

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: P581422

Luminaire Tested: **HCC4W07D010BZ-HM40525827-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581422  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W07D010BZ-HM40525827-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

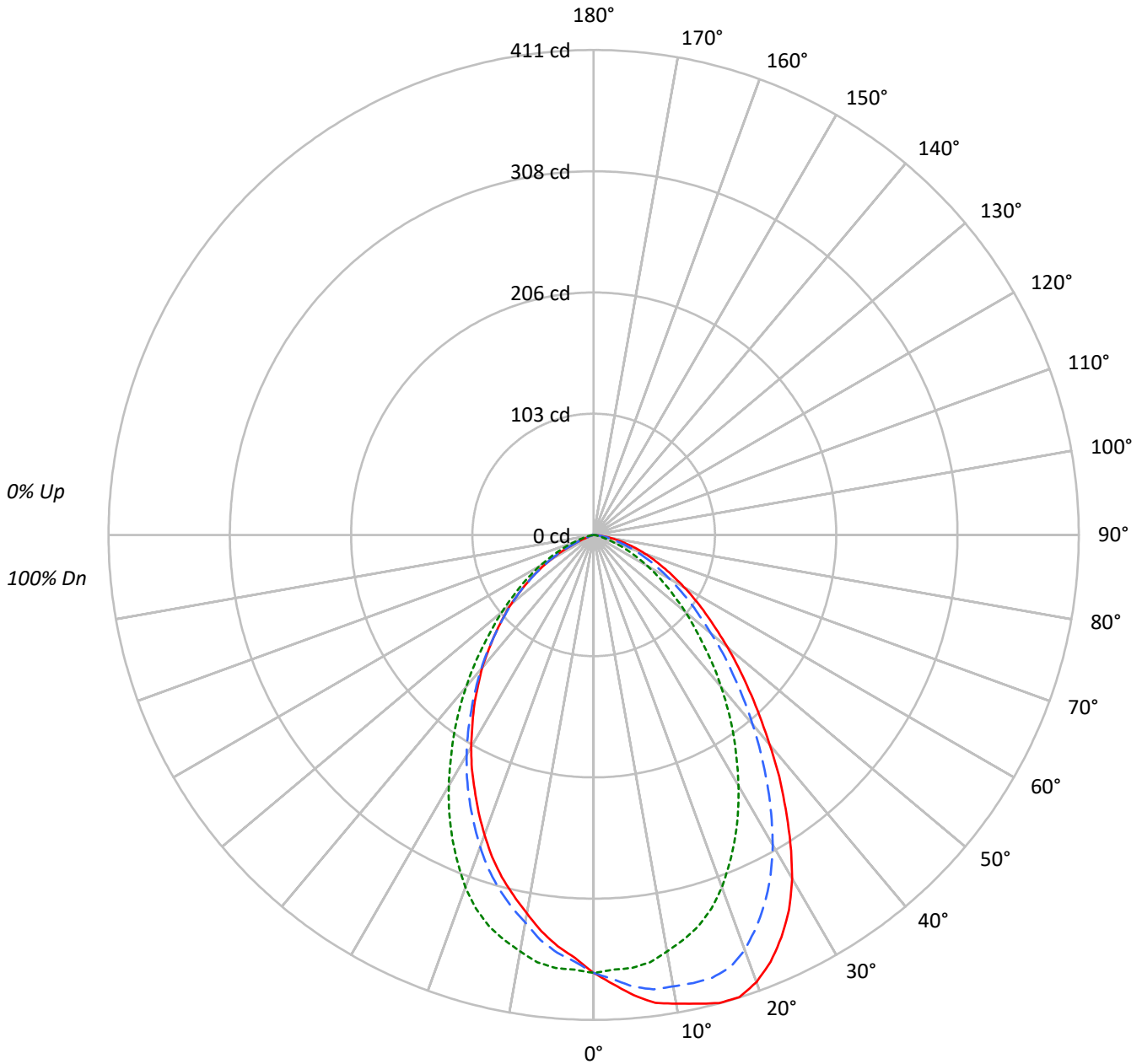
Lumens per Lamp: N/A  
Luminaire Lumens: 641.0 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99  | 97  | 97  | 95  | 94  | 94  | 92  | 91  | 89  |    |    |    |  |  |  |  |   |
| 2   | 103 | 97  | 91  | 87  | 101 | 95  | 90  | 86  | 92  | 87  | 84  | 88  | 85  | 82  | 85  | 83  | 80  | 78  |    |    |    |  |  |  |  |   |
| 3   | 96  | 87  | 80  | 75  | 94  | 86  | 79  | 74  | 83  | 78  | 73  | 80  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |    |  |  |  |  |   |
| 4   | 89  | 79  | 72  | 66  | 87  | 78  | 71  | 65  | 75  | 69  | 65  | 73  | 68  | 64  | 71  | 67  | 63  | 61  |    |    |    |  |  |  |  |   |
| 5   | 83  | 72  | 64  | 58  | 81  | 71  | 64  | 58  | 69  | 62  | 58  | 67  | 61  | 57  | 65  | 60  | 56  | 55  |    |    |    |  |  |  |  |   |
| 6   | 77  | 66  | 58  | 52  | 75  | 65  | 57  | 52  | 63  | 57  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |    |    |    |  |  |  |  |   |
| 7   | 72  | 60  | 53  | 47  | 71  | 59  | 52  | 47  | 58  | 51  | 47  | 57  | 51  | 46  | 55  | 50  | 46  | 44  |    |    |    |  |  |  |  |   |
| 8   | 68  | 56  | 48  | 43  | 66  | 55  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 51  | 46  | 42  | 40  |    |    |    |  |  |  |  |   |
| 9   | 64  | 52  | 44  | 39  | 62  | 51  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |    |    |    |  |  |  |  |   |
| 10  | 60  | 48  | 41  | 36  | 59  | 47  | 41  | 36  | 46  | 40  | 36  | 46  | 40  | 36  | 45  | 39  | 36  | 34  |    |    |    |  |  |  |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 45774 | 45774 | 45774 |
| 5°  | 48499 | 45614 | 43323 |
| 10° | 50513 | 44889 | 40793 |
| 15° | 52445 | 43813 | 38347 |
| 20° | 52938 | 41702 | 35480 |
| 25° | 51213 | 38583 | 32459 |
| 30° | 47898 | 34966 | 29554 |
| 35° | 42689 | 31079 | 26547 |
| 40° | 37307 | 27035 | 23621 |
| 45° | 32498 | 22921 | 20444 |
| 50° | 28362 | 19458 | 17520 |
| 55° | 24859 | 16128 | 14193 |
| 60° | 21758 | 13025 | 10410 |
| 65° | 18971 | 9690  | 5837  |
| 70° | 16589 | 6275  | 1875  |
| 75° | 13535 | 3241  | 477   |
| 80° | 10087 | 1563  | 426   |
| 85° | 5944  | 849   | 849   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 35.0   | 5.5       |
| 10°-20°   | 98.0   | 15.3      |
| 20°-30°   | 135.5  | 21.1      |
| 30°-40°   | 136.3  | 21.3      |
| 40°-50°   | 110.0  | 17.2      |
| 50°-60°   | 74.4   | 11.6      |
| 60°-70°   | 37.8   | 5.9       |
| 70°-80°   | 12.1   | 1.9       |
| 80°-90°   | 1.9    | 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°    | 268.6  | 41.9      |
| 0°-40°    | 404.8  | 63.2      |
| 0°-60°    | 589.1  | 91.9      |
| 0°-90°    | 641.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 641.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 371 | 371 | 371 | 371  | 371  |      |
| 5°  | 392 | 384 | 368 | 355  | 350  | 38   |
| 15° | 411 | 388 | 343 | 310  | 300  | 116  |
| 25° | 376 | 344 | 284 | 249  | 238  | 172  |
| 35° | 284 | 256 | 206 | 180  | 176  | 177  |
| 45° | 186 | 167 | 131 | 117  | 117  | 144  |
| 55° | 116 | 100 | 75  | 65   | 66   | 104  |
| 65° | 65  | 53  | 33  | 22   | 20   | 65   |
| 75° | 28  | 20  | 7   | 2    | 1    | 31   |
| 85° | 4   | 2   | 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°    | 371.1 | 371.1 | 371.1 | 371.1 | 371.1 | 371.1  | 371.1 | 371.1  | 371.1 |
| 2.5°  | 381.1 | 379.0 | 376.9 | 373.2 | 368.9 | 364.7  | 362.1 | 359.9  | 358.9 |
| 5°    | 391.7 | 389.0 | 384.3 | 376.3 | 368.4 | 361.1  | 355.3 | 351.5  | 349.9 |
| 7.5°  | 400.1 | 396.4 | 388.5 | 377.4 | 365.3 | 353.7  | 346.3 | 340.9  | 338.9 |
| 10°   | 403.3 | 399.0 | 388.5 | 373.7 | 358.4 | 344.1  | 333.5 | 328.3  | 325.7 |
| 12.5° | 406.9 | 402.2 | 389.0 | 370.5 | 351.5 | 334.7  | 322.5 | 315.7  | 313.0 |
| 15°   | 410.7 | 404.3 | 388.5 | 365.8 | 343.1 | 323.5  | 310.3 | 303.5  | 300.3 |
| 17.5° | 410.7 | 403.3 | 384.3 | 357.9 | 332.0 | 311.5  | 296.7 | 288.7  | 286.1 |
| 20°   | 403.3 | 394.8 | 374.2 | 345.2 | 317.7 | 295.5  | 281.3 | 273.5  | 270.3 |
| 22.5° | 391.7 | 382.1 | 359.9 | 329.9 | 300.9 | 279.3  | 264.9 | 257.5  | 254.5 |
| 25°   | 376.3 | 366.9 | 343.6 | 312.5 | 283.5 | 261.9  | 248.7 | 241.7  | 238.5 |
| 27.5° | 358.4 | 347.9 | 324.7 | 293.5 | 264.9 | 244.3  | 232.3 | 225.9  | 223.3 |
| 30°   | 336.3 | 326.2 | 303.5 | 272.9 | 245.5 | 226.5  | 215.3 | 209.5  | 207.5 |
| 32.5° | 310.3 | 301.9 | 279.7 | 251.3 | 225.4 | 207.9  | 197.9 | 193.2  | 191.1 |
| 35°   | 283.5 | 275.5 | 256.0 | 229.6 | 206.4 | 190.0  | 180.5 | 177.3  | 176.3 |
| 37.5° | 258.1 | 251.3 | 232.3 | 207.9 | 186.9 | 172.6  | 164.1 | 162.1  | 161.0 |
| 40°   | 231.7 | 226.9 | 209.5 | 187.4 | 167.9 | 155.2  | 148.3 | 146.7  | 146.7 |
| 42.5° | 207.9 | 202.7 | 187.4 | 167.3 | 149.9 | 137.2  | 132.5 | 130.9  | 131.4 |
| 45°   | 186.3 | 181.1 | 166.8 | 148.3 | 131.4 | 120.9  | 117.2 | 117.2  | 117.2 |
| 47.5° | 166.3 | 161.5 | 148.3 | 129.3 | 115.6 | 107.2  | 103.4 | 103.4  | 104.0 |
| 50°   | 147.8 | 144.6 | 129.8 | 113.5 | 101.4 | 93.4   | 90.8  | 90.2   | 91.3  |
| 52.5° | 130.4 | 126.7 | 113.5 | 98.7  | 87.1  | 80.8   | 78.1  | 77.6   | 78.1  |
| 55°   | 115.6 | 111.4 | 99.8  | 85.5  | 75.0  | 68.6   | 65.4  | 65.0   | 66.0  |
| 57.5° | 101.4 | 98.2  | 86.0  | 73.4  | 63.4  | 57.0   | 54.4  | 53.3   | 53.8  |
| 60°   | 88.2  | 85.0  | 73.9  | 61.8  | 52.8  | 46.4   | 42.8  | 41.7   | 42.2  |
| 62.5° | 76.0  | 73.4  | 62.8  | 51.2  | 42.2  | 36.4   | 32.8  | 30.0   | 31.2  |
| 65°   | 65.0  | 62.2  | 52.8  | 41.2  | 33.2  | 27.0   | 21.6  | 19.6   | 20.0  |
| 67.5° | 55.4  | 52.2  | 43.2  | 32.8  | 24.8  | 18.0   | 12.2  | 11.0   | 11.0  |
| 70°   | 46.0  | 42.8  | 34.8  | 25.4  | 17.4  | 9.4    | 5.2   | 5.2    | 5.2   |
| 72.5° | 37.0  | 34.3  | 27.0  | 19.0  | 11.0  | 4.2    | 2.2   | 2.2    | 2.2   |
| 75°   | 28.4  | 26.4  | 20.0  | 13.2  | 6.8   | 2.2    | 1.6   | 1.0    | 1.0   |
| 77.5° | 21.2  | 19.0  | 14.2  | 9.0   | 4.2   | 1.0    | 1.0   | 1.0    | 1.0   |
| 80°   | 14.2  | 12.6  | 9.4   | 5.2   | 2.2   | 0.6    | 0.6   | 0.6    | 0.6   |
| 82.5° | 8.4   | 7.4   | 5.2   | 2.6   | 1.0   | 0.6    | 0.6   | 0.6    | 0.6   |
| 85°   | 4.2   | 3.2   | 2.2   | 1.0   | 0.6   | 0.6    | 0.6   | 0.6    | 0.6   |
| 87.5° | 1.0   | 0.6   | 0.6   | 0.6   | 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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Scaled Data Report



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

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