

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: P581012

Luminaire Tested: **HC405D010-HM40525835-41WDWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581012
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-10)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC405D010-HM40525835-41WDWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 723.4 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.14 / 1.07
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

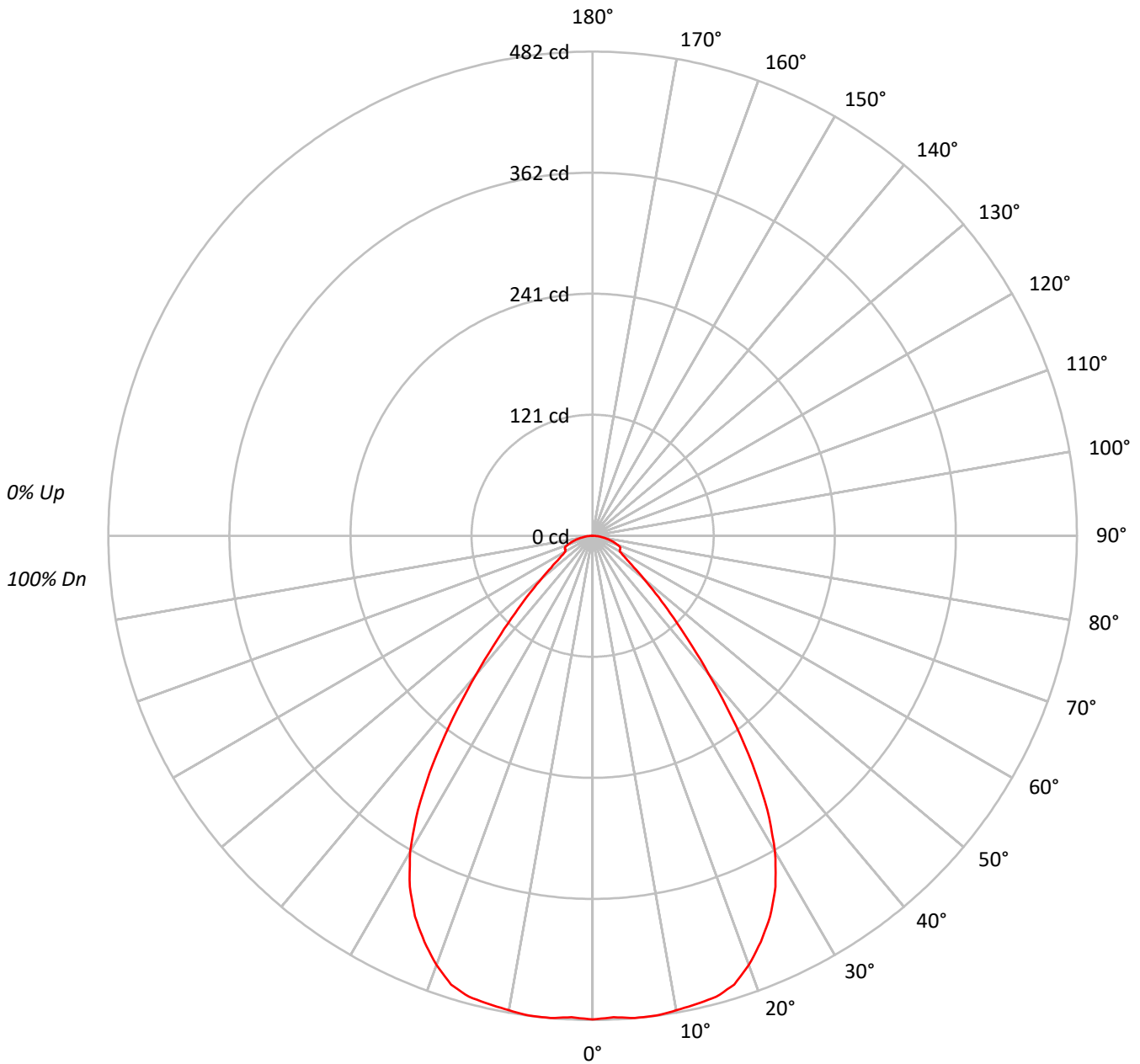
Input Watts (W): 6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 92 | 90 | | | 90 |
| 2 | 104 | 98 | 93 | 89 | 102 | 96 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 84 | 82 | 80 | | | 80 |
| 3 | 98 | 89 | 83 | 78 | 95 | 88 | 82 | 78 | 85 | 80 | 76 | 83 | 78 | 75 | 80 | 77 | 74 | 72 | | | 72 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 74 | 69 | 78 | 73 | 69 | 76 | 72 | 68 | 74 | 70 | 67 | 65 | | | 65 |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 61 | 59 | | | 59 |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 60 | 56 | 64 | 59 | 56 | 54 | | | 54 |
| 7 | 76 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | 49 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 46 | | | 46 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 | | | 42 |
| 10 | 64 | 52 | 46 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 | | | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 59391 |
| 5° | 59667 |
| 10° | 60082 |
| 15° | 60682 |
| 20° | 59672 |
| 25° | 56916 |
| 30° | 51715 |
| 35° | 41725 |
| 40° | 28951 |
| 45° | 19014 |
| 50° | 12742 |
| 55° | 9053 |
| 60° | 7721 |
| 65° | 8902 |
| 70° | 9521 |
| 75° | 9198 |
| 80° | 8311 |
| 85° | 7501 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.9 | 6.3 |
| 10°-20° | 133.5 | 18.5 |
| 20°-30° | 190.7 | 26.4 |
| 30°-40° | 170.4 | 23.6 |
| 40°-50° | 87.4 | 12.1 |
| 50°-60° | 39.7 | 5.5 |
| 60°-70° | 29.6 | 4.1 |
| 70°-80° | 20.1 | 2.8 |
| 80°-90° | 6.0 | 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° | 370.1 | 51.2 |
| 0°-40° | 540.5 | 74.7 |
| 0°-60° | 667.6 | 92.3 |
| 0°-90° | 723.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 723.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 482 | |
| 5° | 482 | 46 |
| 15° | 475 | 134 |
| 25° | 418 | 191 |
| 35° | 277 | 170 |
| 45° | 109 | 87 |
| 55° | 42 | 40 |
| 65° | 30 | 30 |
| 75° | 19 | 20 |
| 85° | 5 | 6 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 481.5 |
| 2.5° | 479.7 |
| 5° | 481.9 |
| 7.5° | 481.9 |
| 10° | 479.7 |
| 12.5° | 477.5 |
| 15° | 475.2 |
| 17.5° | 468.5 |
| 20° | 454.6 |
| 22.5° | 437.5 |
| 25° | 418.2 |
| 27.5° | 394.1 |
| 30° | 363.1 |
| 32.5° | 323.7 |
| 35° | 277.1 |
| 37.5° | 227.3 |
| 40° | 179.8 |
| 42.5° | 140.3 |
| 45° | 109.0 |
| 47.5° | 85.1 |
| 50° | 66.4 |
| 52.5° | 52.0 |
| 55° | 42.1 |
| 57.5° | 35.4 |
| 60° | 31.3 |
| 62.5° | 30.5 |
| 65° | 30.5 |
| 67.5° | 29.6 |
| 70° | 26.4 |
| 72.5° | 22.8 |
| 75° | 19.3 |
| 77.5° | 15.2 |
| 80° | 11.7 |
| 82.5° | 8.5 |
| 85° | 5.3 |
| 87.5° | 2.3 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)