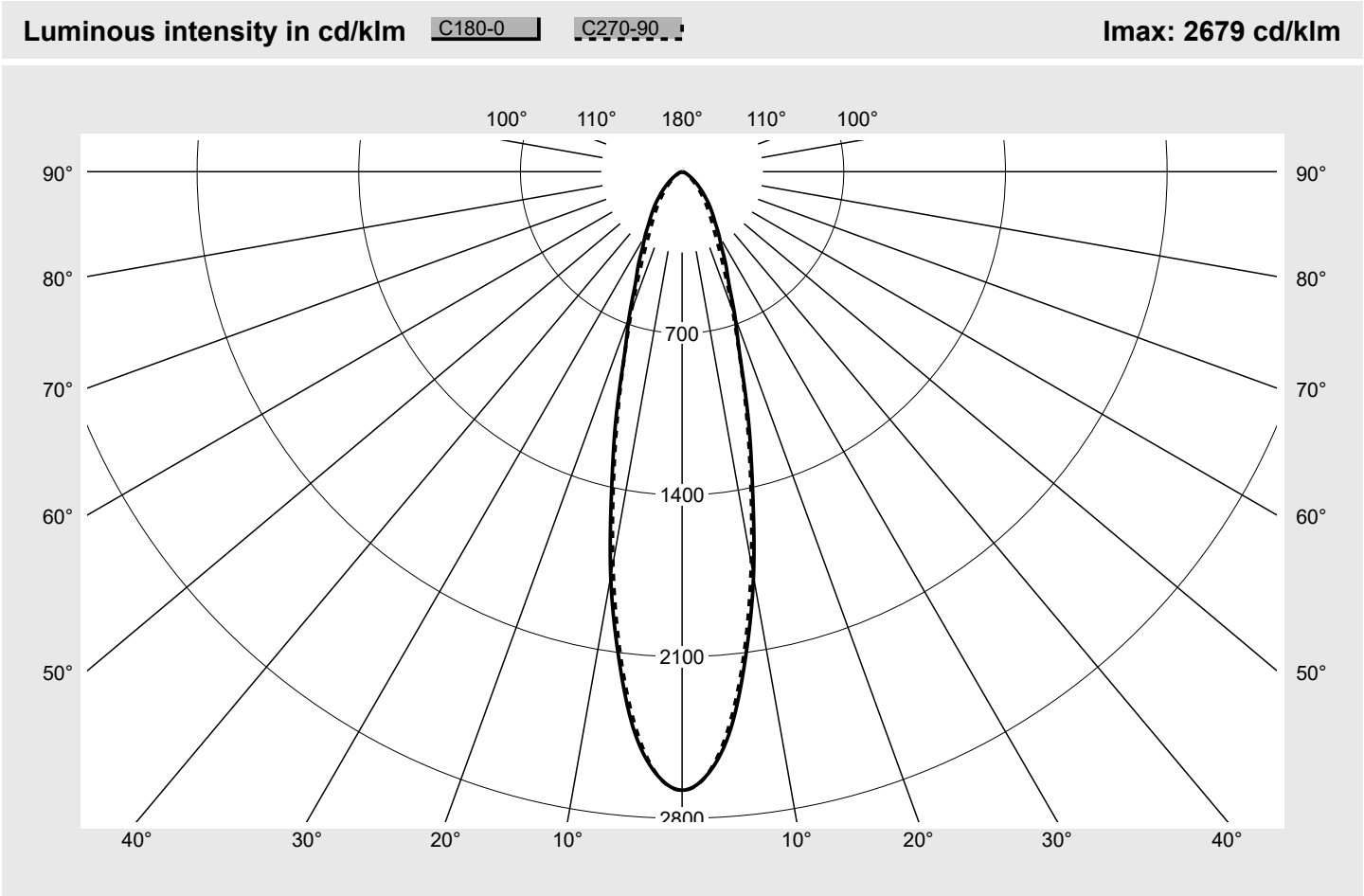


Photometric test report

|                                                                                   |                                                                |                                                                                               |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Family</b><br>Highbay 11                                                       | <b>Order number: 51HN11DA3FMA</b><br><b>EAN: 4069025424051</b> | <b>LP number</b><br>59711_372                                                                 |
|  | <b>Version</b>                                                 | primary light control with lens, PMMA, housing, white, for Modario® rail, narrow distribution |
|                                                                                   | <b>Lamps</b>                                                   | LED 3000 K   CRI ≥ 80                                                                         |
|                                                                                   | <b>Controlgear</b>                                             | ECG-DALI                                                                                      |
|                                                                                   | <b>Rated values</b>                                            | Net luminous flux = 14260 lm<br>Power consumption = 73.2 W<br>Luminous efficacy = 194.8 lm/W  |
|                                                                                   |                                                                | <b>serial documentation</b><br>09.04.2025                                                     |
|                                                                                   |                                                                |            |



| Classifications |                    | Luminaire light output ratios |        |
|-----------------|--------------------|-------------------------------|--------|
| DIN 5040        | A 7 0              | $\eta_{LB}$                   | 100.0% |
| CIE             | N1=85 N2=97 N3=100 | $\phi_u$                      | 100.0% |
|                 | N4=100 N5=100      | $\phi_o$                      | 0.0%   |

| Measurement conditions    |
|---------------------------|
| DIN EN 13032 and DIN 5032 |

Photometric test report

|                                          |                                                  |                            |
|------------------------------------------|--------------------------------------------------|----------------------------|
| Family<br>Highbay 11                     | Order number: 51HN11DA3FMA<br>EAN: 4069025424051 | LP number<br>59711_372     |
| Table of values for luminous intensities |                                                  | Maximum luminous intensity |

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| C-<br>planes | 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                | Total<br>Phi-zone |
|--------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|-------------------------|-------------------|
| γ            | Luminous intensity in cd/klm |                             |                             |                             |                             |                             |             | Luminous flux in lm/klm |                   |
| 0,0°         | 2678.6                       | 2678.6                      | 2678.6                      | 2678.6                      | 2678.6                      | 2678.6                      | 2678.6      | 4.0                     | 4.0               |
| 2,5°         | 2608.0                       | 2619.4                      | 2619.4                      | 2616.5                      | 2617.6                      | 2616.2                      | 2606.1      | 31.3                    | 35.3              |
| 5,0°         | 2420.1                       | 2415.7                      | 2414.1                      | 2408.4                      | 2406.6                      | 2402.3                      | 2391.7      | 57.6                    | 92.8              |
| 7,5°         | 2113.4                       | 2116.1                      | 2112.3                      | 2103.0                      | 2097.6                      | 2090.5                      | 2079.6      | 75.2                    | 168.1             |
| 10,0°        | 1780.1                       | 1768.7                      | 1762.7                      | 1751.6                      | 1743.6                      | 1735.2                      | 1724.7      | 83.4                    | 251.5             |
| 12,5°        | 1410.1                       | 1409.3                      | 1404.7                      | 1395.9                      | 1388.1                      | 1380.5                      | 1373.1      | 82.8                    | 334.3             |
| 15,0°        | 1106.5                       | 1097.8                      | 1095.0                      | 1089.4                      | 1083.1                      | 1078.4                      | 1073.9      | 77.3                    | 411.5             |
| 17,5°        | 830.1                        | 840.2                       | 835.5                       | 831.1                       | 826.6                       | 824.9                       | 824.1       | 68.5                    | 480.0             |
| 20,0°        | 671.1                        | 661.9                       | 651.8                       | 643.2                       | 639.9                       | 639.4                       | 641.0       | 60.8                    | 540.8             |
| 22,5°        | 531.9                        | 530.5                       | 514.2                       | 498.9                       | 497.0                       | 496.6                       | 496.8       | 53.4                    | 594.2             |
| 25,0°        | 450.6                        | 441.3                       | 420.6                       | 401.3                       | 399.0                       | 395.8                       | 392.4       | 47.9                    | 642.1             |
| 27,5°        | 370.8                        | 368.7                       | 351.4                       | 331.7                       | 326.8                       | 321.1                       | 316.0       | 43.1                    | 685.2             |
| 30,0°        | 320.4                        | 312.1                       | 300.8                       | 284.1                       | 278.0                       | 270.2                       | 264.7       | 39.7                    | 724.9             |
| 32,5°        | 271.0                        | 266.8                       | 259.0                       | 245.6                       | 238.0                       | 229.0                       | 224.7       | 36.5                    | 761.4             |
| 35,0°        | 235.8                        | 228.9                       | 222.7                       | 210.5                       | 201.6                       | 193.0                       | 191.7       | 33.3                    | 794.7             |
| 37,5°        | 204.4                        | 197.8                       | 191.5                       | 181.1                       | 172.0                       | 164.3                       | 162.4       | 30.3                    | 825.0             |
| 40,0°        | 176.7                        | 170.7                       | 163.1                       | 154.3                       | 146.1                       | 138.3                       | 135.6       | 27.3                    | 852.2             |
| 42,5°        | 147.6                        | 145.5                       | 138.6                       | 130.6                       | 123.2                       | 115.8                       | 113.3       | 24.2                    | 876.4             |
| 45,0°        | 126.0                        | 121.8                       | 116.3                       | 109.0                       | 102.0                       | 95.3                        | 93.2        | 21.1                    | 897.6             |
| 47,5°        | 103.2                        | 101.5                       | 97.1                        | 90.9                        | 84.6                        | 78.4                        | 76.7        | 18.3                    | 915.9             |
| 50,0°        | 85.9                         | 82.9                        | 79.4                        | 74.6                        | 69.1                        | 63.7                        | 61.9        | 15.5                    | 931.4             |
| 52,5°        | 69.0                         | 67.2                        | 64.5                        | 61.0                        | 56.2                        | 51.6                        | 49.7        | 13.0                    | 944.4             |
| 55,0°        | 55.6                         | 54.1                        | 52.2                        | 49.5                        | 45.7                        | 41.7                        | 40.0        | 10.9                    | 955.3             |
| 57,5°        | 43.6                         | 43.1                        | 41.8                        | 39.8                        | 37.0                        | 33.6                        | 32.2        | 9.0                     | 964.3             |
| 60,0°        | 33.2                         | 33.3                        | 33.9                        | 32.4                        | 30.5                        | 27.5                        | 26.1        | 7.4                     | 971.7             |
| 62,5°        | 25.9                         | 26.0                        | 27.0                        | 26.2                        | 25.1                        | 22.4                        | 21.3        | 6.1                     | 977.8             |
| 65,0°        | 21.6                         | 21.2                        | 21.7                        | 21.3                        | 20.9                        | 18.8                        | 17.7        | 5.1                     | 982.9             |
| 67,5°        | 17.0                         | 17.1                        | 17.8                        | 17.0                        | 17.3                        | 15.6                        | 14.8        | 4.3                     | 987.2             |
| 70,0°        | 13.5                         | 13.4                        | 14.4                        | 13.6                        | 14.1                        | 13.0                        | 12.4        | 3.5                     | 990.7             |
| 72,5°        | 11.0                         | 10.8                        | 10.9                        | 10.9                        | 11.0                        | 10.7                        | 10.6        | 2.8                     | 993.5             |
| 75,0°        | 9.0                          | 8.4                         | 8.4                         | 8.3                         | 8.6                         | 9.0                         | 8.9         | 2.3                     | 995.8             |
| 77,5°        | 6.6                          | 6.4                         | 6.2                         | 6.2                         | 6.6                         | 7.3                         | 7.4         | 1.8                     | 997.5             |
| 80,0°        | 4.4                          | 4.2                         | 4.1                         | 4.2                         | 4.7                         | 5.7                         | 5.8         | 1.3                     | 998.8             |
| 82,5°        | 2.0                          | 2.1                         | 2.2                         | 2.4                         | 3.0                         | 3.9                         | 4.1         | 0.8                     | 999.6             |
| 85,0°        | 0.8                          | 0.8                         | 0.8                         | 1.0                         | 1.5                         | 2.2                         | 2.4         | 0.4                     | 999.9             |
| 87,5°        | 0.3                          | 0.3                         | 0.3                         | 0.3                         | 0.3                         | 0.4                         | 0.5         | 0.1                     | 1000.0            |
| 90,0°        | 0.0                          | 0.0                         | 0.0                         | 0.0                         | 0.0                         | 0.0                         | 0.0         | 0.0                     | 1000.0            |

Photometric test report

|                      |                                                  |                        |
|----------------------|--------------------------------------------------|------------------------|
| Family<br>Highbay 11 | Order number: 51HN11DA3FMA<br>EAN: 4069025424051 | LP number<br>59711_372 |
|----------------------|--------------------------------------------------|------------------------|

| UGR-Table                    |     | Standard room       |      |      |      |      |                    |      | siteco |      |      |
|------------------------------|-----|---------------------|------|------|------|------|--------------------|------|--------|------|------|
| Reflection factor of ceiling | 0.7 | 0.7                 | 0.5  | 0.5  | 0.3  | 0.7  | 0.7                | 0.5  | 0.5    | 0.3  |      |
| Reflection factor of walls   | 0.5 | 0.3                 | 0.5  | 0.3  | 0.3  | 0.5  | 0.3                | 0.5  | 0.3    | 0.3  |      |
| Reflection factor of floor   | 0.2 | 0.2                 | 0.2  | 0.2  | 0.2  | 0.2  | 0.2                | 0.2  | 0.2    | 0.2  |      |
| Room dimensions              |     | View crosswise (C0) |      |      |      |      | View endwise (C90) |      |        |      |      |
| x                            | y   |                     |      |      |      |      |                    |      |        |      |      |
| 2H                           | 2H  | 18.7                | 19.9 | 19.1 | 20.2 | 20.5 | 17.5               | 18.7 | 17.9   | 19.0 | 19.3 |
|                              | 3H  | 19.0                | 20.0 | 19.3 | 20.3 | 20.7 | 17.8               | 18.9 | 18.2   | 19.2 | 19.5 |
|                              | 4H  | 19.0                | 20.0 | 19.4 | 20.3 | 20.7 | 18.0               | 18.9 | 18.4   | 19.3 | 19.6 |
|                              | 6H  | 19.1                | 19.9 | 19.5 | 20.3 | 20.7 | 18.1               | 18.9 | 18.5   | 19.3 | 19.7 |
|                              | 8H  | 19.1                | 19.9 | 19.6 | 20.2 | 20.6 | 18.2               | 18.9 | 18.6   | 19.3 | 19.7 |
|                              | 12H | 19.1                | 19.8 | 19.5 | 20.2 | 20.6 | 18.2               | 18.9 | 18.7   | 19.3 | 19.7 |
| 4H                           | 2H  | 18.8                | 19.7 | 19.2 | 20.1 | 20.5 | 17.7               | 18.7 | 18.1   | 19.0 | 19.4 |
|                              | 3H  | 19.1                | 19.9 | 19.5 | 20.3 | 20.7 | 18.1               | 18.9 | 18.6   | 19.3 | 19.7 |
|                              | 4H  | 19.2                | 19.9 | 19.7 | 20.3 | 20.8 | 18.3               | 19.0 | 18.8   | 19.4 | 19.9 |
|                              | 6H  | 19.3                | 19.9 | 19.8 | 20.3 | 20.8 | 18.5               | 19.1 | 19.0   | 19.5 | 20.0 |
|                              | 8H  | 19.3                | 19.8 | 19.8 | 20.2 | 20.7 | 18.6               | 19.1 | 19.1   | 19.6 | 20.0 |
|                              | 12H | 19.3                | 19.7 | 19.8 | 20.2 | 20.7 | 18.7               | 19.1 | 19.1   | 19.6 | 20.1 |
| 8H                           | 4H  | 19.2                | 19.7 | 19.7 | 20.2 | 20.7 | 18.3               | 18.9 | 18.8   | 19.3 | 19.8 |
|                              | 6H  | 19.3                | 19.7 | 19.8 | 20.2 | 20.7 | 18.6               | 19.0 | 19.1   | 19.5 | 20.0 |
|                              | 8H  | 19.3                | 19.6 | 19.8 | 20.1 | 20.7 | 18.7               | 19.0 | 19.2   | 19.5 | 20.1 |
|                              | 12H | 19.2                | 19.5 | 19.8 | 20.0 | 20.6 | 18.7               | 19.0 | 19.3   | 19.6 | 20.1 |
| 12H                          | 4H  | 19.2                | 19.6 | 19.7 | 20.1 | 20.6 | 18.3               | 18.8 | 18.8   | 19.2 | 19.7 |
|                              | 6H  | 19.3                | 19.6 | 19.8 | 20.1 | 20.6 | 18.6               | 18.9 | 19.1   | 19.4 | 19.9 |
|                              | 8H  | 19.2                | 19.5 | 19.8 | 20.1 | 20.6 | 18.7               | 19.0 | 19.2   | 19.5 | 20.0 |

| Luminance table |                    | Max. for $\gamma \geq 65^\circ$ |                             | Photometric dimensions in mm: |                             | L = 426<br>B = 264          |             |
|-----------------|--------------------|---------------------------------|-----------------------------|-------------------------------|-----------------------------|-----------------------------|-------------|
| C-planes        | 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° |
| $\gamma$        | Luminance in cd/m² |                                 |                             |                               |                             |                             |             |
| 45,0°           | 22591.8            | 21837.6                         | 20853.8                     | 19549.5                       | 18290.7                     | 17094.1                     | 16711.4     |
| 50,0°           | 16936.3            | 16346.7                         | 15654.3                     | 14724.8                       | 13620.8                     | 12557.2                     | 12201.7     |
| 55,0°           | 12289.1            | 11956.4                         | 11542.1                     | 10942.6                       | 10099.7                     | 9218.7                      | 8848.2      |
| 60,0°           | 8431.7             | 8440.8                          | 8597.8                      | 8214.4                        | 7725.9                      | 6970.5                      | 6622.6      |
| 65,0°           | 6473.6             | 6364.4                          | 6508.7                      | 6403.4                        | 6268.1                      | 5633.0                      | 5324.5      |
| 70,0°           | 5015.6             | 4955.1                          | 5323.3                      | 5027.1                        | 5216.9                      | 4802.8                      | 4590.0      |
| 75,0°           | 4396.9             | 4126.4                          | 4135.8                      | 4079.9                        | 4209.2                      | 4389.0                      | 4381.2      |
| 80,0°           | 3207.7             | 3088.7                          | 2987.9                      | 3042.0                        | 3399.0                      | 4127.8                      | 4211.7      |
| 85,0°           | 1187.1             | 1172.6                          | 1226.4                      | 1386.4                        | 2128.4                      | 3133.7                      | 3551.2      |

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Family  
Highbay 11

Order number: 51HN11DA3FMA  
EAN: 4069025424051

LP number  
59711\_372

Luminance values in cd/m²

γ 65°

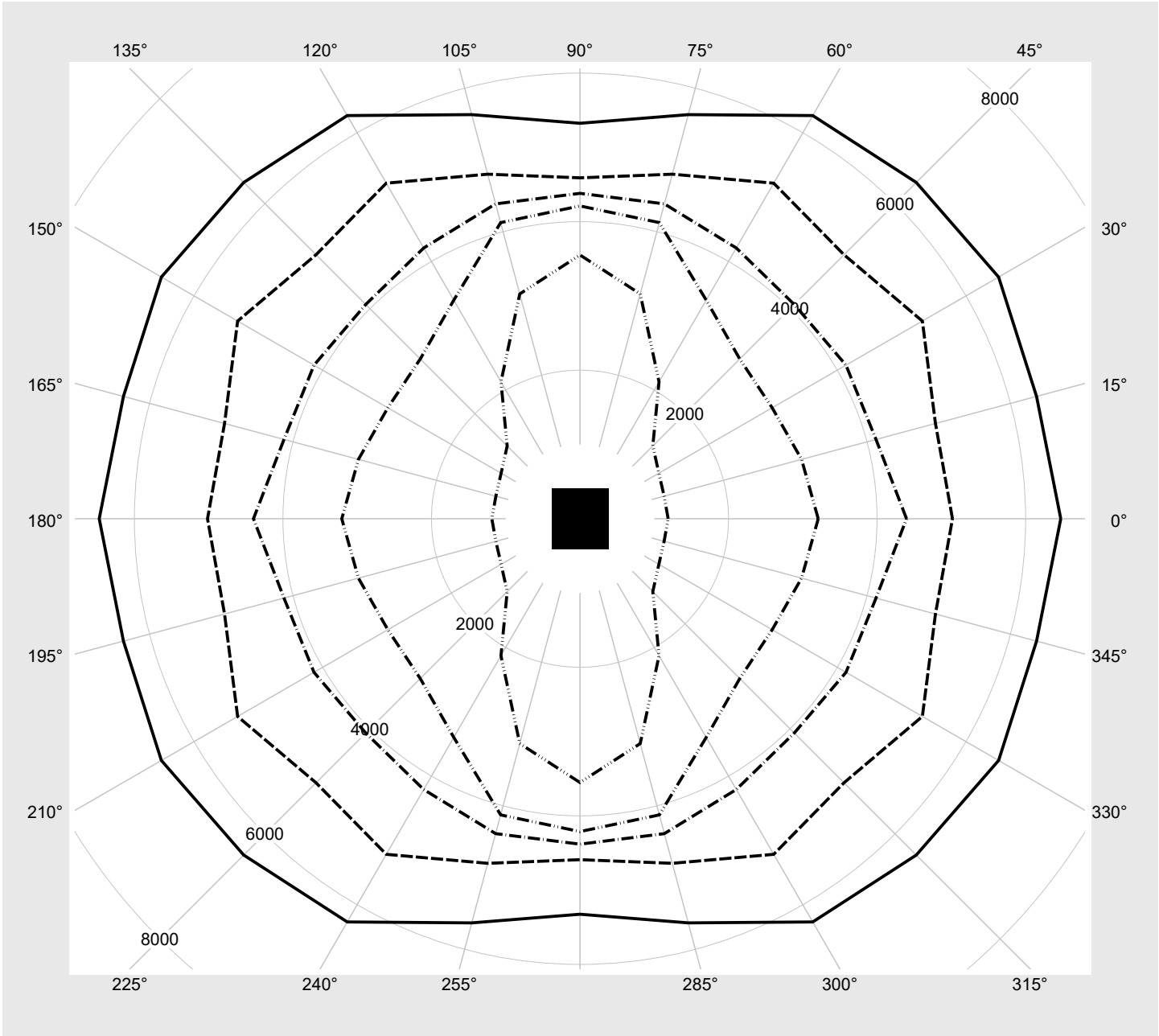
γ 70°

γ 75°

γ 80°

γ 85°

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Photometric test report

|                      |                                                  |                                 |
|----------------------|--------------------------------------------------|---------------------------------|
| Family<br>Highbay 11 | Order number: 51HN11DA3FMA<br>EAN: 4069025424051 | LP number<br>59711_372          |
| Dimming levels table |                                                  | environmental temperature: 25°C |
|                      |                                                  | siteco                          |

| Luminous flux<br>% | Dimming level<br>linear | Dimming level<br>logarithmic | Luminous flux<br>[lm] | Power consumption<br>[W] |
|--------------------|-------------------------|------------------------------|-----------------------|--------------------------|
| 100                | 254                     | 254                          | 14260                 | 73.2                     |
| 95                 | 241                     | 252                          | 13561                 | 69.3                     |
| 90                 | 228                     | 250                          | 12861                 | 65.5                     |
| 85                 | 214                     | 248                          | 12105                 | 61.5                     |
| 80                 | 201                     | 245                          | 11394                 | 57.7                     |
| 75                 | 188                     | 243                          | 10686                 | 53.8                     |
| 70                 | 175                     | 240                          | 9972                  | 50.1                     |
| 65                 | 162                     | 238                          | 9250                  | 46.4                     |
| 60                 | 149                     | 234                          | 8529                  | 42.7                     |
| 55                 | 137                     | 231                          | 7858                  | 39.2                     |
| 50                 | 124                     | 228                          | 7126                  | 35.6                     |
| 45                 | 111                     | 224                          | 6394                  | 31.9                     |
| 40                 | 99                      | 219                          | 5715                  | 28.6                     |
| 35                 | 86                      | 214                          | 4969                  | 24.9                     |
| 30                 | 74                      | 209                          | 4282                  | 21.7                     |
| 25                 | 62                      | 202                          | 3590                  | 18.3                     |
| 20                 | 49                      | 194                          | 2833                  | 14.8                     |
| 15                 | 37                      | 183                          | 2134                  | 11.5                     |
| 10                 | 25                      | 169                          | 1431                  | 8.2                      |
| 5                  | 13                      | 145                          | 720                   | 4.7                      |
| 2                  | 5                       | 110                          | 247                   | 2.5                      |