

## Lighting Tables for New Equipment

4/8/2010

### T8 and SUPER T8 Fluorescent Lamps and Fixtures with Electronic Ballasts

LAMP LENGTH	DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
				CODE	REBATE PER FIXTURE	CODE	REBATE PER FIXTURE
2'	F17T8	1	18	200	9.00	---	---
		2	32	201	9.00	---	---
		3	48	202	15.00	---	---
		4	57	203	15.00	---	---
	F17T8 with Reflectors	1	18	204	14.00	---	---
		2	32	205	14.00	---	---
3'	F25T8	1	24	300	9.00	---	---
		2	46	301	9.00	---	---
		3	66	302	15.00	---	---
		4	82	303	15.00	---	---
	F25T8 with Reflectors	1	24	304	16.00	---	---
		2	46	305	16.00	---	---
4'	F25T8	4	85	438	15.00	---	---
	F25T8 with Reflectors	4	85	439	19.00	---	---
	F32T8	1	29	400	9.00	---	---
		2	58	401	9.00	---	---
		3	85	402	15.00	---	---
		4	107	403	15.00	---	---
	F32T8 with Reflectors	1	29	462	12.00	---	---
		2	58	463	12.00	---	---
		3	85	464	20.00	---	---
		4	107	465	20.00	---	---
		5	148	466	26.00	---	---
		6	170	467	31.00	---	---
		8	227	468	40.00	---	---
		F32T8 - RLO	1	26	411	9.00	---
	2		51	412	9.00	---	---
	3		74	413	15.00	---	---
	4		94	414	15.00	---	---
	F32T8 - RLO / Reflectors	1	26	415	18.00	---	---
		2	51	416	18.00	---	---
	F32T8 - RLO / Reflectors (Compare to 400 watt HID base)	8	192	433	65.00	425	20.00
	F32T8 - HBF / Reflectors (For high-bay applications – ceiling height > 15')	1	37	445	8.00	446	4.00
		2	72	447	15.00	448	7.50
		3	107	449	50.00	450	15.00
		4	141	436	65.00	437	20.00
		6	234	432	65.00	423	20.00
	F32 SUPER T8 (ceiling height ≤ 15') Must meet SUPER T8 lamp and ballast requirements shown on last page.  (Compare to standard T8 and T12 fixtures. Applicable to all SUPER T8 ballast-factor ballasts.)	1	26	427	11.00	451	1.75
		2	53	428	11.00	452	1.75
		3	80	429	20.00	453	2.25
		4	106	430	20.00	454	2.25
		6	159	440	31.00	455	2.75
	F32 SUPER T8 / Reflectors (ceiling height ≤ 15') Must meet SUPER T8 lamp and ballast requirements shown on last page.  (Compare to standard T8 and T12 fixtures. Applicable to all SUPER T8 ballast-factor ballasts.)	1	26	471	13.00	472	2.75
		2	53	469	13.00	470	2.75
3		80	444	24.00	456	3.75	
4		106	441	24.00	457	4.25	
6		159	442	35.00	458	4.75	
8		212	443	44.00	459	6.75	

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				CODE	REBATE PER FIXTURE	CODE	REBATE PER FIXTURE
4'	F32 SUPER T8 / Reflectors (ceiling height > 15') Must meet SUPER T8 lamp and ballast requirements shown on last page.  (For high-bay applications. Applicable to all SUPER T8 ballast-factor ballasts.)	6	159	473	70.00	474	35.00
	F36T8	2	74	417	9.00	---	---
	F36T8 with Reflectors	1	37	418	9.00	---	---
	F48T8/HO	1	40	419	9.00	---	---
		2	81	420	9.00	---	---
		3	118	421	15.00	---	---
		4	149	422	15.00	---	---
	Low-Wattage, 28 watt, 4' T8 Lamps Only (use Code 8091 as Existing/Base Code)	NA	28	475	1.00 per lamp	476	1.00 per lamp
Low-Wattage, 25 watts or less, 4' T8 Lamps Only (use Code 8091 as Existing/Base Code)	NA	25	477	1.50 per lamp	478	1.50 per lamp	
5'	F40T8	1	46	500	9.00	---	---
		2	71	501	9.00	---	---
		3	105	502	18.00	---	---
	F40T8 with Reflectors	1	46	503	9.00	---	---
6'	F72T8/HO	1	80	600	9.00	---	---
		2	147	601	9.00	---	---
8'	F96T8	1	60	800	9.00	---	---
		2	108	801	9.00	---	---
		6	324	809	30.00	---	---
	F96T8 with Reflectors	1	60	804	9.00	---	---
	F96T8 with Reflectors (From F96T12/HO/VHO)	2	108	803	27.50	---	---
	F96T8 - RLO	1	49	805	9.00	---	---
		2	99	806	9.00	---	---
	F96T8 - RLO / Reflectors	1	49	807	9.00	---	---
F96T8/HO	2	160	808	9.00	---	---	

### T5 Fluorescent Fixtures with Electronic Ballasts

DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
			CODE	REBATE PER FIXTURE	CODE	REBATE PER FIXTURE
14 Watt T5 HBF (compare to 2-lamp F32T8 base)	2	39	2086	10.00	2087	2.00
18 Watt T5	1	20	2001	10.00	2000	2.00
	2	34	2003	10.00	2002	2.00
	3	50	2005	16.00	2004	2.50
28 Watt T5	1	29	2084	10.00	2085	2.00
	2	58	2076	10.00	2077	2.00
	3	96	2078	16.00	2079	2.50
	4	116	2080	16.00	2081	2.50
39 Watt T5	1	38	2007	10.00	2006	2.00
	2	66	2009	10.00	2008	2.00
	3	104	2011	16.00	2010	2.50
40 Watt T5	1	35	2013	10.00	2013	2.00
	2	68	2015	10.00	2014	2.00
	3	98	2017	16.00	2016	2.50

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DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
			CODE	REBATE PER FIXTURE	CODE	REBATE PER FIXTURE
40 Watt T5	4	136	2019	16.00	2018	2.50
	6	204	2021	20.00	2020	3.00
50 Watt T5	1	50	2023	10.00	2022	2.00
	2	100	2027	10.00	2026	2.00
	3	150	2031	16.00	2030	8.00
	4	200	2035	16.00	2034	8.00
55 Watt T5	1	55	2025	10.00	2024	2.00
	2	110	2029	10.00	2028	2.00
	3	165	2033	16.00	2032	8.00
	4	220	2037	16.00	2036	8.00
24 Watt HO T5	1	29	2039	4.00	2038	2.00
	2	55	2041	4.00	2040	2.00
	3	82	2082	8.00	2083	4.00
39 Watt HO T5	1	43	2043	8.00	2042	2.00
	2	85	2045	8.00	2044	2.00
48 Watt HO T5 / Reflectors (400 watt HID base)	4	224	2051	75.00	2050	20.00
54 Watt HO T5	1	62	2065	12.75	2064	6.50
	2	124	2063	25.50	2062	12.75
	3	186	2069	65.00	2068	32.50
	4	248	2057	51.00	2056	25.50
54 Watt HO T5 / Reflectors (2-lamp 8' T12 HO base)	2	124	2075	27.50	2074	13.75
54 Watt HO T5 / Reflectors (400 watt HID base)	3	186	2071	69.00	2070	34.50
	4	248	2061	55.00	2060	27.50
	6	351	2053	35.00	2052	17.50
54 Watt HO T5 / Reflectors (1000 watt HID base)	8	497	2059	135.00	2058	67.50
	10	548	2055	125.00	2054	62.50
	12	702	2067	95.50	2066	47.75
80 Watt HO T5	4	368	2049	14.00	2048	2.00
Low-Wattage, 49 watt, T5 HO Lamps Only (use Code 8101 as Existing/Base Code)	NA	49	2088	1.20 per lamp	2089	1.20 per lamp

### Metal Halide (MH) Fixtures and Lamps

DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
			CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
32 Watt MH Fixture	1	41	901	17.00	900	7.50
50 Watt MH Fixture	1	67	905	17.00	904	7.50
70 Watt MH Fixture	1	92	909	17.00	908	7.50
100 Watt MH Fixture	1	129	913	17.00	912	7.50
150 Watt Pulse-Start MH Fixture	1	175	968	25.00	916	6.00
175 Watt Pulse-Start MH Fixture	1	208	969	25.00	970	6.00
200 Watt Pulse-Start MH Fixture	1	218	971	40.00	972	8.00
250 Watt Pulse-Start MH Fixture	1	288	973	40.00	974	8.00
320 Watt Pulse-Start MH Fixture	1	365	975	55.00	976	12.00
350 Watt Pulse-Start MH Fixture	1	395	977	55.00	978	12.00
400 Watt Pulse-Start MH Fixture	1	422	979	55.00	980	12.00
	2	844	981	110.00	982	24.00
575 Watt Pulse-Start MH Fixture	1	620	967	85.00	966	20.00

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### Metal Halide (MH) Fixtures and Lamps

DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
			CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
750 Watt Pulse-Start MH Fixture	1	840	947	65.00	946	15.00
875 Watt Pulse-Start MH Fixture	1	935	953	65.00	952	15.00
	2	1870	955	130.00	954	30.00
	3	2805	957	195.00	956	45.00
360 Watt – MH Lamp Only w/Ferro Electric Capacitor	1	420	951	10.00	950	5.00

### Ceramic Metal Halide Fixtures and Lamps

DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
			CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
25 Watt Integrated Ceramic Metal Halide Lamp	1	25	959	20.00	958	8.00
205 Watt Ceramic Metal Halide Lamp (use Code 8099 as Existing/Base Code)	1	205	983	20.00	984	8.00
330 Watt Ceramic Metal Halide Lamp (use Code 8100 as Existing/Base Code)	1	330	985	20.00	986	8.00
150 Watt or less Ceramic Metal Halide Fixture	All	100	961	50.00	960	20.00
151-250 Watt Ceramic Metal Halide Fixture	All	200	963	45.00	962	10.00
251 Watt or greater Ceramic Metal Halide Fixture	All	300	965	60.00	964	15.00

### High Pressure Sodium (HPS) Fixtures

DESCRIPTION	NUMBER OF LAMPS	WATTS	RETROFIT		NEW CONSTRUCTION	
			CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
35 Watt HPS Fixture	1	41	903	17.00	902	7.50
50 Watt HPS Fixture	1	67	907	17.00	906	7.50
70 Watt HPS Fixture	1	92	911	17.00	910	7.50
100 Watt HPS Fixture	1	129	915	17.00	914	7.50
150 Watt HPS Fixture	1	187	919	17.00	918	7.50
200 Watt HPS Fixture	1	240	925	28.00	924	15.00
250 Watt HPS Fixture	1	295	929	28.00	928	15.00
310 Watt HPS Fixture	1	365	931	45.00	930	15.00
400 Watt HPS Fixture	1	460	939	45.00	938	15.00
600 Watt HPS Fixture	1	665	945	45.00	944	15.00
750 Watt HPS Fixture	1	835	949	45.00	948	15.00

### Compact Fluorescent Lamps – 1 Piece

DESCRIPTION	WATTS	RETROFIT		NEW CONSTRUCTION	
		CODE	REBATE PER LAMP	CODE	REBATE PER LAMP
3 - 10 Watt CFL	6	1011	6.00	1010	3.00
11 - 15 Watt CFL	13	1025	6.00	1024	3.00
16 - 20 Watt CFL	18	1035	6.00	1034	3.00
21 - 25 Watt CFL	23	1045	9.00	1044	4.50
26 - 30 Watt CFL	28	1055	9.00	1054	4.50
31 - 35 Watt CFL	33	1065	9.00	1064	4.50
36 - 40 Watt CFL	38	1075	12.00	1074	6.00
41 - 45 Watt CFL	43	1085	12.00	1084	6.00
46 - 50 Watt CFL	48	1095	12.00	1094	6.00
51 - 55 Watt CFL	53	1105	12.00	1104	6.00

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### Compact Fluorescent Lamps – 1 Piece

DESCRIPTION	WATTS	RETROFIT		NEW CONSTRUCTION	
		CODE	REBATE PER LAMP	CODE	REBATE PER LAMP
56 - 60 Watt CFL	58	1231	18.50	1230	9.25
61 - 65 Watt CFL	63	1233	18.50	1232	9.25
66 - 70 Watt CFL	68	1235	18.50	1234	9.25
71 - 75 Watt CFL	73	1237	21.50	1236	10.25
76 - 80 Watt CFL	78	1239	21.50	1238	10.25
81 - 85 Watt CFL	83	1241	21.50	1240	10.25
86 - 90 Watt CFL	88	1243	25.00	1242	12.50
91 - 95 Watt CFL	93	1245	25.00	1244	12.50
96 - 100 Watt CFL	98	1247	25.00	1246	12.50
101 - 105 Watt CFL	103	1249	25.00	1248	12.50
106 - 110 Watt CFL	108	1251	25.00	1250	12.50

### Compact Fluorescent Lamps – Hardwired Fixtures (Does not include screw-base CFLs)

TOTAL CFL WATTAGE	WATTS	RETROFIT		NEW CONSTRUCTION	
		CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
3 - 10 Watts Total	7	1253	8.00	1252	3.00
11 - 15 Watts Total	15	1255	8.00	1254	3.75
16 - 20 Watts Total	18	1257	18.00	1256	4.00
21 - 25 Watts Total	24	1259	18.00	1258	5.00
26 - 30 Watts Total	31	1261	18.00	1260	5.00
31 - 40 Watts Total	36	1263	24.00	1262	8.00
41 - 50 Watts Total	48	1265	24.00	1264	8.00
51 - 60 Watts Total	60	1267	24.00	1266	8.00
3 Lamp - Industrial Multi-CFL Fixture	165	1003	25.00	1002	15.00
8 Lamp - Industrial Multi-CFL Fixture	310	1001	25.00	1000	15.00
9 Lamp – Industrial Multi-CFL Fixture (400 watt MH base)	318	1269	30.00	1268	15.00

### Cold Cathode Lamps

LAMP WATTAGE	WATTS	RETROFIT		NEW CONSTRUCTION	
		CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
5 - 10 Watt	7	1405	15.00	1406	7.50
11 - 20 Watt	14	1407	25.00	1408	12.50

### Induction Lamps and Fixtures

LAMP WATTAGE	WATTS	RETROFIT		NEW CONSTRUCTION	
		CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
15 - 22 Watt (70 watt HID base)	15	1603	17.50	1602	8.75
23 - 39 Watt (100 watt HID base)	23	1601	22.00	1600	11.00
40 - 149 Watt (175 watt HID base)	80	1605	41.00	1604	20.50
150 - 199 Watt (250 watt HID base)	150	1607	60.00	1606	30.00
200 - 299 Watt (400 watt HID base)	225	1609	100.00	1608	50.00
300 – 400 Watt (1000 watt HID base)	350	1611	100.00	1610	50.00

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### LED Lamps and Fixtures

DESCRIPTION	RETROFIT		NEW CONSTRUCTION	
	CODE	REBATE	CODE	REBATE
ENERGY STAR <sup>®</sup> rated LED Fixtures (visit <a href="http://www.energystar.gov/index.cfm?c=ssl.pr_commercial">http://www.energystar.gov/index.cfm?c=ssl.pr_commercial</a> for a list of qualifying fixtures)	1503	\$30 per fixture	1502	\$30 per fixture
LED Lamps and Fixtures - All wattages (Not including exit signs or traffic signals)	1501	0.24 per watt saved	1500	0.24 per watt saved

### Exit Signs, Occupancy Sensors, and Photocells

DESCRIPTION	WATTS	RETROFIT		NEW CONSTRUCTION	
		CODE	REBATE PER UNIT	CODE	REBATE PER UNIT
Exit Sign – LED (incandescent existing)	4	3001	12.00	---	---
Exit Sign – LED (CFL existing)	4	3002	6.00	---	---
Exit Sign – LEC/Electroluminescent (incandescent existing)	1	3003	15.00	---	---
Exit Sign – LEC/Electroluminescent (CFL existing)	1	3004	10.00	---	---
Exit Sign – Photoluminescent (incandescent existing)	0	3005	16.00	---	---
Exit Sign – Photoluminescent (CFL existing)	0	3006	11.00	---	---
Wall Mount Occupancy Sensor	---	4001	12.00	4000	6.00
Ceiling Mount Occupancy Sensor	---	4003	36.00	4002	18.00
Photocells	---	4005	12.00	4004	6.00

#### Definitions:

CFL – Compact Fluorescent Lamp  
 HBF – High Ballast Factor  
 HID – High Intensity Discharge  
 HO – High Output

HPS – High Pressure Sodium  
 LEC – Light Emitting Capacitor  
 LED – Light Emitting Diode  
 MH – Metal Halide

RLO – Reduced Light Output  
 VHO – Very High Output

SUPER T8 systems must meet the following CEE specifications:

- This specification applies to systems using 4' 32 watt T8 lamps. Lamps must produce at least 3100 initial lumens; color-rendering index (CRI)  $\geq 80$ ; mean lumens per watt  $\geq 90$  for instant-start ballasts or  $\geq 88$  for programmed rapid-start ballasts; lamp life  $\geq 24,000$  hours (at 3 hours/start); and lumen maintenance  $\geq 94\%$  or minimum mean lumens of 2900.
- Ballasts must have a ballast efficacy factor (BEF) equal to or greater than the factors shown in the table below; ballast power factor  $\geq 0.90$ ; and total harmonic distortion  $\leq 20\%$ . (BF=Ballast Factor)

INSTANT START BALLAST (BEF)			
Lamps	Low (BF $\leq 0.85$ )	Medium ( $0.85 < \text{BF} \leq 1.0$ )	High (BF $\geq 1.01$ )
1	3.08	3.11	3.03
2	1.60	1.58	1.55
3	1.04	1.05	1.04
4	0.79	0.80	0.77
6	N/A	N/A	0.52

PROGRAMMED RAPID START BALLAST (BEF)			
Lamps	Low (BF $\leq 0.85$ )	Medium ( $0.85 < \text{BF} \leq 1.0$ )	High (BF $\geq 1.01$ )
1	2.84	2.84	2.95
2	1.48	1.47	1.51
3	0.97	1.00	1.00
4	0.76	0.75	0.75
6	N/A	N/A	0.50