

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: P579708

Luminaire Tested: **HC410D010-HM40525830-41MDC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579708
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: HC410D010-HM40525830-41MDC
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: 1093.7 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1 / 1 / 0.96
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

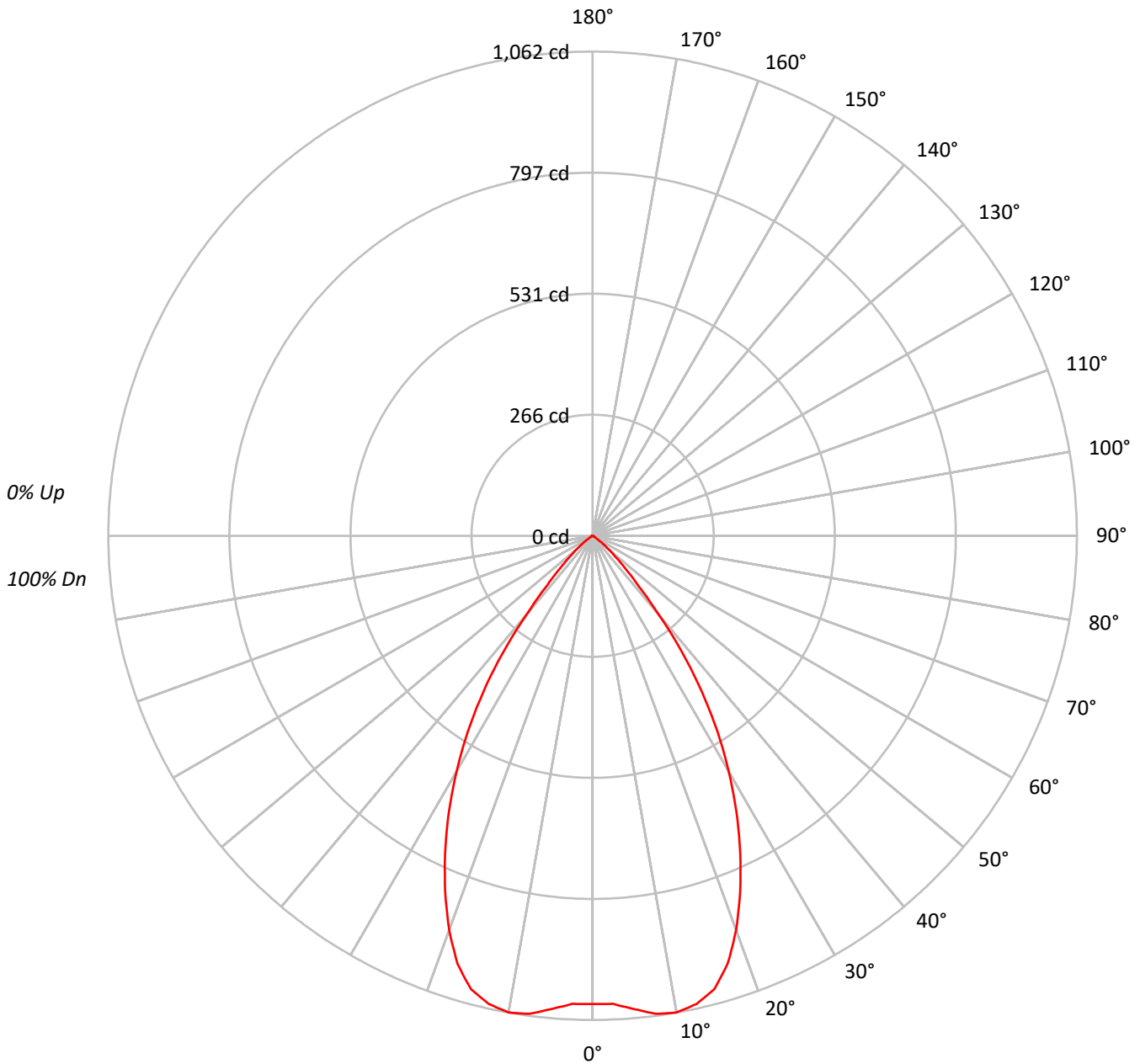
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 71 | 61 | 55 | 51 | 69 | 60 | 54 | 51 | 59 | 54 | 50 | 58 | 54 | 50 | 58 | 53 | 50 | 49 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 126676 |
| 5° | 129017 |
| 10° | 132989 |
| 15° | 131515 |
| 20° | 120774 |
| 25° | 104182 |
| 30° | 84901 |
| 35° | 62866 |
| 40° | 36068 |
| 45° | 17426 |
| 50° | 8290 |
| 55° | 2882 |
| 60° | 1036 |
| 65° | 642 |
| 70° | 505 |
| 75° | 334 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.2 | 9.2 |
| 10°-20° | 285.5 | 26.1 |
| 20°-30° | 348.7 | 31.9 |
| 30°-40° | 256.3 | 23.4 |
| 40°-50° | 85.0 | 7.8 |
| 50°-60° | 15.0 | 1.4 |
| 60°-70° | 2.3 | 0.2 |
| 70°-80° | 0.7 | 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° | 734.4 | 67.2 |
| 0°-40° | 990.7 | 90.6 |
| 0°-60° | 1090.7 | 99.7 |
| 0°-90° | 1093.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1093.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1027 | |
| 5° | 1042 | 100 |
| 15° | 1030 | 286 |
| 25° | 766 | 349 |
| 35° | 418 | 256 |
| 45° | 100 | 85 |
| 55° | 13 | 15 |
| 65° | 2 | 2 |
| 75° | 1 | 1 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1027.0 |
| 2.5° | 1027.7 |
| 5° | 1042.0 |
| 7.5° | 1057.5 |
| 10° | 1061.8 |
| 12.5° | 1051.9 |
| 15° | 1029.9 |
| 17.5° | 984.5 |
| 20° | 920.1 |
| 22.5° | 844.9 |
| 25° | 765.5 |
| 27.5° | 682.6 |
| 30° | 596.1 |
| 32.5° | 509.6 |
| 35° | 417.5 |
| 37.5° | 323.9 |
| 40° | 224.0 |
| 42.5° | 148.2 |
| 45° | 99.9 |
| 47.5° | 66.6 |
| 50° | 43.2 |
| 52.5° | 25.5 |
| 55° | 13.4 |
| 57.5° | 5.7 |
| 60° | 4.2 |
| 62.5° | 2.8 |
| 65° | 2.2 |
| 67.5° | 1.4 |
| 70° | 1.4 |
| 72.5° | 0.7 |
| 75° | 0.7 |
| 77.5° | 0.7 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)