

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: P581457

Luminaire Tested: **HCC4W07D010MW-HM40525835-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581457
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: HCC4W07D010MW-HM40525835-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

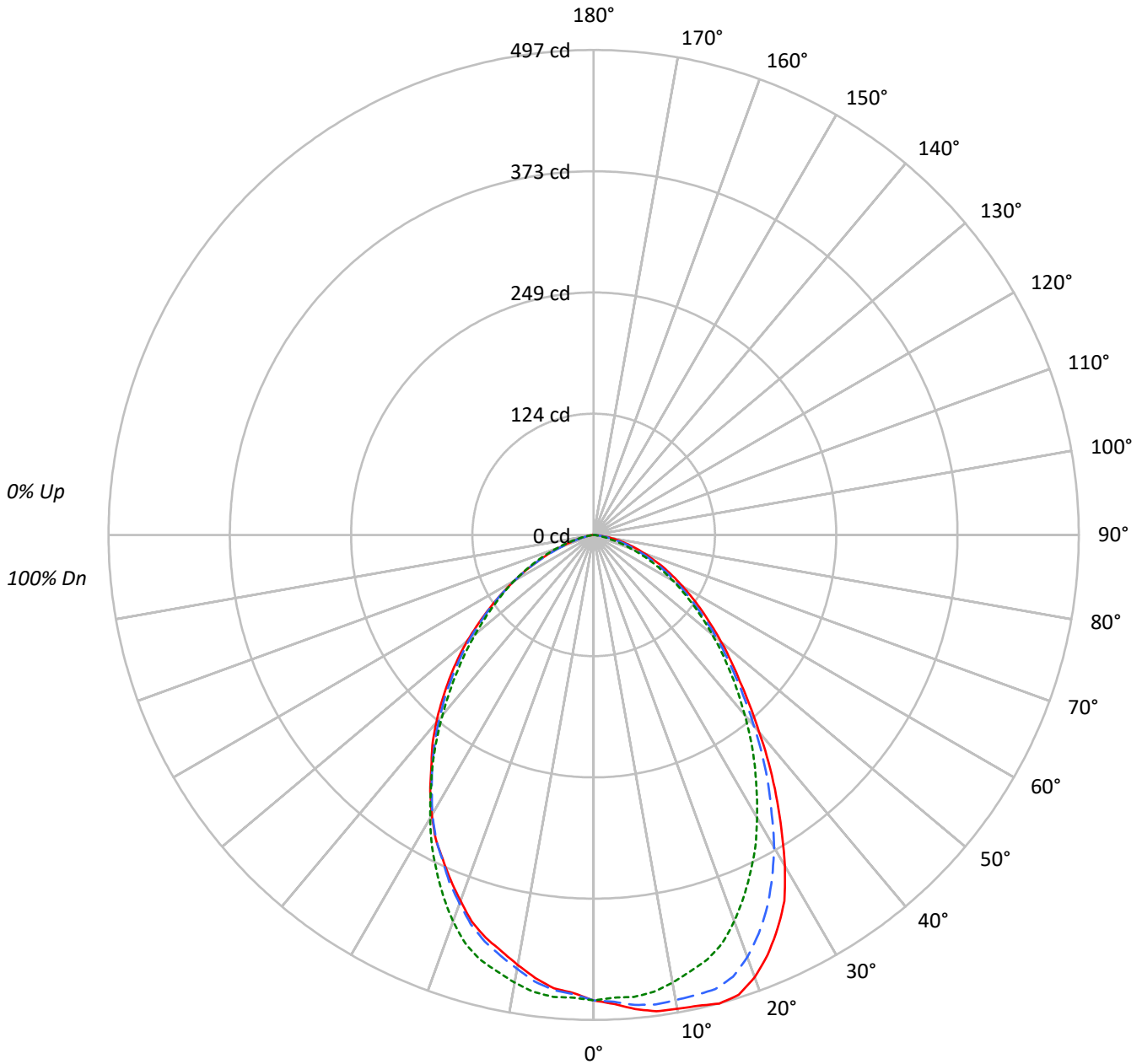
Lumens per Lamp: N/A
Luminaire Lumens: 909.3 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 8
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° | 58836 | 58836 | 58836 |
| 5° | 60385 | 58838 | 57748 |
| 10° | 61760 | 58341 | 56049 |
| 15° | 63491 | 57515 | 54565 |
| 20° | 63321 | 55301 | 52360 |
| 25° | 60645 | 51771 | 49839 |
| 30° | 55789 | 47685 | 47186 |
| 35° | 49073 | 43291 | 43622 |
| 40° | 42460 | 38741 | 40367 |
| 45° | 36911 | 34416 | 36492 |
| 50° | 32756 | 30357 | 32411 |
| 55° | 29053 | 26623 | 27784 |
| 60° | 25878 | 23115 | 23115 |
| 65° | 23028 | 19204 | 18008 |
| 70° | 19871 | 14534 | 12803 |
| 75° | 16632 | 9579 | 7911 |
| 80° | 12644 | 4617 | 4191 |
| 85° | 6793 | 1557 | 1557 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.2 | 5.0 |
| 10°-20° | 128.1 | 14.1 |
| 20°-30° | 180.6 | 19.9 |
| 30°-40° | 186.6 | 20.5 |
| 40°-50° | 158.2 | 17.4 |
| 50°-60° | 115.1 | 12.7 |
| 60°-70° | 67.3 | 7.4 |
| 70°-80° | 25.0 | 2.7 |
| 80°-90° | 3.3 | 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° | 353.9 | 38.9 |
| 0°-40° | 540.5 | 59.4 |
| 0°-60° | 813.8 | 89.5 |
| 0°-90° | 909.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 909.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 477 | 477 | 477 | 477 | 477 | |
| 5° | 488 | 484 | 475 | 468 | 466 | 47 |
| 15° | 497 | 482 | 450 | 431 | 427 | 140 |
| 25° | 446 | 421 | 380 | 367 | 366 | 204 |
| 35° | 326 | 312 | 288 | 288 | 290 | 204 |
| 45° | 212 | 206 | 197 | 204 | 209 | 165 |
| 55° | 135 | 129 | 124 | 128 | 129 | 122 |
| 65° | 79 | 72 | 66 | 62 | 62 | 78 |
| 75° | 35 | 29 | 20 | 16 | 17 | 38 |
| 85° | 5 | 3 | 1 | 1 | 1 | 7 |
| 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° | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 | 477.0 |
| 2.5° | 481.1 | 480.0 | 478.9 | 477.0 | 474.7 | 473.0 | 471.1 | 469.9 | 469.9 |
| 5° | 487.7 | 485.9 | 483.5 | 479.4 | 475.2 | 471.7 | 468.2 | 466.4 | 466.4 |
| 7.5° | 492.4 | 490.1 | 485.4 | 479.4 | 472.3 | 466.9 | 461.7 | 459.3 | 458.0 |
| 10° | 493.1 | 490.7 | 484.1 | 475.2 | 465.8 | 457.5 | 451.6 | 448.0 | 447.5 |
| 12.5° | 494.2 | 491.3 | 483.0 | 470.6 | 458.0 | 448.0 | 441.5 | 437.9 | 436.8 |
| 15° | 497.2 | 493.1 | 481.8 | 465.8 | 450.4 | 438.5 | 431.4 | 428.5 | 427.3 |
| 17.5° | 494.2 | 488.3 | 474.7 | 455.7 | 438.5 | 425.5 | 418.3 | 415.4 | 415.4 |
| 20° | 482.4 | 476.5 | 460.4 | 439.7 | 421.3 | 408.9 | 401.8 | 400.0 | 398.9 |
| 22.5° | 465.8 | 459.3 | 442.1 | 420.1 | 401.8 | 390.6 | 385.8 | 383.4 | 382.8 |
| 25° | 445.6 | 439.2 | 420.7 | 398.2 | 380.4 | 371.0 | 366.8 | 366.8 | 366.2 |
| 27.5° | 423.1 | 414.8 | 395.9 | 376.3 | 359.2 | 352.0 | 350.3 | 350.3 | 350.8 |
| 30° | 391.7 | 385.8 | 369.7 | 350.8 | 334.8 | 330.1 | 330.1 | 331.3 | 331.3 |
| 32.5° | 357.9 | 353.8 | 339.6 | 323.0 | 310.6 | 307.6 | 308.7 | 311.1 | 311.7 |
| 35° | 325.9 | 321.1 | 311.7 | 296.9 | 287.5 | 286.2 | 288.0 | 289.7 | 289.7 |
| 37.5° | 294.5 | 289.7 | 283.2 | 271.4 | 264.2 | 264.9 | 267.3 | 269.6 | 271.4 |
| 40° | 263.7 | 260.1 | 255.4 | 245.9 | 240.6 | 243.0 | 245.9 | 248.3 | 250.7 |
| 42.5° | 236.5 | 232.9 | 229.3 | 222.3 | 218.7 | 221.7 | 225.2 | 227.6 | 229.9 |
| 45° | 211.6 | 209.2 | 205.6 | 199.7 | 197.3 | 200.3 | 204.5 | 206.8 | 209.2 |
| 47.5° | 190.3 | 189.0 | 184.4 | 179.0 | 177.8 | 180.7 | 184.4 | 187.3 | 189.0 |
| 50° | 170.7 | 168.9 | 164.8 | 159.4 | 158.2 | 163.0 | 165.4 | 167.1 | 168.9 |
| 52.5° | 151.7 | 149.9 | 145.2 | 140.4 | 140.4 | 144.0 | 145.8 | 146.3 | 148.2 |
| 55° | 135.1 | 133.4 | 128.6 | 125.1 | 123.8 | 126.8 | 128.0 | 128.0 | 129.2 |
| 57.5° | 119.7 | 117.9 | 113.2 | 109.0 | 108.5 | 110.3 | 110.3 | 110.3 | 110.8 |
| 60° | 104.9 | 103.1 | 98.3 | 94.8 | 93.7 | 94.2 | 93.7 | 93.1 | 93.7 |
| 62.5° | 91.3 | 89.4 | 84.8 | 80.6 | 79.4 | 79.4 | 77.6 | 77.0 | 77.6 |
| 65° | 78.9 | 75.9 | 72.3 | 68.2 | 65.8 | 64.0 | 61.7 | 61.7 | 61.7 |
| 67.5° | 66.3 | 64.0 | 59.9 | 55.6 | 52.7 | 49.7 | 46.2 | 47.5 | 48.0 |
| 70° | 55.1 | 53.4 | 48.6 | 44.5 | 40.3 | 36.8 | 33.8 | 34.9 | 35.5 |
| 72.5° | 45.1 | 42.7 | 38.5 | 33.8 | 30.3 | 25.5 | 23.7 | 24.9 | 24.9 |
| 75° | 34.9 | 32.5 | 29.0 | 24.4 | 20.1 | 16.0 | 16.0 | 16.6 | 16.6 |
| 77.5° | 26.1 | 23.7 | 20.1 | 16.0 | 12.4 | 9.4 | 10.1 | 10.1 | 10.1 |
| 80° | 17.8 | 16.0 | 13.1 | 9.4 | 6.5 | 5.3 | 5.3 | 5.3 | 5.9 |
| 82.5° | 10.1 | 8.9 | 7.1 | 4.8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 85° | 4.8 | 3.5 | 3.0 | 1.8 | 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



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

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