

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: 29634

Luminaire Tested: **340-4-CFL/1/26-FICO**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: 29634  
Test Lab: LIGHTING SCIENCES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 340-4-CFL/1/26-FICO  
Description: SHAPER 4" CFL RECESSED GLASS DOWNLIGHT WITH FROSTED  
INNER FLUTED GLASS AND CLEAR OUTER GLASS CYLINDER  
Light Source: ONE SYLVANIA 26W CFL  
  
CF26DT/E. LUMEN RATING = 1800 LMS.  
  
Ballast/Driver: -

**Summary**

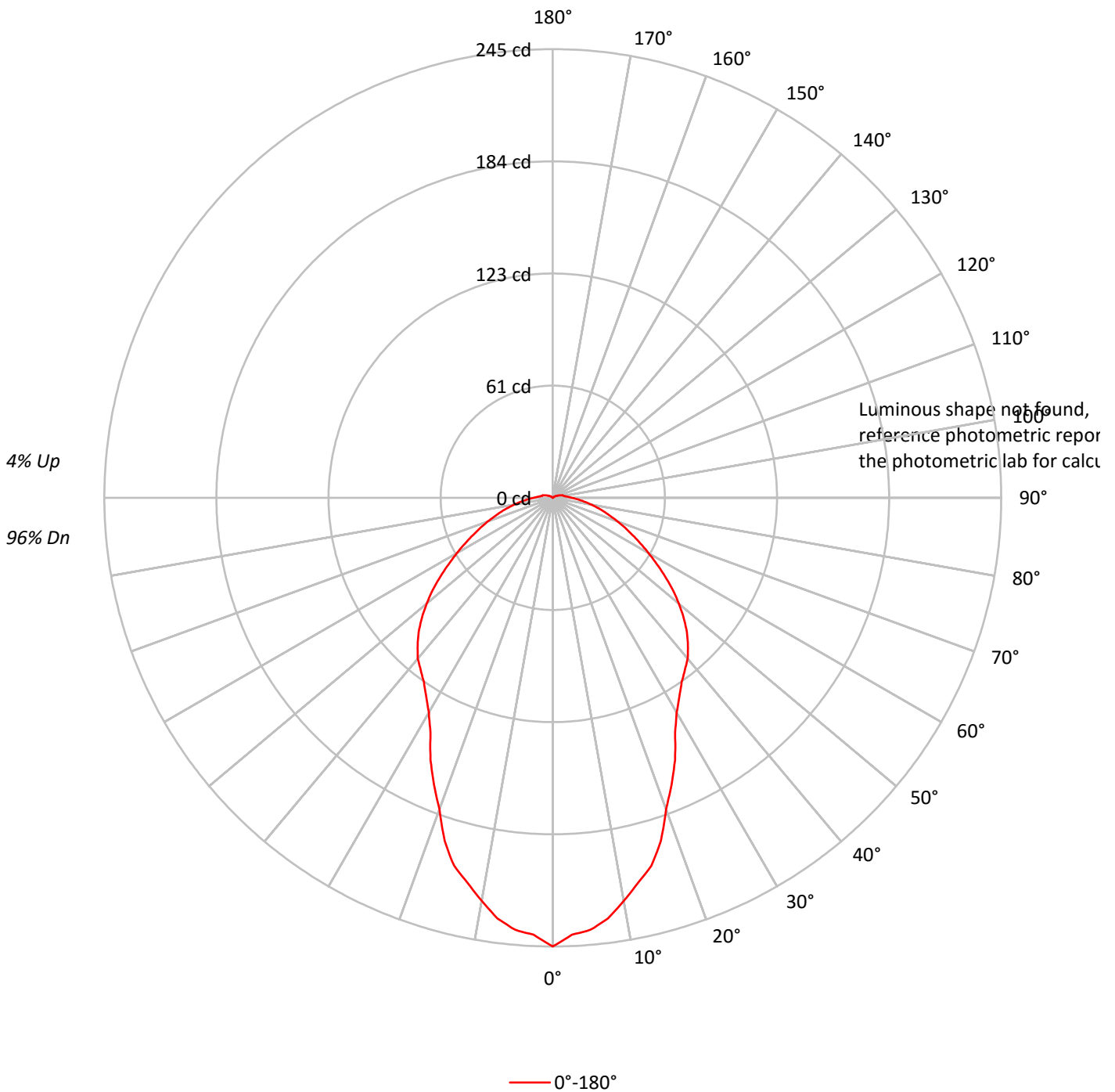
Lumens per Lamp: 1800 (1 lamp)  
Luminaire Lumens: 490.1 lumens  
Efficiency: 27.2%  
Efficacy: 18.9 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 0.9 / 1.06  
Luminous Opening: (L: 0' x W: -0.34' x H: 0.12'  
CIE Type: Direct  
  
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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   | 32 | 32 | 32 | 32 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 28 | 28 | 28 | 27 | 27 | 27 | 26 |
| 1   | 29 | 28 | 27 | 26 | 28 | 27 | 26 | 25 | 26 | 25 | 24 | 25 | 24 | 23 | 24 | 23 | 22 | 22 |
| 2   | 27 | 25 | 23 | 21 | 26 | 24 | 22 | 21 | 23 | 21 | 20 | 22 | 21 | 20 | 21 | 20 | 19 | 18 |
| 3   | 25 | 22 | 20 | 18 | 24 | 21 | 19 | 18 | 20 | 19 | 17 | 19 | 18 | 17 | 19 | 17 | 16 | 16 |
| 4   | 23 | 19 | 17 | 15 | 22 | 19 | 17 | 15 | 18 | 16 | 15 | 17 | 16 | 15 | 17 | 15 | 14 | 14 |
| 5   | 21 | 17 | 15 | 13 | 20 | 17 | 15 | 13 | 16 | 14 | 13 | 16 | 14 | 13 | 15 | 14 | 13 | 12 |
| 6   | 19 | 16 | 13 | 12 | 19 | 16 | 13 | 12 | 15 | 13 | 12 | 14 | 13 | 11 | 14 | 12 | 11 | 11 |
| 7   | 18 | 14 | 12 | 11 | 17 | 14 | 12 | 10 | 14 | 12 | 10 | 13 | 11 | 10 | 13 | 11 | 10 | 9  |
| 8   | 17 | 13 | 11 | 9  | 16 | 13 | 11 | 9  | 13 | 11 | 9  | 12 | 10 | 9  | 12 | 10 | 9  | 9  |
| 9   | 16 | 12 | 10 | 9  | 15 | 12 | 10 | 9  | 12 | 10 | 8  | 11 | 10 | 8  | 11 | 9  | 8  | 8  |
| 10  | 15 | 11 | 9  | 8  | 14 | 11 | 9  | 8  | 11 | 9  | 8  | 11 | 9  | 8  | 10 | 9  | 8  | 7  |

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





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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10°    | 22.2   | 4.5       | 1.2    |
| 10°-20°   | 57.7   | 11.8      | 3.2    |
| 20°-30°   | 72.3   | 14.7      | 4.0    |
| 30°-40°   | 77.5   | 15.8      | 4.3    |
| 40°-50°   | 79.5   | 16.2      | 4.4    |
| 50°-60°   | 67.1   | 13.7      | 3.7    |
| 60°-70°   | 48.0   | 9.8       | 2.7    |
| 70°-80°   | 30.7   | 6.3       | 1.7    |
| 80°-90°   | 16.8   | 3.4       | 0.9    |
| 90°-100°  | 8.6    | 1.8       | 0.5    |
| 100°-110° | 5.4    | 1.1       | 0.3    |
| 110°-120° | 2.8    | 0.6       | 0.2    |
| 120°-130° | 1.2    | 0.2       | 0.1    |
| 130°-140° | 0.3    | 0.1       | 0.0    |
| 140°-150° | 0.0    | 0.0       | 0.0    |
| 150°-160° | 0.0    | 0.0       | 0.0    |
| 160°-170° | 0.0    | 0.0       | 0.0    |
| 170°-180° | 0.0    | 0.0       | 0.0    |
| 0°-30°    | 152.2  | 31.0      | 8.5    |
| 0°-40°    | 229.6  | 46.9      | 12.8   |
| 0°-60°    | 376.2  | 76.8      | 20.9   |
| 0°-90°    | 471.8  | 96.3      | 26.2   |
| 90°-120°  | 16.9   | 3.4       | 0.9    |
| 90°-150°  | 18.4   | 3.7       | 1.0    |
| 90°-180°  | 18.0   | 3.7       | 1.0    |
| 0°-180°   | 490.1  | 100.0     | 27.2   |

**CANDELA DISTRIBUTION:**

|      | 0°  | Flux |
|------|-----|------|
| 0°   | 245 |      |
| 5°   | 237 | 22   |
| 15°  | 208 | 58   |
| 25°  | 158 | 72   |
| 35°  | 123 | 77   |
| 45°  | 104 | 80   |
| 55°  | 75  | 67   |
| 65°  | 48  | 48   |
| 75°  | 29  | 31   |
| 85°  | 15  | 14   |
| 90°  | 10  | 6    |
| 95°  | 8   | 6    |
| 105° | 5   | 5    |
| 115° | 3   | 3    |
| 125° | 1   | 1    |
| 135° | 0   | 0    |
| 145° | 0   | 0    |
| 155° | 0   | 0    |
| 165° | 0   | 0    |
| 175° | 0   | 0    |
| 180° | 0   | 0    |



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**CANDELA DISTRIBUTION (FULL):**

| 0°     |       |
|--------|-------|
| 0°     | 245.0 |
| 2.5°   | 238.8 |
| 5°     | 236.8 |
| 7.5°   | 231.6 |
| 10°    | 223.5 |
| 12.5°  | 215.3 |
| 15°    | 208.1 |
| 17.5°  | 196.5 |
| 20°    | 180.9 |
| 22.5°  | 169.5 |
| 25°    | 158.0 |
| 27.5°  | 144.6 |
| 30°    | 135.4 |
| 32.5°  | 128.6 |
| 35°    | 122.8 |
| 37.5°  | 118.5 |
| 40°    | 114.7 |
| 42.5°  | 109.3 |
| 45°    | 103.6 |
| 47.5°  | 97.0  |
| 50°    | 89.9  |
| 52.5°  | 82.6  |
| 55°    | 74.9  |
| 57.5°  | 67.4  |
| 60°    | 60.5  |
| 62.5°  | 54.1  |
| 65°    | 48.1  |
| 67.5°  | 42.7  |
| 70°    | 37.7  |
| 72.5°  | 33.0  |
| 75°    | 28.9  |
| 77.5°  | 25.0  |
| 80°    | 21.3  |
| 82.5°  | 18.1  |
| 85°    | 15.1  |
| 87.5°  | 12.6  |
| 90°    | 10.4  |
| 92.5°  | 8.9   |
| 95°    | 7.7   |
| 97.5°  | 6.7   |
| 100°   | 6.1   |
| 102.5° | 5.7   |
| 105°   | 5.4   |
| 107.5° | 4.5   |
| 110°   | 3.8   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  |
|--------|-----|
| 112.5° | 3.3 |
| 115°   | 2.8 |
| 117.5° | 2.4 |
| 120°   | 2.0 |
| 122.5° | 1.7 |
| 125°   | 1.3 |
| 127.5° | 0.9 |
| 130°   | 0.6 |
| 132.5° | 0.5 |
| 135°   | 0.3 |
| 137.5° | 0.2 |
| 140°   | 0.1 |
| 142.5° | 0.1 |
| 145°   | 0.0 |
| 147.5° | 0.0 |
| 150°   | 0.0 |
| 152.5° | 0.0 |
| 155°   | 0.0 |
| 157.5° | 0.0 |
| 160°   | 0.0 |
| 162.5° | 0.0 |
| 165°   | 0.0 |
| 167.5° | 0.0 |
| 170°   | 0.0 |
| 172.5° | 0.0 |
| 175°   | 0.0 |
| 177.5° | 0.0 |
| 180°   | 0.0 |

(END OF REPORT)