

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: P580288

Luminaire Tested: **HCC4S30D010MW-HM43040830-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580288
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: HCC4S30D010MW-HM43040830-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

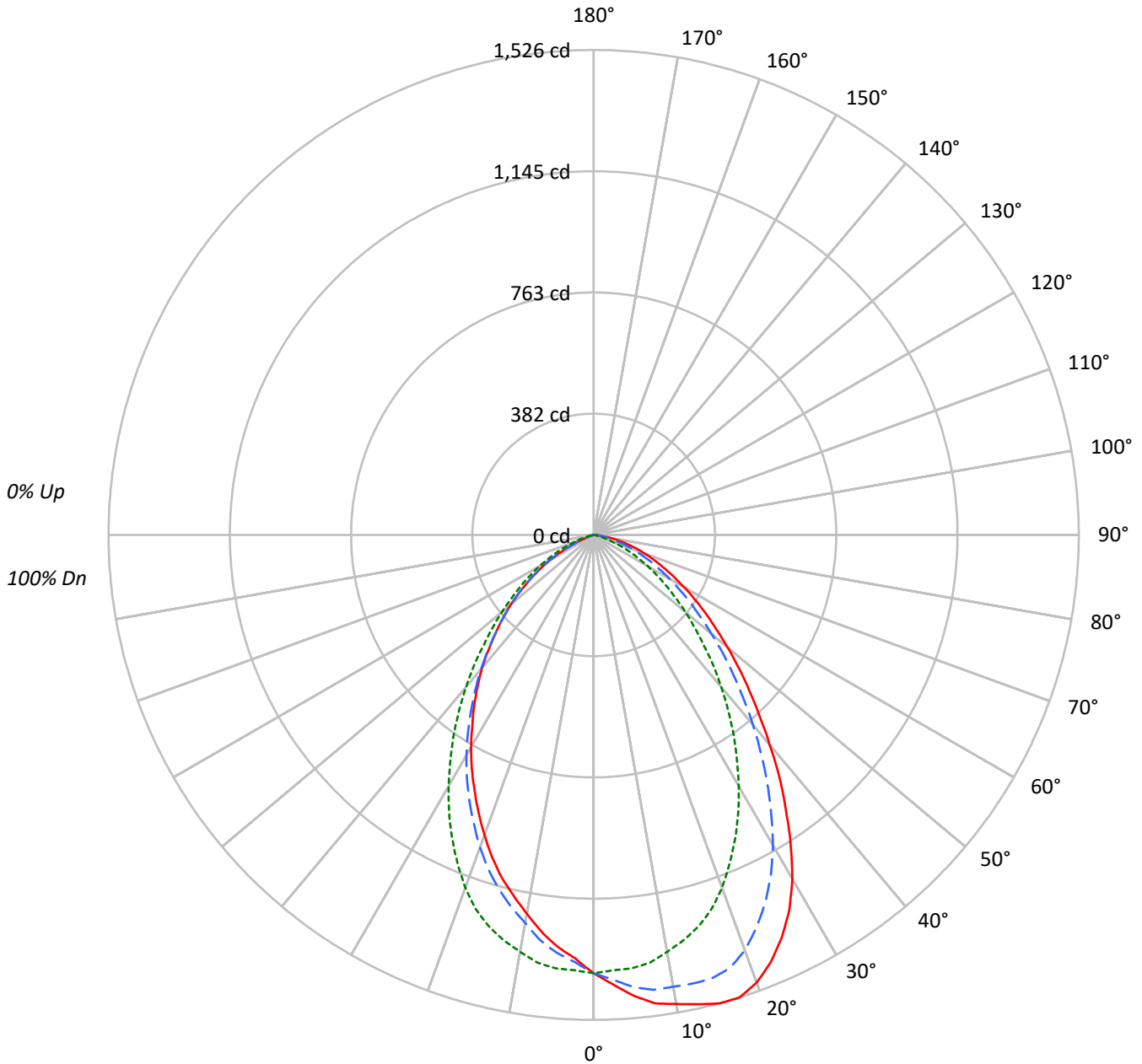
Lumens per Lamp: N/A
Luminaire Lumens: 2382.0 lumens
Efficiency: N/A
Efficacy: 85.1 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28
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 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | | | | | |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | | | | |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | | | | | | |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | | | | |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | | | | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | | | | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 170094 | 170094 | 170094 |
| 5° | 180228 | 169530 | 161036 |
| 10° | 187710 | 166818 | 151588 |
| 15° | 194891 | 162826 | 142535 |
| 20° | 196722 | 155007 | 131839 |
| 25° | 190345 | 143364 | 120663 |
| 30° | 177977 | 129922 | 109797 |
| 35° | 158618 | 115493 | 98643 |
| 40° | 138651 | 100442 | 87818 |
| 45° | 120798 | 85195 | 75967 |
| 50° | 105387 | 72266 | 65128 |
| 55° | 92362 | 59890 | 52729 |
| 60° | 80816 | 48401 | 38706 |
| 65° | 70426 | 36074 | 21773 |
| 70° | 61561 | 23333 | 7069 |
| 75° | 50469 | 12153 | 1859 |
| 80° | 37647 | 5612 | 1350 |
| 85° | 22219 | 2689 | 2689 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 130.2 | 5.5 |
| 10°-20° | 364.3 | 15.3 |
| 20°-30° | 503.6 | 21.1 |
| 30°-40° | 506.4 | 21.3 |
| 40°-50° | 408.7 | 17.2 |
| 50°-60° | 276.3 | 11.6 |
| 60°-70° | 140.6 | 5.9 |
| 70°-80° | 45.0 | 1.9 |
| 80°-90° | 6.9 | 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° | 998.1 | 41.9 |
| 0°-40° | 1504.5 | 63.2 |
| 0°-60° | 2189.5 | 91.9 |
| 0°-90° | 2382.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2382.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1379 | 1379 | 1379 | 1379 | 1379 | |
| 5° | 1456 | 1428 | 1369 | 1320 | 1301 | 140 |
| 15° | 1526 | 1444 | 1275 | 1154 | 1116 | 430 |
| 25° | 1399 | 1277 | 1053 | 924 | 887 | 640 |
| 35° | 1053 | 951 | 767 | 671 | 655 | 658 |
| 45° | 692 | 620 | 488 | 436 | 436 | 537 |
| 55° | 430 | 371 | 278 | 243 | 245 | 386 |
| 65° | 241 | 196 | 124 | 80 | 75 | 242 |
| 75° | 106 | 75 | 26 | 6 | 4 | 114 |
| 85° | 16 | 8 | 2 | 2 | 2 | 21 |
| 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° | 1379.0 | 1379.0 | 1379.0 | 1379.0 | 1379.0 | 1379.0 | 1379.0 | 1379.0 | 1379.0 |
| 2.5° | 1416.3 | 1408.4 | 1400.6 | 1386.9 | 1371.2 | 1355.5 | 1345.7 | 1337.8 | 1333.9 |
| 5° | 1455.6 | 1445.8 | 1428.0 | 1398.6 | 1369.2 | 1341.8 | 1320.2 | 1306.4 | 1300.6 |
| 7.5° | 1486.9 | 1473.2 | 1443.7 | 1402.6 | 1357.4 | 1314.3 | 1286.8 | 1267.2 | 1259.4 |
| 10° | 1498.7 | 1483.0 | 1443.7 | 1388.8 | 1331.9 | 1279.0 | 1239.8 | 1220.2 | 1210.3 |
| 12.5° | 1512.4 | 1494.7 | 1445.8 | 1377.1 | 1306.4 | 1243.6 | 1198.6 | 1173.0 | 1163.2 |
| 15° | 1526.2 | 1502.6 | 1443.7 | 1359.5 | 1275.1 | 1202.4 | 1153.5 | 1127.9 | 1116.2 |
| 17.5° | 1526.2 | 1498.7 | 1428.0 | 1330.0 | 1233.9 | 1157.3 | 1102.4 | 1073.1 | 1063.3 |
| 20° | 1498.7 | 1467.3 | 1390.8 | 1282.9 | 1180.9 | 1098.6 | 1045.5 | 1016.1 | 1004.4 |
| 22.5° | 1455.6 | 1420.3 | 1337.8 | 1226.0 | 1118.2 | 1037.8 | 984.7 | 957.3 | 945.5 |
| 25° | 1398.6 | 1363.3 | 1277.0 | 1161.3 | 1053.4 | 973.0 | 923.9 | 898.5 | 886.6 |
| 27.5° | 1331.9 | 1292.7 | 1206.4 | 1090.7 | 984.7 | 908.3 | 863.1 | 839.6 | 829.8 |
| 30° | 1249.6 | 1212.3 | 1127.9 | 1014.2 | 912.2 | 841.5 | 800.3 | 778.8 | 770.9 |
| 32.5° | 1153.5 | 1122.0 | 1039.7 | 933.8 | 837.7 | 772.9 | 735.6 | 718.0 | 710.1 |
| 35° | 1053.4 | 1024.0 | 951.4 | 853.3 | 767.0 | 706.2 | 670.9 | 659.1 | 655.1 |
| 37.5° | 959.3 | 933.8 | 863.1 | 772.9 | 694.4 | 641.5 | 610.0 | 602.2 | 598.3 |
| 40° | 861.1 | 843.5 | 778.8 | 696.4 | 623.8 | 576.7 | 551.3 | 545.4 | 545.4 |
| 42.5° | 772.9 | 753.3 | 696.4 | 621.9 | 557.1 | 510.0 | 492.4 | 486.5 | 488.4 |
| 45° | 692.5 | 672.9 | 619.8 | 551.3 | 488.4 | 449.2 | 435.5 | 435.5 | 435.5 |
| 47.5° | 617.9 | 600.2 | 551.3 | 480.6 | 429.5 | 398.2 | 384.5 | 384.5 | 386.5 |
| 50° | 549.2 | 537.5 | 482.6 | 421.8 | 376.6 | 347.2 | 337.4 | 335.5 | 339.4 |
| 52.5° | 484.5 | 470.8 | 421.8 | 366.8 | 323.6 | 300.2 | 290.3 | 288.3 | 290.3 |
| 55° | 429.5 | 413.9 | 370.8 | 317.8 | 278.5 | 255.0 | 243.2 | 241.3 | 245.2 |
| 57.5° | 376.6 | 364.9 | 319.8 | 272.6 | 235.4 | 211.8 | 202.0 | 198.1 | 200.1 |
| 60° | 327.6 | 315.8 | 274.7 | 229.5 | 196.2 | 172.6 | 158.9 | 155.0 | 156.9 |
| 62.5° | 282.5 | 272.6 | 233.4 | 190.3 | 156.9 | 135.4 | 121.6 | 111.8 | 115.7 |
| 65° | 241.3 | 231.5 | 196.2 | 153.0 | 123.6 | 100.1 | 80.4 | 72.5 | 74.6 |
| 67.5° | 206.0 | 194.2 | 160.9 | 121.6 | 92.2 | 66.7 | 45.1 | 41.2 | 41.2 |
| 70° | 170.7 | 158.9 | 129.5 | 94.2 | 64.7 | 35.3 | 19.6 | 19.6 | 19.6 |
| 72.5° | 137.3 | 127.5 | 100.1 | 70.6 | 41.2 | 15.7 | 7.9 | 7.9 | 7.9 |
| 75° | 105.9 | 98.1 | 74.6 | 49.1 | 25.5 | 7.9 | 5.9 | 3.9 | 3.9 |
| 77.5° | 78.5 | 70.6 | 53.0 | 33.4 | 15.7 | 3.9 | 3.9 | 3.9 | 3.9 |
| 80° | 53.0 | 47.0 | 35.3 | 19.6 | 7.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 82.5° | 31.4 | 27.4 | 19.6 | 9.8 | 3.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 85° | 15.7 | 11.7 | 7.9 | 3.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 87.5° | 3.9 | 1.9 | 1.9 | 1.9 | 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report



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

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