

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SURE-LITES

Report Number: H27021

Luminaire Tested: **029-121**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H27021
Test Lab:
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SURE-LITES
Catalog Number: 029-121
Description: SURE-LITES EMERGENCY 4" DIA EMERGENCY HEAD
EFFICIENCY 87.6
Light Source: 5.4 WATTS 75 LUMENS Incandescent (Low Voltage)
6 V WEDGE BASE
ANSI#939
Ballast/Driver: -

Summary

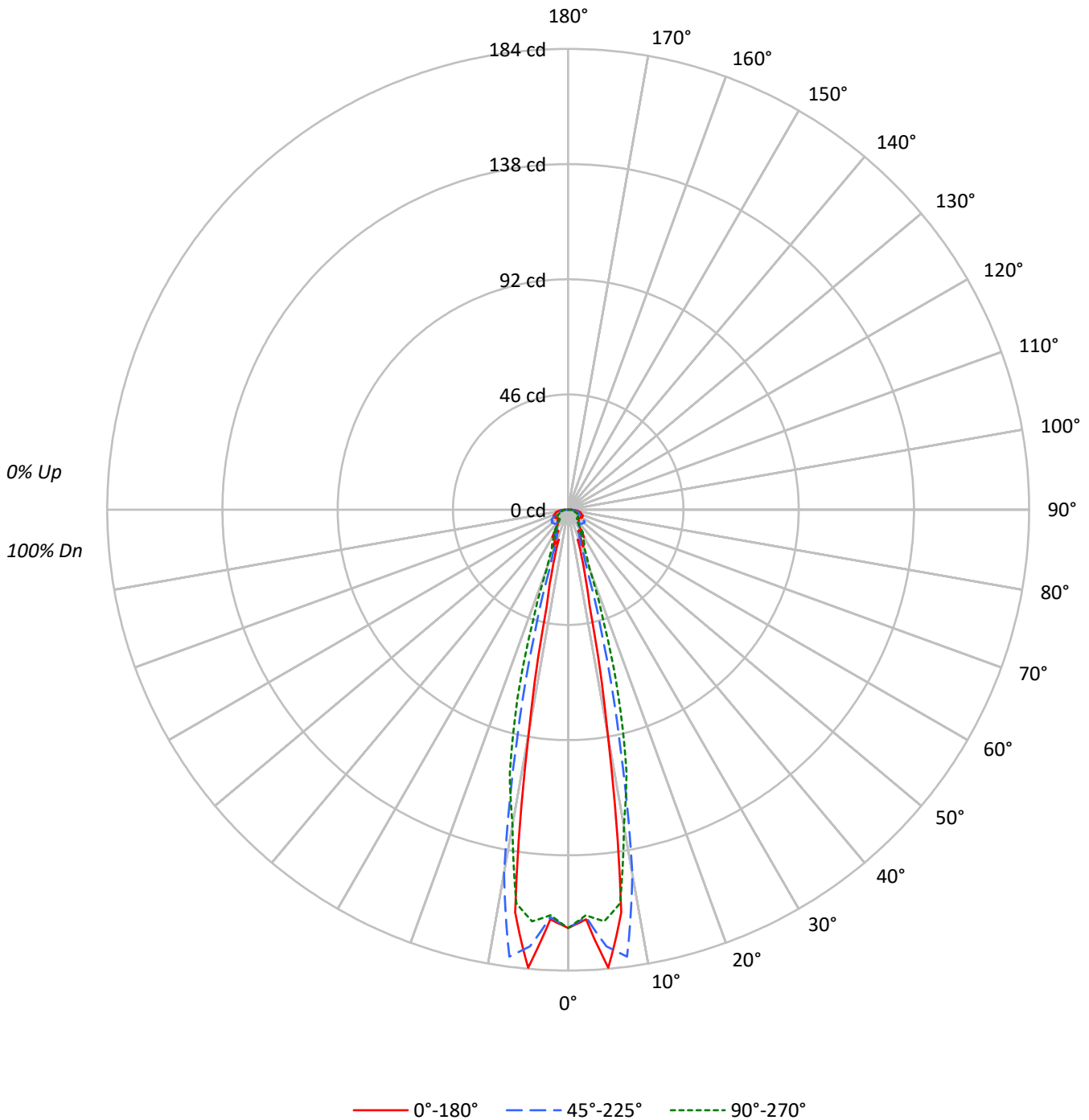
Lumens per Lamp: 75 (1 lamp)
Luminaire Lumens: 66.0 lumens
Efficiency: 88.0%
Efficacy: 13.2 lumens/watt
Spacing Criteria (0/90/45): 0.36 / 0.49 / 0.4
Luminous Opening: (L: 0 ' x W: -0.33 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 5
Input Voltage (V): NR
Input Current (A_{in}): 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 | 105 | 105 | 105 | 105 | 102 | 102 | 102 | 102 | 98 | 98 | 98 | | 93 | 93 | 93 | | 90 | 90 | 90 | 88 |
| 1 | 97 | 93 | 90 | 86 | 94 | 91 | 88 | 85 | 87 | 85 | 82 | | 84 | 82 | 80 | | 81 | 79 | 77 | 76 |
| 2 | 90 | 84 | 79 | 75 | 88 | 82 | 78 | 74 | 79 | 75 | 72 | | 76 | 73 | 70 | | 74 | 71 | 69 | 67 |
| 3 | 85 | 77 | 71 | 67 | 83 | 76 | 70 | 66 | 73 | 69 | 65 | | 71 | 67 | 64 | | 69 | 65 | 63 | 61 |
| 4 | 80 | 71 | 65 | 61 | 78 | 70 | 65 | 60 | 68 | 63 | 59 | | 66 | 62 | 59 | | 65 | 61 | 58 | 56 |
| 5 | 76 | 67 | 61 | 56 | 74 | 66 | 60 | 56 | 64 | 59 | 55 | | 63 | 58 | 55 | | 61 | 57 | 54 | 53 |
| 6 | 72 | 63 | 57 | 53 | 71 | 62 | 56 | 52 | 61 | 56 | 52 | | 59 | 55 | 51 | | 58 | 54 | 51 | 50 |
| 7 | 69 | 60 | 54 | 50 | 68 | 59 | 53 | 49 | 58 | 53 | 49 | | 57 | 52 | 49 | | 56 | 52 | 49 | 47 |
| 8 | 66 | 57 | 51 | 47 | 65 | 56 | 51 | 47 | 55 | 50 | 47 | | 54 | 50 | 47 | | 53 | 49 | 46 | 45 |
| 9 | 64 | 54 | 49 | 45 | 63 | 54 | 49 | 45 | 53 | 48 | 45 | | 52 | 48 | 45 | | 52 | 48 | 45 | 43 |
| 10 | 61 | 52 | 47 | 43 | 60 | 52 | 47 | 43 | 51 | 46 | 43 | | 50 | 46 | 43 | | 50 | 46 | 43 | 42 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--|-----|-----|
| 0° | Luminous shape not found, | | |
| 5° | reference photometric report, or contact | | |
| 10° | the photometric lab for calculations. | | |
| 15° | | | |
| 20° | | | |
| 25° | | | |
| 30° | | | |
| 35° | | | |
| 40° | | | |
| 45° | | | |
| 50° | | | |
| 55° | | | |
| 60° | | | |
| 65° | | | |
| 70° | | | |
| 75° | | | |
| 80° | | | |
| 85° | | | |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|--------|-----------|--------|------|-----|-------|-----|-------|-----|------|
| 0°-10° | 15.4 | 23.3 | 20.5 | 0° | 167 | 167 | 167 | 167 | 167 | |
| 10°-20° | 16.3 | 24.7 | 21.8 | 5° | 184 | 181 | 175 | 167 | 165 | 15 |
| 20°-30° | 5.9 | 8.9 | 7.9 | 15° | 24 | 26 | 53 | 90 | 78 | 8 |
| 30°-40° | 4.9 | 7.4 | 6.5 | 25° | 9 | 11 | 10 | 13 | 15 | 5 |
| 40°-50° | 5.1 | 7.7 | 6.7 | 35° | 7 | 8 | 7 | 7 | 7 | 5 |
| 50°-60° | 5.5 | 8.3 | 7.3 | 45° | 6 | 7 | 8 | 6 | 5 | 5 |
| 60°-70° | 5.6 | 8.5 | 7.5 | 55° | 6 | 5 | 8 | 6 | 5 | 5 |
| 70°-80° | 4.4 | 6.7 | 5.9 | 65° | 6 | 5 | 6 | 7 | 4 | 6 |
| 80°-90° | 2.7 | 4.2 | 3.7 | 75° | 5 | 4 | 4 | 5 | 3 | 5 |
| 90°-100° | 0.2 | 0.3 | 0.3 | 85° | 3 | 3 | 2 | 3 | 2 | 3 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 1 | 1 | 1 | 2 | 1 | 1 |
| 110°-120° | 0.0 | 0.0 | 0.0 | 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 120°-130° | 0.0 | 0.0 | 0.0 | 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 130°-140° | 0.0 | 0.0 | 0.0 | 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 140°-150° | 0.0 | 0.0 | 0.0 | 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 150°-160° | 0.0 | 0.0 | 0.0 | 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 160°-170° | 0.0 | 0.0 | 0.0 | 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 170°-180° | 0.0 | 0.0 | 0.0 | 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-30° | 37.6 | 57.0 | 50.2 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 42.5 | 64.4 | 56.7 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 53.0 | 80.3 | 70.7 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 65.8 | 99.7 | 87.7 | | | | | | | |
| 90°-120° | 0.2 | 0.3 | 0.3 | | | | | | | |
| 90°-150° | 0.2 | 0.3 | 0.3 | | | | | | | |
| 90°-180° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 0°-180° | 66.0 | 100.0 | 88.0 | | | | | | | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 167.0 | 167.0 | 167.0 | 167.0 | 167.0 |
| 2.5° | 163.7 | 163.8 | 162.8 | 162.7 | 162.1 |
| 5° | 183.6 | 181.1 | 175.0 | 167.1 | 165.0 |
| 7.5° | 162.2 | 167.0 | 180.0 | 170.0 | 158.5 |
| 10° | 90.8 | 111.6 | 147.5 | 154.7 | 127.9 |
| 12.5° | 39.5 | 55.2 | 94.7 | 121.0 | 107.6 |
| 15° | 23.9 | 25.5 | 53.4 | 90.2 | 78.2 |
| 17.5° | 12.5 | 16.9 | 24.3 | 71.5 | 47.8 |
| 20° | 14.0 | 12.8 | 15.0 | 31.0 | 24.8 |
| 22.5° | 16.0 | 12.3 | 11.7 | 15.9 | 17.2 |
| 25° | 9.4 | 10.9 | 10.3 | 13.4 | 15.1 |
| 27.5° | 9.3 | 11.4 | 11.3 | 11.5 | 12.6 |
| 30° | 12.7 | 10.2 | 8.7 | 10.5 | 9.6 |
| 32.5° | 9.4 | 10.2 | 8.4 | 7.8 | 11.0 |
| 35° | 7.3 | 8.3 | 7.2 | 7.2 | 7.3 |
| 37.5° | 6.8 | 7.2 | 6.4 | 5.6 | 6.4 |
| 40° | 6.6 | 7.3 | 6.9 | 5.3 | 5.4 |
| 42.5° | 6.3 | 7.7 | 7.7 | 6.1 | 5.0 |
| 45° | 5.9 | 7.3 | 7.9 | 5.5 | 5.3 |
| 47.5° | 5.3 | 7.2 | 7.9 | 5.5 | 5.0 |
| 50° | 5.4 | 6.6 | 8.2 | 5.4 | 4.9 |
| 52.5° | 5.4 | 5.9 | 8.3 | 5.4 | 4.7 |
| 55° | 5.8 | 5.1 | 7.6 | 5.7 | 4.8 |
| 57.5° | 6.2 | 5.2 | 7.8 | 5.7 | 4.8 |
| 60° | 6.4 | 5.1 | 7.7 | 6.1 | 4.9 |
| 62.5° | 5.7 | 5.1 | 6.6 | 6.6 | 5.0 |
| 65° | 6.1 | 4.9 | 5.5 | 6.9 | 4.1 |
| 67.5° | 6.4 | 5.1 | 4.9 | 7.1 | 3.7 |
| 70° | 5.7 | 4.8 | 4.5 | 6.6 | 3.4 |
| 72.5° | 5.5 | 4.5 | 4.2 | 5.7 | 2.6 |
| 75° | 5.2 | 3.9 | 3.8 | 4.9 | 2.8 |
| 77.5° | 5.0 | 3.5 | 3.5 | 4.2 | 2.5 |
| 80° | 4.4 | 3.3 | 3.0 | 3.8 | 2.3 |
| 82.5° | 3.6 | 3.0 | 2.5 | 3.5 | 2.1 |
| 85° | 3.3 | 2.6 | 2.1 | 3.1 | 1.9 |
| 87.5° | 2.1 | 2.2 | 1.6 | 2.7 | 1.7 |
| 90° | 1.2 | 1.4 | 1.0 | 2.1 | 1.2 |
| 92.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)