

## Lichttechnischer Prüfbefund

Familie  
Silica® 21

Bestell-Nr.: 51MX24DB45WB  
EAN: 4058352905456

LP-Nummer  
59270\_78



**Ausführung** Anbauleuchte, Reflektor, schwarz, direkt strahlend, asymmetrisch strahlend

**Bestückung** LED 4000 K | CRI ≥ 80

**Betriebsgerät** EVG-DALI

**Bemessungswerte** Nettolichtstrom = 5400 lm  
Systemleistung = 37.6 W  
Lichtausbeute = 143.6 lm/W

Seriendokumentation  
02.08.2023

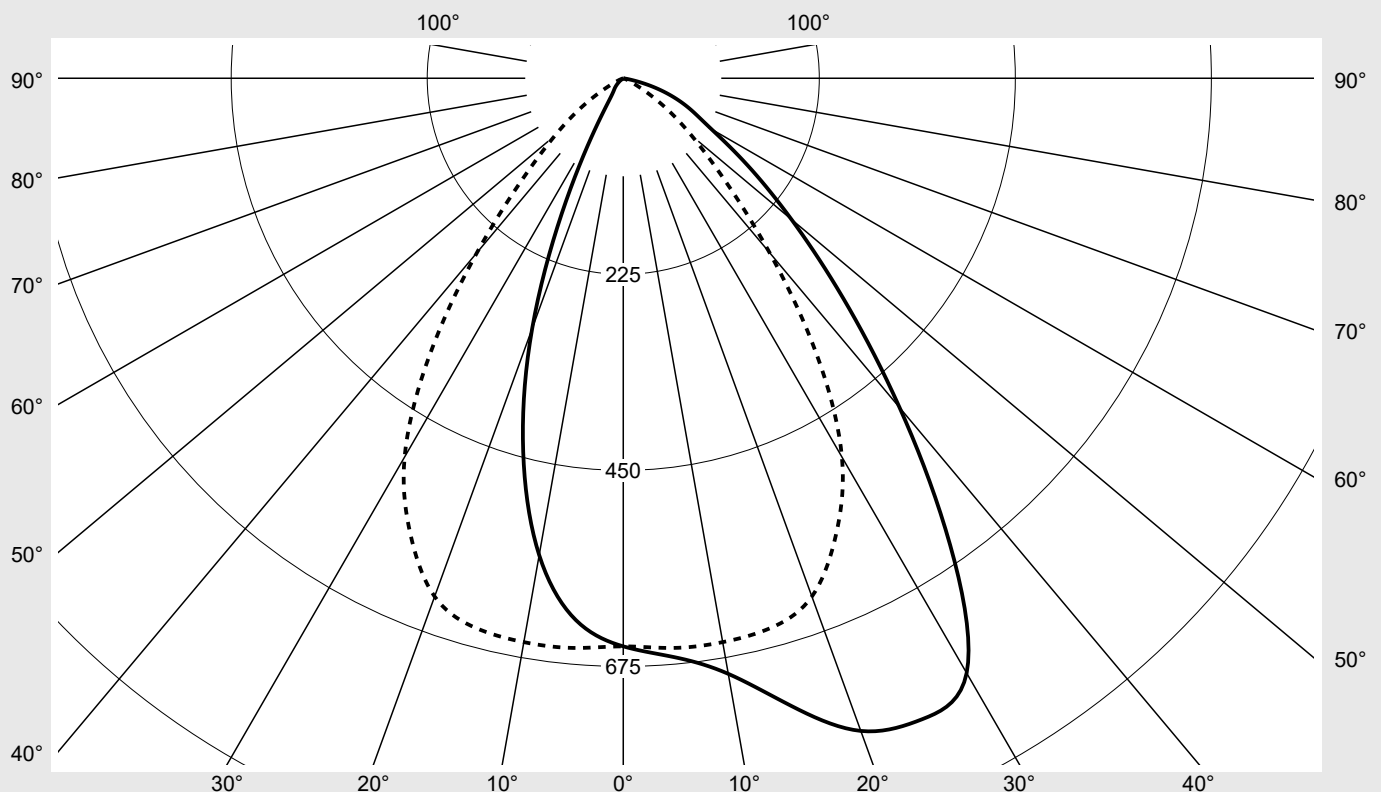
siteco

Lichtstärke in cd/klm

C180-0

C270-90

Imax: 826 cd/klm



## Klassifizierungen

DIN 5040 A 6 0  
CIE N1=74 N2=94 N3=99  
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

|  |   |                                     |
|--|---|-------------------------------------|
| <b>Familie</b><br><b>Silica® 21</b>    | <b>Bestell-Nr.: 51MX24DB45WB</b><br><b>EAN: 4058352905456</b> | <b>LP-Nummer</b><br><b>59270_78</b> |
| <b>Wertetabelle Lichtstärkemessung</b> |   | <b>Maximale Lichtstärke</b>         |
| <b>siteco</b>                          |   |                                     |

| C-<br>Ebenen | 0°                    | 15°<br>345° | 30°<br>330° | 45°<br>315° | 60°<br>300° | 75°<br>285° | 90°<br>270° |
|--------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| $\gamma$     | Lichtstärke in cd/klm |             |             |             |             |             |             |
| 0°           | 652.0                 | 652.0       | 652.0       | 652.0       | 652.0       | 652.0       | 652.0       |
| 5°           | 666.9                 | 669.0       | 664.7       | 668.1       | 665.8       | 658.5       | 656.3       |
| 10°          | 694.1                 | 699.5       | 694.9       | 697.8       | 687.8       | 669.7       | 657.2       |
| 15°          | 745.9                 | 757.8       | 758.6       | 751.7       | 720.3       | 681.6       | 653.2       |
| 20°          | 797.2                 | 810.9       | 815.9       | 795.0       | 737.5       | 674.0       | 633.0       |
| 25°          | 811.7                 | 825.8       | 812.3       | 769.4       | 703.1       | 631.1       | 577.8       |
| 30°          | 788.3                 | 790.4       | 769.6       | 695.9       | 622.5       | 550.2       | 501.9       |
| 35°          | 654.2                 | 653.0       | 648.0       | 598.2       | 512.7       | 433.1       | 387.1       |
| 40°          | 493.4                 | 503.0       | 513.6       | 491.7       | 407.8       | 312.4       | 261.1       |
| 45°          | 356.9                 | 371.2       | 396.6       | 382.3       | 311.7       | 212.0       | 163.2       |
| 50°          | 252.0                 | 264.9       | 292.8       | 285.3       | 227.0       | 141.1       | 102.4       |
| 55°          | 174.1                 | 185.5       | 214.4       | 210.2       | 168.5       | 93.5        | 60.0        |
| 60°          | 116.9                 | 126.6       | 154.3       | 157.4       | 127.4       | 55.1        | 26.1        |
| 65°          | 85.8                  | 90.4        | 106.5       | 115.9       | 84.8        | 29.1        | 8.4         |
| 70°          | 58.6                  | 65.3        | 76.1        | 78.1        | 49.1        | 15.0        | 3.2         |
| 75°          | 29.3                  | 36.5        | 51.8        | 37.7        | 23.5        | 8.4         | 1.1         |
| 80°          | 4.9                   | 7.0         | 15.4        | 15.1        | 10.7        | 3.3         | 0.5         |
| 85°          | 1.0                   | 1.2         | 2.3         | 2.1         | 0.8         | 0.3         | 0.3         |
| 90°          | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 95°          | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 100°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 105°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 110°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 115°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 120°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 125°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 130°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 135°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 140°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 145°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 150°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 155°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 160°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 165°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 170°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 175°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| 180°         | 0.0                   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |

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

| C-<br>Ebenen | 105°<br>255°          | 120°<br>240° | 135°<br>225° | 150°<br>210° | 165°<br>195° | 180°  | Phi-Zone             | Summe<br>Phi-Zone |
|--------------|-----------------------|--------------|--------------|--------------|--------------|-------|----------------------|-------------------|
| $\gamma$     | Lichtstärke in cd/klm |              |              |              |              |       | Lichtstrom in lm/klm |                   |
| 0°           | 652.0                 | 652.0        | 652.0        | 652.0        | 652.0        | 652.0 | 3.9                  | 3.9               |
| 5°           | 648.8                 | 644.3        | 634.4        | 624.8        | 623.0        | 624.2 | 31.1                 | 35.0              |
| 10°          | 640.2                 | 622.4        | 598.9        | 573.5        | 560.8        | 555.7 | 61.3                 | 96.3              |
| 15°          | 627.5                 | 590.3        | 536.8        | 485.9        | 456.2        | 443.8 | 90.0                 | 186.3             |
| 20°          | 595.4                 | 535.2        | 448.1        | 369.0        | 322.8        | 305.6 | 113.9                | 300.1             |
| 25°          | 535.8                 | 444.7        | 330.5        | 240.5        | 178.2        | 155.1 | 126.1                | 426.3             |
| 30°          | 439.6                 | 334.4        | 213.1        | 117.0        | 65.0         | 52.1  | 126.1                | 552.3             |
| 35°          | 312.5                 | 213.9        | 111.2        | 44.6         | 25.1         | 21.7  | 112.1                | 664.4             |
| 40°          | 197.6                 | 120.2        | 49.4         | 22.0         | 16.7         | 15.5  | 92.5                 | 756.9             |
| 45°          | 117.6                 | 62.5         | 22.8         | 14.8         | 11.5         | 10.5  | 72.7                 | 829.5             |
| 50°          | 69.7                  | 30.7         | 13.3         | 9.8          | 7.0          | 5.9   | 55.0                 | 884.6             |
| 55°          | 38.5                  | 15.6         | 8.4          | 6.0          | 3.7          | 3.2   | 40.9                 | 925.5             |
| 60°          | 14.7                  | 7.6          | 5.1          | 3.5          | 2.8          | 2.3   | 29.3                 | 954.8             |
| 65°          | 4.9                   | 3.9          | 3.0          | 2.5          | 1.8          | 1.2   | 20.5                 | 975.2             |
| 70°          | 1.9                   | 1.9          | 1.7          | 1.4          | 1.0          | 0.6   | 13.9                 | 989.2             |
| 75°          | 0.7                   | 0.9          | 0.9          | 0.8          | 0.6          | 0.5   | 7.8                  | 997.0             |
| 80°          | 0.4                   | 0.5          | 0.5          | 0.5          | 0.4          | 0.4   | 2.6                  | 999.6             |
| 85°          | 0.4                   | 0.4          | 0.4          | 0.4          | 0.3          | 0.3   | 0.4                  | 1000.0            |
| 90°          | 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                  | 1000.0            |
| 100°         | 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                  | 1000.0            |
| 110°         | 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                  | 1000.0            |
| 120°         | 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                  | 1000.0            |
| 130°         | 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                  | 1000.0            |
| 140°         | 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                  | 1000.0            |
| 150°         | 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                  | 1000.0            |
| 160°         | 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                  | 1000.0            |
| 170°         | 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                  | 1000.0            |
| 180°         | 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                        |      |      |      |      |                                       |      |      |      |      |
|-----------------|-----|-------------------------------------|------|------|------|------|---------------------------------------|------|------|------|------|
|                 |     | Blickrichtung quer zur Leuchte (C0) |      |      |      |      | Blickrichtung längs zur Leuchte (C90) |      |      |      |      |
| Raumabmessungen |     |                                     |      |      |      |      |                                       |      |      |      |      |
| x               | y   |                                     |      |      |      |      |                                       |      |      |      |      |
| 2H              | 2H  | 25,0                                | 26,4 | 25,4 | 26,7 | 27,0 | 20,4                                  | 21,8 | 20,8 | 22,1 | 22,4 |
|                 | 3H  | 25,5                                | 26,8 | 25,9 | 27,1 | 27,5 | 20,4                                  | 21,6 | 20,7 | 21,9 | 22,3 |
|                 | 4H  | 25,7                                | 26,8 | 26,1 | 27,2 | 27,5 | 20,3                                  | 21,5 | 20,7 | 21,8 | 22,2 |
|                 | 6H  | 25,7                                | 26,7 | 26,1 | 27,1 | 27,5 | 20,2                                  | 21,3 | 20,7 | 21,7 | 22,1 |
|                 | 8H  | 25,6                                | 26,6 | 26,1 | 27,0 | 27,4 | 20,2                                  | 21,2 | 20,7 | 21,6 | 22,0 |
|                 | 12H | 25,7                                | 26,5 | 26,1 | 26,9 | 27,3 | 20,3                                  | 21,1 | 20,7 | 21,5 | 21,9 |
| 4H              | 2H  | 25,4                                | 26,5 | 25,8 | 26,9 | 27,3 | 21,2                                  | 22,4 | 21,6 | 22,8 | 23,1 |
|                 | 3H  | 26,1                                | 27,1 | 26,5 | 27,5 | 27,9 | 21,4                                  | 22,4 | 21,8 | 22,8 | 23,2 |
|                 | 4H  | 26,4                                | 27,2 | 26,8 | 27,6 | 28,1 | 21,4                                  | 22,2 | 21,8 | 22,7 | 23,1 |
|                 | 6H  | 26,4                                | 27,1 | 26,8 | 27,5 | 28,0 | 21,3                                  | 22,1 | 21,8 | 22,5 | 23,0 |
|                 | 8H  | 26,3                                | 27,0 | 26,8 | 27,4 | 27,9 | 21,3                                  | 22,0 | 21,8 | 22,4 | 22,9 |
|                 | 12H | 26,3                                | 26,9 | 26,8 | 27,4 | 27,9 | 21,3                                  | 21,9 | 21,8 | 22,3 | 22,8 |
| 8H              | 4H  | 26,4                                | 27,1 | 26,9 | 27,5 | 28,0 | 21,6                                  | 22,3 | 22,1 | 22,7 | 23,2 |
|                 | 6H  | 26,5                                | 27,0 | 26,9 | 27,5 | 28,0 | 21,6                                  | 22,1 | 22,1 | 22,6 | 23,1 |
|                 | 8H  | 26,4                                | 26,9 | 26,9 | 27,4 | 27,9 | 21,6                                  | 22,0 | 22,1 | 22,5 | 23,1 |
|                 | 12H | 26,4                                | 26,8 | 26,9 | 27,3 | 27,8 | 21,5                                  | 21,9 | 22,1 | 22,4 | 23,0 |
| 12H             | 4H  | 26,4                                | 27,0 | 26,9 | 27,4 | 27,9 | 21,7                                  | 22,2 | 22,2 | 22,7 | 23,2 |
|                 | 6H  | 26,5                                | 26,9 | 27,0 | 27,4 | 27,9 | 21,6                                  | 22,1 | 22,1 | 22,6 | 23,1 |
|                 | 8H  | 26,4                                | 26,8 | 26,9 | 27,3 | 27,8 | 21,6                                  | 22,0 | 22,1 | 22,5 | 23,0 |

| Leuchtdichten-Tabelle |  | Max. für $\gamma \geq 65^\circ$                    |             |             |             |             |             |             |              |              |              |              |              |        |  |
|-----------------------|--|--|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------|--|
|                       |  | Lichttechnische Abmessungen in mm: L = 1470 B = 49 |             |             |             |             |             |             |              |              |              |              |              |        |  |
| C-Ebenen              |  | 0°   | 15°<br>345° | 30°<br>330° | 45°<br>315° | 60°<br>300° | 75°<br>285° | 90°<br>270° | 105°<br>255° | 120°<br>240° | 135°<br>225° | 150°<br>210° | 165°<br>195° | 180°   |  |
| $\gamma$              |  | Leuchtdichte in cd/m <sup>2</sup>                  |             |             |             |             |             |             |              |              |              |              |              |        |  |
| 45°                   |  | 37839.4  | 39355.2     | 42043.7     | 40527.9     | 33048.7     | 22474.8     | 17303.7     | 12471.6      | 6626.9       | 2419.6       | 1571.7       | 1222.7       | 1112.6 |  |
| 50°                   |  | 29386.5  | 30896.8     | 34153.2     | 33272.3     | 26476.2     | 16458.3     | 11940.3     | 8123.8       | 3582.1       | 1555.9       | 1146.8       | 814.9        | 682.8  |  |
| 55°                   |  | 22760.1  | 24248.1     | 28024.4     | 27469.0     | 22017.9     | 12219.3     | 7847.1      | 5028.1       | 2036.2       | 1094.8       | 781.0        | 481.3        | 412.5  |  |
| 60°                   |  | 17526.2  | 18986.4     | 23128.3     | 23597.5     | 19103.7     | 8263.5      | 3917.4      | 2206.5       | 1140.6       | 766.5        | 529.9        | 412.6        | 347.9  |  |
| 65°                   |  | 15212.9  | 16028.7     | 18890.4     | 20558.2     | 15040.6     | 5161.0      | 1495.4      | 861.4        | 684.4        | 540.7        | 437.8        | 325.3        | 215.4  |  |
| 70°                   |  | 12849.2  | 14306.8     | 16684.0     | 17124.5     | 10764.8     | 3293.6      | 697.7       | 416.9        | 416.9        | 369.6        | 307.5        | 221.8        | 135.9  |  |
| 75°                   |  | 8486.1   | 10576.2     | 15018.4     | 10912.3     | 6809.8      | 2445.9      | 320.4       | 210.9        | 257.8        | 246.2        | 226.5        | 183.6        | 148.6  |  |
| 80°                   |  | 2096.5   | 3022.1      | 6650.3      | 6498.8      | 4612.1      | 1426.9      | 203.8       | 192.1        | 227.1        | 233.1        | 221.5        | 192.1        | 174.8  |  |
| 85°                   |  | 858.4  | 1032.2      | 1949.1      | 1833.0      | 649.4       | 289.9       | 278.7       | 313.1        | 348.4        | 359.6        | 336.3        | 289.9        | 278.7  |  |

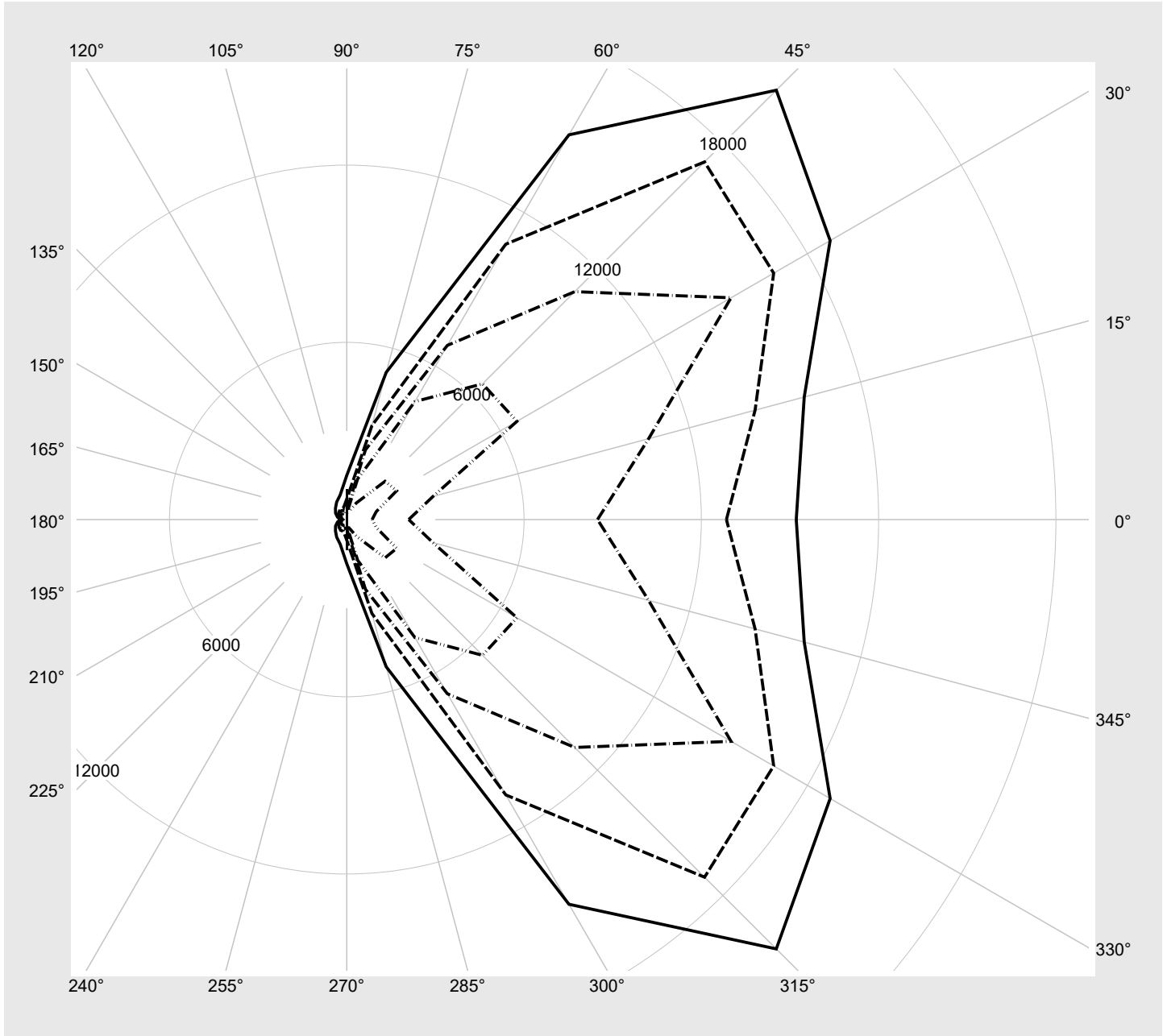
**Lichttechnischer Prüfbefund**

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

**Leuchtdichten in cd/m<sup>2</sup>**

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

**siteco**



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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                     | 5400            | 37.6               |
| 95             | 240              | 252                     | 5123            | 35.5               |
| 90             | 227              | 250                     | 4863            | 33.6               |
| 85             | 214              | 248                     | 4599            | 31.8               |
| 80             | 200              | 245                     | 4313            | 29.7               |
| 75             | 187              | 243                     | 4046            | 27.8               |
| 70             | 174              | 240                     | 3777            | 26.0               |
| 65             | 161              | 237                     | 3506            | 24.1               |
| 60             | 148              | 234                     | 3233            | 22.3               |
| 55             | 136              | 231                     | 2979            | 20.5               |
| 50             | 123              | 227                     | 2700            | 18.7               |
| 45             | 110              | 223                     | 2422            | 16.8               |
| 40             | 98               | 219                     | 2163            | 15.1               |
| 35             | 85               | 214                     | 1880            | 13.3               |
| 30             | 73               | 208                     | 1618            | 11.6               |
| 25             | 61               | 202                     | 1354            | 9.9                |
| 20             | 49               | 194                     | 1088            | 8.4                |
| 15             | 37               | 183                     | 820             | 6.6                |
| 10             | 24               | 168                     | 530             | 4.8                |
| 5              | 12               | 142                     | 260             | 3.2                |
| 2              | 5                | 110                     | 102             | 2.2                |