

Lichttechnischer Prüfbefund

**Familie**  
**Modario® 31**

**Bestell-Nr.: 53BM8117U4L3D2**  
**EAN: 4069025227102**

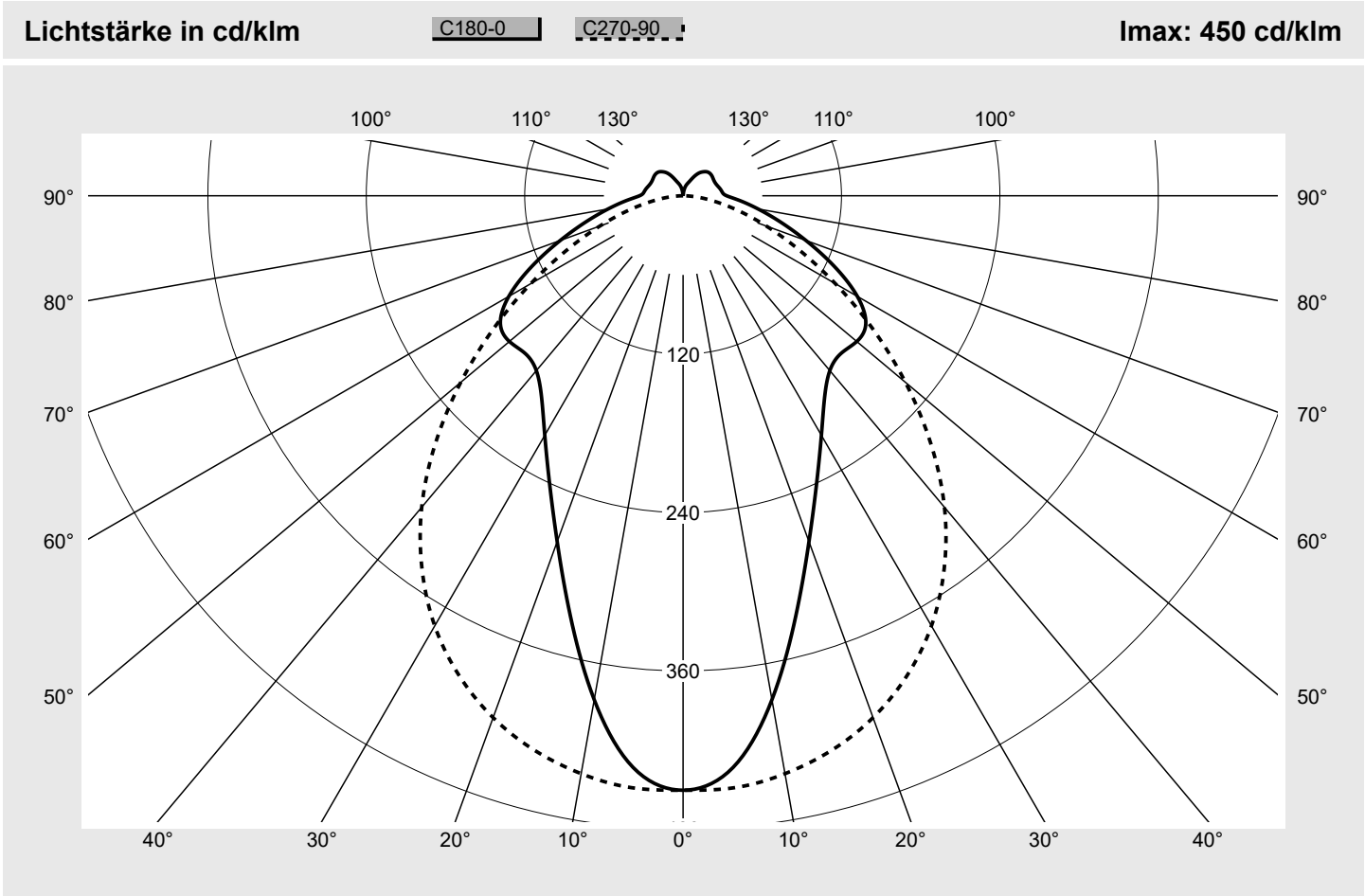
**LP-Nummer**  
**59593\_43**



**Ausführung** Diffusoroptik, satiniert, eng strahlend  
**Bestückung** LED 4000 K | CRI ≥ 80  
**Betriebsgerät** EVG  
**Bemessungswerte** Nettolichtstrom = 23600 lm  
Systemleistung = 126.0 W  
Lichtausbeute = 187.3 lm/W

**Seriendokumentation**  
**30.08.2024**

siteco



| Klassifizierungen |                   | Leuchtenbetriebswirkungsgrade |        |
|-------------------|-------------------|-------------------------------|--------|
| DIN 5040          | A 4 1             | $\eta_{LB}$                   | 100,0% |
| CIE               | N1=50 N2=78 N3=94 | $\phi_u$                      | 90,4%  |
|                   | N4=90 N5=100      | $\phi_o$                      | 9,6%   |

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

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|                                 |                                                   |                       |
|---------------------------------|---------------------------------------------------|-----------------------|
| Familie<br>Modario® 31          | Bestell-Nr.: 53BM8117U4L3D2<br>EAN: 4069025227102 | LP-Nummer<br>59593_43 |
| 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°           | 450.4                 | 450.4                       | 450.4                       | 450.4                       | 450.4                       | 450.4                       | 450.4       | 2.7                  | 2.7               |
| 5°           | 434.8                 | 434.4                       | 434.2                       | 439.8                       | 445.7                       | 448.7                       | 450.2       | 21.1                 | 23.8              |
| 10°          | 387.7                 | 390.2                       | 396.4                       | 411.2                       | 428.2                       | 439.8                       | 444.6       | 39.4                 | 63.1              |
| 15°          | 329.8                 | 334.4                       | 345.9                       | 370.2                       | 400.2                       | 424.7                       | 434.9       | 53.4                 | 116.5             |
| 20°          | 278.9                 | 283.9                       | 296.1                       | 324.2                       | 364.7                       | 403.3                       | 420.8       | 63.2                 | 179.7             |
| 25°          | 239.6                 | 243.9                       | 253.6                       | 279.8                       | 325.0                       | 376.1                       | 401.3       | 69.5                 | 249.1             |
| 30°          | 209.6                 | 212.8                       | 219.1                       | 240.3                       | 283.9                       | 343.6                       | 376.3       | 72.7                 | 321.9             |
| 35°          | 186.9                 | 188.8                       | 191.5                       | 205.8                       | 243.8                       | 306.6                       | 344.9       | 73.5                 | 395.4             |
| 40°          | 173.0                 | 173.1                       | 171.1                       | 177.5                       | 207.0                       | 267.1                       | 308.1       | 72.6                 | 468.0             |
| 45°          | 169.1                 | 166.9                       | 158.6                       | 155.4                       | 174.1                       | 225.8                       | 265.4       | 70.9                 | 538.9             |
| 50°          | 171.8                 | 167.4                       | 153.3                       | 140.0                       | 146.6                       | 186.3                       | 219.9       | 69.2                 | 608.2             |
| 55°          | 169.0                 | 164.3                       | 148.2                       | 128.3                       | 123.8                       | 150.1                       | 175.1       | 66.4                 | 674.5             |
| 60°          | 152.5                 | 148.9                       | 135.5                       | 115.0                       | 103.6                       | 117.6                       | 133.2       | 60.4                 | 734.9             |
| 65°          | 126.3                 | 124.1                       | 114.5                       | 97.6                        | 84.4                        | 89.2                        | 96.9        | 51.5                 | 786.4             |
| 70°          | 99.0                  | 97.7                        | 90.6                        | 78.2                        | 65.9                        | 64.8                        | 67.1        | 41.2                 | 827.6             |
| 75°          | 76.1                  | 75.0                        | 69.7                        | 60.3                        | 49.1                        | 44.1                        | 43.1        | 31.6                 | 859.2             |
| 80°          | 57.7                  | 56.8                        | 53.2                        | 44.9                        | 34.6                        | 27.3                        | 24.1        | 23.2                 | 882.4             |
| 85°          | 43.5                  | 42.6                        | 39.5                        | 32.5                        | 22.9                        | 14.7                        | 10.1        | 16.3                 | 898.6             |
| 90°          | 33.0                  | 32.1                        | 28.8                        | 22.5                        | 14.4                        | 6.3                         | 0.8         | 11.1                 | 909.7             |
| 95°          | 29.9                  | 28.9                        | 25.8                        | 20.4                        | 13.4                        | 6.1                         | 0.9         | 10.0                 | 919.7             |
| 100°         | 28.7                  | 27.7                        | 24.5                        | 19.6                        | 13.4                        | 6.3                         | 0.9         | 9.6                  | 929.3             |
| 105°         | 27.4                  | 26.4                        | 23.6                        | 19.5                        | 13.7                        | 6.7                         | 0.8         | 9.2                  | 938.4             |
| 110°         | 26.5                  | 25.4                        | 23.3                        | 19.7                        | 14.2                        | 7.2                         | 0.7         | 8.9                  | 947.3             |
| 115°         | 26.1                  | 25.1                        | 23.5                        | 20.2                        | 14.6                        | 6.8                         | 0.8         | 8.6                  | 955.9             |
| 120°         | 26.2                  | 25.3                        | 23.9                        | 20.5                        | 14.8                        | 6.4                         | 0.8         | 8.3                  | 964.2             |
| 125°         | 26.5                  | 25.6                        | 24.0                        | 20.4                        | 14.4                        | 6.3                         | 0.8         | 7.8                  | 972.0             |
| 130°         | 26.5                  | 25.4                        | 23.5                        | 19.6                        | 12.9                        | 6.2                         | 0.9         | 7.1                  | 979.0             |
| 135°         | 25.6                  | 24.4                        | 22.2                        | 18.2                        | 10.9                        | 5.6                         | 1.1         | 6.1                  | 985.2             |
| 140°         | 23.7                  | 22.4                        | 20.1                        | 15.4                        | 9.4                         | 4.6                         | 1.1         | 4.9                  | 990.1             |
| 145°         | 21.0                  | 19.8                        | 17.0                        | 12.1                        | 7.6                         | 3.5                         | 1.3         | 3.7                  | 993.8             |
| 150°         | 16.9                  | 15.5                        | 12.9                        | 9.4                         | 6.3                         | 2.5                         | 1.3         | 2.5                  | 996.4             |
| 155°         | 12.6                  | 11.7                        | 10.1                        | 7.4                         | 5.2                         | 1.9                         | 1.4         | 1.7                  | 998.0             |
| 160°         | 9.9                   | 9.3                         | 7.5                         | 5.7                         | 3.8                         | 1.6                         | 1.4         | 1.0                  | 999.1             |
| 165°         | 7.7                   | 7.3                         | 5.1                         | 4.1                         | 2.4                         | 1.5                         | 1.4         | 0.6                  | 999.7             |
| 170°         | 4.8                   | 3.7                         | 2.7                         | 2.3                         | 1.6                         | 1.5                         | 1.5         | 0.2                  | 999.9             |
| 175°         | 1.6                   | 1.5                         | 1.5                         | 1.5                         | 1.5                         | 1.5                         | 1.5         | 0.1                  | 1000.0            |
| 180°         | 1.5                   | 1.5                         | 1.5                         | 1.5                         | 1.5                         | 1.5                         | 1.5         | 0.0                  | 1000.0            |

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|                        |     |                                     |                                                   |      |      |      |                                       |      |                       |      |      |
|------------------------|-----|-------------------------------------|---------------------------------------------------|------|------|------|---------------------------------------|------|-----------------------|------|------|
| Familie<br>Modario® 31 |     |                                     | Bestell-Nr.: 53BM8117U4L3D2<br>EAN: 4069025227102 |      |      |      |                                       |      | LP-Nummer<br>59593_43 |      |      |
| 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  | 23,4                                | 25,1                                              | 23,7 | 25,4 | 25,7 | 23,9                                  | 25,6 | 24,3                  | 25,9 | 26,2 |
|                        | 3H  | 25,1                                | 26,7                                              | 25,5 | 27,0 | 27,3 | 25,1                                  | 26,6 | 25,5                  | 27,0 | 27,3 |
|                        | 4H  | 25,8                                | 27,3                                              | 26,2 | 27,6 | 28,0 | 25,6                                  | 27,0 | 26,0                  | 27,3 | 27,7 |
|                        | 6H  | 26,4                                | 27,7                                              | 26,8 | 28,1 | 28,5 | 25,9                                  | 27,2 | 26,3                  | 27,6 | 28,0 |
|                        | 8H  | 26,7                                | 27,9                                              | 27,1 | 28,3 | 28,7 | 26,0                                  | 27,2 | 26,5                  | 27,6 | 28,0 |
|                        | 12H | 26,9                                | 28,1                                              | 27,4 | 28,5 | 28,9 | 26,1                                  | 27,2 | 26,5                  | 27,6 | 28,1 |
| 4H                     | 2H  | 24,0                                | 25,4                                              | 24,4 | 25,8 | 26,1 | 24,4                                  | 25,8 | 24,8                  | 26,1 | 26,5 |
|                        | 3H  | 26,0                                | 27,2                                              | 26,4 | 27,5 | 28,0 | 25,7                                  | 27,0 | 26,2                  | 27,3 | 27,8 |
|                        | 4H  | 26,8                                | 27,9                                              | 27,2 | 28,3 | 28,7 | 26,3                                  | 27,4 | 26,7                  | 27,8 | 28,2 |
|                        | 6H  | 27,5                                | 28,5                                              | 28,0 | 28,9 | 29,4 | 26,7                                  | 27,7 | 27,2                  | 28,1 | 28,6 |
|                        | 8H  | 27,9                                | 28,7                                              | 28,3 | 29,2 | 29,6 | 26,9                                  | 27,8 | 27,3                  | 28,2 | 28,7 |
|                        | 12H | 28,2                                | 29,0                                              | 28,7 | 29,4 | 29,9 | 27,0                                  | 27,8 | 27,5                  | 28,2 | 28,7 |
| 8H                     | 4H  | 27,1                                | 27,9                                              | 27,5 | 28,4 | 28,9 | 26,6                                  | 27,5 | 27,1                  | 28,0 | 28,4 |
|                        | 6H  | 28,0                                | 28,7                                              | 28,4 | 29,2 | 29,7 | 27,2                                  | 27,9 | 27,7                  | 28,4 | 28,9 |
|                        | 8H  | 28,4                                | 29,1                                              | 28,9 | 29,5 | 30,1 | 27,4                                  | 28,0 | 27,9                  | 28,5 | 29,0 |
|                        | 12H | 28,9                                | 29,4                                              | 29,4 | 29,9 | 30,4 | 27,6                                  | 28,1 | 28,1                  | 28,6 | 29,1 |
| 12H                    | 4H  | 27,1                                | 27,9                                              | 27,6 | 28,3 | 28,8 | 26,7                                  | 27,5 | 27,2                  | 27,9 | 28,4 |
|                        | 6H  | 28,0                                | 28,7                                              | 28,5 | 29,2 | 29,7 | 27,3                                  | 27,9 | 27,8                  | 28,4 | 28,9 |
|                        | 8H  | 28,5                                | 29,1                                              | 29,0 | 29,6 | 30,1 | 27,6                                  | 28,1 | 28,1                  | 28,6 | 29,1 |

| Leuchtdichten-Tabelle |                       | Max. für $\gamma \geq 65^\circ$ |                             | Lichttechnische Abmessungen in mm: |                             | L = 2392<br>B = 75          | H(C0) = 25<br>H(C90) = 0 | H(C180) = 25<br>H(C270) = 0 |
|-----------------------|-----------------------|---------------------------------|-----------------------------|------------------------------------|-----------------------------|-----------------------------|--------------------------|-----------------------------|
| 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°                   | 23590.7               | 23480.5                         | 22896.1                     | 23401.4                            | 27757.7                     | 38676.3                     | 49368.7                  |                             |
| 50°                   | 25157.5               | 24763.6                         | 23338.8                     | 22369.9                            | 25026.2                     | 34579.3                     | 45001.8                  |                             |
| 55°                   | 26256.9               | 25814.9                         | 24074.7                     | 22006.7                            | 22941.2                     | 30648.1                     | 40152.5                  |                             |
| 60°                   | 25428.7               | 25157.7                         | 23761.9                     | 21488.5                            | 21152.1                     | 26907.8                     | 35054.0                  |                             |
| 65°                   | 22922.6               | 22854.4                         | 22006.6                     | 20181.4                            | 19361.3                     | 23428.5                     | 30168.6                  |                             |
| 70°                   | 19883.3               | 19935.4                         | 19425.9                     | 18258.2                            | 17382.3                     | 20142.7                     | 25823.7                  |                             |
| 75°                   | 17228.0               | 17322.1                         | 17058.8                     | 16299.2                            | 15381.2                     | 16973.5                     | 21887.1                  |                             |
| 80°                   | 15133.3               | 15230.3                         | 15275.3                     | 14547.4                            | 13475.8                     | 13909.8                     | 18222.4                  |                             |
| 85°                   | 13643.8               | 13743.7                         | 13881.2                     | 13265.2                            | 11876.9                     | 11192.7                     | 15178.1                  |                             |

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**59593\_43**

Leuchtdichten in cd/m²
 

γ 65°

γ 70°

γ 75°

γ 80°

γ 85°

sit

eco

