

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P261350

Luminaire Tested: **24CZ-LD5-30SE-S-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P261350  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-30SE-S-UNV-L92765-W2A1-U-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2733.0 lumens  
Efficiency: N/A  
Efficacy: 124.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

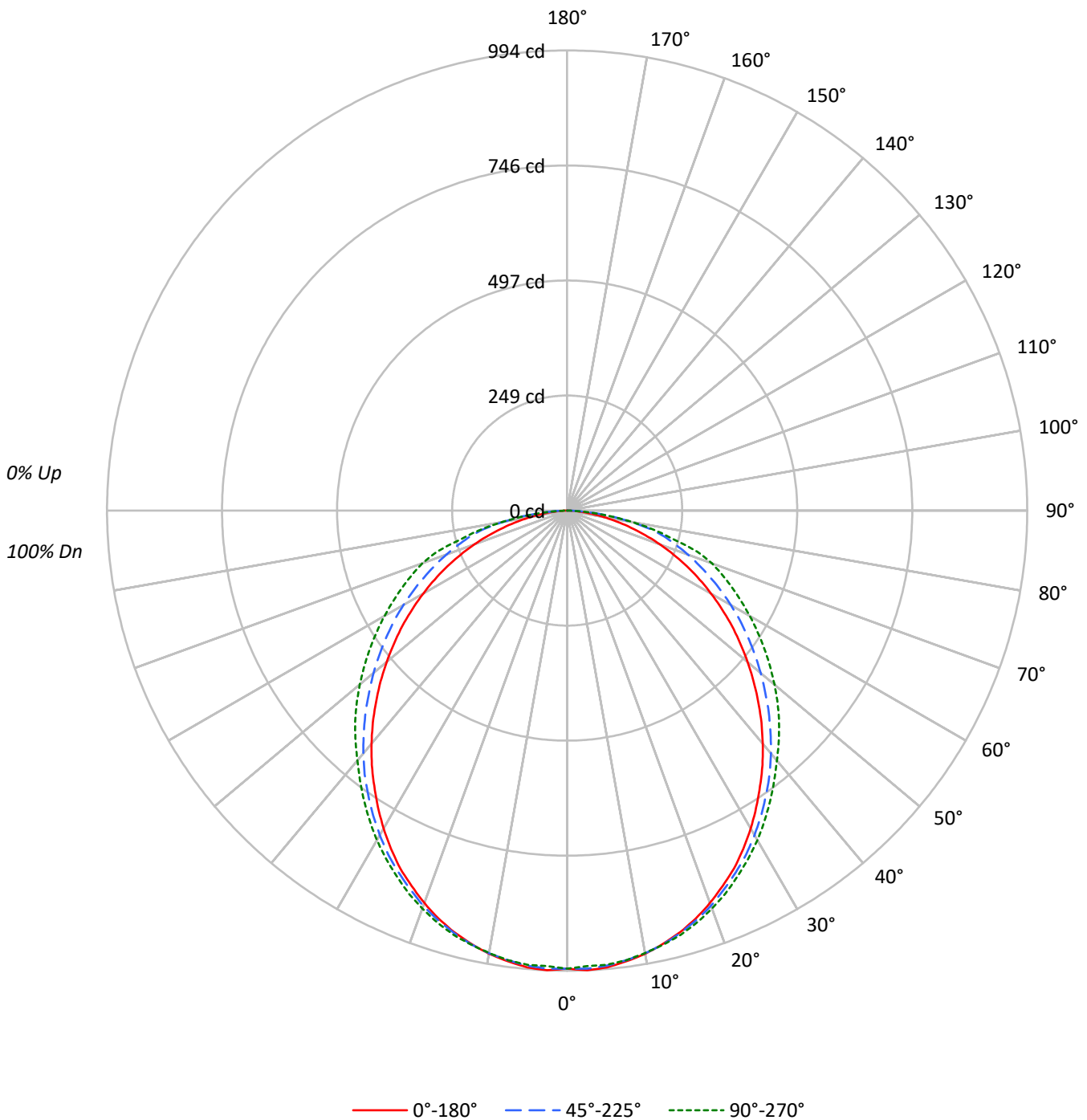
Input Watts (W): 22.041  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P261350

CATALOG NUMBER: 24CZ-LD5-30SE-S-UNV-L92765-W2A1-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P261350

CATALOG NUMBER: 24CZ-LD5-30SE-S-UNV-L92765-W2A1-U-4000K

**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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 64  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 58  | 52  | 62  | 56  | 52  | 50  |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 38  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 41  | 35  | 46  | 40  | 35  | 33  |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  | 27  |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1331 | 1331 | 1331 |
| 5°  | 1338 | 1333 | 1330 |
| 10° | 1328 | 1327 | 1326 |
| 15° | 1314 | 1316 | 1321 |
| 20° | 1292 | 1301 | 1310 |
| 25° | 1266 | 1280 | 1293 |
| 30° | 1232 | 1257 | 1277 |
| 35° | 1193 | 1231 | 1256 |
| 40° | 1155 | 1203 | 1238 |
| 45° | 1111 | 1171 | 1232 |
| 50° | 1066 | 1142 | 1224 |
| 55° | 1020 | 1118 | 1220 |
| 60° | 967  | 1099 | 1226 |
| 65° | 909  | 1086 | 1251 |
| 70° | 837  | 1091 | 1309 |
| 75° | 742  | 1130 | 1220 |
| 80° | 620  | 1071 | 1099 |
| 85° | 463  | 857  | 786  |



TEST NUMBER: P261350

CATALOG NUMBER: 24CZ-LD5-30SE-S-UNV-L92765-W2A1-U-4000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 93.5   | 3.4       |
| 10°-20°   | 266.0  | 9.7       |
| 20°-30°   | 396.5  | 14.5      |
| 30°-40°   | 466.7  | 17.1      |
| 40°-50°   | 474.3  | 17.4      |
| 50°-60°   | 426.4  | 15.6      |
| 60°-70°   | 336.9  | 12.3      |
| 70°-80°   | 213.7  | 7.8       |
| 80°-90°   | 59.0   | 2.2       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 756.1  | 27.7      |
| 0°-40°    | 1222.8 | 44.7      |
| 0°-60°    | 2123.4 | 77.7      |
| 0°-90°    | 2733.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2733.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 989 | 989   | 989 | 989   | 989 |      |
| 5°  | 990 | 982   | 987 | 985   | 985 | 94   |
| 15° | 943 | 938   | 945 | 948   | 948 | 266  |
| 25° | 853 | 852   | 862 | 868   | 871 | 392  |
| 35° | 727 | 731   | 749 | 758   | 765 | 455  |
| 45° | 584 | 592   | 616 | 634   | 648 | 450  |
| 55° | 435 | 446   | 476 | 507   | 520 | 388  |
| 65° | 286 | 300   | 341 | 378   | 393 | 283  |
| 75° | 143 | 167   | 217 | 236   | 235 | 152  |
| 85° | 30  | 52    | 56  | 51    | 51  | 37   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P261350

CATALOG NUMBER: 24CZ-LD5-30SE-S-UNV-L92765-W2A1-U-4000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 989.4 | 989.4 | 989.4 | 989.4 | 989.4 |
| 2.5°  | 993.9 | 986.7 | 990.3 | 988.5 | 984.8 |
| 5°    | 990.3 | 982.1 | 986.7 | 984.8 | 984.8 |
| 7.5°  | 982.1 | 975.8 | 979.4 | 978.5 | 979.4 |
| 10°   | 972.1 | 965.8 | 971.2 | 971.2 | 970.3 |
| 12.5° | 958.5 | 953.0 | 959.4 | 959.4 | 960.3 |
| 15°   | 943.0 | 938.5 | 944.8 | 947.6 | 948.5 |
| 17.5° | 923.9 | 919.4 | 927.6 | 930.3 | 933.0 |
| 20°   | 902.1 | 900.3 | 908.5 | 911.2 | 914.8 |
| 22.5° | 877.5 | 877.5 | 885.7 | 889.4 | 894.8 |
| 25°   | 853.0 | 852.1 | 862.1 | 867.5 | 871.2 |
| 27.5° | 823.9 | 824.8 | 837.5 | 843.0 | 847.5 |
| 30°   | 793.0 | 794.8 | 809.3 | 815.7 | 822.1 |
| 32.5° | 760.2 | 763.9 | 780.2 | 787.5 | 793.9 |
| 35°   | 726.6 | 731.1 | 749.3 | 757.5 | 764.8 |
| 37.5° | 692.9 | 699.3 | 718.4 | 726.6 | 734.8 |
| 40°   | 657.5 | 662.9 | 684.8 | 694.8 | 704.8 |
| 42.5° | 621.1 | 628.4 | 650.2 | 664.8 | 676.6 |
| 45°   | 583.8 | 592.0 | 615.6 | 633.8 | 647.5 |
| 47.5° | 546.5 | 557.4 | 580.2 | 604.7 | 616.6 |
| 50°   | 509.2 | 520.2 | 545.6 | 572.9 | 584.7 |
| 52.5° | 471.1 | 482.0 | 511.1 | 539.3 | 552.0 |
| 55°   | 434.7 | 445.6 | 476.5 | 507.4 | 520.2 |
| 57.5° | 396.5 | 408.3 | 442.9 | 474.7 | 487.4 |
| 60°   | 359.2 | 371.0 | 408.3 | 442.0 | 455.6 |
| 62.5° | 322.8 | 335.6 | 374.7 | 410.1 | 423.8 |
| 65°   | 285.5 | 300.1 | 341.0 | 378.3 | 392.8 |
| 67.5° | 249.2 | 265.5 | 308.3 | 347.4 | 362.8 |
| 70°   | 212.8 | 231.9 | 277.4 | 317.4 | 332.8 |
| 72.5° | 177.3 | 198.2 | 246.4 | 286.5 | 294.6 |
| 75°   | 142.8 | 167.3 | 217.3 | 236.4 | 234.6 |
| 77.5° | 110.0 | 137.3 | 184.6 | 188.2 | 193.7 |
| 80°   | 80.0  | 110.0 | 138.2 | 145.5 | 141.9 |
| 82.5° | 52.7  | 82.8  | 99.1  | 95.5  | 94.6  |
| 85°   | 30.0  | 51.8  | 55.5  | 50.9  | 50.9  |
| 87.5° | 12.7  | 20.9  | 18.2  | 13.6  | 12.7  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)