

filename : LED-X-APLED4-CLEAR.LDT  
 meas. number : 3203  
 luminaire number : LED-X/APLED4/CLEAR  
 date / operator : 27-11-2013

**default lamp type(s)**

no of lamps	lamp type	luminaire lumens	input wattage
1	4x700mA LED Panels	2600 lm	29.8 W

**dimensions**

luminaire		luminous area	
length	: 1125 mm	length	: 1120 mm
width	: 28 mm	width	: 25 mm
height	: 24 mm	height	: 5 mm

**coordinate system**

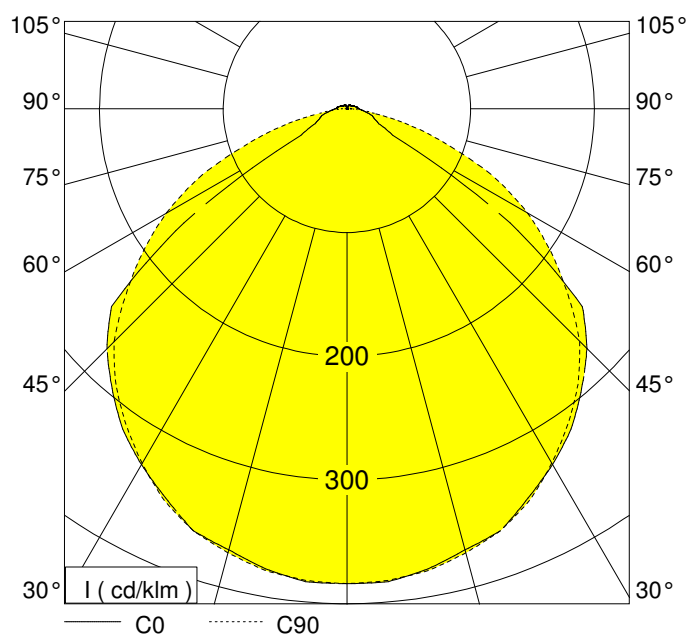
no of planes	: 24	samples / plane	: 37
first c-plane	: 0.0 °	first gamma-angle	: 0.0 °
step angle	: 15.0 °	step angle	: 5.0 °
last c-plane	: 345.0 °	last gamma-angle	: 180.0 °
symmetrics	: bi-symmetric		

**performance**

light output ratio	: 100.0 %
DFF	: 98.0 %
UFF	: 2.0 %

**classification**

LiTG / DIN	: A41
UTE	: 0.98D+0.02T
CIE	: 54 88 98 98 100
BZ	: 3 3 3 3 3 3 3 3
Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 29.8 W
Amps (running)	: 0.128 A
V.A.	: 30.72 VA
Power Factor	: 0.97
CCT	: 3925K(measured):4000K(nominal)
Ballast/Driver Details:	: Harvard CL700-240-C

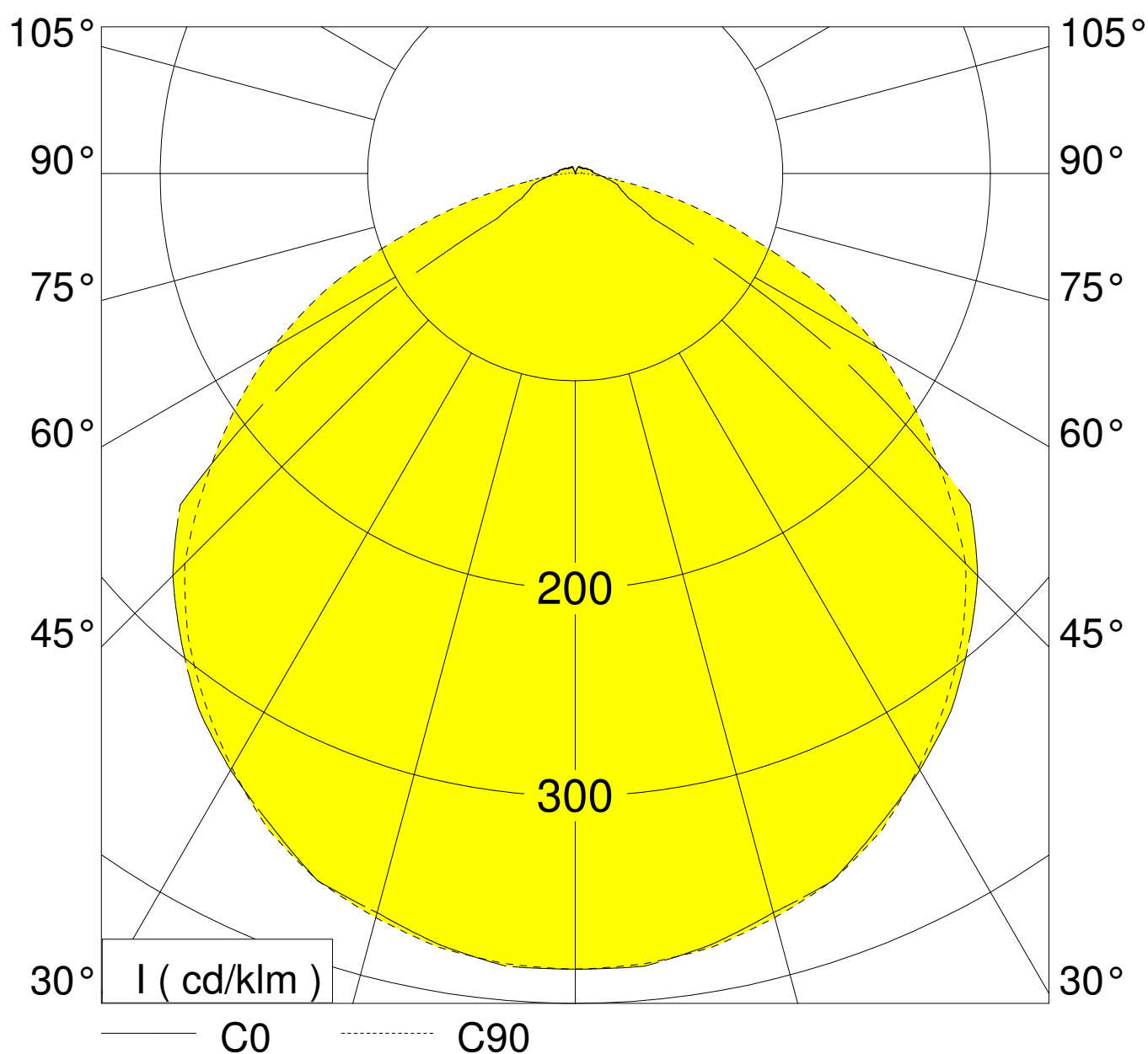


Measurements made are in absolute units  
The luminaire is treated as if it was a lamp as it  
is not possible to measure each LED separately  
- hence an LOR of 100%

The Light output ratio in real terms would be  
less than 100%. If it was possible to compare  
real LED lumens with the total output from the  
luminaire we could obtain an actual LOR

This also means that the total lumens emitted  
from the LED's would be greater than the 2600  
lumens measured.

In reality the LED lumens would approximate to  
this value divided by the actual Light Output



	C 0.0	C 15.0	C 30.0	C 45.0	C 60.0	C 75.0	C 90.0	C 105.0
0.0°	383.40	383.40	383.40	383.40	383.40	383.40	383.40	383.40
5.0°	383.40	383.40	383.40	382.80	382.20	382.20	382.20	382.20
10.0°	377.30	377.30	377.30	378.60	379.80	379.20	378.60	379.20
15.0°	368.70	368.80	368.80	369.40	370.00	370.60	371.20	370.60
20.0°	362.60	361.40	360.30	359.00	357.70	360.20	362.60	360.20
25.0°	346.60	346.70	346.80	346.20	345.50	347.30	349.10	347.30
30.0°	331.90	331.40	330.90	330.20	329.50	330.10	330.70	330.10
35.0°	315.80	314.30	312.70	312.60	312.40	311.80	311.10	311.80
40.0°	295.00	293.40	291.90	291.10	290.30	290.30	290.30	290.30
45.0°	274.10	270.70	267.50	266.70	265.90	265.90	265.90	265.90
50.0°	248.30	244.40	240.50	237.50	234.60	233.70	232.80	233.70
55.0°	160.90	183.50	206.20	205.00	203.80	202.40	201.00	202.40
60.0°	43.00	50.30	57.60	111.70	165.80	167.10	168.40	167.10
65.0°	28.40	28.20	28.10	75.50	122.80	127.60	132.30	127.60
70.0°	23.60	23.10	22.70	30.70	38.60	63.50	88.60	63.50
75.0°	21.00	20.20	19.40	17.60	15.60	35.10	54.50	35.10
80.0°	15.80	15.40	15.00	13.70	12.40	18.20	23.90	18.20
85.0°	12.30	11.70	11.10	9.90	8.70	8.60	8.50	8.60
90.0°	9.50	9.40	9.20	8.10	6.90	5.20	3.60	5.20
95.0°	8.30	7.90	7.60	6.60	5.70	4.30	2.90	4.30
100.0°	8.00	7.40	6.80	5.90	5.00	2.50	0.00	2.50
105.0°	7.20	6.60	6.00	5.00	4.00	1.90	0.00	1.90
110.0°	6.00	5.70	5.40	4.40	3.30	1.60	0.00	1.60
115.0°	5.70	5.20	4.70	3.90	3.00	1.50	0.00	1.50
120.0°	4.90	4.10	3.10	3.00	2.80	1.40	0.00	1.40
125.0°	4.20	3.60	2.90	1.40	0.00	0.00	0.00	0.00
130.0°	4.20	3.50	2.80	1.40	0.00	0.00	0.00	0.00
135.0°	3.70	3.10	2.60	1.30	0.00	0.00	0.00	0.00
140.0°	3.70	3.10	2.60	1.30	0.00	0.00	0.00	0.00
145.0°	3.70	3.10	2.50	1.30	0.00	0.00	0.00	0.00
150.0°	3.60	2.90	2.30	1.10	0.00	0.00	0.00	0.00
155.0°	3.30	2.60	1.90	1.00	0.00	0.00	0.00	0.00
160.0°	1.90	1.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	cd / klm							

	C 120.0	C 135.0	C 150.0	C 165.0	C 180.0	C 195.0	C 210.0	C 225.0
0.0°	383.40	383.40	383.40	383.40	383.40	383.40	383.40	383.40
5.0°	382.20	382.80	383.40	383.40	383.40	383.40	383.40	382.80
10.0°	379.80	378.60	377.30	377.30	377.30	377.30	377.30	378.60
15.0°	370.00	369.40	368.80	368.80	368.70	368.80	368.80	369.40
20.0°	357.70	359.00	360.30	361.40	362.60	361.40	360.30	359.00
25.0°	345.50	346.20	346.80	346.70	346.60	346.70	346.80	346.20
30.0°	329.50	330.20	330.90	331.40	331.90	331.40	330.90	330.20
35.0°	312.40	312.60	312.70	314.30	315.80	314.30	312.70	312.60
40.0°	290.30	291.10	291.90	293.40	295.00	293.40	291.90	291.10
45.0°	265.90	266.70	267.50	270.70	274.10	270.70	267.50	266.70
50.0°	234.60	237.50	240.50	244.40	248.30	244.40	240.50	237.50
55.0°	203.80	205.00	206.20	183.50	160.90	183.50	206.20	205.00
60.0°	165.80	111.70	57.60	50.30	43.00	50.30	57.60	111.70
65.0°	122.80	75.50	28.10	28.20	28.40	28.20	28.10	75.50
70.0°	38.60	30.70	22.70	23.10	23.60	23.10	22.70	30.70
75.0°	15.60	17.60	19.40	20.20	21.00	20.20	19.40	17.60
80.0°	12.40	13.70	15.00	15.40	15.80	15.40	15.00	13.70
85.0°	8.70	9.90	11.10	11.70	12.30	11.70	11.10	9.90
90.0°	6.90	8.10	9.20	9.40	9.50	9.40	9.20	8.10
95.0°	5.70	6.60	7.60	7.90	8.30	7.90	7.60	6.60
100.0°	5.00	5.90	6.80	7.40	8.00	7.40	6.80	5.90
105.0°	4.00	5.00	6.00	6.60	7.20	6.60	6.00	5.00
110.0°	3.30	4.40	5.40	5.70	6.00	5.70	5.40	4.40
115.0°	3.00	3.90	4.70	5.20	5.70	5.20	4.70	3.90
120.0°	2.80	3.00	3.10	4.10	4.90	4.10	3.10	3.00
125.0°	0.00	1.40	2.90	3.60	4.20	3.60	2.90	1.40
130.0°	0.00	1.40	2.80	3.50	4.20	3.50	2.80	1.40
135.0°	0.00	1.30	2.60	3.10	3.70	3.10	2.60	1.30
140.0°	0.00	1.30	2.60	3.10	3.70	3.10	2.60	1.30
145.0°	0.00	1.30	2.50	3.10	3.70	3.10	2.50	1.30
150.0°	0.00	1.10	2.30	2.90	3.60	2.90	2.30	1.10
155.0°	0.00	1.00	1.90	2.60	3.30	2.60	1.90	1.00
160.0°	0.00	0.00	0.00	1.00	1.90	1.00	0.00	0.00
165.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	cd / klm							

	C 240.0	C 255.0	C 270.0	C 285.0	C 300.0	C 315.0	C 330.0	C 345.0
0.0°	383.40	383.40	383.40	383.40	383.40	383.40	383.40	383.40
5.0°	382.20	382.20	382.20	382.20	382.20	382.80	383.40	383.40
10.0°	379.80	379.20	378.60	379.20	379.80	378.60	377.30	377.30
15.0°	370.00	370.60	371.20	370.60	370.00	369.40	368.80	368.80
20.0°	357.70	360.20	362.60	360.20	357.70	359.00	360.30	361.40
25.0°	345.50	347.30	349.10	347.30	345.50	346.20	346.80	346.70
30.0°	329.50	330.10	330.70	330.10	329.50	330.20	330.90	331.40
35.0°	312.40	311.80	311.10	311.80	312.40	312.60	312.70	314.30
40.0°	290.30	290.30	290.30	290.30	290.30	291.10	291.90	293.40
45.0°	265.90	265.90	265.90	265.90	265.90	266.70	267.50	270.70
50.0°	234.60	233.70	232.80	233.70	234.60	237.50	240.50	244.40
55.0°	203.80	202.40	201.00	202.40	203.80	205.00	206.20	183.50
60.0°	165.80	167.10	168.40	167.10	165.80	111.70	57.60	50.30
65.0°	122.80	127.60	132.30	127.60	122.80	75.50	28.10	28.20
70.0°	38.60	63.50	88.60	63.50	38.60	30.70	22.70	23.10
75.0°	15.60	35.10	54.50	35.10	15.60	17.60	19.40	20.20
80.0°	12.40	18.20	23.90	18.20	12.40	13.70	15.00	15.40
85.0°	8.70	8.60	8.50	8.60	8.70	9.90	11.10	11.70
90.0°	6.90	5.20	3.60	5.20	6.90	8.10	9.20	9.40
95.0°	5.70	4.30	2.90	4.30	5.70	6.60	7.60	7.90
100.0°	5.00	2.50	0.00	2.50	5.00	5.90	6.80	7.40
105.0°	4.00	1.90	0.00	1.90	4.00	5.00	6.00	6.60
110.0°	3.30	1.60	0.00	1.60	3.30	4.40	5.40	5.70
115.0°	3.00	1.50	0.00	1.50	3.00	3.90	4.70	5.20
120.0°	2.80	1.40	0.00	1.40	2.80	3.00	3.10	4.10
125.0°	0.00	0.00	0.00	0.00	0.00	1.40	2.90	3.60
130.0°	0.00	0.00	0.00	0.00	0.00	1.40	2.80	3.50
135.0°	0.00	0.00	0.00	0.00	0.00	1.30	2.60	3.10
140.0°	0.00	0.00	0.00	0.00	0.00	1.30	2.60	3.10
145.0°	0.00	0.00	0.00	0.00	0.00	1.30	2.50	3.10
150.0°	0.00	0.00	0.00	0.00	0.00	1.10	2.30	2.90
155.0°	0.00	0.00	0.00	0.00	0.00	1.00	1.90	2.60
160.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
165.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	cd / klm							

glare rating according to UGR											
ρ-ceiling		70	70	50	50	30	70	70	50	50	30
ρ-walls		50	30	50	30	30	50	30	50	30	30
ρ-workplane		20	20	20	20	20	20	20	20	20	20
room dimensions X                      Y		viewed crosswise					viewed endwise				
2H	2H	22.7	24.1	23.0	24.4	24.6	25.0	26.4	25.2	26.6	26.8
	3H	22.1	23.1	22.3	23.3	23.5	25.3	26.3	25.6	26.5	26.7
	4H	22.2	23.1	22.4	23.4	23.6	25.7	26.7	26.0	26.9	27.1
	6H	22.3	23.2	22.6	23.5	23.7	25.9	26.8	26.2	27.1	27.3
	8H	22.3	23.3	22.7	23.5	23.8	26.0	26.9	26.3	27.2	27.4
	12H	22.4	23.4	22.8	23.6	23.9	26.0	26.9	26.4	27.2	27.5
4H	2H	22.6	23.5	22.8	23.8	24.0	24.5	25.5	24.8	25.7	26.0
	3H	22.8	23.7	23.1	24.0	24.3	25.7	26.7	26.1	27.0	27.2
	4H	23.0	23.9	23.3	24.2	24.5	26.2	27.1	26.6	27.4	27.7
	6H	22.9	23.7	23.3	24.0	24.3	26.2	27.0	26.6	27.3	27.7
	8H	23.0	23.7	23.4	24.1	24.5	26.3	27.0	26.7	27.4	27.8
	12H	23.3	24.0	23.7	24.4	24.8	26.6	27.2	27.0	27.7	28.1
8H	4H	22.9	23.6	23.3	24.0	24.3	26.0	26.7	26.4	27.1	27.5
	6H	23.3	24.0	23.8	24.4	24.9	26.5	27.2	27.0	27.6	28.1
	8H	23.6	24.2	24.1	24.7	25.2	26.7	27.3	27.2	27.8	28.4
	12H	23.6	24.1	24.1	24.6	25.2	26.7	27.2	27.2	27.7	28.3
12H	4H	23.1	23.7	23.5	24.2	24.6	26.2	26.8	26.6	27.3	27.7
	6H	23.5	24.1	24.0	24.6	25.1	26.6	27.2	27.1	27.7	28.3
	8H	23.5	24.0	24.1	24.5	25.1	26.6	27.2	27.2	27.7	28.2
variation of observer position											
S =	1.0H	+0.8/		-0.8		+0.1/		-0.3			
	1.5H	+2.0/		-3.9		+0.3/		-0.5			
	2.0H	+3.1/		-4.5		+1.1/		-2.3			
standard-table		BK02					BK03				
correction for luminaire		5.6					9.1				
correct glare indices for a total flux of 2600lm											

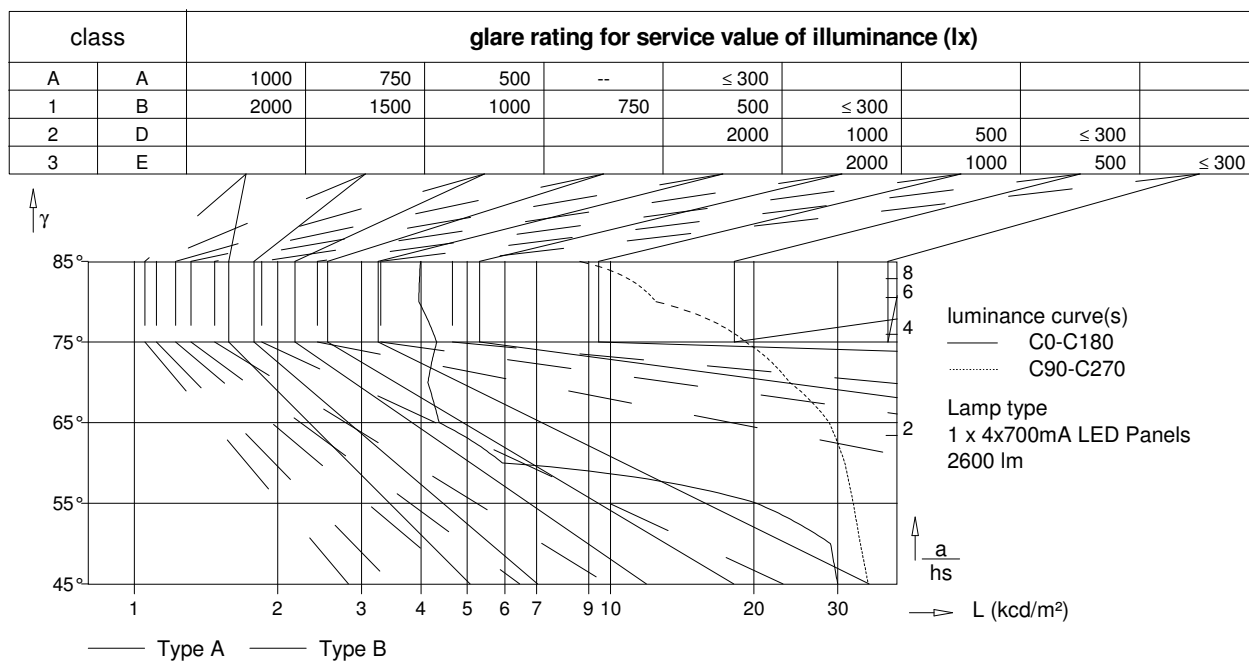


Tabelle der berechneten Leuchtdichten

gamma	C 0	C 90	C 180	C 270
45°	29995.6	34762.8	29995.6	34762.8
50°	28965.5	33452.3	28965.5	33452.3
55°	20261.2	32334.0	20261.2	32334.0
60°	5931.1	31034.3	5931.1	31034.3
65°	4367.0	28793.1	4367.0	28793.1
70°	4135.1	23763.1	4135.1	23763.1
75°	4314.1	19232.7	4314.1	19232.7
80°	3958.7	12464.8	3958.7	12464.8
85°	3988.0	8616.4	3988.0	8616.4

alle Werte in cd/m²

