

Cálculo da q.d.t., pelos momentos de corrente e potência

Cálculo a q.d.t., para iluminação de arruamentos- pública

Amarelo - preenchimento obrigatório				Cálculo pelos momentos de corrente						Cálculo pelos momentos de potência activa					
		Luminária	Distância [m]	I [A]	Σ Li*II [A.m]	cos φ	Σ Li*II*cosφi	Fase			Luminária	Distância [m]	P [W]	Σ Li*Pi [W.m]	Fase
Alternada monofásica	Alternada trifásica														
		I1	40	3,007	120,2813061	0,36	43,30127019	R	I1	40	750	30000	R		
		I2	40	3,007	240,5626122	0,36	86,60254038	S	I2	40	750	60000	S		
		I3	40	3,007	360,8439182	0,36	129,9038106	T	I3	40	750	90000	T		
		I4	40	3,007	481,1252243	0,36	173,2050808	R	I4	40	750	120000	R		
		I5	40	3,007	601,4065304	0,36	216,5063509	S	I5	40	750	150000	S		
		I6	40	3,007	721,6878365	0,36	259,8076211	T	I6	40	750	180000	T		
		I7	40	3,007	841,9691426	0,36	303,1088913	R	I7	40	750	210000	R		
		I8	40	3,007	962,2504486	0,36	346,4101615	S	I8	40	750	240000	S		
		I9	40	3,007	1082,531755	0,36	389,7114317	T	I9	40	750	270000	T		
		I10	40	3,007	1202,813061	0,36	433,0127019	R	I10	40	750	300000	R		
		I11	40	3,007	1323,094367	0,36	476,3139721	S	I11	40	750	330000	S		
		I12	40	3,007	1443,375673	0,36	519,6152423	T	I12	40	750	360000	T		
		I13	40	3,007	1563,656979	0,36	562,9165125	R	I13	40	750	390000	R		
		I14	40	3,007	1683,938285	0,36	606,2177826	S	I14	40	750	420000	S		
		I15	40	3,007	1804,219591	0,36	649,5190528	T	I15	40	750	450000	T		
I16	40	3,007	1924,500897	0,36	692,820323	R	I16	40	750	480000	R				
I17	40	3,007	2044,782203	0,36	736,1215932	S	I17	40	750	510000	S				
I18	40	3,007	2165,063509	0,36	779,4228634	T	I18	40	750	540000	T				
I19	40	3,007	2285,344816	0,36	822,7241336	R	I19	40	750	570000	R				
I20	40	3,007	2405,626122	0,36	866,0254038	S	I20	40	750	600000	S				
I21	40	3,007	2525,907428	0,36	909,326674	T	I21	40	750	630000	T				
I22	40	3,007	2646,188734	0,36	952,6279442	R	I22	40	750	660000	R				
I23	40	3,007	2766,47004	0,36	995,9292144	S	I23	40	750	690000	S				
I24	40	3,007	2886,751346	0,36	1039,230485	T	I24	40	750	720000	T				
I25	40	3,007	3007,032652	0,36	1082,531755	R	I25	40	750	750000	R				
I26	40	3,007	3127,313958	0,36	1125,833025	S	I26	40	750	780000	S				
I27	40	3,007	3247,595264	0,36	1169,134295	T	I27	40	750	810000	T				
I28	40	3,007	3367,87657	0,36	1212,435565	R	I28	40	750	840000	R				
I29	40	3,007	3488,157876	0,36	1255,736835	S	I29	40	750	870000	S				
I30	40	3,007	3608,439182	0,36	1299,038106	T	I30	40	750	900000	T				
I31	40	3,007	3728,720489	0,36	1342,339376	R	I31	40	750	930000	R				
I32	40	3,007	3849,001795	0,36	1385,640646	S	I32	40	750	960000	S				
I33	40	3,007	3969,283101	0,36	1428,941916	T	I33	40	750	990000	T				
I34	40	3,007	4089,564407	0,36	1472,243186	R	I34	40	750	1020000	R				
I35	40	3,007	4209,845713	0,36	1515,544557	S	I35	40	750	1050000	S				
I36	40	3,007	4330,127019	0,36	1558,845727	T	I36	40	750	1080000	T				
I37	40	3,007	4450,408325	0,36	1602,146997	R	I37	40	750	1110000	R				
I38	40	3,007	4570,689631	0,36	1645,448267	S	I38	40	750	1140000	S				
I39	40	3,007	4690,970937	0,36	1688,749537	T	I39	40	750	1170000	T				
I40	40	3,007	4811,252243	0,36	1732,050808	R	I40	40	750	1200000	R				
I41	40	3,007	4931,533549	0,36	1775,352078	S	I41	40	750	1230000	S				
I42	40	3,007	5051,814855	0,36	1818,653348	T	I42	40	750	1260000	T				
I43	40	3,007	5172,096161	0,36	1861,954618	R	I43	40	750	1290000	R				
I44	40	3,007	5292,377468	0,36	1905,255888	S	I44	40	750	1320000	S				
I45	40	3,007	5412,658774	0,36	1948,557159	T	I45	40	750	1350000	T				
I46	40	3,007	5532,94008	0,36	1991,858429	R	I46	40	750	1380000	R				
I47	40	3,007	5653,221386	0,36	2035,159699	S	I47	40	750	1410000	S				
I48	40	3,007	5773,502692	0,36	2078,460969	T	I48	40	750	1440000	T				
I49	40	3,007	5893,783998	0,36	2121,762239	R	I49	40	750	1470000	R				
I50	40	3,007	6014,065304	0,36	2165,063509	S	I50	40	750	1500000	S				
I51	40	3,007	6134,34661	0,36	2208,364748	T	I51	40	750	1530000	T				
I52	40	3,007	6254,627916	0,36	2251,66605	R	I52	40	750	1560000	R				
I53	40	3,007	6374,909222	0,36	2294,96732	S	I53	40	750	1590000	S				
I54	40	3,007	6495,190528	0,36	2338,26859	T	I54	40	750	1620000	T				
I55	40	3,007	6615,471834	0,36	2381,56986	R	I55	40	750	1650000	R				
I56	40	3,007	6735,753141	0,36	2424,871131	S	I56	40	750	1680000	S				
I57	40	3,007	6856,034447	0,36	2468,172401	T	I57	40	750	1710000	T				
I58	40	3,007	6976,315753	0,36	2511,473671	R	I58	40	750	1740000	R				
I59	40	3,007	7096,597059	0,36	2554,774941	S	I59	40	750	1770000	S				
I60	40	3,007	7216,878365	0,36	2598,076211	T	I60	40	750	1800000	T				
I61	40	3,007	7337,159671	0,36	2641,377482	R	I61	40	750	1830000	R				
I62	40	3,007	7457,440977	0,36	2684,678752	S	I62	40	750	1860000	S				
I63	40	3,007	7577,722283	0,36	2727,980022	T	I63	40	750	1890000	T				
I64	40	3,007	7698,003589	0,36	2771,281292	R	I64	40	750	1920000	R				
I65	40	3,007	7818,284895	0,36	2814,582562	S	I65	40	750	1950000	S				
				840	19,045	22853,44816	8227,241336		840	4750	5700000				

Alternada trifásica

$\Delta U=(\rho/s)^{\frac{1}{2}}\sum Li^{*}Ii\cos\phi i$

s [mm2]	ΔU [V]	ΔU%
10	18,283	7,917

$s=(\rho\Delta U)^{\frac{1}{2}}\sum Li^{*}Ii\cos\phi i$

ΔU%	ΔU [V]	s [mm2]
8	18,475	9,896

Canalização

XAV5G10

Alternada monofásica

$\Delta U=2^{*}(\rho/s)^{\frac{1}{2}}\sum Li^{*}Ii\cos\phi i$

s [mm2]	ΔU [V]	ΔU%
25	14,626	6,333

$s=2^{*}(\rho\Delta U)^{\frac{1}{2}}\sum Li^{*}Ii\cos\phi i$

ΔU%	ΔU [V]	s [mm2]
8	18,475	19,792

Alternada trifásica

$\Delta U=\rho/(1,73^{*}Uc^{*}s)^{\frac{1}{2}}\sum Li^{*}Pi$

s [mm2]	ΔU [V]	ΔU%
10	18,283	7,917

$s=\rho/(1,73^{*}Uc^{*}\Delta U)^{\frac{1}{2}}\sum Li^{*}Pi$

ΔU%	ΔU [V]	s [mm2]
8	18,475	9,896