

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: P1036167

Luminaire Tested: SQ4R-BB-050D-B2750-1D-UNV-W2A\_4000K

Issue Date: 8/14/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P1036167  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P518604)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/14/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4R-BB-050D-B2750-1D-UNV-W2A\_4000K  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH, DIRECT ONLY 500 LUMENS PER FOOT DOV

Light Source: -  
Ballast/Driver: -

**Summary**

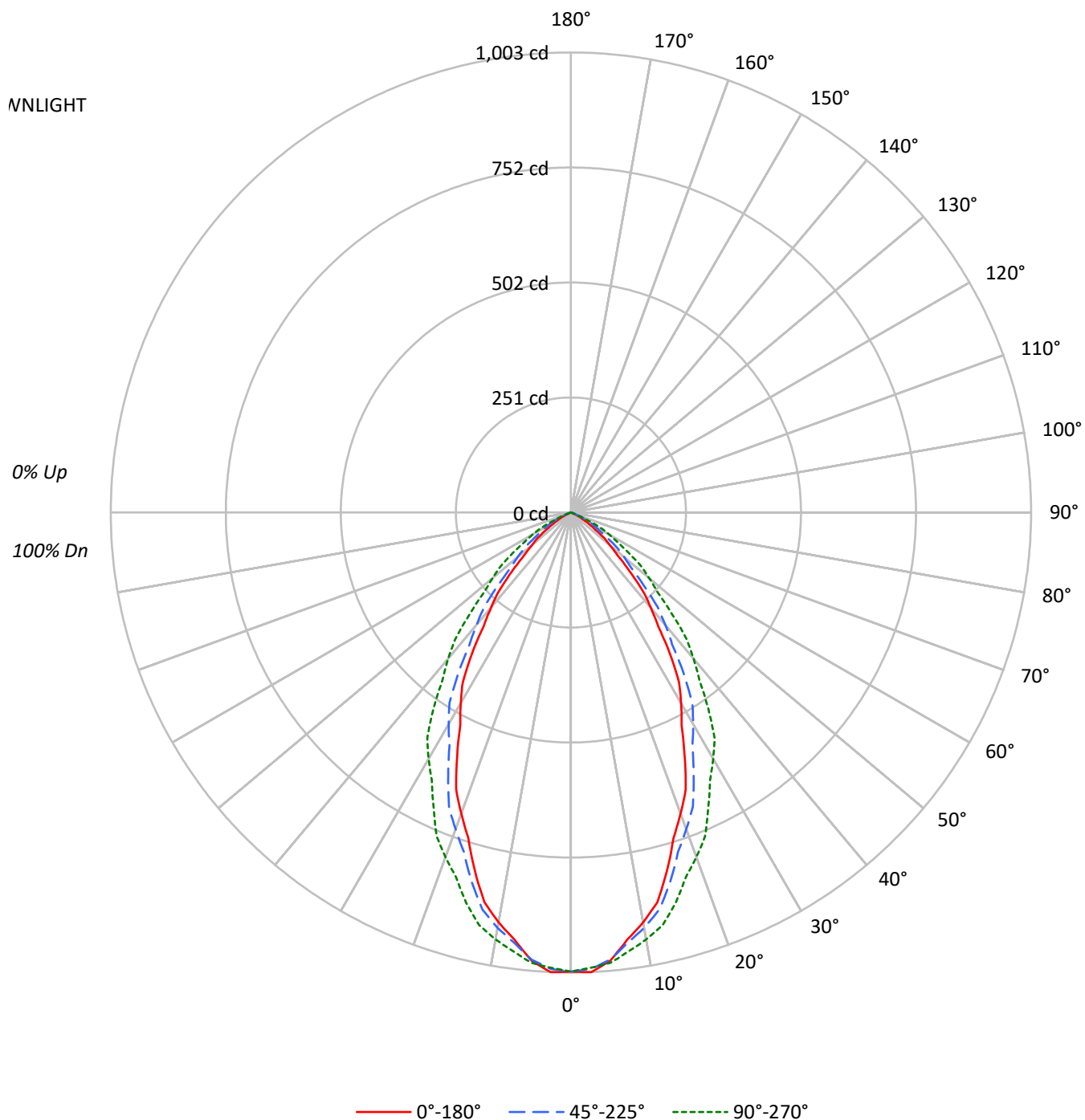
Lumens per Lamp: N/A  
Luminaire Lumens: 1193.9 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.97 / 0.97  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.8  
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  | 30  | 10  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 103 | 101 | 99  | 99  | 98  | 96  | 96  | 94  | 93  | 93  | 93  | 91  |
| 2   | 106 | 100 | 95  | 91  | 103 | 98  | 94  | 90  | 95  | 91  | 88  | 92  | 89  | 86  | 89  | 86  | 84  | 84  | 84  | 82  |
| 3   | 99  | 91  | 85  | 81  | 97  | 90  | 84  | 80  | 87  | 82  | 79  | 85  | 81  | 77  | 82  | 79  | 76  | 76  | 76  | 74  |
| 4   | 93  | 84  | 77  | 72  | 91  | 82  | 76  | 72  | 80  | 75  | 71  | 78  | 74  | 70  | 76  | 72  | 69  | 69  | 69  | 67  |
| 5   | 87  | 77  | 70  | 65  | 85  | 76  | 70  | 65  | 74  | 68  | 64  | 72  | 67  | 64  | 71  | 66  | 63  | 63  | 63  | 61  |
| 6   | 82  | 71  | 64  | 59  | 80  | 70  | 64  | 59  | 69  | 63  | 58  | 67  | 62  | 58  | 66  | 61  | 58  | 58  | 58  | 56  |
| 7   | 77  | 66  | 59  | 54  | 75  | 65  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 53  | 61  | 56  | 53  | 53  | 53  | 51  |
| 8   | 72  | 61  | 54  | 50  | 71  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 49  | 49  | 49  | 47  |
| 9   | 68  | 57  | 50  | 46  | 67  | 57  | 50  | 46  | 56  | 50  | 46  | 55  | 49  | 45  | 54  | 49  | 45  | 45  | 45  | 44  |
| 10  | 65  | 54  | 47  | 42  | 63  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 51  | 46  | 42  | 42  | 42  | 41  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9234 | 9234 | 9234 |
| 5°  | 9085 | 9063 | 9130 |
| 10° | 8500 | 8614 | 8854 |
| 15° | 7728 | 7974 | 8418 |
| 20° | 6860 | 7216 | 7849 |
| 25° | 5974 | 6447 | 7212 |
| 30° | 5118 | 5679 | 6607 |
| 35° | 4243 | 4821 | 5878 |
| 40° | 3260 | 3855 | 5009 |
| 45° | 2356 | 2920 | 4030 |
| 50° | 1605 | 2175 | 3198 |
| 55° | 1044 | 1573 | 2485 |
| 60° | 600  | 1109 | 1797 |
| 65° | 159  | 677  | 910  |
| 70° | 81   | 210  | 262  |
| 75° | 36   | 18   | 0    |
| 80° | 27   | 0    | 0    |
| 85° | 0    | 0    | 0    |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 4030 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 91.3   | 7.6       |
| 10°-20°   | 233.6  | 19.6      |
| 20°-30°   | 292.4  | 24.5      |
| 30°-40°   | 270.1  | 22.6      |
| 40°-50°   | 181.5  | 15.2      |
| 50°-60°   | 93.8   | 7.9       |
| 60°-70°   | 29.4   | 2.5       |
| 70°-80°   | 1.9    | 0.2       |
| 80°-90°   | 0.0    | 0.0       |
| 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       |
| <hr/>     |        |           |
| 0°-30°    | 617.3  | 51.7      |
| 0°-40°    | 887.4  | 74.3      |
| 0°-60°    | 1162.7 | 97.4      |
| 0°-90°    | 1193.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1193.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1001 | 1001  | 1001 | 1001  | 1001 |      |
| 5°  | 981  | 971   | 979  | 982   | 986  | 91   |
| 15° | 809  | 806   | 835  | 863   | 881  | 225  |
| 25° | 587  | 592   | 633  | 677   | 708  | 269  |
| 35° | 377  | 386   | 428  | 478   | 522  | 233  |
| 45° | 181  | 192   | 224  | 267   | 309  | 142  |
| 55° | 65   | 76    | 98   | 126   | 154  | 61   |
| 65° | 7    | 14    | 31   | 37    | 42   | 12   |
| 75° | 1    | 1     | 0    | 0     | 0    | 1    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1000.8 | 1000.8 | 1000.8 | 1000.8 | 1000.8 |
| 2.5°  | 1003.2 | 993.7  | 996.1  | 996.1  | 993.5  |
| 5°    | 981.0  | 971.0  | 978.6  | 982.0  | 985.8  |
| 7.5°  | 939.6  | 931.8  | 946.3  | 956.9  | 964.9  |
| 10°   | 907.3  | 900.7  | 919.5  | 934.2  | 945.1  |
| 12.5° | 870.1  | 865.0  | 887.7  | 908.0  | 921.9  |
| 15°   | 809.1  | 806.3  | 834.8  | 862.8  | 881.3  |
| 17.5° | 743.7  | 743.6  | 776.0  | 810.9  | 833.1  |
| 20°   | 698.7  | 700.1  | 735.0  | 773.4  | 799.4  |
| 22.5° | 653.7  | 657.0  | 694.3  | 734.4  | 764.2  |
| 25°   | 586.8  | 591.5  | 633.3  | 676.7  | 708.4  |
| 27.5° | 522.5  | 529.5  | 573.4  | 618.4  | 657.0  |
| 30°   | 480.4  | 488.4  | 533.1  | 580.5  | 620.2  |
| 32.5° | 438.8  | 448.5  | 492.0  | 542.2  | 582.6  |
| 35°   | 376.7  | 386.2  | 428.0  | 478.4  | 521.9  |
| 37.5° | 312.5  | 321.7  | 362.6  | 412.2  | 459.3  |
| 40°   | 270.7  | 281.0  | 320.1  | 368.1  | 415.9  |
| 42.5° | 232.8  | 243.1  | 279.8  | 327.0  | 372.1  |
| 45°   | 180.6  | 191.5  | 223.8  | 267.3  | 308.9  |
| 47.5° | 137.5  | 149.2  | 177.4  | 217.0  | 254.9  |
| 50°   | 111.8  | 123.7  | 151.5  | 186.3  | 222.8  |
| 52.5° | 91.3   | 102.8  | 127.9  | 160.6  | 194.0  |
| 55°   | 64.9   | 75.8   | 97.8   | 125.6  | 154.5  |
| 57.5° | 44.9   | 54.3   | 74.0   | 97.1   | 119.8  |
| 60°   | 32.5   | 41.5   | 60.1   | 78.8   | 97.4   |
| 62.5° | 21.6   | 29.8   | 48.0   | 62.5   | 74.9   |
| 65°   | 7.3    | 14.0   | 31.0   | 37.4   | 41.7   |
| 67.5° | 3.7    | 4.4    | 16.2   | 17.2   | 18.6   |
| 70°   | 3.0    | 3.0    | 7.8    | 8.2    | 9.7    |
| 72.5° | 2.0    | 2.0    | 3.1    | 4.0    | 4.3    |
| 75°   | 1.0    | 1.0    | 0.5    | 0.0    | 0.0    |
| 77.5° | 0.5    | 0.5    | 0.5    | 0.0    | 0.0    |
| 80°   | 0.5    | 0.5    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.1    | 0.1    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 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 | 7.66             | 8.89 | 8.02 | 9.20 | 9.52 | 12.24          | 13.47 | 12.60 | 13.78 | 14.09 |
|                 | 3H   | 7.54             | 8.62 | 7.92 | 8.95 | 9.32 | 12.21          | 13.29 | 12.59 | 13.62 | 13.99 |
|                 | 4H   | 7.46             | 8.46 | 7.86 | 8.81 | 9.20 | 12.13          | 13.13 | 12.53 | 13.48 | 13.87 |
|                 | 6H   | 7.37             | 8.29 | 7.79 | 8.66 | 9.06 | 12.04          | 12.96 | 12.46 | 13.33 | 13.73 |
|                 | 8H   | 7.33             | 8.19 | 7.76 | 8.58 | 8.99 | 11.99          | 12.86 | 12.43 | 13.25 | 13.66 |
|                 | 12H  | 7.28             | 8.10 | 7.71 | 8.49 | 8.92 | 11.95          | 12.77 | 12.38 | 13.16 | 13.59 |
| 4H              | 2H   | 8.02             | 9.02 | 8.43 | 9.38 | 9.76 | 12.17          | 13.17 | 12.57 | 13.52 | 13.91 |
|                 | 3H   | 7.91             | 8.72 | 8.32 | 9.12 | 9.53 | 12.15          | 12.96 | 12.56 | 13.36 | 13.77 |
|                 | 4H   | 7.82             | 8.53 | 8.25 | 8.95 | 9.40 | 12.05          | 12.77 | 12.49 | 13.19 | 13.64 |
|                 | 6H   | 7.73             | 8.34 | 8.19 | 8.79 | 9.26 | 11.96          | 12.58 | 12.43 | 13.02 | 13.49 |
|                 | 8H   | 7.67             | 8.24 | 8.14 | 8.69 | 9.16 | 11.90          | 12.47 | 12.37 | 12.92 | 13.39 |
|                 | 12H  | 7.61             | 8.12 | 8.10 | 8.60 | 9.08 | 11.85          | 12.35 | 12.33 | 12.83 | 13.31 |
| 8H              | 4H   | 7.67             | 8.25 | 8.15 | 8.70 | 9.17 | 11.90          | 12.47 | 12.37 | 12.92 | 13.40 |
|                 | 6H   | 7.56             | 8.03 | 8.07 | 8.53 | 9.01 | 11.79          | 12.25 | 12.29 | 12.75 | 13.24 |
|                 | 8H   | 7.50             | 7.91 | 8.02 | 8.43 | 8.93 | 11.72          | 12.14 | 12.25 | 12.66 | 13.15 |
|                 | 12H  | 7.45             | 7.81 | 7.96 | 8.31 | 8.88 | 11.67          | 12.04 | 12.19 | 12.53 | 13.11 |
| 12H             | 4H   | 7.62             | 8.12 | 8.11 | 8.61 | 9.08 | 11.85          | 12.35 | 12.34 | 12.84 | 13.31 |
|                 | 6H   | 7.50             | 7.91 | 8.02 | 8.43 | 8.93 | 11.72          | 12.14 | 12.25 | 12.66 | 13.15 |
|                 | 8H   | 7.45             | 7.81 | 7.96 | 8.31 | 8.88 | 11.67          | 12.04 | 12.19 | 12.53 | 13.11 |