

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: P581471

Luminaire Tested: **HC407D010-HM40525840-41NDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581471
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: HC407D010-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
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 838.2 lumens
Efficiency: N/A
Efficacy: 104.8 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

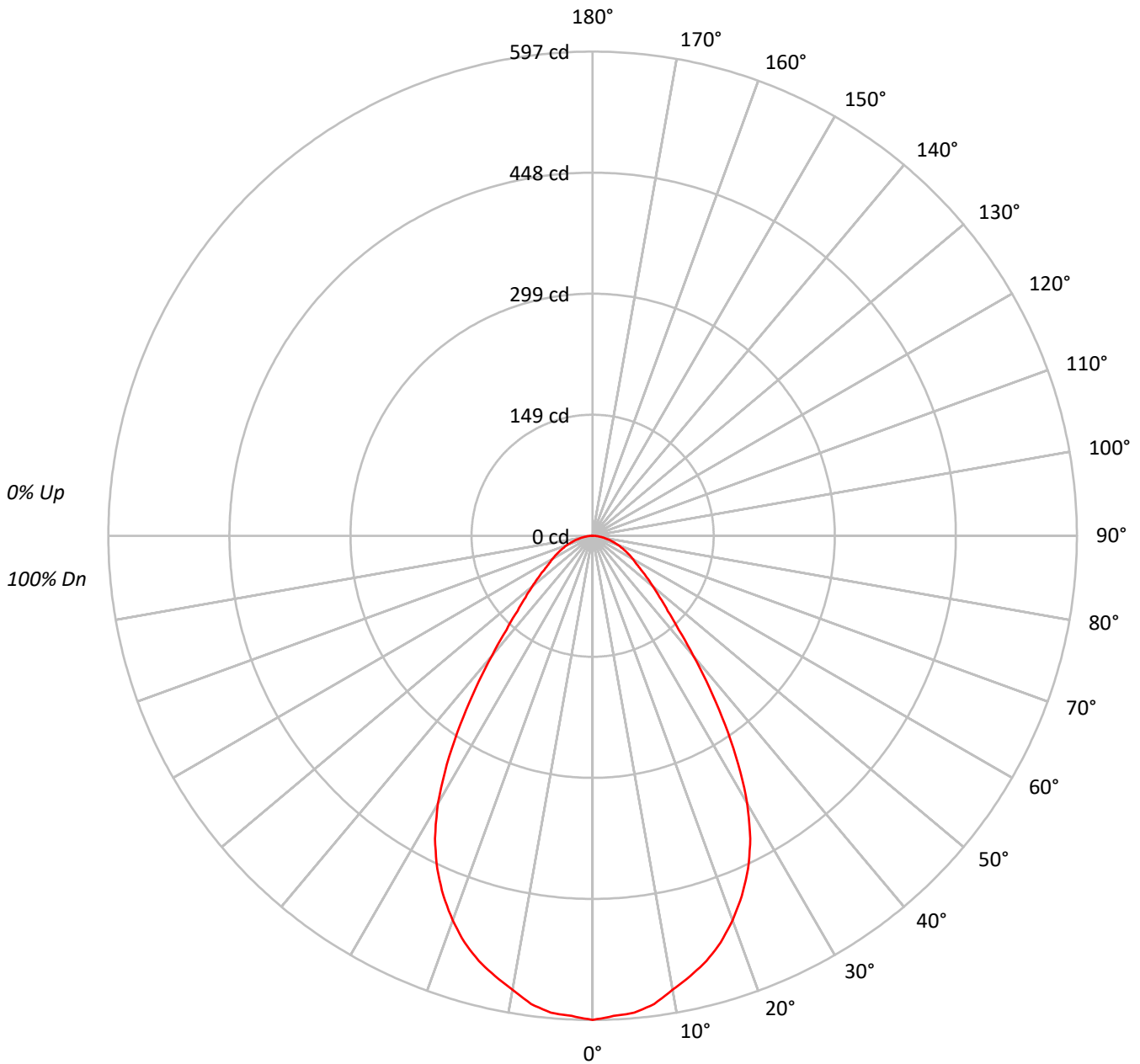
Input Watts (W): 8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | |
| 1 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 92 | 91 | 89 | | | |
| 2 | 104 | 97 | 92 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 79 | | | |
| 3 | 97 | 88 | 82 | 77 | 95 | 87 | 81 | 76 | 84 | 79 | 75 | 82 | 77 | 74 | 79 | 76 | 73 | 71 | | | |
| 4 | 90 | 81 | 74 | 68 | 88 | 80 | 73 | 68 | 77 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 64 | | | |
| 5 | 85 | 74 | 67 | 61 | 83 | 73 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 60 | 68 | 63 | 59 | 58 | | | |
| 6 | 79 | 68 | 61 | 56 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 64 | 59 | 55 | 63 | 58 | 54 | 52 | | | |
| 7 | 75 | 63 | 56 | 51 | 73 | 62 | 56 | 51 | 61 | 55 | 50 | 60 | 54 | 50 | 59 | 53 | 50 | 48 | | | |
| 8 | 70 | 59 | 52 | 47 | 69 | 58 | 51 | 46 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | |
| 9 | 66 | 55 | 48 | 43 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 47 | 43 | 51 | 46 | 42 | 41 | | | |
| 10 | 63 | 51 | 44 | 40 | 62 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 43 | 39 | 48 | 43 | 39 | 38 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 73637 |
| 5° | 73089 |
| 10° | 71179 |
| 15° | 69301 |
| 20° | 66208 |
| 25° | 61693 |
| 30° | 54308 |
| 35° | 42839 |
| 40° | 31092 |
| 45° | 22851 |
| 50° | 18575 |
| 55° | 15591 |
| 60° | 14111 |
| 65° | 12988 |
| 70° | 12081 |
| 75° | 11009 |
| 80° | 9944 |
| 85° | 8633 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 55.7 | 6.6 |
| 10°-20° | 152.2 | 18.2 |
| 20°-30° | 206.4 | 24.6 |
| 30°-40° | 177.1 | 21.1 |
| 40°-50° | 104.6 | 12.5 |
| 50°-60° | 66.3 | 7.9 |
| 60°-70° | 44.5 | 5.3 |
| 70°-80° | 24.6 | 2.9 |
| 80°-90° | 6.9 | 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° | 414.2 | 49.4 |
| 0°-40° | 591.3 | 70.6 |
| 0°-60° | 762.2 | 90.9 |
| 0°-90° | 838.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 838.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 597 | |
| 5° | 590 | 56 |
| 15° | 543 | 152 |
| 25° | 453 | 206 |
| 35° | 284 | 177 |
| 45° | 131 | 105 |
| 55° | 72 | 66 |
| 65° | 44 | 45 |
| 75° | 23 | 25 |
| 85° | 6 | 7 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 597.0 |
| 2.5° | 592.7 |
| 5° | 590.3 |
| 7.5° | 582.3 |
| 10° | 568.3 |
| 12.5° | 556.1 |
| 15° | 542.7 |
| 17.5° | 525.6 |
| 20° | 504.4 |
| 22.5° | 480.6 |
| 25° | 453.3 |
| 27.5° | 420.9 |
| 30° | 381.3 |
| 32.5° | 334.5 |
| 35° | 284.5 |
| 37.5° | 236.4 |
| 40° | 193.1 |
| 42.5° | 157.2 |
| 45° | 131.0 |
| 47.5° | 112.1 |
| 50° | 96.8 |
| 52.5° | 84.1 |
| 55° | 72.5 |
| 57.5° | 63.4 |
| 60° | 57.2 |
| 62.5° | 51.2 |
| 65° | 44.5 |
| 67.5° | 39.0 |
| 70° | 33.5 |
| 72.5° | 28.0 |
| 75° | 23.1 |
| 77.5° | 18.3 |
| 80° | 14.0 |
| 82.5° | 9.8 |
| 85° | 6.1 |
| 87.5° | 2.4 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)