

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: P581007

Luminaire Tested: **HCC4W05D010BZ-HM40525830-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581007  
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: HCC4W05D010BZ-HM40525830-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

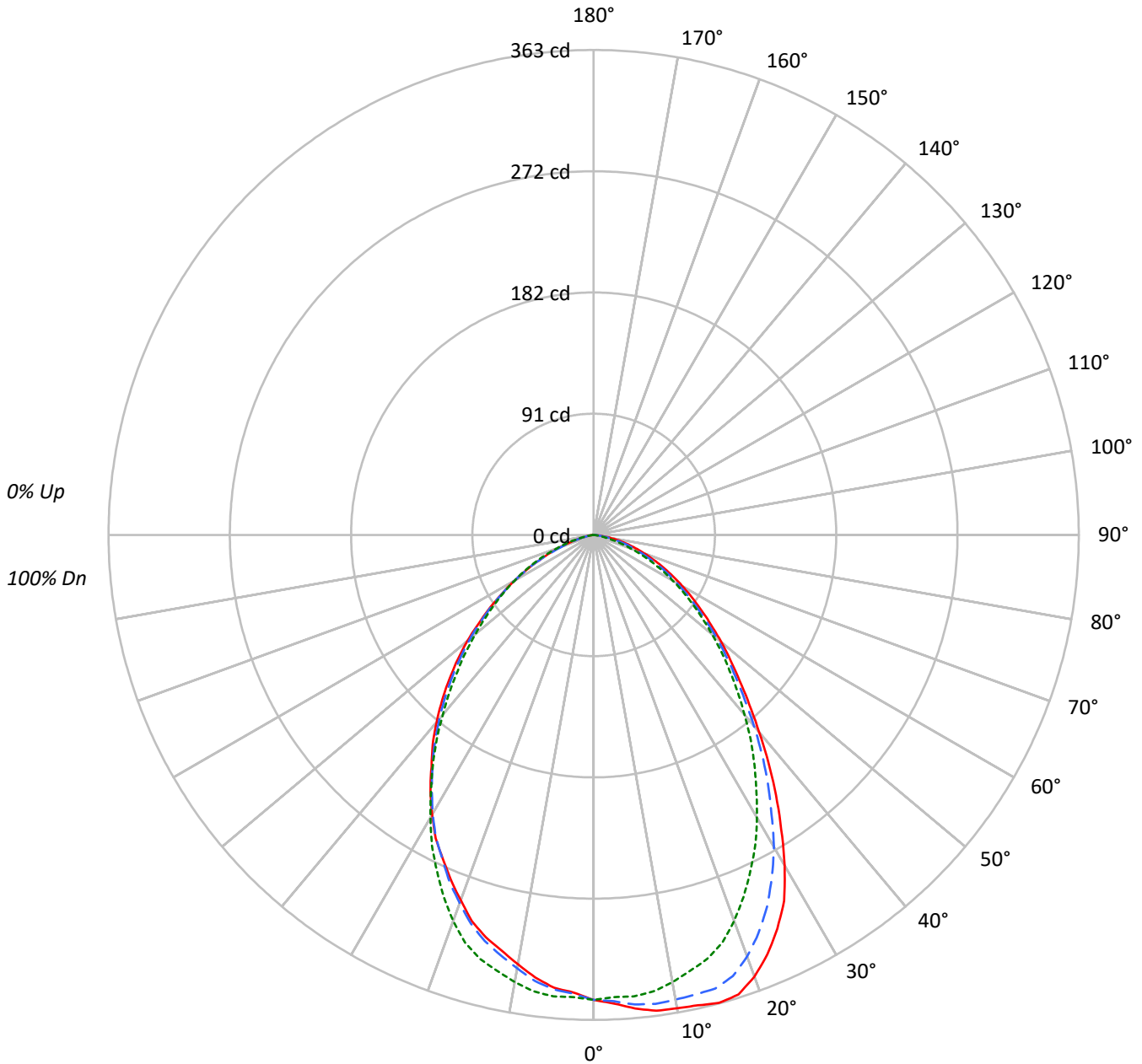
Lumens per Lamp: N/A  
Luminaire Lumens: 663.4 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 6  
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 | 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 | 104 | 100 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |    |    | 88  |   |  |   |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 84  | 90  | 86  | 82  | 87  | 84  | 80  | 84  | 81  | 79  | 77  |    |    |    |    | 77  |   |  |   |
| 3   | 95  | 86  | 79  | 73  | 92  | 84  | 78  | 73  | 81  | 76  | 71  | 79  | 74  | 70  | 76  | 72  | 69  | 67  |    |    |    |    | 67  |   |  |   |
| 4   | 88  | 77  | 70  | 64  | 86  | 76  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 62  | 69  | 65  | 61  | 59  |    |    |    |    | 59  |   |  |   |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 52  |    |    |    |    | 52  |   |  |   |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 60  | 54  | 49  | 58  | 53  | 49  | 47  |    |    |    |    | 47  |   |  |   |
| 7   | 71  | 58  | 51  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 45  | 55  | 49  | 44  | 54  | 48  | 44  | 42  |    |    |    |    | 42  |   |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 41  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    |    | 35  |   |  |   |
| 10  | 58  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    |    | 32  |   |  |   |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 42924 | 42924 | 42924 |
| 5°  | 44054 | 42927 | 42135 |
| 10° | 45052 | 42559 | 40881 |
| 15° | 46316 | 41961 | 39803 |
| 20° | 46178 | 40350 | 38184 |
| 25° | 44245 | 37767 | 36365 |
| 30° | 40706 | 34795 | 34410 |
| 35° | 35807 | 31561 | 31847 |
| 40° | 30980 | 28258 | 29434 |
| 45° | 26933 | 25101 | 26637 |
| 50° | 23891 | 22144 | 23660 |
| 55° | 21182 | 19419 | 20257 |
| 60° | 18872 | 16849 | 16849 |
| 65° | 16782 | 14009 | 13105 |
| 70° | 14498 | 10603 | 9377  |
| 75° | 12153 | 7053  | 5767  |
| 80° | 9163  | 3410  | 3054  |
| 85° | 4812  | 1274  | 1274  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 33.0   | 5.0       |
| 10°-20°   | 93.4   | 14.1      |
| 20°-30°   | 131.8  | 19.9      |
| 30°-40°   | 136.1  | 20.5      |
| 40°-50°   | 115.4  | 17.4      |
| 50°-60°   | 84.0   | 12.7      |
| 60°-70°   | 49.1   | 7.4       |
| 70°-80°   | 18.2   | 2.7       |
| 80°-90°   | 2.4    | 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°    | 258.2  | 38.9      |
| 0°-40°    | 394.3  | 59.4      |
| 0°-60°    | 593.6  | 89.5      |
| 0°-90°    | 663.4  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 663.4  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 348 | 348 | 348 | 348  | 348  |      |
| 5°  | 356 | 353 | 347 | 342  | 340  | 34   |
| 15° | 363 | 352 | 329 | 315  | 312  | 102  |
| 25° | 325 | 307 | 278 | 268  | 267  | 149  |
| 35° | 238 | 227 | 210 | 210  | 212  | 149  |
| 45° | 154 | 150 | 144 | 149  | 153  | 120  |
| 55° | 98  | 94  | 90  | 93   | 94   | 89   |
| 65° | 58  | 53  | 48  | 45   | 45   | 57   |
| 75° | 26  | 21  | 15  | 12   | 12   | 27   |
| 85° | 3   | 2   | 1   | 1    | 1    | 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°    | 348.0 | 348.0 | 348.0 | 348.0 | 348.0 | 348.0  | 348.0 | 348.0  | 348.0 |
| 2.5°  | 351.1 | 350.1 | 349.4 | 348.0 | 346.3 | 344.9  | 343.7 | 342.8  | 342.8 |
| 5°    | 355.8 | 354.5 | 352.8 | 349.7 | 346.7 | 344.1  | 341.5 | 340.3  | 340.3 |
| 7.5°  | 359.2 | 357.5 | 354.0 | 349.7 | 344.6 | 340.6  | 336.8 | 335.1  | 334.1 |
| 10°   | 359.7 | 358.0 | 353.2 | 346.7 | 339.8 | 333.7  | 329.4 | 326.8  | 326.4 |
| 12.5° | 360.6 | 358.4 | 352.3 | 343.2 | 334.1 | 326.8  | 322.1 | 319.5  | 318.6 |
| 15°   | 362.7 | 359.7 | 351.5 | 339.8 | 328.6 | 320.0  | 314.7 | 312.6  | 311.7 |
| 17.5° | 360.6 | 356.2 | 346.3 | 332.4 | 320.0 | 310.4  | 305.2 | 303.0  | 303.0 |
| 20°   | 351.8 | 347.5 | 335.8 | 320.8 | 307.4 | 298.3  | 293.1 | 291.8  | 290.9 |
| 22.5° | 339.8 | 335.1 | 322.5 | 306.4 | 293.1 | 284.9  | 281.5 | 279.7  | 279.3 |
| 25°   | 325.1 | 320.3 | 306.9 | 290.6 | 277.5 | 270.6  | 267.6 | 267.6  | 267.2 |
| 27.5° | 308.7 | 302.6 | 288.7 | 274.6 | 262.0 | 256.7  | 255.5 | 255.5  | 255.9 |
| 30°   | 285.8 | 281.5 | 269.8 | 255.9 | 244.3 | 240.8  | 240.8 | 241.6  | 241.6 |
| 32.5° | 261.2 | 258.1 | 247.7 | 235.6 | 226.5 | 224.4  | 225.2 | 227.0  | 227.3 |
| 35°   | 237.8 | 234.3 | 227.3 | 216.6 | 209.6 | 208.8  | 210.1 | 211.5  | 211.5 |
| 37.5° | 214.9 | 211.5 | 206.7 | 197.9 | 192.8 | 193.3  | 195.0 | 196.7  | 197.9 |
| 40°   | 192.4 | 189.8 | 186.4 | 179.4 | 175.5 | 177.3  | 179.4 | 181.1  | 182.8 |
| 42.5° | 172.5 | 169.9 | 167.3 | 162.1 | 159.5 | 161.7  | 164.2 | 166.1  | 167.8 |
| 45°   | 154.4 | 152.7 | 150.0 | 145.7 | 143.9 | 146.1  | 149.1 | 150.8  | 152.7 |
| 47.5° | 138.8 | 137.9 | 134.5 | 130.5 | 129.7 | 131.9  | 134.5 | 136.7  | 137.9 |
| 50°   | 124.5 | 123.3 | 120.2 | 116.3 | 115.4 | 118.8  | 120.7 | 121.9  | 123.3 |
| 52.5° | 110.7 | 109.4 | 105.9 | 102.5 | 102.5 | 105.1  | 106.3 | 106.8  | 108.1 |
| 55°   | 98.5  | 97.3  | 93.9  | 91.3  | 90.3  | 92.5   | 93.4  | 93.4   | 94.2  |
| 57.5° | 87.3  | 86.0  | 82.5  | 79.6  | 79.1  | 80.4   | 80.4  | 80.4   | 80.8  |
| 60°   | 76.5  | 75.3  | 71.7  | 69.1  | 68.3  | 68.8   | 68.3  | 67.9   | 68.3  |
| 62.5° | 66.6  | 65.3  | 61.9  | 58.8  | 57.9  | 57.9   | 56.6  | 56.2   | 56.6  |
| 65°   | 57.5  | 55.4  | 52.8  | 49.7  | 48.0  | 46.6   | 44.9  | 44.9   | 44.9  |
| 67.5° | 48.5  | 46.6  | 43.7  | 40.6  | 38.5  | 36.3   | 33.7  | 34.6   | 35.1  |
| 70°   | 40.2  | 38.9  | 35.4  | 32.5  | 29.4  | 26.8   | 24.6  | 25.5   | 26.0  |
| 72.5° | 32.8  | 31.1  | 28.1  | 24.6  | 22.0  | 18.6   | 17.3  | 18.2   | 18.2  |
| 75°   | 25.5  | 23.7  | 21.2  | 17.7  | 14.8  | 11.7   | 11.7  | 12.1   | 12.1  |
| 77.5° | 19.1  | 17.3  | 14.8  | 11.7  | 9.1   | 6.9    | 7.4   | 7.4    | 7.4   |
| 80°   | 12.9  | 11.7  | 9.5   | 6.9   | 4.8   | 3.9    | 3.9   | 3.9    | 4.3   |
| 82.5° | 7.4   | 6.5   | 5.2   | 3.4   | 2.2   | 2.2    | 2.2   | 2.2    | 2.2   |
| 85°   | 3.4   | 2.6   | 2.2   | 1.2   | 0.9   | 0.9    | 0.9   | 0.9    | 0.9   |
| 87.5° | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5    | 0.5   | 0.5    | 0.5   |
| 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



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

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