

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: P581674

Luminaire Tested: **HC610D010-HM60525935-61WWW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581674  
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: HC610D010-HM60525935-61WWW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 974.7 lumens  
Efficiency: N/A  
Efficacy: 98.5 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

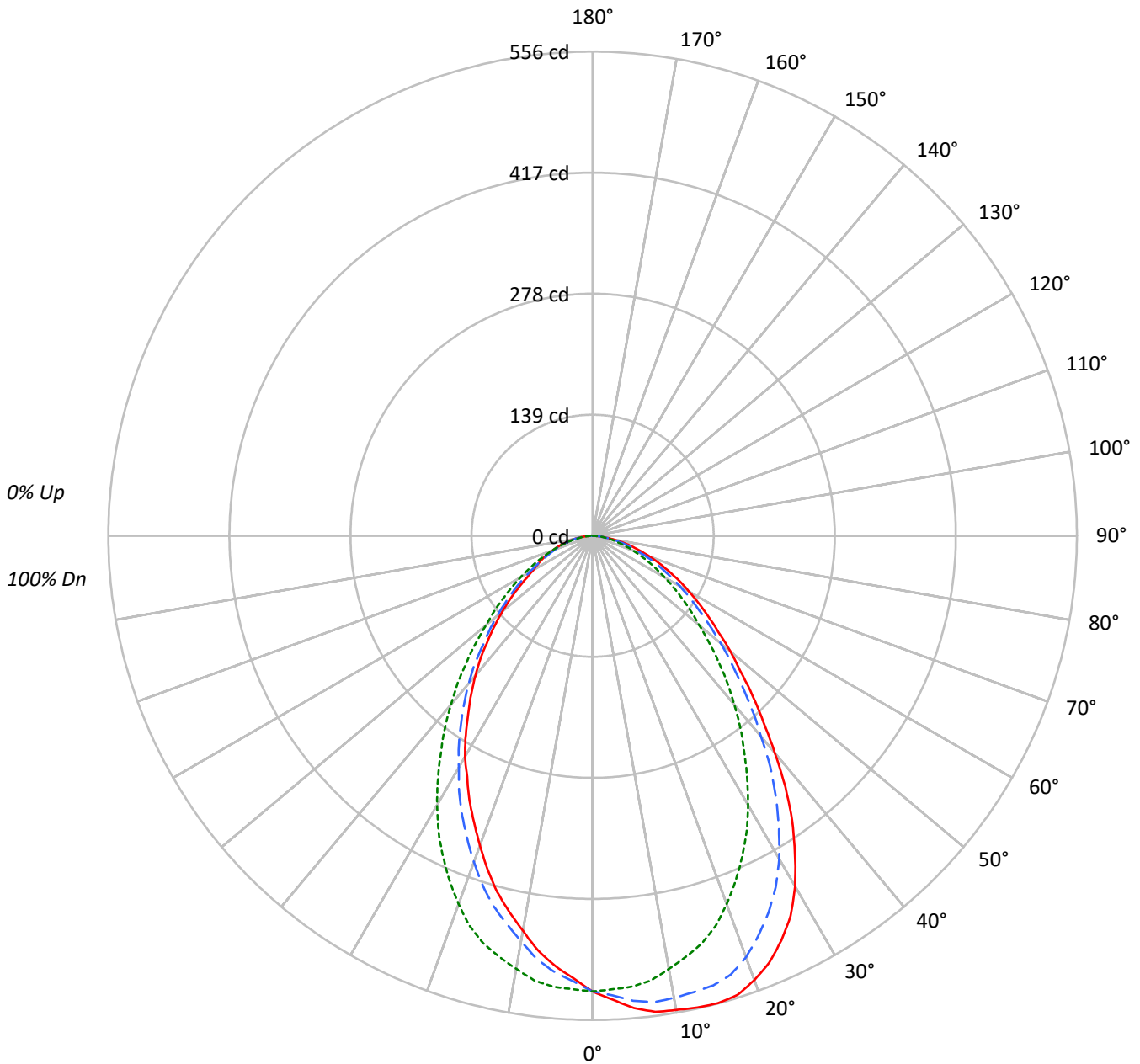
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |    |    |    |  |  |  |  |   |
| 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°  | 28682 | 28682 | 28682 |
| 5°  | 29958 | 28599 | 27284 |
| 10° | 30778 | 28111 | 25640 |
| 15° | 31538 | 27497 | 24024 |
| 20° | 31678 | 26252 | 22064 |
| 25° | 31012 | 24582 | 20233 |
| 30° | 29422 | 22598 | 18547 |
| 35° | 26729 | 20311 | 16637 |
| 40° | 23279 | 18091 | 14971 |
| 45° | 20149 | 15831 | 13156 |
| 50° | 17603 | 13629 | 11539 |
| 55° | 15550 | 11976 | 9902  |
| 60° | 13979 | 10504 | 8574  |
| 65° | 12505 | 9132  | 8315  |
| 70° | 11172 | 7790  | 7790  |
| 75° | 9680  | 6566  | 7307  |
| 80° | 7798  | 5588  | 6693  |
| 85° | 5346  | 4843  | 5787  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.2   | 5.0       |
| 10°-20°   | 136.7  | 14.0      |
| 20°-30°   | 190.5  | 19.5      |
| 30°-40°   | 196.3  | 20.1      |
| 40°-50°   | 162.7  | 16.7      |
| 50°-60°   | 116.9  | 12.0      |
| 60°-70°   | 74.4   | 7.6       |
| 70°-80°   | 38.2   | 3.9       |
| 80°-90°   | 9.7    | 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°    | 376.4  | 38.6      |
| 0°-40°    | 572.7  | 58.8      |
| 0°-60°    | 852.3  | 87.4      |
| 0°-90°    | 974.7  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 974.7  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 523 | 523 | 523 | 523  | 523  |      |
| 5°  | 544 | 536 | 520 | 503  | 496  | 52   |
| 15° | 556 | 534 | 484 | 440  | 423  | 157  |
| 25° | 513 | 478 | 406 | 354  | 334  | 235  |
| 35° | 399 | 367 | 304 | 263  | 249  | 248  |
| 45° | 260 | 242 | 204 | 178  | 170  | 201  |
| 55° | 163 | 149 | 125 | 111  | 104  | 147  |
| 65° | 96  | 86  | 70  | 61   | 64   | 97   |
| 75° | 46  | 39  | 31  | 32   | 34   | 49   |
| 85° | 8   | 8   | 8   | 8    | 9    | 11   |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0°    | 523.2 | 523.2 | 523.2 | 523.2 | 523.2 | 523.2  | 523.2 | 523.2  | 523.2 |
| 2.5°  | 533.2 | 531.0 | 528.2 | 525.4 | 521.2 | 516.2  | 512.0 | 510.6  | 508.5 |
| 5°    | 544.4 | 541.5 | 535.9 | 528.9 | 519.7 | 510.6  | 502.8 | 498.0  | 495.8 |
| 7.5°  | 551.4 | 547.9 | 540.2 | 528.2 | 514.8 | 501.5  | 490.2 | 483.1  | 480.3 |
| 10°   | 552.9 | 549.4 | 538.7 | 522.5 | 505.0 | 486.6  | 472.6 | 464.1  | 460.6 |
| 12.5° | 554.9 | 550.0 | 536.7 | 517.7 | 495.1 | 474.0  | 456.3 | 445.8  | 442.3 |
| 15°   | 555.7 | 550.0 | 534.5 | 511.3 | 484.5 | 459.1  | 440.1 | 427.4  | 423.3 |
| 17.5° | 552.9 | 546.5 | 528.2 | 500.0 | 469.8 | 443.0  | 420.4 | 407.1  | 401.4 |
| 20°   | 543.0 | 535.9 | 514.8 | 483.1 | 450.0 | 421.9  | 398.6 | 384.5  | 378.2 |
| 22.5° | 530.3 | 521.2 | 497.2 | 463.4 | 428.9 | 399.4  | 376.1 | 362.0  | 355.7 |
| 25°   | 512.7 | 504.3 | 477.5 | 441.6 | 406.4 | 375.4  | 354.2 | 339.5  | 334.5 |
| 27.5° | 492.3 | 482.5 | 455.0 | 419.1 | 383.1 | 352.2  | 331.7 | 318.3  | 312.0 |
| 30°   | 464.8 | 455.6 | 428.2 | 392.2 | 357.0 | 328.2  | 307.1 | 295.8  | 293.0 |
| 32.5° | 432.4 | 424.7 | 397.9 | 364.1 | 330.3 | 303.5  | 285.9 | 273.9  | 271.1 |
| 35°   | 399.4 | 390.2 | 366.9 | 335.2 | 303.5 | 279.6  | 263.4 | 252.8  | 248.6 |
| 37.5° | 363.4 | 355.0 | 335.2 | 307.1 | 278.9 | 256.4  | 242.2 | 233.1  | 228.9 |
| 40°   | 325.3 | 319.0 | 300.8 | 278.1 | 252.8 | 233.1  | 221.2 | 213.4  | 209.2 |
| 42.5° | 290.1 | 283.8 | 271.1 | 250.1 | 228.9 | 211.2  | 200.7 | 193.7  | 190.2 |
| 45°   | 259.9 | 254.2 | 241.6 | 223.2 | 204.2 | 189.5  | 178.2 | 173.2  | 169.7 |
| 47.5° | 229.6 | 226.7 | 215.5 | 198.6 | 181.0 | 168.3  | 160.5 | 155.0  | 152.1 |
| 50°   | 206.4 | 202.9 | 192.2 | 174.7 | 159.8 | 150.0  | 143.0 | 138.0  | 135.3 |
| 52.5° | 182.4 | 178.9 | 169.0 | 154.2 | 142.3 | 133.1  | 126.1 | 121.8  | 119.0 |
| 55°   | 162.7 | 159.8 | 149.3 | 136.0 | 125.3 | 117.6  | 111.3 | 106.3  | 103.6 |
| 57.5° | 144.3 | 141.6 | 131.7 | 119.0 | 109.9 | 102.8  | 97.2  | 92.9   | 89.4  |
| 60°   | 127.5 | 125.3 | 115.5 | 103.6 | 95.8  | 88.7   | 83.8  | 80.3   | 78.2  |
| 62.5° | 112.6 | 108.4 | 100.0 | 89.4  | 82.4  | 76.7   | 71.9  | 69.7   | 71.1  |
| 65°   | 96.4  | 94.4  | 85.9  | 76.7  | 70.4  | 64.8   | 61.2  | 62.7   | 64.1  |
| 67.5° | 83.1  | 80.3  | 73.2  | 64.8  | 59.2  | 54.9   | 52.9  | 55.6   | 56.4  |
| 70°   | 69.7  | 66.9  | 60.6  | 53.5  | 48.6  | 45.7   | 45.7  | 47.9   | 48.6  |
| 72.5° | 57.1  | 54.9  | 49.2  | 43.7  | 40.2  | 38.0   | 39.4  | 40.9   | 41.5  |
| 75°   | 45.7  | 43.7  | 39.4  | 34.5  | 31.0  | 31.0   | 32.4  | 33.8   | 34.5  |
| 77.5° | 35.2  | 33.8  | 29.5  | 26.0  | 24.7  | 24.7   | 26.0  | 26.7   | 27.5  |
| 80°   | 24.7  | 23.2  | 21.2  | 19.0  | 17.7  | 19.0   | 20.4  | 20.4   | 21.2  |
| 82.5° | 16.2  | 15.5  | 14.0  | 12.7  | 12.7  | 13.4   | 14.0  | 14.8   | 14.8  |
| 85°   | 8.5   | 8.5   | 7.7   | 7.0   | 7.7   | 8.5    | 8.5   | 9.2    | 9.2   |
| 87.5° | 2.8   | 2.8   | 2.8   | 2.8   | 3.5   | 3.5    | 3.5   | 3.5    | 3.5   |
| 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)