

Photometric test report

Family
Highbay 21

Order number: 52HN11DB4MLA03
EAN: 4069025421449

LP number
59724_181

serial
documentation
20.03.2025



Version primary light control with lens, PMMA, housing, white, for Licross® rail, narrow distribution, with DALI multisensor

Lamps LED 4000 K | CRI ≥ 80

Controlgear ECG-DALI

Rated values Net luminous flux = 28000 lm
Power consumption = 144.0 W
Luminous efficacy = 194.5 lm/W

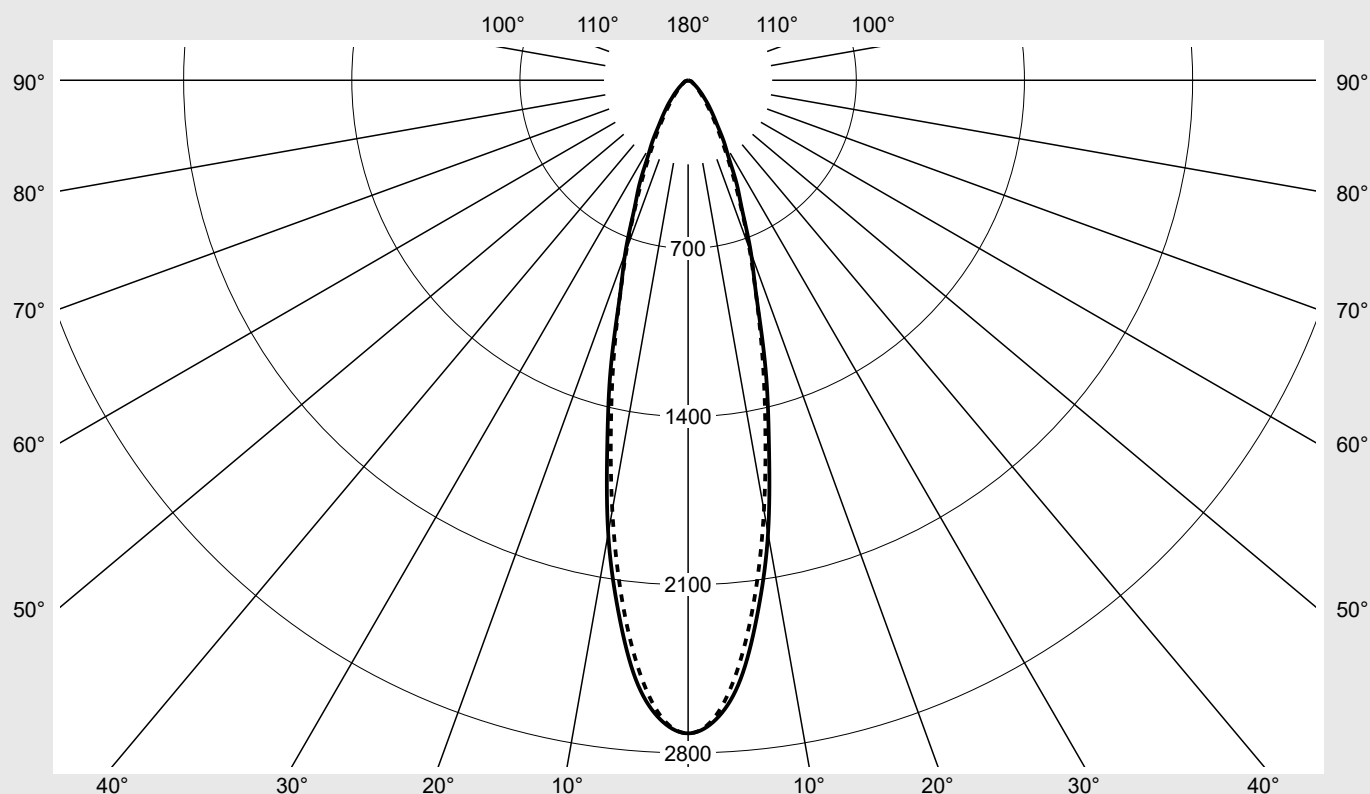
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Luminous intensity in cd/klm

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

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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°
		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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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	16.4	17.5	16.7	17.8	18.1	15.8	17.0	16.2	17.3	17.6
	3H	16.8	17.8	17.2	18.1	18.5	16.5	17.5	16.9	17.8	18.2
	4H	17.0	17.9	17.4	18.3	18.7	16.9	17.8	17.3	18.2	18.5
	6H	17.2	18.0	17.6	18.4	18.8	17.3	18.1	17.7	18.5	18.9
	8H	17.3	18.0	17.7	18.3	18.7	17.5	18.2	18.0	18.6	19.0
	12H	17.3	17.9	17.7	18.3	18.7	17.6	18.2	18.0	18.6	19.0
4H	2H	16.5	17.4	16.9	17.8	18.2	16.1	17.0	16.5	17.3	17.7
	3H	17.1	17.9	17.6	18.3	18.7	16.9	17.7	17.3	18.1	18.5
	4H	17.4	18.1	17.9	18.5	19.0	17.5	18.1	17.9	18.5	19.0
	6H	17.7	18.2	18.1	18.7	19.1	18.0	18.5	18.5	19.0	19.5
	8H	17.7	18.2	18.2	18.6	19.1	18.2	18.7	18.7	19.1	19.6
	12H	17.7	18.1	18.2	18.6	19.1	18.3	18.7	18.8	19.2	19.7
8H	4H	17.5	18.0	18.0	18.5	19.0	17.6	18.0	18.0	18.5	19.0
	6H	17.8	18.2	18.3	18.7	19.2	18.2	18.6	18.7	19.0	19.5
	8H	17.8	18.2	18.3	18.7	19.2	18.4	18.7	18.9	19.2	19.8
	12H	17.8	18.1	18.3	18.6	19.2	18.6	18.8	19.1	19.3	19.9
12H	4H	17.6	18.0	18.0	18.4	18.9	17.6	18.0	18.0	18.4	18.9
	6H	17.8	18.1	18.3	18.6	19.2	18.2	18.5	18.7	19.0	19.5
	8H	17.8	18.1	18.4	18.6	19.2	18.4	18.7	18.9	19.2	19.7

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°	14328.8	13988.2	13969.5	13592.8	13007.9	12620.0	12295.0	11968.6	11798.9	11720.9
50,0°	10157.6	9987.9	10031.9	9874.9	9609.1	9421.9	9122.7	8862.2	8753.7	8670.1
55,0°	7358.0	7287.9	7509.5	7606.5	7572.7	7439.7	7254.9	6996.9	6760.7	6672.0
60,0°	5559.2	5594.5	5996.2	6435.1	6394.9	6382.7	6426.9	6084.5	5724.8	5632.7
65,0°	5018.6	4976.9	5259.2	5818.9	5610.5	5709.7	5954.1	5701.8	5318.8	5255.7
70,0°	4654.4	4553.2	4917.1	5193.8	5009.0	5074.6	5462.8	5600.1	5232.0	5304.8
75,0°	4652.4	4402.9	4561.2	4477.8	4370.6	4520.5	4983.3	5812.5	5640.0	5728.4
80,0°	3512.0	3378.8	3474.1	3256.8	3286.2	3530.3	4111.3	5214.3	5388.7	5707.8
85,0°	1154.1	1124.5	1149.8	1166.9	1290.4	1565.4	2393.8	3451.1	4252.0	4737.7

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Highbay 21

Order number: 52HN11DB4MLA03
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Luminance values in cd/m²

γ 65°

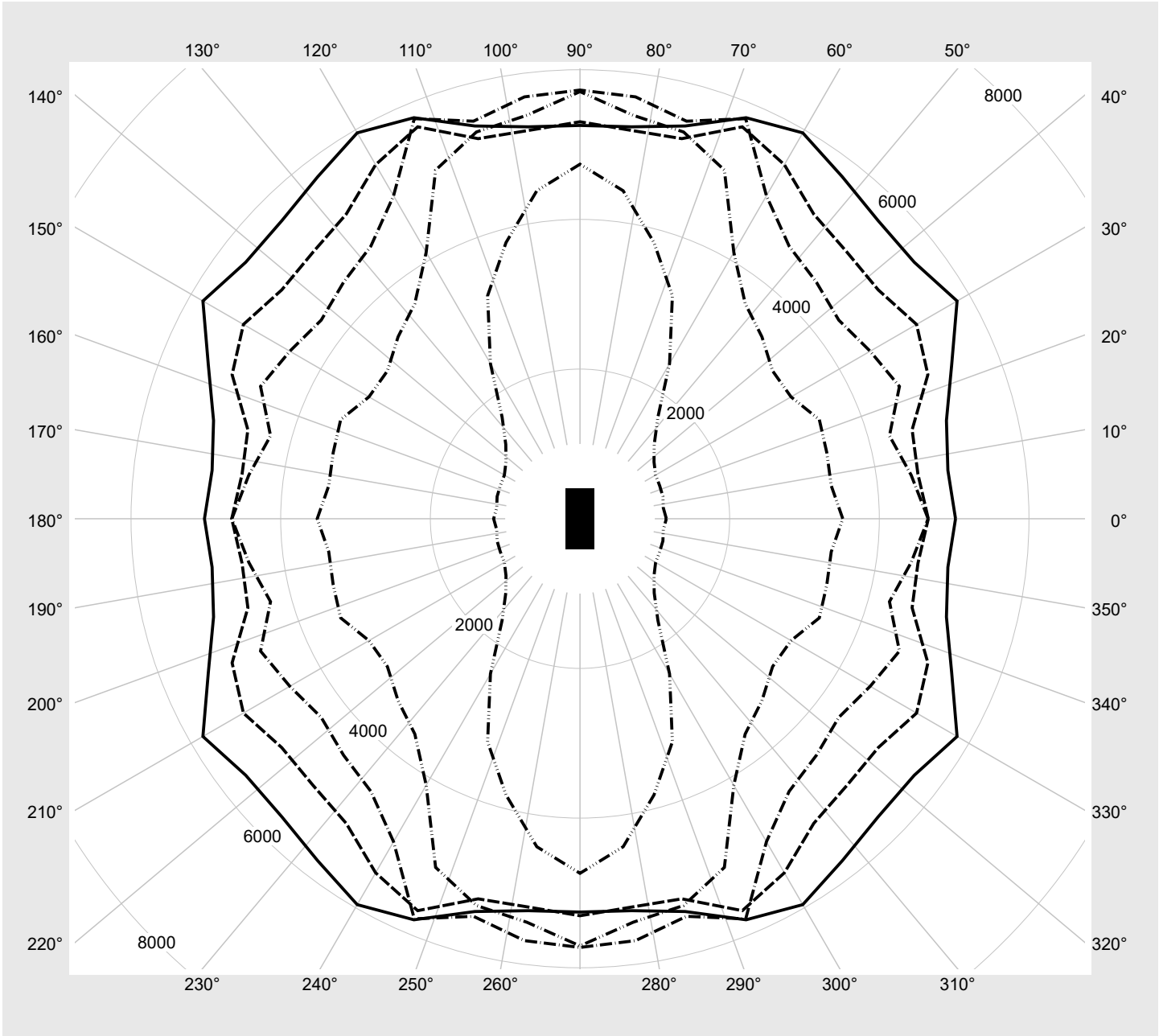
γ 70°

γ 75°

γ 80°

γ 85°

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Family Highbay 21	Order number: 52HN11DB4MLA03 EAN: 4069025421449	LP number 59724_181
Dimming levels table		environmental temperature: 25°C



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	28000	144.0
95	241	252	26607	136.5
90	228	250	25210	129.1
85	215	248	23807	121.6
80	202	246	22396	114.0
75	189	243	20985	106.8
70	176	241	19564	99.4
65	164	238	18254	92.7
60	151	235	16828	85.2
55	138	232	15398	77.9
50	125	228	13963	70.7
45	113	224	12629	63.9
40	100	220	11186	56.7
35	88	215	9845	50.0
30	75	209	8391	42.8
25	63	203	7039	36.2
20	50	194	5577	29.2
15	38	184	4219	22.5
10	25	169	2748	15.5
5	13	145	1382	8.6
2	5	110	472	4.0