

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: P579769

Luminaire Tested: **HCC4W10D010BZ-HM40525927-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579769
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: HCC4W10D010BZ-HM40525927-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

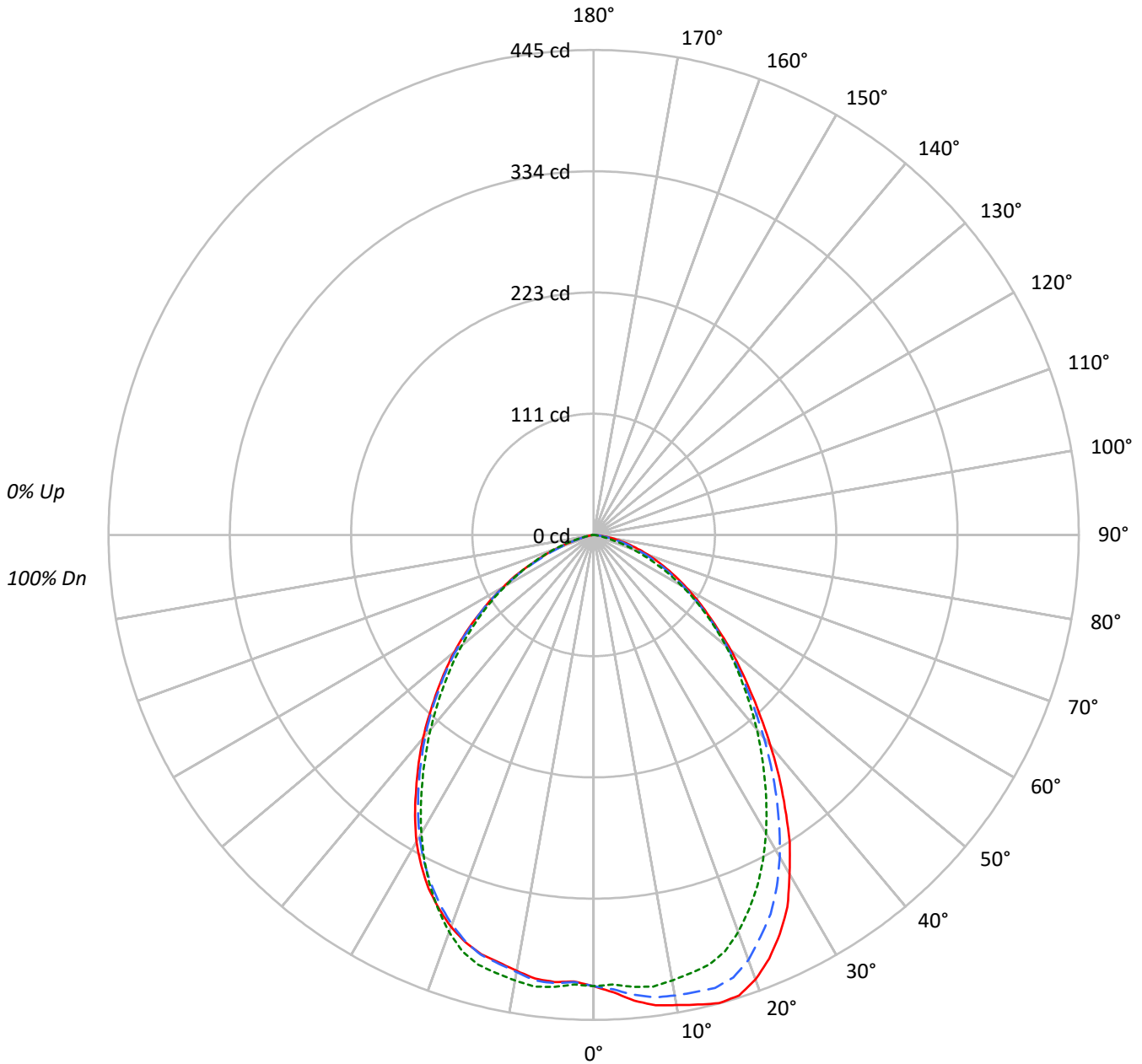
Lumens per Lamp: N/A
Luminaire Lumens: 862.8 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
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 | 62 | 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° | 51065 | 51065 | 51065 |
| 5° | 53130 | 51545 | 50988 |
| 10° | 54871 | 51991 | 50876 |
| 15° | 56800 | 52151 | 50874 |
| 20° | 56981 | 50890 | 50234 |
| 25° | 54983 | 48355 | 48736 |
| 30° | 51160 | 45021 | 46303 |
| 35° | 46077 | 41198 | 42719 |
| 40° | 40624 | 37468 | 39191 |
| 45° | 35533 | 33771 | 35428 |
| 50° | 31470 | 30376 | 31988 |
| 55° | 27676 | 26816 | 27913 |
| 60° | 24694 | 22918 | 23608 |
| 65° | 21714 | 18592 | 18300 |
| 70° | 18970 | 13704 | 12514 |
| 75° | 15727 | 8245 | 6672 |
| 80° | 11862 | 3125 | 1989 |
| 85° | 5519 | 849 | 849 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 39.9 | 4.6 |
| 10°-20° | 116.5 | 13.5 |
| 20°-30° | 168.8 | 19.6 |
| 30°-40° | 178.1 | 20.6 |
| 40°-50° | 154.1 | 17.9 |
| 50°-60° | 114.2 | 13.2 |
| 60°-70° | 65.8 | 7.6 |
| 70°-80° | 23.0 | 2.7 |
| 80°-90° | 2.4 | 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° | 325.3 | 37.7 |
| 0°-40° | 503.3 | 58.3 |
| 0°-60° | 771.6 | 89.4 |
| 0°-90° | 862.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 862.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 414 | 414 | 414 | 414 | 414 | |
| 5° | 429 | 424 | 416 | 413 | 412 | 41 |
| 15° | 445 | 430 | 408 | 399 | 398 | 125 |
| 25° | 404 | 384 | 355 | 353 | 358 | 185 |
| 35° | 306 | 292 | 274 | 280 | 284 | 191 |
| 45° | 204 | 198 | 194 | 201 | 203 | 158 |
| 55° | 129 | 126 | 125 | 129 | 130 | 116 |
| 65° | 74 | 70 | 64 | 60 | 63 | 74 |
| 75° | 33 | 28 | 17 | 14 | 14 | 36 |
| 85° | 4 | 2 | 1 | 1 | 1 | 6 |
| 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° | 414.0 | 414.0 | 414.0 | 414.0 | 414.0 | 414.0 | 414.0 | 414.0 | 414.0 |
| 2.5° | 420.1 | 419.1 | 417.4 | 415.1 | 412.9 | 411.3 | 410.7 | 410.1 | 410.1 |
| 5° | 429.1 | 426.9 | 423.6 | 419.1 | 416.3 | 414.6 | 412.9 | 411.8 | 411.8 |
| 7.5° | 435.3 | 433.0 | 428.0 | 421.9 | 418.0 | 414.6 | 412.4 | 410.7 | 410.7 |
| 10° | 438.1 | 435.3 | 429.1 | 421.3 | 415.1 | 410.7 | 407.3 | 406.2 | 406.2 |
| 12.5° | 441.4 | 438.1 | 429.7 | 419.6 | 411.8 | 406.2 | 402.9 | 401.7 | 401.7 |
| 15° | 444.8 | 440.9 | 430.3 | 418.6 | 408.4 | 401.7 | 399.0 | 398.4 | 398.4 |
| 17.5° | 443.1 | 438.1 | 425.8 | 411.8 | 400.6 | 393.9 | 391.1 | 391.1 | 391.7 |
| 20° | 434.1 | 429.1 | 415.1 | 399.4 | 387.7 | 382.7 | 380.4 | 381.6 | 382.7 |
| 22.5° | 420.7 | 414.6 | 399.4 | 384.4 | 372.1 | 367.6 | 367.6 | 369.3 | 371.0 |
| 25° | 404.0 | 398.4 | 383.8 | 367.0 | 355.3 | 352.0 | 353.0 | 355.9 | 358.1 |
| 27.5° | 385.0 | 378.8 | 363.7 | 348.0 | 336.3 | 334.6 | 337.4 | 341.3 | 342.4 |
| 30° | 359.2 | 354.1 | 341.3 | 326.2 | 316.1 | 315.6 | 319.4 | 322.3 | 325.1 |
| 32.5° | 334.6 | 329.0 | 316.7 | 302.1 | 294.9 | 295.4 | 299.9 | 303.3 | 305.0 |
| 35° | 306.0 | 301.0 | 292.0 | 280.3 | 273.6 | 274.7 | 279.7 | 283.1 | 283.7 |
| 37.5° | 279.2 | 275.9 | 266.9 | 258.0 | 252.9 | 255.1 | 259.6 | 263.6 | 263.6 |
| 40° | 252.3 | 249.6 | 242.8 | 235.6 | 232.7 | 235.6 | 240.0 | 243.4 | 243.4 |
| 42.5° | 226.6 | 224.9 | 219.3 | 214.3 | 212.6 | 216.6 | 220.4 | 223.3 | 222.7 |
| 45° | 203.7 | 202.0 | 198.0 | 194.1 | 193.6 | 197.6 | 200.9 | 202.6 | 203.1 |
| 47.5° | 183.0 | 181.9 | 178.4 | 175.7 | 175.7 | 179.6 | 182.4 | 184.1 | 184.6 |
| 50° | 164.0 | 162.8 | 160.0 | 157.7 | 158.3 | 162.3 | 164.4 | 166.1 | 166.7 |
| 52.5° | 144.9 | 144.3 | 142.1 | 139.3 | 141.0 | 143.8 | 146.6 | 147.7 | 148.3 |
| 55° | 128.7 | 128.7 | 125.9 | 123.7 | 124.7 | 127.6 | 129.3 | 129.8 | 129.8 |
| 57.5° | 114.1 | 113.6 | 110.3 | 108.0 | 108.6 | 111.3 | 112.4 | 113.0 | 113.0 |
| 60° | 100.1 | 99.6 | 96.3 | 92.9 | 92.9 | 94.6 | 95.1 | 95.7 | 95.7 |
| 62.5° | 86.7 | 86.1 | 82.3 | 79.4 | 78.3 | 77.7 | 77.7 | 78.9 | 81.1 |
| 65° | 74.4 | 73.9 | 70.0 | 65.4 | 63.7 | 62.1 | 60.4 | 61.6 | 62.7 |
| 67.5° | 63.3 | 62.1 | 58.2 | 54.3 | 50.3 | 47.6 | 44.7 | 46.4 | 48.7 |
| 70° | 52.6 | 51.4 | 47.0 | 42.6 | 38.0 | 33.6 | 31.3 | 33.6 | 34.7 |
| 72.5° | 42.6 | 41.4 | 36.9 | 32.4 | 26.9 | 22.4 | 21.8 | 22.4 | 23.0 |
| 75° | 33.0 | 32.4 | 28.0 | 23.0 | 17.3 | 14.0 | 14.0 | 14.0 | 14.0 |
| 77.5° | 24.6 | 23.4 | 19.0 | 14.6 | 10.0 | 7.9 | 7.3 | 7.3 | 7.3 |
| 80° | 16.7 | 15.7 | 11.7 | 8.4 | 4.4 | 3.3 | 3.3 | 2.8 | 2.8 |
| 82.5° | 9.6 | 9.0 | 6.1 | 3.3 | 1.7 | 1.1 | 1.1 | 1.1 | 1.1 |
| 85° | 3.9 | 3.3 | 2.3 | 1.1 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 87.5° | 0.6 | 0.6 | 0.6 | 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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