

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: FAIL-SAFE

Report Number: P412063

Luminaire Tested: **MRI-2ASR-2-1000-L935-OPL**

Issue Date: 10/5/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P412063  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2006-829-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/5/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MRI-2ASR-2-1000-L935-OPL  
Description: 2 FT, 2 INCH CHANNEL, OPAL LENS  
Light Source: (98) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1218.0 lumens  
Efficiency: N/A  
Efficacy: 35.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.17' x L: 2' x H: 0')  
CIE Type: Direct

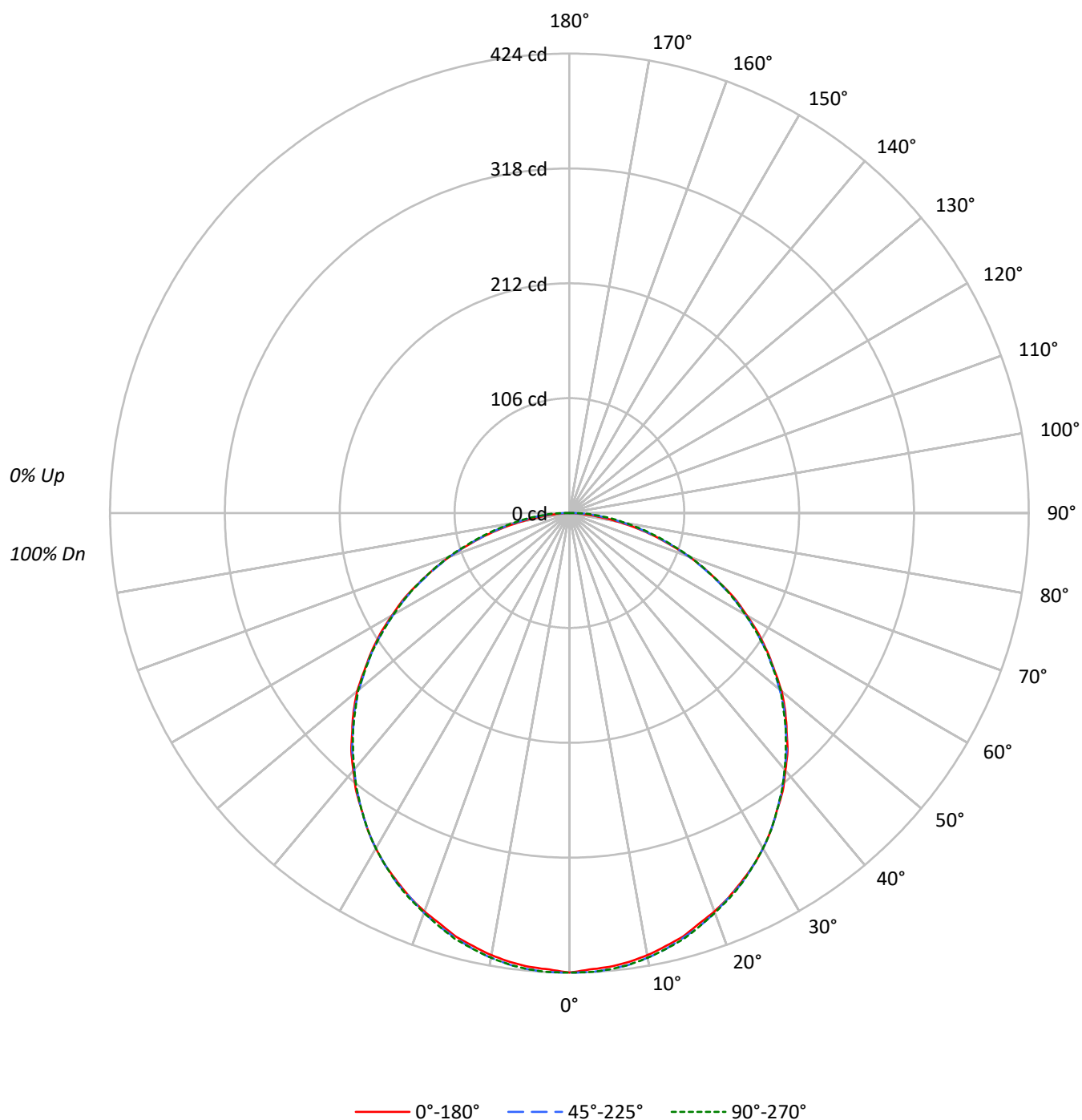
Input Watts (W): 34.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |     |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 87  | 85  | 83  |    |    |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 77  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |    |    |
| 3   | 90  | 79  | 71  | 64  | 87  | 78  | 70  | 64  | 75  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 62  | 56  | 52  | 50  |    |    |
| 5   | 75  | 62  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  | 43  |    |    |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |    |    |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 35  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |    |    |
| 8   | 60  | 46  | 38  | 32  | 59  | 46  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |    |    |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |    |    |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13692 | 13692 | 13692 |
| 5°  | 13627 | 13705 | 13705 |
| 10° | 13585 | 13664 | 13664 |
| 15° | 13526 | 13566 | 13606 |
| 20° | 13447 | 13488 | 13488 |
| 25° | 13379 | 13422 | 13422 |
| 30° | 13326 | 13326 | 13326 |
| 35° | 13178 | 13178 | 13178 |
| 40° | 13072 | 13021 | 13021 |
| 45° | 12947 | 12892 | 12892 |
| 50° | 12841 | 12720 | 12780 |
| 55° | 12549 | 12481 | 12481 |
| 60° | 12206 | 12129 | 12129 |
| 65° | 11752 | 11660 | 11752 |
| 70° | 11094 | 11094 | 11207 |
| 75° | 9981  | 10131 | 10430 |
| 80° | 8331  | 9242  | 9689  |
| 85° | 5817  | 8966  | 9411  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 40.1   | 3.3       |
| 10°-20°   | 114.6  | 9.4       |
| 20°-30°   | 173.4  | 14.2      |
| 30°-40°   | 209.4  | 17.2      |
| 40°-50°   | 218.2  | 17.9      |
| 50°-60°   | 198.1  | 16.3      |
| 60°-70°   | 151.5  | 12.4      |
| 70°-80°   | 86.7   | 7.1       |
| 80°-90°   | 25.9   | 2.1       |
| 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°    | 328.1  | 26.9      |
| 0°-40°    | 537.5  | 44.1      |
| 0°-60°    | 953.8  | 78.3      |
| 0°-90°    | 1218.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1218.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 424 | 424   | 424 | 424   | 424 |      |
| 5°  | 420 | 422   | 423 | 423   | 423 | 40   |
| 15° | 405 | 406   | 406 | 407   | 407 | 114  |
| 25° | 376 | 376   | 377 | 377   | 377 | 173  |
| 35° | 334 | 336   | 334 | 334   | 334 | 210  |
| 45° | 284 | 284   | 282 | 282   | 282 | 219  |
| 55° | 223 | 222   | 222 | 222   | 222 | 199  |
| 65° | 154 | 154   | 153 | 153   | 154 | 152  |
| 75° | 80  | 80    | 81  | 82    | 84  | 85   |
| 85° | 16  | 19    | 24  | 24    | 25  | 20   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 424.0 | 424.0 | 424.0 | 424.0 | 424.0 |
| 2.5°  | 421.6 | 422.8 | 424.0 | 425.2 | 424.0 |
| 5°    | 420.4 | 421.6 | 422.8 | 422.8 | 422.8 |
| 7.5°  | 417.9 | 419.1 | 420.4 | 420.4 | 420.4 |
| 10°   | 414.3 | 415.5 | 416.7 | 416.7 | 416.7 |
| 12.5° | 409.4 | 410.7 | 411.9 | 411.9 | 411.9 |
| 15°   | 404.6 | 405.8 | 405.8 | 407.0 | 407.0 |
| 17.5° | 397.3 | 399.8 | 399.8 | 401.0 | 399.8 |
| 20°   | 391.3 | 392.5 | 392.5 | 392.5 | 392.5 |
| 22.5° | 384.0 | 385.2 | 384.0 | 385.2 | 385.2 |
| 25°   | 375.5 | 375.5 | 376.7 | 376.7 | 376.7 |
| 27.5° | 367.1 | 367.1 | 367.1 | 367.1 | 367.1 |
| 30°   | 357.4 | 357.4 | 357.4 | 357.4 | 357.4 |
| 32.5° | 346.5 | 346.5 | 346.5 | 346.5 | 346.5 |
| 35°   | 334.3 | 335.6 | 334.3 | 334.3 | 334.3 |
| 37.5° | 323.4 | 323.4 | 322.2 | 322.2 | 322.2 |
| 40°   | 310.1 | 310.1 | 308.9 | 308.9 | 308.9 |
| 42.5° | 298.0 | 296.8 | 296.8 | 295.6 | 295.6 |
| 45°   | 283.5 | 283.5 | 282.3 | 282.3 | 282.3 |
| 47.5° | 270.1 | 268.9 | 268.9 | 268.9 | 267.7 |
| 50°   | 255.6 | 254.4 | 253.2 | 253.2 | 254.4 |
| 52.5° | 238.6 | 238.6 | 237.4 | 237.4 | 237.4 |
| 55°   | 222.9 | 221.7 | 221.7 | 221.7 | 221.7 |
| 57.5° | 207.1 | 204.7 | 204.7 | 205.9 | 204.7 |
| 60°   | 189.0 | 187.8 | 187.8 | 187.8 | 187.8 |
| 62.5° | 173.2 | 170.8 | 170.8 | 170.8 | 170.8 |
| 65°   | 153.8 | 153.8 | 152.6 | 152.6 | 153.8 |
| 67.5° | 135.7 | 135.7 | 134.5 | 135.7 | 135.7 |
| 70°   | 117.5 | 116.3 | 117.5 | 117.5 | 118.7 |
| 72.5° | 98.1  | 99.3  | 99.3  | 99.3  | 100.5 |
| 75°   | 80.0  | 80.0  | 81.2  | 82.4  | 83.6  |
| 77.5° | 61.8  | 63.0  | 65.4  | 66.6  | 67.8  |
| 80°   | 44.8  | 47.2  | 49.7  | 52.1  | 52.1  |
| 82.5° | 29.1  | 31.5  | 36.3  | 40.0  | 40.0  |
| 85°   | 15.7  | 19.4  | 24.2  | 24.2  | 25.4  |
| 87.5° | 6.1   | 9.7   | 13.3  | 17.0  | 17.0  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)