

Scaled data based on original data using  
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact  
Fluorescent Lamps

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: SHAPER

Report Number: 253P218

Luminaire Tested: **1200-OB-44-CFL/4/50**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: 253P218  
Test Lab: METALUX LABORATORIES  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 1200-OB-44-CFL/4/50  
Description: SHAPER 44 INCH 1200 SERIES DIRECT/INDIRECT INDOOR PENDANT FIXTURE  
WITH OPEN BOTTOM  
Light Source: FOUR - F50BX/SPX41 - 4000 LUMENS - 50 WATTS  
Ballast/Driver: -

**Summary**

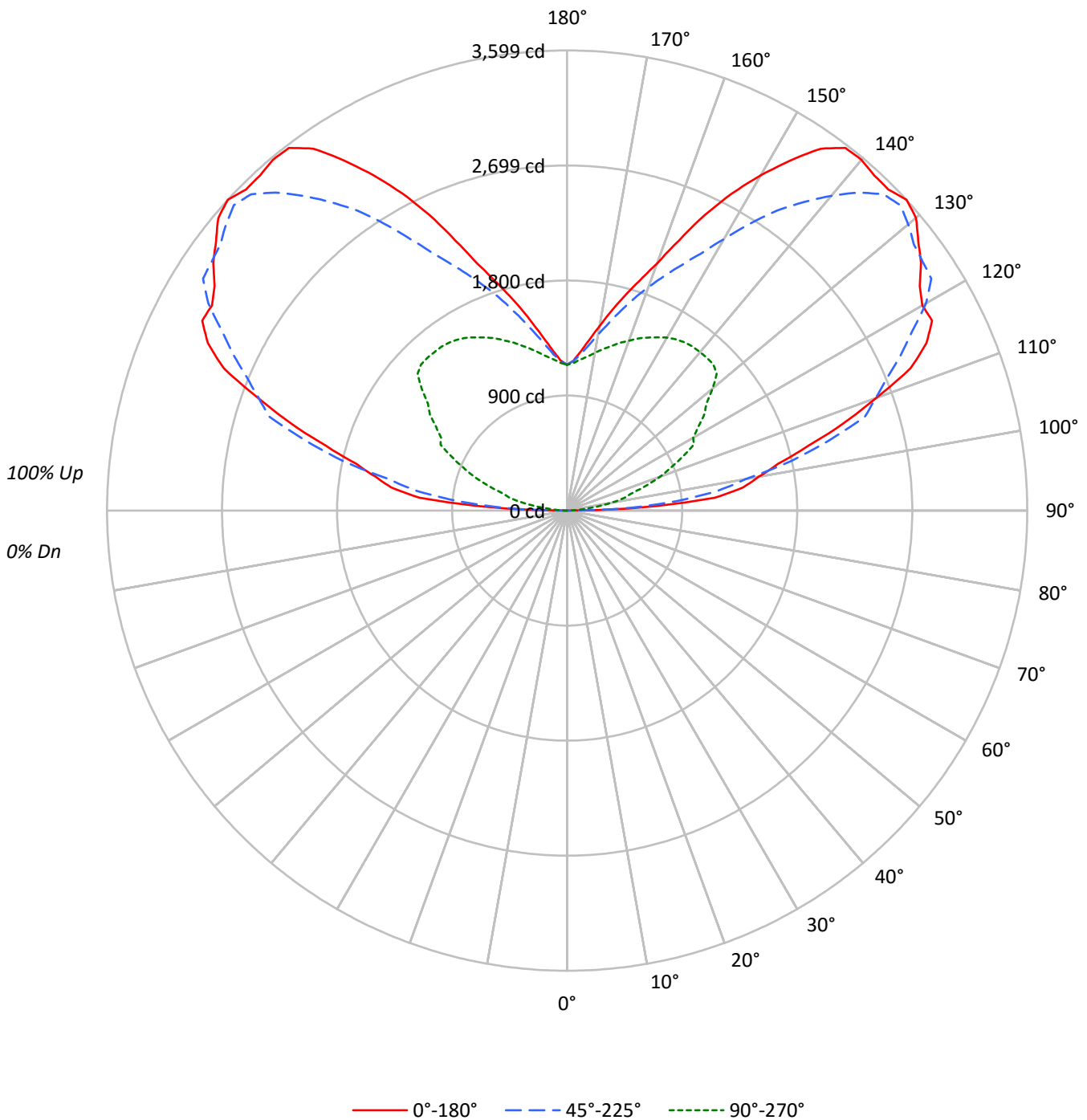
Lumens per Lamp: 4000 (4 lamps)  
Luminaire Lumens: 13382.8 lumens  
Efficiency: 83.6%  
Efficacy: 54.8 lumens/watt  
N/A  
Luminous Opening: Circular (Dia: 3.67' x H: 0')  
CIE Type: Indirect

Input Watts (W): 244  
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 |    |  | 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   | 80 | 80 | 80 | 80 | 68 | 68 | 68 | 68 | 46 | 46 | 46 | 27 | 27 | 27 | 9  | 9  | 9  |  | 0  |
| 1   | 72 | 69 | 66 | 63 | 62 | 59 | 57 | 55 | 40 | 39 | 38 | 23 | 23 | 22 | 7  | 7  | 7  |  | 0  |
| 2   | 66 | 60 | 56 | 52 | 56 | 52 | 48 | 45 | 35 | 33 | 31 | 20 | 19 | 18 | 7  | 6  | 6  |  | 0  |
| 3   | 60 | 53 | 47 | 43 | 51 | 45 | 41 | 37 | 31 | 28 | 26 | 18 | 17 | 15 | 6  | 5  | 5  |  | 0  |
| 4   | 55 | 47 | 41 | 36 | 47 | 40 | 35 | 31 | 27 | 24 | 22 | 16 | 14 | 13 | 5  | 5  | 4  |  | 0  |
| 5   | 50 | 41 | 35 | 30 | 42 | 35 | 30 | 26 | 24 | 21 | 19 | 14 | 12 | 11 | 5  | 4  | 4  |  | 0  |
| 6   | 46 | 37 | 30 | 26 | 39 | 31 | 26 | 23 | 22 | 18 | 16 | 13 | 11 | 10 | 4  | 4  | 3  |  | 0  |
| 7   | 42 | 33 | 27 | 22 | 36 | 28 | 23 | 20 | 19 | 16 | 14 | 11 | 10 | 8  | 4  | 3  | 3  |  | 0  |
| 8   | 39 | 30 | 24 | 20 | 33 | 25 | 20 | 17 | 18 | 14 | 12 | 10 | 8  | 7  | 3  | 3  | 2  |  | 0  |
| 9   | 36 | 27 | 21 | 17 | 31 | 23 | 18 | 15 | 16 | 13 | 11 | 9  | 8  | 6  | 3  | 2  | 2  |  | 0  |
| 10  | 33 | 24 | 19 | 15 | 28 | 21 | 16 | 13 | 14 | 11 | 9  | 8  | 7  | 6  | 3  | 2  | 2  |  | 0  |

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

|      | 0°    | 45°   | 90°  |
|------|-------|-------|------|
| 95°  | 13544 | 10094 | 1404 |
| 100° | 8935  | 8330  | 2072 |
| 105° | 7676  | 8354  | 2060 |
| 110° | 7660  | 7648  | 2298 |
| 115° | 7480  | 6942  | 2405 |
| 120° | 6540  | 6608  | 2322 |
| 125° | 6004  | 6032  | 2328 |
| 130° | 5649  | 5524  | 2357 |
| 135° | 5121  | 5043  | 2330 |
| 140° | 4765  | 4277  | 2152 |
| 145° | 4300  | 3564  | 1997 |
| 150° | 3563  | 2885  | 1839 |
| 155° | 2870  | 2382  | 1679 |
| 160° | 2229  | 2017  | 1534 |
| 165° | 1834  | 1704  | 1405 |
| 170° | 1516  | 1446  | 1296 |
| 175° | 1281  | 1256  | 1213 |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture | % Lamp |
|-----------|---------|-----------|--------|
| 0°-10°    | 0.0     | 0.0       | 0.0    |
| 10°-20°   | 0.0     | 0.0       | 0.0    |
| 20°-30°   | 0.0     | 0.0       | 0.0    |
| 30°-40°   | 0.0     | 0.0       | 0.0    |
| 40°-50°   | 0.0     | 0.0       | 0.0    |
| 50°-60°   | 0.0     | 0.0       | 0.0    |
| 60°-70°   | 0.0     | 0.0       | 0.0    |
| 70°-80°   | 0.0     | 0.0       | 0.0    |
| 80°-90°   | 0.0     | 0.0       | 0.0    |
| 90°-100°  | 787.7   | 5.9       | 4.9    |
| 100°-110° | 1852.2  | 13.8      | 11.6   |
| 110°-120° | 2535.6  | 18.9      | 15.8   |
| 120°-130° | 2623.4  | 19.6      | 16.4   |
| 130°-140° | 2329.2  | 17.4      | 14.6   |
| 140°-150° | 1699.4  | 12.7      | 10.6   |
| 150°-160° | 977.8   | 7.3       | 6.1    |
| 160°-170° | 455.7   | 3.4       | 2.8    |
| 170°-180° | 122.0   | 0.9       | 0.8    |
| 0°-30°    | 0.0     | 0.0       | 0.0    |
| 0°-40°    | 0.0     | 0.0       | 0.0    |
| 0°-60°    | 0.0     | 0.0       | 0.0    |
| 0°-90°    | 0.0     | 0.0       | 0.0    |
| 90°-120°  | 5175.4  | 38.7      | 32.3   |
| 90°-150°  | 11827.5 | 88.4      | 73.9   |
| 90°-180°  | 13383.0 | 100.0     | 83.6   |
| 0°-180°   | 13382.8 | 100.0     | 83.6   |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 90°  | 4    | 28    | 20   | 9     | 5    |      |
| 95°  | 1158 | 1126  | 863  | 507   | 120  | 1062 |
| 105° | 1949 | 2158  | 2121 | 1505  | 523  | 2098 |
| 115° | 3101 | 3245  | 2878 | 2163  | 997  | 3002 |
| 125° | 3378 | 3553  | 3394 | 2422  | 1310 | 3023 |
| 135° | 3552 | 3644  | 3498 | 2332  | 1616 | 2765 |
| 145° | 3455 | 3390  | 2864 | 2076  | 1605 | 2140 |
| 155° | 2552 | 2448  | 2118 | 1765  | 1493 | 1191 |
| 165° | 1738 | 1727  | 1615 | 1450  | 1331 | 503  |
| 175° | 1252 | 1252  | 1227 | 1213  | 1185 | 126  |
| 180° | 1140 | 1140  | 1140 | 1140  | 1140 |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°   | 22.5° | 45°  | 67.5° | 90°  |
|--------|------|-------|------|-------|------|
| 90°    | 4    | 28    | 20   | 9     | 5    |
| 92.5°  | 593  | 678   | 498  | 242   | 39   |
| 95°    | 1158 | 1126  | 863  | 507   | 120  |
| 97.5°  | 1387 | 1391  | 1189 | 786   | 233  |
| 100°   | 1522 | 1538  | 1419 | 1102  | 353  |
| 102.5° | 1689 | 1774  | 1795 | 1330  | 455  |
| 105°   | 1949 | 2158  | 2121 | 1505  | 523  |
| 107.5° | 2264 | 2467  | 2441 | 1725  | 647  |
| 110°   | 2570 | 2837  | 2566 | 1915  | 771  |
| 112.5° | 2907 | 3106  | 2706 | 2017  | 880  |
| 115°   | 3101 | 3245  | 2878 | 2163  | 997  |
| 117.5° | 3218 | 3280  | 3043 | 2317  | 1116 |
| 120°   | 3208 | 3334  | 3241 | 2386  | 1139 |
| 122.5° | 3269 | 3451  | 3377 | 2415  | 1214 |
| 125°   | 3378 | 3553  | 3394 | 2422  | 1310 |
| 127.5° | 3461 | 3658  | 3419 | 2470  | 1371 |
| 130°   | 3562 | 3702  | 3483 | 2484  | 1486 |
| 132.5° | 3599 | 3657  | 3535 | 2421  | 1586 |
| 135°   | 3552 | 3644  | 3498 | 2332  | 1616 |
| 137.5° | 3555 | 3670  | 3373 | 2257  | 1620 |
| 140°   | 3581 | 3680  | 3214 | 2195  | 1617 |
| 142.5° | 3575 | 3580  | 3042 | 2135  | 1615 |
| 145°   | 3455 | 3390  | 2864 | 2076  | 1605 |
| 147.5° | 3245 | 3175  | 2659 | 2000  | 1587 |
| 150°   | 3027 | 2952  | 2451 | 1926  | 1562 |
| 152.5° | 2797 | 2714  | 2266 | 1846  | 1528 |
| 155°   | 2552 | 2448  | 2118 | 1765  | 1493 |
| 157.5° | 2286 | 2210  | 1985 | 1685  | 1457 |
| 160°   | 2055 | 2019  | 1859 | 1604  | 1414 |
| 162.5° | 1884 | 1868  | 1737 | 1527  | 1375 |
| 165°   | 1738 | 1727  | 1615 | 1450  | 1331 |
| 167.5° | 1599 | 1588  | 1500 | 1380  | 1293 |
| 170°   | 1465 | 1460  | 1397 | 1313  | 1252 |
| 172.5° | 1350 | 1345  | 1305 | 1256  | 1215 |
| 175°   | 1252 | 1252  | 1227 | 1213  | 1185 |
| 177.5° | 1175 | 1178  | 1173 | 1169  | 1156 |
| 180°   | 1140 | 1140  | 1140 | 1140  | 1140 |

(END OF REPORT)