

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: P583196

Luminaire Tested: **HC660D010-HM64560840-61RWWC**

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P583196
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC660D010-HM64560840-61RWWC
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6174.0 lumens
Efficiency: N/A
Efficacy: 112.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.15 / 1.2
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

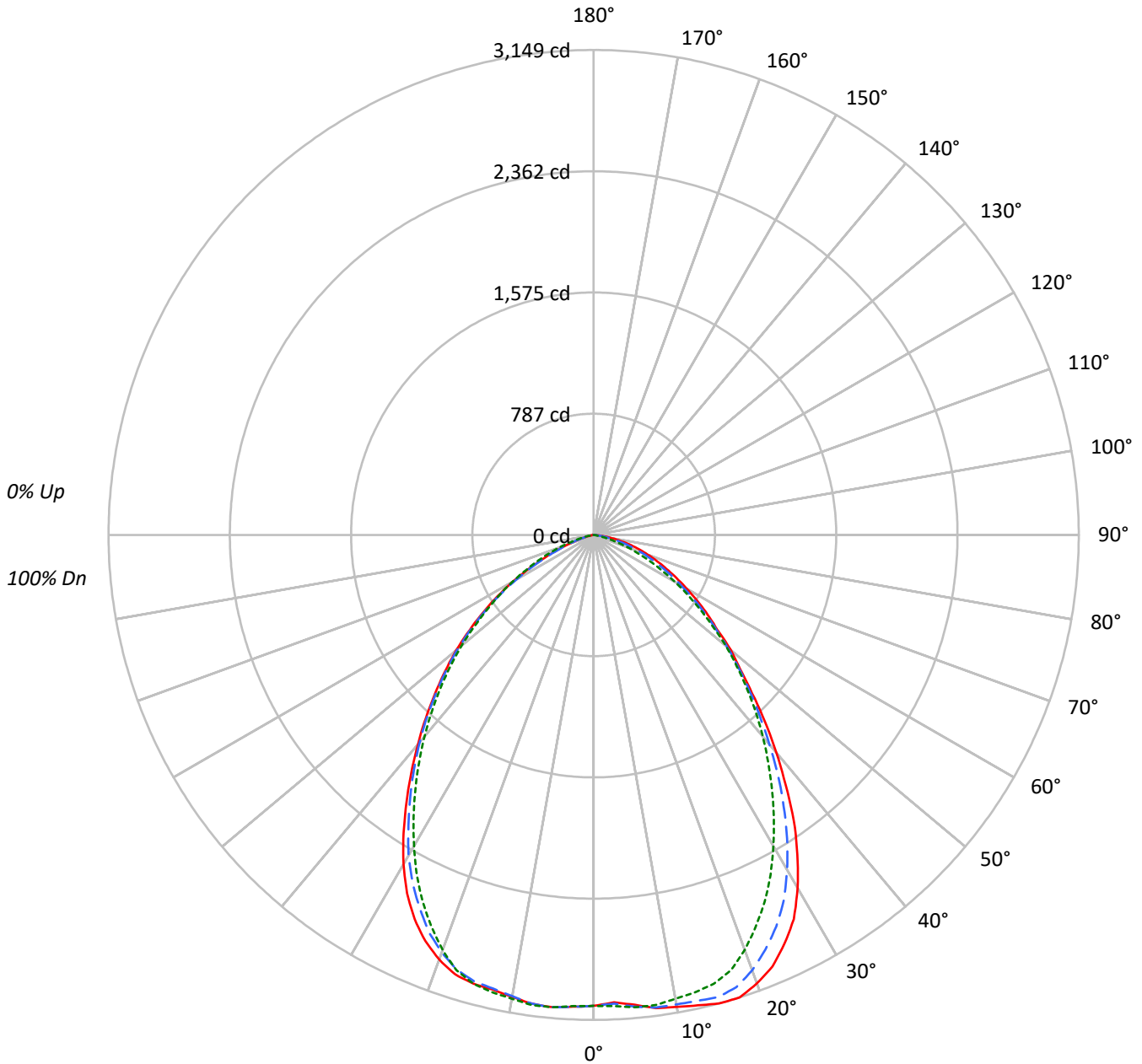
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 88 | | | | | | | | | | | | | | | | | | | |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 86 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | | | | | | | | | | | | | | | | |
| 3 | 95 | 86 | 79 | 74 | 93 | 85 | 78 | 73 | 82 | 76 | 72 | 79 | 75 | 71 | 77 | 73 | 69 | 68 | | | | | | | | | | | | | | | | | | | |
| 4 | 88 | 78 | 70 | 64 | 86 | 76 | 69 | 64 | 74 | 68 | 63 | 72 | 67 | 62 | 70 | 65 | 61 | 60 | | | | | | | | | | | | | | | | | | | |
| 5 | 82 | 70 | 62 | 57 | 80 | 69 | 62 | 56 | 67 | 61 | 56 | 65 | 60 | 55 | 64 | 59 | 55 | 53 | | | | | | | | | | | | | | | | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | | | | | | | | | | | | | | | | |
| 7 | 71 | 59 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 42 | | | | | | | | | | | | | | | | | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | | | | | | | | | | | | | | | |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | | | | | | | | | | | | | | | |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 167651 | 167651 | 167651 |
| 5° | 168517 | 169431 | 169431 |
| 10° | 173238 | 170237 | 169547 |
| 15° | 178735 | 171210 | 171210 |
| 20° | 180820 | 167285 | 171159 |
| 25° | 177204 | 158912 | 166431 |
| 30° | 167621 | 147681 | 156334 |
| 35° | 151695 | 135051 | 141710 |
| 40° | 131962 | 122179 | 126916 |
| 45° | 112764 | 108911 | 112764 |
| 50° | 98948 | 95425 | 99306 |
| 55° | 86343 | 80399 | 83562 |
| 60° | 76321 | 66793 | 65883 |
| 65° | 67724 | 52677 | 45154 |
| 70° | 59786 | 37186 | 27232 |
| 75° | 50898 | 21075 | 13153 |
| 80° | 37947 | 6535 | 3915 |
| 85° | 20882 | 2579 | 2579 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 293.4 | 4.8 |
| 10°-20° | 858.2 | 13.9 |
| 20°-30° | 1253.5 | 20.3 |
| 30°-40° | 1314.6 | 21.3 |
| 40°-50° | 1107.5 | 17.9 |
| 50°-60° | 776.0 | 12.6 |
| 60°-70° | 416.0 | 6.7 |
| 70°-80° | 139.5 | 2.3 |
| 80°-90° | 15.2 | 0.2 |
| 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° | 2405.1 | 39.0 |
| 0°-40° | 3719.8 | 60.2 |
| 0°-60° | 5603.3 | 90.8 |
| 0°-90° | 6174.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6174.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 3058 | 3058 | 3058 | 3058 | 3058 | |
| 5° | 3062 | 3075 | 3079 | 3079 | 3079 | 294 |
| 15° | 3149 | 3108 | 3017 | 3000 | 3017 | 888 |
| 25° | 2930 | 2805 | 2627 | 2673 | 2752 | 1342 |
| 35° | 2267 | 2151 | 2018 | 2076 | 2118 | 1407 |
| 45° | 1454 | 1430 | 1405 | 1442 | 1454 | 1133 |
| 55° | 903 | 874 | 841 | 858 | 874 | 813 |
| 65° | 522 | 476 | 406 | 336 | 348 | 521 |
| 75° | 240 | 186 | 100 | 62 | 62 | 255 |
| 85° | 33 | 16 | 4 | 4 | 4 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P583196

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3058.2 | 3058.2 | 3058.2 | 3058.2 | 3058.2 | 3058.2 | 3058.2 | 3058.2 | 3058.2 |
| 2.5° | 3037.4 | 3037.4 | 3045.8 | 3054.0 | 3062.3 | 3062.3 | 3066.5 | 3070.6 | 3066.5 |
| 5° | 3062.3 | 3062.3 | 3074.7 | 3078.9 | 3078.9 | 3074.7 | 3078.9 | 3078.9 | 3078.9 |
| 7.5° | 3099.5 | 3091.3 | 3095.4 | 3087.1 | 3078.9 | 3074.7 | 3070.6 | 3070.6 | 3070.6 |
| 10° | 3112.1 | 3103.8 | 3095.4 | 3078.9 | 3058.2 | 3045.8 | 3041.5 | 3045.8 | 3045.8 |
| 12.5° | 3128.6 | 3120.3 | 3099.5 | 3066.5 | 3041.5 | 3020.8 | 3016.7 | 3025.0 | 3025.0 |
| 15° | 3149.3 | 3141.0 | 3107.9 | 3054.0 | 3016.7 | 2996.0 | 3000.2 | 3008.4 | 3016.7 |
| 17.5° | 3149.3 | 3132.7 | 3078.9 | 3008.4 | 2962.8 | 2942.2 | 2958.7 | 2979.4 | 2991.9 |
| 20° | 3099.5 | 3083.0 | 3008.4 | 2921.4 | 2867.5 | 2855.1 | 2884.1 | 2921.4 | 2933.9 |
| 22.5° | 3033.3 | 3000.2 | 2913.1 | 2809.5 | 2751.5 | 2751.5 | 2792.9 | 2838.5 | 2855.1 |
| 25° | 2929.6 | 2904.8 | 2805.3 | 2685.2 | 2627.2 | 2623.0 | 2672.8 | 2734.9 | 2751.5 |
| 27.5° | 2813.6 | 2780.5 | 2672.8 | 2548.5 | 2486.3 | 2490.5 | 2544.3 | 2606.5 | 2623.0 |
| 30° | 2648.0 | 2606.5 | 2511.2 | 2391.0 | 2333.0 | 2349.5 | 2403.4 | 2449.0 | 2469.7 |
| 32.5° | 2461.4 | 2424.2 | 2337.1 | 2225.2 | 2175.5 | 2192.0 | 2237.6 | 2279.1 | 2295.7 |
| 35° | 2266.7 | 2225.2 | 2150.7 | 2051.2 | 2018.0 | 2034.6 | 2076.0 | 2109.2 | 2117.5 |
| 37.5° | 2047.1 | 2018.0 | 1964.1 | 1885.4 | 1860.6 | 1881.3 | 1914.5 | 1935.2 | 1943.4 |
| 40° | 1844.0 | 1819.1 | 1773.5 | 1715.5 | 1707.3 | 1723.8 | 1757.0 | 1769.4 | 1773.5 |
| 42.5° | 1645.1 | 1624.4 | 1595.4 | 1553.9 | 1553.9 | 1570.6 | 1599.5 | 1607.8 | 1611.9 |
| 45° | 1454.5 | 1442.0 | 1429.6 | 1396.5 | 1404.8 | 1425.5 | 1442.0 | 1454.5 | 1454.5 |
| 47.5° | 1288.8 | 1292.9 | 1276.3 | 1251.4 | 1259.7 | 1280.5 | 1292.9 | 1305.3 | 1305.3 |
| 50° | 1160.2 | 1147.8 | 1131.3 | 1106.4 | 1118.9 | 1135.4 | 1152.0 | 1160.2 | 1164.4 |
| 52.5° | 1011.1 | 1007.0 | 994.6 | 965.5 | 973.8 | 982.1 | 998.7 | 1011.1 | 1015.3 |
| 55° | 903.4 | 891.0 | 874.3 | 841.2 | 841.2 | 849.5 | 857.8 | 866.0 | 874.3 |
| 57.5° | 799.8 | 787.3 | 762.4 | 725.2 | 721.1 | 721.1 | 716.9 | 725.2 | 737.6 |
| 60° | 696.1 | 692.0 | 654.8 | 621.6 | 609.2 | 596.8 | 580.1 | 584.3 | 600.9 |
| 62.5° | 605.0 | 596.8 | 563.6 | 522.1 | 497.3 | 476.5 | 455.8 | 451.7 | 468.2 |
| 65° | 522.1 | 513.8 | 476.5 | 435.1 | 406.1 | 368.9 | 335.7 | 335.7 | 348.1 |
| 67.5° | 447.5 | 431.0 | 397.8 | 352.2 | 315.0 | 269.4 | 236.2 | 244.5 | 248.6 |
| 70° | 373.0 | 360.5 | 323.3 | 277.6 | 232.0 | 186.4 | 165.8 | 169.9 | 169.9 |
| 72.5° | 306.6 | 290.1 | 252.7 | 207.2 | 161.6 | 120.2 | 111.9 | 107.8 | 107.8 |
| 75° | 240.3 | 223.8 | 186.4 | 140.8 | 99.5 | 70.4 | 62.1 | 62.1 | 62.1 |
| 77.5° | 174.0 | 161.6 | 128.4 | 87.1 | 53.9 | 33.2 | 29.1 | 24.8 | 24.8 |
| 80° | 120.2 | 107.8 | 78.7 | 45.6 | 20.7 | 12.4 | 12.4 | 12.4 | 12.4 |
| 82.5° | 70.4 | 58.0 | 37.3 | 20.7 | 8.3 | 4.1 | 4.1 | 4.1 | 4.1 |
| 85° | 33.2 | 24.8 | 16.5 | 8.3 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 87.5° | 4.1 | 4.1 | 4.1 | 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)