

Photometric test report

Family
Highbay 11

Order number: 51HN12DA4FMA
EAN: 4069025349781

LP number
59710_3

serial
documentation
29.01.2025

siteco

Version primary light control with lens, PMMA, housing, white, for Modario® rail, wide distribution

Lamps LED 4000 K | CRI ≥ 80

Controlgear ECG-DALI

Rated values Net luminous flux = 15000 lm
Power consumption = 73.2 W
Luminous efficacy = 204.9 lm/W



Luminous intensity in cd/klm

C180-0

C270-90

Imax: 772 cd/klm



Classifications

DIN 5040 A 6 0
CIE N1=88 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° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°	Phi-zone	Total Phi-zone
γ	Luminous intensity in cd/klm							Luminous flux in lm/klm	
0,0°	643.6	643.6	643.6	643.6	643.6	643.6	643.6	1.0	1.0
2,5°	644.5	645.1	645.0	644.3	644.2	643.7	641.7	7.7	8.7
5,0°	651.5	652.3	650.7	647.5	645.3	643.2	640.4	15.5	24.1
7,5°	669.6	669.1	664.2	657.2	651.2	645.8	641.3	23.5	47.6
10,0°	693.4	691.0	681.5	670.0	659.9	651.2	645.8	31.9	79.6
12,5°	711.8	709.4	700.3	685.9	671.9	660.7	654.0	40.7	120.2
15,0°	721.3	721.7	717.1	704.9	689.4	675.9	667.7	49.7	169.9
17,5°	743.8	740.8	737.9	726.5	708.9	693.0	684.2	59.4	229.3
20,0°	761.9	761.9	759.6	745.2	724.0	705.6	696.8	69.2	298.5
22,5°	772.0	771.2	770.0	754.7	731.1	710.8	702.6	78.2	376.7
25,0°	758.1	756.6	756.3	743.6	722.7	703.3	695.6	85.1	461.8
27,5°	706.7	709.5	709.5	700.0	685.7	672.3	667.0	87.8	549.7
30,0°	640.4	635.6	633.7	626.6	621.7	614.1	609.9	85.8	635.5
32,5°	530.6	537.6	535.6	526.2	530.2	524.1	520.8	78.1	713.6
35,0°	428.2	426.4	425.9	411.9	420.8	414.2	411.4	66.0	779.6
37,5°	322.5	323.4	327.0	311.0	319.4	310.8	308.2	53.0	832.6
40,0°	236.1	234.0	241.6	230.8	230.9	219.8	218.4	40.7	873.3
42,5°	162.3	165.3	172.9	171.1	161.7	151.3	150.8	30.2	903.5
45,0°	117.3	114.9	119.4	122.5	109.3	102.6	102.3	21.9	925.4
47,5°	80.5	81.4	82.8	85.5	75.2	71.4	70.8	15.9	941.3
50,0°	59.4	58.0	58.0	59.0	52.9	50.5	49.6	11.7	953.0
52,5°	43.3	42.8	42.8	43.0	39.3	37.2	36.6	8.9	961.8
55,0°	33.3	32.4	32.9	33.7	30.5	28.7	28.3	7.1	968.9
57,5°	25.9	25.4	25.9	26.8	24.5	22.9	22.9	5.8	974.7
60,0°	20.9	20.2	21.2	21.8	20.4	18.9	19.2	4.9	979.5
62,5°	16.9	16.2	17.4	18.0	17.2	15.9	16.4	4.1	983.6
65,0°	14.9	13.6	14.4	15.1	14.8	13.6	14.4	3.6	987.2
67,5°	12.3	11.4	12.5	12.4	13.0	11.7	12.6	3.1	990.3
70,0°	10.4	9.5	10.5	10.1	11.1	10.1	11.0	2.7	993.0
72,5°	8.2	7.7	7.9	8.2	8.7	8.6	9.5	2.2	995.2
75,0°	6.5	6.0	6.0	6.4	6.6	7.1	7.9	1.7	996.9
77,5°	4.5	4.3	4.4	4.7	5.1	5.6	6.3	1.3	998.2
80,0°	2.9	2.7	2.9	3.1	3.5	4.1	4.7	0.9	999.1
82,5°	1.3	1.4	1.6	1.8	2.2	2.7	3.3	0.5	999.7
85,0°	0.6	0.6	0.6	0.7	1.0	1.4	1.8	0.3	999.9
87,5°	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.1	1000.0
90,0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	19.9	21.2	20.3	21.5	21.8	19.6	20.9	20.0	21.2	21.5
	3H	19.9	21.1	20.3	21.4	21.7	19.6	20.8	20.0	21.1	21.5
	4H	19.9	21.0	20.3	21.3	21.7	19.7	20.7	20.1	21.1	21.4
	6H	19.9	20.8	20.3	21.2	21.6	19.7	20.6	20.1	21.0	21.4
	8H	20.0	20.8	20.4	21.1	21.5	19.8	20.6	20.2	21.0	21.4
	12H	19.9	20.7	20.4	21.1	21.5	19.8	20.5	20.2	20.9	21.3
4H	2H	19.8	20.9	20.2	21.2	21.6	19.5	20.6	19.9	20.9	21.3
	3H	19.9	20.7	20.3	21.1	21.5	19.6	20.5	20.0	20.9	21.3
	4H	19.9	20.6	20.3	21.0	21.5	19.6	20.4	20.1	20.8	21.3
	6H	19.8	20.5	20.3	20.9	21.4	19.7	20.3	20.2	20.8	21.2
	8H	19.8	20.4	20.3	20.8	21.3	19.7	20.3	20.2	20.7	21.2
	12H	19.8	20.3	20.3	20.7	21.2	19.7	20.2	20.2	20.7	21.2
8H	4H	19.8	20.4	20.3	20.8	21.3	19.6	20.2	20.1	20.6	21.1
	6H	19.8	20.2	20.3	20.7	21.2	19.6	20.1	20.1	20.6	21.1
	8H	19.7	20.1	20.2	20.6	21.2	19.6	20.1	20.2	20.6	21.1
	12H	19.7	20.0	20.2	20.5	21.1	19.7	20.0	20.2	20.5	21.1
12H	4H	19.8	20.3	20.3	20.7	21.2	19.6	20.1	20.1	20.5	21.0
	6H	19.8	20.1	20.3	20.6	21.2	19.6	20.0	20.2	20.5	21.0
	8H	19.7	20.0	20.3	20.6	21.1	19.7	20.0	20.2	20.5	21.0

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 426 B = 264	
C-planes	0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°
γ	Luminance in cd/m²						
45,0°	22130.1	21669.3	22524.9	23102.3	20610.4	19351.1	19294.2
50,0°	12330.0	12038.5	12025.9	12240.6	10984.0	10473.0	10293.3
55,0°	7748.7	7541.5	7649.2	7824.8	7098.1	6672.3	6592.1
60,0°	5573.3	5380.1	5653.0	5822.7	5451.6	5048.5	5112.8
65,0°	4702.7	4277.9	4559.7	4756.3	4657.5	4307.2	4550.6
70,0°	4042.0	3687.9	4079.4	3946.8	4329.8	3941.4	4304.4
75,0°	3331.1	3085.3	3077.0	3290.9	3419.2	3659.8	4079.8
80,0°	2248.9	2098.4	2220.5	2398.7	2707.5	3184.5	3630.0
85,0°	898.3	893.7	922.8	1080.4	1597.7	2128.7	2757.6

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Luminance values in cd/m²

γ 65°

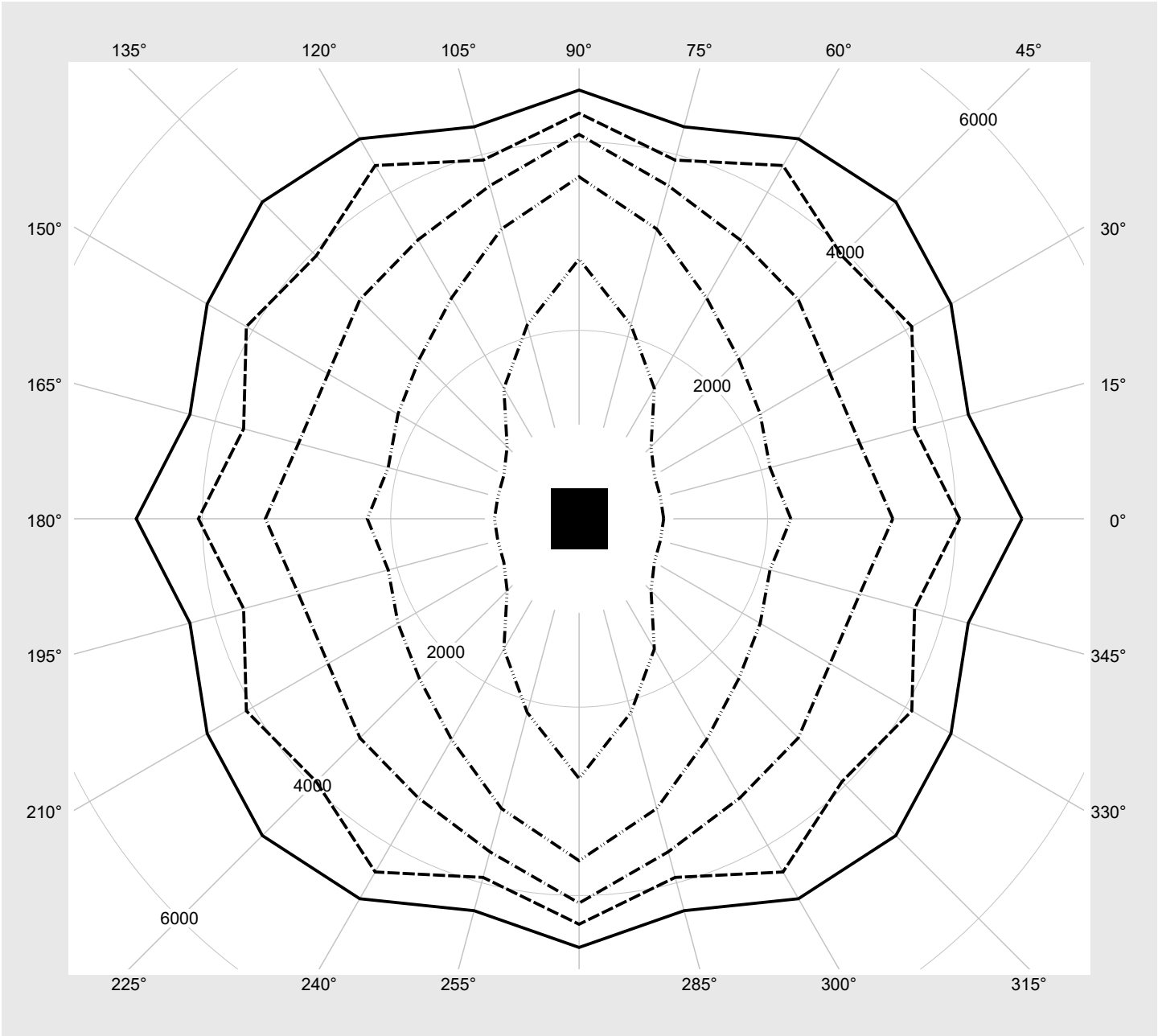
γ 70°

γ 75°

γ 80°

γ 85°

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Dimming levels table		environmental temperature: 25°C



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	----	----	----	----
95	241	252	14266	69.4
90	227	250	13473	65.3
85	214	248	12736	61.5
80	201	245	11990	57.8
75	188	243	11246	53.9
70	175	240	10495	50.2
65	162	238	9737	46.4
60	149	234	8979	42.7
55	137	231	8274	39.3
50	124	228	7504	35.6
45	111	224	6733	31.9
40	99	219	6018	28.6
35	86	214	5233	24.9
30	74	209	4509	21.7
25	62	202	3779	18.3
20	49	194	2979	14.8
15	37	183	2239	11.6
10	25	169	1496	8.2
5	13	145	743	4.7
2	5	110	241	2.5