

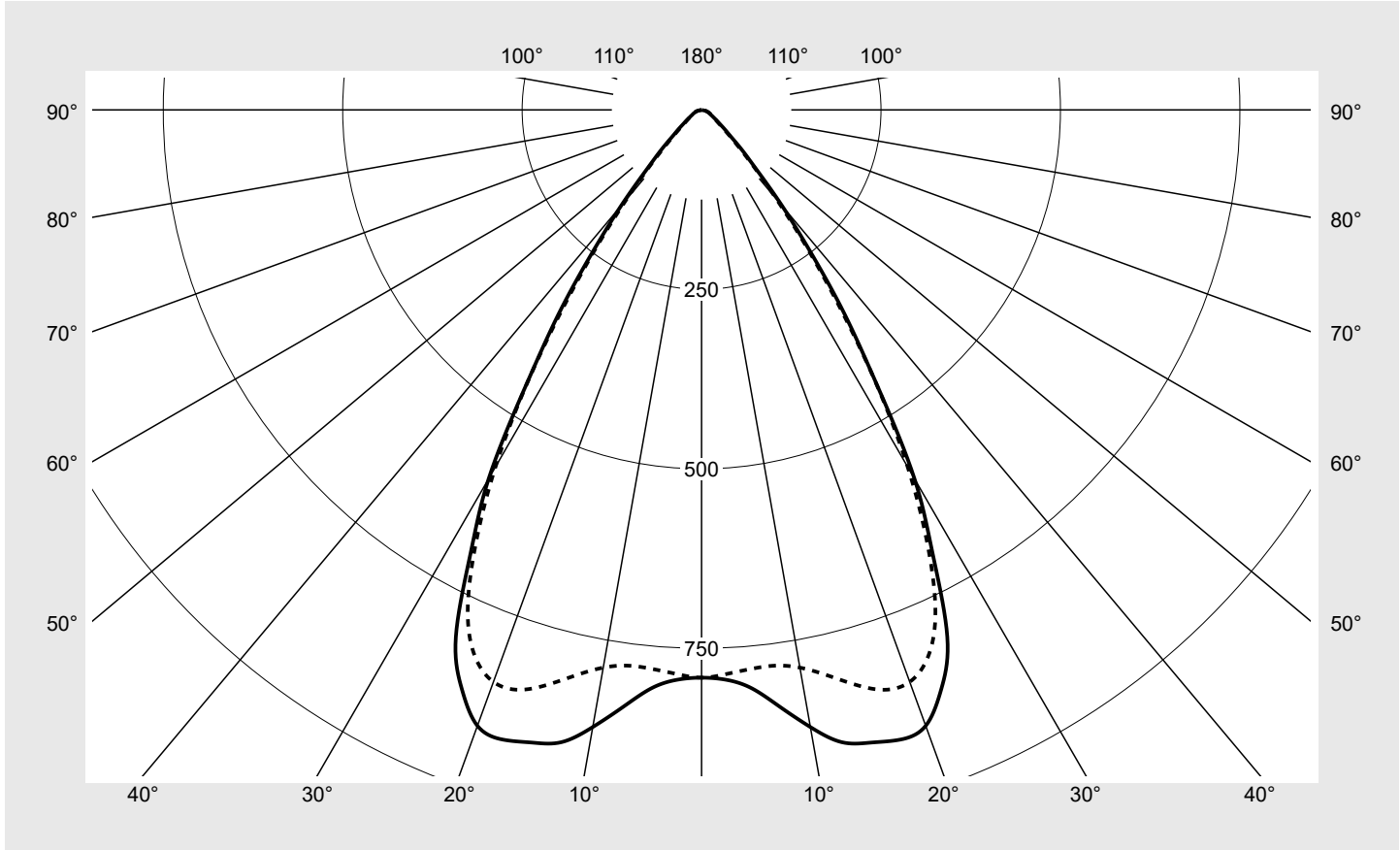


Photometric test report

Family Highbay 21	Order number: 52HN12DA5FLA EAN: 4069025445421	LP number 59723_231
	Version primary light control with lens, PMMA, housing, white, wide distribution	serial documentation 24.04.2025
	Lamps LED 5000 K CRI ≥ 80 Controlgear ECG-DALI Setting AC-mode Rated values Net luminous flux = 13620 lm Power consumption = 72.1 W Luminous efficacy = 188.9 lm/W	
		

Luminous intensity in cd/klm C180-0 C270-90 **Imax: 920 cd/klm**



Classifications	
DIN 5040	A 7 0
CIE	N1=90 N2=98 N3=100 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	sITeco
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C-planes	0,0° 180,0°	7,5°	15,0°	22,5°	30,0°	37,5°	45,0°
		172,5° 187,5° 352,5°	165,0° 195,0° 345,0°	157,5° 202,5° 337,5°	150,0° 210,0° 330,0°	142,5° 217,5° 322,5°	135,0° 225,0° 315,0°
γ	Luminous intensity in cd/klm						
0,0°	791.0	791.0	791.0	791.0	791.0	791.0	791.0
2,5°	794.7	794.4	795.0	795.0	794.2	792.8	792.0
5,0°	809.1	811.4	809.6	807.9	804.8	800.8	797.1
7,5°	839.0	837.9	835.9	831.3	824.9	817.3	810.1
10,0°	873.0	873.9	866.7	857.6	846.5	834.6	825.0
12,5°	902.2	899.8	892.6	881.8	868.2	853.9	842.5
15,0°	912.4	911.0	905.2	895.6	883.1	869.5	858.7
17,5°	919.8	918.2	913.1	904.4	892.7	879.7	870.3
20,0°	913.1	910.4	906.8	900.7	891.6	880.0	870.9
22,5°	873.0	875.7	872.3	868.8	863.2	854.7	847.2
25,0°	810.1	803.4	805.6	804.0	800.6	794.9	789.9
27,5°	697.5	704.9	702.5	701.8	699.9	697.0	693.3
30,0°	593.2	587.4	585.8	584.9	582.5	580.2	578.9
32,5°	456.1	464.3	462.1	462.0	458.3	454.5	453.6
35,0°	347.7	343.4	342.9	343.5	340.5	335.4	333.2
37,5°	248.6	249.1	246.7	247.3	245.8	241.7	237.9
40,0°	174.7	169.8	171.0	172.0	172.0	169.5	166.1
42,5°	115.9	118.7	117.3	118.1	118.9	118.2	116.5
45,0°	82.2	79.8	80.4	81.1	81.3	81.6	80.9
47,5°	56.5	57.6	57.2	57.7	57.6	57.9	57.5
50,0°	42.4	41.3	41.7	42.1	42.1	42.1	42.0
52,5°	32.0	31.8	31.7	32.2	32.5	32.7	32.7
55,0°	25.6	24.9	25.0	25.6	26.1	26.6	26.9
57,5°	20.6	20.3	20.3	20.8	21.4	22.1	22.4
60,0°	17.2	16.8	16.6	17.2	18.2	18.6	18.9
62,5°	14.5	14.3	13.9	14.3	15.3	15.8	16.0
65,0°	13.1	12.5	12.0	12.2	13.0	13.5	13.7
67,5°	11.1	10.9	10.3	10.4	11.4	11.4	11.5
70,0°	9.4	9.0	8.7	8.7	9.6	9.3	9.5
72,5°	7.6	7.5	7.3	7.2	7.3	7.4	7.8
75,0°	5.9	5.7	5.6	5.7	5.6	5.7	6.1
77,5°	4.1	4.1	4.1	4.2	4.1	4.2	4.5
80,0°	2.6	2.5	2.5	2.7	2.7	2.8	2.9
82,5°	1.1	1.2	1.2	1.3	1.5	1.5	1.7
85,0°	0.5	0.5	0.5	0.5	0.5	0.5	0.6
87,5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3

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Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes	52,5°	60,0°	67,5°	75,0°	82,5°	90,0°	Phi-zone	Total Phi-zone
	127,5°	120,0°	112,5°	105,0°	97,5°			
	232,5°	240,0°	247,5°	255,0°	262,5°			
	307,5°	300,0°	292,5°	285,0°	277,5°	270,0°		
γ	Luminous intensity in cd/klm						Luminous flux in lm/klm	
0,0°	791.0	791.0	791.0	791.0	791.0	791.0	1.2	1.2
2,5°	791.3	790.7	790.0	789.4	788.0	786.7	9.5	10.7
5,0°	794.2	790.9	788.1	786.0	783.2	781.9	19.1	29.7
7,5°	803.7	797.3	791.2	786.8	782.5	780.9	29.0	58.7
10,0°	816.7	808.7	801.4	796.1	791.2	788.9	39.5	98.2
12,5°	833.0	825.3	818.6	813.6	808.7	806.6	50.4	148.6
15,0°	850.7	844.9	836.9	832.9	831.6	829.0	61.4	210.0
17,5°	864.2	859.8	856.6	853.6	849.6	847.0	72.4	282.5
20,0°	864.8	860.1	856.9	853.9	850.4	848.0	82.3	364.7
22,5°	841.4	836.7	833.2	829.7	826.8	824.5	89.2	453.9
25,0°	786.0	782.5	779.1	775.6	772.9	771.0	91.6	545.4
27,5°	691.2	689.6	687.4	684.8	682.7	681.4	87.8	633.3
30,0°	578.6	579.1	578.3	576.4	575.3	574.3	79.6	712.9
32,5°	454.5	456.7	457.0	455.4	454.6	454.3	67.4	780.2
35,0°	335.0	337.7	338.0	336.6	336.0	336.2	53.3	833.5
37,5°	239.3	241.4	241.0	239.6	239.1	239.2	40.5	874.0
40,0°	166.2	166.4	164.7	163.3	162.9	163.0	29.6	903.6
42,5°	115.3	113.5	111.1	110.0	109.8	109.7	21.3	924.9
45,0°	79.0	76.9	75.1	74.3	74.0	73.9	15.2	940.1
47,5°	56.0	54.4	53.1	52.3	51.9	51.7	11.2	951.3
50,0°	40.9	39.8	38.8	38.0	37.5	37.4	8.5	959.8
52,5°	31.8	30.8	29.9	29.1	28.8	28.7	6.8	966.6
55,0°	25.9	25.0	24.2	23.4	23.2	23.3	5.6	972.3
57,5°	21.7	20.8	20.1	19.5	19.4	19.6	4.8	977.0
60,0°	18.6	18.0	17.1	16.6	16.8	17.1	4.2	981.2
62,5°	16.0	15.6	14.7	14.4	14.7	15.1	3.6	984.8
65,0°	14.0	13.6	12.8	12.7	13.1	13.5	3.2	988.1
67,5°	12.0	12.1	11.2	11.1	11.6	12.1	2.9	991.0
70,0°	9.8	10.4	9.7	9.7	10.2	10.6	2.5	993.4
72,5°	7.8	8.3	8.3	8.3	8.8	9.1	2.1	995.5
75,0°	6.2	6.3	6.8	6.9	7.3	7.6	1.6	997.1
77,5°	4.6	4.9	5.3	5.5	5.8	6.0	1.3	998.4
80,0°	3.1	3.4	3.7	4.0	4.2	4.4	0.9	999.2
82,5°	1.8	2.1	2.4	2.6	2.8	2.9	0.5	999.7
85,0°	0.7	1.0	1.2	1.3	1.6	1.6	0.2	1000.0
87,5°	0.3	0.3	0.3	0.3	0.4	0.4	0.1	1000.0

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UGR-Table		Standard room									
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	18.0	19.3	18.4	19.6	19.9	17.8	19.1	18.2	19.4	19.7
	3H	18.1	19.1	18.4	19.5	19.8	17.9	19.0	18.3	19.3	19.7
	4H	18.1	19.1	18.5	19.4	19.8	18.0	19.0	18.4	19.3	19.7
	6H	18.0	18.9	18.5	19.3	19.7	18.0	18.9	18.4	19.3	19.7
	8H	18.1	18.9	18.6	19.3	19.7	18.1	18.9	18.6	19.3	19.7
	12H	18.1	18.8	18.6	19.2	19.6	18.1	18.8	18.6	19.2	19.6
4H	2H	17.9	18.9	18.3	19.3	19.6	17.8	18.7	18.2	19.1	19.5
	3H	18.0	18.8	18.4	19.2	19.6	17.9	18.7	18.3	19.1	19.5
	4H	18.0	18.8	18.5	19.2	19.6	18.0	18.7	18.4	19.1	19.6
	6H	18.0	18.6	18.5	19.1	19.6	18.1	18.7	18.5	19.1	19.6
	8H	18.0	18.6	18.5	19.0	19.5	18.1	18.7	18.6	19.1	19.6
	12H	18.0	18.5	18.5	18.9	19.4	18.2	18.6	18.7	19.1	19.6
8H	4H	18.0	18.5	18.5	19.0	19.5	17.9	18.5	18.4	18.9	19.4
	6H	18.0	18.4	18.5	18.9	19.4	18.0	18.5	18.5	19.0	19.5
	8H	17.9	18.3	18.5	18.8	19.4	18.1	18.5	18.6	19.0	19.5
	12H	17.9	18.2	18.5	18.7	19.3	18.1	18.4	18.6	18.9	19.5
12H	4H	18.0	18.4	18.5	18.9	19.4	18.0	18.4	18.5	18.9	19.4
	6H	18.0	18.3	18.5	18.8	19.4	18.1	18.4	18.6	18.9	19.4
	8H	18.0	18.3	18.5	18.8	19.3	18.1	18.4	18.6	18.9	19.4

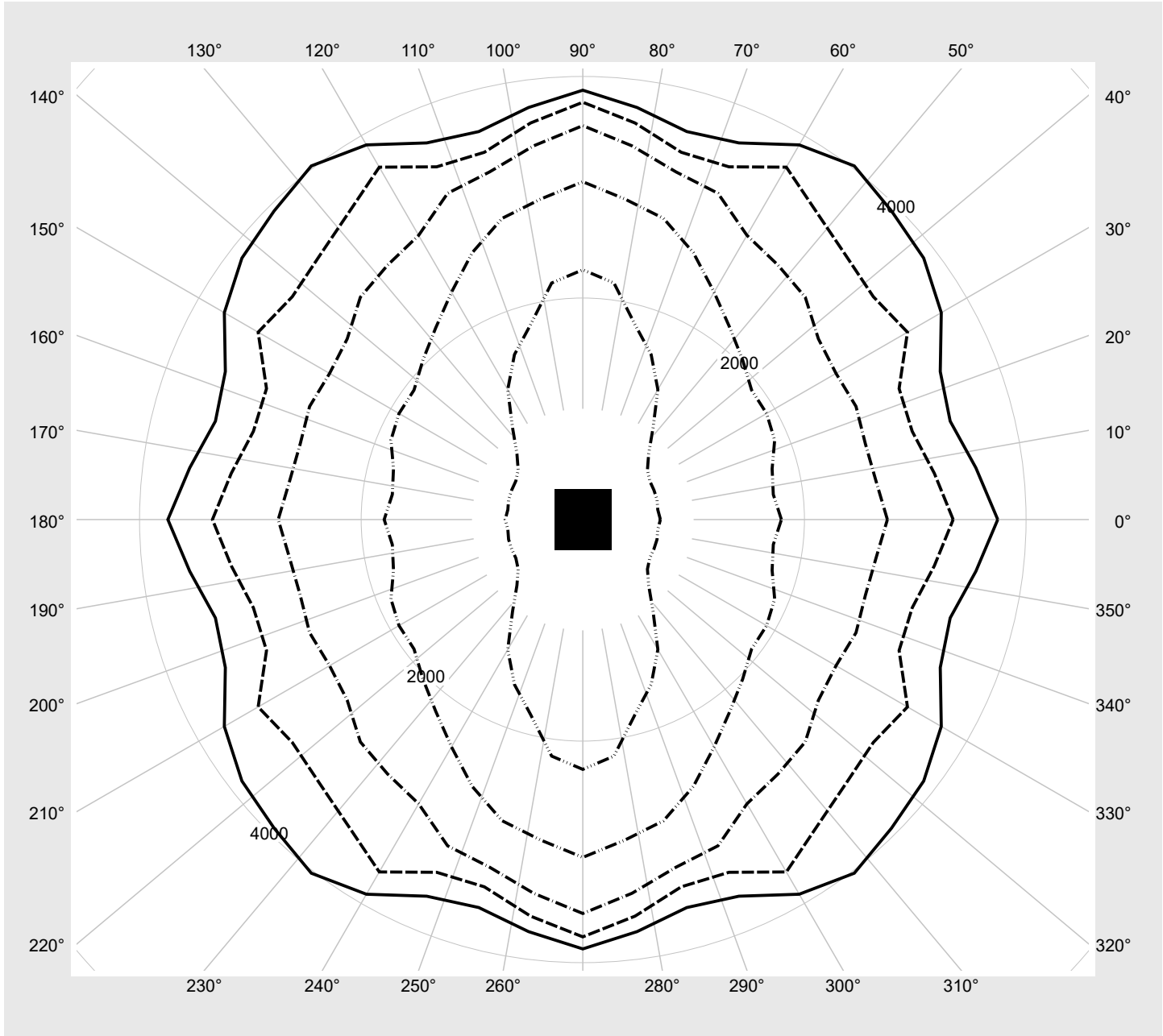
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Luminance table		Max. for $\gamma \geq 65^\circ$									
		Photometric dimensions in mm: L = 426 B = 264									
C-planes	γ	10,0°	20,0°	30,0°	40,0°	50,0°	60,0°	70,0°	80,0°	90,0°	
		170,0°	160,0°	150,0°	140,0°	130,0°	120,0°	110,0°	100,0°		
		190,0°	200,0°	210,0°	220,0°	230,0°	240,0°	250,0°	260,0°		
		180,0°	350,0°	340,0°	320,0°	310,0°	300,0°	290,0°	280,0°	270,0°	
Luminance in cd/m ²											
45,0°		14083.3	13647.4	13852.5	13929.5	13958.2	13647.7	13162.9	12802.7	12684.0	12649.1
50,0°		7989.2	7769.1	7914.5	7932.7	7931.6	7781.2	7501.8	7252.5	7094.1	7038.5
55,0°		5409.0	5250.7	5367.6	5504.7	5652.5	5544.2	5269.9	5049.7	4912.1	4928.9
60,0°		4161.4	4041.4	4109.5	4399.5	4537.8	4530.3	4364.2	4096.9	4049.2	4134.1
65,0°		3744.5	3526.8	3451.2	3735.3	3907.1	4018.6	3905.5	3643.2	3710.2	3876.0
70,0°		3342.2	3156.5	3054.1	3383.0	3308.9	3433.1	3673.3	3418.4	3554.0	3767.1
75,0°		2748.5	2653.3	2665.5	2638.6	2719.7	2874.6	2962.8	3226.5	3351.5	3556.2
80,0°		1792.4	1735.0	1846.0	1915.1	1947.0	2128.4	2369.8	2680.1	2880.4	3049.8
85,0°		700.3	682.7	694.1	697.5	762.7	961.4	1354.8	1687.0	2068.7	2255.2

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



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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	13620	72.1
95	241	252	12941	68.3
90	228	250	12263	64.7
85	215	248	11577	61.0
80	202	246	10893	57.4
75	189	243	10208	53.5
70	176	241	9515	49.9
65	164	238	8877	46.6
60	151	235	8183	42.9
55	138	232	7485	39.3
50	125	228	6785	35.7
45	113	224	6140	32.4
40	100	220	5438	28.8
35	88	215	4784	25.5
30	75	209	4078	22.0
25	63	203	3424	18.7
20	50	194	2709	15.1
15	38	184	2051	11.9
10	25	169	1337	8.4
5	13	145	671	4.9
2	5	110	229	2.5