

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: P581550

Luminaire Tested: **HCC4W07D010MB-HM40525940-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581550  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W07D010MB-HM40525940-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

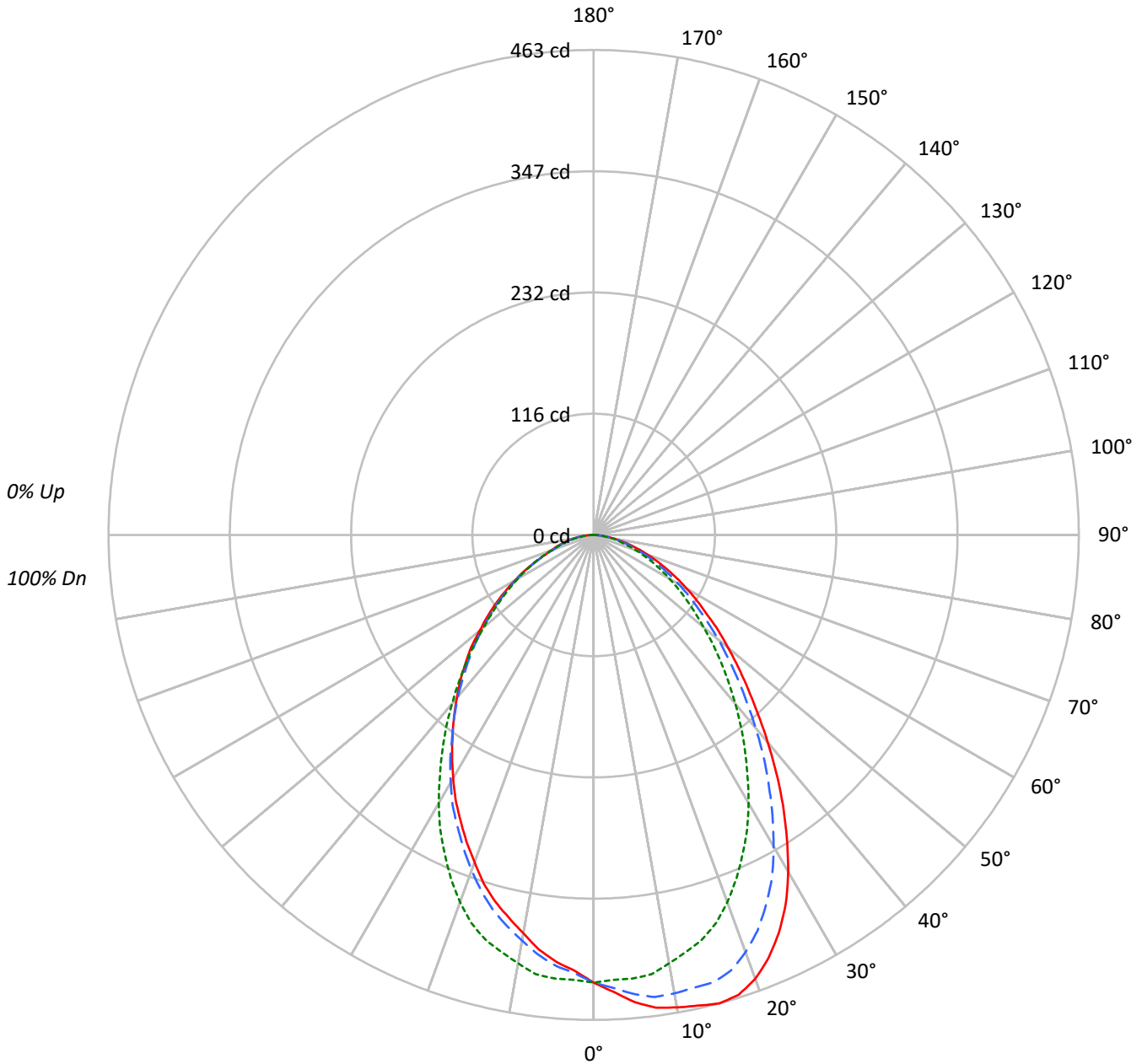
Lumens per Lamp: N/A  
Luminaire Lumens: 828.8 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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   | 110 | 106 | 103 | 99  | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 92  | 91  | 89  | 87  |    |    |    |  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    |  |  |  |  |   |
| 3   | 94  | 85  | 77  | 72  | 92  | 83  | 76  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |    |  |  |  |  |   |
| 4   | 87  | 76  | 68  | 62  | 85  | 75  | 68  | 62  | 72  | 66  | 61  | 70  | 65  | 60  | 68  | 63  | 60  | 58  |    |    |    |  |  |  |  |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 60  | 55  | 66  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 53  | 51  |    |    |    |  |  |  |  |   |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 54  | 49  | 60  | 53  | 48  | 59  | 53  | 48  | 57  | 52  | 47  | 46  |    |    |    |  |  |  |  |   |
| 7   | 70  | 58  | 50  | 44  | 68  | 57  | 49  | 44  | 55  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 43  | 41  |    |    |    |  |  |  |  |   |
| 8   | 65  | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 39  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |    |  |  |  |  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 45  | 40  | 36  | 34  |    |    |    |  |  |  |  |   |
| 10  | 58  | 45  | 38  | 33  | 57  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 42  | 37  | 33  | 31  |    |    |    |  |  |  |  |   |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 52706 | 52706 | 52706 |
| 5°  | 55433 | 52647 | 50666 |
| 10° | 57364 | 52016 | 48371 |
| 15° | 59136 | 51066 | 46303 |
| 20° | 59199 | 48961 | 43631 |
| 25° | 56970 | 45769 | 40924 |
| 30° | 52897 | 42116 | 38199 |
| 35° | 47417 | 37915 | 35356 |
| 40° | 41607 | 33830 | 32686 |
| 45° | 36370 | 29951 | 30160 |
| 50° | 32103 | 26212 | 27172 |
| 55° | 28322 | 23247 | 24429 |
| 60° | 25286 | 20574 | 21388 |
| 65° | 22415 | 18095 | 18095 |
| 70° | 19583 | 15435 | 15435 |
| 75° | 16775 | 13058 | 14631 |
| 80° | 13283 | 11720 | 13283 |
| 85° | 8491  | 10190 | 12454 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 40.5   | 4.9       |
| 10°-20°   | 114.0  | 13.8      |
| 20°-30°   | 159.7  | 19.3      |
| 30°-40°   | 164.6  | 19.9      |
| 40°-50°   | 140.1  | 16.9      |
| 50°-60°   | 103.8  | 12.5      |
| 60°-70°   | 65.2   | 7.9       |
| 70°-80°   | 32.4   | 3.9       |
| 80°-90°   | 8.5    | 1.0       |
| 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°    | 314.3  | 37.9      |
| 0°-40°    | 478.8  | 57.8      |
| 0°-60°    | 722.8  | 87.2      |
| 0°-90°    | 828.8  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 828.8  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 427 | 427 | 427 | 427  | 427  |      |
| 5°  | 448 | 440 | 425 | 413  | 409  | 43   |
| 15° | 463 | 442 | 400 | 371  | 363  | 130  |
| 25° | 419 | 390 | 336 | 307  | 301  | 191  |
| 35° | 315 | 291 | 252 | 235  | 235  | 196  |
| 45° | 208 | 194 | 172 | 168  | 173  | 162  |
| 55° | 132 | 121 | 108 | 110  | 114  | 119  |
| 65° | 77  | 69  | 62  | 61   | 62   | 77   |
| 75° | 35  | 31  | 27  | 30   | 31   | 38   |
| 85° | 6   | 6   | 7   | 8    | 9    | 8    |
| 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°    | 427.3 | 427.3 | 427.3 | 427.3 | 427.3 | 427.3  | 427.3 | 427.3  | 427.3 |
| 2.5°  | 436.7 | 435.1 | 432.9 | 429.0 | 425.2 | 421.9  | 418.6 | 417.0  | 416.4 |
| 5°    | 447.7 | 444.4 | 440.0 | 432.9 | 425.2 | 418.6  | 413.1 | 410.4  | 409.2 |
| 7.5°  | 455.3 | 452.0 | 445.0 | 433.9 | 423.0 | 413.1  | 404.3 | 400.5  | 399.3 |
| 10°   | 458.0 | 454.3 | 444.4 | 429.6 | 415.3 | 403.2  | 393.3 | 388.4  | 386.2 |
| 12.5° | 460.3 | 455.3 | 442.7 | 425.2 | 407.6 | 392.8  | 382.4 | 375.8  | 374.2 |
| 15°   | 463.1 | 457.5 | 442.2 | 420.7 | 399.9 | 382.4  | 370.9 | 364.8  | 362.6 |
| 17.5° | 460.3 | 454.3 | 436.1 | 412.0 | 388.4 | 369.2  | 356.5 | 351.1  | 348.9 |
| 20°   | 451.0 | 444.4 | 424.0 | 398.3 | 373.0 | 353.3  | 340.7 | 335.1  | 332.4 |
| 22.5° | 436.7 | 429.6 | 408.7 | 381.2 | 355.5 | 336.3  | 324.2 | 318.8  | 317.0 |
| 25°   | 418.6 | 411.5 | 389.5 | 361.5 | 336.3 | 317.6  | 307.3 | 302.3  | 300.7 |
| 27.5° | 397.2 | 390.1 | 368.7 | 341.2 | 317.0 | 299.5  | 291.3 | 286.3  | 285.3 |
| 30°   | 371.4 | 364.3 | 343.4 | 318.2 | 295.7 | 279.3  | 272.7 | 268.8  | 268.2 |
| 32.5° | 342.9 | 336.8 | 317.6 | 294.6 | 273.2 | 259.5  | 254.6 | 251.8  | 251.3 |
| 35°   | 314.9 | 308.3 | 291.3 | 270.5 | 251.8 | 239.8  | 235.3 | 234.8  | 234.8 |
| 37.5° | 286.3 | 279.8 | 266.1 | 246.8 | 231.0 | 220.0  | 218.4 | 218.8  | 218.8 |
| 40°   | 258.4 | 252.4 | 240.2 | 224.4 | 210.1 | 201.9  | 201.3 | 202.5  | 203.0 |
| 42.5° | 232.0 | 227.1 | 216.1 | 202.5 | 190.4 | 183.8  | 184.4 | 186.5  | 188.2 |
| 45°   | 208.5 | 204.0 | 194.3 | 182.1 | 171.7 | 166.7  | 168.4 | 171.2  | 172.9 |
| 47.5° | 187.1 | 183.2 | 173.9 | 163.0 | 154.2 | 150.9  | 153.1 | 156.4  | 158.5 |
| 50°   | 167.3 | 164.0 | 155.2 | 143.7 | 136.6 | 134.4  | 137.1 | 140.4  | 141.6 |
| 52.5° | 149.8 | 146.5 | 137.1 | 127.2 | 121.8 | 120.7  | 123.5 | 126.2  | 127.8 |
| 55°   | 131.7 | 128.9 | 121.2 | 112.4 | 108.1 | 107.5  | 110.3 | 112.4  | 113.6 |
| 57.5° | 116.9 | 114.1 | 107.0 | 99.3  | 95.5  | 94.9   | 97.6  | 99.3   | 99.8  |
| 60°   | 102.5 | 99.8  | 93.3  | 86.1  | 83.4  | 83.4   | 85.0  | 86.1   | 86.7  |
| 62.5° | 89.4  | 86.7  | 80.7  | 74.7  | 72.4  | 72.4   | 72.4  | 72.9   | 74.7  |
| 65°   | 76.8  | 74.7  | 69.1  | 63.6  | 62.0  | 60.9   | 60.9  | 60.9   | 62.0  |
| 67.5° | 65.3  | 63.0  | 58.7  | 53.7  | 52.1  | 50.5   | 50.0  | 51.0   | 51.0  |
| 70°   | 54.3  | 52.7  | 48.3  | 44.4  | 42.8  | 41.2   | 40.6  | 42.8   | 42.8  |
| 72.5° | 44.4  | 42.8  | 40.1  | 36.2  | 34.6  | 34.0   | 35.2  | 36.2   | 36.8  |
| 75°   | 35.2  | 33.5  | 31.3  | 29.0  | 27.4  | 28.0   | 29.6  | 30.2   | 30.7  |
| 77.5° | 26.3  | 25.8  | 23.6  | 22.0  | 22.0  | 22.5   | 23.6  | 24.7   | 25.3  |
| 80°   | 18.7  | 18.1  | 17.0  | 15.9  | 16.5  | 17.5   | 18.1  | 19.2   | 18.7  |
| 82.5° | 11.5  | 11.5  | 10.9  | 10.9  | 11.5  | 12.6   | 13.2  | 13.8   | 14.2  |
| 85°   | 6.0   | 6.0   | 6.0   | 6.6   | 7.2   | 7.6    | 8.2   | 8.8    | 8.8   |
| 87.5° | 1.6   | 2.2   | 2.2   | 2.7   | 3.3   | 3.3    | 3.9   | 3.9    | 3.9   |
| 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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Scaled Data Report



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

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