

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: P579913

Luminaire Tested: **HCC4W15D010MB-HM40525927-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579913
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: HCC4W15D010MB-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

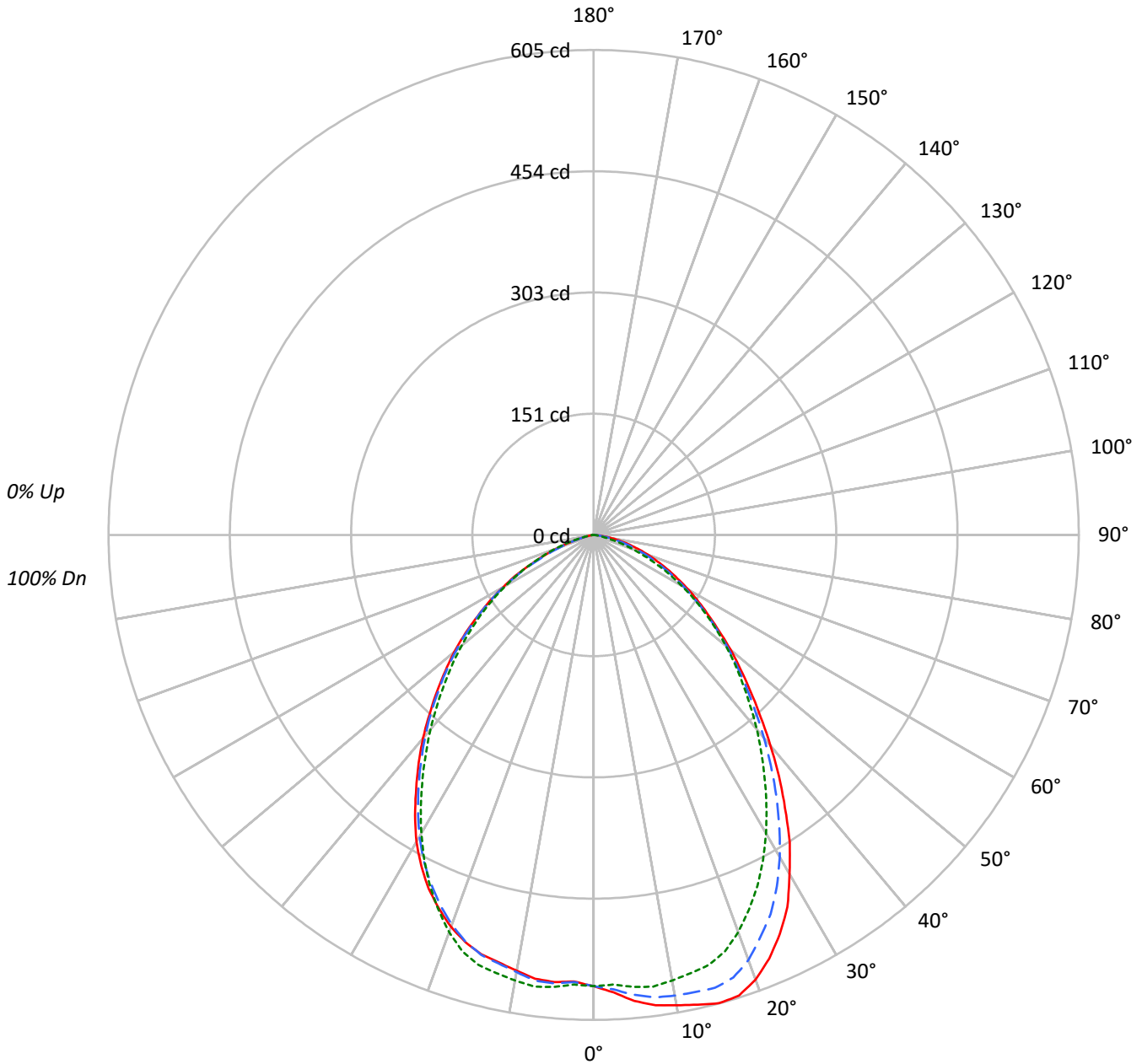
Lumens per Lamp: N/A
Luminaire Lumens: 1173.1 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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 | 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 | | | |
| 1 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | | 76 | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | 58 | | | |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | 31 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 69431 | 69431 | 69431 |
| 5° | 72247 | 70080 | 69325 |
| 10° | 74610 | 70690 | 69162 |
| 15° | 77231 | 70910 | 69173 |
| 20° | 77484 | 69201 | 68295 |
| 25° | 74758 | 65748 | 66266 |
| 30° | 69547 | 61215 | 62953 |
| 35° | 62655 | 56015 | 58078 |
| 40° | 55229 | 50946 | 53280 |
| 45° | 48302 | 45912 | 48180 |
| 50° | 42773 | 41295 | 43502 |
| 55° | 37633 | 36472 | 37956 |
| 60° | 33599 | 31157 | 32095 |
| 65° | 29536 | 25334 | 24867 |
| 70° | 25786 | 18645 | 17022 |
| 75° | 21398 | 11199 | 9055 |
| 80° | 16266 | 4333 | 2699 |
| 85° | 7501 | 1132 | 1132 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 54.3 | 4.6 |
| 10°-20° | 158.5 | 13.5 |
| 20°-30° | 229.5 | 19.6 |
| 30°-40° | 242.1 | 20.6 |
| 40°-50° | 209.5 | 17.9 |
| 50°-60° | 155.2 | 13.2 |
| 60°-70° | 89.5 | 7.6 |
| 70°-80° | 31.2 | 2.7 |
| 80°-90° | 3.3 | 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° | 442.2 | 37.7 |
| 0°-40° | 684.3 | 58.3 |
| 0°-60° | 1049.1 | 89.4 |
| 0°-90° | 1173.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1173.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 563 | 563 | 563 | 563 | 563 | |
| 5° | 584 | 576 | 566 | 562 | 560 | 56 |
| 15° | 605 | 585 | 555 | 542 | 542 | 170 |
| 25° | 549 | 522 | 483 | 480 | 487 | 251 |
| 35° | 416 | 397 | 372 | 380 | 386 | 260 |
| 45° | 277 | 269 | 263 | 273 | 276 | 215 |
| 55° | 175 | 171 | 170 | 176 | 176 | 158 |
| 65° | 101 | 95 | 87 | 82 | 85 | 101 |
| 75° | 45 | 38 | 24 | 19 | 19 | 48 |
| 85° | 5 | 3 | 1 | 1 | 1 | 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° | 562.9 | 562.9 | 562.9 | 562.9 | 562.9 | 562.9 | 562.9 | 562.9 | 562.9 |
| 2.5° | 571.3 | 569.8 | 567.5 | 564.4 | 561.5 | 559.2 | 558.4 | 557.6 | 557.6 |
| 5° | 583.5 | 580.4 | 575.9 | 569.8 | 566.0 | 563.7 | 561.5 | 559.9 | 559.9 |
| 7.5° | 591.8 | 588.9 | 581.9 | 573.6 | 568.3 | 563.7 | 560.7 | 558.4 | 558.4 |
| 10° | 595.7 | 591.8 | 583.5 | 572.8 | 564.4 | 558.4 | 553.8 | 552.2 | 552.2 |
| 12.5° | 600.2 | 595.7 | 584.2 | 570.5 | 559.9 | 552.2 | 547.7 | 546.2 | 546.2 |
| 15° | 604.8 | 599.4 | 585.0 | 569.1 | 555.3 | 546.2 | 542.3 | 541.7 | 541.7 |
| 17.5° | 602.5 | 595.7 | 579.0 | 559.9 | 544.6 | 535.5 | 531.8 | 531.8 | 532.5 |
| 20° | 590.3 | 583.5 | 564.4 | 543.1 | 527.2 | 520.3 | 517.3 | 518.8 | 520.3 |
| 22.5° | 572.0 | 563.7 | 543.1 | 522.6 | 505.9 | 499.8 | 499.8 | 502.1 | 504.4 |
| 25° | 549.3 | 541.7 | 521.9 | 499.0 | 483.1 | 478.4 | 480.0 | 483.8 | 486.9 |
| 27.5° | 523.4 | 515.1 | 494.5 | 473.2 | 457.2 | 454.9 | 458.7 | 464.0 | 465.6 |
| 30° | 488.3 | 481.5 | 464.0 | 443.5 | 429.8 | 429.1 | 434.3 | 438.2 | 442.0 |
| 32.5° | 454.9 | 447.3 | 430.6 | 410.8 | 400.9 | 401.7 | 407.7 | 412.3 | 414.6 |
| 35° | 416.1 | 409.3 | 397.0 | 381.1 | 372.0 | 373.5 | 380.3 | 384.9 | 385.7 |
| 37.5° | 379.6 | 375.0 | 362.8 | 350.7 | 343.8 | 346.9 | 352.9 | 358.3 | 358.3 |
| 40° | 343.0 | 339.3 | 330.2 | 320.3 | 316.4 | 320.3 | 326.3 | 330.9 | 330.9 |
| 42.5° | 308.1 | 305.9 | 298.2 | 291.4 | 289.0 | 294.4 | 299.7 | 303.6 | 302.8 |
| 45° | 276.9 | 274.6 | 269.2 | 264.0 | 263.2 | 268.6 | 273.1 | 275.4 | 276.2 |
| 47.5° | 248.8 | 247.2 | 242.6 | 238.9 | 238.9 | 244.2 | 248.0 | 250.3 | 251.0 |
| 50° | 222.9 | 221.4 | 217.6 | 214.6 | 215.2 | 220.6 | 223.6 | 225.9 | 226.7 |
| 52.5° | 197.0 | 196.2 | 193.2 | 189.4 | 191.7 | 195.5 | 199.3 | 200.8 | 201.6 |
| 55° | 175.0 | 175.0 | 171.1 | 168.2 | 169.6 | 173.4 | 175.8 | 176.5 | 176.5 |
| 57.5° | 155.2 | 154.4 | 149.9 | 146.8 | 147.6 | 151.3 | 152.9 | 153.7 | 153.7 |
| 60° | 136.2 | 135.4 | 130.9 | 126.3 | 126.3 | 128.6 | 129.3 | 130.1 | 130.1 |
| 62.5° | 117.9 | 117.1 | 111.9 | 108.0 | 106.5 | 105.7 | 105.7 | 107.2 | 110.3 |
| 65° | 101.2 | 100.4 | 95.1 | 89.0 | 86.8 | 84.5 | 82.2 | 83.7 | 85.2 |
| 67.5° | 86.0 | 84.5 | 79.1 | 73.8 | 68.4 | 64.7 | 60.8 | 63.1 | 66.2 |
| 70° | 71.5 | 70.0 | 63.9 | 57.8 | 51.7 | 45.6 | 42.6 | 45.6 | 47.2 |
| 72.5° | 57.8 | 56.3 | 50.3 | 44.1 | 36.5 | 30.5 | 29.7 | 30.5 | 31.2 |
| 75° | 44.9 | 44.1 | 38.1 | 31.2 | 23.5 | 19.0 | 19.0 | 19.0 | 19.0 |
| 77.5° | 33.4 | 31.9 | 25.8 | 19.8 | 13.6 | 10.7 | 9.9 | 9.9 | 9.9 |
| 80° | 22.9 | 21.3 | 16.0 | 11.4 | 6.1 | 4.5 | 4.5 | 3.8 | 3.8 |
| 82.5° | 13.0 | 12.2 | 8.4 | 4.5 | 2.3 | 1.5 | 1.5 | 1.5 | 1.5 |
| 85° | 5.3 | 4.5 | 3.1 | 1.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 87.5° | 0.8 | 0.8 | 0.8 | 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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