

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: P581439

Luminaire Tested: **HCC4S07D010SL-HM40525830-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581439
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: HCC4S07D010SL-HM40525830-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

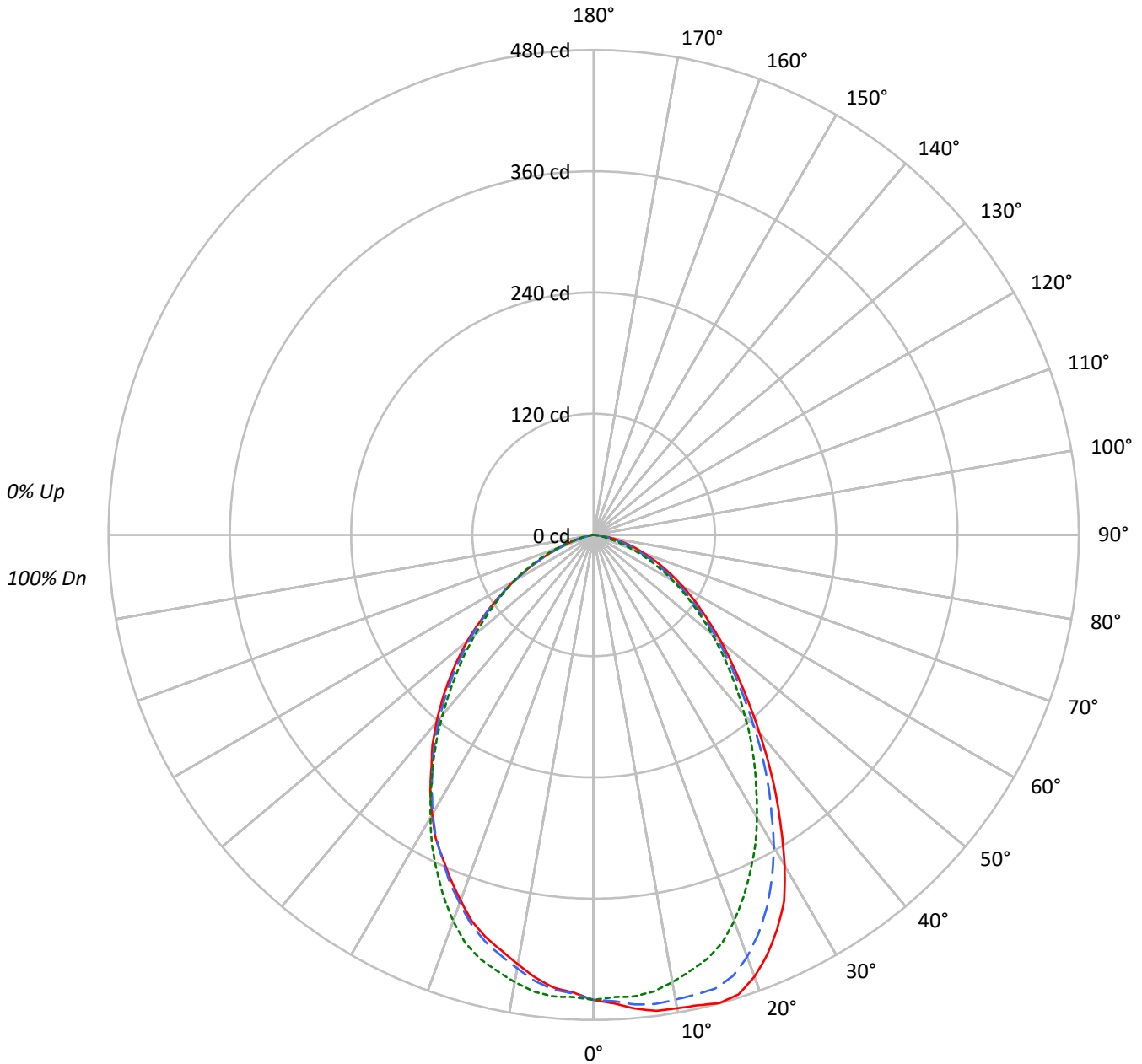
Lumens per Lamp: N/A
Luminaire Lumens: 877.2 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | | 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 | 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° | 56764 | 56764 | 56764 |
| 5° | 58268 | 56770 | 55718 |
| 10° | 59581 | 56287 | 54057 |
| 15° | 61256 | 55484 | 52637 |
| 20° | 61076 | 53358 | 50509 |
| 25° | 58508 | 49948 | 48083 |
| 30° | 53823 | 46004 | 45520 |
| 35° | 47341 | 41755 | 42101 |
| 40° | 40979 | 37388 | 38934 |
| 45° | 35620 | 33213 | 35201 |
| 50° | 31605 | 29283 | 31278 |
| 55° | 28021 | 25698 | 26795 |
| 60° | 24965 | 22301 | 22301 |
| 65° | 22181 | 18533 | 17337 |
| 70° | 19150 | 14029 | 12370 |
| 75° | 16060 | 9293 | 7625 |
| 80° | 12217 | 4475 | 4049 |
| 85° | 6510 | 1557 | 1557 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.6 | 5.0 |
| 10°-20° | 123.6 | 14.1 |
| 20°-30° | 174.3 | 19.9 |
| 30°-40° | 180.0 | 20.5 |
| 40°-50° | 152.6 | 17.4 |
| 50°-60° | 111.0 | 12.7 |
| 60°-70° | 64.9 | 7.4 |
| 70°-80° | 24.1 | 2.7 |
| 80°-90° | 3.1 | 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° | 341.4 | 38.9 |
| 0°-40° | 521.4 | 59.4 |
| 0°-60° | 785.1 | 89.5 |
| 0°-90° | 877.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 877.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 460 | 460 | 460 | 460 | 460 | |
| 5° | 471 | 466 | 458 | 452 | 450 | 45 |
| 15° | 480 | 465 | 434 | 416 | 412 | 135 |
| 25° | 430 | 406 | 367 | 354 | 353 | 197 |
| 35° | 314 | 301 | 277 | 278 | 280 | 196 |
| 45° | 204 | 198 | 190 | 197 | 202 | 159 |
| 55° | 130 | 124 | 120 | 124 | 125 | 117 |
| 65° | 76 | 70 | 64 | 59 | 59 | 75 |
| 75° | 34 | 28 | 20 | 16 | 16 | 36 |
| 85° | 5 | 3 | 1 | 1 | 1 | 6 |
| 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° | 460.2 | 460.2 | 460.2 | 460.2 | 460.2 | 460.2 | 460.2 | 460.2 | 460.2 |
| 2.5° | 464.2 | 463.1 | 461.9 | 460.2 | 457.9 | 456.2 | 454.5 | 453.4 | 453.4 |
| 5° | 470.6 | 468.9 | 466.5 | 462.5 | 458.5 | 455.1 | 451.7 | 450.0 | 450.0 |
| 7.5° | 475.1 | 472.8 | 468.3 | 462.5 | 455.7 | 450.5 | 445.4 | 443.0 | 441.9 |
| 10° | 475.7 | 473.4 | 467.0 | 458.5 | 449.4 | 441.3 | 435.6 | 432.2 | 431.6 |
| 12.5° | 476.8 | 474.0 | 465.9 | 453.9 | 441.9 | 432.2 | 426.0 | 422.5 | 421.4 |
| 15° | 479.7 | 475.7 | 464.8 | 449.4 | 434.5 | 423.1 | 416.2 | 413.3 | 412.2 |
| 17.5° | 476.8 | 471.1 | 457.9 | 439.6 | 423.1 | 410.5 | 403.6 | 400.8 | 400.8 |
| 20° | 465.3 | 459.6 | 444.3 | 424.2 | 406.5 | 394.4 | 387.6 | 385.9 | 384.8 |
| 22.5° | 449.4 | 443.0 | 426.5 | 405.4 | 387.6 | 376.8 | 372.2 | 369.8 | 369.3 |
| 25° | 429.9 | 423.7 | 405.9 | 384.2 | 367.0 | 357.9 | 353.9 | 353.9 | 353.3 |
| 27.5° | 408.2 | 400.2 | 381.9 | 363.0 | 346.4 | 339.6 | 337.9 | 337.9 | 338.4 |
| 30° | 377.9 | 372.2 | 356.8 | 338.4 | 323.0 | 318.4 | 318.4 | 319.6 | 319.6 |
| 32.5° | 345.3 | 341.3 | 327.6 | 311.6 | 299.5 | 296.7 | 297.8 | 300.2 | 300.8 |
| 35° | 314.4 | 309.9 | 300.8 | 286.4 | 277.3 | 276.2 | 277.9 | 279.6 | 279.6 |
| 37.5° | 284.2 | 279.6 | 273.2 | 261.9 | 255.0 | 255.6 | 257.9 | 260.1 | 261.9 |
| 40° | 254.5 | 250.9 | 246.4 | 237.3 | 232.2 | 234.4 | 237.3 | 239.5 | 241.8 |
| 42.5° | 228.2 | 224.6 | 221.2 | 214.4 | 211.0 | 213.8 | 217.2 | 219.5 | 221.8 |
| 45° | 204.2 | 201.8 | 198.4 | 192.7 | 190.4 | 193.2 | 197.2 | 199.5 | 201.8 |
| 47.5° | 183.6 | 182.4 | 177.8 | 172.6 | 171.5 | 174.3 | 177.8 | 180.7 | 182.4 |
| 50° | 164.7 | 163.0 | 159.0 | 153.7 | 152.6 | 157.3 | 159.5 | 161.3 | 163.0 |
| 52.5° | 146.3 | 144.6 | 140.1 | 135.5 | 135.5 | 138.9 | 140.7 | 141.2 | 142.9 |
| 55° | 130.3 | 128.6 | 124.0 | 120.6 | 119.5 | 122.3 | 123.5 | 123.5 | 124.6 |
| 57.5° | 115.5 | 113.8 | 109.2 | 105.2 | 104.6 | 106.3 | 106.3 | 106.3 | 106.9 |
| 60° | 101.2 | 99.5 | 94.9 | 91.5 | 90.4 | 90.9 | 90.4 | 89.8 | 90.4 |
| 62.5° | 88.1 | 86.4 | 81.7 | 77.7 | 76.6 | 76.6 | 74.9 | 74.3 | 74.9 |
| 65° | 76.0 | 73.2 | 69.8 | 65.8 | 63.5 | 61.8 | 59.4 | 59.4 | 59.4 |
| 67.5° | 64.1 | 61.8 | 57.7 | 53.7 | 50.9 | 48.0 | 44.6 | 45.7 | 46.3 |
| 70° | 53.1 | 51.4 | 46.9 | 42.9 | 38.9 | 35.4 | 32.5 | 33.7 | 34.3 |
| 72.5° | 43.5 | 41.2 | 37.2 | 32.5 | 29.1 | 24.6 | 22.9 | 24.0 | 24.0 |
| 75° | 33.7 | 31.4 | 28.0 | 23.4 | 19.5 | 15.5 | 15.5 | 16.0 | 16.0 |
| 77.5° | 25.1 | 22.9 | 19.5 | 15.5 | 12.1 | 9.1 | 9.7 | 9.7 | 9.7 |
| 80° | 17.2 | 15.5 | 12.6 | 9.1 | 6.3 | 5.1 | 5.1 | 5.1 | 5.7 |
| 82.5° | 9.7 | 8.5 | 6.8 | 4.6 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 85° | 4.6 | 3.4 | 2.8 | 1.7 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| 87.5° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| 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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