

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: P20229

Luminaire Tested: **ML709830T120DEM – 493SCS06 – H750TEM912**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20229
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P20229)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML709830T120DEM – 493SCS06 – H750TEM912
Description: HALO 6" RECESSED LED DOWNLIGHT WITH SPECULAR CLEAR LOWER TRIM REFLECTOR, SPECULAR UPPER TRIM REFLECTOR AND SOLITE GLASS LENS WITH MODULE
Light Source: HIGH OUTPUT LED
Ballast/Driver: IOTA BATTERY PACK

Summary

Lumens per Lamp: 487 (1 lamp)
Luminaire Lumens: 486.7 lumens
Efficiency: 99.9%
Efficacy: 52.3 lumens/watt
Spacing Criteria (0/90/45): 0.95 / 0.95 / 1.04
Luminous Opening: Vertical Cylinder (Dia: 0.5' x H: 0.1')
CIE Type: Direct

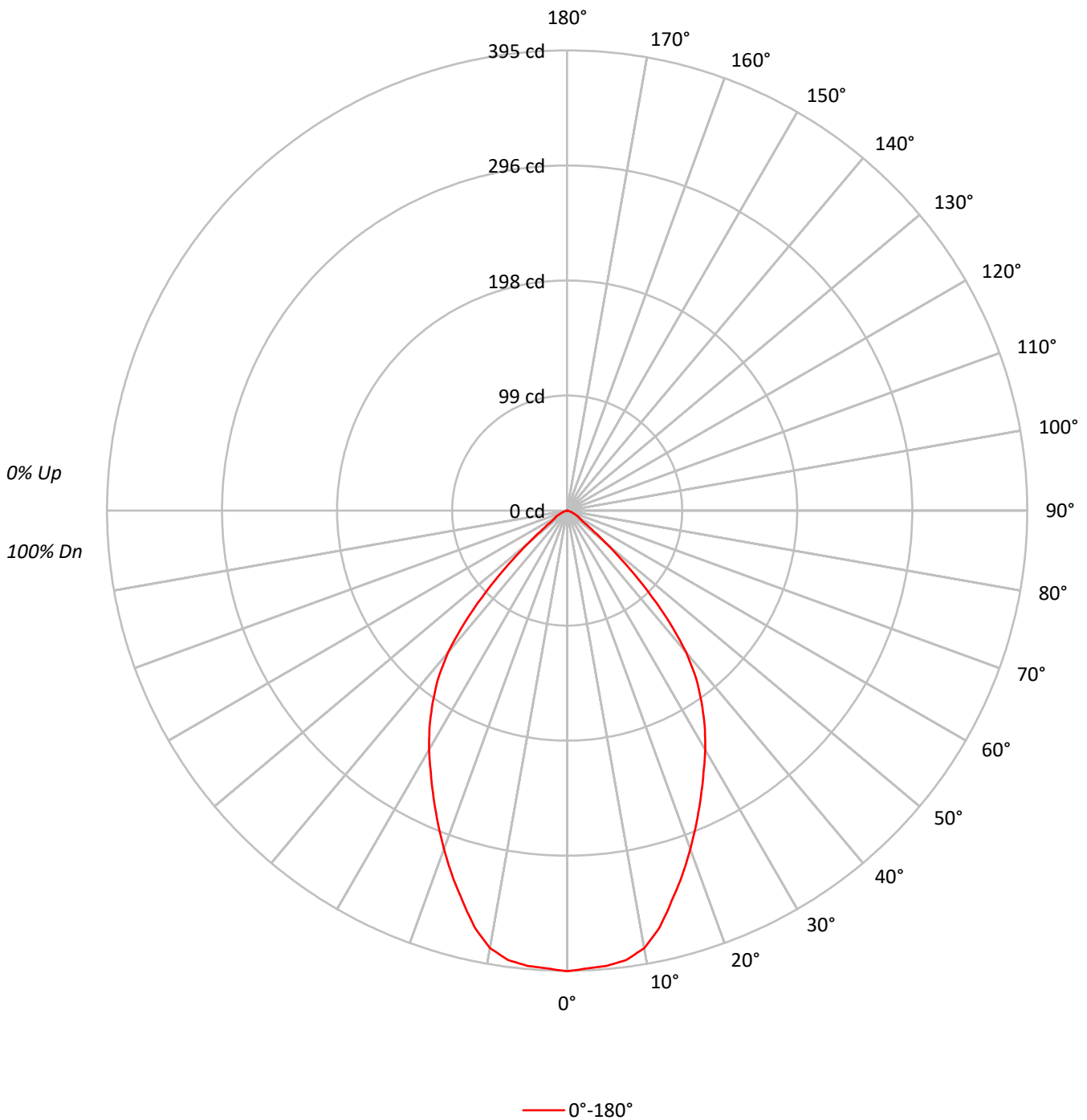
Input Watts (W): 9.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 99 | 100 | 98 | 96 | 96 | 95 | 94 | 92 | | | | | 92 | | | |
| 2 | 106 | 100 | 96 | 92 | 104 | 99 | 95 | 91 | 95 | 92 | 89 | 92 | 90 | 87 | 90 | 87 | 85 | 83 | | | | | 83 | | | |
| 3 | 100 | 92 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 78 | 76 | | | | | 76 | | | |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 73 | 82 | 76 | 72 | 79 | 75 | 72 | 77 | 74 | 71 | 69 | | | | | 69 | | | |
| 5 | 88 | 78 | 72 | 67 | 86 | 77 | 71 | 66 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 | | | | | 63 | | | |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 65 | 61 | 70 | 64 | 60 | 69 | 64 | 60 | 67 | 63 | 59 | 58 | | | | | 58 | | | |
| 7 | 78 | 67 | 60 | 56 | 76 | 67 | 60 | 56 | 65 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | 53 | | | | | 53 | | | |
| 8 | 73 | 63 | 56 | 51 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 51 | 59 | 54 | 50 | 49 | | | | | 49 | | | |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 | | | | | 45 | | | |
| 10 | 66 | 55 | 48 | 44 | 65 | 54 | 48 | 44 | 53 | 48 | 44 | 53 | 47 | 44 | 52 | 47 | 43 | 42 | | | | | 42 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 21676 |
| 5° | 21112 |
| 10° | 20313 |
| 15° | 18425 |
| 20° | 16503 |
| 25° | 14674 |
| 30° | 13079 |
| 35° | 11427 |
| 40° | 9375 |
| 45° | 6037 |
| 50° | 2840 |
| 55° | 1163 |
| 60° | 875 |
| 65° | 587 |
| 70° | 358 |
| 75° | 65 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 37.1 | 7.6 | 7.6 |
| 10°-20° | 97.2 | 20.0 | 20.0 |
| 20°-30° | 124.9 | 25.7 | 25.7 |
| 30°-40° | 124.8 | 25.7 | 25.6 |
| 40°-50° | 75.5 | 15.5 | 15.5 |
| 50°-60° | 18.4 | 3.8 | 3.8 |
| 60°-70° | 7.2 | 1.5 | 1.5 |
| 70°-80° | 1.5 | 0.3 | 0.3 |
| 80°-90° | 0.0 | 0.0 | 0.0 |
| 90°-100° | 0.0 | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 | 0.0 |
| 0°-30° | 259.3 | 53.3 | 53.2 |
| 0°-40° | 384.1 | 78.9 | 78.9 |
| 0°-60° | 477.9 | 98.2 | 98.1 |
| 0°-90° | 486.7 | 100.0 | 99.9 |
| 90°-120° | 0.0 | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 | 0.0 |
| 0°-180° | 486.7 | 100.0 | 99.9 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 395 | |
| 5° | 392 | 37 |
| 15° | 347 | 97 |
| 25° | 271 | 125 |
| 35° | 201 | 125 |
| 45° | 98 | 75 |
| 55° | 17 | 18 |
| 65° | 7 | 7 |
| 75° | 1 | 1 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|-------|
| 0° | 395.4 |
| 2.5° | 393.4 |
| 5° | 392.2 |
| 7.5° | 389.0 |
| 10° | 381.3 |
| 12.5° | 366.6 |
| 15° | 346.8 |
| 17.5° | 328.3 |
| 20° | 309.1 |
| 22.5° | 290.0 |
| 25° | 271.4 |
| 27.5° | 253.6 |
| 30° | 237.0 |
| 32.5° | 219.7 |
| 35° | 201.2 |
| 37.5° | 182.0 |
| 40° | 159.0 |
| 42.5° | 129.7 |
| 45° | 97.7 |
| 47.5° | 67.7 |
| 50° | 43.4 |
| 52.5° | 26.2 |
| 55° | 16.6 |
| 57.5° | 12.8 |
| 60° | 11.5 |
| 62.5° | 9.6 |
| 65° | 7.0 |
| 67.5° | 5.1 |
| 70° | 3.8 |
| 72.5° | 2.6 |
| 75° | 0.6 |
| 77.5° | 0.6 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

(END OF REPORT)