

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: P219848

Luminaire Tested: **MRZ-1-REC-X-4-L27-97-WFL-UNV-X-STD**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219848
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14880)
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-4-L27-97-WFL-UNV-X-STD
Description: MRZ INTEGRAL LED DOWNLIGHT
55 DEGREE WIDE FLOOD OPTIC, LIGHT LEVEL 4
Light Source: (1) 2700K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1044.8 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.91
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

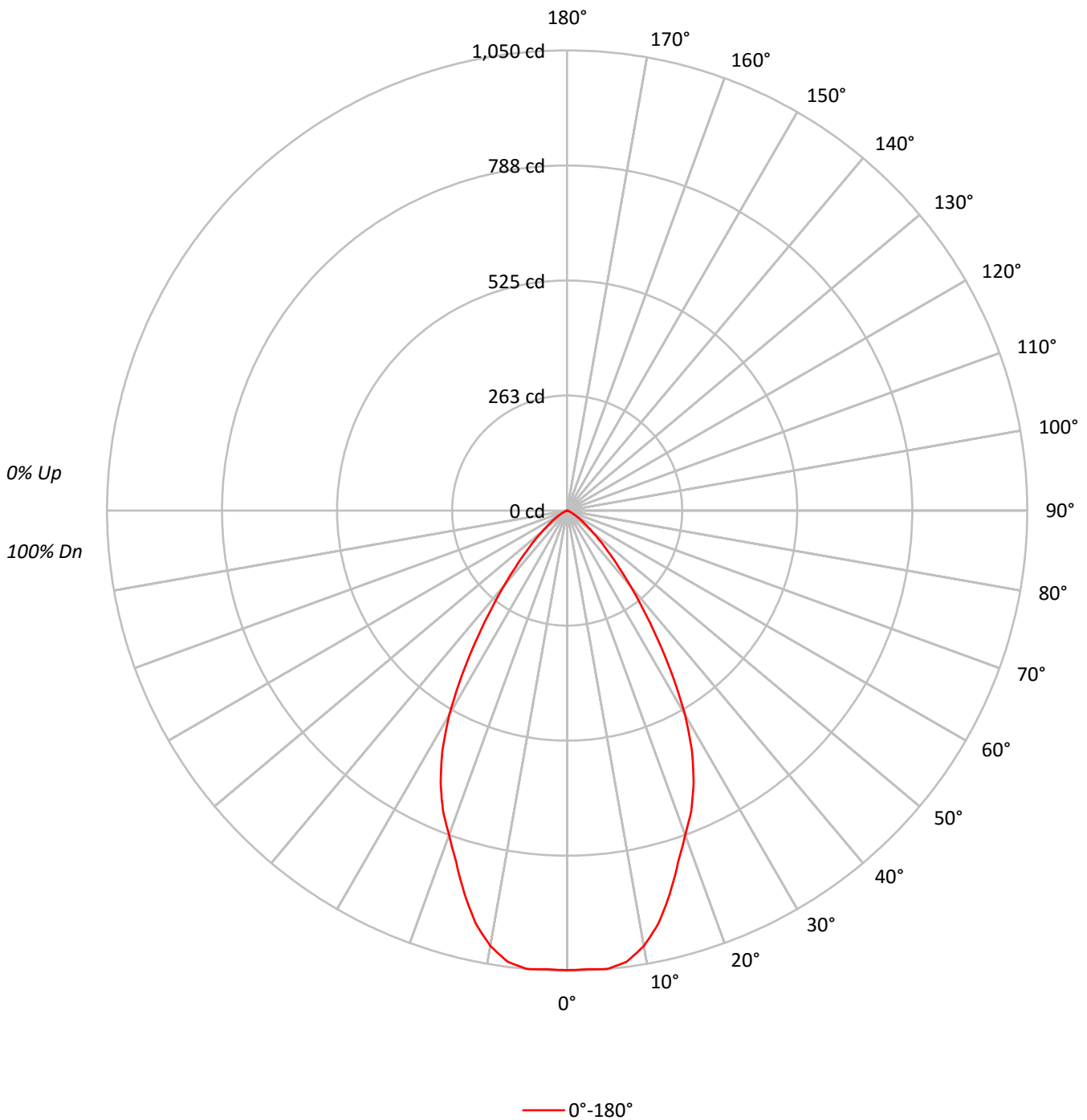
Input Watts (W): 15.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | | 100 | 99 | 97 | | 97 | 96 | 94 | 93 |
| 2 | 107 | 102 | 97 | 94 | 105 | 100 | 96 | 93 | 97 | 94 | 91 | | 94 | 91 | 89 | | 91 | 89 | 87 | 85 |
| 3 | 101 | 94 | 89 | 85 | 99 | 93 | 88 | 84 | 90 | 86 | 83 | | 88 | 84 | 81 | | 85 | 82 | 80 | 78 |
| 4 | 95 | 87 | 81 | 77 | 94 | 86 | 81 | 76 | 84 | 79 | 76 | | 82 | 78 | 75 | | 80 | 77 | 74 | 72 |
| 5 | 90 | 81 | 75 | 70 | 88 | 80 | 74 | 70 | 78 | 73 | 69 | | 77 | 72 | 69 | | 75 | 71 | 68 | 67 |
| 6 | 85 | 76 | 69 | 65 | 84 | 75 | 69 | 65 | 73 | 68 | 64 | | 72 | 67 | 64 | | 71 | 66 | 63 | 62 |
| 7 | 81 | 71 | 64 | 60 | 79 | 70 | 64 | 60 | 69 | 63 | 59 | | 68 | 63 | 59 | | 66 | 62 | 59 | 57 |
| 8 | 76 | 66 | 60 | 56 | 75 | 66 | 60 | 56 | 65 | 59 | 55 | | 64 | 59 | 55 | | 63 | 58 | 55 | 53 |
| 9 | 73 | 62 | 56 | 52 | 71 | 62 | 56 | 52 | 61 | 55 | 52 | | 60 | 55 | 51 | | 59 | 55 | 51 | 50 |
| 10 | 69 | 59 | 53 | 49 | 68 | 58 | 52 | 48 | 57 | 52 | 48 | | 57 | 52 | 48 | | 56 | 51 | 48 | 47 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 517407 |
| 5° | 520027 |
| 10° | 505500 |
| 15° | 462515 |
| 20° | 413629 |
| 25° | 371760 |
| 30° | 305989 |
| 35° | 217974 |
| 40° | 144141 |
| 45° | 91893 |
| 50° | 56953 |
| 55° | 35181 |
| 60° | 20229 |
| 65° | 10507 |
| 70° | 5482 |
| 75° | 4956 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 98.9 | 9.5 |
| 10°-20° | 252.5 | 24.2 |
| 20°-30° | 309.3 | 29.6 |
| 30°-40° | 228.2 | 21.8 |
| 40°-50° | 105.5 | 10.1 |
| 50°-60° | 38.3 | 3.7 |
| 60°-70° | 9.9 | 0.9 |
| 70°-80° | 2.2 | 0.2 |
| 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° | 660.7 | 63.2 |
| 0°-40° | 888.9 | 85.1 |
| 0°-60° | 1032.7 | 98.8 |
| 0°-90° | 1044.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1044.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1049 | |
| 5° | 1050 | 99 |
| 15° | 906 | 252 |
| 25° | 683 | 309 |
| 35° | 362 | 228 |
| 45° | 132 | 106 |
| 55° | 41 | 38 |
| 65° | 9 | 10 |
| 75° | 3 | 2 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 1048.7 |
| 2.5° | 1047.4 |
| 5° | 1050.0 |
| 7.5° | 1038.5 |
| 10° | 1009.0 |
| 12.5° | 964.3 |
| 15° | 905.5 |
| 17.5° | 841.5 |
| 20° | 787.8 |
| 22.5° | 740.5 |
| 25° | 682.9 |
| 27.5° | 616.4 |
| 30° | 537.1 |
| 32.5° | 448.9 |
| 35° | 361.9 |
| 37.5° | 286.5 |
| 40° | 223.8 |
| 42.5° | 172.6 |
| 45° | 131.7 |
| 47.5° | 99.8 |
| 50° | 74.2 |
| 52.5° | 55.0 |
| 55° | 40.9 |
| 57.5° | 29.4 |
| 60° | 20.5 |
| 62.5° | 14.1 |
| 65° | 9.0 |
| 67.5° | 5.1 |
| 70° | 3.8 |
| 72.5° | 2.6 |
| 75° | 2.6 |
| 77.5° | 1.3 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

(END OF REPORT)