

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: P579991

Luminaire Tested: **HCC4S20D010BZ-HM40525830-41WDWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579991  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-10)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC4S20D010BZ-HM40525830-41WDWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

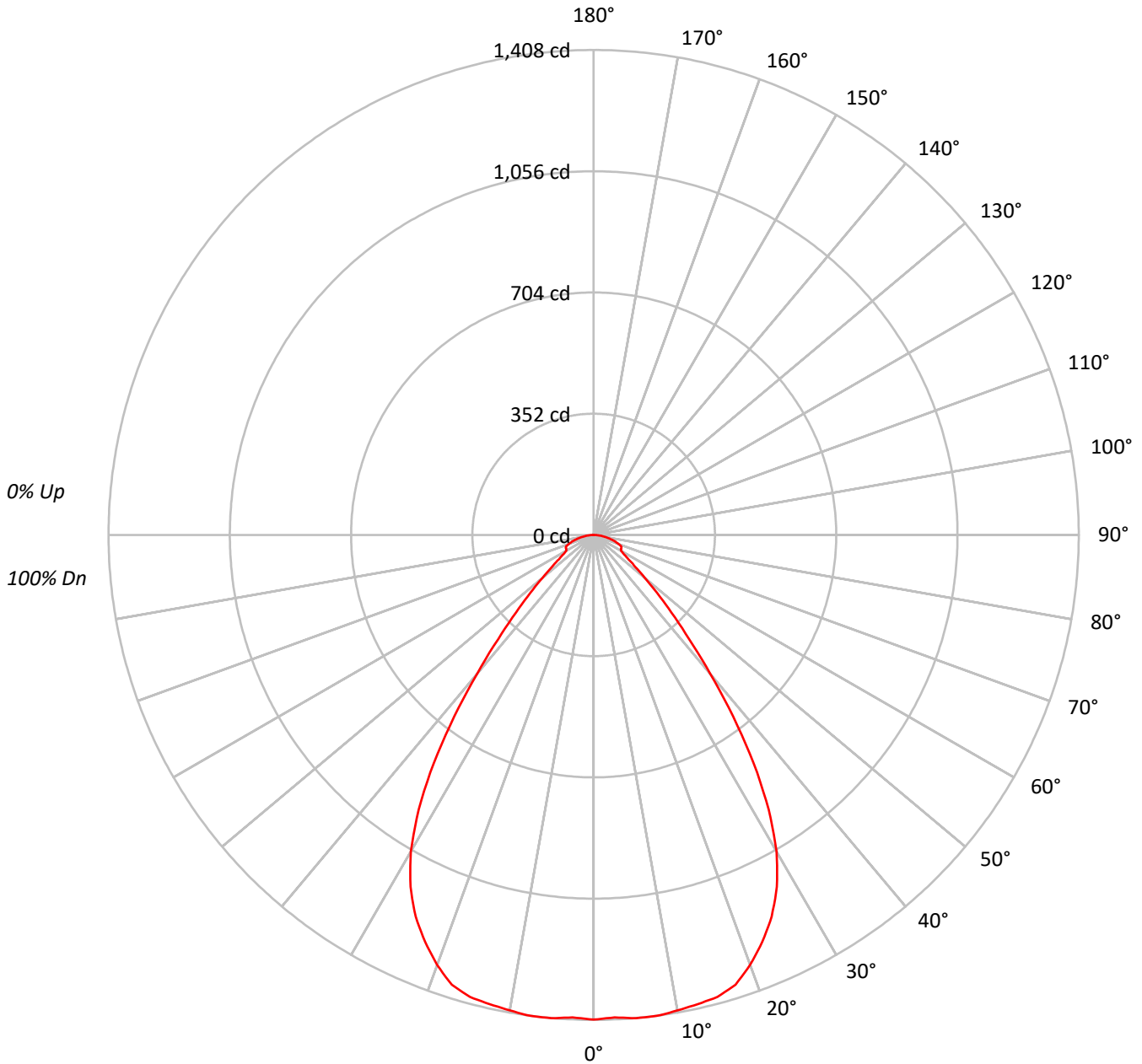
Lumens per Lamp: N/A  
Luminaire Lumens: 2114.3 lumens  
Efficiency: N/A  
Efficacy: 105.7 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.14 / 1.07  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 92  | 90  |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 84  | 82  | 80  |
| 3   | 98  | 89  | 83  | 78  | 95  | 88  | 82  | 78  | 85  | 80  | 76  | 83  | 78  | 75  | 80  | 77  | 74  | 72  |
| 4   | 91  | 82  | 75  | 70  | 89  | 81  | 74  | 69  | 78  | 73  | 69  | 76  | 72  | 68  | 74  | 70  | 67  | 65  |
| 5   | 86  | 75  | 68  | 63  | 84  | 74  | 68  | 63  | 72  | 67  | 62  | 71  | 65  | 61  | 69  | 64  | 61  | 59  |
| 6   | 80  | 70  | 62  | 57  | 79  | 69  | 62  | 57  | 67  | 61  | 57  | 66  | 60  | 56  | 64  | 59  | 56  | 54  |
| 7   | 76  | 64  | 57  | 52  | 74  | 64  | 57  | 52  | 62  | 56  | 52  | 61  | 56  | 51  | 60  | 55  | 51  | 49  |
| 8   | 71  | 60  | 53  | 48  | 70  | 59  | 53  | 48  | 58  | 52  | 48  | 57  | 51  | 47  | 56  | 51  | 47  | 46  |
| 9   | 67  | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 42  |
| 10  | 64  | 52  | 46  | 41  | 62  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 49  | 44  | 41  | 39  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 173560 |
| 5°  | 174396 |
| 10° | 175586 |
| 15° | 177345 |
| 20° | 174394 |
| 25° | 166378 |
| 30° | 151158 |
| 35° | 121922 |
| 40° | 84598  |
| 45° | 55541  |
| 50° | 37227  |
| 55° | 26494  |
| 60° | 22646  |
| 65° | 26005  |
| 70° | 27877  |
| 75° | 26831  |
| 80° | 24222  |
| 85° | 22219  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 134.2  | 6.3       |
| 10°-20°   | 390.1  | 18.5      |
| 20°-30°   | 557.4  | 26.4      |
| 30°-40°   | 497.9  | 23.6      |
| 40°-50°   | 255.4  | 12.1      |
| 50°-60°   | 116.1  | 5.5       |
| 60°-70°   | 86.6   | 4.1       |
| 70°-80°   | 58.9   | 2.8       |
| 80°-90°   | 17.5   | 0.8       |
| 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°    | 1081.8 | 51.2      |
| 0°-40°    | 1579.7 | 74.7      |
| 0°-60°    | 1951.3 | 92.3      |
| 0°-90°    | 2114.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2114.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1407 |      |
| 5°  | 1408 | 134  |
| 15° | 1389 | 390  |
| 25° | 1222 | 557  |
| 35° | 810  | 498  |
| 45° | 318  | 255  |
| 55° | 123  | 116  |
| 65° | 89   | 87   |
| 75° | 56   | 59   |
| 85° | 16   | 17   |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1407.1 |
| 2.5°  | 1401.9 |
| 5°    | 1408.5 |
| 7.5°  | 1408.5 |
| 10°   | 1401.9 |
| 12.5° | 1395.3 |
| 15°   | 1388.8 |
| 17.5° | 1369.2 |
| 20°   | 1328.6 |
| 22.5° | 1278.8 |
| 25°   | 1222.5 |
| 27.5° | 1151.7 |
| 30°   | 1061.3 |
| 32.5° | 945.9  |
| 35°   | 809.7  |
| 37.5° | 664.2  |
| 40°   | 525.4  |
| 42.5° | 410.1  |
| 45°   | 318.4  |
| 47.5° | 248.9  |
| 50°   | 194.0  |
| 52.5° | 152.0  |
| 55°   | 123.2  |
| 57.5° | 103.5  |
| 60°   | 91.8   |
| 62.5° | 89.1   |
| 65°   | 89.1   |
| 67.5° | 86.5   |
| 70°   | 77.3   |
| 72.5° | 66.9   |
| 75°   | 56.3   |
| 77.5° | 44.5   |
| 80°   | 34.1   |
| 82.5° | 24.9   |
| 85°   | 15.7   |
| 87.5° | 6.5    |
| 90°   | 0.0    |

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— 0°-180°

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