

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: P581045

Luminaire Tested: **HCC4W05D010MW-HM40525840-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581045  
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: HCC4W05D010MW-HM40525840-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

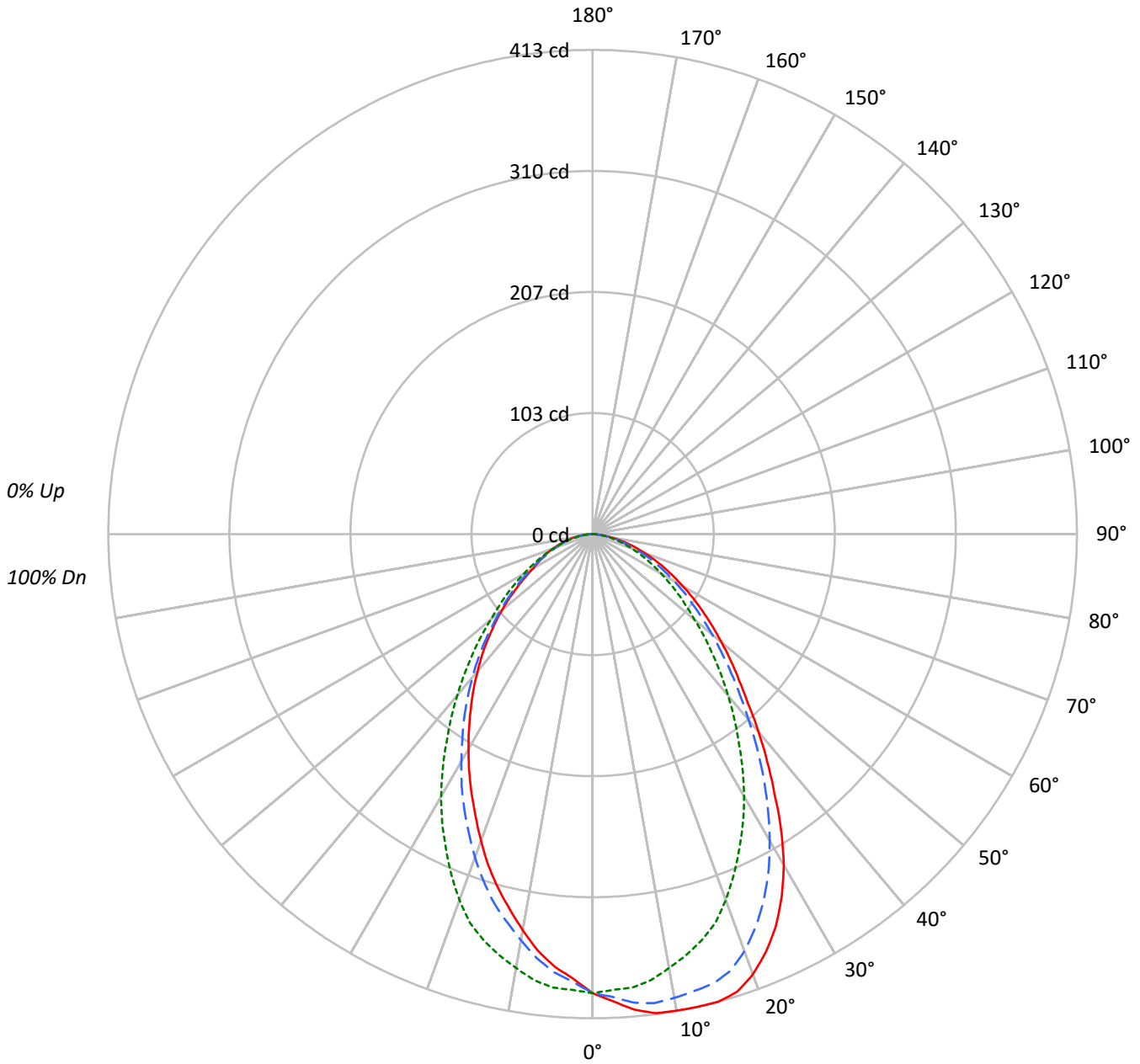
Lumens per Lamp: N/A  
Luminaire Lumens: 699.2 lumens  
Efficiency: N/A  
Efficacy: 116.5 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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 | 106 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 87  |    |    |    |    | 87  |   |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |    |    | 76  |   |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 73  | 69  | 76  | 72  | 68  | 66  |    |    |    |    | 66  |   |  |   |
| 4   | 87  | 77  | 69  | 63  | 85  | 76  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |    |    | 58  |   |  |   |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |    | 52  |   |  |   |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 48  | 47  |    |    |    |    | 47  |   |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 58  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 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  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    |    | 35  |   |  |   |
| 10  | 59  | 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°  | 48290 | 48290 | 48290 |
| 5°  | 50406 | 48078 | 45862 |
| 10° | 51690 | 47068 | 42973 |
| 15° | 52752 | 45818 | 39867 |
| 20° | 52465 | 43592 | 36517 |
| 25° | 50274 | 40298 | 33221 |
| 30° | 46446 | 36803 | 30123 |
| 35° | 40716 | 32735 | 27254 |
| 40° | 35456 | 28935 | 24539 |
| 45° | 30840 | 25224 | 21944 |
| 50° | 27479 | 21741 | 19362 |
| 55° | 24558 | 19118 | 16752 |
| 60° | 21931 | 16726 | 14431 |
| 65° | 19467 | 14651 | 13717 |
| 70° | 17094 | 12622 | 12767 |
| 75° | 14488 | 10771 | 11867 |
| 80° | 11152 | 9163  | 10797 |
| 85° | 6652  | 7218  | 9199  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 36.7   | 5.2       |
| 10°-20°   | 101.2  | 14.5      |
| 20°-30°   | 138.3  | 19.8      |
| 30°-40°   | 138.9  | 19.9      |
| 40°-50°   | 114.9  | 16.4      |
| 50°-60°   | 83.3   | 11.9      |
| 60°-70°   | 52.7   | 7.5       |
| 70°-80°   | 26.7   | 3.8       |
| 80°-90°   | 6.5    | 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°    | 276.2  | 39.5      |
| 0°-40°    | 415.1  | 59.4      |
| 0°-60°    | 613.2  | 87.7      |
| 0°-90°    | 699.2  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 699.2  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 392 | 392 | 392 | 392  | 392  |      |
| 5°  | 407 | 401 | 388 | 375  | 370  | 39   |
| 15° | 413 | 397 | 359 | 326  | 312  | 116  |
| 25° | 369 | 345 | 296 | 259  | 244  | 169  |
| 35° | 270 | 254 | 217 | 191  | 181  | 169  |
| 45° | 177 | 167 | 145 | 130  | 126  | 138  |
| 55° | 114 | 104 | 89  | 81   | 78   | 103  |
| 65° | 67  | 60  | 50  | 45   | 47   | 66   |
| 75° | 30  | 26  | 23  | 24   | 25   | 32   |
| 85° | 5   | 5   | 5   | 6    | 6    | 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°    | 391.5 | 391.5 | 391.5 | 391.5 | 391.5 | 391.5  | 391.5 | 391.5  | 391.5 |
| 2.5°  | 398.8 | 397.5 | 395.2 | 392.5 | 389.2 | 385.6  | 382.3 | 380.5  | 379.5 |
| 5°    | 407.1 | 405.3 | 401.2 | 395.2 | 388.3 | 381.4  | 375.3 | 371.7  | 370.4 |
| 7.5°  | 412.2 | 409.5 | 403.5 | 394.3 | 383.6 | 373.5  | 364.8 | 359.7  | 358.3 |
| 10°   | 412.7 | 409.5 | 401.7 | 389.2 | 375.8 | 362.5  | 351.8 | 344.6  | 343.1 |
| 12.5° | 413.1 | 409.1 | 399.3 | 384.7 | 368.0 | 351.4  | 338.6 | 329.8  | 327.4 |
| 15°   | 413.1 | 409.1 | 397.0 | 379.5 | 358.8 | 339.9  | 325.6 | 315.5  | 312.2 |
| 17.5° | 409.5 | 404.9 | 390.6 | 370.4 | 347.8 | 326.5  | 310.0 | 299.4  | 296.1 |
| 20°   | 399.7 | 394.8 | 378.6 | 356.5 | 332.1 | 310.0  | 293.4 | 282.4  | 278.2 |
| 22.5° | 386.0 | 380.0 | 363.0 | 339.0 | 314.6 | 292.0  | 275.9 | 264.3  | 260.7 |
| 25°   | 369.4 | 363.4 | 345.0 | 321.5 | 296.1 | 275.0  | 258.9 | 248.2  | 244.1 |
| 27.5° | 349.1 | 342.7 | 324.7 | 301.2 | 277.7 | 256.5  | 241.9 | 232.1  | 228.0 |
| 30°   | 326.1 | 319.2 | 302.1 | 279.6 | 258.4 | 238.1  | 223.8 | 216.0  | 211.5 |
| 32.5° | 299.4 | 293.4 | 278.2 | 258.0 | 238.1 | 218.8  | 206.8 | 199.9  | 196.2 |
| 35°   | 270.4 | 267.2 | 254.2 | 236.8 | 217.4 | 201.2  | 190.7 | 184.2  | 181.0 |
| 37.5° | 244.6 | 241.3 | 230.3 | 215.5 | 198.5 | 183.8  | 175.0 | 169.5  | 166.7 |
| 40°   | 220.2 | 217.4 | 206.8 | 194.4 | 179.7 | 166.7  | 159.4 | 155.3  | 152.4 |
| 42.5° | 196.2 | 194.9 | 186.0 | 174.6 | 161.6 | 150.6  | 144.6 | 141.4  | 139.2 |
| 45°   | 176.8 | 175.0 | 166.7 | 155.7 | 144.6 | 135.4  | 130.3 | 128.0  | 125.8 |
| 47.5° | 159.8 | 157.5 | 148.8 | 139.2 | 128.9 | 120.7  | 116.1 | 113.7  | 112.8 |
| 50°   | 143.2 | 141.0 | 133.1 | 123.5 | 113.3 | 107.4  | 103.6 | 101.4  | 100.9 |
| 52.5° | 128.5 | 126.2 | 117.5 | 108.3 | 100.4 | 95.3   | 92.2  | 89.8   | 88.9  |
| 55°   | 114.2 | 111.5 | 104.1 | 95.3  | 88.9  | 84.3   | 81.0  | 78.8   | 77.9  |
| 57.5° | 101.4 | 98.5  | 92.2  | 83.9  | 77.9  | 73.7   | 70.9  | 68.7   | 67.8  |
| 60°   | 88.9  | 86.6  | 80.6  | 72.8  | 67.8  | 64.0   | 61.3  | 59.5   | 58.5  |
| 62.5° | 77.4  | 75.6  | 69.6  | 62.7  | 58.5  | 55.3   | 53.0  | 51.1   | 52.1  |
| 65°   | 66.7  | 64.9  | 59.5  | 53.5  | 50.2  | 47.0   | 45.2  | 45.2   | 47.0  |
| 67.5° | 56.6  | 54.8  | 50.2  | 45.2  | 42.3  | 40.1   | 38.7  | 40.1   | 41.4  |
| 70°   | 47.4  | 45.6  | 41.4  | 37.3  | 35.0  | 33.1   | 33.1  | 34.5   | 35.4  |
| 72.5° | 38.7  | 36.9  | 33.6  | 30.4  | 28.6  | 27.1   | 28.6  | 29.5   | 30.4  |
| 75°   | 30.4  | 29.1  | 26.2  | 23.9  | 22.6  | 22.1   | 23.5  | 24.4   | 24.9  |
| 77.5° | 22.6  | 21.7  | 19.9  | 17.9  | 17.0  | 17.5   | 18.8  | 19.3   | 19.9  |
| 80°   | 15.7  | 15.2  | 13.8  | 12.9  | 12.9  | 13.4   | 14.3  | 14.8   | 15.2  |
| 82.5° | 9.6   | 9.6   | 8.7   | 8.3   | 8.7   | 9.6    | 10.1  | 10.6   | 10.6  |
| 85°   | 4.7   | 5.1   | 4.7   | 4.7   | 5.1   | 6.0    | 6.0   | 6.5    | 6.5   |
| 87.5° | 1.4   | 1.4   | 1.8   | 1.8   | 2.3   | 2.3    | 2.3   | 2.3    | 2.7   |
| 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





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Scaled Data Report



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

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