

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: P581460

Luminaire Tested: **HCC4S07D010MB-HM40525835-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581460  
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: HCC4S07D010MB-HM40525835-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

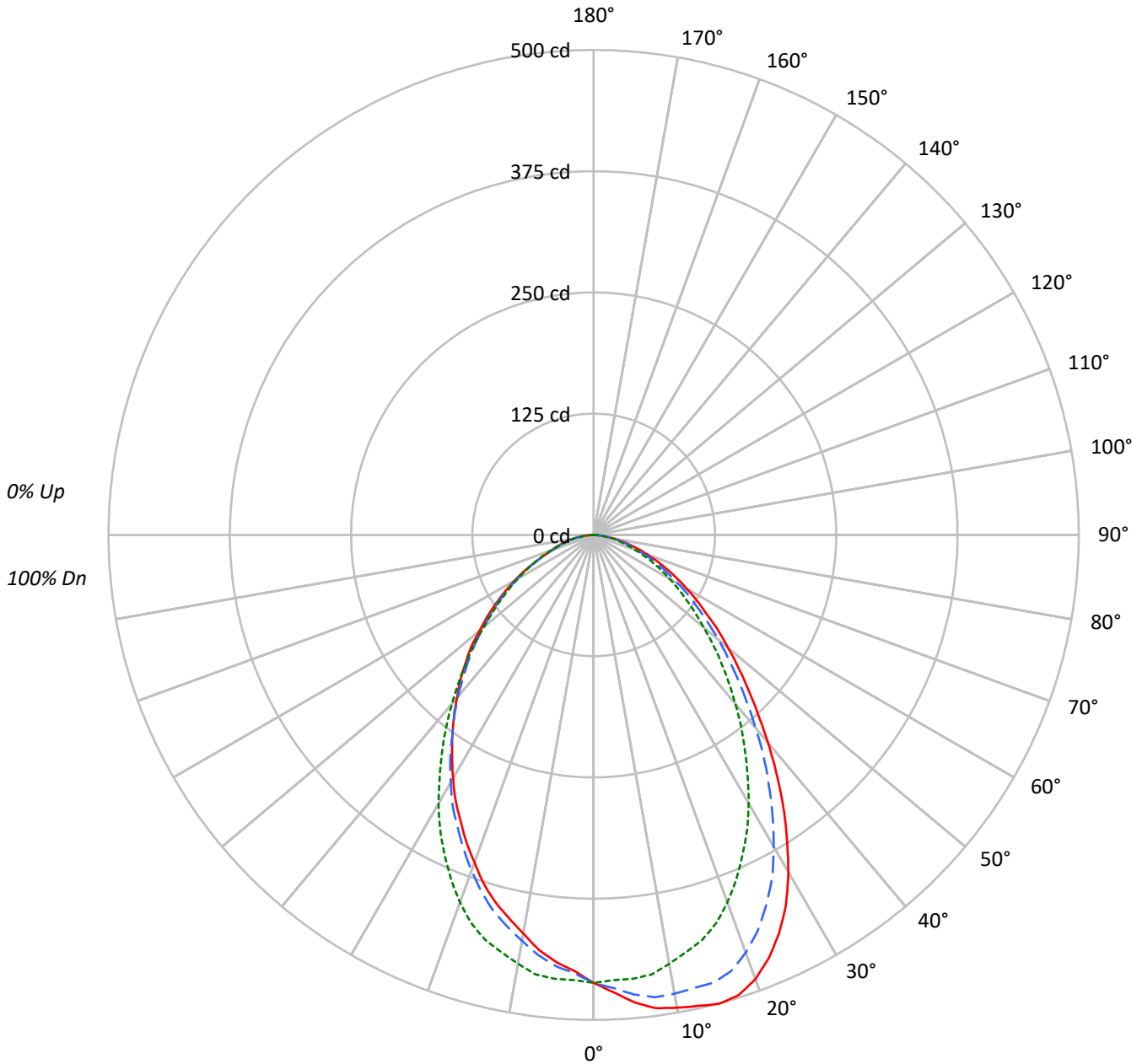
Lumens per Lamp: N/A  
Luminaire Lumens: 895.6 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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 | 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   | 110 | 106 | 103 | 99  | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 92  | 91  | 89  | 87  |    |    |    |    | 87  |   |  |   |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    |    | 75  |   |  |   |
| 3   | 94  | 85  | 77  | 72  | 92  | 83  | 76  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |    |    | 66  |   |  |   |
| 4   | 87  | 76  | 68  | 62  | 85  | 75  | 68  | 62  | 72  | 66  | 61  | 70  | 65  | 60  | 68  | 63  | 60  | 58  |    |    |    |    | 58  |   |  |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 60  | 55  | 66  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 53  | 51  |    |    |    |    | 51  |   |  |   |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 54  | 49  | 60  | 53  | 48  | 59  | 53  | 48  | 57  | 52  | 47  | 46  |    |    |    |    | 46  |   |  |   |
| 7   | 70  | 58  | 50  | 44  | 68  | 57  | 49  | 44  | 55  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 43  | 41  |    |    |    |    | 41  |   |  |   |
| 8   | 65  | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 39  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |    |    | 37  |   |  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 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°  | 56961 | 56961 | 56961 |
| 5°  | 59903 | 56881 | 54752 |
| 10° | 61998 | 56211 | 52266 |
| 15° | 63899 | 55191 | 50032 |
| 20° | 63964 | 52912 | 47162 |
| 25° | 61570 | 49458 | 44218 |
| 30° | 57170 | 45520 | 41275 |
| 35° | 51241 | 40972 | 38216 |
| 40° | 44972 | 36551 | 35311 |
| 45° | 39301 | 32376 | 32567 |
| 50° | 34694 | 28323 | 29340 |
| 55° | 30580 | 25117 | 26386 |
| 60° | 27333 | 22227 | 23115 |
| 65° | 24224 | 19555 | 19555 |
| 70° | 21169 | 16661 | 16661 |
| 75° | 18062 | 14106 | 15822 |
| 80° | 14277 | 12644 | 14277 |
| 85° | 9199  | 10897 | 13303 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.8   | 4.9       |
| 10°-20°   | 123.2  | 13.8      |
| 20°-30°   | 172.6  | 19.3      |
| 30°-40°   | 177.8  | 19.9      |
| 40°-50°   | 151.4  | 16.9      |
| 50°-60°   | 112.2  | 12.5      |
| 60°-70°   | 70.4   | 7.9       |
| 70°-80°   | 35.0   | 3.9       |
| 80°-90°   | 9.2    | 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°    | 339.6  | 37.9      |
| 0°-40°    | 517.4  | 57.8      |
| 0°-60°    | 781.0  | 87.2      |
| 0°-90°    | 895.6  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 895.6  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 462 | 462 | 462 | 462  | 462  |      |
| 5°  | 484 | 476 | 459 | 446  | 442  | 47   |
| 15° | 500 | 478 | 432 | 401  | 392  | 141  |
| 25° | 452 | 421 | 363 | 332  | 325  | 207  |
| 35° | 340 | 315 | 272 | 254  | 254  | 212  |
| 45° | 225 | 210 | 186 | 182  | 187  | 175  |
| 55° | 142 | 131 | 117 | 119  | 123  | 129  |
| 65° | 83  | 75  | 67  | 66   | 67   | 83   |
| 75° | 38  | 34  | 30  | 32   | 33   | 40   |
| 85° | 6   | 6   | 8   | 9    | 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°    | 461.8 | 461.8 | 461.8 | 461.8 | 461.8 | 461.8  | 461.8 | 461.8  | 461.8 |
| 2.5°  | 471.9 | 470.1 | 467.7 | 463.6 | 459.4 | 455.9  | 452.4 | 450.5  | 450.0 |
| 5°    | 483.8 | 480.2 | 475.5 | 467.7 | 459.4 | 452.4  | 446.4 | 443.5  | 442.2 |
| 7.5°  | 492.1 | 488.5 | 480.8 | 469.0 | 457.0 | 446.4  | 436.9 | 432.8  | 431.5 |
| 10°   | 495.0 | 490.8 | 480.2 | 464.2 | 448.8 | 435.7  | 425.0 | 419.7  | 417.3 |
| 12.5° | 497.4 | 492.1 | 478.4 | 459.4 | 440.5 | 424.5  | 413.2 | 406.0  | 404.3 |
| 15°   | 500.4 | 494.5 | 477.8 | 454.7 | 432.2 | 413.2  | 400.8 | 394.2  | 391.8 |
| 17.5° | 497.4 | 490.8 | 471.4 | 445.2 | 419.7 | 399.0  | 385.3 | 379.4  | 377.0 |
| 20°   | 487.3 | 480.2 | 458.3 | 430.4 | 403.1 | 381.8  | 368.1 | 362.2  | 359.3 |
| 22.5° | 471.9 | 464.2 | 441.7 | 412.1 | 384.2 | 363.4  | 350.4 | 344.5  | 342.7 |
| 25°   | 452.4 | 444.6 | 420.9 | 390.7 | 363.4 | 343.2  | 332.0 | 326.6  | 324.9 |
| 27.5° | 429.3 | 421.5 | 398.4 | 368.7 | 342.7 | 323.6  | 314.8 | 309.4  | 308.3 |
| 30°   | 401.4 | 393.6 | 371.1 | 343.8 | 319.6 | 301.8  | 294.6 | 290.5  | 289.8 |
| 32.5° | 370.5 | 364.0 | 343.2 | 318.3 | 295.2 | 280.4  | 275.1 | 272.1  | 271.5 |
| 35°   | 340.3 | 333.2 | 314.8 | 292.2 | 272.1 | 259.1  | 254.3 | 253.8  | 253.8 |
| 37.5° | 309.4 | 302.4 | 287.6 | 266.7 | 249.6 | 237.7  | 235.9 | 236.6  | 236.6 |
| 40°   | 279.3 | 272.7 | 259.7 | 242.5 | 227.0 | 218.2  | 217.6 | 218.7  | 219.3 |
| 42.5° | 250.8 | 245.5 | 233.6 | 218.7 | 205.8 | 198.6  | 199.1 | 201.5  | 203.4 |
| 45°   | 225.3 | 220.5 | 209.8 | 196.9 | 185.6 | 180.3  | 182.0 | 184.9  | 186.7 |
| 47.5° | 202.1 | 198.0 | 187.9 | 176.0 | 166.6 | 163.1  | 165.4 | 169.0  | 171.4 |
| 50°   | 180.8 | 177.3 | 167.7 | 155.3 | 147.6 | 145.2  | 148.2 | 151.8  | 152.9 |
| 52.5° | 161.8 | 158.3 | 148.2 | 137.6 | 131.6 | 130.4  | 133.4 | 136.3  | 138.2 |
| 55°   | 142.2 | 139.3 | 131.0 | 121.5 | 116.8 | 116.2  | 119.1 | 121.5  | 122.7 |
| 57.5° | 126.3 | 123.4 | 115.6 | 107.3 | 103.1 | 102.5  | 105.5 | 107.3  | 107.9 |
| 60°   | 110.8 | 107.9 | 100.8 | 93.1  | 90.1  | 90.1   | 91.8  | 93.1   | 93.7  |
| 62.5° | 96.6  | 93.7  | 87.2  | 80.6  | 78.3  | 78.3   | 78.3  | 78.9   | 80.6  |
| 65°   | 83.0  | 80.6  | 74.7  | 68.7  | 67.0  | 65.8   | 65.8  | 65.8   | 67.0  |
| 67.5° | 70.6  | 68.2  | 63.4  | 58.2  | 56.3  | 54.5   | 53.9  | 55.1   | 55.1  |
| 70°   | 58.7  | 56.9  | 52.1  | 48.0  | 46.2  | 44.5   | 43.8  | 46.2   | 46.2  |
| 72.5° | 48.0  | 46.2  | 43.2  | 39.1  | 37.3  | 36.8   | 37.9  | 39.1   | 39.7  |
| 75°   | 37.9  | 36.2  | 33.8  | 31.4  | 29.6  | 30.3   | 32.0  | 32.7   | 33.2  |
| 77.5° | 28.4  | 27.9  | 25.5  | 23.7  | 23.7  | 24.4   | 25.5  | 26.6   | 27.3  |
| 80°   | 20.1  | 19.6  | 18.3  | 17.2  | 17.8  | 19.0   | 19.6  | 20.7   | 20.1  |
| 82.5° | 12.4  | 12.4  | 11.8  | 11.8  | 12.4  | 13.7   | 14.2  | 14.8   | 15.4  |
| 85°   | 6.5   | 6.5   | 6.5   | 7.2   | 7.7   | 8.3    | 8.9   | 9.4    | 9.4   |
| 87.5° | 1.8   | 2.4   | 2.4   | 3.0   | 3.5   | 3.5    | 4.1   | 4.1    | 4.1   |
| 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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