

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: P579700

Luminaire Tested: **HCC4W10D010SL-HM40525827-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579700
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: HCC4W10D010SL-HM40525827-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

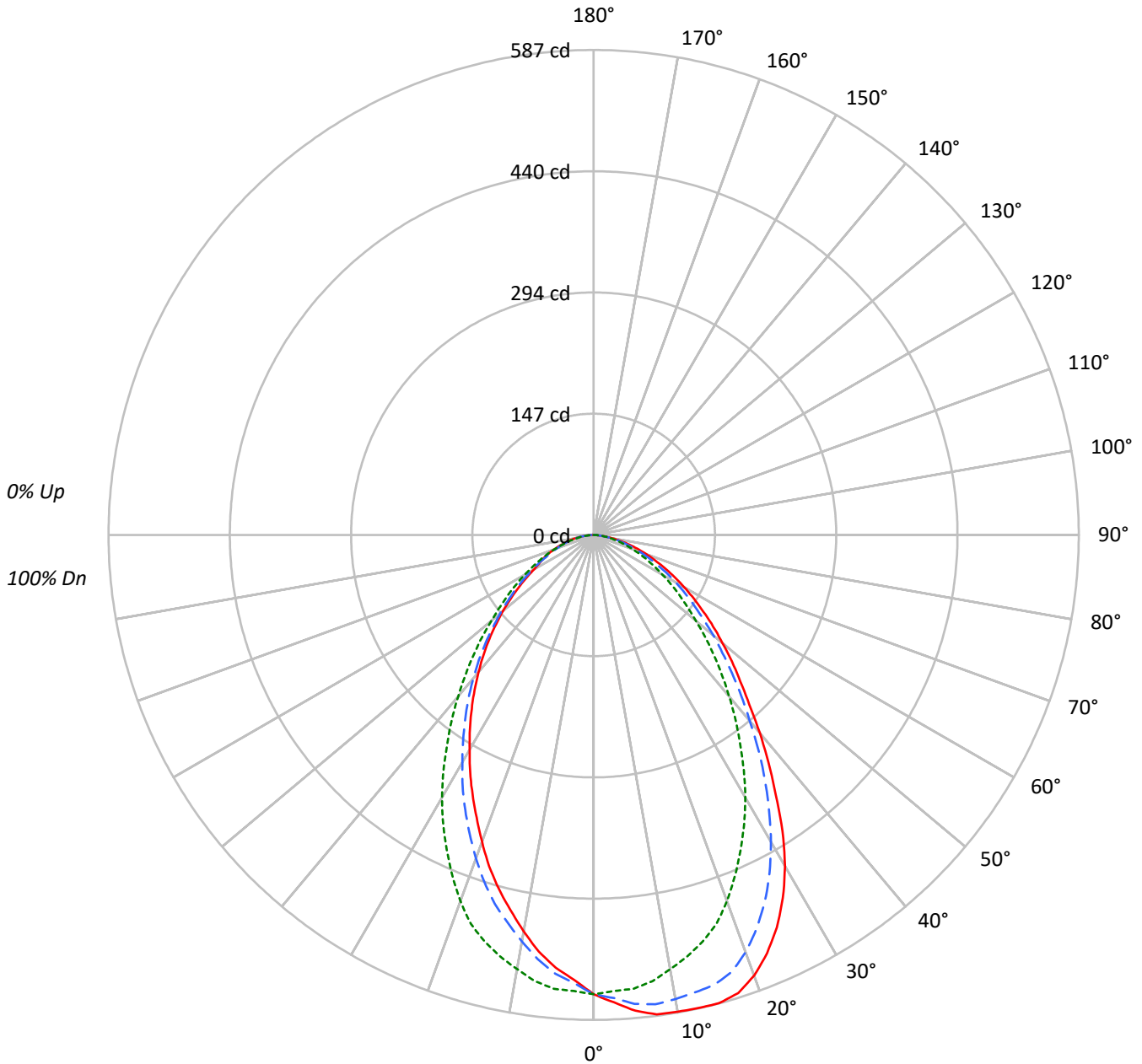
Lumens per Lamp: N/A
Luminaire Lumens: 992.8 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 68568 | 68568 | 68568 |
| 5° | 71591 | 68273 | 65115 |
| 10° | 73396 | 66845 | 61034 |
| 15° | 74907 | 65062 | 56634 |
| 20° | 74517 | 61903 | 51848 |
| 25° | 71383 | 57229 | 47171 |
| 30° | 65958 | 52257 | 42757 |
| 35° | 57822 | 46483 | 38713 |
| 40° | 50334 | 41059 | 34844 |
| 45° | 43819 | 35829 | 31154 |
| 50° | 39031 | 30875 | 27498 |
| 55° | 34881 | 27139 | 23763 |
| 60° | 31132 | 23732 | 20500 |
| 65° | 27668 | 20780 | 19467 |
| 70° | 24307 | 17924 | 18176 |
| 75° | 20540 | 15298 | 16823 |
| 80° | 15769 | 12999 | 15343 |
| 85° | 9199 | 10190 | 12879 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.1 | 5.2 |
| 10°-20° | 143.7 | 14.5 |
| 20°-30° | 196.4 | 19.8 |
| 30°-40° | 197.2 | 19.9 |
| 40°-50° | 163.1 | 16.4 |
| 50°-60° | 118.2 | 11.9 |
| 60°-70° | 74.9 | 7.5 |
| 70°-80° | 37.8 | 3.8 |
| 80°-90° | 9.3 | 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° | 392.2 | 39.5 |
| 0°-40° | 589.4 | 59.4 |
| 0°-60° | 870.8 | 87.7 |
| 0°-90° | 992.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 992.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 556 | 556 | 556 | 556 | 556 | |
| 5° | 578 | 570 | 551 | 533 | 526 | 55 |
| 15° | 587 | 564 | 510 | 462 | 444 | 165 |
| 25° | 524 | 490 | 420 | 368 | 347 | 240 |
| 35° | 384 | 361 | 309 | 271 | 257 | 241 |
| 45° | 251 | 237 | 205 | 185 | 179 | 195 |
| 55° | 162 | 148 | 126 | 115 | 110 | 146 |
| 65° | 95 | 84 | 71 | 64 | 67 | 94 |
| 75° | 43 | 37 | 32 | 33 | 35 | 46 |
| 85° | 6 | 6 | 7 | 8 | 9 | 9 |
| 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° | 555.9 | 555.9 | 555.9 | 555.9 | 555.9 | 555.9 | 555.9 | 555.9 | 555.9 |
| 2.5° | 566.4 | 564.4 | 561.1 | 557.3 | 552.6 | 547.4 | 542.8 | 540.2 | 539.0 |
| 5° | 578.2 | 575.6 | 569.7 | 561.1 | 551.4 | 541.6 | 533.0 | 527.8 | 525.9 |
| 7.5° | 585.4 | 581.4 | 573.0 | 559.9 | 544.8 | 530.4 | 518.0 | 510.8 | 508.8 |
| 10° | 586.0 | 581.4 | 570.4 | 552.6 | 533.7 | 514.7 | 499.7 | 489.2 | 487.3 |
| 12.5° | 586.6 | 580.8 | 567.1 | 546.1 | 522.6 | 499.0 | 480.7 | 468.3 | 465.0 |
| 15° | 586.6 | 580.8 | 563.8 | 539.0 | 509.5 | 482.6 | 462.4 | 448.0 | 443.5 |
| 17.5° | 581.4 | 574.9 | 554.7 | 525.9 | 493.8 | 463.7 | 440.2 | 425.2 | 420.5 |
| 20° | 567.7 | 560.5 | 537.6 | 506.2 | 471.6 | 440.2 | 416.6 | 400.9 | 395.0 |
| 22.5° | 548.1 | 539.5 | 515.4 | 481.4 | 446.7 | 414.7 | 391.8 | 375.4 | 370.2 |
| 25° | 524.5 | 516.1 | 489.9 | 456.6 | 420.5 | 390.4 | 367.6 | 352.6 | 346.6 |
| 27.5° | 495.7 | 486.6 | 461.1 | 427.8 | 394.4 | 364.3 | 343.3 | 329.7 | 323.8 |
| 30° | 463.1 | 453.3 | 429.0 | 397.0 | 366.9 | 338.1 | 317.8 | 306.7 | 300.2 |
| 32.5° | 425.2 | 416.6 | 395.0 | 366.2 | 338.1 | 310.7 | 293.6 | 283.8 | 278.6 |
| 35° | 384.0 | 379.3 | 361.0 | 336.2 | 308.7 | 285.9 | 270.7 | 261.6 | 257.1 |
| 37.5° | 347.3 | 342.8 | 327.1 | 306.1 | 281.9 | 260.9 | 248.5 | 240.7 | 236.7 |
| 40° | 312.6 | 308.7 | 293.6 | 276.0 | 255.0 | 236.7 | 226.3 | 220.4 | 216.4 |
| 42.5° | 278.6 | 276.6 | 264.2 | 247.9 | 229.5 | 213.8 | 205.4 | 200.7 | 197.6 |
| 45° | 251.2 | 248.5 | 236.7 | 221.1 | 205.4 | 192.3 | 185.0 | 181.9 | 178.6 |
| 47.5° | 226.9 | 223.7 | 211.2 | 197.6 | 183.1 | 171.4 | 164.8 | 161.6 | 160.2 |
| 50° | 203.4 | 200.2 | 189.0 | 175.3 | 160.9 | 152.4 | 147.1 | 143.8 | 143.3 |
| 52.5° | 182.4 | 179.2 | 166.8 | 153.7 | 142.6 | 135.4 | 130.8 | 127.6 | 126.2 |
| 55° | 162.2 | 158.3 | 147.8 | 135.4 | 126.2 | 119.7 | 115.2 | 111.9 | 110.5 |
| 57.5° | 143.8 | 140.0 | 130.8 | 119.0 | 110.5 | 104.7 | 100.7 | 97.4 | 96.2 |
| 60° | 126.2 | 122.9 | 114.5 | 103.3 | 96.2 | 90.9 | 86.9 | 84.3 | 83.1 |
| 62.5° | 109.9 | 107.3 | 98.8 | 89.0 | 83.1 | 78.5 | 75.2 | 72.6 | 73.9 |
| 65° | 94.8 | 92.2 | 84.3 | 75.9 | 71.2 | 66.7 | 64.1 | 64.1 | 66.7 |
| 67.5° | 80.5 | 77.8 | 71.2 | 64.1 | 60.2 | 56.9 | 55.0 | 56.9 | 58.8 |
| 70° | 67.4 | 64.8 | 58.8 | 53.0 | 49.7 | 47.1 | 47.1 | 49.0 | 50.4 |
| 72.5° | 55.0 | 52.3 | 47.8 | 43.1 | 40.5 | 38.6 | 40.5 | 41.9 | 43.1 |
| 75° | 43.1 | 41.2 | 37.3 | 34.0 | 32.1 | 31.4 | 33.3 | 34.7 | 35.3 |
| 77.5° | 32.1 | 30.7 | 28.1 | 25.5 | 24.2 | 24.8 | 26.9 | 27.4 | 28.1 |
| 80° | 22.2 | 21.6 | 19.6 | 18.3 | 18.3 | 19.0 | 20.3 | 20.9 | 21.6 |
| 82.5° | 13.8 | 13.8 | 12.4 | 11.7 | 12.4 | 13.8 | 14.3 | 15.0 | 15.0 |
| 85° | 6.5 | 7.2 | 6.5 | 6.5 | 7.2 | 8.5 | 8.5 | 9.1 | 9.1 |
| 87.5° | 1.9 | 1.9 | 2.6 | 2.6 | 3.3 | 3.3 | 3.3 | 3.3 | 3.9 |
| 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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