

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



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: P579770

Luminaire Tested: **HCC4W10D010MB-HM40525927-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579770
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W10D010MB-HM40525927-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

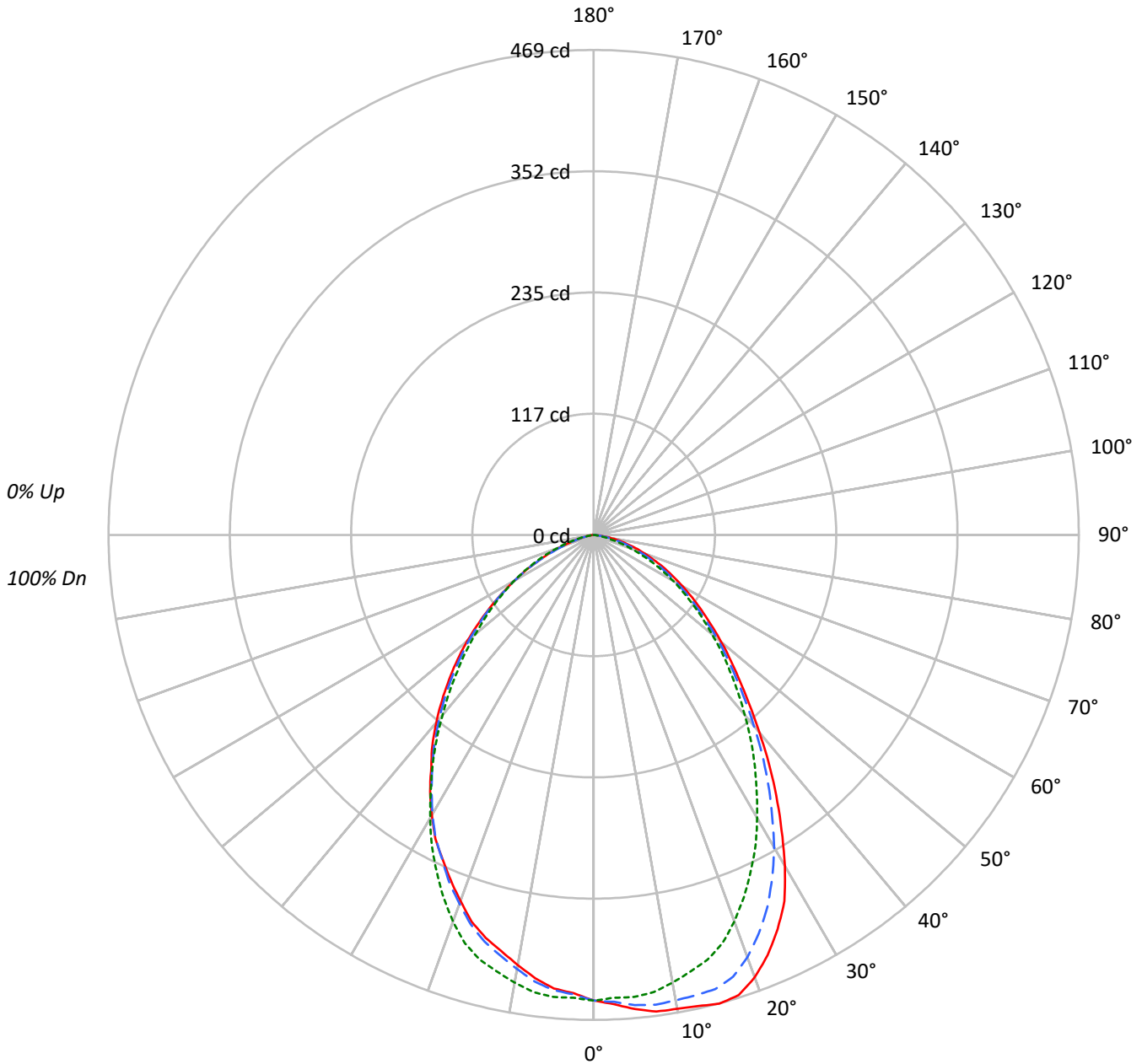
Lumens per Lamp: N/A
Luminaire Lumens: 858.3 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 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 | 111 | 107 | 104 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 | | | | | | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | | | | | |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 55543 | 55543 | 55543 |
| 5° | 57005 | 55544 | 54517 |
| 10° | 58291 | 55072 | 52892 |
| 15° | 59928 | 54297 | 51500 |
| 20° | 59763 | 52203 | 49420 |
| 25° | 57256 | 48886 | 47049 |
| 30° | 52655 | 45007 | 44537 |
| 35° | 46333 | 40852 | 41198 |
| 40° | 40077 | 36567 | 38096 |
| 45° | 34835 | 32498 | 34434 |
| 50° | 30914 | 28649 | 30588 |
| 55° | 27440 | 25139 | 26236 |
| 60° | 24422 | 21808 | 21808 |
| 65° | 21714 | 18125 | 16986 |
| 70° | 18753 | 13704 | 12117 |
| 75° | 15727 | 9055 | 7482 |
| 80° | 11862 | 4333 | 3978 |
| 85° | 6227 | 1557 | 1557 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 42.6 | 5.0 |
| 10°-20° | 120.9 | 14.1 |
| 20°-30° | 170.5 | 19.9 |
| 30°-40° | 176.1 | 20.5 |
| 40°-50° | 149.3 | 17.4 |
| 50°-60° | 108.6 | 12.7 |
| 60°-70° | 63.5 | 7.4 |
| 70°-80° | 23.6 | 2.7 |
| 80°-90° | 3.1 | 0.4 |
| 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° | 334.1 | 38.9 |
| 0°-40° | 510.2 | 59.4 |
| 0°-60° | 768.2 | 89.5 |
| 0°-90° | 858.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 858.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 450 | 450 | 450 | 450 | 450 | |
| 5° | 460 | 456 | 449 | 442 | 440 | 44 |
| 15° | 469 | 455 | 425 | 407 | 403 | 132 |
| 25° | 421 | 397 | 359 | 346 | 346 | 192 |
| 35° | 308 | 294 | 271 | 272 | 274 | 192 |
| 45° | 200 | 194 | 186 | 193 | 197 | 155 |
| 55° | 128 | 121 | 117 | 121 | 122 | 115 |
| 65° | 74 | 68 | 62 | 58 | 58 | 74 |
| 75° | 33 | 27 | 19 | 15 | 16 | 35 |
| 85° | 4 | 3 | 1 | 1 | 1 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 450.3 | 450.3 | 450.3 | 450.3 | 450.3 | 450.3 | 450.3 | 450.3 | 450.3 |
| 2.5° | 454.2 | 453.2 | 452.0 | 450.3 | 448.0 | 446.4 | 444.7 | 443.6 | 443.6 |
| 5° | 460.4 | 458.7 | 456.5 | 452.6 | 448.6 | 445.3 | 441.9 | 440.3 | 440.3 |
| 7.5° | 464.9 | 462.6 | 458.2 | 452.6 | 445.9 | 440.9 | 435.7 | 433.6 | 432.4 |
| 10° | 465.4 | 463.2 | 457.0 | 448.6 | 439.7 | 431.9 | 426.3 | 422.9 | 422.3 |
| 12.5° | 466.6 | 463.7 | 455.9 | 444.2 | 432.4 | 422.9 | 416.7 | 413.4 | 412.3 |
| 15° | 469.3 | 465.4 | 454.7 | 439.7 | 425.2 | 414.0 | 407.3 | 404.4 | 403.3 |
| 17.5° | 466.6 | 460.9 | 448.0 | 430.2 | 414.0 | 401.6 | 394.9 | 392.2 | 392.2 |
| 20° | 455.3 | 449.7 | 434.6 | 415.0 | 397.7 | 386.0 | 379.3 | 377.6 | 376.5 |
| 22.5° | 439.7 | 433.6 | 417.3 | 396.6 | 379.3 | 368.6 | 364.2 | 361.9 | 361.3 |
| 25° | 420.7 | 414.5 | 397.2 | 375.9 | 359.2 | 350.2 | 346.3 | 346.3 | 345.7 |
| 27.5° | 399.4 | 391.6 | 373.7 | 355.2 | 339.0 | 332.3 | 330.6 | 330.6 | 331.2 |
| 30° | 369.7 | 364.2 | 349.0 | 331.2 | 316.0 | 311.6 | 311.6 | 312.7 | 312.7 |
| 32.5° | 337.9 | 334.0 | 320.6 | 304.9 | 293.1 | 290.3 | 291.4 | 293.7 | 294.3 |
| 35° | 307.7 | 303.2 | 294.3 | 280.3 | 271.3 | 270.2 | 271.9 | 273.6 | 273.6 |
| 37.5° | 278.0 | 273.6 | 267.4 | 256.2 | 249.4 | 250.0 | 252.3 | 254.6 | 256.2 |
| 40° | 248.9 | 245.6 | 241.1 | 232.2 | 227.1 | 229.3 | 232.2 | 234.4 | 236.6 |
| 42.5° | 223.2 | 219.9 | 216.4 | 209.7 | 206.4 | 209.2 | 212.6 | 214.9 | 217.0 |
| 45° | 199.7 | 197.4 | 194.1 | 188.6 | 186.3 | 189.0 | 193.0 | 195.3 | 197.4 |
| 47.5° | 179.6 | 178.4 | 174.0 | 169.0 | 167.9 | 170.6 | 174.0 | 176.7 | 178.4 |
| 50° | 161.1 | 159.4 | 155.6 | 150.4 | 149.3 | 153.9 | 156.0 | 157.7 | 159.4 |
| 52.5° | 143.2 | 141.6 | 137.0 | 132.6 | 132.6 | 135.9 | 137.6 | 138.2 | 139.9 |
| 55° | 127.6 | 125.9 | 121.4 | 118.0 | 116.9 | 119.7 | 120.9 | 120.9 | 122.0 |
| 57.5° | 113.0 | 111.3 | 106.9 | 102.9 | 102.4 | 104.0 | 104.0 | 104.0 | 104.6 |
| 60° | 99.0 | 97.3 | 92.9 | 89.6 | 88.4 | 89.0 | 88.4 | 87.9 | 88.4 |
| 62.5° | 86.1 | 84.4 | 80.0 | 76.1 | 75.0 | 75.0 | 73.3 | 72.7 | 73.3 |
| 65° | 74.4 | 71.6 | 68.3 | 64.3 | 62.1 | 60.4 | 58.2 | 58.2 | 58.2 |
| 67.5° | 62.7 | 60.4 | 56.4 | 52.6 | 49.7 | 47.0 | 43.6 | 44.7 | 45.3 |
| 70° | 52.0 | 50.3 | 45.9 | 42.0 | 38.0 | 34.7 | 31.9 | 33.0 | 33.6 |
| 72.5° | 42.6 | 40.3 | 36.4 | 31.9 | 28.6 | 24.0 | 22.4 | 23.4 | 23.4 |
| 75° | 33.0 | 30.7 | 27.4 | 23.0 | 19.0 | 15.1 | 15.1 | 15.7 | 15.7 |
| 77.5° | 24.6 | 22.4 | 19.0 | 15.1 | 11.7 | 9.0 | 9.6 | 9.6 | 9.6 |
| 80° | 16.7 | 15.1 | 12.3 | 9.0 | 6.1 | 5.0 | 5.0 | 5.0 | 5.6 |
| 82.5° | 9.6 | 8.4 | 6.7 | 4.4 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 85° | 4.4 | 3.3 | 2.8 | 1.7 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| 87.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180° - - 45°-225° - - - - 90°-270°

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