

## Voltage Drop Chart for #8-2 Wire

<i>Watts</i>	40	80	120	160	200	240	280	300	340	384
<i>Amps</i>	3.3	6.7	10.0	13.3	16.7	20.0	23.3	25.0	28.3	32.0

DISTANCE*									
25	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	<b>The NEC (National Electrical Code) limits all secondary wire runs to a maximum of 20 amps.</b>
50	0.2	0.4	0.6	0.9	1.1	1.3	1.5	1.6	
75	0.3	0.6	1.0	1.3	1.6	1.9	2.2	2.4	
100	0.4	0.9	1.3	1.7	2.1	2.6	3.0	3.2	
125	0.5	1.1	1.6	2.1	2.7	3.2	3.7	4.0	
150	0.6	1.3	1.9	2.6	3.2	3.8	4.5	4.8	
175	0.7	1.5	2.2	3.0	3.7	4.5	5.2	5.6	
200	0.9	1.7	2.6	3.4	4.3	5.1	6.0	6.4	
225	1.0	1.9	2.9	3.8	4.8	5.8	6.7	7.2	
250	1.1	2.1	3.2	4.3	5.3	6.4	7.5	8.0	
275	1.2	2.3	3.5	4.7	5.9	7.0	8.2	8.8	
300	1.3	2.6	3.8	5.1	6.4	7.7	9.0	9.6	
325	1.4	2.8	4.2	5.5	6.9	8.3	9.7		
350	1.5	3.0	4.5	6.0	7.5	9.0			
375	1.6	3.2	4.8	6.4	8.0	9.6			
400	1.7	3.4	5.1	6.8	8.5	10.2			
425	1.8	3.6	5.4	7.3	9.1				
450	1.9	3.8	5.8	7.7	9.6				
475	2.0	4.1	6.1	8.1	10.1				
500	2.1	4.3	6.4	8.5					
525	2.2	4.5	6.7	9.0					
550	2.3	4.7	7.0	9.4					
575	2.5	4.9	7.4	9.8					
600	2.6	5.1	7.7	10.2					
625	2.7	5.3	8.0						
650	2.8	5.5	8.3						
675	2.9	5.8	8.6						
700	3.0	6.0	9.0						
725	3.1	6.2	9.3						
750	3.2	6.4	9.6						
775	3.3	6.6	9.9						
800	3.4	6.8	10.2						
825	3.5	7.0							
850	3.6	7.3							
875	3.7	7.5							
900	3.8	7.7							
925	3.9	7.9							
950	4.1	8.1							
975	4.2	8.3							
1000	4.3	8.5							

Note: #8-2 wire is rated for maximum of 40 amps and 480 watts. Always use no more than 80% (according to the National Electrical Code) thus a total of 384 watts of total lamp load.

Formula used:  

$$\text{Amps} \times \text{Distance} \times 2 \times \text{Resistance/foot} = \text{Watts} / \text{Volts}$$
 Resistance per foot for #8-2 wire = .00064

\* Distance of wire is calculated from the transformer to the first connection point ONLY.

