

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: P27413

Luminaire Tested: **5120TBZ-E5ICAT _ H5ICAT-29WA19**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P27413
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: 5120TBZ-E5ICAT _ H5ICAT-29WA19
Description: H5 5" RECESSED INCANDESCENT WITH FULL CONE TUSCAN BRONZE REFLECTOR AND TUSCAN BRONZE SELF-FLANGE RING
Light Source: (1) PHILIPS ECOVANTAGE MEDIUM BASE INCANDESCENT 29A19/EV
Ballast/Driver: (1) CHROMA AC POWER SUPPLY IN0061

Summary

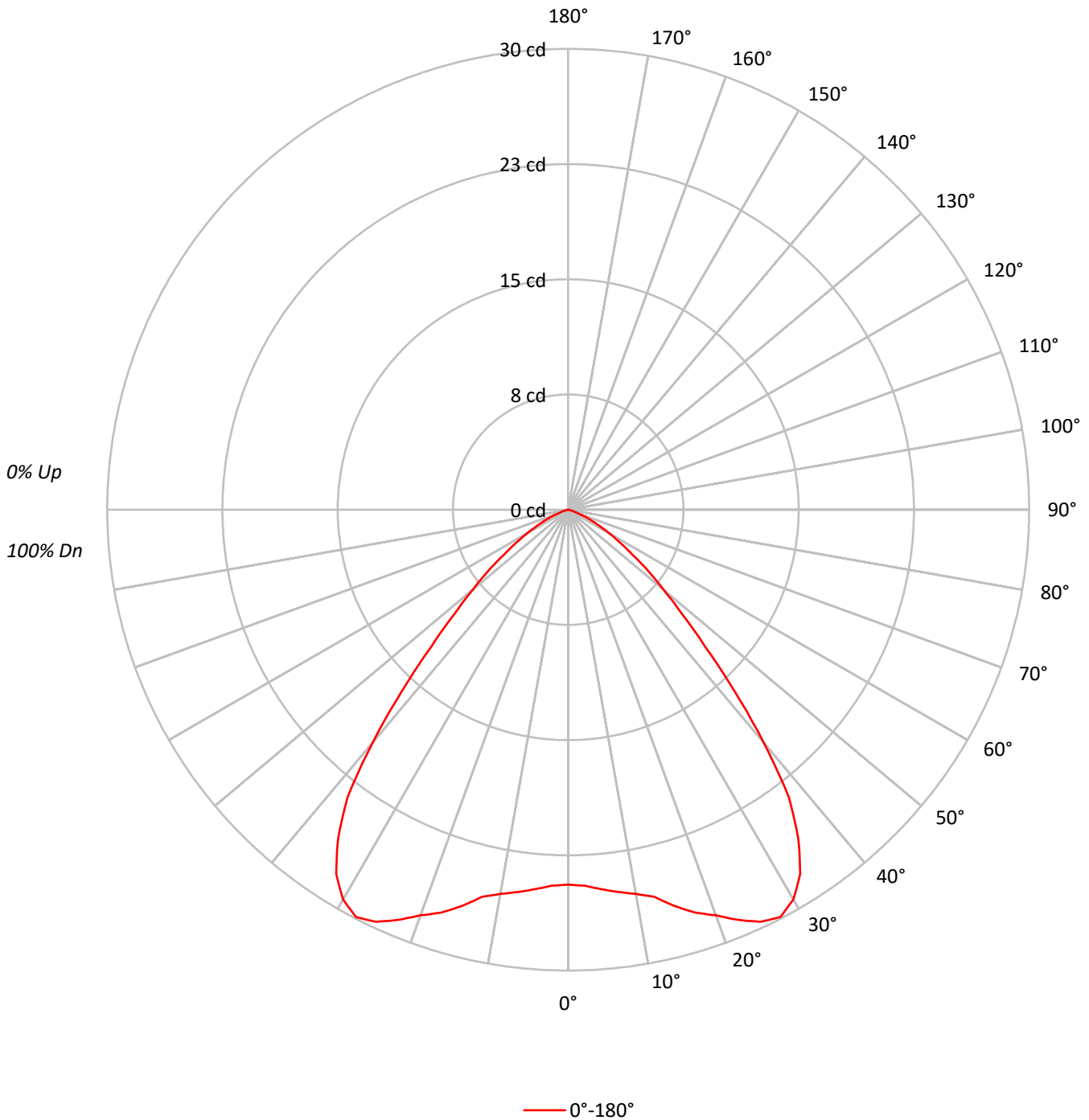
Lumens per Lamp: 380 (1 lamp)
Luminaire Lumens: 56.3 lumens
Efficiency: 14.8%
Efficacy: 2.0 lumens/watt
Spacing Criteria (0/90/45): 1.51 / 1.51 / 1.31
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

Input Watts (W): 28.5
Input Voltage (V): 120.43
Input Current (Ain): 0.23691
Voltage Rise (V): NR
Power Factor: 1
Total Harmonic Distortion (THDi): 0.96%
Frequency (hertz): 60
Stabilization Time: 0.25 HR
Operation Time: 0.5 HR
Ambient Temperature (°C): 24.8
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 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | | 16 | 16 | 16 | | 15 | 15 | 15 | 15 |
| 1 | 17 | 16 | 16 | 15 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | | 15 | 14 | 14 | | 14 | 14 | 14 | 13 |
| 2 | 15 | 15 | 14 | 13 | 15 | 14 | 14 | 13 | 14 | 13 | 13 | | 13 | 13 | 12 | | 13 | 13 | 12 | 12 |
| 3 | 14 | 13 | 12 | 12 | 14 | 13 | 12 | 11 | 13 | 12 | 11 | | 12 | 12 | 11 | | 12 | 11 | 11 | 11 |
| 4 | 13 | 12 | 11 | 10 | 13 | 12 | 11 | 10 | 11 | 11 | 10 | | 11 | 10 | 10 | | 11 | 10 | 10 | 9 |
| 5 | 12 | 11 | 10 | 9 | 12 | 11 | 10 | 9 | 10 | 10 | 9 | | 10 | 9 | 9 | | 10 | 9 | 9 | 8 |
| 6 | 12 | 10 | 9 | 8 | 11 | 10 | 9 | 8 | 10 | 9 | 8 | | 9 | 9 | 8 | | 9 | 8 | 8 | 8 |
| 7 | 11 | 9 | 8 | 7 | 11 | 9 | 8 | 7 | 9 | 8 | 7 | | 9 | 8 | 7 | | 8 | 8 | 7 | 7 |
| 8 | 10 | 8 | 7 | 7 | 10 | 8 | 7 | 7 | 8 | 7 | 7 | | 8 | 7 | 6 | | 8 | 7 | 6 | 6 |
| 9 | 10 | 8 | 7 | 6 | 9 | 8 | 7 | 6 | 8 | 7 | 6 | | 7 | 7 | 6 | | 7 | 6 | 6 | 6 |
| 10 | 9 | 7 | 6 | 5 | 9 | 7 | 6 | 5 | 7 | 6 | 5 | | 7 | 6 | 5 | | 7 | 6 | 5 | 5 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|------|
| | 0° |
| 0° | 1926 |
| 5° | 1965 |
| 10° | 2036 |
| 15° | 2182 |
| 20° | 2361 |
| 25° | 2578 |
| 30° | 2671 |
| 35° | 2515 |
| 40° | 2040 |
| 45° | 1407 |
| 50° | 995 |
| 55° | 702 |
| 60° | 489 |
| 65° | 318 |
| 70° | 138 |
| 75° | 61 |
| 80° | 45 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 2.4 | 4.2 | 0.6 |
| 10°-20° | 7.6 | 13.5 | 2.0 |
| 20°-30° | 13.6 | 24.1 | 3.6 |
| 30°-40° | 16.0 | 28.3 | 4.2 |
| 40°-50° | 10.0 | 17.8 | 2.6 |
| 50°-60° | 4.7 | 8.4 | 1.2 |
| 60°-70° | 1.7 | 3.0 | 0.4 |
| 70°-80° | 0.3 | 0.5 | 0.1 |
| 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° | 23.6 | 41.9 | 6.2 |
| 0°-40° | 39.5 | 70.2 | 10.4 |
| 0°-60° | 54.3 | 96.5 | 14.3 |
| 0°-90° | 56.3 | 100.0 | 14.8 |
| 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° | 56.3 | 100.0 | 14.8 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|----|------|
| 0° | 24 | |
| 5° | 25 | 2 |
| 15° | 27 | 8 |
| 25° | 30 | 14 |
| 35° | 26 | 16 |
| 45° | 13 | 10 |
| 55° | 5 | 5 |
| 65° | 2 | 2 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|------|
| 0° | 24.4 |
| 2.5° | 24.5 |
| 5° | 24.8 |
| 7.5° | 25.1 |
| 10° | 25.4 |
| 12.5° | 25.8 |
| 15° | 26.7 |
| 17.5° | 27.5 |
| 20° | 28.1 |
| 22.5° | 28.9 |
| 25° | 29.6 |
| 27.5° | 29.9 |
| 30° | 29.3 |
| 32.5° | 28.1 |
| 35° | 26.1 |
| 37.5° | 23.6 |
| 40° | 19.8 |
| 42.5° | 16.0 |
| 45° | 12.6 |
| 47.5° | 10.0 |
| 50° | 8.1 |
| 52.5° | 6.6 |
| 55° | 5.1 |
| 57.5° | 4.0 |
| 60° | 3.1 |
| 62.5° | 2.3 |
| 65° | 1.7 |
| 67.5° | 1.1 |
| 70° | 0.6 |
| 72.5° | 0.4 |
| 75° | 0.2 |
| 77.5° | 0.1 |
| 80° | 0.1 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |

(END OF REPORT)