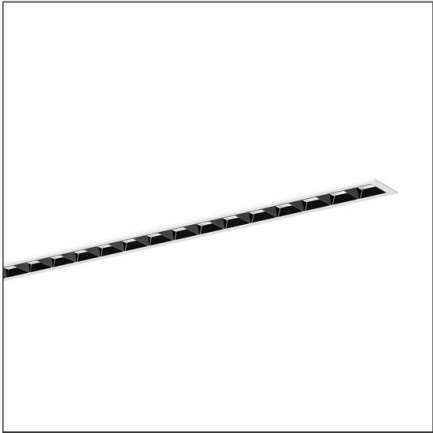
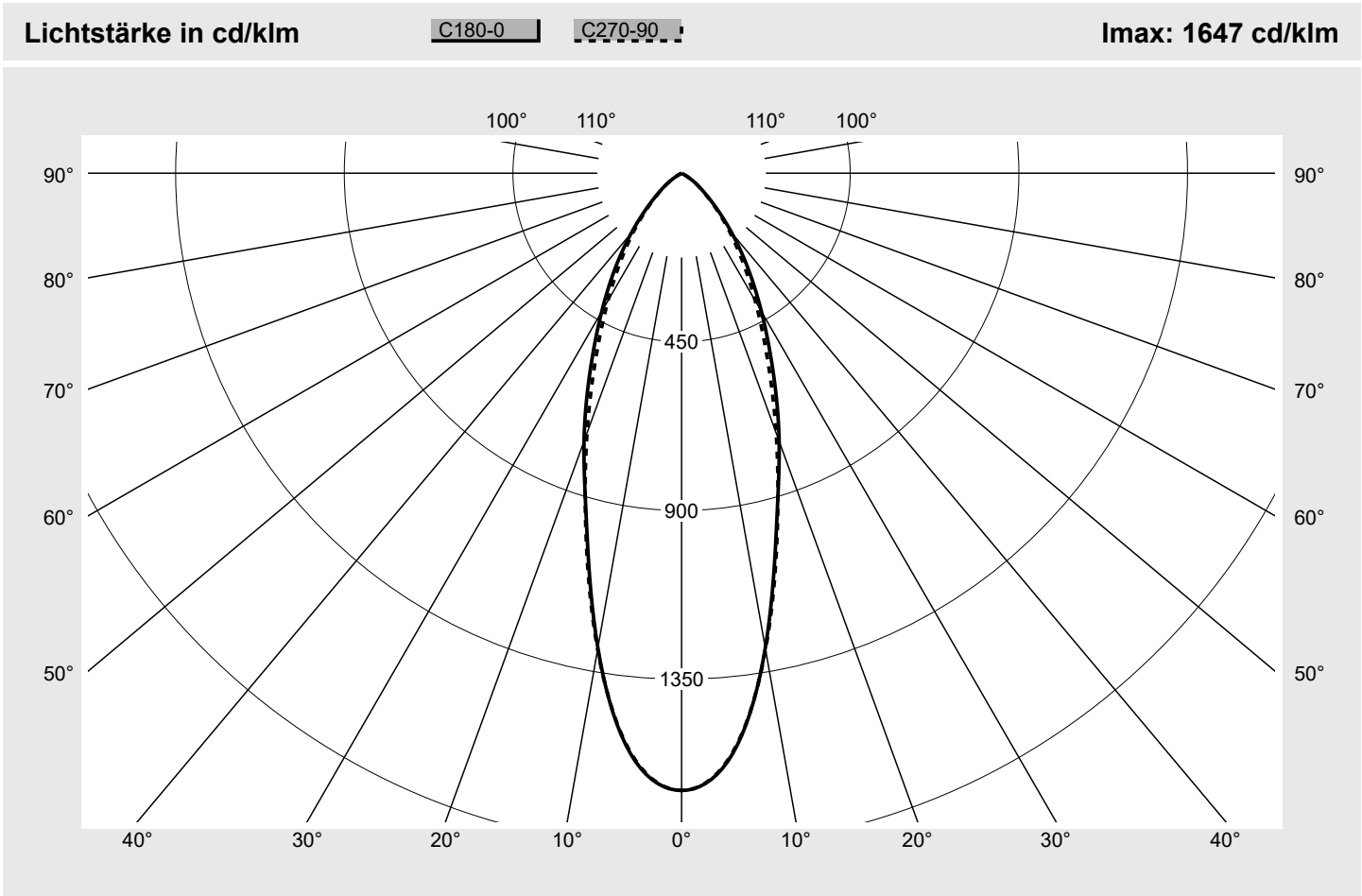


Lichttechnischer Prüfbefund

|                                                                                                                                      |                                                                                                                                                                                                                                |                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <div>Familie</div> <div>Silica® 21</div> <div></div> | <div>Bestell-Nr.: 51MX11DA34WB</div> <div>EAN: 4058352907122</div>                                                                                                                                                             | <div>LP-Nummer</div> <div>59268_189</div>            |
|                                                                                                                                      | <div>Ausführung</div> <div>Einbauleuchte, Reflektor, schwarz, direkt strahlend, eng strahlend, UGR≤19 (L65≤3000cd/m²)</div>                                                                                                    | <div>Seriendokumentation</div> <div>17.12.2024</div> |
|                                                                                                                                      | <div>Bestückung</div> <div>LED 3000 K   CRI ≥ 80</div> <div>Betriebsgerät</div> <div>EVG-DALI</div> <div>Bemessungswerte</div> <div>Nettolichtstrom = 4320 lm<br/>Systemleistung = 27.4 W<br/>Lichtausbeute = 157.7 lm/W</div> |                                                      |

siteco



| Klassifizierungen |                    | Leuchtenbetriebswirkungsgrade |        |
|-------------------|--------------------|-------------------------------|--------|
| DIN 5040          | A 7 0              | ηLB                           | 100,0% |
| CIE               | N1=87 N2=99 N3=100 | ϕ <sub>u</sub>                | 100,0% |
|                   | N4=100 N5=100      | ϕ <sub>o</sub>                | 0,0%   |

| Messbedingungen           |
|---------------------------|
| DIN EN 13032 und DIN 5032 |

Lichttechnischer Prüfbefund

|                                 |                                                 |                        |
|---------------------------------|-------------------------------------------------|------------------------|
| Familie<br>Silica® 21           | Bestell-Nr.: 51MX11DA34WB<br>EAN: 4058352907122 | LP-Nummer<br>59268_189 |
| Wertetabelle Lichtstärkemessung |                                                 | Maximale Lichtstärke   |

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| C-<br>Ebenen | 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° | Phi-Zone             | Summe<br>Phi-Zone |
|--------------|-----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|----------------------|-------------------|
| γ            | Lichtstärke in cd/klm |                             |                             |                             |                             |                             |             | Lichtstrom in lm/klm |                   |
| 0°           | 1647.1                | 1647.1                      | 1647.1                      | 1647.1                      | 1647.1                      | 1647.1                      | 1647.1      | 9.9                  | 9.9               |
| 5°           | 1556.0                | 1552.2                      | 1545.4                      | 1552.7                      | 1555.3                      | 1549.6                      | 1552.8      | 74.1                 | 84.0              |
| 10°          | 1286.3                | 1288.4                      | 1295.0                      | 1311.1                      | 1307.0                      | 1291.2                      | 1290.4      | 123.4                | 207.4             |
| 15°          | 978.4                 | 985.5                       | 998.6                       | 1011.3                      | 1007.8                      | 991.2                       | 986.9       | 141.3                | 348.7             |
| 20°          | 761.0                 | 758.1                       | 743.8                       | 731.7                       | 736.2                       | 737.5                       | 737.7       | 139.2                | 488.0             |
| 25°          | 575.0                 | 565.5                       | 534.1                       | 513.6                       | 528.8                       | 542.8                       | 539.9       | 125.2                | 613.2             |
| 30°          | 426.0                 | 419.2                       | 386.1                       | 366.4                       | 385.1                       | 401.9                       | 392.9       | 108.2                | 721.3             |
| 35°          | 308.0                 | 307.0                       | 281.1                       | 264.9                       | 280.7                       | 295.5                       | 280.0       | 90.3                 | 811.6             |
| 40°          | 209.2                 | 211.1                       | 196.7                       | 188.3                       | 198.2                       | 205.5                       | 193.0       | 70.5                 | 882.1             |
| 45°          | 130.5                 | 131.9                       | 127.1                       | 124.8                       | 130.2                       | 130.3                       | 123.1       | 49.8                 | 932.0             |
| 50°          | 76.5                  | 78.3                        | 78.7                        | 78.6                        | 80.6                        | 77.5                        | 73.2        | 32.8                 | 964.8             |
| 55°          | 42.1                  | 44.0                        | 46.1                        | 47.2                        | 47.6                        | 43.6                        | 40.6        | 20.2                 | 985.0             |
| 60°          | 13.4                  | 16.3                        | 24.8                        | 26.9                        | 25.6                        | 18.0                        | 14.5        | 9.9                  | 994.9             |
| 65°          | 4.2                   | 5.2                         | 7.6                         | 13.7                        | 8.3                         | 5.3                         | 4.6         | 3.7                  | 998.6             |
| 70°          | 1.7                   | 1.8                         | 1.5                         | 2.7                         | 1.9                         | 2.1                         | 2.2         | 1.0                  | 999.6             |
| 75°          | 0.3                   | 0.5                         | 0.5                         | 0.6                         | 0.6                         | 0.6                         | 0.4         | 0.3                  | 999.9             |
| 80°          | 0.1                   | 0.1                         | 0.1                         | 0.1                         | 0.2                         | 0.2                         | 0.2         | 0.1                  | 999.9             |
| 85°          | 0.1                   | 0.1                         | 0.1                         | 0.1                         | 0.1                         | 0.2                         | 0.2         | 0.1                  | 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            |

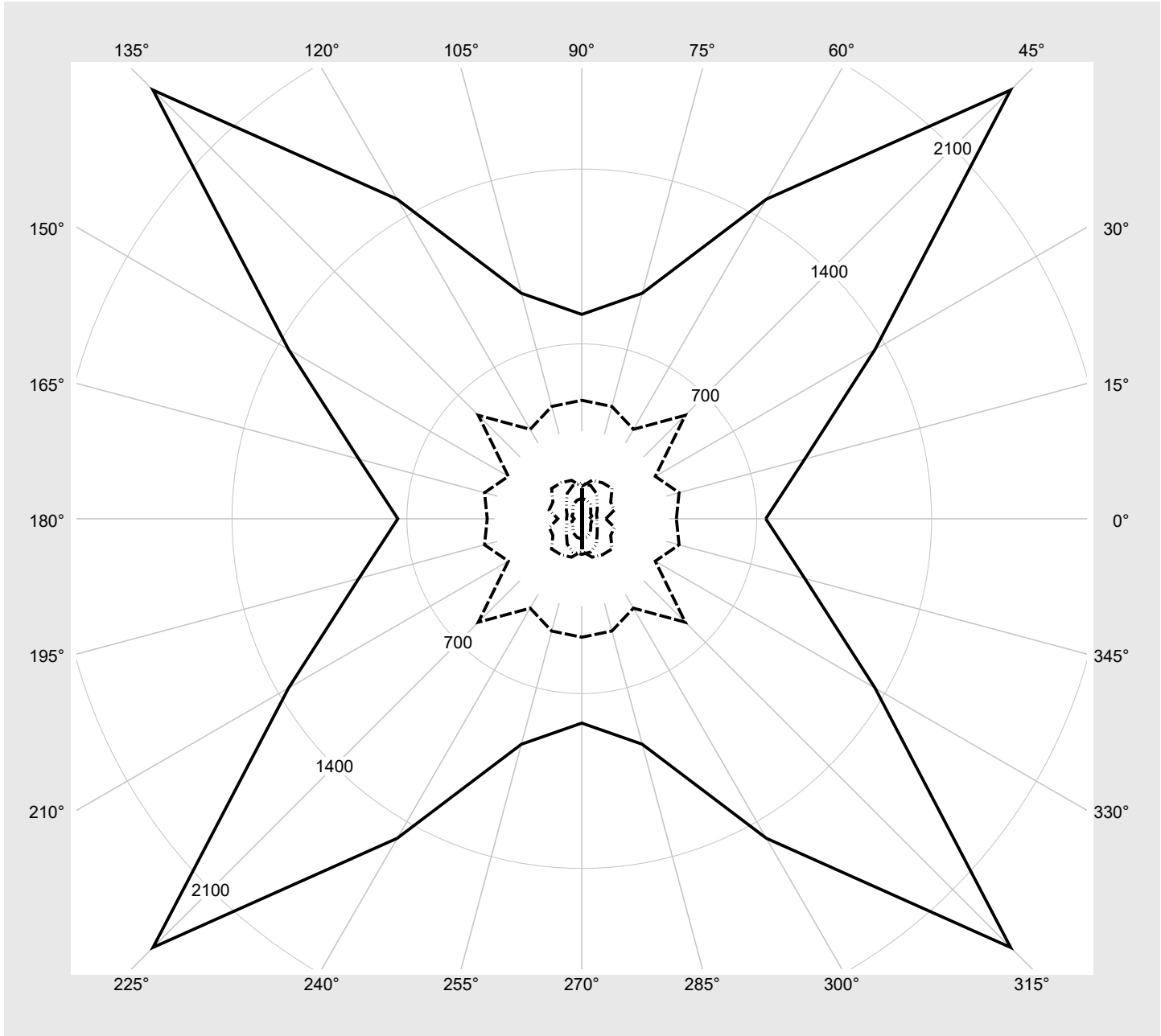
Lichttechnischer Prüfbefund

|                       |     |                                     |                                                 |      |      |      |                                       |      |                        |      |      |
|-----------------------|-----|-------------------------------------|-------------------------------------------------|------|------|------|---------------------------------------|------|------------------------|------|------|
| Familie<br>Silica® 21 |     |                                     | Bestell-Nr.: 51MX11DA34WB<br>EAN: 4058352907122 |      |      |      |                                       |      | LP-Nummer<br>59268_189 |      |      |
| UGR-Tabelle           |     |                                     | Standardraum                                    |      |      |      |                                       |      | siteco                 |      |      |
| 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       |     | Blickrichtung quer zur Leuchte (C0) |                                                 |      |      |      | Blickrichtung längs zur Leuchte (C90) |      |                        |      |      |
| x                     | y   |                                     |                                                 |      |      |      |                                       |      |                        |      |      |
| 2H                    | 2H  | 17,1                                | 18,3                                            | 17,5 | 18,6 | 18,9 | 17,0                                  | 18,2 | 17,4                   | 18,5 | 18,8 |
|                       | 3H  | 17,0                                | 18,0                                            | 17,3 | 18,4 | 18,7 | 16,9                                  | 17,9 | 17,2                   | 18,3 | 18,6 |
|                       | 4H  | 16,9                                | 17,9                                            | 17,3 | 18,2 | 18,6 | 16,8                                  | 17,8 | 17,2                   | 18,1 | 18,5 |
|                       | 6H  | 16,8                                | 17,7                                            | 17,3 | 18,1 | 18,5 | 16,7                                  | 17,6 | 17,2                   | 18,0 | 18,4 |
|                       | 8H  | 16,9                                | 17,6                                            | 17,3 | 18,0 | 18,4 | 16,8                                  | 17,5 | 17,2                   | 17,9 | 18,3 |
|                       | 12H | 16,9                                | 17,5                                            | 17,3 | 17,9 | 18,3 | 16,8                                  | 17,4 | 17,2                   | 17,8 | 18,2 |
| 4H                    | 2H  | 17,0                                | 18,0                                            | 17,4 | 18,4 | 18,7 | 16,9                                  | 17,9 | 17,3                   | 18,3 | 18,6 |
|                       | 3H  | 16,9                                | 17,7                                            | 17,3 | 18,1 | 18,5 | 16,8                                  | 17,6 | 17,2                   | 18,0 | 18,4 |
|                       | 4H  | 16,8                                | 17,5                                            | 17,2 | 17,9 | 18,3 | 16,7                                  | 17,4 | 17,1                   | 17,8 | 18,2 |
|                       | 6H  | 16,7                                | 17,3                                            | 17,2 | 17,7 | 18,2 | 16,6                                  | 17,2 | 17,1                   | 17,6 | 18,1 |
|                       | 8H  | 16,6                                | 17,2                                            | 17,1 | 17,6 | 18,1 | 16,6                                  | 17,1 | 17,0                   | 17,5 | 18,0 |
|                       | 12H | 16,6                                | 17,1                                            | 17,1 | 17,5 | 18,0 | 16,5                                  | 17,0 | 17,0                   | 17,4 | 17,9 |
| 8H                    | 4H  | 16,6                                | 17,2                                            | 17,1 | 17,6 | 18,1 | 16,6                                  | 17,1 | 17,0                   | 17,5 | 18,0 |
|                       | 6H  | 16,5                                | 17,0                                            | 17,0 | 17,4 | 18,0 | 16,4                                  | 16,9 | 16,9                   | 17,3 | 17,9 |
|                       | 8H  | 16,5                                | 16,8                                            | 17,0 | 17,3 | 17,9 | 16,4                                  | 16,8 | 16,9                   | 17,2 | 17,8 |
|                       | 12H | 16,5                                | 16,7                                            | 17,0 | 17,2 | 17,8 | 16,4                                  | 16,6 | 16,9                   | 17,1 | 17,7 |
| 12H                   | 4H  | 16,6                                | 17,1                                            | 17,1 | 17,5 | 18,0 | 16,6                                  | 17,0 | 17,0                   | 17,4 | 17,9 |
|                       | 6H  | 16,5                                | 16,8                                            | 17,0 | 17,3 | 17,9 | 16,4                                  | 16,8 | 16,9                   | 17,2 | 17,8 |
|                       | 8H  | 16,5                                | 16,7                                            | 17,0 | 17,2 | 17,8 | 16,4                                  | 16,6 | 16,9                   | 17,1 | 17,7 |

| Leuchtdichten-Tabelle |                       | Max. für $\gamma \geq 65^\circ$ |                             | Lichttechnische Abmessungen in mm: |                             | L = 1176<br>B = 49          |             |
|-----------------------|-----------------------|---------------------------------|-----------------------------|------------------------------------|-----------------------------|-----------------------------|-------------|
| C-<br>Ebenen          | 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° |
| $\gamma$              | Leuchtdichte in cd/m² |                                 |                             |                                    |                             |                             |             |
| 45°                   | 13837.3               | 13986.0                         | 13475.6                     | 13233.6                            | 13804.1                     | 13819.2                     | 13053.7     |
| 50°                   | 8925.4                | 9130.3                          | 9184.1                      | 9166.8                             | 9400.7                      | 9037.8                      | 8535.2      |
| 55°                   | 5509.0                | 5751.6                          | 6021.4                      | 6172.9                             | 6227.0                      | 5700.7                      | 5312.7      |
| 60°                   | 2003.8                | 2439.0                          | 3713.1                      | 4029.6                             | 3843.3                      | 2697.1                      | 2177.5      |
| 65°                   | 736.4                 | 924.0                           | 1355.3                      | 2427.2                             | 1477.0                      | 934.7                       | 818.1       |
| 70°                   | 378.5                 | 403.1                           | 339.5                       | 585.9                              | 413.4                       | 465.3                       | 474.3       |
| 75°                   | 95.9                  | 135.3                           | 133.5                       | 171.2                              | 166.3                       | 159.3                       | 130.1       |
| 80°                   | 30.7                  | 41.0                            | 41.0                        | 50.9                               | 66.5                        | 76.4                        | 81.6        |
| 85°                   | 61.1                  | 61.1                            | 71.4                        | 86.9                               | 117.0                       | 137.6                       | 142.8       |

# Lichttechnischer Prüfbefund

|                                                                                                                                     |                                                                    |                                           |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| <div>Familie</div> <div>Silica® 21</div>                                                                                            | <div>Bestell-Nr.: 51MX11DA34WB</div> <div>EAN: 4058352907122</div> | <div>LP-Nummer</div> <div>59268_189</div> |
| <div>Leuchtdichten in cd/m²</div> <div> <div>γ 65°</div> <div>γ 70°</div> <div>γ 75°</div> <div>γ 80°</div> <div>γ 85°</div> </div> | <div>siteco</div>                                                  |                                           |



Lichttechnischer Prüfbefund

|                                                            |                                                            |                                   |
|------------------------------------------------------------|------------------------------------------------------------|-----------------------------------|
| <p>Familie</p> <p>Silica® 21</p>                           | <p>Bestell-Nr.: 51MX11DA34WB</p> <p>EAN: 4058352907122</p> | <p>LP-Nummer</p> <p>59268_189</p> |
| <p>Dimmstufen-Tabelle</p> <p>Umgebungstemperatur: 25°C</p> |                                                            | <p>siteco</p>                     |

| Lichtstrom<br>[%] | Dimmstufe<br>linear | Dimmstufe<br>logarithmisch | Lichtstrom<br>[lm] | Systemleistung<br>[W] |
|-------------------|---------------------|----------------------------|--------------------|-----------------------|
| 100               | 254                 | 254                        | 4320               | 27.4                  |
| 95                | 240                 | 252                        | 4098               | 25.9                  |
| 90                | 227                 | 250                        | 3889               | 24.5                  |
| 85                | 214                 | 248                        | 3678               | 23.1                  |
| 80                | 200                 | 245                        | 3450               | 21.5                  |
| 75                | 187                 | 243                        | 3236               | 20.1                  |
| 70                | 174                 | 240                        | 3021               | 18.7                  |
| 65                | 161                 | 237                        | 2805               | 17.2                  |
| 60                | 148                 | 234                        | 2585               | 15.9                  |
| 55                | 136                 | 231                        | 2383               | 14.6                  |
| 50                | 123                 | 227                        | 2160               | 13.3                  |
| 45                | 110                 | 223                        | 1937               | 11.9                  |
| 40                | 98                  | 219                        | 1730               | 10.6                  |
| 35                | 85                  | 214                        | 1503               | 9.3                   |
| 30                | 73                  | 208                        | 1293               | 8.1                   |
| 25                | 61                  | 202                        | 1083               | 6.9                   |
| 20                | 49                  | 194                        | 870                | 5.8                   |
| 15                | 37                  | 183                        | 655                | 4.5                   |
| 10                | 24                  | 168                        | 423                | 3.3                   |
| 5                 | 12                  | 142                        | 207                | 1.9                   |
| 3                 | 8                   | 127                        | 135                | 1.3                   |