

filename : LED-X-APLED5-CLEAR.LDT
 meas. number : 3217-C
 luminaire number : LED-X/APLED5/CLEAR
 date / operator : 28-11-2013

default lamp type(s)

no of lamps	lamp type	luminaire lumens	input wattage
1	5x700mA LED Panels	3093 lm	38 W

dimensions

luminaire		luminous area	
length	: 1405 mm	length	: 1400 mm
width	: 28 mm	width	: 25 mm
height	: 24 mm	height	: 5 mm

coordinate system

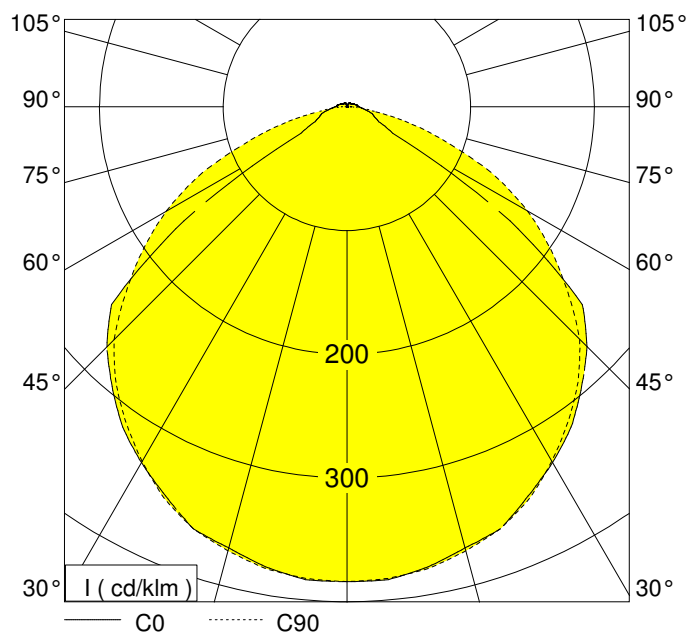
no of planes	: 24	samples / plane	: 37
first c-plane	: 0.0 °	first gamma-angle	: 0.0 °
step angle	: 15.0 °	step angle	: 5.0 °
last c-plane	: 345.0 °	last gamma-angle	: 180.0 °
symmetrics	: bi-symmetric		

performance

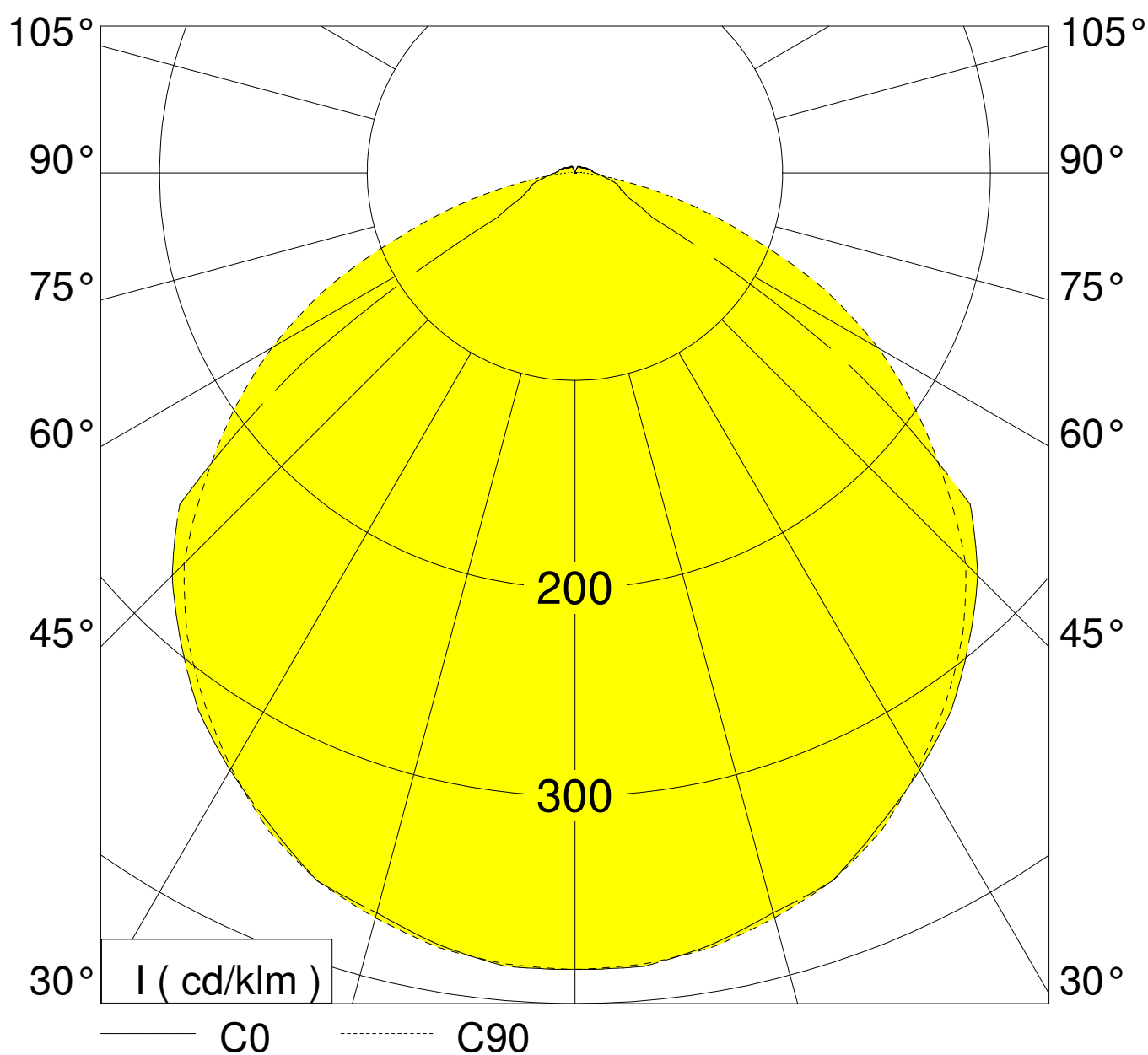
light output ratio	: 100.0 %
DFF	: 98.0 %
UFF	: 2.0 %

classification

LiTG / DIN	: A41
UTE	: 0.98D+0.02T
CIE	: 54 88 98 98 100
BZ	: 3 3 3 3 3 3 3 3



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 3093
 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°	383.42	383.42	383.42	383.42	383.42	383.42	383.42	383.42
5.0°	383.42	383.42	383.42	382.82	382.22	382.22	382.22	382.22
10.0°	377.32	377.32	377.32	378.62	379.82	379.22	378.62	379.22
15.0°	368.72	368.82	368.82	369.42	370.02	370.62	371.22	370.62
20.0°	362.62	361.42	360.32	359.02	357.72	360.22	362.62	360.22
25.0°	346.62	346.72	346.82	346.22	345.52	347.32	349.12	347.32
30.0°	331.92	331.42	330.92	330.22	329.52	330.12	330.72	330.12
35.0°	315.82	314.32	312.72	312.62	312.42	311.82	311.12	311.82
40.0°	295.01	293.41	291.91	291.11	290.31	290.31	290.31	290.31
45.0°	274.11	270.71	267.51	266.71	265.91	265.91	265.91	265.91
50.0°	248.31	244.41	240.51	237.51	234.61	233.71	232.81	233.71
55.0°	160.91	183.51	206.21	205.01	203.81	202.41	201.01	202.41
60.0°	43.00	50.30	57.60	111.71	165.81	167.11	168.41	167.11
65.0°	28.40	28.20	28.10	75.50	122.81	127.61	132.31	127.61
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°	383.42	383.42	383.42	383.42	383.42	383.42	383.42	383.42
5.0°	382.22	382.82	383.42	383.42	383.42	383.42	383.42	382.82
10.0°	379.82	378.62	377.32	377.32	377.32	377.32	377.32	378.62
15.0°	370.02	369.42	368.82	368.82	368.72	368.82	368.82	369.42
20.0°	357.72	359.02	360.32	361.42	362.62	361.42	360.32	359.02
25.0°	345.52	346.22	346.82	346.72	346.62	346.72	346.82	346.22
30.0°	329.52	330.22	330.92	331.42	331.92	331.42	330.92	330.22
35.0°	312.42	312.62	312.72	314.32	315.82	314.32	312.72	312.62
40.0°	290.31	291.11	291.91	293.41	295.01	293.41	291.91	291.11
45.0°	265.91	266.71	267.51	270.71	274.11	270.71	267.51	266.71
50.0°	234.61	237.51	240.51	244.41	248.31	244.41	240.51	237.51
55.0°	203.81	205.01	206.21	183.51	160.91	183.51	206.21	205.01
60.0°	165.81	111.71	57.60	50.30	43.00	50.30	57.60	111.71
65.0°	122.81	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°	383.42	383.42	383.42	383.42	383.42	383.42	383.42	383.42
5.0°	382.22	382.22	382.22	382.22	382.22	382.82	383.42	383.42
10.0°	379.82	379.22	378.62	379.22	379.82	378.62	377.32	377.32
15.0°	370.02	370.62	371.22	370.62	370.02	369.42	368.82	368.82
20.0°	357.72	360.22	362.62	360.22	357.72	359.02	360.32	361.42
25.0°	345.52	347.32	349.12	347.32	345.52	346.22	346.82	346.72
30.0°	329.52	330.12	330.72	330.12	329.52	330.22	330.92	331.42
35.0°	312.42	311.82	311.12	311.82	312.42	312.62	312.72	314.32
40.0°	290.31	290.31	290.31	290.31	290.31	291.11	291.91	293.41
45.0°	265.91	265.91	265.91	265.91	265.91	266.71	267.51	270.71
50.0°	234.61	233.71	232.81	233.71	234.61	237.51	240.51	244.41
55.0°	203.81	202.41	201.01	202.41	203.81	205.01	206.21	183.51
60.0°	165.81	167.11	168.41	167.11	165.81	111.71	57.60	50.30
65.0°	122.81	127.61	132.31	127.61	122.81	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	22.6	24.0	22.9	24.2	24.4	24.8	26.2	25.1	26.4	26.6
	3H	21.9	22.9	22.1	23.1	23.3	25.2	26.2	25.4	26.4	26.6
	4H	22.0	23.0	22.3	23.2	23.4	25.5	26.5	25.8	26.7	26.9
	6H	22.1	23.0	22.4	23.3	23.5	25.7	26.6	26.0	26.9	27.2
	8H	22.2	23.1	22.5	23.4	23.6	25.8	26.7	26.1	27.0	27.3
	12H	22.3	23.2	22.6	23.5	23.7	25.9	26.8	26.2	27.1	27.4
4H	2H	22.4	23.4	22.7	23.6	23.8	24.4	25.3	24.7	25.6	25.8
	3H	22.6	23.5	22.9	23.8	24.1	25.6	26.5	25.9	26.8	27.1
	4H	22.8	23.7	23.2	24.0	24.3	26.0	26.9	26.4	27.2	27.6
	6H	22.7	23.5	23.1	23.8	24.2	26.1	26.8	26.4	27.1	27.5
	8H	22.9	23.5	23.3	23.9	24.3	26.2	26.9	26.6	27.2	27.6
	12H	23.1	23.8	23.6	24.2	24.7	26.4	27.1	26.9	27.5	27.9
8H	4H	22.7	23.4	23.1	23.8	24.2	25.8	26.5	26.3	26.9	27.3
	6H	23.2	23.8	23.7	24.3	24.8	26.4	27.0	26.8	27.5	27.9
	8H	23.4	24.0	23.9	24.5	25.0	26.6	27.2	27.1	27.7	28.2
	12H	23.4	24.0	24.0	24.5	25.0	26.5	27.1	27.1	27.6	28.1
12H	4H	22.9	23.6	23.4	24.0	24.4	26.0	26.7	26.5	27.1	27.6
	6H	23.3	23.9	23.8	24.4	24.9	26.4	27.1	27.0	27.6	28.1
	8H	23.3	23.9	23.9	24.4	24.9	26.5	27.0	27.0	27.5	28.1
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		5.4					9.0				
correct glare indices for a total flux of 3093lm											

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

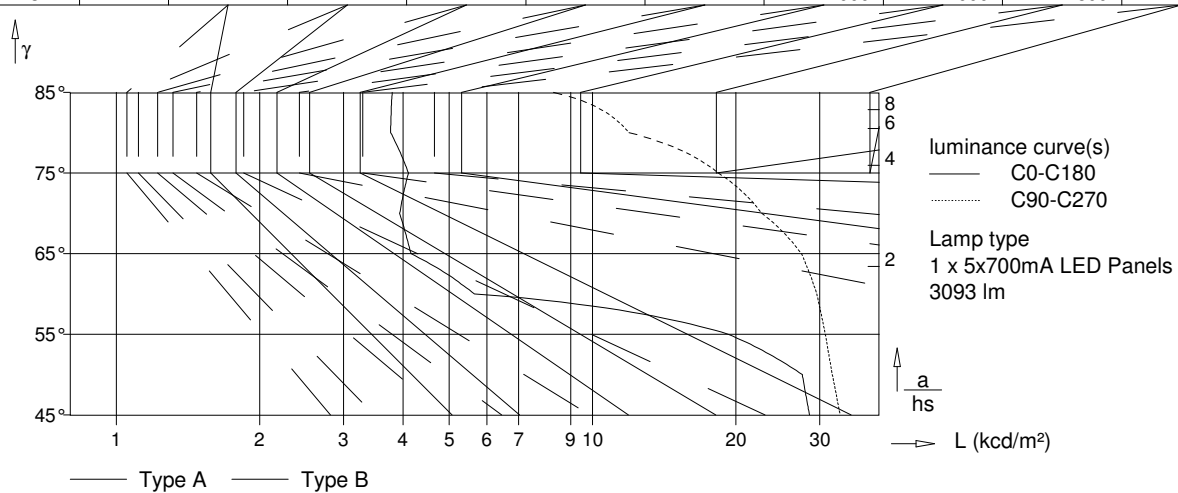


Tabelle der berechneten Leuchtdichten

gamma	C 0	C 90	C 180	C 270
45°	28548.0	33114.5	28548.0	33114.5
50°	27567.6	31871.6	27567.6	31871.6
55°	19283.3	30812.6	19283.3	30812.6
60°	5644.9	29582.0	5644.9	29582.0
65°	4156.2	27455.6	4156.2	27455.6
70°	3935.5	22671.2	3935.5	22671.2
75°	4105.9	18364.7	4105.9	18364.7
80°	3767.7	11922.1	3767.7	11922.1
85°	3795.5	8280.9	3795.5	8280.9

alle Werte in cd/m²

