

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: P592779

Luminaire Tested: **HCC4S35D010MB-HM43040850-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592779
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: HCC4S35D010MB-HM43040850-41WWBB
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

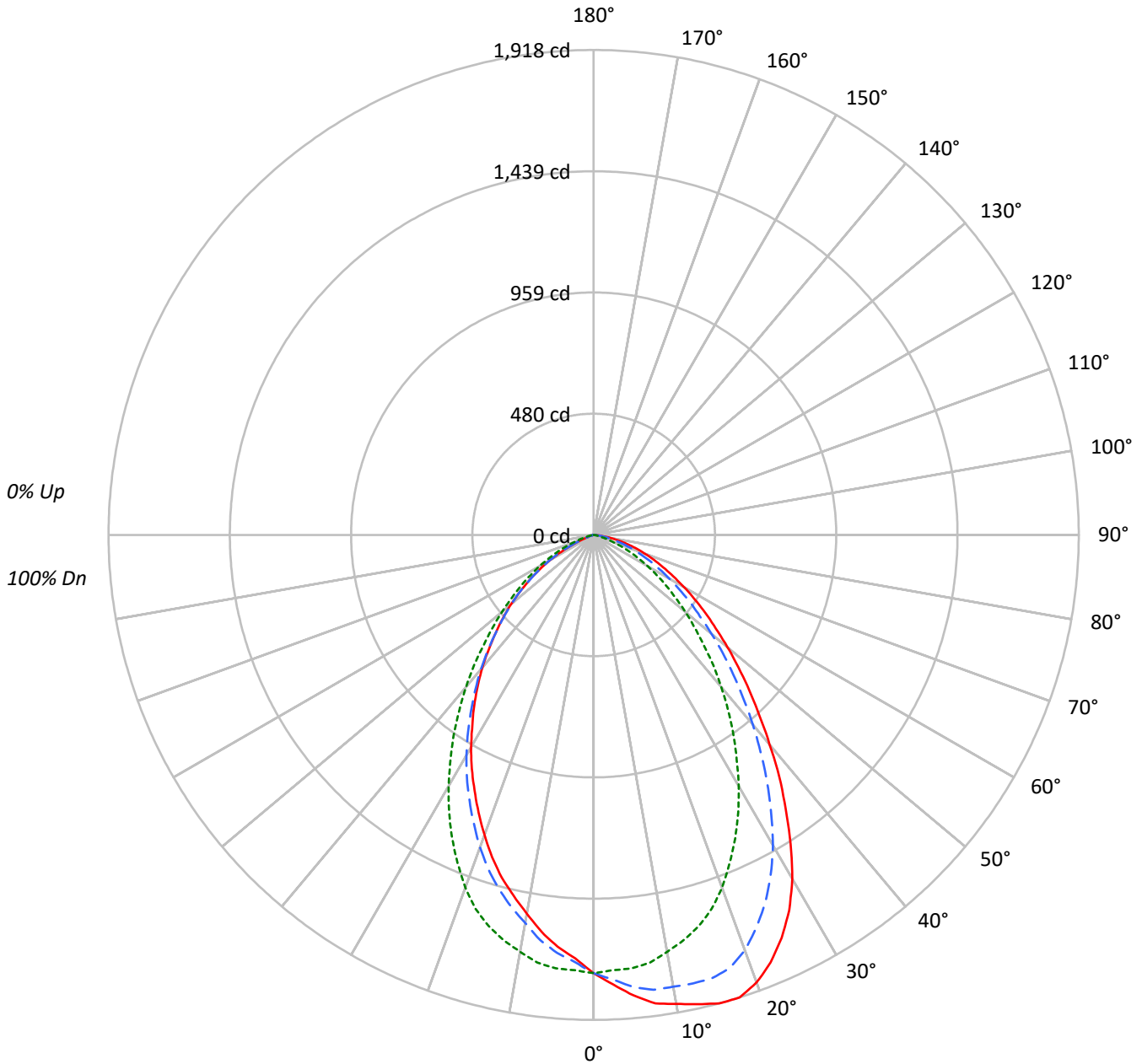
Lumens per Lamp: N/A
Luminaire Lumens: 2993.7 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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 | | | | | | | | |
| 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° | 213770 | 213770 | 213770 |
| 5° | 226498 | 213064 | 202379 |
| 10° | 235905 | 209666 | 190515 |
| 15° | 244922 | 204634 | 179133 |
| 20° | 247231 | 194805 | 165692 |
| 25° | 239231 | 180165 | 151653 |
| 30° | 223682 | 163279 | 137998 |
| 35° | 199334 | 145141 | 123985 |
| 40° | 174268 | 126237 | 110344 |
| 45° | 151795 | 107069 | 95469 |
| 50° | 132444 | 90822 | 81823 |
| 55° | 116104 | 75288 | 66277 |
| 60° | 101563 | 60809 | 48672 |
| 65° | 88521 | 45326 | 27318 |
| 70° | 77357 | 29356 | 8872 |
| 75° | 63432 | 15250 | 2335 |
| 80° | 47236 | 7032 | 1776 |
| 85° | 27880 | 3538 | 3538 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 163.6 | 5.5 |
| 10°-20° | 457.8 | 15.3 |
| 20°-30° | 633.0 | 21.1 |
| 30°-40° | 636.5 | 21.3 |
| 40°-50° | 513.6 | 17.2 |
| 50°-60° | 347.3 | 11.6 |
| 60°-70° | 176.8 | 5.9 |
| 70°-80° | 56.6 | 1.9 |
| 80°-90° | 8.7 | 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° | 1254.3 | 41.9 |
| 0°-40° | 1890.8 | 63.2 |
| 0°-60° | 2751.6 | 91.9 |
| 0°-90° | 2993.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2993.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1733 | 1733 | 1733 | 1733 | 1733 | |
| 5° | 1829 | 1795 | 1721 | 1659 | 1634 | 176 |
| 15° | 1918 | 1814 | 1602 | 1450 | 1403 | 540 |
| 25° | 1758 | 1605 | 1324 | 1161 | 1114 | 804 |
| 35° | 1324 | 1196 | 964 | 843 | 823 | 827 |
| 45° | 870 | 779 | 614 | 547 | 547 | 674 |
| 55° | 540 | 466 | 350 | 306 | 308 | 485 |
| 65° | 303 | 246 | 155 | 101 | 94 | 304 |
| 75° | 133 | 94 | 32 | 7 | 5 | 143 |
| 85° | 20 | 10 | 2 | 2 | 2 | 26 |
| 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° | 1733.1 | 1733.1 | 1733.1 | 1733.1 | 1733.1 | 1733.1 | 1733.1 | 1733.1 | 1733.1 |
| 2.5° | 1780.0 | 1770.1 | 1760.2 | 1743.0 | 1723.2 | 1703.5 | 1691.2 | 1681.4 | 1676.4 |
| 5° | 1829.3 | 1816.9 | 1794.8 | 1757.8 | 1720.8 | 1686.2 | 1659.1 | 1641.9 | 1634.5 |
| 7.5° | 1868.8 | 1851.5 | 1814.5 | 1762.7 | 1706.0 | 1651.7 | 1617.2 | 1592.6 | 1582.7 |
| 10° | 1883.5 | 1863.8 | 1814.5 | 1745.5 | 1674.0 | 1607.4 | 1558.1 | 1533.5 | 1521.1 |
| 12.5° | 1900.8 | 1878.5 | 1816.9 | 1730.6 | 1641.9 | 1563.0 | 1506.3 | 1474.2 | 1462.0 |
| 15° | 1918.0 | 1888.4 | 1814.5 | 1708.5 | 1602.5 | 1511.2 | 1449.6 | 1417.6 | 1402.8 |
| 17.5° | 1918.0 | 1883.5 | 1794.8 | 1671.5 | 1550.7 | 1454.6 | 1385.6 | 1348.6 | 1336.2 |
| 20° | 1883.5 | 1844.0 | 1747.9 | 1612.3 | 1484.1 | 1380.6 | 1314.1 | 1277.1 | 1262.3 |
| 22.5° | 1829.3 | 1784.9 | 1681.4 | 1540.8 | 1405.2 | 1304.2 | 1237.6 | 1203.0 | 1188.3 |
| 25° | 1757.8 | 1713.4 | 1605.0 | 1459.5 | 1323.8 | 1222.8 | 1161.2 | 1129.1 | 1114.3 |
| 27.5° | 1674.0 | 1624.6 | 1516.2 | 1370.7 | 1237.6 | 1141.4 | 1084.8 | 1055.1 | 1042.8 |
| 30° | 1570.5 | 1523.6 | 1417.6 | 1274.6 | 1146.4 | 1057.6 | 1005.9 | 978.8 | 968.9 |
| 32.5° | 1449.6 | 1410.2 | 1306.6 | 1173.5 | 1052.7 | 971.4 | 924.5 | 902.3 | 892.5 |
| 35° | 1323.8 | 1286.9 | 1195.7 | 1072.4 | 963.9 | 887.5 | 843.1 | 828.4 | 823.4 |
| 37.5° | 1205.5 | 1173.5 | 1084.8 | 971.4 | 872.7 | 806.1 | 766.7 | 756.9 | 752.0 |
| 40° | 1082.3 | 1060.0 | 978.8 | 875.1 | 784.0 | 724.8 | 692.7 | 685.3 | 685.3 |
| 42.5° | 971.4 | 946.6 | 875.1 | 781.5 | 700.1 | 641.0 | 618.8 | 611.3 | 613.8 |
| 45° | 870.2 | 845.6 | 779.0 | 692.7 | 613.8 | 564.6 | 547.3 | 547.3 | 547.3 |
| 47.5° | 776.6 | 754.4 | 692.7 | 604.0 | 539.9 | 500.4 | 483.2 | 483.2 | 485.7 |
| 50° | 690.2 | 675.5 | 606.5 | 530.1 | 473.3 | 436.3 | 424.1 | 421.6 | 426.4 |
| 52.5° | 609.0 | 591.7 | 530.1 | 461.1 | 406.8 | 377.2 | 364.9 | 362.4 | 364.9 |
| 55° | 539.9 | 520.2 | 465.9 | 399.4 | 350.1 | 320.5 | 305.7 | 303.3 | 308.2 |
| 57.5° | 473.3 | 458.6 | 401.8 | 342.7 | 295.8 | 266.3 | 253.9 | 249.0 | 251.4 |
| 60° | 411.7 | 396.9 | 345.2 | 288.4 | 246.5 | 216.9 | 199.7 | 194.8 | 197.3 |
| 62.5° | 355.0 | 342.7 | 293.4 | 239.2 | 197.3 | 170.1 | 152.9 | 140.5 | 145.4 |
| 65° | 303.3 | 290.9 | 246.5 | 192.3 | 155.3 | 125.8 | 101.0 | 91.3 | 93.6 |
| 67.5° | 258.9 | 244.0 | 202.2 | 152.9 | 115.9 | 83.9 | 56.6 | 51.8 | 51.8 |
| 70° | 214.5 | 199.7 | 162.8 | 118.4 | 81.4 | 44.4 | 24.6 | 24.6 | 24.6 |
| 72.5° | 172.5 | 160.3 | 125.8 | 88.8 | 51.8 | 19.7 | 9.9 | 9.9 | 9.9 |
| 75° | 133.1 | 123.3 | 93.6 | 61.6 | 32.0 | 9.9 | 7.4 | 4.9 | 4.9 |
| 77.5° | 98.6 | 88.8 | 66.5 | 41.9 | 19.7 | 4.9 | 4.9 | 4.9 | 4.9 |
| 80° | 66.5 | 59.1 | 44.4 | 24.6 | 9.9 | 2.5 | 2.5 | 2.5 | 2.5 |
| 82.5° | 39.5 | 34.5 | 24.6 | 12.4 | 4.9 | 2.5 | 2.5 | 2.5 | 2.5 |
| 85° | 19.7 | 14.8 | 9.9 | 4.9 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 87.5° | 4.9 | 2.5 | 2.5 | 2.5 | 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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