

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: P219823

Luminaire Tested: **MRZ-1-REC-X-1H-L35-80-WFL-UNV-X-STD**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219823
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-1H-L35-80-WFL-UNV-X-STD
Description: MRZ INTEGRAL LED DOWNLIGHT
55 DEGREE WIDE FLOOD OPTIC, LIGHT LEVEL 1
Light Source: (1) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 656.2 lumens
Efficiency: N/A
Efficacy: 96.5 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

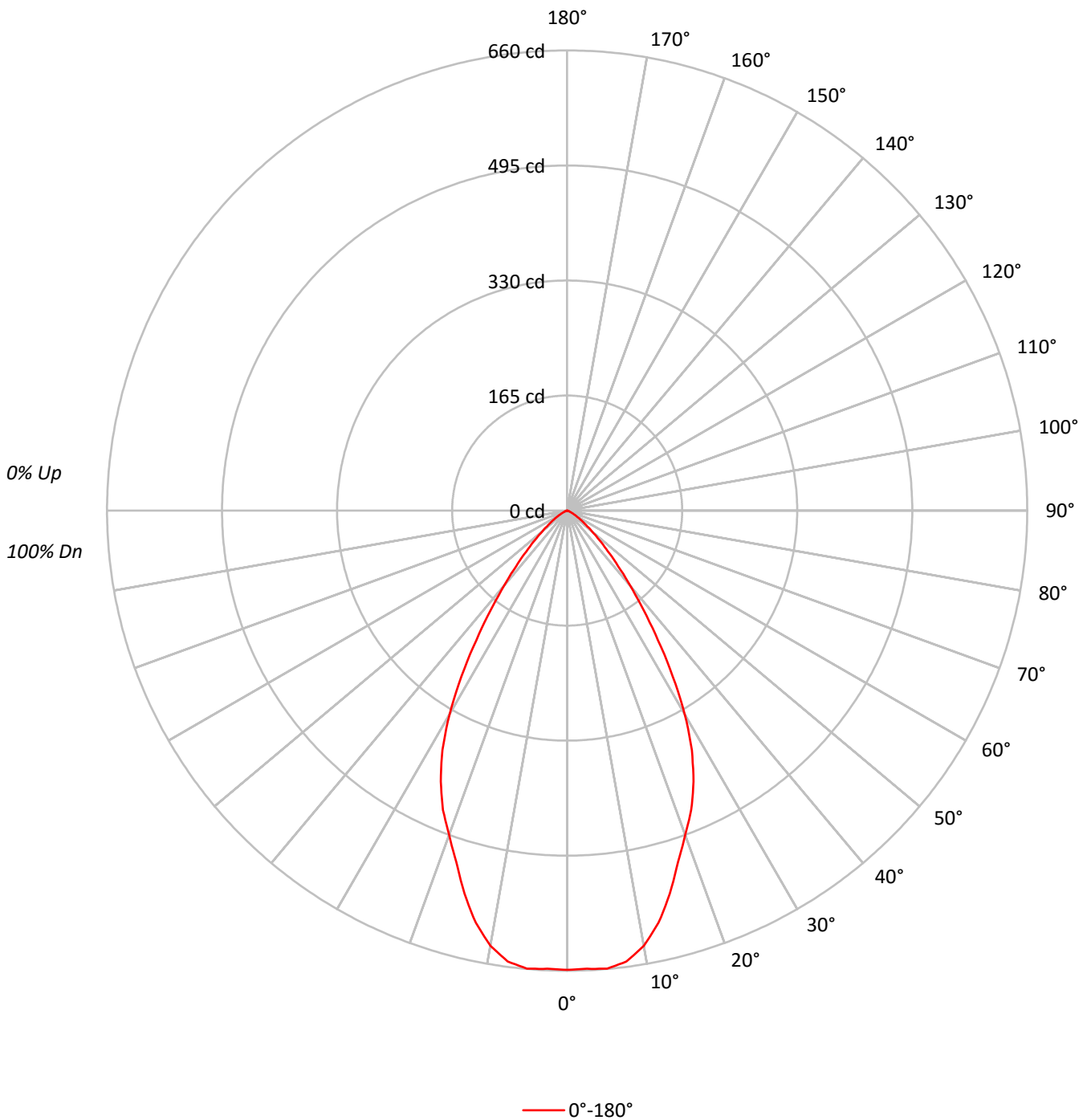
Input Watts (W): 6.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 324989 |
| 5° | 326627 |
| 10° | 317528 |
| 15° | 290483 |
| 20° | 259792 |
| 25° | 233486 |
| 30° | 192219 |
| 35° | 136904 |
| 40° | 90555 |
| 45° | 57703 |
| 50° | 35768 |
| 55° | 22107 |
| 60° | 12729 |
| 65° | 6538 |
| 70° | 3462 |
| 75° | 3050 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 62.1 | 9.5 |
| 10°-20° | 158.6 | 24.2 |
| 20°-30° | 194.3 | 29.6 |
| 30°-40° | 143.3 | 21.8 |
| 40°-50° | 66.3 | 10.1 |
| 50°-60° | 24.0 | 3.7 |
| 60°-70° | 6.2 | 0.9 |
| 70°-80° | 1.4 | 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° | 415.0 | 63.2 |
| 0°-40° | 558.3 | 85.1 |
| 0°-60° | 648.6 | 98.8 |
| 0°-90° | 656.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 656.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 659 | |
| 5° | 660 | 62 |
| 15° | 569 | 159 |
| 25° | 429 | 194 |
| 35° | 227 | 143 |
| 45° | 83 | 66 |
| 55° | 26 | 24 |
| 65° | 6 | 6 |
| 75° | 2 | 1 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 658.7 |
| 2.5° | 657.8 |
| 5° | 659.5 |
| 7.5° | 652.2 |
| 10° | 633.8 |
| 12.5° | 605.6 |
| 15° | 568.7 |
| 17.5° | 528.5 |
| 20° | 494.8 |
| 22.5° | 465.1 |
| 25° | 428.9 |
| 27.5° | 387.2 |
| 30° | 337.4 |
| 32.5° | 281.9 |
| 35° | 227.3 |
| 37.5° | 179.9 |
| 40° | 140.6 |
| 42.5° | 108.4 |
| 45° | 82.7 |
| 47.5° | 62.7 |
| 50° | 46.6 |
| 52.5° | 34.5 |
| 55° | 25.7 |
| 57.5° | 18.5 |
| 60° | 12.9 |
| 62.5° | 8.8 |
| 65° | 5.6 |
| 67.5° | 3.2 |
| 70° | 2.4 |
| 72.5° | 1.6 |
| 75° | 1.6 |
| 77.5° | 0.8 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

(END OF REPORT)