

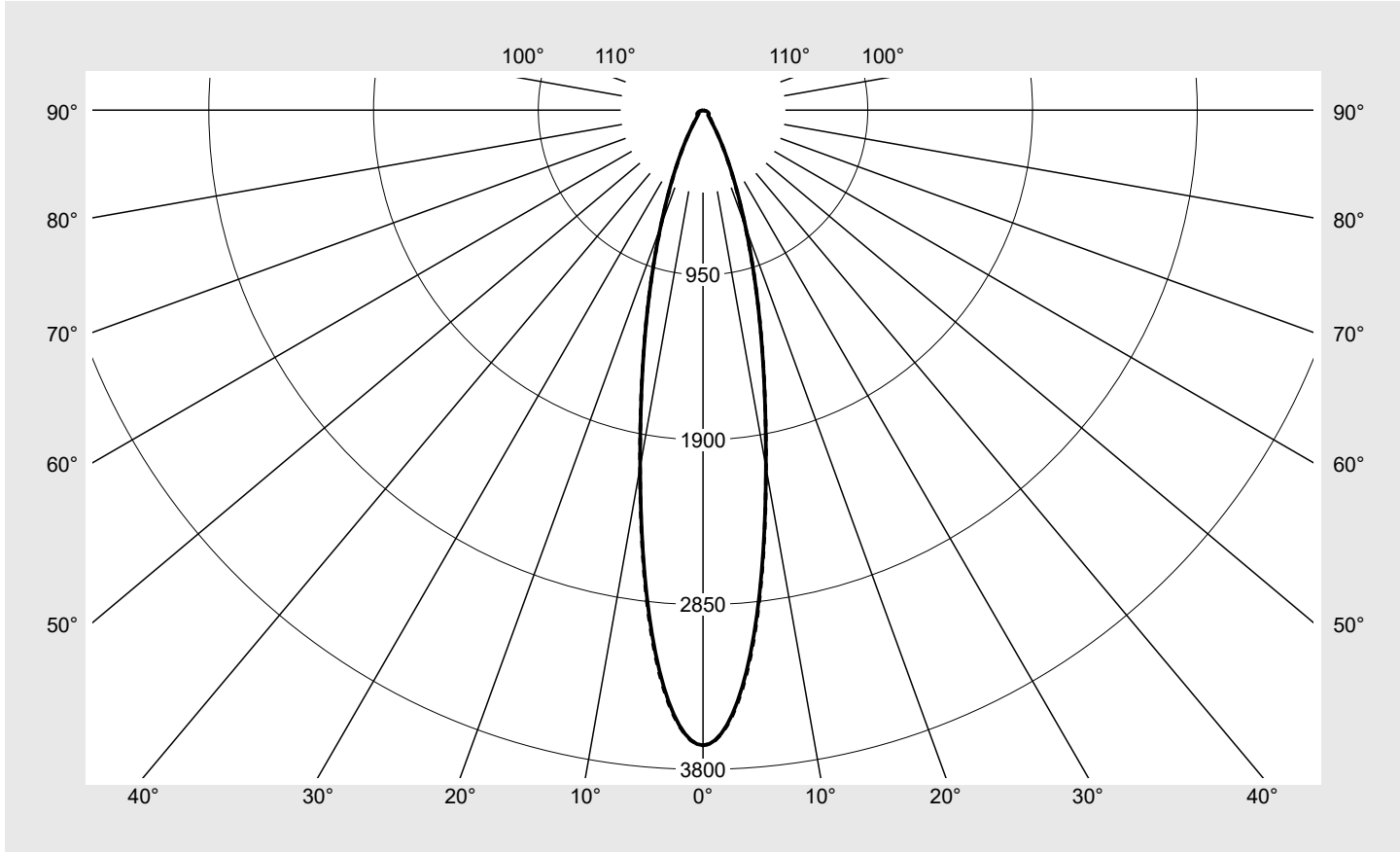


Photometric test report

Family Highbay 11	Order number: 51HLA1D24MCA EAN: 4058352322925	LP number 58918_3
	Version narrow distribution, UGR≤22 Lamps LED 4000 K CRI ≥ 80 Controlgear ECG-DALI Rated values Net luminous flux = 28120 lm Power consumption = 162.4 W Luminous efficacy = 173.2 lm/W	serial documentation 21.05.2019
		

Luminous intensity in cd/klm C180-0 C270-90 Imax: 3662 cd/klm



Classifications	
DIN 5040	A 7 0
CIE	N1=88 N2=95 N3=99 N4=100 N5=100

Luminaire light output ratios	
η_{LB}	100.0%
ϕ_u	100.0%
ϕ_o	0.0%

Measurement conditions
 DIN EN 13032 and DIN 5032

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Table of values for luminous intensities	Maximum luminous intensity
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C-planes γ	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°	3661.5	3661.5	3661.5	3661.5	3661.5	3661.5	3661.5	21.9	21.9
5°	3142.6	3138.8	3148.7	3152.8	3150.8	3162.1	3157.3	150.5	172.4
10°	2088.2	2082.4	2095.8	2102.6	2097.1	2098.1	2092.4	199.3	371.8
15°	1265.5	1263.0	1272.3	1276.0	1271.9	1272.7	1269.2	180.2	552.0
20°	717.4	718.4	730.4	738.2	732.8	722.5	712.3	136.1	688.1
25°	380.2	383.6	397.1	405.5	395.8	382.2	373.9	90.4	778.5
30°	189.9	192.8	203.8	209.2	205.7	196.2	189.8	54.7	833.2
35°	93.4	93.2	98.1	106.1	108.6	103.6	99.4	31.8	865.0
40°	56.8	57.1	60.0	67.1	71.1	71.1	70.3	22.9	887.9
45°	41.2	40.8	44.9	50.9	50.2	47.6	46.5	18.0	905.9
50°	41.3	41.9	46.2	48.9	40.8	33.1	32.5	17.3	923.2
55°	41.3	42.1	45.2	43.2	36.0	29.8	29.9	17.4	940.6
60°	39.0	39.2	40.5	39.6	33.4	27.4	27.5	16.9	957.4
65°	33.8	33.6	34.5	34.8	29.3	24.3	24.5	15.4	972.8
70°	26.5	26.3	27.0	27.6	23.9	20.0	20.0	12.7	985.5
75°	15.9	16.7	18.0	19.3	17.3	15.5	15.6	9.0	994.6
80°	6.4	6.9	7.9	9.2	9.9	9.6	10.9	4.7	999.3
85°	0.5	0.5	0.6	1.0	1.8	2.4	3.4	0.7	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

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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	16.7	17.9	17.1	18.2	18.5	15.5	16.6	15.8	16.9	17.2
	3H	18.6	19.6	19.0	19.9	20.3	17.1	18.0	17.5	18.4	18.7
	4H	19.2	20.1	19.6	20.4	20.8	17.8	18.7	18.2	19.0	19.4
	6H	19.4	20.2	19.8	20.6	21.0	18.4	19.3	18.9	19.6	20.0
	8H	19.5	20.2	19.9	20.6	21.0	18.8	19.5	19.2	19.8	20.2
	12H	19.5	20.1	19.9	20.5	20.9	18.8	19.5	19.3	19.9	20.3
4H	2H	17.5	18.4	17.9	18.8	19.2	16.6	17.5	17.0	17.9	18.3
	3H	19.5	20.3	20.0	20.7	21.1	18.4	19.1	18.8	19.5	19.9
	4H	20.2	20.9	20.6	21.3	21.7	19.1	19.8	19.6	20.2	20.7
	6H	20.5	21.1	20.9	21.5	22.0	19.8	20.4	20.3	20.8	21.3
	8H	20.5	21.0	21.0	21.5	21.9	20.1	20.6	20.5	21.0	21.5
	12H	20.5	20.9	21.0	21.4	21.9	20.1	20.6	20.6	21.0	21.5
8H	4H	20.5	21.0	21.0	21.4	21.9	19.6	20.1	20.1	20.6	21.0
	6H	20.9	21.3	21.4	21.7	22.2	20.4	20.8	20.9	21.3	21.8
	8H	20.8	21.2	21.4	21.7	22.2	20.6	21.0	21.1	21.5	22.0
	12H	20.8	21.1	21.3	21.6	22.2	20.7	21.0	21.2	21.5	22.1
12H	4H	20.5	20.9	21.0	21.4	21.9	19.6	20.0	20.1	20.5	21.0
	6H	20.8	21.2	21.3	21.7	22.2	20.4	20.7	20.9	21.2	21.8
	8H	20.9	21.2	21.4	21.7	22.2	20.6	20.9	21.1	21.4	22.0

Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	L = 600 B = 320
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C-planes	γ	Luminance 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°		8526.4	8443.6	9306.7	10541.5	10400.9	9861.8	9630.2	
50°		9419.7	9555.3	10518.0	11145.0	9289.6	7548.4	7403.5	
55°		10554.1	10748.4	11549.4	11020.1	9183.4	7604.6	7645.7	
60°		11427.6	11481.5	11851.4	11605.4	9790.7	8026.5	8061.9	
65°		11704.7	11632.6	11940.0	12061.0	10169.9	8430.5	8501.6	
70°		11335.3	11246.7	11546.0	11834.6	10229.2	8578.9	8581.9	
75°		8988.3	9431.4	10163.1	10929.2	9796.4	8776.1	8826.5	
80°		5429.9	5794.3	6652.9	7766.2	8358.3	8110.3	9184.0	
85°		774.7	779.7	1065.4	1712.3	3043.2	3977.6	5763.8	

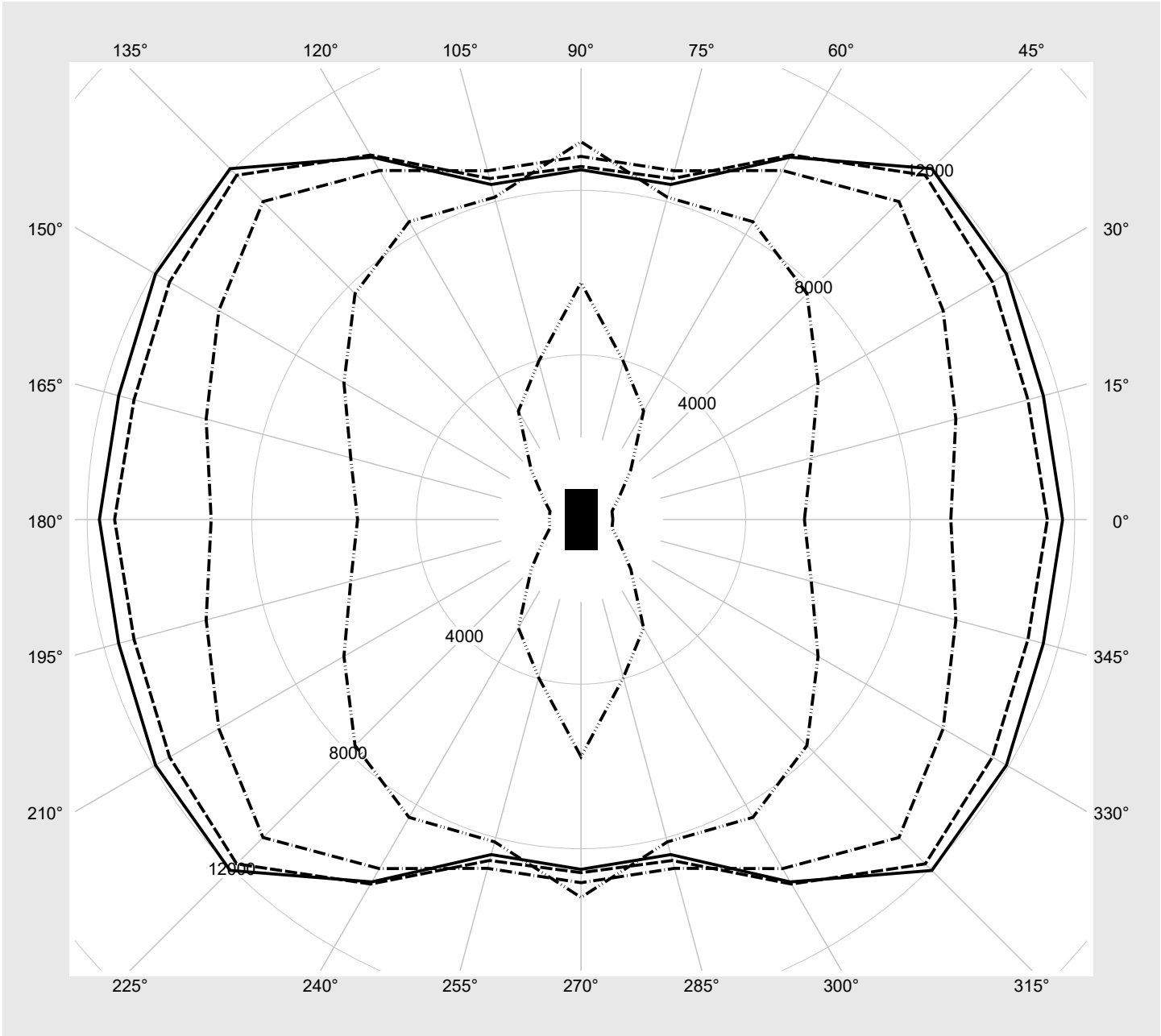
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Luminance values in cd/m²

γ 65°
 γ 70°
 γ 75°
 γ 80°
 γ 85°



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Dimming levels table	environmental temperature: 25°C	sITeco
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	28120	162.4
95	241	252	26714	153.6
90	227	250	25308	145.0
85	214	248	23902	136.6
80	201	245	22496	128.3
75	188	243	21090	120.1
70	175	240	19684	111.9
65	162	237	18278	103.9
60	149	234	16872	95.9
55	136	231	15466	88.1
50	124	228	14060	80.3
45	111	224	12654	72.7
40	99	219	11248	65.0
35	86	215	9842	57.5
30	74	209	8436	50.1
25	62	203	7030	42.6
20	50	195	5624	35.3
15	38	185	4218	28.1
10	26	170	2811	20.8