

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: P580031

Luminaire Tested: **HCC4S20D010MB-HM40525840-41NDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580031
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S20D010MB-HM40525840-41NDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

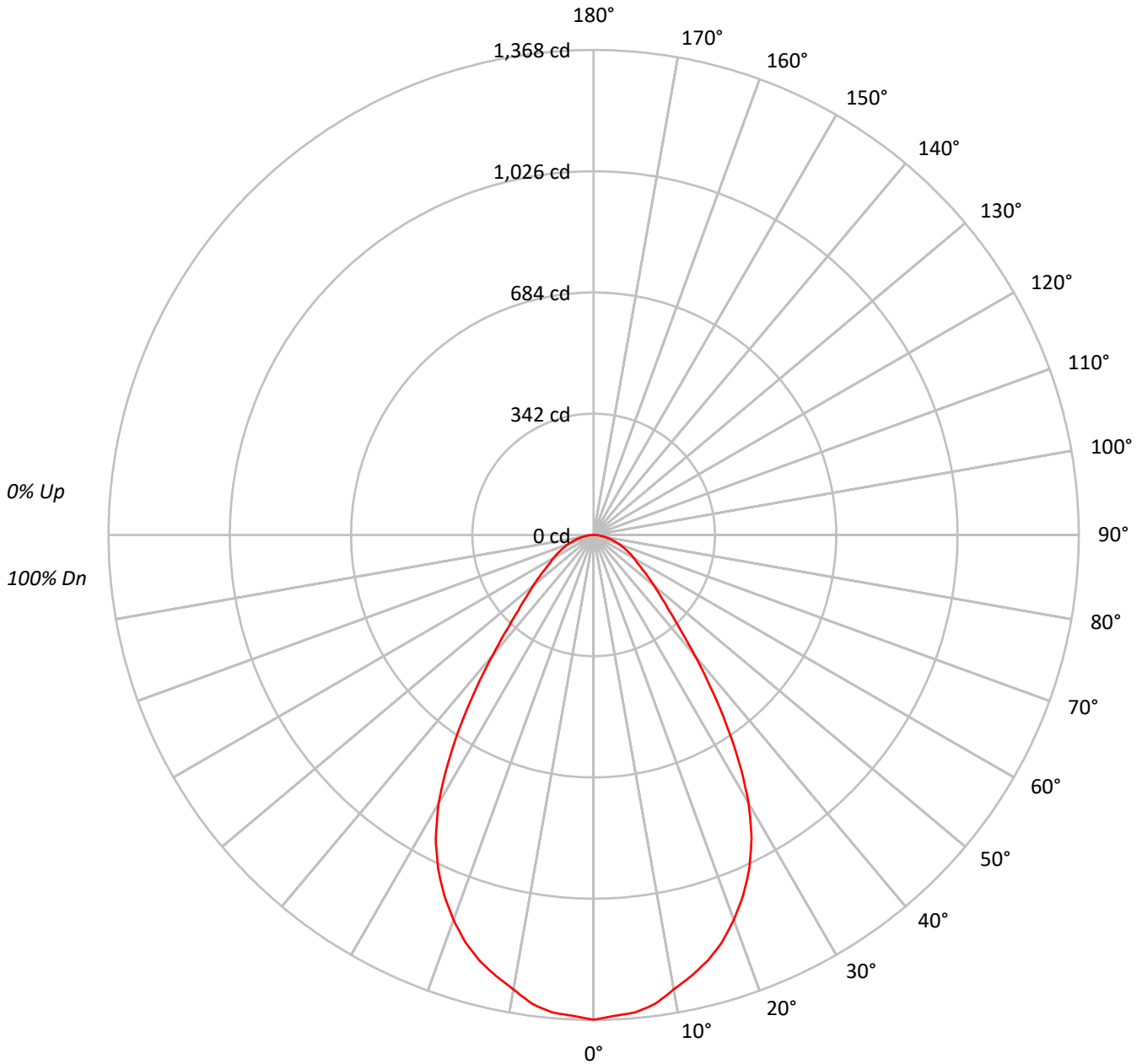
Lumens per Lamp: N/A
Luminaire Lumens: 1920.0 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.01
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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 | | | | |
| 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 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 92 | 91 | 89 | | | 89 |
| 2 | 104 | 97 | 92 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 79 | | | 79 |
| 3 | 97 | 88 | 82 | 77 | 95 | 87 | 81 | 76 | 84 | 79 | 75 | 82 | 77 | 74 | 79 | 76 | 73 | 71 | | | 71 |
| 4 | 90 | 81 | 74 | 68 | 88 | 80 | 73 | 68 | 77 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 64 | | | 64 |
| 5 | 85 | 74 | 67 | 61 | 83 | 73 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 60 | 68 | 63 | 59 | 58 | | | 58 |
| 6 | 79 | 68 | 61 | 56 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 64 | 59 | 55 | 63 | 58 | 54 | 52 | | | 52 |
| 7 | 75 | 63 | 56 | 51 | 73 | 62 | 56 | 51 | 61 | 55 | 50 | 60 | 54 | 50 | 59 | 53 | 50 | 48 | | | 48 |
| 8 | 70 | 59 | 52 | 47 | 69 | 58 | 51 | 46 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | 44 |
| 9 | 66 | 55 | 48 | 43 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 47 | 43 | 51 | 46 | 42 | 41 | | | 41 |
| 10 | 63 | 51 | 44 | 40 | 62 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 43 | 39 | 48 | 43 | 39 | 38 | | | 38 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 168675 |
| 5° | 167413 |
| 10° | 163048 |
| 15° | 158753 |
| 20° | 151660 |
| 25° | 141282 |
| 30° | 124424 |
| 35° | 98116 |
| 40° | 71218 |
| 45° | 52349 |
| 50° | 42562 |
| 55° | 35719 |
| 60° | 32366 |
| 65° | 29741 |
| 70° | 27661 |
| 75° | 25258 |
| 80° | 22801 |
| 85° | 19813 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.5 | 6.6 |
| 10°-20° | 348.7 | 18.2 |
| 20°-30° | 472.7 | 24.6 |
| 30°-40° | 405.6 | 21.1 |
| 40°-50° | 239.5 | 12.5 |
| 50°-60° | 151.8 | 7.9 |
| 60°-70° | 102.0 | 5.3 |
| 70°-80° | 56.3 | 2.9 |
| 80°-90° | 15.8 | 0.8 |
| 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° | 948.9 | 49.4 |
| 0°-40° | 1354.6 | 70.6 |
| 0°-60° | 1745.9 | 90.9 |
| 0°-90° | 1920.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1920.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1368 | |
| 5° | 1352 | 127 |
| 15° | 1243 | 349 |
| 25° | 1038 | 473 |
| 35° | 652 | 406 |
| 45° | 300 | 240 |
| 55° | 166 | 152 |
| 65° | 102 | 102 |
| 75° | 53 | 56 |
| 85° | 14 | 16 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1367.5 |
| 2.5° | 1357.7 |
| 5° | 1352.1 |
| 7.5° | 1334.0 |
| 10° | 1301.8 |
| 12.5° | 1274.0 |
| 15° | 1243.2 |
| 17.5° | 1204.2 |
| 20° | 1155.4 |
| 22.5° | 1101.0 |
| 25° | 1038.1 |
| 27.5° | 964.2 |
| 30° | 873.6 |
| 32.5° | 766.1 |
| 35° | 651.6 |
| 37.5° | 541.4 |
| 40° | 442.3 |
| 42.5° | 360.0 |
| 45° | 300.1 |
| 47.5° | 256.7 |
| 50° | 221.8 |
| 52.5° | 192.6 |
| 55° | 166.1 |
| 57.5° | 145.1 |
| 60° | 131.2 |
| 62.5° | 117.2 |
| 65° | 101.9 |
| 67.5° | 89.4 |
| 70° | 76.7 |
| 72.5° | 64.2 |
| 75° | 53.0 |
| 77.5° | 41.9 |
| 80° | 32.1 |
| 82.5° | 22.4 |
| 85° | 14.0 |
| 87.5° | 5.6 |
| 90° | 0.0 |

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Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180°

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(END OF REPORT)