

filename : LED-X-APLED3-CLEAR.LDT
 meas. number : 3213-C
 luminaire number : LED-X/APLED3/CLEAR
 date / operator : 28-11-2013

default lamp type(s)

no of lamps	lamp type	luminaire lumens	input wattage
1	3x700mA LED Panels	1725 lm	24 W

dimensions

luminaire		luminous area	
length	: 750 mm	length	: 745 mm
width	: 28 mm	width	: 25 mm
height	: 24 mm	height	: 5 mm

coordinate system

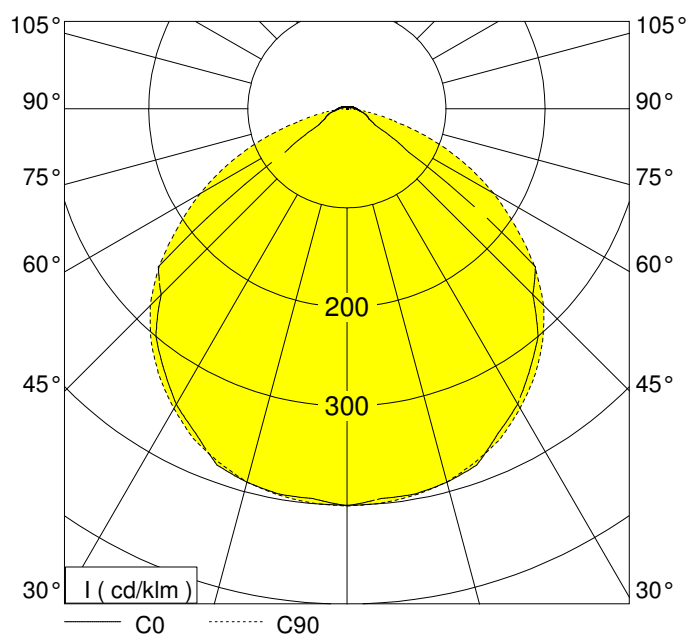
no of planes	: 24	samples / plane	: 37
first c-plane	: 0.0 °	first gamma-angle	: 0.0 °
step angle	: 15.0 °	step angle	: 5.0 °
last c-plane	: 345.0 °	last gamma-angle	: 180.0 °
symmetrics	: bi-symmetric		

performance

light output ratio	: 100.0 %
DFF	: 98.3 %
UFF	: 1.7 %

classification

LiTG / DIN	: A51
UTE	: 0.98D+0.02T
CIE	: 56 89 98 98 100
BZ	: 2 3 3 3 3 2 3 3 3

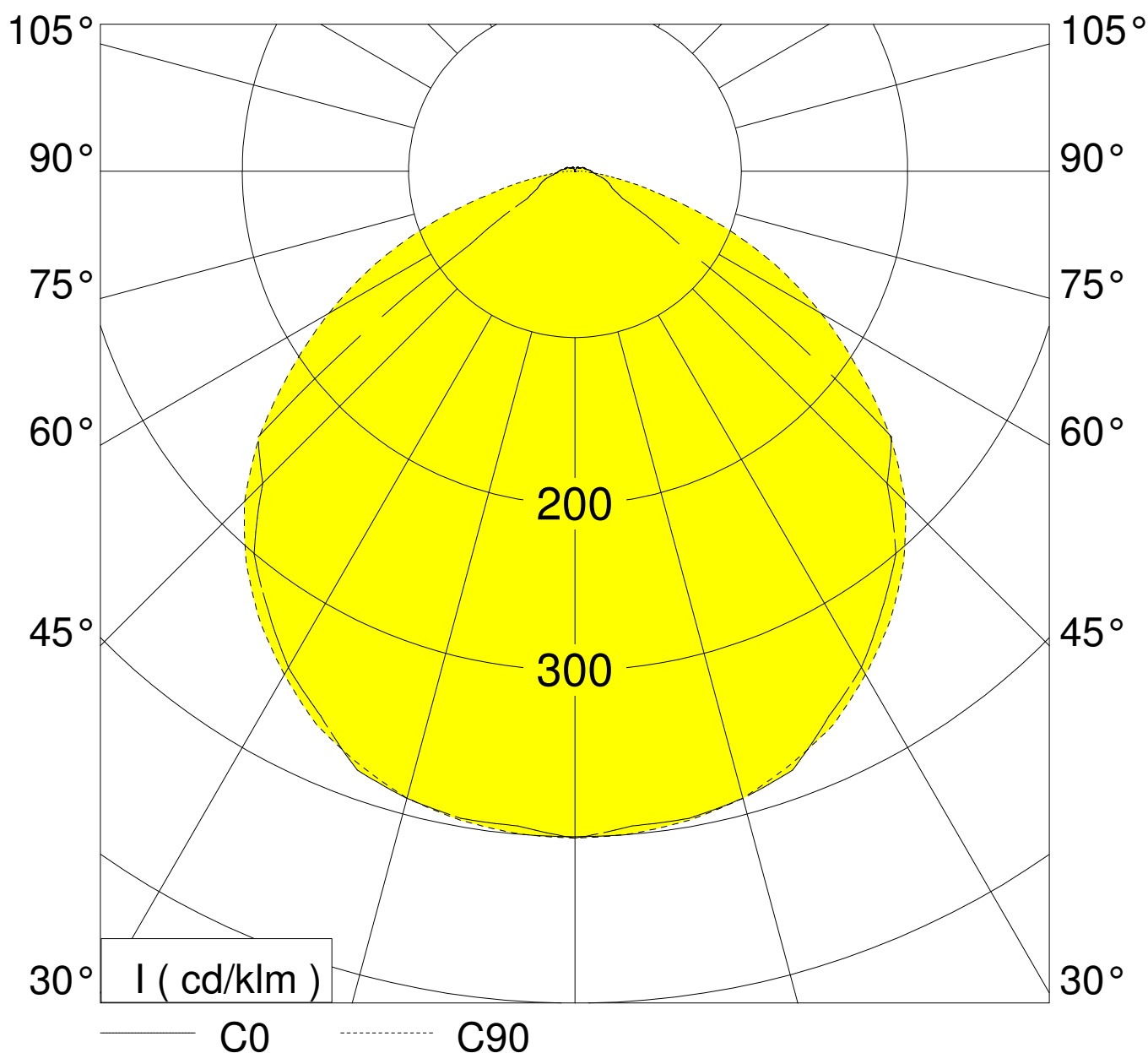


Measurements made are in absolute units
The luminaire is treated as if it was a lamp as it
is not possible to measure each LED separately
- hence an LOR of 100%

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 1725
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°	400.82	400.82	400.82	400.82	400.82	400.82	400.82	400.82
5.0°	394.92	394.92	394.92	396.02	397.22	398.42	399.62	398.42
10.0°	394.92	394.92	394.92	391.92	388.92	392.52	396.02	392.52
15.0°	390.12	390.12	390.12	388.32	386.52	388.32	390.12	388.32
20.0°	382.92	381.72	380.52	378.72	376.92	378.12	379.32	378.12
25.0°	361.32	361.92	362.52	363.72	364.92	366.12	367.22	366.12
30.0°	344.42	343.22	342.02	344.42	346.82	348.02	349.32	348.02
35.0°	321.72	322.32	322.92	325.92	328.92	329.52	330.12	329.52
40.0°	300.12	296.52	292.91	297.72	302.52	304.92	307.32	304.92
45.0°	265.31	270.11	274.91	273.11	271.31	276.11	280.81	276.11
50.0°	248.51	237.11	225.61	232.81	240.11	243.71	247.31	243.71
55.0°	76.40	117.21	158.21	177.11	196.01	202.11	208.21	202.11
60.0°	33.00	33.30	33.70	98.00	162.31	166.51	170.81	166.51
65.0°	24.90	24.40	24.00	72.20	120.31	126.51	132.51	126.51
70.0°	21.90	20.80	19.70	35.30	51.00	71.40	91.70	71.40
75.0°	18.30	17.40	16.60	15.20	13.60	32.80	52.00	32.80
80.0°	13.40	12.60	11.70	9.90	8.10	16.90	25.60	16.90
85.0°	11.00	10.30	9.60	7.70	5.70	7.20	8.60	7.20
90.0°	9.60	9.00	8.40	6.30	4.30	3.50	2.60	3.50
95.0°	8.60	8.10	7.50	5.60	3.60	1.80	0.00	1.80
100.0°	6.30	6.60	6.80	5.10	3.30	1.70	0.00	1.70
105.0°	6.30	6.30	6.20	4.70	3.10	1.60	0.00	1.60
110.0°	5.60	5.60	5.60	4.20	2.80	1.40	0.00	1.40
115.0°	5.30	5.00	4.80	3.60	2.50	1.30	0.00	1.30
120.0°	3.70	3.50	3.20	1.60	0.00	0.00	0.00	0.00
125.0°	3.20	3.20	3.20	1.60	0.00	0.00	0.00	0.00
130.0°	2.90	3.00	3.10	1.60	0.00	0.00	0.00	0.00
135.0°	2.90	3.00	3.10	1.60	0.00	0.00	0.00	0.00
140.0°	2.80	2.90	3.00	1.50	0.00	0.00	0.00	0.00
145.0°	2.80	2.90	3.00	1.50	0.00	0.00	0.00	0.00
150.0°	2.60	2.50	2.40	1.20	0.00	0.00	0.00	0.00
155.0°	2.20	2.10	2.00	1.00	0.00	0.00	0.00	0.00
160.0°	0.00	0.00	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°	400.82	400.82	400.82	400.82	400.82	400.82	400.82	400.82
5.0°	397.22	396.02	394.92	394.92	394.92	394.92	394.92	396.02
10.0°	388.92	391.92	394.92	394.92	394.92	394.92	394.92	391.92
15.0°	386.52	388.32	390.12	390.12	390.12	390.12	390.12	388.32
20.0°	376.92	378.72	380.52	381.72	382.92	381.72	380.52	378.72
25.0°	364.92	363.72	362.52	361.92	361.32	361.92	362.52	363.72
30.0°	346.82	344.42	342.02	343.22	344.42	343.22	342.02	344.42
35.0°	328.92	325.92	322.92	322.32	321.72	322.32	322.92	325.92
40.0°	302.52	297.72	292.91	296.52	300.12	296.52	292.91	297.72
45.0°	271.31	273.11	274.91	270.11	265.31	270.11	274.91	273.11
50.0°	240.11	232.81	225.61	237.11	248.51	237.11	225.61	232.81
55.0°	196.01	177.11	158.21	117.21	76.40	117.21	158.21	177.11
60.0°	162.31	98.00	33.70	33.30	33.00	33.30	33.70	98.00
65.0°	120.31	72.20	24.00	24.40	24.90	24.40	24.00	72.20
70.0°	51.00	35.30	19.70	20.80	21.90	20.80	19.70	35.30
75.0°	13.60	15.20	16.60	17.40	18.30	17.40	16.60	15.20
80.0°	8.10	9.90	11.70	12.60	13.40	12.60	11.70	9.90
85.0°	5.70	7.70	9.60	10.30	11.00	10.30	9.60	7.70
90.0°	4.30	6.30	8.40	9.00	9.60	9.00	8.40	6.30
95.0°	3.60	5.60	7.50	8.10	8.60	8.10	7.50	5.60
100.0°	3.30	5.10	6.80	6.60	6.30	6.60	6.80	5.10
105.0°	3.10	4.70	6.20	6.30	6.30	6.30	6.20	4.70
110.0°	2.80	4.20	5.60	5.60	5.60	5.60	5.60	4.20
115.0°	2.50	3.60	4.80	5.00	5.30	5.00	4.80	3.60
120.0°	0.00	1.60	3.20	3.50	3.70	3.50	3.20	1.60
125.0°	0.00	1.60	3.20	3.20	3.20	3.20	3.20	1.60
130.0°	0.00	1.60	3.10	3.00	2.90	3.00	3.10	1.60
135.0°	0.00	1.60	3.10	3.00	2.90	3.00	3.10	1.60
140.0°	0.00	1.50	3.00	2.90	2.80	2.90	3.00	1.50
145.0°	0.00	1.50	3.00	2.90	2.80	2.90	3.00	1.50
150.0°	0.00	1.20	2.40	2.50	2.60	2.50	2.40	1.20
155.0°	0.00	1.00	2.00	2.10	2.20	2.10	2.00	1.00
160.0°	0.00	0.00	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 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°	400.82	400.82	400.82	400.82	400.82	400.82	400.82	400.82
5.0°	397.22	398.42	399.62	398.42	397.22	396.02	394.92	394.92
10.0°	388.92	392.52	396.02	392.52	388.92	391.92	394.92	394.92
15.0°	386.52	388.32	390.12	388.32	386.52	388.32	390.12	390.12
20.0°	376.92	378.12	379.32	378.12	376.92	378.72	380.52	381.72
25.0°	364.92	366.12	367.22	366.12	364.92	363.72	362.52	361.92
30.0°	346.82	348.02	349.32	348.02	346.82	344.42	342.02	343.22
35.0°	328.92	329.52	330.12	329.52	328.92	325.92	322.92	322.32
40.0°	302.52	304.92	307.32	304.92	302.52	297.72	292.91	296.52
45.0°	271.31	276.11	280.81	276.11	271.31	273.11	274.91	270.11
50.0°	240.11	243.71	247.31	243.71	240.11	232.81	225.61	237.11
55.0°	196.01	202.11	208.21	202.11	196.01	177.11	158.21	117.21
60.0°	162.31	166.51	170.81	166.51	162.31	98.00	33.70	33.30
65.0°	120.31	126.51	132.51	126.51	120.31	72.20	24.00	24.40
70.0°	51.00	71.40	91.70	71.40	51.00	35.30	19.70	20.80
75.0°	13.60	32.80	52.00	32.80	13.60	15.20	16.60	17.40
80.0°	8.10	16.90	25.60	16.90	8.10	9.90	11.70	12.60
85.0°	5.70	7.20	8.60	7.20	5.70	7.70	9.60	10.30
90.0°	4.30	3.50	2.60	3.50	4.30	6.30	8.40	9.00
95.0°	3.60	1.80	0.00	1.80	3.60	5.60	7.50	8.10
100.0°	3.30	1.70	0.00	1.70	3.30	5.10	6.80	6.60
105.0°	3.10	1.60	0.00	1.60	3.10	4.70	6.20	6.30
110.0°	2.80	1.40	0.00	1.40	2.80	4.20	5.60	5.60
115.0°	2.50	1.30	0.00	1.30	2.50	3.60	4.80	5.00
120.0°	0.00	0.00	0.00	0.00	0.00	1.60	3.20	3.50
125.0°	0.00	0.00	0.00	0.00	0.00	1.60	3.20	3.20
130.0°	0.00	0.00	0.00	0.00	0.00	1.60	3.10	3.00
135.0°	0.00	0.00	0.00	0.00	0.00	1.60	3.10	3.00
140.0°	0.00	0.00	0.00	0.00	0.00	1.50	3.00	2.90
145.0°	0.00	0.00	0.00	0.00	0.00	1.50	3.00	2.90
150.0°	0.00	0.00	0.00	0.00	0.00	1.20	2.40	2.50
155.0°	0.00	0.00	0.00	0.00	0.00	1.00	2.00	2.10
160.0°	0.00	0.00	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							

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	21.9	23.3	22.2	23.5	23.7	25.0	26.4	25.3	26.6	26.8
	3H	21.2	22.2	21.5	22.4	22.6	25.4	26.4	25.7	26.6	26.8
	4H	21.3	22.3	21.6	22.5	22.7	25.7	26.7	26.0	26.9	27.2
	6H	21.4	22.3	21.7	22.6	22.8	25.9	26.9	26.2	27.1	27.4
	8H	21.5	22.4	21.8	22.7	22.9	26.0	26.9	26.3	27.2	27.5
	12H	21.6	22.5	21.9	22.8	23.1	26.1	27.0	26.4	27.3	27.6
4H	2H	21.8	22.8	22.1	23.0	23.2	24.5	25.5	24.8	25.7	25.9
	3H	22.0	22.9	22.3	23.2	23.5	25.8	26.7	26.2	27.0	27.3
	4H	22.2	23.1	22.6	23.4	23.7	26.2	27.1	26.6	27.4	27.8
	6H	22.1	22.9	22.5	23.2	23.5	26.3	27.0	26.6	27.3	27.7
	8H	22.2	22.9	22.6	23.3	23.7	26.4	27.1	26.8	27.4	27.8
	12H	22.5	23.1	22.9	23.6	24.0	26.6	27.3	27.0	27.7	28.1
8H	4H	22.2	22.8	22.6	23.2	23.6	26.1	26.7	26.5	27.1	27.5
	6H	22.6	23.2	23.1	23.7	24.1	26.5	27.2	27.0	27.6	28.1
	8H	22.8	23.4	23.3	23.9	24.4	26.7	27.3	27.2	27.8	28.4
	12H	22.8	23.3	23.4	23.8	24.4	26.7	27.2	27.2	27.7	28.3
12H	4H	22.3	23.0	22.8	23.4	23.9	26.2	26.9	26.7	27.3	27.8
	6H	22.7	23.3	23.2	23.8	24.3	26.6	27.2	27.1	27.7	28.3
	8H	22.7	23.2	23.2	23.7	24.3	26.6	27.1	27.2	27.7	28.2
variation of observer position											
S =	1.0H	+1.0/		-1.7		+0.2/		-0.3			
	1.5H	+2.2/		-4.2		+0.2/		-0.5			
	2.0H	+3.6/		-4.8		+1.2/		-1.9			
standard-table		BK02					BK03				
correction for luminaire		4.8					9.2				
correct glare indices for a total flux of 1725lm											

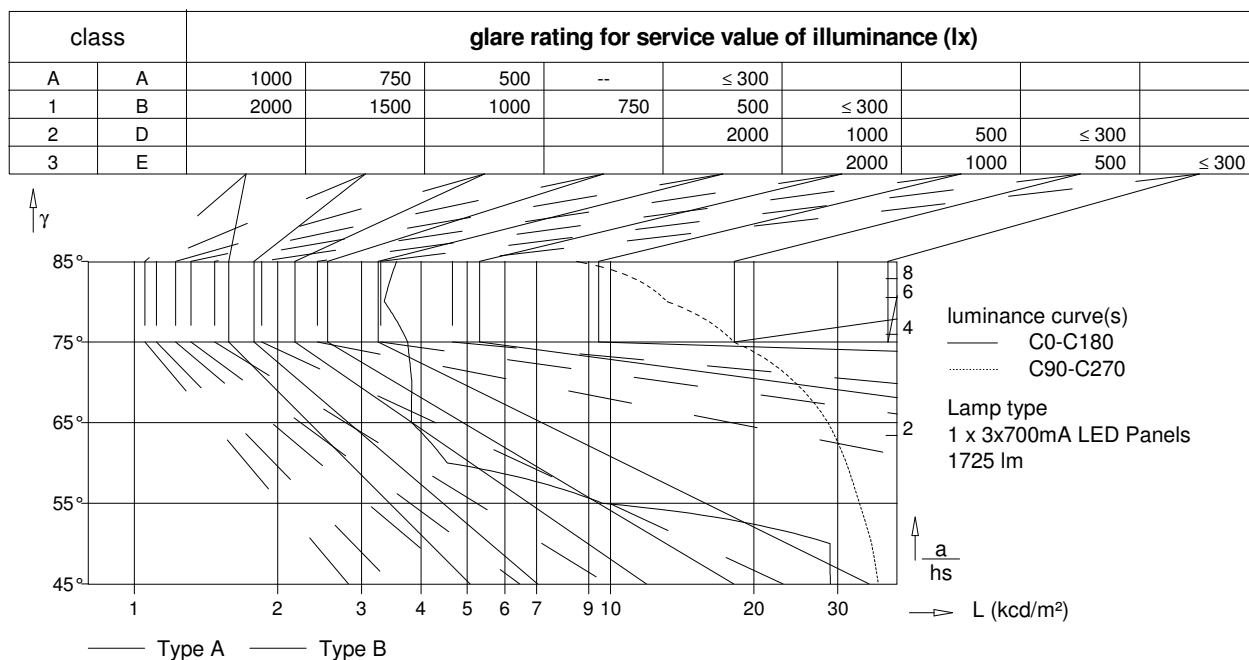


Tabelle der berechneten Leuchtdichten

gamma	C 0	C 90	C 180	C 270
45°	28959.1	36536.1	28959.1	36536.1
50°	28915.5	35351.8	28915.5	35351.8
55°	9596.2	33301.3	9596.2	33301.3
60°	4540.3	31276.2	4540.3	31276.2
65°	3819.1	28627.0	3819.1	28627.0
70°	3827.5	24383.6	3827.5	24383.6
75°	3749.9	18154.2	3749.9	18154.2
80°	3348.9	13154.1	3348.9	13154.1
85°	3557.5	8488.2	3557.5	8488.2

alle Werte in cd/m²

