

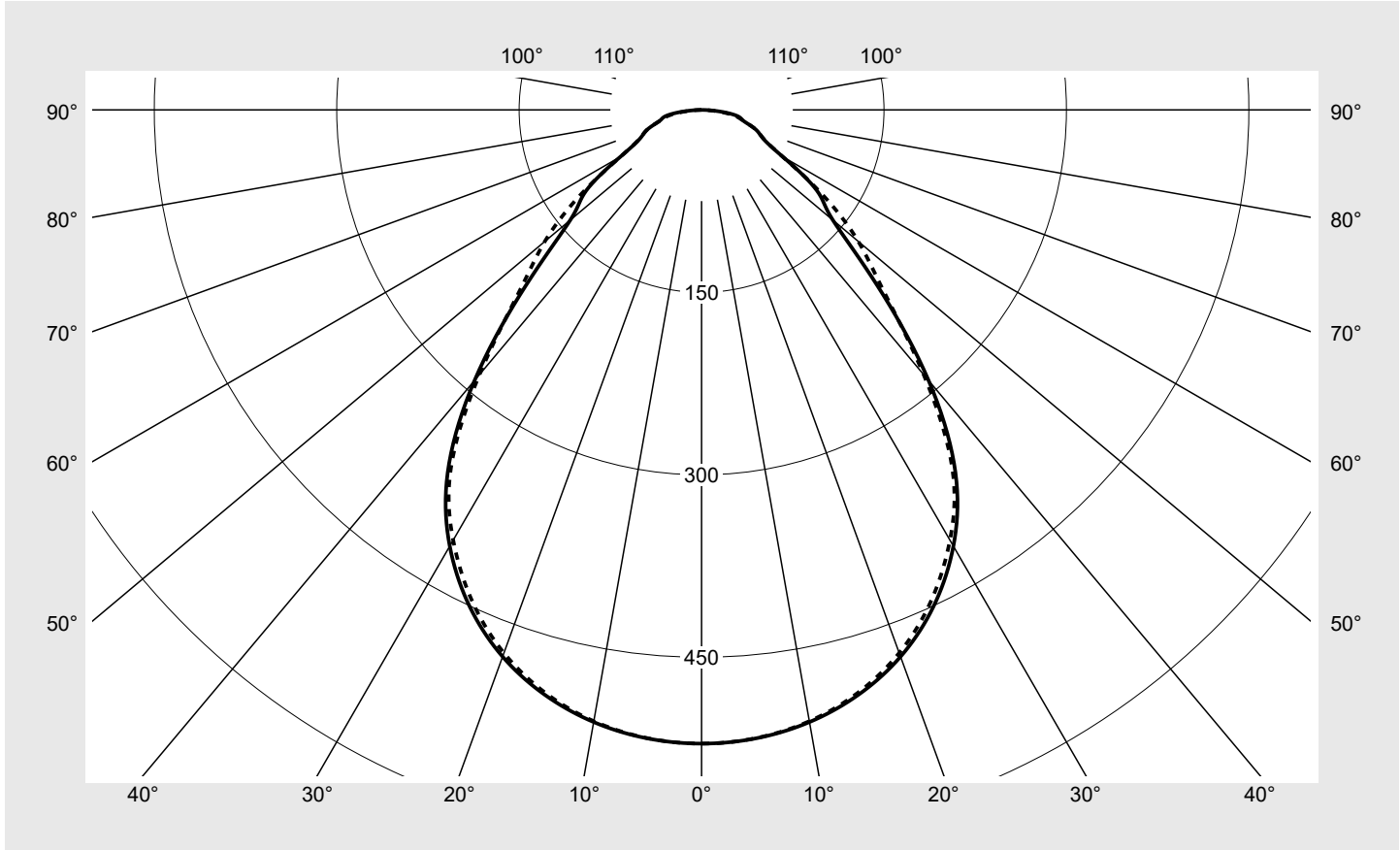


Photometric test report

| | | |
|--|---|--|
| Family Sport 31 | Order number: 51HS12DD4JCA EAN: 4058352501825 | LP number 59187_5 |
|  | Version CDP microprismatic optics, wide distribution Lamps LED 4000 K CRI ≥ 80 Controlgear ECG-DALI Rated values Net luminous flux = 19720 lm Power consumption = 146.2 W Luminous efficacy = 134.9 lm/W | serial documentation 27.07.2021 |
| |  | |

Luminous intensity in cd/klm C180-0 C270-90 **Imax: 521 cd/klm**



| Classifications | |
|-----------------|------------------------------------|
| DIN 5040 | A 5 0 |
| CIE | N1=65 N2=89 N3=97 N4=100 N5=100 |

| Luminaire light output ratios | |
|-------------------------------|--------|
| η_{LB} | 100.0% |
| ϕ_u | 100.0% |
| ϕ_o | 0.0% |

Measurement conditions
DIN EN 13032 and DIN 5032

Photometric test report

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|---|--|------------------------------------|
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| 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° | 521.0 | 521.0 | 521.0 | 521.0 | 521.0 | 521.0 | 521.0 | 3.1 | 3.1 |
| 5° | 518.5 | 518.4 | 518.3 | 518.4 | 518.2 | 518.1 | 518.3 | 24.8 | 27.9 |
| 10° | 511.0 | 510.9 | 510.6 | 510.5 | 510.1 | 510.0 | 510.3 | 48.6 | 76.5 |
| 15° | 497.9 | 497.5 | 497.3 | 497.0 | 496.5 | 496.2 | 496.2 | 70.5 | 147.0 |
| 20° | 478.3 | 478.1 | 477.4 | 476.3 | 475.5 | 474.9 | 475.1 | 89.3 | 236.3 |
| 25° | 450.9 | 450.8 | 450.2 | 448.2 | 446.4 | 445.5 | 446.0 | 103.8 | 340.1 |
| 30° | 414.1 | 414.8 | 414.4 | 411.1 | 407.7 | 407.5 | 408.5 | 112.7 | 452.8 |
| 35° | 363.9 | 366.3 | 367.3 | 360.9 | 355.6 | 356.6 | 359.3 | 113.6 | 566.4 |
| 40° | 290.4 | 294.7 | 297.0 | 285.4 | 277.5 | 279.3 | 284.1 | 101.1 | 667.5 |
| 45° | 204.6 | 218.3 | 229.0 | 208.7 | 190.3 | 198.4 | 212.8 | 81.0 | 748.5 |
| 50° | 140.9 | 171.9 | 185.1 | 159.3 | 127.2 | 151.6 | 168.3 | 66.5 | 814.9 |
| 55° | 115.9 | 135.6 | 132.9 | 125.3 | 102.7 | 120.0 | 121.1 | 55.0 | 869.9 |
| 60° | 77.1 | 78.0 | 77.1 | 78.0 | 77.1 | 78.0 | 77.0 | 36.8 | 906.8 |
| 65° | 55.9 | 56.5 | 55.9 | 56.4 | 55.9 | 56.2 | 56.5 | 27.9 | 934.7 |
| 70° | 47.6 | 46.5 | 47.6 | 46.8 | 47.6 | 46.8 | 47.6 | 24.3 | 959.0 |
| 75° | 36.1 | 35.1 | 36.1 | 35.1 | 36.1 | 35.1 | 36.1 | 18.8 | 977.8 |
| 80° | 30.3 | 26.7 | 28.2 | 25.7 | 27.9 | 26.3 | 27.7 | 14.7 | 992.5 |
| 85° | 15.0 | 15.5 | 14.5 | 13.2 | 12.4 | 12.6 | 12.4 | 7.5 | 1000.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1000.0 |

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| UGR-Table | Standard room | siteco |
|------------------|----------------------|---------------|

| | | | | | | | | | | | |
|------------------------------|---------------------|------|------|------|------|--------------------|------|------|------|------|------|
| 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 | 19.0 | 20.5 | 19.4 | 20.8 | 21.2 | 18.6 | 20.1 | 18.9 | 20.4 | 20.7 |
| | 3H | 19.8 | 21.1 | 20.1 | 21.4 | 21.8 | 19.4 | 20.8 | 19.8 | 21.1 | 21.5 |
| | 4H | 20.2 | 21.5 | 20.6 | 21.8 | 22.2 | 19.9 | 21.2 | 20.3 | 21.5 | 21.9 |
| | 6H | 20.7 | 21.9 | 21.1 | 22.3 | 22.7 | 20.4 | 21.6 | 20.9 | 22.0 | 22.4 |
| | 8H | 21.1 | 22.1 | 21.5 | 22.5 | 22.9 | 20.7 | 21.8 | 21.2 | 22.2 | 22.6 |
| | 12H | 21.3 | 22.3 | 21.7 | 22.7 | 23.1 | 20.9 | 21.9 | 21.3 | 22.3 | 22.7 |
| 4H | 2H | 19.3 | 20.6 | 19.7 | 20.9 | 21.3 | 19.0 | 20.2 | 19.4 | 20.6 | 20.9 |
| | 3H | 20.3 | 21.3 | 20.7 | 21.7 | 22.1 | 20.0 | 21.1 | 20.5 | 21.5 | 21.9 |
| | 4H | 20.9 | 21.8 | 21.3 | 22.2 | 22.7 | 20.7 | 21.6 | 21.1 | 22.0 | 22.5 |
| | 6H | 21.6 | 22.4 | 22.0 | 22.8 | 23.3 | 21.4 | 22.2 | 21.8 | 22.6 | 23.1 |
| | 8H | 21.9 | 22.7 | 22.4 | 23.1 | 23.6 | 21.7 | 22.4 | 22.2 | 22.9 | 23.4 |
| | 12H | 22.3 | 22.9 | 22.7 | 23.4 | 23.9 | 21.9 | 22.6 | 22.4 | 23.0 | 23.5 |
| 8H | 4H | 21.1 | 21.9 | 21.6 | 22.3 | 22.8 | 21.0 | 21.7 | 21.4 | 22.2 | 22.6 |
| | 6H | 22.0 | 22.7 | 22.5 | 23.1 | 23.6 | 21.9 | 22.5 | 22.4 | 22.9 | 23.5 |
| | 8H | 22.5 | 23.1 | 23.0 | 23.5 | 24.1 | 22.3 | 22.8 | 22.8 | 23.3 | 23.8 |
| | 12H | 22.9 | 23.4 | 23.4 | 23.9 | 24.4 | 22.6 | 23.1 | 23.1 | 23.6 | 24.1 |
| 12H | 4H | 21.2 | 21.9 | 21.7 | 22.3 | 22.8 | 21.0 | 21.7 | 21.5 | 22.1 | 22.6 |
| | 6H | 22.2 | 22.7 | 22.7 | 23.2 | 23.7 | 22.0 | 22.5 | 22.5 | 23.0 | 23.5 |
| | 8H | 22.7 | 23.1 | 23.2 | 23.6 | 24.2 | 22.4 | 22.9 | 23.0 | 23.4 | 23.9 |

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| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 1470 B = 345 |
|------------------------|---|--------------------------------------|-----------------------------------|

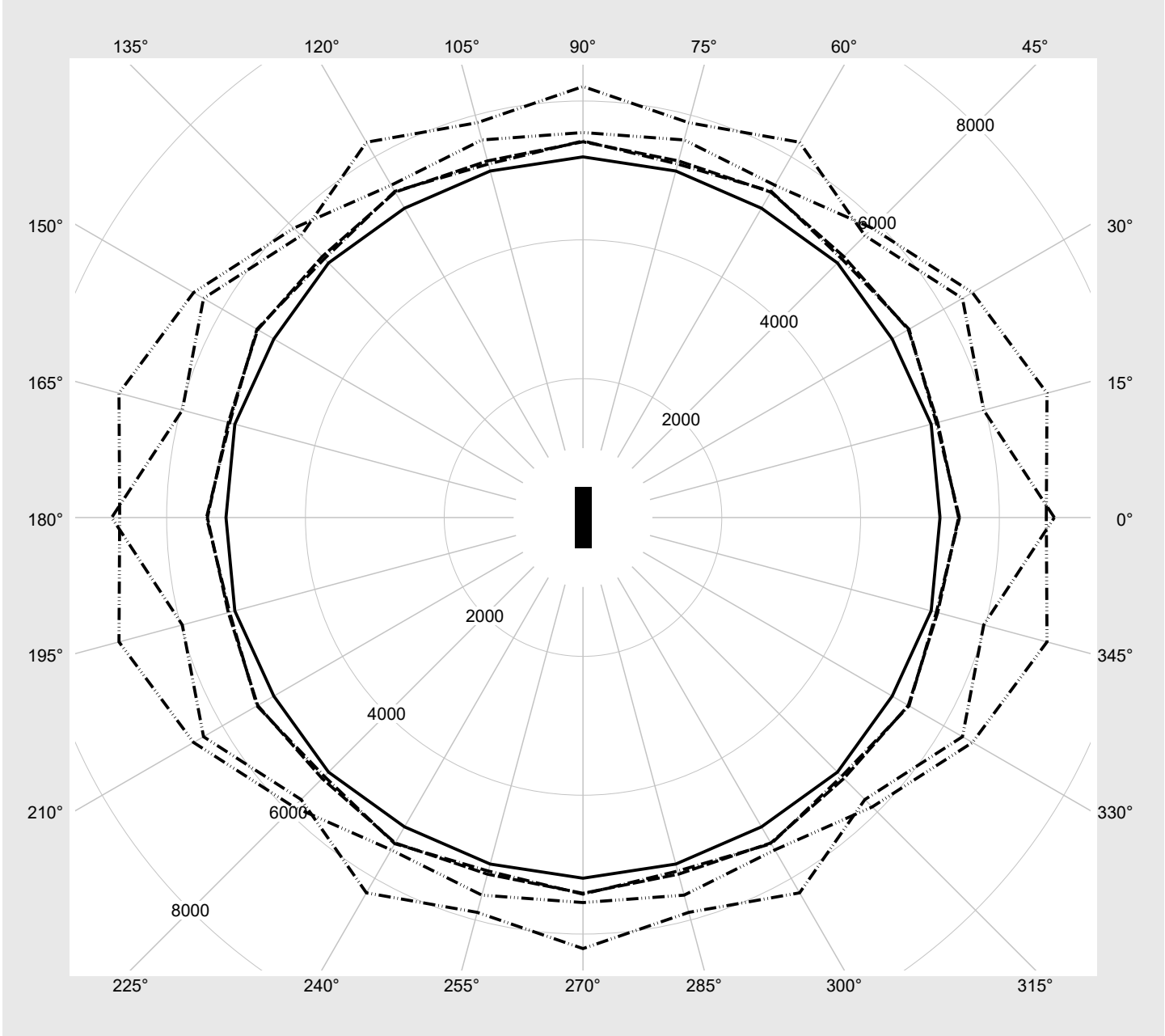
| C-planes | γ | Luminance in cd/m ² | | | | | | | |
|----------|----------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
| | | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° | |
| 45° | | 11251.5 | 12002.3 | 12592.3 | 11475.1 | 10466.0 | 10910.5 | 11701.5 | |
| 50° | | 8524.5 | 10398.2 | 11199.9 | 9638.8 | 7694.9 | 9168.0 | 10178.2 | |
| 55° | | 7859.3 | 9193.8 | 9012.5 | 8497.1 | 6963.6 | 8132.3 | 8210.4 | |
| 60° | | 5994.7 | 6068.0 | 5997.9 | 6068.0 | 5999.4 | 6068.0 | 5988.5 | |
| 65° | | 5144.9 | 5194.6 | 5144.9 | 5186.4 | 5144.9 | 5167.9 | 5195.6 | |
| 70° | | 5413.1 | 5291.3 | 5413.1 | 5316.3 | 5413.1 | 5318.6 | 5413.1 | |
| 75° | | 5425.5 | 5271.9 | 5425.5 | 5271.9 | 5425.5 | 5271.9 | 5425.5 | |
| 80° | | 6792.3 | 5978.1 | 6314.4 | 5744.8 | 6242.8 | 5888.3 | 6209.2 | |
| 85° | | 6677.0 | 6922.8 | 6480.2 | 5894.9 | 5528.6 | 5631.2 | 5546.5 | |

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



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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 | 19720 | 146.2 |
| 95 | 238 | 252 | 18715 | 138.0 |
| 90 | 223 | 249 | 17739 | 129.9 |
| 85 | 211 | 247 | 16765 | 122.2 |
| 80 | 198 | 245 | 15780 | 114.5 |
| 75 | 184 | 242 | 14808 | 107.0 |
| 70 | 170 | 239 | 13827 | 99.4 |
| 65 | 158 | 237 | 12854 | 92.0 |
| 60 | 145 | 233 | 11862 | 84.6 |
| 55 | 130 | 229 | 10836 | 77.0 |
| 50 | 118 | 226 | 9876 | 70.1 |
| 45 | 107 | 222 | 8903 | 63.2 |
| 40 | 95 | 218 | 7892 | 56.1 |
| 35 | 82 | 213 | 6877 | 49.1 |
| 30 | 70 | 207 | 5906 | 42.5 |
| 25 | 59 | 201 | 4970 | 36.2 |
| 20 | 47 | 192 | 3960 | 29.4 |
| 15 | 35 | 181 | 2982 | 23.0 |
| 10 | 23 | 166 | 1994 | 16.1 |
| 6 | 13 | 145 | 1127 | 9.2 |