

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: CORELITE

Report Number: P183472

Luminaire Tested: **VB-WS-2L35-1D-UNV-4-STD-DM8**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P183472
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26969)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: CORELITE
Catalog Number: VB-WS-2L35-1D-UNV-4-STD-DM8
Description: CORELITE VERTECHS SUSPENDED DIRECT-INDIRECT LED LUMINAIRE, 4 FOOT.
WaveStream WITH FROSTED LENS. 80% UP / 20% DOWN.
Light Source: (336)3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3669.7 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.58' x H: 0.21')
CIE Type: Semi-Indirect

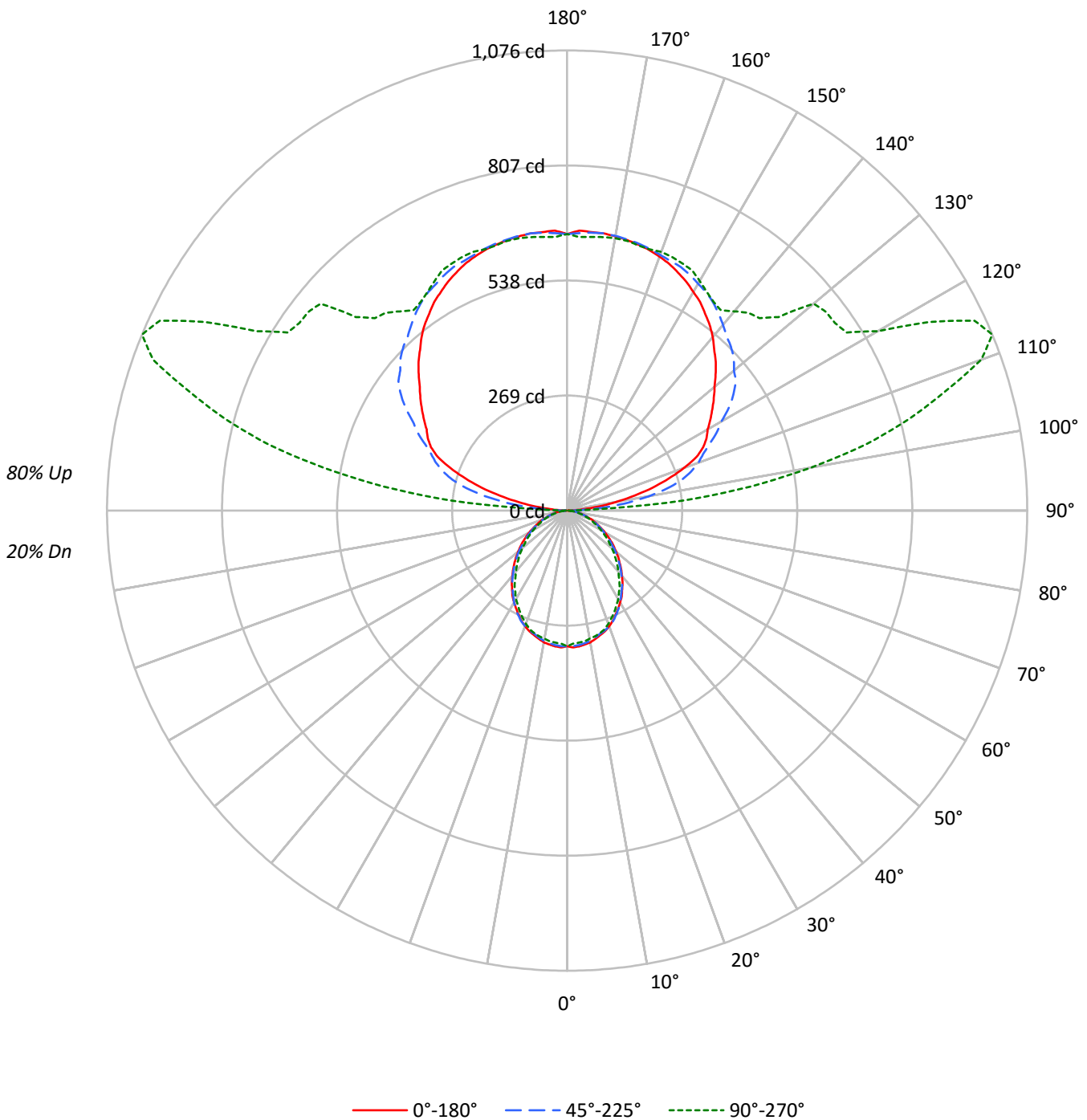
Input Watts (W): 35.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P183472

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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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 100 | 100 | 100 | 100 | 88 | 88 | 88 | 88 | 67 | 67 | 67 | 47 | 47 | 47 | 29 | 29 | 29 | 20 | | | | |
| 1 | 91 | 87 | 83 | 80 | 81 | 77 | 74 | 71 | 58 | 57 | 55 | 41 | 40 | 39 | 26 | 25 | 24 | 17 | | | | |
| 2 | 83 | 76 | 70 | 65 | 73 | 67 | 63 | 59 | 51 | 48 | 45 | 36 | 34 | 33 | 23 | 22 | 21 | 15 | | | | |
| 3 | 76 | 67 | 60 | 55 | 67 | 59 | 54 | 49 | 45 | 41 | 38 | 32 | 30 | 28 | 20 | 19 | 18 | 12 | | | | |
| 4 | 69 | 59 | 52 | 46 | 61 | 53 | 46 | 41 | 40 | 36 | 32 | 29 | 26 | 24 | 18 | 17 | 15 | 11 | | | | |
| 5 | 63 | 52 | 45 | 39 | 56 | 47 | 40 | 35 | 36 | 31 | 28 | 26 | 23 | 21 | 16 | 15 | 13 | 9 | | | | |
| 6 | 58 | 47 | 39 | 34 | 51 | 42 | 35 | 31 | 32 | 28 | 24 | 23 | 20 | 18 | 15 | 13 | 12 | 8 | | | | |
| 7 | 54 | 42 | 35 | 29 | 47 | 38 | 31 | 27 | 29 | 24 | 21 | 21 | 18 | 16 | 13 | 12 | 10 | 7 | | | | |
| 8 | 50 | 38 | 31 | 26 | 44 | 34 | 28 | 23 | 26 | 22 | 19 | 19 | 16 | 14 | 12 | 11 | 9 | 7 | | | | |
| 9 | 46 | 35 | 28 | 23 | 41 | 31 | 25 | 21 | 24 | 20 | 17 | 18 | 15 | 12 | 11 | 10 | 8 | 6 | | | | |
| 10 | 43 | 32 | 25 | 20 | 38 | 28 | 22 | 18 | 22 | 18 | 15 | 16 | 13 | 11 | 10 | 9 | 8 | 5 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2542 | 2542 | 2542 |
| 5° | 2551 | 2446 | 2376 |
| 10° | 2519 | 2342 | 2252 |
| 15° | 2459 | 2215 | 2141 |
| 20° | 2403 | 2119 | 1999 |
| 25° | 2311 | 1986 | 1834 |
| 30° | 2219 | 1834 | 1675 |
| 35° | 2108 | 1672 | 1507 |
| 40° | 1986 | 1516 | 1327 |
| 45° | 1865 | 1353 | 1172 |
| 50° | 1738 | 1200 | 1018 |
| 55° | 1617 | 1043 | 885 |
| 60° | 1482 | 891 | 747 |
| 65° | 1343 | 753 | 612 |
| 70° | 1222 | 615 | 492 |
| 75° | 1050 | 470 | 372 |
| 80° | 923 | 335 | 246 |
| 85° | 734 | 205 | 129 |



TEST NUMBER: P183472

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 29.8 | 0.8 |
| 10°-20° | 84.1 | 2.3 |
| 20°-30° | 122.5 | 3.3 |
| 30°-40° | 138.1 | 3.8 |
| 40°-50° | 131.2 | 3.6 |
| 50°-60° | 108.0 | 2.9 |
| 60°-70° | 76.0 | 2.1 |
| 70°-80° | 42.8 | 1.2 |
| 80°-90° | 14.2 | 0.4 |
| 90°-100° | 143.9 | 3.9 |
| 100°-110° | 439.1 | 12.0 |
| 110°-120° | 526.5 | 14.3 |
| 120°-130° | 486.7 | 13.3 |
| 130°-140° | 428.3 | 11.7 |
| 140°-150° | 366.4 | 10.0 |
| 150°-160° | 288.2 | 7.9 |
| 160°-170° | 182.0 | 5.0 |
| 170°-180° | 62.0 | 1.7 |
| 0°-30° | 236.4 | 6.4 |
| 0°-40° | 374.5 | 10.2 |
| 0°-60° | 613.6 | 16.7 |
| 0°-90° | 746.5 | 20.3 |
| 90°-120° | 1109.6 | 30.2 |
| 90°-150° | 2391.0 | 65.2 |
| 90°-180° | 2923.0 | 79.7 |
| 0°-180° | 3669.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|------|------|
| 0° | 317 | 317 | 317 | 317 | 317 | |
| 5° | 319 | 314 | 316 | 314 | 310 | 30 |
| 15° | 301 | 298 | 298 | 298 | 297 | 85 |
| 25° | 269 | 266 | 270 | 263 | 261 | 124 |
| 35° | 224 | 226 | 223 | 217 | 214 | 140 |
| 45° | 174 | 176 | 171 | 164 | 161 | 135 |
| 55° | 125 | 127 | 121 | 115 | 114 | 112 |
| 65° | 80 | 81 | 77 | 72 | 71 | 79 |
| 75° | 41 | 43 | 40 | 38 | 37 | 45 |
| 85° | 13 | 15 | 13 | 12 | 10 | 13 |
| 90° | 2 | 4 | 3 | 2 | 0 | 3 |
| 95° | 40 | 52 | 94 | 235 | 276 | 49 |
| 105° | 207 | 211 | 278 | 689 | 828 | 216 |
| 115° | 351 | 351 | 366 | 719 | 1051 | 342 |
| 125° | 415 | 441 | 475 | 667 | 764 | 371 |
| 135° | 492 | 505 | 542 | 595 | 636 | 379 |
| 145° | 562 | 567 | 595 | 593 | 596 | 352 |
| 155° | 614 | 610 | 629 | 633 | 638 | 283 |
| 165° | 644 | 640 | 646 | 642 | 642 | 182 |
| 175° | 654 | 651 | 652 | 648 | 642 | 62 |
| 180° | 646 | 646 | 646 | 646 | 646 | |



TEST NUMBER: P183472

CATALOG NUMBER: VB-WS-2L35-1D-UNV-4-STD-DM8

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|--------|
| 0° | 317.3 | 317.3 | 317.3 | 317.3 | 317.3 |
| 2.5° | 320.3 | 315.8 | 317.3 | 315.8 | 311.4 |
| 5° | 318.8 | 314.4 | 315.8 | 314.4 | 309.9 |
| 7.5° | 315.8 | 311.4 | 312.9 | 311.4 | 308.5 |
| 10° | 312.9 | 308.5 | 309.9 | 307.0 | 304.0 |
| 12.5° | 307.0 | 304.0 | 304.0 | 301.1 | 301.1 |
| 15° | 301.1 | 298.1 | 298.1 | 298.1 | 296.6 |
| 17.5° | 295.2 | 290.7 | 293.7 | 293.7 | 290.7 |
| 20° | 287.8 | 283.4 | 287.8 | 284.8 | 281.9 |
| 22.5° | 278.9 | 276.0 | 280.4 | 274.5 | 271.6 |
| 25° | 268.6 | 265.7 | 270.1 | 262.7 | 261.2 |
| 27.5° | 258.3 | 256.8 | 259.8 | 252.4 | 249.4 |
| 30° | 247.9 | 246.5 | 247.9 | 242.0 | 239.1 |
| 32.5° | 237.6 | 236.1 | 234.7 | 228.8 | 225.8 |
| 35° | 224.3 | 225.8 | 222.9 | 217.0 | 214.0 |
| 37.5° | 212.5 | 214.0 | 211.0 | 203.7 | 199.2 |
| 40° | 199.2 | 202.2 | 197.8 | 190.4 | 186.0 |
| 42.5° | 187.4 | 188.9 | 184.5 | 177.1 | 174.2 |
| 45° | 174.2 | 175.6 | 171.2 | 163.8 | 160.9 |
| 47.5° | 162.3 | 163.8 | 159.4 | 152.0 | 149.1 |
| 50° | 149.1 | 150.5 | 146.1 | 138.7 | 135.8 |
| 52.5° | 137.3 | 138.7 | 132.8 | 126.9 | 124.0 |
| 55° | 125.4 | 126.9 | 121.0 | 115.1 | 113.6 |
| 57.5° | 113.6 | 115.1 | 109.2 | 104.8 | 101.8 |
| 60° | 101.8 | 103.3 | 97.4 | 93.0 | 91.5 |
| 62.5° | 90.0 | 91.5 | 87.1 | 82.6 | 81.2 |
| 65° | 79.7 | 81.2 | 76.7 | 72.3 | 70.8 |
| 67.5° | 69.4 | 70.8 | 66.4 | 63.5 | 62.0 |
| 70° | 60.5 | 60.5 | 57.6 | 54.6 | 53.1 |
| 72.5° | 50.2 | 51.7 | 48.7 | 45.8 | 44.3 |
| 75° | 41.3 | 42.8 | 39.8 | 38.4 | 36.9 |
| 77.5° | 33.9 | 35.4 | 32.5 | 31.0 | 29.5 |
| 80° | 26.6 | 28.0 | 25.1 | 23.6 | 22.1 |
| 82.5° | 19.2 | 20.7 | 19.2 | 17.7 | 16.2 |
| 85° | 13.3 | 14.8 | 13.3 | 11.8 | 10.3 |
| 87.5° | 5.9 | 8.9 | 5.9 | 5.9 | 4.4 |
| 90° | 1.5 | 4.4 | 3.0 | 1.5 | 0.0 |
| 92.5° | 14.8 | 20.7 | 31.0 | 53.1 | 57.6 |
| 95° | 39.8 | 51.7 | 94.5 | 234.7 | 276.0 |
| 97.5° | 75.3 | 88.6 | 144.6 | 367.5 | 433.9 |
| 100° | 115.1 | 128.4 | 194.8 | 484.1 | 578.5 |
| 102.5° | 160.9 | 171.2 | 240.6 | 591.8 | 715.8 |
| 105° | 206.6 | 211.0 | 277.5 | 689.2 | 828.0 |
| 107.5° | 249.4 | 252.4 | 304.0 | 763.0 | 926.8 |
| 110° | 290.7 | 286.3 | 326.2 | 792.5 | 1030.2 |



TEST NUMBER: P183472

CATALOG NUMBER: VB-WS-2L35-1D-UNV-4-STD-DM8

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|--------|
| 112.5° | 327.6 | 320.3 | 343.9 | 770.4 | 1075.9 |
| 115° | 351.3 | 351.3 | 366.0 | 718.7 | 1050.8 |
| 117.5° | 367.5 | 377.8 | 394.1 | 692.2 | 954.9 |
| 120° | 379.3 | 405.9 | 416.2 | 681.9 | 838.3 |
| 122.5° | 397.0 | 429.5 | 448.7 | 673.0 | 774.8 |
| 125° | 414.7 | 441.3 | 475.2 | 667.1 | 764.5 |
| 127.5° | 432.4 | 450.1 | 497.4 | 665.6 | 763.0 |
| 130° | 450.1 | 464.9 | 509.2 | 639.0 | 752.7 |
| 132.5° | 470.8 | 485.6 | 528.4 | 593.3 | 670.0 |
| 135° | 491.5 | 504.7 | 541.6 | 594.8 | 636.1 |
| 137.5° | 509.2 | 519.5 | 552.0 | 594.8 | 627.2 |
| 140° | 529.8 | 537.2 | 566.7 | 583.0 | 608.1 |
| 142.5° | 547.5 | 553.4 | 581.5 | 583.0 | 590.3 |
| 145° | 562.3 | 566.7 | 594.8 | 593.3 | 596.2 |
| 147.5° | 578.5 | 580.0 | 605.1 | 606.6 | 606.6 |
| 150° | 590.3 | 590.3 | 612.5 | 619.9 | 619.9 |
| 152.5° | 603.6 | 600.7 | 621.3 | 628.7 | 633.1 |
| 155° | 614.0 | 609.5 | 628.7 | 633.1 | 637.6 |
| 157.5° | 624.3 | 619.9 | 631.7 | 639.0 | 642.0 |
| 160° | 631.7 | 627.2 | 636.1 | 640.5 | 643.5 |
| 162.5° | 639.0 | 633.1 | 642.0 | 639.0 | 640.5 |
| 165° | 643.5 | 640.5 | 646.4 | 642.0 | 642.0 |
| 167.5° | 647.9 | 646.4 | 649.4 | 646.4 | 646.4 |
| 170° | 650.9 | 649.4 | 652.3 | 647.9 | 646.4 |
| 172.5° | 653.8 | 650.9 | 653.8 | 647.9 | 645.0 |
| 175° | 653.8 | 650.9 | 652.3 | 647.9 | 642.0 |
| 177.5° | 655.3 | 649.4 | 649.4 | 643.5 | 640.5 |
| 180° | 646.4 | 646.4 | 646.4 | 646.4 | 646.4 |

(END OF REPORT)