filename	: Bubble Wafer Suspension Back to Back 580mm.LDT
meas. number	: 2564/C
luminaire number	: Bubble Wafer Suspension Back to Back 580mm
date / operator	: 11.04.2018

default lamp type(s))

no of lamps	lamp type	luminaire lumens	wattage
1	2xLED MODULE	2780 lm	30.8 W

dimensions

luminaire			luminous area		
length	:	580 mm	length	:	575 mm
width	:	65 mm	width	:	60 mm
height	:	15 mm	height	:	10 mm

coordinate system

no of planes	:	7	samples / plane	:	37
first c-plane	:	0.0 °	first gamma-angle	:	0.0 °
step angle	:	15.0 °	step angle	:	5.0 °
last c-plane	:	90.0 °	last gamma-angle	:	180.0 °

symmetrics : symmetry to C0 / C90

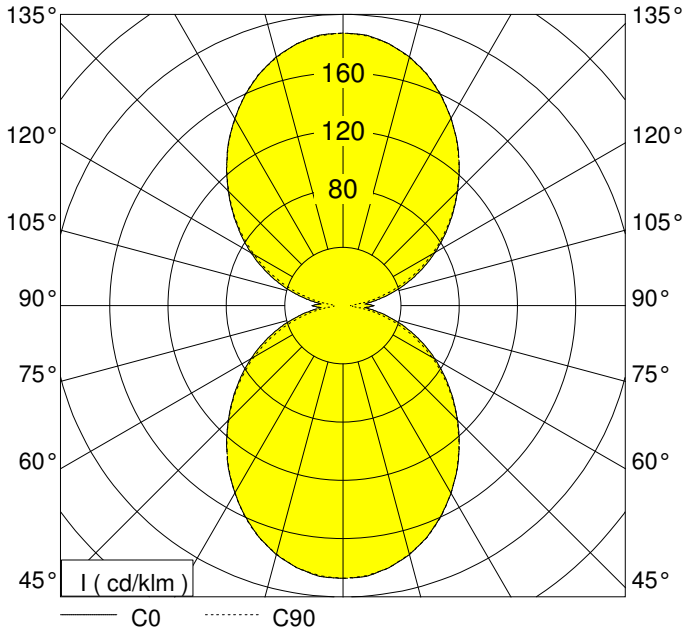
performance

light output ratio	:	100.0 %
DFF	:	50.0 %
UFF	:	50.0 %

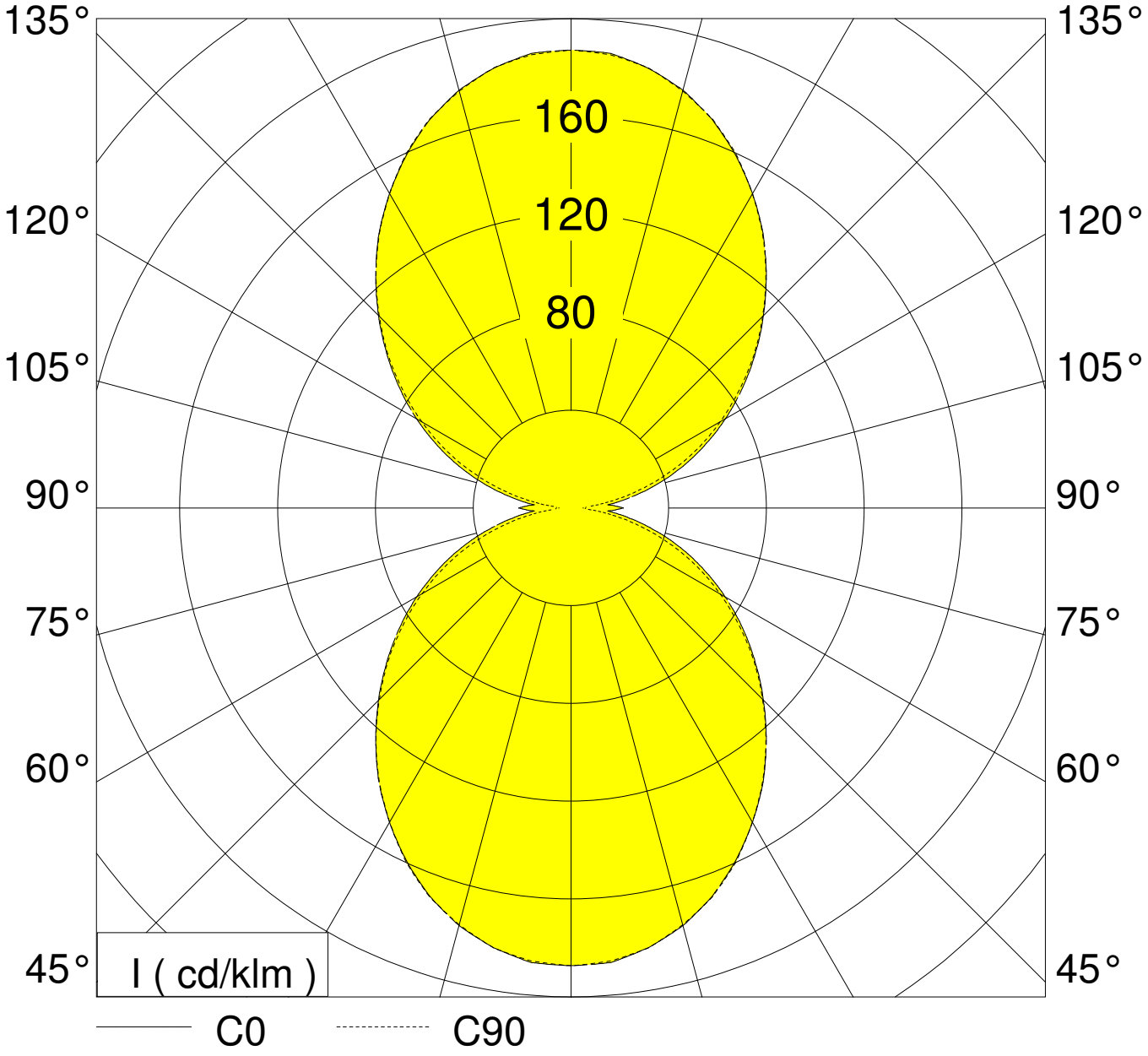
classification

LiTG / DIN	: C43
UTE	: 0.50D+0.50T 0.50E+0.50T
CIE	: 48 78 94 50 100
BZ	: 4 4 4 4 4 5 5 5 5

Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 30.8W
Amps (running)	: 0.138A
V.A.	: 33.12VA
Power Factor	: 0.93
CCT	: 3882K (measured): 3900K (declared)
CRI (Ra)	: 86
Luminaire Lumens	: 2780 LLm
Output Current DC	: 2x520mA
Output Voltage DC	: 23.6V
Output Power	:.24.54 W
Luminaire Lm/circ.Watt	: 90.26 LLm/circ.Watt
Driver Efficiency	: 80%
Driver Details	: 2xHELVAR LL1X30-E-CV24



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 Luminaire 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
0.0°	187.10	187.10	187.10	187.10	187.10	187.10	187.10
5.0°	186.50	186.20	185.90	185.90	185.90	185.90	185.90
10.0°	182.50	182.50	182.50	182.50	182.60	182.60	182.60
15.0°	176.80	176.90	176.90	176.90	176.90	176.70	176.40
20.0°	168.90	168.90	169.00	169.00	169.00	169.10	169.10
25.0°	159.20	159.30	159.40	159.40	159.50	159.50	159.60
30.0°	148.40	148.50	148.60	148.70	148.80	148.50	148.30
35.0°	136.90	136.80	136.60	136.80	137.00	136.80	136.60
40.0°	124.20	124.40	124.70	124.70	124.70	124.40	124.00
45.0°	111.30	111.60	111.80	111.80	111.80	111.30	110.80
50.0°	98.40	98.70	99.00	99.00	98.80	98.20	97.70
55.0°	85.60	85.90	86.10	85.80	85.50	84.70	84.00
60.0°	72.90	73.10	73.30	72.90	72.40	71.40	70.40
65.0°	60.10	60.20	60.40	59.90	59.30	58.10	56.90
70.0°	47.70	47.80	47.90	47.00	46.00	44.50	43.10
75.0°	35.50	35.30	35.20	34.10	33.00	31.40	29.70
80.0°	24.30	24.00	23.70	22.40	21.10	19.20	17.40
85.0°	15.10	14.70	14.30	12.70	11.10	9.20	7.20
90.0°	21.40	20.60	19.60	16.40	13.20	9.00	4.90
95.0°	15.10	14.70	14.30	12.70	11.10	9.20	7.20
100.0°	24.30	24.00	23.70	22.40	21.10	19.20	17.40
105.0°	35.50	35.30	35.20	34.10	33.00	31.40	29.70
110.0°	47.70	47.80	47.90	47.00	46.00	44.50	43.10
115.0°	60.10	60.20	60.40	59.90	59.30	58.10	56.90
120.0°	72.90	73.10	73.30	72.90	72.40	71.40	70.40
125.0°	85.60	85.90	86.10	85.80	85.50	84.70	84.00
130.0°	98.40	98.70	99.00	99.00	98.80	98.20	97.70
135.0°	111.30	111.60	111.80	111.80	111.80	111.30	110.80
140.0°	124.20	124.40	124.70	124.70	124.70	124.40	124.00
145.0°	136.90	136.80	136.60	136.80	137.00	136.80	136.60
150.0°	148.40	148.50	148.60	148.70	148.80	148.50	148.30
155.0°	159.20	159.30	159.40	159.40	159.50	159.50	159.60
160.0°	168.90	168.90	169.00	169.00	169.00	169.10	169.10
165.0°	176.80	176.90	176.90	176.90	176.90	176.70	176.40
170.0°	182.50	182.50	182.50	182.50	182.60	182.60	182.60
175.0°	186.50	186.20	185.90	185.90	185.90	185.90	185.90
180.0°	187.10	187.10	187.10	187.10	187.10	187.10	187.10
							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	17.4	18.4	18.3	19.3	20.3	17.7	18.7	18.6	19.6	20.6
	3H	19.3	20.4	20.4	21.5	23.1	19.7	20.7	20.7	21.8	23.4
	4H	19.9	20.9	21.1	22.1	23.9	20.2	21.2	21.4	22.4	24.2
	6H	20.4	21.3	21.6	22.6	24.5	20.6	21.5	21.8	22.8	24.7
	8H	20.6	21.5	21.8	22.8	24.8	20.8	21.7	22.0	23.0	25.0
	12H	20.7	21.6	22.0	23.0	25.1	20.9	21.8	22.1	23.1	25.2
4H	2H	18.5	19.5	19.7	20.7	22.5	18.8	19.8	19.9	21.0	22.7
	3H	20.2	21.1	21.5	22.5	24.6	20.5	21.4	21.8	22.7	24.8
	4H	21.0	21.9	22.4	23.3	25.7	21.3	22.1	22.6	23.6	25.9
	6H	21.4	22.1	22.8	23.6	25.9	21.6	22.3	23.0	23.8	26.1
	8H	21.7	22.3	23.1	23.8	26.3	21.8	22.4	23.2	24.0	26.4
	12H	21.9	22.6	23.5	24.2	27.1	22.0	22.6	23.5	24.3	27.2
8H	4H	21.1	21.8	22.5	23.3	25.8	21.3	22.0	22.8	23.5	26.0
	6H	22.0	22.6	23.6	24.3	27.5	22.2	22.8	23.8	24.5	27.6
	8H	22.4	23.0	24.1	24.8	28.3	22.5	23.1	24.2	24.9	28.3
	12H	22.6	23.1	24.3	24.9	28.3	22.6	23.1	24.3	24.9	28.3
12H	4H	21.3	21.9	22.8	23.5	26.4	21.5	22.1	23.0	23.7	26.7
	6H	22.2	22.7	23.8	24.5	28.0	22.3	22.9	24.0	24.7	28.1
	8H	22.4	22.9	24.1	24.7	28.2	22.5	23.0	24.2	24.8	28.3
variation of observer position											
S =	1.0H	+0.1/ -0.1					+0.1/ -0.1				
	1.5H	+0.2/ -0.3					+0.2/ -0.3				
	2.0H	+0.4/ -0.6					+0.4/ -0.6				
standard-table		BK06					BK06				
correction for luminaire		5.3					5.5				
correct glare indices for a total flux of 2780lm											

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

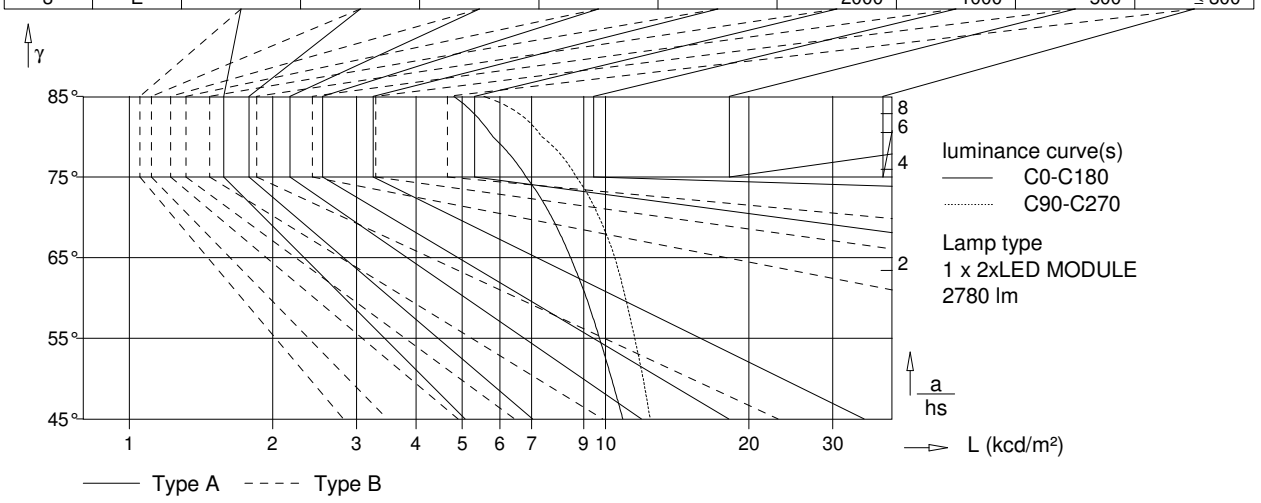


Table of intensities

gamma	C 0	C 90	C 180	C 270
45°	10871.5	12410.6	10871.5	12410.6
50°	10291.3	11999.0	10291.3	11999.0
55°	9713.6	11514.9	9713.6	11514.9
60°	9116.7	11013.9	9116.7	11013.9
65°	8441.9	10458.9	8441.9	10458.9
70°	7708.3	9691.3	7708.3	9691.3
75°	6814.0	8683.1	6814.0	8683.1
80°	5796.9	7349.4	5796.9	7349.4
85°	4805.7	5552.9	4805.7	5552.9

all values in cd/m²

utilization factors / TM5

reflection			room index								
C	W	F	0.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0
70	50	20	48	55	62	66	73	77	80	84	87
70	30	20	41	49	55	60	67	72	76	80	83
70	10	20	36	44	50	55	63	68	72	77	81
50	50	20	41	48	53	57	62	66	68	71	73
50	30	20	36	43	48	52	58	62	65	69	71
50	10	20	32	39	44	48	54	59	62	66	69
30	50	20	36	41	45	48	52	55	57	60	61
30	30	20	32	37	41	45	49	52	55	58	60
30	10	20	29	34	38	42	47	50	53	56	58
0	0	0	22	26	29	32	35	37	39	41	43
BZ-class			4	4	4	4	4	5	5	5	5
SHRnom : 1.50 SHRmax : 1.507											

isolux diagram