

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: P434726

Luminaire Tested: **HCMR1R25930ED010MMS**

Issue Date: 11/24/2020

Test Information

Test Method: LM-41-14
Report Number: P434726
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-933-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 11/24/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCMR1R25930ED010MMS
Description: HALO COMMERCIAL 4INCH ADJUSTABLE MULTIPLE, 25 DEG REFLECTOR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1213.4 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Spacing Criteria (0/90/45): 0.39 / 0.39 / 0.39
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

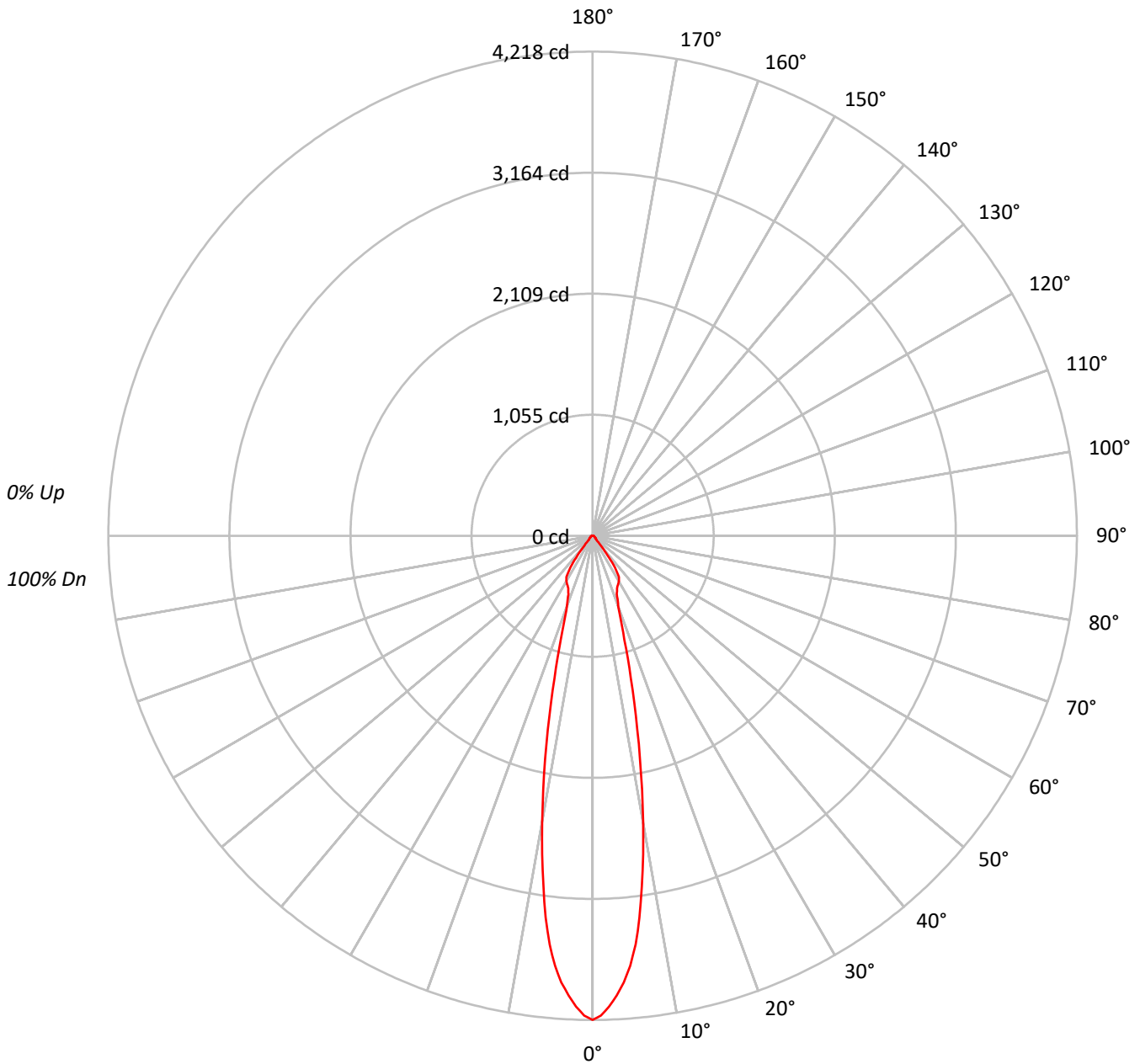
Input Watts (W): 14.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | 0 |
| RCR | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | | 100 |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | | 94 |
| 2 | 109 | 104 | 100 | 97 | 107 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 94 | 92 | 90 | | 88 |
| 3 | 104 | 98 | 93 | 90 | 102 | 97 | 92 | 89 | 94 | 91 | 88 | 92 | 89 | 86 | 89 | 87 | 85 | | 83 |
| 4 | 100 | 93 | 88 | 84 | 98 | 92 | 87 | 83 | 89 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | | 79 |
| 5 | 95 | 88 | 83 | 79 | 94 | 87 | 82 | 78 | 85 | 81 | 78 | 84 | 80 | 77 | 82 | 79 | 76 | | 75 |
| 6 | 92 | 84 | 78 | 75 | 90 | 83 | 78 | 74 | 81 | 77 | 74 | 80 | 76 | 73 | 79 | 75 | 73 | | 72 |
| 7 | 88 | 80 | 75 | 71 | 87 | 79 | 74 | 71 | 78 | 74 | 70 | 77 | 73 | 70 | 76 | 72 | 70 | | 68 |
| 8 | 85 | 76 | 71 | 68 | 84 | 76 | 71 | 67 | 75 | 70 | 67 | 74 | 70 | 67 | 73 | 69 | 67 | | 65 |
| 9 | 82 | 73 | 68 | 65 | 81 | 73 | 68 | 65 | 72 | 68 | 64 | 71 | 67 | 64 | 70 | 67 | 64 | | 63 |
| 10 | 79 | 70 | 65 | 62 | 78 | 70 | 65 | 62 | 69 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 62 | | 60 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 2080976 |
| 5° | 1862490 |
| 10° | 1267957 |
| 15° | 655336 |
| 20° | 341856 |
| 25° | 274370 |
| 30° | 260469 |
| 35° | 202796 |
| 40° | 70009 |
| 45° | 30491 |
| 50° | 26174 |
| 55° | 22881 |
| 60° | 19933 |
| 65° | 18679 |
| 70° | 20051 |
| 75° | 24400 |
| 80° | 30401 |
| 85° | 6227 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 318.5 | 26.2 |
| 10°-20° | 366.0 | 30.2 |
| 20°-30° | 239.1 | 19.7 |
| 30°-40° | 193.5 | 15.9 |
| 40°-50° | 39.2 | 3.2 |
| 50°-60° | 23.6 | 1.9 |
| 60°-70° | 16.4 | 1.3 |
| 70°-80° | 13.7 | 1.1 |
| 80°-90° | 3.5 | 0.3 |
| 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° | 923.6 | 76.1 |
| 0°-40° | 1117.0 | 92.1 |
| 0°-60° | 1179.9 | 97.2 |
| 0°-90° | 1213.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1213.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 4218 | |
| 5° | 3761 | 318 |
| 15° | 1283 | 366 |
| 25° | 504 | 239 |
| 35° | 337 | 193 |
| 45° | 44 | 39 |
| 55° | 27 | 24 |
| 65° | 16 | 16 |
| 75° | 13 | 14 |
| 85° | 1 | 3 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 4217.8 |
| 1° | 4180.5 |
| 2° | 4104.8 |
| 3° | 4010.0 |
| 4° | 3900.2 |
| 5° | 3760.6 |
| 6° | 3579.4 |
| 7° | 3350.3 |
| 8° | 3082.9 |
| 9° | 2810.1 |
| 10° | 2530.9 |
| 11° | 2252.7 |
| 12° | 1986.3 |
| 13° | 1731.6 |
| 14° | 1498.3 |
| 15° | 1283.0 |
| 16° | 1108.3 |
| 17° | 947.3 |
| 18° | 821.6 |
| 19° | 723.6 |
| 20° | 651.1 |
| 22.5° | 549.9 |
| 25° | 504.0 |
| 26° | 492.3 |
| 27° | 483.8 |
| 28° | 475.3 |
| 29° | 465.7 |
| 30° | 457.2 |
| 32.5° | 425.2 |
| 35° | 336.7 |
| 37.5° | 216.3 |
| 40° | 108.7 |
| 42.5° | 52.2 |
| 45° | 43.7 |
| 47.5° | 38.4 |
| 50° | 34.1 |
| 52.5° | 29.8 |
| 55° | 26.6 |
| 57.5° | 22.4 |
| 60° | 20.2 |
| 62.5° | 18.1 |
| 65° | 16.0 |
| 67.5° | 14.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° |
|-------|------|
| 75° | 12.8 |
| 77.5° | 12.8 |
| 80° | 10.7 |
| 82.5° | 6.4 |
| 85° | 1.1 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







| | | |
|-------|--|------|
| 70° | | 13.9 |
| 72.5° | | 13.9 |



(END OF REPORT)