

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: P592602

Luminaire Tested: **HC410D010-HM40525950-41WDBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592602
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-11)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC410D010-HM40525950-41WDBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 881.3 lumens
Efficiency: N/A
Efficacy: 89.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.03
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

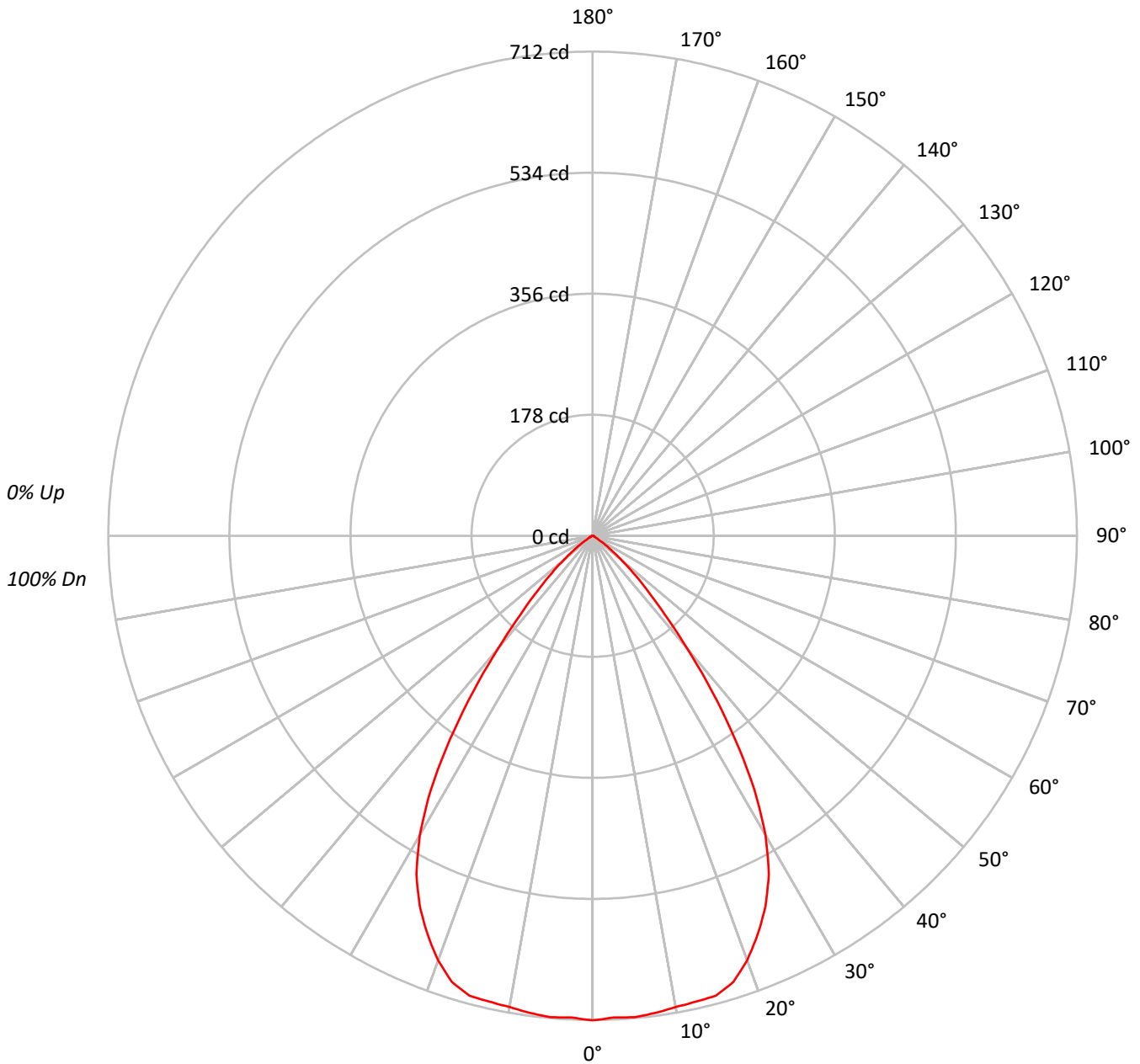
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 96 | 94 | 93 | | | 93 |
| 2 | 107 | 102 | 97 | 94 | 105 | 100 | 96 | 93 | 97 | 93 | 91 | 94 | 91 | 89 | 91 | 89 | 87 | 85 | | | 85 |
| 3 | 101 | 94 | 89 | 84 | 99 | 93 | 88 | 84 | 90 | 86 | 82 | 87 | 84 | 81 | 85 | 82 | 80 | 78 | | | 78 |
| 4 | 95 | 87 | 81 | 77 | 93 | 86 | 80 | 76 | 84 | 79 | 75 | 82 | 78 | 74 | 80 | 76 | 73 | 72 | | | 72 |
| 5 | 90 | 81 | 75 | 70 | 88 | 80 | 74 | 70 | 78 | 73 | 69 | 76 | 72 | 68 | 75 | 71 | 68 | 66 | | | 66 |
| 6 | 85 | 75 | 69 | 64 | 83 | 74 | 68 | 64 | 73 | 67 | 63 | 71 | 67 | 63 | 70 | 66 | 62 | 61 | | | 61 |
| 7 | 80 | 70 | 64 | 59 | 79 | 69 | 63 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 66 | 61 | 58 | 56 | | | 56 |
| 8 | 76 | 65 | 59 | 55 | 74 | 65 | 59 | 54 | 64 | 58 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | 52 | | | 52 |
| 9 | 72 | 61 | 55 | 51 | 71 | 61 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 58 | 53 | 50 | 49 | | | 49 |
| 10 | 68 | 58 | 51 | 47 | 67 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 55 | 50 | 47 | 45 | | | 45 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 87884 |
| 5° | 87972 |
| 10° | 88137 |
| 15° | 89426 |
| 20° | 87197 |
| 25° | 81808 |
| 30° | 72367 |
| 35° | 55021 |
| 40° | 34667 |
| 45° | 19903 |
| 50° | 10554 |
| 55° | 4387 |
| 60° | 1184 |
| 65° | 992 |
| 70° | 721 |
| 75° | 667 |
| 80° | 497 |
| 85° | 991 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 67.6 | 7.7 |
| 10°-20° | 196.1 | 22.3 |
| 20°-30° | 273.7 | 31.1 |
| 30°-40° | 225.2 | 25.6 |
| 40°-50° | 92.8 | 10.5 |
| 50°-60° | 20.9 | 2.4 |
| 60°-70° | 3.4 | 0.4 |
| 70°-80° | 1.3 | 0.1 |
| 80°-90° | 0.5 | 0.1 |
| 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° | 537.3 | 61.0 |
| 0°-40° | 762.5 | 86.5 |
| 0°-60° | 876.2 | 99.4 |
| 0°-90° | 881.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 881.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 712 | |
| 5° | 710 | 68 |
| 15° | 700 | 196 |
| 25° | 601 | 274 |
| 35° | 365 | 225 |
| 45° | 114 | 93 |
| 55° | 20 | 21 |
| 65° | 3 | 3 |
| 75° | 1 | 1 |
| 85° | 1 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 712.5 |
| 2.5° | 709.1 |
| 5° | 710.5 |
| 7.5° | 707.7 |
| 10° | 703.7 |
| 12.5° | 701.7 |
| 15° | 700.3 |
| 17.5° | 688.0 |
| 20° | 664.3 |
| 22.5° | 634.4 |
| 25° | 601.1 |
| 27.5° | 561.0 |
| 30° | 508.1 |
| 32.5° | 442.9 |
| 35° | 365.4 |
| 37.5° | 287.3 |
| 40° | 215.3 |
| 42.5° | 156.9 |
| 45° | 114.1 |
| 47.5° | 81.5 |
| 50° | 55.0 |
| 52.5° | 34.6 |
| 55° | 20.4 |
| 57.5° | 10.2 |
| 60° | 4.8 |
| 62.5° | 4.1 |
| 65° | 3.4 |
| 67.5° | 2.7 |
| 70° | 2.0 |
| 72.5° | 1.4 |
| 75° | 1.4 |
| 77.5° | 0.7 |
| 80° | 0.7 |
| 82.5° | 0.7 |
| 85° | 0.7 |
| 87.5° | 0.0 |
| 90° | 0.0 |



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180°







(END OF REPORT)