

filename : LED-X-APLED2-CLEAR.LDT
 meas. number : 3202
 luminaire number : LED-X/APLED2/CLEAR
 date / operator : 27-11-2013

default lamp type(s)

no of lamps	lamp type	luminaire lumens	input wattage
1	2x700mA LED Panels	1150 lm	16.5 W

dimensions

luminaire		luminous area	
length	: 570 mm	length	: 565 mm
width	: 28 mm	width	: 25 mm
height	: 24 mm	height	: 5 mm

coordinate system

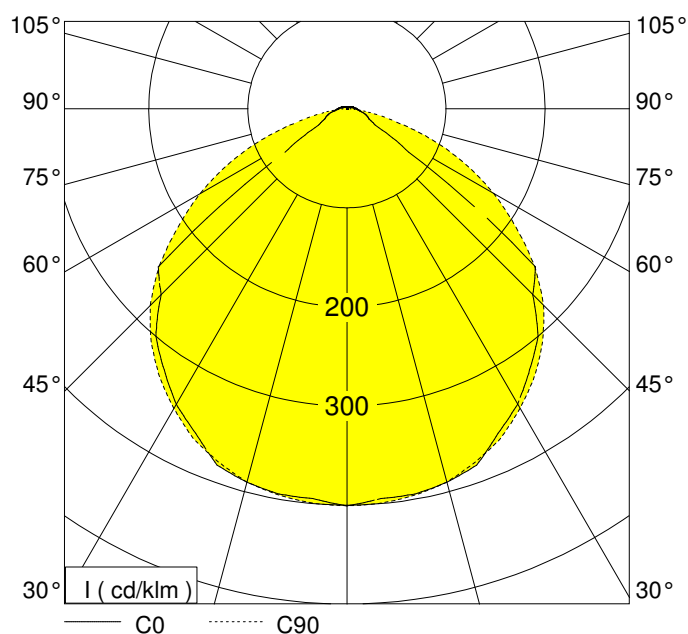
no of planes	: 24	samples / plane	: 37
first c-plane	: 0.0 °	first gamma-angle	: 0.0 °
step angle	: 15.0 °	step angle	: 5.0 °
last c-plane	: 345.0 °	last gamma-angle	: 180.0 °
symmetrics	: bi-symmetric		

performance

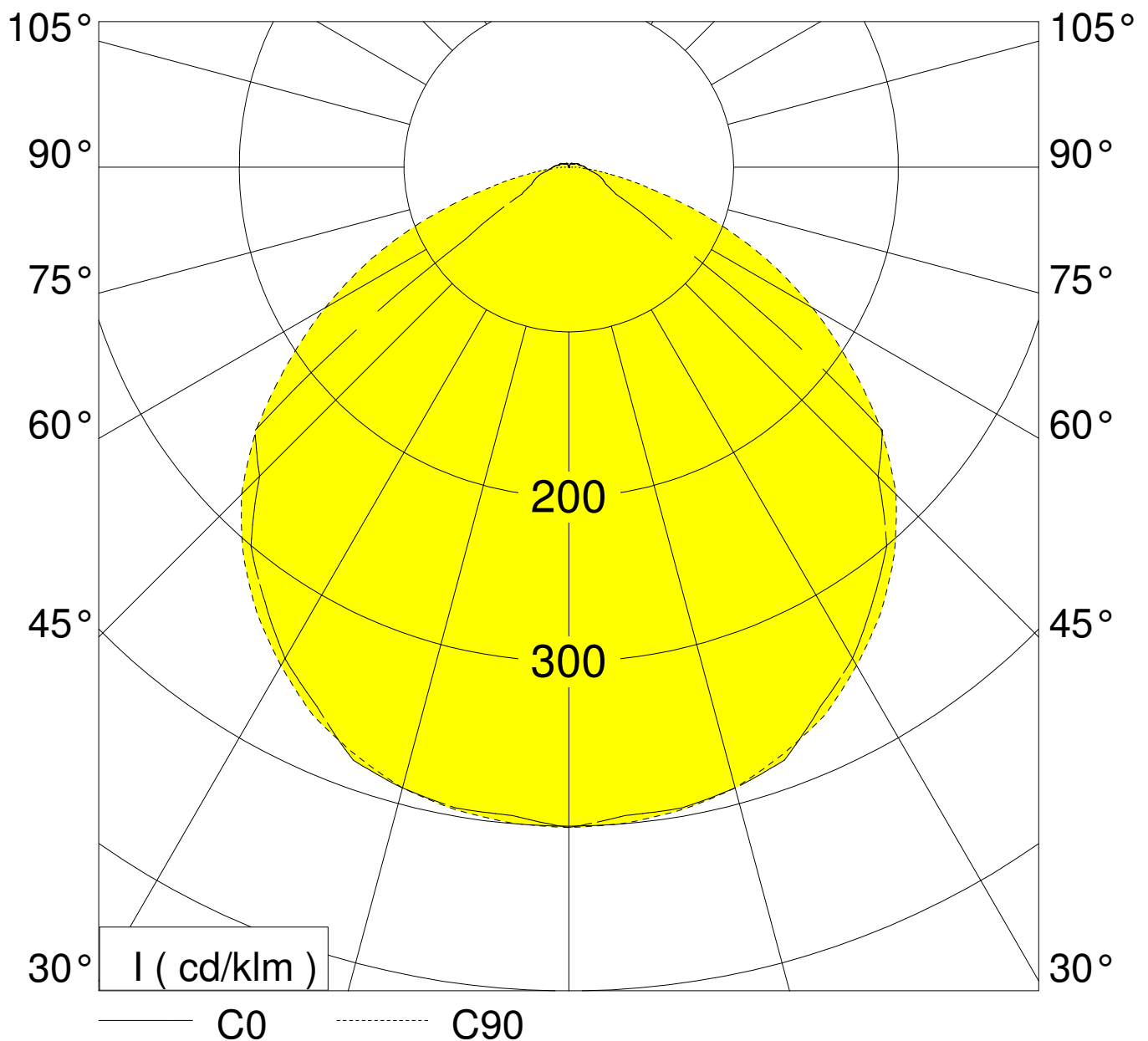
light output ratio	: 100.0 %
DFF	: 98.3 %
UFF	: 1.7 %

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
Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 16.5 W
Amps (running)	: 0.074 A
V.A.	: 17.7 VA
Power Factor	: 0.93
CCT	: 3955K(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 1150
 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°	400.80	400.80	400.80	400.80	400.80	400.80	400.80	400.80
5.0°	394.90	394.90	394.90	396.00	397.20	398.40	399.60	398.40
10.0°	394.90	394.90	394.90	391.90	388.90	392.50	396.00	392.50
15.0°	390.10	390.10	390.10	388.30	386.50	388.30	390.10	388.30
20.0°	382.90	381.70	380.50	378.70	376.90	378.10	379.30	378.10
25.0°	361.30	361.90	362.50	363.70	364.90	366.10	367.20	366.10
30.0°	344.40	343.20	342.00	344.40	346.80	348.00	349.30	348.00
35.0°	321.70	322.30	322.90	325.90	328.90	329.50	330.10	329.50
40.0°	300.10	296.50	292.90	297.70	302.50	304.90	307.30	304.90
45.0°	265.30	270.10	274.90	273.10	271.30	276.10	280.80	276.10
50.0°	248.50	237.10	225.60	232.80	240.10	243.70	247.30	243.70
55.0°	76.40	117.20	158.20	177.10	196.00	202.10	208.20	202.10
60.0°	33.00	33.30	33.70	98.00	162.30	166.50	170.80	166.50
65.0°	24.90	24.40	24.00	72.20	120.30	126.50	132.50	126.50
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°	400.80	400.80	400.80	400.80	400.80	400.80	400.80	400.80
5.0°	397.20	396.00	394.90	394.90	394.90	394.90	394.90	396.00
10.0°	388.90	391.90	394.90	394.90	394.90	394.90	394.90	391.90
15.0°	386.50	388.30	390.10	390.10	390.10	390.10	390.10	388.30
20.0°	376.90	378.70	380.50	381.70	382.90	381.70	380.50	378.70
25.0°	364.90	363.70	362.50	361.90	361.30	361.90	362.50	363.70
30.0°	346.80	344.40	342.00	343.20	344.40	343.20	342.00	344.40
35.0°	328.90	325.90	322.90	322.30	321.70	322.30	322.90	325.90
40.0°	302.50	297.70	292.90	296.50	300.10	296.50	292.90	297.70
45.0°	271.30	273.10	274.90	270.10	265.30	270.10	274.90	273.10
50.0°	240.10	232.80	225.60	237.10	248.50	237.10	225.60	232.80
55.0°	196.00	177.10	158.20	117.20	76.40	117.20	158.20	177.10
60.0°	162.30	98.00	33.70	33.30	33.00	33.30	33.70	98.00
65.0°	120.30	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°	400.80	400.80	400.80	400.80	400.80	400.80	400.80	400.80
5.0°	397.20	398.40	399.60	398.40	397.20	396.00	394.90	394.90
10.0°	388.90	392.50	396.00	392.50	388.90	391.90	394.90	394.90
15.0°	386.50	388.30	390.10	388.30	386.50	388.30	390.10	390.10
20.0°	376.90	378.10	379.30	378.10	376.90	378.70	380.50	381.70
25.0°	364.90	366.10	367.20	366.10	364.90	363.70	362.50	361.90
30.0°	346.80	348.00	349.30	348.00	346.80	344.40	342.00	343.20
35.0°	328.90	329.50	330.10	329.50	328.90	325.90	322.90	322.30
40.0°	302.50	304.90	307.30	304.90	302.50	297.70	292.90	296.50
45.0°	271.30	276.10	280.80	276.10	271.30	273.10	274.90	270.10
50.0°	240.10	243.70	247.30	243.70	240.10	232.80	225.60	237.10
55.0°	196.00	202.10	208.20	202.10	196.00	177.10	158.20	117.20
60.0°	162.30	166.50	170.80	166.50	162.30	98.00	33.70	33.30
65.0°	120.30	126.50	132.50	126.50	120.30	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	21.5	22.8	21.7	23.0	23.3	24.5	25.9	24.8	26.1	26.3
	3H	20.8	21.8	21.0	22.0	22.2	24.9	25.9	25.2	26.1	26.3
	4H	20.9	21.9	21.2	22.1	22.3	25.3	26.3	25.6	26.5	26.7
	6H	21.0	21.9	21.3	22.1	22.4	25.5	26.4	25.8	26.6	26.9
	8H	21.0	22.0	21.4	22.2	22.5	25.6	26.5	25.9	26.7	27.0
	12H	21.1	22.0	21.5	22.3	22.6	25.6	26.5	26.0	26.8	27.1
4H	2H	21.3	22.3	21.6	22.5	22.8	24.1	25.0	24.3	25.2	25.5
	3H	21.6	22.5	21.9	22.7	23.0	25.4	26.3	25.7	26.6	26.8
	4H	21.8	22.7	22.1	23.0	23.3	25.8	26.7	26.1	27.0	27.3
	6H	21.7	22.4	22.1	22.7	23.1	25.8	26.5	26.2	26.9	27.2
	8H	21.8	22.5	22.2	22.8	23.2	25.9	26.6	26.3	27.0	27.3
	12H	22.0	22.7	22.5	23.1	23.6	26.1	26.8	26.6	27.2	27.7
8H	4H	21.7	22.4	22.1	22.8	23.1	25.6	26.3	26.0	26.7	27.0
	6H	22.1	22.8	22.6	23.2	23.7	26.1	26.7	26.6	27.2	27.6
	8H	22.3	22.9	22.8	23.4	23.9	26.3	26.9	26.8	27.4	27.9
	12H	22.4	22.9	22.9	23.4	23.9	26.2	26.8	26.8	27.3	27.8
12H	4H	21.9	22.5	22.3	23.0	23.4	25.8	26.4	26.2	26.8	27.3
	6H	22.2	22.8	22.7	23.3	23.8	26.2	26.8	26.7	27.3	27.8
	8H	22.3	22.8	22.8	23.3	23.8	26.2	26.7	26.7	27.2	27.7
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		4.4					8.7				
correct glare indices for a total flux of 1150lm											

class		glare rating for service value of illuminance (lx)								
A	A	1000	750	500	--	≤ 300				
1	B	2000	1500	1000	750	500	≤ 300			
2	D					2000	1000	500	≤ 300	
3	E						2000	1000	500	≤ 300

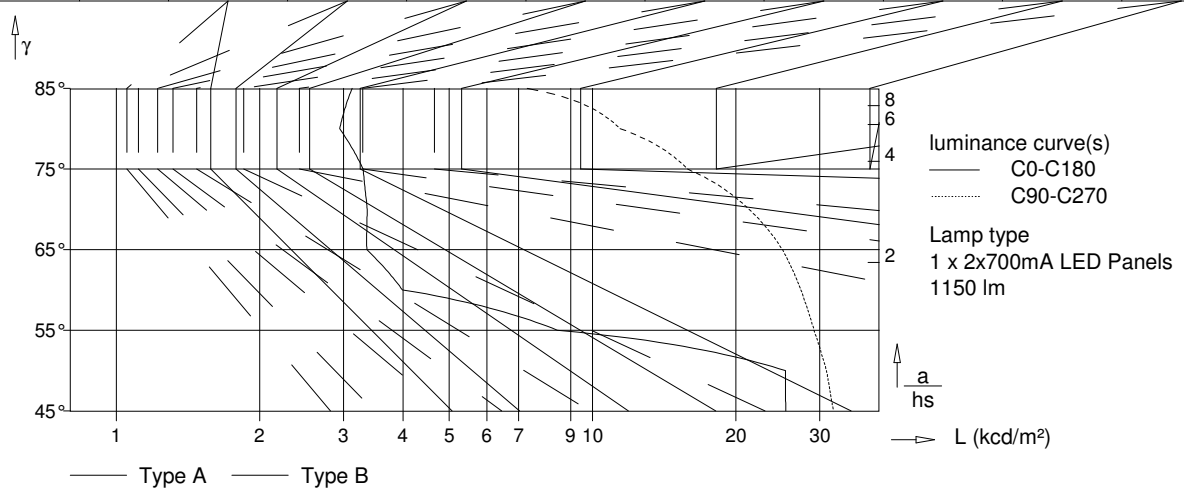


Tabelle der berechneten Leuchtdichten

gamma	C 0	C 90	C 180	C 270
45°	25455.4	32047.6	25455.4	32047.6
50°	25417.0	30996.3	25417.0	30996.3
55°	8435.2	29184.0	8435.2	29184.0
60°	3990.9	27391.8	3990.9	27391.8
65°	3357.1	25050.3	3357.1	25050.3
70°	3364.4	21310.5	3364.4	21310.5
75°	3296.2	15834.5	3296.2	15834.5
80°	2943.7	11429.1	2943.7	11429.1
85°	3127.1	7295.7	3127.1	7295.7

alle Werte in cd/m²

