

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: P579825

Luminaire Tested: **HCC4W10D010SL-HM40525940-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579825
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: HCC4W10D010SL-HM40525940-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

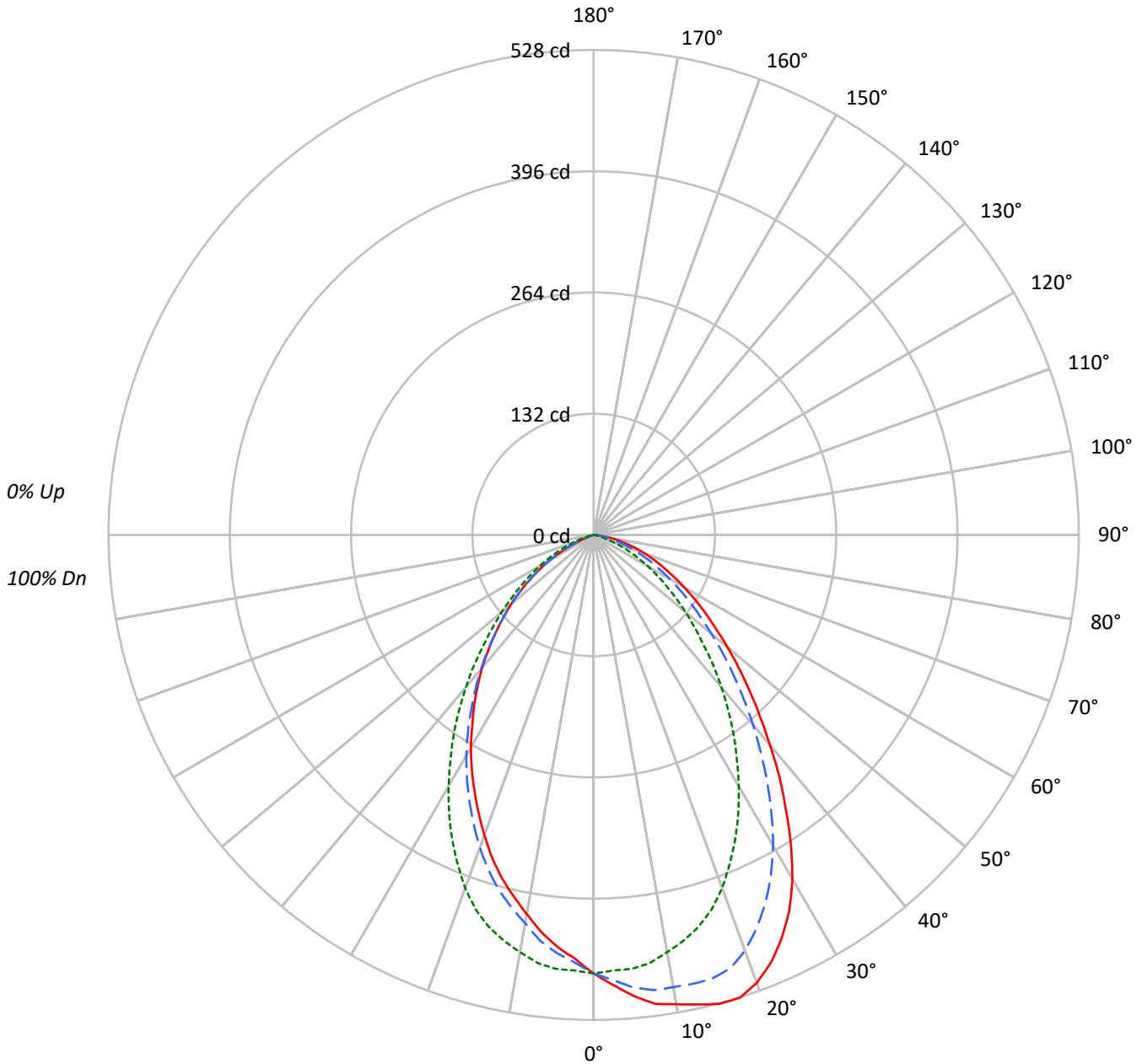
Lumens per Lamp: N/A
Luminaire Lumens: 824.9 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | | | | | | 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° | 58898 | 58898 | 58898 |
| 5° | 62404 | 58702 | 55767 |
| 10° | 64991 | 57765 | 52492 |
| 15° | 67488 | 56378 | 49355 |
| 20° | 68112 | 53673 | 45653 |
| 25° | 65912 | 49635 | 41782 |
| 30° | 61628 | 44993 | 38028 |
| 35° | 54916 | 39993 | 34166 |
| 40° | 48015 | 34780 | 30400 |
| 45° | 41830 | 29497 | 26305 |
| 50° | 36498 | 25023 | 22566 |
| 55° | 31977 | 20752 | 18257 |
| 60° | 27999 | 16750 | 13420 |
| 65° | 24370 | 12492 | 7530 |
| 70° | 21314 | 8078 | 2452 |
| 75° | 17442 | 4241 | 667 |
| 80° | 12999 | 1918 | 497 |
| 85° | 7784 | 991 | 991 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.1 | 5.5 |
| 10°-20° | 126.1 | 15.3 |
| 20°-30° | 174.4 | 21.1 |
| 30°-40° | 175.4 | 21.3 |
| 40°-50° | 141.5 | 17.2 |
| 50°-60° | 95.7 | 11.6 |
| 60°-70° | 48.7 | 5.9 |
| 70°-80° | 15.6 | 1.9 |
| 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° | 345.6 | 41.9 |
| 0°-40° | 521.0 | 63.2 |
| 0°-60° | 758.2 | 91.9 |
| 0°-90° | 824.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 824.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 478 | 478 | 478 | 478 | 478 | |
| 5° | 504 | 495 | 474 | 457 | 450 | 49 |
| 15° | 528 | 500 | 442 | 399 | 386 | 149 |
| 25° | 484 | 442 | 365 | 320 | 307 | 222 |
| 35° | 365 | 330 | 266 | 232 | 227 | 228 |
| 45° | 240 | 215 | 169 | 151 | 151 | 186 |
| 55° | 149 | 128 | 96 | 84 | 85 | 134 |
| 65° | 84 | 68 | 43 | 28 | 26 | 84 |
| 75° | 37 | 26 | 9 | 2 | 1 | 40 |
| 85° | 6 | 3 | 1 | 1 | 1 | 7 |
| 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° | 477.5 | 477.5 | 477.5 | 477.5 | 477.5 | 477.5 | 477.5 | 477.5 | 477.5 |
| 2.5° | 490.5 | 487.7 | 485.0 | 480.2 | 474.8 | 469.4 | 466.0 | 463.3 | 461.9 |
| 5° | 504.0 | 500.6 | 494.6 | 484.3 | 474.1 | 464.6 | 457.1 | 452.4 | 450.4 |
| 7.5° | 514.9 | 510.2 | 499.9 | 485.7 | 470.1 | 455.1 | 445.6 | 438.8 | 436.1 |
| 10° | 518.9 | 513.6 | 499.9 | 480.9 | 461.2 | 442.9 | 429.3 | 422.5 | 419.1 |
| 12.5° | 523.7 | 517.6 | 500.6 | 476.8 | 452.4 | 430.6 | 415.0 | 406.3 | 402.9 |
| 15° | 528.5 | 520.3 | 499.9 | 470.8 | 441.5 | 416.4 | 399.4 | 390.6 | 386.5 |
| 17.5° | 528.5 | 518.9 | 494.6 | 460.5 | 427.3 | 400.8 | 381.8 | 371.6 | 368.1 |
| 20° | 518.9 | 508.1 | 481.6 | 444.3 | 408.9 | 380.4 | 362.1 | 351.9 | 347.8 |
| 22.5° | 504.0 | 491.8 | 463.3 | 424.6 | 387.1 | 359.4 | 340.9 | 331.5 | 327.4 |
| 25° | 484.3 | 472.2 | 442.2 | 402.2 | 364.7 | 337.0 | 319.9 | 311.1 | 307.0 |
| 27.5° | 461.2 | 447.7 | 417.8 | 377.7 | 340.9 | 314.5 | 298.8 | 290.8 | 287.3 |
| 30° | 432.7 | 419.8 | 390.6 | 351.2 | 315.9 | 291.4 | 277.1 | 269.7 | 267.0 |
| 32.5° | 399.4 | 388.5 | 360.1 | 323.3 | 290.1 | 267.7 | 254.7 | 248.7 | 245.9 |
| 35° | 364.7 | 354.6 | 329.5 | 295.5 | 265.6 | 244.6 | 232.3 | 228.3 | 226.9 |
| 37.5° | 332.2 | 323.3 | 298.8 | 267.7 | 240.5 | 222.1 | 211.2 | 208.6 | 207.2 |
| 40° | 298.2 | 292.1 | 269.7 | 241.1 | 216.0 | 199.7 | 190.8 | 188.8 | 188.8 |
| 42.5° | 267.7 | 260.8 | 241.1 | 215.3 | 192.9 | 176.6 | 170.5 | 168.4 | 169.1 |
| 45° | 239.8 | 232.9 | 214.6 | 190.8 | 169.1 | 155.6 | 150.8 | 150.8 | 150.8 |
| 47.5° | 213.9 | 207.9 | 190.8 | 166.4 | 148.7 | 137.9 | 133.1 | 133.1 | 133.8 |
| 50° | 190.2 | 186.2 | 167.1 | 146.0 | 130.4 | 120.3 | 116.9 | 116.2 | 117.6 |
| 52.5° | 167.7 | 163.1 | 146.0 | 127.0 | 112.1 | 103.9 | 100.5 | 99.8 | 100.5 |
| 55° | 148.7 | 143.3 | 128.4 | 110.0 | 96.5 | 88.3 | 84.2 | 83.5 | 84.9 |
| 57.5° | 130.4 | 126.3 | 110.7 | 94.5 | 81.5 | 73.4 | 70.0 | 68.6 | 69.3 |
| 60° | 113.5 | 109.4 | 95.1 | 79.4 | 67.9 | 59.7 | 55.0 | 53.7 | 54.4 |
| 62.5° | 97.9 | 94.5 | 80.8 | 65.9 | 54.4 | 46.9 | 42.1 | 38.7 | 40.1 |
| 65° | 83.5 | 80.1 | 67.9 | 53.0 | 42.8 | 34.6 | 27.9 | 25.1 | 25.8 |
| 67.5° | 71.4 | 67.3 | 55.6 | 42.1 | 32.0 | 23.1 | 15.6 | 14.2 | 14.2 |
| 70° | 59.1 | 55.0 | 44.8 | 32.7 | 22.4 | 12.2 | 6.8 | 6.8 | 6.8 |
| 72.5° | 47.6 | 44.2 | 34.6 | 24.5 | 14.2 | 5.5 | 2.7 | 2.7 | 2.7 |
| 75° | 36.6 | 33.9 | 25.8 | 17.0 | 8.9 | 2.7 | 2.0 | 1.4 | 1.4 |
| 77.5° | 27.2 | 24.5 | 18.3 | 11.5 | 5.5 | 1.4 | 1.4 | 1.4 | 1.4 |
| 80° | 18.3 | 16.3 | 12.2 | 6.8 | 2.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 82.5° | 10.9 | 9.6 | 6.8 | 3.4 | 1.4 | 0.7 | 0.7 | 0.7 | 0.7 |
| 85° | 5.5 | 4.1 | 2.7 | 1.4 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 87.5° | 1.4 | 0.7 | 0.7 | 0.7 | 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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