

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: P583168

Luminaire Tested: **HC660D010-HM64560830-61WWW**

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P583168
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC660D010-HM64560830-61WWW
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5270.4 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.06 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

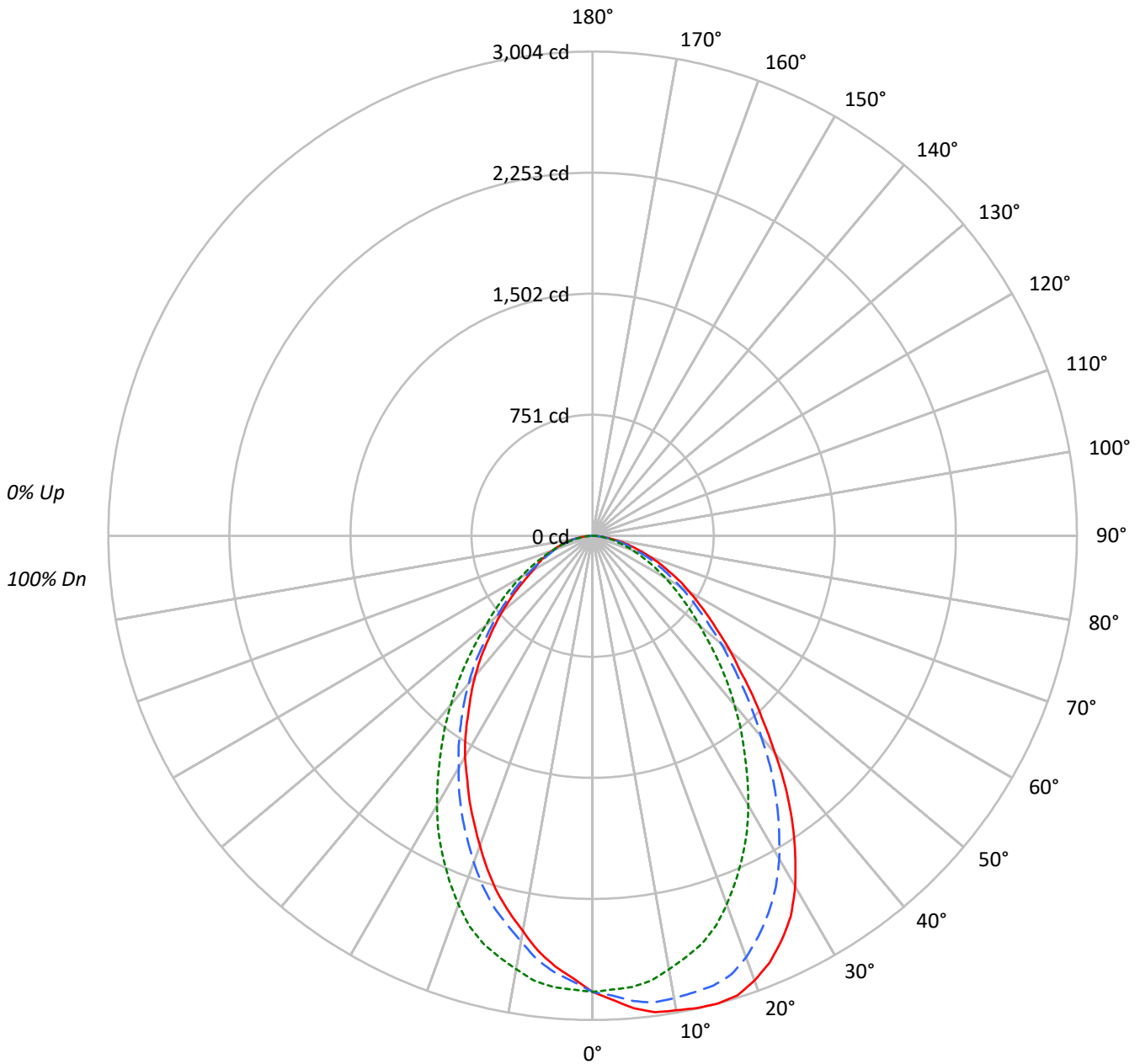
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 93 | 91 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 88 | 83 | 90 | 85 | 81 | 86 | 83 | 79 | 83 | 80 | 78 | 76 | | | | | | | | | | | | | | | | | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 58 | | | | | | | | | | | | | | | | | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 51 | | | | | | | | | | | | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | | | | | | | | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 43 | 42 | | | | | | | | | | | | | | | | | | | |
| 8 | 66 | 53 | 46 | 40 | 64 | 53 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 39 | 38 | | | | | | | | | | | | | | | | | | | |
| 9 | 62 | 49 | 42 | 37 | 60 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 | | | | | | | | | | | | | | | | | | | |
| 10 | 58 | 46 | 39 | 34 | 57 | 45 | 38 | 34 | 44 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 32 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 155108 | 155108 | 155108 |
| 5° | 161985 | 154650 | 147523 |
| 10° | 166402 | 151990 | 138636 |
| 15° | 170517 | 148690 | 129887 |
| 20° | 171282 | 141955 | 119296 |
| 25° | 167683 | 132909 | 109410 |
| 30° | 159094 | 122215 | 100275 |
| 35° | 144494 | 109834 | 89958 |
| 40° | 125900 | 97833 | 80937 |
| 45° | 108934 | 85614 | 71147 |
| 50° | 95161 | 73729 | 62360 |
| 55° | 84078 | 64781 | 53503 |
| 60° | 75564 | 56783 | 46334 |
| 65° | 67673 | 49396 | 44959 |
| 70° | 60411 | 42106 | 42106 |
| 75° | 52423 | 35499 | 39524 |
| 80° | 42082 | 30054 | 36053 |
| 85° | 28745 | 26355 | 31135 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 265.9 | 5.0 |
| 10°-20° | 739.2 | 14.0 |
| 20°-30° | 1030.2 | 19.5 |
| 30°-40° | 1061.4 | 20.1 |
| 40°-50° | 879.7 | 16.7 |
| 50°-60° | 632.2 | 12.0 |
| 60°-70° | 402.6 | 7.6 |
| 70°-80° | 206.7 | 3.9 |
| 80°-90° | 52.6 | 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° | 2035.2 | 38.6 |
| 0°-40° | 3096.6 | 58.8 |
| 0°-60° | 4608.5 | 87.4 |
| 0°-90° | 5270.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5270.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2829 | 2829 | 2829 | 2829 | 2829 | |
| 5° | 2944 | 2898 | 2810 | 2719 | 2681 | 282 |
| 15° | 3004 | 2890 | 2620 | 2380 | 2289 | 847 |
| 25° | 2772 | 2582 | 2197 | 1916 | 1809 | 1270 |
| 35° | 2159 | 1984 | 1641 | 1424 | 1344 | 1341 |
| 45° | 1405 | 1306 | 1104 | 963 | 918 | 1088 |
| 55° | 880 | 807 | 678 | 602 | 560 | 792 |
| 65° | 522 | 465 | 381 | 331 | 347 | 522 |
| 75° | 248 | 213 | 168 | 175 | 187 | 264 |
| 85° | 46 | 42 | 42 | 46 | 50 | 59 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P583168

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2829.4 | 2829.4 | 2829.4 | 2829.4 | 2829.4 | 2829.4 | 2829.4 | 2829.4 | 2829.4 |
| 2.5° | 2882.6 | 2871.2 | 2856.0 | 2840.8 | 2818.0 | 2791.2 | 2768.4 | 2760.7 | 2749.3 |
| 5° | 2943.6 | 2928.3 | 2897.9 | 2859.8 | 2810.3 | 2760.7 | 2718.9 | 2692.2 | 2680.8 |
| 7.5° | 2981.7 | 2962.6 | 2920.8 | 2856.0 | 2783.6 | 2711.3 | 2650.4 | 2612.2 | 2597.1 |
| 10° | 2989.3 | 2970.2 | 2913.1 | 2825.5 | 2730.4 | 2631.3 | 2555.1 | 2509.4 | 2490.5 |
| 12.5° | 3000.7 | 2974.0 | 2901.7 | 2798.9 | 2677.0 | 2562.8 | 2467.5 | 2410.4 | 2391.4 |
| 15° | 3004.5 | 2974.0 | 2890.3 | 2764.6 | 2619.9 | 2482.8 | 2380.0 | 2311.5 | 2288.6 |
| 17.5° | 2989.3 | 2955.0 | 2856.0 | 2703.6 | 2539.9 | 2395.2 | 2273.3 | 2201.0 | 2170.5 |
| 20° | 2936.0 | 2897.9 | 2783.6 | 2612.2 | 2433.3 | 2281.0 | 2155.3 | 2079.2 | 2044.9 |
| 22.5° | 2867.4 | 2818.0 | 2688.4 | 2505.7 | 2319.0 | 2159.1 | 2033.5 | 1957.3 | 1923.0 |
| 25° | 2772.2 | 2726.5 | 2581.9 | 2387.6 | 2197.3 | 2029.7 | 1915.5 | 1835.5 | 1808.8 |
| 27.5° | 2661.8 | 2608.5 | 2460.0 | 2265.8 | 2071.5 | 1904.0 | 1793.6 | 1721.2 | 1686.9 |
| 30° | 2513.3 | 2463.8 | 2315.3 | 2121.1 | 1930.7 | 1774.5 | 1660.3 | 1599.4 | 1584.1 |
| 32.5° | 2338.1 | 2296.2 | 2151.6 | 1968.7 | 1785.9 | 1641.2 | 1546.1 | 1481.3 | 1466.1 |
| 35° | 2159.1 | 2109.7 | 1984.0 | 1812.5 | 1641.2 | 1511.8 | 1424.2 | 1367.1 | 1344.2 |
| 37.5° | 1964.9 | 1919.2 | 1812.5 | 1660.3 | 1508.0 | 1386.1 | 1310.0 | 1260.5 | 1237.6 |
| 40° | 1759.3 | 1725.0 | 1626.0 | 1504.1 | 1367.1 | 1260.5 | 1195.7 | 1153.8 | 1131.0 |
| 42.5° | 1568.9 | 1534.6 | 1466.1 | 1351.9 | 1237.6 | 1142.4 | 1085.3 | 1047.2 | 1028.2 |
| 45° | 1405.1 | 1374.7 | 1306.2 | 1207.1 | 1104.3 | 1024.4 | 963.4 | 936.8 | 917.7 |
| 47.5° | 1241.4 | 1226.2 | 1165.2 | 1073.8 | 978.7 | 910.2 | 868.2 | 837.7 | 822.5 |
| 50° | 1115.8 | 1096.7 | 1039.6 | 944.4 | 864.5 | 811.1 | 773.0 | 746.4 | 731.2 |
| 52.5° | 986.2 | 967.3 | 913.9 | 834.0 | 769.2 | 719.7 | 681.6 | 658.7 | 643.6 |
| 55° | 879.7 | 864.5 | 807.2 | 734.9 | 677.8 | 635.9 | 601.6 | 575.0 | 559.8 |
| 57.5° | 780.6 | 765.4 | 712.1 | 643.6 | 594.1 | 555.9 | 525.6 | 502.7 | 483.6 |
| 60° | 689.2 | 677.8 | 624.5 | 559.8 | 517.9 | 479.8 | 453.1 | 434.1 | 422.6 |
| 62.5° | 609.3 | 586.4 | 540.7 | 483.6 | 445.5 | 415.1 | 388.4 | 376.9 | 384.6 |
| 65° | 521.7 | 510.3 | 464.6 | 415.1 | 380.8 | 350.3 | 331.3 | 338.9 | 346.6 |
| 67.5° | 449.4 | 434.1 | 396.0 | 350.3 | 319.8 | 297.0 | 285.6 | 300.9 | 304.6 |
| 70° | 376.9 | 361.8 | 327.5 | 289.4 | 262.7 | 247.5 | 247.5 | 259.0 | 262.7 |
| 72.5° | 308.4 | 297.0 | 266.6 | 236.1 | 217.0 | 205.6 | 213.3 | 220.9 | 224.7 |
| 75° | 247.5 | 236.1 | 213.3 | 186.6 | 167.6 | 167.6 | 175.2 | 182.8 | 186.6 |
| 77.5° | 190.4 | 182.8 | 159.9 | 140.8 | 133.3 | 133.3 | 140.8 | 144.7 | 148.5 |
| 80° | 133.3 | 125.6 | 114.2 | 102.8 | 95.2 | 102.8 | 110.5 | 110.5 | 114.2 |
| 82.5° | 87.6 | 83.7 | 76.2 | 68.5 | 68.5 | 72.3 | 76.2 | 80.0 | 80.0 |
| 85° | 45.7 | 45.7 | 41.9 | 38.0 | 41.9 | 45.7 | 45.7 | 49.5 | 49.5 |
| 87.5° | 15.2 | 15.2 | 15.2 | 15.2 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







(END OF REPORT)