

Lichttechnischer Prüfbefund

Familie
Modario® 31

Bestell-Nr.: 53BM812M1V4120
EAN: 4058352421888

LP-Nummer
59064_2



Ausführung Diffusoroptik, satiniert, breit strahlend
Bestückung LED 4000 K | CRI ≥ 80
Betriebsgerät EVG-Multilumen
Bemessungswerte Nettolichtstrom = 12380 lm
 Systemleistung = 77.3 W
 Lichtausbeute = 160.2 lm/W

Seriendokumentation
01.09.2020

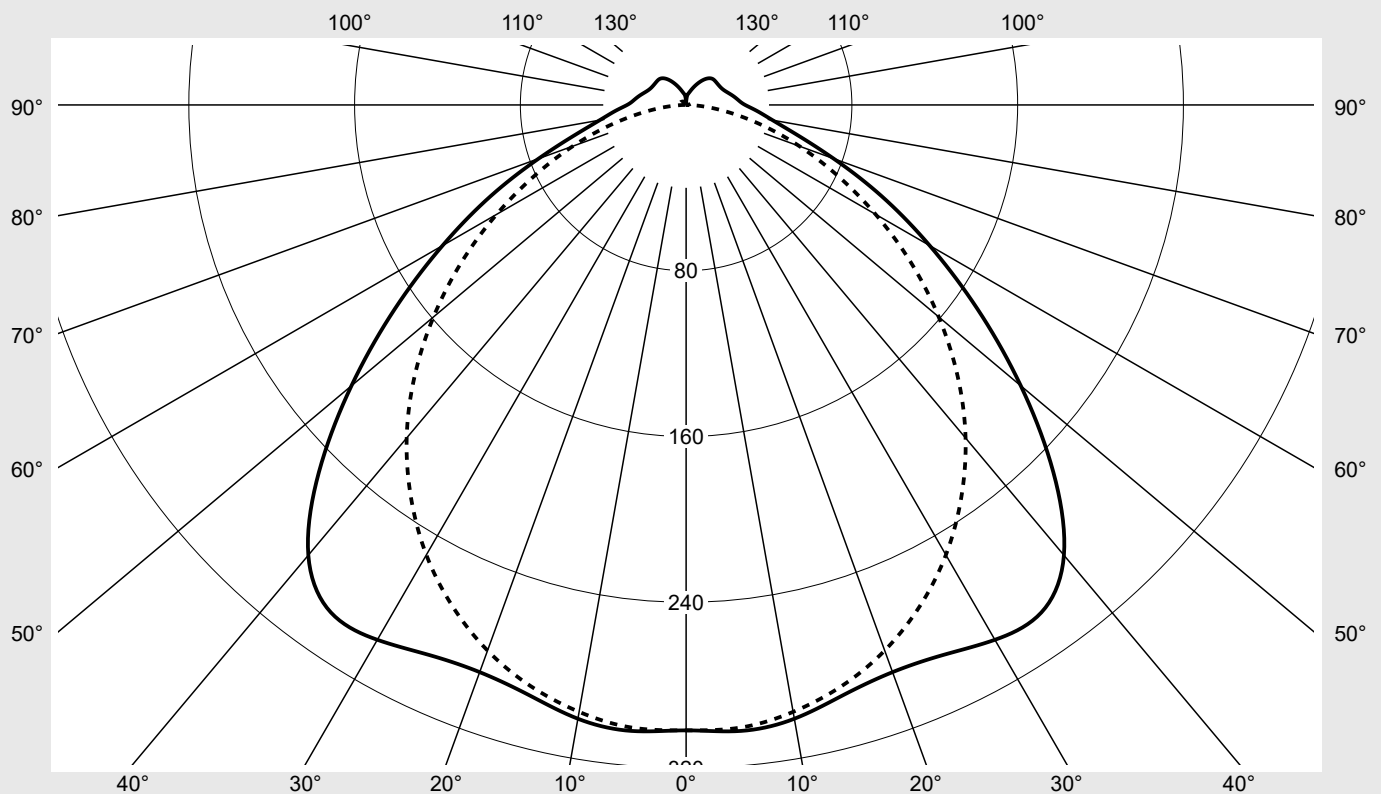
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Lichtstärke in cd/klm

C180-0

C270-90

Imax: 303 cd/klm



Klassifizierungen

DIN 5040 A 4 1
 CIE N1=47 N2=80 N3=95
 N4=92 N5=100

Leuchtenbetriebswirkungsgrade

η_{LB} 100,0%
 ϕ_u 92,2%
 ϕ_o 7,8%

Messbedingungen

DIN EN 13032 und DIN 5032

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| | | |
|--|---|------------------------------------|
| Familie Modario® 31 | Bestell-Nr.: 53BM812M1V4120 EAN: 4058352421888 | LP-Nummer 59064_2 |
| Wertetabelle Lichtstärkemessung | | Maximale Lichtstärke |
| | | sITeco |

| C- Ebenen | 0° 180° | 15° | 30° | 45° | 60° | 75° | 90° 270° | Phi-Zone | Summe Phi-Zone |
|-----------------------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|----------------------|-------------------|
| | | 165° 195° 345° | 150° 210° 330° | 135° 225° 315° | 120° 240° 300° | 105° 255° 285° | | | |
| Lichtstärke in cd/klm | | | | | | | | Lichtstrom in lm/klm | |
| γ | | | | | | | | | |
| 0° | 301.8 | 301.8 | 301.8 | 301.8 | 301.8 | 301.8 | 301.8 | 1.8 | 1.8 |
| 5° | 303.3 | 302.1 | 299.9 | 300.9 | 301.9 | 301.5 | 301.6 | 14.4 | 16.2 |
| 10° | 300.8 | 300.0 | 297.7 | 298.5 | 298.9 | 297.8 | 297.4 | 28.4 | 44.6 |
| 15° | 294.6 | 294.3 | 291.7 | 292.6 | 293.1 | 291.2 | 290.3 | 41.5 | 86.1 |
| 20° | 291.3 | 290.6 | 285.8 | 284.4 | 284.3 | 281.8 | 280.2 | 53.5 | 139.7 |
| 25° | 293.0 | 291.5 | 283.0 | 276.7 | 273.3 | 269.6 | 266.9 | 64.6 | 204.3 |
| 30° | 298.0 | 296.0 | 283.3 | 270.8 | 261.1 | 254.6 | 250.8 | 74.9 | 279.2 |
| 35° | 299.0 | 297.5 | 283.8 | 265.6 | 248.4 | 237.0 | 231.5 | 83.7 | 362.9 |
| 40° | 283.7 | 284.3 | 276.5 | 258.3 | 235.0 | 217.5 | 209.8 | 89.2 | 452.1 |
| 45° | 250.6 | 253.6 | 254.2 | 243.8 | 219.3 | 195.5 | 185.4 | 89.4 | 541.5 |
| 50° | 210.8 | 214.1 | 220.0 | 218.9 | 199.3 | 171.7 | 159.1 | 84.6 | 626.1 |
| 55° | 171.6 | 174.1 | 180.5 | 185.1 | 173.7 | 146.4 | 132.4 | 75.7 | 701.8 |
| 60° | 135.7 | 137.3 | 141.6 | 147.2 | 142.6 | 119.7 | 105.6 | 64.0 | 765.8 |
| 65° | 104.1 | 104.9 | 107.1 | 111.0 | 110.3 | 93.2 | 80.6 | 51.2 | 817.1 |
| 70° | 75.8 | 76.7 | 78.0 | 80.6 | 80.3 | 68.4 | 58.2 | 38.7 | 855.8 |
| 75° | 55.2 | 55.4 | 55.7 | 57.0 | 55.4 | 46.3 | 38.3 | 27.9 | 883.7 |
| 80° | 42.4 | 41.9 | 40.8 | 39.2 | 35.6 | 27.7 | 21.5 | 19.5 | 903.3 |
| 85° | 34.5 | 33.8 | 31.7 | 27.6 | 21.5 | 14.0 | 8.7 | 13.7 | 916.9 |
| 90° | 28.5 | 27.9 | 25.4 | 20.0 | 13.0 | 5.8 | 0.8 | 9.7 | 926.7 |
| 95° | 25.4 | 25.0 | 22.9 | 18.2 | 11.9 | 5.4 | 1.1 | 8.8 | 935.5 |
| 100° | 23.4 | 22.9 | 21.0 | 17.1 | 11.6 | 5.5 | 1.7 | 8.2 | 943.6 |
| 105° | 21.5 | 21.0 | 19.3 | 16.3 | 11.6 | 5.8 | 2.4 | 7.6 | 951.2 |
| 110° | 19.9 | 19.3 | 18.1 | 15.8 | 11.8 | 6.2 | 2.9 | 7.1 | 958.3 |
| 115° | 18.9 | 18.4 | 17.5 | 15.6 | 12.1 | 6.5 | 2.9 | 6.7 | 965.0 |
| 120° | 18.5 | 17.9 | 17.3 | 15.6 | 12.2 | 6.6 | 2.9 | 6.3 | 971.4 |
| 125° | 18.2 | 17.7 | 17.1 | 15.5 | 11.7 | 6.5 | 2.7 | 5.9 | 977.3 |
| 130° | 18.1 | 17.6 | 16.9 | 14.9 | 10.9 | 6.2 | 2.5 | 5.4 | 982.6 |
| 135° | 17.9 | 17.2 | 16.1 | 13.6 | 9.8 | 5.6 | 2.4 | 4.7 | 987.3 |
| 140° | 16.8 | 15.9 | 14.5 | 12.0 | 8.4 | 5.0 | 2.2 | 3.8 | 991.1 |
| 145° | 14.9 | 14.0 | 12.6 | 10.1 | 6.9 | 4.5 | 2.0 | 3.0 | 994.1 |
| 150° | 12.5 | 11.8 | 10.5 | 8.0 | 5.7 | 4.2 | 1.8 | 2.2 | 996.3 |
| 155° | 10.2 | 9.6 | 8.4 | 6.3 | 5.0 | 3.7 | 1.6 | 1.5 | 997.8 |
| 160° | 8.1 | 7.7 | 6.3 | 5.1 | 4.6 | 3.6 | 1.5 | 1.0 | 998.8 |
| 165° | 6.4 | 6.2 | 4.7 | 4.5 | 4.1 | 4.7 | 1.5 | 0.7 | 999.5 |
| 170° | 5.4 | 4.4 | 3.9 | 4.0 | 3.9 | 3.8 | 1.5 | 0.4 | 999.8 |
| 175° | 3.9 | 3.2 | 4.4 | 4.7 | 3.9 | 2.2 | 1.5 | 0.2 | 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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|--------------------|---------------------|---------------|
| 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 | 23,5 | 25,2 | 23,9 | 25,5 | 25,9 | 23,3 | 25,0 | 23,7 | 25,3 | 25,7 |
| | 3H | 24,5 | 26,0 | 24,9 | 26,4 | 26,7 | 24,5 | 26,0 | 24,9 | 26,3 | 26,7 |
| | 4H | 24,9 | 26,3 | 25,3 | 26,7 | 27,0 | 24,9 | 26,3 | 25,3 | 26,7 | 27,1 |
| | 6H | 25,2 | 26,5 | 25,6 | 26,9 | 27,3 | 25,2 | 26,5 | 25,6 | 26,9 | 27,3 |
| | 8H | 25,4 | 26,6 | 25,8 | 27,0 | 27,4 | 25,3 | 26,5 | 25,7 | 26,9 | 27,3 |
| | 12H | 25,6 | 26,7 | 26,0 | 27,1 | 27,5 | 25,3 | 26,5 | 25,7 | 26,9 | 27,3 |
| 4H | 2H | 24,2 | 25,6 | 24,6 | 26,0 | 26,3 | 24,1 | 25,5 | 24,5 | 25,8 | 26,2 |
| | 3H | 25,3 | 26,5 | 25,7 | 26,9 | 27,3 | 25,4 | 26,6 | 25,8 | 27,0 | 27,4 |
| | 4H | 25,8 | 26,9 | 26,2 | 27,3 | 27,7 | 25,9 | 27,0 | 26,4 | 27,4 | 27,9 |
| | 6H | 26,2 | 27,2 | 26,7 | 27,6 | 28,1 | 26,3 | 27,3 | 26,8 | 27,7 | 28,2 |
| | 8H | 26,4 | 27,3 | 26,9 | 27,8 | 28,2 | 26,4 | 27,3 | 26,9 | 27,8 | 28,2 |
| | 12H | 26,7 | 27,5 | 27,2 | 27,9 | 28,4 | 26,5 | 27,3 | 27,0 | 27,8 | 28,3 |
| 8H | 4H | 26,0 | 26,9 | 26,5 | 27,4 | 27,9 | 26,2 | 27,1 | 26,7 | 27,5 | 28,0 |
| | 6H | 26,6 | 27,4 | 27,1 | 27,8 | 28,3 | 26,7 | 27,4 | 27,2 | 27,9 | 28,4 |
| | 8H | 26,9 | 27,6 | 27,4 | 28,1 | 28,6 | 26,9 | 27,5 | 27,4 | 28,0 | 28,5 |
| | 12H | 27,3 | 27,8 | 27,8 | 28,3 | 28,9 | 27,0 | 27,6 | 27,5 | 28,1 | 28,6 |
| 12H | 4H | 26,1 | 26,9 | 26,6 | 27,3 | 27,8 | 26,2 | 27,0 | 26,7 | 27,5 | 28,0 |
| | 6H | 26,7 | 27,3 | 27,2 | 27,8 | 28,3 | 26,8 | 27,4 | 27,3 | 27,9 | 28,4 |
| | 8H | 27,1 | 27,6 | 27,6 | 28,1 | 28,6 | 27,0 | 27,6 | 27,5 | 28,1 | 28,6 |

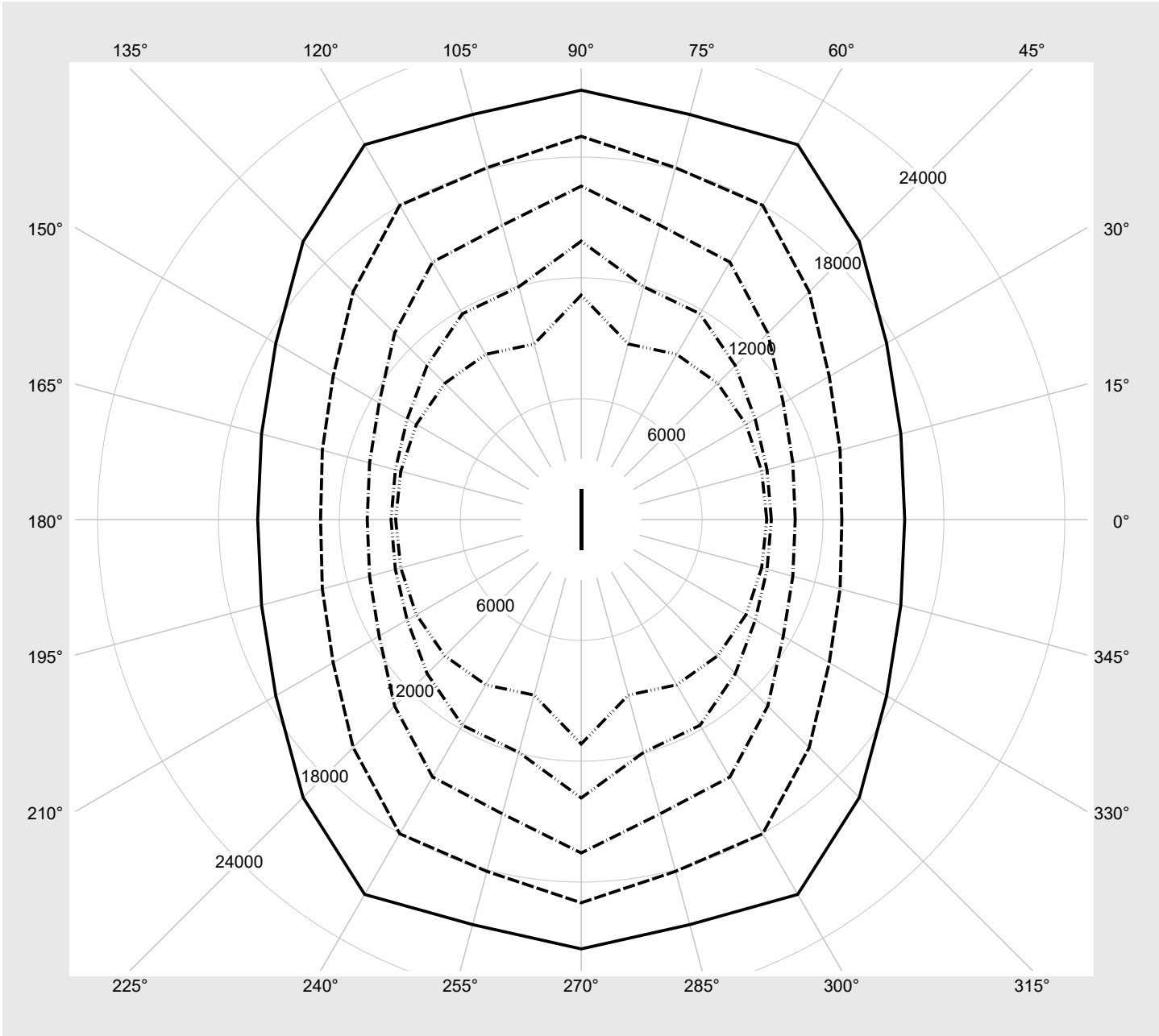
| | | | | | |
|------------------------------|---------------------------------|------------------------------------|--------------------|--------------------------|-----------------------------|
| Leuchtdichten-Tabelle | Max. für $\gamma \geq 65^\circ$ | Lichttechnische Abmessungen in mm: | L = 1476 B = 75 | H(C0) = 25 H(C90) = 0 | H(C180) = 25 H(C270) = 0 |
|------------------------------|---------------------------------|------------------------------------|--------------------|--------------------------|-----------------------------|

| C-Ebenen | γ | Leuchtdichte in cd/m ² | | | | | | | |
|----------|----------|-----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
| | | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° | |
| 45° | | 29729.5 | 30334.4 | 31191.4 | 31203.4 | 29730.9 | 28459.2 | 29317.7 | |
| 50° | | 26254.3 | 26920.9 | 28472.2 | 29735.0 | 28931.9 | 27087.6 | 27687.6 | |
| 55° | | 22669.9 | 23256.1 | 24920.0 | 27000.0 | 27350.6 | 25410.0 | 25805.3 | |
| 60° | | 19246.5 | 19712.1 | 21113.0 | 23381.8 | 24747.8 | 23298.7 | 23620.0 | |
| 65° | | 16056.7 | 16424.9 | 17503.4 | 19519.3 | 21493.2 | 20821.6 | 21318.7 | |
| 70° | | 12936.0 | 13301.8 | 14216.1 | 16004.4 | 18015.3 | 18085.5 | 19028.6 | |
| 75° | | 10621.6 | 10873.0 | 11579.3 | 13096.0 | 14759.0 | 15126.5 | 16555.2 | |
| 80° | | 9437.5 | 9548.9 | 9975.6 | 10816.0 | 11795.8 | 11966.9 | 13822.1 | |
| 85° | | 9210.6 | 9272.0 | 9447.0 | 9570.6 | 9474.5 | 9025.5 | 11142.9 | |

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Leuchtdichten in cd/m² γ 65° γ 70° γ 75° γ 80° γ 85° **siteco**



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Multilumen-Tabelle

Umgebungstemperatur: 25°C



| DIP-Stufe | Schalterstellung | | | Lichtstrom [lm] | Systemleistung [W] |
|-----------|------------------|---|---|--------------------|-----------------------|
| | 1 | 2 | 3 | | |
| 1 | A | C | E | 12380 | 77.3 |
| 2 | A | C | F | 11050 | 67.5 |
| 3 | A | D | E | 10060 | 60.6 |
| 4 | A | D | F | 9050 | 53.8 |
| 5 | B | C | E | 8010 | 47.0 |
| 6 | B | C | F | 7020 | 40.8 |
| 7 | B | D | E | 6010 | 34.7 |
| 8 | B | D | F | 5050 | 29.1 |