

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: P580020

Luminaire Tested: **HCC4W20D010BZ-HM40525835-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580020
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W20D010BZ-HM40525835-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

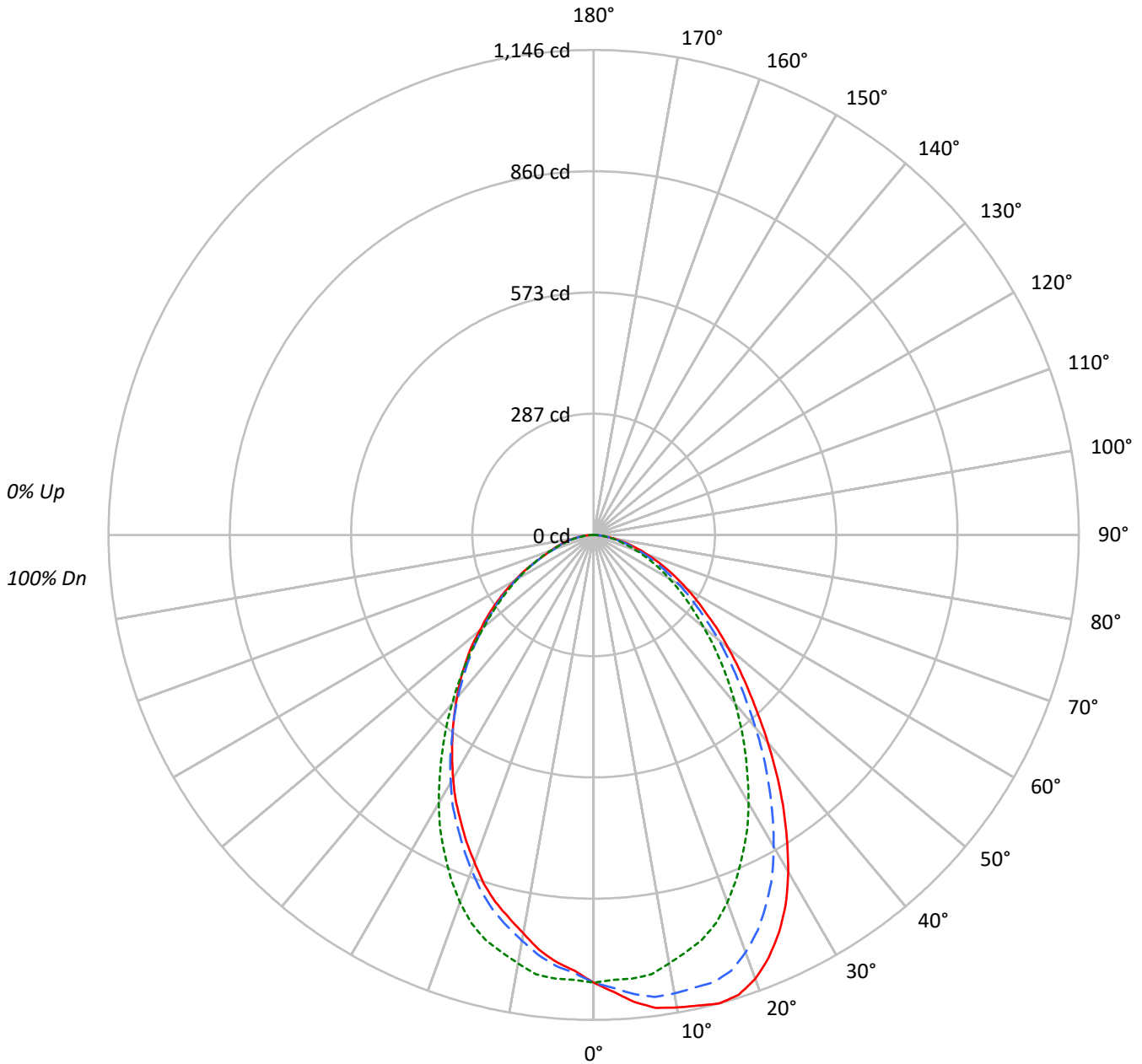
Lumens per Lamp: N/A
Luminaire Lumens: 2051.6 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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



TEST NUMBER: P580020
CATALOG NUMBER: HCC4W20D010BZ-HM40525835-41WWWB

Luminous Intensity Polar Plot



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



TEST NUMBER: P580020

CATALOG NUMBER: HCC4W20D010BZ-HM40525835-41WWWB

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|--|--|--|---|
| RF | 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 | 92 | 91 | 89 | 87 | | | | | | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | | | | |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | | | | |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 68 | 62 | 72 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 60 | 58 | | | | | | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 60 | 55 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 53 | 51 | | | | | | | | |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 46 | | | | | | | | |
| 7 | 70 | 58 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 43 | 41 | | | | | | | | |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | | | | |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | | | | |
| 10 | 58 | 45 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 130487 | 130487 | 130487 |
| 5° | 137201 | 130317 | 125426 |
| 10° | 142019 | 128768 | 119738 |
| 15° | 146366 | 126420 | 114621 |
| 20° | 146527 | 121207 | 108028 |
| 25° | 141024 | 113301 | 101283 |
| 30° | 130933 | 104257 | 94586 |
| 35° | 117375 | 93855 | 87515 |
| 40° | 102986 | 83761 | 80911 |
| 45° | 90010 | 74153 | 74607 |
| 50° | 79482 | 64879 | 67239 |
| 55° | 70105 | 57525 | 60450 |
| 60° | 62635 | 50942 | 52940 |
| 65° | 55512 | 44801 | 44801 |
| 70° | 48470 | 38192 | 38192 |
| 75° | 41414 | 32359 | 36219 |
| 80° | 32817 | 28910 | 32817 |
| 85° | 21087 | 25050 | 30711 |



TEST NUMBER: P580020

CATALOG NUMBER: HCC4W20D010BZ-HM40525835-41WWWB

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.2 | 4.9 |
| 10°-20° | 282.3 | 13.8 |
| 20°-30° | 395.4 | 19.3 |
| 30°-40° | 407.4 | 19.9 |
| 40°-50° | 346.8 | 16.9 |
| 50°-60° | 257.0 | 12.5 |
| 60°-70° | 161.3 | 7.9 |
| 70°-80° | 80.1 | 3.9 |
| 80°-90° | 21.0 | 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° | 777.9 | 37.9 |
| 0°-40° | 1185.3 | 57.8 |
| 0°-60° | 1789.2 | 87.2 |
| 0°-90° | 2051.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2051.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1058 | 1058 | 1058 | 1058 | 1058 | |
| 5° | 1108 | 1089 | 1052 | 1023 | 1013 | 107 |
| 15° | 1146 | 1095 | 990 | 918 | 898 | 322 |
| 25° | 1036 | 964 | 832 | 760 | 744 | 474 |
| 35° | 780 | 721 | 623 | 583 | 581 | 486 |
| 45° | 516 | 481 | 425 | 417 | 428 | 400 |
| 55° | 326 | 300 | 268 | 273 | 281 | 295 |
| 65° | 190 | 171 | 154 | 151 | 154 | 190 |
| 75° | 87 | 77 | 68 | 73 | 76 | 93 |
| 85° | 15 | 15 | 18 | 20 | 22 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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



TEST NUMBER: P580020

CATALOG NUMBER: HCC4W20D010BZ-HM40525835-41WWWB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1057.9 | 1057.9 | 1057.9 | 1057.9 | 1057.9 | 1057.9 | 1057.9 | 1057.9 | 1057.9 |
| 2.5° | 1080.9 | 1076.9 | 1071.4 | 1062.0 | 1052.5 | 1044.3 | 1036.2 | 1032.1 | 1030.7 |
| 5° | 1108.1 | 1100.0 | 1089.1 | 1071.4 | 1052.5 | 1036.2 | 1022.6 | 1015.8 | 1013.0 |
| 7.5° | 1127.2 | 1119.0 | 1101.3 | 1074.2 | 1047.0 | 1022.6 | 1000.9 | 991.4 | 988.6 |
| 10° | 1133.9 | 1124.4 | 1100.0 | 1063.3 | 1028.1 | 998.1 | 973.7 | 961.4 | 956.0 |
| 12.5° | 1139.3 | 1127.2 | 1096.0 | 1052.5 | 1009.0 | 972.3 | 946.5 | 930.2 | 926.2 |
| 15° | 1146.2 | 1132.5 | 1094.6 | 1041.6 | 990.0 | 946.5 | 918.1 | 903.0 | 897.6 |
| 17.5° | 1139.3 | 1124.4 | 1079.7 | 1019.9 | 961.4 | 913.9 | 882.7 | 869.1 | 863.7 |
| 20° | 1116.3 | 1100.0 | 1049.7 | 986.0 | 923.4 | 874.6 | 843.3 | 829.7 | 823.0 |
| 22.5° | 1080.9 | 1063.3 | 1011.8 | 943.9 | 880.0 | 832.5 | 802.6 | 789.0 | 784.9 |
| 25° | 1036.2 | 1018.5 | 964.2 | 894.9 | 832.5 | 786.3 | 760.5 | 748.3 | 744.2 |
| 27.5° | 983.2 | 965.5 | 912.6 | 844.7 | 784.9 | 741.4 | 721.1 | 708.8 | 706.2 |
| 30° | 919.3 | 901.8 | 850.2 | 787.6 | 732.0 | 691.2 | 674.9 | 665.4 | 664.1 |
| 32.5° | 848.8 | 833.9 | 786.3 | 729.3 | 676.3 | 642.3 | 630.2 | 623.3 | 622.0 |
| 35° | 779.5 | 763.2 | 721.1 | 669.5 | 623.3 | 593.5 | 582.6 | 581.2 | 581.2 |
| 37.5° | 708.8 | 692.6 | 658.6 | 611.1 | 571.7 | 544.6 | 540.5 | 541.8 | 541.8 |
| 40° | 639.6 | 624.7 | 594.8 | 555.4 | 520.2 | 499.7 | 498.4 | 501.1 | 502.5 |
| 42.5° | 574.4 | 562.3 | 535.1 | 501.1 | 471.2 | 454.9 | 456.3 | 461.7 | 465.8 |
| 45° | 516.0 | 505.1 | 480.7 | 450.9 | 425.1 | 412.8 | 416.9 | 423.7 | 427.7 |
| 47.5° | 463.0 | 453.5 | 430.5 | 403.3 | 381.6 | 373.5 | 378.9 | 387.0 | 392.5 |
| 50° | 414.2 | 406.0 | 384.4 | 355.8 | 338.1 | 332.7 | 339.5 | 347.7 | 350.4 |
| 52.5° | 370.7 | 362.6 | 339.5 | 315.1 | 301.4 | 298.8 | 305.6 | 312.3 | 316.5 |
| 55° | 326.0 | 319.1 | 300.2 | 278.4 | 267.5 | 266.2 | 273.0 | 278.4 | 281.1 |
| 57.5° | 289.3 | 282.5 | 264.8 | 245.8 | 236.3 | 234.9 | 241.7 | 245.8 | 247.2 |
| 60° | 253.9 | 247.2 | 230.9 | 213.2 | 206.5 | 206.5 | 210.5 | 213.2 | 214.6 |
| 62.5° | 221.4 | 214.6 | 199.6 | 184.7 | 179.3 | 179.3 | 179.3 | 180.7 | 184.7 |
| 65° | 190.2 | 184.7 | 171.1 | 157.5 | 153.5 | 150.7 | 150.7 | 150.7 | 153.5 |
| 67.5° | 161.6 | 156.2 | 145.3 | 133.1 | 129.0 | 124.9 | 123.5 | 126.3 | 126.3 |
| 70° | 134.4 | 130.4 | 119.5 | 110.0 | 105.9 | 101.9 | 100.5 | 105.9 | 105.9 |
| 72.5° | 110.0 | 105.9 | 99.1 | 89.6 | 85.6 | 84.2 | 86.9 | 89.6 | 91.0 |
| 75° | 86.9 | 82.8 | 77.4 | 72.0 | 67.9 | 69.3 | 73.3 | 74.7 | 76.0 |
| 77.5° | 65.1 | 63.8 | 58.4 | 54.4 | 54.4 | 55.6 | 58.4 | 61.1 | 62.5 |
| 80° | 46.2 | 44.8 | 42.1 | 39.3 | 40.7 | 43.5 | 44.8 | 47.5 | 46.2 |
| 82.5° | 28.6 | 28.6 | 27.2 | 27.2 | 28.6 | 31.2 | 32.6 | 34.0 | 35.3 |
| 85° | 14.9 | 14.9 | 14.9 | 16.3 | 17.7 | 19.0 | 20.4 | 21.7 | 21.7 |
| 87.5° | 4.1 | 5.4 | 5.4 | 6.8 | 8.1 | 8.1 | 9.5 | 9.5 | 9.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

Scaled Data Report



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

Scaled Data Report



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

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



(END OF REPORT)