

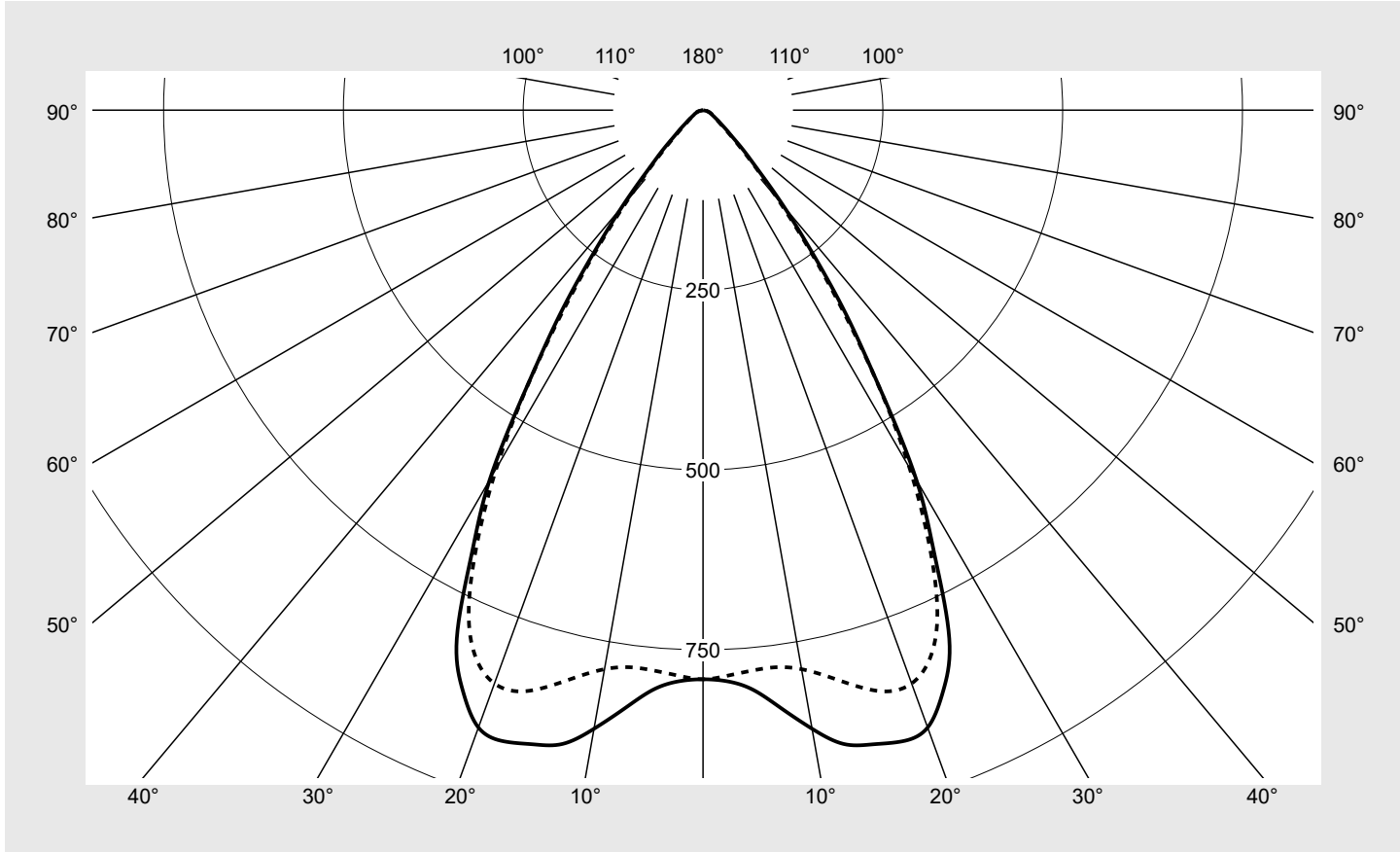


Photometric test report

Family Highbay 21	Order number: 52HN12DB4QDA02 EAN: 4069025421838	LP number 59723_160
	Version	primary light control with lens, PMMA, housing, white, wide distribution, with Node BT
	Lamps	LED 4000 K CRI ≥ 80
	Controlgear	ECG-DALI
	Rated values	Net luminous flux = 38000 lm Power consumption = 198.2 W Luminous efficacy = 191.7 lm/W
		serial documentation 20.03.2025
		

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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sITeco

Table of values for luminous intensities Maximum luminous intensity

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°
Luminous intensity in cd/klm							
γ							
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



C-planes γ	52,5°	60,0°	67,5°	75,0°	82,5°	90,0° 270,0°	Phi-zone	Total Phi-zone
	127,5° 232,5° 307,5°	120,0° 240,0° 300,0°	112,5° 247,5° 292,5°	105,0° 255,0° 285,0°	97,5° 262,5° 277,5°			
	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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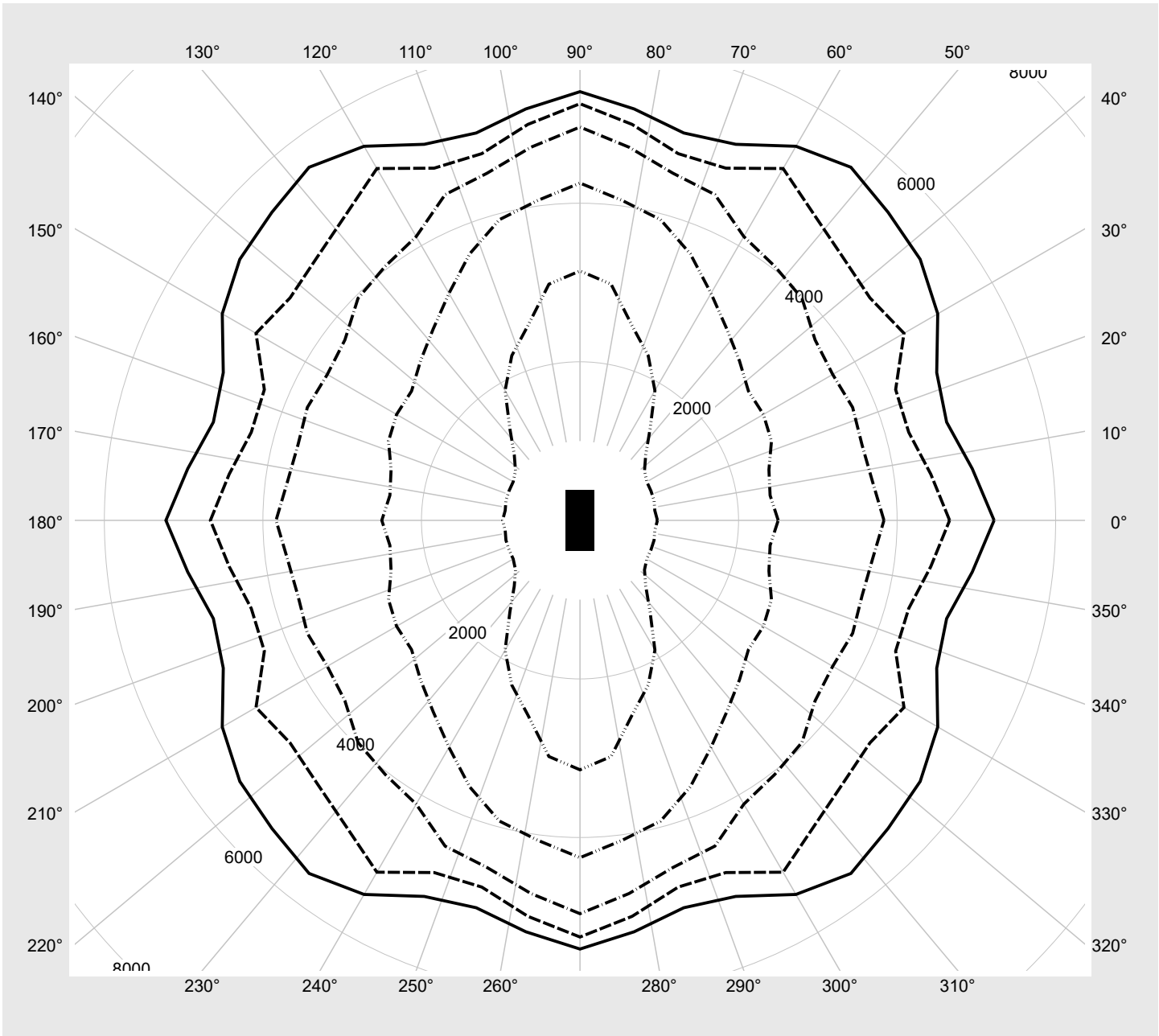
UGR-Table		Standard room									
Reflection factor of ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
Reflection factor of walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
Reflection factor of floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		View crosswise (C0)					View endwise (C90)				
x	y										
2H	2H	19.2	20.4	19.5	20.7	21.0	19.0	20.2	19.4	20.5	20.9
	3H	19.2	20.3	19.6	20.6	21.0	19.1	20.2	19.5	20.5	20.8
	4H	19.2	20.2	19.6	20.6	20.9	19.1	20.1	19.5	20.5	20.9
	6H	19.2	20.1	19.6	20.5	20.9	19.2	20.1	19.6	20.4	20.8
	8H	19.3	20.0	19.7	20.4	20.8	19.3	20.0	19.7	20.4	20.8
	12H	19.3	19.9	19.7	20.3	20.8	19.3	20.0	19.7	20.4	20.8
4H	2H	19.1	20.1	19.5	20.4	20.8	18.9	19.9	19.3	20.3	20.6
	3H	19.2	20.0	19.6	20.4	20.8	19.1	19.9	19.5	20.3	20.7
	4H	19.2	19.9	19.6	20.3	20.8	19.1	19.9	19.6	20.3	20.7
	6H	19.2	19.8	19.7	20.2	20.7	19.2	19.8	19.7	20.3	20.8
	8H	19.2	19.7	19.6	20.2	20.6	19.3	19.8	19.7	20.3	20.7
	12H	19.2	19.6	19.7	20.1	20.6	19.3	19.7	19.8	20.2	20.7
8H	4H	19.1	19.7	19.6	20.1	20.6	19.1	19.6	19.6	20.1	20.6
	6H	19.1	19.6	19.6	20.1	20.6	19.2	19.6	19.7	20.1	20.6
	8H	19.1	19.5	19.6	20.0	20.5	19.2	19.6	19.7	20.1	20.6
	12H	19.1	19.4	19.6	19.9	20.5	19.3	19.6	19.8	20.1	20.6
12H	4H	19.2	19.6	19.7	20.1	20.6	19.1	19.5	19.6	20.0	20.5
	6H	19.2	19.5	19.7	20.0	20.5	19.2	19.5	19.7	20.0	20.6
	8H	19.1	19.4	19.6	19.9	20.5	19.2	19.5	19.8	20.0	20.6

Luminance table		Max. for $\gamma \geq 65^\circ$									
		Photometric dimensions in mm: L = 852 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°	330,0°	320,0°	310,0°	300,0°	290,0°	280,0°	270,0°
Luminance in cd/m ²											
45,0°		19646.3	19038.2	19324.3	19431.7	19471.8	19038.7	18362.3	17859.9	17694.2	17645.5
50,0°		11145.0	10837.9	11040.8	11066.1	11064.6	10854.8	10465.0	10117.2	9896.3	9818.7
55,0°		7545.6	7324.8	7487.8	7679.0	7885.3	7734.2	7351.5	7044.4	6852.4	6875.8
60,0°		5805.2	5637.9	5732.8	6137.4	6330.3	6319.8	6088.0	5715.2	5648.7	5767.0
65,0°		5223.6	4919.9	4814.4	5210.8	5450.4	5605.9	5448.2	5082.3	5175.7	5407.1
70,0°		4662.5	4403.4	4260.5	4719.3	4616.0	4789.2	5124.3	4768.7	4957.8	5255.2
75,0°		3834.2	3701.4	3718.4	3680.8	3794.0	4010.0	4133.2	4501.0	4675.4	4960.9
80,0°		2500.4	2420.4	2575.2	2671.6	2716.1	2969.1	3305.9	3738.8	4018.2	4254.5
85,0°		977.0	952.4	968.3	973.1	1064.0	1341.2	1889.9	2353.4	2885.9	3146.0

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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	38000	198.2
95	241	252	36142	187.8
90	228	250	34270	177.6
85	214	248	32244	166.6
80	201	245	30347	156.3
75	188	243	28447	146.3
70	175	240	26529	136.1
65	163	238	24754	126.7
60	150	235	22825	116.7
55	137	231	20886	106.6
50	124	228	18947	96.8
45	112	224	17141	87.6
40	99	219	15170	77.7
35	87	215	13346	68.5
30	74	209	11364	58.8
25	62	202	9525	49.6
20	50	194	7676	40.7
15	37	183	5668	31.1
10	25	169	3806	22.3
5	13	145	1934	13.0
1	4	102	528	5.9