

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: P580304

Luminaire Tested: **HC430D010-HM43040835-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC430D010-HM43040835-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3034.3 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

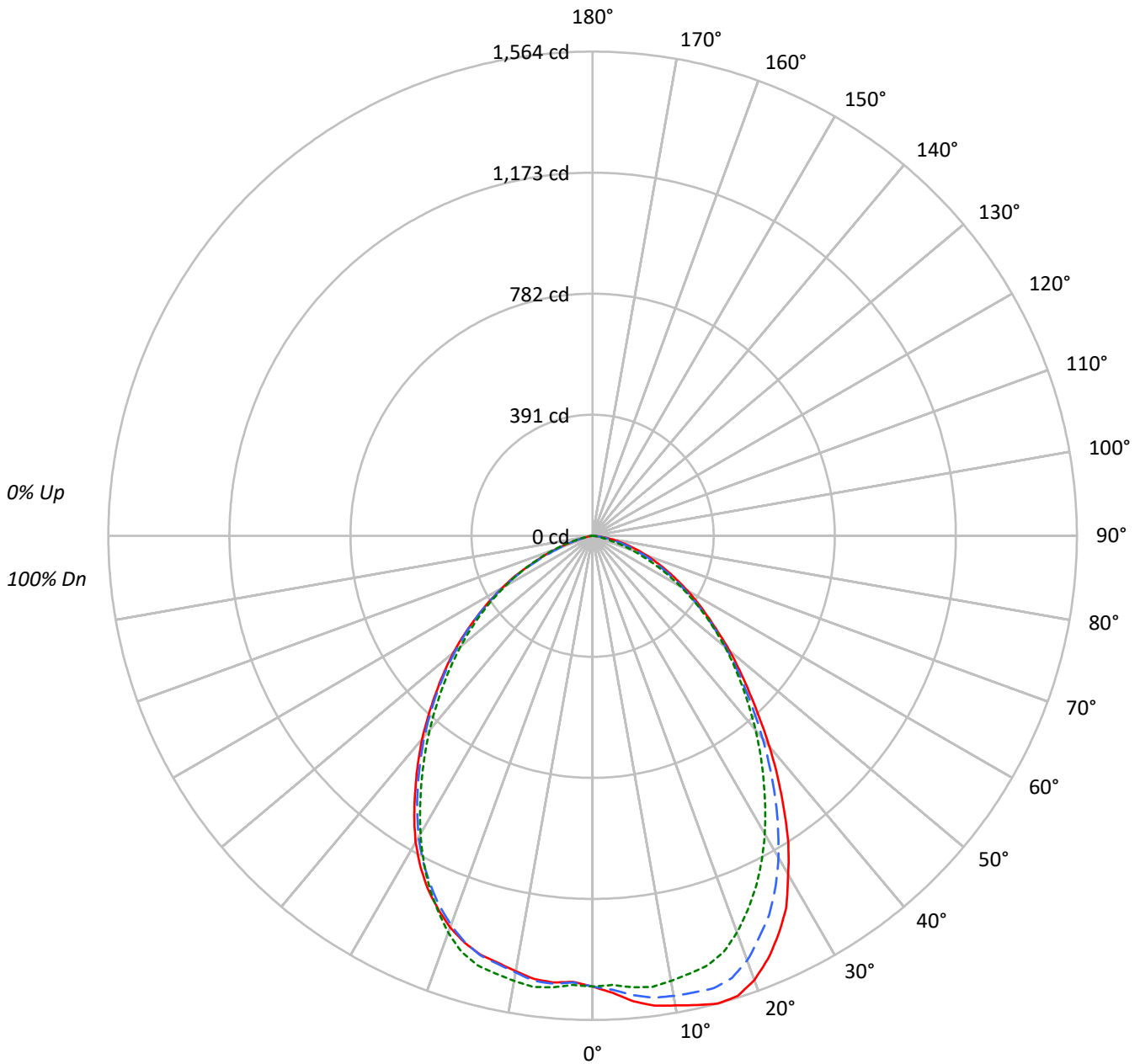
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P580304

CATALOG NUMBER: HC430D010-HM43040835-41RWWC

Luminous Intensity Polar Plot





TEST NUMBER: P580304

CATALOG NUMBER: HC430D010-HM43040835-41RWWC

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 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | 88 | 88 | 88 |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | 76 | 76 | 76 |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | 67 | 67 | 67 |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | 58 | 58 | 58 |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | 52 | 52 | 52 |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | 46 | 46 | 46 |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | 41 | 41 | 41 |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | 37 | 37 | 37 |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | 34 | 34 | 34 |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | 31 | 31 | 31 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 179591 | 179591 | 179591 |
| 5° | 186864 | 181255 | 179311 |
| 10° | 192970 | 182863 | 178917 |
| 15° | 199756 | 183424 | 178903 |
| 20° | 200423 | 178988 | 176665 |
| 25° | 193339 | 170053 | 171387 |
| 30° | 179914 | 158351 | 162823 |
| 35° | 162066 | 144885 | 150216 |
| 40° | 142886 | 131808 | 137814 |
| 45° | 124949 | 118774 | 124583 |
| 50° | 110626 | 106865 | 112506 |
| 55° | 97330 | 94362 | 98169 |
| 60° | 86885 | 80594 | 83012 |
| 65° | 76380 | 65494 | 64326 |
| 70° | 66718 | 48253 | 43998 |
| 75° | 55330 | 29071 | 23447 |
| 80° | 41909 | 11223 | 6961 |
| 85° | 19530 | 2689 | 2689 |



TEST NUMBER: P580304

CATALOG NUMBER: HC430D010-HM43040835-41RWWC

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 140.4 | 4.6 |
| 10°-20° | 409.9 | 13.5 |
| 20°-30° | 593.6 | 19.6 |
| 30°-40° | 626.2 | 20.6 |
| 40°-50° | 542.0 | 17.9 |
| 50°-60° | 401.5 | 13.2 |
| 60°-70° | 231.4 | 7.6 |
| 70°-80° | 80.8 | 2.7 |
| 80°-90° | 8.5 | 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° | 1143.8 | 37.7 |
| 0°-40° | 1770.1 | 58.3 |
| 0°-60° | 2713.5 | 89.4 |
| 0°-90° | 3034.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3034.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1456 | 1456 | 1456 | 1456 | 1456 | |
| 5° | 1509 | 1490 | 1464 | 1452 | 1448 | 145 |
| 15° | 1564 | 1513 | 1436 | 1403 | 1401 | 440 |
| 25° | 1421 | 1350 | 1250 | 1242 | 1259 | 650 |
| 35° | 1076 | 1027 | 962 | 984 | 998 | 672 |
| 45° | 716 | 696 | 681 | 706 | 714 | 556 |
| 55° | 453 | 443 | 439 | 455 | 456 | 408 |
| 65° | 262 | 246 | 224 | 212 | 220 | 261 |
| 75° | 116 | 98 | 61 | 49 | 49 | 125 |
| 85° | 14 | 8 | 2 | 2 | 2 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P580304

CATALOG NUMBER: HC430D010-HM43040835-41RWWC

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1456.0 | 1456.0 | 1456.0 | 1456.0 | 1456.0 | 1456.0 | 1456.0 | 1456.0 | 1456.0 |
| 2.5° | 1477.7 | 1473.7 | 1467.9 | 1460.0 | 1452.2 | 1446.2 | 1444.3 | 1442.3 | 1442.3 |
| 5° | 1509.2 | 1501.4 | 1489.5 | 1473.7 | 1463.9 | 1458.1 | 1452.2 | 1448.2 | 1448.2 |
| 7.5° | 1530.8 | 1523.0 | 1505.3 | 1483.7 | 1469.9 | 1458.1 | 1450.2 | 1444.3 | 1444.3 |
| 10° | 1540.7 | 1530.8 | 1509.2 | 1481.6 | 1460.0 | 1444.3 | 1432.4 | 1428.5 | 1428.5 |
| 12.5° | 1552.5 | 1540.7 | 1511.2 | 1475.8 | 1448.2 | 1428.5 | 1416.8 | 1412.8 | 1412.8 |
| 15° | 1564.3 | 1550.5 | 1513.1 | 1471.8 | 1436.4 | 1412.8 | 1402.9 | 1401.0 | 1401.0 |
| 17.5° | 1558.4 | 1540.7 | 1497.4 | 1448.2 | 1408.9 | 1385.2 | 1375.4 | 1375.4 | 1377.4 |
| 20° | 1526.9 | 1509.2 | 1460.0 | 1404.9 | 1363.6 | 1345.9 | 1338.0 | 1342.0 | 1345.9 |
| 22.5° | 1479.7 | 1458.1 | 1404.9 | 1351.8 | 1308.5 | 1292.8 | 1292.8 | 1298.7 | 1304.5 |
| 25° | 1420.6 | 1401.0 | 1349.8 | 1290.8 | 1249.5 | 1237.6 | 1241.6 | 1251.4 | 1259.3 |
| 27.5° | 1353.7 | 1332.1 | 1279.0 | 1223.9 | 1182.6 | 1176.6 | 1186.5 | 1200.3 | 1204.3 |
| 30° | 1263.2 | 1245.5 | 1200.3 | 1147.2 | 1111.8 | 1109.7 | 1123.5 | 1133.4 | 1143.2 |
| 32.5° | 1176.6 | 1157.0 | 1113.7 | 1062.6 | 1037.0 | 1038.9 | 1054.7 | 1066.5 | 1072.4 |
| 35° | 1076.3 | 1058.6 | 1027.2 | 985.8 | 962.2 | 966.1 | 983.8 | 995.7 | 997.6 |
| 37.5° | 981.8 | 970.1 | 938.6 | 907.1 | 889.4 | 897.2 | 913.0 | 926.8 | 926.8 |
| 40° | 887.4 | 877.6 | 854.0 | 828.4 | 818.6 | 828.4 | 844.1 | 855.9 | 855.9 |
| 42.5° | 796.9 | 791.0 | 771.3 | 753.6 | 747.8 | 761.5 | 775.3 | 785.1 | 783.2 |
| 45° | 716.3 | 710.3 | 696.5 | 682.8 | 680.9 | 694.6 | 706.4 | 712.3 | 714.2 |
| 47.5° | 643.4 | 639.5 | 627.7 | 617.8 | 617.8 | 631.6 | 641.5 | 647.4 | 649.3 |
| 50° | 576.5 | 572.6 | 562.8 | 554.9 | 556.9 | 570.7 | 578.4 | 584.4 | 586.3 |
| 52.5° | 509.6 | 507.7 | 499.8 | 490.0 | 495.9 | 505.7 | 515.5 | 519.4 | 521.5 |
| 55° | 452.6 | 452.6 | 442.7 | 434.8 | 438.8 | 448.6 | 454.6 | 456.5 | 456.5 |
| 57.5° | 401.5 | 399.4 | 387.6 | 379.8 | 381.7 | 391.5 | 395.5 | 397.5 | 397.5 |
| 60° | 352.2 | 350.2 | 338.4 | 326.7 | 326.7 | 332.5 | 334.5 | 336.5 | 336.5 |
| 62.5° | 305.0 | 303.0 | 289.2 | 279.4 | 275.5 | 273.5 | 273.5 | 277.5 | 285.3 |
| 65° | 261.7 | 259.8 | 245.9 | 230.2 | 224.4 | 218.4 | 212.5 | 216.5 | 220.4 |
| 67.5° | 222.3 | 218.4 | 204.6 | 190.9 | 177.1 | 167.3 | 157.5 | 163.3 | 171.2 |
| 70° | 185.0 | 181.0 | 165.3 | 149.6 | 133.8 | 118.1 | 110.2 | 118.1 | 122.0 |
| 72.5° | 149.6 | 145.6 | 129.8 | 114.2 | 94.4 | 78.7 | 76.7 | 78.7 | 80.7 |
| 75° | 116.1 | 114.2 | 98.4 | 80.7 | 61.0 | 49.2 | 49.2 | 49.2 | 49.2 |
| 77.5° | 86.6 | 82.7 | 66.9 | 51.2 | 35.4 | 27.5 | 25.6 | 25.6 | 25.6 |
| 80° | 59.0 | 55.0 | 41.3 | 29.6 | 15.8 | 11.8 | 11.8 | 9.8 | 9.8 |
| 82.5° | 33.5 | 31.5 | 21.7 | 11.8 | 5.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 85° | 13.8 | 11.8 | 7.9 | 3.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 87.5° | 1.9 | 1.9 | 1.9 | 0.0 | 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 |



Report Generated By 670245859 / DESKTOP-HRDQ47P





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







(END OF REPORT)