

Photometric test report

Family
Highbay 21

Order number: 52HN11DA3FLA
EAN: 4069025445001

LP number
59724_219



Version primary light control with lens, PMMA, housing, white, narrow distribution

Lamps LED 3000 K | CRI ≥ 80

Controlgear ECG-DALI

Setting AC-mode

Rated values Net luminous flux = 12810 lm
Power consumption = 72.1 W
Luminous efficacy = 177.7 lm/W

serial
documentation
24.04.2025

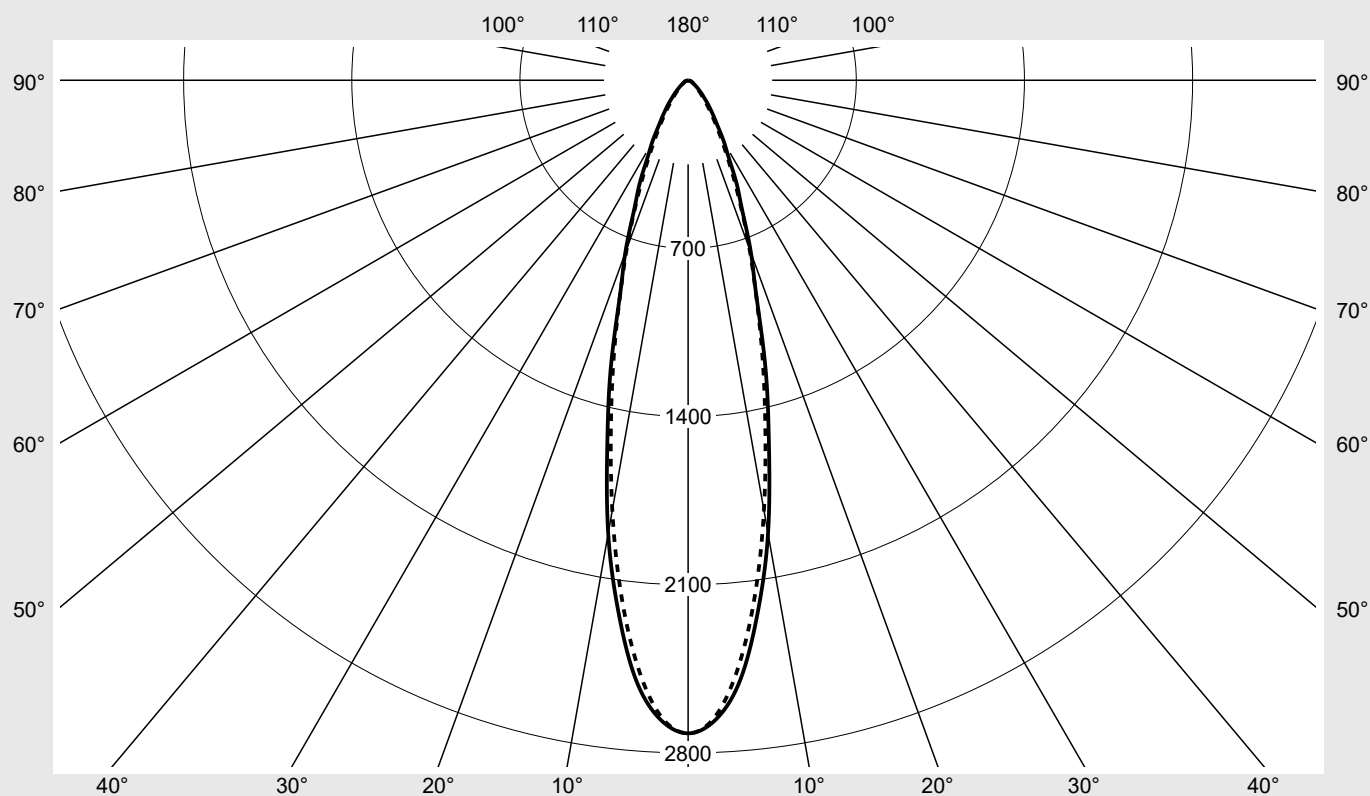
siteco

Luminous intensity in cd/klm

C180-0

C270-90

Imax: 2719 cd/klm



Classifications

DIN 5040 A 7 0
CIE N1=89 N2=97 N3=99
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

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°
		Luminous intensity in cd/klm					
γ							
0,0°	2718.5	2718.5	2718.5	2718.5	2718.5	2718.5	2718.5
2,5°	2662.8	2671.1	2671.1	2670.6	2667.6	2663.3	2662.4
5,0°	2502.8	2490.9	2498.0	2494.5	2487.6	2479.1	2473.3
7,5°	2228.4	2233.8	2227.9	2223.2	2214.7	2203.4	2194.2
10,0°	1915.8	1894.8	1902.8	1897.9	1890.8	1880.8	1870.9
12,5°	1554.6	1560.7	1554.3	1552.6	1548.0	1540.2	1531.7
15,0°	1246.2	1237.0	1237.4	1238.4	1237.7	1233.9	1229.0
17,5°	947.1	964.7	959.6	960.0	960.5	959.5	958.4
20,0°	765.0	752.2	754.6	751.6	749.0	747.8	747.5
22,5°	591.2	598.6	590.3	583.2	577.5	573.8	572.1
25,0°	481.4	472.8	470.4	460.9	451.8	445.8	443.1
27,5°	370.5	376.3	371.1	363.9	355.1	347.9	344.8
30,0°	301.2	297.9	295.0	290.6	284.7	279.0	275.2
32,5°	234.8	237.8	234.9	232.8	229.2	225.3	220.4
35,0°	189.2	188.5	187.7	186.9	184.4	180.6	175.3
37,5°	154.0	153.7	151.7	151.0	148.4	144.9	141.0
40,0°	125.7	123.3	123.0	121.9	119.1	115.8	113.2
42,5°	99.2	100.3	99.3	98.6	95.9	92.9	90.7
45,0°	81.4	79.6	79.7	79.0	77.2	74.6	72.7
47,5°	64.2	64.9	64.5	64.0	62.8	60.9	59.5
50,0°	52.5	51.6	51.8	51.7	51.0	49.9	49.1
52,5°	41.7	41.9	41.8	42.1	41.9	41.4	40.9
55,0°	33.9	33.5	34.1	34.8	35.0	35.0	34.7
57,5°	27.1	27.4	28.1	29.2	29.7	29.7	29.6
60,0°	22.3	22.3	23.0	24.6	25.8	25.8	25.5
62,5°	19.0	19.2	19.6	20.7	22.4	22.3	22.0
65,0°	17.0	16.8	17.2	18.3	19.8	19.1	19.1
67,5°	14.7	14.8	14.9	16.1	17.2	16.3	16.1
70,0°	12.8	12.5	12.6	13.8	14.3	13.8	13.9
72,5°	11.3	11.1	10.9	11.6	11.4	11.2	11.7
75,0°	9.7	9.3	8.9	9.6	9.3	9.1	9.3
77,5°	7.4	7.4	7.1	7.5	7.1	6.8	7.1
80,0°	4.9	4.7	4.8	4.8	4.5	4.5	4.8
82,5°	2.2	2.3	2.3	2.4	2.4	2.5	2.7
85,0°	0.8	0.8	0.8	0.8	0.8	0.9	1.0
87,5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4

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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°	2718.5	2718.5	2718.5	2718.5	2718.5	2718.5	4.1	4.1
2,5°	2661.4	2660.0	2657.7	2657.0	2651.0	2647.2	31.8	35.9
5,0°	2468.0	2461.9	2456.3	2452.9	2444.7	2440.4	59.1	95.0
7,5°	2185.5	2176.0	2168.0	2162.0	2152.6	2148.3	78.5	173.5
10,0°	1860.3	1847.8	1837.7	1831.0	1822.1	1817.6	88.9	262.4
12,5°	1522.0	1510.4	1500.7	1495.5	1488.9	1485.2	90.6	353.0
15,0°	1223.0	1215.3	1207.9	1204.2	1200.8	1197.6	86.8	439.8
17,5°	955.3	949.4	945.6	944.9	945.8	944.0	78.6	518.5
20,0°	745.4	741.8	741.4	743.7	748.0	747.7	70.2	588.6
22,5°	571.4	571.2	573.5	575.9	579.7	580.1	60.8	649.4
25,0°	443.2	444.5	446.3	448.3	449.2	448.8	52.5	701.9
27,5°	344.0	344.5	345.1	346.1	344.9	343.6	44.7	746.7
30,0°	273.7	273.8	273.9	272.4	270.2	268.2	38.5	785.2
32,5°	217.7	217.2	215.9	213.7	211.0	209.4	32.9	818.1
35,0°	172.5	170.5	168.2	166.4	165.0	164.5	27.8	845.9
37,5°	138.1	135.6	133.3	132.0	130.7	130.3	23.7	869.5
40,0°	110.2	108.1	106.1	104.8	103.7	103.1	20.0	889.6
42,5°	88.5	86.8	85.0	83.9	83.2	82.7	16.9	906.5
45,0°	71.2	69.8	68.4	67.3	66.9	66.6	14.2	920.7
47,5°	58.5	57.3	56.0	55.1	54.8	54.6	12.1	932.8
50,0°	48.3	47.1	46.0	45.5	45.1	44.8	10.3	943.0
52,5°	40.2	39.3	38.3	37.7	37.1	36.8	8.7	951.8
55,0°	34.1	33.4	32.5	31.7	31.0	30.7	7.5	959.3
57,5°	29.3	29.0	28.2	27.0	26.3	26.1	6.6	965.9
60,0°	25.7	25.8	24.8	23.5	22.8	22.6	5.8	971.6
62,5°	22.4	22.9	21.8	20.7	20.1	19.9	5.1	976.8
65,0°	19.6	20.2	19.7	18.4	17.9	17.8	4.6	981.4
67,5°	16.7	17.6	17.8	16.4	16.0	16.0	4.1	985.5
70,0°	14.1	15.0	15.6	14.4	14.4	14.6	3.6	989.1
72,5°	11.7	12.4	13.4	12.9	13.2	13.4	3.1	992.3
75,0°	9.5	10.4	12.0	11.4	11.8	11.9	2.7	995.0
77,5°	7.2	8.1	9.6	9.6	10.0	10.2	2.1	997.1
80,0°	5.1	5.7	7.0	7.5	7.6	8.0	1.5	998.6
82,5°	3.0	3.6	4.5	5.0	5.3	5.6	0.9	999.5
85,0°	1.2	1.7	2.3	2.7	3.1	3.3	0.4	999.9
87,5°	0.4	0.4	0.5	0.6	0.8	0.9	0.1	1000.1

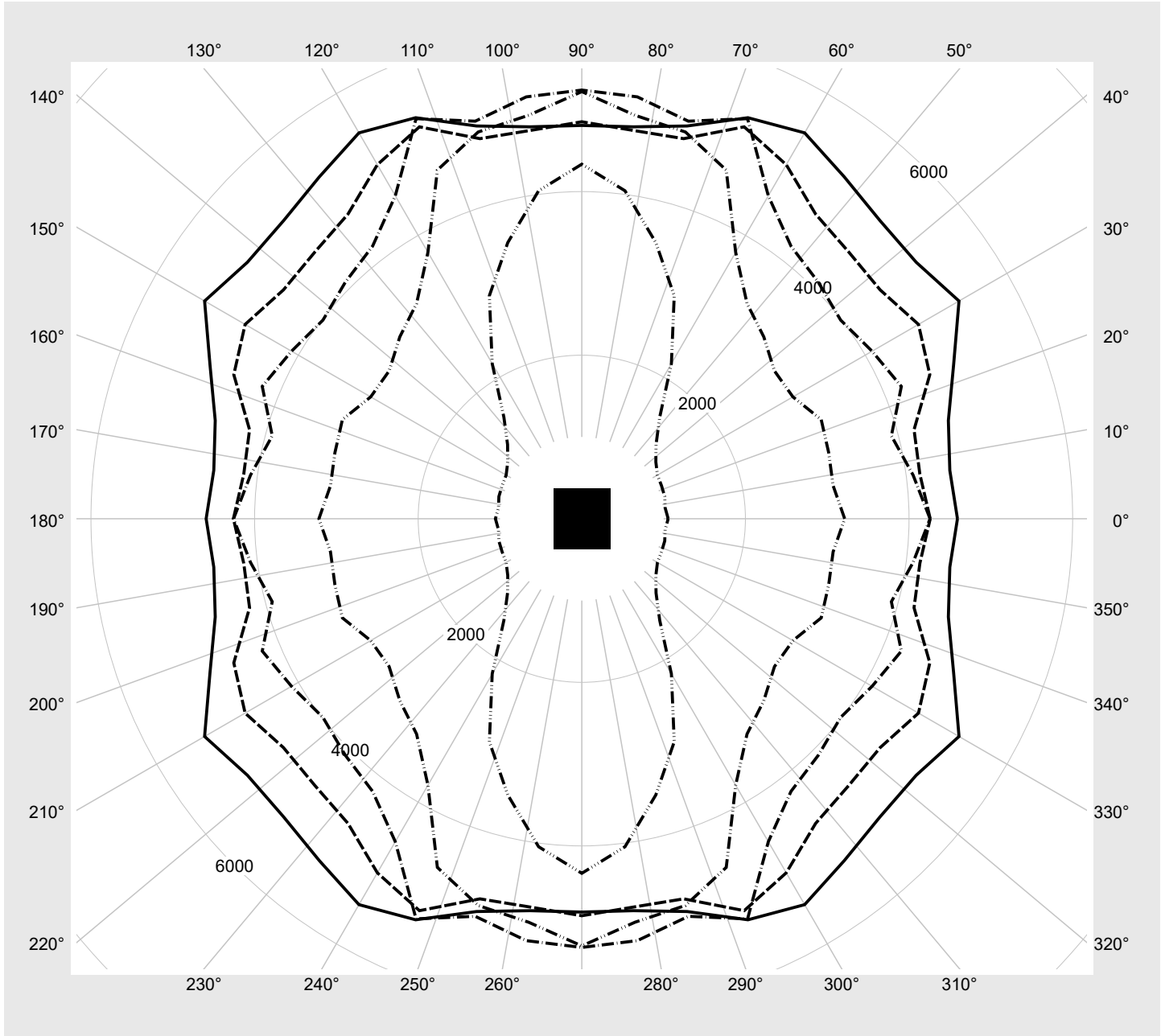
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Family Highbay 21			Order number: 52HN11DA3FLA EAN: 4069025445001						LP number 59724_219		
UGR-Table			Standard room						siteco		
Reflection factor of ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
Reflection factor of walls	0.5	0.3	0.5	0.3	0.3	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	16.1	17.2	16.4	17.5	17.8	15.5	16.7	15.9	17.0	17.3
	3H	16.5	17.5	16.9	17.8	18.2	16.2	17.2	16.6	17.5	17.9
	4H	16.7	17.6	17.1	18.0	18.3	16.6	17.5	17.0	17.8	18.2
	6H	16.9	17.7	17.3	18.1	18.5	17.0	17.8	17.4	18.2	18.6
	8H	17.0	17.6	17.4	18.0	18.4	17.2	17.9	17.7	18.3	18.7
	12H	16.9	17.6	17.4	18.0	18.4	17.3	17.9	17.7	18.3	18.7
4H	2H	16.2	17.1	16.6	17.5	17.9	15.8	16.7	16.2	17.0	17.4
	3H	16.8	17.6	17.3	18.0	18.4	16.6	17.3	17.0	17.7	18.2
	4H	17.1	17.8	17.6	18.2	18.7	17.1	17.8	17.6	18.2	18.7
	6H	17.4	17.9	17.8	18.4	18.8	17.7	18.2	18.2	18.7	19.1
	8H	17.4	17.9	17.9	18.3	18.8	17.9	18.4	18.4	18.8	19.3
	12H	17.4	17.8	17.9	18.3	18.8	18.0	18.4	18.5	18.9	19.4
8H	4H	17.2	17.7	17.7	18.2	18.7	17.2	17.7	17.7	18.2	18.7
	6H	17.5	17.9	18.0	18.4	18.9	17.9	18.2	18.4	18.7	19.2
	8H	17.5	17.9	18.0	18.4	18.9	18.1	18.4	18.6	18.9	19.5
	12H	17.5	17.8	18.0	18.3	18.8	18.3	18.5	18.8	19.0	19.6
12H	4H	17.2	17.6	17.7	18.1	18.6	17.2	17.6	17.7	18.1	18.6
	6H	17.5	17.8	18.0	18.3	18.9	17.8	18.2	18.4	18.7	19.2
	8H	17.5	17.8	18.1	18.3	18.9	18.1	18.4	18.6	18.9	19.4

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°	13110.9	12799.2	12782.1	12437.4	11902.2	11547.3	11249.9	10951.3	10796.0	10724.6
50,0°	9294.2	9139.0	9179.2	9035.5	8792.3	8621.0	8347.3	8108.9	8009.7	7933.1
55,0°	6732.6	6668.4	6871.2	6960.0	6929.0	6807.3	6638.3	6402.1	6186.0	6104.9
60,0°	5086.7	5119.0	5486.6	5888.1	5851.3	5840.2	5880.6	5567.3	5238.2	5153.9
65,0°	4592.0	4553.8	4812.2	5324.3	5133.6	5224.3	5448.0	5217.1	4866.7	4809.0
70,0°	4258.8	4166.2	4499.2	4752.3	4583.2	4643.2	4998.5	5124.1	4787.3	4853.9
75,0°	4257.0	4028.6	4173.5	4097.2	3999.1	4136.3	4559.8	5318.5	5160.6	5241.4
80,0°	3213.5	3091.6	3178.8	2979.9	3006.9	3230.2	3761.8	4771.1	4930.6	5222.6
85,0°	1056.0	1029.0	1052.0	1067.7	1180.7	1432.4	2190.4	3157.7	3890.6	4335.0

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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



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	12810	72.1
95	241	252	12173	68.3
90	228	250	11537	64.7
85	215	248	10893	61.0
80	202	246	10251	57.4
75	189	243	9608	53.5
70	176	241	8957	49.9
65	163	238	8307	46.3
60	151	235	7706	42.9
55	138	232	7049	39.3
50	125	228	6391	35.7
45	113	224	5785	32.4
40	100	220	5124	28.8
35	88	215	4508	25.5
30	75	209	3843	22.0
25	63	203	3227	18.7
20	50	194	2554	15.1
15	38	184	1934	11.9
10	25	169	1260	8.4
5	13	145	633	4.9
2	5	110	216	2.5