

# TOVO

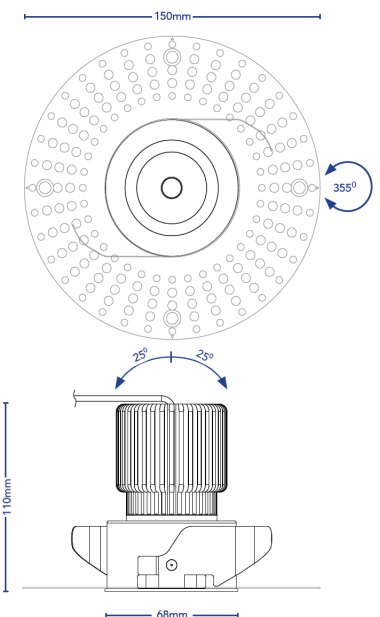
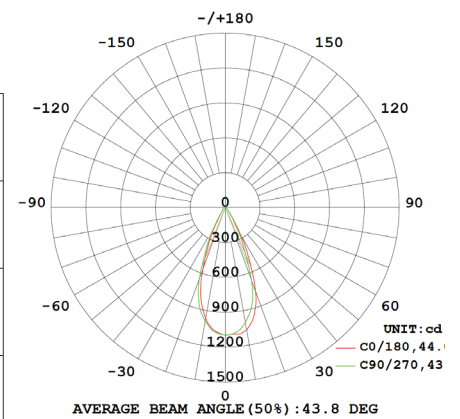
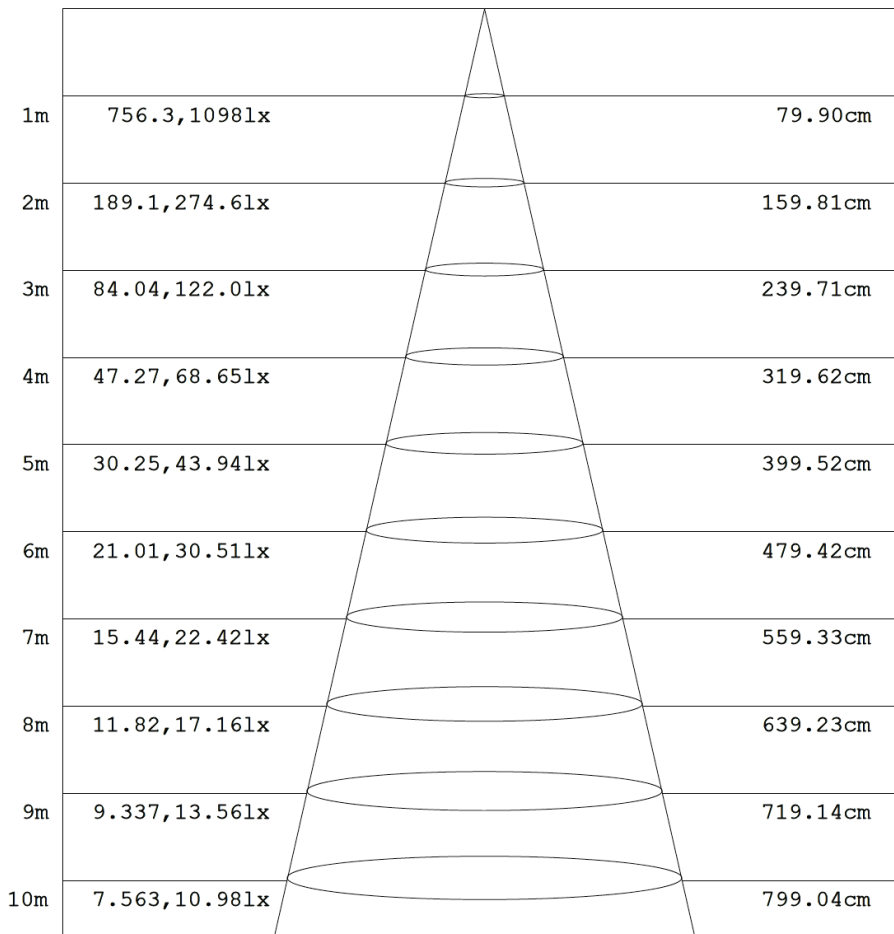
PHOTOMETRY

## Downlight - Modulated Click Spot Series - Trimless - B Spot - 3000K

<b>FITTING</b> - Downlight - Modulated Click Spot Series - Trimless - B Spot		<b>CODE</b> - 4909_3000K_60°	
<b>BODY</b> - Modulated Downlight System With Tunnel Baffle And No Trim. Allowing For Interchangeable Body			
<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>	681Lm	<b>LAMPS INSIDE</b>	1
<b>IMAX</b>	1098CD	<b>LIGHT OUTPUT RATIO</b>	100%
<b>CIE CLASS</b>	Direct	<b>UP</b>	.06%
<b>EFFICIENCY</b>	60.30 Lm/W	<b>DOWN</b>	99.4%

LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	50296	44012
80	53050	50007
75	54851	51993
70	55699	54063
65	50299	51258
60	44574	46025
55	42034	43192
50	41966	42265
45	48633	47673

Flux out: 387.9 lm



Height                      Eavg, Emax                      Angle: 43.56deg                      Diameter



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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	1.01	1.01	1.01	.99
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	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.88	.85	.82	.86	.83	.81	.79
4.0	.89	.84	.79	.88	.83	.79	.86	.81	.78	.84	.80	.77	.82	.78	.76	.74
5.0	.84	.78	.74	.83	.78	.74	.81	.76	.73	.79	.75	.72	.78	.74	.71	.70
6.0	.79	.74	.69	.79	.73	.69	.77	.72	.69	.76	.71	.68	.74	.70	.67	.66
7.0	.75	.69	.65	.75	.69	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.63
8.0	.72	.66	.62	.71	.65	.62	.70	.65	.61	.69	.64	.61	.68	.64	.61	.59
9.0	.68	.63	.59	.68	.62	.59	.67	.62	.58	.66	.61	.58	.65	.61	.58	.57
10.0	.65	.60	.56	.65	.59	.56	.64	.59	.56	.63	.59	.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	1098	1098	1096	1097	1096	1096	1096	1096	1098	1098	1096	1097	1096	1096	1096	1096			
5	1093	1094	1088	1085	1076	1068	1061	1054	1062	1057	1058	1064	1071	1076	1083	1092			
10	1066	1063	1044	1027	1003	983	970	963	969	971	975	982	991	1012	1040	1055			
15	961	960	936	905	878	853	832	806	810	812	824	840	866	894	923	956			
20	768	767	738	704	666	632	591	566	563	572	584	618	655	699	736	768			
25	491	473	450	418	383	362	348	334	334	333	343	355	384	416	453	484			
30	256	264	242	222	201	182	159	150	141	144	148	172	183	216	239	265			
35	120	120	115	105	98.5	89.6	80.4	73.5	71.0	68.0	71.7	80.0	86.2	98.3	109	117			
40	62.0	64.0	61.0	57.7	53.7	49.8	46.2	44.0	41.3	41.0	42.6	45.3	47.4	52.3	57.2	60.4			
45	34.4	33.5	34.3	34.3	33.7	32.9	31.9	31.4	30.3	30.5	30.8	31.7	31.8	32.5	33.5	33.5			
50	27.0	26.5	26.3	26.8	27.2	27.2	27.3	27.5	26.7	27.1	27.3	27.9	27.9	27.5	26.9	26.4			
55	24.1	23.6	23.6	24.0	24.8	25.4	25.7	25.8	25.4	25.8	25.9	26.4	26.4	25.8	25.1	23.8			
60	22.3	21.8	21.7	22.0	23.0	23.7	24.2	24.2	24.1	24.3	24.6	24.7	24.8	24.3	23.3	22.1			
65	21.3	21.0	20.8	20.9	21.7	22.5	22.6	22.9	22.7	23.2	23.5	23.6	23.6	23.3	22.1	20.9			
70	19.1	18.8	18.4	18.5	18.5	18.6	18.6	18.7	18.9	19.2	19.7	20.1	20.2	20.1	19.5	18.9			
75	14.2	14.0	13.7	13.6	13.5	13.4	13.3	13.2	13.1	13.4	13.7	14.1	14.2	14.3	10.8	13.9			
80	9.21	9.06	8.84	8.79	8.68	8.48	8.30	8.14	7.75	7.84	8.08	8.42	8.67	8.82	4.53	8.84			
85	4.38	4.31	4.13	4.07	3.84	3.60	3.37	3.21	2.53	2.61	2.75	2.99	3.25	3.57	0.72	3.88			
90	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.08	0.08	0.08	0.08	0.00	0.00	0.00	0.24	0.16		
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.16	0.32	0.08	0.00	0.00	0.40	0.40			
125	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.40	0.24	0.48	0.00	0.24	0.00	0.64	0.80			
130	0.16	0.08	0.00	0.00	0.40	0.00	0.56	0.56	0.63	0.48	0.79	0.00	0.16	0.00	0.64	1.28			
135	0.40	0.00	0.16	0.00	0.39	0.32	1.35	1.35	1.03	0.88	1.11	0.72	0.02	0.64	1.35	1.60			
140	1.27	0.48	1.02	1.59	1.59	1.51	2.31	1.99	1.67	1.35	1.35	1.61	1.99	2.08	1.20	2.32			
145	1.59	1.27	1.35	2.71	2.30	2.87	1.91	2.63	2.06	2.07	1.27	2.86	1.91	3.43	1.12	2.71			
150	2.38	2.06	0.32	2.24	2.63	3.42	0.56	3.19	2.06	2.06	0.94	2.86	1.19	3.74	0.97	2.55			
155	1.28	0.87	2.52	1.26	0.72	0.80	2.70	1.45	1.82	1.35	0.95	2.86	1.37	3.74	2.08	1.04			
160	2.04	3.96	3.88	3.82	3.03	4.54	4.46	2.38	1.11	1.19	1.03	2.63	2.71	3.11	3.10	0.88			
165	4.98	6.11	6.09	5.33	3.03	5.41	5.34	4.46	4.28	4.21	1.67	1.35	2.55	1.51	1.51	1.12			
170	6.10	7.70	7.69	7.54	3.03	5.03	5.42	5.10	4.12	3.81	1.82	3.20	1.60	1.83	2.02	1.75			
175	4.69	6.69	6.90	6.06	3.03	2.40	4.48	5.10	4.04	3.65	1.82	2.86	1.91	2.55	2.53	1.75			
180	1.90	1.83	1.90	1.75	1.91	1.75	2.07	1.59	1.82	1.91	1.98	1.91	1.83	1.83	1.83	1.83			