

## Lichttechnischer Prüfbefund

Familie  
Silica®

Bestell-Nr.: 5MX31BD2E4A  
EAN: 4058352305454

LP-Nummer  
58997\_10



**Ausführung** Pendelleuchte, Kombinierte Linsen und Reflektor Optik, satinierte Abdeckung, direkt-/indirekt strahlend,  $UGR \leq 19$  ( $L65 \leq 3000 \text{cd/m}^2$ )

**Bestückung** LED 4000 K | CRI  $\geq 80$

**Betriebsgerät** EVG-DALI

**Einstellung** indiv. Einstellung: nur Direktanteil in Betrieb

**Bemessungswerte** Nettolichtstrom = 9910 lm  
Systemleistung = 60.1 W  
Lichtausbeute = 164.9 lm/W

Seriendokumentation  
07.10.2020

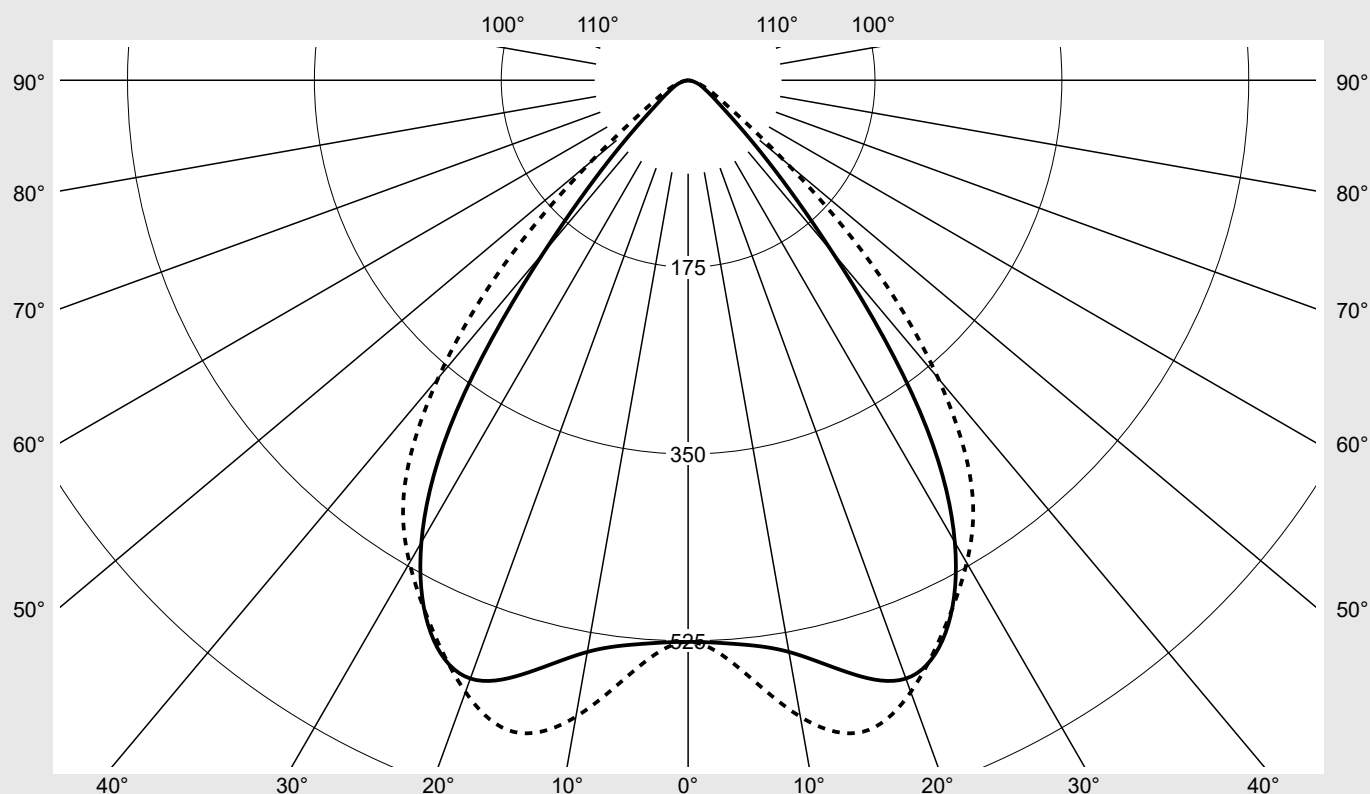
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Lichtstärke in cd/klm

C180-0

C270-90

Imax: 653 cd/klm



## Klassifizierungen

DIN 5040 A 6 0  
CIE N1=82 N2=97 N3=100  
N4=100 N5=100

## Leuchtenbetriebswirkungsgrade

$\eta_{LB}$  100,0%  
 $\phi_u$  100,0%  
 $\phi_o$  0,0%

## Messbedingungen

DIN EN 13032 und DIN 5032

## Lichttechnischer Prüfbefund

|  |  |                                     |
|--|--|-------------------------------------|
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| <b>Wertetabelle Lichtstärkemessung</b> |  | <b>Maximale Lichtstärke</b>         |
|  |  | <b>siteco</b>                       |

| C-<br>Ebenen          | 0°<br>180° | 15°                  | 30°                  | 45°                  | 60°                  | 75°                  | 90°<br>270° | Phi-Zone | Summe<br>Phi-Zone |
|-----------------------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|----------|-------------------|
|                       |            | 165°<br>195°<br>345° | 150°<br>210°<br>330° | 135°<br>225°<br>315° | 120°<br>240°<br>300° | 105°<br>255°<br>285° |             |          |                   |
| γ                     |            |                      |                      |                      |                      |                      |             |          |                   |
| Lichtstärke in cd/klm |            |                      |                      |                      |                      |                      |             |          |                   |
| Lichtstrom in lm/klm  |            |                      |                      |                      |                      |                      |             |          |                   |
| 0°                    | 525.9      | 525.9                | 525.9                | 525.9                | 525.9                | 525.9                | 525.9       | 3.1      | 3.1               |
| 5°                    | 530.1      | 532.1                | 531.7                | 539.8                | 547.4                | 550.9                | 553.0       | 25.8     | 29.0              |
| 10°                   | 543.6      | 552.3                | 561.3                | 580.0                | 594.8                | 602.1                | 605.3       | 55.0     | 83.9              |
| 15°                   | 573.7      | 588.4                | 603.0                | 623.3                | 632.9                | 632.0                | 631.7       | 87.1     | 171.0             |
| 20°                   | 596.3      | 620.1                | 639.0                | 641.8                | 629.5                | 614.8                | 609.6       | 117.1    | 288.1             |
| 25°                   | 570.6      | 616.7                | 653.0                | 638.7                | 597.2                | 573.3                | 567.1       | 140.8    | 429.0             |
| 30°                   | 499.6      | 560.3                | 609.4                | 604.2                | 567.1                | 527.4                | 521.8       | 154.4    | 583.3             |
| 35°                   | 378.2      | 424.0                | 476.5                | 520.1                | 513.0                | 469.3                | 462.5       | 147.9    | 731.2             |
| 40°                   | 210.0      | 238.9                | 292.3                | 362.7                | 384.1                | 367.3                | 364.2       | 113.5    | 844.7             |
| 45°                   | 100.2      | 117.8                | 146.5                | 199.3                | 232.4                | 237.2                | 242.0       | 71.3     | 916.1             |
| 50°                   | 49.1       | 55.7                 | 69.4                 | 82.4                 | 93.7                 | 107.9                | 119.5       | 34.5     | 950.6             |
| 55°                   | 30.0       | 32.2                 | 36.5                 | 41.6                 | 42.2                 | 47.4                 | 55.6        | 18.2     | 968.7             |
| 60°                   | 20.2       | 21.0                 | 22.3                 | 23.8                 | 24.3                 | 28.1                 | 32.8        | 11.6     | 980.3             |
| 65°                   | 14.7       | 14.9                 | 15.1                 | 15.2                 | 15.9                 | 19.0                 | 21.0        | 8.1      | 988.4             |
| 70°                   | 10.4       | 10.5                 | 10.3                 | 10.1                 | 10.5                 | 12.3                 | 12.9        | 5.6      | 994.0             |
| 75°                   | 6.2        | 6.2                  | 6.1                  | 6.1                  | 6.3                  | 7.1                  | 7.3         | 3.4      | 997.4             |
| 80°                   | 3.3        | 3.3                  | 3.3                  | 3.3                  | 3.4                  | 3.8                  | 3.9         | 1.9      | 999.3             |
| 85°                   | 1.2        | 1.2                  | 1.2                  | 1.3                  | 1.3                  | 1.4                  | 1.5         | 0.7      | 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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|                           |  |                              |
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|---------------------------|--|------------------------------|

| UGR-Tabelle     |     | Standardraum                        |      |      |      |      |                                       |      |      |      |      |
|-----------------|-----|-------------------------------------|------|------|------|------|---------------------------------------|------|------|------|------|
| Raumabmessungen |     | Blickrichtung quer zur Leuchte (C0) |      |      |      |      | Blickrichtung längs zur Leuchte (C90) |      |      |      |      |
| x               | y   |                                     |      |      |      |      |                                       |      |      |      |      |
| 2H              | 2H  | 17,4                                | 18,7 | 17,7 | 19,0 | 19,4 | 19,2                                  | 20,6 | 19,6 | 20,9 | 21,2 |
|                 | 3H  | 17,4                                | 18,6 | 17,8 | 18,9 | 19,3 | 19,2                                  | 20,4 | 19,6 | 20,7 | 21,1 |
|                 | 4H  | 17,4                                | 18,5 | 17,8 | 18,8 | 19,2 | 19,2                                  | 20,3 | 19,6 | 20,6 | 21,0 |
|                 | 6H  | 17,3                                | 18,3 | 17,8 | 18,7 | 19,1 | 19,2                                  | 20,1 | 19,6 | 20,5 | 20,9 |
|                 | 8H  | 17,4                                | 18,3 | 17,8 | 18,7 | 19,1 | 19,2                                  | 20,1 | 19,7 | 20,5 | 20,9 |
|                 | 12H | 17,4                                | 18,2 | 17,8 | 18,6 | 19,0 | 19,2                                  | 20,0 | 19,6 | 20,4 | 20,8 |
| 4H              | 2H  | 17,3                                | 18,4 | 17,7 | 18,8 | 19,1 | 19,1                                  | 20,2 | 19,5 | 20,5 | 20,9 |
|                 | 3H  | 17,3                                | 18,2 | 17,8 | 18,6 | 19,0 | 19,1                                  | 20,0 | 19,5 | 20,4 | 20,8 |
|                 | 4H  | 17,3                                | 18,1 | 17,8 | 18,6 | 19,0 | 19,1                                  | 19,9 | 19,5 | 20,3 | 20,7 |
|                 | 6H  | 17,3                                | 18,0 | 17,8 | 18,4 | 18,9 | 19,0                                  | 19,7 | 19,5 | 20,2 | 20,6 |
|                 | 8H  | 17,3                                | 17,9 | 17,8 | 18,4 | 18,9 | 19,0                                  | 19,6 | 19,5 | 20,1 | 20,6 |
|                 | 12H | 17,3                                | 17,8 | 17,8 | 18,3 | 18,8 | 19,0                                  | 19,5 | 19,5 | 20,0 | 20,5 |
| 8H              | 4H  | 17,3                                | 17,9 | 17,8 | 18,3 | 18,8 | 19,0                                  | 19,6 | 19,4 | 20,0 | 20,5 |
|                 | 6H  | 17,3                                | 17,8 | 17,8 | 18,2 | 18,7 | 18,9                                  | 19,4 | 19,4 | 19,9 | 20,4 |
|                 | 8H  | 17,2                                | 17,7 | 17,7 | 18,2 | 18,7 | 18,9                                  | 19,4 | 19,4 | 19,8 | 20,4 |
|                 | 12H | 17,2                                | 17,6 | 17,8 | 18,1 | 18,6 | 18,9                                  | 19,3 | 19,5 | 19,8 | 20,3 |
| 12H             | 4H  | 17,3                                | 17,8 | 17,8 | 18,3 | 18,7 | 19,0                                  | 19,5 | 19,5 | 19,9 | 20,4 |
|                 | 6H  | 17,3                                | 17,7 | 17,8 | 18,2 | 18,7 | 18,9                                  | 19,3 | 19,4 | 19,8 | 20,4 |
|                 | 8H  | 17,2                                | 17,6 | 17,8 | 18,1 | 18,6 | 18,9                                  | 19,3 | 19,4 | 19,8 | 20,3 |

|  |  |
|--|--|
| <b>Leuchtdichten-Tabelle</b> Max. für $\gamma \geq 65^\circ$ | <b>Lichttechnische Abmessungen in mm:</b> L = 2836<br>B = 61 |
|--|--|

| C-Ebenen | $\gamma$ | Leuchtdichte in cd/m <sup>2</sup> |                             |                             |                             |                             |                             |             |  |
|----------|----------|-----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
|          |          | 0°<br>180°                        | 15°<br>165°<br>195°<br>345° | 30°<br>150°<br>210°<br>330° | 45°<br>135°<br>225°<br>315° | 60°<br>120°<br>240°<br>300° | 75°<br>105°<br>255°<br>285° | 90°<br>270° |  |
| 45°      |          | 8114.3                            | 9546.4                      | 11871.8                     | 16147.4                     | 18828.3                     | 19218.4                     | 19605.4     |  |
| 50°      |          | 4375.2                            | 4966.4                      | 6186.2                      | 7339.4                      | 8346.3                      | 9611.5                      | 10651.1     |  |
| 55°      |          | 2992.6                            | 3219.5                      | 3641.3                      | 4154.5                      | 4210.6                      | 4738.2                      | 5553.4      |  |
| 60°      |          | 2315.4                            | 2408.9                      | 2553.1                      | 2725.9                      | 2787.6                      | 3221.7                      | 3756.6      |  |
| 65°      |          | 1987.1                            | 2020.7                      | 2045.0                      | 2056.4                      | 2151.4                      | 2573.6                      | 2846.9      |  |
| 70°      |          | 1742.9                            | 1759.5                      | 1731.5                      | 1699.5                      | 1765.8                      | 2065.3                      | 2164.3      |  |
| 75°      |          | 1366.3                            | 1375.8                      | 1355.4                      | 1341.0                      | 1389.3                      | 1564.6                      | 1620.8      |  |
| 80°      |          | 1083.0                            | 1084.3                      | 1083.0                      | 1083.0                      | 1131.2                      | 1248.0                      | 1290.2      |  |
| 85°      |          | 807.1                             | 795.3                       | 807.1                       | 837.4                       | 877.5                       | 945.1                       | 961.6       |  |

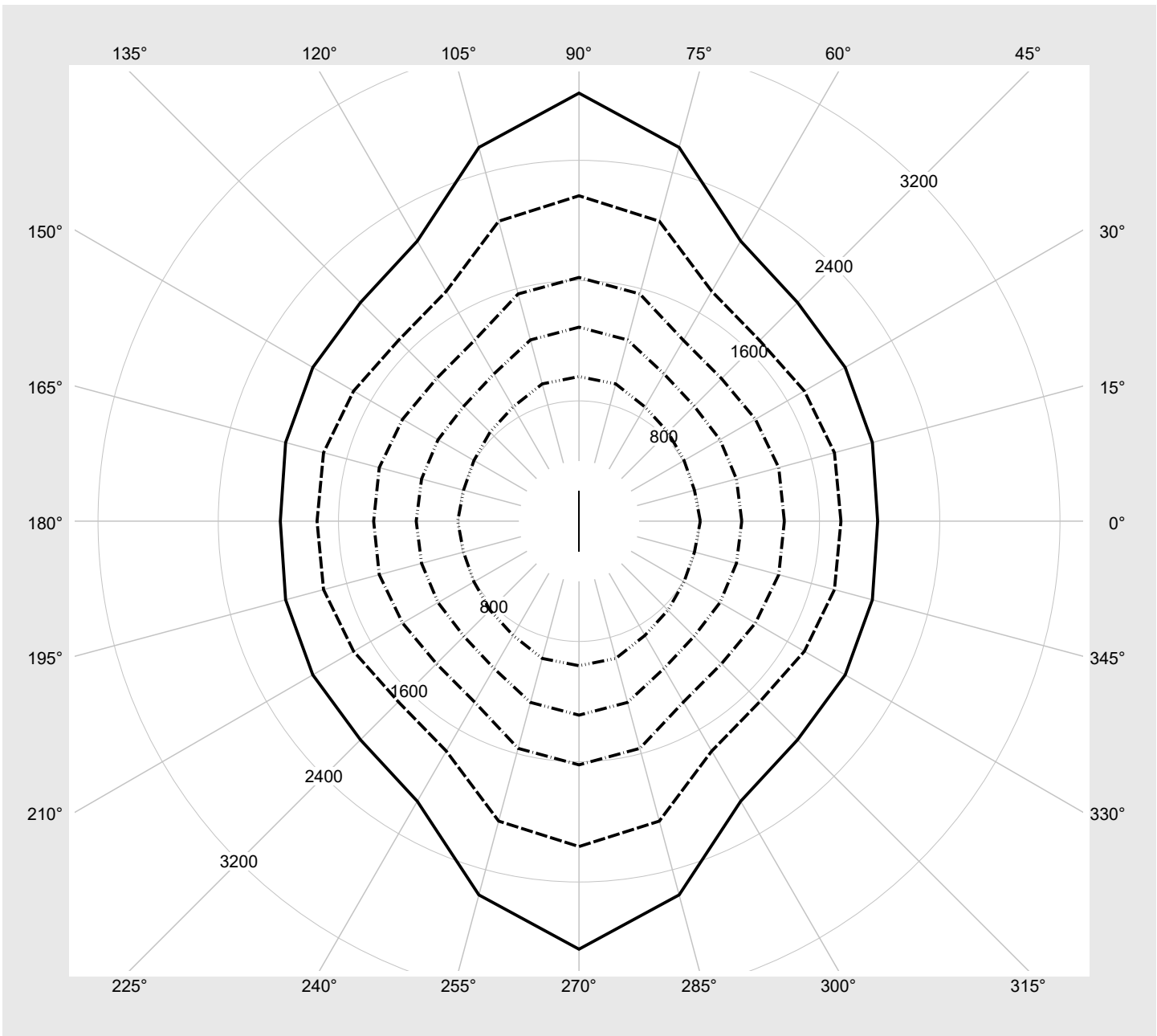
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|                                  |  |                                     |
|----------------------------------|--|-------------------------------------|
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|----------------------------------|--|-------------------------------------|

**Leuchtdichten in cd/m²**

|              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|
| $\gamma$ 65° | $\gamma$ 70° | $\gamma$ 75° | $\gamma$ 80° | $\gamma$ 85° |
|--------------|--------------|--------------|--------------|--------------|

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|                           |  |                                     |
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|                           |                           |               |
|---------------------------|---------------------------|---------------|
| <b>Dimmstufen-Tabelle</b> | Umgebungstemperatur: 25°C | <b>sITeco</b> |
|---------------------------|---------------------------|---------------|

| Lichtstrom [%] | Dimmstufe linear | Dimmstufe logarithmisch | Lichtstrom [lm] | Systemleistung [W] |
|----------------|------------------|-------------------------|-----------------|--------------------|
| 100            | 254              | 254                     | 9910            | 60.1               |
| 95             | 241              | 252                     | 9421            | 57.1               |
| 90             | 228              | 250                     | 8934            | 54.0               |
| 85             | 215              | 248                     | 8442            | 50.9               |
| 80             | 202              | 246                     | 7947            | 47.9               |
| 75             | 189              | 243                     | 7451            | 44.8               |
| 70             | 176              | 241                     | 6952            | 41.7               |
| 65             | 163              | 238                     | 6446            | 38.7               |
| 60             | 150              | 235                     | 5940            | 35.7               |
| 55             | 137              | 231                     | 5433            | 32.8               |
| 50             | 125              | 228                     | 4961            | 30.0               |
| 45             | 112              | 224                     | 4445            | 27.1               |
| 40             | 100              | 220                     | 3965            | 24.4               |
| 35             | 88               | 215                     | 3486            | 21.7               |
| 30             | 75               | 209                     | 2963            | 18.8               |
| 25             | 63               | 203                     | 2475            | 16.1               |
| 20             | 51               | 195                     | 1988            | 13.4               |
| 15             | 39               | 185                     | 1500            | 10.8               |
| 10             | 27               | 172                     | 1007            | 8.1                |
| 5              | 15               | 150                     | 511             | 5.4                |
| 3              | 10               | 136                     | 304             | 4.4                |