

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: ITL44169

Luminaire Tested: **DIM-296PG**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: ITL44169
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: DIM-296PG
Description: WHITE PAINTED FABRICATED METAL STRIP BALLAST HOUSING WITH
WHITE PAINTED SOCKET HOUSINGS, WHITE PAINTED FABRICATED METAL
REFLECTOR WITH UP-LIGHT APERTURES, OPEN BOTTOM.
Light Source: TWO 215-WATT F96PG17/CW FLUORESCENTS.
Ballast/Driver: ONE MAGNETEK UNIVERSAL 931-LH-TC-P (BALLAST FACTOR 90.2 %).

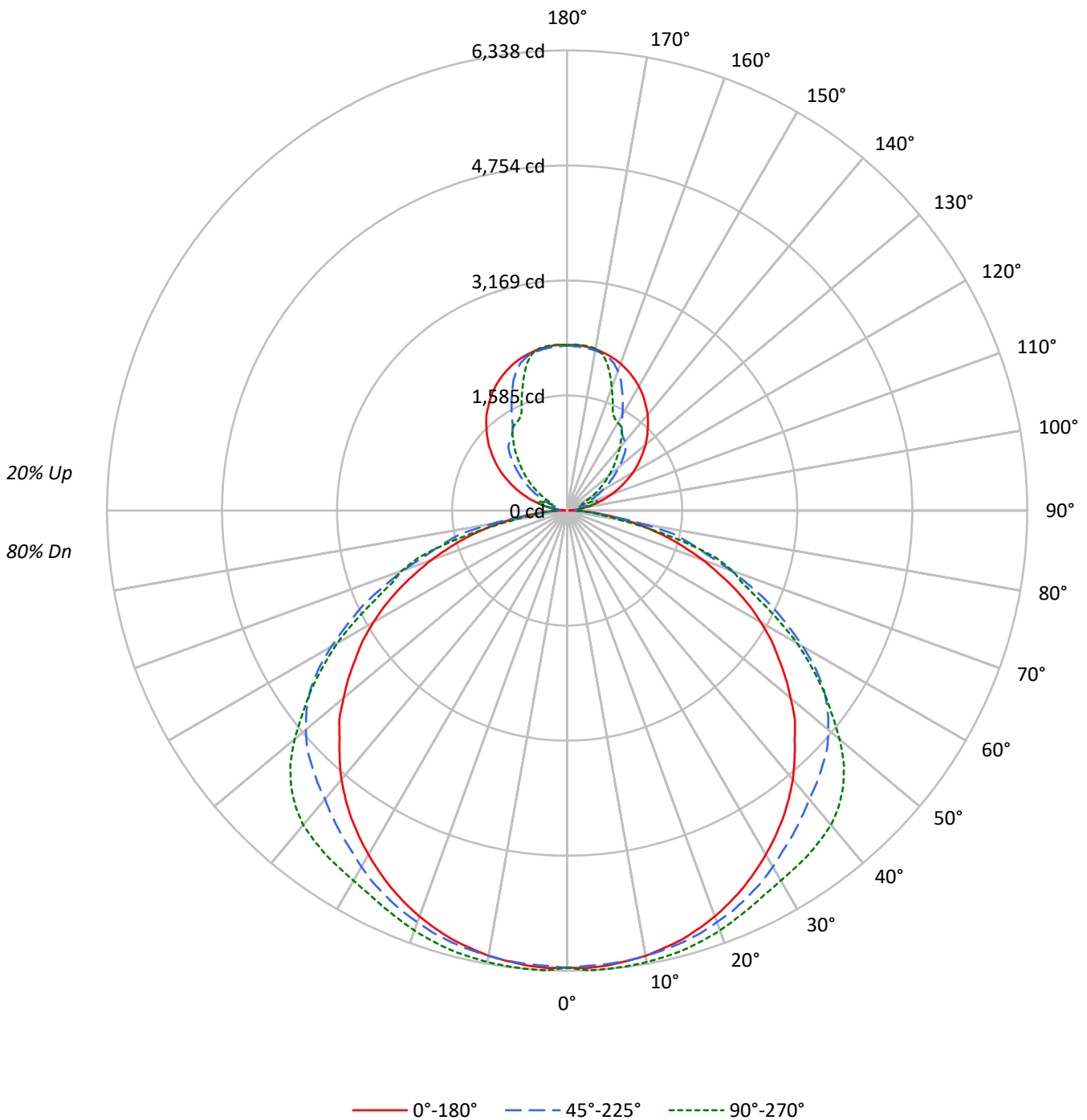
Summary

Lumens per Lamp: 15300 (2 lamps)
Luminaire Lumens: 26437.2 lumens
Efficiency: 86.4%
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.41 / 1.51
Luminous Opening: Rectangular (W 1.08' x L: 8' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 395
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 | 99 | 99 | 99 | 99 | 95 | 95 | 95 | 95 | 87 | 87 | 87 | 79 | 79 | 79 | 73 | 73 | 73 | 70 |
| 1 | 90 | 85 | 82 | 78 | 86 | 82 | 78 | 75 | 75 | 72 | 70 | 69 | 67 | 65 | 63 | 62 | 60 | 57 |
| 2 | 81 | 74 | 68 | 63 | 77 | 71 | 65 | 61 | 65 | 61 | 57 | 60 | 56 | 53 | 55 | 52 | 49 | 47 |
| 3 | 74 | 64 | 57 | 52 | 70 | 62 | 55 | 50 | 57 | 51 | 47 | 52 | 48 | 44 | 48 | 44 | 41 | 39 |
| 4 | 67 | 57 | 49 | 43 | 64 | 54 | 47 | 42 | 50 | 44 | 40 | 46 | 41 | 37 | 42 | 38 | 35 | 33 |
| 5 | 61 | 50 | 42 | 37 | 58 | 48 | 41 | 36 | 45 | 38 | 34 | 41 | 36 | 32 | 38 | 34 | 30 | 28 |
| 6 | 57 | 45 | 37 | 32 | 54 | 43 | 36 | 31 | 40 | 34 | 29 | 37 | 32 | 28 | 34 | 30 | 26 | 24 |
| 7 | 52 | 41 | 33 | 28 | 50 | 39 | 32 | 27 | 36 | 30 | 26 | 34 | 28 | 24 | 31 | 27 | 23 | 21 |
| 8 | 48 | 37 | 30 | 24 | 46 | 36 | 29 | 24 | 33 | 27 | 23 | 31 | 25 | 22 | 28 | 24 | 21 | 19 |
| 9 | 45 | 34 | 27 | 22 | 43 | 32 | 26 | 21 | 30 | 24 | 20 | 28 | 23 | 19 | 26 | 22 | 18 | 17 |
| 10 | 42 | 31 | 24 | 20 | 40 | 30 | 23 | 19 | 28 | 22 | 18 | 26 | 21 | 17 | 24 | 20 | 17 | 15 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7819 | 7819 | 7819 |
| 5° | 7842 | 7817 | 7902 |
| 10° | 7853 | 7853 | 7963 |
| 15° | 7864 | 7914 | 8048 |
| 20° | 7863 | 7973 | 8135 |
| 25° | 7858 | 8049 | 8239 |
| 30° | 7848 | 8127 | 8440 |
| 35° | 7851 | 8238 | 8779 |
| 40° | 7842 | 8415 | 9169 |
| 45° | 7785 | 8733 | 9445 |
| 50° | 7766 | 9078 | 9468 |
| 55° | 7705 | 9357 | 9322 |
| 60° | 7656 | 9323 | 9094 |
| 65° | 7491 | 9137 | 8590 |
| 70° | 7241 | 8668 | 8795 |
| 75° | 6901 | 8460 | 7966 |
| 80° | 6251 | 7553 | 5343 |
| 85° | 5772 | 5144 | 5087 |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|---------|-----------|--------|------|------|-------|------|-------|------|------|
| 0°-10° | 598.6 | 2.3 | 2.0 | 0° | 6295 | 6295 | 6295 | 6295 | 6295 | |
| 10°-20° | 1742.1 | 6.6 | 5.7 | 5° | 6290 | 6259 | 6270 | 6294 | 6338 | 598 |
| 20°-30° | 2710.6 | 10.3 | 8.9 | 15° | 6116 | 6112 | 6155 | 6199 | 6259 | 1726 |
| 30°-40° | 3427.2 | 13.0 | 11.2 | 25° | 5734 | 5782 | 5873 | 5953 | 6012 | 2643 |
| 40°-50° | 3821.3 | 14.5 | 12.5 | 35° | 5178 | 5297 | 5433 | 5663 | 5790 | 3239 |
| 50°-60° | 3670.7 | 13.9 | 12.0 | 45° | 4432 | 4642 | 4972 | 5309 | 5377 | 3429 |
| 60°-70° | 2954.2 | 11.2 | 9.7 | 55° | 3558 | 3856 | 4321 | 4356 | 4305 | 3186 |
| 70°-80° | 1842.7 | 7.0 | 6.0 | 65° | 2549 | 3074 | 3109 | 3050 | 2923 | 2517 |
| 80°-90° | 508.1 | 1.9 | 1.7 | 75° | 1438 | 1950 | 1763 | 1847 | 1660 | 1510 |
| 90°-100° | 154.9 | 0.6 | 0.5 | 85° | 405 | 588 | 361 | 377 | 357 | 425 |
| 100°-110° | 332.0 | 1.3 | 1.1 | 90° | 33 | 96 | 111 | 130 | 131 | 39 |
| 110°-120° | 466.0 | 1.8 | 1.5 | 95° | 83 | 136 | 124 | 138 | 131 | 102 |
| 120°-130° | 716.4 | 2.7 | 2.3 | 105° | 440 | 265 | 213 | 405 | 421 | 468 |
| 130°-140° | 897.1 | 3.4 | 2.9 | 115° | 845 | 618 | 388 | 292 | 243 | 836 |
| 140°-150° | 937.2 | 3.5 | 3.1 | 125° | 1228 | 915 | 747 | 639 | 574 | 1099 |
| 150°-160° | 834.3 | 3.2 | 2.7 | 135° | 1568 | 1292 | 1124 | 1000 | 933 | 1212 |
| 160°-170° | 608.2 | 2.3 | 2.0 | 145° | 1856 | 1765 | 1308 | 1339 | 1319 | 1162 |
| 170°-180° | 215.8 | 0.8 | 0.7 | 155° | 2072 | 2066 | 1795 | 1580 | 1486 | 956 |
| 0°-30° | 5051.2 | 19.1 | 16.5 | 165° | 2213 | 2197 | 2185 | 2153 | 2114 | 625 |
| 0°-40° | 8478.4 | 32.1 | 27.7 | 175° | 2280 | 2257 | 2260 | 2271 | 2286 | 217 |
| 0°-60° | 15970.4 | 60.4 | 52.2 | 180° | 2276 | 2276 | 2276 | 2276 | 2276 | |
| 0°-90° | 21275.3 | 80.5 | 69.5 | | | | | | | |
| 90°-120° | 952.9 | 3.6 | 3.1 | | | | | | | |
| 90°-150° | 3503.6 | 13.3 | 11.4 | | | | | | | |
| 90°-180° | 5162.0 | 19.5 | 16.9 | | | | | | | |
| 0°-180° | 26437.2 | 100.0 | 86.4 | | | | | | | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|------|-------|------|-------|------|
| 0° | 6295 | 6295 | 6295 | 6295 | 6295 |
| 2.5° | 6306 | 6266 | 6278 | 6298 | 6338 |
| 5° | 6290 | 6259 | 6270 | 6294 | 6338 |
| 7.5° | 6259 | 6243 | 6255 | 6282 | 6330 |
| 10° | 6227 | 6215 | 6227 | 6259 | 6314 |
| 12.5° | 6171 | 6171 | 6195 | 6235 | 6290 |
| 15° | 6116 | 6112 | 6155 | 6199 | 6259 |
| 17.5° | 6036 | 6048 | 6104 | 6159 | 6211 |
| 20° | 5949 | 5981 | 6032 | 6108 | 6155 |
| 22.5° | 5846 | 5885 | 5965 | 6036 | 6084 |
| 25° | 5734 | 5782 | 5873 | 5953 | 6012 |
| 27.5° | 5607 | 5679 | 5782 | 5869 | 5941 |
| 30° | 5472 | 5560 | 5667 | 5790 | 5885 |
| 32.5° | 5329 | 5429 | 5544 | 5718 | 5838 |
| 35° | 5178 | 5297 | 5433 | 5663 | 5790 |
| 37.5° | 5012 | 5159 | 5313 | 5603 | 5726 |
| 40° | 4837 | 4992 | 5190 | 5532 | 5655 |
| 42.5° | 4638 | 4821 | 5087 | 5425 | 5536 |
| 45° | 4432 | 4642 | 4972 | 5309 | 5377 |
| 47.5° | 4257 | 4468 | 4857 | 5166 | 5170 |
| 50° | 4019 | 4245 | 4698 | 4908 | 4900 |
| 52.5° | 3796 | 4043 | 4527 | 4638 | 4591 |
| 55° | 3558 | 3856 | 4321 | 4356 | 4305 |
| 57.5° | 3336 | 3661 | 4059 | 4047 | 3979 |
| 60° | 3082 | 3475 | 3753 | 3737 | 3661 |
| 62.5° | 2827 | 3268 | 3423 | 3387 | 3288 |
| 65° | 2549 | 3074 | 3109 | 3050 | 2923 |
| 67.5° | 2256 | 2831 | 2740 | 2677 | 2613 |
| 70° | 1994 | 2585 | 2387 | 2391 | 2422 |
| 72.5° | 1700 | 2295 | 2025 | 2208 | 2136 |
| 75° | 1438 | 1950 | 1763 | 1847 | 1660 |
| 77.5° | 1152 | 1600 | 1509 | 1362 | 1152 |
| 80° | 874 | 1215 | 1056 | 894 | 747 |
| 82.5° | 627 | 909 | 623 | 544 | 484 |
| 85° | 405 | 588 | 361 | 377 | 357 |
| 87.5° | 191 | 250 | 222 | 254 | 222 |
| 90° | 33 | 96 | 111 | 130 | 131 |
| 92.5° | 28 | 88 | 103 | 122 | 127 |
| 95° | 83 | 136 | 124 | 138 | 131 |
| 97.5° | 157 | 127 | 197 | 203 | 182 |
| 100° | 246 | 130 | 269 | 291 | 265 |
| 102.5° | 343 | 191 | 298 | 367 | 354 |
| 105° | 440 | 265 | 213 | 405 | 421 |
| 107.5° | 546 | 351 | 176 | 337 | 432 |
| 110° | 644 | 440 | 225 | 217 | 324 |



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CATALOG NUMBER: DIM-296PG

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|------|-------|------|-------|------|
| 112.5° | 744 | 530 | 307 | 222 | 221 |
| 115° | 845 | 618 | 388 | 292 | 243 |
| 117.5° | 945 | 718 | 475 | 377 | 315 |
| 120° | 1047 | 804 | 567 | 458 | 402 |
| 122.5° | 1139 | 861 | 658 | 548 | 485 |
| 125° | 1228 | 915 | 747 | 639 | 574 |
| 127.5° | 1319 | 971 | 841 | 726 | 662 |
| 130° | 1410 | 1052 | 935 | 813 | 754 |
| 132.5° | 1492 | 1162 | 1030 | 905 | 844 |
| 135° | 1568 | 1292 | 1124 | 1000 | 933 |
| 137.5° | 1650 | 1417 | 1198 | 1094 | 1030 |
| 140° | 1726 | 1541 | 1236 | 1189 | 1129 |
| 142.5° | 1790 | 1661 | 1270 | 1283 | 1218 |
| 145° | 1856 | 1765 | 1308 | 1339 | 1319 |
| 147.5° | 1919 | 1866 | 1395 | 1361 | 1378 |
| 150° | 1975 | 1947 | 1521 | 1391 | 1398 |
| 152.5° | 2027 | 2012 | 1662 | 1448 | 1424 |
| 155° | 2072 | 2066 | 1795 | 1580 | 1486 |
| 157.5° | 2116 | 2107 | 1935 | 1737 | 1638 |
| 160° | 2153 | 2142 | 2043 | 1888 | 1799 |
| 162.5° | 2185 | 2173 | 2132 | 2038 | 1965 |
| 165° | 2213 | 2197 | 2185 | 2153 | 2114 |
| 167.5° | 2236 | 2218 | 2219 | 2224 | 2215 |
| 170° | 2257 | 2235 | 2238 | 2252 | 2264 |
| 172.5° | 2268 | 2247 | 2250 | 2263 | 2281 |
| 175° | 2280 | 2257 | 2260 | 2271 | 2286 |
| 177.5° | 2285 | 2261 | 2264 | 2273 | 2289 |
| 180° | 2276 | 2276 | 2276 | 2276 | 2276 |

(END OF REPORT)