

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: 19374A

Luminaire Tested: **233-14-SH-CF1/32**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19374A
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 233-14-SH-CF1/32
Description: INTERIOR CEILING MOUNT LUMINAIRE WITH WHITE GLASS LENS

Light Source: ONE 32 WATT CPFL LAMP. LUMEN RATING = 2400 LMS.

Ballast/Driver: -

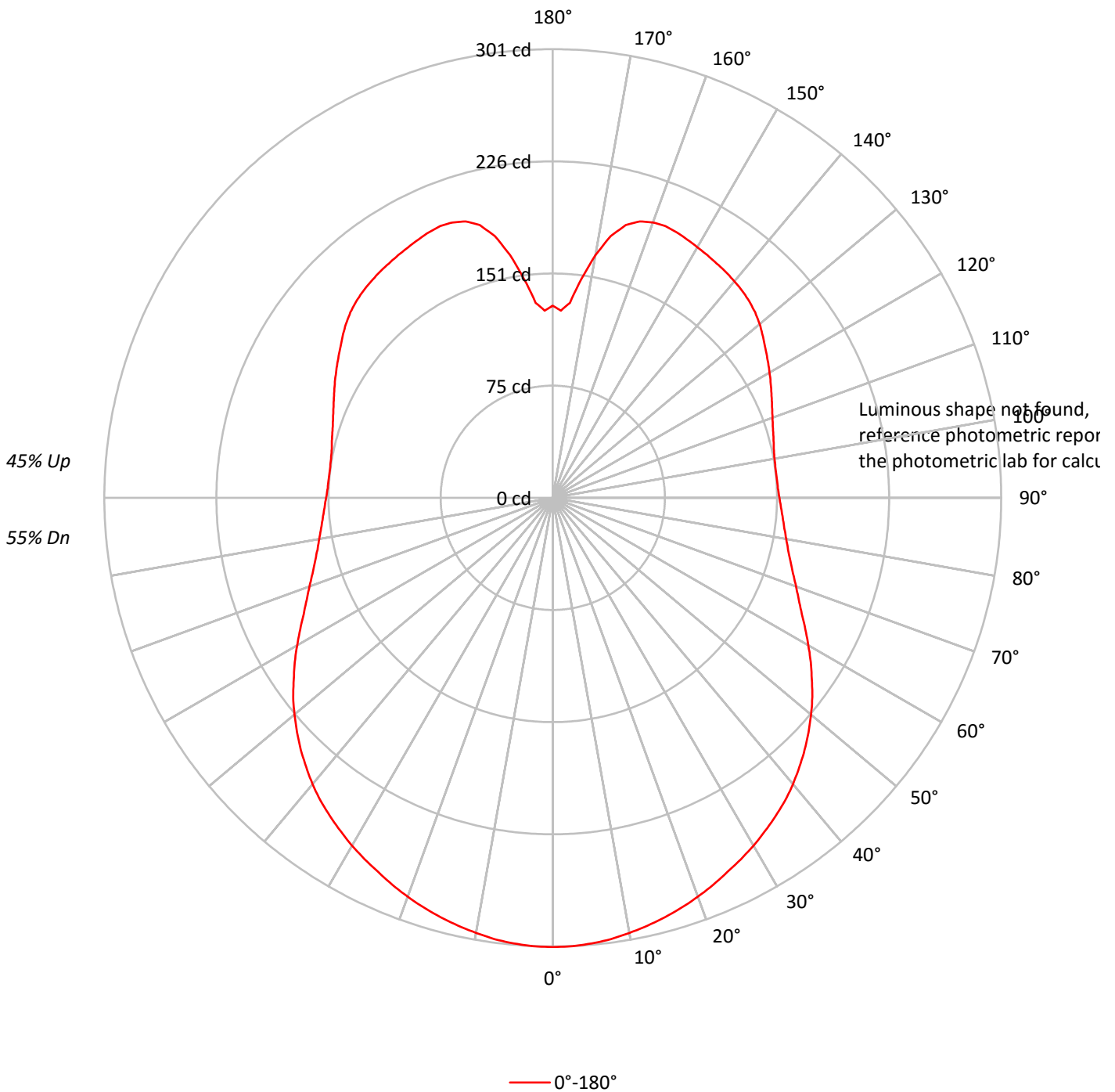
Summary

Lumens per Lamp: 2400 (1 lamp)
Luminaire Lumens: 2372.2 lumens
Efficiency: 98.8%
Efficacy: -
Spacing Criteria (0/90/45): 1.34 / 1.34 / 1.5
Luminous Opening: (L: 0 ' x W: -0.08 ' x H: 0.46 '
CIE Type: General Diffuse

Input Watts (W): 0
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





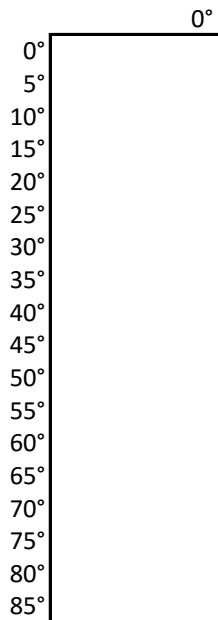
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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|--|----|----|----|--|----|----|----|----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | 0 | | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | | 50 | 30 | 10 | | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 85 | 85 | 85 | | 72 | 72 | 72 | | 60 | 60 | 60 | 54 |
| 1 | 95 | 89 | 84 | 79 | 87 | 82 | 78 | 74 | 70 | 66 | 63 | | 58 | 56 | 53 | | 48 | 46 | 44 | 39 |
| 2 | 85 | 76 | 69 | 62 | 78 | 70 | 64 | 58 | 60 | 55 | 50 | | 50 | 46 | 42 | | 41 | 38 | 35 | 31 |
| 3 | 77 | 66 | 57 | 51 | 71 | 61 | 53 | 47 | 52 | 46 | 41 | | 43 | 39 | 35 | | 35 | 32 | 29 | 25 |
| 4 | 70 | 58 | 49 | 42 | 64 | 54 | 46 | 39 | 45 | 39 | 34 | | 38 | 33 | 29 | | 31 | 27 | 24 | 20 |
| 5 | 64 | 51 | 42 | 36 | 59 | 47 | 39 | 33 | 40 | 34 | 29 | | 34 | 29 | 25 | | 28 | 24 | 21 | 17 |
| 6 | 59 | 46 | 37 | 31 | 54 | 42 | 34 | 29 | 36 | 30 | 25 | | 30 | 25 | 21 | | 25 | 21 | 18 | 15 |
| 7 | 54 | 41 | 33 | 27 | 50 | 38 | 30 | 25 | 33 | 26 | 22 | | 27 | 22 | 19 | | 23 | 19 | 16 | 13 |
| 8 | 50 | 37 | 29 | 23 | 46 | 35 | 27 | 22 | 30 | 24 | 19 | | 25 | 20 | 16 | | 21 | 17 | 14 | 11 |
| 9 | 47 | 34 | 26 | 21 | 43 | 32 | 24 | 19 | 27 | 21 | 17 | | 23 | 18 | 15 | | 19 | 15 | 12 | 10 |
| 10 | 44 | 31 | 23 | 18 | 40 | 29 | 22 | 17 | 25 | 19 | 15 | | 21 | 16 | 13 | | 18 | 14 | 11 | 9 |

AVERAGE LUMINANCE (cd/sqm):





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ZONAL LUMENS:

| Zone | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10° | 28.5 | 1.2 | 1.2 |
| 10°-20° | 82.3 | 3.5 | 3.4 |
| 20°-30° | 128.1 | 5.4 | 5.3 |
| 30°-40° | 163.4 | 6.9 | 6.8 |
| 40°-50° | 184.7 | 7.8 | 7.7 |
| 50°-60° | 190.2 | 8.0 | 7.9 |
| 60°-70° | 183.5 | 7.7 | 7.6 |
| 70°-80° | 175.2 | 7.4 | 7.3 |
| 80°-90° | 169.3 | 7.1 | 7.1 |
| 90°-100° | 164.9 | 7.0 | 6.9 |
| 100°-110° | 162.4 | 6.8 | 6.8 |
| 110°-120° | 160.9 | 6.8 | 6.7 |
| 120°-130° | 156.4 | 6.6 | 6.5 |
| 130°-140° | 144.0 | 6.1 | 6.0 |
| 140°-150° | 120.5 | 5.1 | 5.0 |
| 150°-160° | 90.8 | 3.8 | 3.8 |
| 160°-170° | 53.2 | 2.2 | 2.2 |
| 170°-180° | 13.8 | 0.6 | 0.6 |
| 0°-30° | 238.9 | 10.1 | 10.0 |
| 0°-40° | 402.4 | 17.0 | 16.8 |
| 0°-60° | 777.4 | 32.8 | 32.4 |
| 0°-90° | 1305.3 | 55.0 | 54.4 |
| 90°-120° | 488.2 | 20.6 | 20.3 |
| 90°-150° | 909.2 | 38.3 | 37.9 |
| 90°-180° | 1067.0 | 45.0 | 44.5 |
| 0°-180° | 2372.2 | 100.0 | 98.8 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|------|-----|------|
| 0° | 301 | |
| 5° | 300 | 29 |
| 15° | 291 | 82 |
| 25° | 277 | 128 |
| 35° | 261 | 163 |
| 45° | 239 | 185 |
| 55° | 212 | 190 |
| 65° | 184 | 184 |
| 75° | 165 | 175 |
| 85° | 155 | 127 |
| 90° | 152 | 83 |
| 95° | 151 | 123 |
| 105° | 153 | 162 |
| 115° | 162 | 161 |
| 125° | 174 | 156 |
| 135° | 186 | 144 |
| 145° | 192 | 121 |
| 155° | 197 | 91 |
| 165° | 189 | 53 |
| 175° | 131 | 14 |
| 180° | 129 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|--------|-------|
| 0° | 301.4 |
| 2.5° | 301.1 |
| 5° | 300.1 |
| 7.5° | 298.7 |
| 10° | 296.4 |
| 12.5° | 294.0 |
| 15° | 291.2 |
| 17.5° | 288.2 |
| 20° | 284.8 |
| 22.5° | 281.1 |
| 25° | 277.1 |
| 27.5° | 273.4 |
| 30° | 269.5 |
| 32.5° | 265.1 |
| 35° | 260.7 |
| 37.5° | 256.1 |
| 40° | 250.8 |
| 42.5° | 245.0 |
| 45° | 239.1 |
| 47.5° | 232.8 |
| 50° | 226.3 |
| 52.5° | 219.6 |
| 55° | 212.2 |
| 57.5° | 205.3 |
| 60° | 198.1 |
| 62.5° | 191.1 |
| 65° | 184.4 |
| 67.5° | 178.7 |
| 70° | 173.7 |
| 72.5° | 169.1 |
| 75° | 165.2 |
| 77.5° | 161.8 |
| 80° | 159.1 |
| 82.5° | 156.8 |
| 85° | 154.9 |
| 87.5° | 153.4 |
| 90° | 152.1 |
| 92.5° | 151.2 |
| 95° | 150.9 |
| 97.5° | 150.8 |
| 100° | 151.1 |
| 102.5° | 151.9 |
| 105° | 153.4 |
| 107.5° | 154.9 |
| 110° | 156.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° |
|--------|-------|
| 112.5° | 159.3 |
| 115° | 162.0 |
| 117.5° | 165.0 |
| 120° | 168.0 |
| 122.5° | 171.1 |
| 125° | 174.2 |
| 127.5° | 177.8 |
| 130° | 181.3 |
| 132.5° | 184.2 |
| 135° | 186.5 |
| 137.5° | 188.3 |
| 140° | 189.6 |
| 142.5° | 190.9 |
| 145° | 191.9 |
| 147.5° | 193.0 |
| 150° | 194.1 |
| 152.5° | 195.4 |
| 155° | 196.6 |
| 157.5° | 197.3 |
| 160° | 196.6 |
| 162.5° | 194.4 |
| 165° | 189.4 |
| 167.5° | 179.8 |
| 170° | 165.3 |
| 172.5° | 148.1 |
| 175° | 131.2 |
| 177.5° | 125.7 |
| 180° | 128.9 |

(END OF REPORT)