

Photometric test report

Family
Highbay 21

Order number: 52HN12DA4FDA02
EAN: 4069025421548

LP number
59723_155

serial
documentation
20.03.2025



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 = 14000 lm
Power consumption = 72.6 W
Luminous efficacy = 192.8 lm/W

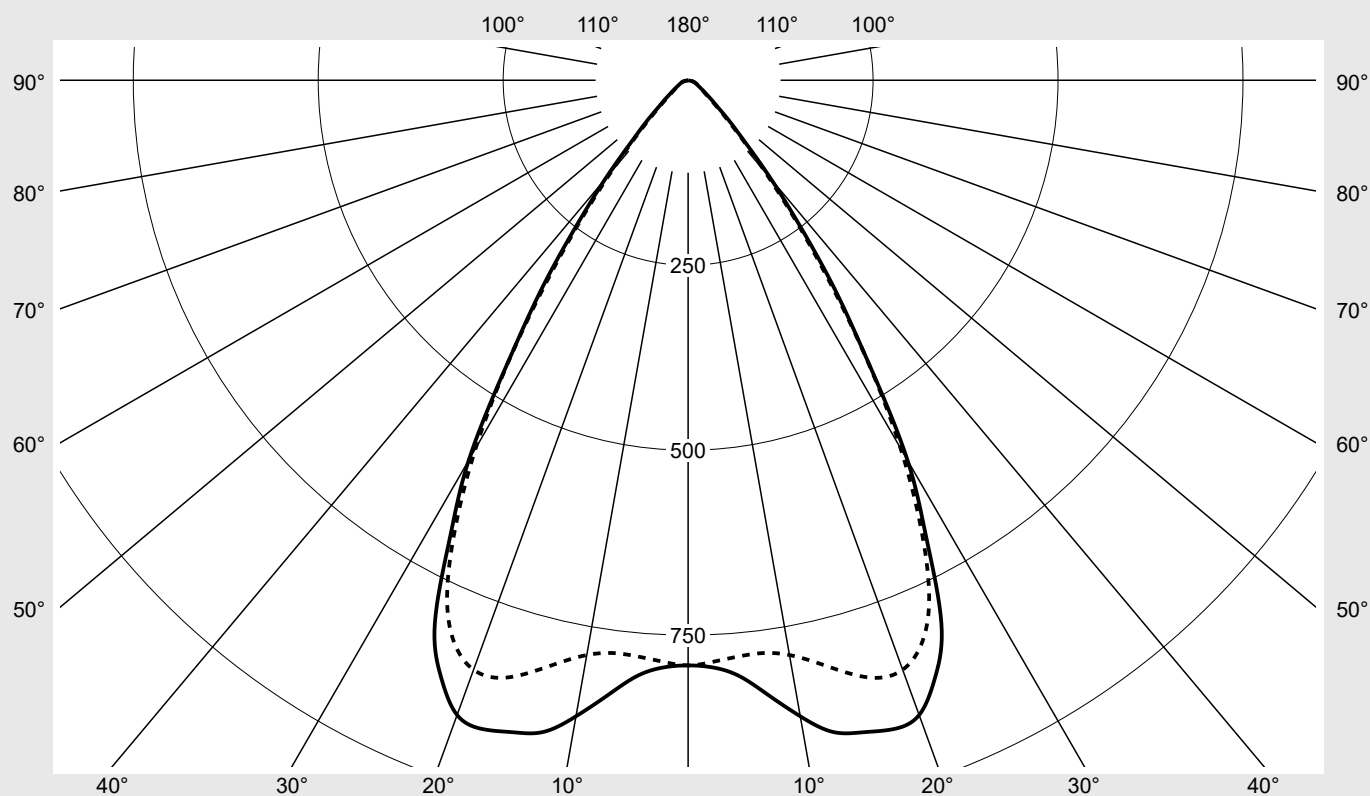
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Luminous intensity in cd/klm

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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Family Highbay 21			Order number: 52HN12DA4FDA02 EAN: 4069025421548							LP number 59723_155	
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	18.1	19.4	18.5	19.7	20.0	17.9	19.2	18.3	19.5	19.8
	3H	18.2	19.2	18.5	19.6	19.9	18.0	19.1	18.4	19.4	19.8
	4H	18.2	19.2	18.6	19.5	19.9	18.1	19.1	18.5	19.4	19.8
	6H	18.1	19.0	18.6	19.4	19.8	18.1	19.0	18.5	19.4	19.8
	8H	18.2	19.0	18.7	19.4	19.8	18.2	19.0	18.7	19.4	19.8
	12H	18.2	18.9	18.6	19.3	19.7	18.2	18.9	18.7	19.3	19.7
4H	2H	18.0	19.0	18.4	19.4	19.7	17.9	18.8	18.2	19.2	19.6
	3H	18.1	18.9	18.5	19.3	19.7	18.0	18.8	18.4	19.2	19.6
	4H	18.1	18.9	18.6	19.3	19.7	18.1	18.8	18.5	19.2	19.7
	6H	18.1	18.7	18.6	19.2	19.7	18.2	18.8	18.6	19.2	19.7
	8H	18.1	18.7	18.6	19.1	19.6	18.2	18.7	18.7	19.2	19.7
	12H	18.1	18.6	18.6	19.0	19.5	18.3	18.7	18.8	19.1	19.6
8H	4H	18.1	18.6	18.6	19.1	19.6	18.0	18.6	18.5	19.0	19.5
	6H	18.1	18.5	18.6	19.0	19.5	18.1	18.6	18.6	19.1	19.6
	8H	18.0	18.4	18.6	18.9	19.5	18.2	18.6	18.7	19.1	19.6
	12H	18.0	18.3	18.6	18.8	19.4	18.2	18.5	18.7	19.0	19.6
12H	4H	18.1	18.5	18.6	19.0	19.5	18.1	18.5	18.6	19.0	19.5
	6H	18.1	18.4	18.6	18.9	19.5	18.2	18.5	18.7	19.0	19.5
	8H	18.1	18.3	18.6	18.9	19.4	18.2	18.5	18.7	19.0	19.5

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:				L = 426 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°	14476.2	14028.1	14239.0	14318.1	14347.6	14028.5	13530.1	13159.9	13037.9	13002.0
50,0°	8212.1	7985.8	8135.3	8154.0	8152.9	7998.3	7711.1	7454.8	7292.0	7234.9
55,0°	5559.9	5397.2	5517.3	5658.2	5810.2	5698.9	5416.9	5190.6	5049.2	5066.4
60,0°	4277.5	4154.2	4224.2	4522.3	4664.4	4656.7	4485.9	4211.2	4162.2	4249.4
65,0°	3848.9	3625.2	3547.5	3839.5	4016.1	4130.7	4014.5	3744.9	3813.7	3984.1
70,0°	3435.5	3244.6	3139.3	3477.3	3401.2	3528.9	3775.8	3513.7	3653.1	3872.3
75,0°	2825.2	2727.3	2739.9	2712.2	2795.6	2954.8	3045.5	3316.6	3445.0	3655.4
80,0°	1842.4	1783.4	1897.5	1968.5	2001.4	2187.7	2435.9	2754.9	2960.8	3134.9
85,0°	719.9	701.8	713.5	717.0	784.0	988.2	1392.6	1734.1	2126.4	2318.1

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Family
Highbay 21

Order number: 52HN12DA4FDA02
EAN: 4069025421548

LP number
59723_155

Luminance values in cd/m²

γ 65°

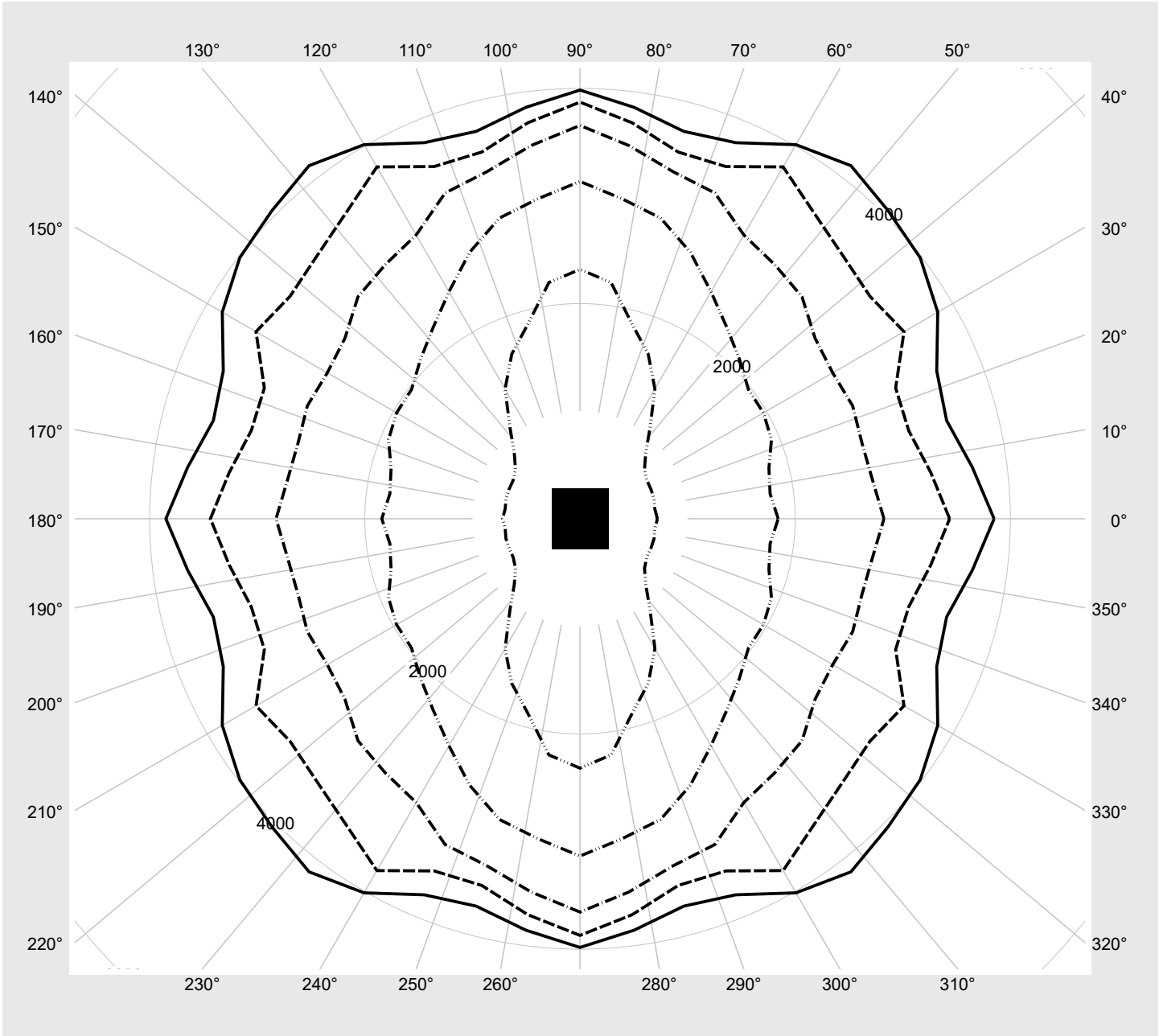
γ 70°

γ 75°

γ 80°

γ 85°

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Dimming levels table		environmental temperature: 25°C

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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	14000	72.6
95	241	252	13303	68.8
90	228	250	12606	65.2
85	215	248	11901	61.5
80	202	246	11197	57.9
75	189	243	10494	54.0
70	176	241	9782	50.4
65	164	238	9126	47.1
60	151	235	8413	43.4
55	138	232	7695	39.8
50	125	228	6976	36.2
45	113	224	6313	32.9
40	100	220	5591	29.3
35	88	215	4919	26.0
30	75	209	4192	22.5
25	63	203	3520	19.2
20	50	194	2785	15.6
15	38	184	2109	12.4
10	25	169	1374	8.9
5	13	145	690	5.4
2	5	110	235	3.0