

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: P580874

Luminaire Tested: **HC450D010-HM44560835-41NDC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580874
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560835-41NDC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4653.7 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 0.84 / 0.85
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

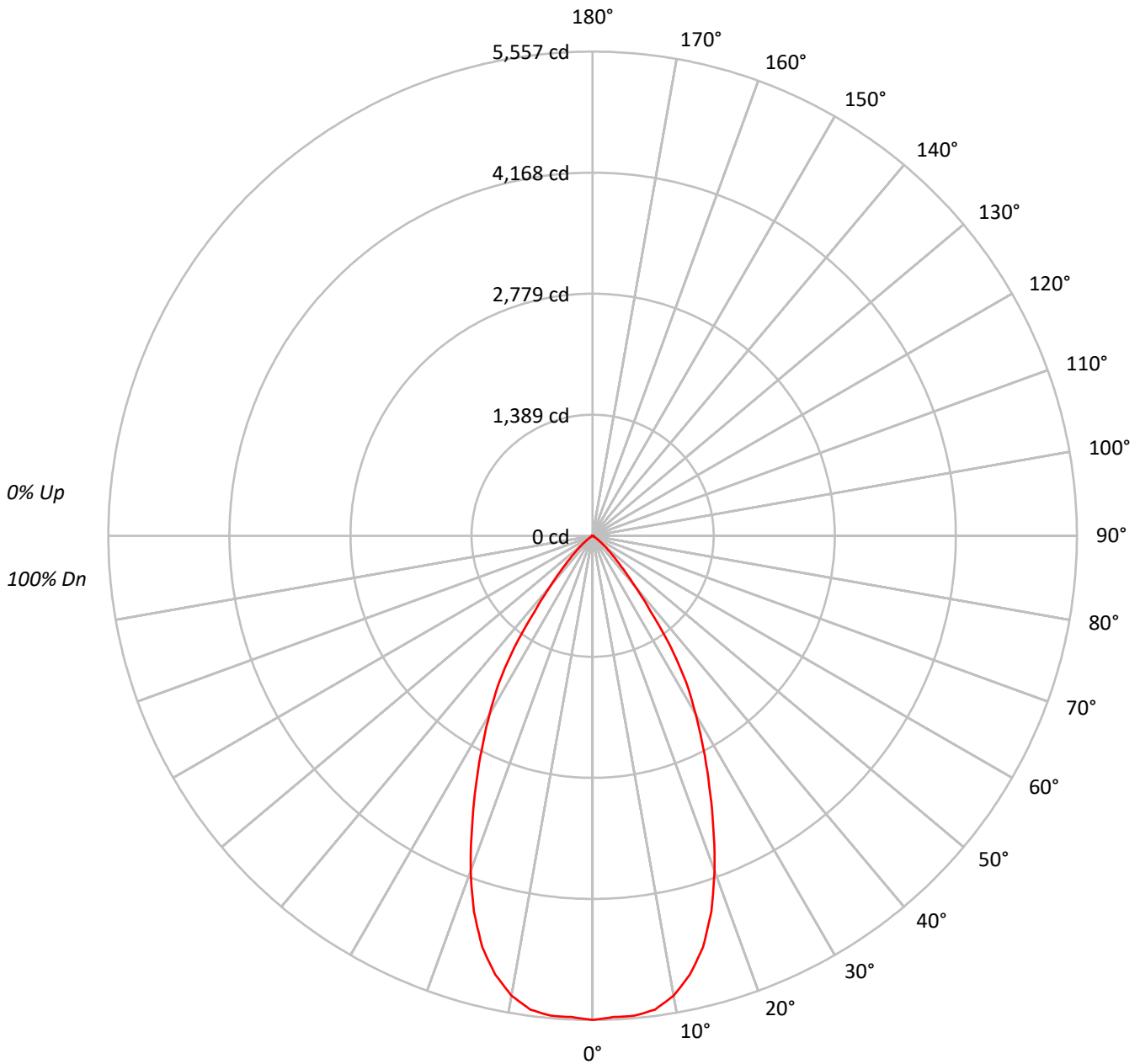
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | |
| 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 | 114 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 100 | 98 | 97 | 96 | 95 | 94 | | | 94 |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 95 | 98 | 95 | 93 | 95 | 93 | 91 | 93 | 91 | 89 | 87 | | | 87 |
| 3 | 103 | 96 | 91 | 87 | 101 | 95 | 90 | 87 | 92 | 88 | 85 | 90 | 87 | 84 | 88 | 85 | 83 | 81 | | | 81 |
| 4 | 97 | 90 | 85 | 80 | 96 | 89 | 84 | 80 | 87 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 77 | 76 | | | 76 |
| 5 | 93 | 84 | 79 | 74 | 91 | 83 | 78 | 74 | 82 | 77 | 73 | 80 | 76 | 73 | 78 | 75 | 72 | 71 | | | 71 |
| 6 | 88 | 79 | 73 | 69 | 87 | 78 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 66 | | | 66 |
| 7 | 84 | 75 | 69 | 64 | 82 | 74 | 68 | 64 | 73 | 68 | 64 | 71 | 67 | 64 | 70 | 66 | 63 | 62 | | | 62 |
| 8 | 80 | 70 | 64 | 60 | 78 | 70 | 64 | 60 | 69 | 64 | 60 | 68 | 63 | 60 | 67 | 62 | 59 | 58 | | | 58 |
| 9 | 76 | 66 | 61 | 57 | 75 | 66 | 60 | 57 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 55 | | | 55 |
| 10 | 72 | 63 | 57 | 53 | 71 | 62 | 57 | 53 | 62 | 57 | 53 | 61 | 56 | 53 | 60 | 56 | 53 | 51 | | | 51 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 685444 |
| 5° | 684558 |
| 10° | 671219 |
| 15° | 624131 |
| 20° | 536768 |
| 25° | 431196 |
| 30° | 336655 |
| 35° | 235699 |
| 40° | 120955 |
| 45° | 61402 |
| 50° | 30760 |
| 55° | 11505 |
| 60° | 4638 |
| 65° | 3677 |
| 70° | 2272 |
| 75° | 1477 |
| 80° | 2202 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 522.7 | 11.2 |
| 10°-20° | 1349.2 | 29.0 |
| 20°-30° | 1453.4 | 31.2 |
| 30°-40° | 954.9 | 20.5 |
| 40°-50° | 296.9 | 6.4 |
| 50°-60° | 58.3 | 1.3 |
| 60°-70° | 12.4 | 0.3 |
| 70°-80° | 4.5 | 0.1 |
| 80°-90° | 1.3 | 0.0 |
| 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° | 3325.3 | 71.5 |
| 0°-40° | 4280.3 | 92.0 |
| 0°-60° | 4635.5 | 99.6 |
| 0°-90° | 4653.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4653.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 5557 | |
| 5° | 5529 | 523 |
| 15° | 4888 | 1349 |
| 25° | 3168 | 1453 |
| 35° | 1565 | 955 |
| 45° | 352 | 297 |
| 55° | 54 | 58 |
| 65° | 13 | 12 |
| 75° | 3 | 5 |
| 85° | 0 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 5557.1 |
| 2.5° | 5528.8 |
| 5° | 5528.8 |
| 7.5° | 5484.9 |
| 10° | 5359.1 |
| 12.5° | 5158.0 |
| 15° | 4887.6 |
| 17.5° | 4526.2 |
| 20° | 4089.3 |
| 22.5° | 3617.8 |
| 25° | 3168.3 |
| 27.5° | 2750.2 |
| 30° | 2363.7 |
| 32.5° | 1999.0 |
| 35° | 1565.3 |
| 37.5° | 1090.7 |
| 40° | 751.2 |
| 42.5° | 518.6 |
| 45° | 352.0 |
| 47.5° | 238.9 |
| 50° | 160.3 |
| 52.5° | 100.6 |
| 55° | 53.5 |
| 57.5° | 22.0 |
| 60° | 18.8 |
| 62.5° | 15.7 |
| 65° | 12.6 |
| 67.5° | 9.4 |
| 70° | 6.3 |
| 72.5° | 6.3 |
| 75° | 3.1 |
| 77.5° | 3.1 |
| 80° | 3.1 |
| 82.5° | 3.1 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180°







(END OF REPORT)