

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: P579805

Luminaire Tested: **HCC4S10D010SL-HM40525935-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P579805
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S10D010SL-HM40525935-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

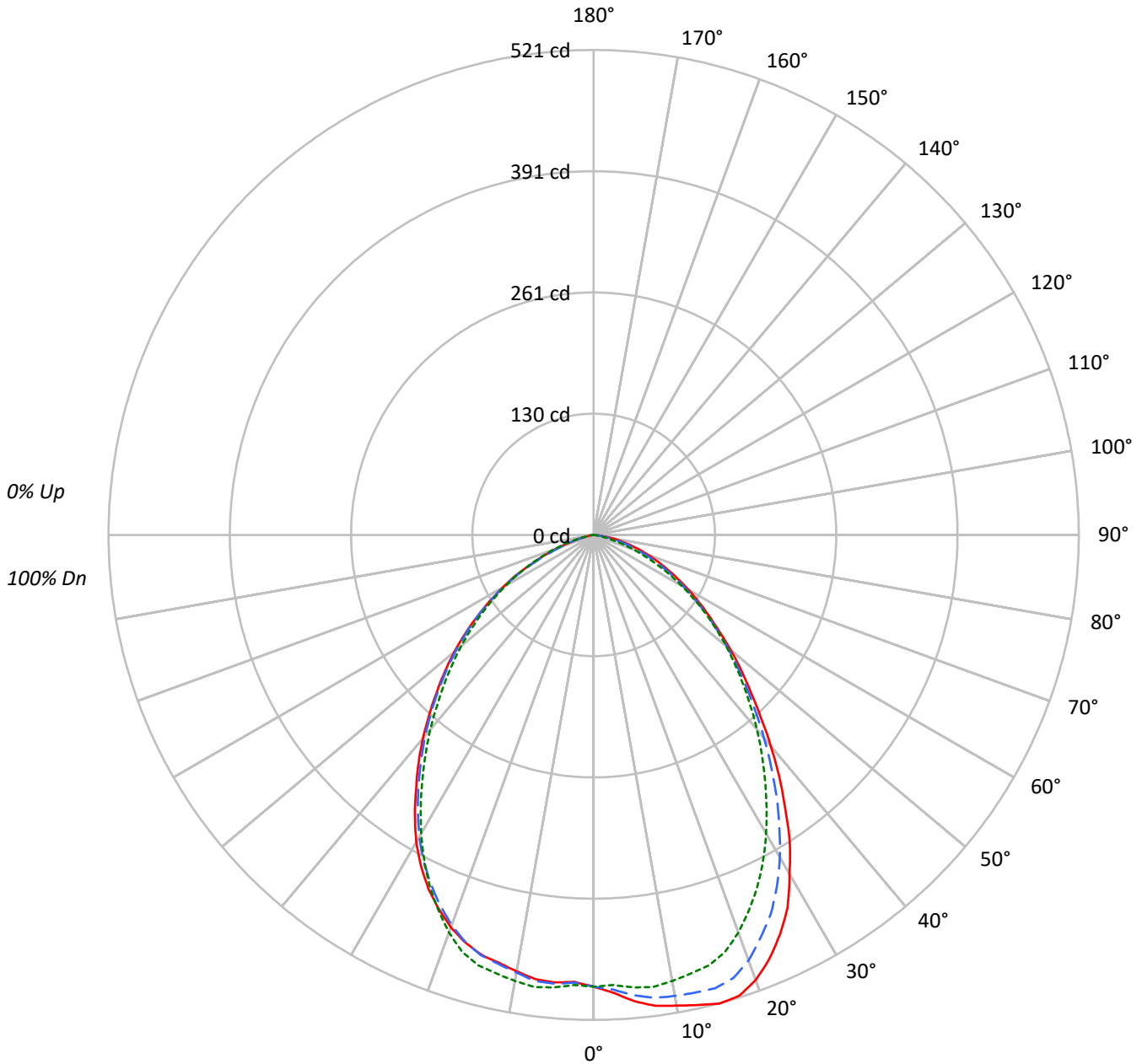
Lumens per Lamp: N/A
Luminaire Lumens: 1011.2 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | 88 | | | | |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | 76 | | | | |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | | 67 | | | | |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | 58 | | | | |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | | 52 | | | | |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | 46 | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | | 41 | | | | |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | 37 | | | | |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | 34 | | | | |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | 31 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 59847 | 59847 | 59847 |
| 5° | 62267 | 60410 | 59754 |
| 10° | 64315 | 60933 | 59618 |
| 15° | 66568 | 61116 | 59609 |
| 20° | 66786 | 59645 | 58871 |
| 25° | 64428 | 56671 | 57120 |
| 30° | 59948 | 52755 | 54265 |
| 35° | 54012 | 48290 | 50052 |
| 40° | 47629 | 43925 | 45922 |
| 45° | 41621 | 39580 | 41533 |
| 50° | 36862 | 35615 | 37496 |
| 55° | 32429 | 31440 | 32730 |
| 60° | 28937 | 26840 | 27654 |
| 65° | 25450 | 21831 | 21423 |
| 70° | 22251 | 16084 | 14642 |
| 75° | 18443 | 9722 | 7816 |
| 80° | 13993 | 3694 | 2344 |
| 85° | 6510 | 991 | 991 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 46.8 | 4.6 |
| 10°-20° | 136.6 | 13.5 |
| 20°-30° | 197.8 | 19.6 |
| 30°-40° | 208.7 | 20.6 |
| 40°-50° | 180.6 | 17.9 |
| 50°-60° | 133.8 | 13.2 |
| 60°-70° | 77.1 | 7.6 |
| 70°-80° | 26.9 | 2.7 |
| 80°-90° | 2.9 | 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° | 381.2 | 37.7 |
| 0°-40° | 589.9 | 58.3 |
| 0°-60° | 904.3 | 89.4 |
| 0°-90° | 1011.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1011.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 485 | 485 | 485 | 485 | 485 | |
| 5° | 503 | 496 | 488 | 484 | 483 | 48 |
| 15° | 521 | 504 | 479 | 468 | 467 | 147 |
| 25° | 473 | 450 | 416 | 414 | 420 | 217 |
| 35° | 359 | 342 | 321 | 328 | 332 | 224 |
| 45° | 239 | 232 | 227 | 236 | 238 | 185 |
| 55° | 151 | 148 | 146 | 152 | 152 | 136 |
| 65° | 87 | 82 | 75 | 71 | 73 | 87 |
| 75° | 39 | 33 | 20 | 16 | 16 | 42 |
| 85° | 5 | 3 | 1 | 1 | 1 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P579805

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 485.2 | 485.2 | 485.2 | 485.2 | 485.2 | 485.2 | 485.2 | 485.2 | 485.2 |
| 2.5° | 492.4 | 491.2 | 489.1 | 486.5 | 483.9 | 481.9 | 481.3 | 480.6 | 480.6 |
| 5° | 502.9 | 500.3 | 496.4 | 491.2 | 487.9 | 485.9 | 483.9 | 482.6 | 482.6 |
| 7.5° | 510.2 | 507.5 | 501.6 | 494.3 | 489.8 | 485.9 | 483.3 | 481.3 | 481.3 |
| 10° | 513.5 | 510.2 | 502.9 | 493.8 | 486.5 | 481.3 | 477.4 | 476.0 | 476.0 |
| 12.5° | 517.3 | 513.5 | 503.6 | 491.7 | 482.6 | 476.0 | 472.2 | 470.8 | 470.8 |
| 15° | 521.3 | 516.7 | 504.2 | 490.5 | 478.6 | 470.8 | 467.5 | 466.8 | 466.8 |
| 17.5° | 519.3 | 513.5 | 499.0 | 482.6 | 469.5 | 461.6 | 458.4 | 458.4 | 459.0 |
| 20° | 508.8 | 502.9 | 486.5 | 468.2 | 454.4 | 448.5 | 445.9 | 447.2 | 448.5 |
| 22.5° | 493.1 | 485.9 | 468.2 | 450.4 | 436.1 | 430.8 | 430.8 | 432.8 | 434.7 |
| 25° | 473.4 | 466.8 | 449.9 | 430.2 | 416.4 | 412.4 | 413.8 | 417.1 | 419.7 |
| 27.5° | 451.1 | 443.9 | 426.2 | 407.9 | 394.1 | 392.2 | 395.3 | 400.0 | 401.3 |
| 30° | 420.9 | 415.0 | 400.0 | 382.3 | 370.4 | 369.8 | 374.4 | 377.7 | 381.0 |
| 32.5° | 392.2 | 385.6 | 371.1 | 354.0 | 345.6 | 346.2 | 351.4 | 355.4 | 357.3 |
| 35° | 358.7 | 352.8 | 342.3 | 328.5 | 320.7 | 321.9 | 327.9 | 331.8 | 332.4 |
| 37.5° | 327.2 | 323.3 | 312.7 | 302.3 | 296.3 | 299.0 | 304.3 | 308.9 | 308.9 |
| 40° | 295.8 | 292.5 | 284.6 | 276.1 | 272.8 | 276.1 | 281.3 | 285.2 | 285.2 |
| 42.5° | 265.6 | 263.6 | 257.1 | 251.2 | 249.2 | 253.8 | 258.3 | 261.6 | 260.9 |
| 45° | 238.6 | 236.7 | 232.2 | 227.5 | 226.9 | 231.5 | 235.5 | 237.4 | 238.1 |
| 47.5° | 214.4 | 213.1 | 209.2 | 205.9 | 205.9 | 210.5 | 213.7 | 215.8 | 216.3 |
| 50° | 192.1 | 190.8 | 187.5 | 184.9 | 185.6 | 190.2 | 192.8 | 194.7 | 195.4 |
| 52.5° | 169.8 | 169.2 | 166.6 | 163.3 | 165.2 | 168.5 | 171.8 | 173.1 | 173.8 |
| 55° | 150.8 | 150.8 | 147.5 | 144.9 | 146.2 | 149.5 | 151.5 | 152.2 | 152.2 |
| 57.5° | 133.7 | 133.1 | 129.2 | 126.5 | 127.2 | 130.5 | 131.8 | 132.5 | 132.5 |
| 60° | 117.3 | 116.8 | 112.8 | 108.8 | 108.8 | 110.8 | 111.5 | 112.1 | 112.1 |
| 62.5° | 101.6 | 100.9 | 96.4 | 93.1 | 91.8 | 91.2 | 91.2 | 92.4 | 95.0 |
| 65° | 87.2 | 86.6 | 81.9 | 76.7 | 74.8 | 72.8 | 70.8 | 72.1 | 73.4 |
| 67.5° | 74.1 | 72.8 | 68.2 | 63.6 | 59.1 | 55.8 | 52.5 | 54.4 | 57.0 |
| 70° | 61.7 | 60.3 | 55.1 | 49.8 | 44.6 | 39.4 | 36.8 | 39.4 | 40.6 |
| 72.5° | 49.8 | 48.5 | 43.2 | 38.0 | 31.5 | 26.2 | 25.6 | 26.2 | 26.9 |
| 75° | 38.7 | 38.0 | 32.8 | 26.9 | 20.4 | 16.4 | 16.4 | 16.4 | 16.4 |
| 77.5° | 28.9 | 27.5 | 22.3 | 17.1 | 11.8 | 9.2 | 8.5 | 8.5 | 8.5 |
| 80° | 19.7 | 18.3 | 13.8 | 9.8 | 5.2 | 4.0 | 4.0 | 3.3 | 3.3 |
| 82.5° | 11.2 | 10.5 | 7.2 | 4.0 | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 |
| 85° | 4.6 | 4.0 | 2.6 | 1.4 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| 87.5° | 0.7 | 0.7 | 0.7 | 0.0 | 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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