

Photometric test report

Family
Highbay 21

Order number: 52HN12DB3PLA
EAN: 4069025445575

LP number
59723_251

serial
documentation
24.04.2025



Version primary light control with lens, PMMA, housing, white, wide distribution
Lamps LED 3000 K | CRI ≥ 80
Controlgear ECG-DALI
Setting AC-mode
Rated values Net luminous flux = 34690 lm
Power consumption = 197.7 W
Luminous efficacy = 175.5 lm/W

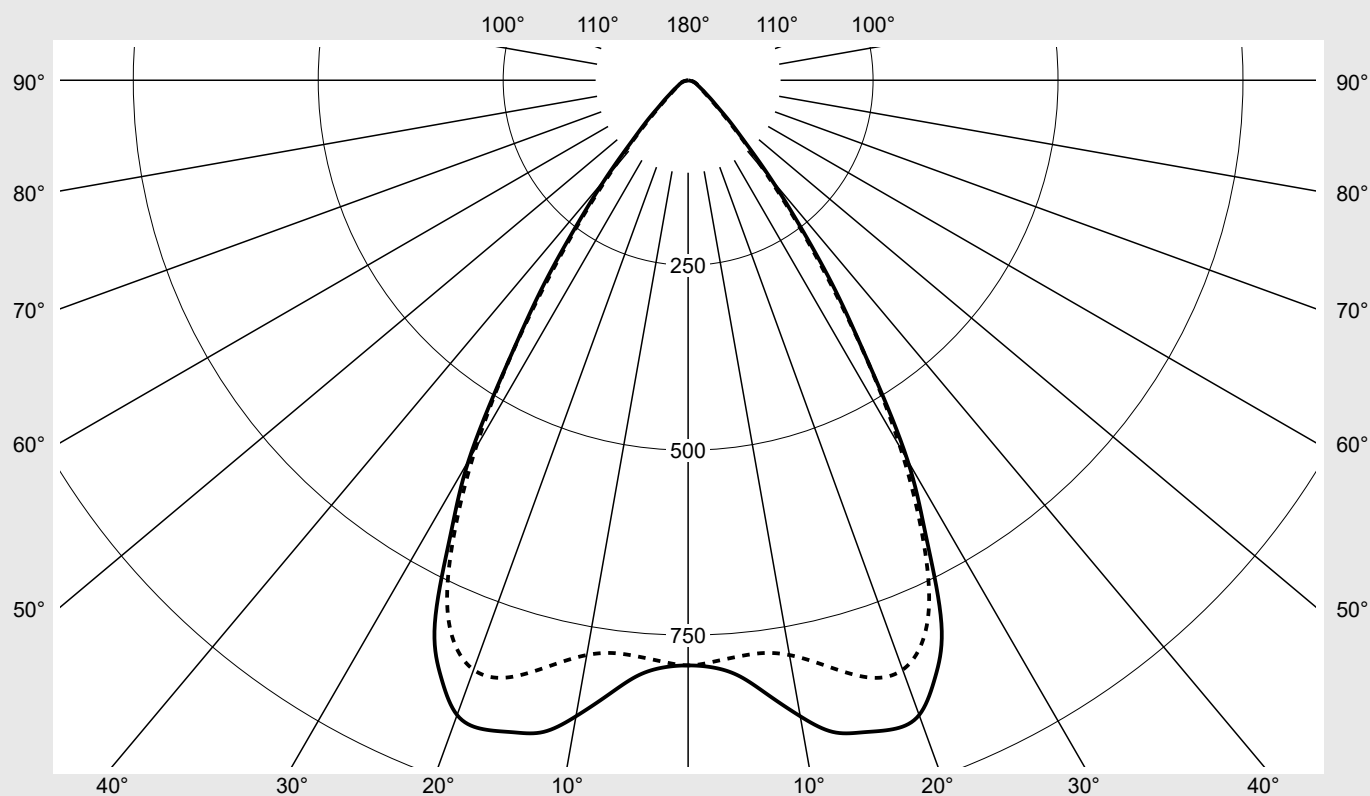
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Luminous intensity in cd/klm

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

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C- planes	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

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Table of values for luminous intensities		Maximum luminous intensity
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C- planes	52,5° 127,5° 232,5° 307,5°	60,0° 120,0° 240,0° 300,0°	67,5° 112,5° 247,5° 292,5°	75,0° 105,0° 255,0° 285,0°	82,5° 97,5° 262,5° 277,5°	90,0° 270,0°	Phi-zone	Total Phi-zone
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							siTeco		
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	18.9	20.1	19.2	20.4	20.7	18.7	19.9	19.0	20.2	20.5
	3H	18.9	20.0	19.3	20.3	20.7	18.8	19.8	19.1	20.2	20.5
	4H	18.9	19.9	19.3	20.3	20.6	18.8	19.8	19.2	20.2	20.5
	6H	18.9	19.8	19.3	20.2	20.5	18.9	19.7	19.3	20.1	20.5
	8H	19.0	19.7	19.4	20.1	20.5	19.0	19.7	19.4	20.1	20.5
	12H	19.0	19.6	19.4	20.0	20.4	19.0	19.6	19.4	20.0	20.5
4H	2H	18.8	19.8	19.2	20.1	20.5	18.6	19.6	19.0	19.9	20.3
	3H	18.8	19.7	19.3	20.1	20.5	18.7	19.6	19.2	19.9	20.4
	4H	18.9	19.6	19.3	20.0	20.5	18.8	19.6	19.3	20.0	20.4
	6H	18.9	19.5	19.3	19.9	20.4	18.9	19.5	19.4	20.0	20.4
	8H	18.9	19.4	19.3	19.8	20.3	18.9	19.5	19.4	19.9	20.4
	12H	18.9	19.3	19.4	19.8	20.3	19.0	19.4	19.5	19.9	20.4
8H	4H	18.8	19.4	19.3	19.8	20.3	18.8	19.3	19.3	19.8	20.3
	6H	18.8	19.3	19.3	19.8	20.3	18.9	19.3	19.4	19.8	20.3
	8H	18.8	19.2	19.3	19.7	20.2	18.9	19.3	19.4	19.8	20.3
	12H	18.8	19.1	19.3	19.6	20.1	19.0	19.3	19.5	19.8	20.3
12H	4H	18.9	19.3	19.4	19.7	20.2	18.8	19.2	19.3	19.7	20.2
	6H	18.8	19.2	19.4	19.7	20.2	18.9	19.2	19.4	19.7	20.3
	8H	18.8	19.1	19.3	19.6	20.1	18.9	19.2	19.4	19.7	20.3

Luminance table		Max. for $\gamma \geq 65^\circ$									Photometric dimensions in mm:	L = 852 B = 264
C-planes	0,0° 180,0°	10,0° 170,0° 190,0° 350,0°	20,0° 160,0° 200,0° 340,0°	30,0° 150,0° 210,0° 330,0°	40,0° 140,0° 220,0° 320,0°	50,0° 130,0° 230,0° 310,0°	60,0° 120,0° 240,0° 300,0°	70,0° 110,0° 250,0° 290,0°	80,0° 100,0° 260,0° 280,0°	90,0° 270,0°		
		Luminance in cd/m²										
γ												
45,0°	17935.0	17379.9	17641.1	17739.1	17775.7	17380.3	16762.9	16304.2	16153.0	16108.5		
50,0°	10174.2	9893.8	10079.1	10102.2	10100.8	9909.3	9553.5	9236.0	9034.3	8963.5		
55,0°	6888.3	6686.8	6835.6	7010.1	7198.4	7060.5	6711.1	6430.8	6255.6	6276.9		
60,0°	5299.6	5146.8	5233.4	5602.8	5778.9	5769.3	5557.7	5217.3	5156.7	5264.7		
65,0°	4768.6	4491.4	4395.0	4756.9	4975.6	5117.6	4973.7	4639.6	4724.9	4936.1		
70,0°	4256.3	4019.8	3889.4	4308.2	4213.9	4372.0	4677.9	4353.3	4526.0	4797.4		
75,0°	3500.2	3378.9	3394.5	3360.2	3463.5	3660.7	3773.2	4109.0	4268.1	4528.7		
80,0°	2282.6	2209.5	2350.9	2438.9	2479.5	2710.5	3018.0	3413.1	3668.2	3883.9		
85,0°	891.9	869.4	884.0	888.3	971.3	1224.3	1725.3	2148.4	2634.5	2872.0		

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Luminance values in cd/m²

γ 65°

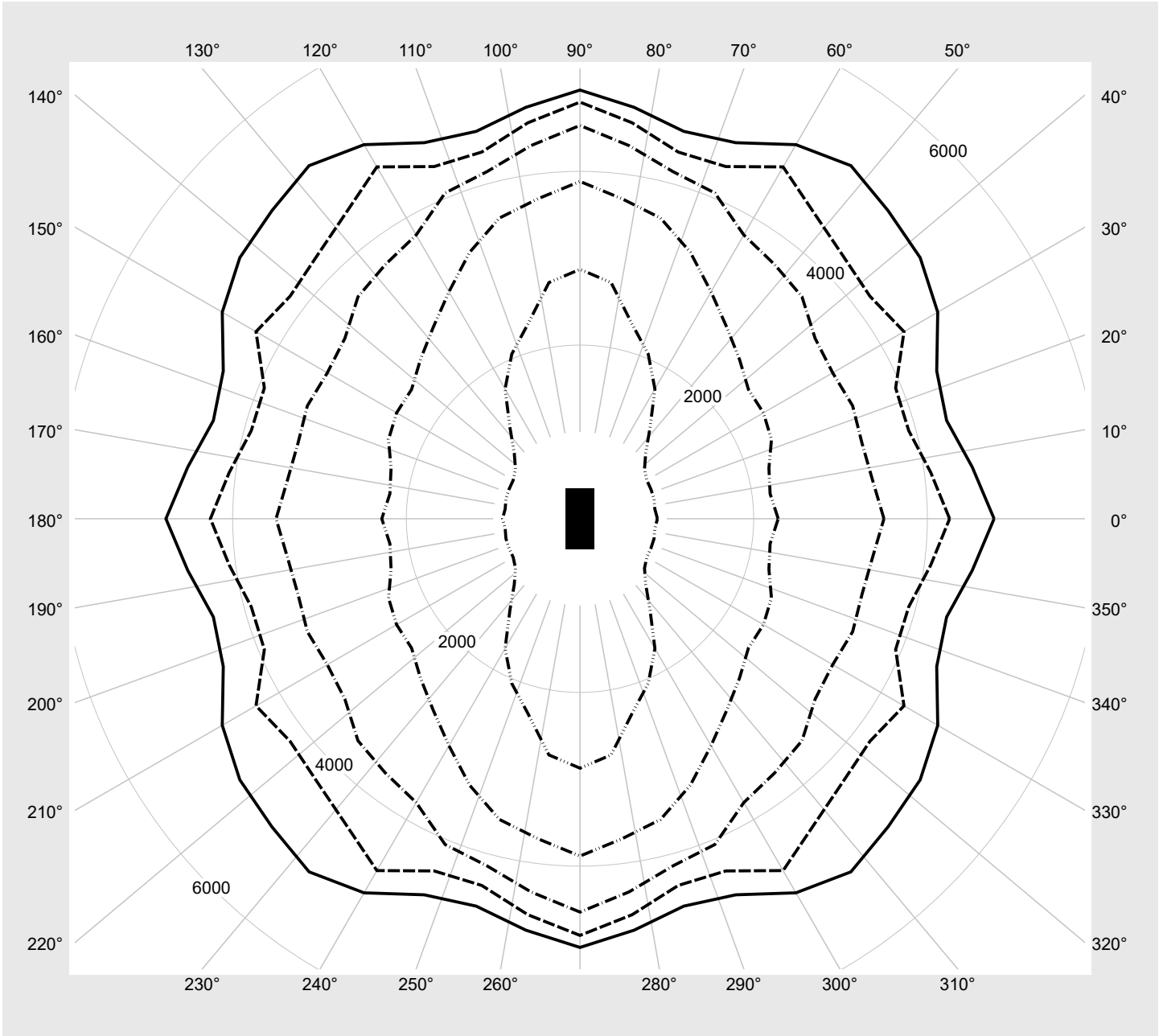
γ 70°

γ 75°

γ 80°

γ 85°

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Family Highbay 21	Order number: 52HN12DB3PLA EAN: 4069025445575	LP number 59723_251
Dimming levels table		environmental temperature: 25°C



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	34690	197.7
95	241	252	32999	187.3
90	227	250	31166	176.3
85	214	248	29452	166.1
80	201	245	27725	155.8
75	188	243	25993	145.8
70	175	240	24246	135.6
65	162	238	22493	125.5
60	150	235	20867	116.2
55	137	231	19099	106.1
50	124	228	17330	96.3
45	111	224	15543	86.3
40	99	219	13881	77.2
35	86	214	12075	67.3
30	74	209	10403	58.3
25	62	202	8721	49.1
20	49	194	6888	39.5
15	37	183	5191	30.6
10	25	169	3487	21.8
5	13	145	1772	12.5
1	4	102	484	5.4