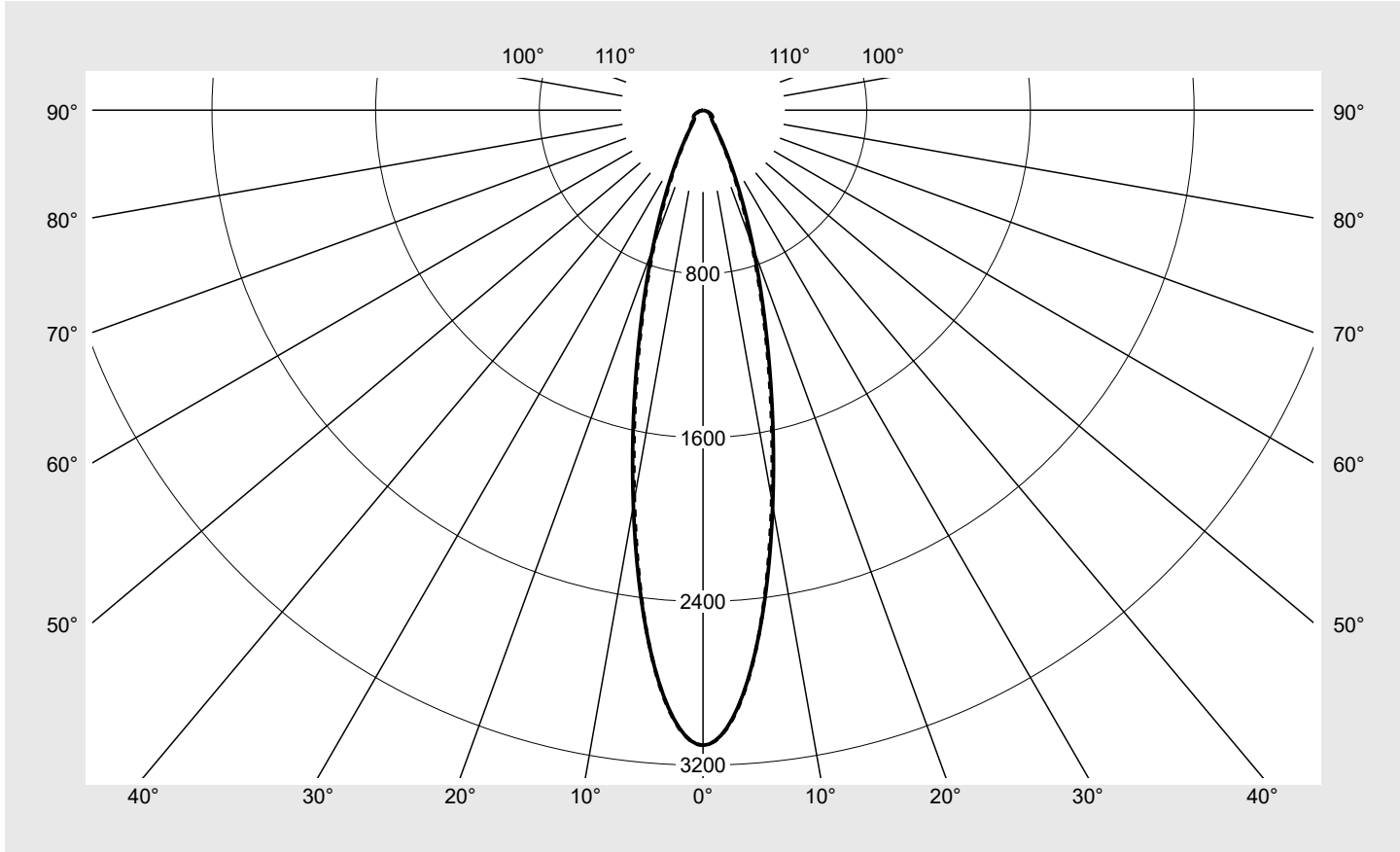


# Photometric test report

<b>Family</b> Highbay 11	<b>Order number: 51HLA1D24MCA + 59HL91001</b> <b>EAN: 4058352322925 + 4058352323519</b>	<b>LP number</b> 58920_3
<b>Version</b>	narrow distribution, UGR≤22, toughened safety glass	<b>serial documentation</b> 13.06.2019
<b>Lamps</b>	LED 4000 K   CRI ≥ 80	
<b>Controlgear</b>	ECG-DALI	
<b>Rated values</b>	Net luminous flux = 27140 lm Power consumption = 162.4 W Luminous efficacy = 167.1 lm/W	



**Luminous intensity in cd/klm** C180-0 C270-90 **Imax: 3103 cd/klm**



Classifications	
DIN 5040	A 7 0
CIE	N1=85 N2=94 N3=99 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

## Photometric test report

Family Highbay 11	Order number: 51HLA1D24MCA + 59HL91001 EAN: 4058352322925 + 4058352323519	LP number 58920_3
Table of values for luminous intensities		Maximum luminous intensity
		<b>sITeco</b>

C-planes $\gamma$	0° 180°	15°	30°	45°	60°	75°	90° 270°	Phi-zone	Total Phi-zone
		165° 195° 345°	150° 210° 330°	135° 225° 315°	120° 240° 300°	105° 255° 285°			
Luminous intensity in cd/klm							Luminous flux in lm/klm		
0°	3103.3	3103.3	3103.3	3103.3	3103.3	3103.3	3103.3	18.6	18.6
5°	2728.1	2725.7	2734.5	2735.8	2731.2	2739.6	2732.7	130.6	149.1
10°	1961.3	1955.1	1962.7	1959.8	1944.6	1940.4	1933.3	185.8	334.9
15°	1234.5	1231.5	1237.4	1233.6	1223.5	1217.2	1209.8	174.2	509.0
20°	720.2	721.2	730.7	731.8	720.5	706.3	696.1	134.9	644.0
25°	391.5	395.5	407.7	412.0	396.6	377.5	368.6	91.5	735.4
30°	203.6	206.8	216.0	219.0	212.4	200.7	194.3	57.3	792.7
35°	109.3	109.5	113.4	118.8	120.5	117.6	115.6	36.3	829.0
40°	71.8	72.6	76.4	83.5	87.0	87.1	87.3	28.5	857.5
45°	59.8	60.1	64.9	71.1	68.6	64.2	62.9	25.2	882.8
50°	58.8	60.0	64.4	66.4	57.1	49.4	48.5	24.6	907.3
55°	56.5	57.6	60.7	58.9	51.3	43.9	43.6	24.1	931.5
60°	50.4	50.7	52.1	52.2	45.2	38.5	38.0	22.4	953.8
65°	40.7	40.4	41.4	42.5	37.1	32.0	31.7	19.0	972.8
70°	28.4	28.2	29.2	30.2	27.5	24.4	24.3	14.2	987.1
75°	15.1	15.6	16.5	18.0	16.8	16.4	16.8	8.8	995.8
80°	5.3	5.6	6.2	6.9	7.4	7.5	9.1	3.7	999.5
85°	0.5	0.5	0.6	0.8	1.1	1.3	1.8	0.5	1000.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0

## Photometric test report

Family Highbay 11	Order number: 51HLA1D24MCA + 59HL91001 EAN: 4058352322925 + 4058352323519	LP number 58920_3
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UGR-Table	Standard room	siteco	
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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	18.5	19.7	18.9	20.0	20.3	17.5	18.7	17.8	19.0	19.3
	3H	20.0	21.0	20.4	21.4	21.7	18.9	19.9	19.2	20.2	20.6
	4H	20.3	21.3	20.7	21.6	22.0	19.4	20.3	19.8	20.7	21.1
	6H	20.5	21.3	20.9	21.7	22.1	19.7	20.6	20.1	20.9	21.3
	8H	20.5	21.2	20.9	21.6	22.0	19.9	20.6	20.3	21.0	21.4
	12H	20.5	21.1	20.9	21.5	22.0	19.9	20.5	20.3	20.9	21.3
4H	2H	19.3	20.2	19.7	20.6	20.9	18.5	19.4	18.9	19.8	20.2
	3H	20.8	21.6	21.2	22.0	22.4	20.0	20.7	20.4	21.1	21.6
	4H	21.2	21.9	21.7	22.3	22.8	20.5	21.2	21.0	21.6	22.1
	6H	21.3	21.9	21.8	22.4	22.8	20.9	21.5	21.3	21.9	22.4
	8H	21.3	21.9	21.8	22.3	22.8	20.9	21.5	21.4	21.9	22.4
	12H	21.3	21.7	21.8	22.2	22.7	20.9	21.4	21.4	21.9	22.4
8H	4H	21.4	21.9	21.9	22.4	22.8	20.8	21.3	21.3	21.7	22.2
	6H	21.5	22.0	22.0	22.4	22.9	21.2	21.6	21.7	22.0	22.6
	8H	21.5	21.9	22.0	22.4	22.9	21.2	21.6	21.7	22.1	22.6
	12H	21.5	21.8	22.0	22.3	22.8	21.2	21.5	21.7	22.0	22.6
12H	4H	21.4	21.8	21.9	22.3	22.8	20.8	21.2	21.3	21.7	22.2
	6H	21.5	21.9	22.0	22.4	22.9	21.1	21.5	21.6	22.0	22.5
	8H	21.5	21.8	22.0	22.3	22.9	21.2	21.5	21.7	22.0	22.6

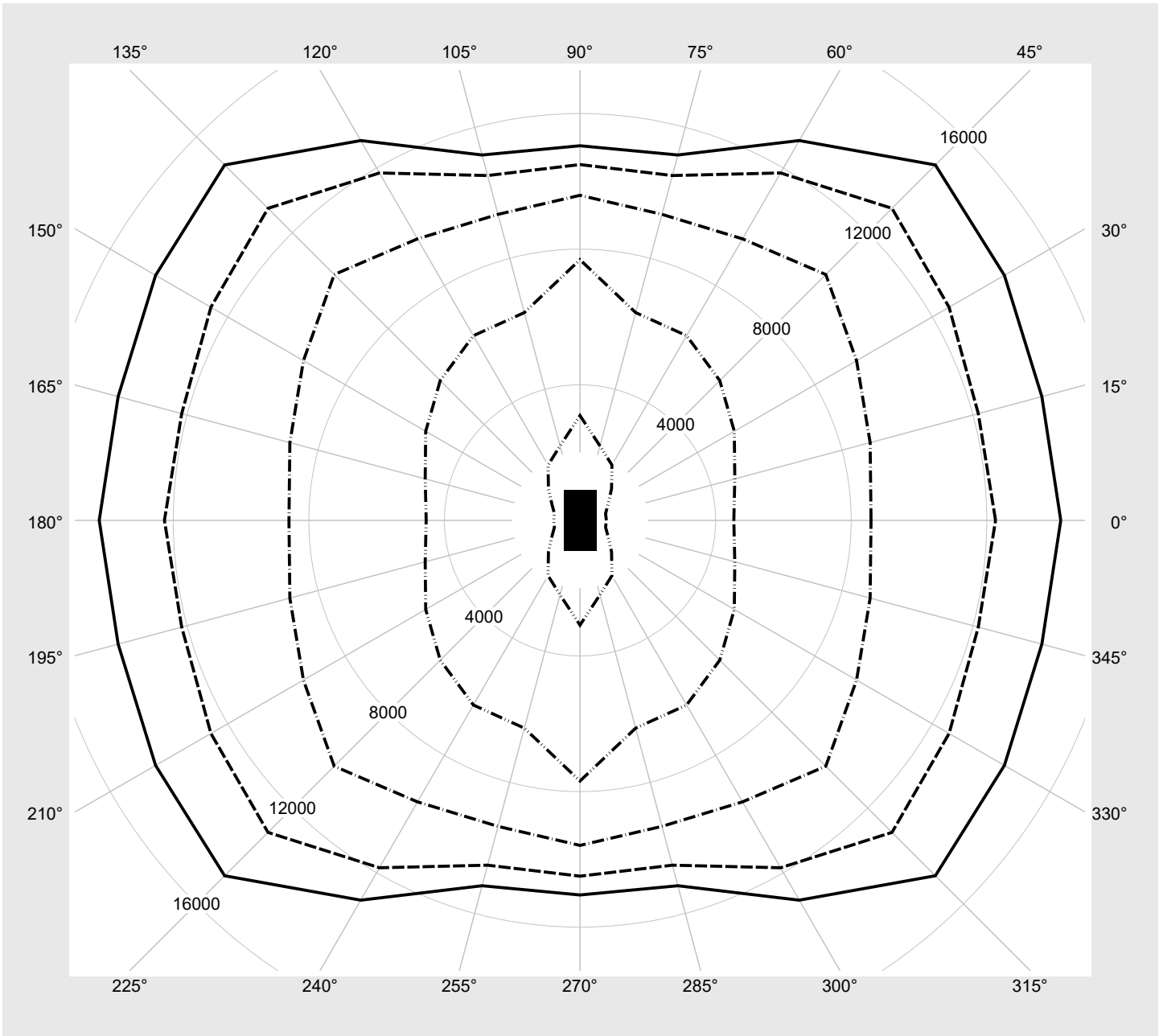
Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	L = 590 B = 312
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C-planes	0°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°
$\gamma$	Luminance in cd/m <sup>2</sup>						
45°	12468.4	12540.8	13529.1	14821.6	14300.8	13394.2	13108.6
50°	13481.4	13757.6	14762.0	15234.7	13105.3	11341.6	11120.8
55°	14520.3	14794.8	15611.0	15147.0	13174.2	11285.6	11213.9
60°	14846.8	14962.1	15374.6	15383.5	13334.1	11348.4	11201.9
65°	14183.4	14106.3	14457.2	14826.0	12936.9	11158.0	11050.2
70°	12259.7	12164.9	12573.1	13016.7	11833.0	10530.3	10495.4
75°	8585.7	8861.5	9421.4	10254.8	9588.3	9345.1	9588.3
80°	4538.2	4727.5	5256.5	5831.3	6289.8	6344.9	7689.0
85°	778.2	781.5	957.5	1316.1	1884.5	2273.6	3090.6

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**Luminance values in cd/m<sup>2</sup>**
γ 65°
γ 70°
γ 75°
γ 80°
γ 85°
siteco



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<b>Dimming levels table</b>	environmental temperature: 25°C	<b>siteco</b>
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	27140	162.4
95	241	252	25783	153.6
90	227	250	24426	145.0
85	214	248	23069	136.6
80	201	245	21712	128.3
75	188	243	20355	120.1
70	175	240	18998	111.9
65	162	238	17641	103.9
60	149	235	16284	95.9
55	136	232	14927	88.1
50	124	228	13570	80.3
45	111	225	12213	72.7
40	99	220	10856	65.0
35	86	216	9499	57.5
30	74	211	8142	50.1
25	62	205	6785	42.6
20	50	198	5428	35.3
15	38	190	4071	28.1
10	26	179	2713	20.8