

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: P579788

Luminaire Tested: **HCC4S10D010SL-HM40525930-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579788
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: HCC4S10D010SL-HM40525930-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

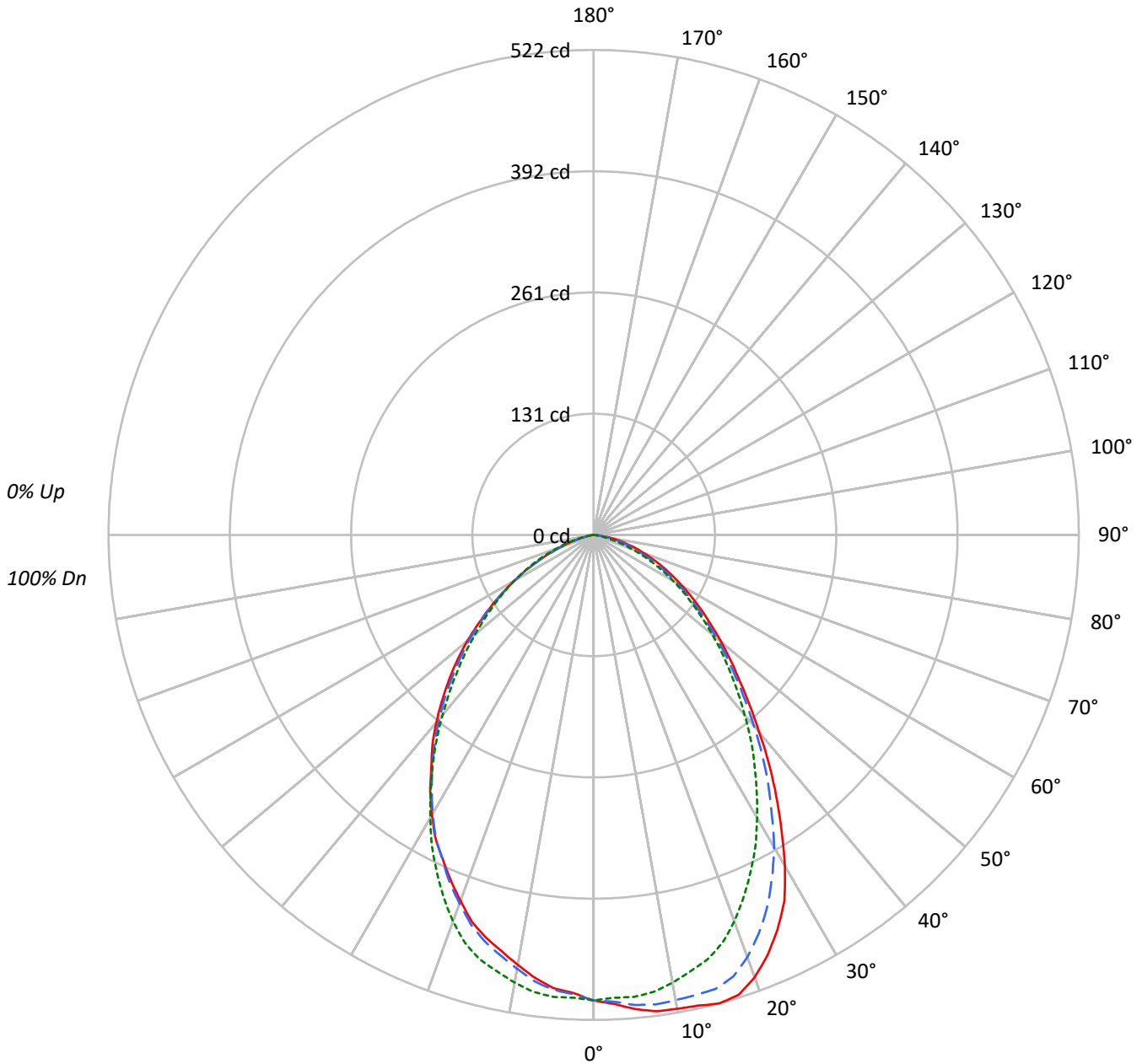
Lumens per Lamp: N/A
Luminaire Lumens: 954.9 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | 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 | 104 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | | 88 | | | |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 | | | | | 77 | | | |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | | 59 | | | |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | | 47 | | | |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 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 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | 35 | | | |
| 10 | 58 | 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° | 61808 | 61808 | 61808 |
| 5° | 63419 | 61797 | 60645 |
| 10° | 64854 | 61272 | 58854 |
| 15° | 66670 | 60401 | 57298 |
| 20° | 66497 | 58083 | 54986 |
| 25° | 63707 | 54384 | 52343 |
| 30° | 58595 | 50077 | 49550 |
| 35° | 51543 | 45444 | 45821 |
| 40° | 44602 | 40673 | 42379 |
| 45° | 38742 | 36143 | 38324 |
| 50° | 34387 | 31873 | 34042 |
| 55° | 30515 | 27978 | 29160 |
| 60° | 27185 | 24250 | 24250 |
| 65° | 24137 | 20168 | 18913 |
| 70° | 20881 | 15255 | 13452 |
| 75° | 17538 | 10103 | 8292 |
| 80° | 13283 | 4830 | 4475 |
| 85° | 7076 | 1840 | 1840 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 47.4 | 5.0 |
| 10°-20° | 134.5 | 14.1 |
| 20°-30° | 189.7 | 19.9 |
| 30°-40° | 196.0 | 20.5 |
| 40°-50° | 166.1 | 17.4 |
| 50°-60° | 120.9 | 12.7 |
| 60°-70° | 70.6 | 7.4 |
| 70°-80° | 26.3 | 2.7 |
| 80°-90° | 3.4 | 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° | 371.7 | 38.9 |
| 0°-40° | 567.6 | 59.4 |
| 0°-60° | 854.6 | 89.5 |
| 0°-90° | 954.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 954.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 501 | 501 | 501 | 501 | 501 | |
| 5° | 512 | 508 | 499 | 492 | 490 | 49 |
| 15° | 522 | 506 | 473 | 453 | 449 | 147 |
| 25° | 468 | 442 | 400 | 385 | 385 | 214 |
| 35° | 342 | 327 | 302 | 302 | 304 | 214 |
| 45° | 222 | 216 | 207 | 215 | 220 | 173 |
| 55° | 142 | 135 | 130 | 134 | 136 | 128 |
| 65° | 83 | 76 | 69 | 65 | 65 | 82 |
| 75° | 37 | 30 | 21 | 17 | 17 | 39 |
| 85° | 5 | 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° | 501.1 | 501.1 | 501.1 | 501.1 | 501.1 | 501.1 | 501.1 | 501.1 | 501.1 |
| 2.5° | 505.4 | 504.1 | 502.9 | 501.1 | 498.6 | 496.6 | 494.8 | 493.6 | 493.6 |
| 5° | 512.2 | 510.4 | 507.9 | 503.5 | 499.1 | 495.4 | 491.6 | 489.8 | 489.8 |
| 7.5° | 517.2 | 514.7 | 509.7 | 503.5 | 496.1 | 490.5 | 484.8 | 482.3 | 481.1 |
| 10° | 517.8 | 515.3 | 508.5 | 499.1 | 489.2 | 480.5 | 474.2 | 470.6 | 469.9 |
| 12.5° | 519.0 | 516.0 | 507.2 | 494.1 | 481.1 | 470.6 | 463.6 | 460.0 | 458.7 |
| 15° | 522.1 | 517.8 | 506.0 | 489.2 | 473.0 | 460.5 | 453.0 | 450.0 | 448.7 |
| 17.5° | 519.0 | 512.8 | 498.6 | 478.6 | 460.5 | 446.9 | 439.4 | 436.3 | 436.3 |
| 20° | 506.6 | 500.4 | 483.5 | 461.8 | 442.5 | 429.5 | 422.0 | 420.1 | 418.9 |
| 22.5° | 489.2 | 482.3 | 464.3 | 441.2 | 422.0 | 410.1 | 405.1 | 402.6 | 402.1 |
| 25° | 468.1 | 461.2 | 441.9 | 418.2 | 399.6 | 389.7 | 385.2 | 385.2 | 384.6 |
| 27.5° | 444.4 | 435.6 | 415.7 | 395.2 | 377.1 | 369.7 | 367.8 | 367.8 | 368.5 |
| 30° | 411.4 | 405.1 | 388.4 | 368.5 | 351.6 | 346.6 | 346.6 | 347.9 | 347.9 |
| 32.5° | 375.9 | 371.6 | 356.6 | 339.2 | 326.2 | 323.0 | 324.2 | 326.7 | 327.4 |
| 35° | 342.3 | 337.3 | 327.4 | 311.8 | 301.8 | 300.7 | 302.5 | 304.3 | 304.3 |
| 37.5° | 309.3 | 304.3 | 297.5 | 285.1 | 277.6 | 278.2 | 280.7 | 283.1 | 285.1 |
| 40° | 277.0 | 273.2 | 268.2 | 258.3 | 252.6 | 255.1 | 258.3 | 260.7 | 263.2 |
| 42.5° | 248.3 | 244.6 | 240.8 | 233.4 | 229.6 | 232.7 | 236.5 | 239.0 | 241.5 |
| 45° | 222.1 | 219.7 | 216.0 | 209.7 | 207.2 | 210.4 | 214.7 | 217.2 | 219.7 |
| 47.5° | 199.8 | 198.6 | 193.6 | 188.0 | 186.7 | 189.8 | 193.6 | 196.6 | 198.6 |
| 50° | 179.2 | 177.4 | 173.0 | 167.4 | 166.1 | 171.2 | 173.7 | 175.5 | 177.4 |
| 52.5° | 159.3 | 157.5 | 152.5 | 147.5 | 147.5 | 151.2 | 153.1 | 153.7 | 155.6 |
| 55° | 141.9 | 140.1 | 135.1 | 131.3 | 130.1 | 133.1 | 134.4 | 134.4 | 135.6 |
| 57.5° | 125.7 | 123.8 | 118.9 | 114.5 | 113.9 | 115.7 | 115.7 | 115.7 | 116.4 |
| 60° | 110.2 | 108.3 | 103.3 | 99.6 | 98.3 | 99.0 | 98.3 | 97.8 | 98.3 |
| 62.5° | 95.8 | 94.0 | 89.0 | 84.7 | 83.4 | 83.4 | 81.5 | 80.9 | 81.5 |
| 65° | 82.7 | 79.7 | 75.9 | 71.6 | 69.1 | 67.3 | 64.8 | 64.8 | 64.8 |
| 67.5° | 69.8 | 67.3 | 62.8 | 58.5 | 55.4 | 52.2 | 48.6 | 49.8 | 50.4 |
| 70° | 57.9 | 56.0 | 51.0 | 46.7 | 42.3 | 38.6 | 35.5 | 36.8 | 37.3 |
| 72.5° | 47.3 | 44.8 | 40.4 | 35.5 | 31.8 | 26.7 | 24.9 | 26.2 | 26.2 |
| 75° | 36.8 | 34.3 | 30.5 | 25.5 | 21.2 | 16.8 | 16.8 | 17.4 | 17.4 |
| 77.5° | 27.4 | 24.9 | 21.2 | 16.8 | 13.1 | 10.0 | 10.6 | 10.6 | 10.6 |
| 80° | 18.7 | 16.8 | 13.7 | 10.0 | 6.8 | 5.6 | 5.6 | 5.6 | 6.3 |
| 82.5° | 10.6 | 9.3 | 7.5 | 5.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 85° | 5.0 | 3.8 | 3.1 | 1.8 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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