

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: P580516

Luminaire Tested: **HC435D010-HM43040935-41MDW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580516
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-6)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC435D010-HM43040935-41MDW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3034.3 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.04 / 1.04 / 1.01
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

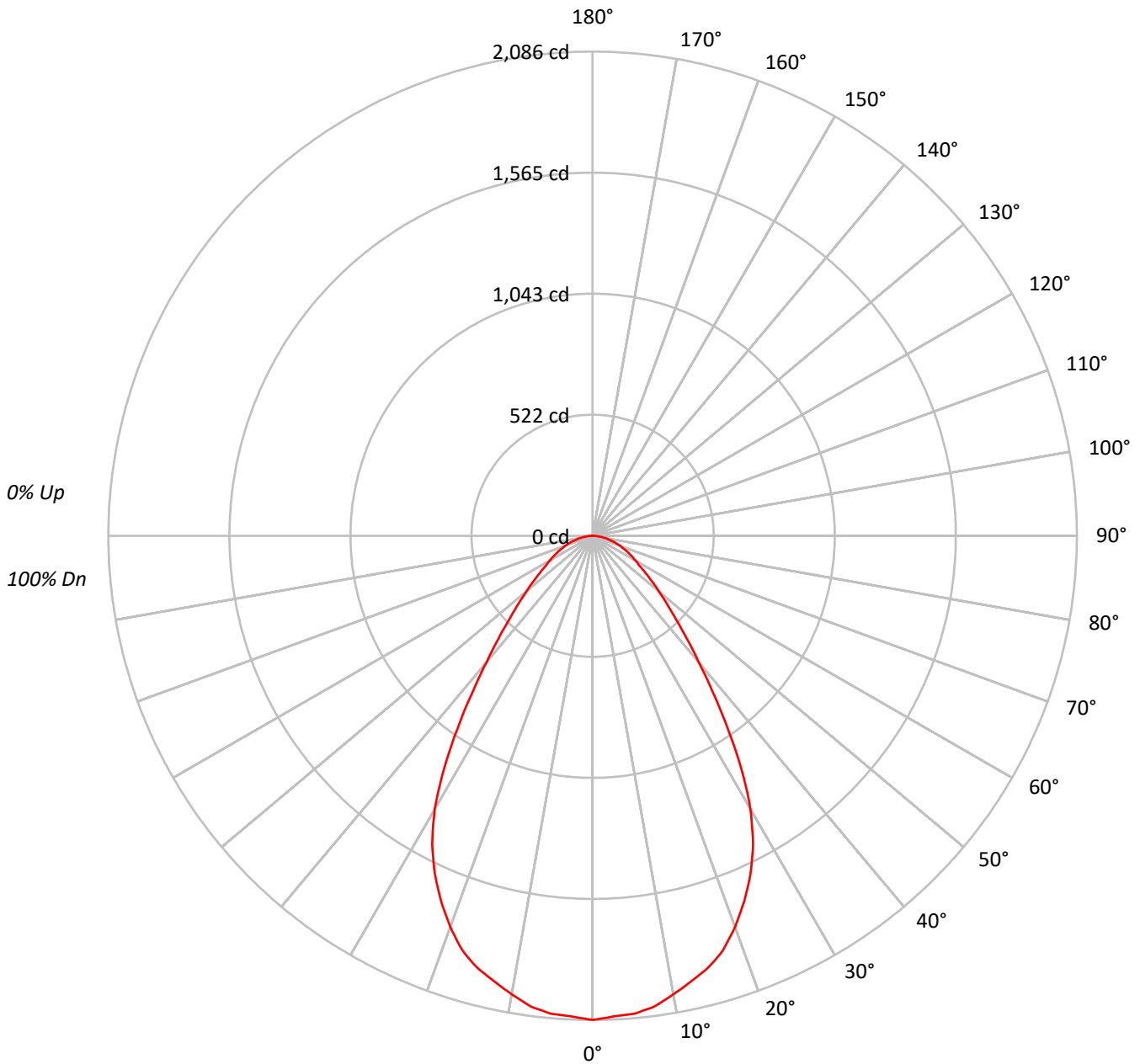
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | 89 |
| 2 | 104 | 97 | 92 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 81 | 79 | | | 79 |
| 3 | 97 | 88 | 82 | 76 | 94 | 87 | 81 | 76 | 84 | 79 | 75 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | | 70 |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 73 | 67 | 77 | 71 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 63 | | | 63 |
| 5 | 84 | 74 | 66 | 61 | 82 | 73 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 59 | 67 | 63 | 59 | 57 | | | 57 |
| 6 | 79 | 68 | 60 | 55 | 77 | 67 | 60 | 55 | 65 | 59 | 54 | 64 | 58 | 54 | 62 | 57 | 54 | 52 | | | 52 |
| 7 | 74 | 63 | 55 | 50 | 73 | 62 | 55 | 50 | 61 | 54 | 50 | 59 | 54 | 49 | 58 | 53 | 49 | 47 | | | 47 |
| 8 | 70 | 58 | 51 | 46 | 68 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 45 | 54 | 49 | 45 | 44 | | | 44 |
| 9 | 66 | 54 | 47 | 42 | 65 | 54 | 47 | 42 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | | 40 |
| 10 | 62 | 51 | 44 | 39 | 61 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 48 | 42 | 39 | 37 | | | 37 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 257250 |
| 5° | 255880 |
| 10° | 251211 |
| 15° | 245906 |
| 20° | 235392 |
| 25° | 218885 |
| 30° | 193744 |
| 35° | 152896 |
| 40° | 114418 |
| 45° | 88021 |
| 50° | 71422 |
| 55° | 59224 |
| 60° | 52373 |
| 65° | 48478 |
| 70° | 44755 |
| 75° | 41080 |
| 80° | 37363 |
| 85° | 29720 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 195.4 | 6.4 |
| 10°-20° | 540.1 | 17.8 |
| 20°-30° | 733.3 | 24.2 |
| 30°-40° | 635.2 | 20.9 |
| 40°-50° | 398.8 | 13.1 |
| 50°-60° | 250.9 | 8.3 |
| 60°-70° | 164.8 | 5.4 |
| 70°-80° | 91.0 | 3.0 |
| 80°-90° | 24.9 | 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° | 1468.7 | 48.4 |
| 0°-40° | 2103.9 | 69.3 |
| 0°-60° | 2753.7 | 90.8 |
| 0°-90° | 3034.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3034.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2086 | |
| 5° | 2067 | 195 |
| 15° | 1926 | 540 |
| 25° | 1608 | 733 |
| 35° | 1015 | 635 |
| 45° | 505 | 399 |
| 55° | 275 | 251 |
| 65° | 166 | 165 |
| 75° | 86 | 91 |
| 85° | 21 | 25 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 2085.6 |
| 2.5° | 2072.9 |
| 5° | 2066.6 |
| 7.5° | 2045.6 |
| 10° | 2005.7 |
| 12.5° | 1965.7 |
| 15° | 1925.7 |
| 17.5° | 1871.1 |
| 20° | 1793.3 |
| 22.5° | 1705.0 |
| 25° | 1608.3 |
| 27.5° | 1496.8 |
| 30° | 1360.3 |
| 32.5° | 1194.1 |
| 35° | 1015.4 |
| 37.5° | 851.4 |
| 40° | 710.6 |
| 42.5° | 599.2 |
| 45° | 504.6 |
| 47.5° | 433.1 |
| 50° | 372.2 |
| 52.5° | 319.6 |
| 55° | 275.4 |
| 57.5° | 237.6 |
| 60° | 212.3 |
| 62.5° | 189.2 |
| 65° | 166.1 |
| 67.5° | 143.0 |
| 70° | 124.1 |
| 72.5° | 103.1 |
| 75° | 86.2 |
| 77.5° | 67.3 |
| 80° | 52.6 |
| 82.5° | 35.7 |
| 85° | 21.0 |
| 87.5° | 8.4 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)