

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: RSA

Report Number: P226169

Luminaire Tested: **MRZ-1-REC-X-1-L40-80-FL-UNV-X-STD-HEX**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P226169  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14876)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: RSA  
Catalog Number: MRZ-1-REC-X-1-L40-80-FL-UNV-X-STD-HEX  
Description: MRZ INTEGRAL LED DOWNLIGHT  
40 DEGREE FLOOD OPTIC WITH HEX LOUVER, LIGHT LEVEL 1  
Light Source: (1) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 373.0 lumens  
Efficiency: N/A  
Efficacy: 69.1 lumens/watt  
Spacing Criteria (0/90/45): 0.56 / 0.56 / 0.55  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

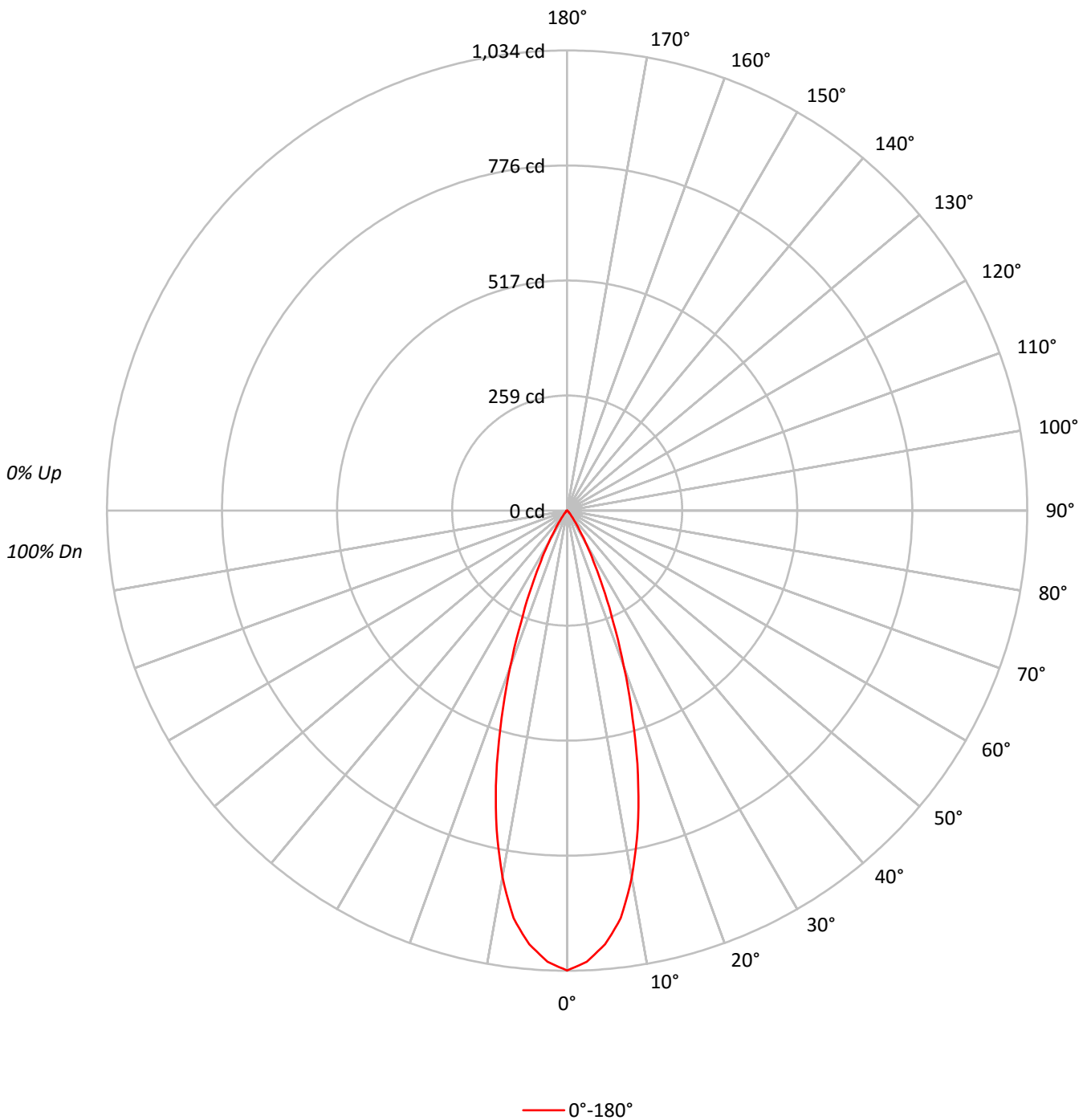
Input Watts (W): 5.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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   | 115 | 112 | 110 | 108 | 112 | 110 | 108 | 107 | 106 | 105 | 103 | 103 | 101 | 100 | 99  | 98  | 98  | 96  |
| 2   | 110 | 106 | 103 | 100 | 108 | 105 | 102 | 99  | 102 | 99  | 97  | 99  | 97  | 95  | 96  | 95  | 93  | 92  |
| 3   | 106 | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  | 95  | 93  | 91  | 93  | 91  | 89  | 88  |
| 4   | 102 | 97  | 92  | 89  | 101 | 95  | 91  | 88  | 93  | 90  | 87  | 92  | 89  | 86  | 90  | 87  | 85  | 84  |
| 5   | 99  | 92  | 88  | 84  | 97  | 91  | 87  | 84  | 90  | 86  | 83  | 88  | 85  | 83  | 87  | 84  | 82  | 81  |
| 6   | 95  | 88  | 84  | 80  | 94  | 88  | 83  | 80  | 86  | 83  | 80  | 85  | 82  | 79  | 84  | 81  | 79  | 78  |
| 7   | 92  | 85  | 80  | 77  | 91  | 84  | 80  | 77  | 83  | 79  | 76  | 82  | 79  | 76  | 81  | 78  | 76  | 75  |
| 8   | 89  | 82  | 77  | 74  | 88  | 81  | 77  | 74  | 80  | 76  | 73  | 79  | 76  | 73  | 78  | 75  | 73  | 72  |
| 9   | 86  | 79  | 74  | 71  | 85  | 78  | 74  | 71  | 77  | 73  | 71  | 77  | 73  | 70  | 76  | 73  | 70  | 69  |
| 10  | 83  | 76  | 71  | 68  | 83  | 76  | 71  | 68  | 75  | 71  | 68  | 74  | 71  | 68  | 73  | 70  | 68  | 67  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 509908 |
| 5°  | 484467 |
| 10° | 419029 |
| 15° | 314234 |
| 20° | 195894 |
| 25° | 102943 |
| 30° | 46374  |
| 35° | 17949  |
| 40° | 7020   |
| 45° | 3558   |
| 50° | 1612   |
| 55° | 1204   |
| 60° | 691    |
| 65° | 817    |
| 70° | 0      |
| 75° | 0      |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 89.1   | 23.9      |
| 10°-20°   | 166.3  | 44.6      |
| 20°-30°   | 90.2   | 24.2      |
| 30°-40°   | 21.8   | 5.9       |
| 40°-50°   | 4.1    | 1.1       |
| 50°-60°   | 1.1    | 0.3       |
| 60°-70°   | 0.4    | 0.1       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 345.6  | 92.6      |
| 0°-40°    | 367.4  | 98.5      |
| 0°-60°    | 372.6  | 99.9      |
| 0°-90°    | 373.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 373.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1034 |      |
| 5°  | 978  | 89   |
| 15° | 615  | 166  |
| 25° | 189  | 90   |
| 35° | 30   | 22   |
| 45° | 5    | 4    |
| 55° | 1    | 1    |
| 65° | 1    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1033.5 |
| 2.5°  | 1014.5 |
| 5°    | 978.2  |
| 7.5°  | 923.7  |
| 10°   | 836.4  |
| 12.5° | 733.1  |
| 15°   | 615.2  |
| 17.5° | 489.5  |
| 20°   | 373.1  |
| 22.5° | 269.9  |
| 25°   | 189.1  |
| 27.5° | 127.3  |
| 30°   | 81.4   |
| 32.5° | 50.2   |
| 35°   | 29.8   |
| 37.5° | 18.2   |
| 40°   | 10.9   |
| 42.5° | 7.2    |
| 45°   | 5.1    |
| 47.5° | 2.9    |
| 50°   | 2.1    |
| 52.5° | 1.4    |
| 55°   | 1.4    |
| 57.5° | 0.7    |
| 60°   | 0.7    |
| 62.5° | 0.7    |
| 65°   | 0.7    |
| 67.5° | 0.0    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 77.5° | 0.0    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |

(END OF REPORT)