

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P580855

Luminaire Tested: **HC450D010-HM44560830-41MDC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580855
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560830-41MDC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4829.1 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1 / 0.96
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

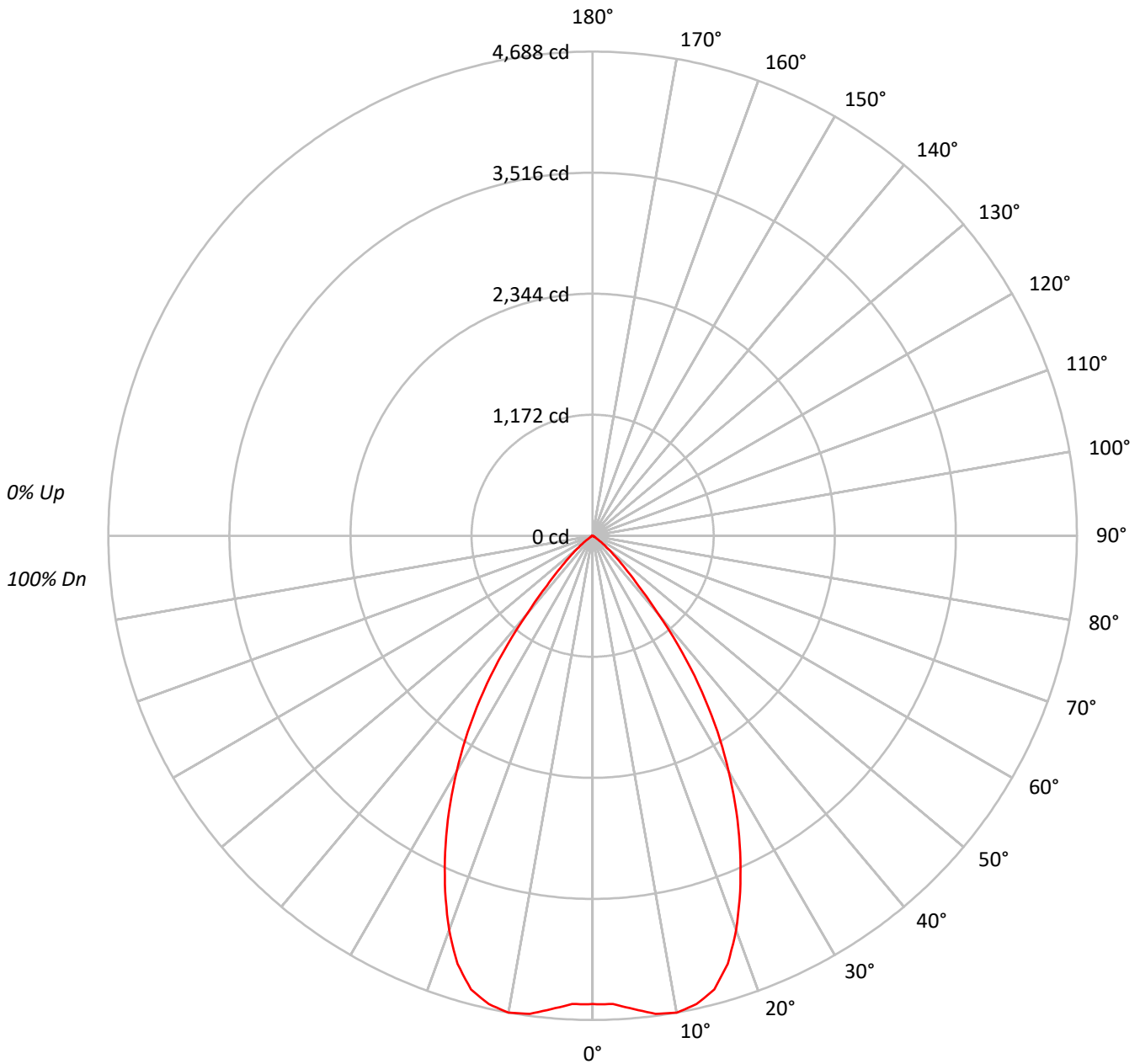
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | |
| 2 | 108 | 103 | 99 | 95 | 105 | 101 | 97 | 94 | 98 | 95 | 92 | 95 | 92 | 90 | 92 | 90 | 88 | 86 | | | |
| 3 | 102 | 95 | 90 | 86 | 100 | 94 | 89 | 86 | 91 | 87 | 84 | 89 | 86 | 83 | 87 | 84 | 82 | 80 | | | |
| 4 | 97 | 89 | 83 | 79 | 95 | 88 | 82 | 78 | 86 | 81 | 77 | 84 | 80 | 77 | 82 | 78 | 76 | 74 | | | |
| 5 | 91 | 83 | 77 | 72 | 90 | 82 | 76 | 72 | 80 | 75 | 72 | 78 | 74 | 71 | 77 | 73 | 70 | 69 | | | |
| 6 | 87 | 78 | 71 | 67 | 85 | 77 | 71 | 67 | 75 | 70 | 66 | 74 | 69 | 66 | 72 | 68 | 65 | 64 | | | |
| 7 | 82 | 73 | 66 | 62 | 81 | 72 | 66 | 62 | 71 | 65 | 62 | 69 | 65 | 61 | 68 | 64 | 61 | 60 | | | |
| 8 | 78 | 68 | 62 | 58 | 77 | 68 | 62 | 58 | 67 | 61 | 57 | 65 | 61 | 57 | 65 | 60 | 57 | 56 | | | |
| 9 | 74 | 64 | 58 | 54 | 73 | 64 | 58 | 54 | 63 | 57 | 54 | 62 | 57 | 54 | 61 | 57 | 53 | 52 | | | |
| 10 | 70 | 61 | 55 | 51 | 69 | 60 | 54 | 51 | 59 | 54 | 50 | 58 | 54 | 50 | 58 | 53 | 50 | 49 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° |
|-----|--------|
| 0° | 559348 |
| 5° | 569632 |
| 10° | 587177 |
| 15° | 580676 |
| 20° | 533211 |
| 25° | 460007 |
| 30° | 374869 |
| 35° | 277574 |
| 40° | 159245 |
| 45° | 76979 |
| 50° | 36651 |
| 55° | 12774 |
| 60° | 4638 |
| 65° | 2743 |
| 70° | 2272 |
| 75° | 1477 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 442.5 | 9.2 |
| 10°-20° | 1260.7 | 26.1 |
| 20°-30° | 1539.5 | 31.9 |
| 30°-40° | 1131.8 | 23.4 |
| 40°-50° | 375.1 | 7.8 |
| 50°-60° | 66.2 | 1.4 |
| 60°-70° | 10.0 | 0.2 |
| 70°-80° | 3.3 | 0.1 |
| 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° | 3242.6 | 67.1 |
| 0°-40° | 4374.4 | 90.6 |
| 0°-60° | 4815.8 | 99.7 |
| 0°-90° | 4829.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4829.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 4535 | |
| 5° | 4601 | 442 |
| 15° | 4547 | 1261 |
| 25° | 3380 | 1539 |
| 35° | 1843 | 1132 |
| 45° | 441 | 375 |
| 55° | 59 | 66 |
| 65° | 9 | 10 |
| 75° | 3 | 3 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 4534.8 |
| 2.5° | 4537.9 |
| 5° | 4600.6 |
| 7.5° | 4669.4 |
| 10° | 4688.1 |
| 12.5° | 4644.4 |
| 15° | 4547.3 |
| 17.5° | 4347.1 |
| 20° | 4062.2 |
| 22.5° | 3730.5 |
| 25° | 3380.0 |
| 27.5° | 3013.8 |
| 30° | 2632.0 |
| 32.5° | 2250.2 |
| 35° | 1843.4 |
| 37.5° | 1430.2 |
| 40° | 989.0 |
| 42.5° | 654.1 |
| 45° | 441.3 |
| 47.5° | 294.2 |
| 50° | 191.0 |
| 52.5° | 112.7 |
| 55° | 59.4 |
| 57.5° | 25.0 |
| 60° | 18.8 |
| 62.5° | 12.5 |
| 65° | 9.4 |
| 67.5° | 6.3 |
| 70° | 6.3 |
| 72.5° | 3.1 |
| 75° | 3.1 |
| 77.5° | 3.1 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180°







(END OF REPORT)