

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: 109P147

Luminaire Tested: **2EP3GX-2U6T8S44I/040-PAF**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 109P147
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2EP3GX-2U6T8S44I/040-PAF
Description: 2 X 2 Recessed Convertible Body Troffer with
a 3" deep 16 cell semi-specular low iridescent
parabolic louver. Louver equipped with a .040
translucent white overlay acrylic lens.
Light Source: Two-FB31T8/TL735/6 - 2650 Lumens ea. - 31 Watts ea.
Ballast/Driver: Triad-Utrad B232I120 Electronic

Summary

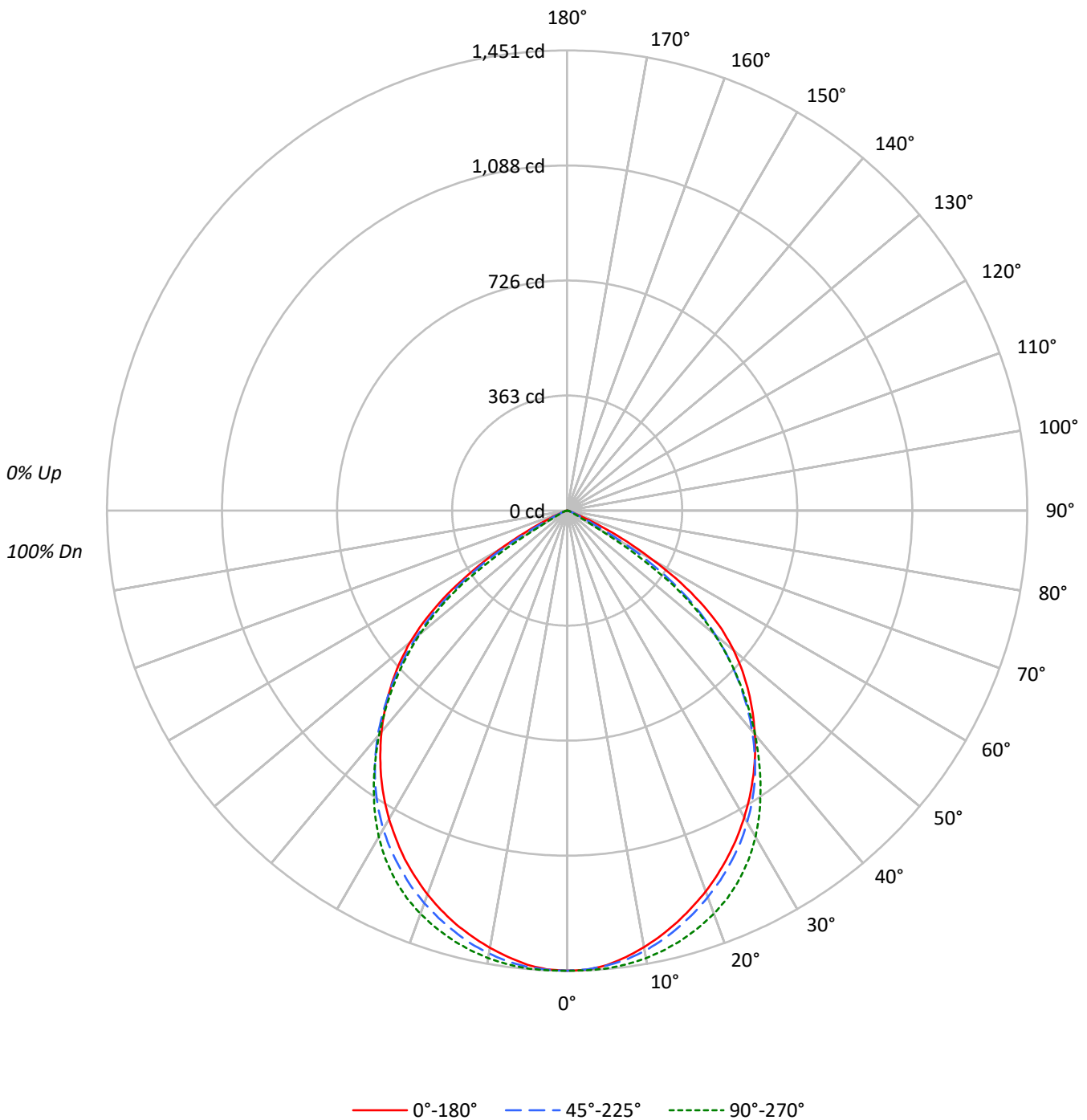
Lumens per Lamp: 2650 (2 lamps)
Luminaire Lumens: 2802.8 lumens
Efficiency: 52.9%
Efficacy: 48.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.21 / 1.26
Luminous Opening: Rectangular (W 1.73' x L: 1.75' x H: 0')
CIE Type: Direct

Input Watts (W): 57.8
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 63 | 63 | 63 | 63 | 61 | 61 | 61 | 61 | 59 | 59 | 59 | 56 | 56 | 56 | 54 | 54 | 54 | 53 |
| 1 | 59 | 57 | 56 | 54 | 58 | 56 | 55 | 53 | 54 | 53 | 52 | 52 | 51 | 50 | 50 | 49 | 49 | 48 |
| 2 | 55 | 52 | 49 | 47 | 54 | 51 | 48 | 46 | 49 | 47 | 45 | 47 | 45 | 44 | 46 | 44 | 43 | 42 |
| 3 | 51 | 47 | 43 | 40 | 50 | 46 | 43 | 40 | 44 | 42 | 39 | 43 | 41 | 39 | 42 | 40 | 38 | 37 |
| 4 | 47 | 42 | 38 | 35 | 46 | 41 | 38 | 35 | 40 | 37 | 35 | 39 | 36 | 34 | 38 | 36 | 34 | 33 |
| 5 | 44 | 38 | 34 | 31 | 43 | 38 | 34 | 31 | 37 | 33 | 31 | 36 | 33 | 30 | 35 | 32 | 30 | 29 |
| 6 | 41 | 35 | 31 | 28 | 40 | 34 | 30 | 28 | 33 | 30 | 27 | 33 | 30 | 27 | 32 | 29 | 27 | 26 |
| 7 | 38 | 32 | 28 | 25 | 37 | 31 | 28 | 25 | 31 | 27 | 25 | 30 | 27 | 24 | 29 | 26 | 24 | 23 |
| 8 | 36 | 29 | 25 | 22 | 35 | 29 | 25 | 22 | 28 | 25 | 22 | 28 | 24 | 22 | 27 | 24 | 22 | 21 |
| 9 | 33 | 27 | 23 | 20 | 33 | 27 | 23 | 20 | 26 | 23 | 20 | 26 | 22 | 20 | 25 | 22 | 20 | 19 |
| 10 | 31 | 25 | 21 | 19 | 31 | 25 | 21 | 19 | 24 | 21 | 18 | 24 | 21 | 18 | 23 | 20 | 18 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|------|------|------|
| 0° | 5161 | 5161 | 5161 |
| 5° | 5138 | 5174 | 5135 |
| 10° | 5049 | 5176 | 5057 |
| 15° | 4946 | 5159 | 4975 |
| 20° | 4838 | 5122 | 4875 |
| 25° | 4718 | 5039 | 4757 |
| 30° | 4588 | 4879 | 4612 |
| 35° | 4442 | 4616 | 4442 |
| 40° | 4277 | 4281 | 4230 |
| 45° | 4075 | 3878 | 3959 |
| 50° | 3796 | 3353 | 3580 |
| 55° | 3274 | 2505 | 2871 |
| 60° | 2227 | 711 | 1750 |
| 65° | 1010 | 210 | 640 |
| 70° | 229 | 135 | 177 |
| 75° | 124 | 96 | 96 |
| 80° | 82 | 61 | 61 |
| 85° | 41 | 41 | 0 |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 45° | 90° | 135° | 180° | Flux |
|-----------|--------|-----------|--------|------|------|------|------|------|------|------|
| 0°-10° | 136.8 | 4.9 | 2.6 | 0° | 1451 | 1451 | 1451 | 1451 | 1451 | |
| 10°-20° | 386.3 | 13.8 | 7.3 | 5° | 1439 | 1440 | 1449 | 1444 | 1438 | 136 |
| 20°-30° | 569.9 | 20.3 | 10.8 | 15° | 1343 | 1360 | 1401 | 1374 | 1351 | 378 |
| 30°-40° | 648.5 | 23.1 | 12.2 | 25° | 1202 | 1223 | 1284 | 1245 | 1212 | 553 |
| 40°-50° | 596.5 | 21.3 | 11.3 | 35° | 1023 | 1032 | 1063 | 1055 | 1023 | 639 |
| 50°-60° | 380.0 | 13.6 | 7.2 | 45° | 810 | 767 | 771 | 784 | 787 | 623 |
| 60°-70° | 73.6 | 2.6 | 1.4 | 55° | 528 | 431 | 404 | 433 | 463 | 461 |
| 70°-80° | 9.8 | 0.4 | 0.2 | 65° | 120 | 45 | 25 | 43 | 76 | 134 |
| 80°-90° | 1.3 | 0.0 | 0.0 | 75° | 9 | 9 | 7 | 9 | 7 | 11 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 1 | 1 | 1 | 1 | 0 | 1 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | 0 |
| 110°-120° | 0.0 | 0.0 | 0.0 | 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 120°-130° | 0.0 | 0.0 | 0.0 | 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 130°-140° | 0.0 | 0.0 | 0.0 | 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 140°-150° | 0.0 | 0.0 | 0.0 | 125° | 0 | 0 | 0 | 0 | 0 | 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° | 1093.0 | 39.0 | 20.6 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 1741.6 | 62.1 | 32.9 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 2718.0 | 97.0 | 51.3 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 2802.8 | 100.0 | 52.9 | | | | | | | |
| 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° | 2802.8 | 100.0 | 52.9 | | | | | | | |



TEST NUMBER: 109P147

CATALOG NUMBER: 2EP3GX-2U6T8S44I/040-PAF

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|------|-------|------|-------|------|--------|------|--------|------|
| 0° | 1451 | 1451 | 1451 | 1451 | 1451 | 1451 | 1451 | 1451 | 1451 |
| 2.5° | 1449 | 1446 | 1448 | 1450 | 1451 | 1450 | 1449 | 1449 | 1448 |
| 5° | 1439 | 1435 | 1440 | 1445 | 1449 | 1447 | 1444 | 1441 | 1438 |
| 7.5° | 1420 | 1418 | 1428 | 1438 | 1443 | 1440 | 1434 | 1428 | 1420 |
| 10° | 1398 | 1396 | 1410 | 1425 | 1433 | 1429 | 1418 | 1410 | 1400 |
| 12.5° | 1372 | 1370 | 1387 | 1407 | 1419 | 1413 | 1399 | 1388 | 1377 |
| 15° | 1343 | 1342 | 1360 | 1386 | 1401 | 1392 | 1374 | 1364 | 1351 |
| 17.5° | 1311 | 1312 | 1330 | 1360 | 1379 | 1367 | 1347 | 1336 | 1321 |
| 20° | 1278 | 1277 | 1297 | 1329 | 1353 | 1338 | 1317 | 1305 | 1288 |
| 22.5° | 1241 | 1241 | 1262 | 1295 | 1322 | 1304 | 1284 | 1270 | 1251 |
| 25° | 1202 | 1201 | 1223 | 1255 | 1284 | 1266 | 1245 | 1231 | 1212 |
| 27.5° | 1161 | 1159 | 1182 | 1210 | 1240 | 1222 | 1205 | 1189 | 1168 |
| 30° | 1117 | 1115 | 1135 | 1158 | 1188 | 1171 | 1160 | 1143 | 1123 |
| 32.5° | 1071 | 1068 | 1086 | 1100 | 1129 | 1114 | 1110 | 1095 | 1075 |
| 35° | 1023 | 1018 | 1032 | 1035 | 1063 | 1050 | 1055 | 1043 | 1023 |
| 37.5° | 973 | 966 | 972 | 966 | 994 | 981 | 995 | 988 | 968 |
| 40° | 921 | 912 | 908 | 893 | 922 | 909 | 930 | 930 | 911 |
| 42.5° | 866 | 854 | 840 | 818 | 847 | 834 | 858 | 869 | 851 |
| 45° | 810 | 794 | 767 | 741 | 771 | 757 | 784 | 803 | 787 |
| 47.5° | 750 | 729 | 691 | 662 | 691 | 677 | 704 | 734 | 720 |
| 50° | 686 | 660 | 611 | 580 | 606 | 592 | 621 | 659 | 647 |
| 52.5° | 614 | 581 | 526 | 491 | 512 | 501 | 532 | 574 | 561 |
| 55° | 528 | 486 | 431 | 389 | 404 | 398 | 433 | 474 | 463 |
| 57.5° | 427 | 379 | 325 | 271 | 251 | 275 | 321 | 364 | 350 |
| 60° | 313 | 264 | 212 | 141 | 100 | 142 | 205 | 248 | 246 |
| 62.5° | 213 | 163 | 104 | 58 | 41 | 59 | 100 | 152 | 152 |
| 65° | 120 | 90 | 45 | 32 | 25 | 32 | 43 | 83 | 76 |
| 67.5° | 47 | 44 | 26 | 22 | 18 | 22 | 25 | 40 | 29 |
| 70° | 22 | 22 | 18 | 15 | 13 | 16 | 17 | 20 | 17 |
| 72.5° | 14 | 14 | 13 | 11 | 9 | 11 | 12 | 14 | 11 |
| 75° | 9 | 10 | 9 | 9 | 7 | 8 | 9 | 9 | 7 |
| 77.5° | 6 | 7 | 6 | 6 | 5 | 6 | 6 | 6 | 5 |
| 80° | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3 |
| 82.5° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 87.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 92.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 97.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|----|-------|-----|-------|-----|--------|------|--------|------|
| 112.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)