

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: P580495

Luminaire Tested: **HCC4S35D010BZ-HM43040930-41MDC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580495  
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: HCC4S35D010BZ-HM43040930-41MDC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

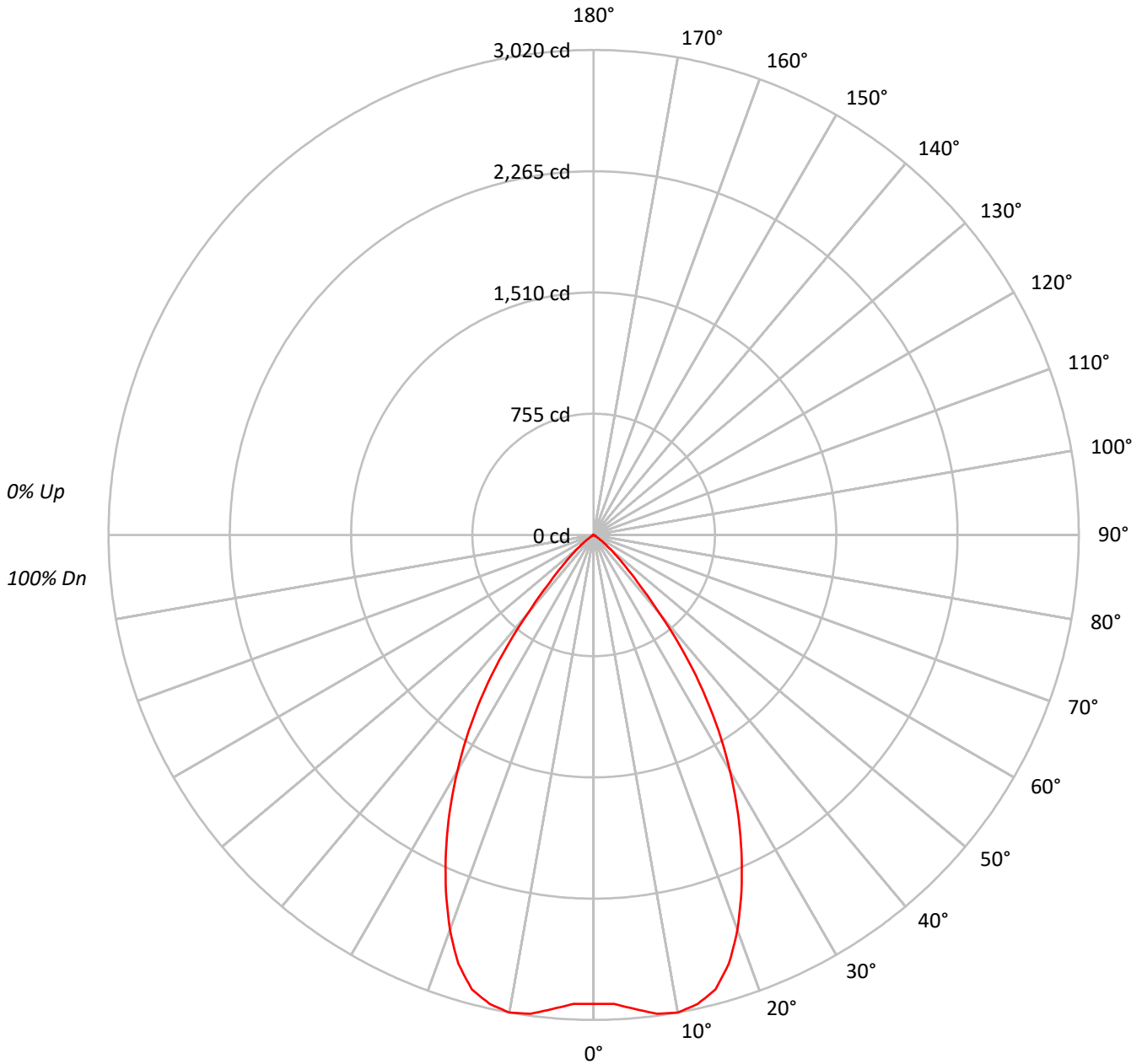
Lumens per Lamp: N/A  
Luminaire Lumens: 3110.5 lumens  
Efficiency: N/A  
Efficacy: 92.3 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1 / 0.96  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.7  
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°  | 360280 |
| 5°  | 366906 |
| 10° | 378213 |
| 15° | 374024 |
| 20° | 343459 |
| 25° | 296296 |
| 30° | 241457 |
| 35° | 178795 |
| 40° | 102567 |
| 45° | 49592  |
| 50° | 23603  |
| 55° | 8236   |
| 60° | 2985   |
| 65° | 1780   |
| 70° | 1443   |
| 75° | 953    |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 285.0  | 9.2       |
| 10°-20°   | 812.0  | 26.1      |
| 20°-30°   | 991.6  | 31.9      |
| 30°-40°   | 729.0  | 23.4      |
| 40°-50°   | 241.6  | 7.8       |
| 50°-60°   | 42.7   | 1.4       |
| 60°-70°   | 6.5    | 0.2       |
| 70°-80°   | 2.1    | 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°    | 2088.6 | 67.1      |
| 0°-40°    | 2817.6 | 90.6      |
| 0°-60°    | 3101.9 | 99.7      |
| 0°-90°    | 3110.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3110.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2921 |      |
| 5°  | 2963 | 285  |
| 15° | 2929 | 812  |
| 25° | 2177 | 992  |
| 35° | 1187 | 729  |
| 45° | 284  | 242  |
| 55° | 38   | 43   |
| 65° | 6    | 6    |
| 75° | 2    | 2    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2920.9 |
| 2.5°  | 2923.0 |
| 5°    | 2963.3 |
| 7.5°  | 3007.7 |
| 10°   | 3019.7 |
| 12.5° | 2991.5 |
| 15°   | 2929.0 |
| 17.5° | 2800.0 |
| 20°   | 2616.6 |
| 22.5° | 2402.9 |
| 25°   | 2177.1 |
| 27.5° | 1941.3 |
| 30°   | 1695.3 |
| 32.5° | 1449.4 |
| 35°   | 1187.4 |
| 37.5° | 921.2  |
| 40°   | 637.0  |
| 42.5° | 421.3  |
| 45°   | 284.3  |
| 47.5° | 189.5  |
| 50°   | 123.0  |
| 52.5° | 72.6   |
| 55°   | 38.3   |
| 57.5° | 16.1   |
| 60°   | 12.1   |
| 62.5° | 8.1    |
| 65°   | 6.1    |
| 67.5° | 4.0    |
| 70°   | 4.0    |
| 72.5° | 2.0    |
| 75°   | 2.0    |
| 77.5° | 2.0    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |

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— 0°-180°

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