

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: P581847

Luminaire Tested: **HC620D010-HM60525827-61RWWH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581847  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC620D010-HM60525827-61RWWH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2001.1 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.19  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

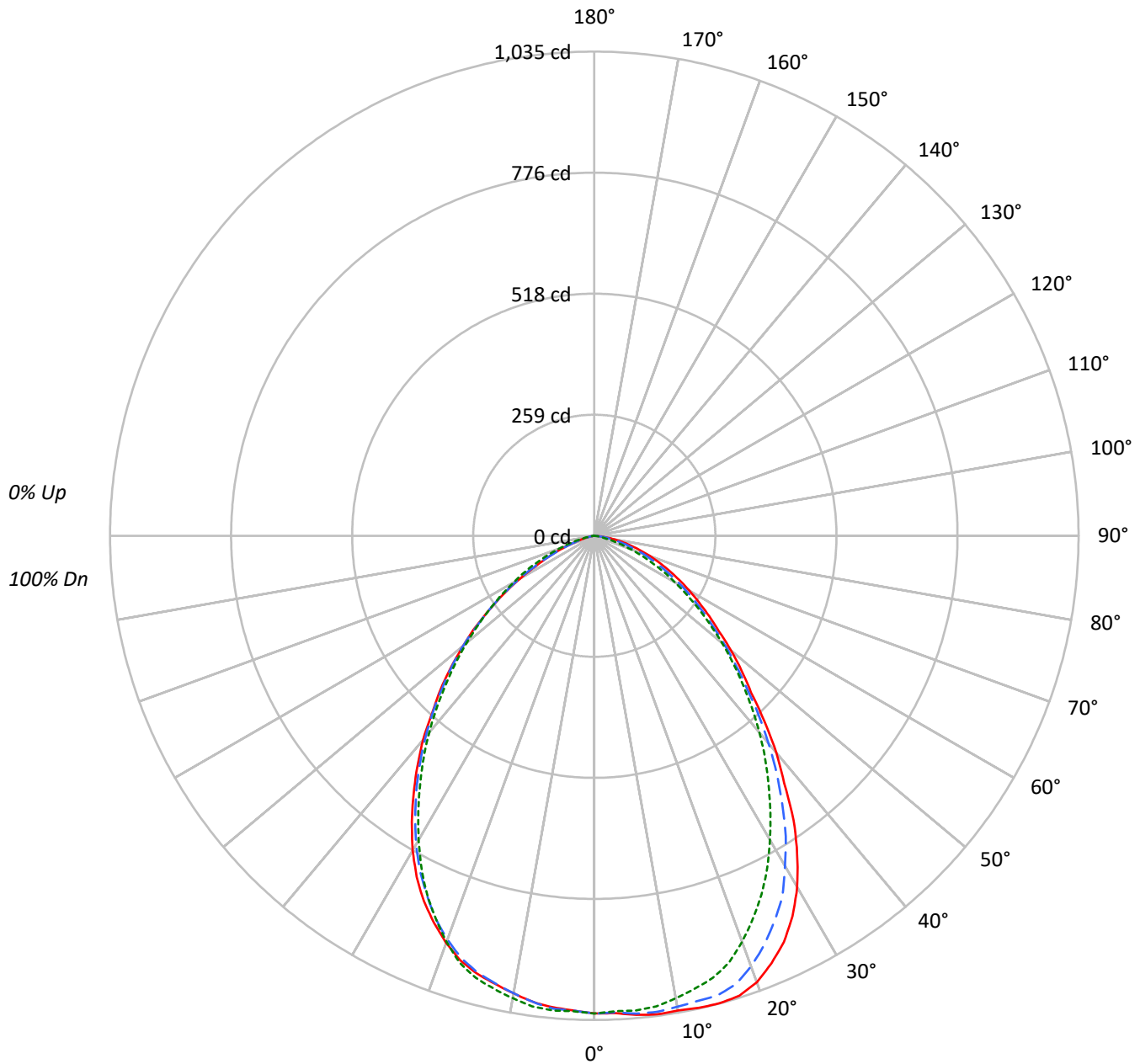
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| 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  | 93  | 92  | 90  | 88  |    |    |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 84  | 91  | 86  | 83  | 87  | 84  | 81  | 85  | 82  | 79  | 77  |    |    |
| 3   | 95  | 86  | 79  | 74  | 93  | 84  | 78  | 73  | 82  | 76  | 72  | 79  | 74  | 70  | 77  | 73  | 69  | 67  |    |    |
| 4   | 88  | 78  | 70  | 64  | 86  | 76  | 69  | 64  | 74  | 68  | 63  | 72  | 66  | 62  | 70  | 65  | 61  | 59  |    |    |
| 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  | 61  | 55  | 50  | 60  | 54  | 49  | 58  | 53  | 49  | 47  |    |    |
| 7   | 71  | 59  | 51  | 45  | 69  | 58  | 50  | 45  | 56  | 50  | 45  | 55  | 49  | 44  | 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°  | 55988 | 55988 | 55988 |
| 5°  | 56570 | 56053 | 55684 |
| 10° | 57369 | 55877 | 55287 |
| 15° | 58723 | 55534 | 55000 |
| 20° | 59260 | 53876 | 54033 |
| 25° | 57965 | 51166 | 52140 |
| 30° | 54901 | 47526 | 49140 |
| 35° | 49710 | 43440 | 45053 |
| 40° | 43295 | 39266 | 40712 |
| 45° | 36732 | 34756 | 36004 |
| 50° | 32536 | 30361 | 31163 |
| 55° | 28654 | 25968 | 25834 |
| 60° | 25678 | 21862 | 20097 |
| 65° | 22908 | 17538 | 14411 |
| 70° | 20164 | 12662 | 9008  |
| 75° | 17008 | 7646  | 5105  |
| 80° | 13101 | 3410  | 2115  |
| 85° | 7548  | 881   | 881   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.9   | 4.8       |
| 10°-20°   | 278.6  | 13.9      |
| 20°-30°   | 402.7  | 20.1      |
| 30°-40°   | 423.8  | 21.2      |
| 40°-50°   | 356.2  | 17.8      |
| 50°-60°   | 250.0  | 12.5      |
| 60°-70°   | 137.5  | 6.9       |
| 70°-80°   | 48.8   | 2.4       |
| 80°-90°   | 6.4    | 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°    | 778.3  | 38.9      |
| 0°-40°    | 1202.0 | 60.1      |
| 0°-60°    | 1808.3 | 90.4      |
| 0°-90°    | 2001.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2001.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1021 | 1021 | 1021 | 1021 | 1021 |      |
| 5°  | 1028 | 1025 | 1019 | 1015 | 1012 | 98   |
| 15° | 1035 | 1017 | 978  | 966  | 969  | 292  |
| 25° | 958  | 910  | 846  | 847  | 862  | 438  |
| 35° | 743  | 700  | 649  | 663  | 673  | 460  |
| 45° | 474  | 460  | 448  | 459  | 464  | 372  |
| 55° | 300  | 284  | 272  | 272  | 270  | 270  |
| 65° | 177  | 158  | 135  | 111  | 111  | 176  |
| 75° | 80   | 64   | 36   | 24   | 24   | 86   |
| 85° | 12   | 7    | 1    | 1    | 1    | 17   |
| 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°    | 1021.3 | 1021.3 | 1021.3 | 1021.3 | 1021.3 | 1021.3 | 1021.3 | 1021.3 | 1021.3 |
| 2.5°  | 1021.3 | 1021.3 | 1019.9 | 1019.9 | 1017.2 | 1017.2 | 1015.8 | 1015.8 | 1015.8 |
| 5°    | 1028.0 | 1028.0 | 1025.3 | 1021.3 | 1018.6 | 1014.6 | 1014.6 | 1013.2 | 1011.9 |
| 7.5°  | 1031.9 | 1030.6 | 1026.6 | 1021.3 | 1014.6 | 1007.8 | 1005.2 | 1006.6 | 1005.2 |
| 10°   | 1030.6 | 1028.0 | 1022.5 | 1011.9 | 1003.8 | 994.4  | 993.2  | 991.8  | 993.2  |
| 12.5° | 1033.3 | 1029.2 | 1018.6 | 1005.2 | 991.8  | 981.1  | 979.7  | 979.7  | 981.1  |
| 15°   | 1034.7 | 1030.6 | 1017.2 | 997.2  | 978.5  | 967.7  | 966.3  | 967.7  | 969.1  |
| 17.5° | 1030.6 | 1025.3 | 1005.2 | 978.5  | 957.0  | 946.3  | 946.3  | 949.0  | 951.6  |
| 20°   | 1015.8 | 1007.8 | 979.7  | 947.6  | 923.5  | 915.5  | 918.2  | 923.5  | 926.2  |
| 22.5° | 989.1  | 979.7  | 947.6  | 911.5  | 886.0  | 879.3  | 886.0  | 892.8  | 895.4  |
| 25°   | 958.3  | 947.6  | 910.1  | 872.6  | 845.9  | 837.9  | 847.3  | 857.9  | 862.0  |
| 27.5° | 916.8  | 904.8  | 870.0  | 827.2  | 800.4  | 796.4  | 807.0  | 819.2  | 821.8  |
| 30°   | 867.3  | 853.9  | 815.1  | 775.0  | 750.8  | 749.5  | 761.6  | 772.3  | 776.3  |
| 32.5° | 807.0  | 795.0  | 761.6  | 721.4  | 700.0  | 700.0  | 712.1  | 721.4  | 725.5  |
| 35°   | 742.8  | 729.4  | 700.0  | 666.5  | 649.1  | 650.5  | 662.6  | 669.3  | 673.2  |
| 37.5° | 666.5  | 662.6  | 639.8  | 611.7  | 599.6  | 602.3  | 611.7  | 617.0  | 621.0  |
| 40°   | 605.0  | 594.3  | 579.5  | 556.8  | 548.7  | 551.4  | 560.8  | 566.2  | 568.9  |
| 42.5° | 538.1  | 531.4  | 519.4  | 503.3  | 498.0  | 501.9  | 510.0  | 513.9  | 512.7  |
| 45°   | 473.8  | 472.5  | 460.5  | 451.0  | 448.3  | 453.8  | 459.1  | 463.1  | 464.4  |
| 47.5° | 426.9  | 421.6  | 410.9  | 404.3  | 401.5  | 406.9  | 412.3  | 414.9  | 414.9  |
| 50°   | 381.5  | 376.2  | 365.4  | 358.7  | 356.0  | 361.4  | 365.4  | 368.1  | 365.4  |
| 52.5° | 335.9  | 330.6  | 321.2  | 313.2  | 311.9  | 314.5  | 315.9  | 317.2  | 319.8  |
| 55°   | 299.8  | 294.5  | 283.7  | 274.4  | 271.7  | 273.1  | 271.7  | 271.7  | 270.3  |
| 57.5° | 265.0  | 259.7  | 248.9  | 238.3  | 234.2  | 232.9  | 228.9  | 227.5  | 226.1  |
| 60°   | 234.2  | 227.5  | 216.9  | 204.7  | 199.4  | 194.1  | 187.4  | 183.3  | 183.3  |
| 62.5° | 204.7  | 198.0  | 186.0  | 175.4  | 167.3  | 157.9  | 147.2  | 141.9  | 141.9  |
| 65°   | 176.6  | 171.3  | 157.9  | 145.9  | 135.2  | 123.2  | 111.1  | 108.4  | 111.1  |
| 67.5° | 149.9  | 144.6  | 131.2  | 119.1  | 105.7  | 91.0   | 80.3   | 80.3   | 82.9   |
| 70°   | 125.8  | 120.4  | 108.4  | 93.7   | 79.0   | 64.2   | 56.2   | 56.2   | 56.2   |
| 72.5° | 103.1  | 97.7   | 84.3   | 70.9   | 56.2   | 41.5   | 37.5   | 38.9   | 37.5   |
| 75°   | 80.3   | 76.3   | 64.2   | 49.5   | 36.1   | 25.4   | 24.1   | 22.8   | 24.1   |
| 77.5° | 60.3   | 56.2   | 45.5   | 32.2   | 20.1   | 14.7   | 13.4   | 13.4   | 13.4   |
| 80°   | 41.5   | 37.5   | 29.5   | 18.7   | 10.8   | 6.7    | 6.7    | 6.7    | 6.7    |
| 82.5° | 25.4   | 21.4   | 16.1   | 9.4    | 4.0    | 4.0    | 4.0    | 4.0    | 4.0    |
| 85°   | 12.0   | 9.4    | 6.7    | 2.7    | 1.4    | 1.4    | 1.4    | 1.4    | 1.4    |
| 87.5° | 2.7    | 2.7    | 1.4    | 1.4    | 0.0    | 1.4    | 1.4    | 0.0    | 0.0    |
| 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)