

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: P581046

Luminaire Tested: **HCC4S05D010MW-HM40525840-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581046
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: HCC4S05D010MW-HM40525840-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

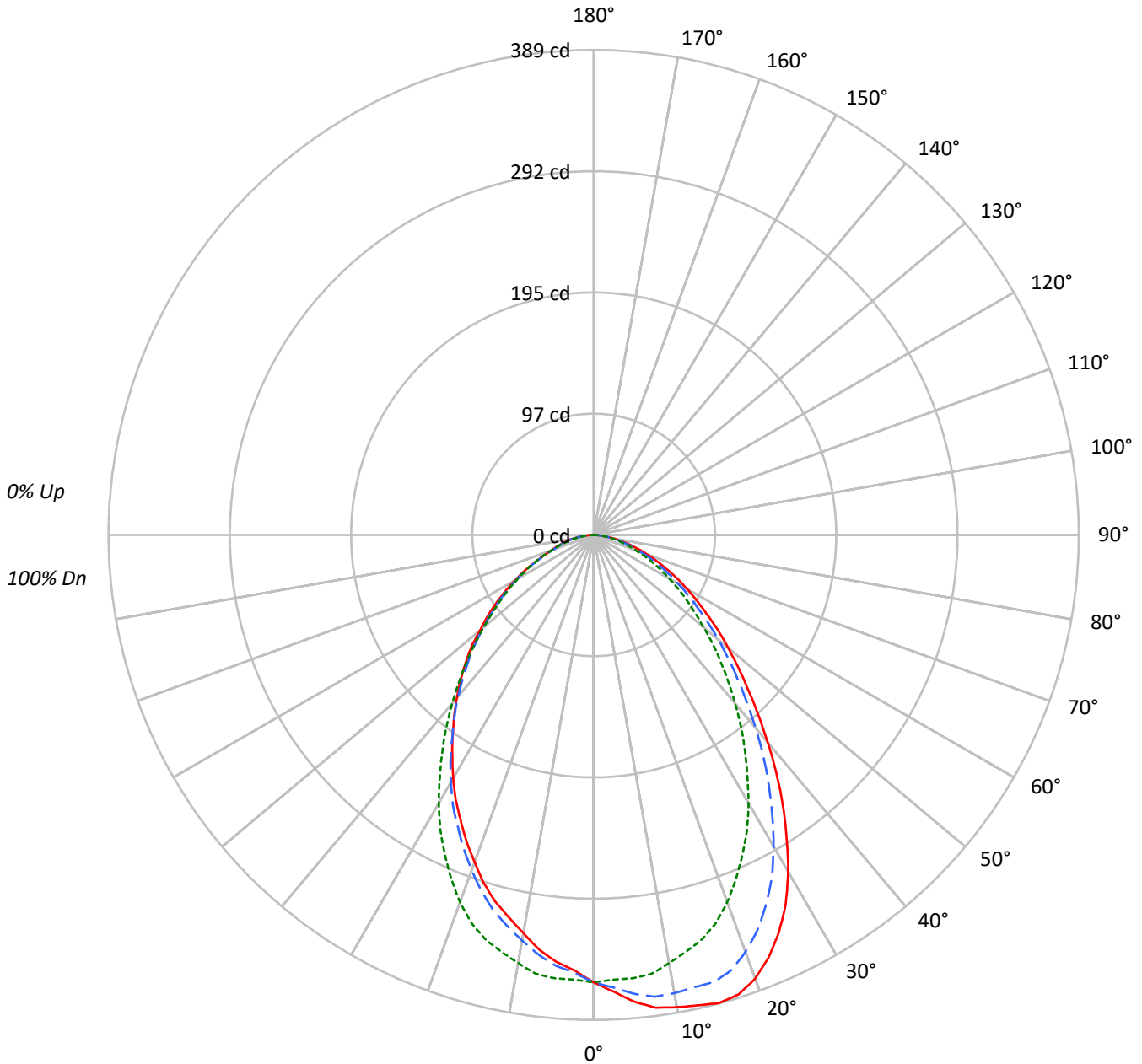
Lumens per Lamp: N/A
Luminaire Lumens: 696.0 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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 | | | | | | | | | | |
| 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 | 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° | 44269 | 44269 | 44269 |
| 5° | 46543 | 44203 | 42556 |
| 10° | 48183 | 43674 | 40618 |
| 15° | 49636 | 42881 | 38884 |
| 20° | 49696 | 41124 | 36648 |
| 25° | 47838 | 38434 | 34351 |
| 30° | 44423 | 35365 | 32089 |
| 35° | 39828 | 31847 | 29679 |
| 40° | 34941 | 28403 | 27453 |
| 45° | 30526 | 25136 | 25311 |
| 50° | 26961 | 22010 | 22797 |
| 55° | 23763 | 19526 | 20494 |
| 60° | 21240 | 17268 | 17959 |
| 65° | 18825 | 15206 | 15206 |
| 70° | 16445 | 12983 | 12983 |
| 75° | 14059 | 10961 | 12296 |
| 80° | 11152 | 9802 | 11152 |
| 85° | 7218 | 8491 | 10473 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 34.0 | 4.9 |
| 10°-20° | 95.7 | 13.8 |
| 20°-30° | 134.1 | 19.3 |
| 30°-40° | 138.2 | 19.9 |
| 40°-50° | 117.7 | 16.9 |
| 50°-60° | 87.2 | 12.5 |
| 60°-70° | 54.7 | 7.9 |
| 70°-80° | 27.2 | 3.9 |
| 80°-90° | 7.1 | 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° | 263.9 | 37.9 |
| 0°-40° | 402.1 | 57.8 |
| 0°-60° | 606.9 | 87.2 |
| 0°-90° | 696.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 696.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 359 | 359 | 359 | 359 | 359 | |
| 5° | 376 | 369 | 357 | 347 | 344 | 36 |
| 15° | 389 | 371 | 336 | 311 | 304 | 109 |
| 25° | 352 | 327 | 282 | 258 | 252 | 161 |
| 35° | 264 | 245 | 212 | 198 | 197 | 165 |
| 45° | 175 | 163 | 144 | 141 | 145 | 136 |
| 55° | 110 | 102 | 91 | 93 | 95 | 100 |
| 65° | 64 | 58 | 52 | 51 | 52 | 64 |
| 75° | 30 | 26 | 23 | 25 | 26 | 32 |
| 85° | 5 | 5 | 6 | 7 | 7 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P581046

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 358.9 | 358.9 | 358.9 | 358.9 | 358.9 | 358.9 | 358.9 | 358.9 | 358.9 |
| 2.5° | 366.7 | 365.4 | 363.4 | 360.2 | 357.0 | 354.2 | 351.5 | 350.1 | 349.7 |
| 5° | 375.9 | 373.2 | 369.4 | 363.4 | 357.0 | 351.5 | 346.9 | 344.6 | 343.7 |
| 7.5° | 382.4 | 379.5 | 373.6 | 364.3 | 355.1 | 346.9 | 339.5 | 336.3 | 335.4 |
| 10° | 384.7 | 381.5 | 373.2 | 360.7 | 348.7 | 338.6 | 330.3 | 326.2 | 324.3 |
| 12.5° | 386.5 | 382.4 | 371.7 | 357.0 | 342.3 | 329.8 | 321.1 | 315.5 | 314.2 |
| 15° | 388.7 | 384.2 | 371.3 | 353.3 | 335.8 | 321.1 | 311.4 | 306.3 | 304.5 |
| 17.5° | 386.5 | 381.5 | 366.3 | 345.9 | 326.2 | 310.0 | 299.4 | 294.9 | 292.9 |
| 20° | 378.6 | 373.2 | 356.0 | 334.5 | 313.3 | 296.7 | 286.0 | 281.5 | 279.2 |
| 22.5° | 366.7 | 360.7 | 343.2 | 320.2 | 298.5 | 282.4 | 272.3 | 267.6 | 266.3 |
| 25° | 351.5 | 345.5 | 327.1 | 303.6 | 282.4 | 266.7 | 258.0 | 253.8 | 252.4 |
| 27.5° | 333.5 | 327.6 | 309.5 | 286.5 | 266.3 | 251.5 | 244.6 | 240.5 | 239.5 |
| 30° | 311.9 | 305.9 | 288.4 | 267.2 | 248.3 | 234.5 | 228.9 | 225.8 | 225.3 |
| 32.5° | 287.9 | 282.8 | 266.7 | 247.3 | 229.4 | 217.9 | 213.7 | 211.5 | 211.0 |
| 35° | 264.5 | 258.9 | 244.6 | 227.1 | 211.5 | 201.3 | 197.6 | 197.1 | 197.1 |
| 37.5° | 240.5 | 234.9 | 223.4 | 207.3 | 194.0 | 184.8 | 183.3 | 183.8 | 183.8 |
| 40° | 217.0 | 211.9 | 201.8 | 188.4 | 176.4 | 169.6 | 169.1 | 170.0 | 170.5 |
| 42.5° | 194.9 | 190.7 | 181.5 | 170.0 | 159.8 | 154.4 | 154.8 | 156.6 | 158.0 |
| 45° | 175.0 | 171.4 | 163.1 | 152.9 | 144.1 | 140.1 | 141.4 | 143.7 | 145.1 |
| 47.5° | 157.1 | 153.9 | 146.1 | 136.8 | 129.4 | 126.7 | 128.5 | 131.3 | 133.1 |
| 50° | 140.5 | 137.8 | 130.4 | 120.7 | 114.7 | 112.8 | 115.2 | 117.9 | 118.8 |
| 52.5° | 125.8 | 123.0 | 115.2 | 106.9 | 102.3 | 101.4 | 103.6 | 105.9 | 107.4 |
| 55° | 110.5 | 108.3 | 101.8 | 94.4 | 90.8 | 90.2 | 92.6 | 94.4 | 95.3 |
| 57.5° | 98.1 | 95.8 | 89.8 | 83.4 | 80.1 | 79.7 | 81.9 | 83.4 | 83.9 |
| 60° | 86.1 | 83.9 | 78.3 | 72.3 | 70.0 | 70.0 | 71.4 | 72.3 | 72.8 |
| 62.5° | 75.1 | 72.8 | 67.8 | 62.7 | 60.8 | 60.8 | 60.8 | 61.3 | 62.7 |
| 65° | 64.5 | 62.7 | 58.0 | 53.5 | 52.1 | 51.2 | 51.2 | 51.2 | 52.1 |
| 67.5° | 54.8 | 53.0 | 49.3 | 45.2 | 43.8 | 42.3 | 41.9 | 42.8 | 42.8 |
| 70° | 45.6 | 44.3 | 40.5 | 37.3 | 36.0 | 34.5 | 34.0 | 36.0 | 36.0 |
| 72.5° | 37.3 | 36.0 | 33.6 | 30.4 | 29.1 | 28.6 | 29.5 | 30.4 | 30.9 |
| 75° | 29.5 | 28.1 | 26.2 | 24.4 | 23.0 | 23.5 | 24.9 | 25.3 | 25.8 |
| 77.5° | 22.1 | 21.7 | 19.9 | 18.4 | 18.4 | 18.8 | 19.9 | 20.8 | 21.2 |
| 80° | 15.7 | 15.2 | 14.3 | 13.4 | 13.8 | 14.8 | 15.2 | 16.1 | 15.7 |
| 82.5° | 9.6 | 9.6 | 9.2 | 9.2 | 9.6 | 10.6 | 11.0 | 11.5 | 12.0 |
| 85° | 5.1 | 5.1 | 5.1 | 5.6 | 6.0 | 6.5 | 6.9 | 7.4 | 7.4 |
| 87.5° | 1.4 | 1.8 | 1.8 | 2.3 | 2.7 | 2.7 | 3.2 | 3.2 | 3.2 |
| 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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— 0°-180° - - 45°-225° - - - - 90°-270°

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