

## Lichttechnischer Prüfbefund

**Familie**  
**Monsun® 31**

**Bestell-Nr.: 51FA20DK450B**  
**EAN: 4058352419571**

**LP-Nummer**  
**59097\_2**



**Ausführung** diffus strahlend  
**Bestückung** LED 4000 K | CRI ≥ 80  
**Betriebsgerät** EVG-DALI  
**Bemessungswerte** Nettolichtstrom = 5100 lm  
 Systemleistung = 38.0 W  
 Lichtausbeute = 134.2 lm/W

**Seriendokumentation**  
24.11.2020

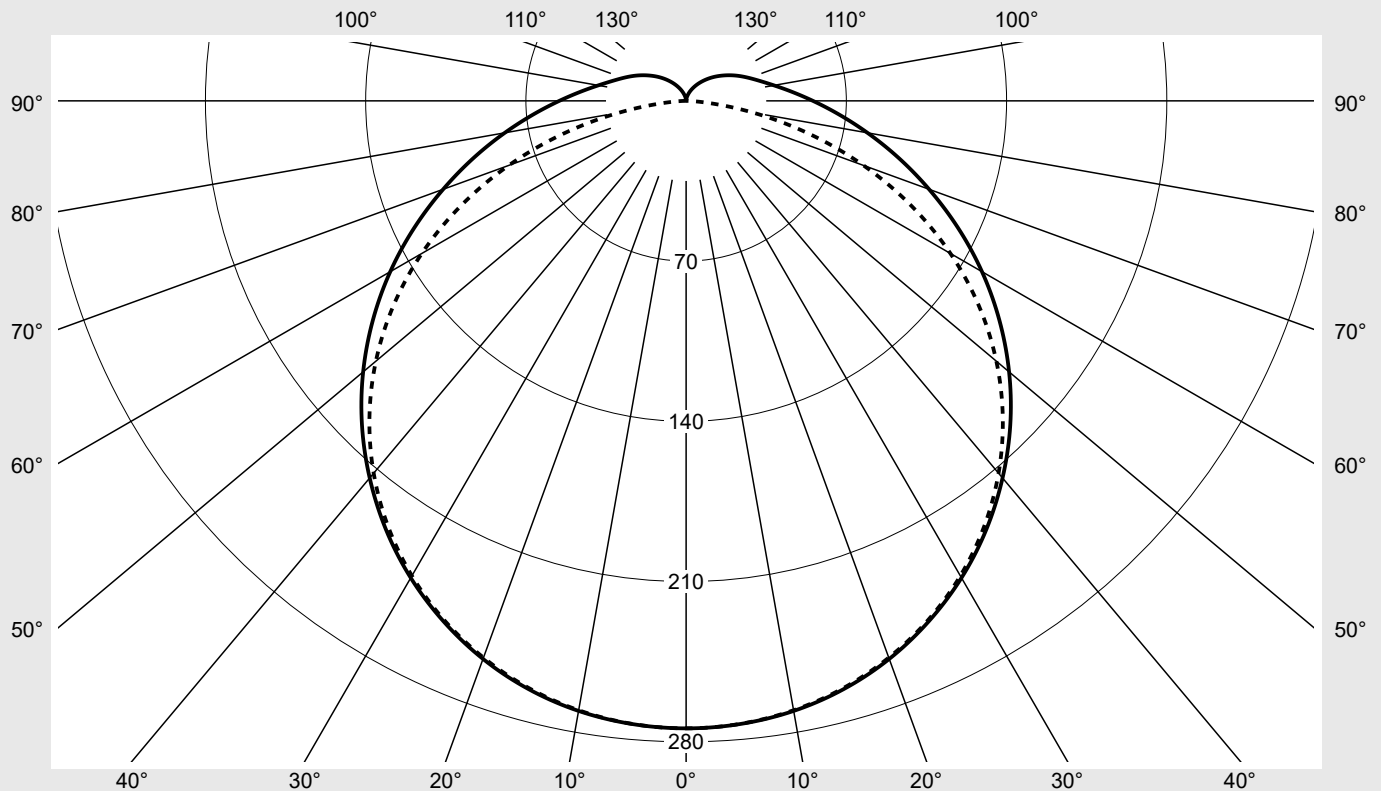
**sitEco**

**Lichtstärke in cd/klm**

**C180-0**

**C270-90**

**Imax: 274 cd/klm**



**Klassifizierungen**

DIN 5040 A 3 1  
 CIE N1=42 N2=72 N3=91  
 N4=91 N5=100

**Leuchtenbetriebswirkungsgrade**

$\eta_{LB}$  100,0%  
 $\phi_u$  91,5%  
 $\phi_o$  8,5%

**Messbedingungen**

DIN EN 13032 und DIN 5032

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|  |   |                                    |
|--|---|------------------------------------|
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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°                    | 274.1      | 274.1                | 274.1                | 274.1                | 274.1                | 274.1                | 274.1       | 1.6      | 1.6               |
| 5°                    | 273.2      | 273.3                | 273.2                | 273.2                | 273.2                | 273.2                | 273.2       | 13.1     | 14.7              |
| 10°                   | 270.6      | 270.6                | 270.6                | 270.5                | 270.4                | 270.3                | 270.3       | 25.7     | 40.4              |
| 15°                   | 266.0      | 266.0                | 266.0                | 266.0                | 265.8                | 265.6                | 265.6       | 37.7     | 78.2              |
| 20°                   | 259.5      | 259.5                | 259.5                | 259.5                | 259.3                | 259.0                | 258.8       | 48.6     | 126.8             |
| 25°                   | 250.9      | 251.0                | 251.0                | 251.1                | 250.9                | 250.5                | 250.2       | 58.1     | 184.9             |
| 30°                   | 240.6      | 240.7                | 240.8                | 240.8                | 240.6                | 240.0                | 239.6       | 65.9     | 250.8             |
| 35°                   | 228.6      | 228.7                | 228.8                | 228.8                | 228.4                | 227.6                | 227.0       | 71.8     | 322.6             |
| 40°                   | 215.1      | 215.1                | 215.2                | 215.0                | 214.4                | 213.2                | 212.4       | 75.6     | 398.1             |
| 45°                   | 200.3      | 200.3                | 200.1                | 199.6                | 198.6                | 196.9                | 195.7       | 77.1     | 475.2             |
| 50°                   | 184.2      | 184.1                | 183.7                | 182.8                | 181.1                | 178.6                | 176.9       | 76.3     | 551.6             |
| 55°                   | 167.1      | 166.9                | 166.1                | 164.5                | 161.9                | 158.4                | 156.2       | 73.3     | 624.9             |
| 60°                   | 149.3      | 148.9                | 147.5                | 145.0                | 141.2                | 136.4                | 133.3       | 68.1     | 692.9             |
| 65°                   | 131.0      | 130.3                | 128.2                | 124.6                | 119.3                | 112.8                | 108.7       | 60.9     | 753.8             |
| 70°                   | 113.0      | 112.0                | 108.9                | 103.7                | 96.6                 | 88.0                 | 82.5        | 52.1     | 805.9             |
| 75°                   | 96.0       | 94.7                 | 90.5                 | 83.5                 | 74.0                 | 62.9                 | 55.7        | 42.5     | 848.4             |
| 80°                   | 80.5       | 78.8                 | 73.9                 | 65.2                 | 53.2                 | 39.2                 | 29.8        | 32.9     | 881.2             |
| 85°                   | 66.8       | 65.0                 | 59.5                 | 50.0                 | 36.5                 | 20.0                 | 8.7         | 24.5     | 905.7             |
| 90°                   | 55.4       | 53.5                 | 47.9                 | 38.3                 | 24.9                 | 9.6                  | 0.2         | 18.5     | 924.1             |
| 95°                   | 46.2       | 44.4                 | 39.0                 | 30.1                 | 18.3                 | 6.1                  | 0.2         | 14.7     | 938.8             |
| 100°                  | 39.0       | 37.3                 | 32.5                 | 24.7                 | 14.8                 | 4.7                  | 0.2         | 12.0     | 950.8             |
| 105°                  | 33.5       | 32.0                 | 27.8                 | 21.0                 | 12.5                 | 3.8                  | 0.2         | 10.1     | 960.9             |
| 110°                  | 29.3       | 28.0                 | 24.2                 | 18.2                 | 10.5                 | 3.2                  | 0.2         | 8.5      | 969.4             |
| 115°                  | 25.7       | 24.5                 | 21.1                 | 15.7                 | 9.0                  | 2.7                  | 0.2         | 7.1      | 976.5             |
| 120°                  | 22.4       | 21.3                 | 18.2                 | 13.4                 | 7.6                  | 2.4                  | 0.3         | 5.9      | 982.4             |
| 125°                  | 19.2       | 18.3                 | 15.6                 | 11.4                 | 6.4                  | 2.1                  | 0.3         | 4.8      | 987.1             |
| 130°                  | 16.4       | 15.6                 | 13.2                 | 9.6                  | 5.4                  | 1.8                  | 0.3         | 3.8      | 990.9             |
| 135°                  | 13.7       | 13.0                 | 11.0                 | 8.0                  | 4.4                  | 1.6                  | 0.3         | 2.9      | 993.8             |
| 140°                  | 11.3       | 10.7                 | 9.0                  | 6.5                  | 3.7                  | 1.4                  | 0.4         | 2.2      | 996.0             |
| 145°                  | 9.1        | 8.6                  | 7.2                  | 5.2                  | 3.0                  | 1.2                  | 0.4         | 1.6      | 997.5             |
| 150°                  | 7.1        | 6.7                  | 5.6                  | 4.1                  | 2.4                  | 0.9                  | 0.4         | 1.1      | 998.6             |
| 155°                  | 5.3        | 5.0                  | 4.2                  | 3.0                  | 1.8                  | 0.8                  | 0.4         | 0.7      | 999.3             |
| 160°                  | 3.8        | 3.6                  | 3.0                  | 2.1                  | 1.3                  | 0.7                  | 0.4         | 0.4      | 999.7             |
| 165°                  | 2.4        | 2.3                  | 1.9                  | 1.4                  | 0.9                  | 0.5                  | 0.4         | 0.2      | 999.9             |
| 170°                  | 1.4        | 1.3                  | 1.1                  | 0.9                  | 0.6                  | 0.5                  | 0.4         | 0.1      | 1000.0            |
| 175°                  | 0.7        | 0.6                  | 0.6                  | 0.5                  | 0.4                  | 0.4                  | 0.4         | 0.0      | 1000.0            |
| 180°                  | 0.4        | 0.4                  | 0.4                  | 0.4                  | 0.4                  | 0.4                  | 0.4         | 0.0      | 1000.0            |

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

| UGR-Tabelle          |           | Standardraum                        |      |      |      |      |                                       |      |      |      |      |
|----------------------|-----------|-------------------------------------|------|------|------|------|---------------------------------------|------|------|------|------|
| Raumabmessungen      |           | Blickrichtung quer zur Leuchte (C0) |      |      |      |      | Blickrichtung längs zur Leuchte (C90) |      |      |      |      |
| x                    | y         |                                     |      |      |      |      |                                       |      |      |      |      |
| 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  |      |
| <b>2H</b>            | <b>2H</b> | 21,5                                | 23,3 | 21,9 | 23,6 | 23,9 | 22,0                                  | 23,7 | 22,3 | 24,0 | 24,4 |
|                      | 3H        | 23,4                                | 25,0 | 23,7 | 25,3 | 25,7 | 23,6                                  | 25,3 | 24,0 | 25,6 | 25,9 |
|                      | 4H        | 24,2                                | 25,8 | 24,6 | 26,1 | 26,5 | 24,3                                  | 25,8 | 24,7 | 26,1 | 26,5 |
|                      | 6H        | 25,1                                | 26,5 | 25,5 | 26,9 | 27,2 | 24,7                                  | 26,1 | 25,1 | 26,5 | 26,9 |
|                      | 8H        | 25,5                                | 26,8 | 25,9 | 27,2 | 27,6 | 24,8                                  | 26,2 | 25,2 | 26,5 | 26,9 |
|                      | 12H       | 25,9                                | 27,1 | 26,3 | 27,5 | 27,9 | 24,9                                  | 26,1 | 25,3 | 26,5 | 26,9 |
| <b>4H</b>            | <b>2H</b> | 22,4                                | 23,9 | 22,8 | 24,2 | 24,6 | 22,7                                  | 24,2 | 23,1 | 24,6 | 24,9 |
|                      | 3H        | 24,4                                | 25,7 | 24,8 | 26,1 | 26,5 | 24,6                                  | 25,9 | 25,0 | 26,3 | 26,7 |
|                      | 4H        | 25,4                                | 26,6 | 25,8 | 27,0 | 27,4 | 25,3                                  | 26,5 | 25,8 | 26,9 | 27,4 |
|                      | 6H        | 26,4                                | 27,5 | 26,9 | 27,9 | 28,3 | 25,9                                  | 26,9 | 26,3 | 27,4 | 27,8 |
|                      | 8H        | 26,9                                | 27,9 | 27,3 | 28,3 | 28,8 | 26,0                                  | 27,0 | 26,5 | 27,5 | 27,9 |
|                      | 12H       | 27,4                                | 28,2 | 27,9 | 28,7 | 29,2 | 26,1                                  | 27,0 | 26,6 | 27,5 | 28,0 |
| <b>8H</b>            | <b>4H</b> | 25,8                                | 26,8 | 26,3 | 27,3 | 27,7 | 25,8                                  | 26,7 | 26,2 | 27,2 | 27,7 |
|                      | 6H        | 27,0                                | 27,8 | 27,5 | 28,3 | 28,8 | 26,5                                  | 27,3 | 27,0 | 27,8 | 28,3 |
|                      | 8H        | 27,6                                | 28,4 | 28,1 | 28,8 | 29,4 | 26,7                                  | 27,5 | 27,2 | 28,0 | 28,5 |
|                      | 12H       | 28,3                                | 28,9 | 28,8 | 29,4 | 29,9 | 26,9                                  | 27,6 | 27,4 | 28,1 | 28,6 |
| <b>12H</b>           | <b>4H</b> | 25,9                                | 26,8 | 26,4 | 27,2 | 27,7 | 25,9                                  | 26,7 | 26,4 | 27,2 | 27,7 |
|                      | 6H        | 27,1                                | 27,9 | 27,6 | 28,4 | 28,9 | 26,7                                  | 27,4 | 27,2 | 27,9 | 28,4 |
|                      | 8H        | 27,8                                | 28,5 | 28,3 | 29,0 | 29,5 | 27,0                                  | 27,6 | 27,5 | 28,1 | 28,7 |

|  |  |                          |                             |
|--|--|--------------------------|-----------------------------|
| <b>Leuchtdichten-Tabelle</b> Max. für $\gamma \geq 65^\circ$ | <b>Lichttechnische Abmessungen in mm:</b> L = 1130<br>B = 64 | H(C0) = 22<br>H(C90) = 0 | H(C180) = 22<br>H(C270) = 0 |
|--|--|--------------------------|-----------------------------|

| C-<br>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°          | 45°      | 14864.1                           | 14993.3                     | 15377.0                     | 16016.9                     | 16900.9                     | 18030.7                     | 19512.8     |  |
| 50°          | 50°      | 14335.1                           | 14470.6                     | 14876.3                     | 15546.8                     | 16487.4                     | 17714.3                     | 19410.1     |  |
| 55°          | 55°      | 13777.5                           | 13919.7                     | 14329.1                     | 15010.0                     | 15983.6                     | 17282.5                     | 19199.3     |  |
| 60°          | 60°      | 13194.9                           | 13330.1                     | 13724.4                     | 14389.2                     | 15349.4                     | 16673.9                     | 18805.1     |  |
| 65°          | 65°      | 12580.4                           | 12698.0                     | 13056.9                     | 13662.5                     | 14545.5                     | 15808.7                     | 18132.0     |  |
| 70°          | 70°      | 11978.8                           | 12076.1                     | 12350.5                     | 12823.0                     | 13522.4                     | 14583.4                     | 17004.4     |  |
| 75°          | 75°      | 11460.8                           | 11518.5                     | 11685.7                     | 11929.0                     | 12277.8                     | 12864.3                     | 15171.3     |  |
| 80°          | 80°      | 11078.2                           | 11102.0                     | 11158.5                     | 11139.5                     | 10934.6                     | 10580.5                     | 12117.0     |  |
| 85°          | 85°      | 10967.9                           | 10970.1                     | 10935.8                     | 10700.1                     | 9962.1                      | 8022.6                      | 7066.9      |  |

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

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

γ 65°
γ 70°
γ 75°
γ 80°
γ 85°

**siteco**

