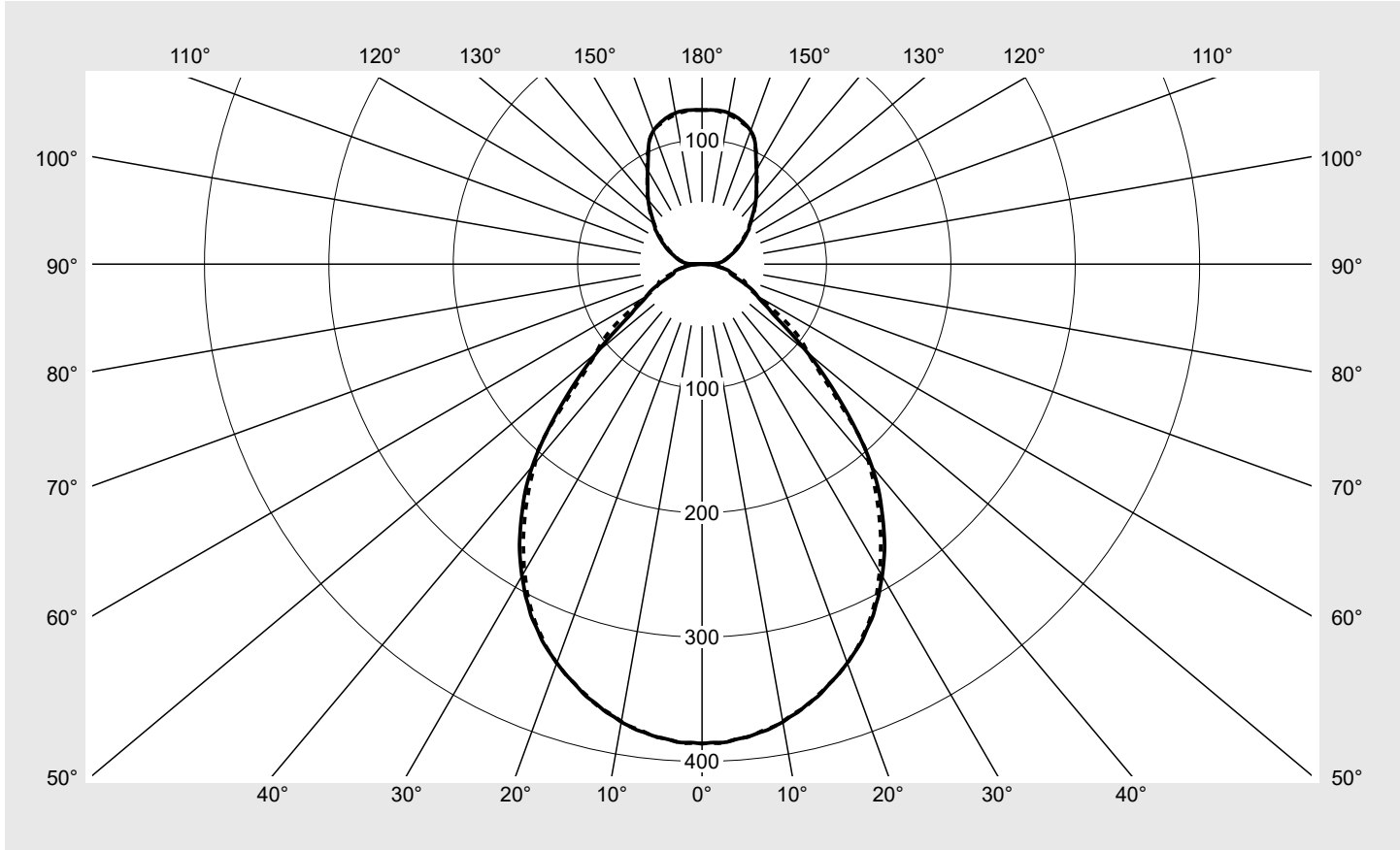


Photometric test report

Family Round 21 L	Order number: 51MR38ND0421W EAN: 4058352830048	LP number 59654_16
	Version Suspended luminaire, micro prismatic cover, PMMA, wide distribution, direct-/ indirect distribution, aluminium housing, white, UGR≤19 (L65≤3000cd/m²)	serial documentation 31.07.2024
	Lamps LED 4000 K CRI ≥ 80	
Controlgear ECG-DALI		
Rated values Net luminous flux = 12230 lm Power consumption = 88.2 W Luminous efficacy = 138.7 lm/W		



Luminous intensity in cd/klm C180-0 C270-90 **Imax: 386 cd/klm**



Classifications	
DIN 5040	B 5 3
CIE	N1=66 N2=90 N3=98 N4=71 N5=100

Luminaire light output ratios	
η_{LB}	100.0%
ϕ_u	70.6%
ϕ_o	29.4%

Measurement conditions
DIN EN 13032 and DIN 5032

Photometric test report

Family Round 21 L	Order number: 51MR38ND0421W EAN: 4058352830048	LP number 59654_16
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	0° 180°	15°	30°	45°	60°	75°	90° 270°	Phi-zone	Total Phi-zone
		165° 195° 345°	150° 210° 330°	135° 225° 315°	120° 240° 300°	105° 255° 285°			
Luminous intensity in cd/klm							Luminous flux in lm/klm		
0°	385.7	385.7	385.7	385.7	385.7	385.7	385.7	0.1	0.1
1°	385.0	385.3	384.9	385.7	385.2	385.8	385.3	0.7	0.8
2°	385.1	385.3	384.7	384.8	385.1	385.3	385.6	1.5	2.3
3°	384.9	384.4	384.2	384.6	384.4	384.5	384.8	2.2	4.5
4°	383.3	383.8	383.7	384.1	383.1	383.9	383.2	2.9	7.4
5°	382.4	382.7	382.8	382.6	382.2	382.5	382.5	3.7	11.1
6°	381.3	381.9	381.4	381.6	380.9	381.5	381.5	4.4	15.5
7°	379.5	380.2	379.8	379.8	379.7	379.9	379.2	5.1	20.5
8°	378.3	378.8	378.4	378.5	378.1	378.8	377.4	5.8	26.3
9°	376.0	376.7	376.0	376.5	375.3	376.7	376.1	6.5	32.8
10°	374.0	374.7	374.1	374.6	373.4	374.4	373.5	7.1	39.9
11°	370.9	372.5	371.7	371.8	370.7	372.2	370.5	7.8	47.7
12°	368.8	369.8	369.0	369.7	368.0	369.4	368.0	8.4	56.1
13°	365.5	367.3	366.0	367.1	365.3	366.8	365.9	9.0	65.1
14°	362.4	364.6	363.2	364.3	362.6	363.9	362.8	9.6	74.8
15°	359.9	361.6	359.9	361.1	359.0	361.0	359.0	10.2	85.0
16°	356.2	358.0	357.0	358.2	356.0	357.8	355.9	10.8	95.8
17°	352.3	355.1	353.8	354.9	352.3	354.3	352.2	11.3	107.1
18°	349.0	351.4	350.0	351.4	348.4	351.0	349.2	11.9	119.0
19°	345.3	348.0	346.4	347.3	344.6	347.0	345.3	12.4	131.4
20°	341.4	343.9	342.3	343.5	340.9	343.5	341.6	12.8	144.2
21°	337.3	340.1	338.4	339.6	336.3	339.0	336.9	13.3	157.5
22°	333.2	335.4	334.1	335.3	332.0	334.2	333.0	13.7	171.2
23°	329.0	331.3	329.5	330.6	327.6	329.9	327.5	14.1	185.4
24°	323.7	326.6	324.4	325.8	322.7	325.1	322.7	14.5	199.8
25°	318.8	321.6	318.9	320.4	317.7	320.1	317.5	14.8	214.7
26°	314.0	316.3	313.5	315.2	312.3	314.2	311.8	15.1	229.8
27°	307.7	310.6	307.6	309.1	306.4	309.0	305.7	15.3	245.1
28°	302.3	304.3	301.4	303.5	300.7	302.6	299.5	15.6	260.7
29°	295.7	298.2	294.8	297.4	294.6	296.4	292.2	15.7	276.4
30°	289.6	291.6	288.0	291.0	288.0	290.1	285.5	15.9	292.3
31°	283.0	285.0	280.5	284.0	282.5	282.8	278.3	16.0	308.2
32°	276.4	277.8	273.8	277.0	275.9	276.1	271.0	16.0	324.2
33°	269.5	270.8	266.2	269.7	269.4	268.6	263.9	16.0	340.3
34°	261.7	263.3	258.9	262.4	262.3	261.6	256.1	16.0	356.3
35°	254.0	256.0	251.6	254.8	255.0	253.9	248.4	16.0	372.3
36°	246.1	248.3	243.8	246.8	247.4	245.8	240.7	15.9	388.1
37°	238.4	240.3	235.8	238.8	239.8	237.6	232.6	15.7	403.8
38°	230.5	231.7	227.8	230.2	232.0	229.0	224.9	15.5	419.3
39°	221.7	222.5	219.5	221.2	223.7	219.6	216.5	15.2	434.6
40°	212.3	213.0	210.1	211.6	215.3	209.7	208.6	14.9	449.5
41°	202.4	202.4	199.7	201.7	206.4	199.2	202.2	14.5	464.0
42°	191.8	191.6	189.6	191.5	196.4	188.5	192.6	14.1	478.1
43°	180.9	180.6	181.0	181.0	186.6	177.8	180.0	13.6	491.6
44°	170.1	169.6	168.4	170.7	176.2	167.8	166.2	13.0	504.6

Photometric test report

Family Round 21 L	Order number: 51MR38ND0421W EAN: 4058352830048	LP number 59654_16
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	0° 180°	15°	30°	45°	60°	75°	90° 270°	Phi-zone	Total Phi-zone
		165° 195° 345°	150° 210° 330°	135° 225° 315°	120° 240° 300°	105° 255° 285°			
Luminous intensity in cd/klm							Luminous flux in lm/klm		
45°	159.3	159.0	156.5	160.3	165.7	157.7	153.3	12.3	516.9
46°	149.0	148.8	145.8	149.4	158.7	147.8	142.7	11.8	528.7
47°	138.9	139.0	133.8	139.0	148.2	138.5	131.6	11.1	539.9
48°	129.2	130.0	125.0	129.2	138.7	129.5	124.1	10.6	550.5
49°	119.9	121.5	117.7	119.6	127.6	121.1	116.8	10.0	560.5
50°	110.2	113.4	111.2	111.0	117.5	113.1	111.4	9.5	569.9
51°	101.0	105.5	106.0	103.0	107.2	105.3	106.9	9.0	578.9
52°	91.7	97.9	100.6	95.4	97.0	97.9	102.7	8.4	587.3
53°	83.1	90.7	95.5	88.4	87.5	90.7	97.6	7.9	595.3
54°	75.5	83.7	90.1	81.4	78.7	83.6	91.8	7.4	602.7
55°	69.0	77.3	84.2	75.2	71.0	77.2	85.3	6.9	609.6
56°	65.5	71.4	77.9	69.2	64.6	71.3	77.7	6.5	616.1
57°	61.0	65.7	71.6	64.1	59.3	65.8	70.3	6.0	622.1
58°	56.6	60.6	65.3	59.7	55.1	60.9	63.3	5.6	627.7
59°	53.4	55.8	59.2	55.9	52.0	56.5	57.2	5.2	632.9
60°	51.3	51.4	53.7	52.3	49.7	52.2	52.0	4.9	637.8
61°	49.4	47.8	49.0	49.2	48.0	48.7	47.9	4.7	642.5
62°	47.4	44.7	45.1	46.5	46.4	45.8	44.5	4.4	646.9
63°	44.8	42.2	42.4	43.9	44.6	43.2	42.0	4.2	651.2
64°	41.9	39.9	40.4	41.1	42.1	40.4	40.1	4.0	655.2
65°	38.6	37.9	39.2	38.3	39.2	37.6	38.7	3.8	659.0
66°	35.6	35.8	38.2	35.5	36.0	34.8	38.2	3.6	662.6
67°	32.6	33.8	37.2	32.9	33.2	32.4	37.8	3.4	666.1
68°	29.9	31.9	35.5	30.6	30.7	30.2	36.7	3.3	669.3
69°	27.6	30.0	33.5	28.7	28.6	28.6	34.5	3.1	672.4
70°	25.9	28.4	31.1	27.6	26.9	27.4	31.9	2.9	675.3
71°	24.7	26.9	28.8	26.9	25.4	26.4	29.3	2.8	678.1
72°	23.9	25.4	26.8	26.0	24.1	25.5	27.0	2.7	680.8
73°	23.6	24.0	25.2	24.7	23.2	24.3	25.2	2.5	683.3
74°	23.3	22.8	24.1	23.1	22.7	23.0	23.8	2.4	685.8
75°	22.8	21.7	23.0	21.5	22.4	21.5	22.7	2.3	688.1
76°	22.2	20.4	21.8	20.1	21.8	20.1	21.7	2.2	690.4
77°	20.7	19.2	20.5	18.8	20.5	18.7	20.4	2.1	692.5
78°	18.8	17.9	18.9	17.5	18.8	17.4	19.0	2.0	694.4
79°	16.7	16.4	17.2	16.1	16.9	16.0	17.4	1.8	696.2
80°	14.7	14.9	15.4	14.5	15.2	14.7	15.7	1.6	697.8
81°	13.5	13.4	13.8	13.1	13.7	13.1	13.9	1.5	699.3
82°	12.3	11.8	12.3	11.8	12.4	11.7	12.2	1.3	700.6
83°	11.3	10.5	10.9	10.4	11.1	10.4	10.6	1.2	701.8
84°	10.0	9.2	9.5	9.1	9.7	9.1	9.3	1.0	702.8
85°	8.7	7.8	8.3	7.7	8.3	7.7	8.0	0.9	703.7
86°	7.4	6.2	6.9	6.3	7.0	6.2	6.6	0.7	704.4
87°	6.2	4.8	5.5	4.8	5.5	4.7	5.3	0.6	705.0
88°	4.2	3.4	4.0	3.5	4.0	3.5	3.9	0.4	705.4
89°	2.6	2.5	2.6	2.7	2.5	2.7	2.5	0.3	705.7

Photometric test report

Family Round 21 L	Order number: 51MR38ND0421W EAN: 4058352830048	LP number 59654_16
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	0° 180°	15°	30°	45°	60°	75°	90° 270°	Phi-zone	Total Phi-zone
		165° 195° 345°	150° 210° 330°	135° 225° 315°	120° 240° 300°	105° 255° 285°			
Luminous intensity in cd/klm								Luminous flux in lm/klm	
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	705.7
91°	9.7	8.6	9.0	8.2	8.4	8.0	8.2	0.9	706.6
92°	11.4	10.0	10.8	9.6	10.3	9.2	10.0	1.1	707.7
93°	12.4	11.5	11.9	11.1	11.5	11.0	11.2	1.3	709.0
94°	13.6	12.8	12.8	12.5	12.8	12.3	12.4	1.4	710.3
95°	14.4	13.7	14.1	13.3	13.9	13.4	13.5	1.5	711.8
96°	15.6	15.1	15.2	14.4	15.2	14.6	14.3	1.6	713.5
97°	16.5	16.1	16.2	15.7	16.1	15.7	15.2	1.7	715.2
98°	17.1	16.8	16.8	16.6	17.0	16.6	16.1	1.8	717.0
99°	18.1	17.8	17.9	17.6	17.7	17.3	17.2	1.9	718.9
100°	18.6	18.7	18.5	18.2	18.5	18.3	18.1	2.0	720.9
101°	19.5	19.2	19.5	19.1	19.2	19.3	19.1	2.1	723.0
102°	20.2	20.0	20.1	19.6	20.1	20.1	19.6	2.1	725.1
103°	20.9	20.8	20.8	20.4	20.9	20.8	20.5	2.2	727.4
104°	21.5	21.5	21.7	21.3	21.6	21.6	20.9	2.3	729.6
105°	22.4	22.3	22.3	22.1	22.4	22.2	21.8	2.4	732.0
106°	23.1	22.7	23.0	23.0	23.1	22.9	22.5	2.4	734.4
107°	23.8	23.6	23.8	23.7	23.9	23.8	23.4	2.5	736.9
108°	24.8	24.5	24.7	24.6	24.7	24.8	24.0	2.6	739.5
109°	25.8	25.4	25.4	25.3	25.8	25.6	24.8	2.6	742.1
110°	26.9	26.4	26.4	26.2	26.6	26.7	26.1	2.7	744.8
111°	27.9	27.2	27.6	27.1	27.6	27.6	26.8	2.8	747.6
112°	29.1	28.5	28.5	28.0	28.4	28.5	27.8	2.9	750.5
113°	30.1	29.5	29.5	28.9	29.4	29.3	28.8	3.0	753.5
114°	31.3	30.4	30.4	29.9	30.5	30.4	29.8	3.0	756.5
115°	32.2	31.4	31.5	31.2	31.6	31.4	30.8	3.1	759.6
116°	33.2	32.2	32.5	32.2	32.7	32.6	31.8	3.2	762.8
117°	34.1	33.3	33.6	33.4	33.7	33.6	33.2	3.3	766.1
118°	35.6	34.5	34.9	34.4	34.9	34.8	34.3	3.4	769.5
119°	36.7	35.6	36.1	35.8	36.2	35.8	35.4	3.4	772.9
120°	37.8	36.8	37.1	36.8	37.1	37.1	36.7	3.5	776.5
121°	39.1	38.0	38.4	38.2	38.4	38.2	38.0	3.6	780.0
122°	40.4	39.2	39.7	39.3	39.8	39.3	39.1	3.7	783.7
123°	41.7	40.6	41.0	40.6	41.0	40.4	40.3	3.7	787.5
124°	43.0	41.9	42.2	41.8	42.6	41.8	42.2	3.8	791.3
125°	44.2	43.2	43.5	43.2	44.1	43.2	43.1	3.9	795.2
126°	46.0	44.6	44.9	44.6	45.6	44.4	44.5	4.0	799.2
127°	47.3	45.9	46.3	45.9	47.1	45.9	46.0	4.1	803.2
128°	47.9	47.5	47.5	47.6	48.8	47.4	47.7	4.1	807.4
129°	48.8	49.0	49.0	48.9	50.2	48.9	49.2	4.2	811.6
130°	50.0	50.4	50.2	50.7	51.6	50.4	50.7	4.3	815.8
131°	51.7	52.2	51.6	52.1	52.9	52.1	52.0	4.3	820.1
132°	53.2	53.8	53.2	53.9	54.2	53.7	53.6	4.4	824.5
133°	54.7	55.5	55.1	55.7	55.7	55.4	55.1	4.4	828.9
134°	56.4	57.2	56.6	57.2	57.3	57.0	56.7	4.5	833.4

Photometric test report

Family Round 21 L	Order number: 51MR38ND0421W EAN: 4058352830048	LP number 59654_16
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	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
	Luminous intensity in cd/klm							Luminous flux in lm/klm	
135°	58.1	59.0	58.1	59.0	58.8	58.8	58.9	4.6	838.0
136°	60.0	60.6	59.8	60.8	60.2	60.5	60.5	4.6	842.6
137°	61.7	62.4	61.5	62.5	61.7	62.2	62.0	4.6	847.2
138°	63.9	64.1	63.4	64.4	63.3	64.1	63.7	4.7	851.9
139°	65.6	66.0	65.1	66.2	65.2	65.9	65.6	4.7	856.6
140°	67.4	67.8	66.9	68.2	67.2	67.8	67.5	4.8	861.4
141°	69.0	69.7	68.8	69.8	69.0	69.8	69.4	4.8	866.2
142°	70.9	71.8	70.6	71.9	70.7	71.7	71.4	4.8	871.0
143°	72.5	73.6	72.5	74.0	72.7	73.7	72.9	4.8	875.8
144°	74.4	75.7	74.5	76.0	74.5	75.8	74.8	4.8	880.7
145°	76.2	77.6	76.3	78.2	76.8	78.0	76.8	4.9	885.5
146°	78.3	79.7	78.5	80.1	78.9	80.2	78.8	4.9	890.4
147°	80.4	82.0	80.5	82.5	81.1	82.5	80.9	4.9	895.3
148°	82.7	84.2	82.8	84.8	83.6	84.8	83.3	4.9	900.2
149°	85.1	86.7	85.2	87.2	85.7	87.3	85.6	4.9	905.0
150°	87.5	89.2	87.7	89.8	88.1	89.7	88.1	4.9	909.9
151°	89.8	91.9	90.6	92.6	91.1	92.5	91.0	4.9	914.8
152°	92.6	94.4	93.3	95.4	93.9	95.3	93.8	4.9	919.6
153°	95.5	97.4	96.2	98.4	96.9	98.1	96.9	4.8	924.4
154°	98.6	100.4	99.2	101.1	99.6	101.0	99.6	4.8	929.3
155°	101.9	103.2	102.4	104.0	102.8	103.6	102.1	4.8	934.0
156°	105.4	105.7	105.2	106.2	105.4	106.3	105.0	4.7	938.7
157°	108.2	108.5	107.6	108.7	108.1	108.7	108.1	4.6	943.4
158°	110.5	110.6	110.1	111.0	110.3	110.6	110.5	4.5	947.9
159°	112.4	112.7	112.1	112.7	112.1	112.4	112.4	4.4	952.3
160°	114.2	114.4	113.8	114.0	113.9	113.9	114.1	4.3	956.6
161°	115.6	116.0	115.6	115.8	115.3	115.4	115.3	4.1	960.7
162°	116.8	117.3	116.7	117.1	116.4	116.6	116.5	4.0	964.7
163°	117.9	118.3	118.0	117.8	117.7	117.6	117.2	3.8	968.5
164°	119.0	119.2	118.9	119.0	118.6	118.4	118.0	3.6	972.1
165°	119.9	120.2	120.0	120.0	119.3	119.5	119.0	3.4	975.5
166°	120.9	121.1	120.7	120.8	120.3	120.2	119.8	3.2	978.7
167°	121.6	121.7	121.5	121.4	121.2	120.8	120.4	3.0	981.7
168°	122.4	122.3	122.1	122.1	121.7	121.4	121.0	2.8	984.4
169°	122.9	123.0	122.6	122.6	122.3	122.0	121.7	2.6	987.0
170°	123.4	123.3	122.9	123.1	122.8	122.4	122.1	2.3	989.3
171°	123.9	123.7	123.4	123.5	123.2	122.8	122.5	2.1	991.5
172°	124.1	124.1	123.5	123.9	123.4	123.1	123.1	1.9	993.3
173°	124.2	124.2	123.8	123.9	123.7	123.1	123.3	1.7	995.0
174°	124.4	124.2	123.9	124.3	124.0	123.3	123.8	1.4	996.4
175°	124.3	124.3	124.2	124.2	124.2	123.4	124.0	1.2	997.6
176°	124.2	124.3	124.1	124.1	124.2	123.4	124.0	0.9	998.5
177°	124.2	124.1	124.1	123.8	124.2	123.3	124.1	0.7	999.3
178°	123.9	123.9	124.2	123.9	124.0	123.4	124.1	0.5	999.7
179°	123.9	123.9	124.0	124.1	124.0	123.3	124.0	0.2	1000.0
180°	124.0	124.0	124.0	124.0	124.0	124.0	124.0	0.0	1000.0

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UGR-Table	Standard room	siteco								
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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	13.7	14.8	14.4	15.5	16.4	13.7	14.8	14.4	15.5	16.4
	3H	14.1	15.1	14.9	15.8	16.8	14.2	15.1	14.9	15.9	16.8
	4H	14.5	15.4	15.3	16.2	17.1	14.6	15.5	15.4	16.2	17.2
	6H	15.0	15.8	15.7	16.5	17.5	15.0	15.8	15.8	16.6	17.5
	8H	15.0	15.8	15.8	16.6	17.5	15.1	15.8	15.9	16.6	17.6
	12H	15.2	15.9	16.0	16.7	17.7	15.2	15.9	16.0	16.7	17.7
4H	2H	13.8	14.7	14.6	15.5	16.4	13.8	14.7	14.6	15.5	16.4
	3H	14.6	15.3	15.4	16.1	17.1	14.6	15.3	15.4	16.1	17.1
	4H	15.1	15.7	15.9	16.5	17.5	15.1	15.7	15.9	16.5	17.5
	6H	15.6	16.2	16.5	17.0	18.0	15.6	16.2	16.4	17.0	18.0
	8H	15.7	16.2	16.6	17.1	18.1	15.7	16.2	16.5	17.1	18.1
	12H	16.0	16.5	16.9	17.3	18.3	16.0	16.4	16.8	17.3	18.3
8H	4H	15.2	15.7	16.0	16.5	17.6	15.2	15.7	16.0	16.5	17.6
	6H	15.8	16.2	16.6	17.1	18.1	15.8	16.2	16.6	17.0	18.1
	8H	16.1	16.5	17.0	17.3	18.4	16.1	16.5	17.0	17.3	18.4
	12H	16.5	16.8	17.4	17.7	18.7	16.5	16.8	17.3	17.6	18.7
12H	4H	15.3	15.7	16.1	16.6	17.6	15.3	15.7	16.1	16.6	17.6
	6H	16.0	16.3	16.8	17.2	18.2	16.0	16.3	16.8	17.2	18.2
	8H	16.3	16.6	17.2	17.5	18.6	16.3	16.6	17.2	17.5	18.5

Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	D = 840
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C-planes	γ	Luminance in cd/m ²								
		0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°		
45°		4973.1	4962.1	4883.1	5004.0	5171.0	4921.5	4786.0		
50°		3782.6	3893.6	3819.4	3810.1	4033.4	3883.3	3824.2		
55°		2656.4	2974.7	3239.6	2893.5	2730.3	2970.9	3280.1		
60°		2263.8	2270.4	2370.2	2309.8	2194.0	2305.3	2292.9		
65°		2017.9	1976.6	2045.1	2002.2	2044.5	1962.5	2019.5		
70°		1671.5	1831.0	2008.5	1783.9	1732.9	1766.4	2056.3		
75°		1946.9	1850.6	1958.8	1836.1	1912.8	1836.9	1933.3		
80°		1870.6	1893.5	1960.9	1847.7	1938.0	1864.3	1992.6		
85°		2209.3	1963.6	2090.3	1958.6	2102.9	1938.3	2019.4		

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Luminance values in cd/m² γ 65° γ 70° γ 75° γ 80° γ 85° serial

