

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

Report Number: P121908

Luminaire Tested: **RA406930WH**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P121908
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (3032)
Test Lab: TUV SUD America
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: RA406930WH
Description: HALO 4" ADJUSTABLE LED MODULE
WITH WHITE TRIM AND DIFFUSE LENS
Light Source: (1) HIGH LUMEN LED 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

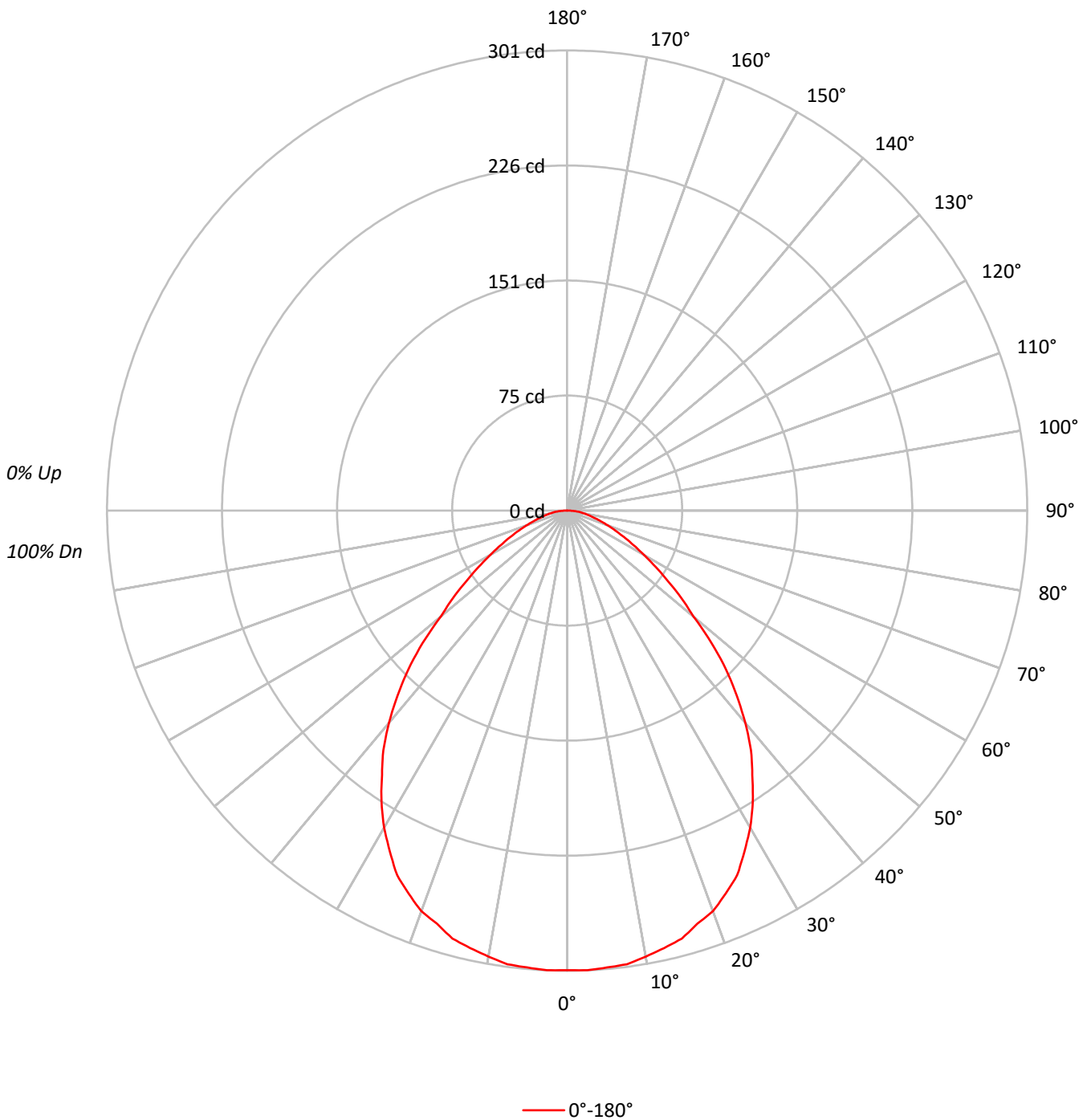
Lumens per Lamp: N/A
Luminaire Lumens: 615.4 lumens
Efficiency: N/A
Efficacy: 61.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.23
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 10
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 |
| 3 | 94 | 85 | 78 | 72 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 73 | 69 | 76 | 72 | 68 | 66 |
| 4 | 87 | 77 | 69 | 63 | 85 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 58 |
| 5 | 81 | 70 | 61 | 56 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 54 | 52 |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 |
| 7 | 70 | 58 | 50 | 44 | 69 | 57 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 |
| 8 | 66 | 53 | 45 | 40 | 64 | 53 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 39 | 49 | 43 | 39 | 38 |
| 9 | 62 | 49 | 42 | 36 | 60 | 49 | 41 | 36 | 48 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 31 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 65045 |
| 5° | 65164 |
| 10° | 65082 |
| 15° | 64921 |
| 20° | 64223 |
| 25° | 62840 |
| 30° | 59842 |
| 35° | 55790 |
| 40° | 51184 |
| 45° | 45015 |
| 50° | 36289 |
| 55° | 30407 |
| 60° | 25144 |
| 65° | 21044 |
| 70° | 17778 |
| 75° | 15551 |
| 80° | 14580 |
| 85° | 14896 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 28.5 | 4.6 |
| 10°-20° | 81.5 | 13.2 |
| 20°-30° | 120.4 | 19.6 |
| 30°-40° | 132.0 | 21.5 |
| 40°-50° | 112.3 | 18.2 |
| 50°-60° | 72.8 | 11.8 |
| 60°-70° | 41.3 | 6.7 |
| 70°-80° | 20.1 | 3.3 |
| 80°-90° | 6.5 | 1.1 |
| 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° | 230.4 | 37.4 |
| 0°-40° | 362.4 | 58.9 |
| 0°-60° | 547.5 | 89.0 |
| 0°-90° | 615.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 615.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 301 | |
| 5° | 300 | 29 |
| 15° | 290 | 81 |
| 25° | 263 | 120 |
| 35° | 211 | 132 |
| 45° | 147 | 112 |
| 55° | 81 | 73 |
| 65° | 41 | 41 |
| 75° | 19 | 20 |
| 85° | 6 | 6 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|-------|
| 0° | 300.6 |
| 2.5° | 301.0 |
| 5° | 300.0 |
| 7.5° | 299.3 |
| 10° | 296.2 |
| 12.5° | 293.1 |
| 15° | 289.8 |
| 17.5° | 283.3 |
| 20° | 278.9 |
| 22.5° | 271.1 |
| 25° | 263.2 |
| 27.5° | 251.2 |
| 30° | 239.5 |
| 32.5° | 226.1 |
| 35° | 211.2 |
| 37.5° | 197.6 |
| 40° | 181.2 |
| 42.5° | 164.3 |
| 45° | 147.1 |
| 47.5° | 128.1 |
| 50° | 107.8 |
| 52.5° | 94.4 |
| 55° | 80.6 |
| 57.5° | 68.6 |
| 60° | 58.1 |
| 62.5° | 48.8 |
| 65° | 41.1 |
| 67.5° | 34.0 |
| 70° | 28.1 |
| 72.5° | 22.9 |
| 75° | 18.6 |
| 77.5° | 14.9 |
| 80° | 11.7 |
| 82.5° | 9.1 |
| 85° | 6.0 |
| 87.5° | 2.7 |
| 90° | 0.3 |

(END OF REPORT)