

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: P580027

Luminaire Tested: **HCC4S20D010SL-HM40525840-41MDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580027  
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: HCC4S20D010SL-HM40525840-41MDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

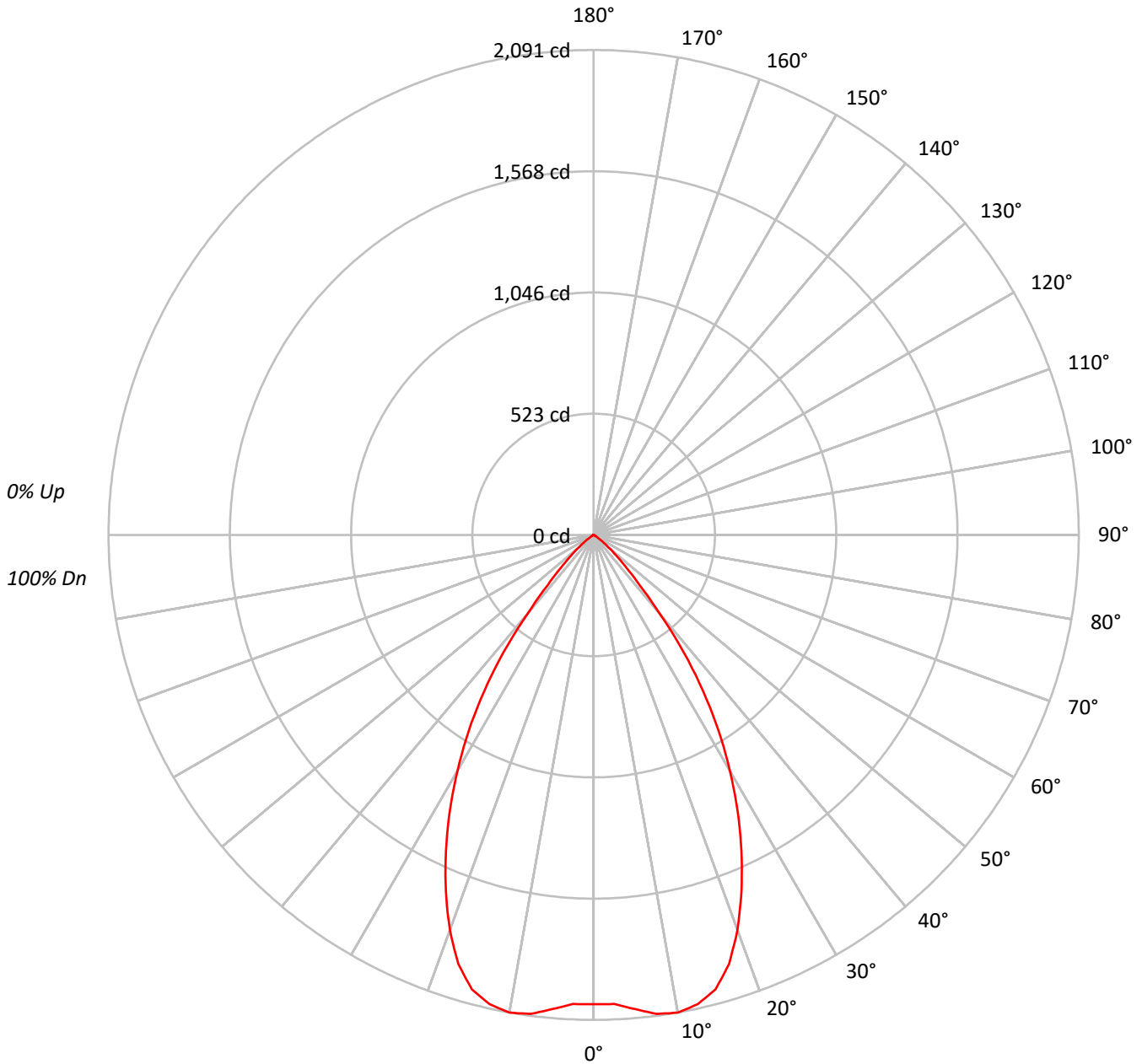
Lumens per Lamp: N/A  
Luminaire Lumens: 2154.3 lumens  
Efficiency: N/A  
Efficacy: 107.7 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 0.96  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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 | 0 |
| 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  | 70  | 61  | 55  | 51  | 69  | 60  | 54  | 51  | 59  | 54  | 50  | 58  | 54  | 50  | 58  | 53  | 50  | 49  |    |    |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 249541 |
| 5°  | 254109 |
| 10° | 261945 |
| 15° | 259046 |
| 20° | 237886 |
| 25° | 205207 |
| 30° | 167238 |
| 35° | 123820 |
| 40° | 71024  |
| 45° | 34329  |
| 50° | 16349  |
| 55° | 5699   |
| 60° | 2072   |
| 65° | 1226   |
| 70° | 1010   |
| 75° | 667    |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 197.4  | 9.2       |
| 10°-20°   | 562.4  | 26.1      |
| 20°-30°   | 686.8  | 31.9      |
| 30°-40°   | 504.9  | 23.4      |
| 40°-50°   | 167.3  | 7.8       |
| 50°-60°   | 29.5   | 1.4       |
| 60°-70°   | 4.5    | 0.2       |
| 70°-80°   | 1.5    | 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°    | 1446.6 | 67.1      |
| 0°-40°    | 1951.5 | 90.6      |
| 0°-60°    | 2148.3 | 99.7      |
| 0°-90°    | 2154.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2154.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2023 |      |
| 5°  | 2052 | 197  |
| 15° | 2029 | 562  |
| 25° | 1508 | 687  |
| 35° | 822  | 505  |
| 45° | 197  | 167  |
| 55° | 26   | 30   |
| 65° | 4    | 4    |
| 75° | 1    | 1    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 2023.1 |
| 2.5°  | 2024.5 |
| 5°    | 2052.3 |
| 7.5°  | 2083.1 |
| 10°   | 2091.4 |
| 12.5° | 2071.9 |
| 15°   | 2028.6 |
| 17.5° | 1939.2 |
| 20°   | 1812.3 |
| 22.5° | 1664.2 |
| 25°   | 1507.8 |
| 27.5° | 1344.5 |
| 30°   | 1174.2 |
| 32.5° | 1003.9 |
| 35°   | 822.3  |
| 37.5° | 638.1  |
| 40°   | 441.1  |
| 42.5° | 291.8  |
| 45°   | 196.8  |
| 47.5° | 131.2  |
| 50°   | 85.2   |
| 52.5° | 50.2   |
| 55°   | 26.5   |
| 57.5° | 11.1   |
| 60°   | 8.4    |
| 62.5° | 5.6    |
| 65°   | 4.2    |
| 67.5° | 2.8    |
| 70°   | 2.8    |
| 72.5° | 1.4    |
| 75°   | 1.4    |
| 77.5° | 1.4    |
| 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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