# Lichttechnischer Prüfbefund

**Familie**

## Silica® 21 rectangular

## Bestell-Nr.: 51MA23D44LSA3
## EAN: 4069025741936

| | |
|---|---|
| **Ausführung** | Anbauleuchte, direkt strahlend, mit Deckenaufhellung, Mikroprismenabdeckung, Gehäuse, silber, UGR≤19 (L65≤3000cd/m²), Casambi |
| **Bestückung** | LED 4000 K \| CRI ≥ 80 |
| **Betriebsgerät** | EVG-DALI |
| **Bemessungswerte** | Nettolichtstrom = 3650 lm<br>Systemleistung = 25.3 W<br>Lichtausbeute = 144.3 lm/W |

**LP-Nummer**
**59926_95**

**Seriendokumentation**
**18.03.2026**

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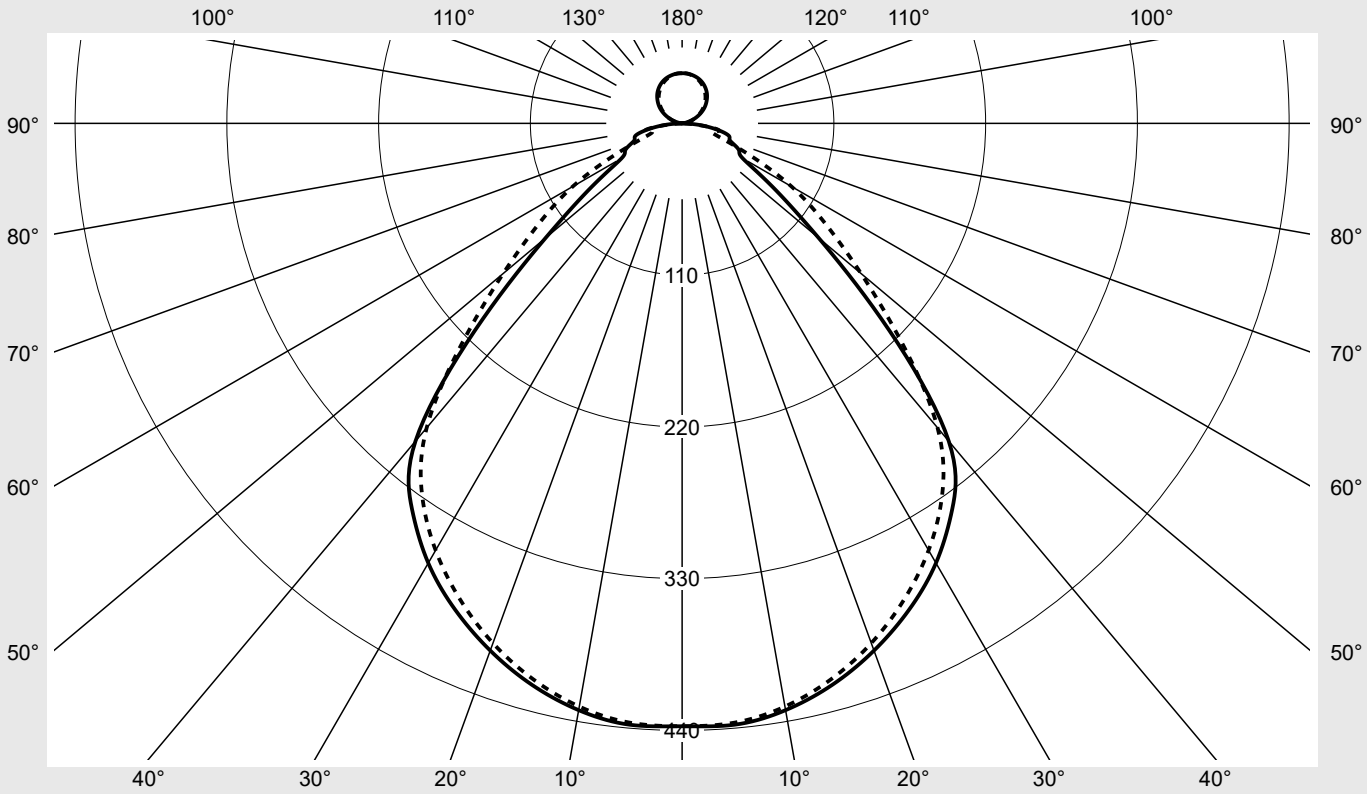
**Lichtstärke in cd/klm** C180-0 C270-90 **Imax: 438 cd/klm**




**Klassifizierungen**

| | |
|---|---|
| DIN 5040 | B 5 3 |
| CIE | N1=64 N2=89 N3=97 N4=90 N5=100 |

**Leuchtenbetriebswirkungsgrade**

| | |
|---|---|
| $\eta_{LB}$ | 100,0% |
| $\phi_u$ | 89,9% |
| $\phi_o$ | 10,1% |

**Messbedingungen**

DIN EN 13032 und DIN 5032

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## Wertetabelle Lichtstärkemessung

Maximale Lichtstärke

| C-Ebenen | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° | Phi-Zone | Summe Phi-Zone |
|---|---|---|---|---|---|---|---|---|---|
| γ | Lichtstärke in cd/klm | | | | | | | Lichtstrom in lm/klm | |
| 0° | 437.0 | 437.0 | 437.0 | 437.0 | 437.0 | 437.0 | 437.0 | 2.6 | 2.6 |
| 5° | 437.5 | 435.2 | 432.8 | 434.3 | 436.3 | 436.1 | 436.0 | 20.8 | 23.4 |
| 10° | 431.9 | 429.5 | 426.7 | 427.9 | 429.6 | 429.3 | 429.2 | 40.8 | 64.2 |
| 15° | 421.2 | 418.9 | 415.8 | 416.5 | 417.8 | 417.3 | 417.1 | 59.2 | 123.5 |
| 20° | 406.6 | 404.3 | 400.8 | 401.0 | 401.8 | 401.1 | 400.9 | 75.4 | 198.9 |
| 25° | 389.1 | 386.4 | 382.0 | 381.9 | 382.7 | 381.5 | 380.8 | 88.8 | 287.6 |
| 30° | 368.0 | 364.7 | 359.7 | 359.4 | 360.6 | 358.7 | 357.3 | 98.9 | 386.6 |
| 35° | 341.4 | 338.2 | 332.1 | 332.4 | 333.3 | 331.3 | 328.6 | 104.9 | 491.5 |
| 40° | 300.7 | 300.8 | 295.3 | 294.9 | 290.1 | 291.5 | 288.1 | 103.8 | 595.2 |
| 45° | 212.6 | 226.3 | 229.6 | 225.2 | 205.5 | 224.7 | 225.8 | 85.9 | 681.2 |
| 50° | 129.2 | 148.2 | 173.1 | 148.1 | 128.3 | 145.9 | 169.3 | 62.5 | 743.7 |
| 55° | 79.6 | 91.0 | 128.9 | 90.6 | 78.9 | 88.6 | 126.8 | 43.5 | 787.2 |
| 60° | 50.7 | 61.5 | 90.5 | 62.1 | 50.6 | 60.7 | 91.6 | 31.4 | 818.5 |
| 65° | 45.3 | 52.6 | 56.0 | 53.9 | 46.4 | 53.9 | 53.0 | 25.8 | 844.4 |
| 70° | 37.2 | 45.3 | 28.7 | 46.2 | 37.4 | 46.2 | 28.4 | 20.3 | 864.7 |
| 75° | 35.1 | 31.6 | 25.1 | 32.3 | 35.6 | 32.1 | 23.0 | 16.4 | 881.1 |
| 80° | 25.2 | 19.1 | 24.9 | 18.5 | 25.5 | 19.5 | 26.6 | 12.0 | 893.1 |
| 85° | 11.8 | 11.0 | 9.3 | 11.0 | 11.7 | 11.3 | 9.3 | 5.9 | 899.0 |
| 90° | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.2 | 899.2 |
| 95° | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.8 | 1.0 | 0.3 | 899.5 |
| 100° | 2.4 | 2.3 | 2.3 | 2.3 | 2.7 | 3.1 | 3.4 | 1.4 | 900.9 |
| 105° | 5.2 | 5.1 | 5.1 | 5.3 | 5.6 | 5.8 | 6.1 | 2.9 | 903.8 |
| 110° | 8.9 | 8.7 | 8.6 | 8.7 | 8.8 | 8.9 | 9.1 | 4.5 | 908.3 |
| 115° | 12.6 | 12.4 | 12.2 | 12.1 | 11.9 | 12.0 | 12.1 | 6.0 | 914.3 |
| 120° | 16.3 | 16.1 | 15.7 | 15.3 | 15.0 | 15.0 | 15.2 | 7.3 | 921.7 |
| 125° | 19.7 | 19.5 | 18.9 | 18.4 | 18.2 | 18.1 | 18.2 | 8.4 | 930.1 |
| 130° | 22.7 | 22.5 | 21.9 | 21.4 | 21.1 | 21.0 | 21.1 | 9.1 | 939.1 |
| 135° | 25.5 | 25.2 | 24.7 | 24.2 | 23.9 | 23.7 | 23.8 | 9.5 | 948.6 |
| 140° | 28.0 | 27.7 | 27.3 | 26.8 | 26.5 | 26.3 | 26.3 | 9.5 | 958.1 |
| 145° | 30.1 | 29.9 | 29.4 | 29.0 | 28.7 | 28.5 | 28.5 | 9.2 | 967.2 |
| 150° | 31.9 | 31.7 | 31.2 | 30.9 | 30.7 | 30.5 | 30.5 | 8.5 | 975.7 |
| 155° | 33.4 | 33.2 | 32.8 | 32.6 | 32.4 | 32.3 | 32.3 | 7.6 | 983.3 |
| 160° | 34.6 | 34.3 | 34.0 | 33.9 | 33.8 | 33.7 | 33.8 | 6.4 | 989.7 |
| 165° | 35.4 | 35.2 | 34.9 | 34.9 | 34.9 | 34.9 | 34.9 | 5.0 | 994.7 |
| 170° | 36.0 | 35.8 | 35.6 | 35.7 | 35.8 | 35.7 | 35.8 | 3.4 | 998.1 |
| 175° | 36.3 | 36.2 | 36.0 | 36.1 | 36.3 | 36.2 | 36.3 | 1.7 | 999.8 |
| 180° | 36.3 | 36.3 | 36.3 | 36.3 | 36.3 | 36.3 | 36.3 | 0.2 | 1000.0 |

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## UGR-Tabelle

Standardraum

| Reflexionsgrad Decke | | 0,7 | 0,7 | 0,5 | 0,5 | 0,3 | 0,7 | 0,7 | 0,5 | 0,5 | 0,3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Reflexionsgrad Wände | | 0,5 | 0,3 | 0,5 | 0,3 | 0,3 | 0,5 | 0,3 | 0,5 | 0,3 | 0,3 |
| Reflexionsgrad Boden | | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| Raumabmessungen x | y | Blickrichtung quer zur Leuchte (C0) | | | | | Blickrichtung längs zur Leuchte (C90) | | | | |
| 2H | 2H | 15,7 | 17,1 | 16,2 | 17,5 | 18,1 | 15,5 | 16,9 | 16,0 | 17,4 | 17,9 |
| | 3H | 16,4 | 17,6 | 16,9 | 18,1 | 18,7 | 16,2 | 17,4 | 16,8 | 17,9 | 18,5 |
| | 4H | 16,9 | 18,0 | 17,4 | 18,5 | 19,1 | 16,6 | 17,7 | 17,1 | 18,2 | 18,8 |
| | 6H | 17,3 | 18,3 | 17,9 | 18,9 | 19,5 | 17,0 | 18,0 | 17,6 | 18,6 | 19,2 |
| | 8H | 17,5 | 18,4 | 18,1 | 19,0 | 19,6 | 17,3 | 18,2 | 17,8 | 18,7 | 19,4 |
| | 12H | 17,7 | 18,5 | 18,3 | 19,1 | 19,7 | 17,4 | 18,2 | 18,0 | 18,8 | 19,4 |
| 4H | 2H | 15,9 | 17,0 | 16,5 | 17,6 | 18,1 | 15,8 | 16,9 | 16,3 | 17,4 | 18,0 |
| | 3H | 16,7 | 17,7 | 17,3 | 18,2 | 18,9 | 16,7 | 17,7 | 17,3 | 18,2 | 18,9 |
| | 4H | 17,3 | 18,1 | 17,9 | 18,7 | 19,4 | 17,3 | 18,1 | 17,9 | 18,7 | 19,3 |
| | 6H | 17,9 | 18,6 | 18,5 | 19,2 | 19,9 | 17,8 | 18,6 | 18,4 | 19,2 | 19,8 |
| | 8H | 18,1 | 18,8 | 18,7 | 19,4 | 20,1 | 18,1 | 18,7 | 18,7 | 19,4 | 20,1 |
| | 12H | 18,4 | 18,9 | 19,0 | 19,6 | 20,3 | 18,3 | 18,9 | 18,9 | 19,5 | 20,2 |
| 8H | 4H | 17,5 | 18,2 | 18,1 | 18,8 | 19,5 | 17,5 | 18,1 | 18,1 | 18,7 | 19,4 |
| | 6H | 18,3 | 18,8 | 18,9 | 19,4 | 20,2 | 18,2 | 18,8 | 18,9 | 19,4 | 20,1 |
| | 8H | 18,6 | 19,1 | 19,3 | 19,7 | 20,5 | 18,6 | 19,1 | 19,3 | 19,7 | 20,5 |
| | 12H | 18,9 | 19,3 | 19,6 | 20,0 | 20,7 | 18,9 | 19,3 | 19,6 | 20,0 | 20,7 |
| 12H | 4H | 17,6 | 18,1 | 18,2 | 18,8 | 19,5 | 17,5 | 18,1 | 18,2 | 18,7 | 19,4 |
| | 6H | 18,4 | 18,8 | 19,0 | 19,5 | 20,2 | 18,3 | 18,8 | 19,0 | 19,4 | 20,2 |
| | 8H | 18,7 | 19,1 | 19,4 | 19,8 | 20,5 | 18,8 | 19,2 | 19,4 | 19,8 | 20,6 |

## Leuchtdichten-Tabelle

Max. für $\gamma >= 65°$

Lichttechnische Abmessungen in mm: L = 1184, B = 158

| C-Ebenen | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° |
|---|---|---|---|---|---|---|---|
| γ | Leuchtdichte in cd/m² | | | | | | |
| 45° | 5867.1 | 6244.4 | 6334.5 | 6212.8 | 5669.9 | 6200.6 | 6229.8 |
| 50° | 3921.8 | 4499.2 | 5253.1 | 4496.5 | 3895.8 | 4427.8 | 5139.2 |
| 55° | 2708.9 | 3094.7 | 4385.5 | 3081.2 | 2684.0 | 3014.3 | 4312.7 |
| 60° | 1979.7 | 2398.5 | 3531.4 | 2424.8 | 1973.6 | 2367.0 | 3573.0 |
| 65° | 2090.4 | 2426.6 | 2585.5 | 2486.3 | 2142.6 | 2487.3 | 2446.0 |
| 70° | 2120.4 | 2585.1 | 1637.5 | 2633.3 | 2132.3 | 2638.4 | 1617.7 |
| 75° | 2648.4 | 2382.7 | 1891.3 | 2434.6 | 2686.7 | 2416.3 | 1733.9 |
| 80° | 2833.2 | 2145.2 | 2799.6 | 2083.3 | 2866.0 | 2186.4 | 2987.0 |
| 85° | 2634.7 | 2463.9 | 2079.9 | 2471.9 | 2619.9 | 2524.1 | 2091.6 |

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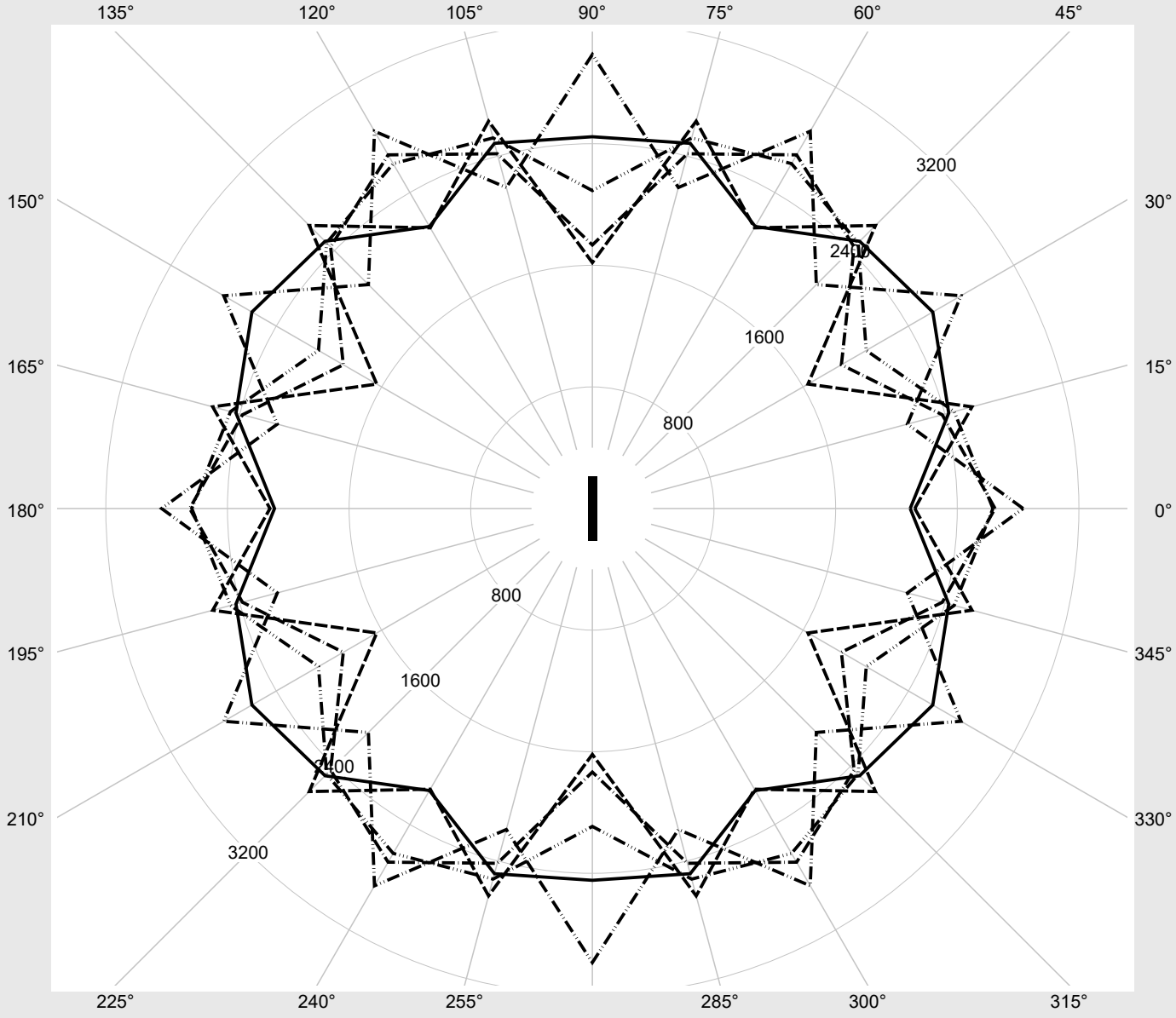
**Leuchtdichten in cd/m²** γ 65° γ 70° γ 75° γ 80° γ 85°



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### Dimmstufen-Tabelle

Umgebungstemperatur: 25°C

| Lichtstrom [%] | Dimmstufe linear | Dimmstufe logarithmisch | Lichtstrom [lm] | Systemleistung [W] |
|---|---|---|---|---|
| 100 | 254 | 254 | 3650 | 25.3 |
| 95 | 240 | 252 | 3464 | 24.0 |
| 90 | 227 | 250 | 3289 | 22.7 |
| 85 | 213 | 248 | 3100 | 21.4 |
| 80 | 200 | 245 | 2923 | 20.1 |
| 75 | 186 | 243 | 2731 | 18.7 |
| 70 | 173 | 240 | 2550 | 17.5 |
| 65 | 160 | 237 | 2369 | 16.3 |
| 60 | 147 | 234 | 2186 | 14.9 |
| 55 | 134 | 231 | 2001 | 13.8 |
| 50 | 122 | 227 | 1829 | 12.7 |
| 45 | 109 | 223 | 1641 | 11.5 |
| 40 | 97 | 219 | 1466 | 10.3 |
| 35 | 84 | 213 | 1275 | 9.1 |
| 30 | 72 | 208 | 1096 | 8.0 |
| 25 | 60 | 201 | 916 | 6.9 |
| 20 | 48 | 193 | 734 | 5.7 |
| 15 | 36 | 182 | 551 | 4.5 |
| 10 | 24 | 168 | 365 | 3.4 |
| 5 | 12 | 142 | 177 | 2.1 |
| 3 | 7 | 122 | 99 | 1.4 |