

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: P580087

Luminaire Tested: **HCC4S20D010MB-HM40525935-41WDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580087
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: HCC4S20D010MB-HM40525935-41WDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

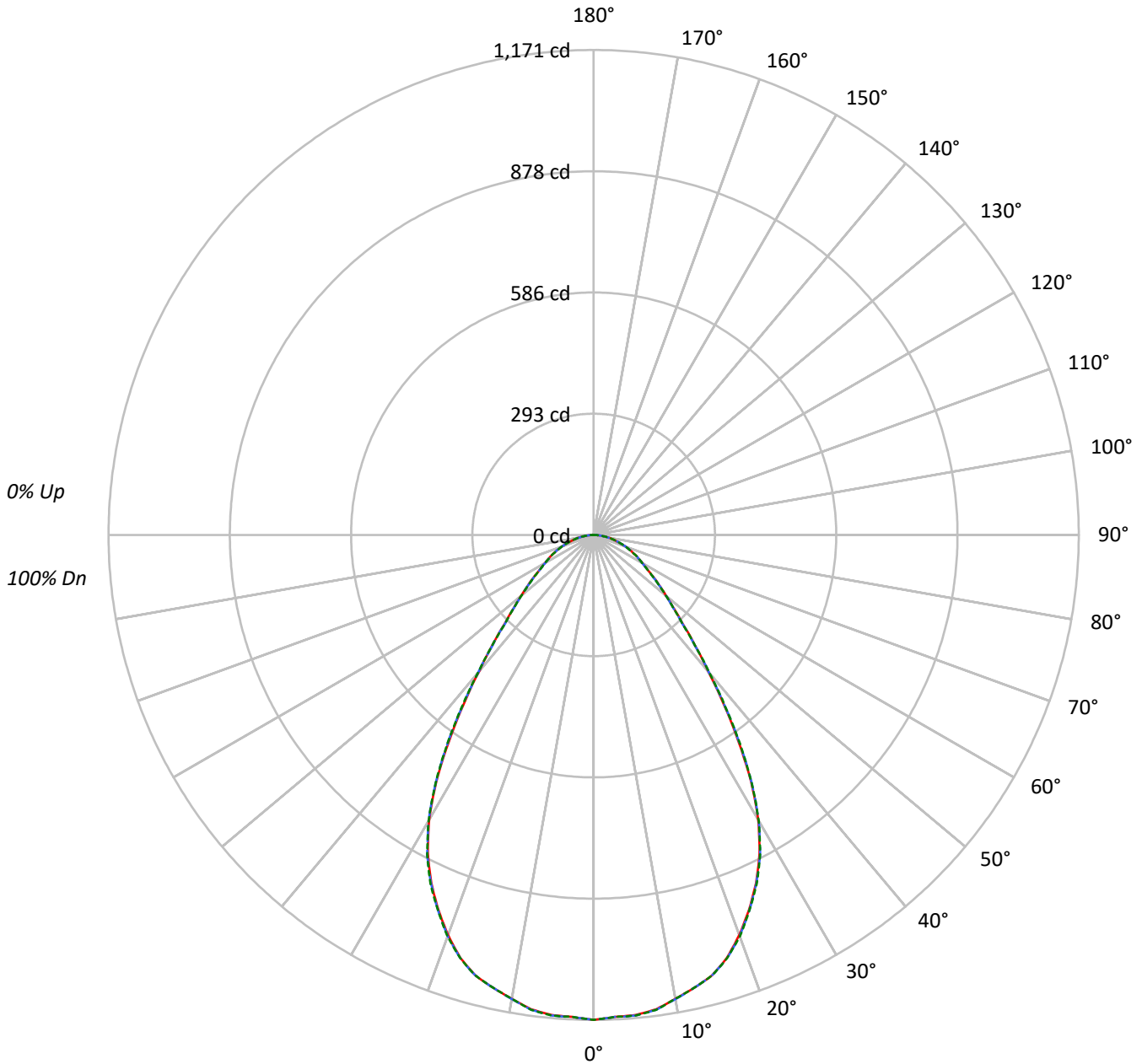
Lumens per Lamp: N/A
Luminaire Lumens: 1806.7 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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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 | | | | | | | | | 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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 | | | | | | | | | | | | | | | | | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 91 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | | | | | | | | | | | | | | | | |
| 3 | 96 | 87 | 81 | 76 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | | | | | | | | | | | | |
| 4 | 90 | 80 | 72 | 67 | 87 | 78 | 72 | 66 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 64 | 62 | | | | | | | | | | | | | | | | | | | |
| 5 | 84 | 73 | 65 | 60 | 82 | 72 | 65 | 59 | 70 | 64 | 59 | 68 | 63 | 58 | 66 | 62 | 58 | 56 | | | | | | | | | | | | | | | | | | | |
| 6 | 78 | 67 | 59 | 54 | 77 | 66 | 59 | 54 | 64 | 58 | 53 | 63 | 57 | 53 | 61 | 56 | 53 | 51 | | | | | | | | | | | | | | | | | | | |
| 7 | 73 | 62 | 54 | 49 | 72 | 61 | 54 | 49 | 60 | 53 | 49 | 58 | 53 | 48 | 57 | 52 | 48 | 46 | | | | | | | | | | | | | | | | | | | |
| 8 | 69 | 57 | 50 | 45 | 68 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 53 | 48 | 44 | 42 | | | | | | | | | | | | | | | | | | | |
| 9 | 65 | 53 | 46 | 41 | 64 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | | | | | | | | | | | | | | | | |
| 10 | 61 | 50 | 43 | 38 | 60 | 49 | 43 | 38 | 48 | 42 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 144438 | 144438 | 144438 |
| 5° | 144086 | 144247 | 144247 |
| 10° | 142420 | 142570 | 142420 |
| 15° | 140709 | 140709 | 140709 |
| 20° | 134924 | 135252 | 135410 |
| 25° | 126203 | 126380 | 126706 |
| 30° | 113101 | 113443 | 113443 |
| 35° | 91807 | 92545 | 92725 |
| 40° | 69301 | 69688 | 69881 |
| 45° | 53081 | 52854 | 52854 |
| 50° | 43732 | 43483 | 43483 |
| 55° | 37547 | 37268 | 37268 |
| 60° | 33501 | 33180 | 33180 |
| 65° | 31492 | 31492 | 31492 |
| 70° | 29284 | 29284 | 29284 |
| 75° | 26545 | 27165 | 26545 |
| 80° | 24932 | 24151 | 24932 |
| 85° | 20662 | 20662 | 20662 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.3 | 6.1 |
| 10°-20° | 308.8 | 17.1 |
| 20°-30° | 424.3 | 23.5 |
| 30°-40° | 381.5 | 21.1 |
| 40°-50° | 241.0 | 13.3 |
| 50°-60° | 157.4 | 8.7 |
| 60°-70° | 106.6 | 5.9 |
| 70°-80° | 60.0 | 3.3 |
| 80°-90° | 16.9 | 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° | 843.4 | 46.7 |
| 0°-40° | 1224.8 | 67.8 |
| 0°-60° | 1623.2 | 89.8 |
| 0°-90° | 1806.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1806.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1171 | 1171 | 1171 | 1171 | 1171 | |
| 5° | 1164 | 1164 | 1165 | 1165 | 1165 | 110 |
| 15° | 1102 | 1102 | 1102 | 1102 | 1102 | 309 |
| 25° | 927 | 929 | 929 | 931 | 931 | 423 |
| 35° | 610 | 612 | 615 | 617 | 616 | 380 |
| 45° | 304 | 303 | 303 | 303 | 303 | 241 |
| 55° | 175 | 175 | 173 | 175 | 173 | 158 |
| 65° | 108 | 108 | 108 | 108 | 108 | 107 |
| 75° | 56 | 57 | 57 | 57 | 56 | 60 |
| 85° | 15 | 15 | 15 | 15 | 15 | 17 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1171.0 | 1171.0 | 1171.0 | 1171.0 | 1171.0 |
| 2.5° | 1165.0 | 1165.0 | 1165.0 | 1165.0 | 1165.0 |
| 5° | 1163.7 | 1163.7 | 1165.0 | 1165.0 | 1165.0 |
| 7.5° | 1155.3 | 1156.5 | 1156.5 | 1156.5 | 1156.5 |
| 10° | 1137.1 | 1137.1 | 1138.3 | 1138.3 | 1137.1 |
| 12.5° | 1120.2 | 1120.2 | 1120.2 | 1121.3 | 1120.2 |
| 15° | 1101.9 | 1101.9 | 1101.9 | 1101.9 | 1101.9 |
| 17.5° | 1070.4 | 1071.6 | 1071.6 | 1071.6 | 1071.6 |
| 20° | 1027.9 | 1030.4 | 1030.4 | 1031.6 | 1031.6 |
| 22.5° | 979.5 | 980.7 | 981.9 | 983.1 | 981.9 |
| 25° | 927.3 | 928.6 | 928.6 | 931.0 | 931.0 |
| 27.5° | 866.8 | 867.9 | 870.3 | 870.3 | 870.3 |
| 30° | 794.1 | 795.2 | 796.5 | 796.5 | 796.5 |
| 32.5° | 707.9 | 707.9 | 710.3 | 711.6 | 710.3 |
| 35° | 609.7 | 612.2 | 614.6 | 617.1 | 615.8 |
| 37.5° | 516.4 | 518.8 | 520.0 | 520.0 | 521.3 |
| 40° | 430.4 | 432.8 | 432.8 | 435.2 | 434.0 |
| 42.5° | 362.5 | 361.2 | 361.2 | 363.7 | 362.5 |
| 45° | 304.3 | 303.0 | 303.0 | 303.0 | 303.0 |
| 47.5° | 261.9 | 260.6 | 260.6 | 260.6 | 260.6 |
| 50° | 227.9 | 226.6 | 226.6 | 226.6 | 226.6 |
| 52.5° | 200.0 | 198.8 | 198.8 | 198.8 | 197.6 |
| 55° | 174.6 | 174.6 | 173.3 | 174.6 | 173.3 |
| 57.5° | 151.5 | 151.5 | 151.5 | 151.5 | 151.5 |
| 60° | 135.8 | 134.5 | 134.5 | 134.5 | 134.5 |
| 62.5° | 121.2 | 121.2 | 121.2 | 121.2 | 121.2 |
| 65° | 107.9 | 107.9 | 107.9 | 107.9 | 107.9 |
| 67.5° | 94.5 | 93.4 | 94.5 | 94.5 | 93.4 |
| 70° | 81.2 | 80.1 | 81.2 | 81.2 | 81.2 |
| 72.5° | 67.9 | 67.9 | 67.9 | 69.0 | 67.9 |
| 75° | 55.7 | 57.0 | 57.0 | 57.0 | 55.7 |
| 77.5° | 44.8 | 46.1 | 44.8 | 44.8 | 44.8 |
| 80° | 35.1 | 34.0 | 34.0 | 34.0 | 35.1 |
| 82.5° | 24.2 | 24.2 | 24.2 | 24.2 | 24.2 |
| 85° | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 |
| 87.5° | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 |
| 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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