

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: P219748

Luminaire Tested: **MRZ-1-REC-X-3-L30-97-FL-UNV-X-STD-HEX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219748
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-3-L30-97-FL-UNV-X-STD-HEX
Description: MRZ INTEGRAL LED DOWNLIGHT
40 DEGREE FLOOD OPTIC WITH HEX LOUVER, LIGHT LEVEL 3
Light Source: (1) 3000K CCT, 97 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 560.9 lumens
Efficiency: N/A
Efficacy: 46.4 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

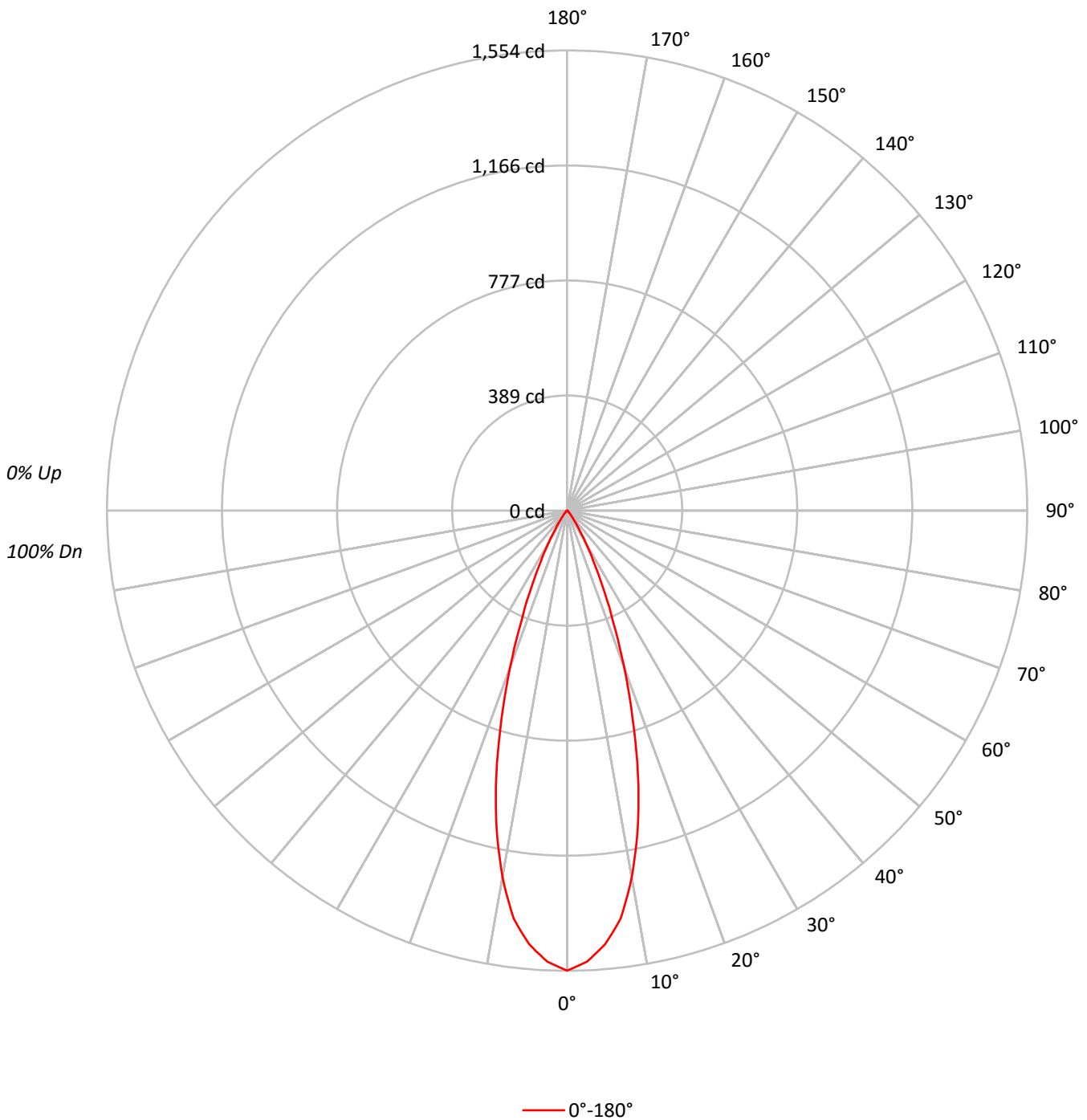
Input Watts (W): 12.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 97 | 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 | 90 | 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 | 75 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 68 | 73 | 70 | 68 | 67 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 766465 |
| 5° | 728286 |
| 10° | 629896 |
| 15° | 472424 |
| 20° | 294497 |
| 25° | 154768 |
| 30° | 69732 |
| 35° | 26983 |
| 40° | 10563 |
| 45° | 5373 |
| 50° | 2533 |
| 55° | 1892 |
| 60° | 1085 |
| 65° | 1284 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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CATALOG NUMBER: MRZ-1-REC-X-3-L30-97-FL-UNV-X-STD-HEX

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 133.9 | 23.9 |
| 10°-20° | 250.0 | 44.6 |
| 20°-30° | 135.6 | 24.2 |
| 30°-40° | 32.8 | 5.9 |
| 40°-50° | 6.2 | 1.1 |
| 50°-60° | 1.7 | 0.3 |
| 60°-70° | 0.7 | 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° | 519.5 | 92.6 |
| 0°-40° | 552.3 | 98.5 |
| 0°-60° | 560.2 | 99.9 |
| 0°-90° | 560.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 560.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1554 | |
| 5° | 1470 | 134 |
| 15° | 925 | 250 |
| 25° | 284 | 136 |
| 35° | 45 | 33 |
| 45° | 8 | 6 |
| 55° | 2 | 2 |
| 65° | 1 | 1 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |

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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 1553.5 |
| 2.5° | 1525.1 |
| 5° | 1470.5 |
| 7.5° | 1388.5 |
| 10° | 1257.3 |
| 12.5° | 1102.0 |
| 15° | 924.9 |
| 17.5° | 735.8 |
| 20° | 560.9 |
| 22.5° | 405.6 |
| 25° | 284.3 |
| 27.5° | 191.3 |
| 30° | 122.4 |
| 32.5° | 75.4 |
| 35° | 44.8 |
| 37.5° | 27.3 |
| 40° | 16.4 |
| 42.5° | 10.9 |
| 45° | 7.7 |
| 47.5° | 4.4 |
| 50° | 3.3 |
| 52.5° | 2.2 |
| 55° | 2.2 |
| 57.5° | 1.1 |
| 60° | 1.1 |
| 62.5° | 1.1 |
| 65° | 1.1 |
| 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)