

# T O V O

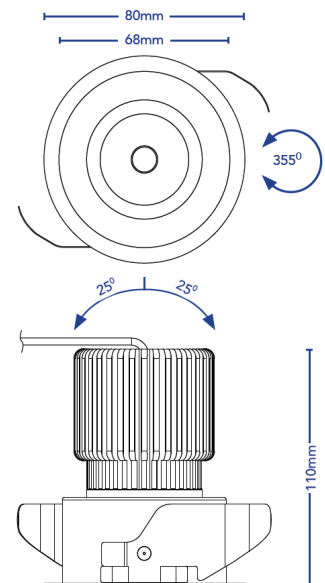
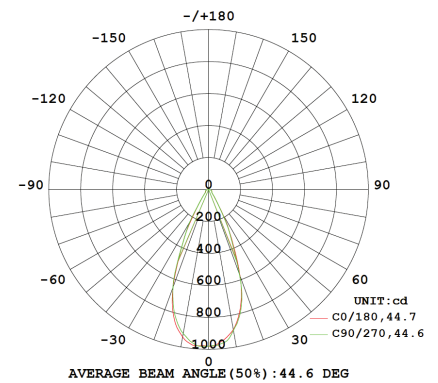
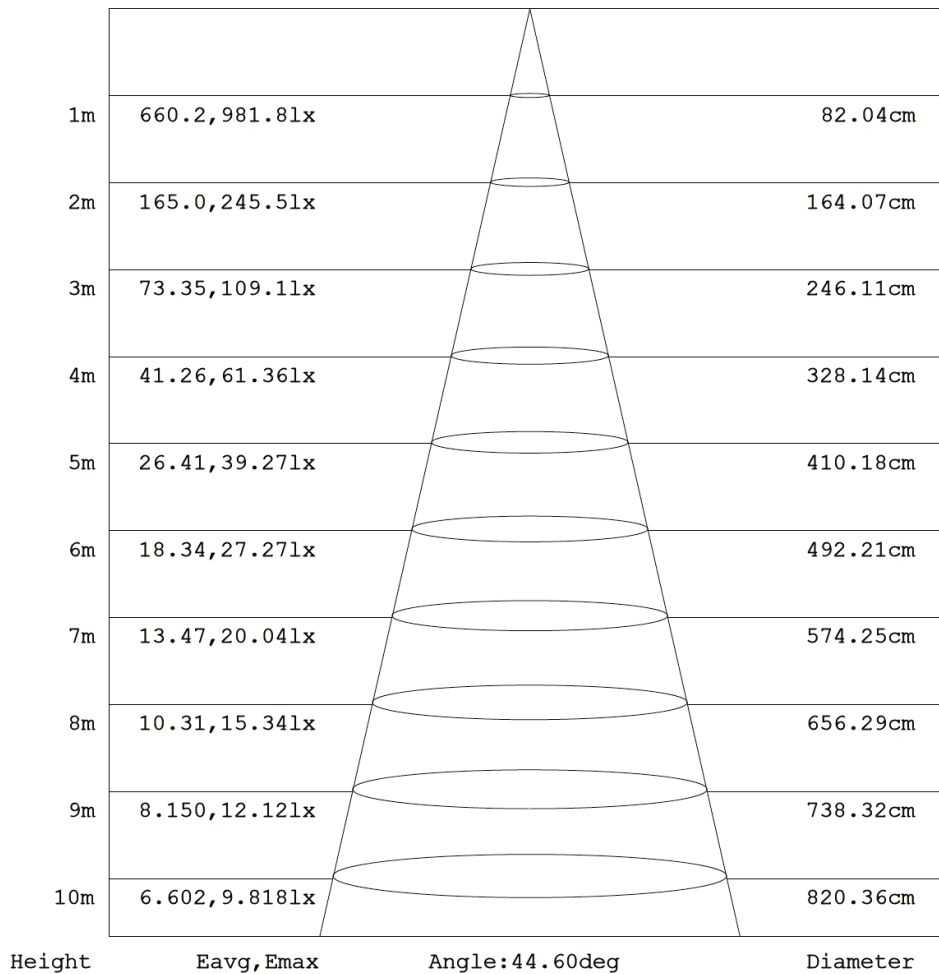
PHOTOMETRY

## Downlight - Modulated Click Spot Series - Semi Trimless - B Spot - 2700K

<b>FITTING</b> - Downlight - Modulated Click Spot Series - Semi Trimless - B Spot		<b>MODEL</b> - 4640_2700K_60°	
<b>BODY</b> - Modulated Downlight System With Tunnel Baffle And Small Trim. Allowing For Interchangeable Body			
<b>LAMP</b> - TOVO 10W 2700K LED Lamp With Dimmable 25-42VDC 250mA LED Driver			
<b>INSTALLATION</b> - Recessed Downlight. 76mm Cut		<b>POWER SUPPLY</b> - 220- 250V LED Driver c/w Flex & Plug	
<b>NOMINAL POWER</b>	10W	<b>RATED INPUT VOLTAGE</b>	240V
<b>NOMINAL FLUX</b>	630.7 Lm	<b>LAMPS INSIDE</b>	1
<b>IMAX</b>	982.7 CD	<b>LIGHT OUTPUT RATIO</b>	100%
<b>CIE CLASS</b>	Direct	<b>UP</b>	.05%
<b>EFFICIENCY</b>	81.59 Lm/W	<b>DOWN</b>	99.5%

LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	46756	30079
80	52266	41759
75	54789	47282
70	57232	50245
65	53237	48684
60	47221	44159
55	44356	41674
50	42062	40421
45	44973	43718

Flux out: 373.7 lm





Downlight - Modulated Click Spot Series - Semi Trimless - B Spot

**Coefficients of Utilisation**

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization (CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.10	1.07	1.05	1.08	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.02	.97	.94	.00	.96	.93	.97	.93	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.95	.90	.86	.93	.89	.85	.91	.87	.83	.88	.85	.82	.86	.83	.81	.79
4.0	.89	.83	.79	.88	.82	.78	.85	.81	.77	.83	.80	.76	.81	.78	.76	.74
5.0	.84	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.72	.78	.74	.71	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66
7.0	.75	.69	.65	.74	.69	.65	.73	.68	.64	.72	.67	.64	.71	.67	.64	.62
8.0	.71	.65	.61	.71	.65	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.59
9.0	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.65	.60	.57	.56
10.0	.65	.59	.55	.64	.59	.55	.63	.58	.55	.63	.58	.55	.62	.58	.55	.54

**Candela Distribution**

UNIT: cd

C (DEG) \ $\gamma$ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	981	980	980	980	979	979	979	978	981	980	980	980	979	979	979	978			
5	953	957	960	959	966	974	977	976	982	982	979	976	973	968	966	960			
10	891	889	882	888	895	912	929	933	936	933	923	921	915	913	916	901			
15	768	764	764	771	781	802	807	820	835	834	830	823	814	803	799	784			
20	575	572	569	559	569	582	602	610	653	663	662	666	653	643	624	600			
25	343	325	313	317	326	350	365	382	401	410	412	409	407	397	385	363			
30	176	167	159	155	164	167	178	188	212	223	236	239	242	231	220	204			
35	77.1	78.2	79.9	80.5	83.4	83.8	86.8	90.0	97.4	99.8	100.0	99.4	99.1	92.7	88.2	81.0			
40	44.9	46.0	45.2	46.1	46.9	45.7	46.5	48.1	51.7	52.6	53.2	53.9	52.9	51.0	48.2	44.8			
45	31.8	31.5	31.1	30.6	30.9	29.6	29.1	29.6	30.5	32.2	32.9	34.0	34.4	33.2	32.1	30.8			
50	27.0	27.1	26.9	26.4	26.0	24.9	24.6	24.8	24.3	25.4	26.1	26.6	27.1	26.6	26.5	26.1			
55	25.4	25.5	25.3	24.8	23.9	22.9	22.5	22.5	22.1	23.1	24.0	24.4	24.9	24.5	24.6	24.4			
60	23.6	23.8	23.6	23.1	22.1	21.2	20.9	20.8	20.3	21.3	22.4	23.0	23.3	23.0	22.9	22.8			
65	22.5	22.3	22.3	21.6	20.6	19.9	19.6	19.7	19.2	19.9	21.0	21.7	21.7	21.7	21.9	21.7			
70	19.6	19.1	18.6	17.9	17.2	16.7	16.6	16.8	16.8	17.5	18.4	19.2	19.5	19.7	19.7	19.5			
75	14.2	13.7	13.3	12.7	12.2	11.8	11.7	11.9	12.0	12.4	13.1	13.9	13.6	14.5	14.4	14.1			
80	9.08	8.60	8.19	7.73	7.25	7.01	7.00	7.24	7.15	7.68	8.23	8.71	8.63	9.04	9.13	8.89			
85	4.08	3.75	3.28	2.87	2.62	2.41	2.47	2.63	2.44	2.93	3.41	3.73	3.89	3.88	4.10	3.96			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.08	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.40	0.32	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.71	0.64	0.00	0.00	0.00	0.08	0.16			
130	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.96	0.79	0.00	0.00	0.00	0.24	0.32			
135	0.16	0.55	0.40	0.00	0.16	0.00	0.00	0.00	1.19	1.35	0.79	0.25	0.00	0.00	0.24	0.40			
140	0.55	1.11	1.35	0.31	0.95	0.71	0.00	0.16	1.67	1.83	0.79	1.75	1.19	0.56	0.24	0.79			
145	1.19	1.59	1.35	1.74	1.35	1.43	0.48	0.79	2.15	2.38	0.71	2.38	1.19	1.43	0.24	1.19			
150	1.51	2.22	0.56	2.38	1.75	1.83	0.32	1.51	2.31	2.30	0.40	2.94	1.03	1.51	0.48	1.34			
155	1.75	1.21	1.82	0.63	0.72	0.71	2.45	0.72	1.11	0.63	1.03	3.17	1.83	2.22	1.27	0.64			
160	0.95	1.65	3.73	3.73	1.51	3.26	3.81	3.23	1.67	1.76	0.79	2.93	2.46	1.83	1.51	0.87			
165	3.58	3.33	4.05	4.84	1.51	5.08	5.72	5.40	5.09	4.77	1.19	1.35	1.81	1.50	1.19	0.95			
170	3.81	3.65	4.05	4.38	1.51	5.56	6.44	6.28	5.01	5.08	1.59	2.78	1.59	1.27	1.52	1.67			
175	2.79	3.65	3.65	3.10	1.51	3.03	4.54	4.61	1.98	1.90	1.59	1.59	1.59	1.51	2.46	1.59			
180	1.52	1.43	1.75	1.67	1.51	1.67	1.59	1.59	1.51	1.67	1.59	1.75	1.59	1.51	1.59	1.59			