

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: P584054

Luminaire Tested: **HC820D010-HM80520930-81PSMDW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584054
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC820D010-HM80520930-81PSMDW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" PLASTIC TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1946.5 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 0.97
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

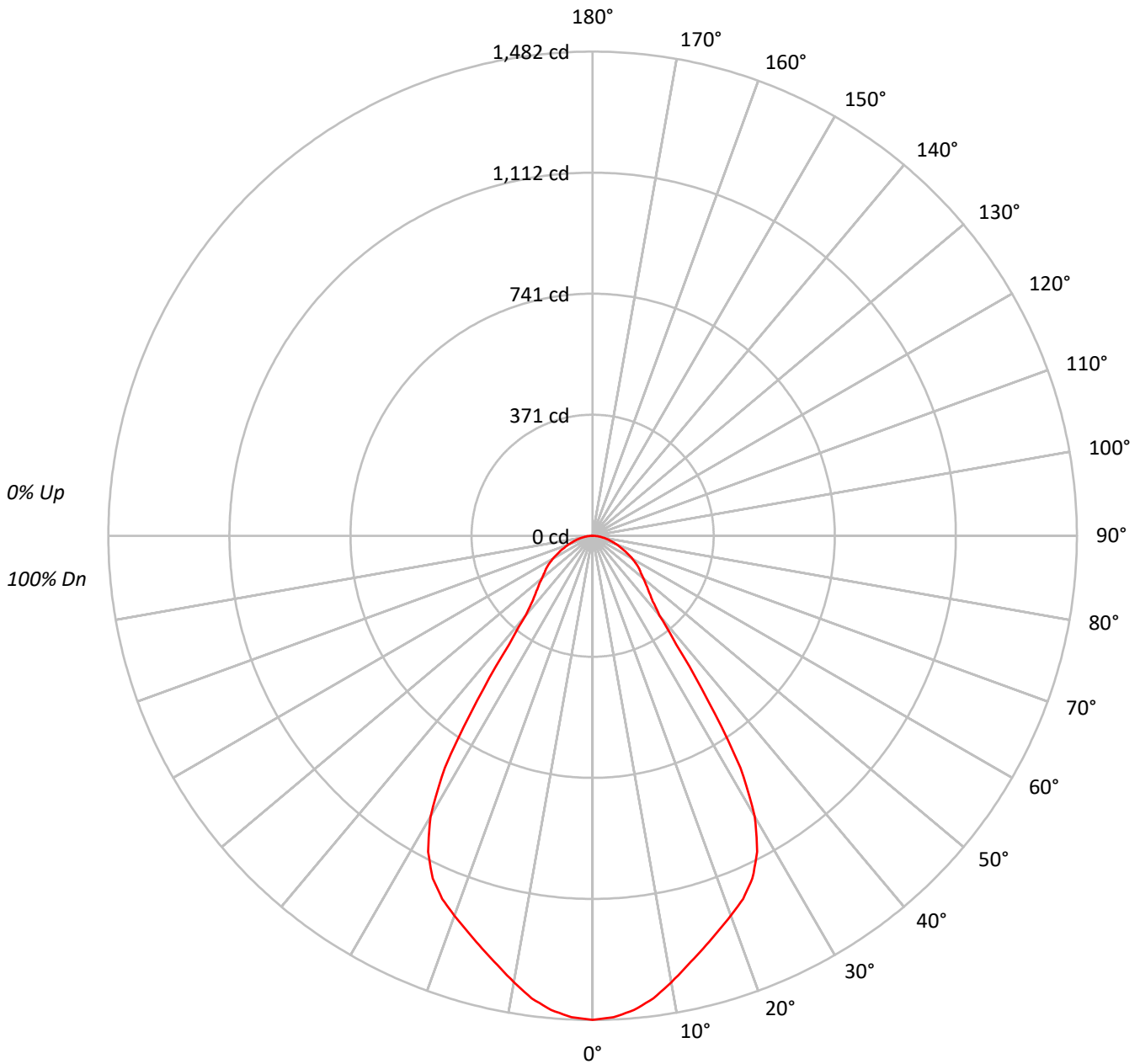
Input Watts (W): 20
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | 89 |
| 2 | 104 | 98 | 92 | 88 | 102 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 84 | 81 | 79 | | | 79 |
| 3 | 97 | 89 | 83 | 77 | 95 | 87 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 74 | 80 | 76 | 73 | 71 | | | 71 |
| 4 | 91 | 81 | 74 | 69 | 89 | 80 | 74 | 69 | 78 | 72 | 68 | 76 | 71 | 67 | 74 | 70 | 66 | 64 | | | 64 |
| 5 | 85 | 75 | 68 | 62 | 83 | 74 | 67 | 62 | 72 | 66 | 61 | 70 | 65 | 61 | 68 | 64 | 60 | 58 | | | 58 |
| 6 | 80 | 69 | 62 | 57 | 78 | 68 | 61 | 56 | 67 | 61 | 56 | 65 | 60 | 56 | 64 | 59 | 55 | 53 | | | 53 |
| 7 | 75 | 64 | 57 | 52 | 74 | 63 | 57 | 52 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 49 | | | 49 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 45 | | | 45 |
| 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° | 45693 |
| 5° | 45094 |
| 10° | 43445 |
| 15° | 41744 |
| 20° | 40593 |
| 25° | 39369 |
| 30° | 35329 |
| 35° | 23159 |
| 40° | 12805 |
| 45° | 10676 |
| 50° | 9729 |
| 55° | 9290 |
| 60° | 8640 |
| 65° | 7829 |
| 70° | 7078 |
| 75° | 6398 |
| 80° | 5807 |
| 85° | 5555 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 136.9 | 7.0 |
| 10°-20° | 368.9 | 19.0 |
| 20°-30° | 525.0 | 27.0 |
| 30°-40° | 388.6 | 20.0 |
| 40°-50° | 192.5 | 9.9 |
| 50°-60° | 153.6 | 7.9 |
| 60°-70° | 106.6 | 5.5 |
| 70°-80° | 57.5 | 3.0 |
| 80°-90° | 16.9 | 0.9 |
| 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° | 1030.8 | 53.0 |
| 0°-40° | 1419.5 | 72.9 |
| 0°-60° | 1765.5 | 90.7 |
| 0°-90° | 1946.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1946.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1482 | |
| 5° | 1457 | 137 |
| 15° | 1308 | 369 |
| 25° | 1157 | 525 |
| 35° | 615 | 389 |
| 45° | 245 | 192 |
| 55° | 173 | 154 |
| 65° | 107 | 107 |
| 75° | 54 | 57 |
| 85° | 16 | 17 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 1481.8 |
| 2.5° | 1475.1 |
| 5° | 1456.8 |
| 7.5° | 1428.1 |
| 10° | 1387.5 |
| 12.5° | 1345.6 |
| 15° | 1307.6 |
| 17.5° | 1271.0 |
| 20° | 1237.0 |
| 22.5° | 1202.9 |
| 25° | 1157.1 |
| 27.5° | 1090.4 |
| 30° | 992.2 |
| 32.5° | 841.7 |
| 35° | 615.2 |
| 37.5° | 420.2 |
| 40° | 318.1 |
| 42.5° | 272.2 |
| 45° | 244.8 |
| 47.5° | 222.6 |
| 50° | 202.8 |
| 52.5° | 185.9 |
| 55° | 172.8 |
| 57.5° | 157.1 |
| 60° | 140.1 |
| 62.5° | 123.0 |
| 65° | 107.3 |
| 67.5° | 91.6 |
| 70° | 78.5 |
| 72.5° | 65.5 |
| 75° | 53.7 |
| 77.5° | 43.1 |
| 80° | 32.7 |
| 82.5° | 23.5 |
| 85° | 15.7 |
| 87.5° | 6.5 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)