

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: P581548

Luminaire Tested: **HCC4W07D010MB-HM40525950-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581548
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W07D010MB-HM40525950-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

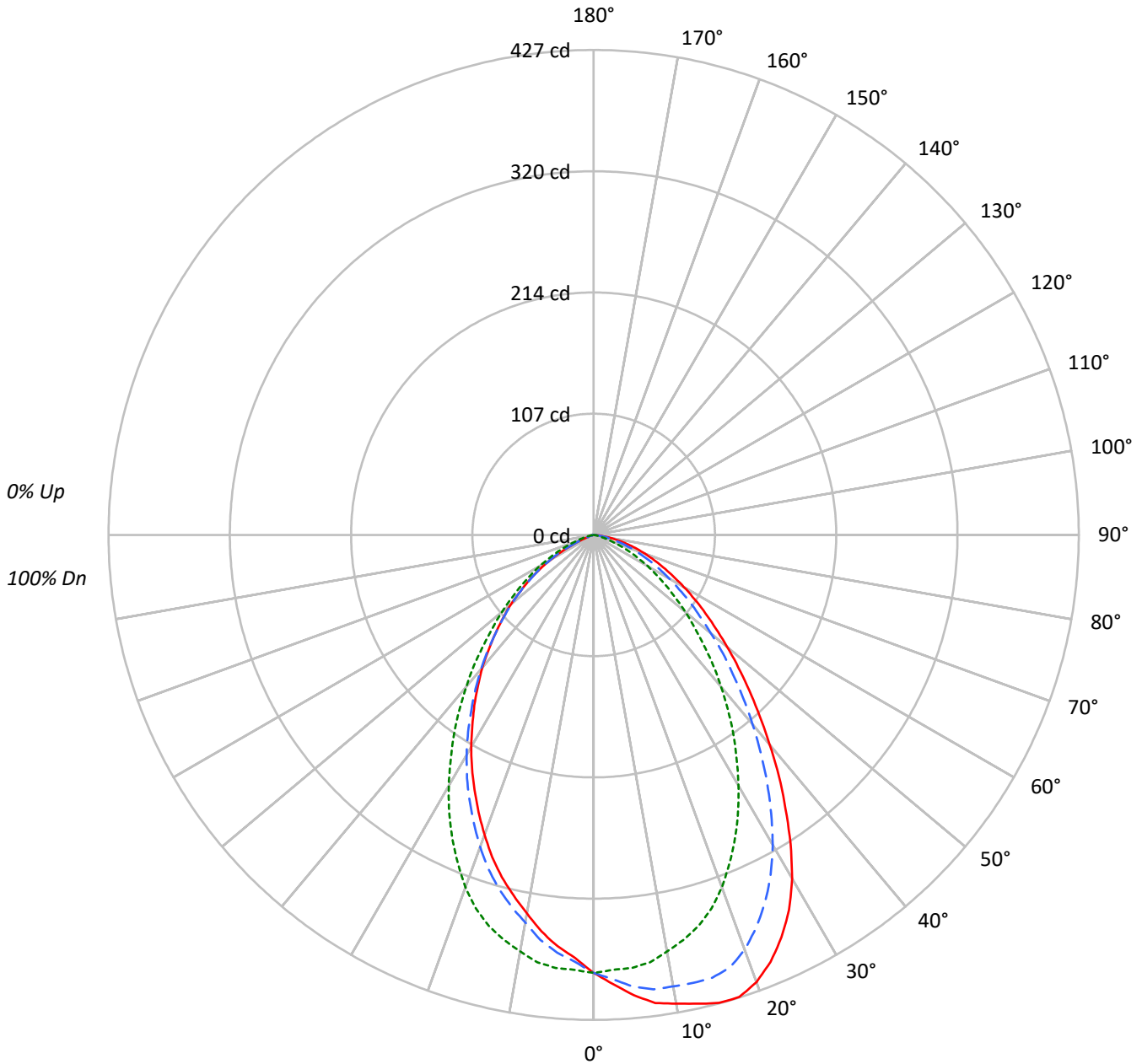
Lumens per Lamp: N/A
Luminaire Lumens: 665.9 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | | | | | | | | | | |
| 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 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | | | | | |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | | | | |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | | | | | | |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | | | | |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | | | | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | | | | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 47562 | 47562 | 47562 |
| 5° | 50369 | 47385 | 45020 |
| 10° | 52479 | 46643 | 42372 |
| 15° | 54475 | 45511 | 39841 |
| 20° | 54999 | 43329 | 36845 |
| 25° | 53214 | 40081 | 33738 |
| 30° | 49764 | 36319 | 30693 |
| 35° | 44345 | 32284 | 27571 |
| 40° | 38757 | 28065 | 24555 |
| 45° | 33771 | 23828 | 21246 |
| 50° | 29455 | 20206 | 18211 |
| 55° | 25827 | 16731 | 14731 |
| 60° | 22597 | 13543 | 10805 |
| 65° | 19701 | 10098 | 6071 |
| 70° | 17202 | 6528 | 1984 |
| 75° | 14106 | 3431 | 524 |
| 80° | 10513 | 1563 | 426 |
| 85° | 6227 | 849 | 849 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 36.4 | 5.5 |
| 10°-20° | 101.8 | 15.3 |
| 20°-30° | 140.8 | 21.1 |
| 30°-40° | 141.6 | 21.3 |
| 40°-50° | 114.2 | 17.2 |
| 50°-60° | 77.2 | 11.6 |
| 60°-70° | 39.3 | 5.9 |
| 70°-80° | 12.6 | 1.9 |
| 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° | 279.0 | 41.9 |
| 0°-40° | 420.6 | 63.2 |
| 0°-60° | 612.1 | 91.9 |
| 0°-90° | 665.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 665.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 386 | 386 | 386 | 386 | 386 | |
| 5° | 407 | 399 | 383 | 369 | 364 | 39 |
| 15° | 427 | 404 | 356 | 322 | 312 | 120 |
| 25° | 391 | 357 | 294 | 258 | 248 | 179 |
| 35° | 294 | 266 | 214 | 188 | 183 | 184 |
| 45° | 194 | 173 | 137 | 122 | 122 | 150 |
| 55° | 120 | 104 | 78 | 68 | 68 | 108 |
| 65° | 68 | 55 | 35 | 22 | 21 | 68 |
| 75° | 30 | 21 | 7 | 2 | 1 | 32 |
| 85° | 4 | 2 | 1 | 1 | 1 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P581548

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 385.6 | 385.6 | 385.6 | 385.6 | 385.6 | 385.6 | 385.6 | 385.6 | 385.6 |
| 2.5° | 395.9 | 393.7 | 391.6 | 387.7 | 383.3 | 379.0 | 376.2 | 373.9 | 372.9 |
| 5° | 406.8 | 404.1 | 399.2 | 391.0 | 382.7 | 375.1 | 369.1 | 365.2 | 363.6 |
| 7.5° | 415.7 | 411.8 | 403.6 | 392.0 | 379.5 | 367.5 | 359.7 | 354.3 | 352.1 |
| 10° | 419.0 | 414.6 | 403.6 | 388.3 | 372.4 | 357.6 | 346.5 | 341.1 | 338.3 |
| 12.5° | 422.8 | 417.9 | 404.1 | 385.0 | 365.2 | 347.7 | 335.0 | 328.0 | 325.2 |
| 15° | 426.6 | 420.0 | 403.6 | 380.0 | 356.4 | 336.2 | 322.4 | 315.3 | 312.0 |
| 17.5° | 426.6 | 419.0 | 399.2 | 371.8 | 344.9 | 323.5 | 308.2 | 300.0 | 297.2 |
| 20° | 419.0 | 410.1 | 388.7 | 358.6 | 330.1 | 307.0 | 292.2 | 284.0 | 280.7 |
| 22.5° | 406.8 | 397.0 | 373.9 | 342.8 | 312.6 | 290.1 | 275.3 | 267.7 | 264.4 |
| 25° | 391.0 | 381.1 | 357.0 | 324.7 | 294.5 | 272.0 | 258.3 | 251.2 | 247.9 |
| 27.5° | 372.4 | 361.4 | 337.3 | 304.9 | 275.3 | 253.9 | 241.3 | 234.7 | 231.9 |
| 30° | 349.4 | 338.9 | 315.3 | 283.5 | 255.0 | 235.2 | 223.7 | 217.7 | 215.5 |
| 32.5° | 322.4 | 313.6 | 290.6 | 261.1 | 234.2 | 216.1 | 205.6 | 200.7 | 198.5 |
| 35° | 294.5 | 286.2 | 266.0 | 238.5 | 214.4 | 197.4 | 187.5 | 184.2 | 183.1 |
| 37.5° | 268.1 | 261.1 | 241.3 | 216.1 | 194.1 | 179.3 | 170.6 | 168.3 | 167.3 |
| 40° | 240.7 | 235.8 | 217.7 | 194.7 | 174.3 | 161.3 | 154.1 | 152.5 | 152.5 |
| 42.5° | 216.1 | 210.5 | 194.7 | 173.9 | 155.8 | 142.6 | 137.7 | 136.0 | 136.6 |
| 45° | 193.6 | 188.1 | 173.3 | 154.1 | 136.6 | 125.5 | 121.8 | 121.8 | 121.8 |
| 47.5° | 172.7 | 167.9 | 154.1 | 134.4 | 120.1 | 111.3 | 107.4 | 107.4 | 108.0 |
| 50° | 153.5 | 150.2 | 134.9 | 117.9 | 105.3 | 97.1 | 94.3 | 93.8 | 94.9 |
| 52.5° | 135.4 | 131.6 | 117.9 | 102.5 | 90.5 | 83.9 | 81.1 | 80.6 | 81.1 |
| 55° | 120.1 | 115.7 | 103.7 | 88.9 | 77.8 | 71.2 | 68.1 | 67.5 | 68.5 |
| 57.5° | 105.3 | 102.0 | 89.3 | 76.2 | 65.8 | 59.2 | 56.4 | 55.4 | 56.0 |
| 60° | 91.6 | 88.3 | 76.8 | 64.2 | 54.9 | 48.3 | 44.4 | 43.4 | 43.8 |
| 62.5° | 79.0 | 76.2 | 65.2 | 53.1 | 43.8 | 37.8 | 34.0 | 31.3 | 32.3 |
| 65° | 67.5 | 64.8 | 54.9 | 42.8 | 34.6 | 28.0 | 22.5 | 20.3 | 20.8 |
| 67.5° | 57.6 | 54.3 | 45.0 | 34.0 | 25.7 | 18.7 | 12.6 | 11.5 | 11.5 |
| 70° | 47.7 | 44.4 | 36.2 | 26.3 | 18.1 | 9.9 | 5.5 | 5.5 | 5.5 |
| 72.5° | 38.4 | 35.6 | 28.0 | 19.7 | 11.5 | 4.4 | 2.2 | 2.2 | 2.2 |
| 75° | 29.6 | 27.4 | 20.8 | 13.7 | 7.2 | 2.2 | 1.6 | 1.1 | 1.1 |
| 77.5° | 22.0 | 19.7 | 14.8 | 9.3 | 4.4 | 1.1 | 1.1 | 1.1 | 1.1 |
| 80° | 14.8 | 13.2 | 9.9 | 5.5 | 2.2 | 0.6 | 0.6 | 0.6 | 0.6 |
| 82.5° | 8.8 | 7.6 | 5.5 | 2.7 | 1.1 | 0.6 | 0.6 | 0.6 | 0.6 |
| 85° | 4.4 | 3.3 | 2.2 | 1.1 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 87.5° | 1.1 | 0.6 | 0.6 | 0.6 | 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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