

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: P580627

Luminaire Tested: **HC440D010-HM43040927-41WDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580627
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC440D010-HM43040927-41WDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3234.9 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

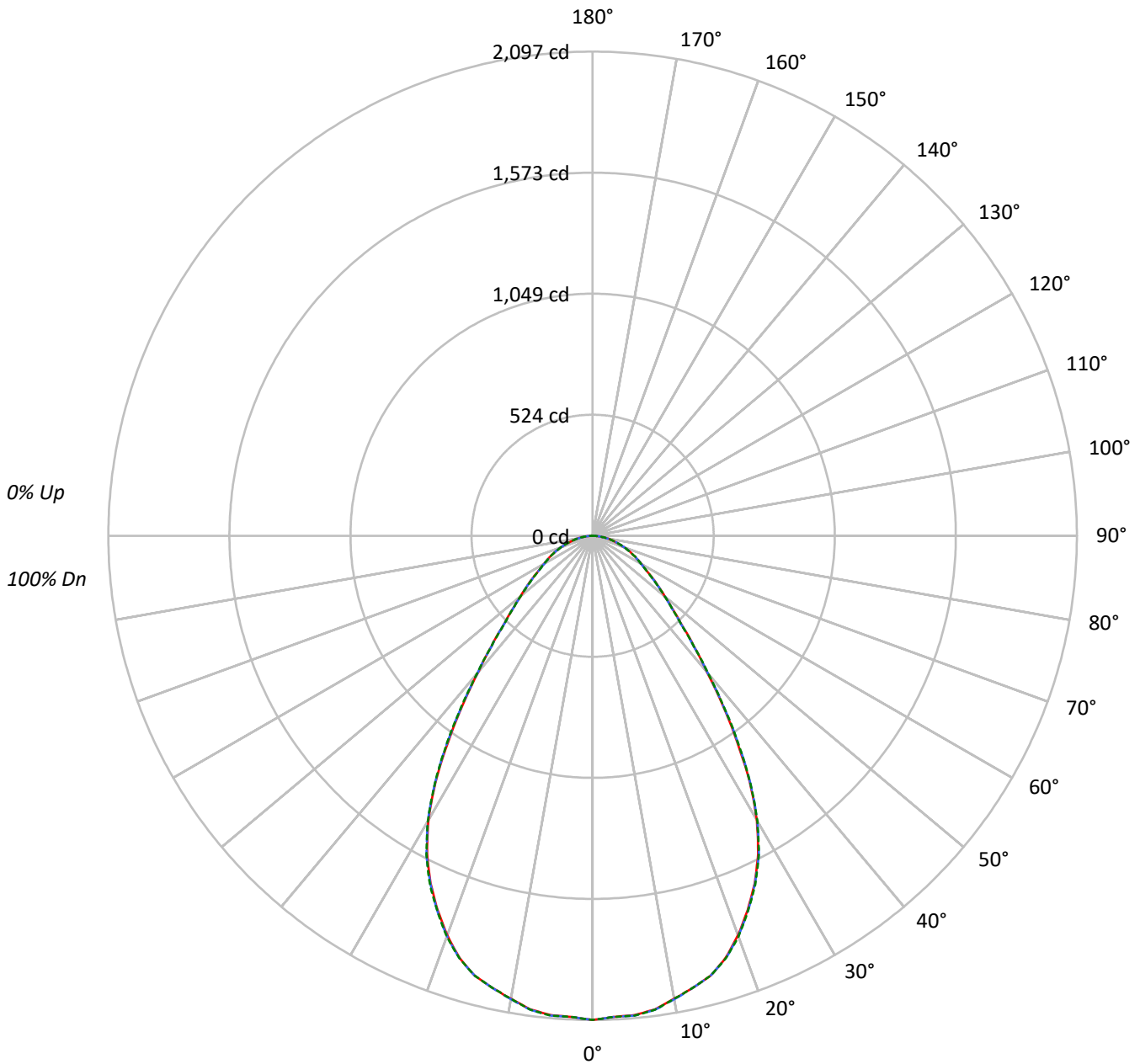
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 | 89 | 89 | 89 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 91 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | 78 | 78 | 78 |
| 3 | 96 | 87 | 81 | 76 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 | 69 | 69 | 69 |
| 4 | 90 | 80 | 72 | 67 | 87 | 78 | 72 | 66 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 62 | 62 | 62 | 62 |
| 5 | 84 | 73 | 65 | 60 | 82 | 72 | 65 | 59 | 70 | 64 | 59 | 68 | 63 | 58 | 66 | 62 | 58 | 56 | 56 | 56 | 56 |
| 6 | 78 | 67 | 59 | 54 | 77 | 66 | 59 | 54 | 64 | 58 | 53 | 63 | 57 | 53 | 61 | 56 | 53 | 51 | 51 | 51 | 51 |
| 7 | 73 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | 46 | 46 | 46 |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | 42 | 42 | 42 |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | 39 | 39 | 39 |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | 36 | 36 | 36 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 258619 | 258619 | 258619 |
| 5° | 257997 | 258257 | 258257 |
| 10° | 255006 | 255269 | 255006 |
| 15° | 251946 | 251946 | 251946 |
| 20° | 241600 | 242165 | 242453 |
| 25° | 225975 | 226275 | 226860 |
| 30° | 202489 | 203101 | 203101 |
| 35° | 164385 | 165710 | 166026 |
| 40° | 124079 | 124755 | 125126 |
| 45° | 95033 | 94667 | 94667 |
| 50° | 78292 | 77889 | 77889 |
| 55° | 67202 | 66750 | 66750 |
| 60° | 59971 | 59428 | 59428 |
| 65° | 56358 | 56358 | 56358 |
| 70° | 52437 | 52437 | 52437 |
| 75° | 47609 | 48610 | 47609 |
| 80° | 44750 | 43187 | 44750 |
| 85° | 36796 | 36796 | 36796 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 197.5 | 6.1 |
| 10°-20° | 552.8 | 17.1 |
| 20°-30° | 759.6 | 23.5 |
| 30°-40° | 683.0 | 21.1 |
| 40°-50° | 431.6 | 13.3 |
| 50°-60° | 281.8 | 8.7 |
| 60°-70° | 190.9 | 5.9 |
| 70°-80° | 107.5 | 3.3 |
| 80°-90° | 30.2 | 0.9 |
| 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° | 1510.0 | 46.7 |
| 0°-40° | 2193.1 | 67.8 |
| 0°-60° | 2906.4 | 89.8 |
| 0°-90° | 3234.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3234.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2097 | 2097 | 2097 | 2097 | 2097 | |
| 5° | 2084 | 2084 | 2086 | 2086 | 2086 | 197 |
| 15° | 1973 | 1973 | 1973 | 1973 | 1973 | 552 |
| 25° | 1660 | 1663 | 1663 | 1667 | 1667 | 758 |
| 35° | 1092 | 1096 | 1100 | 1105 | 1103 | 680 |
| 45° | 545 | 543 | 543 | 543 | 543 | 432 |
| 55° | 312 | 312 | 310 | 312 | 310 | 283 |
| 65° | 193 | 193 | 193 | 193 | 193 | 191 |
| 75° | 100 | 102 | 102 | 102 | 100 | 107 |
| 85° | 26 | 26 | 26 | 26 | 26 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2096.7 | 2096.7 | 2096.7 | 2096.7 | 2096.7 |
| 2.5° | 2085.8 | 2085.8 | 2085.8 | 2085.8 | 2085.8 |
| 5° | 2083.7 | 2083.7 | 2085.8 | 2085.8 | 2085.8 |
| 7.5° | 2068.5 | 2070.7 | 2070.7 | 2070.7 | 2070.7 |
| 10° | 2036.0 | 2036.0 | 2038.1 | 2038.1 | 2036.0 |
| 12.5° | 2005.6 | 2005.6 | 2005.6 | 2007.7 | 2005.6 |
| 15° | 1973.0 | 1973.0 | 1973.0 | 1973.0 | 1973.0 |
| 17.5° | 1916.6 | 1918.7 | 1918.7 | 1918.7 | 1918.7 |
| 20° | 1840.6 | 1844.9 | 1844.9 | 1847.1 | 1847.1 |
| 22.5° | 1753.8 | 1755.9 | 1758.1 | 1760.3 | 1758.1 |
| 25° | 1660.4 | 1662.6 | 1662.6 | 1666.9 | 1666.9 |
| 27.5° | 1551.9 | 1554.0 | 1558.4 | 1558.4 | 1558.4 |
| 30° | 1421.7 | 1423.9 | 1426.0 | 1426.0 | 1426.0 |
| 32.5° | 1267.6 | 1267.6 | 1271.9 | 1274.1 | 1271.9 |
| 35° | 1091.7 | 1096.1 | 1100.5 | 1104.7 | 1102.6 |
| 37.5° | 924.6 | 929.0 | 931.1 | 931.1 | 933.3 |
| 40° | 770.6 | 774.8 | 774.8 | 779.2 | 777.1 |
| 42.5° | 648.9 | 646.8 | 646.8 | 651.2 | 648.9 |
| 45° | 544.8 | 542.7 | 542.7 | 542.7 | 542.7 |
| 47.5° | 468.8 | 466.7 | 466.7 | 466.7 | 466.7 |
| 50° | 408.0 | 405.9 | 405.9 | 405.9 | 405.9 |
| 52.5° | 358.2 | 355.9 | 355.9 | 355.9 | 353.8 |
| 55° | 312.5 | 312.5 | 310.4 | 312.5 | 310.4 |
| 57.5° | 271.3 | 271.3 | 271.3 | 271.3 | 271.3 |
| 60° | 243.1 | 240.9 | 240.9 | 240.9 | 240.9 |
| 62.5° | 217.0 | 217.0 | 217.0 | 217.0 | 217.0 |
| 65° | 193.1 | 193.1 | 193.1 | 193.1 | 193.1 |
| 67.5° | 169.3 | 167.1 | 169.3 | 169.3 | 167.1 |
| 70° | 145.4 | 143.3 | 145.4 | 145.4 | 145.4 |
| 72.5° | 121.5 | 121.5 | 121.5 | 123.8 | 121.5 |
| 75° | 99.9 | 102.0 | 102.0 | 102.0 | 99.9 |
| 77.5° | 80.3 | 82.5 | 80.3 | 80.3 | 80.3 |
| 80° | 63.0 | 60.8 | 60.8 | 60.8 | 63.0 |
| 82.5° | 43.4 | 43.4 | 43.4 | 43.4 | 43.4 |
| 85° | 26.0 | 26.0 | 26.0 | 26.0 | 26.0 |
| 87.5° | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 |
| 90° | 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)