

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

(formerly Eaton)

Brand: CORELITE

Report Number: P520180

Luminaire Tested: **SQ4-F-100U-050D-840-1D-UNV-STD-W-4**

Issue Date: 4/29/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P520180  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-536-23, G3-1910-536-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/29/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: CORELITE  
Catalog Number: SQ4-F-100U-050D-840-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

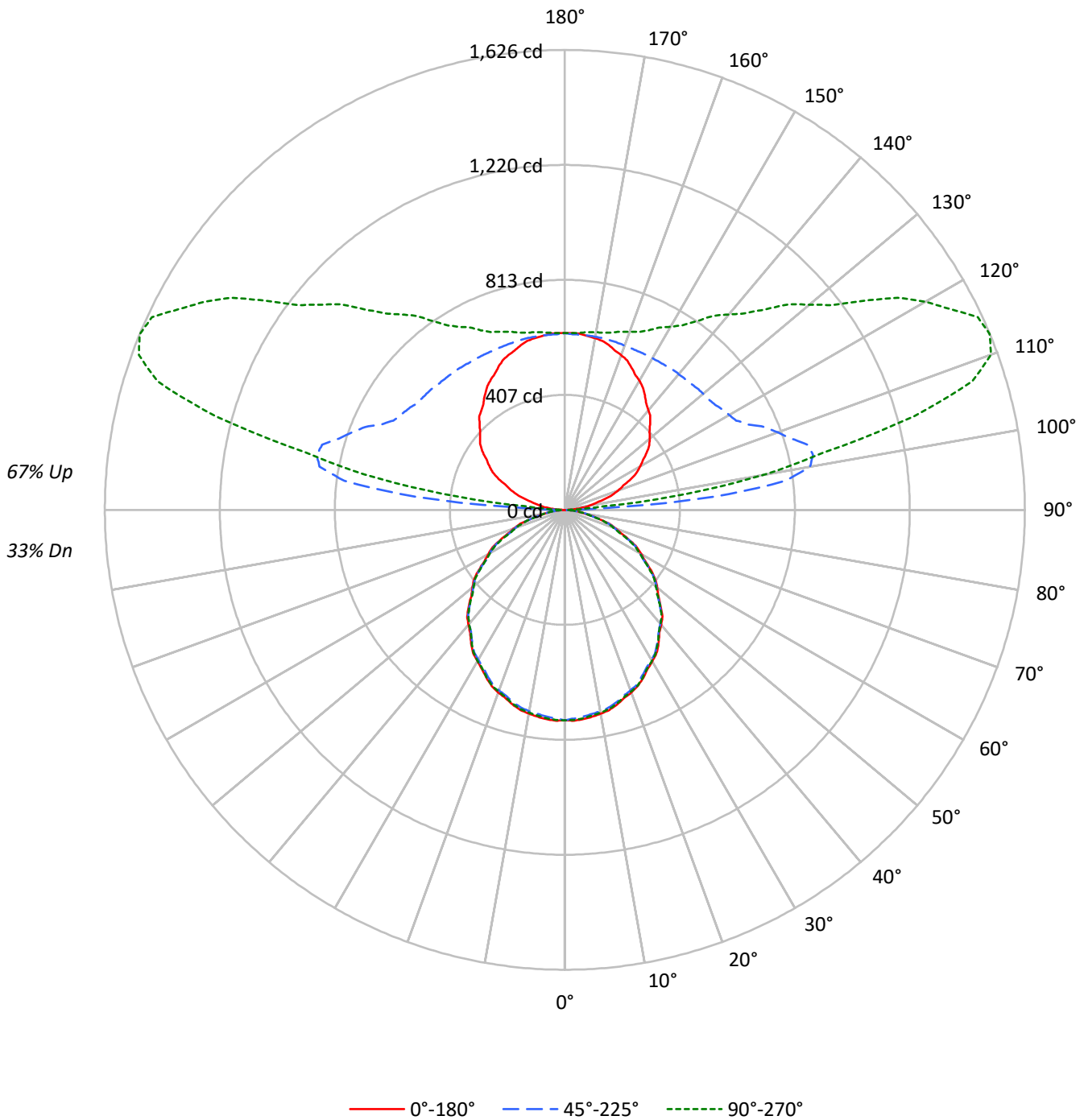
Lumens per Lamp: N/A  
Luminaire Lumens: 6088.6 lumens  
Efficiency: N/A  
Efficacy: 147.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.35  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 41.3  
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   | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 74 | 74 | 74 | 57 | 57 | 57 | 41 | 41 | 41 | 33 |
| 1   | 94  | 90  | 86  | 83  | 85 | 81 | 78 | 75 | 65 | 63 | 61 | 50 | 48 | 47 | 36 | 35 | 34 | 28 |
| 2   | 86  | 78  | 72  | 67  | 77 | 71 | 66 | 61 | 57 | 53 | 50 | 44 | 41 | 39 | 32 | 30 | 29 | 23 |
| 3   | 78  | 69  | 62  | 56  | 70 | 62 | 56 | 51 | 50 | 46 | 42 | 39 | 36 | 33 | 28 | 26 | 25 | 20 |
| 4   | 71  | 61  | 53  | 47  | 64 | 55 | 48 | 43 | 44 | 39 | 36 | 34 | 31 | 28 | 25 | 23 | 21 | 17 |
| 5   | 65  | 54  | 46  | 40  | 59 | 49 | 42 | 37 | 39 | 34 | 31 | 31 | 27 | 24 | 22 | 20 | 18 | 15 |
| 6   | 60  | 48  | 40  | 35  | 54 | 44 | 37 | 32 | 35 | 30 | 27 | 28 | 24 | 21 | 20 | 18 | 16 | 13 |
| 7   | 55  | 43  | 36  | 30  | 50 | 39 | 33 | 28 | 32 | 27 | 23 | 25 | 21 | 19 | 18 | 16 | 14 | 11 |
| 8   | 51  | 39  | 32  | 27  | 46 | 36 | 29 | 25 | 29 | 24 | 20 | 23 | 19 | 17 | 17 | 14 | 13 | 10 |
| 9   | 48  | 36  | 28  | 23  | 43 | 33 | 26 | 22 | 27 | 22 | 18 | 21 | 17 | 15 | 16 | 13 | 11 | 9  |
| 10  | 44  | 33  | 26  | 21  | 40 | 30 | 24 | 19 | 24 | 20 | 16 | 19 | 16 | 13 | 14 | 12 | 10 | 8  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6864 | 6864 | 6864 |
| 5°  | 6881 | 6798 | 6853 |
| 10° | 6858 | 6774 | 6821 |
| 15° | 6811 | 6725 | 6784 |
| 20° | 6747 | 6670 | 6718 |
| 25° | 6671 | 6590 | 6652 |
| 30° | 6579 | 6525 | 6568 |
| 35° | 6506 | 6428 | 6462 |
| 40° | 6382 | 6322 | 6334 |
| 45° | 6250 | 6199 | 6199 |
| 50° | 6119 | 6061 | 6033 |
| 55° | 5976 | 5895 | 5863 |
| 60° | 5752 | 5661 | 5624 |
| 65° | 5480 | 5370 | 5307 |
| 70° | 5104 | 4999 | 4888 |
| 75° | 4581 | 4438 | 4331 |
| 80° | 3703 | 3650 | 3549 |
| 85° | 2212 | 2530 | 2636 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 70.2   | 1.2       |
| 10°-20°   | 199.9  | 3.3       |
| 20°-30°   | 300.2  | 4.9       |
| 30°-40°   | 358.4  | 5.9       |
| 40°-50°   | 367.3  | 6.0       |
| 50°-60°   | 327.5  | 5.4       |
| 60°-70°   | 243.9  | 4.0       |
| 70°-80°   | 132.4  | 2.2       |
| 80°-90°   | 32.0   | 0.5       |
| 90°-100°  | 292.4  | 4.8       |
| 100°-110° | 807.2  | 13.3      |
| 110°-120° | 832.5  | 13.7      |
| 120°-130° | 669.0  | 11.0      |
| 130°-140° | 525.7  | 8.6       |
| 140°-150° | 403.2  | 6.6       |
| 150°-160° | 289.8  | 4.8       |
| 160°-170° | 177.2  | 2.9       |
| 170°-180° | 59.7   | 1.0       |
| 0°-30°    | 570.3  | 9.4       |
| 0°-40°    | 928.8  | 15.3      |
| 0°-60°    | 1623.6 | 26.7      |
| 0°-90°    | 2031.9 | 33.4      |
| 90°-120°  | 1932.1 | 31.7      |
| 90°-150°  | 3530.0 | 58.0      |
| 90°-180°  | 4057.0 | 66.6      |
| 0°-180°   | 6088.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90°  | Flux |
|------|-----|-------|-----|-------|------|------|
| 0°   | 744 | 744   | 744 | 744   | 744  |      |
| 5°   | 743 | 742   | 734 | 741   | 740  | 71   |
| 15°  | 713 | 711   | 704 | 710   | 710  | 201  |
| 25°  | 655 | 653   | 647 | 651   | 653  | 302  |
| 35°  | 578 | 576   | 571 | 571   | 574  | 360  |
| 45°  | 479 | 480   | 475 | 474   | 475  | 370  |
| 55°  | 372 | 372   | 366 | 364   | 364  | 331  |
| 65°  | 251 | 250   | 246 | 243   | 243  | 249  |
| 75°  | 128 | 128   | 124 | 122   | 122  | 136  |
| 85°  | 21  | 23    | 24  | 25    | 25   | 29   |
| 90°  | 2   | 4     | 8   | 9     | 10   | 4    |
| 95°  | 43  | 158   | 530 | 218   | 142  | 46   |
| 105° | 144 | 222   | 888 | 1356  | 1277 | 153  |
| 115° | 258 | 312   | 715 | 1416  | 1610 | 253  |
| 125° | 354 | 402   | 648 | 1097  | 1288 | 315  |
| 135° | 426 | 472   | 630 | 889   | 1002 | 329  |
| 145° | 494 | 528   | 622 | 757   | 814  | 309  |
| 155° | 556 | 575   | 617 | 679   | 700  | 256  |
| 165° | 602 | 610   | 620 | 644   | 649  | 170  |
| 175° | 624 | 625   | 621 | 630   | 628  | 59   |
| 180° | 624 | 624   | 624 | 624   | 624  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 0°     | 744.0 | 744.0 | 744.0 | 744.0  | 744.0  |
| 2.5°   | 746.3 | 744.9 | 738.5 | 744.0  | 743.2  |
| 5°     | 743.0 | 742.0 | 734.0 | 741.0  | 740.0  |
| 7.5°   | 737.7 | 735.7 | 727.9 | 734.6  | 733.6  |
| 10°    | 732.0 | 730.1 | 723.1 | 729.0  | 728.1  |
| 12.5°  | 724.9 | 723.7 | 715.9 | 721.9  | 721.7  |
| 15°    | 713.1 | 711.1 | 704.1 | 710.2  | 710.2  |
| 17.5°  | 697.5 | 696.5 | 689.6 | 695.4  | 694.6  |
| 20°    | 687.2 | 685.3 | 679.3 | 684.2  | 684.2  |
| 22.5°  | 674.5 | 673.3 | 667.3 | 671.5  | 672.3  |
| 25°    | 655.3 | 653.4 | 647.3 | 651.4  | 653.4  |
| 27.5°  | 634.2 | 632.7 | 627.6 | 630.3  | 631.7  |
| 30°    | 617.5 | 617.5 | 612.5 | 613.6  | 616.5  |
| 32.5°  | 602.4 | 602.4 | 596.6 | 597.6  | 599.0  |
| 35°    | 577.6 | 575.8 | 570.7 | 570.7  | 573.7  |
| 37.5°  | 548.9 | 548.1 | 544.8 | 544.2  | 545.0  |
| 40°    | 529.9 | 528.9 | 524.9 | 525.9  | 525.9  |
| 42.5°  | 510.8 | 509.8 | 505.7 | 504.4  | 505.9  |
| 45°    | 479.0 | 480.0 | 475.1 | 474.1  | 475.1  |
| 47.5°  | 447.8 | 447.8 | 443.8 | 441.1  | 442.6  |
| 50°    | 426.3 | 426.3 | 422.3 | 420.3  | 420.3  |
| 52.5°  | 404.0 | 404.8 | 399.9 | 397.2  | 398.0  |
| 55°    | 371.5 | 371.5 | 366.5 | 363.6  | 364.5  |
| 57.5°  | 335.7 | 335.7 | 330.6 | 327.8  | 329.4  |
| 60°    | 311.7 | 311.7 | 306.8 | 303.8  | 304.8  |
| 62.5°  | 287.8 | 287.8 | 282.9 | 279.8  | 280.0  |
| 65°    | 251.0 | 250.0 | 246.0 | 243.1  | 243.1  |
| 67.5°  | 215.6 | 213.0 | 209.9 | 206.0  | 206.0  |
| 70°    | 189.2 | 188.2 | 185.3 | 181.2  | 181.2  |
| 72.5°  | 165.4 | 163.6 | 160.5 | 157.4  | 157.4  |
| 75°    | 128.5 | 127.5 | 124.5 | 122.5  | 121.5  |
| 77.5°  | 92.0  | 91.2  | 91.0  | 88.3   | 89.0   |
| 80°    | 69.7  | 69.7  | 68.7  | 66.8   | 66.8   |
| 82.5°  | 49.8  | 50.6  | 48.8  | 48.4   | 47.6   |
| 85°    | 20.9  | 22.9  | 23.9  | 24.9   | 24.9   |
| 87.5°  | 4.3   | 7.1   | 7.2   | 8.2    | 8.4    |
| 90°    | 2.0   | 4.0   | 8.0   | 9.0    | 10.0   |
| 92.5°  | 18.0  | 74.6  | 133.4 | 48.7   | 38.0   |
| 95°    | 42.9  | 158.2 | 530.4 | 218.0  | 141.9  |
| 97.5°  | 71.1  | 177.2 | 785.8 | 605.0  | 438.1  |
| 100°   | 91.9  | 188.6 | 880.1 | 886.3  | 720.2  |
| 102.5° | 111.9 | 201.5 | 898.5 | 1095.1 | 937.7  |
| 105°   | 143.8 | 222.0 | 888.1 | 1355.8 | 1276.7 |
| 107.5° | 177.9 | 247.4 | 838.6 | 1481.6 | 1510.4 |
| 110°   | 201.8 | 264.3 | 800.2 | 1508.6 | 1602.3 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 223.4 | 283.5 | 764.2 | 1487.2 | 1625.5 |
| 115°   | 257.7 | 311.5 | 715.3 | 1416.0 | 1610.3 |
| 117.5° | 287.7 | 341.2 | 683.1 | 1315.7 | 1536.8 |
| 120°   | 307.6 | 360.5 | 670.3 | 1247.8 | 1470.5 |
| 122.5° | 326.8 | 377.3 | 659.9 | 1184.4 | 1395.4 |
| 125°   | 353.6 | 402.5 | 648.3 | 1097.2 | 1287.7 |
| 127.5° | 376.4 | 425.3 | 641.5 | 1023.4 | 1187.8 |
| 130°   | 391.6 | 440.4 | 638.3 | 978.4  | 1127.8 |
| 132.5° | 406.0 | 452.5 | 635.2 | 940.5  | 1075.9 |
| 135°   | 425.6 | 471.5 | 630.3 | 888.6  | 1002.0 |
| 137.5° | 447.5 | 489.4 | 628.0 | 845.1  | 941.8  |
| 140°   | 459.5 | 500.5 | 626.4 | 816.1  | 901.1  |
| 142.5° | 473.1 | 511.0 | 624.8 | 790.3  | 865.1  |
| 145°   | 493.5 | 527.6 | 622.3 | 756.6  | 814.1  |
| 147.5° | 513.1 | 543.0 | 620.1 | 728.1  | 772.8  |
| 150°   | 527.5 | 551.9 | 619.3 | 711.1  | 747.3  |
| 152.5° | 538.6 | 561.5 | 618.6 | 696.6  | 726.5  |
| 155°   | 556.4 | 575.0 | 617.4 | 678.8  | 700.3  |
| 157.5° | 572.9 | 587.1 | 617.6 | 665.8  | 680.5  |
| 160°   | 582.4 | 595.1 | 618.4 | 658.5  | 669.3  |
| 162.5° | 590.4 | 601.5 | 619.2 | 652.1  | 660.5  |
| 165°   | 602.3 | 610.1 | 620.3 | 644.5  | 649.3  |
| 167.5° | 611.5 | 616.3 | 621.3 | 639.7  | 641.3  |
| 170°   | 616.4 | 620.2 | 621.3 | 637.4  | 637.4  |
| 172.5° | 620.3 | 622.7 | 621.3 | 634.1  | 633.3  |
| 175°   | 624.4 | 625.3 | 621.3 | 630.3  | 628.4  |
| 177.5° | 626.0 | 625.2 | 621.1 | 626.7  | 625.2  |
| 180°   | 624.4 | 624.4 | 624.4 | 624.4  | 624.4  |

(END OF REPORT)