

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: P581024

Luminaire Tested: **HCC4S05D010MW-HM40525835-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581024
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S05D010MW-HM40525835-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

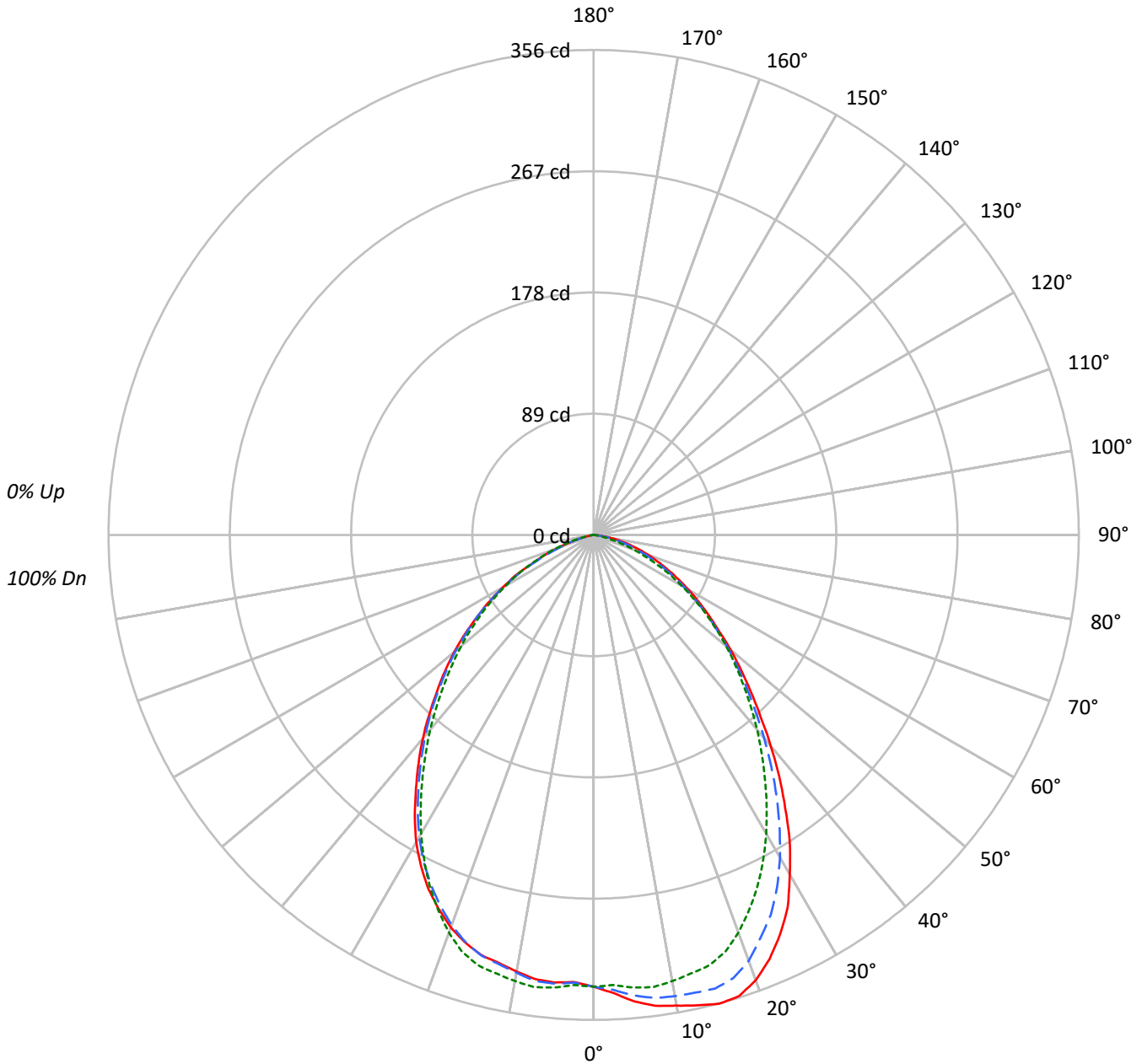
Lumens per Lamp: N/A
Luminaire Lumens: 691.1 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
Input Voltage (V): NR
Input Current (A_{in}): 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 | | | | | | | | | | |
| 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 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | | | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 40901 | 40901 | 40901 |
| 5° | 42568 | 41293 | 40835 |
| 10° | 43950 | 41658 | 40756 |
| 15° | 45498 | 41782 | 40761 |
| 20° | 45653 | 40770 | 40245 |
| 25° | 44041 | 38720 | 39033 |
| 30° | 40976 | 36063 | 37088 |
| 35° | 36922 | 33007 | 34211 |
| 40° | 32541 | 30030 | 31398 |
| 45° | 28451 | 27038 | 28363 |
| 50° | 25195 | 24351 | 25637 |
| 55° | 22171 | 21505 | 22365 |
| 60° | 19785 | 18329 | 18897 |
| 65° | 17395 | 14914 | 14651 |
| 70° | 15183 | 10999 | 10026 |
| 75° | 12581 | 6577 | 5338 |
| 80° | 9518 | 2557 | 1634 |
| 85° | 4529 | 708 | 708 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 32.0 | 4.6 |
| 10°-20° | 93.4 | 13.5 |
| 20°-30° | 135.2 | 19.6 |
| 30°-40° | 142.6 | 20.6 |
| 40°-50° | 123.4 | 17.9 |
| 50°-60° | 91.5 | 13.2 |
| 60°-70° | 52.7 | 7.6 |
| 70°-80° | 18.4 | 2.7 |
| 80°-90° | 2.0 | 0.3 |
| 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° | 260.5 | 37.7 |
| 0°-40° | 403.2 | 58.3 |
| 0°-60° | 618.1 | 89.4 |
| 0°-90° | 691.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 691.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 332 | 332 | 332 | 332 | 332 | |
| 5° | 344 | 339 | 334 | 331 | 330 | 33 |
| 15° | 356 | 345 | 327 | 320 | 319 | 100 |
| 25° | 324 | 308 | 284 | 283 | 287 | 148 |
| 35° | 245 | 234 | 219 | 224 | 227 | 153 |
| 45° | 163 | 159 | 155 | 161 | 163 | 127 |
| 55° | 103 | 101 | 100 | 104 | 104 | 93 |
| 65° | 60 | 56 | 51 | 48 | 50 | 60 |
| 75° | 26 | 22 | 14 | 11 | 11 | 28 |
| 85° | 3 | 2 | 0 | 0 | 0 | 5 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 331.6 | 331.6 | 331.6 | 331.6 | 331.6 | 331.6 | 331.6 | 331.6 | 331.6 |
| 2.5° | 336.6 | 335.7 | 334.4 | 332.6 | 330.7 | 329.4 | 328.9 | 328.5 | 328.5 |
| 5° | 343.8 | 342.0 | 339.3 | 335.7 | 333.5 | 332.1 | 330.7 | 329.8 | 329.8 |
| 7.5° | 348.7 | 346.9 | 342.9 | 337.9 | 334.8 | 332.1 | 330.3 | 328.9 | 328.9 |
| 10° | 350.9 | 348.7 | 343.8 | 337.4 | 332.6 | 328.9 | 326.3 | 325.4 | 325.4 |
| 12.5° | 353.7 | 350.9 | 344.2 | 336.2 | 329.8 | 325.4 | 322.7 | 321.8 | 321.8 |
| 15° | 356.3 | 353.2 | 344.7 | 335.3 | 327.2 | 321.8 | 319.5 | 319.2 | 319.2 |
| 17.5° | 354.9 | 350.9 | 341.1 | 329.8 | 320.9 | 315.5 | 313.3 | 313.3 | 313.7 |
| 20° | 347.8 | 343.8 | 332.6 | 320.0 | 310.6 | 306.6 | 304.7 | 305.7 | 306.6 |
| 22.5° | 337.0 | 332.1 | 320.0 | 307.9 | 298.1 | 294.4 | 294.4 | 295.8 | 297.1 |
| 25° | 323.6 | 319.2 | 307.5 | 294.0 | 284.5 | 281.9 | 282.8 | 285.0 | 286.8 |
| 27.5° | 308.4 | 303.4 | 291.4 | 278.8 | 269.3 | 268.0 | 270.2 | 273.4 | 274.3 |
| 30° | 287.7 | 283.8 | 273.4 | 261.3 | 253.2 | 252.8 | 255.9 | 258.2 | 260.4 |
| 32.5° | 268.0 | 263.5 | 253.7 | 242.0 | 236.2 | 236.6 | 240.3 | 242.9 | 244.3 |
| 35° | 245.2 | 241.1 | 233.9 | 224.5 | 219.2 | 220.1 | 224.0 | 226.8 | 227.2 |
| 37.5° | 223.6 | 221.0 | 213.8 | 206.6 | 202.6 | 204.4 | 207.9 | 211.1 | 211.1 |
| 40° | 202.1 | 199.9 | 194.5 | 188.6 | 186.5 | 188.6 | 192.3 | 195.0 | 195.0 |
| 42.5° | 181.5 | 180.1 | 175.7 | 171.6 | 170.4 | 173.4 | 176.6 | 178.9 | 178.4 |
| 45° | 163.1 | 161.9 | 158.7 | 155.5 | 155.0 | 158.2 | 160.9 | 162.2 | 162.6 |
| 47.5° | 146.5 | 145.6 | 143.0 | 140.7 | 140.7 | 143.9 | 146.1 | 147.4 | 147.9 |
| 50° | 131.3 | 130.4 | 128.1 | 126.4 | 126.9 | 130.0 | 131.8 | 133.1 | 133.6 |
| 52.5° | 116.1 | 115.7 | 113.8 | 111.6 | 112.9 | 115.2 | 117.5 | 118.3 | 118.7 |
| 55° | 103.1 | 103.1 | 100.8 | 99.1 | 100.0 | 102.2 | 103.5 | 104.0 | 104.0 |
| 57.5° | 91.5 | 91.0 | 88.3 | 86.5 | 86.9 | 89.2 | 90.1 | 90.6 | 90.6 |
| 60° | 80.2 | 79.8 | 77.1 | 74.3 | 74.3 | 75.7 | 76.2 | 76.6 | 76.6 |
| 62.5° | 69.5 | 69.0 | 65.8 | 63.7 | 62.8 | 62.3 | 62.3 | 63.2 | 65.0 |
| 65° | 59.6 | 59.1 | 56.1 | 52.4 | 51.1 | 49.7 | 48.4 | 49.3 | 50.2 |
| 67.5° | 50.6 | 49.7 | 46.6 | 43.5 | 40.3 | 38.1 | 35.9 | 37.2 | 39.0 |
| 70° | 42.1 | 41.2 | 37.7 | 34.0 | 30.5 | 26.9 | 25.1 | 26.9 | 27.8 |
| 72.5° | 34.0 | 33.1 | 29.6 | 26.0 | 21.6 | 17.9 | 17.5 | 17.9 | 18.4 |
| 75° | 26.4 | 26.0 | 22.4 | 18.4 | 13.8 | 11.2 | 11.2 | 11.2 | 11.2 |
| 77.5° | 19.7 | 18.8 | 15.2 | 11.7 | 8.1 | 6.2 | 5.8 | 5.8 | 5.8 |
| 80° | 13.4 | 12.6 | 9.4 | 6.7 | 3.6 | 2.7 | 2.7 | 2.3 | 2.3 |
| 82.5° | 7.6 | 7.2 | 4.9 | 2.7 | 1.4 | 0.9 | 0.9 | 0.9 | 0.9 |
| 85° | 3.2 | 2.7 | 1.8 | 0.9 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 87.5° | 0.5 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report



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— 0°-180° - - 45°-225° - - - - 90°-270°

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