

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: P580450

Luminaire Tested: **HCC4W35D010SL-HM43040835-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580450
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: HCC4W35D010SL-HM43040835-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

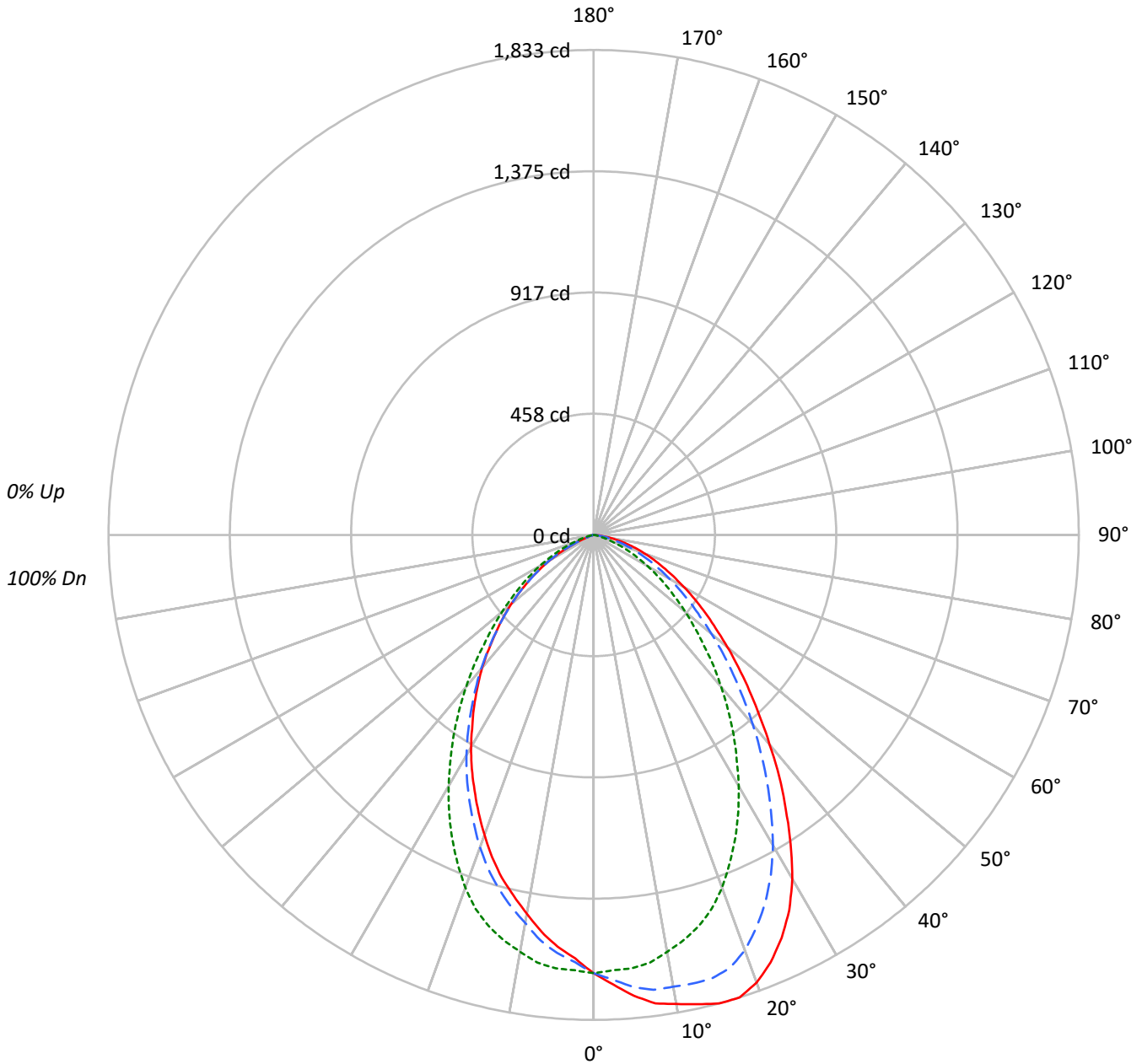
Lumens per Lamp: N/A
Luminaire Lumens: 2861.2 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
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 | 100 | 100 |
| 1 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | 89 | 89 | 89 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | 78 | 78 | 78 |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | 69 | 69 | 69 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | 61 | 61 | 61 |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | 55 | 55 | 55 |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | 49 | 49 | 49 |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | 44 | 44 | 44 |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | 40 | 40 | 40 |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | 37 | 37 | 37 |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | 34 | 34 | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 204310 | 204310 | 204310 |
| 5° | 216481 | 203629 | 193414 |
| 10° | 225472 | 200385 | 182086 |
| 15° | 234081 | 195580 | 171203 |
| 20° | 236297 | 186195 | 158354 |
| 25° | 228643 | 172203 | 144943 |
| 30° | 213769 | 156058 | 131888 |
| 35° | 190525 | 138727 | 118504 |
| 40° | 166555 | 120649 | 105482 |
| 45° | 145097 | 102342 | 91248 |
| 50° | 126610 | 86812 | 78234 |
| 55° | 110964 | 71955 | 63331 |
| 60° | 97073 | 58120 | 46501 |
| 65° | 84581 | 43341 | 26151 |
| 70° | 73931 | 28058 | 8511 |
| 75° | 60620 | 14631 | 2240 |
| 80° | 45176 | 6677 | 1705 |
| 85° | 26748 | 3397 | 3397 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 156.3 | 5.5 |
| 10°-20° | 437.5 | 15.3 |
| 20°-30° | 605.0 | 21.1 |
| 30°-40° | 608.3 | 21.3 |
| 40°-50° | 490.9 | 17.2 |
| 50°-60° | 331.9 | 11.6 |
| 60°-70° | 168.9 | 5.9 |
| 70°-80° | 54.1 | 1.9 |
| 80°-90° | 8.3 | 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° | 1198.8 | 41.9 |
| 0°-40° | 1807.1 | 63.2 |
| 0°-60° | 2629.9 | 91.9 |
| 0°-90° | 2861.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2861.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1656 | 1656 | 1656 | 1656 | 1656 | |
| 5° | 1748 | 1715 | 1645 | 1586 | 1562 | 168 |
| 15° | 1833 | 1734 | 1532 | 1385 | 1341 | 516 |
| 25° | 1680 | 1534 | 1265 | 1110 | 1065 | 769 |
| 35° | 1265 | 1143 | 921 | 806 | 787 | 791 |
| 45° | 832 | 744 | 587 | 523 | 523 | 645 |
| 55° | 516 | 445 | 335 | 292 | 294 | 464 |
| 65° | 290 | 236 | 148 | 97 | 90 | 291 |
| 75° | 127 | 90 | 31 | 7 | 5 | 137 |
| 85° | 19 | 9 | 2 | 2 | 2 | 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° | 1656.4 | 1656.4 | 1656.4 | 1656.4 | 1656.4 | 1656.4 | 1656.4 | 1656.4 | 1656.4 |
| 2.5° | 1701.2 | 1691.7 | 1682.4 | 1665.9 | 1647.0 | 1628.1 | 1616.4 | 1607.0 | 1602.3 |
| 5° | 1748.4 | 1736.6 | 1715.3 | 1680.0 | 1644.6 | 1611.7 | 1585.7 | 1569.2 | 1562.1 |
| 7.5° | 1786.0 | 1769.5 | 1734.2 | 1684.8 | 1630.5 | 1578.7 | 1545.7 | 1522.1 | 1512.7 |
| 10° | 1800.2 | 1781.3 | 1734.2 | 1668.2 | 1599.9 | 1536.3 | 1489.2 | 1465.6 | 1453.8 |
| 12.5° | 1816.6 | 1795.5 | 1736.6 | 1654.1 | 1569.2 | 1493.9 | 1439.6 | 1409.0 | 1397.2 |
| 15° | 1833.1 | 1804.9 | 1734.2 | 1632.8 | 1531.6 | 1444.3 | 1385.4 | 1354.9 | 1340.7 |
| 17.5° | 1833.1 | 1800.2 | 1715.3 | 1597.5 | 1482.1 | 1390.2 | 1324.2 | 1288.9 | 1277.1 |
| 20° | 1800.2 | 1762.4 | 1670.6 | 1541.0 | 1418.5 | 1319.5 | 1255.8 | 1220.6 | 1206.4 |
| 22.5° | 1748.4 | 1705.9 | 1607.0 | 1472.7 | 1343.1 | 1246.4 | 1182.8 | 1149.9 | 1135.7 |
| 25° | 1680.0 | 1637.6 | 1533.9 | 1394.9 | 1265.3 | 1168.7 | 1109.8 | 1079.2 | 1065.0 |
| 27.5° | 1599.9 | 1552.8 | 1449.1 | 1310.0 | 1182.8 | 1091.0 | 1036.8 | 1008.5 | 996.7 |
| 30° | 1500.9 | 1456.1 | 1354.9 | 1218.2 | 1095.7 | 1010.8 | 961.4 | 935.4 | 926.0 |
| 32.5° | 1385.4 | 1347.8 | 1248.8 | 1121.5 | 1006.1 | 928.3 | 883.6 | 862.3 | 853.0 |
| 35° | 1265.3 | 1230.0 | 1142.8 | 1025.0 | 921.3 | 848.3 | 805.8 | 791.7 | 787.0 |
| 37.5° | 1152.2 | 1121.5 | 1036.8 | 928.3 | 834.1 | 770.5 | 732.7 | 723.4 | 718.7 |
| 40° | 1034.4 | 1013.2 | 935.4 | 836.5 | 749.3 | 692.7 | 662.1 | 655.1 | 655.1 |
| 42.5° | 928.3 | 904.8 | 836.5 | 746.9 | 669.1 | 612.6 | 591.4 | 584.4 | 586.7 |
| 45° | 831.8 | 808.2 | 744.5 | 662.1 | 586.7 | 539.6 | 523.1 | 523.1 | 523.1 |
| 47.5° | 742.2 | 721.0 | 662.1 | 577.3 | 516.0 | 478.3 | 461.9 | 461.9 | 464.2 |
| 50° | 659.8 | 645.6 | 579.6 | 506.6 | 452.4 | 417.0 | 405.3 | 403.0 | 407.7 |
| 52.5° | 582.0 | 565.5 | 506.6 | 440.6 | 388.8 | 360.5 | 348.8 | 346.4 | 348.8 |
| 55° | 516.0 | 497.1 | 445.3 | 381.7 | 334.6 | 306.3 | 292.1 | 289.8 | 294.5 |
| 57.5° | 452.4 | 438.2 | 384.1 | 327.5 | 282.8 | 254.5 | 242.7 | 238.0 | 240.3 |
| 60° | 393.5 | 379.4 | 329.9 | 275.7 | 235.6 | 207.4 | 190.9 | 186.1 | 188.5 |
| 62.5° | 339.3 | 327.5 | 280.4 | 228.5 | 188.5 | 162.5 | 146.1 | 134.3 | 139.0 |
| 65° | 289.8 | 278.1 | 235.6 | 183.8 | 148.5 | 120.2 | 96.6 | 87.2 | 89.6 |
| 67.5° | 247.4 | 233.2 | 193.2 | 146.1 | 110.7 | 80.1 | 54.2 | 49.5 | 49.5 |
| 70° | 205.0 | 190.9 | 155.6 | 113.1 | 77.8 | 42.4 | 23.6 | 23.6 | 23.6 |
| 72.5° | 164.9 | 153.2 | 120.2 | 84.9 | 49.5 | 18.9 | 9.4 | 9.4 | 9.4 |
| 75° | 127.2 | 117.8 | 89.6 | 58.9 | 30.7 | 9.4 | 7.1 | 4.7 | 4.7 |
| 77.5° | 94.3 | 84.9 | 63.6 | 40.0 | 18.9 | 4.7 | 4.7 | 4.7 | 4.7 |
| 80° | 63.6 | 56.5 | 42.4 | 23.6 | 9.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 82.5° | 37.7 | 32.9 | 23.6 | 11.8 | 4.7 | 2.4 | 2.4 | 2.4 | 2.4 |
| 85° | 18.9 | 14.2 | 9.4 | 4.7 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 87.5° | 4.7 | 2.4 | 2.4 | 2.4 | 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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