

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: P579914

Luminaire Tested: **HCC4W15D010SL-HM40525927-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W15D010SL-HM40525927-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

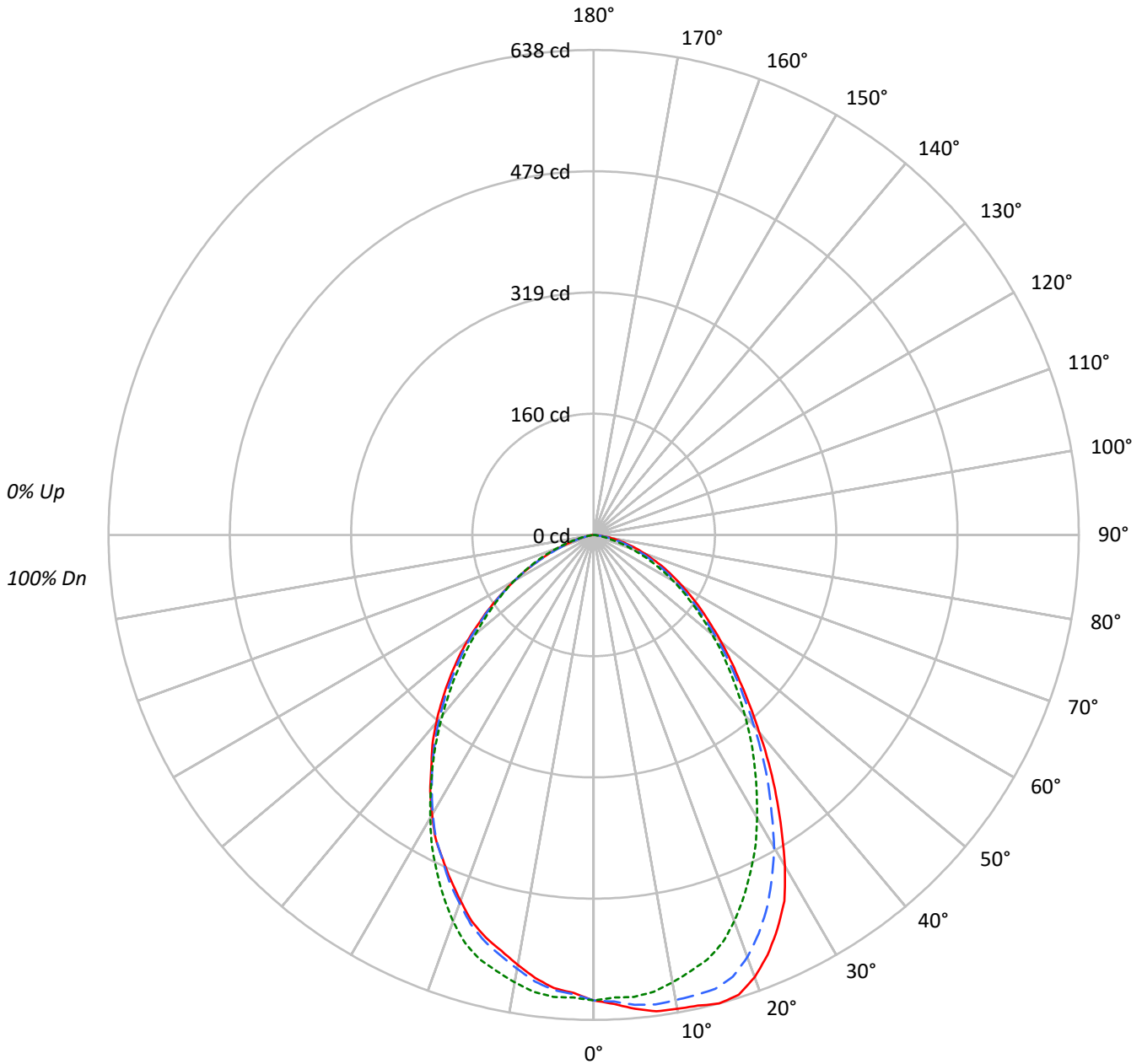
Lumens per Lamp: N/A
Luminaire Lumens: 1167.0 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | | | | | | | | | |
| 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 | 107 | 104 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | | | | | | | | | | | | | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 | | | | | | | | | | | | | | | | | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | | | | | | | | | | | | | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | | | | | | | | | | | | | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | | | | | | | | | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | | | | | | | | | | | | | | | | |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | | | | | | | | | | | | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | | | | | | | | | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | | | | | | | | | | | | |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 75525 | 75525 | 75525 |
| 5° | 77497 | 75528 | 74104 |
| 10° | 79270 | 74874 | 71918 |
| 15° | 81483 | 73822 | 70029 |
| 20° | 81264 | 70986 | 67193 |
| 25° | 77834 | 66456 | 63966 |
| 30° | 71612 | 61201 | 60546 |
| 35° | 62986 | 55533 | 56000 |
| 40° | 54504 | 49722 | 51815 |
| 45° | 47360 | 44185 | 46819 |
| 50° | 42043 | 38973 | 41583 |
| 55° | 37289 | 34192 | 35655 |
| 60° | 33205 | 29652 | 29652 |
| 65° | 29536 | 24662 | 23086 |
| 70° | 25497 | 18645 | 16445 |
| 75° | 21398 | 12296 | 10151 |
| 80° | 16266 | 5967 | 5398 |
| 85° | 8633 | 2123 | 2123 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 58.0 | 5.0 |
| 10°-20° | 164.4 | 14.1 |
| 20°-30° | 231.8 | 19.9 |
| 30°-40° | 239.5 | 20.5 |
| 40°-50° | 203.0 | 17.4 |
| 50°-60° | 147.7 | 12.7 |
| 60°-70° | 86.3 | 7.4 |
| 70°-80° | 32.1 | 2.7 |
| 80°-90° | 4.2 | 0.4 |
| 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° | 454.2 | 38.9 |
| 0°-40° | 693.7 | 59.4 |
| 0°-60° | 1044.4 | 89.5 |
| 0°-90° | 1167.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1167.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 612 | 612 | 612 | 612 | 612 | |
| 5° | 626 | 621 | 610 | 601 | 598 | 60 |
| 15° | 638 | 618 | 578 | 554 | 548 | 179 |
| 25° | 572 | 540 | 488 | 471 | 470 | 262 |
| 35° | 418 | 400 | 369 | 370 | 372 | 261 |
| 45° | 272 | 264 | 253 | 262 | 268 | 211 |
| 55° | 173 | 165 | 159 | 164 | 166 | 156 |
| 65° | 101 | 93 | 84 | 79 | 79 | 100 |
| 75° | 45 | 37 | 26 | 21 | 21 | 48 |
| 85° | 6 | 4 | 2 | 2 | 2 | 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° | 612.3 | 612.3 | 612.3 | 612.3 | 612.3 | 612.3 | 612.3 | 612.3 | 612.3 |
| 2.5° | 617.6 | 616.0 | 614.5 | 612.3 | 609.2 | 606.9 | 604.7 | 603.2 | 603.2 |
| 5° | 625.9 | 623.6 | 620.6 | 615.3 | 610.0 | 605.5 | 600.9 | 598.5 | 598.5 |
| 7.5° | 632.1 | 629.0 | 623.0 | 615.3 | 606.1 | 599.3 | 592.5 | 589.4 | 587.9 |
| 10° | 632.9 | 629.8 | 621.4 | 610.0 | 597.8 | 587.1 | 579.5 | 575.0 | 574.2 |
| 12.5° | 634.3 | 630.5 | 619.9 | 603.9 | 587.9 | 575.0 | 566.7 | 562.0 | 560.5 |
| 15° | 638.1 | 632.9 | 618.3 | 597.8 | 578.1 | 562.8 | 553.7 | 549.9 | 548.4 |
| 17.5° | 634.3 | 626.7 | 609.2 | 584.9 | 562.8 | 546.1 | 537.0 | 533.1 | 533.1 |
| 20° | 619.1 | 611.5 | 591.0 | 564.3 | 540.8 | 524.8 | 515.6 | 513.4 | 511.9 |
| 22.5° | 597.8 | 589.4 | 567.4 | 539.3 | 515.6 | 501.2 | 495.2 | 492.1 | 491.3 |
| 25° | 571.9 | 563.6 | 540.0 | 511.1 | 488.3 | 476.2 | 470.8 | 470.8 | 470.0 |
| 27.5° | 543.0 | 532.5 | 508.0 | 483.0 | 460.9 | 451.7 | 449.5 | 449.5 | 450.3 |
| 30° | 502.8 | 495.2 | 474.6 | 450.3 | 429.7 | 423.6 | 423.6 | 425.1 | 425.1 |
| 32.5° | 459.3 | 454.1 | 435.8 | 414.6 | 398.5 | 394.8 | 396.2 | 399.3 | 400.1 |
| 35° | 418.3 | 412.3 | 400.1 | 381.0 | 368.8 | 367.4 | 369.6 | 371.9 | 371.9 |
| 37.5° | 378.1 | 371.9 | 363.5 | 348.4 | 339.2 | 340.0 | 343.0 | 346.1 | 348.4 |
| 40° | 338.5 | 333.9 | 327.8 | 315.6 | 308.8 | 311.9 | 315.6 | 318.7 | 321.8 |
| 42.5° | 303.5 | 298.9 | 294.4 | 285.2 | 280.6 | 284.5 | 289.0 | 292.1 | 295.1 |
| 45° | 271.5 | 268.4 | 263.9 | 256.3 | 253.3 | 257.1 | 262.4 | 265.5 | 268.4 |
| 47.5° | 244.1 | 242.6 | 236.5 | 229.7 | 228.2 | 231.9 | 236.5 | 240.4 | 242.6 |
| 50° | 219.1 | 216.7 | 211.5 | 204.5 | 203.1 | 209.2 | 212.2 | 214.4 | 216.7 |
| 52.5° | 194.7 | 192.4 | 186.4 | 180.2 | 180.2 | 184.9 | 187.2 | 187.8 | 190.1 |
| 55° | 173.4 | 171.1 | 165.1 | 160.4 | 159.0 | 162.8 | 164.3 | 164.3 | 165.8 |
| 57.5° | 153.6 | 151.3 | 145.3 | 140.0 | 139.2 | 141.4 | 141.4 | 141.4 | 142.2 |
| 60° | 134.6 | 132.3 | 126.2 | 121.7 | 120.2 | 121.0 | 120.2 | 119.4 | 120.2 |
| 62.5° | 117.1 | 114.8 | 108.8 | 103.5 | 101.9 | 101.9 | 99.6 | 98.9 | 99.6 |
| 65° | 101.2 | 97.3 | 92.8 | 87.4 | 84.5 | 82.1 | 79.1 | 79.1 | 79.1 |
| 67.5° | 85.2 | 82.1 | 76.9 | 71.5 | 67.7 | 63.9 | 59.4 | 60.8 | 61.6 |
| 70° | 70.7 | 68.4 | 62.4 | 57.1 | 51.7 | 47.2 | 43.3 | 44.9 | 45.6 |
| 72.5° | 57.8 | 54.8 | 49.5 | 43.3 | 38.8 | 32.7 | 30.5 | 31.9 | 31.9 |
| 75° | 44.9 | 41.8 | 37.3 | 31.2 | 25.8 | 20.6 | 20.6 | 21.3 | 21.3 |
| 77.5° | 33.4 | 30.5 | 25.8 | 20.6 | 15.9 | 12.2 | 13.0 | 13.0 | 13.0 |
| 80° | 22.9 | 20.6 | 16.7 | 12.2 | 8.4 | 6.8 | 6.8 | 6.8 | 7.6 |
| 82.5° | 13.0 | 11.4 | 9.1 | 6.1 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 85° | 6.1 | 4.5 | 3.8 | 2.3 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 87.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 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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