

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: P581080

Luminaire Tested: **HCC4S05D010BZ-HM40525930-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581080
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S05D010BZ-HM40525930-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

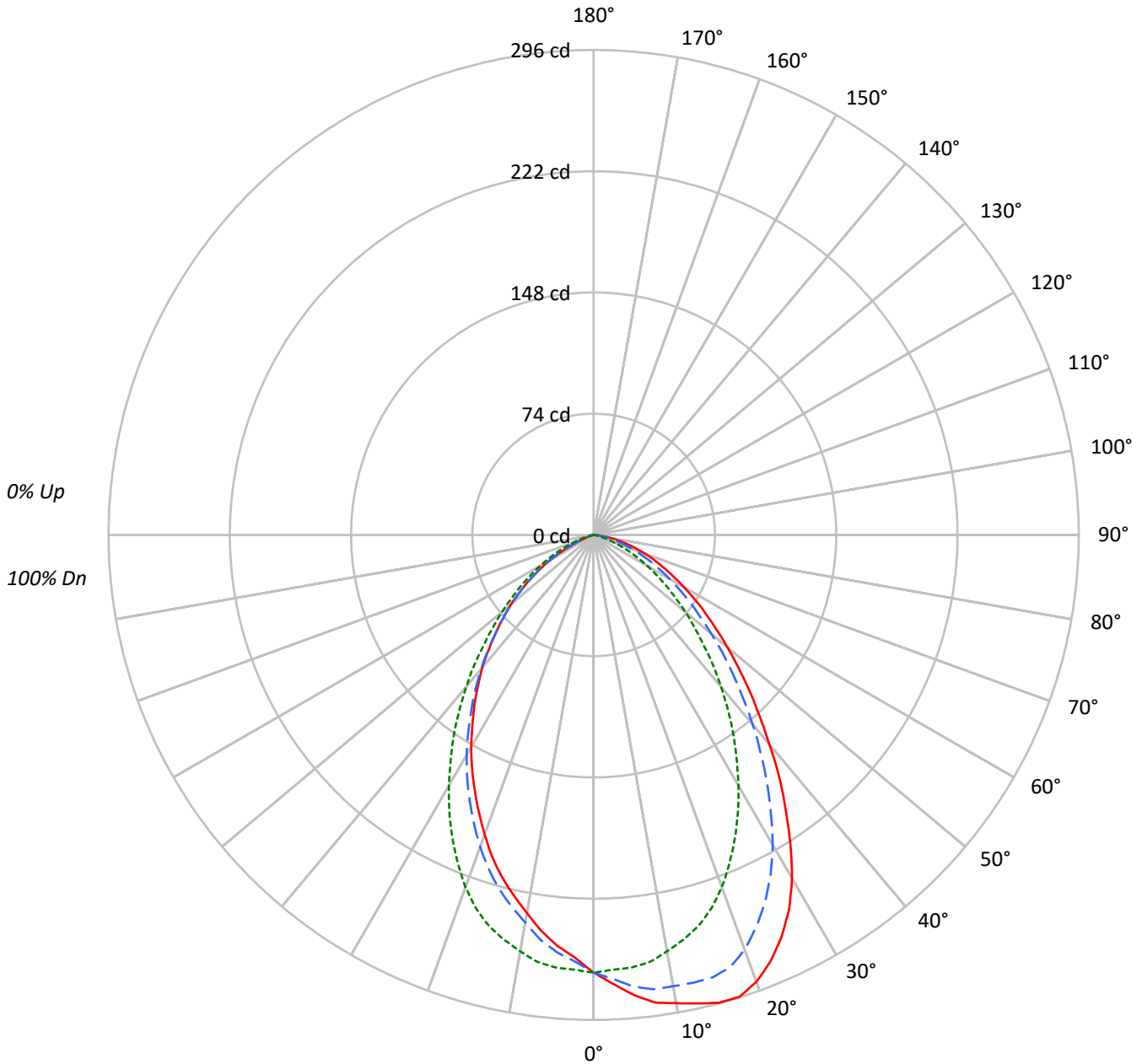
Lumens per Lamp: N/A
Luminaire Lumens: 461.3 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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 | | | | | | | | | | |
| 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 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 86 | 83 | 80 | 78 | | | | | | | | |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | | | | |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | | | | | | |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | | | | |
| 7 | 72 | 60 | 53 | 47 | 71 | 60 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | | | | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | | | | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 32946 | 32946 | 32946 |
| 5° | 34904 | 32824 | 31189 |
| 10° | 36347 | 32314 | 29358 |
| 15° | 37747 | 31541 | 27608 |
| 20° | 38092 | 30020 | 25530 |
| 25° | 36869 | 27764 | 23368 |
| 30° | 34467 | 25153 | 21264 |
| 35° | 30718 | 22376 | 19108 |
| 40° | 26841 | 19451 | 17019 |
| 45° | 23409 | 16484 | 14705 |
| 50° | 20398 | 14008 | 12607 |
| 55° | 17892 | 11591 | 10193 |
| 60° | 15640 | 9374 | 7499 |
| 65° | 13659 | 6975 | 4203 |
| 70° | 11901 | 4508 | 1334 |
| 75° | 9770 | 2383 | 381 |
| 80° | 7245 | 1065 | 213 |
| 85° | 4387 | 425 | 425 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 25.2 | 5.5 |
| 10°-20° | 70.5 | 15.3 |
| 20°-30° | 97.5 | 21.1 |
| 30°-40° | 98.1 | 21.3 |
| 40°-50° | 79.1 | 17.2 |
| 50°-60° | 53.5 | 11.6 |
| 60°-70° | 27.2 | 5.9 |
| 70°-80° | 8.7 | 1.9 |
| 80°-90° | 1.3 | 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° | 193.3 | 41.9 |
| 0°-40° | 291.4 | 63.2 |
| 0°-60° | 424.0 | 91.9 |
| 0°-90° | 461.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 461.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 267 | 267 | 267 | 267 | 267 | |
| 5° | 282 | 277 | 265 | 256 | 252 | 27 |
| 15° | 296 | 280 | 247 | 223 | 216 | 83 |
| 25° | 271 | 247 | 204 | 179 | 172 | 124 |
| 35° | 204 | 184 | 149 | 130 | 127 | 127 |
| 45° | 134 | 120 | 94 | 84 | 84 | 104 |
| 55° | 83 | 72 | 54 | 47 | 47 | 75 |
| 65° | 47 | 38 | 24 | 16 | 14 | 47 |
| 75° | 20 | 14 | 5 | 1 | 1 | 22 |
| 85° | 3 | 2 | 0 | 0 | 0 | 4 |
| 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° | 267.1 | 267.1 | 267.1 | 267.1 | 267.1 | 267.1 | 267.1 | 267.1 | 267.1 |
| 2.5° | 274.3 | 272.7 | 271.3 | 268.5 | 265.6 | 262.5 | 260.6 | 259.1 | 258.3 |
| 5° | 281.9 | 280.0 | 276.6 | 270.9 | 265.1 | 259.8 | 255.7 | 253.0 | 251.9 |
| 7.5° | 287.9 | 285.3 | 279.7 | 271.6 | 262.9 | 254.6 | 249.2 | 245.4 | 243.9 |
| 10° | 290.2 | 287.2 | 279.7 | 269.0 | 258.0 | 247.7 | 240.1 | 236.3 | 234.4 |
| 12.5° | 292.9 | 289.5 | 280.0 | 266.7 | 253.0 | 240.8 | 232.1 | 227.2 | 225.3 |
| 15° | 295.6 | 291.0 | 279.7 | 263.3 | 247.0 | 232.9 | 223.4 | 218.5 | 216.2 |
| 17.5° | 295.6 | 290.2 | 276.6 | 257.5 | 238.9 | 224.2 | 213.5 | 207.8 | 205.9 |
| 20° | 290.2 | 284.2 | 269.3 | 248.5 | 228.7 | 212.7 | 202.5 | 196.8 | 194.5 |
| 22.5° | 281.9 | 275.0 | 259.1 | 237.4 | 216.6 | 201.0 | 190.7 | 185.3 | 183.1 |
| 25° | 270.9 | 264.0 | 247.3 | 225.0 | 204.0 | 188.4 | 179.0 | 174.0 | 171.7 |
| 27.5° | 258.0 | 250.4 | 233.7 | 211.2 | 190.7 | 175.9 | 167.2 | 162.6 | 160.7 |
| 30° | 242.0 | 234.8 | 218.5 | 196.4 | 176.6 | 163.0 | 155.0 | 150.8 | 149.3 |
| 32.5° | 223.4 | 217.4 | 201.3 | 180.8 | 162.2 | 149.7 | 142.4 | 139.0 | 137.6 |
| 35° | 204.0 | 198.3 | 184.2 | 165.3 | 148.6 | 136.8 | 130.0 | 127.7 | 126.9 |
| 37.5° | 185.8 | 180.8 | 167.2 | 149.7 | 134.5 | 124.3 | 118.2 | 116.7 | 115.9 |
| 40° | 166.7 | 163.3 | 150.8 | 134.8 | 120.8 | 111.7 | 106.8 | 105.7 | 105.7 |
| 42.5° | 149.7 | 145.8 | 134.8 | 120.4 | 107.9 | 98.7 | 95.3 | 94.2 | 94.5 |
| 45° | 134.2 | 130.3 | 120.1 | 106.8 | 94.5 | 87.1 | 84.3 | 84.3 | 84.3 |
| 47.5° | 119.6 | 116.2 | 106.8 | 93.1 | 83.2 | 77.1 | 74.5 | 74.5 | 74.8 |
| 50° | 106.3 | 104.1 | 93.4 | 81.7 | 73.0 | 67.2 | 65.4 | 64.9 | 65.7 |
| 52.5° | 93.9 | 91.1 | 81.7 | 71.1 | 62.7 | 58.1 | 56.2 | 55.8 | 56.2 |
| 55° | 83.2 | 80.1 | 71.8 | 61.5 | 53.9 | 49.4 | 47.1 | 46.8 | 47.4 |
| 57.5° | 73.0 | 70.7 | 62.0 | 52.8 | 45.6 | 41.0 | 39.2 | 38.4 | 38.7 |
| 60° | 63.4 | 61.2 | 53.2 | 44.5 | 38.0 | 33.5 | 30.8 | 30.0 | 30.4 |
| 62.5° | 54.7 | 52.8 | 45.2 | 36.9 | 30.4 | 26.2 | 23.6 | 21.7 | 22.4 |
| 65° | 46.8 | 44.8 | 38.0 | 29.6 | 23.9 | 19.4 | 15.5 | 14.1 | 14.4 |
| 67.5° | 39.8 | 37.6 | 31.1 | 23.6 | 17.8 | 12.9 | 8.7 | 7.9 | 7.9 |
| 70° | 33.0 | 30.8 | 25.1 | 18.3 | 12.5 | 6.8 | 3.7 | 3.7 | 3.7 |
| 72.5° | 26.6 | 24.7 | 19.4 | 13.6 | 7.9 | 3.1 | 1.5 | 1.5 | 1.5 |
| 75° | 20.5 | 19.0 | 14.4 | 9.5 | 5.0 | 1.5 | 1.1 | 0.8 | 0.8 |
| 77.5° | 15.2 | 13.6 | 10.2 | 6.5 | 3.1 | 0.8 | 0.8 | 0.8 | 0.8 |
| 80° | 10.2 | 9.1 | 6.8 | 3.7 | 1.5 | 0.3 | 0.3 | 0.3 | 0.3 |
| 82.5° | 6.1 | 5.3 | 3.7 | 1.9 | 0.8 | 0.3 | 0.3 | 0.3 | 0.3 |
| 85° | 3.1 | 2.3 | 1.5 | 0.8 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 87.5° | 0.8 | 0.3 | 0.3 | 0.3 | 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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

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