

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: P579841

Luminaire Tested: **HCC4W15D010BZ-HM40525827-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579841
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W15D010BZ-HM40525827-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

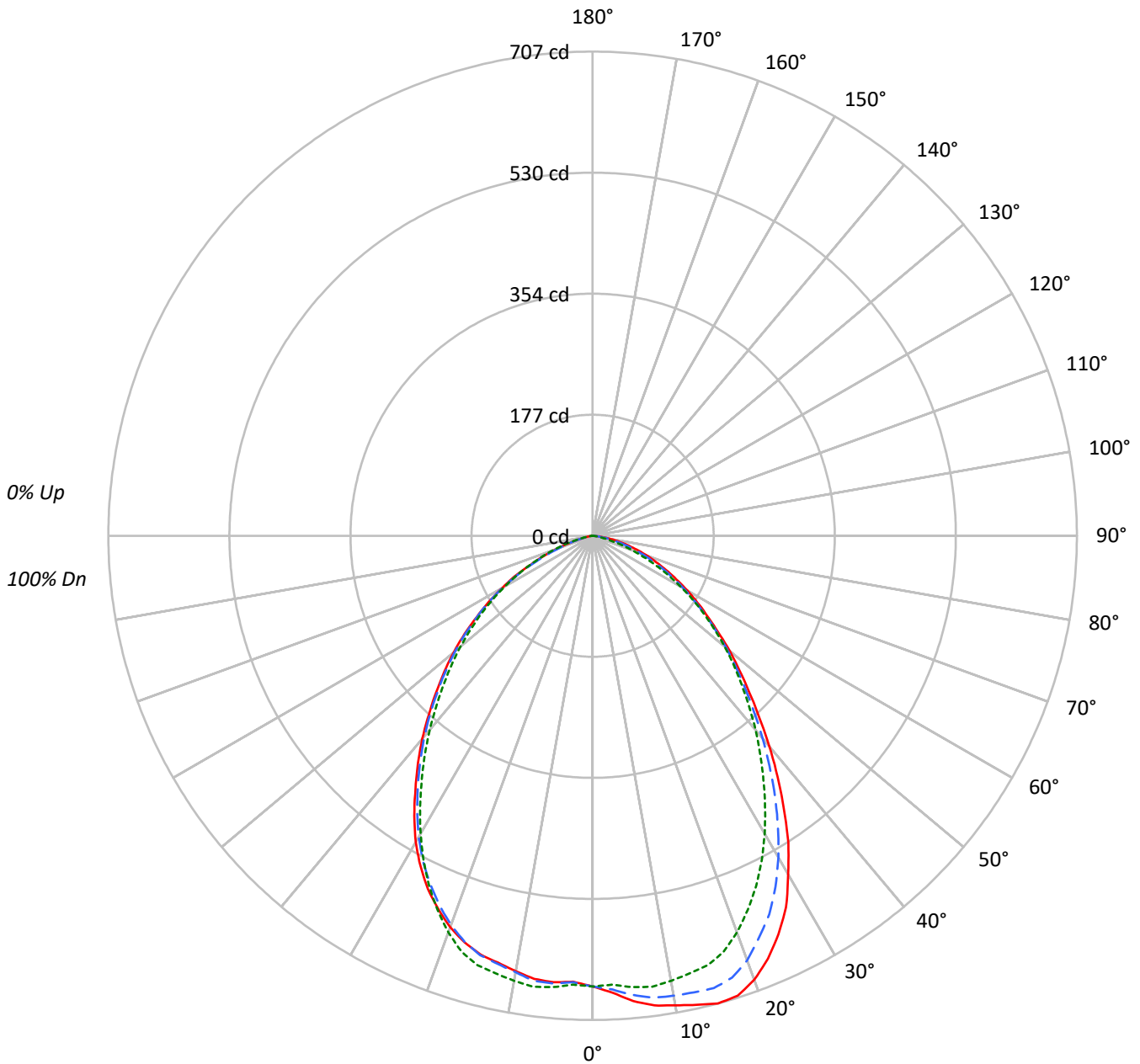
Lumens per Lamp: N/A
Luminaire Lumens: 1371.1 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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 | | | | | | | | | | |
| 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 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | | | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 81161 | 81161 | 81161 |
| 5° | 84443 | 81905 | 81038 |
| 10° | 87198 | 82639 | 80860 |
| 15° | 90269 | 82888 | 80845 |
| 20° | 90571 | 80870 | 79833 |
| 25° | 87374 | 76840 | 77453 |
| 30° | 81312 | 71541 | 73592 |
| 35° | 73241 | 65471 | 67880 |
| 40° | 64568 | 59560 | 62281 |
| 45° | 56465 | 53674 | 56308 |
| 50° | 49988 | 48280 | 50832 |
| 55° | 43977 | 42644 | 44364 |
| 60° | 39273 | 36412 | 37497 |
| 65° | 34498 | 29595 | 29069 |
| 70° | 30149 | 21819 | 19871 |
| 75° | 24972 | 13106 | 10628 |
| 80° | 18966 | 5114 | 3125 |
| 85° | 8916 | 1274 | 1274 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 63.5 | 4.6 |
| 10°-20° | 185.2 | 13.5 |
| 20°-30° | 268.2 | 19.6 |
| 30°-40° | 283.0 | 20.6 |
| 40°-50° | 244.9 | 17.9 |
| 50°-60° | 181.4 | 13.2 |
| 60°-70° | 104.6 | 7.6 |
| 70°-80° | 36.5 | 2.7 |
| 80°-90° | 3.8 | 0.3 |
| 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° | 516.9 | 37.7 |
| 0°-40° | 799.9 | 58.3 |
| 0°-60° | 1226.2 | 89.4 |
| 0°-90° | 1371.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1371.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 658 | 658 | 658 | 658 | 658 | |
| 5° | 682 | 673 | 662 | 656 | 654 | 66 |
| 15° | 707 | 684 | 649 | 634 | 633 | 199 |
| 25° | 642 | 610 | 565 | 561 | 569 | 294 |
| 35° | 486 | 464 | 435 | 445 | 451 | 304 |
| 45° | 324 | 315 | 308 | 319 | 323 | 251 |
| 55° | 204 | 200 | 198 | 205 | 206 | 184 |
| 65° | 118 | 111 | 101 | 96 | 100 | 118 |
| 75° | 52 | 44 | 28 | 22 | 22 | 56 |
| 85° | 6 | 4 | 1 | 1 | 1 | 10 |
| 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° | 658.0 | 658.0 | 658.0 | 658.0 | 658.0 | 658.0 | 658.0 | 658.0 | 658.0 |
| 2.5° | 667.8 | 665.9 | 663.3 | 659.8 | 656.2 | 653.5 | 652.6 | 651.7 | 651.7 |
| 5° | 682.0 | 678.4 | 673.1 | 665.9 | 661.5 | 658.9 | 656.2 | 654.5 | 654.5 |
| 7.5° | 691.8 | 688.2 | 680.3 | 670.5 | 664.2 | 658.9 | 655.4 | 652.6 | 652.6 |
| 10° | 696.2 | 691.8 | 682.0 | 669.6 | 659.8 | 652.6 | 647.3 | 645.6 | 645.6 |
| 12.5° | 701.5 | 696.2 | 682.9 | 666.9 | 654.5 | 645.6 | 640.2 | 638.4 | 638.4 |
| 15° | 706.9 | 700.6 | 683.8 | 665.1 | 649.1 | 638.4 | 634.0 | 633.1 | 633.1 |
| 17.5° | 704.3 | 696.2 | 676.6 | 654.5 | 636.6 | 626.0 | 621.5 | 621.5 | 622.4 |
| 20° | 690.0 | 682.0 | 659.8 | 634.9 | 616.1 | 608.2 | 604.7 | 606.4 | 608.2 |
| 22.5° | 668.7 | 658.9 | 634.9 | 610.9 | 591.4 | 584.2 | 584.2 | 586.8 | 589.5 |
| 25° | 642.0 | 633.1 | 610.0 | 583.3 | 564.6 | 559.3 | 561.1 | 565.5 | 569.1 |
| 27.5° | 611.7 | 601.9 | 577.9 | 553.0 | 534.4 | 531.8 | 536.2 | 542.3 | 544.2 |
| 30° | 570.9 | 562.8 | 542.3 | 518.4 | 502.3 | 501.5 | 507.7 | 512.2 | 516.7 |
| 32.5° | 531.8 | 522.8 | 503.2 | 480.2 | 468.6 | 469.5 | 476.6 | 482.0 | 484.6 |
| 35° | 486.4 | 478.3 | 464.1 | 445.5 | 434.8 | 436.6 | 444.6 | 449.9 | 450.8 |
| 37.5° | 443.7 | 438.3 | 424.1 | 409.9 | 401.9 | 405.5 | 412.6 | 418.8 | 418.8 |
| 40° | 401.0 | 396.6 | 385.9 | 374.3 | 369.9 | 374.3 | 381.5 | 386.8 | 386.8 |
| 42.5° | 360.1 | 357.5 | 348.6 | 340.5 | 337.9 | 344.1 | 350.3 | 354.7 | 353.8 |
| 45° | 323.7 | 321.0 | 314.7 | 308.6 | 307.7 | 313.9 | 319.2 | 321.9 | 322.8 |
| 47.5° | 290.7 | 289.0 | 283.7 | 279.2 | 279.2 | 285.4 | 289.8 | 292.6 | 293.5 |
| 50° | 260.5 | 258.8 | 254.3 | 250.7 | 251.6 | 257.9 | 261.4 | 264.1 | 264.9 |
| 52.5° | 230.2 | 229.4 | 225.8 | 221.4 | 224.1 | 228.5 | 233.0 | 234.8 | 235.6 |
| 55° | 204.5 | 204.5 | 200.1 | 196.5 | 198.3 | 202.7 | 205.3 | 206.3 | 206.3 |
| 57.5° | 181.4 | 180.6 | 175.2 | 171.6 | 172.5 | 176.9 | 178.7 | 179.6 | 179.6 |
| 60° | 159.2 | 158.3 | 152.9 | 147.6 | 147.6 | 150.3 | 151.1 | 152.0 | 152.0 |
| 62.5° | 137.8 | 136.9 | 130.8 | 126.2 | 124.5 | 123.6 | 123.6 | 125.4 | 128.9 |
| 65° | 118.2 | 117.3 | 111.2 | 104.0 | 101.4 | 98.7 | 96.1 | 97.8 | 99.6 |
| 67.5° | 100.5 | 98.7 | 92.4 | 86.3 | 80.0 | 75.6 | 71.2 | 73.8 | 77.3 |
| 70° | 83.6 | 81.8 | 74.7 | 67.5 | 60.5 | 53.3 | 49.8 | 53.3 | 55.1 |
| 72.5° | 67.5 | 65.8 | 58.7 | 51.6 | 42.6 | 35.6 | 34.7 | 35.6 | 36.5 |
| 75° | 52.4 | 51.6 | 44.5 | 36.5 | 27.5 | 22.3 | 22.3 | 22.3 | 22.3 |
| 77.5° | 39.1 | 37.3 | 30.2 | 23.1 | 16.0 | 12.4 | 11.6 | 11.6 | 11.6 |
| 80° | 26.7 | 24.9 | 18.6 | 13.3 | 7.2 | 5.3 | 5.3 | 4.4 | 4.4 |
| 82.5° | 15.1 | 14.2 | 9.8 | 5.3 | 2.6 | 1.8 | 1.8 | 1.8 | 1.8 |
| 85° | 6.3 | 5.3 | 3.5 | 1.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 87.5° | 0.9 | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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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