

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: P581495

Luminaire Tested: **HCC4W07D010BZ-HM40525927-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581495
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W07D010BZ-HM40525927-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

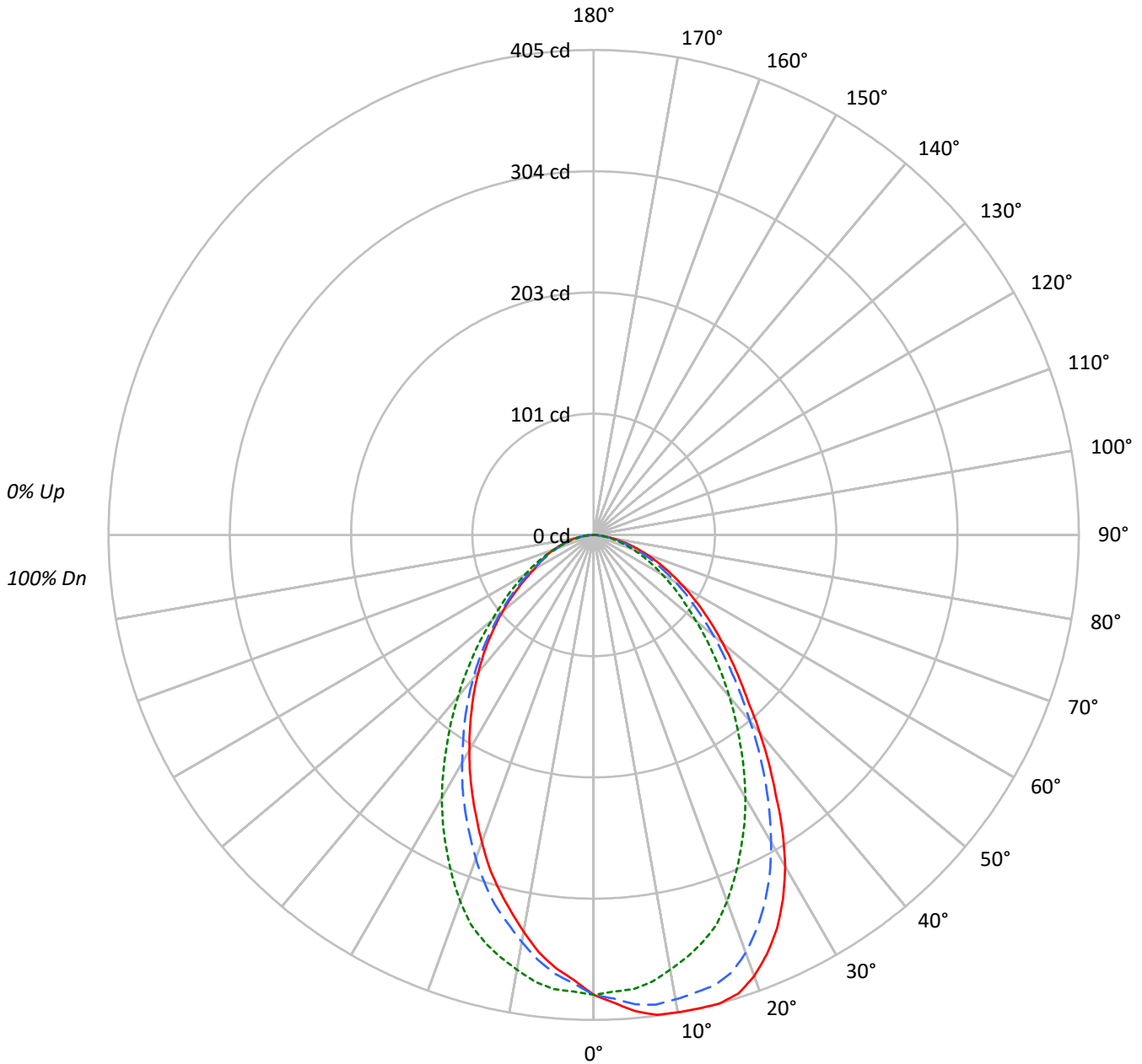
Lumens per Lamp: N/A
Luminaire Lumens: 685.7 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 106 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 73 | 69 | 76 | 72 | 68 | 66 | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 48 | 47 | | | | | | | | |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 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 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | |
| 10 | 59 | 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° | 47365 | 47365 | 47365 |
| 5° | 49440 | 47149 | 44958 |
| 10° | 50701 | 46167 | 42146 |
| 15° | 51743 | 44937 | 39101 |
| 20° | 51455 | 42752 | 35808 |
| 25° | 49294 | 39523 | 32582 |
| 30° | 45548 | 36091 | 29525 |
| 35° | 39933 | 32118 | 26727 |
| 40° | 34763 | 28371 | 24072 |
| 45° | 30247 | 24735 | 21526 |
| 50° | 26942 | 21319 | 18978 |
| 55° | 24085 | 18752 | 16430 |
| 60° | 21511 | 16356 | 14160 |
| 65° | 19117 | 14389 | 13455 |
| 70° | 16770 | 12406 | 12550 |
| 75° | 14202 | 10532 | 11628 |
| 80° | 10939 | 8950 | 10584 |
| 85° | 6510 | 7076 | 9057 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 36.0 | 5.2 |
| 10°-20° | 99.3 | 14.5 |
| 20°-30° | 135.6 | 19.8 |
| 30°-40° | 136.2 | 19.9 |
| 40°-50° | 112.7 | 16.4 |
| 50°-60° | 81.7 | 11.9 |
| 60°-70° | 51.7 | 7.5 |
| 70°-80° | 26.1 | 3.8 |
| 80°-90° | 6.4 | 0.9 |
| 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° | 270.9 | 39.5 |
| 0°-40° | 407.1 | 59.4 |
| 0°-60° | 601.4 | 87.7 |
| 0°-90° | 685.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 685.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 384 | 384 | 384 | 384 | 384 | |
| 5° | 399 | 393 | 381 | 368 | 363 | 38 |
| 15° | 405 | 389 | 352 | 319 | 306 | 114 |
| 25° | 362 | 338 | 290 | 254 | 239 | 166 |
| 35° | 265 | 249 | 213 | 187 | 178 | 166 |
| 45° | 173 | 164 | 142 | 128 | 123 | 135 |
| 55° | 112 | 102 | 87 | 80 | 76 | 101 |
| 65° | 66 | 58 | 49 | 44 | 46 | 65 |
| 75° | 30 | 26 | 22 | 23 | 24 | 32 |
| 85° | 5 | 5 | 5 | 6 | 6 | 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° | 384.0 | 384.0 | 384.0 | 384.0 | 384.0 | 384.0 | 384.0 | 384.0 | 384.0 |
| 2.5° | 391.1 | 389.9 | 387.6 | 384.9 | 381.7 | 378.0 | 375.0 | 373.2 | 372.2 |
| 5° | 399.3 | 397.5 | 393.4 | 387.6 | 380.8 | 374.1 | 368.1 | 364.5 | 363.1 |
| 7.5° | 404.3 | 401.6 | 395.7 | 386.7 | 376.2 | 366.3 | 357.8 | 352.8 | 351.4 |
| 10° | 404.8 | 401.6 | 393.9 | 381.7 | 368.6 | 355.5 | 345.2 | 337.9 | 336.5 |
| 12.5° | 405.2 | 401.1 | 391.6 | 377.1 | 361.0 | 344.7 | 332.0 | 323.4 | 321.1 |
| 15° | 405.2 | 401.1 | 389.4 | 372.2 | 351.9 | 333.3 | 319.3 | 309.4 | 306.2 |
| 17.5° | 401.6 | 397.0 | 383.1 | 363.1 | 341.1 | 320.2 | 304.0 | 293.6 | 290.4 |
| 20° | 392.0 | 387.1 | 371.3 | 349.6 | 325.7 | 304.0 | 287.7 | 276.9 | 272.8 |
| 22.5° | 378.5 | 372.7 | 356.0 | 332.4 | 308.5 | 286.4 | 270.6 | 259.2 | 255.7 |
| 25° | 362.2 | 356.4 | 338.3 | 315.3 | 290.4 | 269.7 | 253.9 | 243.4 | 239.4 |
| 27.5° | 342.4 | 336.1 | 318.4 | 295.4 | 272.4 | 251.6 | 237.2 | 227.7 | 223.6 |
| 30° | 319.8 | 313.1 | 296.3 | 274.1 | 253.4 | 233.5 | 219.5 | 211.9 | 207.3 |
| 32.5° | 293.6 | 287.7 | 272.8 | 253.0 | 233.5 | 214.5 | 202.8 | 196.1 | 192.4 |
| 35° | 265.2 | 262.0 | 249.3 | 232.2 | 213.3 | 197.4 | 187.0 | 180.7 | 177.5 |
| 37.5° | 239.9 | 236.7 | 225.9 | 211.4 | 194.7 | 180.3 | 171.6 | 166.3 | 163.5 |
| 40° | 215.9 | 213.3 | 202.8 | 190.6 | 176.2 | 163.5 | 156.2 | 152.3 | 149.5 |
| 42.5° | 192.4 | 191.1 | 182.5 | 171.2 | 158.5 | 147.7 | 141.8 | 138.7 | 136.4 |
| 45° | 173.4 | 171.6 | 163.5 | 152.7 | 141.8 | 132.8 | 127.8 | 125.5 | 123.4 |
| 47.5° | 156.7 | 154.5 | 145.9 | 136.4 | 126.4 | 118.4 | 113.8 | 111.5 | 110.6 |
| 50° | 140.4 | 138.3 | 130.5 | 121.1 | 111.1 | 105.3 | 101.6 | 99.3 | 98.9 |
| 52.5° | 126.0 | 123.8 | 115.2 | 106.2 | 98.4 | 93.5 | 90.4 | 88.1 | 87.2 |
| 55° | 112.0 | 109.4 | 102.1 | 93.5 | 87.2 | 82.6 | 79.5 | 77.3 | 76.4 |
| 57.5° | 99.3 | 96.6 | 90.4 | 82.2 | 76.4 | 72.3 | 69.5 | 67.3 | 66.3 |
| 60° | 87.2 | 84.9 | 79.1 | 71.4 | 66.3 | 62.8 | 60.1 | 58.3 | 57.4 |
| 62.5° | 75.9 | 74.1 | 68.2 | 61.5 | 57.4 | 54.2 | 51.9 | 50.2 | 51.1 |
| 65° | 65.5 | 63.7 | 58.3 | 52.3 | 49.3 | 46.1 | 44.3 | 44.3 | 46.1 |
| 67.5° | 55.5 | 53.7 | 49.3 | 44.3 | 41.5 | 39.3 | 37.9 | 39.3 | 40.6 |
| 70° | 46.5 | 44.7 | 40.6 | 36.6 | 34.4 | 32.5 | 32.5 | 33.9 | 34.8 |
| 72.5° | 37.9 | 36.2 | 33.0 | 29.8 | 28.0 | 26.6 | 28.0 | 28.9 | 29.8 |
| 75° | 29.8 | 28.4 | 25.7 | 23.4 | 22.1 | 21.7 | 23.0 | 23.9 | 24.4 |
| 77.5° | 22.1 | 21.3 | 19.5 | 17.6 | 16.7 | 17.2 | 18.5 | 19.0 | 19.5 |
| 80° | 15.4 | 14.9 | 13.5 | 12.6 | 12.6 | 13.1 | 14.0 | 14.5 | 14.9 |
| 82.5° | 9.4 | 9.4 | 8.5 | 8.1 | 8.5 | 9.4 | 9.9 | 10.4 | 10.4 |
| 85° | 4.6 | 5.0 | 4.6 | 4.6 | 5.0 | 5.9 | 5.9 | 6.4 | 6.4 |
| 87.5° | 1.4 | 1.4 | 1.8 | 1.8 | 2.3 | 2.3 | 2.3 | 2.3 | 2.7 |
| 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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