

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: P183452

Luminaire Tested: **MB-WS-2L30-1D-UNV-4-STD-DM8**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P183452
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: MB-WS-2L30-1D-UNV-4-STD-DM8
Description: CORELITE MINIGATOR SUSPENDED DIRECT-INDIRECT LED LUMINAIRE, 4 FOOT.
WaveStream WITH FROSTED LENS. 80% UP / 20% DOWN.
Light Source: (336)3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3528.6 lumens
Efficiency: N/A
Efficacy: 99.4 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

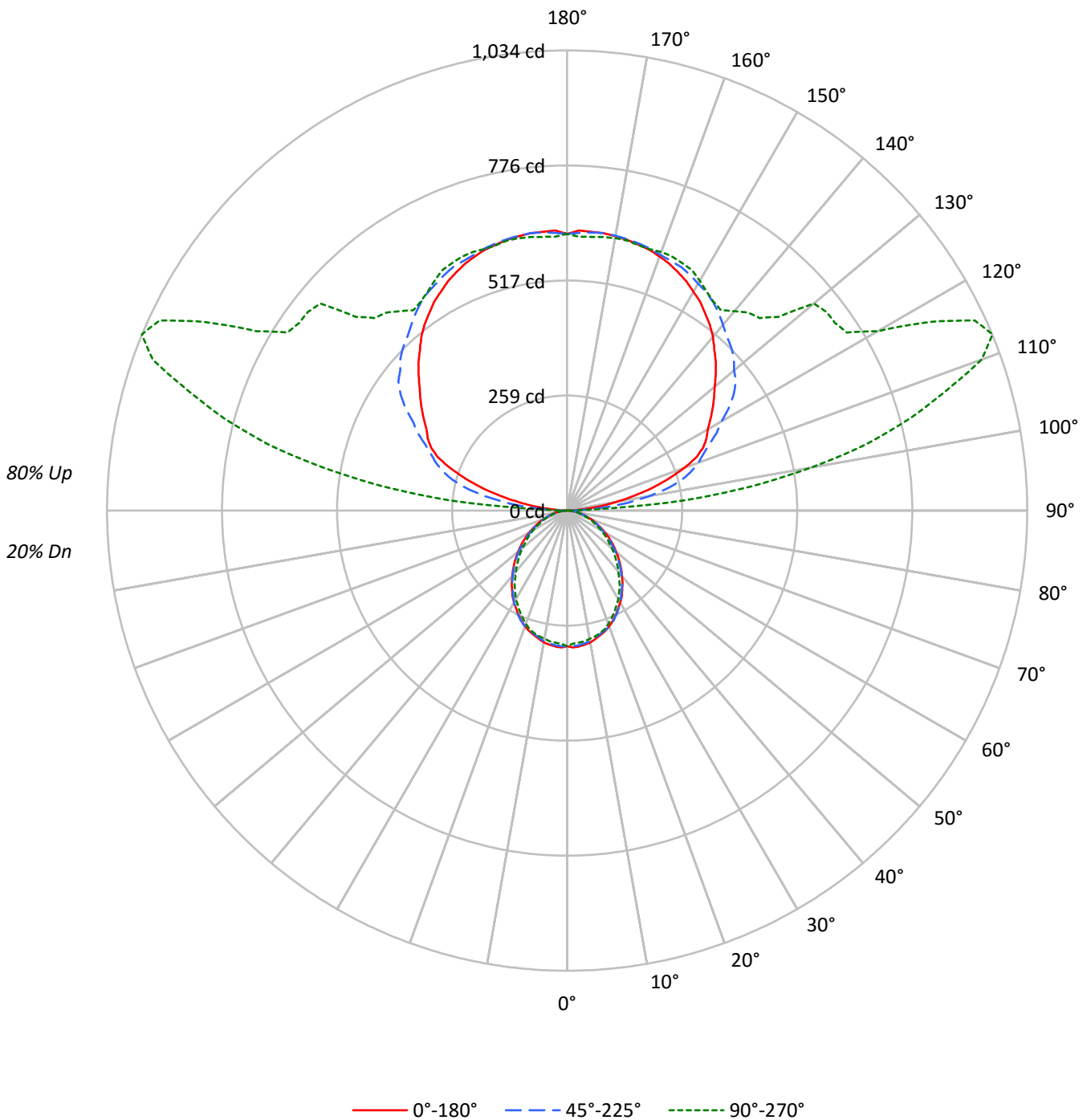
Input Watts (W): 35.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 2444 | 2444 | 2444 |
| 5° | 2452 | 2353 | 2285 |
| 10° | 2422 | 2252 | 2165 |
| 15° | 2364 | 2130 | 2059 |
| 20° | 2310 | 2037 | 1922 |
| 25° | 2223 | 1909 | 1763 |
| 30° | 2134 | 1763 | 1610 |
| 35° | 2027 | 1607 | 1449 |
| 40° | 1910 | 1458 | 1275 |
| 45° | 1793 | 1300 | 1127 |
| 50° | 1670 | 1154 | 979 |
| 55° | 1555 | 1004 | 851 |
| 60° | 1425 | 857 | 719 |
| 65° | 1291 | 725 | 589 |
| 70° | 1175 | 591 | 474 |
| 75° | 1010 | 453 | 358 |
| 80° | 885 | 321 | 237 |
| 85° | 707 | 197 | 124 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.7 | 0.8 |
| 10°-20° | 80.9 | 2.3 |
| 20°-30° | 117.8 | 3.3 |
| 30°-40° | 132.8 | 3.8 |
| 40°-50° | 126.1 | 3.6 |
| 50°-60° | 103.8 | 2.9 |
| 60°-70° | 73.1 | 2.1 |
| 70°-80° | 41.2 | 1.2 |
| 80°-90° | 13.6 | 0.4 |
| 90°-100° | 138.4 | 3.9 |
| 100°-110° | 422.2 | 12.0 |
| 110°-120° | 506.3 | 14.3 |
| 120°-130° | 468.0 | 13.3 |
| 130°-140° | 411.8 | 11.7 |
| 140°-150° | 352.3 | 10.0 |
| 150°-160° | 277.1 | 7.9 |
| 160°-170° | 175.0 | 5.0 |
| 170°-180° | 59.6 | 1.7 |
| 0°-30° | 227.3 | 6.4 |
| 0°-40° | 360.1 | 10.2 |
| 0°-60° | 590.0 | 16.7 |
| 0°-90° | 717.9 | 20.3 |
| 90°-120° | 1066.9 | 30.2 |
| 90°-150° | 2299.0 | 65.2 |
| 90°-180° | 2811.0 | 79.7 |
| 0°-180° | 3528.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|------|------|
| 0° | 305 | 305 | 305 | 305 | 305 | |
| 5° | 306 | 302 | 304 | 302 | 298 | 29 |
| 15° | 290 | 287 | 287 | 287 | 285 | 82 |
| 25° | 258 | 255 | 260 | 253 | 251 | 119 |
| 35° | 216 | 217 | 214 | 209 | 206 | 135 |
| 45° | 168 | 169 | 165 | 158 | 155 | 129 |
| 55° | 121 | 122 | 116 | 111 | 109 | 108 |
| 65° | 77 | 78 | 74 | 70 | 68 | 76 |
| 75° | 40 | 41 | 38 | 37 | 36 | 43 |
| 85° | 13 | 14 | 13 | 11 | 10 | 13 |
| 90° | 1 | 4 | 3 | 1 | 0 | 3 |
| 95° | 38 | 50 | 91 | 226 | 265 | 47 |
| 105° | 199 | 203 | 267 | 663 | 796 | 208 |
| 115° | 338 | 338 | 352 | 691 | 1010 | 329 |
| 125° | 399 | 424 | 457 | 641 | 735 | 357 |
| 135° | 473 | 485 | 521 | 572 | 612 | 364 |
| 145° | 541 | 545 | 572 | 570 | 573 | 339 |
| 155° | 590 | 586 | 604 | 609 | 613 | 272 |
| 165° | 619 | 616 | 622 | 617 | 617 | 175 |
| 175° | 629 | 626 | 627 | 623 | 617 | 60 |
| 180° | 622 | 622 | 622 | 622 | 622 | |



TEST NUMBER: P183452

CATALOG NUMBER: MB-WS-2L30-1D-UNV-4-STD-DM8

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 305.1 | 305.1 | 305.1 | 305.1 | 305.1 |
| 2.5° | 307.9 | 303.7 | 305.1 | 303.7 | 299.4 |
| 5° | 306.5 | 302.3 | 303.7 | 302.3 | 298.0 |
| 7.5° | 303.7 | 299.4 | 300.8 | 299.4 | 296.6 |
| 10° | 300.8 | 296.6 | 298.0 | 295.2 | 292.3 |
| 12.5° | 295.2 | 292.3 | 292.3 | 289.5 | 289.5 |
| 15° | 289.5 | 286.7 | 286.7 | 286.7 | 285.2 |
| 17.5° | 283.8 | 279.6 | 282.4 | 282.4 | 279.6 |
| 20° | 276.7 | 272.5 | 276.7 | 273.9 | 271.0 |
| 22.5° | 268.2 | 265.4 | 269.6 | 264.0 | 261.1 |
| 25° | 258.3 | 255.4 | 259.7 | 252.6 | 251.2 |
| 27.5° | 248.3 | 246.9 | 249.8 | 242.7 | 239.8 |
| 30° | 238.4 | 237.0 | 238.4 | 232.7 | 229.9 |
| 32.5° | 228.5 | 227.1 | 225.6 | 220.0 | 217.1 |
| 35° | 215.7 | 217.1 | 214.3 | 208.6 | 205.8 |
| 37.5° | 204.4 | 205.8 | 202.9 | 195.8 | 191.6 |
| 40° | 191.6 | 194.4 | 190.2 | 183.1 | 178.8 |
| 42.5° | 180.2 | 181.6 | 177.4 | 170.3 | 167.5 |
| 45° | 167.5 | 168.9 | 164.6 | 157.5 | 154.7 |
| 47.5° | 156.1 | 157.5 | 153.3 | 146.2 | 143.3 |
| 50° | 143.3 | 144.7 | 140.5 | 133.4 | 130.6 |
| 52.5° | 132.0 | 133.4 | 127.7 | 122.0 | 119.2 |
| 55° | 120.6 | 122.0 | 116.4 | 110.7 | 109.3 |
| 57.5° | 109.3 | 110.7 | 105.0 | 100.8 | 97.9 |
| 60° | 97.9 | 99.3 | 93.7 | 89.4 | 88.0 |
| 62.5° | 86.6 | 88.0 | 83.7 | 79.5 | 78.1 |
| 65° | 76.6 | 78.1 | 73.8 | 69.5 | 68.1 |
| 67.5° | 66.7 | 68.1 | 63.9 | 61.0 | 59.6 |
| 70° | 58.2 | 58.2 | 55.3 | 52.5 | 51.1 |
| 72.5° | 48.2 | 49.7 | 46.8 | 44.0 | 42.6 |
| 75° | 39.7 | 41.2 | 38.3 | 36.9 | 35.5 |
| 77.5° | 32.6 | 34.1 | 31.2 | 29.8 | 28.4 |
| 80° | 25.5 | 27.0 | 24.1 | 22.7 | 21.3 |
| 82.5° | 18.4 | 19.9 | 18.4 | 17.0 | 15.6 |
| 85° | 12.8 | 14.2 | 12.8 | 11.4 | 9.9 |
| 87.5° | 5.7 | 8.5 | 5.7 | 5.7 | 4.3 |
| 90° | 1.4 | 4.3 | 2.8 | 1.4 | 0.0 |
| 92.5° | 14.2 | 19.9 | 29.8 | 51.1 | 55.3 |
| 95° | 38.3 | 49.7 | 90.8 | 225.6 | 265.4 |
| 97.5° | 72.4 | 85.1 | 139.1 | 353.4 | 417.2 |
| 100° | 110.7 | 123.5 | 187.3 | 465.5 | 556.3 |
| 102.5° | 154.7 | 164.6 | 231.3 | 569.1 | 688.3 |
| 105° | 198.7 | 202.9 | 266.8 | 662.7 | 796.1 |
| 107.5° | 239.8 | 242.7 | 292.3 | 733.7 | 891.2 |
| 110° | 279.6 | 275.3 | 313.6 | 762.1 | 990.5 |



TEST NUMBER: P183452

CATALOG NUMBER: MB-WS-2L30-1D-UNV-4-STD-DM8

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|--------|
| 112.5° | 315.0 | 307.9 | 330.7 | 740.8 | 1034.5 |
| 115° | 337.7 | 337.7 | 351.9 | 691.1 | 1010.4 |
| 117.5° | 353.4 | 363.3 | 378.9 | 665.6 | 918.2 |
| 120° | 364.7 | 390.3 | 400.2 | 655.6 | 806.0 |
| 122.5° | 381.7 | 413.0 | 431.4 | 647.1 | 745.0 |
| 125° | 398.8 | 424.3 | 457.0 | 641.4 | 735.1 |
| 127.5° | 415.8 | 432.8 | 478.2 | 640.0 | 733.7 |
| 130° | 432.8 | 447.0 | 489.6 | 614.5 | 723.7 |
| 132.5° | 452.7 | 466.9 | 508.0 | 570.5 | 644.3 |
| 135° | 472.6 | 485.3 | 520.8 | 571.9 | 611.6 |
| 137.5° | 489.6 | 499.5 | 530.7 | 571.9 | 603.1 |
| 140° | 509.5 | 516.6 | 544.9 | 560.5 | 584.7 |
| 142.5° | 526.5 | 532.2 | 559.1 | 560.5 | 567.6 |
| 145° | 540.7 | 544.9 | 571.9 | 570.5 | 573.3 |
| 147.5° | 556.3 | 557.7 | 581.8 | 583.3 | 583.3 |
| 150° | 567.6 | 567.6 | 588.9 | 596.0 | 596.0 |
| 152.5° | 580.4 | 577.6 | 597.4 | 604.5 | 608.8 |
| 155° | 590.3 | 586.1 | 604.5 | 608.8 | 613.1 |
| 157.5° | 600.3 | 596.0 | 607.4 | 614.5 | 617.3 |
| 160° | 607.4 | 603.1 | 611.6 | 615.9 | 618.7 |
| 162.5° | 614.5 | 608.8 | 617.3 | 614.5 | 615.9 |
| 165° | 618.7 | 615.9 | 621.6 | 617.3 | 617.3 |
| 167.5° | 623.0 | 621.6 | 624.4 | 621.6 | 621.6 |
| 170° | 625.8 | 624.4 | 627.2 | 623.0 | 621.6 |
| 172.5° | 628.7 | 625.8 | 628.7 | 623.0 | 620.1 |
| 175° | 628.7 | 625.8 | 627.2 | 623.0 | 617.3 |
| 177.5° | 630.1 | 624.4 | 624.4 | 618.7 | 615.9 |
| 180° | 621.6 | 621.6 | 621.6 | 621.6 | 621.6 |

(END OF REPORT)