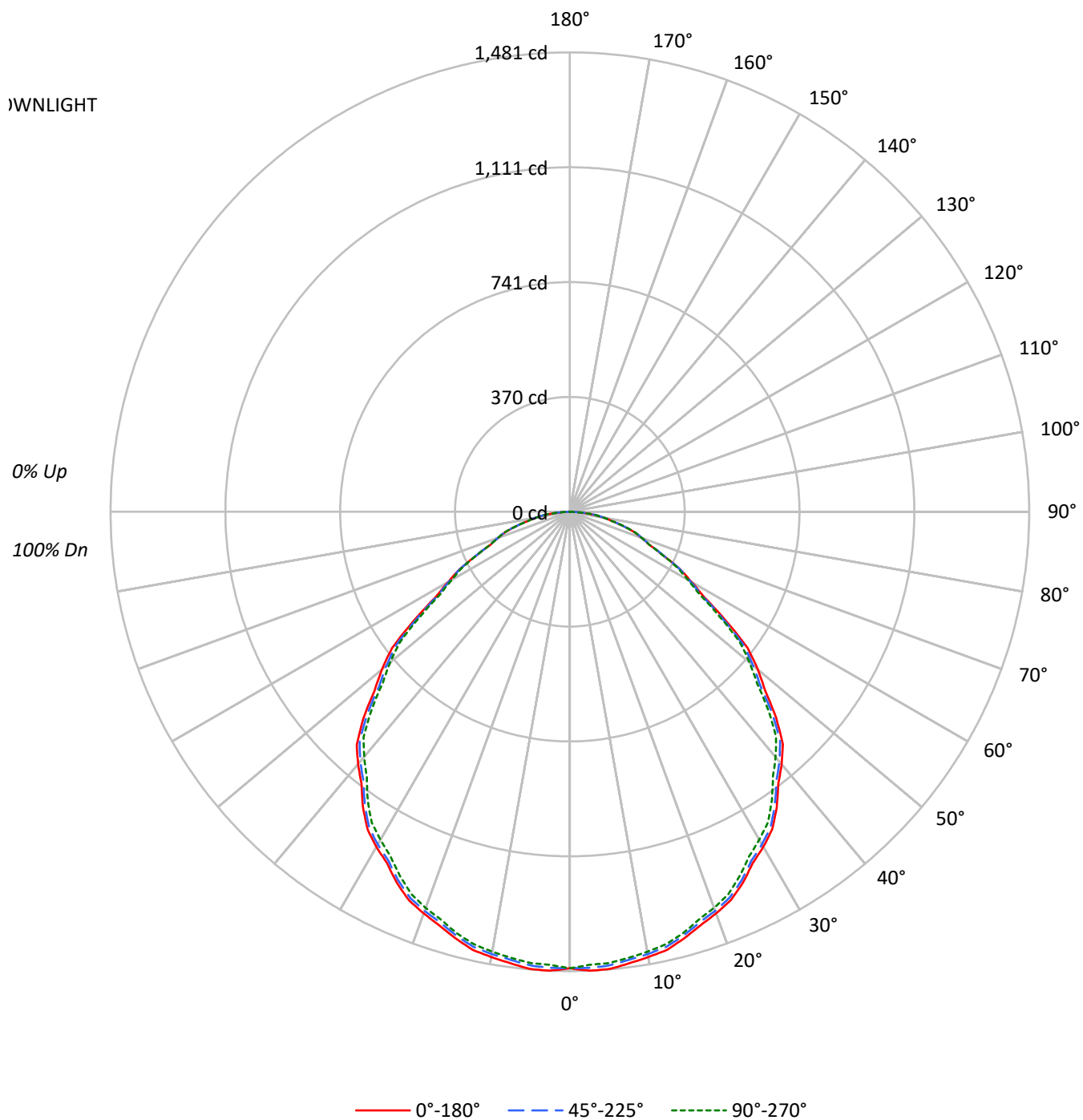
Lumens per Lamp: N/A  
Luminaire Lumens: 3679.3 lumens  
Efficiency: N/A  
Efficacy: 105.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.24 / 1.35  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 34.9  
Input Voltage (V): NR  
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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  |  | 95  | 92  | 90  |  | 91  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  |  | 84  | 80  | 76  |  | 81  |
| 3   | 92  | 82  | 74  | 68  | 90  | 80  | 73  | 68  | 78  | 71  | 66  |  | 75  | 70  | 65  |  | 72  |
| 4   | 85  | 73  | 65  | 58  | 82  | 72  | 64  | 58  | 69  | 63  | 57  |  | 67  | 61  | 56  |  | 65  |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 57  | 50  | 63  | 55  | 50  |  | 61  | 54  | 49  |  | 59  |
| 6   | 72  | 59  | 51  | 45  | 70  | 58  | 50  | 44  | 57  | 49  | 44  |  | 55  | 49  | 44  |  | 53  |
| 7   | 67  | 54  | 46  | 40  | 65  | 53  | 45  | 39  | 52  | 44  | 39  |  | 50  | 44  | 39  |  | 49  |
| 8   | 63  | 49  | 41  | 35  | 61  | 49  | 41  | 35  | 47  | 40  | 35  |  | 46  | 40  | 35  |  | 45  |
| 9   | 58  | 45  | 37  | 32  | 57  | 45  | 37  | 32  | 44  | 37  | 32  |  | 43  | 36  | 32  |  | 42  |
| 10  | 55  | 42  | 34  | 29  | 54  | 41  | 34  | 29  | 40  | 34  | 29  |  | 40  | 33  | 29  |  | 39  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13578 | 13578 | 13578 |
| 5°  | 13701 | 13597 | 13525 |
| 10° | 13657 | 13563 | 13492 |
| 15° | 13599 | 13514 | 13440 |
| 20° | 13530 | 13442 | 13343 |
| 25° | 13434 | 13345 | 13189 |
| 30° | 13289 | 13195 | 13007 |
| 35° | 13094 | 12978 | 12794 |
| 40° | 12793 | 12657 | 12427 |
| 45° | 12275 | 12057 | 11810 |
| 50° | 11355 | 11081 | 10861 |
| 55° | 9909  | 9687  | 9482  |
| 60° | 8350  | 8281  | 8117  |
| 65° | 7222  | 7252  | 7193  |
| 70° | 6631  | 6666  | 6666  |
| 75° | 6370  | 6370  | 6420  |
| 80° | 5993  | 6062  | 5993  |
| 85° | 4838  | 5367  | 5367  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12275 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 139.2  | 3.8       |
| 10°-20°   | 398.2  | 10.8      |
| 20°-30°   | 600.6  | 16.3      |
| 30°-40°   | 715.7  | 19.5      |
| 40°-50°   | 705.6  | 19.2      |
| 50°-60°   | 539.2  | 14.7      |
| 60°-70°   | 333.7  | 9.1       |
| 70°-80°   | 189.5  | 5.2       |
| 80°-90°   | 57.7   | 1.6       |
| 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°    | 1138.0 | 30.9      |
| 0°-40°    | 1853.7 | 50.4      |
| 0°-60°    | 3098.5 | 84.2      |
| 0°-90°    | 3679.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3679.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1472 | 1472  | 1472 | 1472  | 1472 |      |
| 5°  | 1479 | 1463  | 1468 | 1463  | 1460 | 140  |
| 15° | 1424 | 1409  | 1415 | 1410  | 1407 | 402  |
| 25° | 1320 | 1304  | 1311 | 1297  | 1296 | 607  |
| 35° | 1163 | 1149  | 1152 | 1137  | 1136 | 726  |
| 45° | 941  | 928   | 924  | 908   | 905  | 721  |
| 55° | 616  | 606   | 602  | 592   | 590  | 552  |
| 65° | 331  | 328   | 332  | 330   | 330  | 335  |
| 75° | 179  | 179   | 179  | 180   | 180  | 189  |
| 85° | 46   | 48    | 51   | 51    | 51   | 55   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1471.7 | 1471.7 | 1471.7 | 1471.7 | 1471.7 |
| 2.5°  | 1481.0 | 1468.1 | 1471.7 | 1468.7 | 1461.7 |
| 5°    | 1479.4 | 1463.2 | 1468.1 | 1462.8 | 1460.4 |
| 7.5°  | 1468.1 | 1452.1 | 1456.9 | 1451.7 | 1450.4 |
| 10°   | 1457.7 | 1442.9 | 1447.7 | 1442.7 | 1440.1 |
| 12.5° | 1446.6 | 1430.9 | 1436.6 | 1430.4 | 1428.1 |
| 15°   | 1423.7 | 1408.8 | 1414.8 | 1409.7 | 1407.1 |
| 17.5° | 1398.4 | 1382.4 | 1388.5 | 1382.6 | 1379.3 |
| 20°   | 1378.0 | 1363.1 | 1369.1 | 1360.3 | 1359.0 |
| 22.5° | 1355.7 | 1340.9 | 1346.7 | 1334.9 | 1334.7 |
| 25°   | 1319.6 | 1303.5 | 1310.9 | 1296.9 | 1295.6 |
| 27.5° | 1276.9 | 1262.0 | 1267.9 | 1253.7 | 1252.3 |
| 30°   | 1247.4 | 1232.5 | 1238.6 | 1223.3 | 1220.9 |
| 32.5° | 1213.9 | 1200.1 | 1205.2 | 1189.9 | 1188.3 |
| 35°   | 1162.6 | 1148.8 | 1152.3 | 1137.2 | 1135.9 |
| 37.5° | 1104.0 | 1091.5 | 1093.5 | 1076.7 | 1075.6 |
| 40°   | 1062.2 | 1050.0 | 1050.9 | 1033.2 | 1031.8 |
| 42.5° | 1016.8 | 1004.3 | 1003.2 | 985.6  | 984.3  |
| 45°   | 940.8  | 928.3  | 924.1  | 907.5  | 905.1  |
| 47.5° | 854.0  | 841.5  | 833.9  | 820.4  | 818.6  |
| 50°   | 791.1  | 778.6  | 772.0  | 760.5  | 756.7  |
| 52.5° | 723.1  | 710.7  | 705.2  | 694.7  | 691.0  |
| 55°   | 616.0  | 606.2  | 602.2  | 592.0  | 589.5  |
| 57.5° | 514.4  | 507.8  | 506.5  | 496.7  | 495.6  |
| 60°   | 452.5  | 448.8  | 448.8  | 439.9  | 439.9  |
| 62.5° | 399.9  | 397.0  | 399.0  | 393.2  | 392.3  |
| 65°   | 330.8  | 328.4  | 332.2  | 329.5  | 329.5  |
| 67.5° | 276.4  | 276.4  | 278.6  | 277.5  | 277.5  |
| 70°   | 245.8  | 245.8  | 247.1  | 247.1  | 247.1  |
| 72.5° | 218.5  | 217.6  | 220.9  | 220.7  | 219.8  |
| 75°   | 178.7  | 178.7  | 178.7  | 180.1  | 180.1  |
| 77.5° | 139.2  | 139.4  | 140.5  | 140.3  | 139.2  |
| 80°   | 112.8  | 114.1  | 114.1  | 112.8  | 112.8  |
| 82.5° | 86.6   | 87.7   | 87.7   | 87.4   | 86.6   |
| 85°   | 45.7   | 48.1   | 50.7   | 50.7   | 50.7   |
| 87.5° | 13.1   | 17.1   | 20.4   | 20.4   | 19.3   |
| 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 | 19.17            | 20.73 | 19.53 | 21.04 | 21.36 | 18.99          | 20.56 | 19.36 | 20.87 | 21.18 |
|                 | 3H   | 20.50            | 21.90 | 20.88 | 22.23 | 22.59 | 20.40          | 21.80 | 20.78 | 22.13 | 22.49 |
|                 | 4H   | 21.10            | 22.42 | 21.50 | 22.77 | 23.15 | 21.03          | 22.35 | 21.43 | 22.70 | 23.07 |
|                 | 6H   | 21.55            | 22.77 | 21.96 | 23.13 | 23.52 | 21.49          | 22.71 | 21.90 | 23.07 | 23.46 |
|                 | 8H   | 21.73            | 22.89 | 22.16 | 23.28 | 23.68 | 21.67          | 22.84 | 22.10 | 23.23 | 23.63 |
|                 | 12H  | 21.84            | 22.95 | 22.27 | 23.34 | 23.77 | 21.80          | 22.91 | 22.23 | 23.29 | 23.72 |
| 4H              | 2H   | 19.64            | 20.96 | 20.04 | 21.31 | 21.68 | 19.50          | 20.82 | 19.90 | 21.17 | 21.54 |
|                 | 3H   | 21.24            | 22.34 | 21.65 | 22.73 | 23.14 | 21.17          | 22.26 | 21.58 | 22.66 | 23.06 |
|                 | 4H   | 21.98            | 22.96 | 22.41 | 23.38 | 23.82 | 21.93          | 22.92 | 22.36 | 23.33 | 23.77 |
|                 | 6H   | 22.56            | 23.43 | 23.02 | 23.87 | 24.33 | 22.53          | 23.39 | 22.98 | 23.83 | 24.29 |
|                 | 8H   | 22.81            | 23.61 | 23.27 | 24.06 | 24.52 | 22.77          | 23.58 | 23.23 | 24.02 | 24.49 |
|                 | 12H  | 22.97            | 23.69 | 23.45 | 24.17 | 24.64 | 22.95          | 23.67 | 23.43 | 24.15 | 24.62 |
| 8H              | 4H   | 22.25            | 23.06 | 22.71 | 23.50 | 23.97 | 22.21          | 23.02 | 22.67 | 23.46 | 23.93 |
|                 | 6H   | 22.98            | 23.65 | 23.47 | 24.14 | 24.61 | 22.94          | 23.61 | 23.44 | 24.10 | 24.58 |
|                 | 8H   | 23.31            | 23.92 | 23.82 | 24.42 | 24.91 | 23.28          | 23.88 | 23.79 | 24.39 | 24.88 |
|                 | 12H  | 23.55            | 24.08 | 24.06 | 24.57 | 25.14 | 23.54          | 24.08 | 24.05 | 24.57 | 25.13 |
| 12H             | 4H   | 22.28            | 23.00 | 22.76 | 23.48 | 23.95 | 22.24          | 22.96 | 22.72 | 23.44 | 23.91 |
|                 | 6H   | 23.04            | 23.64 | 23.55 | 24.15 | 24.64 | 23.01          | 23.61 | 23.52 | 24.12 | 24.61 |
|                 | 8H   | 23.44            | 23.97 | 23.95 | 24.47 | 25.03 | 23.41          | 23.94 | 23.92 | 24.44 | 25.00 |

END OF REPORT