

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: ITL55889

Luminaire Tested: **HLCFL/6/39W (FIXTURES 1200, 1215, 1220, 1240, 1250, 1270)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: ITL55889  
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: HLCFL/6/39W (FIXTURES 1200, 1215, 1220, 1240, 1250, 1270)  
Description: FABRICATED SEMI-SPECULAR METAL MOUNTING PLATE, THREE FORMED METAL REFLECTORS WITH PREMIUM SPECULAR FINISH, OPEN SOCKET ENDS AND TOP.  
Light Source: SIX 39-WATT SINGLE ENDED TWIN TUBE FLUORESCENTS, OSRAM 36/39W/RS/4100. LAMPS HORIZONTAL WITH TUBES VERTICAL.  
Ballast/Driver: THREE UNIVERSAL B254PUNV-D

**Summary**

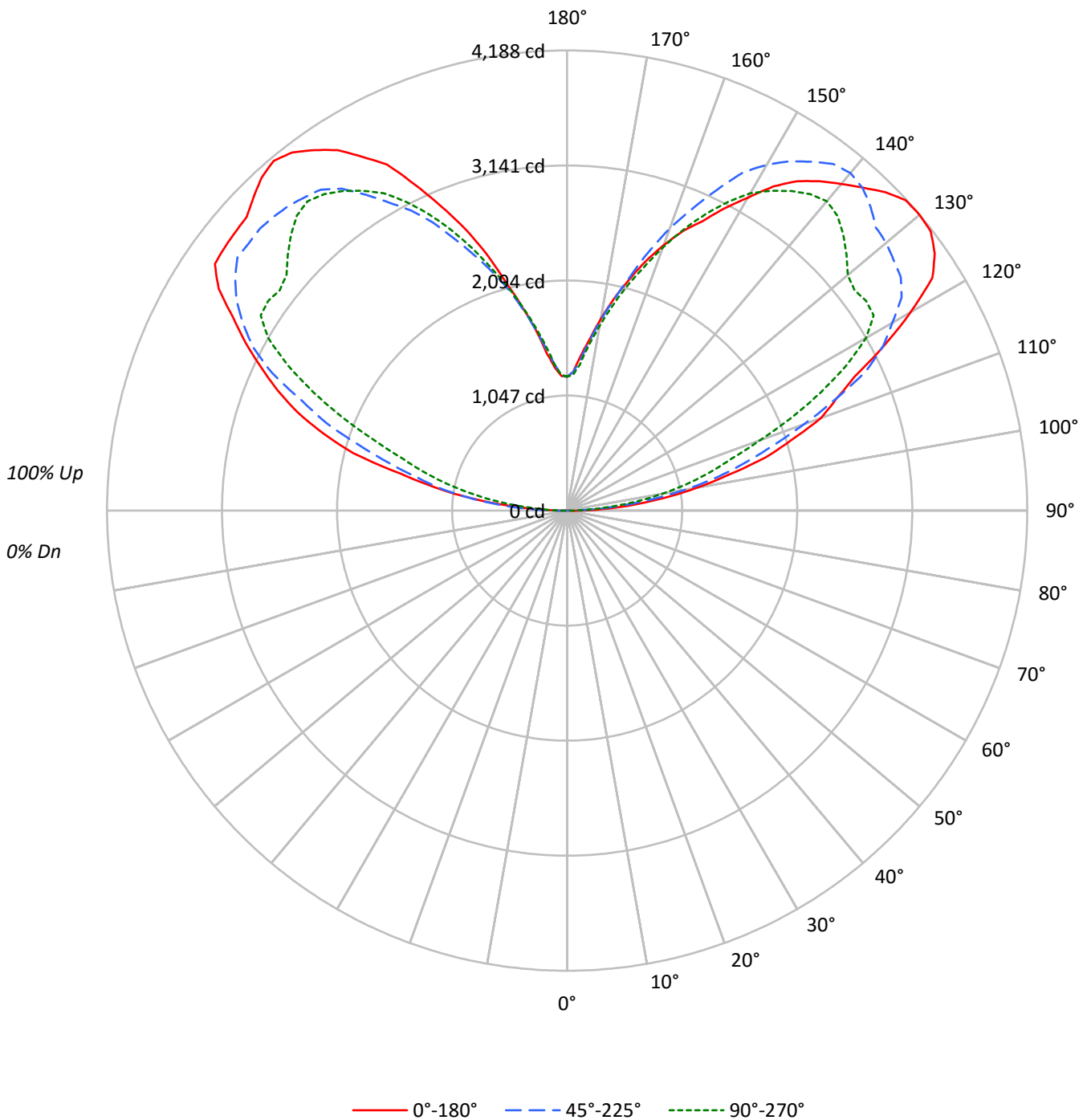
Lumens per Lamp: 2900 (6 lamps)  
Luminaire Lumens: 15938.7 lumens  
Efficiency: 91.6%  
Efficacy: 62.3 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Vertical Cylinder (Dia: 2.56' x H: 0.16')  
CIE Type: Indirect

Input Watts (W): 255.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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   | 87 | 87 | 87 | 87 | 75 | 75 | 75 | 75 | 51 | 51 | 51 | 29 | 29 | 29 | 10 | 10 | 10 | 0 |
| 1   | 79 | 76 | 72 | 69 | 68 | 65 | 62 | 60 | 44 | 43 | 41 | 26 | 25 | 24 | 8  | 8  | 8  | 0 |
| 2   | 72 | 66 | 61 | 57 | 62 | 57 | 52 | 49 | 39 | 36 | 34 | 22 | 21 | 20 | 7  | 7  | 7  | 0 |
| 3   | 66 | 58 | 52 | 47 | 56 | 50 | 45 | 41 | 34 | 31 | 29 | 20 | 18 | 17 | 6  | 6  | 6  | 0 |
| 4   | 60 | 51 | 44 | 39 | 51 | 44 | 38 | 34 | 30 | 27 | 24 | 17 | 16 | 14 | 6  | 5  | 5  | 0 |
| 5   | 55 | 45 | 38 | 33 | 47 | 39 | 33 | 29 | 27 | 23 | 20 | 15 | 14 | 12 | 5  | 4  | 4  | 0 |
| 6   | 50 | 40 | 33 | 28 | 43 | 35 | 29 | 25 | 24 | 20 | 18 | 14 | 12 | 10 | 4  | 4  | 3  | 0 |
| 7   | 46 | 36 | 29 | 25 | 39 | 31 | 25 | 21 | 21 | 18 | 15 | 12 | 10 | 9  | 4  | 3  | 3  | 0 |
| 8   | 43 | 32 | 26 | 21 | 36 | 28 | 22 | 19 | 19 | 16 | 13 | 11 | 9  | 8  | 4  | 3  | 3  | 0 |
| 9   | 40 | 29 | 23 | 19 | 34 | 25 | 20 | 16 | 17 | 14 | 12 | 10 | 8  | 7  | 3  | 3  | 2  | 0 |
| 10  | 37 | 27 | 20 | 16 | 31 | 23 | 18 | 14 | 16 | 13 | 10 | 9  | 7  | 6  | 3  | 2  | 2  | 0 |

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

|     | 0° | 90° | 180° |
|-----|----|-----|------|
| 0°  | 0  | 0   | 0    |
| 5°  | 0  | 0   | 0    |
| 10° | 0  | 0   | 0    |
| 15° | 0  | 0   | 0    |
| 20° | 0  | 0   | 0    |
| 25° | 0  | 0   | 0    |
| 30° | 0  | 0   | 0    |
| 35° | 0  | 0   | 0    |
| 40° | 0  | 0   | 0    |
| 45° | 0  | 0   | 0    |
| 50° | 0  | 0   | 0    |
| 55° | 0  | 0   | 0    |
| 60° | 0  | 0   | 0    |
| 65° | 0  | 0   | 0    |
| 70° | 0  | 0   | 0    |
| 75° | 0  | 0   | 0    |
| 80° | 0  | 0   | 0    |
| 85° | 0  | 0   | 0    |



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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°   | 40.9    | 0.3       | 0.2    |
| 90°-100°  | 605.8   | 3.8       | 3.5    |
| 100°-110° | 1775.6  | 11.1      | 10.2   |
| 110°-120° | 2839.4  | 17.8      | 16.3   |
| 120°-130° | 3268.8  | 20.5      | 18.8   |
| 130°-140° | 2955.2  | 18.5      | 17.0   |
| 140°-150° | 2315.5  | 14.5      | 13.3   |
| 150°-160° | 1409.7  | 8.8       | 8.1    |
| 160°-170° | 618.6   | 3.9       | 3.6    |
| 170°-180° | 139.9   | 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°    | 40.9    | 0.3       | 0.2    |
| 90°-120°  | 5220.7  | 32.8      | 30.0   |
| 90°-150°  | 13760.2 | 86.3      | 79.1   |
| 90°-180°  | 15928.0 | 99.9      | 91.5   |
| 0°-180°   | 15938.7 | 100.0     | 91.6   |

**CANDELA DISTRIBUTION:**

|      | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 0    | 0    | 0    | 0    | 0    |      |
| 5°   | 0    | 0    | 0    | 0    | 0    | 0    |
| 15°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 25°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 35°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 45°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 55°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 65°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 75°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 85°  | 0    | 0    | 0    | 0    | 0    | 0    |
| 90°  | 134  | 33   | 38   | 127  | 33   | 85   |
| 95°  | 599  | 467  | 387  | 624  | 561  | 618  |
| 105° | 1870 | 1671 | 1344 | 1681 | 2012 | 1939 |
| 115° | 2885 | 2999 | 2547 | 2964 | 3068 | 2927 |
| 125° | 4084 | 3706 | 3323 | 3688 | 3914 | 3606 |
| 135° | 4098 | 3906 | 3552 | 3780 | 4035 | 3159 |
| 145° | 3660 | 3875 | 3550 | 3576 | 4005 | 2287 |
| 155° | 2902 | 3218 | 2974 | 2892 | 3268 | 1362 |
| 165° | 2173 | 2198 | 2119 | 2093 | 2146 | 628  |
| 175° | 1412 | 1374 | 1334 | 1340 | 1308 | 146  |
| 180° | 1218 | 1218 | 1218 | 1218 | 1218 |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°   | 22.5° | 45°  | 67.5° | 90°  | 112.5° | 135° | 157.5° | 180° |
|--------|------|-------|------|-------|------|--------|------|--------|------|
| 0°     | 0    | 0     | 0    | 0     | 0    | 0      | 0    | 0      | 0    |
| 87.5°  | 0    | 0     | 0    | 0     | 0    | 0      | 0    | 0      | 0    |
| 90°    | 134  | 114   | 33   | 26    | 38   | 137    | 127  | 41     | 33   |
| 92.5°  | 350  | 296   | 204  | 244   | 181  | 368    | 353  | 250    | 263  |
| 95°    | 599  | 543   | 467  | 538   | 387  | 660    | 624  | 494    | 561  |
| 97.5°  | 898  | 802   | 773  | 846   | 641  | 933    | 907  | 768    | 906  |
| 100°   | 1199 | 1033  | 1091 | 1178  | 876  | 1247   | 1180 | 1062   | 1226 |
| 102.5° | 1508 | 1295  | 1395 | 1548  | 1114 | 1545   | 1403 | 1349   | 1552 |
| 105°   | 1870 | 1474  | 1671 | 1905  | 1344 | 1845   | 1681 | 1610   | 2012 |
| 107.5° | 2143 | 1718  | 1960 | 2231  | 1567 | 2115   | 1989 | 1844   | 2324 |
| 110°   | 2458 | 2017  | 2291 | 2496  | 1865 | 2457   | 2335 | 2197   | 2609 |
| 112.5° | 2650 | 2329  | 2639 | 2800  | 2208 | 2770   | 2610 | 2568   | 2849 |
| 115°   | 2885 | 2643  | 2999 | 3064  | 2547 | 3060   | 2964 | 2859   | 3068 |
| 117.5° | 3255 | 2980  | 3241 | 3287  | 2867 | 3303   | 3223 | 3133   | 3296 |
| 120°   | 3610 | 3246  | 3417 | 3463  | 3142 | 3546   | 3407 | 3370   | 3509 |
| 122.5° | 3942 | 3389  | 3609 | 3668  | 3307 | 3825   | 3569 | 3498   | 3761 |
| 125°   | 4084 | 3433  | 3706 | 3836  | 3323 | 4025   | 3688 | 3516   | 3914 |
| 127.5° | 4172 | 3475  | 3746 | 3891  | 3296 | 4103   | 3784 | 3512   | 3931 |
| 130°   | 4188 | 3520  | 3790 | 3925  | 3334 | 4062   | 3783 | 3552   | 3942 |
| 132.5° | 4180 | 3619  | 3812 | 3925  | 3448 | 3980   | 3795 | 3636   | 3955 |
| 135°   | 4098 | 3686  | 3906 | 3970  | 3552 | 3932   | 3780 | 3725   | 4035 |
| 137.5° | 3985 | 3697  | 3981 | 4031  | 3641 | 3888   | 3757 | 3806   | 4114 |
| 140°   | 3881 | 3682  | 4010 | 4076  | 3675 | 3813   | 3721 | 3787   | 4155 |
| 142.5° | 3777 | 3667  | 3977 | 4076  | 3630 | 3699   | 3682 | 3725   | 4109 |
| 145°   | 3660 | 3591  | 3875 | 3995  | 3550 | 3576   | 3576 | 3643   | 4005 |
| 147.5° | 3498 | 3472  | 3769 | 3865  | 3450 | 3393   | 3407 | 3530   | 3890 |
| 150°   | 3287 | 3316  | 3634 | 3690  | 3335 | 3212   | 3235 | 3407   | 3714 |
| 152.5° | 3099 | 3122  | 3469 | 3535  | 3166 | 3026   | 3078 | 3216   | 3550 |
| 155°   | 2902 | 2940  | 3218 | 3279  | 2974 | 2863   | 2892 | 2996   | 3268 |
| 157.5° | 2754 | 2758  | 2971 | 3004  | 2767 | 2659   | 2676 | 2759   | 2997 |
| 160°   | 2570 | 2536  | 2733 | 2750  | 2548 | 2474   | 2473 | 2543   | 2737 |
| 162.5° | 2381 | 2332  | 2469 | 2454  | 2321 | 2276   | 2286 | 2287   | 2455 |
| 165°   | 2173 | 2145  | 2198 | 2202  | 2119 | 2087   | 2093 | 2065   | 2146 |
| 167.5° | 1976 | 1935  | 1965 | 1943  | 1909 | 1879   | 1886 | 1844   | 1902 |
| 170°   | 1774 | 1738  | 1763 | 1718  | 1707 | 1674   | 1681 | 1636   | 1681 |
| 172.5° | 1574 | 1540  | 1552 | 1507  | 1518 | 1489   | 1490 | 1445   | 1453 |
| 175°   | 1412 | 1365  | 1374 | 1326  | 1334 | 1323   | 1340 | 1296   | 1308 |
| 177.5° | 1262 | 1245  | 1262 | 1235  | 1239 | 1221   | 1228 | 1217   | 1226 |
| 180°   | 1218 | 1218  | 1218 | 1218  | 1218 | 1218   | 1218 | 1218   | 1218 |

(END OF REPORT)