

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: P518446

Luminaire Tested: **SQ4-BB-050U-100D-830-1D-UNV-STD-W-8**

Issue Date: 4/29/2021

Test Information

Test Method: LM-79-2019
Report Number: P518446
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-536-21, 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-050U-100D-830-1D-UNV-STD-W-8
Description: CORELITE SQ4 SUSPENDED LED LUMINAIRE WITH BLACK BAFFLE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8374.1 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.97 / 0.97
Luminous Opening: Rectangular (W 0.29' x L: 8' x H: 0')
CIE Type: General Diffuse

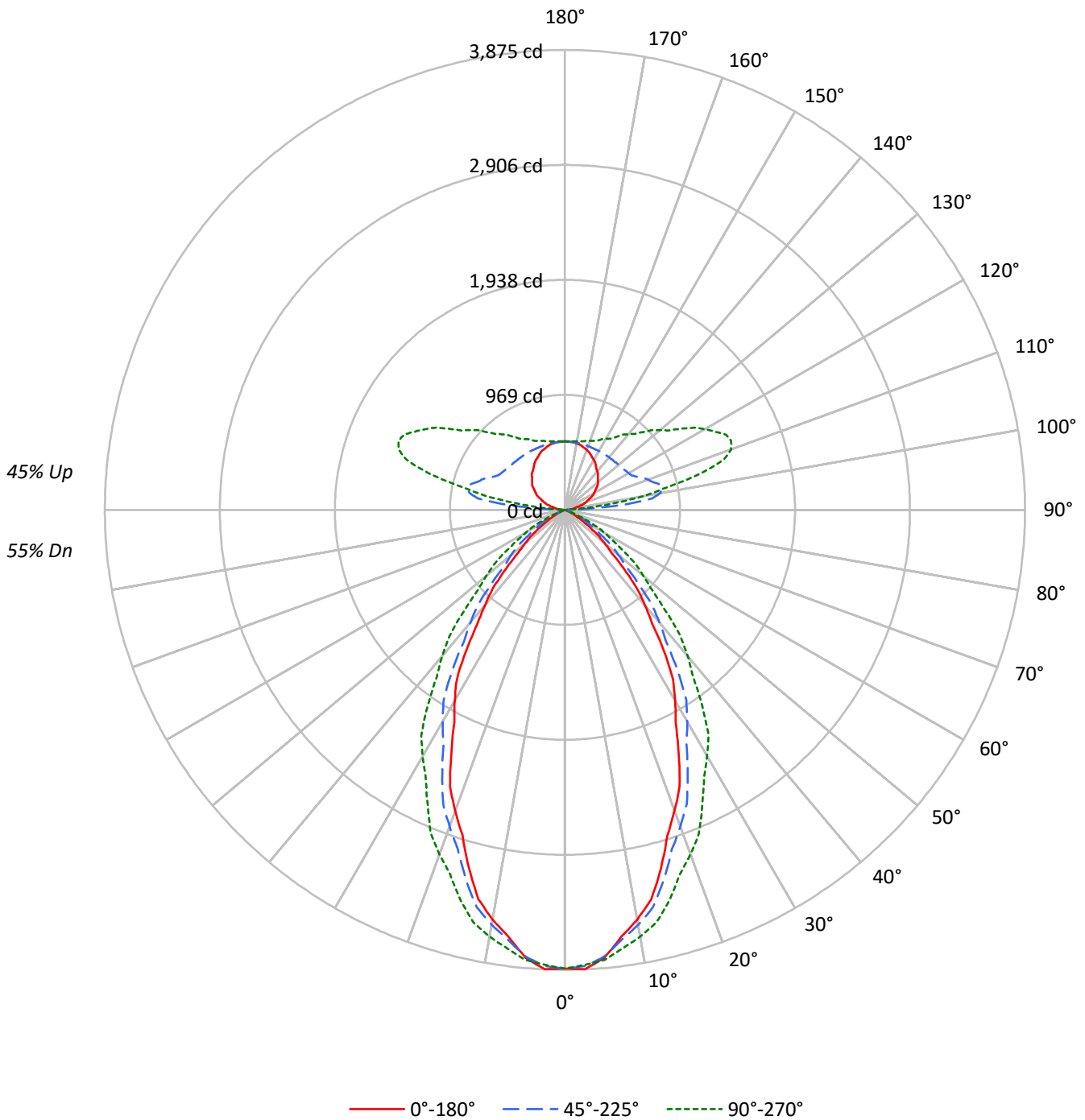
Input Watts (W): 95.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | | | | | | | | | | |
| 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 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 108 | 108 | 108 | 108 | 101 | 101 | 101 | 101 | 86 | 86 | 86 | 73 | 73 | 73 | 61 | 61 | 61 | 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 101 | 97 | 94 | 91 | 94 | 91 | 88 | 86 | 78 | 77 | 75 | 67 | 66 | 65 | 57 | 56 | 55 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 94 | 87 | 82 | 78 | 87 | 82 | 77 | 74 | 71 | 68 | 65 | 61 | 59 | 57 | 52 | 51 | 50 | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 87 | 79 | 72 | 67 | 81 | 74 | 68 | 64 | 65 | 61 | 57 | 56 | 53 | 51 | 48 | 46 | 45 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 80 | 71 | 64 | 59 | 75 | 67 | 61 | 56 | 59 | 54 | 51 | 52 | 48 | 46 | 45 | 42 | 40 | 37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 75 | 65 | 57 | 52 | 70 | 61 | 55 | 50 | 54 | 49 | 45 | 47 | 44 | 41 | 41 | 39 | 37 | 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 70 | 59 | 52 | 46 | 65 | 56 | 49 | 45 | 49 | 44 | 41 | 44 | 40 | 37 | 38 | 36 | 33 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 65 | 54 | 47 | 42 | 61 | 51 | 45 | 40 | 46 | 41 | 37 | 41 | 37 | 34 | 36 | 33 | 31 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 61 | 50 | 43 | 38 | 57 | 47 | 41 | 36 | 42 | 37 | 34 | 38 | 34 | 31 | 33 | 30 | 28 | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 57 | 46 | 39 | 34 | 53 | 44 | 37 | 33 | 39 | 34 | 31 | 35 | 31 | 28 | 31 | 28 | 26 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 54 | 42 | 36 | 31 | 50 | 40 | 34 | 30 | 36 | 32 | 28 | 33 | 29 | 26 | 29 | 26 | 24 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 17833 | 17833 | 17833 |
| 5° | 17547 | 17503 | 17633 |
| 10° | 16418 | 16637 | 17101 |
| 15° | 14925 | 15399 | 16256 |
| 20° | 13249 | 13938 | 15159 |
| 25° | 11538 | 12452 | 13927 |
| 30° | 9883 | 10969 | 12762 |
| 35° | 8194 | 9311 | 11354 |
| 40° | 6296 | 7444 | 9675 |
| 45° | 4551 | 5637 | 7784 |
| 50° | 3100 | 4201 | 6174 |
| 55° | 2015 | 3039 | 4798 |
| 60° | 1156 | 2140 | 3468 |
| 65° | 307 | 1307 | 1755 |
| 70° | 151 | 403 | 504 |
| 75° | 66 | 34 | 0 |
| 80° | 50 | 0 | 0 |
| 85° | 0 | 0 | 0 |



TEST NUMBER: P518446

CATALOG NUMBER: SQ4-BB-050U-100D-830-1D-UNV-STD-W-8

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 352.8 | 4.2 |
| 10°-20° | 902.2 | 10.8 |
| 20°-30° | 1129.5 | 13.5 |
| 30°-40° | 1043.3 | 12.5 |
| 40°-50° | 701.0 | 8.4 |
| 50°-60° | 362.1 | 4.3 |
| 60°-70° | 113.4 | 1.4 |
| 70°-80° | 7.2 | 0.1 |
| 80°-90° | 2.4 | 0.0 |
| 90°-100° | 276.5 | 3.3 |
| 100°-110° | 751.0 | 9.0 |
| 110°-120° | 772.2 | 9.2 |
| 120°-130° | 617.4 | 7.4 |
| 130°-140° | 485.1 | 5.8 |
| 140°-150° | 372.0 | 4.4 |
| 150°-160° | 267.5 | 3.2 |
| 160°-170° | 163.6 | 2.0 |
| 170°-180° | 55.1 | 0.7 |
| 0°-30° | 2384.5 | 28.5 |
| 0°-40° | 3427.8 | 40.9 |
| 0°-60° | 4490.9 | 53.6 |
| 0°-90° | 4613.8 | 55.1 |
| 90°-120° | 1799.7 | 21.5 |
| 90°-150° | 3274.1 | 39.1 |
| 90°-180° | 3760.0 | 44.9 |
| 0°-180° | 8374.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 3866 | 3866 | 3866 | 3866 | 3866 | |
| 5° | 3789 | 3751 | 3780 | 3793 | 3808 | 351 |
| 15° | 3125 | 3114 | 3224 | 3333 | 3404 | 870 |
| 25° | 2267 | 2285 | 2446 | 2614 | 2736 | 1039 |
| 35° | 1455 | 1492 | 1653 | 1848 | 2016 | 901 |
| 45° | 698 | 740 | 864 | 1032 | 1193 | 548 |
| 55° | 251 | 293 | 378 | 485 | 597 | 234 |
| 65° | 28 | 54 | 120 | 144 | 161 | 47 |
| 75° | 4 | 4 | 2 | 0 | 0 | 5 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 2 | 7 | 13 | 17 | 17 | 3 |
| 95° | 41 | 151 | 482 | 210 | 141 | 43 |
| 105° | 133 | 208 | 826 | 1258 | 1183 | 142 |
| 115° | 237 | 288 | 661 | 1315 | 1498 | 234 |
| 125° | 326 | 371 | 598 | 1008 | 1189 | 291 |
| 135° | 393 | 436 | 582 | 821 | 926 | 304 |
| 145° | 454 | 486 | 574 | 698 | 750 | 285 |
| 155° | 513 | 531 | 570 | 626 | 644 | 237 |
| 165° | 556 | 563 | 572 | 596 | 598 | 157 |
| 175° | 576 | 578 | 574 | 581 | 580 | 55 |
| 180° | 576 | 576 | 576 | 576 | 576 | |

TEST NUMBER: P518446

CATALOG NUMBER: SQ4-BB-050U-100D-830-1D-UNV-STD-W-8

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 3865.8 | 3865.8 | 3865.8 | 3865.8 | 3865.8 |
| 2.5° | 3874.8 | 3838.2 | 3847.9 | 3847.6 | 3837.4 |
| 5° | 3789.2 | 3750.8 | 3779.8 | 3793.2 | 3807.9 |
| 7.5° | 3629.1 | 3599.1 | 3654.9 | 3696.7 | 3727.1 |
| 10° | 3504.9 | 3479.3 | 3551.6 | 3608.7 | 3650.8 |
| 12.5° | 3361.2 | 3341.5 | 3428.9 | 3507.2 | 3561.0 |
| 15° | 3125.2 | 3114.2 | 3224.3 | 3332.6 | 3403.9 |
| 17.5° | 2872.4 | 2872.0 | 2997.7 | 3132.0 | 3218.0 |
| 20° | 2698.8 | 2704.3 | 2839.1 | 2987.2 | 3087.8 |
| 22.5° | 2525.2 | 2538.0 | 2682.0 | 2836.4 | 2951.7 |
| 25° | 2266.8 | 2285.0 | 2446.3 | 2613.7 | 2736.2 |
| 27.5° | 2018.4 | 2045.1 | 2214.8 | 2388.7 | 2537.9 |
| 30° | 1855.3 | 1886.4 | 2059.2 | 2242.2 | 2395.8 |
| 32.5° | 1695.2 | 1732.1 | 1900.6 | 2094.1 | 2250.7 |
| 35° | 1455.1 | 1491.6 | 1653.3 | 1847.9 | 2016.1 |
| 37.5° | 1207.1 | 1242.9 | 1400.8 | 1592.4 | 1774.1 |
| 40° | 1045.5 | 1085.7 | 1236.2 | 1421.9 | 1606.6 |
| 42.5° | 898.8 | 939.1 | 1080.6 | 1263.0 | 1437.5 |
| 45° | 697.6 | 739.7 | 864.1 | 1032.3 | 1193.2 |
| 47.5° | 530.8 | 576.5 | 685.6 | 837.8 | 984.5 |
| 50° | 432.0 | 477.7 | 585.4 | 719.5 | 860.3 |
| 52.5° | 352.7 | 397.0 | 494.1 | 620.5 | 749.6 |
| 55° | 250.6 | 292.7 | 377.8 | 485.1 | 596.6 |
| 57.5° | 173.2 | 209.4 | 285.8 | 375.3 | 462.7 |
| 60° | 125.3 | 160.1 | 231.9 | 304.6 | 375.9 |
| 62.5° | 83.4 | 115.2 | 185.5 | 241.2 | 289.1 |
| 65° | 28.1 | 53.7 | 119.7 | 144.4 | 160.8 |
| 67.5° | 14.2 | 17.1 | 62.8 | 66.3 | 71.8 |
| 70° | 11.2 | 11.2 | 29.9 | 31.9 | 37.4 |
| 72.5° | 8.2 | 8.2 | 12.0 | 15.4 | 16.5 |
| 75° | 3.7 | 3.7 | 1.9 | 0.0 | 0.0 |
| 77.5° | 1.9 | 1.9 | 1.5 | 0.0 | 0.0 |
| 80° | 1.9 | 1.9 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.4 | 1.5 | 2.6 | 3.3 | 3.3 |
| 90° | 1.9 | 7.3 | 13.0 | 16.7 | 16.7 |
| 92.5° | 16.7 | 75.7 | 131.5 | 56.5 | 47.8 |
| 95° | 40.7 | 151.2 | 481.5 | 209.5 | 140.7 |
| 97.5° | 67.4 | 167.0 | 738.1 | 574.3 | 403.3 |
| 100° | 85.2 | 177.5 | 816.7 | 827.8 | 668.5 |
| 102.5° | 103.0 | 188.1 | 837.4 | 1023.8 | 883.3 |
| 105° | 133.3 | 207.6 | 825.9 | 1257.5 | 1183.3 |
| 107.5° | 164.8 | 230.4 | 778.1 | 1378.2 | 1398.9 |
| 110° | 187.0 | 246.8 | 742.6 | 1402.0 | 1490.7 |

TEST NUMBER: P518446

CATALOG NUMBER: SQ4-BB-050U-100D-830-1D-UNV-STD-W-8

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 206.3 | 263.1 | 707.0 | 1382.3 | 1515.9 |
| 115° | 237.0 | 287.7 | 661.1 | 1315.2 | 1498.1 |
| 117.5° | 265.9 | 314.4 | 631.8 | 1220.2 | 1426.3 |
| 120° | 285.2 | 332.3 | 618.5 | 1156.5 | 1361.1 |
| 122.5° | 301.5 | 348.6 | 609.6 | 1092.6 | 1290.0 |
| 125° | 325.9 | 371.2 | 598.1 | 1007.8 | 1188.9 |
| 127.5° | 347.8 | 392.7 | 591.8 | 943.5 | 1098.9 |
| 130° | 361.1 | 404.6 | 588.9 | 903.2 | 1042.6 |
| 132.5° | 374.4 | 417.9 | 585.9 | 868.7 | 992.2 |
| 135° | 392.6 | 436.0 | 581.5 | 820.9 | 925.9 |
| 137.5° | 412.2 | 451.7 | 579.2 | 778.7 | 867.0 |
| 140° | 424.1 | 462.1 | 577.8 | 751.8 | 831.5 |
| 142.5° | 435.9 | 471.0 | 576.3 | 730.8 | 797.4 |
| 145° | 453.7 | 486.3 | 574.1 | 697.5 | 750.0 |
| 147.5° | 473.7 | 501.6 | 572.2 | 671.3 | 712.6 |
| 150° | 487.0 | 510.6 | 572.2 | 656.3 | 688.9 |
| 152.5° | 497.4 | 518.0 | 570.7 | 642.8 | 669.6 |
| 155° | 513.0 | 531.1 | 570.4 | 626.3 | 644.4 |
| 157.5° | 528.1 | 542.3 | 570.4 | 615.1 | 628.9 |
| 160° | 537.0 | 549.7 | 570.4 | 607.6 | 618.5 |
| 162.5° | 545.9 | 555.7 | 571.8 | 601.7 | 609.6 |
| 165° | 555.5 | 562.8 | 572.2 | 596.3 | 598.1 |
| 167.5° | 565.5 | 569.2 | 574.1 | 590.0 | 591.5 |
| 170° | 568.5 | 572.1 | 574.1 | 587.0 | 587.0 |
| 172.5° | 571.5 | 573.6 | 574.1 | 584.1 | 584.1 |
| 175° | 575.9 | 577.7 | 574.1 | 581.4 | 579.6 |
| 177.5° | 577.4 | 577.4 | 573.0 | 578.8 | 575.9 |
| 180° | 575.9 | 575.9 | 575.9 | 575.9 | 575.9 |

(END OF REPORT)