

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: 19431

Luminaire Tested: **434-SH-16-CF1/32**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: 19431  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 434-SH-16-CF1/32  
Description: INTERIOR SUSPENDED LUMINAIRE WITH WHITE GLASS GLOBE LENS  
  
Light Source: ONE SYLVANIA 32 WATT CPFL LAMP  
  
CF32DT/E/841. LUMEN RATING = 2400 LMS.  
  
Ballast/Driver: -

**Summary**

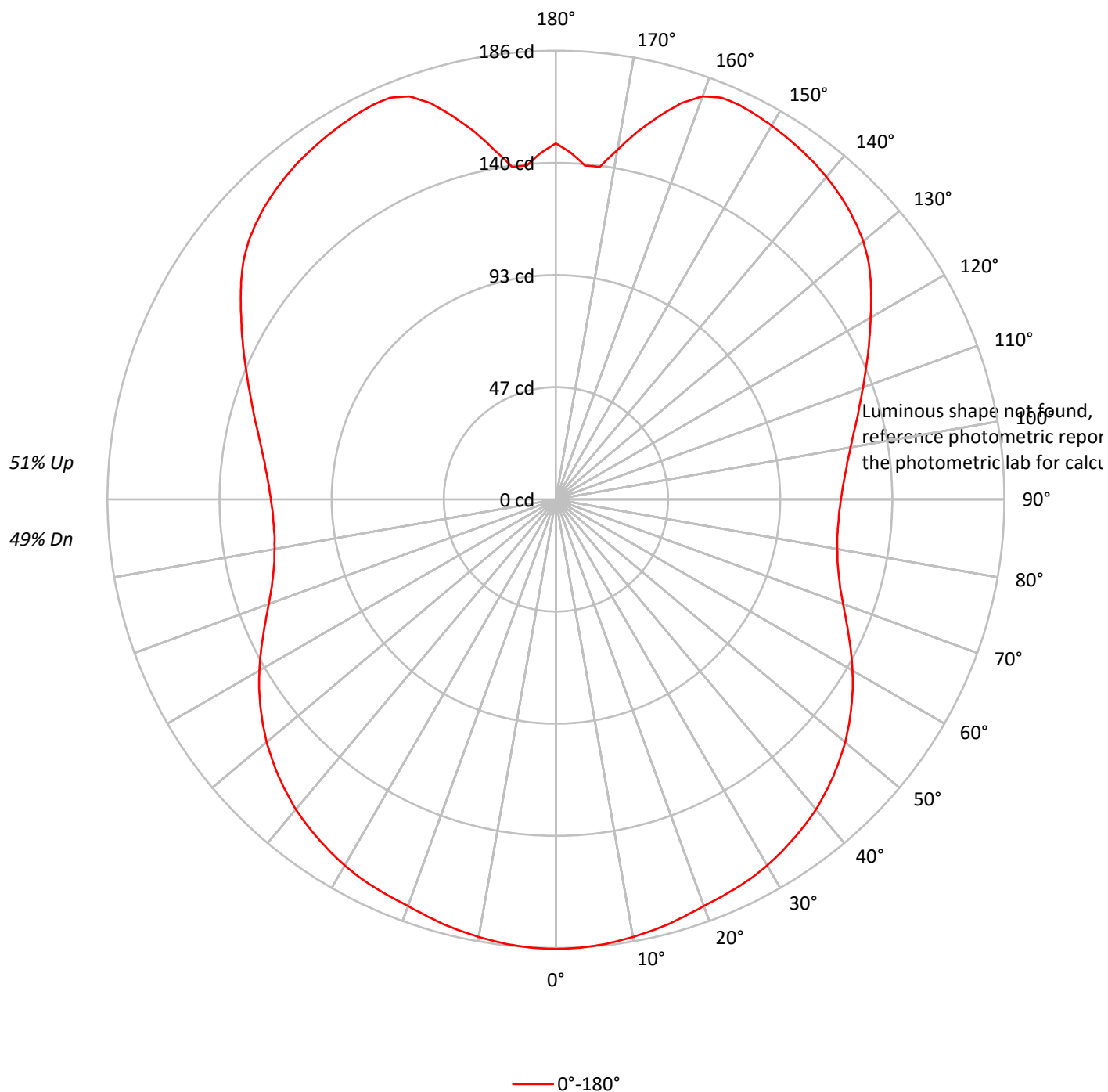
Lumens per Lamp: 2400 (1 lamp)  
Luminaire Lumens: 1848.8 lumens  
Efficiency: 77.0%  
Efficacy: 57.8 lumens/watt  
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.59  
Luminous Opening: (L: 0 ' x W: -0.08 ' x H: 0.67 '  
CIE Type: General Diffuse

Input Watts (W): 32  
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 |
| RC  | 80 |    |    |    | 70 |    |    |    | 50 |    |    |  | 30 |    |    |  | 10 |
| RW  | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 |  | 50 | 30 | 10 |  | 50 |
| RCR |    |    |    |    |    |    |    |    |    |    |    |  |    |    |    |  |    |
| 0   | 82 | 82 | 82 | 82 | 76 | 76 | 76 | 76 | 64 | 64 | 64 |  | 53 | 53 | 53 |  | 43 |
| 1   | 73 | 68 | 64 | 61 | 67 | 63 | 59 | 56 | 52 | 50 | 47 |  | 43 | 41 | 39 |  | 34 |
| 2   | 65 | 58 | 53 | 48 | 60 | 54 | 49 | 44 | 44 | 41 | 37 |  | 36 | 33 | 31 |  | 28 |
| 3   | 59 | 51 | 44 | 39 | 54 | 46 | 41 | 36 | 39 | 34 | 30 |  | 31 | 28 | 25 |  | 24 |
| 4   | 54 | 44 | 37 | 32 | 49 | 41 | 35 | 30 | 34 | 29 | 25 |  | 27 | 24 | 21 |  | 21 |
| 5   | 49 | 39 | 32 | 27 | 45 | 36 | 30 | 25 | 30 | 25 | 21 |  | 24 | 21 | 18 |  | 19 |
| 6   | 45 | 35 | 28 | 23 | 41 | 32 | 26 | 22 | 27 | 22 | 18 |  | 22 | 18 | 15 |  | 17 |
| 7   | 42 | 31 | 25 | 20 | 38 | 29 | 23 | 19 | 24 | 19 | 16 |  | 20 | 16 | 13 |  | 16 |
| 8   | 38 | 28 | 22 | 18 | 35 | 26 | 20 | 16 | 22 | 17 | 14 |  | 18 | 14 | 12 |  | 14 |
| 9   | 36 | 26 | 20 | 16 | 33 | 24 | 18 | 14 | 20 | 16 | 12 |  | 16 | 13 | 10 |  | 13 |
| 10  | 33 | 24 | 18 | 14 | 30 | 22 | 16 | 13 | 18 | 14 | 11 |  | 15 | 12 | 9  |  | 12 |

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

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

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10°    | 17.7   | 1.0       | 0.7    |
| 10°-20°   | 51.5   | 2.8       | 2.1    |
| 20°-30°   | 82.1   | 4.4       | 3.4    |
| 30°-40°   | 107.8  | 5.8       | 4.5    |
| 40°-50°   | 125.7  | 6.8       | 5.2    |
| 50°-60°   | 134.0  | 7.2       | 5.6    |
| 60°-70°   | 133.0  | 7.2       | 5.5    |
| 70°-80°   | 128.8  | 7.0       | 5.4    |
| 80°-90°   | 128.5  | 7.0       | 5.4    |
| 90°-100°  | 131.6  | 7.1       | 5.5    |
| 100°-110° | 136.9  | 7.4       | 5.7    |
| 110°-120° | 141.7  | 7.7       | 5.9    |
| 120°-130° | 142.5  | 7.7       | 5.9    |
| 130°-140° | 132.2  | 7.2       | 5.5    |
| 140°-150° | 111.1  | 6.0       | 4.6    |
| 150°-160° | 83.2   | 4.5       | 3.5    |
| 160°-170° | 46.9   | 2.5       | 2.0    |
| 170°-180° | 13.5   | 0.7       | 0.6    |
| 0°-30°    | 151.3  | 8.2       | 6.3    |
| 0°-40°    | 259.1  | 14.0      | 10.8   |
| 0°-60°    | 518.7  | 28.1      | 21.6   |
| 0°-90°    | 909.2  | 49.2      | 37.9   |
| 90°-120°  | 410.3  | 22.2      | 17.1   |
| 90°-150°  | 796.1  | 43.1      | 33.2   |
| 90°-180°  | 940.0  | 50.8      | 39.2   |
| 0°-180°   | 1848.8 | 100.0     | 77.0   |

**CANDELA DISTRIBUTION:**

|      | 0°  | Flux |
|------|-----|------|
| 0°   | 186 |      |
| 5°   | 186 | 18   |
| 15°  | 182 | 52   |
| 25°  | 178 | 82   |
| 35°  | 172 | 108  |
| 45°  | 163 | 126  |
| 55°  | 150 | 134  |
| 65°  | 134 | 133  |
| 75°  | 121 | 129  |
| 85°  | 118 | 96   |
| 90°  | 118 | 65   |
| 95°  | 120 | 99   |
| 105° | 129 | 137  |
| 115° | 143 | 142  |
| 125° | 159 | 143  |
| 135° | 171 | 132  |
| 145° | 177 | 111  |
| 155° | 180 | 83   |
| 165° | 164 | 47   |
| 175° | 139 | 14   |
| 180° | 148 |      |

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**CANDELA DISTRIBUTION (FULL):**

| 0°     |       |
|--------|-------|
| 0°     | 186.4 |
| 2.5°   | 186.2 |
| 5°     | 185.8 |
| 7.5°   | 185.1 |
| 10°    | 184.2 |
| 12.5°  | 183.2 |
| 15°    | 182.1 |
| 17.5°  | 180.7 |
| 20°    | 179.4 |
| 22.5°  | 178.5 |
| 25°    | 177.6 |
| 27.5°  | 176.6 |
| 30°    | 175.2 |
| 32.5°  | 173.6 |
| 35°    | 171.8 |
| 37.5°  | 169.9 |
| 40°    | 167.8 |
| 42.5°  | 165.2 |
| 45°    | 162.6 |
| 47.5°  | 159.6 |
| 50°    | 156.6 |
| 52.5°  | 153.2 |
| 55°    | 149.6 |
| 57.5°  | 146.0 |
| 60°    | 142.0 |
| 62.5°  | 138.0 |
| 65°    | 134.0 |
| 67.5°  | 130.2 |
| 70°    | 126.7 |
| 72.5°  | 123.7 |
| 75°    | 121.4 |
| 77.5°  | 119.6 |
| 80°    | 118.5 |
| 82.5°  | 117.7 |
| 85°    | 117.5 |
| 87.5°  | 117.6 |
| 90°    | 118.2 |
| 92.5°  | 119.1 |
| 95°    | 120.4 |
| 97.5°  | 122.0 |
| 100°   | 124.1 |
| 102.5° | 126.4 |
| 105°   | 129.3 |
| 107.5° | 132.2 |
| 110°   | 135.5 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    |
|--------|-------|
| 112.5° | 139.0 |
| 115°   | 142.8 |
| 117.5° | 146.7 |
| 120°   | 150.7 |
| 122.5° | 155.0 |
| 125°   | 159.3 |
| 127.5° | 163.2 |
| 130°   | 166.4 |
| 132.5° | 168.9 |
| 135°   | 171.1 |
| 137.5° | 172.9 |
| 140°   | 174.5 |
| 142.5° | 175.9 |
| 145°   | 177.0 |
| 147.5° | 178.0 |
| 150°   | 178.9 |
| 152.5° | 179.7 |
| 155°   | 180.3 |
| 157.5° | 180.2 |
| 160°   | 177.8 |
| 162.5° | 172.1 |
| 165°   | 164.3 |
| 167.5° | 156.1 |
| 170°   | 147.1 |
| 172.5° | 139.0 |
| 175°   | 138.9 |
| 177.5° | 143.8 |
| 180°   | 147.6 |

(END OF REPORT)