

filename : Bubble Wafer Suspension 1160mm.LDT
 meas. number : 2361
 luminaire number : Bubble Wafer Suspension 1160mm
 date / operator : 11-08-2017

**default lamp type(s)**

no of lamps	lamp type	luminaire lumens	input wattage
1	LED MODULE	2880 lm	28.4 W

dimensions

luminaire		luminous area	
length	: 1160 mm	length	: 1160 mm
width	: 65 mm	width	: 60 mm
height	: 15 mm	height	: 5 mm

coordinate system

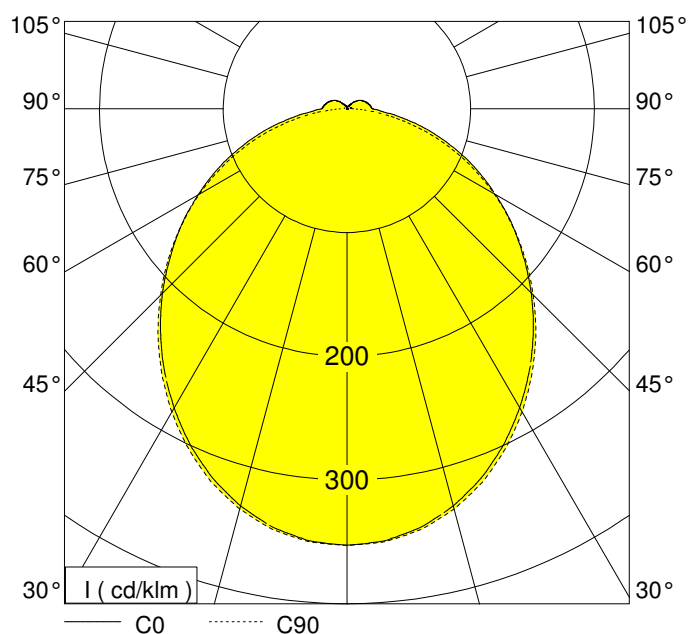
no of planes	: 7	samples / plane	: 37
first c-plane	: 0.0 °	first gamma-angle	: 0.0 °
step angle	: 15.0 °	step angle	: 5.0 °
last c-plane	: 90.0 °	last gamma-angle	: 180.0 °
symmetrics : symmetry to C0 / C90			

performance

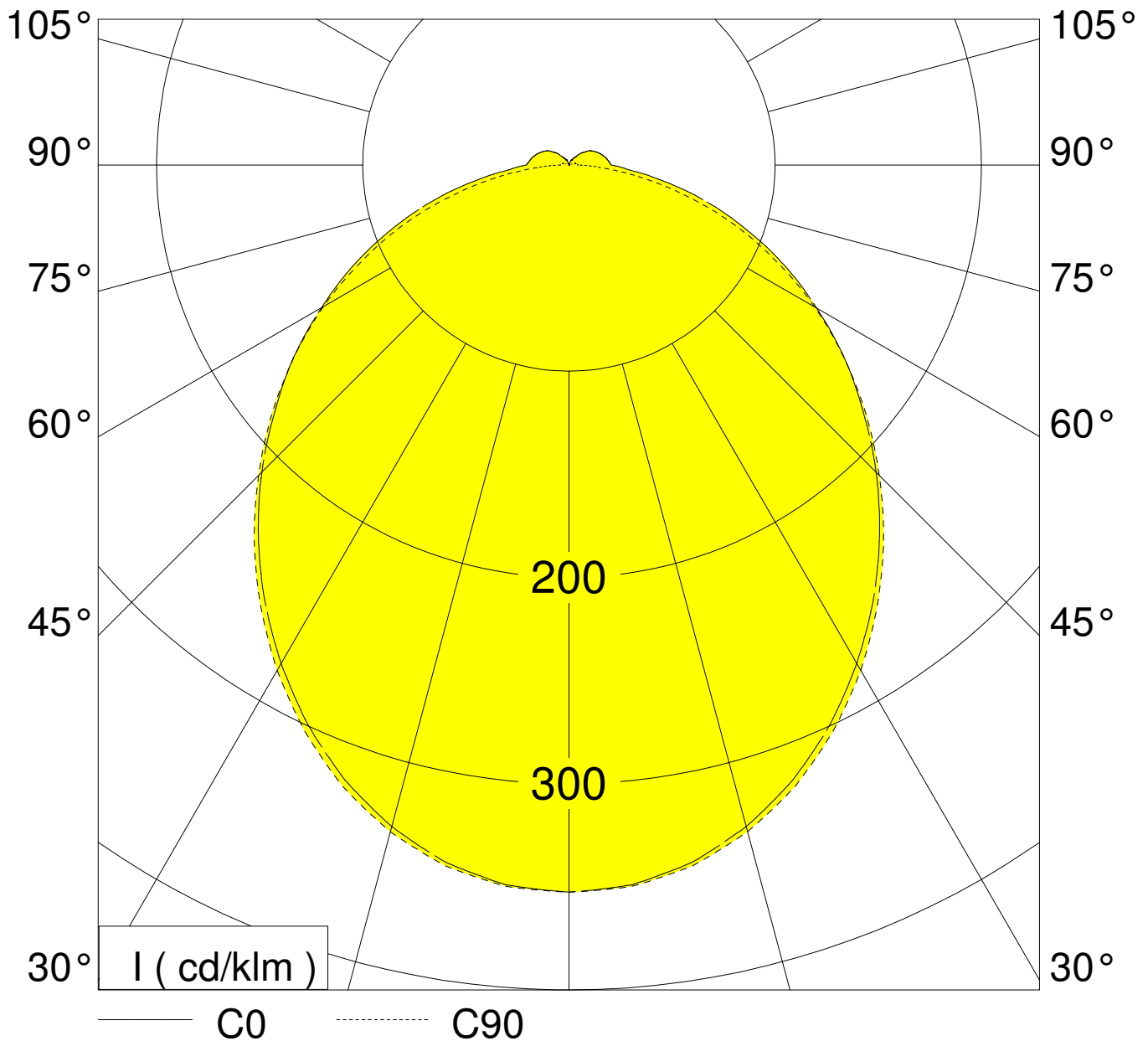
light output ratio	: 100.0 %
DFF	: 95.3 %
UFF	: 4.7 %

classification

LiTG / DIN	: A41
UTE	: 0.95D+0.05T 0.95E+0.05T
CIE	: 47 78 94 95 100
BZ	: 4 4 4 4 4 5 5 5 5
Ambient Temperature	: 25 degC
Input Voltage	: 240 V
Circuit Watts	: 28.4W
Amps (running)	: 0.122A
V.A.	: 29.28VA
Power Factor	: 0.97
CCT	: 3897K (measured): 4000K (declared)
CRI (Ra)	: 86
Luminaire Lumens	: 2880 LLm
Output Current DC	: 1040mA
Output Voltage DC	: 23.7V
Output Power	: 24.65W
Luminaire Lm/circ.Watt	: 101.4 LLm/circ.Watt
Driver Efficiency	: 87%
Driver Details	: HARVARD LL 1X30-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°	352.50	352.50	352.50	352.50	352.50	352.50	352.50
5.0°	350.20	350.20	350.20	350.50	350.80	350.90	351.00
10.0°	343.30	343.50	343.70	344.20	344.70	344.90	345.00
15.0°	332.00	332.40	332.80	333.40	334.10	334.40	334.60
20.0°	317.30	317.80	318.30	319.10	319.90	320.20	320.60
25.0°	299.40	299.90	300.50	301.40	302.30	302.60	302.90
30.0°	279.00	279.90	280.90	281.60	282.30	282.60	282.90
35.0°	257.30	258.00	258.80	259.60	260.40	260.60	260.70
40.0°	234.30	235.60	236.90	237.20	237.50	237.50	237.40
45.0°	210.60	211.90	213.10	213.50	213.90	213.30	212.80
50.0°	186.20	187.80	189.50	189.50	189.50	188.80	188.10
55.0°	163.10	164.10	165.20	164.80	164.40	163.60	162.80
60.0°	138.60	139.90	141.20	140.80	140.40	139.00	137.50
65.0°	115.40	116.10	116.80	116.00	115.10	113.20	111.30
70.0°	91.60	92.60	93.50	92.10	90.60	88.30	86.00
75.0°	69.30	69.40	69.50	67.60	65.60	62.80	60.00
80.0°	47.60	47.60	47.70	45.20	42.80	39.50	36.30
85.0°	29.80	29.30	28.80	25.90	23.10	19.30	15.40
90.0°	20.60	19.90	19.20	15.70	12.20	8.30	4.30
95.0°	19.40	18.70	18.00	14.50	11.10	7.20	3.40
100.0°	18.50	17.70	16.90	13.50	10.10	6.70	3.20
105.0°	17.30	16.50	15.70	12.50	9.30	6.20	3.00
110.0°	16.20	15.40	14.60	11.60	8.60	4.30	0.00
115.0°	14.80	14.10	13.40	10.20	7.00	3.50	0.00
120.0°	13.50	12.80	12.10	8.80	5.50	2.80	0.00
125.0°	12.10	11.00	10.00	6.90	3.80	1.90	0.00
130.0°	9.60	8.90	8.30	5.70	3.20	1.60	0.00
135.0°	8.10	6.70	5.40	3.90	2.50	1.20	0.00
140.0°	5.20	4.80	4.40	2.20	0.00	0.00	0.00
145.0°	4.20	3.90	3.60	1.80	0.00	0.00	0.00
150.0°	2.90	2.70	2.50	1.20	0.00	0.00	0.00
155.0°	2.50	1.20	0.00	0.00	0.00	0.00	0.00
160.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0°	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
175.0°	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
	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	20.7	22.2	21.1	22.4	22.7	20.9	22.4	21.3	22.7	22.9
	3H	21.8	22.9	22.1	23.2	23.5	22.0	23.1	22.3	23.4	23.7
	4H	22.5	23.6	22.9	23.9	24.2	22.7	23.8	23.0	24.1	24.4
	6H	23.1	24.1	23.5	24.5	24.8	23.2	24.2	23.5	24.5	24.9
	8H	23.4	24.4	23.7	24.7	25.1	23.4	24.4	23.7	24.7	25.1
	12H	23.6	24.6	24.0	25.0	25.3	23.5	24.5	23.9	24.9	25.3
4H	2H	21.0	22.1	21.3	22.4	22.7	21.1	22.2	21.5	22.5	22.8
	3H	22.9	23.9	23.3	24.3	24.6	23.0	24.1	23.4	24.4	24.8
	4H	23.8	24.8	24.2	25.2	25.6	23.9	24.9	24.3	25.3	25.7
	6H	24.3	25.1	24.7	25.5	26.0	24.3	25.2	24.8	25.5	26.0
	8H	24.6	25.4	25.1	25.8	26.3	24.6	25.4	25.0	25.8	26.2
	12H	25.0	25.8	25.6	26.3	26.8	24.9	25.6	25.4	26.1	26.7
8H	4H	24.0	24.8	24.5	25.2	25.7	24.1	24.9	24.5	25.3	25.8
	6H	25.1	25.8	25.7	26.4	26.9	25.1	25.8	25.6	26.4	26.9
	8H	25.6	26.3	26.2	26.9	27.5	25.5	26.2	26.1	26.8	27.4
	12H	25.9	26.5	26.5	27.0	27.7	25.7	26.3	26.3	26.8	27.5
12H	4H	24.2	25.0	24.7	25.4	26.0	24.3	25.0	24.8	25.5	26.1
	6H	25.3	26.0	25.9	26.6	27.2	25.3	26.0	25.9	26.6	27.2
	8H	25.7	26.2	26.3	26.8	27.5	25.6	26.2	26.2	26.7	27.4
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	+0.3/ -0.5				+0.3/ -0.5					
standard-table		BK06					BK06				
correction for luminaire		8.1					8.1				
correct glare indices for a total flux of 2880lm											

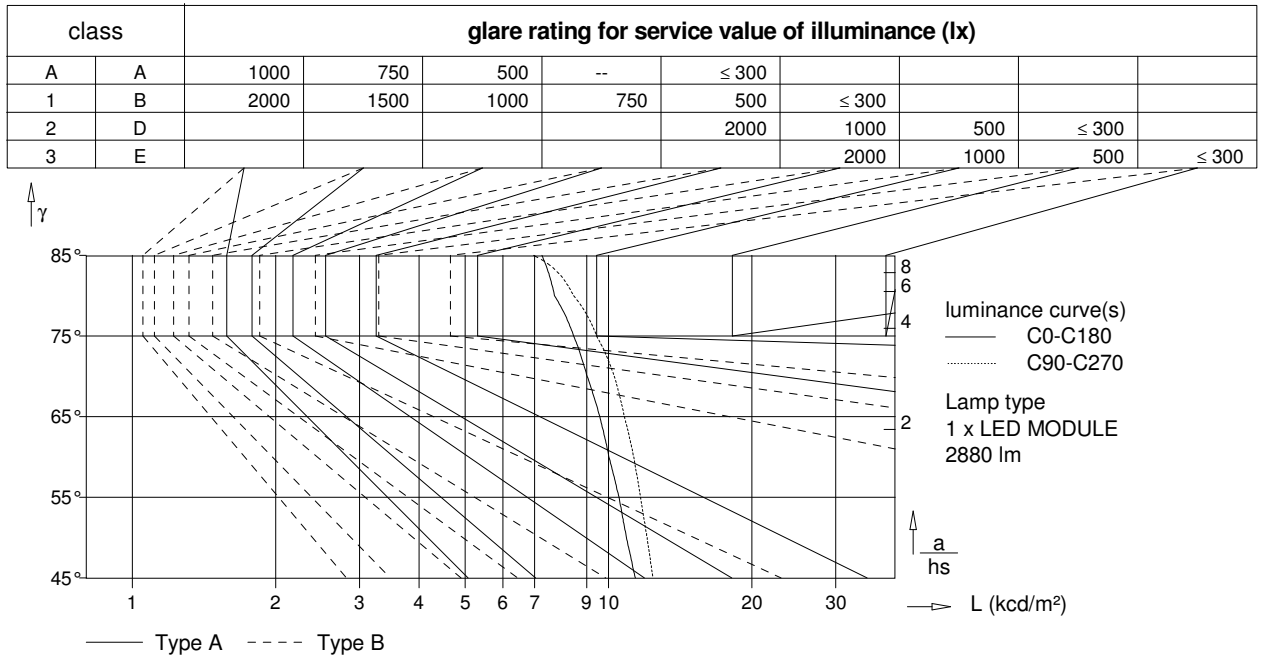


Table of intensities

gamma	C 0	C 90	C 180	C 270
45°	11376.1	12399.4	11376.1	12399.4
50°	10903.7	12047.0	10903.7	12047.0
55°	10515.0	11673.0	10515.0	11673.0
60°	10023.6	11295.0	10023.6	11295.0
65°	9585.9	10797.8	9585.9	10797.8
70°	9017.6	10282.9	9017.6	10282.9
75°	8451.2	9440.8	8451.2	9440.8
80°	7702.5	8443.7	7702.5	8443.7
85°	7246.2	6968.2	7246.2	6968.2

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	59	67	74	79	86	91	94	98	101
70	30	20	52	60	67	72	80	85	89	94	98
70	10	20	46	54	61	67	75	81	85	91	95
50	50	20	57	64	71	76	82	87	90	94	96
50	30	20	50	58	65	70	77	82	85	90	93
50	10	20	46	53	60	65	73	78	82	87	91
30	50	20	55	62	68	73	79	83	85	89	92
30	30	20	49	56	63	68	74	79	82	86	89
30	10	20	45	52	59	64	71	76	79	84	87
0	0	0	42	49	56	60	67	71	74	79	81
BZ-class			4	4	4	4	4	5	5	5	5
SHRnom : 1.50						SHRmax : 1.505					

