

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: P412115

Luminaire Tested: **MRI-4ASR-2-250-L950-OPL**

Issue Date: 10/5/2020

Test Information

Test Method: LM-79-08
Report Number: P412115
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2006-829-8)
Test Lab: INNOVATION CENTER
Issue Date: 10/5/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MRI-4ASR-2-250-L950-OPL
Description: 2 FT, 4 INCH CHANNEL, OPAL LENS
Light Source: (196) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

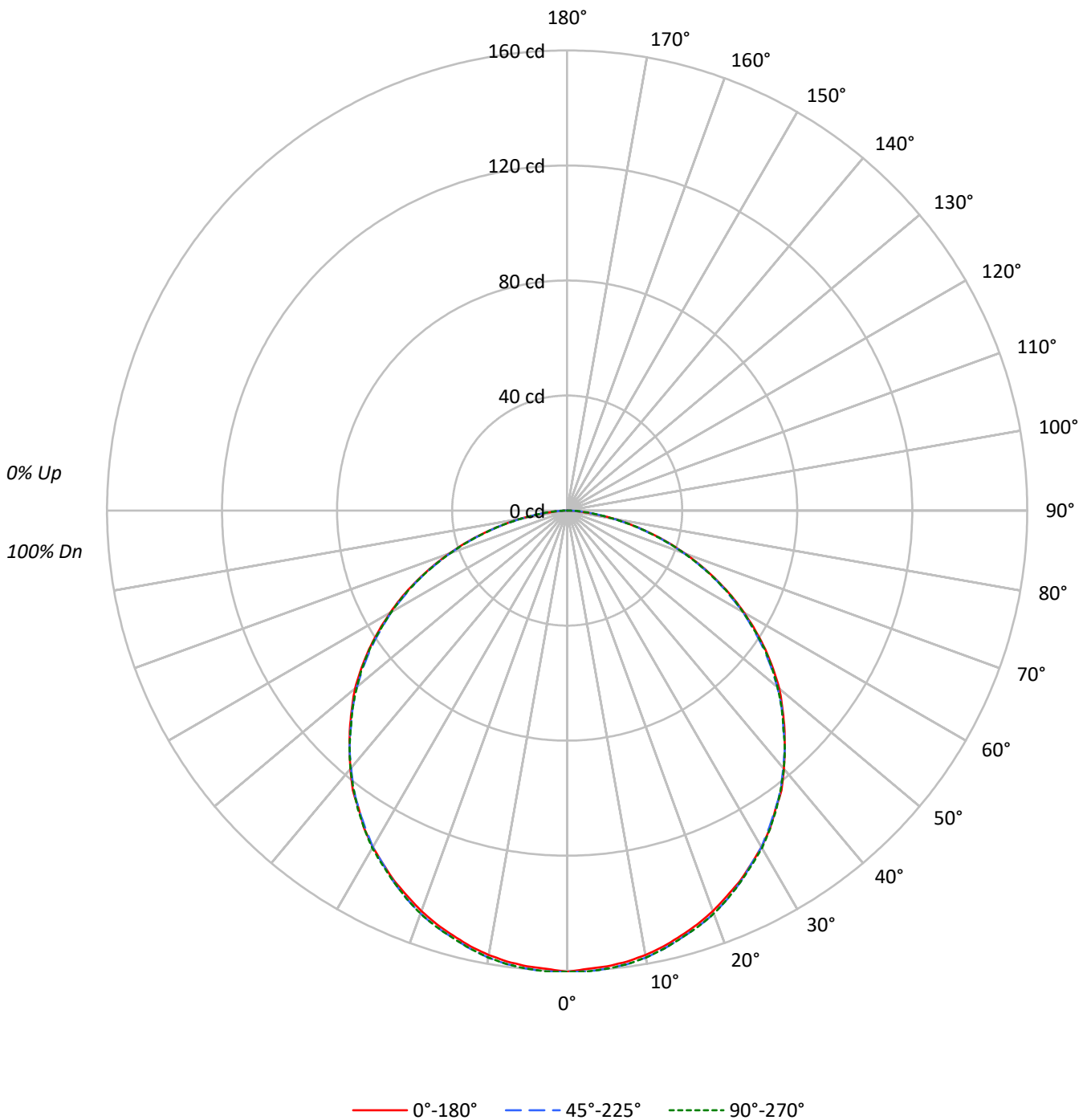
Lumens per Lamp: N/A
Luminaire Lumens: 455.0 lumens
Efficiency: N/A
Efficacy: 47.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.37
Luminous Opening: Rectangular (W 0.33' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 9.5
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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 98 | 94 | 91 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 74 | 79 | 75 | 72 | 70 |
| 3 | 90 | 80 | 71 | 65 | 88 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 67 | 62 | 70 | 65 | 61 | 59 |
| 4 | 82 | 70 | 62 | 55 | 80 | 69 | 61 | 54 | 67 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 43 |
| 6 | 70 | 57 | 48 | 41 | 68 | 56 | 47 | 41 | 54 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 38 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2590 | 2590 | 2590 |
| 5° | 2579 | 2592 | 2592 |
| 10° | 2572 | 2587 | 2587 |
| 15° | 2557 | 2571 | 2571 |
| 20° | 2546 | 2562 | 2562 |
| 25° | 2532 | 2539 | 2539 |
| 30° | 2519 | 2519 | 2526 |
| 35° | 2491 | 2491 | 2499 |
| 40° | 2470 | 2462 | 2470 |
| 45° | 2439 | 2427 | 2427 |
| 50° | 2419 | 2396 | 2396 |
| 55° | 2367 | 2342 | 2356 |
| 60° | 2293 | 2280 | 2280 |
| 65° | 2197 | 2181 | 2181 |
| 70° | 2058 | 2035 | 2035 |
| 75° | 1847 | 1822 | 1822 |
| 80° | 1543 | 1497 | 1497 |
| 85° | 963 | 1056 | 1130 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 15.2 | 3.3 |
| 10°-20° | 43.4 | 9.5 |
| 20°-30° | 65.6 | 14.4 |
| 30°-40° | 79.2 | 17.4 |
| 40°-50° | 82.2 | 18.1 |
| 50°-60° | 74.5 | 16.4 |
| 60°-70° | 56.5 | 12.4 |
| 70°-80° | 31.1 | 6.8 |
| 80°-90° | 7.3 | 1.6 |
| 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° | 124.2 | 27.3 |
| 0°-40° | 203.4 | 44.7 |
| 0°-60° | 360.1 | 79.2 |
| 0°-90° | 455.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 455.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 160 | 160 | 160 | 160 | 160 | |
| 5° | 159 | 160 | 160 | 160 | 160 | 15 |
| 15° | 153 | 153 | 154 | 154 | 154 | 43 |
| 25° | 142 | 142 | 142 | 142 | 142 | 65 |
| 35° | 126 | 126 | 126 | 126 | 127 | 79 |
| 45° | 107 | 106 | 106 | 107 | 106 | 82 |
| 55° | 84 | 83 | 83 | 83 | 84 | 75 |
| 65° | 58 | 57 | 57 | 57 | 57 | 57 |
| 75° | 30 | 30 | 29 | 29 | 29 | 31 |
| 85° | 5 | 6 | 6 | 6 | 6 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: MRI-4ASR-2-250-L950-OPL

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 160.4 | 160.4 | 160.4 | 160.4 | 160.4 |
| 2.5° | 159.5 | 159.9 | 160.4 | 160.8 | 160.4 |
| 5° | 159.1 | 159.5 | 159.9 | 160.4 | 159.9 |
| 7.5° | 158.2 | 158.6 | 159.1 | 159.5 | 159.1 |
| 10° | 156.9 | 157.3 | 157.8 | 158.2 | 157.8 |
| 12.5° | 155.2 | 155.6 | 156.0 | 156.0 | 156.0 |
| 15° | 153.0 | 153.4 | 153.8 | 154.3 | 153.8 |
| 17.5° | 150.8 | 151.2 | 151.7 | 151.7 | 151.7 |
| 20° | 148.2 | 148.6 | 149.1 | 149.1 | 149.1 |
| 22.5° | 145.1 | 145.6 | 146.0 | 146.0 | 146.0 |
| 25° | 142.1 | 142.1 | 142.5 | 142.5 | 142.5 |
| 27.5° | 138.6 | 138.6 | 138.6 | 139.0 | 139.0 |
| 30° | 135.1 | 135.1 | 135.1 | 135.1 | 135.5 |
| 32.5° | 131.2 | 131.2 | 130.7 | 131.2 | 131.2 |
| 35° | 126.4 | 126.4 | 126.4 | 126.4 | 126.8 |
| 37.5° | 122.5 | 121.6 | 122.0 | 122.0 | 122.0 |
| 40° | 117.2 | 117.2 | 116.8 | 117.2 | 117.2 |
| 42.5° | 112.0 | 112.0 | 112.0 | 112.0 | 112.0 |
| 45° | 106.8 | 106.3 | 106.3 | 106.8 | 106.3 |
| 47.5° | 101.5 | 101.1 | 101.1 | 101.1 | 101.1 |
| 50° | 96.3 | 95.4 | 95.4 | 95.4 | 95.4 |
| 52.5° | 90.2 | 89.3 | 89.3 | 89.3 | 89.8 |
| 55° | 84.1 | 83.2 | 83.2 | 83.2 | 83.7 |
| 57.5° | 77.6 | 77.1 | 76.7 | 77.1 | 77.1 |
| 60° | 71.0 | 70.6 | 70.6 | 70.6 | 70.6 |
| 62.5° | 64.5 | 64.1 | 63.6 | 63.6 | 64.1 |
| 65° | 57.5 | 57.1 | 57.1 | 57.1 | 57.1 |
| 67.5° | 50.6 | 50.1 | 50.1 | 50.1 | 50.1 |
| 70° | 43.6 | 43.1 | 43.1 | 43.6 | 43.1 |
| 72.5° | 36.6 | 36.2 | 36.2 | 36.2 | 36.2 |
| 75° | 29.6 | 29.6 | 29.2 | 29.2 | 29.2 |
| 77.5° | 22.7 | 22.7 | 22.7 | 22.7 | 22.7 |
| 80° | 16.6 | 16.1 | 16.1 | 16.1 | 16.1 |
| 82.5° | 10.0 | 10.0 | 10.5 | 10.5 | 10.5 |
| 85° | 5.2 | 5.7 | 5.7 | 6.1 | 6.1 |
| 87.5° | 1.7 | 2.2 | 2.6 | 3.1 | 3.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)