

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: P581493

Luminaire Tested: **HCC4W07D010SL-HM40525927-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581493
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4W07D010SL-HM40525927-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

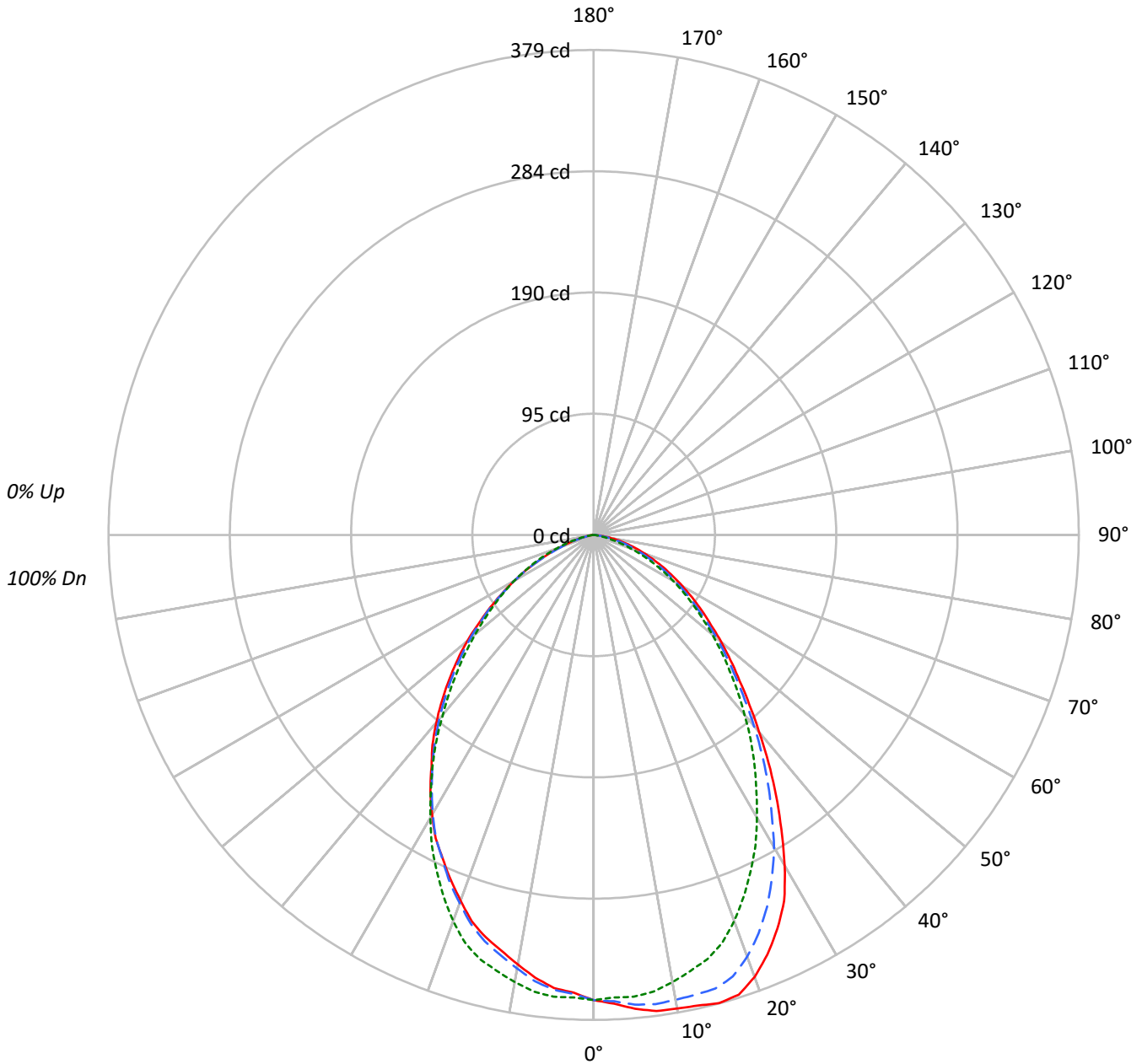
Lumens per Lamp: N/A
Luminaire Lumens: 692.9 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | 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 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | 88 |
| 2 | 103 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 | | | | 77 |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 | | | | 67 |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | 59 |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | 52 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | 47 |
| 7 | 71 | 58 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 45 | 55 | 49 | 44 | 54 | 48 | 44 | 42 | | | | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | 35 |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 44836 | 44836 | 44836 |
| 5° | 46023 | 44846 | 44004 |
| 10° | 47068 | 44451 | 42697 |
| 15° | 48372 | 43826 | 41578 |
| 20° | 48252 | 42135 | 39904 |
| 25° | 46218 | 39468 | 37971 |
| 30° | 42515 | 36333 | 35949 |
| 35° | 37403 | 32991 | 33247 |
| 40° | 32364 | 29514 | 30770 |
| 45° | 28137 | 26218 | 27805 |
| 50° | 24965 | 23142 | 24696 |
| 55° | 22150 | 20279 | 21161 |
| 60° | 19711 | 17614 | 17614 |
| 65° | 17541 | 14622 | 13717 |
| 70° | 15147 | 11072 | 9773 |
| 75° | 12677 | 7339 | 6005 |
| 80° | 9589 | 3552 | 3267 |
| 85° | 5095 | 1274 | 1274 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 34.4 | 5.0 |
| 10°-20° | 97.6 | 14.1 |
| 20°-30° | 137.6 | 19.9 |
| 30°-40° | 142.2 | 20.5 |
| 40°-50° | 120.5 | 17.4 |
| 50°-60° | 87.7 | 12.7 |
| 60°-70° | 51.2 | 7.4 |
| 70°-80° | 19.0 | 2.7 |
| 80°-90° | 2.5 | 0.4 |
| 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° | 269.7 | 38.9 |
| 0°-40° | 411.9 | 59.4 |
| 0°-60° | 620.1 | 89.5 |
| 0°-90° | 692.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 692.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 364 | 364 | 364 | 364 | 364 | |
| 5° | 372 | 368 | 362 | 357 | 355 | 36 |
| 15° | 379 | 367 | 343 | 329 | 326 | 107 |
| 25° | 340 | 321 | 290 | 280 | 279 | 155 |
| 35° | 248 | 238 | 219 | 220 | 221 | 155 |
| 45° | 161 | 157 | 150 | 156 | 159 | 125 |
| 55° | 103 | 98 | 94 | 98 | 98 | 93 |
| 65° | 60 | 55 | 50 | 47 | 47 | 60 |
| 75° | 27 | 22 | 15 | 12 | 13 | 29 |
| 85° | 4 | 2 | 1 | 1 | 1 | 5 |
| 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° | 363.5 | 363.5 | 363.5 | 363.5 | 363.5 | 363.5 | 363.5 | 363.5 | 363.5 |
| 2.5° | 366.7 | 365.8 | 364.8 | 363.5 | 361.8 | 360.4 | 359.0 | 358.1 | 358.1 |
| 5° | 371.7 | 370.3 | 368.5 | 365.3 | 362.2 | 359.5 | 356.8 | 355.4 | 355.4 |
| 7.5° | 375.3 | 373.5 | 369.8 | 365.3 | 359.9 | 355.9 | 351.8 | 349.9 | 349.0 |
| 10° | 375.8 | 373.9 | 368.9 | 362.2 | 354.9 | 348.7 | 344.1 | 341.4 | 340.9 |
| 12.5° | 376.7 | 374.4 | 368.0 | 358.6 | 349.0 | 341.4 | 336.4 | 333.8 | 332.9 |
| 15° | 378.8 | 375.8 | 367.1 | 354.9 | 343.2 | 334.2 | 328.8 | 326.5 | 325.6 |
| 17.5° | 376.7 | 372.1 | 361.8 | 347.3 | 334.2 | 324.2 | 318.9 | 316.6 | 316.6 |
| 20° | 367.6 | 363.0 | 350.8 | 335.0 | 321.0 | 311.6 | 306.1 | 304.9 | 304.0 |
| 22.5° | 354.9 | 349.9 | 336.8 | 320.2 | 306.1 | 297.6 | 293.9 | 292.1 | 291.8 |
| 25° | 339.6 | 334.6 | 320.6 | 303.5 | 290.0 | 282.7 | 279.5 | 279.5 | 279.0 |
| 27.5° | 322.4 | 316.1 | 301.7 | 286.8 | 273.7 | 268.2 | 266.9 | 266.9 | 267.3 |
| 30° | 298.5 | 293.9 | 281.8 | 267.3 | 255.1 | 251.5 | 251.5 | 252.4 | 252.4 |
| 32.5° | 272.8 | 269.6 | 258.8 | 246.1 | 236.6 | 234.4 | 235.2 | 237.0 | 237.5 |
| 35° | 248.4 | 244.8 | 237.5 | 226.2 | 219.1 | 218.2 | 219.5 | 220.8 | 220.8 |
| 37.5° | 224.4 | 220.8 | 215.9 | 206.8 | 201.4 | 201.9 | 203.7 | 205.5 | 206.8 |
| 40° | 201.0 | 198.2 | 194.6 | 187.4 | 183.3 | 185.2 | 187.4 | 189.2 | 191.1 |
| 42.5° | 180.1 | 177.5 | 174.8 | 169.3 | 166.6 | 168.9 | 171.6 | 173.4 | 175.3 |
| 45° | 161.3 | 159.4 | 156.7 | 152.2 | 150.3 | 152.6 | 155.8 | 157.6 | 159.4 |
| 47.5° | 145.0 | 144.1 | 140.4 | 136.3 | 135.4 | 137.7 | 140.4 | 142.7 | 144.1 |
| 50° | 130.1 | 128.7 | 125.5 | 121.4 | 120.6 | 124.2 | 126.0 | 127.3 | 128.7 |
| 52.5° | 115.6 | 114.3 | 110.6 | 107.0 | 107.0 | 109.7 | 111.1 | 111.5 | 112.9 |
| 55° | 103.0 | 101.6 | 98.0 | 95.3 | 94.3 | 96.6 | 97.5 | 97.5 | 98.4 |
| 57.5° | 91.3 | 89.9 | 86.3 | 83.1 | 82.6 | 84.0 | 84.0 | 84.0 | 84.4 |
| 60° | 79.9 | 78.5 | 75.0 | 72.3 | 71.4 | 71.8 | 71.4 | 70.9 | 71.4 |
| 62.5° | 69.5 | 68.2 | 64.5 | 61.5 | 60.5 | 60.5 | 59.2 | 58.7 | 59.2 |
| 65° | 60.1 | 57.8 | 55.1 | 51.9 | 50.1 | 48.8 | 47.0 | 47.0 | 47.0 |
| 67.5° | 50.5 | 48.8 | 45.6 | 42.4 | 40.2 | 37.9 | 35.3 | 36.1 | 36.5 |
| 70° | 42.0 | 40.6 | 37.0 | 33.9 | 30.7 | 28.0 | 25.7 | 26.6 | 27.1 |
| 72.5° | 34.4 | 32.5 | 29.4 | 25.7 | 23.0 | 19.5 | 18.1 | 19.0 | 19.0 |
| 75° | 26.6 | 24.8 | 22.1 | 18.5 | 15.4 | 12.2 | 12.2 | 12.6 | 12.6 |
| 77.5° | 19.9 | 18.1 | 15.4 | 12.2 | 9.4 | 7.2 | 7.6 | 7.6 | 7.6 |
| 80° | 13.5 | 12.2 | 9.9 | 7.2 | 5.0 | 4.1 | 4.1 | 4.1 | 4.6 |
| 82.5° | 7.6 | 6.8 | 5.5 | 3.6 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 85° | 3.6 | 2.7 | 2.3 | 1.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 87.5° | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 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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