

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO

Report Number: P887094

Luminaire Tested: ML412LSFLD2W1E-TIR4D25NFL-TL4RDMW-600LM-2700K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P887094
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-36)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/18/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFLD2W1E-TIR4D25NFL-TL4RDMW-600LM-2700K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) D2W LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

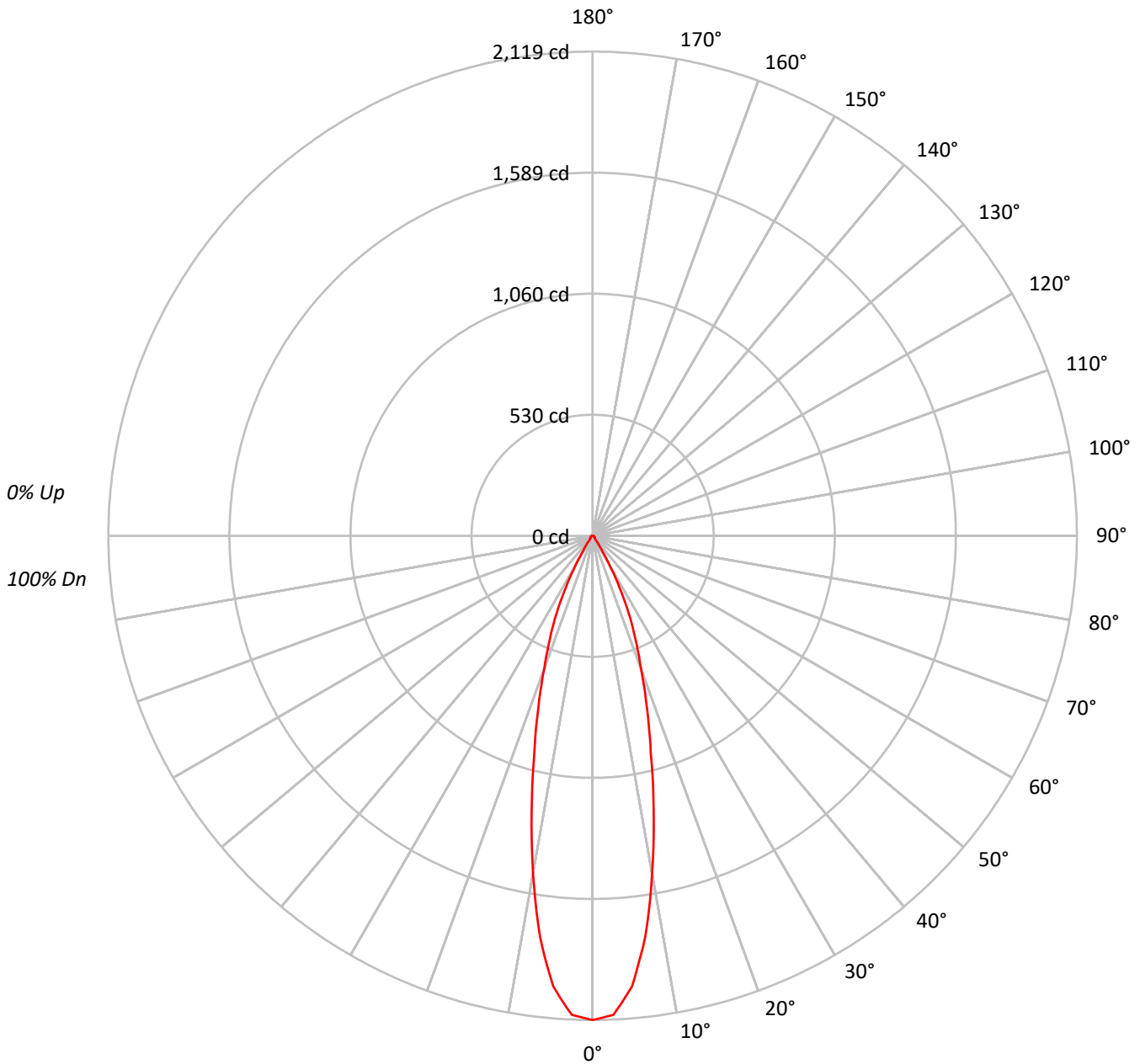
Lumens per Lamp: N/A
Luminaire Lumens: 682.8 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.51
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.4
Input Voltage (V): NR
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: 24 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P887094

CATALOG NUMBER: ML412LSFLD2W1E-TIR4D25NFL-TL4RDMW-600LM-2700K

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 | 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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 105 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 105 | 100 | 96 | 92 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 94 | 91 | 89 | 92 | 89 | 88 | 86 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 101 | 95 | 91 | 87 | 100 | 94 | 90 | 87 | 92 | 88 | 86 | 90 | 87 | 85 | 88 | 86 | 84 | 82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 98 | 91 | 86 | 83 | 96 | 90 | 86 | 82 | 88 | 84 | 82 | 87 | 83 | 81 | 85 | 82 | 80 | 79 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 94 | 87 | 82 | 79 | 93 | 86 | 82 | 78 | 85 | 81 | 78 | 84 | 80 | 77 | 82 | 79 | 77 | 76 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 91 | 84 | 79 | 75 | 90 | 83 | 78 | 75 | 82 | 78 | 75 | 81 | 77 | 74 | 80 | 76 | 74 | 73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 88 | 80 | 76 | 72 | 87 | 80 | 75 | 72 | 79 | 75 | 72 | 78 | 74 | 72 | 77 | 74 | 71 | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 85 | 77 | 73 | 69 | 84 | 77 | 72 | 69 | 76 | 72 | 69 | 75 | 72 | 69 | 75 | 71 | 69 | 68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 82 | 75 | 70 | 67 | 82 | 74 | 70 | 67 | 74 | 70 | 67 | 73 | 69 | 67 | 72 | 69 | 66 | 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 261382 |
| 5° | 245046 |
| 10° | 187948 |
| 15° | 125705 |
| 20° | 81264 |
| 25° | 50778 |
| 30° | 21179 |
| 35° | 6204 |
| 40° | 2576 |
| 45° | 2163 |
| 50° | 2168 |
| 55° | 2215 |
| 60° | 2146 |
| 65° | 2247 |
| 70° | 2236 |
| 75° | 2192 |
| 80° | 2202 |
| 85° | 2123 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 2828 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 173.3 | 25.4 |
| 10°-20° | 275.5 | 40.3 |
| 20°-30° | 166.8 | 24.4 |
| 30°-40° | 33.8 | 5.0 |
| 40°-50° | 9.9 | 1.4 |
| 50°-60° | 9.2 | 1.3 |
| 60°-70° | 7.6 | 1.1 |
| 70°-80° | 5.0 | 0.7 |
| 80°-90° | 1.8 | 0.3 |
| 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° | 615.5 | 90.1 |
| 0°-40° | 649.4 | 95.1 |
| 0°-60° | 668.4 | 97.9 |
| 0°-90° | 682.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 682.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2119 | |
| 5° | 1979 | 173 |
| 15° | 984 | 275 |
| 25° | 373 | 167 |
| 35° | 41 | 34 |
| 45° | 12 | 10 |
| 55° | 10 | 9 |
| 65° | 8 | 8 |
| 75° | 5 | 5 |
| 85° | 2 | 2 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 2119.1 |
| 2.5° | 2098.5 |
| 5° | 1979.1 |
| 7.5° | 1768.7 |
| 10° | 1500.6 |
| 12.5° | 1233.0 |
| 15° | 984.4 |
| 17.5° | 789.9 |
| 20° | 619.1 |
| 22.5° | 487.3 |
| 25° | 373.1 |
| 27.5° | 252.2 |
| 30° | 148.7 |
| 32.5° | 80.8 |
| 35° | 41.2 |
| 37.5° | 21.1 |
| 40° | 16.0 |
| 42.5° | 13.9 |
| 45° | 12.4 |
| 47.5° | 11.3 |
| 50° | 11.3 |
| 52.5° | 10.8 |
| 55° | 10.3 |
| 57.5° | 9.8 |
| 60° | 8.7 |
| 62.5° | 8.2 |
| 65° | 7.7 |
| 67.5° | 7.2 |
| 70° | 6.2 |
| 72.5° | 5.7 |
| 75° | 4.6 |
| 77.5° | 4.1 |
| 80° | 3.1 |
| 82.5° | 2.6 |
| 85° | 1.5 |
| 87.5° | 1.0 |
| 90° | 0.0 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180°

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Scaled Data Report



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