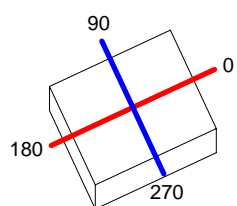


Luminaire		Measurem.		Lamp		
Code	5430	Code	5430	Code	66748 ECO	
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2	
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal	
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm	
Maximum value	133.21 cd/klm	Position	C=90.00 G=5.00	Double Symmetrical		
Rectangular Luminaire	Length	380 mm	Width	467 mm	Height	77 mm
Rectangular Luminous Area	Length	380 mm	Width	467 mm	Height	62 mm
Horizontal Luminous Area	0.177460 m2	Emitting area on Plane 180°		0.023560 m2		
Emitting area on Plane 0°	0.023560 m2	Emitting area on Plane 270°		0.028954 m2		
Emitting area on Plane 90°	0.028954 m2	Glare area at 76°		0.065792 m2		
Symmetry Type	Double Symmetrical	Maximum Gamma Angle		180		
Measurement Distance	6.44	Measurement Flux		1480.00 lm		
Operator	Asselum T2	Source voltage		230.00 V		
Temperature	23.00 °C	Source current		PRC		
Humidity	52.00 %	Photocell				
Notes						

Luminaire Lamps					
Line	Code	Name	Fluxlm	Pow.W	Qta
OSRAM 2006 HS, HM, HD, HR	66748 ECO	HALOPIN® ECO 48W G9	740.00	48.00	2
C.I.E.	43 72 91 81 52	D DIN 5040		B31	
F UTE	0.42 G + 0.10 T	B NBN		BZ 5	

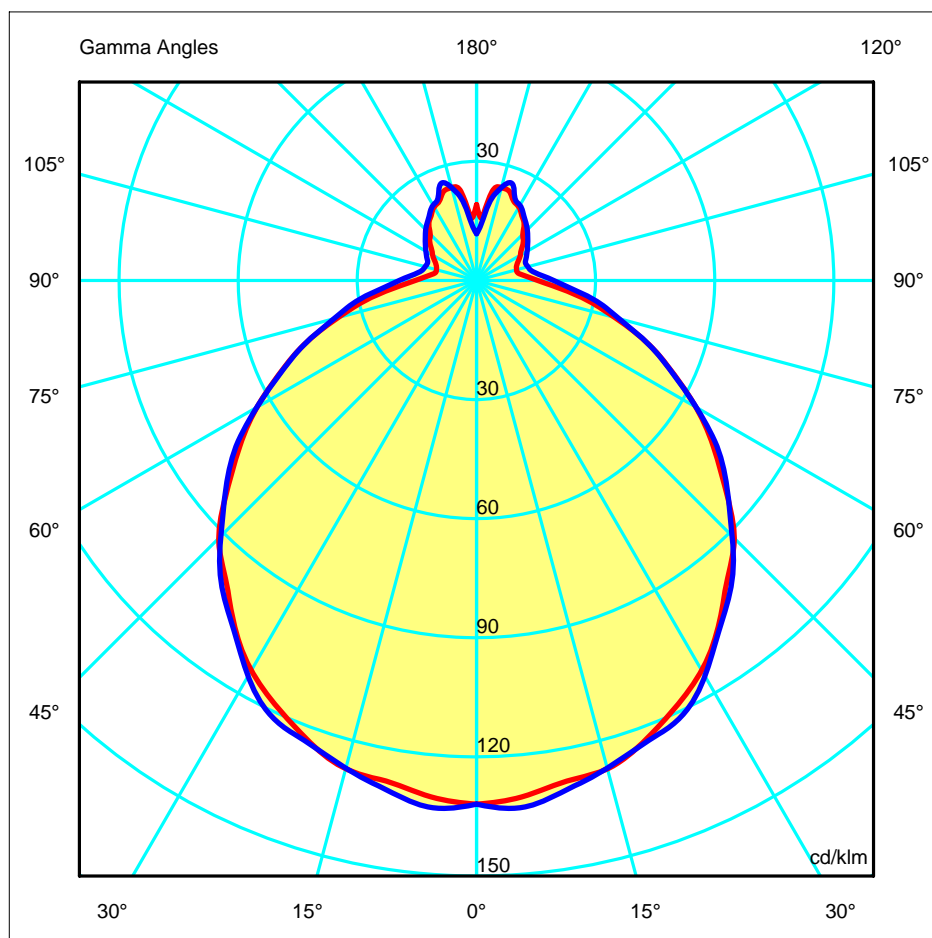
380mm x 467mm



C Halfplanes

180.0 — 0.0
 270.0 — 90.0

ULOR 10.04 %
 DLOR 41.91 %
 RN 19.32 %



Luminaire		Measurem.				Lamp	
Code	5430	Code	5430			Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.			Number	2
Line	VIBIA-Puck	Date	04-06-2012			Position	Universal
Efficiency	51.94%	Coordinate system	C-G			Total Flux	1480.00 lm
Luminous Intensity Table cd/klm				Table 1/1			
	C 0.00	C 15.00	C 30.00	C 45.00	C 60.00	C 75.00	C 90.00
G 0.0	131.88	131.88	131.88	131.88	131.88	131.88	131.88
G 5.0	130.58	131.74	131.82	132.19	130.69	132.23	133.21
G 10.0	128.18	128.15	129.85	129.31	128.79	129.99	130.29
G 15.0	127.34	127.50	126.63	126.56	127.27	127.09	127.19
G 20.0	123.47	123.18	122.64	123.68	122.50	124.78	123.92
G 25.0	118.59	117.97	119.08	118.73	118.07	118.81	121.46
G 30.0	113.40	111.84	112.44	112.27	110.98	112.86	115.04
G 35.0	106.23	106.38	106.62	105.71	105.29	106.49	106.76
G 40.0	98.29	97.63	98.31	98.61	97.70	99.00	99.97
G 45.0	91.79	89.63	89.74	89.68	89.88	90.34	91.01
G 50.0	81.91	80.92	81.54	80.72	81.28	81.88	82.48
G 55.0	72.78	71.05	71.72	72.01	71.14	72.37	74.31
G 60.0	63.85	62.57	63.26	62.73	63.36	63.46	63.88
G 65.0	54.28	53.75	53.49	53.44	53.57	54.45	54.13
G 70.0	45.67	43.79	44.53	44.71	44.84	44.86	45.64
G 75.0	36.06	34.94	34.88	35.85	36.46	37.42	37.15
G 80.0	28.20	27.00	27.81	27.78	28.84	29.26	30.97
G 85.0	20.59	19.91	19.89	20.48	22.09	23.41	24.17
G 90.0	15.41	14.74	15.17	15.38	17.42	18.43	19.45
G 95.0	12.54	11.85	11.89	12.85	14.30	15.40	16.16
G100.0	10.67	10.75	10.83	11.57	12.90	13.71	14.07
G105.0	10.45	10.58	10.88	11.52	12.42	12.95	13.40
G110.0	10.74	11.04	11.58	12.18	12.65	12.91	13.11
G115.0	11.60	12.12	12.46	13.22	13.45	13.81	13.82
G120.0	12.75	13.28	13.91	14.36	14.60	14.52	14.74
G125.0	13.83	14.38	15.11	15.63	15.78	15.72	15.72
G130.0	15.42	15.89	16.49	17.11	17.04	16.89	16.85
G135.0	16.48	17.07	17.75	18.08	18.22	18.14	18.10
G140.0	18.66	18.73	19.27	19.74	19.73	19.26	19.24
G145.0	19.92	20.29	20.71	21.01	21.41	21.09	20.54
G150.0	21.39	21.62	21.56	22.21	22.63	22.14	21.91
G155.0	22.09	22.99	22.76	24.34	23.74	23.46	22.93
G160.0	24.00	24.77	24.42	25.97	24.23	24.88	26.06
G165.0	24.19	24.03	24.45	25.06	24.20	24.39	24.21
G170.0	22.81	21.89	22.36	20.42	21.03	21.26	20.51
G175.0	16.03	17.71	17.67	18.61	15.21	15.32	14.46
G180.0	19.11	19.37	17.03	16.40	17.20	15.46	11.78

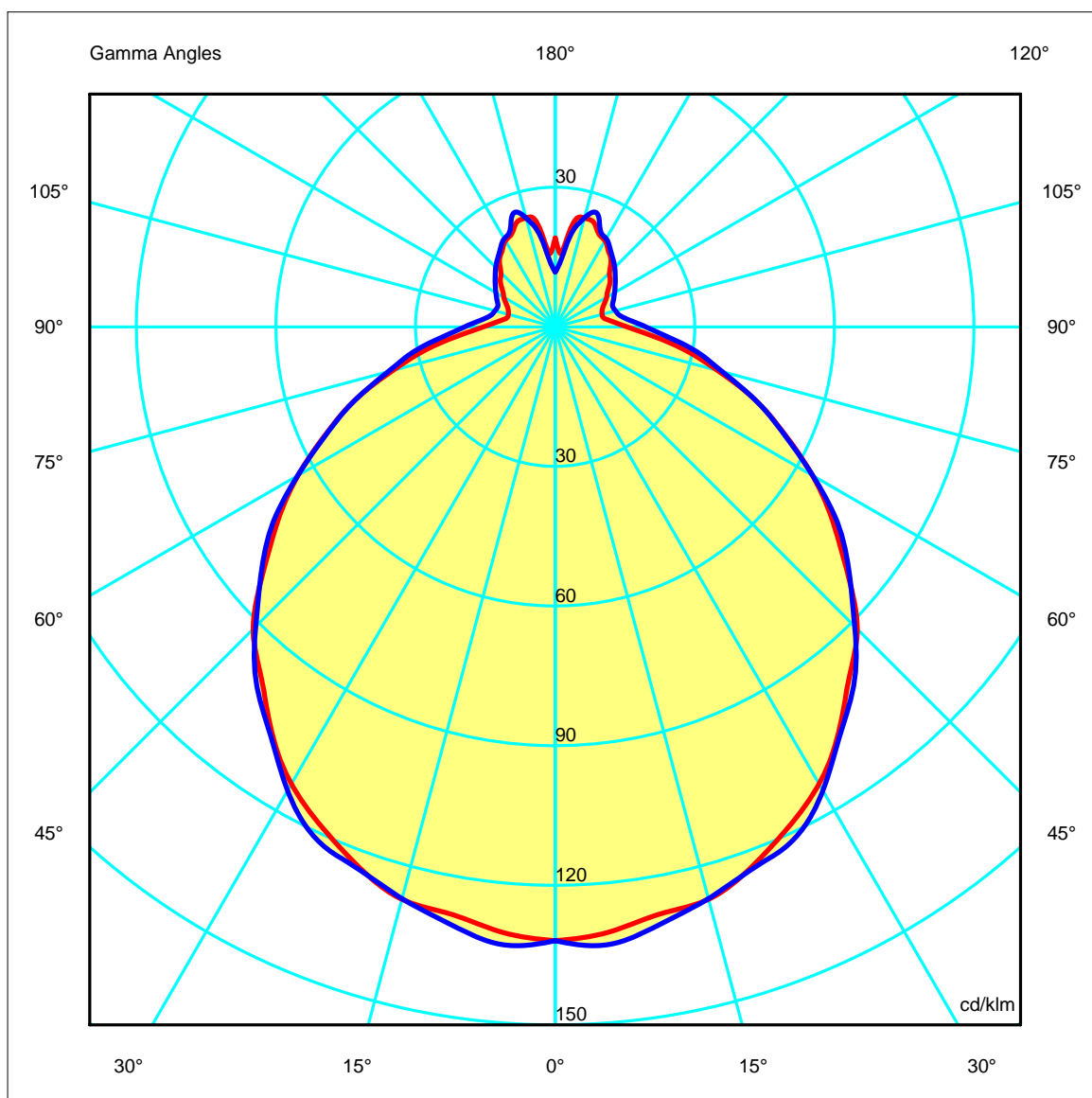
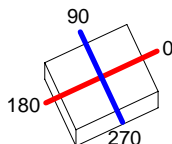
Luminaire		Measurem.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

380mm x 467mm

C Halfplanes

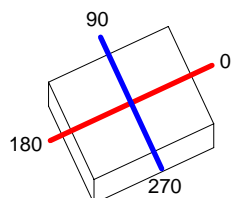
180.0 ————— 0.0

270.0 ————— 90.0



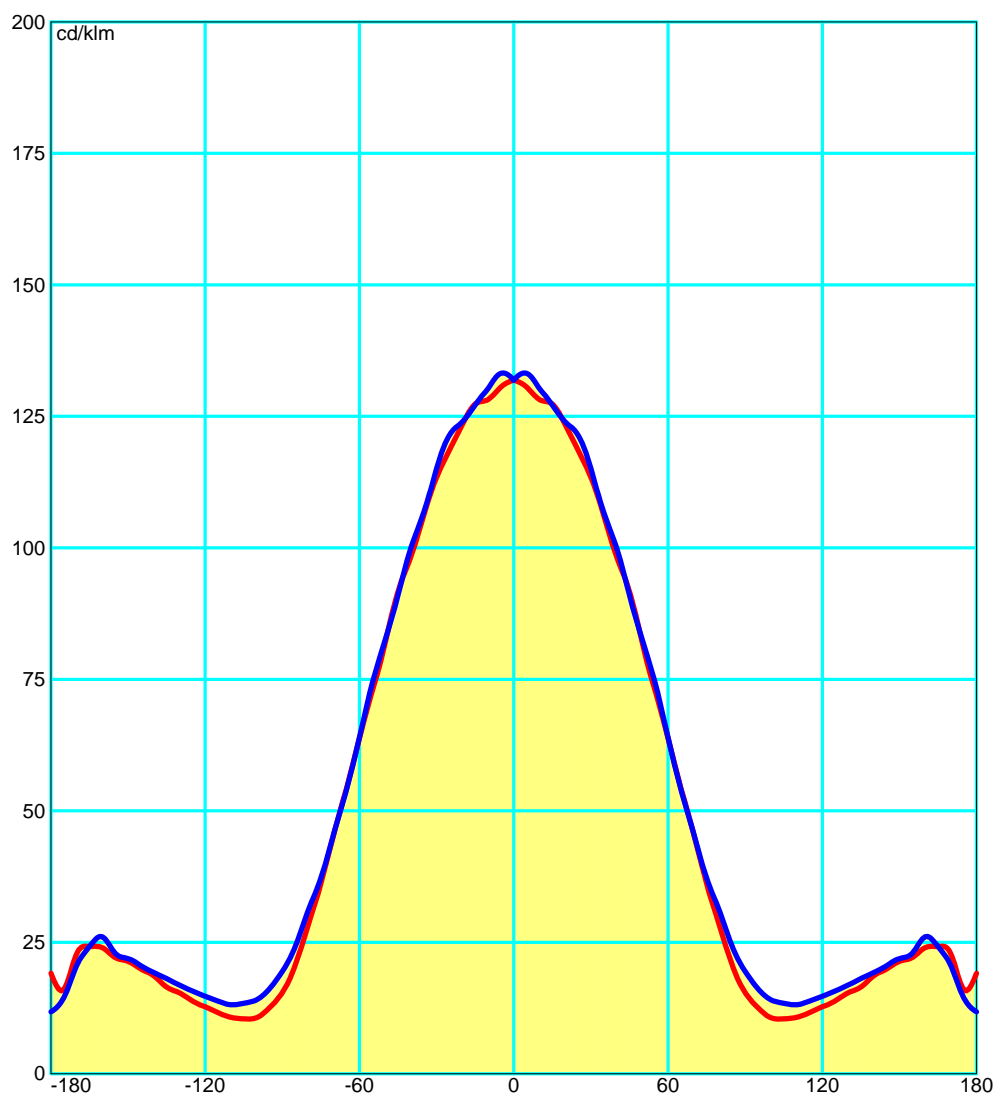
Luminaire		Measurem.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

380mm x 467mm



C Halfplanes

180.0 ————— 0.0
 270.0 ————— 90.0

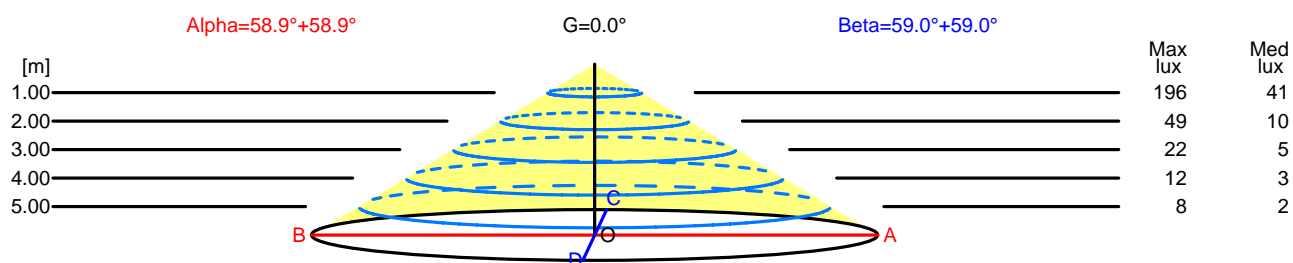


Luminaire		Measurem.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

Width at 50.00 % of MaxLux

H[m]	1.00	2.00	3.00	4.00	5.00	H[m]	1.00	2.00	3.00	4.00	5.00
OA	1.66	3.31	4.97	6.62	8.28	OC	1.67	3.33	5.00	6.67	8.33
OB	1.66	3.31	4.97	6.62	8.28	OD	1.67	3.33	5.00	6.67	8.33

	Luminous Intensities [cd/klm]									
	0	5	15	25	35	45	55	65	75	85
OA	131.88	130.58	127.34	118.59	106.23	91.79	72.78	54.28	36.06	20.59
OB	131.88	130.58	127.34	118.59	106.23	91.79	72.78	54.28	36.06	20.59
OC	131.88	133.21	127.19	121.46	106.76	91.01	74.31	54.13	37.15	24.17
OD	131.88	133.21	127.19	121.46	106.76	91.01	74.31	54.13	37.15	24.17



H[m]	D[m]	Max lux	Med lux	Alpha=58.9°+58.9°	G=0.0	
1.00	3.31	196	41			
2.00	6.62	49	10			
3.00	9.94	22	5			
4.00	13.25	12	3			
5.00	16.56	8	2			

H[m]	D[m]	Max lux	Med lux	Beta=59.0°+59.0°	G=0.0	
1.00	3.33	196	41			
2.00	6.67	49	10			
3.00	10.00	22	5			
4.00	13.33	12	3			
5.00	16.67	8	2			

Luminaire		Measur.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

Total Flux=1480.00 Luminaire Flux=768.77

RI	0.60	0.80	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	10.00	20.00
DRR	0.28	0.36	0.42	0.49	0.55	0.63	0.69	0.73	0.78	0.82	0.90	0.94
RC	6	6	6	6	6	6	6	6	6	6	6	6

Zonal Flux per 1000 Lumen

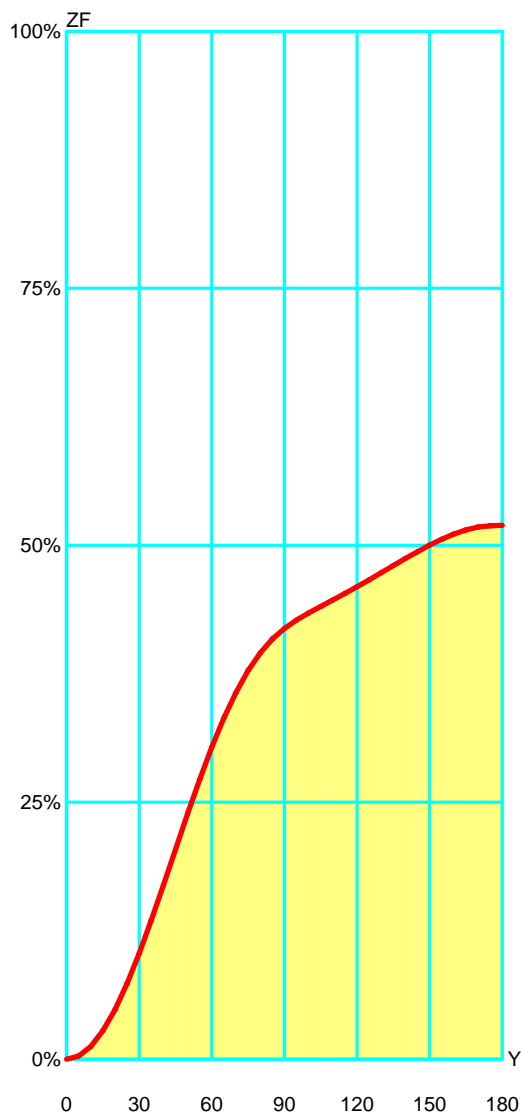
Y°	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
ZF(Y)	12	48	103	169	239	303	357	395	419	434	447	460	473	487	500	511	518	519

CIE Flux Codes

43 72 91 81 52

C.I.E. 6
D DIN 5040 B31
F UTE 0.42 G + 0.10 T
B NBN BZ 5
RN 19.32070 %
BLF 1.0

LOR 51.94416 %
ULOR 10.03598 %
DLOR 41.90819 %
UFF 19.32070 %
DFF 80.67930 %
FFR 23.94753 %



Zonal Flux				
Gamma °	Flux	Sum lm	Flux [%]	Sum [%]
0°	0.00	0.00	0.00 %	0.00 %
5°	3.15	3.15	0.61 %	0.61 %
10°	9.34	12.49	1.80 %	2.40 %
15°	15.20	27.69	2.93 %	5.33 %
20°	20.64	48.33	3.97 %	9.30 %
25°	25.40	73.73	4.89 %	14.19 %
30°	29.26	102.99	5.63 %	19.83 %
35°	32.19	135.18	6.20 %	26.02 %
40°	34.13	169.31	6.57 %	32.60 %
45°	34.90	204.22	6.72 %	39.31 %
50°	34.66	238.88	6.67 %	45.99 %
55°	33.35	272.23	6.42 %	52.41 %
60°	31.25	303.48	6.02 %	58.42 %
65°	28.45	331.93	5.48 %	63.90 %
70°	24.95	356.88	4.80 %	68.70 %
75°	21.11	377.99	4.06 %	72.77 %
80°	17.23	395.22	3.32 %	76.09 %
85°	13.52	408.73	2.60 %	78.69 %
90°	10.35	419.08	1.99 %	80.68 %
95°	8.18	427.26	1.57 %	82.25 %
100°	6.92	434.18	1.33 %	83.59 %
105°	6.35	440.53	1.22 %	84.81 %
110°	6.21	446.74	1.20 %	86.00 %
115°	6.33	453.07	1.22 %	87.22 %
120°	6.57	459.64	1.27 %	88.49 %
125°	6.77	466.42	1.30 %	89.79 %
130°	6.92	473.34	1.33 %	91.12 %
135°	6.94	480.28	1.34 %	92.46 %
140°	6.86	487.14	1.32 %	93.78 %
145°	6.69	493.82	1.29 %	95.07 %
150°	6.30	500.12	1.21 %	96.28 %
155°	5.73	505.85	1.10 %	97.38 %
160°	5.05	510.90	0.97 %	98.36 %
165°	4.06	514.96	0.78 %	99.14 %
170°	2.72	517.68	0.52 %	99.66 %
175°	1.36	519.04	0.26 %	99.92 %
180°	0.40	519.44	0.08 %	100.00 %

Luminaire		Measurem.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

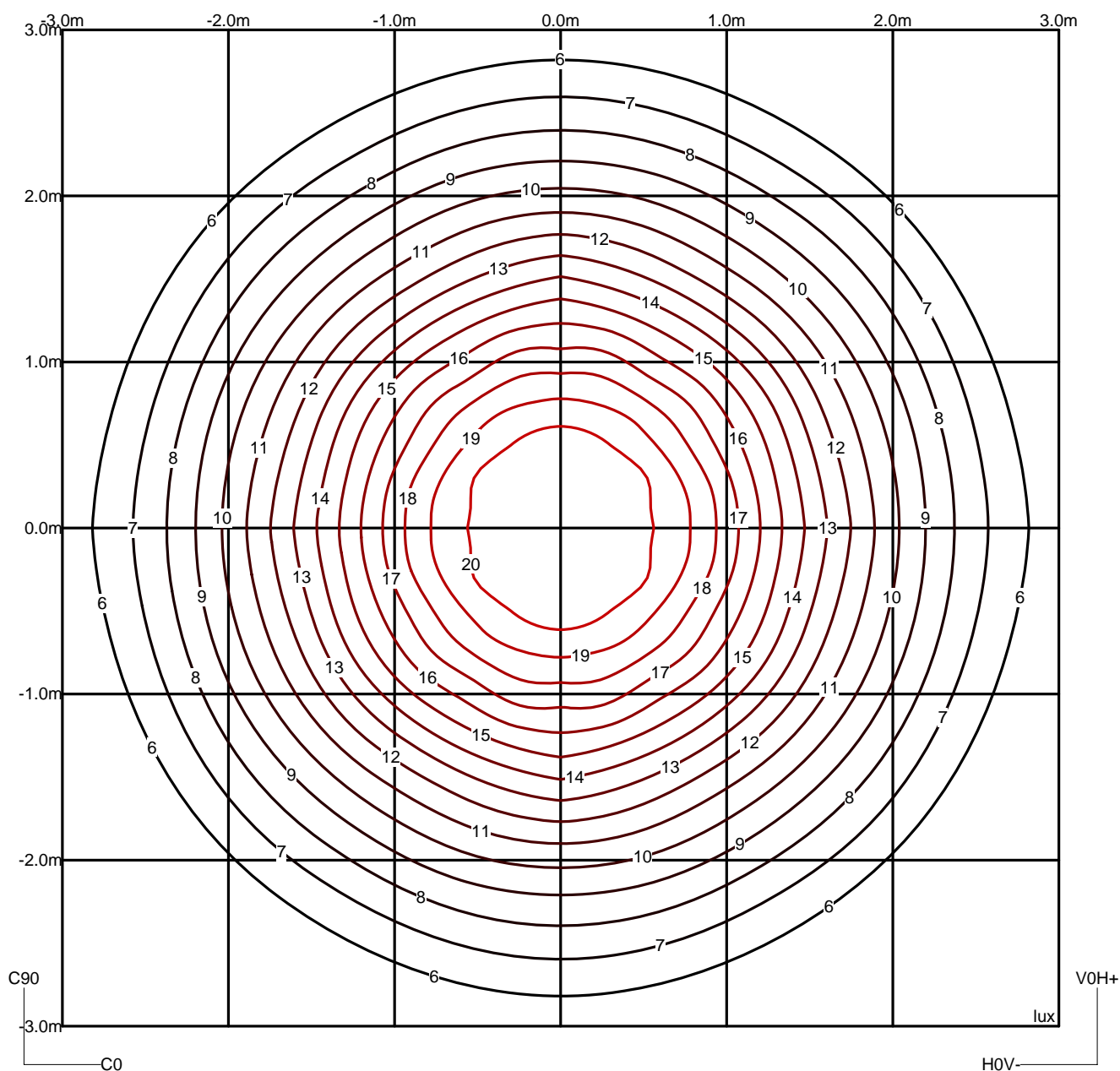
UGR
S = 0.250

Reflectancies										
Ceiling/Cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
WorkingPlane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RoomDimensions	ViewedCrosswise					ViewedEndwise				
x=2H y=2H	10.6	11.7	11.1	12.3	12.8	10.6	11.7	11.1	12.2	12.8
x=2H y=3H	12.3	13.4	12.9	14.0	14.6	12.3	13.3	12.9	13.9	14.6
x=2H y=4H	13.1	14.1	13.7	14.7	15.3	13.1	14.1	13.7	14.7	15.3
x=2H y=6H	13.8	14.8	14.5	15.4	16.1	13.9	14.8	14.5	15.4	16.1
x=2H y=8H	14.2	15.1	14.8	15.7	16.5	14.3	15.2	14.9	15.8	16.5
x=2H y=12H	14.5	15.3	15.2	16.0	16.9	14.7	15.5	15.3	16.1	16.9
x=4H y=2H	11.3	12.2	11.8	12.8	13.4	11.2	12.2	11.8	12.8	13.4
x=4H y=3H	13.2	14.0	13.8	14.6	15.3	13.2	14.0	13.8	14.6	15.3
x=4H y=4H	14.1	14.8	14.7	15.5	16.3	14.1	14.8	14.8	15.5	16.3
x=4H y=6H	15.0	15.6	15.6	16.3	17.2	15.1	15.7	15.7	16.4	17.2
x=4H y=8H	15.4	16.0	16.1	16.7	17.6	15.5	16.1	16.2	16.8	17.6
x=4H y=12H	15.7	16.3	16.5	17.0	18.0	16.0	16.5	16.7	17.2	18.0
x=8H y=4H	14.4	15.0	15.1	15.7	16.6	14.5	15.1	15.2	15.8	16.6
x=8H y=6H	15.5	16.0	16.2	16.7	17.6	15.6	16.1	16.3	16.8	17.6
x=8H y=8H	16.0	16.4	16.8	17.2	18.2	16.2	16.6	16.9	17.3	18.2
x=8H y=12H	16.5	16.9	17.3	17.6	18.8	16.8	17.2	17.5	17.9	18.8
x=12H y=4H	14.5	15.0	15.2	15.7	16.6	14.5	15.1	15.2	15.7	16.6
x=12H y=6H	15.6	16.0	16.3	16.8	17.7	15.7	16.1	16.4	16.9	17.7
x=12H y=8H	16.2	16.6	16.9	17.3	18.3	16.3	16.7	17.1	17.4	18.3

Luminaire		Measur.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

Isolux (Floor)

Luminaire position X=0.00m Y=0.00m Z=3.00m



Luminaire				Measur.				Lamp			
Code	5430			Code	5430			Code	66748 ECO		
Name	Double ceiling lamp hal.			Name	Double ceiling lamp hal.			Number	2		
Line	VIBIA-Puck			Date	04-06-2012			Position	Universal		
Efficiency	51.94%			Coordinate system	C-G			Total Flux	1480.00 lm		

Utilizations CIE

Mounting	Direct		114-Norm type Normalised										Suspension Ratio 3										Standard CIE Settings																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Wall

K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000										
0.60	231	221	204	196	216	192	170	162	155	148	130	122	112	104	145	123	120	107	102	118	103	100	91										
0.80	265	254	228	220	247	215	201	192	179	172	154	144	135	125	166	145	141	128	123	138	123	119	108										
1.00	288	278	243	236	269	229	224	215	196	189	171	161	152	142	182	161	157	144	139	153	138	134	121										
1.25	310	301	255	249	289	242	247	237	211	204	188	178	169	158	196	176	172	160	154	167	153	147	133										
1.50	327	318	264	259	305	251	265	255	223	217	201	191	182	172	207	188	185	173	167	178	165	158	142										
2.00	347	340	273	269	325	261	289	280	237	231	217	208	200	190	220	203	200	189	184	192	180	172	154										
2.50	361	354	279	275	338	267	306	298	246	241	228	221	213	204	229	214	211	201	196	202	191	182	163										
3.00	371	365	283	280	347	271	319	311	253	248	237	230	223	214	235	222	219	210	205	209	199	189	169										
4.00	387	382	291	289	363	279	339	332	264	261	251	245	239	231	247	236	233	225	221	222	213	202	180										
5.00	399	395	298	296	375	287	354	348	274	271	262	257	251	245	256	246	244	237	233	232	224	213	190										
10.00	432	429	318	317	407	308	394	391	300	298	293	290	286	282	282	276	275	270	268	261	256	242	216										
20.00	455	454	335	334	431	325	423	421	321	320	316	314	312	309	303	299	298	295	294	283	280	265	238										

Working Pl.

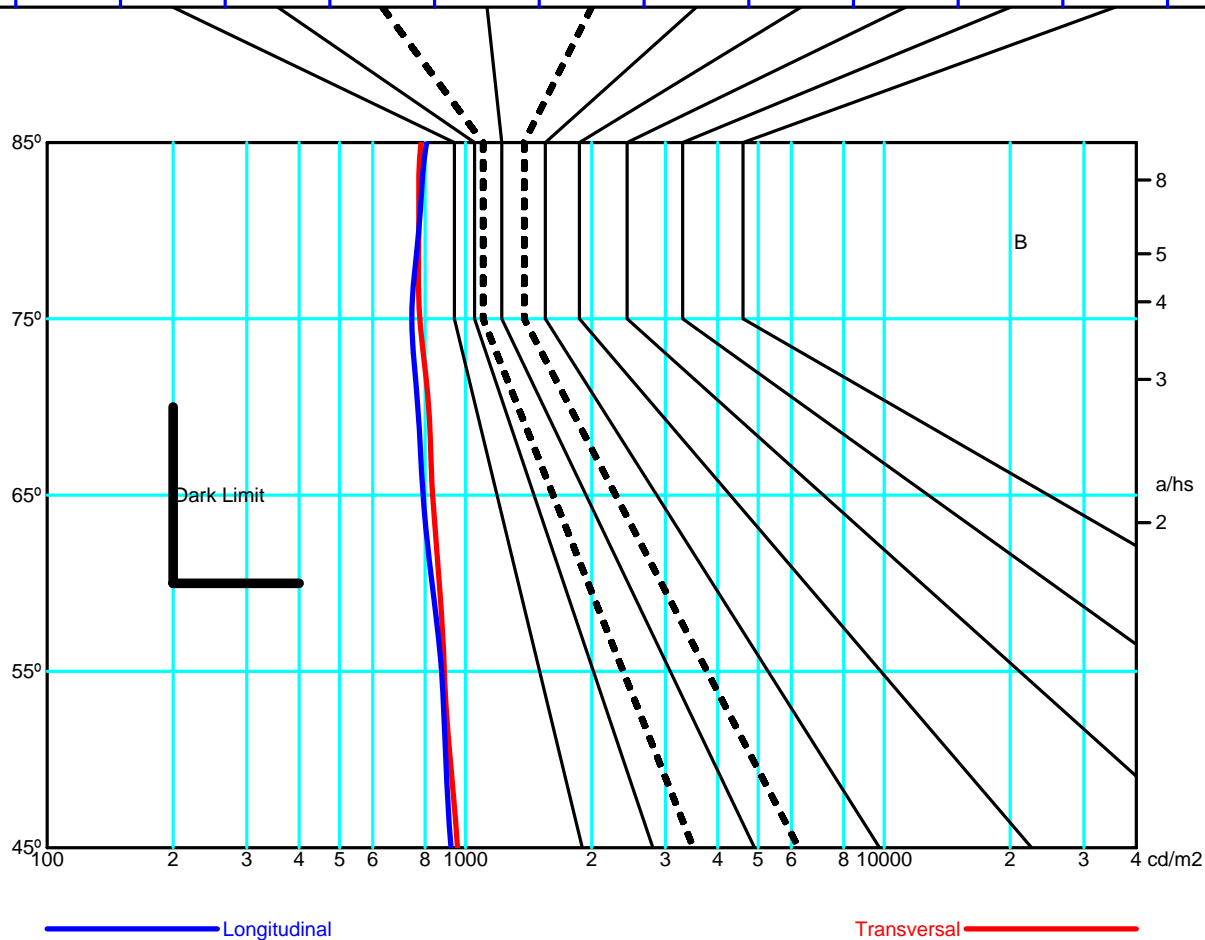
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0.60	274	263	255	246	256	241	201	192	193	186	161	152	138	130	181	153	149	132	128	147	128	125	116										
0.80	327	315	301	292	305	284	249	238	237	229	203	193	178	167	221	192	188	169	164	184	163	159	149										
1.00	369	357	336	327	344	318	288	277	273	264	239	227	213	201	254	225	221	202	196	215	194	188	178										
1.25	409	397	369	360	382	349	328	316	307	298	275	262	249	235	285	258	253	236	229	245	226	217	207										
1.50	439	428	392	385	410	373	359	347	334	325	302	290	277	263	310	284	279	262	255	269	250	240	229										
2.00	484	474	426	420	452	406	407	395	373	365	345	333	321	307	346	323	319	304	296	306	289	276	265										
2.50	513	504	447	442	480	428	439	428	399	391	374	362	352	338	371	350	346	332	325	331	315	301	289										
3.00	534	526	462	458	500	443	463	453	417	411	395	384	375	362	388	370	366	353	346	349	335	319	306										
4.00	560	554	481	477	526	462	495	486	441	435	422	413	405	393	411	395	391	381	375	372	360	342	329										
5.00	577	572	492	489	542	473	515	507	455	451	439	431	424	414	425	411	408	399	393	387	377	356	343										
10.00	614	611	516	514	577	498	561	557	487	485	478	473	468	462	456	448	446	440	436	420	414	390	376										
20.00	634	633	529	528	597	511	588	586	506	504	500	497	495	491	473	469	468	465	462	440	436	409	395										

LM53 SHR C0-C180: 1.274 SHR C90-C270: 1.274 SHR Square: 1.389

Luminaire		Measur.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

	45°	50°	55°	60°	Average Luminance [cd/m²]					80°	85°	
0°	955.8	917.6	889.6	865.9	65°	60°	70°	75°	80°	85°	---	
90°	922.9	895.9	876.3	830.7	791.3	768.5	744.0	772.0	772.8	782.8	---	

Flush mounted or transversal view												
		Illumination(lx)										
A	A	2000	1000	750	500		<300					1.15
B	1		2000	1500	1000	750	500	<300				1.5
C					2000		1000	500	<300			1.85
D	2						2000	1000	500	<300		2.2
E	3							2000	1000	500	<300	2.55



Luminaire		Measur.		Lamp	
Code	5430	Code	5430	Code	66748 ECO
Name	Double ceiling lamp hal.	Name	Double ceiling lamp hal.	Number	2
Line	VIBIA-Puck	Date	04-06-2012	Position	Universal
Efficiency	51.94%	Coordinate system	C-G	Total Flux	1480.00 lm

Luminance												
G/C	0	30	60	90	120	150	180	210	240	270	300	330
0°	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85	1099.85
5°	1080.64	1084.89	1074.54	1099.48	1074.54	1084.89	1080.64	1084.89	1074.54	1099.48	1074.54	1084.89
10°	1060.65	1062.78	1052.14	1072.50	1052.14	1062.78	1060.65	1062.78	1052.14	1072.50	1052.14	1062.78
15°	1061.70	1038.60	1040.90	1052.15	1040.90	1038.60	1061.70	1038.60	1040.90	1052.15	1040.90	1038.60
20°	1045.32	1015.81	1010.80	1038.15	1010.80	1015.81	1045.32	1015.81	1010.80	1038.15	1010.80	1015.81
25°	1027.68	1003.76	990.57	1038.68	990.57	1003.76	1027.68	1003.76	990.57	1038.68	990.57	1003.76
30°	1014.32	972.49	954.34	1012.46	954.34	972.49	1014.32	972.49	954.34	1012.46	954.34	972.49
35°	989.56	954.15	935.87	975.50	935.87	954.15	989.56	954.15	935.87	975.50	935.87	954.15
40°	962.77	918.80	905.76	957.31	905.76	918.80	962.77	918.80	905.76	957.31	905.76	918.80
45°	955.76	884.58	877.75	922.85	877.75	884.58	955.76	884.58	877.75	922.85	877.75	884.58
50°	917.59	857.15	845.40	895.95	845.40	857.15	917.59	857.15	845.40	895.95	845.40	857.15
55°	889.59	814.23	797.75	876.26	797.75	814.23	889.59	814.23	797.75	876.26	797.75	814.23
60°	865.92	787.19	777.23	830.74	777.23	787.19	865.92	787.19	777.23	830.74	777.23	787.19
65°	833.76	742.55	731.34	791.30	731.34	742.55	833.76	742.55	731.34	791.30	731.34	742.55
70°	816.04	705.14	696.10	768.47	696.10	705.14	816.04	705.14	696.10	768.47	696.10	705.14
75°	776.99	648.37	661.77	743.97	661.77	648.37	776.99	648.37	661.77	743.97	661.77	648.37
80°	772.76	631.51	636.07	772.64	636.07	631.51	772.76	631.51	636.07	772.64	636.07	631.51
85°	782.76	586.33	626.50	807.37	626.50	586.33	782.76	586.33	626.50	807.37	626.50	586.33
90°	968.08	643.66	699.44	994.40	699.44	643.66	968.08	643.66	699.44	994.40	699.44	643.66

