

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: P592635

Luminaire Tested: **HCC4S15D010SL-HM40525850-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592635
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: HCC4S15D010SL-HM40525850-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

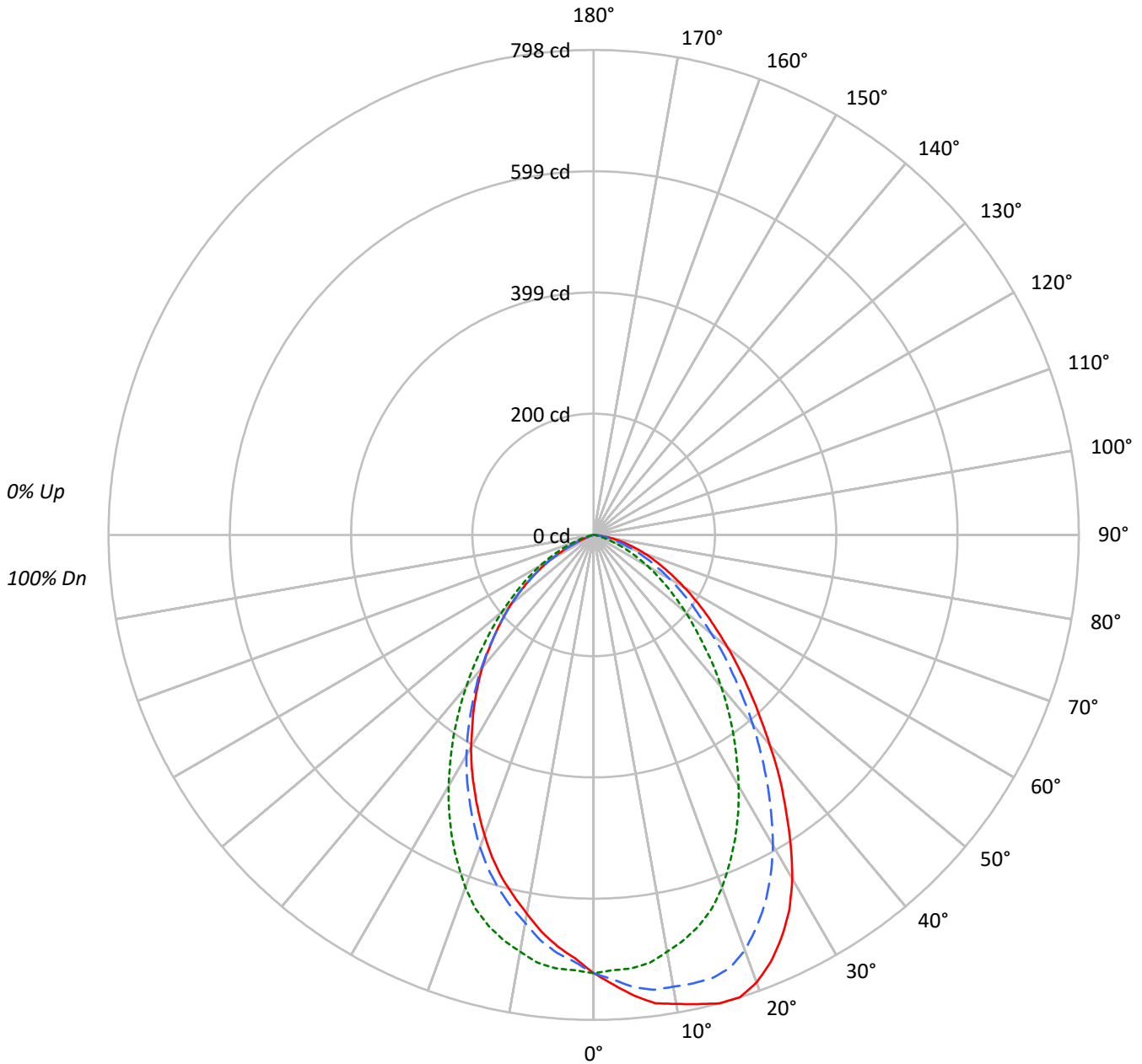
Lumens per Lamp: N/A
Luminaire Lumens: 1245.4 lumens
Efficiency: N/A
Efficacy: 89.0 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | 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 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | 89 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | 78 |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | 69 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | 61 |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | 55 |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | 49 |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | 44 |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | 40 |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | 37 |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|-------|-------|
| 0° | 88932 | 88932 | 88932 |
| 5° | 94225 | 88640 | 84183 |
| 10° | 98145 | 87223 | 79270 |
| 15° | 101889 | 85123 | 74524 |
| 20° | 102857 | 81041 | 68926 |
| 25° | 99514 | 74962 | 63094 |
| 30° | 93048 | 67924 | 57412 |
| 35° | 82938 | 60381 | 51588 |
| 40° | 72506 | 52507 | 45922 |
| 45° | 63146 | 44551 | 39719 |
| 50° | 55111 | 37783 | 34061 |
| 55° | 48299 | 31311 | 27590 |
| 60° | 42234 | 25311 | 20253 |
| 65° | 36833 | 18854 | 11383 |
| 70° | 32205 | 12226 | 3679 |
| 75° | 26402 | 6338 | 953 |
| 80° | 19676 | 2912 | 710 |
| 85° | 11605 | 1415 | 1415 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 68.1 | 5.5 |
| 10°-20° | 190.4 | 15.3 |
| 20°-30° | 263.3 | 21.1 |
| 30°-40° | 264.8 | 21.3 |
| 40°-50° | 213.7 | 17.2 |
| 50°-60° | 144.5 | 11.6 |
| 60°-70° | 73.5 | 5.9 |
| 70°-80° | 23.5 | 1.9 |
| 80°-90° | 3.6 | 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° | 521.8 | 41.9 |
| 0°-40° | 786.6 | 63.2 |
| 0°-60° | 1144.7 | 91.9 |
| 0°-90° | 1245.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1245.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 721 | 721 | 721 | 721 | 721 | |
| 5° | 761 | 747 | 716 | 690 | 680 | 73 |
| 15° | 798 | 755 | 667 | 603 | 584 | 225 |
| 25° | 731 | 668 | 551 | 483 | 464 | 335 |
| 35° | 551 | 497 | 401 | 351 | 343 | 344 |
| 45° | 362 | 324 | 255 | 228 | 228 | 281 |
| 55° | 225 | 194 | 146 | 127 | 128 | 202 |
| 65° | 126 | 103 | 65 | 42 | 39 | 127 |
| 75° | 55 | 39 | 13 | 3 | 2 | 60 |
| 85° | 8 | 4 | 1 | 1 | 1 | 11 |
| 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° | 721.0 | 721.0 | 721.0 | 721.0 | 721.0 | 721.0 | 721.0 | 721.0 | 721.0 |
| 2.5° | 740.5 | 736.4 | 732.3 | 725.1 | 716.9 | 708.7 | 703.6 | 699.5 | 697.4 |
| 5° | 761.0 | 755.9 | 746.7 | 731.2 | 715.9 | 701.5 | 690.3 | 683.1 | 679.9 |
| 7.5° | 777.4 | 770.2 | 754.9 | 733.4 | 709.7 | 687.2 | 672.8 | 662.5 | 658.4 |
| 10° | 783.6 | 775.3 | 754.9 | 726.1 | 696.4 | 668.7 | 648.2 | 638.0 | 632.9 |
| 12.5° | 790.8 | 781.5 | 755.9 | 719.9 | 683.1 | 650.3 | 626.6 | 613.3 | 608.2 |
| 15° | 797.9 | 785.7 | 754.9 | 710.7 | 666.6 | 628.6 | 603.1 | 589.8 | 583.6 |
| 17.5° | 797.9 | 783.6 | 746.7 | 695.4 | 645.1 | 605.1 | 576.3 | 561.0 | 555.9 |
| 20° | 783.6 | 767.1 | 727.1 | 670.7 | 617.4 | 574.3 | 546.7 | 531.3 | 525.1 |
| 22.5° | 761.0 | 742.6 | 699.5 | 641.0 | 584.6 | 542.6 | 514.8 | 500.5 | 494.4 |
| 25° | 731.2 | 712.8 | 667.6 | 607.2 | 550.8 | 508.7 | 483.1 | 469.7 | 463.6 |
| 27.5° | 696.4 | 675.8 | 630.8 | 570.2 | 514.8 | 474.8 | 451.3 | 439.0 | 433.9 |
| 30° | 653.3 | 633.9 | 589.8 | 530.3 | 476.9 | 440.0 | 418.4 | 407.2 | 403.1 |
| 32.5° | 603.1 | 586.7 | 543.6 | 488.2 | 438.0 | 404.1 | 384.6 | 375.3 | 371.2 |
| 35° | 550.8 | 535.4 | 497.4 | 446.2 | 401.0 | 369.2 | 350.8 | 344.6 | 342.6 |
| 37.5° | 501.5 | 488.2 | 451.3 | 404.1 | 363.0 | 335.4 | 318.9 | 314.8 | 312.8 |
| 40° | 450.3 | 441.0 | 407.2 | 364.1 | 326.1 | 301.5 | 288.2 | 285.2 | 285.2 |
| 42.5° | 404.1 | 393.9 | 364.1 | 325.1 | 291.3 | 266.6 | 257.4 | 254.3 | 255.4 |
| 45° | 362.0 | 351.8 | 324.0 | 288.2 | 255.4 | 234.9 | 227.7 | 227.7 | 227.7 |
| 47.5° | 323.0 | 313.8 | 288.2 | 251.3 | 224.6 | 208.2 | 201.0 | 201.0 | 202.0 |
| 50° | 287.2 | 281.1 | 252.3 | 220.5 | 196.9 | 181.6 | 176.3 | 175.3 | 177.5 |
| 52.5° | 253.3 | 246.2 | 220.5 | 191.8 | 169.2 | 156.9 | 151.8 | 150.8 | 151.8 |
| 55° | 224.6 | 216.4 | 193.9 | 166.1 | 145.6 | 133.4 | 127.2 | 126.2 | 128.3 |
| 57.5° | 196.9 | 190.8 | 167.1 | 142.6 | 123.0 | 110.7 | 105.6 | 103.6 | 104.6 |
| 60° | 171.2 | 165.1 | 143.6 | 120.0 | 102.6 | 90.3 | 83.1 | 81.1 | 82.1 |
| 62.5° | 147.7 | 142.6 | 122.0 | 99.5 | 82.1 | 70.7 | 63.6 | 58.4 | 60.5 |
| 65° | 126.2 | 121.0 | 102.6 | 80.0 | 64.6 | 52.3 | 42.1 | 38.0 | 39.0 |
| 67.5° | 107.7 | 101.5 | 84.1 | 63.6 | 48.2 | 34.9 | 23.5 | 21.5 | 21.5 |
| 70° | 89.3 | 83.1 | 67.7 | 49.2 | 33.9 | 18.4 | 10.2 | 10.2 | 10.2 |
| 72.5° | 71.7 | 66.6 | 52.3 | 37.0 | 21.5 | 8.2 | 4.1 | 4.1 | 4.1 |
| 75° | 55.4 | 51.3 | 39.0 | 25.7 | 13.3 | 4.1 | 3.1 | 2.0 | 2.0 |
| 77.5° | 41.0 | 37.0 | 27.7 | 17.4 | 8.2 | 2.0 | 2.0 | 2.0 | 2.0 |
| 80° | 27.7 | 24.6 | 18.4 | 10.2 | 4.1 | 1.0 | 1.0 | 1.0 | 1.0 |
| 82.5° | 16.4 | 14.3 | 10.2 | 5.1 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 85° | 8.2 | 6.1 | 4.1 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 87.5° | 2.0 | 1.0 | 1.0 | 1.0 | 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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