

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: 122p114

Luminaire Tested: **SNF-124T5-UNV-EBT-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 122p114
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SNF-124T5-UNV-EBT-1
Description: 2' COMMERCIAL NARROW STRIP, T5 LAMP
Light Source: ONE T5 LINEAR FLUORESCENT HIGH OUTPUT LAMPS
F24T5/841 24 WATTS
Ballast/Driver: -

Summary

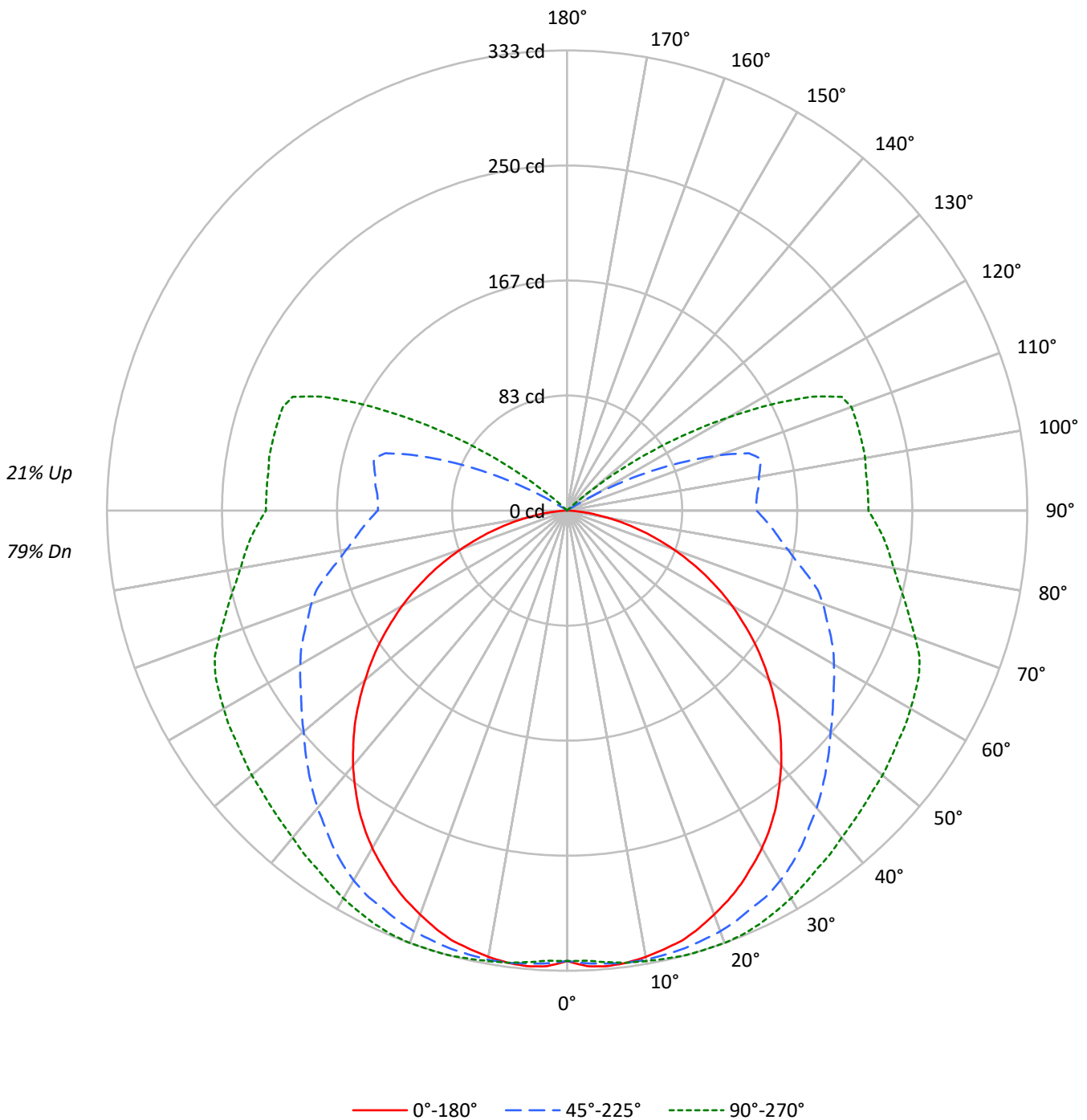
Lumens per Lamp: 1800 (1 lamp)
Luminaire Lumens: 1758.8 lumens
Efficiency: 97.7%
Efficacy: 62.8 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.48 / 1.53
Luminous Opening: Rectangular (W 0.23' x L: 3.83' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 28
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 | 111 | 111 | 111 | 111 | 107 | 107 | 107 | 107 | 97 | 97 | 97 | 89 | 89 | 89 | 81 | 81 | 81 | 77 |
| 1 | 98 | 92 | 87 | 82 | 93 | 88 | 83 | 78 | 80 | 76 | 72 | 72 | 69 | 66 | 66 | 63 | 61 | 57 |
| 2 | 88 | 78 | 70 | 64 | 83 | 75 | 68 | 61 | 68 | 62 | 57 | 62 | 57 | 53 | 56 | 52 | 48 | 45 |
| 3 | 79 | 68 | 59 | 52 | 75 | 65 | 56 | 50 | 59 | 52 | 46 | 53 | 48 | 43 | 48 | 44 | 40 | 37 |
| 4 | 72 | 59 | 50 | 43 | 68 | 57 | 48 | 41 | 52 | 44 | 39 | 47 | 41 | 36 | 42 | 37 | 33 | 30 |
| 5 | 66 | 53 | 43 | 36 | 62 | 50 | 42 | 35 | 46 | 38 | 33 | 42 | 35 | 31 | 38 | 33 | 28 | 26 |
| 6 | 61 | 47 | 38 | 31 | 57 | 45 | 36 | 30 | 41 | 34 | 28 | 38 | 31 | 26 | 34 | 29 | 25 | 22 |
| 7 | 56 | 42 | 33 | 27 | 53 | 41 | 32 | 26 | 37 | 30 | 25 | 34 | 28 | 23 | 31 | 26 | 22 | 19 |
| 8 | 52 | 38 | 30 | 24 | 49 | 37 | 29 | 23 | 34 | 27 | 22 | 31 | 25 | 21 | 28 | 23 | 19 | 17 |
| 9 | 49 | 35 | 27 | 21 | 46 | 34 | 26 | 21 | 31 | 24 | 20 | 29 | 23 | 18 | 26 | 21 | 17 | 15 |
| 10 | 45 | 32 | 24 | 19 | 43 | 31 | 24 | 19 | 29 | 22 | 18 | 26 | 21 | 17 | 24 | 19 | 16 | 14 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 3994 | 3994 | 3994 |
| 5° | 4071 | 4047 | 4034 |
| 10° | 4081 | 4106 | 4118 |
| 15° | 4085 | 4161 | 4224 |
| 20° | 4055 | 4225 | 4342 |
| 25° | 4029 | 4286 | 4461 |
| 30° | 3990 | 4372 | 4584 |
| 35° | 3934 | 4428 | 4727 |
| 40° | 3855 | 4495 | 4942 |
| 45° | 3760 | 4592 | 5250 |
| 50° | 3641 | 4746 | 5681 |
| 55° | 3525 | 5020 | 6238 |
| 60° | 3382 | 5465 | 7033 |
| 65° | 3189 | 6089 | 8147 |
| 70° | 2938 | 7058 | 9601 |
| 75° | 2604 | 8522 | 11977 |
| 80° | 2117 | 11431 | 16935 |
| 85° | 1406 | 20947 | 32335 |



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CATALOG NUMBER: SNF-124T5-UNV-EBT-1

ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|--------|-----------|--------|------|-----|-------|-----|-------|-----|------|
| 0°-10° | 31.4 | 1.8 | 1.7 | 0° | 326 | 326 | 326 | 326 | 326 | |
| 10°-20° | 92.6 | 5.3 | 5.1 | 5° | 331 | 330 | 329 | 328 | 328 | 31 |
| 20°-30° | 145.6 | 8.3 | 8.1 | 15° | 322 | 323 | 328 | 331 | 333 | 91 |
| 30°-40° | 183.3 | 10.4 | 10.2 | 25° | 298 | 304 | 317 | 327 | 330 | 137 |
| 40°-50° | 203.9 | 11.6 | 11.3 | 35° | 263 | 275 | 296 | 310 | 316 | 164 |
| 50°-60° | 209.1 | 11.9 | 11.6 | 45° | 217 | 238 | 265 | 293 | 303 | 167 |
| 60°-70° | 201.4 | 11.4 | 11.2 | 55° | 165 | 192 | 235 | 278 | 292 | 147 |
| 70°-80° | 177.8 | 10.1 | 9.9 | 65° | 110 | 146 | 210 | 262 | 281 | 109 |
| 80°-90° | 148.7 | 8.5 | 8.3 | 75° | 55 | 104 | 180 | 234 | 253 | 58 |
| 90°-100° | 137.0 | 7.8 | 7.6 | 85° | 10 | 66 | 149 | 208 | 230 | 12 |
| 100°-110° | 126.0 | 7.2 | 7.0 | 90° | 0 | 56 | 137 | 197 | 218 | 0 |
| 110°-120° | 80.3 | 4.6 | 4.5 | 95° | 0 | 58 | 138 | 197 | 218 | 0 |
| 120°-130° | 21.1 | 1.2 | 1.2 | 105° | 0 | 27 | 145 | 199 | 219 | 0 |
| 130°-140° | 0.6 | 0.0 | 0.0 | 115° | 0 | 0 | 68 | 162 | 195 | 0 |
| 140°-150° | 0.0 | 0.0 | 0.0 | 125° | 0 | 0 | 0 | 48 | 75 | 0 |
| 150°-160° | 0.0 | 0.0 | 0.0 | 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 160°-170° | 0.0 | 0.0 | 0.0 | 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 170°-180° | 0.0 | 0.0 | 0.0 | 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-30° | 269.6 | 15.3 | 15.0 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 452.9 | 25.8 | 25.2 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 865.9 | 49.2 | 48.1 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 1393.8 | 79.2 | 77.4 | | | | | | | |
| 90°-120° | 343.3 | 19.5 | 19.1 | | | | | | | |
| 90°-150° | 365.0 | 20.8 | 20.3 | | | | | | | |
| 90°-180° | 365.0 | 20.8 | 20.3 | | | | | | | |
| 0°-180° | 1758.8 | 100.0 | 97.7 | | | | | | | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 0° | 326 | 326 | 326 | 326 | 326 |
| 2.5° | 330 | 329 | 328 | 327 | 326 |
| 5° | 331 | 330 | 329 | 328 | 328 |
| 7.5° | 330 | 329 | 330 | 330 | 330 |
| 10° | 328 | 328 | 330 | 331 | 331 |
| 12.5° | 325 | 326 | 329 | 331 | 332 |
| 15° | 322 | 323 | 328 | 331 | 333 |
| 17.5° | 317 | 319 | 326 | 331 | 333 |
| 20° | 311 | 315 | 324 | 330 | 333 |
| 22.5° | 305 | 310 | 321 | 329 | 332 |
| 25° | 298 | 304 | 317 | 327 | 330 |
| 27.5° | 290 | 298 | 314 | 324 | 327 |
| 30° | 282 | 291 | 309 | 320 | 324 |
| 32.5° | 273 | 283 | 303 | 315 | 320 |
| 35° | 263 | 275 | 296 | 310 | 316 |
| 37.5° | 252 | 266 | 288 | 305 | 313 |
| 40° | 241 | 257 | 281 | 301 | 309 |
| 42.5° | 229 | 247 | 273 | 297 | 306 |
| 45° | 217 | 238 | 265 | 293 | 303 |
| 47.5° | 204 | 227 | 257 | 288 | 300 |
| 50° | 191 | 216 | 249 | 284 | 298 |
| 52.5° | 178 | 204 | 242 | 281 | 295 |
| 55° | 165 | 192 | 235 | 278 | 292 |
| 57.5° | 151 | 181 | 229 | 273 | 290 |
| 60° | 138 | 169 | 223 | 270 | 287 |
| 62.5° | 124 | 157 | 217 | 266 | 284 |
| 65° | 110 | 146 | 210 | 262 | 281 |
| 67.5° | 96 | 134 | 203 | 258 | 276 |
| 70° | 82 | 124 | 197 | 251 | 268 |
| 72.5° | 68 | 115 | 190 | 242 | 260 |
| 75° | 55 | 104 | 180 | 234 | 253 |
| 77.5° | 42 | 94 | 170 | 226 | 246 |
| 80° | 30 | 85 | 162 | 219 | 240 |
| 82.5° | 19 | 74 | 155 | 213 | 235 |
| 85° | 10 | 66 | 149 | 208 | 230 |
| 87.5° | 3 | 60 | 143 | 202 | 224 |
| 90° | 0 | 56 | 137 | 197 | 218 |
| 92.5° | 0 | 56 | 137 | 196 | 218 |
| 95° | 0 | 58 | 138 | 197 | 218 |
| 97.5° | 0 | 60 | 140 | 197 | 218 |
| 100° | 0 | 59 | 141 | 198 | 219 |
| 102.5° | 0 | 44 | 143 | 199 | 219 |
| 105° | 0 | 27 | 145 | 199 | 219 |
| 107.5° | 0 | 12 | 138 | 200 | 219 |
| 110° | 0 | 3 | 117 | 200 | 219 |



TEST NUMBER: 122p114

CATALOG NUMBER: SNF-124T5-UNV-EBT-1

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|----|-------|-----|-------|-----|
| 112.5° | 0 | 1 | 93 | 188 | 215 |
| 115° | 0 | 0 | 68 | 162 | 195 |
| 117.5° | 0 | 0 | 44 | 133 | 166 |
| 120° | 0 | 0 | 22 | 104 | 135 |
| 122.5° | 0 | 0 | 5 | 75 | 105 |
| 125° | 0 | 0 | 0 | 48 | 75 |
| 127.5° | 0 | 0 | 0 | 23 | 47 |
| 130° | 0 | 0 | 0 | 7 | 22 |
| 132.5° | 0 | 0 | 0 | 0 | 6 |
| 135° | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)