

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: P581456

Luminaire Tested: **HCC4S07D010MW-HM40525835-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581456  
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: HCC4S07D010MW-HM40525835-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

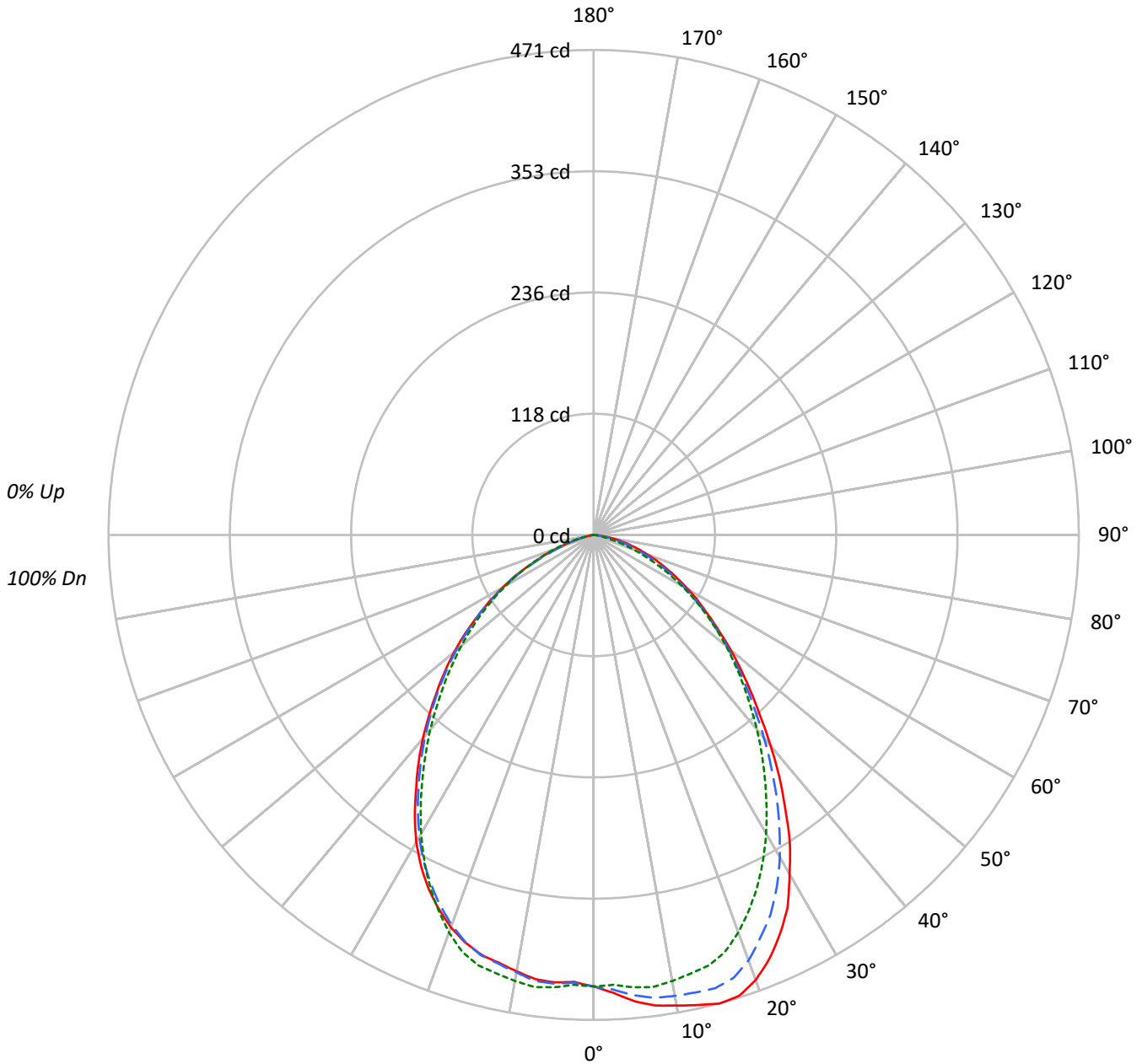
Lumens per Lamp: N/A  
Luminaire Lumens: 914.0 lumens  
Efficiency: N/A  
Efficacy: 114.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 54099 | 54099 | 54099 |
| 5°  | 56287 | 54603 | 54009 |
| 10° | 58128 | 55084 | 53894 |
| 15° | 60171 | 55254 | 53888 |
| 20° | 60380 | 53909 | 53227 |
| 25° | 58236 | 51213 | 51622 |
| 30° | 54194 | 47699 | 49052 |
| 35° | 48817 | 43637 | 45248 |
| 40° | 43040 | 39707 | 41526 |
| 45° | 37644 | 35777 | 37539 |
| 50° | 33332 | 32180 | 33888 |
| 55° | 29311 | 28408 | 29569 |
| 60° | 26174 | 24274 | 25014 |
| 65° | 23028 | 19730 | 19350 |
| 70° | 20124 | 14534 | 13271 |
| 75° | 16632 | 8721  | 7053  |
| 80° | 12644 | 3410  | 2131  |
| 85° | 5802  | 849   | 849   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 42.3   | 4.6       |
| 10°-20°   | 123.5  | 13.5      |
| 20°-30°   | 178.8  | 19.6      |
| 30°-40°   | 188.6  | 20.6      |
| 40°-50°   | 163.3  | 17.9      |
| 50°-60°   | 120.9  | 13.2      |
| 60°-70°   | 69.7   | 7.6       |
| 70°-80°   | 24.3   | 2.7       |
| 80°-90°   | 2.5    | 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°    | 344.6  | 37.7      |
| 0°-40°    | 533.2  | 58.3      |
| 0°-60°    | 817.4  | 89.4      |
| 0°-90°    | 914.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 914.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 439 | 439 | 439 | 439  | 439  |      |
| 5°  | 455 | 449 | 441 | 437  | 436  | 44   |
| 15° | 471 | 456 | 433 | 423  | 422  | 133  |
| 25° | 428 | 407 | 376 | 374  | 379  | 196  |
| 35° | 324 | 309 | 290 | 296  | 300  | 203  |
| 45° | 216 | 210 | 205 | 213  | 215  | 167  |
| 55° | 136 | 133 | 132 | 137  | 138  | 123  |
| 65° | 79  | 74  | 68  | 64   | 66   | 79   |
| 75° | 35  | 30  | 18  | 15   | 15   | 38   |
| 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°    | 438.6 | 438.6 | 438.6 | 438.6 | 438.6 | 438.6  | 438.6 | 438.6  | 438.6 |
| 2.5°  | 445.2 | 443.9 | 442.1 | 439.8 | 437.4 | 435.6  | 435.1 | 434.5  | 434.5 |
| 5°    | 454.6 | 452.2 | 448.7 | 443.9 | 441.0 | 439.2  | 437.4 | 436.2  | 436.2 |
| 7.5°  | 461.1 | 458.7 | 453.4 | 446.9 | 442.8 | 439.2  | 436.9 | 435.1  | 435.1 |
| 10°   | 464.1 | 461.1 | 454.6 | 446.3 | 439.8 | 435.1  | 431.5 | 430.3  | 430.3 |
| 12.5° | 467.6 | 464.1 | 455.2 | 444.5 | 436.2 | 430.3  | 426.7 | 425.6  | 425.6 |
| 15°   | 471.2 | 467.0 | 455.8 | 443.4 | 432.7 | 425.6  | 422.7 | 422.0  | 422.0 |
| 17.5° | 469.4 | 464.1 | 451.1 | 436.2 | 424.4 | 417.3  | 414.3 | 414.3  | 414.9 |
| 20°   | 460.0 | 454.6 | 439.8 | 423.2 | 410.7 | 405.5  | 403.1 | 404.2  | 405.5 |
| 22.5° | 445.8 | 439.2 | 423.2 | 407.2 | 394.2 | 389.4  | 389.4 | 391.2  | 393.0 |
| 25°   | 427.9 | 422.0 | 406.6 | 388.9 | 376.3 | 372.8  | 373.9 | 377.0  | 379.3 |
| 27.5° | 407.7 | 401.3 | 385.2 | 368.7 | 356.2 | 354.5  | 357.4 | 361.5  | 362.8 |
| 30°   | 380.5 | 375.2 | 361.5 | 345.5 | 334.9 | 334.3  | 338.4 | 341.4  | 344.4 |
| 32.5° | 354.5 | 348.6 | 335.5 | 320.1 | 312.4 | 313.0  | 317.7 | 321.3  | 323.1 |
| 35°   | 324.2 | 318.9 | 309.4 | 296.9 | 289.8 | 291.0  | 296.3 | 299.9  | 300.5 |
| 37.5° | 295.8 | 292.2 | 282.7 | 273.2 | 267.9 | 270.3  | 275.1 | 279.2  | 279.2 |
| 40°   | 267.3 | 264.4 | 257.2 | 249.6 | 246.6 | 249.6  | 254.2 | 257.9  | 257.9 |
| 42.5° | 240.0 | 238.3 | 232.4 | 227.0 | 225.2 | 229.4  | 233.5 | 236.5  | 235.9 |
| 45°   | 215.8 | 213.9 | 209.8 | 205.6 | 205.1 | 209.3  | 212.8 | 214.5  | 215.2 |
| 47.5° | 193.8 | 192.7 | 189.0 | 186.1 | 186.1 | 190.3  | 193.2 | 195.1  | 195.6 |
| 50°   | 173.7 | 172.5 | 169.6 | 167.2 | 167.7 | 171.8  | 174.2 | 176.0  | 176.6 |
| 52.5° | 153.5 | 152.9 | 150.6 | 147.6 | 149.4 | 152.4  | 155.3 | 156.5  | 157.0 |
| 55°   | 136.3 | 136.3 | 133.4 | 131.0 | 132.1 | 135.2  | 136.9 | 137.5  | 137.5 |
| 57.5° | 121.0 | 120.3 | 116.8 | 114.4 | 114.9 | 117.9  | 119.1 | 119.7  | 119.7 |
| 60°   | 106.1 | 105.5 | 102.0 | 98.4  | 98.4  | 100.1  | 100.7 | 101.4  | 101.4 |
| 62.5° | 91.8  | 91.3  | 87.2  | 84.2  | 83.0  | 82.4   | 82.4  | 83.5   | 85.9  |
| 65°   | 78.9  | 78.3  | 74.1  | 69.3  | 67.6  | 65.8   | 64.1  | 65.2   | 66.3  |
| 67.5° | 67.0  | 65.8  | 61.7  | 57.5  | 53.4  | 50.4   | 47.5  | 49.2   | 51.6  |
| 70°   | 55.8  | 54.5  | 49.8  | 45.1  | 40.3  | 35.6   | 33.2  | 35.6   | 36.8  |
| 72.5° | 45.1  | 43.8  | 39.1  | 34.4  | 28.4  | 23.7   | 23.1  | 23.7   | 24.4  |
| 75°   | 34.9  | 34.4  | 29.6  | 24.4  | 18.3  | 14.8   | 14.8  | 14.8   | 14.8  |
| 77.5° | 26.1  | 24.9  | 20.1  | 15.4  | 10.7  | 8.3    | 7.7   | 7.7    | 7.7   |
| 80°   | 17.8  | 16.6  | 12.4  | 8.9   | 4.8   | 3.5    | 3.5   | 3.0    | 3.0   |
| 82.5° | 10.1  | 9.4   | 6.5   | 3.5   | 1.8   | 1.1    | 1.1   | 1.1    | 1.1   |
| 85°   | 4.1   | 3.5   | 2.4   | 1.1   | 0.6   | 0.6    | 0.6   | 0.6    | 0.6   |
| 87.5° | 0.6   | 0.6   | 0.6   | 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report



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

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