

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: P592745

Luminaire Tested: **HC430D010-HM43040850-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592745
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: HC430D010-HM43040850-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3110.9 lumens
Efficiency: N/A
Efficacy: 111.1 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

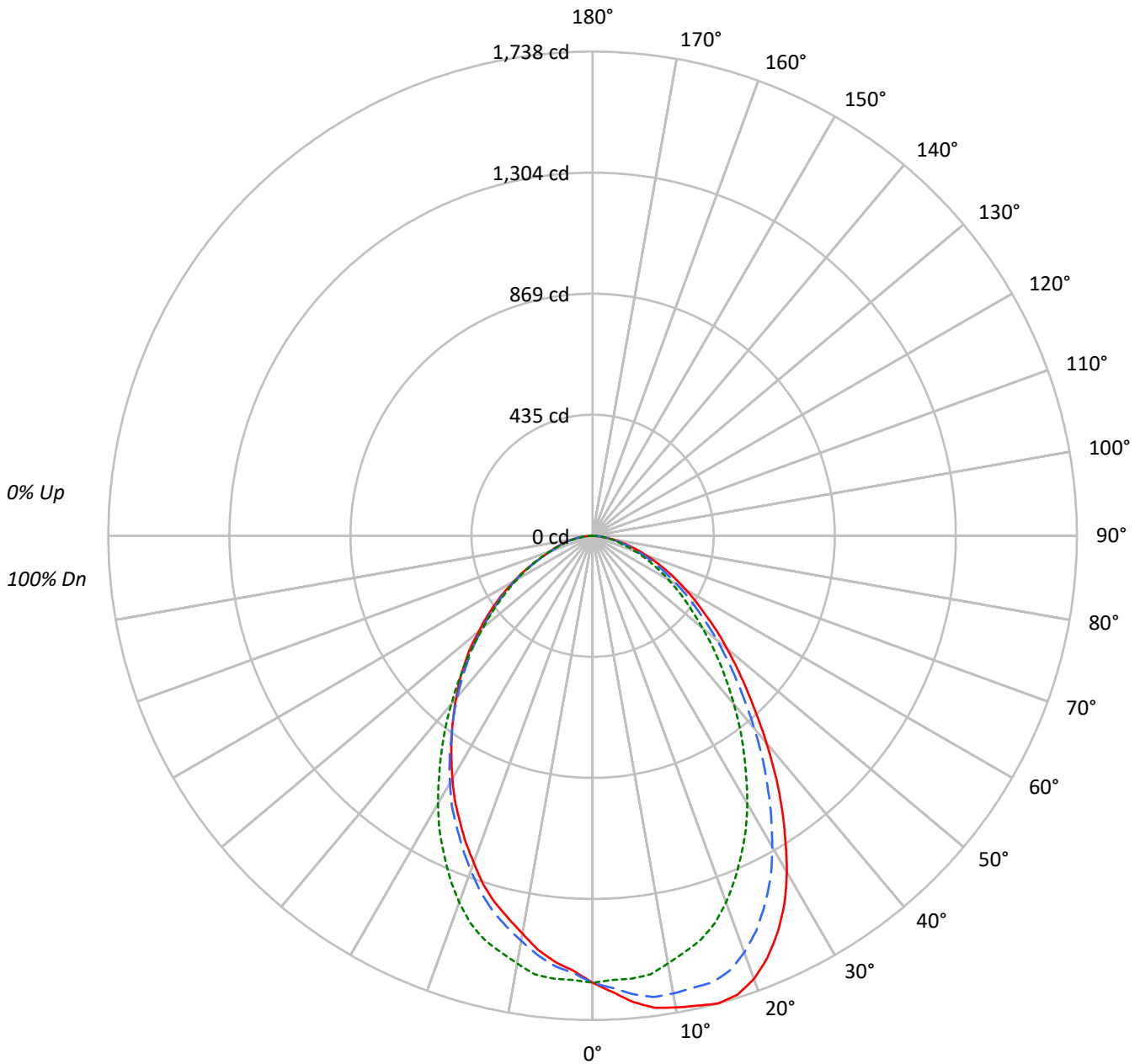
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 92 | 91 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | | | | | | | | | | | | | | | |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 68 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 60 | 58 | | | | | | | | | | | | | | | | | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 60 | 55 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 53 | 51 | | | | | | | | | | | | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 46 | | | | | | | | | | | | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | | | | | | | | | | | | | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | | | | | | | | | | | | | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | | | | | | | | | | | | | | | |
| 10 | 58 | 45 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 197859 | 197859 | 197859 |
| 5° | 208049 | 197599 | 190195 |
| 10° | 215352 | 195237 | 181573 |
| 15° | 221924 | 191686 | 173821 |
| 20° | 222187 | 183793 | 163801 |
| 25° | 213835 | 171781 | 153585 |
| 30° | 198558 | 158066 | 143424 |
| 35° | 177967 | 142326 | 132704 |
| 40° | 156170 | 126994 | 122678 |
| 45° | 136497 | 112425 | 113140 |
| 50° | 120527 | 98383 | 101952 |
| 55° | 106276 | 87223 | 91674 |
| 60° | 95001 | 77214 | 80249 |
| 65° | 84143 | 67916 | 67916 |
| 70° | 73498 | 57919 | 57919 |
| 75° | 62812 | 49087 | 54949 |
| 80° | 49722 | 43898 | 49722 |
| 85° | 32126 | 37787 | 46561 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 152.0 | 4.9 |
| 10°-20° | 428.0 | 13.8 |
| 20°-30° | 599.6 | 19.3 |
| 30°-40° | 617.7 | 19.9 |
| 40°-50° | 525.9 | 16.9 |
| 50°-60° | 389.7 | 12.5 |
| 60°-70° | 244.5 | 7.9 |
| 70°-80° | 121.5 | 3.9 |
| 80°-90° | 31.9 | 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° | 1179.6 | 37.9 |
| 0°-40° | 1797.3 | 57.8 |
| 0°-60° | 2712.9 | 87.2 |
| 0°-90° | 3110.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3110.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1604 | 1604 | 1604 | 1604 | 1604 | |
| 5° | 1680 | 1652 | 1596 | 1550 | 1536 | 162 |
| 15° | 1738 | 1660 | 1501 | 1392 | 1361 | 489 |
| 25° | 1571 | 1462 | 1262 | 1153 | 1128 | 719 |
| 35° | 1182 | 1093 | 945 | 883 | 881 | 737 |
| 45° | 782 | 729 | 644 | 632 | 649 | 607 |
| 55° | 494 | 455 | 406 | 414 | 426 | 447 |
| 65° | 288 | 259 | 233 | 228 | 233 | 288 |
| 75° | 132 | 117 | 103 | 111 | 115 | 141 |
| 85° | 23 | 23 | 27 | 31 | 33 | 29 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P592745

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1604.1 | 1604.1 | 1604.1 | 1604.1 | 1604.1 | 1604.1 | 1604.1 | 1604.1 | 1604.1 |
| 2.5° | 1639.1 | 1632.9 | 1624.7 | 1610.2 | 1595.9 | 1583.5 | 1571.2 | 1565.0 | 1563.0 |
| 5° | 1680.3 | 1668.0 | 1651.5 | 1624.7 | 1595.9 | 1571.2 | 1550.5 | 1540.3 | 1536.1 |
| 7.5° | 1709.1 | 1696.7 | 1670.0 | 1628.8 | 1587.7 | 1550.5 | 1517.6 | 1503.2 | 1499.1 |
| 10° | 1719.4 | 1705.0 | 1668.0 | 1612.4 | 1558.8 | 1513.4 | 1476.4 | 1457.9 | 1449.7 |
| 12.5° | 1727.6 | 1709.1 | 1661.8 | 1595.9 | 1529.9 | 1474.4 | 1435.3 | 1410.6 | 1404.4 |
| 15° | 1737.9 | 1717.4 | 1659.7 | 1579.4 | 1501.1 | 1435.3 | 1392.0 | 1369.4 | 1361.2 |
| 17.5° | 1727.6 | 1705.0 | 1637.1 | 1546.5 | 1457.9 | 1385.9 | 1338.5 | 1317.8 | 1309.6 |
| 20° | 1692.7 | 1668.0 | 1591.7 | 1494.9 | 1400.2 | 1326.1 | 1278.7 | 1258.2 | 1247.9 |
| 22.5° | 1639.1 | 1612.4 | 1534.1 | 1431.1 | 1334.3 | 1262.2 | 1217.0 | 1196.4 | 1190.2 |
| 25° | 1571.2 | 1544.3 | 1462.0 | 1357.0 | 1262.2 | 1192.3 | 1153.2 | 1134.7 | 1128.5 |
| 27.5° | 1490.9 | 1464.0 | 1383.7 | 1280.8 | 1190.2 | 1124.3 | 1093.4 | 1074.9 | 1070.8 |
| 30° | 1394.1 | 1367.2 | 1289.1 | 1194.3 | 1109.8 | 1048.1 | 1023.4 | 1009.0 | 1007.0 |
| 32.5° | 1286.9 | 1264.4 | 1192.3 | 1105.8 | 1025.5 | 974.0 | 955.4 | 945.2 | 943.1 |
| 35° | 1181.9 | 1157.2 | 1093.4 | 1015.2 | 945.2 | 899.8 | 883.3 | 881.3 | 881.3 |
| 37.5° | 1074.9 | 1050.2 | 998.7 | 926.7 | 866.9 | 825.7 | 819.5 | 821.6 | 821.6 |
| 40° | 969.9 | 947.2 | 901.9 | 842.2 | 788.7 | 757.8 | 755.8 | 759.8 | 761.9 |
| 42.5° | 871.0 | 852.5 | 811.3 | 759.8 | 714.5 | 689.8 | 691.9 | 700.1 | 706.2 |
| 45° | 782.5 | 766.0 | 728.9 | 683.7 | 644.5 | 626.0 | 632.1 | 642.5 | 648.6 |
| 47.5° | 702.2 | 687.7 | 652.8 | 611.6 | 578.7 | 566.3 | 574.5 | 586.9 | 595.1 |
| 50° | 628.1 | 615.7 | 582.7 | 539.5 | 512.7 | 504.4 | 514.8 | 527.1 | 531.3 |
| 52.5° | 562.2 | 549.8 | 514.8 | 477.7 | 457.2 | 453.0 | 463.3 | 473.6 | 479.7 |
| 55° | 494.2 | 483.9 | 455.0 | 422.1 | 405.6 | 403.6 | 413.9 | 422.1 | 426.3 |
| 57.5° | 438.6 | 428.3 | 401.6 | 372.7 | 358.3 | 356.2 | 366.5 | 372.7 | 374.7 |
| 60° | 385.1 | 374.7 | 350.0 | 323.3 | 313.0 | 313.0 | 319.2 | 323.3 | 325.3 |
| 62.5° | 335.7 | 325.3 | 302.6 | 280.1 | 271.8 | 271.8 | 271.8 | 273.9 | 280.1 |
| 65° | 288.3 | 280.1 | 259.4 | 238.9 | 232.7 | 228.5 | 228.5 | 228.5 | 232.7 |
| 67.5° | 245.0 | 236.8 | 220.3 | 201.8 | 195.6 | 189.4 | 187.4 | 191.5 | 191.5 |
| 70° | 203.8 | 197.6 | 181.2 | 166.8 | 160.6 | 154.4 | 152.4 | 160.6 | 160.6 |
| 72.5° | 166.8 | 160.6 | 150.4 | 135.9 | 129.7 | 127.7 | 131.8 | 135.9 | 138.0 |
| 75° | 131.8 | 125.7 | 117.4 | 109.2 | 103.0 | 105.0 | 111.2 | 113.3 | 115.3 |
| 77.5° | 98.8 | 96.8 | 88.5 | 82.3 | 82.3 | 84.4 | 88.5 | 92.6 | 94.8 |
| 80° | 70.0 | 67.9 | 63.8 | 59.7 | 61.8 | 65.9 | 67.9 | 72.1 | 70.0 |
| 82.5° | 43.2 | 43.2 | 41.2 | 41.2 | 43.2 | 47.4 | 49.4 | 51.4 | 53.6 |
| 85° | 22.7 | 22.7 | 22.7 | 24.7 | 26.7 | 28.9 | 30.9 | 32.9 | 32.9 |
| 87.5° | 6.2 | 8.2 | 8.2 | 10.3 | 12.4 | 12.4 | 14.4 | 14.4 | 14.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



Report Generated By 670245859 / DESKTOP-HRDQ47P





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







(END OF REPORT)