

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: RSA

Report Number: P22186-R2

Luminaire Tested: **CSHIN30SML11**

Issue Date: 3/3/2020

**Test Information**

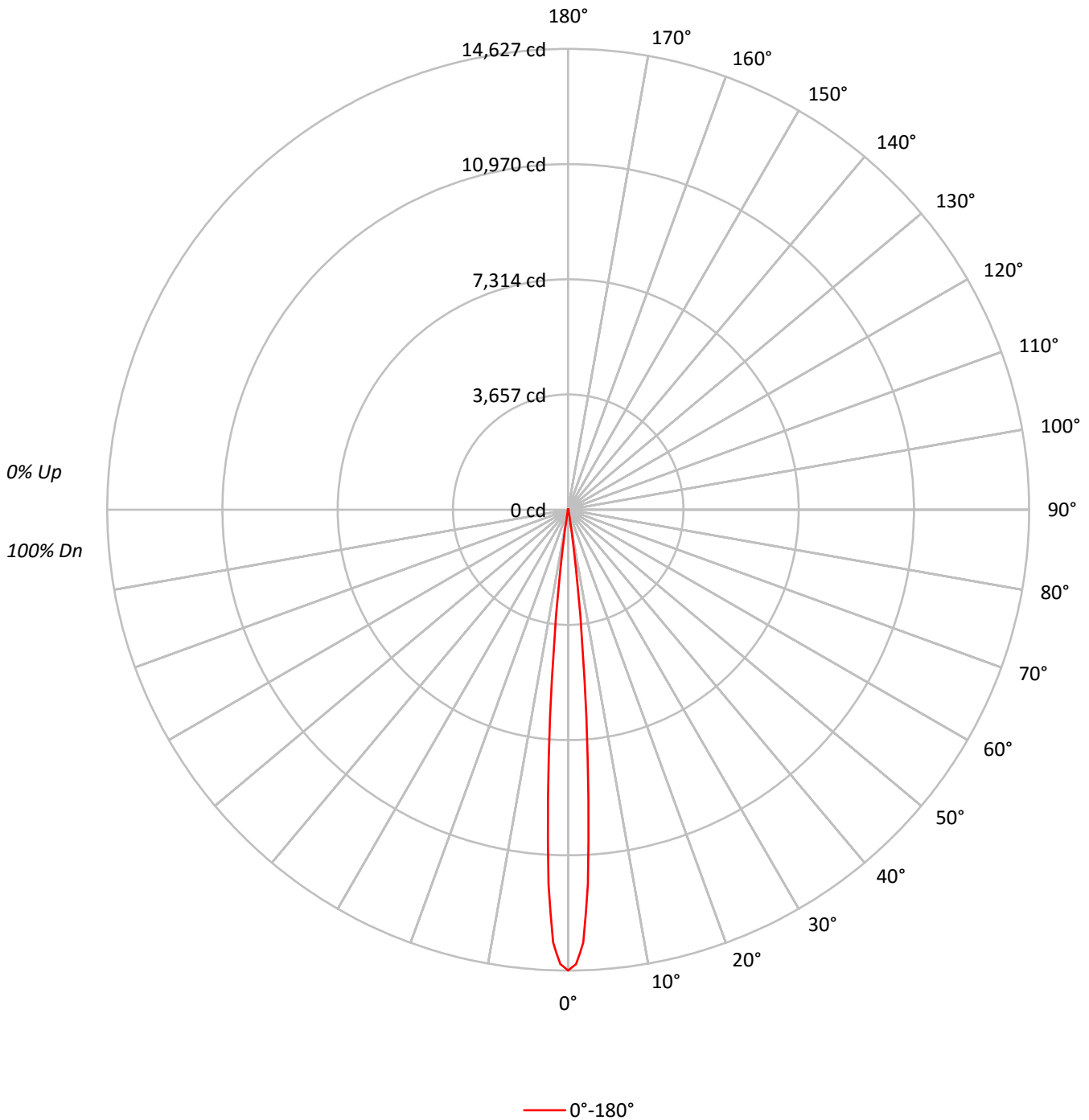
Test Method: LM-79-08  
Report Number: P22186-R2  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: RSA  
Catalog Number: CSHIN30SML11  
Description: \*\*\*THIS IS A REVISION OF P22186 TO UPDATE CATALOG  
NUMBER\*\*\*COMBOLIGHT ONE 8W LED HEAD, 3 LED UNIT SPOT  
DISTRIBUTION,3000K  
Light Source: (3) 3000K SMT LEDS  
XPG  
Ballast/Driver: (1) MAGTECH HIGH PERFECTION ELECTRONIC DRIVER  
LP1020-12-C700

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 436.4 lumens  
Efficiency: N/A  
Efficacy: 55.2 lumens/watt  
Spacing Criteria (0/90/45): 0.16 / 0.16 / 0.16  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 7.9  
Input Voltage (V): NR  
Input Current (Ain): 0.06792  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: HR  
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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 116 | 114 | 113 | 111 | 114 | 112 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 101 | 101 | 100 | 99  |
| 2   | 114 | 111 | 109 | 107 | 112 | 109 | 107 | 106 | 106 | 105 | 104 | 104 | 102 | 101 | 101 | 100 | 99  | 98  |
| 3   | 112 | 109 | 106 | 104 | 110 | 107 | 105 | 103 | 105 | 103 | 102 | 103 | 101 | 100 | 101 | 100 | 99  | 98  |
| 4   | 110 | 107 | 104 | 102 | 109 | 106 | 103 | 101 | 104 | 102 | 100 | 102 | 101 | 99  | 101 | 99  | 98  | 97  |
| 5   | 109 | 105 | 102 | 101 | 108 | 104 | 102 | 100 | 103 | 101 | 99  | 102 | 100 | 99  | 100 | 99  | 98  | 97  |
| 6   | 108 | 104 | 101 | 99  | 107 | 103 | 101 | 99  | 102 | 100 | 99  | 101 | 99  | 98  | 100 | 99  | 97  | 97  |
| 7   | 107 | 103 | 100 | 99  | 106 | 102 | 100 | 98  | 101 | 99  | 98  | 101 | 99  | 98  | 100 | 98  | 97  | 96  |
| 8   | 106 | 102 | 100 | 98  | 105 | 102 | 99  | 98  | 101 | 99  | 97  | 100 | 98  | 97  | 99  | 98  | 97  | 96  |
| 9   | 105 | 101 | 99  | 97  | 104 | 101 | 99  | 97  | 100 | 98  | 97  | 100 | 98  | 97  | 99  | 98  | 97  | 96  |
| 10  | 104 | 101 | 99  | 97  | 104 | 100 | 98  | 97  | 100 | 98  | 97  | 99  | 98  | 97  | 99  | 97  | 96  | 96  |

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

|     | 0°      |
|-----|---------|
| 0°  | 3207418 |
| 5°  | 1447718 |
| 10° | 71252   |
| 15° | 6356    |
| 20° | 1867    |
| 25° | 3871    |
| 30° | 4304    |
| 35° | 1071    |
| 40° | 859     |
| 45° | 0       |
| 50° | 1023    |
| 55° | 0       |
| 60° | 0       |
| 65° | 0       |
| 70° | 1282    |
| 75° | 847     |
| 80° | 2526    |
| 85° | 22644   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 405.5  | 92.9      |
| 10°-20°   | 14.5   | 3.3       |
| 20°-30°   | 4.3    | 1.0       |
| 30°-40°   | 3.0    | 0.7       |
| 40°-50°   | 2.3    | 0.5       |
| 50°-60°   | 0.3    | 0.1       |
| 60°-70°   | 0.7    | 0.2       |
| 70°-80°   | 1.6    | 0.4       |
| 80°-90°   | 4.1    | 0.9       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 424.3  | 97.2      |
| 0°-40°    | 427.3  | 97.9      |
| 0°-60°    | 429.9  | 98.5      |
| 0°-90°    | 436.4  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 436.4  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 14627 |      |
| 5°  | 6577  | 406  |
| 15° | 28    | 15   |
| 25° | 16    | 4    |
| 35° | 4     | 3    |
| 45° | 0     | 2    |
| 55° | 0     | 0    |
| 65° | 0     | 1    |
| 75° | 1     | 2    |
| 85° | 9     | 4    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |       |
|-------|-------|
| 0°    | 14627 |
| 1°    | 14421 |
| 2°    | 13745 |
| 3°    | 11905 |
| 4°    | 9184  |
| 5°    | 6577  |
| 6°    | 4292  |
| 7°    | 2519  |
| 8°    | 1321  |
| 9°    | 640   |
| 10°   | 320   |
| 11°   | 154   |
| 12°   | 99    |
| 13°   | 50    |
| 14°   | 43    |
| 15°   | 28    |
| 17.5° | 20    |
| 20°   | 8     |
| 22.5° | 4     |
| 25°   | 16    |
| 27.5° | 4     |
| 30°   | 17    |
| 32.5° | 5     |
| 35°   | 4     |
| 37.5° | 1     |
| 40°   | 3     |
| 42.5° | 7     |
| 45°   | 0     |
| 47.5° | 2     |
| 50°   | 3     |
| 52.5° | 0     |
| 55°   | 0     |
| 57.5° | 0     |
| 60°   | 0     |
| 62.5° | 2     |
| 65°   | 0     |
| 67.5° | 0     |
| 70°   | 2     |
| 72.5° | 2     |
| 75°   | 1     |
| 77.5° | 1     |
| 80°   | 2     |
| 82.5° | 1     |
| 85°   | 9     |
| 87.5° | 4     |



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CANDELA DISTRIBUTION (continued):

90° |  $\frac{0^\circ}{0}$

(END OF REPORT)