

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: P22184-R2

Luminaire Tested: **CSWIM40MED11**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P22184-R2
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: RSA
Catalog Number: CSWIM40MED11
Description: ***THIS IS A REVISION OF P22184 TO UPDATE CATALOG
NUMBER***COMBOLIGHT ONE 18W LED HEAD, 7 LED UNIT NARROW
FLOOD DISTRIBUTION, 4000K
Light Source: (7) 4000K SMT LEDS
XPG
Ballast/Driver: (1) MAGTECH HIGH PERFECTION ELECTRONIC DRIVER
LP1020-24-C700

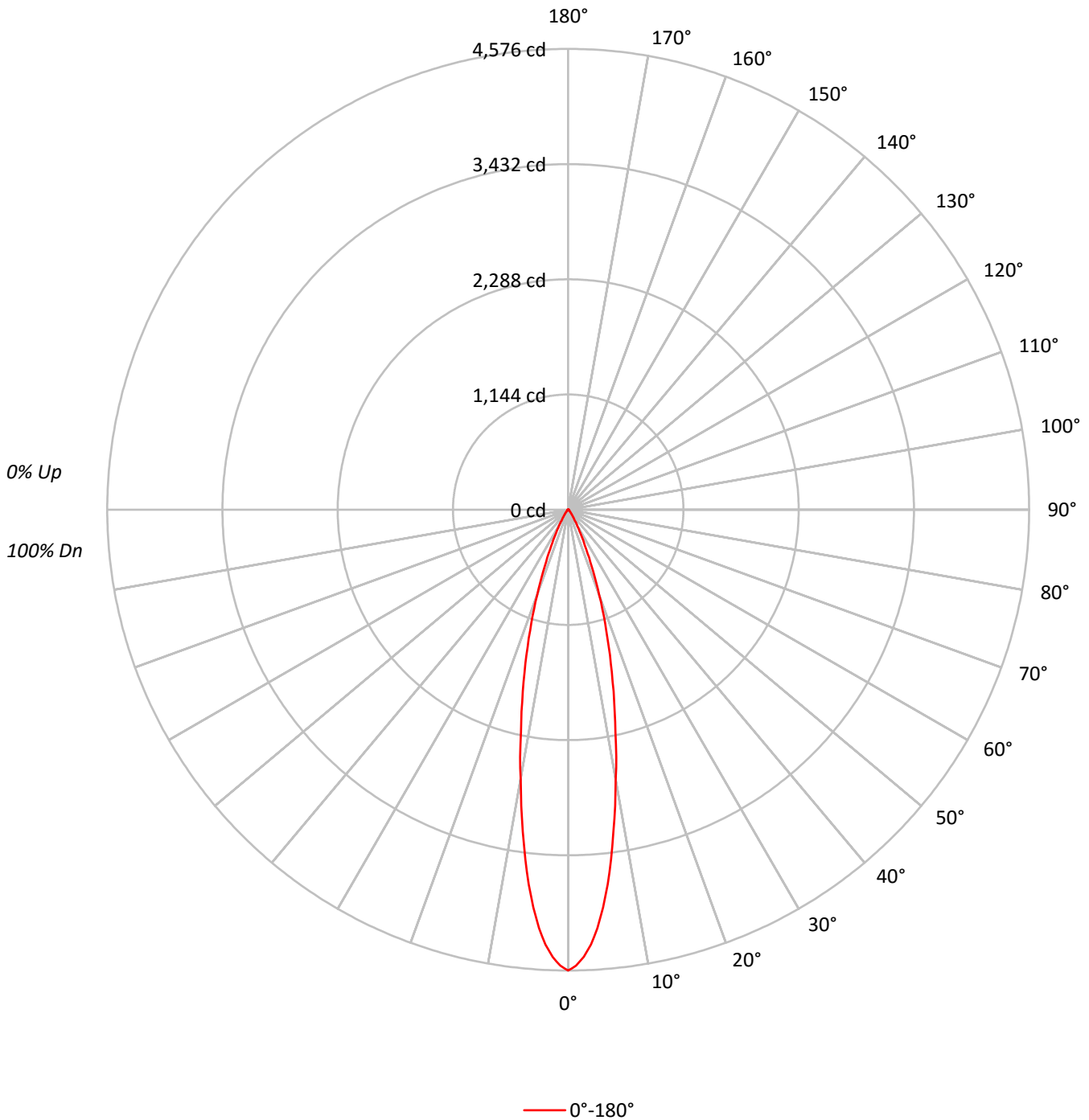
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1073.1 lumens
Efficiency: N/A
Efficacy: 62.8 lumens/watt
Spacing Criteria (0/90/45): 0.4 / 0.4 / 0.44
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (Ain): 0.14397
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 | 115 | 113 | 111 | 109 | 112 | 110 | 109 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 99 | 99 | 98 | 96 |
| 2 | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 | 102 | 100 | 98 | 99 | 97 | 96 | 97 | 95 | 94 | 92 |
| 3 | 107 | 102 | 98 | 95 | 105 | 101 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 94 | 92 | 90 | 89 |
| 4 | 103 | 98 | 94 | 90 | 102 | 97 | 93 | 90 | 95 | 91 | 89 | 93 | 90 | 88 | 91 | 89 | 87 | 86 |
| 5 | 100 | 94 | 89 | 86 | 99 | 93 | 89 | 86 | 91 | 88 | 85 | 90 | 87 | 84 | 88 | 86 | 84 | 83 |
| 6 | 97 | 90 | 86 | 83 | 96 | 90 | 85 | 82 | 88 | 85 | 82 | 87 | 84 | 81 | 86 | 83 | 81 | 80 |
| 7 | 94 | 87 | 83 | 80 | 93 | 86 | 82 | 79 | 85 | 82 | 79 | 84 | 81 | 79 | 83 | 80 | 78 | 77 |
| 8 | 91 | 84 | 80 | 77 | 90 | 84 | 80 | 77 | 83 | 79 | 76 | 82 | 78 | 76 | 81 | 78 | 76 | 75 |
| 9 | 88 | 81 | 77 | 74 | 88 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 74 | 79 | 76 | 73 | 72 |
| 10 | 86 | 79 | 75 | 72 | 85 | 79 | 75 | 72 | 78 | 74 | 72 | 77 | 74 | 71 | 77 | 74 | 71 | 70 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 564430 |
| 5° | 491057 |
| 10° | 340175 |
| 15° | 213254 |
| 20° | 118398 |
| 25° | 53486 |
| 30° | 24070 |
| 35° | 10842 |
| 40° | 6924 |
| 45° | 3489 |
| 50° | 2111 |
| 55° | 1935 |
| 60° | 1727 |
| 65° | 584 |
| 70° | 1443 |
| 75° | 477 |
| 80° | 1421 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 337.0 | 31.4 |
| 10°-20° | 461.1 | 43.0 |
| 20°-30° | 197.3 | 18.4 |
| 30°-40° | 52.1 | 4.9 |
| 40°-50° | 14.3 | 1.3 |
| 50°-60° | 6.5 | 0.6 |
| 60°-70° | 2.8 | 0.3 |
| 70°-80° | 1.3 | 0.1 |
| 80°-90° | 0.5 | 0.1 |
| 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° | 995.5 | 92.8 |
| 0°-40° | 1047.6 | 97.6 |
| 0°-60° | 1068.4 | 99.6 |
| 0°-90° | 1073.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1073.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 4576 | |
| 5° | 3966 | 337 |
| 15° | 1670 | 461 |
| 25° | 393 | 197 |
| 35° | 72 | 52 |
| 45° | 20 | 14 |
| 55° | 9 | 6 |
| 65° | 2 | 3 |
| 75° | 1 | 1 |
| 85° | 0 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|------|
| 0° | 4576 |
| 1° | 4529 |
| 2° | 4444 |
| 3° | 4325 |
| 4° | 4165 |
| 5° | 3966 |
| 6° | 3741 |
| 7° | 3499 |
| 8° | 3231 |
| 9° | 2977 |
| 10° | 2716 |
| 11° | 2502 |
| 12° | 2259 |
| 13° | 2056 |
| 14° | 1860 |
| 15° | 1670 |
| 17.5° | 1254 |
| 20° | 902 |
| 22.5° | 604 |
| 25° | 393 |
| 27.5° | 257 |
| 30° | 169 |
| 32.5° | 107 |
| 35° | 72 |
| 37.5° | 56 |
| 40° | 43 |
| 42.5° | 25 |
| 45° | 20 |
| 47.5° | 4 |
| 50° | 11 |
| 52.5° | 6 |
| 55° | 9 |
| 57.5° | 5 |
| 60° | 7 |
| 62.5° | 2 |
| 65° | 2 |
| 67.5° | 2 |
| 70° | 4 |
| 72.5° | 1 |
| 75° | 1 |
| 77.5° | 0 |
| 80° | 2 |
| 82.5° | 0 |
| 85° | 0 |
| 87.5° | 1 |



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CANDELA DISTRIBUTION (continued):

90° | $\frac{0^\circ}{0}$

(END OF REPORT)