

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: P219918

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219918
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14883)
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-1H-L27-97-WFL-UNV-X-STD-SFL
Description: MRZ INTEGRAL LED DOWNLIGHT
55 DEGREE WIDE FLOOD OPTIC WITH SOFT FOCUS LENS, LIGHT LEVEL 1
Light Source: (1) 2700K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 408.4 lumens
Efficiency: N/A
Efficacy: 60.1 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.9
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

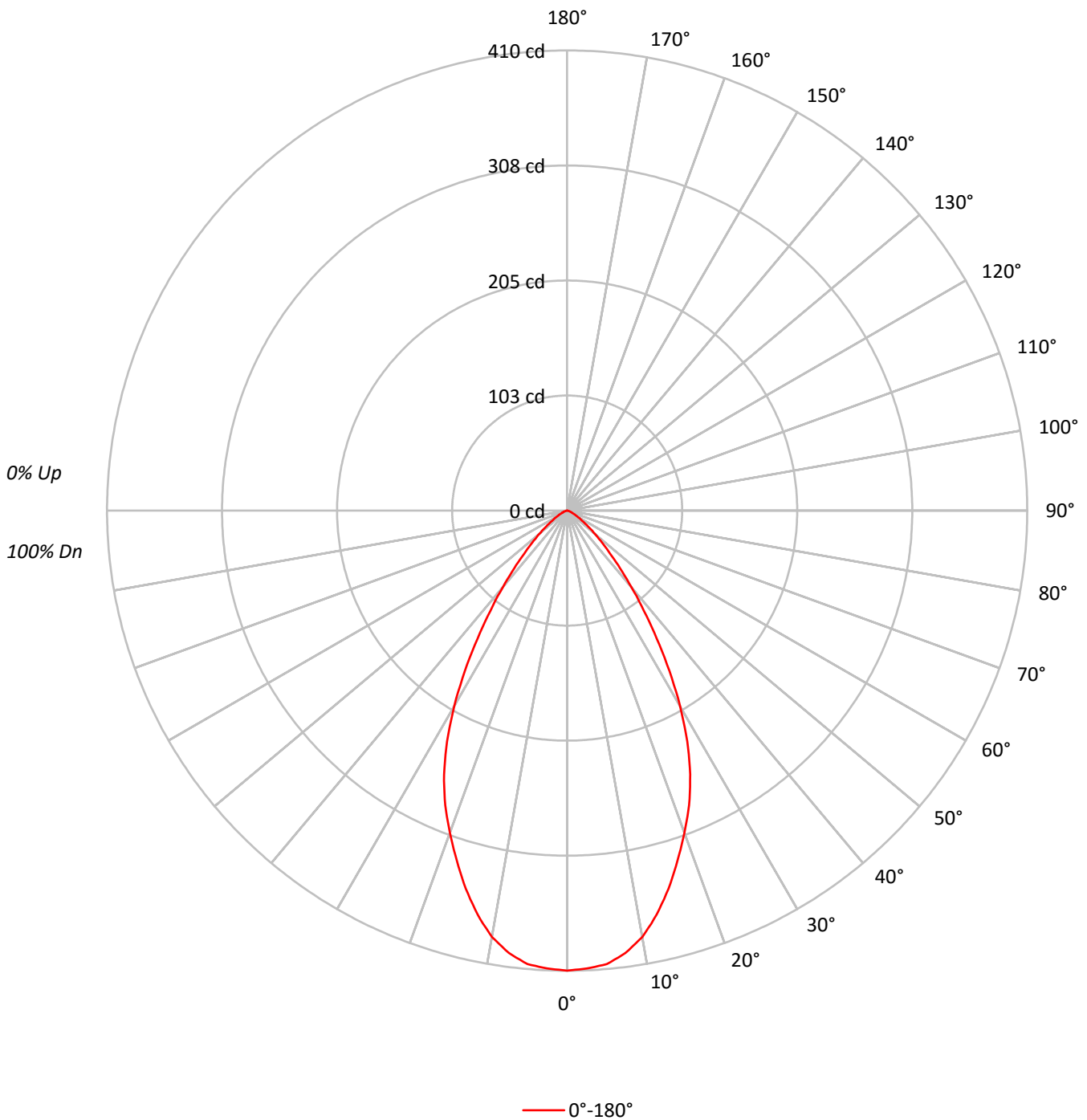
Input Watts (W): 6.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 98 | 97 | 97 | 95 | 94 | 92 |
| 2 | 107 | 101 | 97 | 93 | 104 | 100 | 96 | 92 | 96 | 93 | 90 | 93 | 91 | 88 | 91 | 88 | 86 | 85 |
| 3 | 101 | 94 | 88 | 84 | 99 | 92 | 87 | 83 | 90 | 85 | 82 | 87 | 84 | 81 | 85 | 82 | 79 | 78 |
| 4 | 95 | 87 | 81 | 76 | 93 | 86 | 80 | 76 | 83 | 79 | 75 | 81 | 77 | 74 | 79 | 76 | 73 | 71 |
| 5 | 90 | 81 | 74 | 70 | 88 | 80 | 74 | 69 | 78 | 73 | 69 | 76 | 72 | 68 | 74 | 71 | 67 | 66 |
| 6 | 85 | 75 | 69 | 64 | 83 | 74 | 68 | 64 | 73 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 62 | 61 |
| 7 | 80 | 70 | 64 | 59 | 79 | 69 | 63 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 66 | 61 | 58 | 56 |
| 8 | 76 | 66 | 59 | 55 | 75 | 65 | 59 | 55 | 64 | 58 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | 53 |
| 9 | 72 | 62 | 55 | 51 | 71 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 58 | 54 | 50 | 49 |
| 10 | 68 | 58 | 52 | 48 | 67 | 58 | 52 | 48 | 57 | 51 | 48 | 56 | 51 | 47 | 55 | 51 | 47 | 46 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 202236 |
| 5° | 200879 |
| 10° | 193282 |
| 15° | 178213 |
| 20° | 160401 |
| 25° | 141268 |
| 30° | 114625 |
| 35° | 83781 |
| 40° | 57193 |
| 45° | 37678 |
| 50° | 24639 |
| 55° | 15655 |
| 60° | 10065 |
| 65° | 6304 |
| 70° | 4616 |
| 75° | 3050 |
| 80° | 1421 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 38.1 | 9.3 |
| 10°-20° | 97.3 | 23.8 |
| 20°-30° | 117.6 | 28.8 |
| 30°-40° | 87.5 | 21.4 |
| 40°-50° | 43.1 | 10.6 |
| 50°-60° | 17.1 | 4.2 |
| 60°-70° | 5.9 | 1.4 |
| 70°-80° | 1.7 | 0.4 |
| 80°-90° | 0.1 | 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° | 253.0 | 62.0 |
| 0°-40° | 340.5 | 83.4 |
| 0°-60° | 400.7 | 98.1 |
| 0°-90° | 408.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 408.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 410 | |
| 5° | 406 | 38 |
| 15° | 349 | 97 |
| 25° | 260 | 118 |
| 35° | 139 | 88 |
| 45° | 54 | 43 |
| 55° | 18 | 17 |
| 65° | 5 | 6 |
| 75° | 2 | 2 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|-------|
| 0° | 409.9 |
| 2.5° | 408.3 |
| 5° | 405.6 |
| 7.5° | 397.6 |
| 10° | 385.8 |
| 12.5° | 368.7 |
| 15° | 348.9 |
| 17.5° | 326.9 |
| 20° | 305.5 |
| 22.5° | 284.1 |
| 25° | 259.5 |
| 27.5° | 231.7 |
| 30° | 201.2 |
| 32.5° | 169.6 |
| 35° | 139.1 |
| 37.5° | 112.4 |
| 40° | 88.8 |
| 42.5° | 69.6 |
| 45° | 54.0 |
| 47.5° | 41.7 |
| 50° | 32.1 |
| 52.5° | 24.1 |
| 55° | 18.2 |
| 57.5° | 13.4 |
| 60° | 10.2 |
| 62.5° | 7.5 |
| 65° | 5.4 |
| 67.5° | 4.3 |
| 70° | 3.2 |
| 72.5° | 2.1 |
| 75° | 1.6 |
| 77.5° | 1.1 |
| 80° | 0.5 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

(END OF REPORT)