

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: P579996

Luminaire Tested: **HCC4W20D010SL-HM40525830-41MDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579996  
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: HCC4W20D010SL-HM40525830-41MDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

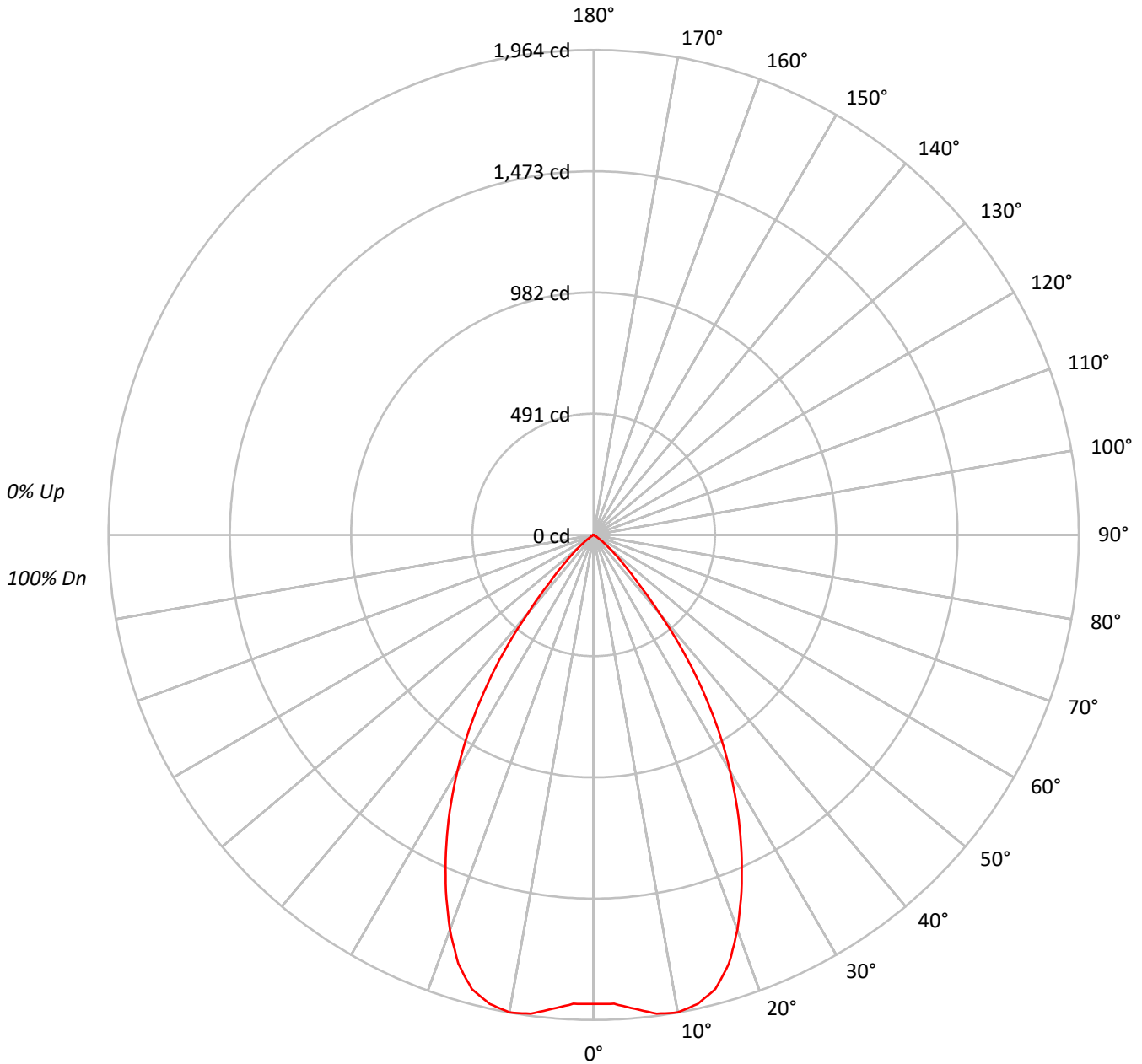
Lumens per Lamp: N/A  
Luminaire Lumens: 2022.4 lumens  
Efficiency: N/A  
Efficacy: 101.1 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 0.96  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (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 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 113 | 111 | 108 | 106 | 111 | 108 | 106 | 104 | 104 | 103 | 101 | 101 | 99  | 98  | 97  | 96  | 95  | 93  |    |    |
| 2   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 94  | 98  | 95  | 92  | 95  | 92  | 90  | 92  | 90  | 88  | 86  |    |    |
| 3   | 102 | 95  | 90  | 86  | 100 | 94  | 89  | 86  | 91  | 87  | 84  | 89  | 86  | 83  | 87  | 84  | 82  | 80  |    |    |
| 4   | 97  | 89  | 83  | 79  | 95  | 88  | 82  | 78  | 86  | 81  | 77  | 84  | 80  | 77  | 82  | 78  | 76  | 74  |    |    |
| 5   | 91  | 83  | 77  | 72  | 90  | 82  | 76  | 72  | 80  | 75  | 72  | 78  | 74  | 71  | 77  | 73  | 70  | 69  |    |    |
| 6   | 87  | 78  | 71  | 67  | 85  | 77  | 71  | 67  | 75  | 70  | 66  | 74  | 69  | 66  | 72  | 68  | 65  | 64  |    |    |
| 7   | 82  | 73  | 66  | 62  | 81  | 72  | 66  | 62  | 71  | 65  | 62  | 69  | 65  | 61  | 68  | 64  | 61  | 60  |    |    |
| 8   | 78  | 68  | 62  | 58  | 77  | 68  | 62  | 58  | 67  | 61  | 57  | 65  | 61  | 57  | 65  | 60  | 57  | 56  |    |    |
| 9   | 74  | 64  | 58  | 54  | 73  | 64  | 58  | 54  | 63  | 57  | 54  | 62  | 57  | 54  | 61  | 57  | 53  | 52  |    |    |
| 10  | 71  | 61  | 55  | 51  | 69  | 60  | 54  | 51  | 59  | 54  | 50  | 58  | 54  | 50  | 58  | 53  | 50  | 49  |    |    |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 234270 |
| 5°  | 238570 |
| 10° | 245925 |
| 15° | 243199 |
| 20° | 223315 |
| 25° | 192659 |
| 30° | 157012 |
| 35° | 116246 |
| 40° | 66693  |
| 45° | 32236  |
| 50° | 15332  |
| 55° | 5355   |
| 60° | 1949   |
| 65° | 1138   |
| 70° | 938    |
| 75° | 620    |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 185.3  | 9.2       |
| 10°-20°   | 528.0  | 26.1      |
| 20°-30°   | 644.8  | 31.9      |
| 30°-40°   | 474.0  | 23.4      |
| 40°-50°   | 157.1  | 7.8       |
| 50°-60°   | 27.7   | 1.4       |
| 60°-70°   | 4.2    | 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°    | 1358.1 | 67.2      |
| 0°-40°    | 1832.1 | 90.6      |
| 0°-60°    | 2016.9 | 99.7      |
| 0°-90°    | 2022.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2022.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1899 |      |
| 5°  | 1927 | 185  |
| 15° | 1904 | 528  |
| 25° | 1416 | 645  |
| 35° | 772  | 474  |
| 45° | 185  | 157  |
| 55° | 25   | 28   |
| 65° | 4    | 4    |
| 75° | 1    | 1    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1899.3 |
| 2.5°  | 1900.6 |
| 5°    | 1926.8 |
| 7.5°  | 1955.6 |
| 10°   | 1963.5 |
| 12.5° | 1945.2 |
| 15°   | 1904.5 |
| 17.5° | 1820.6 |
| 20°   | 1701.3 |
| 22.5° | 1562.4 |
| 25°   | 1415.6 |
| 27.5° | 1262.3 |
| 30°   | 1102.4 |
| 32.5° | 942.4  |
| 35°   | 772.0  |
| 37.5° | 599.0  |
| 40°   | 414.2  |
| 42.5° | 273.9  |
| 45°   | 184.8  |
| 47.5° | 123.2  |
| 50°   | 79.9   |
| 52.5° | 47.1   |
| 55°   | 24.9   |
| 57.5° | 10.4   |
| 60°   | 7.9    |
| 62.5° | 5.3    |
| 65°   | 3.9    |
| 67.5° | 2.6    |
| 70°   | 2.6    |
| 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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