

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: P219575

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P219575
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14871)
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-NFL-UNV-X-STD-HEX
Description: MRZ INTEGRAL LED DOWNLIGHT
25 DEGREE NARROW FLOOD OPTIC WITH HEX LOUVER, LIGHT LEVEL 1
Light Source: (1) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 486.6 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 0.36 / 0.36 / 0.35
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

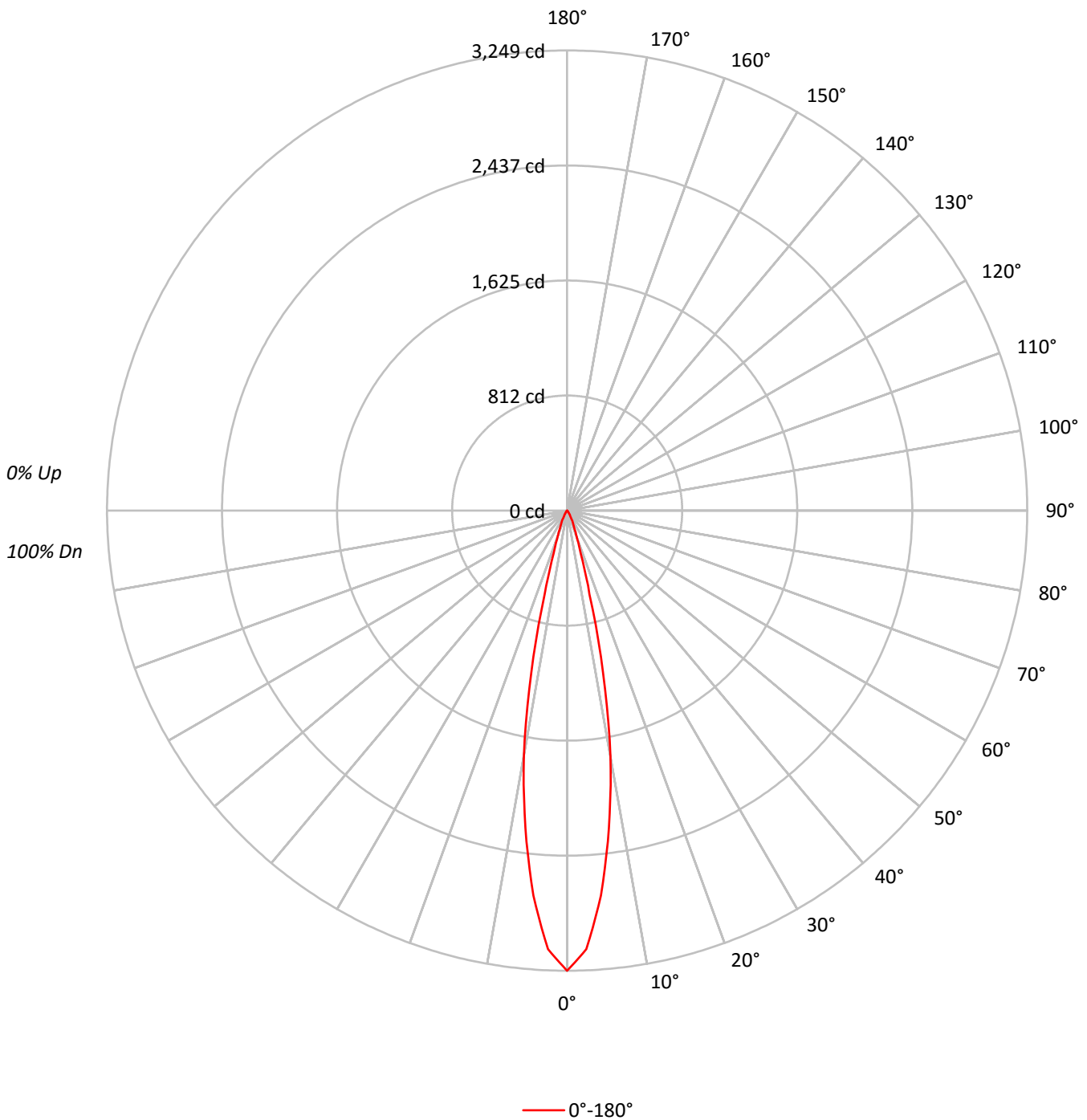
Input Watts (W): 6.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: MRZ-1-REC-X-1H-L35-80-NFL-UNV-X-STD-HEX

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 | 113 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99 | 97 |
| 2 | 112 | 109 | 106 | 104 | 110 | 107 | 105 | 103 | 104 | 102 | 100 | 101 | 100 | 98 | 99 | 97 | 96 | 95 |
| 3 | 109 | 105 | 101 | 99 | 107 | 103 | 100 | 98 | 101 | 99 | 97 | 99 | 97 | 95 | 97 | 95 | 94 | 92 |
| 4 | 106 | 101 | 98 | 95 | 105 | 100 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 95 | 93 | 91 | 90 |
| 5 | 103 | 98 | 94 | 92 | 102 | 97 | 94 | 91 | 96 | 93 | 91 | 94 | 92 | 90 | 93 | 91 | 89 | 88 |
| 6 | 101 | 95 | 92 | 89 | 100 | 95 | 91 | 89 | 93 | 90 | 88 | 92 | 90 | 88 | 91 | 89 | 87 | 86 |
| 7 | 99 | 93 | 89 | 87 | 98 | 92 | 89 | 86 | 91 | 88 | 86 | 90 | 88 | 86 | 89 | 87 | 85 | 84 |
| 8 | 96 | 91 | 87 | 84 | 95 | 90 | 87 | 84 | 89 | 86 | 84 | 88 | 86 | 84 | 88 | 85 | 83 | 82 |
| 9 | 94 | 88 | 85 | 82 | 94 | 88 | 85 | 82 | 87 | 84 | 82 | 87 | 84 | 82 | 86 | 83 | 82 | 81 |
| 10 | 92 | 87 | 83 | 81 | 92 | 86 | 83 | 81 | 86 | 82 | 80 | 85 | 82 | 80 | 84 | 82 | 80 | 79 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 1603039 |
| 5° | 1351378 |
| 10° | 882896 |
| 15° | 311374 |
| 20° | 100388 |
| 25° | 52043 |
| 30° | 24269 |
| 35° | 11143 |
| 40° | 5152 |
| 45° | 2791 |
| 50° | 1228 |
| 55° | 688 |
| 60° | 789 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 229.5 | 47.2 |
| 10°-20° | 194.2 | 39.9 |
| 20°-30° | 45.6 | 9.4 |
| 30°-40° | 12.8 | 2.6 |
| 40°-50° | 3.2 | 0.7 |
| 50°-60° | 1.0 | 0.2 |
| 60°-70° | 0.3 | 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° | 469.3 | 96.5 |
| 0°-40° | 482.1 | 99.1 |
| 0°-60° | 486.3 | 99.9 |
| 0°-90° | 486.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 486.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 3249 | |
| 5° | 2729 | 230 |
| 15° | 610 | 194 |
| 25° | 96 | 46 |
| 35° | 18 | 13 |
| 45° | 4 | 3 |
| 55° | 1 | 1 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 3249.1 |
| 2.5° | 3098.8 |
| 5° | 2728.6 |
| 7.5° | 2259.5 |
| 10° | 1762.3 |
| 12.5° | 1171.1 |
| 15° | 609.6 |
| 17.5° | 314.9 |
| 20° | 191.2 |
| 22.5° | 132.5 |
| 25° | 95.6 |
| 27.5° | 65.9 |
| 30° | 42.6 |
| 32.5° | 28.1 |
| 35° | 18.5 |
| 37.5° | 12.0 |
| 40° | 8.0 |
| 42.5° | 5.6 |
| 45° | 4.0 |
| 47.5° | 2.4 |
| 50° | 1.6 |
| 52.5° | 1.6 |
| 55° | 0.8 |
| 57.5° | 0.8 |
| 60° | 0.8 |
| 62.5° | 0.8 |
| 65° | 0.0 |
| 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)