

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: P580398

Luminaire Tested: **HCC4W30D010BZ-HM43040940-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580398
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W30D010BZ-HM43040940-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

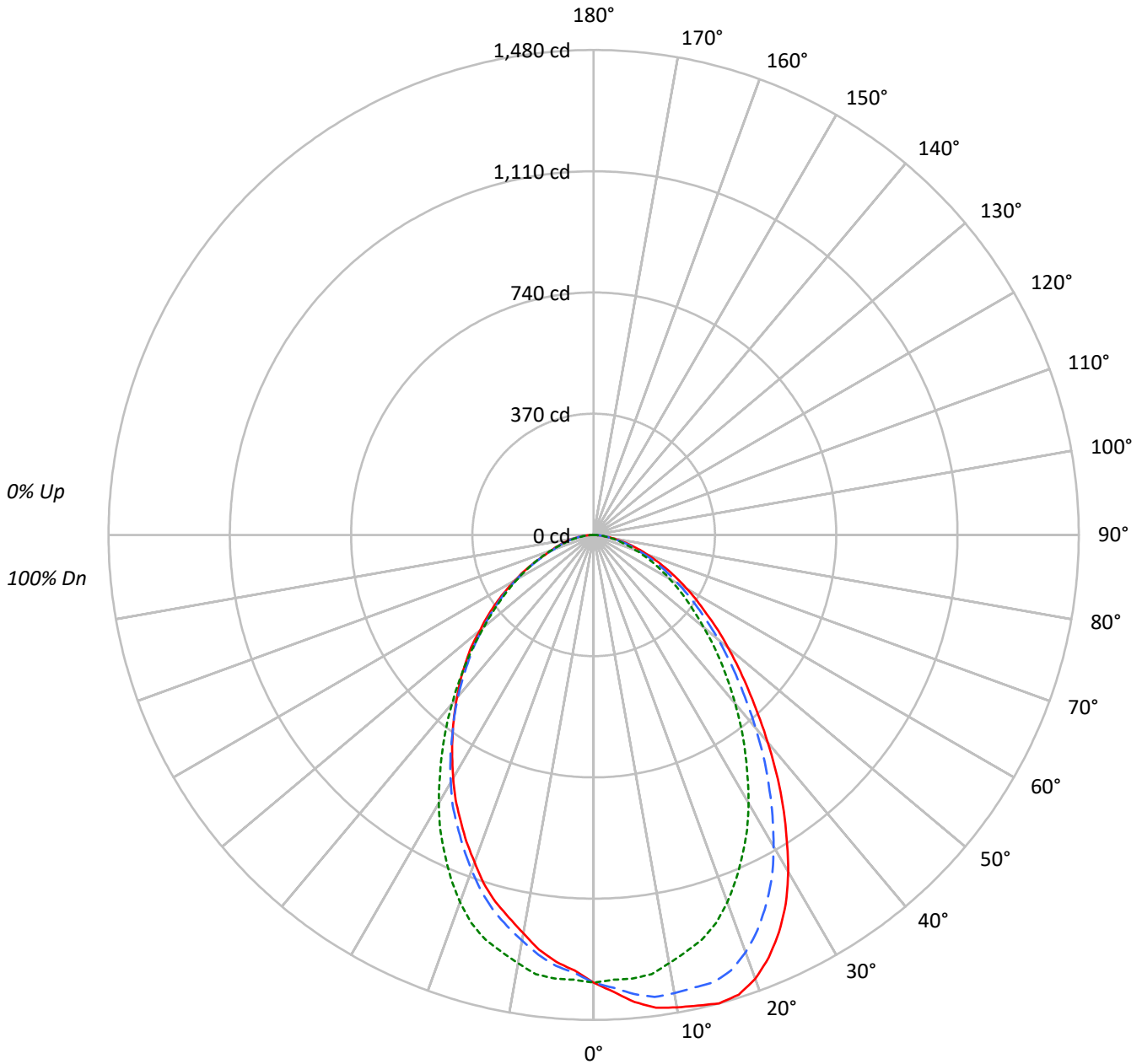
Lumens per Lamp: N/A
Luminaire Lumens: 2649.0 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | 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 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 92 | 91 | 89 | 87 | | | | | 87 | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | 75 | | | |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | 66 | | | |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 68 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 60 | 58 | | | | | 58 | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 60 | 55 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 53 | 51 | | | | | 51 | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 46 | | | | | 46 | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | 41 | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |
| 10 | 58 | 45 | 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° | 168478 | 168478 | 168478 |
| 5° | 177157 | 168255 | 161952 |
| 10° | 183376 | 166242 | 154607 |
| 15° | 188966 | 163222 | 148001 |
| 20° | 189201 | 156503 | 139479 |
| 25° | 182070 | 146290 | 130762 |
| 30° | 169075 | 134594 | 122117 |
| 35° | 151541 | 121185 | 113008 |
| 40° | 132967 | 108139 | 104451 |
| 45° | 116227 | 95731 | 96342 |
| 50° | 102624 | 83780 | 86793 |
| 55° | 90513 | 74277 | 78062 |
| 60° | 80890 | 65743 | 68333 |
| 65° | 71652 | 57847 | 57847 |
| 70° | 62607 | 49299 | 49299 |
| 75° | 53471 | 41748 | 46752 |
| 80° | 42406 | 37363 | 42406 |
| 85° | 27314 | 32267 | 39768 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.4 | 4.9 |
| 10°-20° | 364.4 | 13.8 |
| 20°-30° | 510.6 | 19.3 |
| 30°-40° | 526.0 | 19.9 |
| 40°-50° | 447.8 | 16.9 |
| 50°-60° | 331.8 | 12.5 |
| 60°-70° | 208.2 | 7.9 |
| 70°-80° | 103.4 | 3.9 |
| 80°-90° | 27.2 | 1.0 |
| 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° | 1004.4 | 37.9 |
| 0°-40° | 1530.4 | 57.8 |
| 0°-60° | 2310.1 | 87.2 |
| 0°-90° | 2649.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2649.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1366 | 1366 | 1366 | 1366 | 1366 | |
| 5° | 1431 | 1406 | 1359 | 1320 | 1308 | 138 |
| 15° | 1480 | 1413 | 1278 | 1185 | 1159 | 416 |
| 25° | 1338 | 1245 | 1075 | 982 | 961 | 612 |
| 35° | 1006 | 931 | 805 | 752 | 750 | 628 |
| 45° | 666 | 621 | 549 | 538 | 552 | 517 |
| 55° | 421 | 388 | 345 | 352 | 363 | 381 |
| 65° | 246 | 221 | 198 | 195 | 198 | 245 |
| 75° | 112 | 100 | 88 | 95 | 98 | 120 |
| 85° | 19 | 19 | 23 | 26 | 28 | 25 |
| 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° | 1365.9 | 1365.9 | 1365.9 | 1365.9 | 1365.9 | 1365.9 | 1365.9 | 1365.9 | 1365.9 |
| 2.5° | 1395.7 | 1390.5 | 1383.5 | 1371.2 | 1358.9 | 1348.4 | 1337.8 | 1332.6 | 1330.8 |
| 5° | 1430.8 | 1420.3 | 1406.3 | 1383.5 | 1358.9 | 1337.8 | 1320.3 | 1311.5 | 1308.0 |
| 7.5° | 1455.3 | 1444.9 | 1422.1 | 1387.0 | 1351.9 | 1320.3 | 1292.2 | 1279.9 | 1276.4 |
| 10° | 1464.1 | 1451.8 | 1420.3 | 1372.9 | 1327.3 | 1288.7 | 1257.2 | 1241.4 | 1234.4 |
| 12.5° | 1471.1 | 1455.3 | 1415.0 | 1358.9 | 1302.7 | 1255.5 | 1222.1 | 1201.1 | 1195.8 |
| 15° | 1479.8 | 1462.3 | 1413.3 | 1344.9 | 1278.2 | 1222.1 | 1185.3 | 1166.0 | 1159.0 |
| 17.5° | 1471.1 | 1451.8 | 1394.0 | 1316.8 | 1241.4 | 1180.0 | 1139.7 | 1122.1 | 1115.1 |
| 20° | 1441.4 | 1420.3 | 1355.4 | 1272.9 | 1192.3 | 1129.2 | 1088.9 | 1071.4 | 1062.6 |
| 22.5° | 1395.7 | 1372.9 | 1306.3 | 1218.6 | 1136.2 | 1074.9 | 1036.3 | 1018.7 | 1013.5 |
| 25° | 1337.8 | 1315.0 | 1245.0 | 1155.5 | 1074.9 | 1015.2 | 981.9 | 966.1 | 960.8 |
| 27.5° | 1269.5 | 1246.7 | 1178.3 | 1090.7 | 1013.5 | 957.3 | 931.1 | 915.3 | 911.8 |
| 30° | 1187.1 | 1164.2 | 1097.7 | 1017.0 | 945.0 | 892.5 | 871.5 | 859.2 | 857.4 |
| 32.5° | 1095.9 | 1076.6 | 1015.2 | 941.5 | 873.2 | 829.4 | 813.6 | 804.8 | 803.0 |
| 35° | 1006.4 | 985.4 | 931.1 | 864.4 | 804.8 | 766.3 | 752.3 | 750.5 | 750.5 |
| 37.5° | 915.3 | 894.3 | 850.4 | 789.0 | 738.2 | 703.1 | 697.9 | 699.6 | 699.6 |
| 40° | 825.8 | 806.5 | 767.9 | 717.2 | 671.6 | 645.2 | 643.5 | 647.0 | 648.7 |
| 42.5° | 741.7 | 725.9 | 690.8 | 647.0 | 608.4 | 587.3 | 589.2 | 596.1 | 601.4 |
| 45° | 666.3 | 652.3 | 620.7 | 582.2 | 548.8 | 533.1 | 538.3 | 547.1 | 552.3 |
| 47.5° | 598.0 | 585.7 | 555.9 | 520.8 | 492.7 | 482.2 | 489.2 | 499.7 | 506.7 |
| 50° | 534.8 | 524.3 | 496.2 | 459.4 | 436.6 | 429.5 | 438.3 | 448.8 | 452.3 |
| 52.5° | 478.7 | 468.1 | 438.3 | 406.8 | 389.3 | 385.8 | 394.5 | 403.3 | 408.6 |
| 55° | 420.9 | 412.1 | 387.5 | 359.5 | 345.4 | 343.7 | 352.4 | 359.5 | 363.0 |
| 57.5° | 373.5 | 364.7 | 341.9 | 317.4 | 305.1 | 303.3 | 312.1 | 317.4 | 319.1 |
| 60° | 327.9 | 319.1 | 298.1 | 275.2 | 266.5 | 266.5 | 271.7 | 275.2 | 277.0 |
| 62.5° | 285.8 | 277.0 | 257.7 | 238.5 | 231.5 | 231.5 | 231.5 | 233.2 | 238.5 |
| 65° | 245.5 | 238.5 | 221.0 | 203.4 | 198.2 | 194.6 | 194.6 | 194.6 | 198.2 |
| 67.5° | 208.7 | 201.7 | 187.6 | 171.8 | 166.6 | 161.3 | 159.6 | 163.1 | 163.1 |
| 70° | 173.6 | 168.3 | 154.3 | 142.0 | 136.7 | 131.5 | 129.7 | 136.7 | 136.7 |
| 72.5° | 142.0 | 136.7 | 128.0 | 115.7 | 110.4 | 108.7 | 112.2 | 115.7 | 117.4 |
| 75° | 112.2 | 106.9 | 99.9 | 92.9 | 87.6 | 89.5 | 94.6 | 96.4 | 98.1 |
| 77.5° | 84.1 | 82.5 | 75.4 | 70.2 | 70.2 | 71.9 | 75.4 | 78.8 | 80.7 |
| 80° | 59.7 | 57.9 | 54.4 | 50.9 | 52.6 | 56.1 | 57.9 | 61.4 | 59.7 |
| 82.5° | 36.8 | 36.8 | 35.1 | 35.1 | 36.8 | 40.4 | 42.1 | 43.9 | 45.6 |
| 85° | 19.3 | 19.3 | 19.3 | 21.1 | 22.8 | 24.6 | 26.3 | 28.1 | 28.1 |
| 87.5° | 5.3 | 7.0 | 7.0 | 8.8 | 10.5 | 10.5 | 12.3 | 12.3 | 12.3 |
| 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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