

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: P581459

Luminaire Tested: **HCC4S07D010BZ-HM40525835-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581459
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S07D010BZ-HM40525835-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

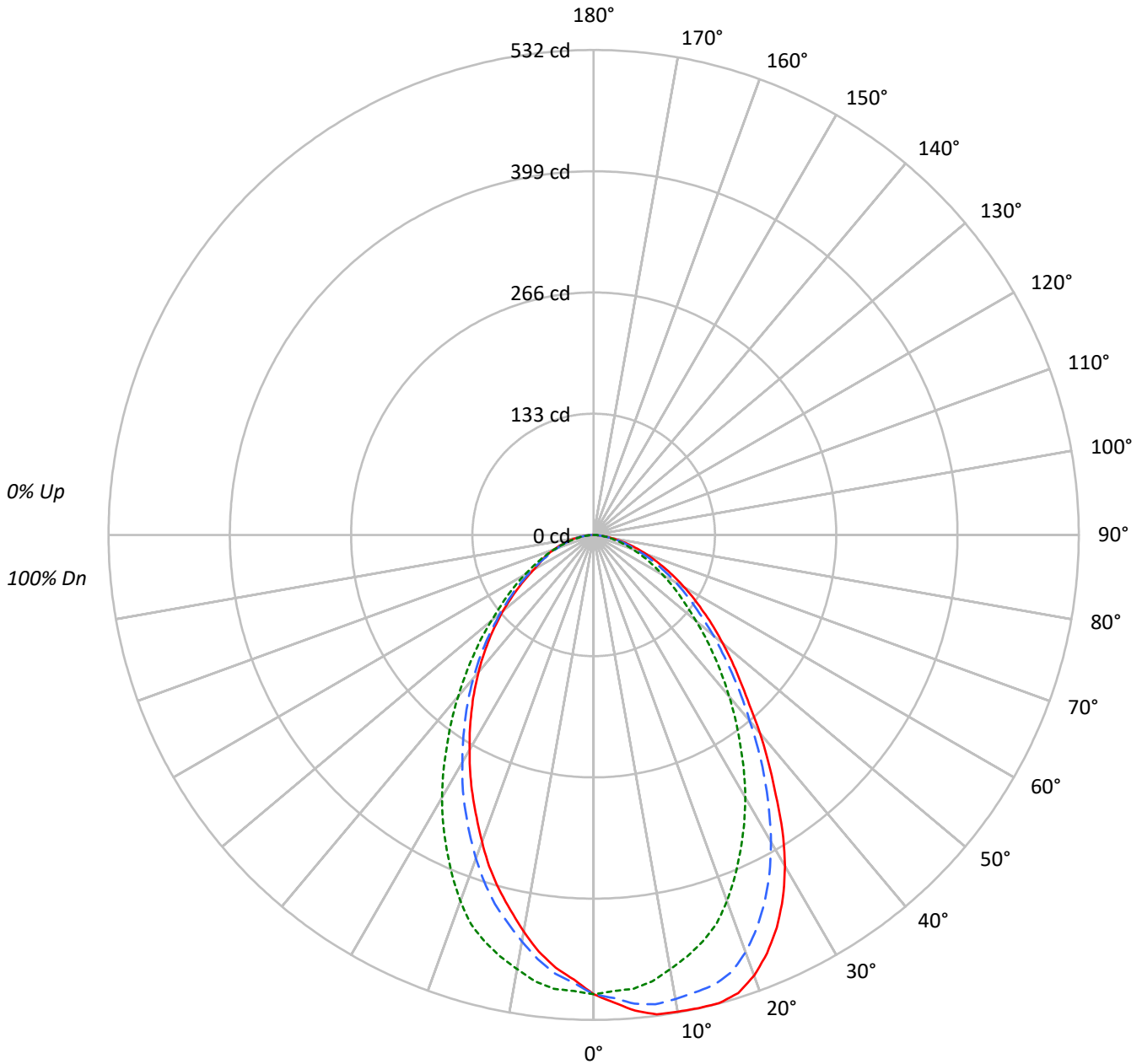
Lumens per Lamp: N/A
Luminaire Lumens: 899.8 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 8
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 | | | | 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 | 100 | 100 | 100 |
| 1 | 111 | 106 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | 87 | 87 | 87 |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | 76 | 76 | 76 |
| 3 | 94 | 85 | 78 | 72 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 73 | 69 | 76 | 72 | 68 | 66 | 66 | 66 | 66 |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | 58 | 58 | 58 |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | 52 | 52 | 52 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 48 | 47 | 47 | 47 | 47 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 | 42 | 42 | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | 38 | 38 | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | 35 | 35 | 35 |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | 32 | 32 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 62142 | 62142 | 62142 |
| 5° | 64880 | 61871 | 59011 |
| 10° | 66519 | 60570 | 55322 |
| 15° | 67896 | 58970 | 51321 |
| 20° | 67534 | 56101 | 46992 |
| 25° | 64687 | 51867 | 42762 |
| 30° | 59777 | 47357 | 38754 |
| 35° | 52401 | 42132 | 35069 |
| 40° | 45632 | 37211 | 31591 |
| 45° | 39702 | 32480 | 28224 |
| 50° | 35385 | 27978 | 24908 |
| 55° | 31612 | 24601 | 21526 |
| 60° | 28221 | 21511 | 18576 |
| 65° | 25071 | 18854 | 17628 |
| 70° | 22035 | 16265 | 16445 |
| 75° | 18634 | 13821 | 15250 |
| 80° | 14277 | 11791 | 13922 |
| 85° | 8350 | 9199 | 11746 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 47.2 | 5.2 |
| 10°-20° | 130.3 | 14.5 |
| 20°-30° | 178.0 | 19.8 |
| 30°-40° | 178.7 | 19.9 |
| 40°-50° | 147.8 | 16.4 |
| 50°-60° | 107.2 | 11.9 |
| 60°-70° | 67.9 | 7.5 |
| 70°-80° | 34.3 | 3.8 |
| 80°-90° | 8.4 | 0.9 |
| 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° | 355.5 | 39.5 |
| 0°-40° | 534.2 | 59.4 |
| 0°-60° | 789.2 | 87.7 |
| 0°-90° | 899.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 899.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 504 | 504 | 504 | 504 | 504 | |
| 5° | 524 | 516 | 500 | 483 | 477 | 50 |
| 15° | 532 | 511 | 462 | 419 | 402 | 150 |
| 25° | 475 | 444 | 381 | 333 | 314 | 217 |
| 35° | 348 | 327 | 280 | 245 | 233 | 218 |
| 45° | 228 | 215 | 186 | 168 | 162 | 177 |
| 55° | 147 | 134 | 114 | 104 | 100 | 132 |
| 65° | 86 | 76 | 65 | 58 | 60 | 86 |
| 75° | 39 | 34 | 29 | 30 | 32 | 42 |
| 85° | 6 | 6 | 6 | 8 | 8 | 8 |
| 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° | 503.8 | 503.8 | 503.8 | 503.8 | 503.8 | 503.8 | 503.8 | 503.8 | 503.8 |
| 2.5° | 513.4 | 511.5 | 508.6 | 505.0 | 500.8 | 496.2 | 492.0 | 489.6 | 488.4 |
| 5° | 524.0 | 521.7 | 516.3 | 508.6 | 499.7 | 490.8 | 483.1 | 478.4 | 476.6 |
| 7.5° | 530.5 | 527.0 | 519.3 | 507.4 | 493.8 | 480.7 | 469.4 | 462.9 | 461.1 |
| 10° | 531.1 | 527.0 | 516.9 | 500.8 | 483.6 | 466.5 | 452.9 | 443.4 | 441.7 |
| 12.5° | 531.7 | 526.3 | 513.9 | 494.9 | 473.6 | 452.2 | 435.6 | 424.5 | 421.4 |
| 15° | 531.7 | 526.3 | 511.0 | 488.4 | 461.8 | 437.4 | 419.1 | 406.0 | 401.9 |
| 17.5° | 527.0 | 521.1 | 502.7 | 476.6 | 447.6 | 420.3 | 399.0 | 385.3 | 381.1 |
| 20° | 514.5 | 508.0 | 487.3 | 458.8 | 427.4 | 399.0 | 377.6 | 363.4 | 358.0 |
| 22.5° | 496.7 | 489.0 | 467.1 | 436.3 | 404.9 | 375.8 | 355.1 | 340.3 | 335.5 |
| 25° | 475.3 | 467.7 | 443.9 | 413.8 | 381.1 | 353.9 | 333.1 | 319.6 | 314.2 |
| 27.5° | 449.3 | 441.0 | 417.9 | 387.7 | 357.4 | 330.1 | 311.2 | 298.7 | 293.4 |
| 30° | 419.7 | 410.8 | 388.9 | 359.8 | 332.5 | 306.5 | 288.0 | 278.0 | 272.1 |
| 32.5° | 385.3 | 377.6 | 358.0 | 332.0 | 306.5 | 281.5 | 266.2 | 257.3 | 252.5 |
| 35° | 348.0 | 343.8 | 327.2 | 304.6 | 279.8 | 259.0 | 245.4 | 237.2 | 232.9 |
| 37.5° | 314.8 | 310.6 | 296.3 | 277.4 | 255.5 | 236.5 | 225.2 | 218.2 | 214.6 |
| 40° | 283.4 | 279.8 | 266.2 | 250.1 | 231.1 | 214.6 | 205.1 | 199.7 | 196.2 |
| 42.5° | 252.5 | 250.7 | 239.4 | 224.6 | 208.0 | 193.8 | 186.2 | 182.0 | 179.0 |
| 45° | 227.6 | 225.2 | 214.6 | 200.4 | 186.2 | 174.2 | 167.7 | 164.8 | 161.8 |
| 47.5° | 205.6 | 202.7 | 191.4 | 179.0 | 165.9 | 155.3 | 149.4 | 146.5 | 145.2 |
| 50° | 184.4 | 181.4 | 171.3 | 158.9 | 145.8 | 138.2 | 133.4 | 130.4 | 129.8 |
| 52.5° | 165.4 | 162.4 | 151.1 | 139.3 | 129.3 | 122.7 | 118.6 | 115.6 | 114.4 |
| 55° | 147.0 | 143.5 | 133.9 | 122.7 | 114.4 | 108.5 | 104.4 | 101.4 | 100.1 |
| 57.5° | 130.4 | 126.9 | 118.6 | 107.9 | 100.1 | 94.8 | 91.3 | 88.3 | 87.2 |
| 60° | 114.4 | 111.4 | 103.8 | 93.7 | 87.2 | 82.4 | 78.9 | 76.5 | 75.3 |
| 62.5° | 99.6 | 97.2 | 89.6 | 80.6 | 75.3 | 71.1 | 68.2 | 65.8 | 67.0 |
| 65° | 85.9 | 83.5 | 76.5 | 68.7 | 64.6 | 60.4 | 58.0 | 58.0 | 60.4 |
| 67.5° | 72.9 | 70.6 | 64.6 | 58.0 | 54.5 | 51.6 | 49.8 | 51.6 | 53.4 |
| 70° | 61.1 | 58.7 | 53.4 | 48.0 | 45.1 | 42.7 | 42.7 | 44.5 | 45.6 |
| 72.5° | 49.8 | 47.5 | 43.2 | 39.1 | 36.8 | 34.9 | 36.8 | 37.9 | 39.1 |
| 75° | 39.1 | 37.3 | 33.8 | 30.8 | 29.0 | 28.4 | 30.3 | 31.4 | 32.0 |
| 77.5° | 29.0 | 27.9 | 25.5 | 23.1 | 22.0 | 22.5 | 24.4 | 24.9 | 25.5 |
| 80° | 20.1 | 19.6 | 17.8 | 16.6 | 16.6 | 17.2 | 18.3 | 19.0 | 19.6 |
| 82.5° | 12.4 | 12.4 | 11.3 | 10.7 | 11.3 | 12.4 | 13.1 | 13.7 | 13.7 |
| 85° | 5.9 | 6.5 | 5.9 | 5.9 | 6.5 | 7.7 | 7.7 | 8.3 | 8.3 |
| 87.5° | 1.8 | 1.8 | 2.4 | 2.4 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 |
| 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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