













Diameter	Watts	Lumens	Lumens/Watt			
T5	28	2900	104			
T8/800	32	3050	95			
			93			
T8/700	32	2850	89			
T12/WM	34	2650	78			
T12/CW	40	3050	66			

T-5	T-5 Dimensions						
 ← ←	C B A			67" max			
Measurements in inches	A max.	B min.	B max.	C max.			
Measurements in inches	A max.	B min.	B max.	<u>C max.</u>			
	21.61"	21.8"	21.89"	22.17 [°]			
Measurements in inches	A max.	B min.	B max.	C max.			
F14T5, F24T5/HO	21.61"	21.8"	21.89"	22.17*			
F21T5, F39T5/HO	33.42"	33.61"	33.70"	33.98*			
Measurements in inches	A max.	B min.	B max.	C max.			
F14T5, F24T5/HO	21.61"	21.8"	21.89"	22.17"			
F21T5, F39T5/HO	33.42"	33.61"	33.70"	33.98"			
F28T5, F54T5/HO	45.24"	45.42"	45.52"	45.8"			
Measurements in inches	A max.	B min.	B max.	C max.			
F14T5, F24T5/HO	21.61"	21.8"	21.89"	22.17"			
F21T5, F39T5/HO	33.42"	33.61"	33.70"	33.98"			
F28T5, F54T5/HO	45.24"	45.42"	45.52"	45.8"			
F35T5	57.05"	57.23"	57.33"	57.61"			

	2 Foot	3 Foot	4 Foot	5 Foc	
Light Output	1350	2100	2900	3650	
Lamp Power	14	21	28	35	
Lamp Efficacy	96	100	104	104	
Lamp Current (M. Amps)	170	170	170	170	
Lamp Voltage	82	123	167	209	
Peak Output Occ.	35	35	35	35	
Rated Avg. Life	20,000	20,000	20,000	20,00	















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Indirect lighting with wider fixture spacings

- Reduces initial costs for labor and materials
- Reduces maintenance costs































Dimming Ballasts





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The California Energy Crisis

- AB 970
 - California Energy Security and Reliability Act of 2000
 - Signed into law by Governor Davis on September 6th, 2000
 - Emergency legislation designed to provide a balanced response to the state's electricity problems

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Potential Savings from AB 970

- 150 megawatts electrical demand
- 548 gWh electrical energy for 2001
- 134,777 MBtus natural gas for space heating and water heating



- Bi-level Switching Requirements
- Automatic Shutoff Requirements
- Minimum efficiency requirements for exterior lighting
- Lighting Power Allowances
- New means of calculating actual lighting power in office spaces

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- Old Title 24: spaces with LPD <1.0 watts/s.f. exempt
- New Title 24: spaces with LPD <0.8 watts/s.f are exempt
- Spaces with occupancy sensors are no longer exempt
- Spaces with automatic time switches are no longer exempt





- Applies to all permanently installed luminaires attached to or powered by electrical service in buildings containing conditioned space
- Exterior luminaires >100 watts must have minimum source efficacy of 60 lumens per watt
- Exception: luminaires controlled by motion sensors



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• The actual power for the portable lighting may be included if sufficient supporting evidence is submitted and accepted by the building department

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- Must be clearly indicated on the plans



