

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: METALUX

Report Number: 14005.0

Luminaire Tested: **AB-454T5-CL-UNV-EBTL1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 14005.0
Test Lab: BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: AB-454T5-CL-UNV-EBTL1-U
Description: AB SERIES LUMINAIRE WITH SPECULAR ALUMINUM MEDIUM
DISTRIBUTION REFLECTOR WITH GASKETED CLEAR ACRYLIC LENS
AND DOORFRAME
Light Source: FOUR 54 WATT T5HO - 4400 LUMENS EA
Ballast/Driver: -

Summary

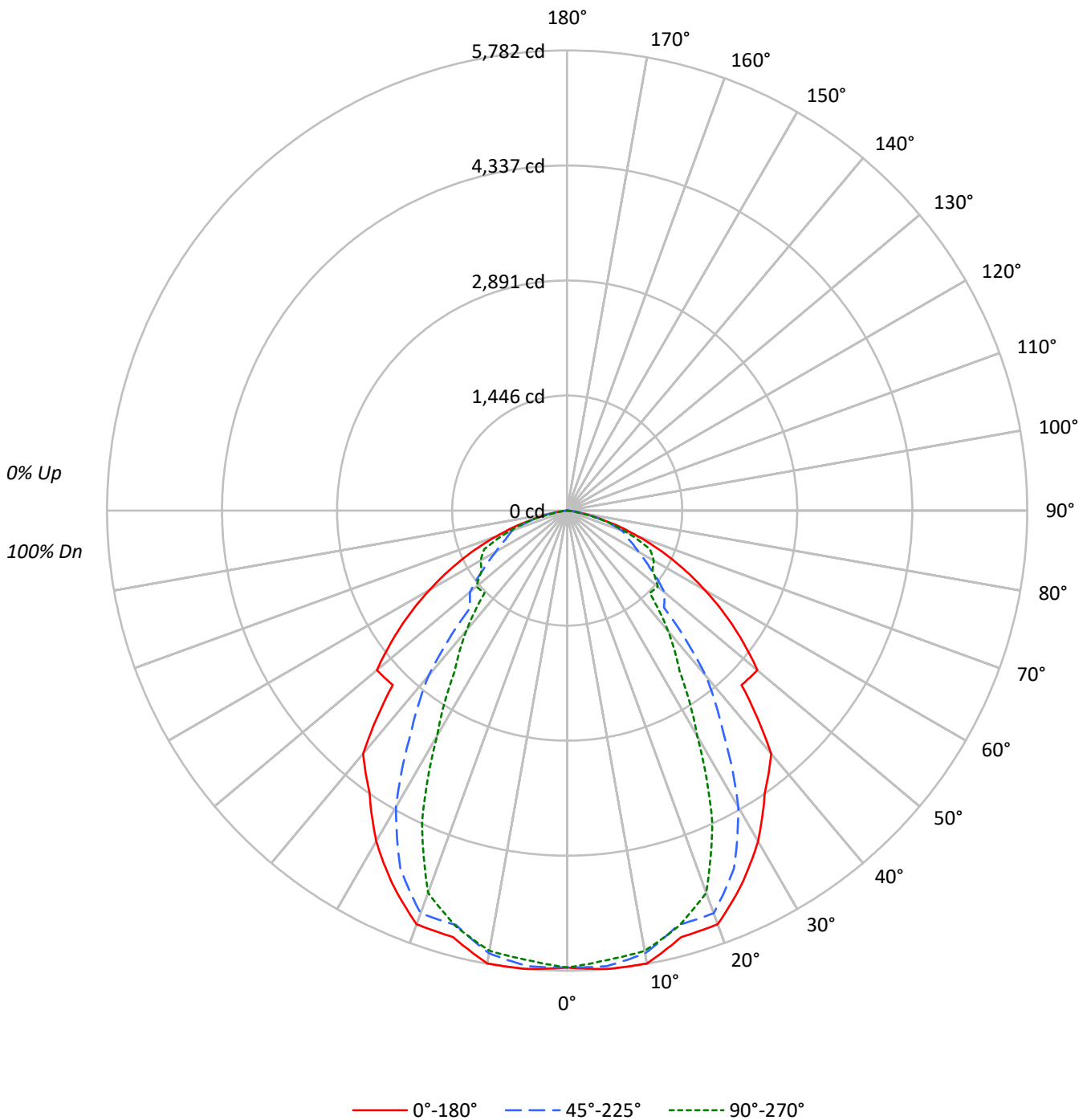
Lumens per Lamp: 4400 (4 lamps)
Luminaire Lumens: 11206.7 lumens
Efficiency: 63.7%
Efficacy: 56.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1 / 1.1
Luminous Opening: Rectangular (W 1.08' x L: 3.91' x H: 0')
CIE Type: Direct

Input Watts (W): 197
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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 76 | 76 | 76 | 76 | 74 | 74 | 74 | 74 | 71 | 71 | 71 | 68 | 68 | 68 | 65 | 65 | 65 | 64 | | | | |
| 1 | 70 | 68 | 65 | 63 | 69 | 66 | 64 | 62 | 64 | 62 | 60 | 61 | 60 | 58 | 59 | 58 | 57 | 56 | | | | |
| 2 | 65 | 60 | 56 | 53 | 63 | 59 | 56 | 53 | 57 | 54 | 51 | 55 | 52 | 50 | 53 | 51 | 49 | 48 | | | | |
| 3 | 60 | 54 | 49 | 45 | 58 | 53 | 49 | 45 | 51 | 47 | 44 | 49 | 46 | 44 | 48 | 45 | 43 | 42 | | | | |
| 4 | 55 | 48 | 43 | 39 | 54 | 48 | 43 | 39 | 46 | 42 | 39 | 45 | 41 | 38 | 43 | 40 | 38 | 36 | | | | |
| 5 | 51 | 44 | 39 | 35 | 50 | 43 | 38 | 35 | 42 | 38 | 34 | 41 | 37 | 34 | 39 | 36 | 34 | 32 | | | | |
| 6 | 48 | 40 | 35 | 31 | 46 | 39 | 34 | 31 | 38 | 34 | 31 | 37 | 33 | 30 | 36 | 33 | 30 | 29 | | | | |
| 7 | 44 | 37 | 31 | 28 | 43 | 36 | 31 | 28 | 35 | 31 | 28 | 34 | 30 | 27 | 33 | 30 | 27 | 26 | | | | |
| 8 | 42 | 34 | 29 | 25 | 41 | 33 | 28 | 25 | 32 | 28 | 25 | 32 | 28 | 25 | 31 | 27 | 25 | 24 | | | | |
| 9 | 39 | 31 | 26 | 23 | 38 | 31 | 26 | 23 | 30 | 26 | 23 | 29 | 25 | 23 | 29 | 25 | 23 | 21 | | | | |
| 10 | 37 | 29 | 24 | 21 | 36 | 29 | 24 | 21 | 28 | 24 | 21 | 27 | 24 | 21 | 27 | 23 | 21 | 20 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 14608 | 14608 | 14608 |
| 5° | 14769 | 14674 | 14483 |
| 10° | 14929 | 14596 | 14513 |
| 15° | 14612 | 14199 | 14244 |
| 20° | 14977 | 14582 | 13837 |
| 25° | 14560 | 13923 | 12106 |
| 30° | 14097 | 12637 | 9614 |
| 35° | 13447 | 10648 | 7651 |
| 40° | 13250 | 9005 | 6554 |
| 45° | 11152 | 6189 | 5275 |
| 50° | 12351 | 6314 | 5886 |
| 55° | 11357 | 5687 | 5807 |
| 60° | 10173 | 5267 | 6392 |
| 65° | 8797 | 5124 | 6912 |
| 70° | 7060 | 5453 | 5892 |
| 75° | 4867 | 4444 | 4552 |
| 80° | 2608 | 2682 | 1495 |
| 85° | 934 | 759 | 613 |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|---------|-----------|--------|-----|------|-------|------|-------|------|------|
| 0°-10° | 545.5 | 4.9 | 3.1 | 0° | 5741 | 5741 | 5741 | 5741 | 5741 | |
| 10°-20° | 1547.0 | 13.8 | 8.8 | 5° | 5782 | 5777 | 5745 | 5702 | 5670 | 551 |
| 20°-30° | 2198.1 | 19.6 | 12.5 | 15° | 5547 | 5476 | 5390 | 5412 | 5407 | 1585 |
| 30°-40° | 2170.1 | 19.4 | 12.3 | 25° | 5186 | 5034 | 4959 | 4565 | 4312 | 2387 |
| 40°-50° | 1754.0 | 15.7 | 10.0 | 35° | 4329 | 4236 | 3428 | 2695 | 2463 | 2732 |
| 50°-60° | 1460.3 | 13.0 | 8.3 | 45° | 3099 | 2900 | 1720 | 1444 | 1466 | 2569 |
| 60°-70° | 1004.7 | 9.0 | 5.7 | 55° | 2560 | 1935 | 1282 | 1277 | 1309 | 2289 |
| 70°-80° | 466.4 | 4.2 | 2.7 | 65° | 1461 | 830 | 851 | 1083 | 1148 | 1451 |
| 80°-90° | 60.5 | 0.5 | 0.3 | 75° | 495 | 339 | 452 | 480 | 463 | 558 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 32 | 48 | 26 | 26 | 21 | 66 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 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° | 4290.6 | 38.3 | 24.4 | | | | | | | |
| 0°-40° | 6460.8 | 57.7 | 36.7 | | | | | | | |
| 0°-60° | 9675.1 | 86.3 | 55.0 | | | | | | | |
| 0°-90° | 11206.7 | 100.0 | 63.7 | | | | | | | |
| 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° | 11206.7 | 100.0 | 63.7 | | | | | | | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-----|------|-------|------|-------|------|
| 0° | 5741 | 5741 | 5741 | 5741 | 5741 |
| 5° | 5782 | 5777 | 5745 | 5702 | 5670 |
| 10° | 5778 | 5746 | 5649 | 5612 | 5617 |
| 15° | 5547 | 5476 | 5390 | 5412 | 5407 |
| 20° | 5531 | 5390 | 5385 | 5234 | 5110 |
| 25° | 5186 | 5034 | 4959 | 4565 | 4312 |
| 30° | 4798 | 4662 | 4301 | 3493 | 3272 |
| 35° | 4329 | 4236 | 3428 | 2695 | 2463 |
| 40° | 3989 | 3827 | 2711 | 2059 | 1973 |
| 45° | 3099 | 2900 | 1720 | 1444 | 1466 |
| 50° | 3120 | 2706 | 1595 | 1514 | 1487 |
| 55° | 2560 | 1935 | 1282 | 1277 | 1309 |
| 60° | 1999 | 1320 | 1035 | 1175 | 1256 |
| 65° | 1461 | 830 | 851 | 1083 | 1148 |
| 70° | 949 | 528 | 733 | 814 | 792 |
| 75° | 495 | 339 | 452 | 480 | 463 |
| 80° | 178 | 178 | 183 | 135 | 102 |
| 85° | 32 | 48 | 26 | 26 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)