

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: P518684

Luminaire Tested: **SQ4-BB-100U-050D-830-1D-UNV-STD-W-4**

Issue Date: 4/29/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P518684  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-536-23, G2-2009-966-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/29/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: CORELITE  
Catalog Number: SQ4-BB-100U-050D-830-1D-UNV-STD-W-4  
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH BLACK BAFFLE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

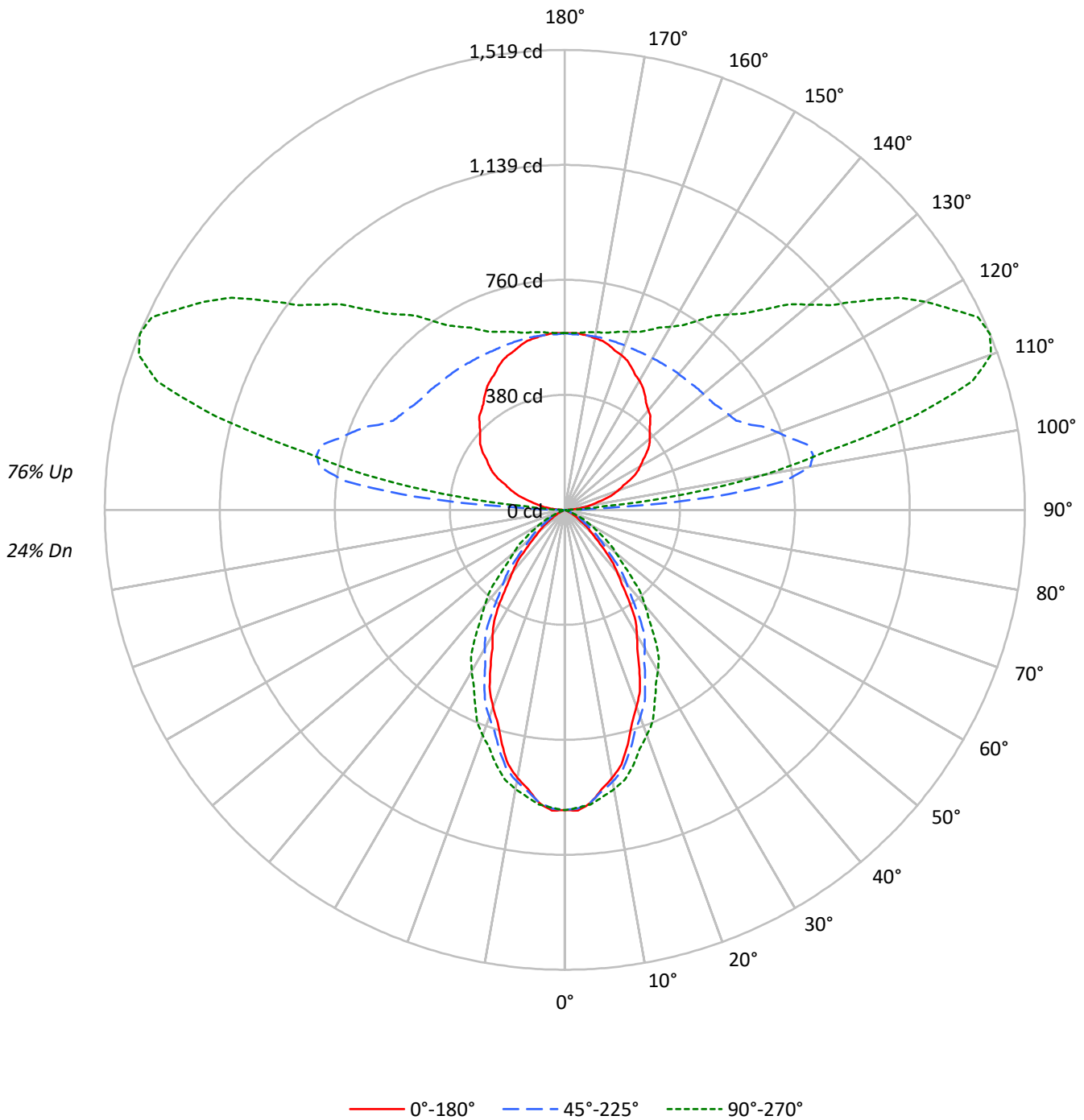
Lumens per Lamp: N/A  
Luminaire Lumens: 4975.3 lumens  
Efficiency: N/A  
Efficacy: 120.5 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.97 / 0.97  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

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   | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 69 | 69 | 69 | 50 | 50 | 50 | 32 | 32 | 32 | 24 |
| 1   | 93  | 89  | 86  | 82  | 82 | 79 | 77 | 74 | 61 | 60 | 58 | 45 | 44 | 43 | 30 | 29 | 29 | 22 |
| 2   | 85  | 79  | 73  | 69  | 76 | 70 | 66 | 62 | 55 | 52 | 49 | 40 | 39 | 37 | 27 | 26 | 25 | 20 |
| 3   | 78  | 70  | 63  | 58  | 70 | 63 | 57 | 53 | 49 | 45 | 42 | 36 | 34 | 32 | 25 | 24 | 23 | 18 |
| 4   | 72  | 62  | 55  | 50  | 64 | 56 | 50 | 45 | 44 | 40 | 37 | 33 | 31 | 28 | 23 | 21 | 20 | 16 |
| 5   | 66  | 56  | 49  | 43  | 59 | 50 | 44 | 39 | 40 | 36 | 32 | 30 | 27 | 25 | 21 | 19 | 18 | 15 |
| 6   | 61  | 50  | 43  | 38  | 55 | 45 | 39 | 35 | 36 | 32 | 28 | 27 | 25 | 22 | 19 | 18 | 17 | 13 |
| 7   | 57  | 46  | 38  | 33  | 51 | 41 | 35 | 31 | 33 | 29 | 25 | 25 | 22 | 20 | 18 | 16 | 15 | 12 |
| 8   | 53  | 41  | 34  | 30  | 47 | 38 | 31 | 27 | 30 | 26 | 23 | 23 | 20 | 18 | 17 | 15 | 14 | 11 |
| 9   | 49  | 38  | 31  | 26  | 44 | 34 | 28 | 24 | 28 | 23 | 20 | 21 | 19 | 17 | 16 | 14 | 13 | 10 |
| 10  | 46  | 35  | 28  | 24  | 41 | 32 | 26 | 22 | 26 | 21 | 19 | 20 | 17 | 15 | 15 | 13 | 12 | 10 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9151 | 9151 | 9151 |
| 5°  | 9003 | 8981 | 9048 |
| 10° | 8424 | 8537 | 8775 |
| 15° | 7659 | 7901 | 8341 |
| 20° | 6798 | 7152 | 7778 |
| 25° | 5920 | 6389 | 7146 |
| 30° | 5071 | 5628 | 6548 |
| 35° | 4205 | 4778 | 5825 |
| 40° | 3230 | 3820 | 4965 |
| 45° | 2336 | 2893 | 3994 |
| 50° | 1590 | 2156 | 3168 |
| 55° | 1034 | 1559 | 2463 |
| 60° | 592  | 1098 | 1779 |
| 65° | 157  | 670  | 902  |
| 70° | 78   | 208  | 259  |
| 75° | 36   | 18   | 0    |
| 80° | 27   | 0    | 0    |
| 85° | 0    | 0    | 0    |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.5   | 1.8       |
| 10°-20°   | 231.5  | 4.7       |
| 20°-30°   | 289.8  | 5.8       |
| 30°-40°   | 267.7  | 5.4       |
| 40°-50°   | 179.8  | 3.6       |
| 50°-60°   | 92.9   | 1.9       |
| 60°-70°   | 29.1   | 0.6       |
| 70°-80°   | 1.8    | 0.0       |
| 80°-90°   | 1.2    | 0.0       |
| 90°-100°  | 273.2  | 5.5       |
| 100°-110° | 754.3  | 15.2      |
| 110°-120° | 777.9  | 15.6      |
| 120°-130° | 625.1  | 12.6      |
| 130°-140° | 491.3  | 9.9       |
| 140°-150° | 376.8  | 7.6       |
| 150°-160° | 270.8  | 5.4       |
| 160°-170° | 165.6  | 3.3       |
| 170°-180° | 55.8   | 1.1       |
| 0°-30°    | 611.8  | 12.3      |
| 0°-40°    | 879.4  | 17.7      |
| 0°-60°    | 1152.1 | 23.2      |
| 0°-90°    | 1184.3 | 23.8      |
| 90°-120°  | 1805.5 | 36.3      |
| 90°-150°  | 3298.7 | 66.3      |
| 90°-180°  | 3791.0 | 76.2      |
| 0°-180°   | 4975.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90°  | Flux |
|------|-----|-------|-----|-------|------|------|
| 0°   | 992 | 992   | 992 | 992   | 992  |      |
| 5°   | 972 | 962   | 970 | 973   | 977  | 90   |
| 15°  | 802 | 799   | 827 | 855   | 873  | 223  |
| 25°  | 582 | 586   | 628 | 670   | 702  | 267  |
| 35°  | 373 | 383   | 424 | 474   | 517  | 231  |
| 45°  | 179 | 190   | 222 | 265   | 306  | 141  |
| 55°  | 64  | 75    | 97  | 124   | 153  | 60   |
| 65°  | 7   | 14    | 31  | 37    | 41   | 12   |
| 75°  | 1   | 1     | 0   | 0     | 0    | 1    |
| 85°  | 0   | 0     | 0   | 0     | 0    | 0    |
| 90°  | 2   | 4     | 8   | 8     | 9    | 3    |
| 95°  | 40  | 148   | 496 | 204   | 133  | 43   |
| 105° | 134 | 207   | 830 | 1267  | 1193 | 143  |
| 115° | 241 | 291   | 668 | 1323  | 1505 | 237  |
| 125° | 330 | 376   | 606 | 1025  | 1203 | 294  |
| 135° | 398 | 441   | 589 | 830   | 936  | 308  |
| 145° | 461 | 493   | 582 | 707   | 761  | 289  |
| 155° | 520 | 537   | 577 | 634   | 654  | 240  |
| 165° | 563 | 570   | 580 | 602   | 607  | 159  |
| 175° | 584 | 584   | 581 | 589   | 587  | 55   |
| 180° | 584 | 584   | 584 | 584   | 584  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 0°     | 991.8 | 991.8 | 991.8 | 991.8  | 991.8  |
| 2.5°   | 994.1 | 984.7 | 987.2 | 987.1  | 984.5  |
| 5°     | 972.1 | 962.3 | 969.7 | 973.2  | 976.9  |
| 7.5°   | 931.0 | 923.3 | 937.7 | 948.4  | 956.2  |
| 10°    | 899.2 | 892.6 | 911.2 | 925.8  | 936.6  |
| 12.5°  | 862.3 | 857.3 | 879.7 | 899.8  | 913.6  |
| 15°    | 801.8 | 799.0 | 827.2 | 855.0  | 873.3  |
| 17.5°  | 736.9 | 736.8 | 769.1 | 803.5  | 825.6  |
| 20°    | 692.4 | 693.8 | 728.4 | 766.4  | 792.2  |
| 22.5°  | 647.8 | 651.1 | 688.1 | 727.7  | 757.2  |
| 25°    | 581.5 | 586.2 | 627.6 | 670.5  | 702.0  |
| 27.5°  | 517.8 | 524.7 | 568.2 | 612.8  | 651.1  |
| 30°    | 476.0 | 484.0 | 528.3 | 575.2  | 614.6  |
| 32.5°  | 434.9 | 444.4 | 487.6 | 537.3  | 577.4  |
| 35°    | 373.3 | 382.7 | 424.2 | 474.1  | 517.2  |
| 37.5°  | 309.7 | 318.9 | 359.4 | 408.5  | 455.2  |
| 40°    | 268.2 | 278.5 | 317.2 | 364.8  | 412.2  |
| 42.5°  | 230.6 | 240.9 | 277.2 | 324.0  | 368.8  |
| 45°    | 179.0 | 189.8 | 221.7 | 264.8  | 306.1  |
| 47.5°  | 136.2 | 147.9 | 175.9 | 214.9  | 252.6  |
| 50°    | 110.8 | 122.6 | 150.2 | 184.6  | 220.7  |
| 52.5°  | 90.5  | 101.8 | 126.8 | 159.2  | 192.3  |
| 55°    | 64.3  | 75.1  | 96.9  | 124.4  | 153.1  |
| 57.5°  | 44.4  | 53.7  | 73.3  | 96.3   | 118.7  |
| 60°    | 32.1  | 41.1  | 59.5  | 78.1   | 96.4   |
| 62.5°  | 21.4  | 29.6  | 47.6  | 61.9   | 74.2   |
| 65°    | 7.2   | 13.8  | 30.7  | 37.0   | 41.3   |
| 67.5°  | 3.6   | 4.4   | 16.1  | 17.0   | 18.4   |
| 70°    | 2.9   | 2.9   | 7.7   | 8.2    | 9.6    |
| 72.5°  | 2.1   | 2.1   | 3.1   | 3.9    | 4.2    |
| 75°    | 1.0   | 1.0   | 0.5   | 0.0    | 0.0    |
| 77.5°  | 0.5   | 0.5   | 0.4   | 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°  | 0.4   | 0.7   | 1.5   | 1.7    | 1.9    |
| 90°    | 1.9   | 3.7   | 7.5   | 8.4    | 9.3    |
| 92.5°  | 16.8  | 69.7  | 124.7 | 45.5   | 35.5   |
| 95°    | 40.1  | 147.8 | 495.7 | 203.8  | 132.6  |
| 97.5°  | 66.5  | 165.6 | 734.3 | 565.3  | 409.4  |
| 100°   | 85.9  | 176.2 | 822.4 | 828.2  | 673.1  |
| 102.5° | 104.6 | 188.3 | 839.6 | 1023.3 | 876.2  |
| 105°   | 134.4 | 207.4 | 829.9 | 1267.0 | 1193.0 |
| 107.5° | 166.2 | 231.2 | 783.6 | 1384.5 | 1411.5 |
| 110°   | 188.6 | 247.0 | 747.8 | 1409.7 | 1497.4 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 208.7 | 265.0 | 714.1 | 1389.8 | 1519.0 |
| 115°   | 240.8 | 291.1 | 668.4 | 1323.2 | 1504.8 |
| 117.5° | 268.9 | 318.9 | 638.3 | 1229.5 | 1436.1 |
| 120°   | 287.5 | 336.8 | 626.4 | 1166.0 | 1374.1 |
| 122.5° | 305.4 | 352.5 | 616.7 | 1106.8 | 1303.9 |
| 125°   | 330.5 | 376.1 | 605.9 | 1025.3 | 1203.3 |
| 127.5° | 351.8 | 397.4 | 599.5 | 956.4  | 1110.0 |
| 130°   | 365.9 | 411.6 | 596.5 | 914.3  | 1053.9 |
| 132.5° | 379.4 | 422.8 | 593.5 | 878.9  | 1005.4 |
| 135°   | 397.7 | 440.6 | 589.1 | 830.4  | 936.3  |
| 137.5° | 418.2 | 457.3 | 586.8 | 789.8  | 880.1  |
| 140°   | 429.4 | 467.8 | 585.3 | 762.6  | 842.0  |
| 142.5° | 442.1 | 477.5 | 583.8 | 738.5  | 808.4  |
| 145°   | 461.2 | 493.1 | 581.6 | 707.0  | 760.8  |
| 147.5° | 479.5 | 507.4 | 579.5 | 680.4  | 722.2  |
| 150°   | 492.9 | 515.7 | 578.8 | 664.5  | 698.3  |
| 152.5° | 503.4 | 524.7 | 578.0 | 650.9  | 678.9  |
| 155°   | 520.0 | 537.3 | 576.9 | 634.3  | 654.4  |
| 157.5° | 535.3 | 548.6 | 577.1 | 622.2  | 635.9  |
| 160°   | 544.2 | 556.1 | 577.9 | 615.4  | 625.5  |
| 162.5° | 551.7 | 562.1 | 578.6 | 609.4  | 617.2  |
| 165°   | 562.9 | 570.2 | 579.7 | 602.2  | 606.8  |
| 167.5° | 571.5 | 575.9 | 580.7 | 597.9  | 599.3  |
| 170°   | 576.0 | 579.6 | 580.7 | 595.6  | 595.6  |
| 172.5° | 579.7 | 581.9 | 580.7 | 592.6  | 591.9  |
| 175°   | 583.5 | 584.4 | 580.7 | 589.0  | 587.2  |
| 177.5° | 584.9 | 584.2 | 580.5 | 585.7  | 584.2  |
| 180°   | 583.5 | 583.5 | 583.5 | 583.5  | 583.5  |

(END OF REPORT)