
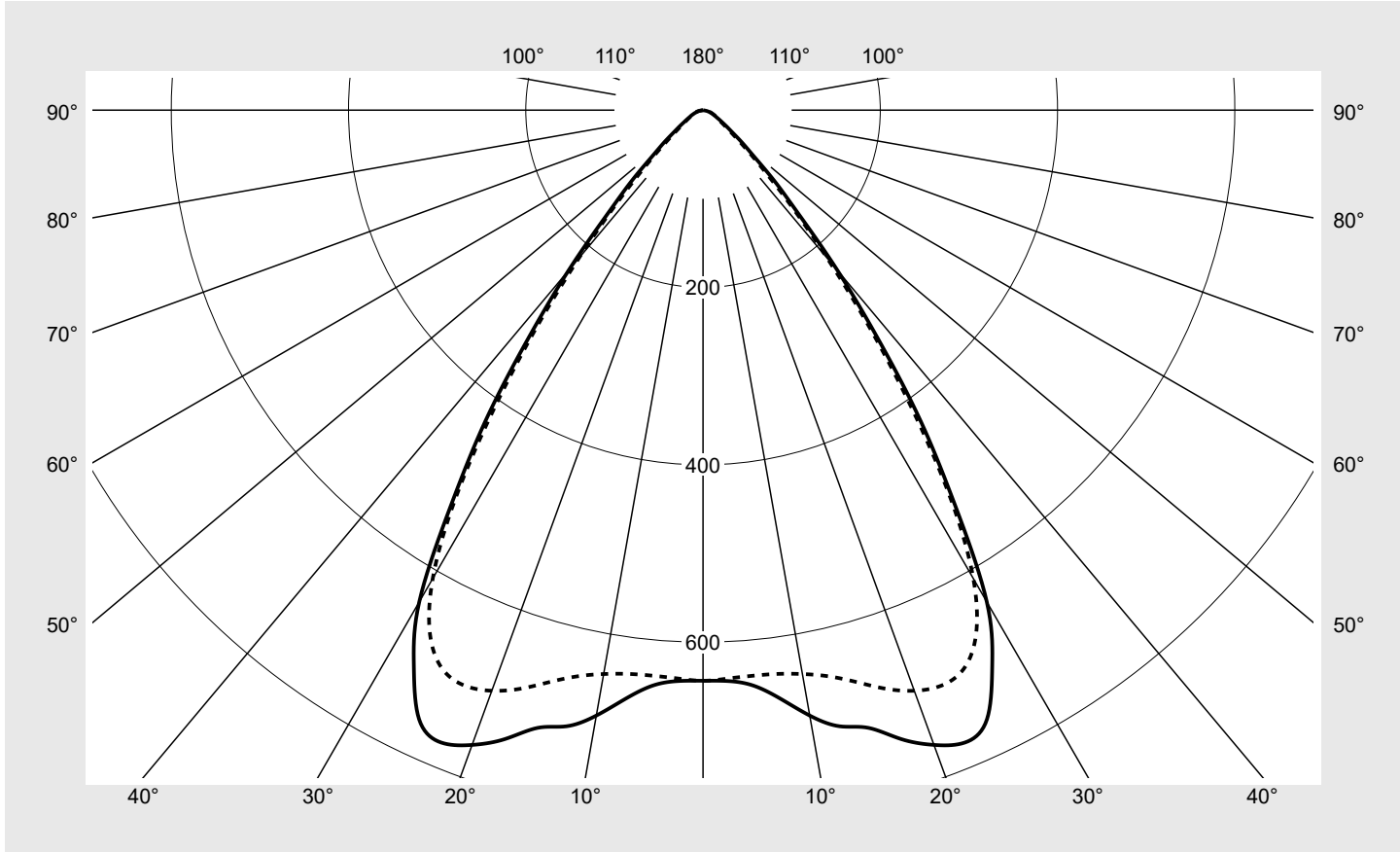


# Photometric test report

|  |  |  |
|--|--|--|
| <b>Family</b><br><b>Highbay 11</b>   | <b>Order number: 51HN12DA6LMA</b><br><b>EAN: 4069025424747</b>   | <b>LP number</b><br><b>59710_393</b>             |
|  | <b>Version</b> primary light control with lens, PMMA, housing, white, for Modario® rail, wide distribution   | <b>serial documentation</b><br><b>09.04.2025</b> |
|  | <b>Lamps</b> LED 6500 K   CRI ≥ 80<br><b>Controlgear</b> ECG-DALI<br><b>Rated values</b> Net luminous flux = 26540 lm<br>Power consumption = 146.7 W<br>Luminous efficacy = 180.9 lm/W |  |



Luminous intensity in cd/klm C180-0 C270-90 **Imax: 772 cd/klm**



| Classifications |                                     |
|-----------------|-------------------------------------|
| DIN 5040        | A 6 0                               |
| CIE             | N1=88 N2=98 N3=100<br>N4=100 N5=100 |

| Luminaire light output ratios |        |
|-------------------------------|--------|
| $\eta_{LB}$                   | 100.0% |
| $\phi_u$                      | 100.0% |
| $\phi_o$                      | 0.0%   |

**Measurement conditions**  
 DIN EN 13032 and DIN 5032

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|--|--|----------------------------|
| Family<br>Highbay 11                     | Order number: 51HN12DA6LMA<br>EAN: 4069025424747 | LP number<br>59710_393     |
| Table of values for luminous intensities |  | Maximum luminous intensity |
|  |  | <b>siteco</b>              |

| C-planes<br>$\gamma$         | 0°<br>180° | 15°                  | 30°                  | 45°                  | 60°                  | 75°                  | 90°<br>270°             | Phi-zone | Total<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° |                         |          |                   |
| Luminous intensity in cd/klm |            |                      |                      |                      |                      |                      | Luminous flux in lm/klm |          |                   |
| 0,0°                         | 643.6      | 643.6                | 643.6                | 643.6                | 643.6                | 643.6                | 643.6                   | 1.0      | 1.0               |
| 2,5°                         | 644.5      | 645.1                | 645.0                | 644.3                | 644.2                | 643.7                | 641.7                   | 7.7      | 8.7               |
| 5,0°                         | 651.5      | 652.3                | 650.7                | 647.5                | 645.3                | 643.2                | 640.4                   | 15.5     | 24.1              |
| 7,5°                         | 669.6      | 669.1                | 664.2                | 657.2                | 651.2                | 645.8                | 641.3                   | 23.5     | 47.6              |
| 10,0°                        | 693.4      | 691.0                | 681.5                | 670.0                | 659.9                | 651.2                | 645.8                   | 31.9     | 79.6              |
| 12,5°                        | 711.8      | 709.4                | 700.3                | 685.9                | 671.9                | 660.7                | 654.0                   | 40.7     | 120.2             |
| 15,0°                        | 721.3      | 721.7                | 717.1                | 704.9                | 689.4                | 675.9                | 667.7                   | 49.7     | 169.9             |
| 17,5°                        | 743.8      | 740.8                | 737.9                | 726.5                | 708.9                | 693.0                | 684.2                   | 59.4     | 229.3             |
| 20,0°                        | 761.9      | 761.9                | 759.6                | 745.2                | 724.0                | 705.6                | 696.8                   | 69.2     | 298.5             |
| 22,5°                        | 772.0      | 771.2                | 770.0                | 754.7                | 731.1                | 710.8                | 702.6                   | 78.2     | 376.7             |
| 25,0°                        | 758.1      | 756.6                | 756.3                | 743.6                | 722.7                | 703.3                | 695.6                   | 85.1     | 461.8             |
| 27,5°                        | 706.7      | 709.5                | 709.5                | 700.0                | 685.7                | 672.3                | 667.0                   | 87.8     | 549.7             |
| 30,0°                        | 640.4      | 635.6                | 633.7                | 626.6                | 621.7                | 614.1                | 609.9                   | 85.8     | 635.5             |
| 32,5°                        | 530.6      | 537.6                | 535.6                | 526.2                | 530.2                | 524.1                | 520.8                   | 78.1     | 713.6             |
| 35,0°                        | 428.2      | 426.4                | 425.9                | 411.9                | 420.8                | 414.2                | 411.4                   | 66.0     | 779.6             |
| 37,5°                        | 322.5      | 323.4                | 327.0                | 311.0                | 319.4                | 310.8                | 308.2                   | 53.0     | 832.6             |
| 40,0°                        | 236.1      | 234.0                | 241.6                | 230.8                | 230.9                | 219.8                | 218.4                   | 40.7     | 873.3             |
| 42,5°                        | 162.3      | 165.3                | 172.9                | 171.1                | 161.7                | 151.3                | 150.8                   | 30.2     | 903.5             |
| 45,0°                        | 117.3      | 114.9                | 119.4                | 122.5                | 109.3                | 102.6                | 102.3                   | 21.9     | 925.4             |
| 47,5°                        | 80.5       | 81.4                 | 82.8                 | 85.5                 | 75.2                 | 71.4                 | 70.8                    | 15.9     | 941.3             |
| 50,0°                        | 59.4       | 58.0                 | 58.0                 | 59.0                 | 52.9                 | 50.5                 | 49.6                    | 11.7     | 953.0             |
| 52,5°                        | 43.3       | 42.8                 | 42.8                 | 43.0                 | 39.3                 | 37.2                 | 36.6                    | 8.9      | 961.8             |
| 55,0°                        | 33.3       | 32.4                 | 32.9                 | 33.7                 | 30.5                 | 28.7                 | 28.3                    | 7.1      | 968.9             |
| 57,5°                        | 25.9       | 25.4                 | 25.9                 | 26.8                 | 24.5                 | 22.9                 | 22.9                    | 5.8      | 974.7             |
| 60,0°                        | 20.9       | 20.2                 | 21.2                 | 21.8                 | 20.4                 | 18.9                 | 19.2                    | 4.9      | 979.5             |
| 62,5°                        | 16.9       | 16.2                 | 17.4                 | 18.0                 | 17.2                 | 15.9                 | 16.4                    | 4.1      | 983.6             |
| 65,0°                        | 14.9       | 13.6                 | 14.4                 | 15.1                 | 14.8                 | 13.6                 | 14.4                    | 3.6      | 987.2             |
| 67,5°                        | 12.3       | 11.4                 | 12.5                 | 12.4                 | 13.0                 | 11.7                 | 12.6                    | 3.1      | 990.3             |
| 70,0°                        | 10.4       | 9.5                  | 10.5                 | 10.1                 | 11.1                 | 10.1                 | 11.0                    | 2.7      | 993.0             |
| 72,5°                        | 8.2        | 7.7                  | 7.9                  | 8.2                  | 8.7                  | 8.6                  | 9.5                     | 2.2      | 995.2             |
| 75,0°                        | 6.5        | 6.0                  | 6.0                  | 6.4                  | 6.6                  | 7.1                  | 7.9                     | 1.7      | 996.9             |
| 77,5°                        | 4.5        | 4.3                  | 4.4                  | 4.7                  | 5.1                  | 5.6                  | 6.3                     | 1.3      | 998.2             |
| 80,0°                        | 2.9        | 2.7                  | 2.9                  | 3.1                  | 3.5                  | 4.1                  | 4.7                     | 0.9      | 999.1             |
| 82,5°                        | 1.3        | 1.4                  | 1.6                  | 1.8                  | 2.2                  | 2.7                  | 3.3                     | 0.5      | 999.7             |
| 85,0°                        | 0.6        | 0.6                  | 0.6                  | 0.7                  | 1.0                  | 1.4                  | 1.8                     | 0.3      | 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            |

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|----------------------|--|------------------------|
| Family<br>Highbay 11 | Order number: 51HN12DA6LMA<br>EAN: 4069025424747 | LP number<br>59710_393 |
|----------------------|--|------------------------|

|           |               |        |  |
|-----------|---------------|--------|--|
| 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                  | 21.9 | 23.2 | 22.3 | 23.5 | 23.8               | 21.6 | 22.9 | 22.0 | 23.2 | 23.5 |
|                              | 3H                  | 21.9 | 23.0 | 22.3 | 23.4 | 23.7               | 21.6 | 22.8 | 22.0 | 23.1 | 23.5 |
|                              | 4H                  | 21.9 | 22.9 | 22.3 | 23.3 | 23.7               | 21.7 | 22.7 | 22.1 | 23.0 | 23.4 |
|                              | 6H                  | 21.9 | 22.8 | 22.3 | 23.2 | 23.6               | 21.7 | 22.6 | 22.1 | 23.0 | 23.4 |
|                              | 8H                  | 21.9 | 22.7 | 22.4 | 23.1 | 23.5               | 21.8 | 22.6 | 22.2 | 23.0 | 23.4 |
|                              | 12H                 | 21.9 | 22.6 | 22.4 | 23.0 | 23.5               | 21.8 | 22.5 | 22.2 | 22.9 | 23.3 |
| 4H                           | 2H                  | 21.8 | 22.8 | 22.2 | 23.2 | 23.6               | 21.5 | 22.6 | 21.9 | 22.9 | 23.3 |
|                              | 3H                  | 21.8 | 22.7 | 22.3 | 23.1 | 23.5               | 21.6 | 22.4 | 22.0 | 22.8 | 23.2 |
|                              | 4H                  | 21.8 | 22.6 | 22.3 | 23.0 | 23.5               | 21.6 | 22.4 | 22.1 | 22.8 | 23.2 |
|                              | 6H                  | 21.8 | 22.5 | 22.3 | 22.9 | 23.4               | 21.7 | 22.3 | 22.1 | 22.8 | 23.2 |
|                              | 8H                  | 21.8 | 22.4 | 22.3 | 22.8 | 23.3               | 21.7 | 22.3 | 22.2 | 22.7 | 23.2 |
|                              | 12H                 | 21.8 | 22.3 | 22.3 | 22.7 | 23.2               | 21.7 | 22.2 | 22.2 | 22.7 | 23.2 |
| 8H                           | 4H                  | 21.8 | 22.4 | 22.2 | 22.8 | 23.3               | 21.6 | 22.1 | 22.0 | 22.6 | 23.1 |
|                              | 6H                  | 21.7 | 22.2 | 22.2 | 22.7 | 23.2               | 21.6 | 22.1 | 22.1 | 22.6 | 23.1 |
|                              | 8H                  | 21.7 | 22.1 | 22.2 | 22.6 | 23.1               | 21.6 | 22.0 | 22.1 | 22.5 | 23.1 |
|                              | 12H                 | 21.7 | 22.0 | 22.2 | 22.5 | 23.1               | 21.7 | 22.0 | 22.2 | 22.5 | 23.0 |
| 12H                          | 4H                  | 21.8 | 22.3 | 22.3 | 22.7 | 23.2               | 21.6 | 22.0 | 22.1 | 22.5 | 23.0 |
|                              | 6H                  | 21.8 | 22.1 | 22.3 | 22.6 | 23.1               | 21.6 | 22.0 | 22.1 | 22.5 | 23.0 |
|                              | 8H                  | 21.7 | 22.0 | 22.2 | 22.5 | 23.1               | 21.6 | 22.0 | 22.2 | 22.5 | 23.0 |

|                 |                                 |                               |                    |
|-----------------|---------------------------------|-------------------------------|--------------------|
| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 426<br>B = 264 |
|-----------------|---------------------------------|-------------------------------|--------------------|

|          |          |            |                                |                             |                             |                             |                             |             |
|----------|----------|------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|
| C-planes | $\gamma$ | 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° |
|          |          |            | Luminance in cd/m <sup>2</sup> |                             |                             |                             |                             |             |
| 45,0°    |          | 39155.5    | 38340.2                        | 39854.0                     | 40875.6                     | 36466.6                     | 34238.6                     | 34137.8     |
| 50,0°    |          | 21816.0    | 21300.1                        | 21277.8                     | 21657.7                     | 19434.4                     | 18530.2                     | 18212.2     |
| 55,0°    |          | 13710.1    | 13343.5                        | 13534.0                     | 13844.6                     | 12558.9                     | 11805.6                     | 11663.6     |
| 60,0°    |          | 9860.9     | 9519.2                         | 10002.1                     | 10302.2                     | 9645.7                      | 8932.6                      | 9046.3      |
| 65,0°    |          | 8320.6     | 7569.0                         | 8067.6                      | 8415.5                      | 8240.7                      | 7620.9                      | 8051.5      |
| 70,0°    |          | 7151.6     | 6525.1                         | 7217.9                      | 6983.3                      | 7660.8                      | 6973.6                      | 7616.0      |
| 75,0°    |          | 5893.8     | 5458.8                         | 5444.3                      | 5822.6                      | 6049.7                      | 6475.5                      | 7218.6      |
| 80,0°    |          | 3979.1     | 3712.8                         | 3928.8                      | 4244.1                      | 4790.4                      | 5634.4                      | 6422.6      |
| 85,0°    |          | 1589.4     | 1581.3                         | 1632.7                      | 1911.6                      | 2826.8                      | 3766.3                      | 4879.2      |

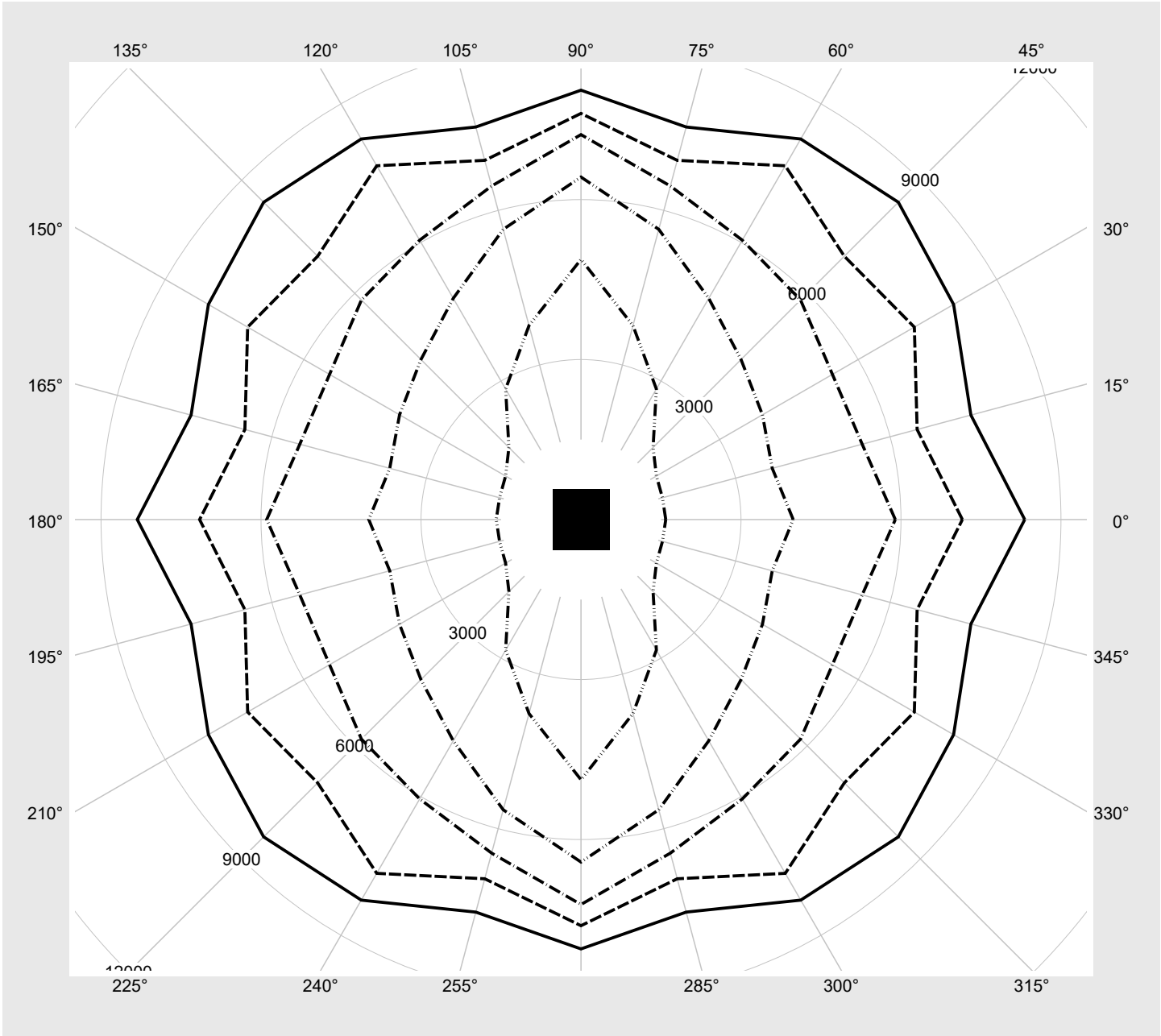
**Photometric test report**

|                             |  |                               |
|-----------------------------|--|-------------------------------|
| <b>Family</b><br>Highbay 11 | <b>Order number: 51HN12DA6LMA</b><br><b>EAN: 4069025424747</b> | <b>LP number</b><br>59710_393 |
|-----------------------------|--|-------------------------------|

**Luminance values in cd/m<sup>2</sup>**

$\gamma$  65°   
   $\gamma$  70°   
   $\gamma$  75°   
   $\gamma$  80°   
   $\gamma$  85°

**siteco**



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

|                             |                                 |               |
|-----------------------------|---------------------------------|---------------|
| <b>Dimming levels table</b> | environmental temperature: 25°C | <b>sITeco</b> |
|-----------------------------|---------------------------------|---------------|

| Luminous flux % | Dimming level linear | Dimming level logarithmic | Luminous flux [lm] | Power consumption [W] |
|-----------------|----------------------|---------------------------|--------------------|-----------------------|
| 100             | 254                  | 254                       | 26540              | 146.7                 |
| 95              | 240                  | 252                       | 25204              | 138.3                 |
| 90              | 226                  | 250                       | 23841              | 129.7                 |
| 85              | 213                  | 248                       | 22569              | 121.9                 |
| 80              | 199                  | 245                       | 21187              | 113.6                 |
| 75              | 186                  | 243                       | 19894              | 105.9                 |
| 70              | 173                  | 240                       | 18588              | 98.3                  |
| 65              | 160                  | 237                       | 17272              | 90.7                  |
| 60              | 147                  | 234                       | 15936              | 83.1                  |
| 55              | 134                  | 231                       | 14598              | 75.6                  |
| 50              | 121                  | 227                       | 13240              | 68.3                  |
| 45              | 109                  | 223                       | 11975              | 61.5                  |
| 40              | 96                   | 218                       | 10598              | 54.0                  |
| 35              | 84                   | 213                       | 9309               | 47.3                  |
| 30              | 72                   | 208                       | 8012               | 40.6                  |
| 25              | 59                   | 201                       | 6590               | 33.5                  |
| 20              | 47                   | 192                       | 5267               | 27.0                  |
| 15              | 35                   | 181                       | 3927               | 20.6                  |
| 10              | 24                   | 168                       | 2691               | 14.6                  |
| 5               | 12                   | 142                       | 1328               | 7.8                   |
| 2               | 5                    | 110                       | 525                | 3.9                   |