

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: PORTFOLIO

Report Number: P499198

Luminaire Tested: **LDA2B159040R30D010 2LBDLC1MMS-30DEG TILT**

Issue Date: 3/8/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P499198  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-037-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LDA2B159040R30D010 2LBDLC1MMS-30DEG TILT  
Description: 1500 LUMEN 2IN ADJUSTABLE LED LUMINAIRE WITH 90 CRI LEDS AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

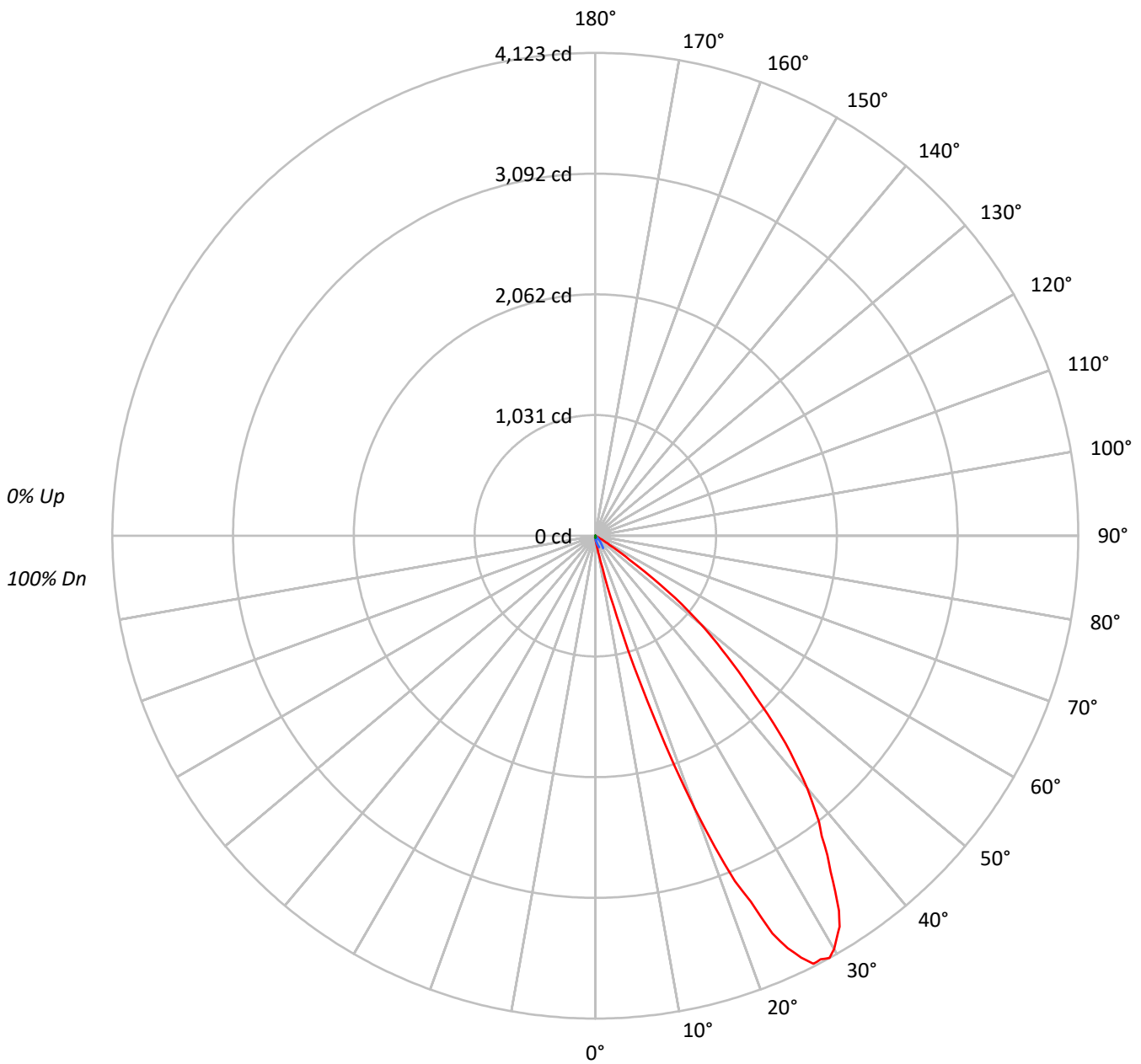
Lumens per Lamp: N/A  
Luminaire Lumens: 829.2 lumens  
Efficiency: N/A  
Efficacy: 58.8 lumens/watt  
Spacing Criteria (0/90/45): 3.2 / 0.53 / 1.4  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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



— 0°-180°    - - 45°-225°    - - - 90°-270°



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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 | 50 | 30 | 10  | 0 |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |     |   |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    |    | 100 |   |  |   |
| 1   | 112 | 109 | 106 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98  | 98  | 97  | 95  | 95  | 94  | 92  | 90  |    |    |    |    | 90  |   |  |   |
| 2   | 104 | 98  | 93  | 89  | 102 | 97  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 85  | 82  | 80  |    |    |    |    | 80  |   |  |   |
| 3   | 97  | 89  | 83  | 77  | 95  | 87  | 82  | 77  | 85  | 80  | 76  | 82  | 78  | 74  | 80  | 76  | 73  | 71  |    |    |    |    | 71  |   |  |   |
| 4   | 90  | 80  | 73  | 68  | 88  | 79  | 72  | 67  | 77  | 71  | 66  | 75  | 70  | 66  | 73  | 68  | 65  | 63  |    |    |    |    | 63  |   |  |   |
| 5   | 83  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 63  | 59  | 68  | 62  | 58  | 66  | 61  | 57  | 56  |    |    |    |    | 56  |   |  |   |
| 6   | 77  | 66  | 58  | 52  | 76  | 65  | 58  | 52  | 63  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |    |    | 49  |   |  |   |
| 7   | 72  | 60  | 52  | 46  | 70  | 59  | 51  | 46  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 49  | 45  | 44  |    |    |    |    | 44  |   |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 54  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 44  | 40  | 39  |    |    |    |    | 39  |   |  |   |
| 9   | 62  | 49  | 42  | 37  | 60  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 34  |    |    |    |    | 34  |   |  |   |
| 10  | 57  | 45  | 38  | 33  | 56  | 45  | 37  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 31  |    |    |    |    | 31  |   |  |   |

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

|     | 0°      | 90°  | 180° |
|-----|---------|------|------|
| 0°  | 9177    | 9177 | 9177 |
| 5°  | 19958   | 8320 | 5943 |
| 10° | 59916   | 7214 | 3908 |
| 15° | 363563  | 5210 | 3065 |
| 20° | 1301589 | 2835 | 1260 |
| 25° | 2115292 | 980  | 0    |
| 30° | 2321581 | 342  | 0    |
| 35° | 2109739 | 0    | 0    |
| 40° | 1810713 | 0    | 0    |
| 45° | 1342202 | 0    | 0    |
| 50° | 907533  | 0    | 0    |
| 55° | 306643  | 516  | 0    |
| 60° | 43909   | 1184 | 0    |
| 65° | 3502    | 1401 | 0    |
| 70° | 0       | 1731 | 0    |
| 75° | 0       | 3431 | 0    |
| 80° | 0       | 3409 | 0    |
| 85° | 0       | 6793 | 0    |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2.4    | 0.3       |
| 10°-20°   | 42.7   | 5.2       |
| 20°-30°   | 242.5  | 29.2      |
| 30°-40°   | 315.9  | 38.1      |
| 40°-50°   | 185.1  | 22.3      |
| 50°-60°   | 37.4   | 4.5       |
| 60°-70°   | 1.4    | 0.2       |
| 70°-80°   | 1.0    | 0.1       |
| 80°-90°   | 0.8    | 0.1       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 287.6  | 34.7      |
| 0°-40°    | 603.5  | 72.8      |
| 0°-60°    | 826.0  | 99.6      |
| 0°-90°    | 829.2  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 829.2  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 19   | 19  | 19  | 19   | 19   |      |
| 5°  | 40   | 29  | 17  | 13   | 12   | 6    |
| 15° | 712  | 81  | 10  | 7    | 6    | 301  |
| 25° | 3886 | 136 | 2   | 1    | 0    | 1718 |
| 35° | 3503 | 100 | 0   | 0    | 0    | 2181 |
| 45° | 1924 | 25  | 0   | 0    | 0    | 1503 |
| 55° | 356  | 2   | 1   | 1    | 0    | 416  |
| 65° | 3    | 1   | 1   | 1    | 0    | 8    |
| 75° | 0    | 1   | 2   | 1    | 0    | 0    |
| 85° | 0    | 1   | 1   | 1    | 0    | 0    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°   | 67.5° | 90°  | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|-------|-------|------|--------|------|--------|------|
| 0°    | 18.6   | 18.6   | 18.6  | 18.6  | 18.6 | 18.6   | 18.6 | 18.6   | 18.6 |
| 2.5°  | 25.2   | 23.4   | 22.2  | 19.2  | 17.4 | 16.2   | 15.6 | 15.0   | 14.4 |
| 5°    | 40.3   | 37.3   | 28.9  | 21.0  | 16.8 | 14.4   | 13.2 | 12.0   | 12.0 |
| 7.5°  | 69.1   | 55.9   | 37.9  | 22.2  | 15.6 | 12.6   | 11.4 | 9.6    | 9.0  |
| 10°   | 119.6  | 93.2   | 51.7  | 23.4  | 14.4 | 11.4   | 9.0  | 8.4    | 7.8  |
| 12.5° | 280.7  | 170.1  | 65.5  | 23.4  | 12.6 | 9.6    | 7.8  | 7.2    | 6.6  |
| 15°   | 711.8  | 346.9  | 81.2  | 22.2  | 10.2 | 7.2    | 6.6  | 6.0    | 6.0  |
| 17.5° | 1476.4 | 712.4  | 98.6  | 20.4  | 8.4  | 5.4    | 4.8  | 4.2    | 4.2  |
| 20°   | 2479.1 | 1276.8 | 115.4 | 17.4  | 5.4  | 3.6    | 3.0  | 2.4    | 2.4  |
| 21°   | 2848.2 | 1481.8 | 123.8 | 16.2  | 4.8  | 3.0    | 2.4  | 2.4    | 1.8  |
| 22°   | 3180.0 | 1670.0 | 128.6 | 15.6  | 3.6  | 2.4    | 2.4  | 1.8    | 1.8  |
| 23°   | 3394.1 | 1908.6 | 132.9 | 13.8  | 3.0  | 1.8    | 1.8  | 1.2    | 0.6  |
| 24°   | 3716.9 | 2095.6 | 134.7 | 12.6  | 2.4  | 1.8    | 1.2  | 0.6    | 0.6  |
| 25°   | 3885.8 | 2265.1 | 136.5 | 11.4  | 1.8  | 1.8    | 1.2  | 0.6    | 0.0  |
| 26°   | 4007.2 | 2399.2 | 143.1 | 10.8  | 1.8  | 1.2    | 1.2  | 0.6    | 0.0  |
| 27°   | 4102.2 | 2484.5 | 146.7 | 9.6   | 1.2  | 1.2    | 1.2  | 0.0    | 0.0  |
| 28°   | 4096.8 | 2546.4 | 143.7 | 8.4   | 1.2  | 1.2    | 0.6  | 0.0    | 0.0  |
| 29°   | 4122.6 | 2588.5 | 141.9 | 7.2   | 0.6  | 0.6    | 0.6  | 0.0    | 0.0  |
| 30°   | 4075.2 | 2592.1 | 135.3 | 6.6   | 0.6  | 0.6    | 0.6  | 0.0    | 0.0  |
| 31°   | 4003.0 | 2548.2 | 132.9 | 6.0   | 0.0  | 0.6    | 0.6  | 0.0    | 0.0  |
| 32°   | 3935.1 | 2528.4 | 125.0 | 4.8   | 0.0  | 0.6    | 0.6  | 0.0    | 0.0  |
| 33°   | 3818.5 | 2439.4 | 117.2 | 4.2   | 0.0  | 0.6    | 0.0  | 0.0    | 0.0  |
| 34°   | 3662.2 | 2352.3 | 110.0 | 3.6   | 0.0  | 0.6    | 0.0  | 0.0    | 0.0  |
| 35°   | 3502.9 | 2280.1 | 99.8  | 3.6   | 0.0  | 0.6    | 0.0  | 0.0    | 0.0  |
| 36°   | 3370.6 | 2149.1 | 92.6  | 3.0   | 0.0  | 0.6    | 0.0  | 0.0    | 0.0  |
| 37°   | 3210.1 | 2036.7 | 83.0  | 2.4   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 38°   | 3100.7 | 1878.6 | 75.7  | 2.4   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 39°   | 2953.4 | 1745.1 | 66.7  | 1.8   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 40°   | 2811.5 | 1606.9 | 57.7  | 1.2   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 42.5° | 2404.6 | 1239.6 | 39.7  | 0.6   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 45°   | 1923.7 | 908.9  | 24.6  | 0.0   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 47.5° | 1527.5 | 613.8  | 15.6  | 0.0   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 50°   | 1182.4 | 316.2  | 9.0   | 0.0   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 52.5° | 786.3  | 134.1  | 5.4   | 0.0   | 0.0  | 0.6    | 0.0  | 0.0    | 0.0  |
| 55°   | 356.5  | 69.7   | 2.4   | 0.0   | 0.6  | 0.6    | 0.6  | 0.0    | 0.0  |
| 57.5° | 143.7  | 30.1   | 1.2   | 0.6   | 0.6  | 0.6    | 0.6  | 0.0    | 0.0  |
| 60°   | 44.5   | 8.4    | 0.6   | 0.6   | 1.2  | 1.2    | 0.6  | 0.0    | 0.0  |
| 62.5° | 9.0    | 1.8    | 0.6   | 1.2   | 1.2  | 1.2    | 0.6  | 0.0    | 0.0  |
| 65°   | 3.0    | 0.6    | 0.6   | 1.2   | 1.2  | 1.2    | 1.2  | 0.0    | 0.0  |
| 67.5° | 0.6    | 0.6    | 0.6   | 1.2   | 1.2  | 1.2    | 1.2  | 0.6    | 0.0  |
| 70°   | 0.0    | 0.6    | 1.2   | 1.2   | 1.2  | 1.8    | 1.2  | 0.6    | 0.0  |
| 72.5° | 0.0    | 0.6    | 1.2   | 1.2   | 1.2  | 1.2    | 1.2  | 0.6    | 0.0  |
| 75°   | 0.0    | 0.6    | 1.2   | 1.2   | 1.8  | 1.8    | 1.2  | 0.6    | 0.0  |
| 77.5° | 0.0    | 0.6    | 1.2   | 1.2   | 1.2  | 1.2    | 1.2  | 0.6    | 0.0  |
| 80°   | 0.0    | 0.6    | 1.2   | 1.2   | 1.2  | 1.2    | 1.2  | 0.6    | 0.0  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|
| 82.5° | 0.0 | 0.6   | 1.2 | 1.2   | 1.2 | 1.2    | 1.2  | 0.6    | 0.0  |
| 85°   | 0.0 | 0.6   | 1.2 | 1.2   | 1.2 | 1.2    | 1.2  | 0.0    | 0.0  |
| 87.5° | 0.0 | 0.6   | 1.2 | 1.2   | 1.2 | 1.2    | 0.6  | 0.0    | 0.0  |
| 90°   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)