

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: P580447

Luminaire Tested: **HCC4S35D010MW-HM43040835-41WDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580447
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S35D010MW-HM43040835-41WDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

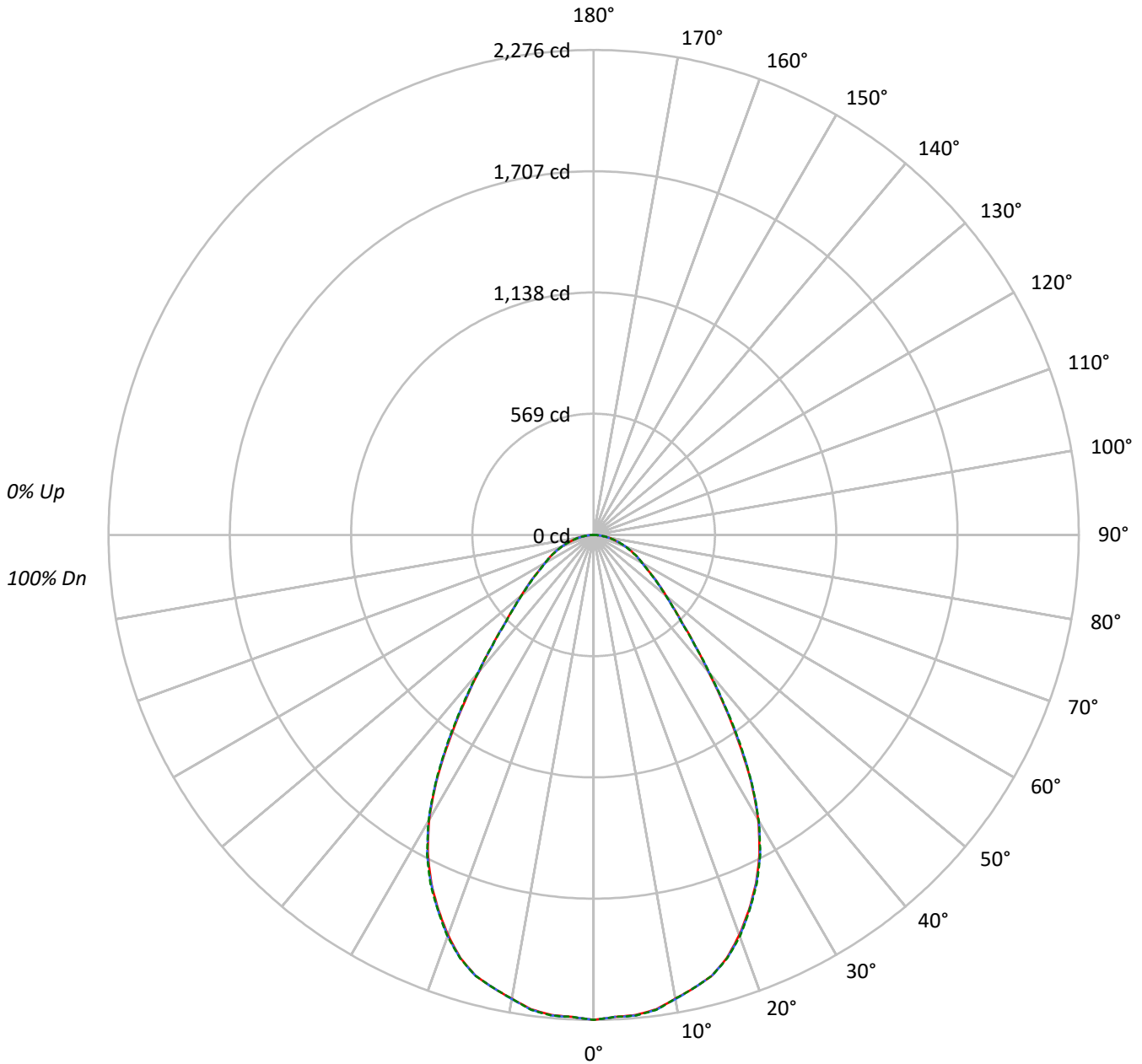
Lumens per Lamp: N/A
Luminaire Lumens: 3511.7 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
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 | | | | 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 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 | | | | 89 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 91 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | 78 |
| 3 | 96 | 87 | 81 | 76 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 | | | | 69 |
| 4 | 90 | 80 | 72 | 67 | 87 | 78 | 72 | 66 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 62 | | | | 62 |
| 5 | 84 | 73 | 65 | 60 | 82 | 72 | 65 | 59 | 70 | 64 | 59 | 68 | 63 | 58 | 66 | 62 | 58 | 56 | | | | 56 |
| 6 | 78 | 67 | 59 | 54 | 77 | 66 | 59 | 54 | 64 | 58 | 53 | 63 | 57 | 53 | 61 | 56 | 53 | 51 | | | | 51 |
| 7 | 73 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | | | 46 |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | | | 42 |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | 39 |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | 36 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 280735 | 280735 | 280735 |
| 5° | 280061 | 280358 | 280358 |
| 10° | 276799 | 277100 | 276799 |
| 15° | 273501 | 273501 | 273501 |
| 20° | 262261 | 262878 | 263193 |
| 25° | 245301 | 245628 | 246267 |
| 30° | 219808 | 220477 | 220477 |
| 35° | 178449 | 179880 | 180226 |
| 40° | 134690 | 135431 | 135801 |
| 45° | 103145 | 102761 | 102761 |
| 50° | 85008 | 84547 | 84547 |
| 55° | 72965 | 72471 | 72471 |
| 60° | 65102 | 64534 | 64534 |
| 65° | 61203 | 61203 | 61203 |
| 70° | 56909 | 56909 | 56909 |
| 75° | 51660 | 52756 | 51660 |
| 80° | 48515 | 46881 | 48515 |
| 85° | 40051 | 40051 | 40051 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 214.4 | 6.1 |
| 10°-20° | 600.1 | 17.1 |
| 20°-30° | 824.6 | 23.5 |
| 30°-40° | 741.5 | 21.1 |
| 40°-50° | 468.5 | 13.3 |
| 50°-60° | 305.9 | 8.7 |
| 60°-70° | 207.2 | 5.9 |
| 70°-80° | 116.7 | 3.3 |
| 80°-90° | 32.8 | 0.9 |
| 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° | 1639.2 | 46.7 |
| 0°-40° | 2380.7 | 67.8 |
| 0°-60° | 3155.1 | 89.8 |
| 0°-90° | 3511.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3511.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2276 | 2276 | 2276 | 2276 | 2276 | |
| 5° | 2262 | 2262 | 2264 | 2264 | 2264 | 214 |
| 15° | 2142 | 2142 | 2142 | 2142 | 2142 | 600 |
| 25° | 1802 | 1805 | 1805 | 1810 | 1810 | 823 |
| 35° | 1185 | 1190 | 1195 | 1199 | 1197 | 738 |
| 45° | 591 | 589 | 589 | 589 | 589 | 469 |
| 55° | 339 | 339 | 337 | 339 | 337 | 307 |
| 65° | 210 | 210 | 210 | 210 | 210 | 208 |
| 75° | 108 | 111 | 111 | 111 | 108 | 116 |
| 85° | 28 | 28 | 28 | 28 | 28 | 33 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2276.0 | 2276.0 | 2276.0 | 2276.0 | 2276.0 |
| 2.5° | 2264.3 | 2264.3 | 2264.3 | 2264.3 | 2264.3 |
| 5° | 2261.9 | 2261.9 | 2264.3 | 2264.3 | 2264.3 |
| 7.5° | 2245.4 | 2247.8 | 2247.8 | 2247.8 | 2247.8 |
| 10° | 2210.0 | 2210.0 | 2212.4 | 2212.4 | 2210.0 |
| 12.5° | 2177.1 | 2177.1 | 2177.1 | 2179.4 | 2177.1 |
| 15° | 2141.8 | 2141.8 | 2141.8 | 2141.8 | 2141.8 |
| 17.5° | 2080.5 | 2082.9 | 2082.9 | 2082.9 | 2082.9 |
| 20° | 1998.0 | 2002.7 | 2002.7 | 2005.1 | 2005.1 |
| 22.5° | 1903.7 | 1906.1 | 1908.4 | 1910.8 | 1908.4 |
| 25° | 1802.4 | 1804.8 | 1804.8 | 1809.5 | 1809.5 |
| 27.5° | 1684.7 | 1687.0 | 1691.7 | 1691.7 | 1691.7 |
| 30° | 1543.3 | 1545.6 | 1548.0 | 1548.0 | 1548.0 |
| 32.5° | 1376.0 | 1376.0 | 1380.7 | 1383.1 | 1380.7 |
| 35° | 1185.1 | 1189.9 | 1194.6 | 1199.3 | 1196.9 |
| 37.5° | 1003.7 | 1008.5 | 1010.8 | 1010.8 | 1013.2 |
| 40° | 836.5 | 841.1 | 841.1 | 845.8 | 843.4 |
| 42.5° | 704.5 | 702.2 | 702.2 | 706.9 | 704.5 |
| 45° | 591.3 | 589.1 | 589.1 | 589.1 | 589.1 |
| 47.5° | 508.9 | 506.6 | 506.6 | 506.6 | 506.6 |
| 50° | 443.0 | 440.6 | 440.6 | 440.6 | 440.6 |
| 52.5° | 388.8 | 386.4 | 386.4 | 386.4 | 384.1 |
| 55° | 339.3 | 339.3 | 337.0 | 339.3 | 337.0 |
| 57.5° | 294.5 | 294.5 | 294.5 | 294.5 | 294.5 |
| 60° | 263.9 | 261.6 | 261.6 | 261.6 | 261.6 |
| 62.5° | 235.6 | 235.6 | 235.6 | 235.6 | 235.6 |
| 65° | 209.7 | 209.7 | 209.7 | 209.7 | 209.7 |
| 67.5° | 183.8 | 181.4 | 183.8 | 183.8 | 181.4 |
| 70° | 157.8 | 155.6 | 157.8 | 157.8 | 157.8 |
| 72.5° | 132.0 | 132.0 | 132.0 | 134.3 | 132.0 |
| 75° | 108.4 | 110.7 | 110.7 | 110.7 | 108.4 |
| 77.5° | 87.2 | 89.6 | 87.2 | 87.2 | 87.2 |
| 80° | 68.3 | 66.0 | 66.0 | 66.0 | 68.3 |
| 82.5° | 47.1 | 47.1 | 47.1 | 47.1 | 47.1 |
| 85° | 28.3 | 28.3 | 28.3 | 28.3 | 28.3 |
| 87.5° | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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