

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: P581492

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581492
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: HCC4W07D010BZ-HM40525927-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

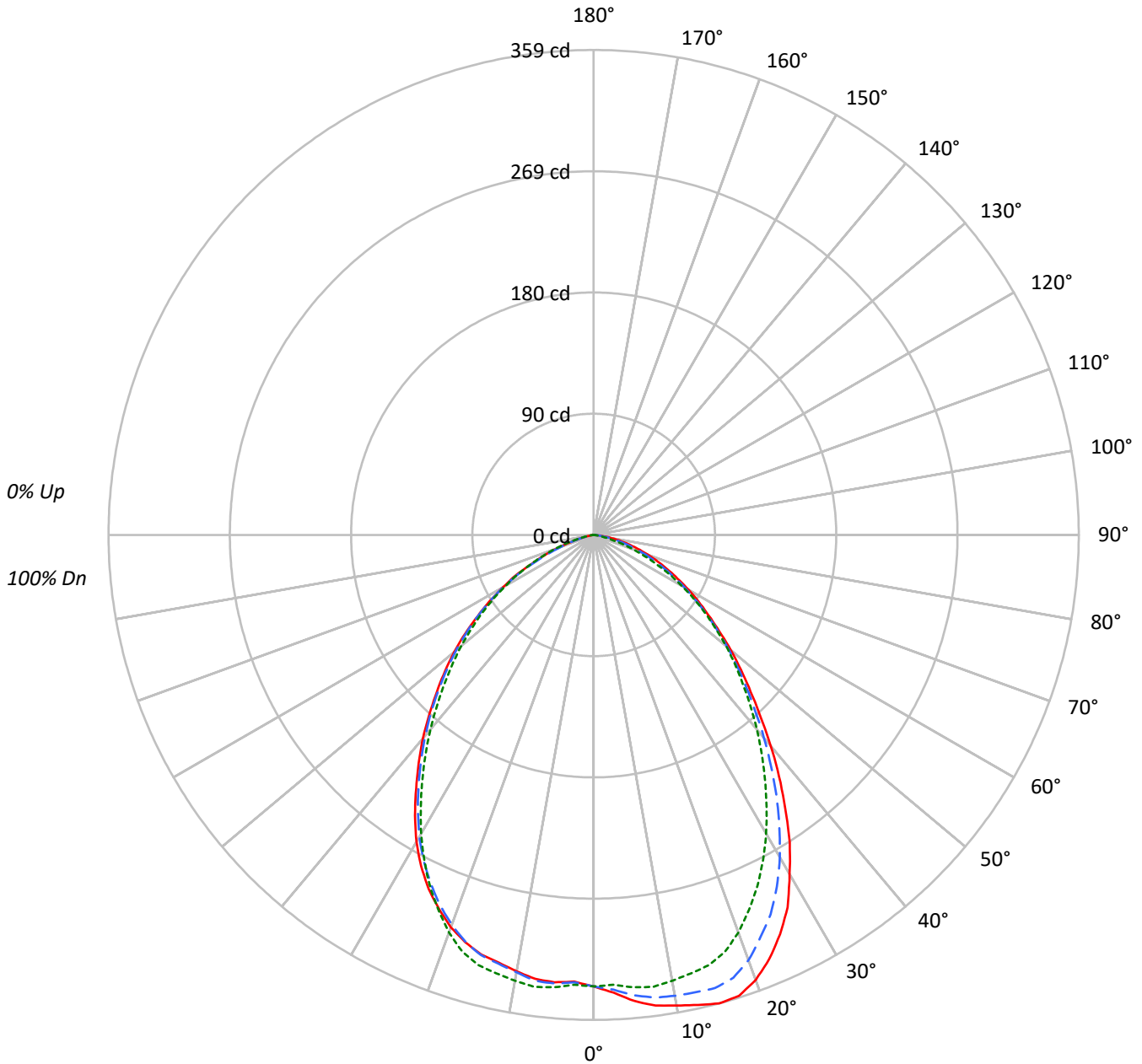
Lumens per Lamp: N/A
Luminaire Lumens: 696.5 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | 100 | | | |
| 1 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | 76 | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | 58 | | | |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 41222 | 41222 | 41222 |
| 5° | 42890 | 41615 | 41157 |
| 10° | 44300 | 41971 | 41081 |
| 15° | 45843 | 42102 | 41067 |
| 20° | 46007 | 41098 | 40560 |
| 25° | 44395 | 39033 | 39346 |
| 30° | 41304 | 36362 | 37373 |
| 35° | 37208 | 33263 | 34482 |
| 40° | 32799 | 30255 | 31640 |
| 45° | 28677 | 27247 | 28608 |
| 50° | 25387 | 24524 | 25829 |
| 55° | 22343 | 21655 | 22537 |
| 60° | 19933 | 18502 | 19069 |
| 65° | 17541 | 15002 | 14768 |
| 70° | 15291 | 11072 | 10098 |
| 75° | 12677 | 6672 | 5385 |
| 80° | 9589 | 2557 | 1634 |
| 85° | 4529 | 708 | 708 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 32.2 | 4.6 |
| 10°-20° | 94.1 | 13.5 |
| 20°-30° | 136.3 | 19.6 |
| 30°-40° | 143.8 | 20.6 |
| 40°-50° | 124.4 | 17.9 |
| 50°-60° | 92.2 | 13.2 |
| 60°-70° | 53.1 | 7.6 |
| 70°-80° | 18.6 | 2.7 |
| 80°-90° | 2.0 | 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° | 262.6 | 37.7 |
| 0°-40° | 406.3 | 58.3 |
| 0°-60° | 622.9 | 89.4 |
| 0°-90° | 696.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 696.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 334 | 334 | 334 | 334 | 334 | |
| 5° | 346 | 342 | 336 | 333 | 332 | 33 |
| 15° | 359 | 347 | 330 | 322 | 322 | 101 |
| 25° | 326 | 310 | 287 | 285 | 289 | 149 |
| 35° | 247 | 236 | 221 | 226 | 229 | 154 |
| 45° | 164 | 160 | 156 | 162 | 164 | 128 |
| 55° | 104 | 102 | 101 | 104 | 105 | 94 |
| 65° | 60 | 56 | 51 | 49 | 51 | 60 |
| 75° | 27 | 22 | 14 | 11 | 11 | 29 |
| 85° | 3 | 2 | 0 | 0 | 0 | 5 |
| 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° | 334.2 | 334.2 | 334.2 | 334.2 | 334.2 | 334.2 | 334.2 | 334.2 | 334.2 |
| 2.5° | 339.2 | 338.3 | 337.0 | 335.1 | 333.3 | 332.0 | 331.5 | 331.0 | 331.0 |
| 5° | 346.4 | 344.6 | 342.0 | 338.3 | 336.1 | 334.7 | 333.3 | 332.4 | 332.4 |
| 7.5° | 351.4 | 349.6 | 345.5 | 340.6 | 337.4 | 334.7 | 332.9 | 331.5 | 331.5 |
| 10° | 353.7 | 351.4 | 346.4 | 340.1 | 335.1 | 331.5 | 328.8 | 328.0 | 328.0 |
| 12.5° | 356.4 | 353.7 | 346.9 | 338.8 | 332.4 | 328.0 | 325.2 | 324.3 | 324.3 |
| 15° | 359.0 | 356.0 | 347.3 | 337.9 | 329.7 | 324.3 | 322.1 | 321.6 | 321.6 |
| 17.5° | 357.7 | 353.7 | 343.7 | 332.4 | 323.4 | 318.0 | 315.7 | 315.7 | 316.1 |
| 20° | 350.5 | 346.4 | 335.1 | 322.5 | 313.1 | 309.0 | 307.1 | 308.1 | 309.0 |
| 22.5° | 339.7 | 334.7 | 322.5 | 310.3 | 300.3 | 296.8 | 296.8 | 298.2 | 299.4 |
| 25° | 326.2 | 321.6 | 309.9 | 296.3 | 286.8 | 284.2 | 285.0 | 287.2 | 289.1 |
| 27.5° | 310.8 | 305.8 | 293.6 | 281.0 | 271.4 | 270.0 | 272.3 | 275.5 | 276.4 |
| 30° | 290.0 | 285.9 | 275.5 | 263.3 | 255.3 | 254.8 | 257.9 | 260.1 | 262.4 |
| 32.5° | 270.0 | 265.6 | 255.6 | 243.9 | 238.1 | 238.5 | 242.1 | 244.8 | 246.1 |
| 35° | 247.1 | 243.0 | 235.8 | 226.2 | 220.9 | 221.8 | 225.9 | 228.5 | 229.0 |
| 37.5° | 225.4 | 222.7 | 215.4 | 208.3 | 204.2 | 206.0 | 209.6 | 212.7 | 212.7 |
| 40° | 203.7 | 201.4 | 196.1 | 190.2 | 187.9 | 190.2 | 193.8 | 196.5 | 196.5 |
| 42.5° | 182.9 | 181.6 | 177.1 | 173.0 | 171.6 | 174.8 | 178.0 | 180.3 | 179.8 |
| 45° | 164.4 | 163.1 | 159.9 | 156.7 | 156.2 | 159.4 | 162.2 | 163.5 | 164.0 |
| 47.5° | 147.7 | 146.8 | 144.1 | 141.8 | 141.8 | 145.0 | 147.3 | 148.6 | 149.1 |
| 50° | 132.3 | 131.4 | 129.2 | 127.3 | 127.8 | 131.0 | 132.8 | 134.2 | 134.6 |
| 52.5° | 117.0 | 116.5 | 114.7 | 112.4 | 113.8 | 116.1 | 118.4 | 119.3 | 119.7 |
| 55° | 103.9 | 103.9 | 101.6 | 99.8 | 100.7 | 103.0 | 104.4 | 104.8 | 104.8 |
| 57.5° | 92.2 | 91.7 | 89.0 | 87.2 | 87.6 | 89.9 | 90.8 | 91.3 | 91.3 |
| 60° | 80.8 | 80.3 | 77.7 | 75.0 | 75.0 | 76.4 | 76.8 | 77.3 | 77.3 |
| 62.5° | 70.0 | 69.5 | 66.3 | 64.2 | 63.3 | 62.8 | 62.8 | 63.7 | 65.5 |
| 65° | 60.1 | 59.6 | 56.4 | 52.8 | 51.4 | 50.2 | 48.8 | 49.7 | 50.6 |
| 67.5° | 51.1 | 50.2 | 47.0 | 43.8 | 40.6 | 38.4 | 36.2 | 37.4 | 39.3 |
| 70° | 42.4 | 41.5 | 37.9 | 34.4 | 30.7 | 27.1 | 25.3 | 27.1 | 28.0 |
| 72.5° | 34.4 | 33.5 | 29.8 | 26.2 | 21.7 | 18.1 | 17.6 | 18.1 | 18.5 |
| 75° | 26.6 | 26.2 | 22.5 | 18.5 | 14.0 | 11.3 | 11.3 | 11.3 | 11.3 |
| 77.5° | 19.9 | 19.0 | 15.4 | 11.7 | 8.1 | 6.4 | 5.9 | 5.9 | 5.9 |
| 80° | 13.5 | 12.6 | 9.4 | 6.8 | 3.6 | 2.7 | 2.7 | 2.3 | 2.3 |
| 82.5° | 7.6 | 7.3 | 5.0 | 2.7 | 1.4 | 0.9 | 0.9 | 0.9 | 0.9 |
| 85° | 3.2 | 2.7 | 1.8 | 0.9 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 87.5° | 0.5 | 0.5 | 0.5 | 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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