

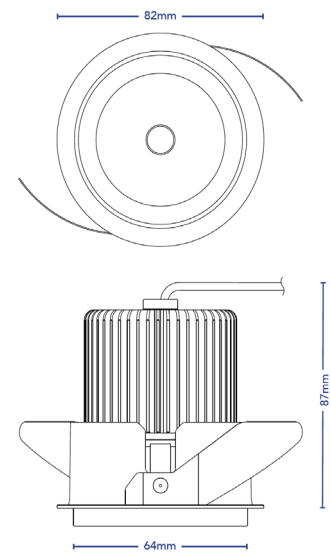
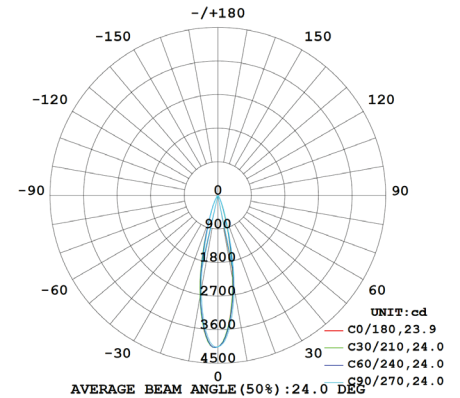
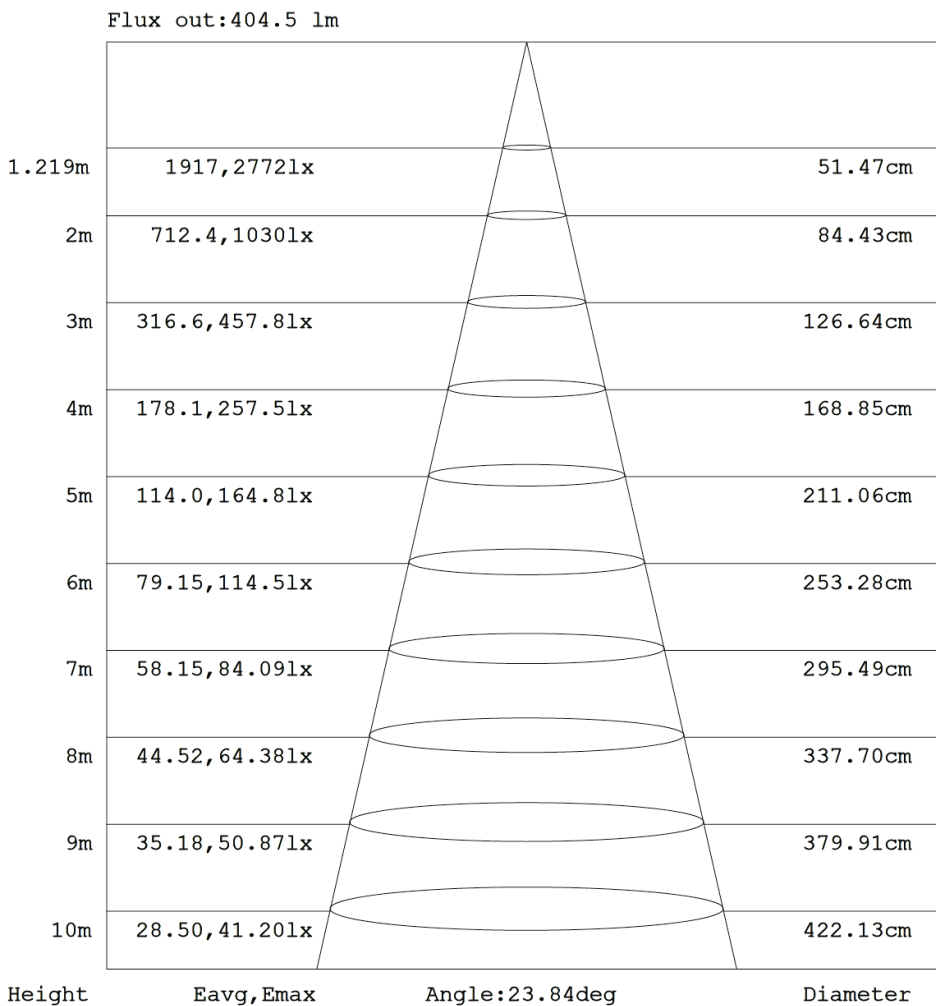
# TOVO

PHOTOMETRY

## Downlight - Modulated Click Spot Series - Semi Trimless - E Spot - 3000K

<b>FITTING</b> - Downlight - Modulated Click Spot Series - Semi Trimless - E Spot		<b>CODE</b> - 4690_3000K_60°	
<b>BODY</b> - Modulated Downlight System With High IP And Small Trim. Ideal For Bathrooms And Damp Areas			
<b>LAMP</b> - TOVO 10W 3000K 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_DC
<b>NOMINAL FLUX</b>	909 Lm	<b>LAMPS INSIDE</b>	1
<b>IMAX</b>	4081 CD	<b>LIGHT OUTPUT RATIO</b>	100%
<b>CIE CLASS</b>	Direct	<b>UP</b>	.01%
<b>EFFICIENCY</b>	78.57 Lm/W	<b>DOWN</b>	99.9%

LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	230	247
80	233	257
75	345	336
70	383	384
65	469	470
60	461	467
55	754	820
50	862	920
45	957	995





Downlight - Modulated Click Spot Series - Semi Trimless - E Spot - 3000K

**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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.95														
2.0	1.06	1.03	1.00	1.04	1.01	.99	1.01	.99	.97	.98	.96	.95	.96	.94	.93	.91														
3.0	1.01	.97	.94	.00	.96	.93	.97	.94	.92	.95	.92	.90	.93	.91	.89	.87														
4.0	.97	.92	.89	.95	.91	.88	.93	.90	.87	.92	.89	.86	.90	.87	.85	.84														
5.0	.93	.88	.85	.92	.88	.84	.90	.86	.84	.89	.85	.83	.87	.84	.82	.81														
6.0	.89	.85	.81	.88	.84	.81	.87	.83	.80	.86	.82	.80	.84	.82	.79	.78														
7.0	.86	.81	.78	.85	.81	.78	.84	.80	.78	.83	.80	.77	.82	.79	.77	.76														
8.0	.83	.79	.75	.83	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.73														
9.0	.80	.76	.73	.80	.76	.73	.79	.75	.73	.78	.75	.73	.78	.75	.72	.71														
10.0	.78	.74	.71	.78	.74	.71	.77	.73	.71	.76	.73	.70	.76	.73	.70	.69														

**Candela Distribution**

UNIT: cd

C (DEG) \ $\gamma$ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057	4057
5	3419	3434	3436	3466	3479	3536	3574	3622	3663	3706	3730	3753	3782	3760	3769	3749	3741	3687	3658
10	2267	2312	2306	2371	2385	2461	2515	2583	2634	2682	2702	2733	2764	2747	2757	2724	2694	2625	2571
15	1096	1107	1129	1154	1196	1249	1268	1350	1375	1445	1456	1500	1540	1503	1514	1459	1444	1353	1320
20	457	470	470	495	505	540	548	576	579	605	610	634	661	645	660	647	653	622	604
25	208	215	217	230	239	256	261	277	273	289	284	298	313	302	318	309	319	296	292
30	102	101	106	109	115	122	125	128	126	131	134	138	143	144	148	149	153	148	141
35	56.7	56.8	56.7	58.3	60.3	64.3	65.7	66.4	64.8	66.0	68.6	71.2	73.5	73.7	76.3	76.9	79.7	79.0	74.9
40	41.6	41.8	41.7	42.6	43.5	44.5	44.8	45.1	43.8	44.0	45.2	47.2	48.6	47.8	49.2	49.7	51.2	50.1	48.4
45	33.5	33.6	33.6	34.0	34.2	35.2	35.3	35.4	34.3	34.1	35.7	36.4	37.3	37.1	37.6	37.8	38.2	37.7	36.3
50	27.4	28.1	28.1	28.5	28.5	29.4	29.6	30.1	29.2	29.1	29.9	30.0	30.1	30.1	30.8	31.1	30.8	30.0	29.4
55	21.4	22.4	21.4	22.2	21.4	23.0	23.6	20.5	24.1	24.5	24.5	24.4	24.1	24.2	24.8	25.2	25.2	24.4	23.9
60	11.4	11.5	11.7	11.8	11.6	11.7	11.7	11.6	11.3	11.3	11.6	11.8	11.9	12.0	12.3	12.5	12.2	12.1	12.2
65	9.80	9.87	9.97	10.1	9.92	10.0	9.96	9.92	9.81	9.85	9.93	9.99	10.1	10.2	10.6	10.5	10.5	10.4	10.5
70	6.47	6.53	6.50	6.53	6.43	6.57	6.58	6.70	6.74	6.91	7.01	7.17	7.37	7.38	7.60	7.45	7.37	7.21	7.29
75	4.42	4.43	4.35	4.32	4.26	4.33	4.35	4.44	4.46	4.54	4.59	4.65	4.76	4.74	4.88	4.82	4.86	4.79	4.81
80	2.00	2.05	2.00	2.05	2.03	2.19	2.23	2.39	2.45	2.55	2.58	2.64	2.73	2.70	2.76	2.73	2.76	2.67	2.66
85	0.99	1.01	0.99	1.02	1.01	1.07	1.08	1.14	1.16	1.22	1.24	1.28	1.32	1.29	1.31	1.28	1.29	1.24	1.24
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	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	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	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	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	0.00	0.00	0.00
115	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	0.00	0.00	0.00
120	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	0.00	0.00	0.00
125	0.00	0.00	0.19	0.21	0.25	0.16	0.23	0.22	0.36	0.21	0.13	0.09	0.00	0.00	0.19	0.09	0.09	0.09	0.21
130	0.00	0.29	0.47	0.48	0.57	0.39	0.34	0.10	0.42	0.39	0.34	0.31	0.00	0.26	0.32	0.26	0.25	0.23	0.28
135	0.00	0.38	0.64	0.76	0.87	0.70	0.59	0.14	0.52	0.51	0.58	0.15	0.00	0.39	0.46	0.46	0.45	0.47	0.06
140	0.00	0.62	0.00	0.92	1.02	0.81	0.63	0.38	0.61	0.59	0.00	0.67	0.00	0.60	0.00	0.65	0.18	0.63	0.64
145	0.00	0.55	0.59	0.84	0.88	0.81	0.57	0.52	0.59	0.56	0.58	0.64	0.00	0.60	0.55	0.67	0.43	0.20	0.61
150	0.00	0.52	0.71	0.00	0.76	0.70	0.51	0.50	0.52	0.00	0.49	0.54	0.00	0.51	0.43	0.00	0.54	0.07	0.48
155	0.00	0.45	0.59	0.63	0.00	0.27	0.32	0.30	0.00	0.45	0.00	0.00	0.00	0.00	0.01	0.56	0.00	0.00	0.45
160	0.00	0.56	0.68	0.06	0.00	0.01	0.00	0.00	0.50	0.47	0.49	0.48	0.00	0.51	0.54	0.54	0.51	0.00	0.00
165	0.00	0.75	0.00	0.00	0.00	1.00	0.58	0.95	0.90	0.89	0.89	0.86	0.06	1.03	1.08	1.16	1.15	0.94	1.00
170	0.08	0.20	1.22	0.63	0.00	0.65	0.94	1.06	0.95	0.93	0.93	0.82	0.12	1.01	1.09	1.16	1.16	1.14	0.52
175	0.70	1.32	1.48	0.40	0.04	0.82	1.65	2.11	1.96	1.69	1.46	0.45	0.11	0.59	1.55	1.72	1.75	1.78	1.59
180	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00