

Photometric test report

Family
Silica® 21

Order number: 51MX32DB49SB
EAN: 4058352886984

LP number
59279_107

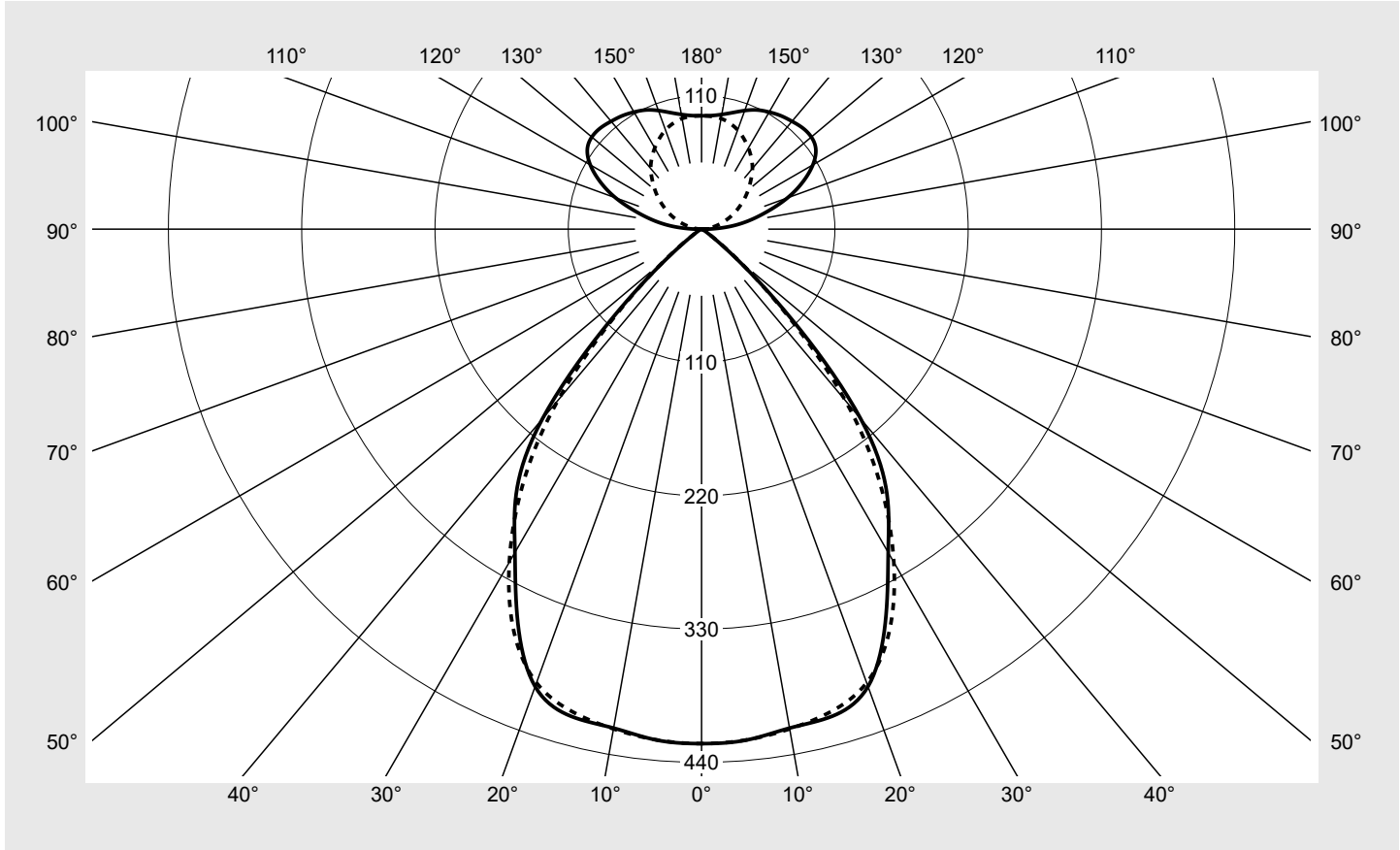


Version Suspended luminaire, reflector, black, direct-/indirect distribution, wide distribution, UGR≤16 (L65≤1000cd/m²)
Lamps LED 4000 K | CRI ≥ 80
Controlgear ECG-DALI
Rated values Net luminous flux = 9110 lm
 Power consumption = 54.7 W
 Luminous efficacy = 166.5 lm/W

serial documentation
02.08.2023



Luminous intensity in cd/klm C180-0 C270-90 **Imax: 425 cd/klm**



Classifications

| | |
|----------|------------------------------------|
| DIN 5040 | C 6 2 |
| CIE | N1=86 N2=99 N3=100 N4=59 N5=100 |

Luminaire light output ratios

| | |
|-------------|--------|
| η_{LB} | 100.0% |
| ϕ_u | 59.2% |
| ϕ_o | 40.8% |

Measurement conditions
DIN EN 13032 and DIN 5032

Photometric test report

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| Family Silica® 21 | Order number: 51MX32DB49SB EAN: 4058352886984 | LP number 59279_107 |
| Table of values for luminous intensities | | Maximum luminous intensity |
| | | siteco |

| C-planes γ | 0° 180° | 15° | 30° | 45° | 60° | 75° | 90° 270° | Phi-zone | Total Phi-zone |
|------------------------------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|-------------------------|-------------------|
| | | 165° 195° 345° | 150° 210° 330° | 135° 225° 315° | 120° 240° 300° | 105° 255° 285° | | | |
| Luminous intensity in cd/klm | | | | | | | | Luminous flux in lm/klm | |
| 0° | 424.5 | 424.5 | 424.5 | 424.5 | 424.5 | 424.5 | 424.5 | 2.5 | 2.5 |
| 5° | 423.2 | 423.7 | 423.1 | 423.1 | 423.3 | 423.7 | 423.1 | 20.2 | 22.8 |
| 10° | 418.0 | 417.2 | 417.3 | 418.4 | 419.3 | 417.7 | 418.7 | 39.8 | 62.6 |
| 15° | 416.1 | 416.5 | 413.5 | 413.8 | 413.5 | 412.7 | 412.2 | 58.7 | 121.3 |
| 20° | 401.6 | 404.7 | 402.8 | 404.0 | 399.5 | 397.4 | 398.3 | 75.3 | 196.5 |
| 25° | 358.7 | 364.9 | 370.6 | 376.3 | 375.4 | 369.4 | 366.5 | 85.7 | 282.2 |
| 30° | 308.1 | 312.2 | 314.3 | 321.5 | 326.7 | 320.5 | 317.3 | 87.1 | 369.4 |
| 35° | 266.7 | 269.2 | 262.0 | 257.7 | 262.2 | 261.4 | 257.3 | 82.5 | 451.9 |
| 40° | 204.3 | 207.3 | 203.4 | 196.7 | 194.2 | 189.2 | 184.5 | 69.6 | 521.5 |
| 45° | 105.6 | 109.2 | 112.9 | 113.5 | 110.1 | 103.6 | 98.8 | 42.1 | 563.6 |
| 50° | 35.1 | 38.0 | 43.5 | 46.6 | 44.5 | 40.2 | 37.5 | 17.4 | 581.0 |
| 55° | 9.3 | 10.9 | 14.6 | 18.5 | 15.5 | 12.0 | 10.3 | 6.1 | 587.1 |
| 60° | 3.6 | 4.0 | 5.4 | 7.2 | 5.8 | 4.5 | 4.1 | 2.4 | 589.5 |
| 65° | 1.2 | 1.4 | 2.0 | 2.5 | 2.2 | 1.8 | 1.6 | 0.9 | 590.5 |
| 70° | 0.8 | 0.8 | 0.6 | 0.6 | 0.7 | 0.9 | 0.9 | 0.4 | 590.8 |
| 75° | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.1 | 591.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 591.0 |
| 85° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 591.2 |
| 90° | 4.7 | 4.5 | 4.8 | 4.8 | 2.8 | 1.0 | 0.4 | 1.9 | 593.1 |
| 95° | 21.9 | 22.4 | 24.0 | 22.7 | 14.5 | 7.5 | 3.9 | 9.5 | 602.5 |
| 100° | 39.1 | 40.2 | 40.5 | 35.5 | 23.8 | 13.4 | 8.9 | 16.0 | 618.5 |
| 105° | 56.1 | 57.3 | 56.2 | 48.0 | 32.8 | 20.3 | 14.9 | 22.1 | 640.6 |
| 110° | 75.4 | 75.7 | 70.9 | 59.1 | 42.1 | 27.5 | 21.3 | 27.8 | 668.4 |
| 115° | 92.2 | 91.4 | 84.2 | 69.3 | 51.0 | 34.7 | 28.4 | 32.4 | 700.7 |
| 120° | 106.0 | 104.3 | 95.1 | 77.6 | 59.4 | 41.8 | 35.4 | 35.5 | 736.3 |
| 125° | 115.1 | 111.9 | 101.7 | 85.2 | 66.4 | 48.4 | 42.8 | 36.9 | 773.1 |
| 130° | 118.2 | 115.6 | 104.8 | 89.7 | 71.8 | 55.3 | 50.2 | 36.5 | 809.6 |
| 135° | 118.0 | 115.6 | 106.0 | 92.7 | 76.1 | 61.7 | 57.6 | 34.9 | 844.5 |
| 140° | 116.1 | 114.4 | 106.3 | 94.9 | 79.7 | 67.7 | 65.3 | 32.5 | 877.0 |
| 145° | 114.2 | 113.0 | 106.3 | 96.1 | 83.1 | 73.4 | 71.6 | 29.6 | 906.6 |
| 150° | 111.5 | 111.1 | 105.1 | 96.0 | 85.8 | 78.8 | 77.3 | 26.1 | 932.7 |
| 155° | 108.5 | 108.2 | 102.4 | 95.6 | 87.9 | 83.6 | 82.4 | 22.1 | 954.8 |
| 160° | 104.1 | 103.9 | 99.3 | 94.8 | 89.7 | 87.3 | 87.1 | 17.8 | 972.6 |
| 165° | 99.5 | 99.0 | 96.7 | 93.7 | 91.6 | 90.3 | 90.4 | 13.4 | 986.0 |
| 170° | 96.1 | 95.6 | 95.0 | 93.7 | 92.8 | 92.7 | 92.7 | 9.0 | 995.0 |
| 175° | 94.1 | 94.0 | 93.5 | 93.3 | 93.3 | 93.4 | 93.4 | 4.5 | 999.4 |
| 180° | 93.6 | 93.6 | 93.6 | 93.6 | 93.6 | 93.6 | 93.6 | 0.6 | 1000.0 |

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| UGR-Table | Standard room | siteco |
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| | | | | | | | | | | | |
|------------------------------|---------------------|------|------|------|------|--------------------|------|------|------|------|------|
| Reflection factor of ceiling | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | |
| Reflection factor of walls | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | |
| Reflection factor of floor | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| Room dimensions | View crosswise (C0) | | | | | View endwise (C90) | | | | | |
| x | y | | | | | | | | | | |
| 2H | 2H | 16.3 | 17.1 | 17.1 | 18.0 | 19.0 | 16.1 | 17.0 | 16.9 | 17.8 | 18.8 |
| | 3H | 16.0 | 16.7 | 16.9 | 17.6 | 18.7 | 15.8 | 16.6 | 16.7 | 17.5 | 18.5 |
| | 4H | 15.8 | 16.5 | 16.7 | 17.4 | 18.5 | 15.7 | 16.4 | 16.6 | 17.3 | 18.4 |
| | 6H | 15.7 | 16.3 | 16.6 | 17.2 | 18.3 | 15.5 | 16.2 | 16.4 | 17.1 | 18.2 |
| | 8H | 15.6 | 16.1 | 16.5 | 17.1 | 18.2 | 15.4 | 15.9 | 16.3 | 16.9 | 18.0 |
| | 12H | 15.5 | 16.0 | 16.4 | 16.9 | 18.1 | 15.3 | 15.9 | 16.3 | 16.8 | 18.0 |
| 4H | 2H | 15.9 | 16.6 | 16.8 | 17.5 | 18.6 | 15.7 | 16.4 | 16.6 | 17.2 | 18.4 |
| | 3H | 15.6 | 16.2 | 16.5 | 17.1 | 18.3 | 15.4 | 16.0 | 16.3 | 16.9 | 18.1 |
| | 4H | 15.5 | 16.0 | 16.4 | 16.9 | 18.1 | 15.3 | 15.8 | 16.2 | 16.7 | 17.9 |
| | 6H | 15.3 | 15.7 | 16.2 | 16.7 | 17.9 | 15.1 | 15.6 | 16.1 | 16.5 | 17.7 |
| | 8H | 15.2 | 15.6 | 16.2 | 16.5 | 17.8 | 15.0 | 15.4 | 16.0 | 16.4 | 17.6 |
| | 12H | 15.1 | 15.4 | 16.1 | 16.4 | 17.6 | 14.9 | 15.3 | 15.9 | 16.2 | 17.5 |
| 8H | 4H | 15.2 | 15.6 | 16.2 | 16.6 | 17.8 | 15.0 | 15.4 | 16.0 | 16.4 | 17.6 |
| | 6H | 15.1 | 15.4 | 16.1 | 16.4 | 17.6 | 14.9 | 15.2 | 15.8 | 16.1 | 17.4 |
| | 8H | 15.0 | 15.3 | 16.0 | 16.3 | 17.5 | 14.8 | 15.1 | 15.8 | 16.1 | 17.3 |
| | 12H | 14.9 | 15.1 | 15.9 | 16.1 | 17.4 | 14.7 | 15.0 | 15.7 | 15.9 | 17.2 |
| 12H | 4H | 15.1 | 15.5 | 16.1 | 16.4 | 17.7 | 14.9 | 15.3 | 15.9 | 16.2 | 17.4 |
| | 6H | 15.0 | 15.3 | 16.0 | 16.2 | 17.5 | 14.8 | 15.1 | 15.8 | 16.0 | 17.3 |
| | 8H | 14.9 | 15.1 | 15.9 | 16.1 | 17.4 | 14.7 | 14.9 | 15.7 | 15.9 | 17.2 |

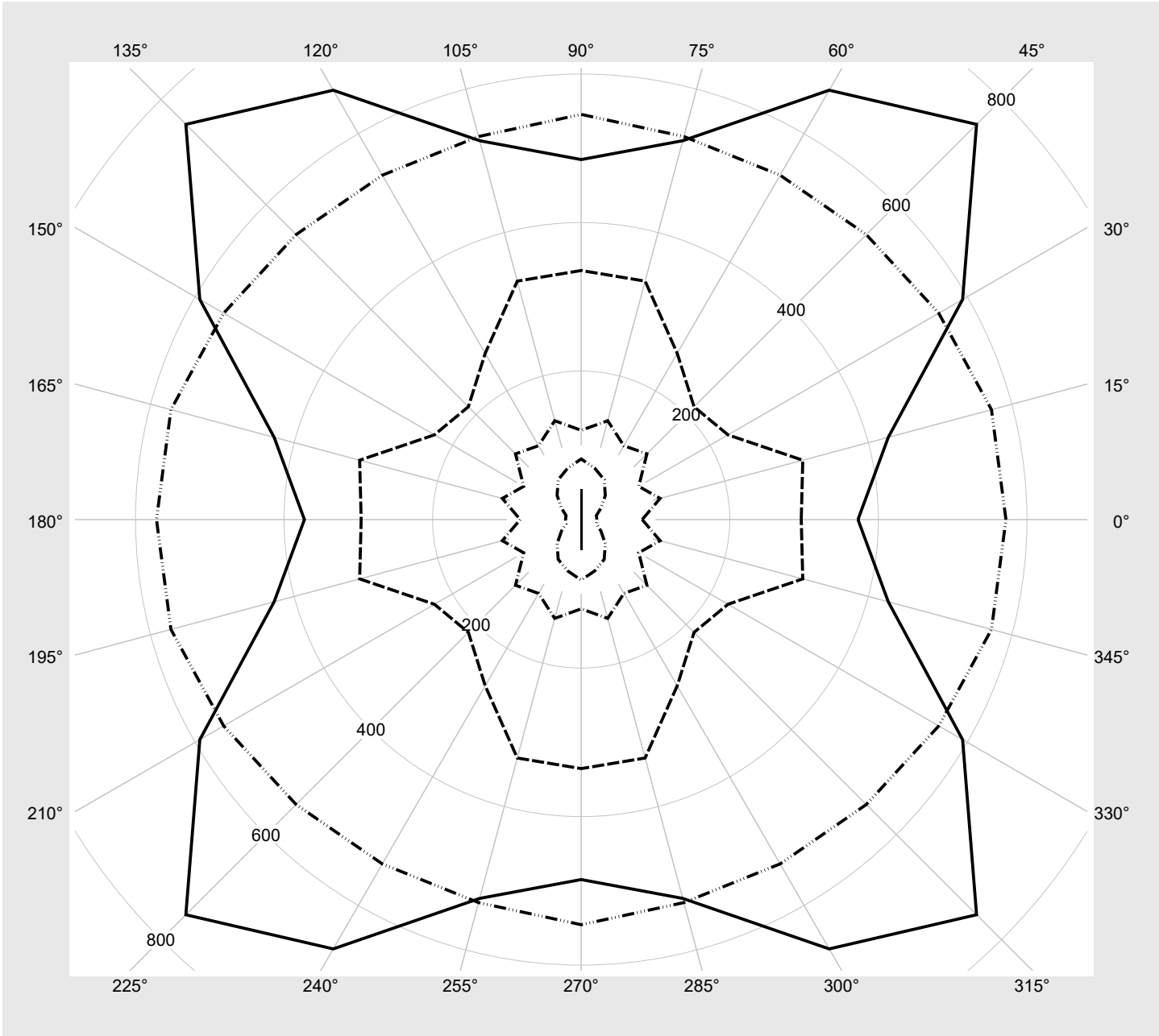
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|------------------------|---|--------------------------------------|----------------------------------|
| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 1470 B = 49 |
|------------------------|---|--------------------------------------|----------------------------------|

| C-planes | γ | Luminance in cd/m ² | | | | | | | |
|----------|----------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
| | | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° | |
| 45° | | 18894.2 | 19529.1 | 20193.1 | 20307.0 | 19696.2 | 18538.1 | 17678.6 | |
| 50° | | 6911.2 | 7475.3 | 8557.1 | 9160.0 | 8753.7 | 7916.1 | 7385.8 | |
| 55° | | 2044.1 | 2412.3 | 3214.0 | 4079.3 | 3423.3 | 2636.3 | 2266.8 | |
| 60° | | 914.2 | 1018.9 | 1361.1 | 1811.9 | 1470.9 | 1147.4 | 1042.2 | |
| 65° | | 372.6 | 427.9 | 592.8 | 752.7 | 667.7 | 528.2 | 484.8 | |
| 70° | | 296.2 | 308.8 | 228.2 | 214.8 | 258.5 | 332.4 | 335.4 | |
| 75° | | 82.1 | 109.9 | 89.4 | 125.1 | 114.8 | 137.8 | 120.2 | |
| 80° | | 21.1 | 21.1 | 30.6 | 45.9 | 61.9 | 71.4 | 81.6 | |
| 85° | | 571.7 | 571.7 | 555.8 | 542.7 | 535.5 | 534.0 | 545.6 | |

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Luminance values in cd/m² γ 65° γ 70° γ 75° γ 80° γ 85° **siteco**



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| Dimming levels table | environmental temperature: 25°C | sITeco |
|-----------------------------|---------------------------------|---------------|

| Luminous flux % | Dimming level linear | Dimming level logarithmic | Luminous flux [lm] | Power consumption [W] |
|-----------------|----------------------|---------------------------|--------------------|-----------------------|
| 100 | 254 | 254 | 9110 | 54.7 |
| 95 | 241 | 252 | 8668 | 52.0 |
| 90 | 227 | 250 | 8190 | 49.0 |
| 85 | 214 | 248 | 7742 | 46.2 |
| 80 | 201 | 245 | 7291 | 43.6 |
| 75 | 188 | 243 | 6837 | 40.8 |
| 70 | 175 | 240 | 6381 | 38.1 |
| 65 | 162 | 238 | 5923 | 35.4 |
| 60 | 149 | 234 | 5460 | 32.7 |
| 55 | 136 | 231 | 4996 | 30.0 |
| 50 | 124 | 228 | 4564 | 27.5 |
| 45 | 111 | 224 | 4095 | 24.9 |
| 40 | 99 | 219 | 3659 | 22.4 |
| 35 | 86 | 214 | 3184 | 19.7 |
| 30 | 74 | 209 | 2743 | 17.3 |
| 25 | 61 | 202 | 2261 | 14.6 |
| 20 | 49 | 194 | 1816 | 12.0 |
| 15 | 37 | 183 | 1370 | 9.7 |
| 10 | 25 | 169 | 921 | 7.2 |
| 5 | 13 | 145 | 471 | 5.1 |
| 2 | 6 | 117 | 207 | 4.2 |