

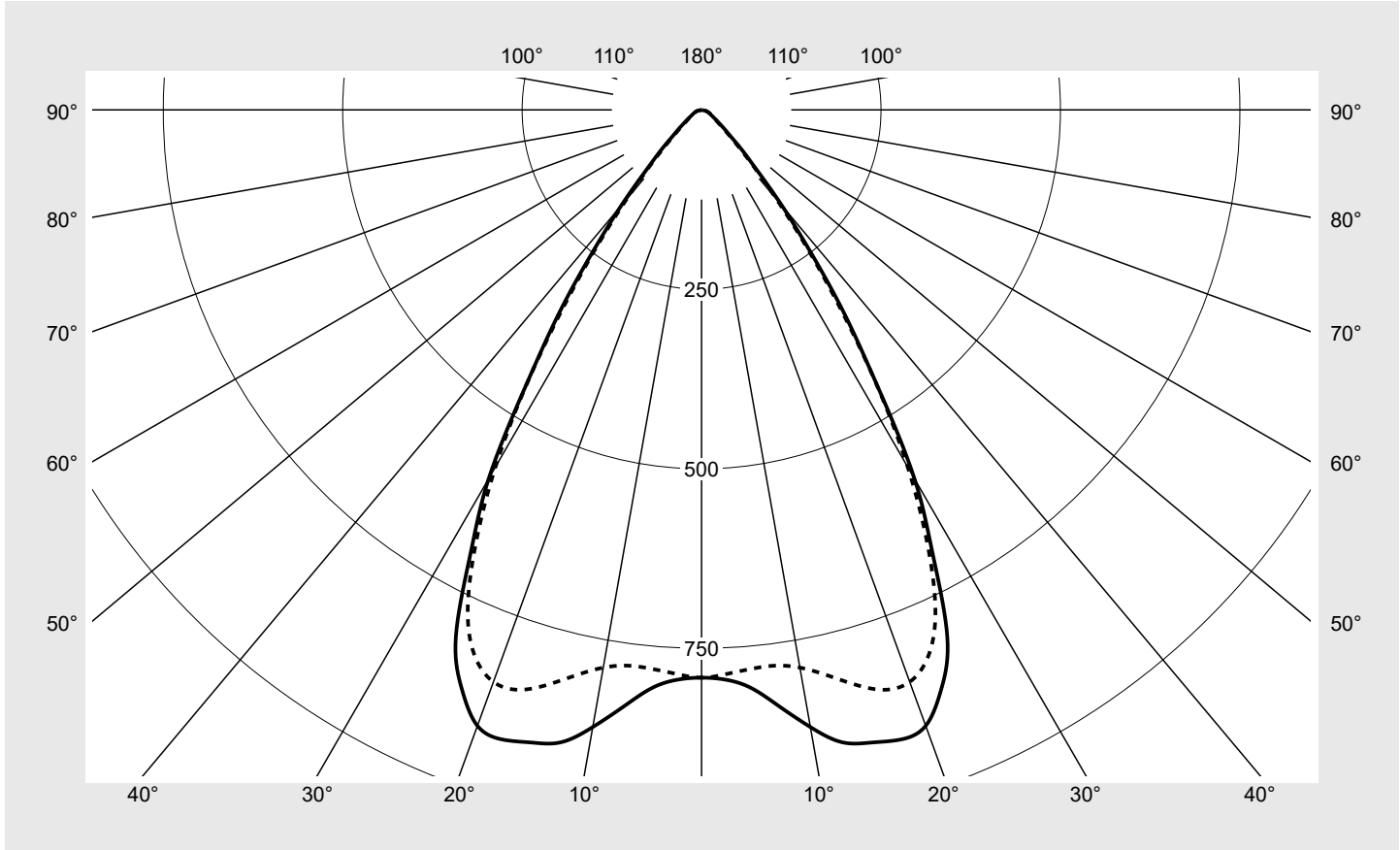


Photometric test report

Family Highbay 21	Order number: 52HN12DA4NDA EAN: 4069025256751	LP number 59723_14
	Version primary light control with lens, PMMA, housing, white, wide distribution	serial documentation 24.02.2025
	Lamps LED 4000 K CRI ≥ 80 Controlgear ECG-DALI Setting AC-mode Rated values Net luminous flux = 32000 lm Power consumption = 175.8 W Luminous efficacy = 182 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	Maximum luminous intensity						
	0,0° 180,0°	7,5° 172,5° 187,5° 352,5°	15,0° 165,0° 195,0° 345,0°	22,5° 157,5° 202,5° 337,5°	30,0° 150,0° 210,0° 330,0°	37,5° 142,5° 217,5° 322,5°	45,0° 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

Photometric test report

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Table of values for luminous intensities	Maximum luminous intensity	sITeco
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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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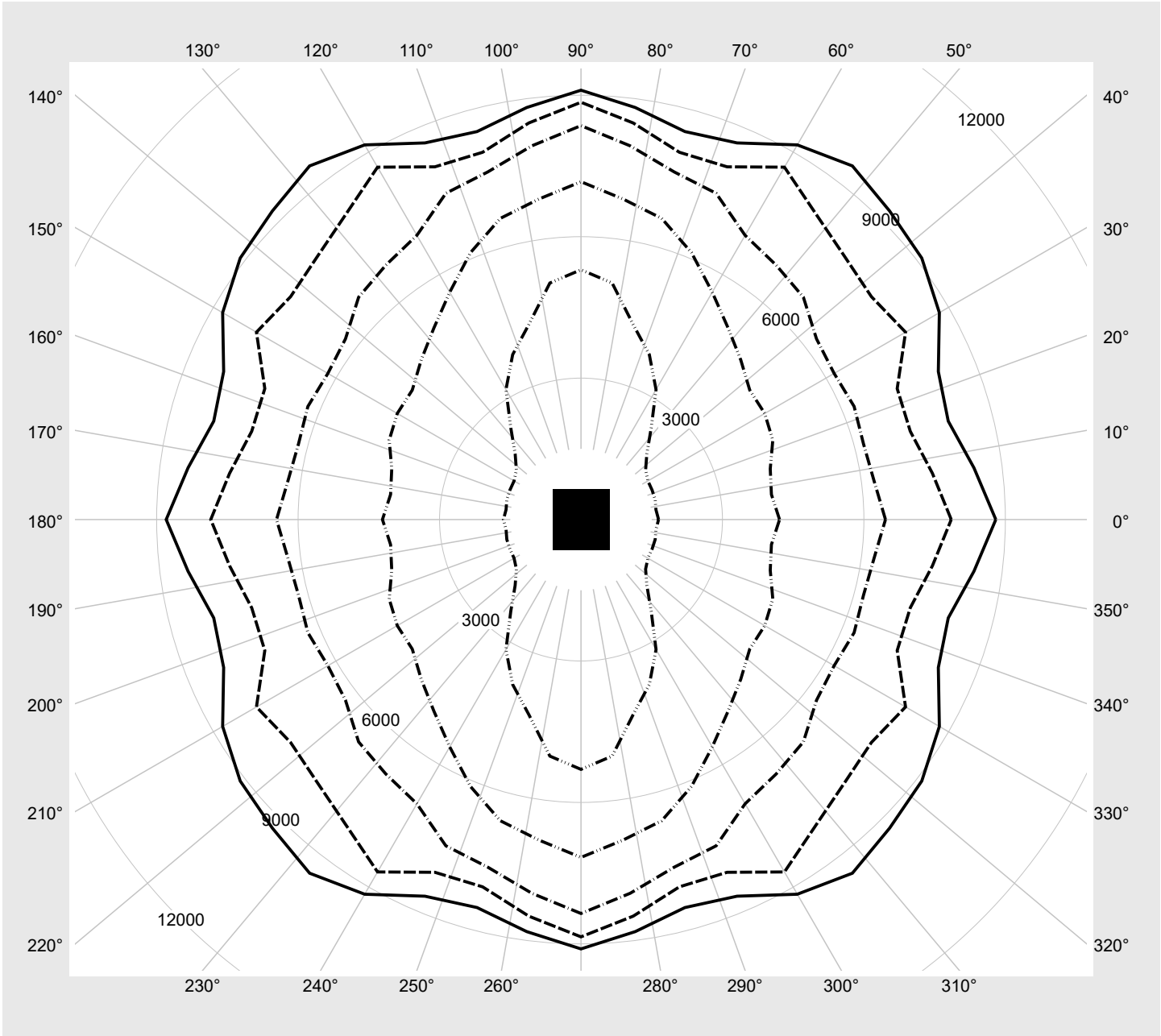
UGR-Table		Standard room									
Reflection factor of ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
Reflection factor of walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
Reflection factor of floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		View crosswise (C0)					View endwise (C90)				
x	y										
2H	2H	21.0	22.2	21.3	22.5	22.9	20.8	22.0	21.2	22.3	22.7
	3H	21.0	22.1	21.4	22.4	22.8	20.9	22.0	21.3	22.3	22.7
	4H	21.0	22.0	21.4	22.4	22.8	20.9	21.9	21.3	22.3	22.7
	6H	21.0	21.9	21.4	22.3	22.7	21.0	21.9	21.4	22.2	22.6
	8H	21.1	21.8	21.5	22.2	22.6	21.1	21.8	21.5	22.2	22.6
	12H	21.1	21.7	21.5	22.1	22.6	21.1	21.8	21.5	22.2	22.6
4H	2H	20.9	21.9	21.3	22.2	22.6	20.7	21.7	21.1	22.1	22.4
	3H	21.0	21.8	21.4	22.2	22.6	20.9	21.7	21.3	22.1	22.5
	4H	21.0	21.7	21.5	22.1	22.6	21.0	21.7	21.4	22.1	22.5
	6H	21.0	21.6	21.5	22.1	22.5	21.0	21.7	21.5	22.1	22.6
	8H	21.0	21.5	21.5	22.0	22.5	21.1	21.6	21.5	22.1	22.6
	12H	21.0	21.4	21.5	21.9	22.4	21.1	21.6	21.6	22.0	22.5
8H	4H	21.0	21.5	21.4	22.0	22.4	20.9	21.5	21.4	21.9	22.4
	6H	21.0	21.4	21.5	21.9	22.4	21.0	21.5	21.5	21.9	22.4
	8H	20.9	21.3	21.4	21.8	22.3	21.0	21.4	21.5	21.9	22.5
	12H	20.9	21.2	21.4	21.7	22.3	21.1	21.4	21.6	21.9	22.4
12H	4H	21.0	21.4	21.5	21.9	22.4	20.9	21.4	21.4	21.8	22.3
	6H	21.0	21.3	21.5	21.8	22.3	21.0	21.4	21.5	21.9	22.4
	8H	20.9	21.2	21.5	21.7	22.3	21.0	21.3	21.6	21.8	22.4

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°	270,0°	
		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°	
	45,0°	33088.5	32064.3	32546.2	32727.1	32794.6	32065.1	30926.0	30079.8	29800.8	29718.8
	50,0°	18770.5	18253.3	18595.0	18637.7	18635.1	18281.8	17625.3	17039.6	16667.5	16536.8
	55,0°	12708.4	12336.6	12611.0	12933.1	13280.5	13026.0	12381.5	11864.2	11541.0	11580.3
	60,0°	9777.2	9495.3	9655.2	10336.6	10661.5	10643.9	10253.5	9625.5	9513.6	9712.9
	65,0°	8797.6	8286.2	8108.5	8776.1	9179.6	9441.5	9176.0	8559.7	8717.0	9106.6
	70,0°	7852.6	7416.3	7175.6	7948.2	7774.3	8066.0	8630.4	8031.4	8350.0	8850.9
	75,0°	6457.6	6233.9	6262.6	6199.3	6389.9	6753.7	6961.2	7580.7	7874.4	8355.1
	80,0°	4211.1	4076.4	4337.1	4499.5	4574.5	5000.6	5567.9	6296.9	6767.5	7165.5
	85,0°	1645.4	1604.0	1630.9	1638.9	1791.9	2258.8	3183.1	3963.7	4860.4	5298.6

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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	32000	175.8
95	240	252	30383	165.9
90	227	250	28854	157.0
85	213	248	27203	146.8
80	199	245	25552	137.1
75	186	243	23973	128.1
70	173	240	22393	119.1
65	160	237	20809	110.2
60	147	234	19203	101.2
55	134	231	17585	92.4
50	121	227	15942	83.5
45	109	223	14413	75.4
40	96	218	12740	66.7
35	84	213	11182	58.6
30	72	208	9616	50.5
25	60	201	8032	42.5
20	48	193	6440	34.6
15	36	182	4835	26.8
10	24	168	3218	18.9
5	12	142	1592	10.7
2	6	117	771	6.5