

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: P1036200

Luminaire Tested: SQ4R-F-050D-B2750-1D-UNV-W2A\_5000K

Issue Date: 8/14/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P1036200  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P520092)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/14/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4R-F-050D-B2750-1D-UNV-W2A\_5000K  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH, DIRECT ONLY 500 LUMENS PER FOOT DOV

Light Source: -  
Ballast/Driver: -

**Summary**

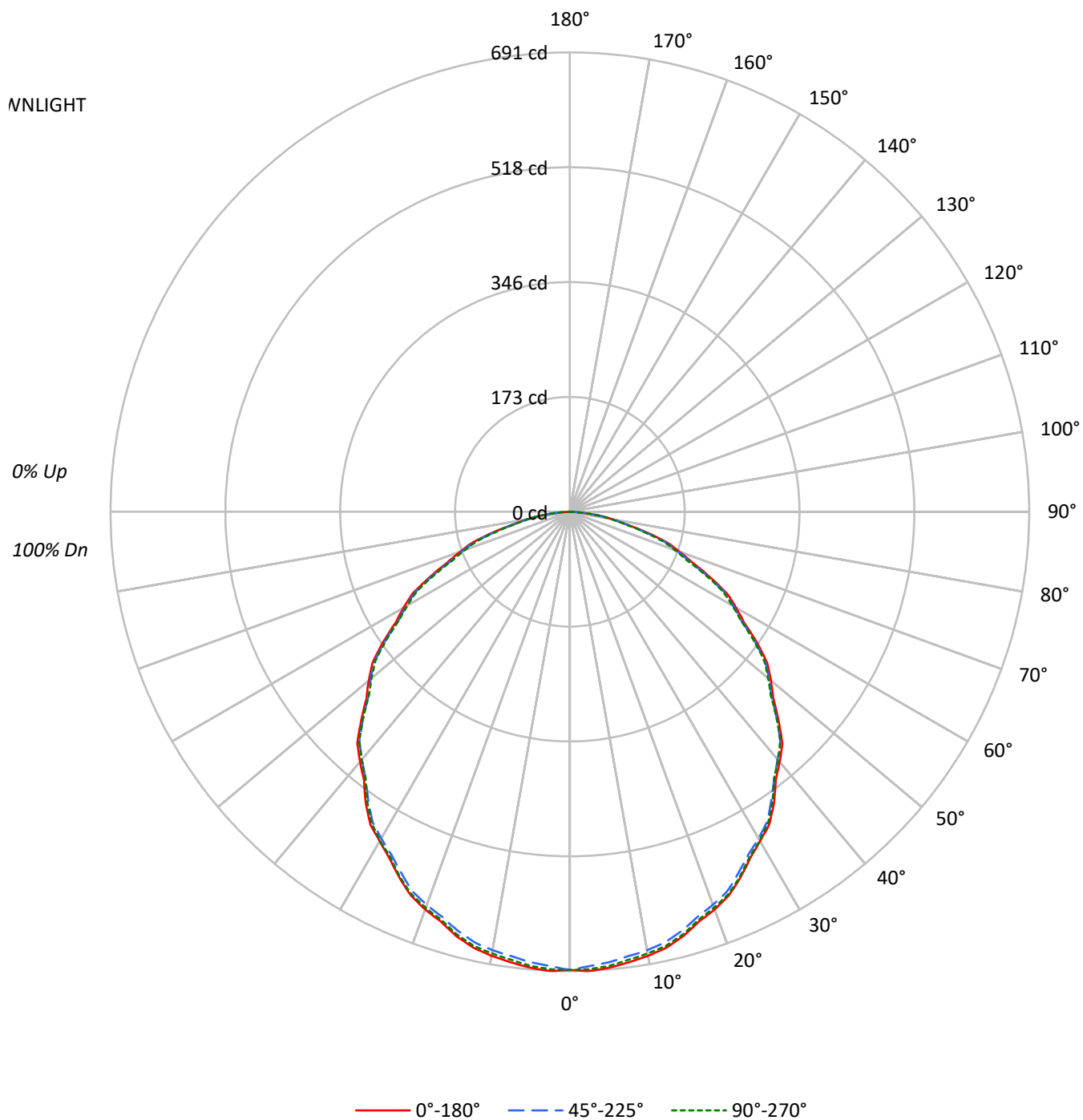
Lumens per Lamp: N/A  
Luminaire Lumens: 1881.2 lumens  
Efficiency: N/A  
Efficacy: 112.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.35  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  |  | 82  | 78  | 74  |  | 79  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  |  | 73  | 67  | 63  |  | 70  |
| 4   | 83  | 71  | 62  | 55  | 81  | 70  | 61  | 55  | 67  | 60  | 54  |  | 65  | 59  | 54  |  | 63  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  |  | 58  | 52  | 46  |  | 56  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  |  | 53  | 46  | 41  |  | 51  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  |  | 48  | 41  | 36  |  | 47  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  |  | 44  | 37  | 32  |  | 43  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  |  | 41  | 34  | 29  |  | 40  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  |  | 38  | 31  | 27  |  | 37  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6360 | 6360 | 6360 |
| 5°  | 6376 | 6299 | 6350 |
| 10° | 6353 | 6275 | 6319 |
| 15° | 6310 | 6231 | 6284 |
| 20° | 6250 | 6179 | 6224 |
| 25° | 6180 | 6106 | 6163 |
| 30° | 6095 | 6045 | 6084 |
| 35° | 6028 | 5956 | 5986 |
| 40° | 5914 | 5856 | 5868 |
| 45° | 5791 | 5742 | 5742 |
| 50° | 5668 | 5616 | 5589 |
| 55° | 5537 | 5463 | 5432 |
| 60° | 5329 | 5244 | 5211 |
| 65° | 5076 | 4975 | 4914 |
| 70° | 4732 | 4629 | 4529 |
| 75° | 4242 | 4114 | 4010 |
| 80° | 3432 | 3390 | 3284 |
| 85° | 2032 | 2350 | 2435 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 5804 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 65.0   | 3.5       |
| 10°-20°   | 185.2  | 9.8       |
| 20°-30°   | 278.2  | 14.8      |
| 30°-40°   | 332.1  | 17.7      |
| 40°-50°   | 340.3  | 18.1      |
| 50°-60°   | 303.4  | 16.1      |
| 60°-70°   | 226.0  | 12.0      |
| 70°-80°   | 122.7  | 6.5       |
| 80°-90°   | 28.4   | 1.5       |
| 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°    | 528.4  | 28.1      |
| 0°-40°    | 860.4  | 45.7      |
| 0°-60°    | 1504.2 | 80.0      |
| 0°-90°    | 1881.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1881.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 689 | 689   | 689 | 689   | 689 |      |
| 5°  | 688 | 688   | 680 | 686   | 686 | 65   |
| 15° | 661 | 659   | 652 | 658   | 658 | 186  |
| 25° | 607 | 605   | 600 | 604   | 605 | 280  |
| 35° | 535 | 533   | 529 | 529   | 532 | 334  |
| 45° | 444 | 445   | 440 | 439   | 440 | 343  |
| 55° | 344 | 344   | 340 | 337   | 338 | 307  |
| 65° | 232 | 232   | 228 | 225   | 225 | 230  |
| 75° | 119 | 118   | 115 | 114   | 112 | 126  |
| 85° | 19  | 21    | 22  | 23    | 23  | 28   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 689.3 | 689.3 | 689.3 | 689.3 | 689.3 |
| 2.5°  | 691.4 | 690.0 | 684.0 | 689.3 | 688.6 |
| 5°    | 688.4 | 687.5 | 680.1 | 686.4 | 685.6 |
| 7.5°  | 683.4 | 681.6 | 674.3 | 680.6 | 679.7 |
| 10°   | 678.1 | 676.3 | 669.8 | 675.4 | 674.5 |
| 12.5° | 671.6 | 670.5 | 663.3 | 668.8 | 668.6 |
| 15°   | 660.6 | 658.8 | 652.3 | 657.9 | 657.9 |
| 17.5° | 646.2 | 645.2 | 638.8 | 644.1 | 643.6 |
| 20°   | 636.6 | 634.9 | 629.3 | 633.9 | 633.9 |
| 22.5° | 624.8 | 623.8 | 618.2 | 622.1 | 622.8 |
| 25°   | 607.1 | 605.4 | 599.8 | 603.5 | 605.4 |
| 27.5° | 587.6 | 586.2 | 581.6 | 583.9 | 585.2 |
| 30°   | 572.1 | 572.1 | 567.4 | 568.5 | 571.1 |
| 32.5° | 558.1 | 558.1 | 552.7 | 553.7 | 554.9 |
| 35°   | 535.2 | 533.4 | 528.8 | 528.8 | 531.5 |
| 37.5° | 508.6 | 507.7 | 504.8 | 504.2 | 505.0 |
| 40°   | 491.0 | 490.0 | 486.2 | 487.2 | 487.2 |
| 42.5° | 473.3 | 472.2 | 468.5 | 467.3 | 468.7 |
| 45°   | 443.8 | 444.8 | 440.1 | 439.2 | 440.1 |
| 47.5° | 415.0 | 415.0 | 411.2 | 408.6 | 410.0 |
| 50°   | 394.9 | 394.9 | 391.3 | 389.4 | 389.4 |
| 52.5° | 374.2 | 375.0 | 370.4 | 368.0 | 368.7 |
| 55°   | 344.2 | 344.2 | 339.6 | 336.8 | 337.7 |
| 57.5° | 310.9 | 310.9 | 306.4 | 303.6 | 305.2 |
| 60°   | 288.8 | 288.8 | 284.2 | 281.4 | 282.4 |
| 62.5° | 266.7 | 266.7 | 262.1 | 259.3 | 259.4 |
| 65°   | 232.5 | 231.6 | 227.9 | 225.1 | 225.1 |
| 67.5° | 199.6 | 197.3 | 194.5 | 190.9 | 190.9 |
| 70°   | 175.4 | 174.3 | 171.6 | 167.9 | 167.9 |
| 72.5° | 153.2 | 151.6 | 148.7 | 145.9 | 145.9 |
| 75°   | 119.0 | 118.1 | 115.4 | 113.5 | 112.5 |
| 77.5° | 85.3  | 84.5  | 84.3  | 81.8  | 82.5  |
| 80°   | 64.6  | 64.6  | 63.8  | 61.8  | 61.8  |
| 82.5° | 46.1  | 46.8  | 45.2  | 44.8  | 44.1  |
| 85°   | 19.2  | 21.1  | 22.2  | 23.0  | 23.0  |
| 87.5° | 3.8   | 5.8   | 5.1   | 5.9   | 5.9   |
| 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 | 18.01            | 19.64 | 18.38 | 19.95 | 20.27 | 17.85          | 19.48 | 18.22 | 19.79 | 20.11 |
|                 | 3H   | 19.75            | 21.22 | 20.13 | 21.55 | 21.91 | 19.55          | 21.02 | 19.92 | 21.34 | 21.70 |
|                 | 4H   | 20.41            | 21.79 | 20.81 | 22.14 | 22.52 | 20.18          | 21.56 | 20.58 | 21.91 | 22.29 |
|                 | 6H   | 20.78            | 22.06 | 21.19 | 22.43 | 22.82 | 20.55          | 21.83 | 20.96 | 22.19 | 22.58 |
|                 | 8H   | 20.90            | 22.13 | 21.33 | 22.52 | 22.92 | 20.67          | 21.89 | 21.09 | 22.28 | 22.68 |
|                 | 12H  | 20.96            | 22.13 | 21.39 | 22.51 | 22.94 | 20.73          | 21.91 | 21.16 | 22.29 | 22.72 |
| 4H              | 2H   | 18.63            | 20.02 | 19.03 | 20.36 | 20.74 | 18.51          | 19.89 | 18.90 | 20.24 | 20.61 |
|                 | 3H   | 20.61            | 21.76 | 21.01 | 22.16 | 22.56 | 20.43          | 21.59 | 20.84 | 21.98 | 22.38 |
|                 | 4H   | 21.37            | 22.41 | 21.80 | 22.83 | 23.26 | 21.16          | 22.21 | 21.59 | 22.62 | 23.06 |
|                 | 6H   | 21.84            | 22.76 | 22.30 | 23.20 | 23.65 | 21.63          | 22.54 | 22.09 | 22.98 | 23.44 |
|                 | 8H   | 22.01            | 22.86 | 22.47 | 23.31 | 23.77 | 21.79          | 22.65 | 22.25 | 23.09 | 23.55 |
|                 | 12H  | 22.09            | 22.86 | 22.57 | 23.33 | 23.80 | 21.89          | 22.66 | 22.37 | 23.13 | 23.60 |
| 8H              | 4H   | 21.63            | 22.48 | 22.09 | 22.92 | 23.39 | 21.44          | 22.30 | 21.90 | 22.74 | 23.21 |
|                 | 6H   | 22.21            | 22.91 | 22.70 | 23.40 | 23.88 | 22.01          | 22.72 | 22.51 | 23.21 | 23.69 |
|                 | 8H   | 22.44            | 23.07 | 22.95 | 23.58 | 24.07 | 22.24          | 22.87 | 22.75 | 23.38 | 23.87 |
|                 | 12H  | 22.57            | 23.13 | 23.07 | 23.62 | 24.18 | 22.39          | 22.95 | 22.90 | 23.44 | 24.00 |
| 12H             | 4H   | 21.64            | 22.41 | 22.12 | 22.89 | 23.36 | 21.47          | 22.23 | 21.95 | 22.71 | 23.18 |
|                 | 6H   | 22.24            | 22.88 | 22.75 | 23.39 | 23.87 | 22.06          | 22.69 | 22.57 | 23.20 | 23.69 |
|                 | 8H   | 22.52            | 23.09 | 23.03 | 23.58 | 24.14 | 22.33          | 22.89 | 22.84 | 23.38 | 23.95 |