

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: P592582

Luminaire Tested: **HCC4S07D010MW-HM40525850-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592582  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S07D010MW-HM40525850-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

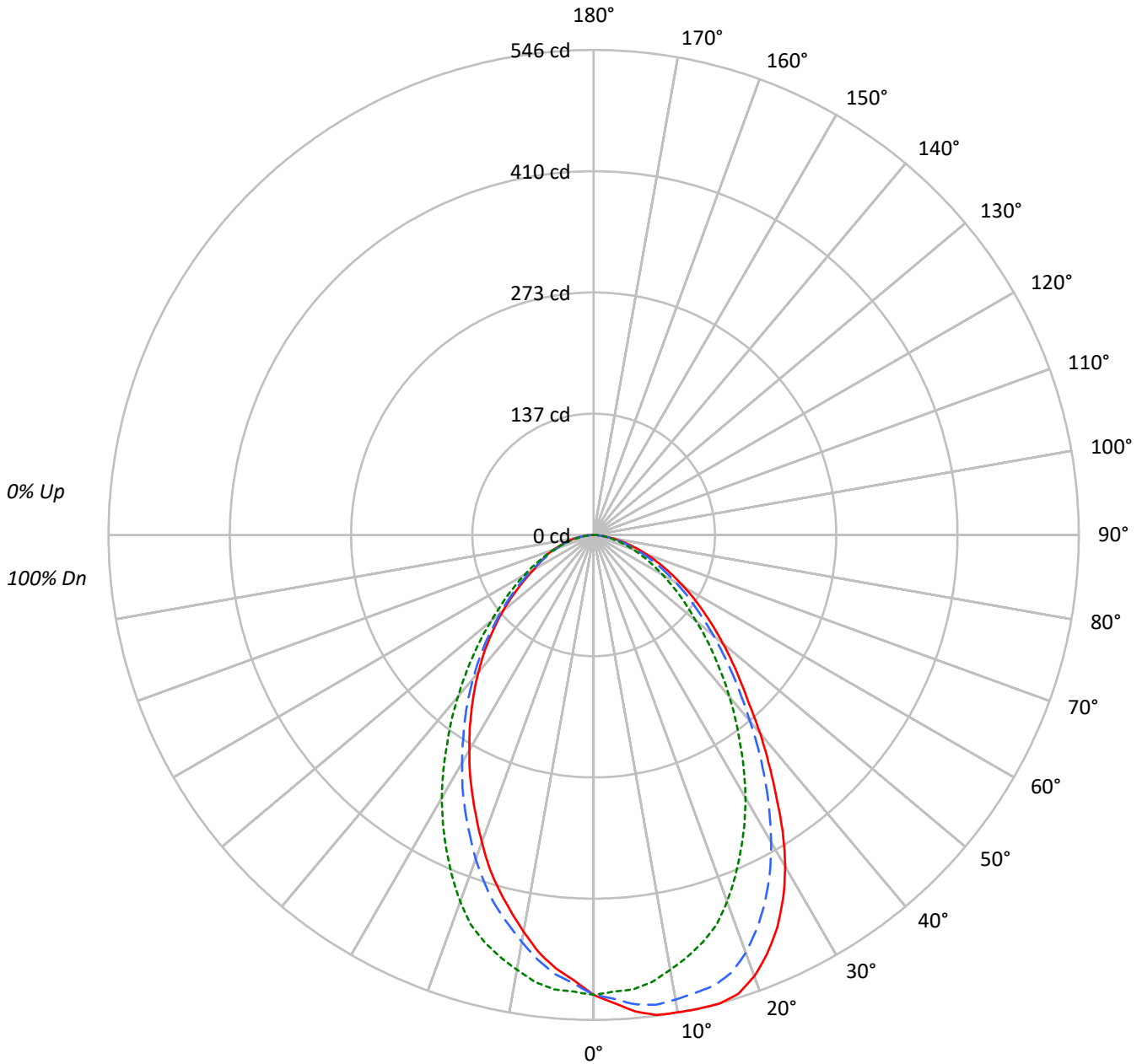
Lumens per Lamp: N/A  
Luminaire Lumens: 924.6 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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 | 106 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 87  |    |    |    |  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |    |  |  |  |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 73  | 69  | 76  | 72  | 68  | 66  |    |    |    |  |  |  |  |   |
| 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  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |  |  |  |  |   |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 48  | 47  |    |    |    |  |  |  |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |    |  |  |  |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |  |  |  |  |   |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    |  |  |  |  |   |
| 10  | 59  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    |  |  |  |  |   |

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

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 63868 | 63868 | 63868 |
| 5°  | 66675 | 63580 | 60645 |
| 10° | 68361 | 62261 | 56838 |
| 15° | 69774 | 60592 | 52739 |
| 20° | 69398 | 57650 | 48291 |
| 25° | 66483 | 53309 | 43946 |
| 30° | 61429 | 48667 | 39823 |
| 35° | 53846 | 43291 | 36048 |
| 40° | 46888 | 38257 | 32477 |
| 45° | 40801 | 33370 | 29009 |
| 50° | 36363 | 28765 | 25598 |
| 55° | 32472 | 25289 | 22150 |
| 60° | 29011 | 22104 | 19094 |
| 65° | 25771 | 19350 | 18125 |
| 70° | 22612 | 16698 | 16914 |
| 75° | 19158 | 14202 | 15679 |
| 80° | 14704 | 12146 | 14277 |
| 85° | 8633  | 9482  | 12029 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 48.5   | 5.2       |
| 10°-20°   | 133.9  | 14.5      |
| 20°-30°   | 182.9  | 19.8      |
| 30°-40°   | 183.7  | 19.9      |
| 40°-50°   | 151.9  | 16.4      |
| 50°-60°   | 110.1  | 11.9      |
| 60°-70°   | 69.7   | 7.5       |
| 70°-80°   | 35.3   | 3.8       |
| 80°-90°   | 8.6    | 0.9       |
| 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°    | 365.3  | 39.5      |
| 0°-40°    | 549.0  | 59.4      |
| 0°-60°    | 811.0  | 87.7      |
| 0°-90°    | 924.6  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 924.6  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 518 | 518 | 518 | 518  | 518  |      |
| 5°  | 538 | 530 | 514 | 496  | 490  | 52   |
| 15° | 546 | 525 | 474 | 431  | 413  | 154  |
| 25° | 488 | 456 | 392 | 342  | 323  | 223  |
| 35° | 358 | 336 | 288 | 252  | 239  | 224  |
| 45° | 234 | 220 | 191 | 172  | 166  | 182  |
| 55° | 151 | 138 | 118 | 107  | 103  | 136  |
| 65° | 88  | 78  | 66  | 60   | 62   | 88   |
| 75° | 40  | 35  | 30  | 31   | 33   | 43   |
| 85° | 6   | 6   | 7   | 8    | 8    | 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°    | 517.8 | 517.8 | 517.8 | 517.8 | 517.8 | 517.8  | 517.8 | 517.8  | 517.8 |
| 2.5°  | 527.5 | 525.6 | 522.7 | 518.9 | 514.7 | 509.8  | 505.6 | 503.1  | 502.0 |
| 5°    | 538.5 | 536.0 | 530.5 | 522.7 | 513.5 | 504.4  | 496.4 | 491.6  | 489.8 |
| 7.5°  | 545.2 | 541.6 | 533.6 | 521.4 | 507.4 | 494.0  | 482.4 | 475.7  | 473.9 |
| 10°   | 545.8 | 541.6 | 531.2 | 514.7 | 497.1 | 479.4  | 465.3 | 455.7  | 453.8 |
| 12.5° | 546.4 | 540.9 | 528.1 | 508.6 | 486.7 | 464.8  | 447.7 | 436.2  | 433.1 |
| 15°   | 546.4 | 540.9 | 525.1 | 502.0 | 474.5 | 449.5  | 430.6 | 417.3  | 413.0 |
| 17.5° | 541.6 | 535.4 | 516.5 | 489.8 | 459.9 | 431.9  | 409.9 | 395.9  | 391.7 |
| 20°   | 528.7 | 522.0 | 500.7 | 471.5 | 439.2 | 409.9  | 388.1 | 373.4  | 367.9 |
| 22.5° | 510.5 | 502.5 | 480.0 | 448.4 | 416.1 | 386.2  | 364.8 | 349.6  | 344.8 |
| 25°   | 488.5 | 480.6 | 456.2 | 425.2 | 391.7 | 363.7  | 342.3 | 328.3  | 322.9 |
| 27.5° | 461.7 | 453.2 | 429.5 | 398.4 | 367.3 | 339.2  | 319.8 | 307.0  | 301.6 |
| 30°   | 431.3 | 422.1 | 399.6 | 369.7 | 341.7 | 314.9  | 296.0 | 285.6  | 279.6 |
| 32.5° | 395.9 | 388.1 | 367.9 | 341.1 | 314.9 | 289.4  | 273.5 | 264.4  | 259.5 |
| 35°   | 357.6 | 353.3 | 336.3 | 313.1 | 287.5 | 266.2  | 252.2 | 243.6  | 239.4 |
| 37.5° | 323.4 | 319.2 | 304.5 | 285.1 | 262.5 | 243.1  | 231.5 | 224.2  | 220.5 |
| 40°   | 291.2 | 287.5 | 273.5 | 257.1 | 237.6 | 220.5  | 210.8 | 205.3  | 201.7 |
| 42.5° | 259.5 | 257.6 | 246.0 | 230.9 | 213.8 | 199.1  | 191.3 | 187.0  | 184.0 |
| 45°   | 233.9 | 231.5 | 220.5 | 205.9 | 191.3 | 179.1  | 172.4 | 169.3  | 166.3 |
| 47.5° | 211.3 | 208.4 | 196.8 | 184.0 | 170.6 | 159.5  | 153.5 | 150.4  | 149.2 |
| 50°   | 189.5 | 186.4 | 176.0 | 163.3 | 149.9 | 141.9  | 137.0 | 134.1  | 133.4 |
| 52.5° | 169.9 | 166.9 | 155.3 | 143.2 | 132.8 | 126.1  | 121.9 | 118.8  | 117.6 |
| 55°   | 151.0 | 147.4 | 137.7 | 126.1 | 117.6 | 111.5  | 107.2 | 104.1  | 103.0 |
| 57.5° | 134.1 | 130.3 | 121.9 | 110.8 | 103.0 | 97.4   | 93.8  | 90.8   | 89.6  |
| 60°   | 117.6 | 114.5 | 106.6 | 96.3  | 89.6  | 84.7   | 81.0  | 78.5   | 77.4  |
| 62.5° | 102.3 | 99.9  | 92.0  | 82.8  | 77.4  | 73.1   | 70.1  | 67.6   | 68.8  |
| 65°   | 88.3  | 85.9  | 78.5  | 70.7  | 66.3  | 62.1   | 59.7  | 59.7   | 62.1  |
| 67.5° | 74.9  | 72.5  | 66.3  | 59.7  | 56.0  | 53.0   | 51.2  | 53.0   | 54.9  |
| 70°   | 62.7  | 60.3  | 54.9  | 49.4  | 46.3  | 43.8   | 43.8  | 45.6   | 46.9  |
| 72.5° | 51.2  | 48.7  | 44.5  | 40.2  | 37.8  | 36.0   | 37.8  | 39.0   | 40.2  |
| 75°   | 40.2  | 38.4  | 34.7  | 31.6  | 29.8  | 29.2   | 31.1  | 32.3   | 32.9  |
| 77.5° | 29.8  | 28.7  | 26.2  | 23.8  | 22.5  | 23.1   | 24.9  | 25.6   | 26.2  |
| 80°   | 20.7  | 20.1  | 18.3  | 17.1  | 17.1  | 17.6   | 18.9  | 19.5   | 20.1  |
| 82.5° | 12.7  | 12.7  | 11.6  | 10.9  | 11.6  | 12.7   | 13.4  | 14.0   | 14.0  |
| 85°   | 6.1   | 6.7   | 6.1   | 6.1   | 6.7   | 8.0    | 8.0   | 8.5    | 8.5   |
| 87.5° | 1.8   | 1.8   | 2.4   | 2.4   | 3.1   | 3.1    | 3.1   | 3.1    | 3.6   |
| 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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