

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P592705

Luminaire Tested: **HCC4W25D010BZ-HM40525850-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592705
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W25D010BZ-HM40525850-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

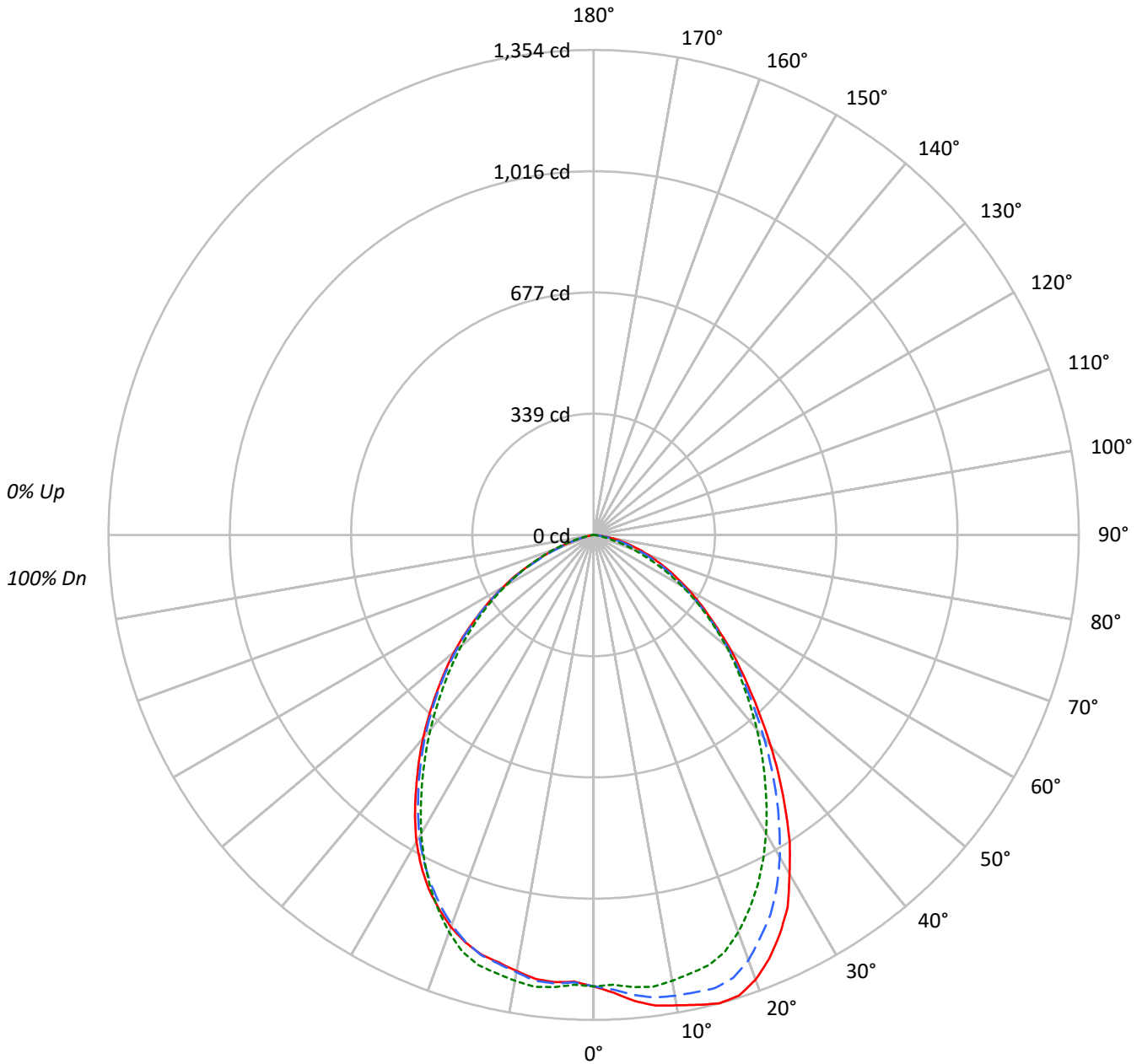
Lumens per Lamp: N/A
Luminaire Lumens: 2626.4 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (A_{in}): 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 |
| 1 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | 88 |
| 2 | 102 | 95 | 90 | 85 | 100 | 94 | 88 | 84 | 90 | 86 | 82 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | 76 |
| 3 | 95 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 69 | 67 | | | 67 |
| 4 | 87 | 77 | 69 | 63 | 85 | 76 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | 58 |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 | | | 52 |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | 46 |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 49 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 | | | 41 |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | 37 |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | 34 |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | 31 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 155452 | 155452 | 155452 |
| 5° | 161754 | 156901 | 155204 |
| 10° | 167031 | 158289 | 154870 |
| 15° | 172901 | 158778 | 154858 |
| 20° | 173475 | 154928 | 152920 |
| 25° | 167358 | 147189 | 148346 |
| 30° | 155730 | 137044 | 140946 |
| 35° | 140293 | 125416 | 130023 |
| 40° | 123693 | 114096 | 119281 |
| 45° | 108134 | 102796 | 107837 |
| 50° | 95754 | 92492 | 97404 |
| 55° | 84255 | 81675 | 84986 |
| 60° | 75191 | 69740 | 71861 |
| 65° | 66106 | 56679 | 55687 |
| 70° | 57738 | 41762 | 38083 |
| 75° | 47895 | 25163 | 20302 |
| 80° | 36297 | 9731 | 6038 |
| 85° | 16983 | 2406 | 2406 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 121.6 | 4.6 |
| 10°-20° | 354.8 | 13.5 |
| 20°-30° | 513.8 | 19.6 |
| 30°-40° | 542.0 | 20.6 |
| 40°-50° | 469.1 | 17.9 |
| 50°-60° | 347.5 | 13.2 |
| 60°-70° | 200.3 | 7.6 |
| 70°-80° | 70.0 | 2.7 |
| 80°-90° | 7.4 | 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° | 990.1 | 37.7 |
| 0°-40° | 1532.1 | 58.3 |
| 0°-60° | 2348.7 | 89.4 |
| 0°-90° | 2626.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2626.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1260 | 1260 | 1260 | 1260 | 1260 | |
| 5° | 1306 | 1289 | 1267 | 1257 | 1254 | 125 |
| 15° | 1354 | 1310 | 1243 | 1214 | 1213 | 381 |
| 25° | 1230 | 1168 | 1082 | 1075 | 1090 | 563 |
| 35° | 932 | 889 | 833 | 852 | 864 | 582 |
| 45° | 620 | 603 | 589 | 612 | 618 | 481 |
| 55° | 392 | 383 | 380 | 394 | 395 | 353 |
| 65° | 226 | 213 | 194 | 184 | 191 | 226 |
| 75° | 100 | 85 | 53 | 43 | 43 | 108 |
| 85° | 12 | 7 | 2 | 2 | 2 | 19 |
| 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° | 1260.3 | 1260.3 | 1260.3 | 1260.3 | 1260.3 | 1260.3 | 1260.3 | 1260.3 | 1260.3 |
| 2.5° | 1279.0 | 1275.7 | 1270.6 | 1263.8 | 1256.9 | 1251.8 | 1250.1 | 1248.4 | 1248.4 |
| 5° | 1306.4 | 1299.5 | 1289.3 | 1275.7 | 1267.2 | 1262.0 | 1256.9 | 1253.5 | 1253.5 |
| 7.5° | 1325.1 | 1318.2 | 1302.9 | 1284.2 | 1272.3 | 1262.0 | 1255.2 | 1250.1 | 1250.1 |
| 10° | 1333.6 | 1325.1 | 1306.4 | 1282.4 | 1263.8 | 1250.1 | 1239.9 | 1236.5 | 1236.5 |
| 12.5° | 1343.8 | 1333.6 | 1308.1 | 1277.4 | 1253.5 | 1236.5 | 1226.3 | 1222.8 | 1222.8 |
| 15° | 1354.0 | 1342.0 | 1309.8 | 1274.0 | 1243.4 | 1222.8 | 1214.4 | 1212.7 | 1212.7 |
| 17.5° | 1348.9 | 1333.6 | 1296.1 | 1253.5 | 1219.4 | 1199.0 | 1190.5 | 1190.5 | 1192.2 |
| 20° | 1321.6 | 1306.4 | 1263.8 | 1216.0 | 1180.3 | 1165.0 | 1158.1 | 1161.5 | 1165.0 |
| 22.5° | 1280.7 | 1262.0 | 1216.0 | 1170.1 | 1132.6 | 1119.0 | 1119.0 | 1124.1 | 1129.2 |
| 25° | 1229.7 | 1212.7 | 1168.4 | 1117.3 | 1081.5 | 1071.3 | 1074.7 | 1083.2 | 1090.0 |
| 27.5° | 1171.8 | 1153.0 | 1107.1 | 1059.3 | 1023.6 | 1018.5 | 1027.1 | 1038.9 | 1042.3 |
| 30° | 1093.4 | 1078.1 | 1038.9 | 993.0 | 962.2 | 960.6 | 972.5 | 981.0 | 989.6 |
| 32.5° | 1018.5 | 1001.4 | 963.9 | 919.7 | 897.6 | 899.2 | 912.9 | 923.1 | 928.3 |
| 35° | 931.7 | 916.3 | 889.1 | 853.3 | 832.9 | 836.3 | 851.6 | 861.8 | 863.5 |
| 37.5° | 849.9 | 839.6 | 812.4 | 785.1 | 769.9 | 776.6 | 790.3 | 802.2 | 802.2 |
| 40° | 768.2 | 759.6 | 739.2 | 717.0 | 708.6 | 717.0 | 730.7 | 740.8 | 740.8 |
| 42.5° | 689.8 | 684.6 | 667.7 | 652.3 | 647.3 | 659.1 | 671.1 | 679.5 | 677.9 |
| 45° | 619.9 | 614.9 | 602.9 | 591.0 | 589.3 | 601.2 | 611.5 | 616.5 | 618.2 |
| 47.5° | 556.9 | 553.5 | 543.3 | 534.8 | 534.8 | 546.7 | 555.2 | 560.3 | 562.0 |
| 50° | 499.0 | 495.6 | 487.1 | 480.3 | 482.0 | 493.9 | 500.7 | 505.8 | 507.6 |
| 52.5° | 441.1 | 439.4 | 432.6 | 424.1 | 429.2 | 437.7 | 446.2 | 449.7 | 451.4 |
| 55° | 391.8 | 391.8 | 383.2 | 376.4 | 379.8 | 388.4 | 393.5 | 395.2 | 395.2 |
| 57.5° | 347.4 | 345.7 | 335.5 | 328.8 | 330.5 | 338.9 | 342.3 | 344.0 | 344.0 |
| 60° | 304.8 | 303.1 | 293.0 | 282.7 | 282.7 | 287.8 | 289.6 | 291.3 | 291.3 |
| 62.5° | 264.0 | 262.3 | 250.4 | 241.8 | 238.4 | 236.8 | 236.8 | 240.1 | 246.9 |
| 65° | 226.5 | 224.8 | 212.9 | 199.3 | 194.2 | 189.1 | 183.9 | 187.3 | 190.8 |
| 67.5° | 192.5 | 189.1 | 177.1 | 165.2 | 153.3 | 144.7 | 136.3 | 141.4 | 148.1 |
| 70° | 160.1 | 156.7 | 143.0 | 129.5 | 115.8 | 102.2 | 95.4 | 102.2 | 105.6 |
| 72.5° | 129.5 | 126.0 | 112.4 | 98.8 | 81.7 | 68.1 | 66.4 | 68.1 | 69.9 |
| 75° | 100.5 | 98.8 | 85.1 | 69.9 | 52.8 | 42.6 | 42.6 | 42.6 | 42.6 |
| 77.5° | 75.0 | 71.6 | 57.9 | 44.3 | 30.7 | 23.8 | 22.1 | 22.1 | 22.1 |
| 80° | 51.1 | 47.6 | 35.8 | 25.5 | 13.7 | 10.3 | 10.3 | 8.5 | 8.5 |
| 82.5° | 28.9 | 27.2 | 18.7 | 10.3 | 5.1 | 3.4 | 3.4 | 3.4 | 3.4 |
| 85° | 12.0 | 10.3 | 6.8 | 3.4 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 87.5° | 1.7 | 1.7 | 1.7 | 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 |

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Scaled Data Report



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Scaled Data Report



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

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