

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: P592680

Luminaire Tested: **HCC4W20D010BZ-HM40525950-41MDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592680  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4W20D010BZ-HM40525950-41MDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

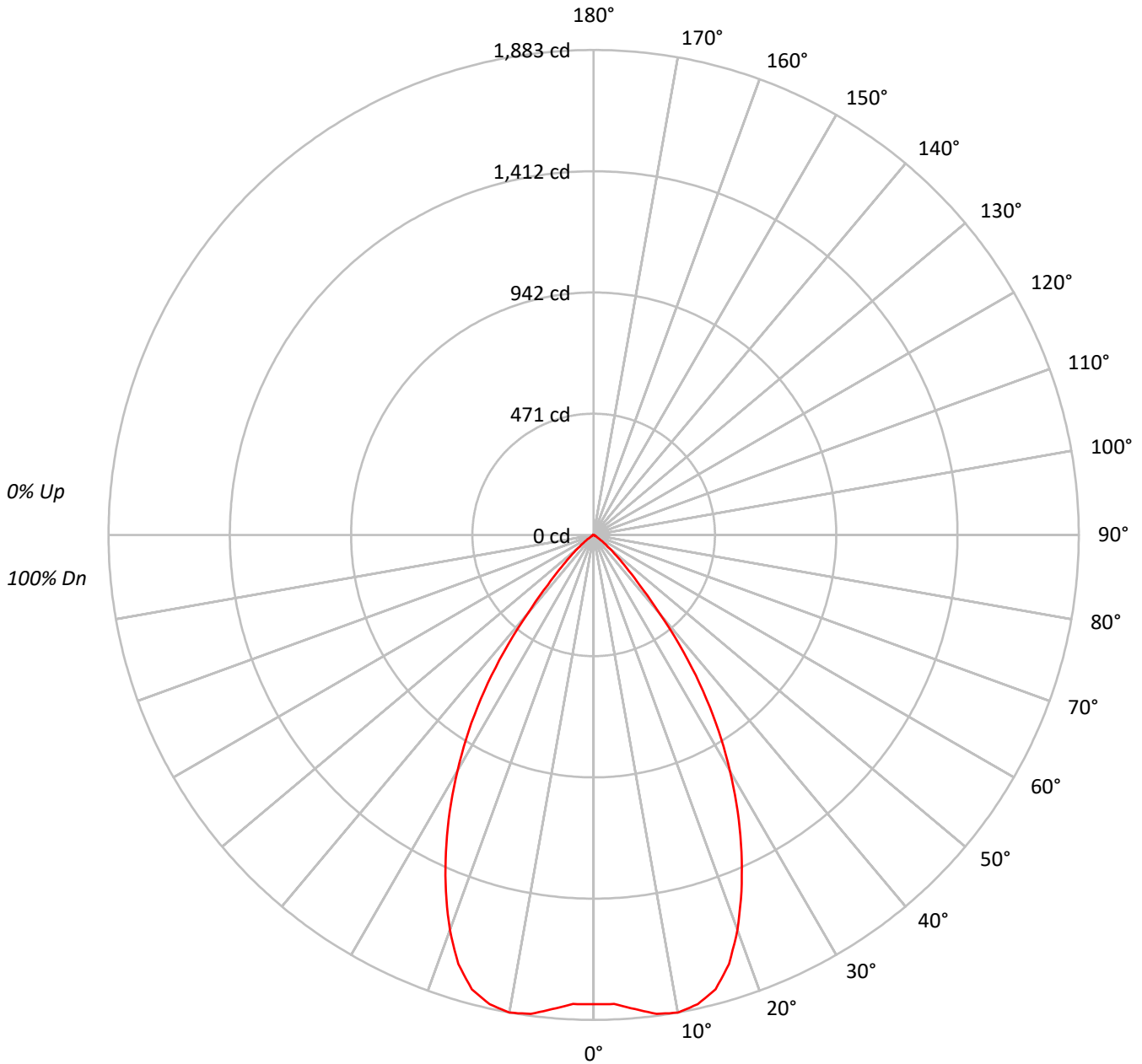
Lumens per Lamp: N/A  
Luminaire Lumens: 1940.0 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 0.96  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): 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   | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 | 101 | 99  | 98  | 97  | 96  | 95  | 93  |    |    |    |    | 93  |   |  |   |
| 2   | 108 | 103 | 98  | 95  | 105 | 101 | 97  | 94  | 98  | 95  | 92  | 95  | 92  | 90  | 92  | 90  | 88  | 86  |    |    |    |    | 86  |   |  |   |
| 3   | 102 | 95  | 90  | 86  | 100 | 94  | 89  | 86  | 91  | 87  | 84  | 89  | 86  | 83  | 87  | 84  | 82  | 80  |    |    |    |    | 80  |   |  |   |
| 4   | 97  | 89  | 83  | 79  | 95  | 88  | 82  | 78  | 86  | 81  | 77  | 84  | 80  | 77  | 82  | 78  | 76  | 74  |    |    |    |    | 74  |   |  |   |
| 5   | 91  | 83  | 77  | 72  | 90  | 82  | 76  | 72  | 80  | 75  | 72  | 78  | 74  | 71  | 77  | 73  | 70  | 69  |    |    |    |    | 69  |   |  |   |
| 6   | 87  | 78  | 71  | 67  | 85  | 77  | 71  | 67  | 75  | 70  | 66  | 74  | 69  | 66  | 72  | 68  | 65  | 64  |    |    |    |    | 64  |   |  |   |
| 7   | 82  | 73  | 66  | 62  | 81  | 72  | 66  | 62  | 71  | 65  | 62  | 69  | 65  | 61  | 68  | 64  | 61  | 60  |    |    |    |    | 60  |   |  |   |
| 8   | 78  | 68  | 62  | 58  | 77  | 68  | 62  | 58  | 67  | 61  | 57  | 65  | 61  | 57  | 64  | 60  | 57  | 56  |    |    |    |    | 56  |   |  |   |
| 9   | 74  | 64  | 58  | 54  | 73  | 64  | 58  | 54  | 63  | 57  | 54  | 62  | 57  | 54  | 61  | 57  | 53  | 52  |    |    |    |    | 52  |   |  |   |
| 10  | 70  | 61  | 55  | 51  | 69  | 60  | 54  | 51  | 59  | 54  | 50  | 58  | 54  | 50  | 58  | 53  | 50  | 49  |    |    |    |    | 49  |   |  |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 224711 |
| 5°  | 228838 |
| 10° | 235893 |
| 15° | 233276 |
| 20° | 214219 |
| 25° | 184792 |
| 30° | 150588 |
| 35° | 111502 |
| 40° | 63972  |
| 45° | 30928  |
| 50° | 14718  |
| 55° | 5140   |
| 60° | 1875   |
| 65° | 1109   |
| 70° | 902    |
| 75° | 620    |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 177.8  | 9.2       |
| 10°-20°   | 506.4  | 26.1      |
| 20°-30°   | 618.5  | 31.9      |
| 30°-40°   | 454.6  | 23.4      |
| 40°-50°   | 150.7  | 7.8       |
| 50°-60°   | 26.6   | 1.4       |
| 60°-70°   | 4.0    | 0.2       |
| 70°-80°   | 1.4    | 0.1       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 1302.7 | 67.1      |
| 0°-40°    | 1757.3 | 90.6      |
| 0°-60°    | 1934.6 | 99.7      |
| 0°-90°    | 1940.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1940.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1822 |      |
| 5°  | 1848 | 178  |
| 15° | 1827 | 506  |
| 25° | 1358 | 618  |
| 35° | 740  | 455  |
| 45° | 177  | 151  |
| 55° | 24   | 27   |
| 65° | 4    | 4    |
| 75° | 1    | 1    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 1821.8 |
| 2.5°  | 1823.0 |
| 5°    | 1848.2 |
| 7.5°  | 1875.8 |
| 10°   | 1883.4 |
| 12.5° | 1865.8 |
| 15°   | 1826.8 |
| 17.5° | 1746.3 |
| 20°   | 1632.0 |
| 22.5° | 1498.7 |
| 25°   | 1357.8 |
| 27.5° | 1210.8 |
| 30°   | 1057.3 |
| 32.5° | 904.0  |
| 35°   | 740.5  |
| 37.5° | 574.5  |
| 40°   | 397.3  |
| 42.5° | 262.8  |
| 45°   | 177.3  |
| 47.5° | 118.1  |
| 50°   | 76.7   |
| 52.5° | 45.3   |
| 55°   | 23.9   |
| 57.5° | 10.1   |
| 60°   | 7.6    |
| 62.5° | 5.0    |
| 65°   | 3.8    |
| 67.5° | 2.5    |
| 70°   | 2.5    |
| 72.5° | 1.3    |
| 75°   | 1.3    |
| 77.5° | 1.3    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |

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Scaled Data Report



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— 0°-180°

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