

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: P123713

Luminaire Tested: **EL406927-TL403WBS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P123713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P13987)
Test Lab: INNOVATION CENTER-P1
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL406927-TL403WBS
Description: HALO 4-INCH RECESSED LED DOWNLIGHT
WHITE BAFFLE, SOLITE® LENS AND WHITE TRIM RING
Light Source: (1)SURFACE MOUNT LED, 2700K CCT, 90CRI
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 700.0 lumens
Efficiency: N/A
Efficacy: 53.8 lumens/watt
Spacing Criteria (0/90/45): 0.66 / 0.66 / 0.82
Luminous Opening: Circular (Dia: 0.29' x H: 0')
CIE Type: Direct

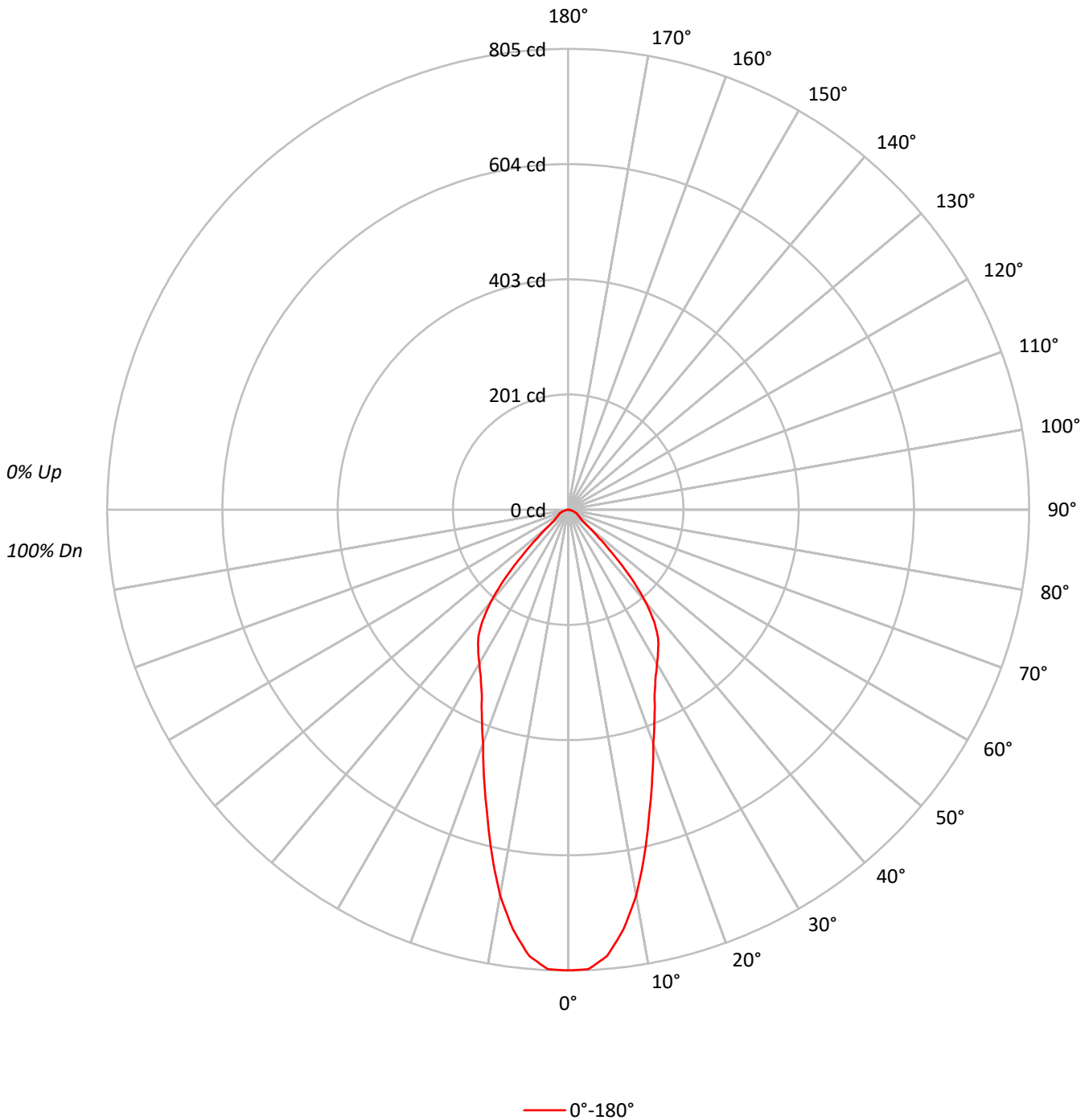
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 113 | 109 | 107 | 104 | 110 | 107 | 105 | 102 | 103 | 101 | 99 | | 99 | 98 | 96 | | 96 | 95 | 94 | 92 |
| 2 | 106 | 100 | 96 | 92 | 104 | 99 | 95 | 91 | 95 | 92 | 89 | | 92 | 90 | 87 | | 90 | 87 | 85 | 83 |
| 3 | 100 | 93 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | | 86 | 82 | 79 | | 84 | 80 | 78 | 76 |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | | 80 | 76 | 72 | | 78 | 74 | 71 | 70 |
| 5 | 89 | 79 | 73 | 68 | 87 | 78 | 72 | 67 | 76 | 71 | 67 | | 75 | 70 | 66 | | 73 | 69 | 66 | 64 |
| 6 | 84 | 74 | 67 | 62 | 82 | 73 | 66 | 62 | 71 | 66 | 61 | | 70 | 65 | 61 | | 68 | 64 | 61 | 59 |
| 7 | 79 | 69 | 62 | 57 | 77 | 68 | 62 | 57 | 67 | 61 | 57 | | 65 | 60 | 56 | | 64 | 60 | 56 | 55 |
| 8 | 75 | 64 | 58 | 53 | 73 | 64 | 57 | 53 | 62 | 57 | 53 | | 61 | 56 | 52 | | 60 | 56 | 52 | 51 |
| 9 | 71 | 60 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 49 | | 58 | 53 | 49 | | 57 | 52 | 49 | 47 |
| 10 | 67 | 57 | 50 | 46 | 66 | 56 | 50 | 46 | 55 | 50 | 46 | | 54 | 49 | 46 | | 54 | 49 | 46 | 44 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 129624 |
| 5° | 126513 |
| 10° | 111911 |
| 15° | 91249 |
| 20° | 74475 |
| 25° | 63389 |
| 30° | 57668 |
| 35° | 53888 |
| 40° | 44143 |
| 45° | 26338 |
| 50° | 11454 |
| 55° | 7359 |
| 60° | 6573 |
| 65° | 6290 |
| 70° | 5511 |
| 75° | 3610 |
| 80° | 3618 |
| 85° | 1848 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.4 | 10.2 |
| 10°-20° | 153.1 | 21.9 |
| 20°-30° | 166.4 | 23.8 |
| 30°-40° | 167.4 | 23.9 |
| 40°-50° | 91.2 | 13.0 |
| 50°-60° | 25.3 | 3.6 |
| 60°-70° | 16.5 | 2.4 |
| 70°-80° | 7.7 | 1.1 |
| 80°-90° | 1.1 | 0.2 |
| 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° | 390.9 | 55.8 |
| 0°-40° | 558.3 | 79.8 |
| 0°-60° | 674.8 | 96.4 |
| 0°-90° | 700.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 700.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 805 | |
| 5° | 782 | 71 |
| 15° | 547 | 153 |
| 25° | 357 | 166 |
| 35° | 274 | 167 |
| 45° | 116 | 91 |
| 55° | 26 | 25 |
| 65° | 16 | 16 |
| 75° | 6 | 8 |
| 85° | 1 | 1 |
| 90° | 0 | |



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CATALOG NUMBER: EL406927-TL403WBS

CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|-------|
| 0° | 804.6 |
| 2.5° | 803.6 |
| 5° | 782.3 |
| 7.5° | 739.5 |
| 10° | 684.1 |
| 12.5° | 616.1 |
| 15° | 547.1 |
| 17.5° | 488.8 |
| 20° | 434.4 |
| 22.5° | 393.6 |
| 25° | 356.6 |
| 27.5° | 330.4 |
| 30° | 310.0 |
| 32.5° | 292.5 |
| 35° | 274.0 |
| 37.5° | 246.8 |
| 40° | 209.9 |
| 42.5° | 165.2 |
| 45° | 115.6 |
| 47.5° | 71.9 |
| 50° | 45.7 |
| 52.5° | 31.1 |
| 55° | 26.2 |
| 57.5° | 23.3 |
| 60° | 20.4 |
| 62.5° | 18.5 |
| 65° | 16.5 |
| 67.5° | 15.5 |
| 70° | 11.7 |
| 72.5° | 10.7 |
| 75° | 5.8 |
| 77.5° | 4.9 |
| 80° | 3.9 |
| 82.5° | 1.0 |
| 85° | 1.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

(END OF REPORT)