

Energy Initiative

Lighting - *Systems & Controls*

2009 Project Information Form for Massachusetts, Rhode Island, and Nantucket

This *Project Information Form* provides a template to collect project systems and equipment information and specifications. In addition, this form serves as a guide to lighting system and controls terms and identifies energy efficiency improvement products and incentives. Prior to the start of any installation of equipment or systems, call your **Energy Solutions representative** to arrange a convenient time to perform an inspection of the existing equipment or systems. This inspection is required for all applications.

Customer Facility Information

Customer Facility Name: _____ Date of Application: _____
 _____ Sq. Ft. Covered by Application: _____
 Contact Person: _____ Federal ID Number: _____
 Street Address: _____ Company Type:
 City: _____ State: _____ Zip: _____ Incorporated Exempt Not Incorporated
 E-mail Address: _____ Phone Number: _____
 Facility Description: _____ Fax Number: _____

Customer of Record Information: Billing Account Number: _____ *Internal Use only*

Installation Contractor Information

Installation Performed By:* Customer Installation Contractor Project Expediter Other (Vendor)

Complete this section if installation is not by the customer

Installation Company: _____ Street Address: _____
 Contact Person: _____ City: _____
 E-mail Address: _____ State: _____ Zip: _____
 * If contractor has not been selected, select **Customer** Phone Number: _____

Application Information

Application Funding Type: AAP Other *Internal Use only*

Expected Completion Date: _____

Proposed Incentive Recipient: Customer (*Account Credit or Check*) Installation Contractor** Project Expediter

** **Complete this section if Installation Contractor has been selected**

Federal ID Number: _____ Company Type: Incorporated Exempt Not Incorporated

This Form Was Completed By:

Name: _____
 Phone Number: _____ E-mail Address: _____

For More Information

Phone: 1-800-787-1706

Internet: www.nationalgridus.com

Project Information Form Index:

- Page 1: Customer information datasheet
Page 2: Reference guide that explains terms regarding the lighting inventory sheets
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Instructions:

- 1) Prior to the start of any installation of equipment or systems, **call your Energy Solutions representative** to arrange a convenient time to perform an inspection of the existing equipment or systems. This inspection is required for all applications.
- 2) Fill in the Customer information datasheet on page 1.
- 3) For lighting systems, enter the proposed equipment for your facility on the Lighting System Inventory Worksheet on page 6.
- 4) For lighting controls, enter the proposed equipment for your facility on the Lighting Control Inventory Worksheet on page 7.
- 5) Contact your Energy Solutions representative to complete an application and to determine the incentive for this Lighting project.

Note:

* For more extensive definition of terms and information on eligibility requirements and other program details, refer to National Grid's Energy Initiative Lighting Incentive and Eligibility Requirements Manual.

Guide to Terms

Watts Controlled: total wattage (combined lamps and ballast wattage) connected to lighting controls.

Minimum Watts Controlled: in order to qualify for an incentive, watts controlled **divided by** quantity of controls **must equal or be more than** the minimum watts controlled.

Measure Category: Lighting Systems

Measure Code: refers to National Grid's unique system of identifying fixture and control types that qualify for incentives. For Measure Codes, see Appendix A: Lighting Incentive Table on page 3.

Device Code: see pages 8-13 for Appendix C: Rated Lighting System Wattage Table

Watts per Fixture (Watts per Device): see pages 8-13 for Appendix C: Rated Lighting System Wattage Table

Annual Hours of Operation: refers to the estimated annual hours that the affected lighting system operates. Minimum of 1000 hours.

Minimum Watts Saved: refers to minimum amount saved in order to receive an incentive. See Appendix A.

Measure Category: Lighting Controls

Measure Code: refers to National Grid's unique system of identifying fixture and control types that qualify for incentives. For Measure Codes, see Appendix A: Lighting Incentive Table on page 3.

Quantity of Controls: amount of controls (or ballasts for Codes 62 and 63) to be installed

Device Code: see pages 8-13 for Appendix C: Rated Lighting System Wattage Table

Quantity of Devices Controlled: how many devices will be controlled

Annual Hours of Reduction: The estimated annual hours that affected lighting system operates

Project Information Form Notes

Appendix A: Lighting Systems and Controls - Efficiency Improvement Opportunities

The following table lists the incentives available for energy efficient lighting improvements. Refer to the National Grid's Energy Initiative Lighting Eligibility and Incentive Manual for complete details on equipment and installation requirements to be eligible for incentives.

Lighting Systems Incentives

Measure	Measure Code	Measure Description	Incentive Amount Per Fixture	Min Watts Saved
High Efficiency Fluorescent Fixtures	10 ‡	Replace lamps and ballasts with new T-8 or T-5 lamps and Electronic ballasts	\$10	5
	11 ‡		\$24/pair	8
High Efficiency Fluorescent Fixtures	30 ‡	High Efficiency 2 lamp Fluorescent Fixtures - 2x2 or 2x4	\$50	19
	31 ‡	High Efficiency 3 lamp Fluorescent Fixtures – 2x2 or 2x4	\$40	11
High Efficiency Fluorescent Retrofit Kits	32 ‡	Recessed Fluorescent 2 lamp Retrofit kits- 2x2 and 2x4	\$50	19
High Efficiency Fluorescent Fixtures	34 ‡	Advanced Recessed Fluorescent Fixtures – 1x4, 2x2, or 2x4	\$65	19
Commercial/Industrial Fluorescent Fixtures	41 ‡	4 ft. Fluorescent Fixtures	\$30	10
	42 ‡	8 ft. Fluorescent Fixtures	\$35	11
Commercial/Industrial Fluorescent Fixtures and Tandem Wired Ballasts	41T ‡	4 ft. Fluorescent Fixtures with Tandem Wired Ballasts	\$20	6
	42T ‡	8 ft. Fluorescent Fixtures with Tandem Wired Ballasts	\$25	8
High Lumen Fluorescent Vaportite Fixtures	43 ‡	4 ft. High Lumen Fluorescent Vaportite fixtures	\$50	19
Compact Fluorescent Fixtures	21	1 Lamp Compact Fluorescent Fixture	\$20	6
	22	2 Lamp Compact Fluorescent Fixture	\$20	6
	23	Dimmable Compact Fluorescent Fixture	\$40	12
LED or LEC Exit Sign Fixtures	25	New LED or LEC (Electroluminescence) Exit Fixtures	\$10	4
High Intensity Discharge (HID) Indoor Fixtures	51	Pulse Start Metal Halide Lamp and Ballast Kits	\$45	13
	52	New Pulse Start Metal Halide Fixture	\$70	20
	55	New High Pressure Sodium Fixture	\$100	29
High Intensity Fluorescent (HIF) Fixtures	56 ‡	New fluorescent fixtures for high and low bay applications (less than or equal to 219 W)	\$70	23
	57 ‡	New higher wattage high and low bay fluorescent fixtures (greater than 219 W)	\$120	34
Specialty Lighting Fixtures	70	Metal Halide Specialty Lighting Fixtures	\$70	23
LED Downlights	80	LED Downlight Fixtures	\$70	21
		Note: 4ft straight tube 32W T8 lamps and ballasts must meet the Consortium for Energy Efficiency's High Performance T8 specification. For eligibility requirements and a list of eligible lamps and ballasts, National Grid's Lighting Incentive and Eligibility Requirements Manual or log onto CEE's web site at www.cee1.org . (applies to codes 10,11,30,31,32,34,41,42,41T,42T,43,56, and 57)		

Lighting Control Incentives

			Incentive Amount Per Control	Minimum Controlled Watts
Controls For Fluorescent Systems	61	Remote-Mounted Occupancy Sensor (per control)	\$75	119
	62	Daylight Dimming System (DDS-FL) (per ballast, min 4 ballast per control)	\$40	253
	63	Occupancy Controlled Step-Dimming System (per ballast)	\$40	253
	64	Wall Mount Occupancy Sensors (per control)	\$25	40
	68	High Bay Fluorescent (HIF) Occupancy Control Systems	\$50	79

Appendix B: Lighting Systems and Controls Eligibility Requirements

Lighting Systems

Measure	Eligibility Criteria
Code 10 Re-lamp/re-ballast of existing fixtures	Re-lamp/re-ballast of existing fixtures with T-8 or T-5 lamps, each fixture is composed of a ballast and 1, 2, 3 or 4 lamps. Only one incentive may be counted per fixture. Multiple fixtures served by a single ballast are only eligible for one incentive. Only 25, 28 and 30 W T-8 lamps are eligible for replacing 32 W T-8 lamps.
Code 11 Re-lamp/re-ballast existing fixtures tandem wired	Re-lamp/re-ballast existing fixtures or any new fluorescent fixture with T-8 or T-5 lamps that share a common ballast. Fixtures that share multiple ballasts for the purposes of multi level switching are not eligible. Only 25, 28 and 30 W T-8 lamps are eligible for replacing 32 W T-8 lamps.
Code 30 High Efficiency 2 Lamp Fluorescent Fixtures	Overall fixture efficiency must exceed: <ul style="list-style-type: none"> - 83% for a prismatic lensed fixture with two T-8 or T-5 lamps; - 75% for 2x4 fixture with parabolic louver (2" to 3" deep cells) with two T-8 or T5 lamps; - 70% for 2x2 fixture with 2" to 3" deep parabolic louver (2" to 3" deep cells) with two T-8 or T5 lamps; - 70% for 2x4 recessed indirect fixture with two T-8 or T-5 lamps; - 70% for 2x2 recessed indirect fixture with two T-8, T-5, or T5HO lamps.
Code 31 High Efficiency 3 Lamp Fluorescent Fixtures	Overall fixture efficiency must exceed: <ul style="list-style-type: none"> - 83% for a prismatic lensed fixture with three T-8 or T-5 lamps; - 75% for 2x4 fixture with parabolic louver (2" to 3" deep cells) with three T-8 or T5 lamps; - 70% for 2x2 fixture with 2" to 3" deep parabolic louver (2" to 3" deep cells) with three T-8 or T5 lamps; - 70% for 2x4 recessed indirect fixture with three T-8 or T-5 lamps; - 70% for 2x2 recessed indirect fixture with three T-8, T-5, or T5HO lamps. <p>Eligible fixtures are limited to 3 lamps with a low power ballast factor < 0.80.</p>
Code 32 High Efficiency 2 lamp Fluorescent Retrofit kits	Overall fixture efficiency must exceed: <ul style="list-style-type: none"> - 80% for 2x4 parabolic retrofit kit and advanced glare reducing diffuser retrofit kit with two T-8 or T-5 lamps; - 80% for 2x2 parabolic retrofit kit and advanced glare reducing diffuser retrofit kit with two T-8 ,T-5, or T-5HO lamps.
Code 34 Advanced Recessed Fluorescent Fixtures	Overall fixture efficiency must exceed: <ul style="list-style-type: none"> - 80% for 2x4 fixture with one or two T-8 or T-5 lamps, or one T-5HO lamp; - 80% for 2x2 fixture with one or two T-8, T-5, T-5HO lamps; - 80% for 1x4 fixture with one or two T-8 or T-5 lamps, or one T-5HO lamp; <p>Fixtures must incorporate advanced glare reducing diffusers.</p>
Code 41, 42 Industrial/ Commercial Fluorescent Fixtures	Overall fixture efficiency must exceed: <ul style="list-style-type: none"> - 85% for Industrial Reflector fixture with one, two, or three T-8 or T-5 lamps; - 83% efficiency for Commercial Grade Wraparound fixture with one or two T-8 or T-5 lamps. <p>Fixtures must be installed 16 feet from the floor or less. Up to 20% up-light as an integral fixture feature (typically slots) may be included but only in instances where white or light colored walls or ceilings exist.</p>
Code 41T, 42T Tandem Wired Industrial/ Commercial Fluorescent Fixtures	Overall fixture efficiency must exceed: <ul style="list-style-type: none"> - 85% for Industrial Reflector fixture with one, two, or three T-8 or T-5 lamps; - 83% efficiency for Commercial Grade Wraparound fixture with one or two T-8 or T-5 lamps. <p>Fixtures must be installed 16 feet from the floor or less. Up to 20% up-light as an integral fixture feature (typically slots) may be included but only in instances where white or light colored walls or ceilings exist.</p>
Code 43 Vaportite Fixtures	4 ft. Vaportite fluorescent fixture with one or two T-8, T-5, T-8HO, T-5HO or 3-T8 lamps. To be eligible for incentives, fixtures must be installed in garage or warehouse applications only.

Code 21, 22, 23 CFL Fixtures	To be eligible for incentives, all fixtures must have electronic ballasts with <33% THD.
Code 25 LED or LEC Exit Sign Fixture	All materials and assembled units shall comply with all applicable codes and standards including (but not limited to) Federal/State/Local building, fire, and electrical codes, and may require designated egress lighting to comply with such codes. Exit sign retrofit kits are not eligible.
Code 51 Pulse Start Metal Halide Lamp	All kits must include a new matched Metal Halide (Pulse Start) Lamp and Ballast installed per manufacturer's specifications and applicable codes. Outdoor Fixtures are not eligible.
Code 52 HID Fixtures	Only New Metal Halide Pulse Start fixtures are eligible. Retrofit of existing metal halide fixture of less than 200 watts with new fixture is not eligible. Outdoor fixtures are not eligible.
Code 55 New HPS Fixtures	New High Pressure Sodium Fixture. Outdoor fixtures are not eligible under this measure code.
Code 56 High Intensity Fluorescent	Fixtures must be installed higher than 16 feet. Maximum wattage is 219 Watts. Minimum wattage is 125 Watts. Minimum fixture efficiency must exceed 80%. High Intensity Fluorescent fixtures incorporate a number of lamp technologies that include T-8, T-5, T-5HO and compact fluorescent.
Code 57 High Intensity Fluorescent	Fixtures must be installed higher than 20 feet. Minimum wattage is 220 Watts. Minimum fixture efficiency must exceed 80%. High Intensity fluorescent fixtures incorporate a number of lamp technologies that include T-8, T-5, T-5HO and compact fluorescent.
Code 70 Specialty Fixtures	Metal Halide Specialty Fixtures must be approved by UL or similar agency
Code 80 LED Downlight Fixtures	LED downlight fixtures must carry the ENERGY STAR label. This applies to hardwired fixtures only.

Lighting Controls

Control Codes For Fluorescent Systems	61	Comply with manufacturer's coverage recommendations. Ceiling mounted control. No manual "ON" overrides.
	62	Minimum of 4 ballasts per control unit. Must have continuous dimming or adjust to a minimum of 4 levels.
	63	Ballast must be automatically controlled based on occupancy. Power consumption in low mode must not exceed 60%. Minimum of 4 fixtures controlled.
	64	Not eligible if installed in restrooms, locker rooms, stairwells or rooms of greater than 250 square feet.
	68	Ballasts must be automatically controlled based on occupancy. Systems with manual "ON" or override switches are not eligible. Sensors may be remote mounted or mounted on individual fixtures

Project Information Form Notes

Energy Initiative Lighting Systems Inventory Worksheet

Building and Room Identification (*Installation Site*): _____

Line Item	Location	Existing/ Proposed	Measure Code (Appendix A)	Device Code (Appendix C)	Watts per Fixture (Watts per Device) (Appendix C)	Device Quantity	Annual Hours of Operation*	Minimum Watts Saved
Ex	Room 202, first floor	Existing	--	3F0SEE	90	8	---	---
		Proposed	10	2F32SSE	60	8	3100	30
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						
		Existing	--					
		Proposed						

* 1000 hours minimum

Ballast Disposal Service Option

I elect to have the Company's disposal contractor take possession and dispose of the fluorescent lighting ballasts from my facility in order to install energy efficient lighting in my facility. Please estimate the total number of fluorescent (*PCB and non-PCB*) lighting ballasts being recycled: _____

I am not interested in having the Company provide any fluorescent lighting ballast disposal service.

Energy Initiative

Lighting - Systems & Controls

Appendix C: Rated Lighting System Wattage Table

BX	Biax/Twin Tube Lamp	EE	Energy-Efficient Lamp	HO	High Output Lamp
HW	Hard Wire Fixture	ELIG	Electronic Ballast	STD	Standard Ballast or Lamp
EEMAG	Energy-Efficient Magnetic	HPF	High Power Factor	VHO	Very High Output Lamp

<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>	<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>
Compact Fluorescents			Compact Fluorescents		
1C0005S	5W COMPACT HW	7	4C0026E	4/26W COMPACT HW ELIG	108
1C0007S	7W COMPACT HW	9	4C0032E	4/32W COMPACT HW ELIG	152
1C0009S	9W COMPACT HW	11	4C0042E	4/42W COMPACT HW ELIG	188
1C0011S	11W COMPACT HW	13	6C0026E	6/26W COMPACT HW ELIG	162
1C0013S	13W COMPACT HW	15	6C0032E	6/32W COMPACT HW ELIG	228
1C0018E	18W COMPACT HW ELIG	20	6C0042E	6/42W COMPACT HW ELIG	282
1C0018S	18W COMPACT HW	20	8C0026E	8/26W COMPACT HW ELIG	216
1C0022S	22W COMPACT HW	24	8C0032E	8/32W COMPACT HW ELIG	304
1C0023E	1/23W COMPACT HW ELIG	25	8C0042E	8/42W COMPACT HW ELIG	376
1C0026E	26W COMPACT HW ELIG	28	Eight Foot HO Systems		
1C0026S	26W COMPACT HW	28	1F96HES	1L8' HO/EE/STD	125
1C0028S	28W COMPACT HW	30	1F96HSS	1L8' HO/STD/STD	135
1C0032S	32W CIRCLINE HW	34	2F96HEE	2L8' HO/EE/ELIG	170
1C0042E	1/42W COMPACT HW ELIG	48	2F96HEM	2L8' HO/EE/EEMAG	207
1C0044S	44W CIRCLINE HW	46	2F96HES	2L8' HO/EE/STD	227
1C0057E	1/57W COMPACT HW ELIG	65	2F96HSE	2L8' HO/STD/ELIG	195
1C2232S	22/32W CIRCLINE HW	58	2F96HSM	2L8' HO/STD/EEMAG	237
1C2D10E	10W 2D COMPACT HW ELIG	12	2F96HSS	2L8' HO/STD/STD	257
1C2D16E	16W 2D COMPACT HW ELIG	18	3F96HES	3L8' HO/EE/STD	352
1C2D21E	21W 2D COMPACT HW ELIG	22	3F96HSS	3L8' HO/STD/STD	392
1C2D28E	28W 2D COMPACT HW ELIG	28	4F96HEE	4L8' HO/EE/ELIG	340
1C2D38E	38W 2D COMP.HW ELIG	36	4F96HEM	4L8' HO/EE/EEMAG	414
1C3240S	32/40W CIRCLINE HW	80	4F96HES	4L8' HO/EE/STD	454
2C0005S	2/5W COMPACT HW	14	4F96HSE	4L8' HO/STD/ELIG	390
2C0007S	2/7W COMPACT HW	18	4F96HSM	4L8' HO/STD/EEMAG	474
2C0009S	2/9W COMPACT HW	22	4F96HSS	4L8' HO/STD/STD	514
2C0011S	2/11W COMPACT HW	26	Eight Foot Systems		
2C0013E	2/13W COMPACT HW ELIG	28	1F96SEE	1L8' EE/ELIG	60
2C0013S	2/13W COMPACT HW	30	1F96SES	1L8' EE/STD	83
2C0018E	2/18W COMP. HW ELIG	40	1F96SSE	1L8' STD/ELIG	70
2C0026E	2/26W COMP. HW ELIG	54	1F96SSS	1L8' STD/STD	100
2C0032E	2/32W COMPACT HW ELIG	68	2F96SEE	2L8' EE/ELIG	109
2C0042E	2/42W COMPACT HW ELIG	100	2F96SEM	2L8' EE/EEMAG	123
3C0009S	3/9W COMPACT HW	33	2F96SES	2L8' EE/STD	138
3C0013S	3/13W COMPACT HW	45	2F96SSE	2L8' STD/ELIG	134
3C0018E	3/18W COMPACT HW ELIG	60	2F96SSM	2L8' STD/EEMAG	158
3C0026E	3/26W COMPACT HW ELIG	82	2F96SSS	2L8' STD/STD	173
3C0032E	3/32W COMPACT HW ELIG	114	3F96SES	3L8' EE/STD	221
3C0042E	3/42W COMPACT HW ELIG	141			
4C0018E	4/18W COMPACT HW ELIG	80			

<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>	<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>
Eight Foot Systems			Four Foot F48VHO Systems		
3F96SSS	3L8' STD/STD	273	1F48VES	1L4' F48VHO/EE/STD	123
4F96SEE	4L8' EE/ELIG	218	1F48VSS	1L4' F48VHO/STD/STD	138
4F96SEM	4L8' EE/EEMAG	246	2F48VES	2L4' F48VHO/EE/STD	210
4F96SES	4L8' EE/STD	276	2F48VSS	2L4' F48VHO/STD/STD	240
4F96SSE	4L8' STD/ELIG	268	3F48VES	3L4' F48VHO/EE/STD	333
4F96SSM	4L8' STD/EEMAG	316	3F48VSS	3L4' F48VHO/STD/STD	378
4F96SSS	4L8' STD/STD	346	4F48VES	4L4' F48VHO/EE/STD	420
			4F48VSS	4L4' F48VHO/STD/STD	480
Eight Foot T8 Systems			Four Foot Fluorescent Systems		
1F59SSE	1L8' T8/ELIG	60	1F40SEE	1L4' EE/ELIG	38
1F80SSE	1L8' T8 HO/ELIG	85	1F40SEM	1L4' EE/EEMAG	40
2F59SSE	2L8' T8/ELIG	109	1F40SES	1L4' EE/STD	50
2F59SSL	2L8' T8/ELIG LOW PWR	100	1F40SSE	1L4' STD/ELIG	46
2F80SSE	2L8' T8 HO/ELIG	160	1F40SSM	1L4' STD/EEMAG	50
Eight Foot VHO Systems			1F40SSS	1L4' STD/STD	57
1F96VES	1L8' VHO/EE/STD	200	2F40SEE	2L4' EE/ELIG	60
1F96VSS	1L8' VHO/STD/STD	230	2F40SEM	2L4' EE/EEMAG	70
2F96VES	2L8' VHO/EE/STD	390	2F40SES	2L4' EE/STD	80
2F96VSS	2L8' VHO/STD/STD	450	2F40SSE	2L4' STD/ELIG	72
3F96VES	3L8' VHO/EE/STD	590	2F40SSM	2L4' STD/EEMAG	86
3F96VSS	3L8' VHO/STD/STD	680	2F40SSS	2L4' STD/STD	94
4F96VES	4L8' VHO/EE/STD	780	3F40SEE	3L4' EE/ELIG	90
4F96VSS	4L8' VHO/STD/STD	900	3F40SEM	3L4' EE/EEMAG	110
Five Foot T8 Systems			3F40SES	3L4' EE/STD	130
1F40HSE	1L5' HO/STD/ELIG	59	3F40SSE	3L4' STD/ELIG	110
1F60HSM	1L5' HO/STD/EEMAG	90	3F40SSM	3L4' STD/EEMAG	136
2F40HSE	2L5' HO/STD/ELIG	123	3F40SSS	3L4' STD/STD	151
2F40TSE	2L5'T8/ELIG	68	4F40SEE	4L4' EE/ELIG	120
2F60HSM	2L5' HO/STD/EEMAG	178	4F40SEM	4L4' EE/EEMAG	140
3F40TSE	3L5'T8/ELIG	106	4F40SES	4L4' EE/STD	160
Four Foot F48 Systems			4F40SSE	4L4' STD/ELIG	144
1F48SES	1L4' F48T12EE/STD	50	4F40SSM	4L4' STD/EEMAG	172
1F48SSS	1L4' F48T12/STD	60	4F40SSS	4L4' STD/STD	188
2F48SES	2L4' F48T12EE/STD	82	6F40SSS	6L4' STD/STD	282
2F48SSS	2L4' F48T12/STD	102	Four Foot T8 Systems		
3F48SES	3L4' F48T12EE/STD	132	1F32SSE	1L4' T8/ELIG	30
3F48SSS	3L4' F48T12/STD	162	1F32SSL	1L4 T8/ELIG LOW POWER	26
4F48SES	4L4' F48T12EE/STD	164	1F32SSM	1L4' T8/EEMAG	37
4F48SSS	4L4' F48T12/STD	204	2F32SSE	2L4' T8/ELIG	60
Four Foot F48HO Systems			2F32SSH	2L4' T8/ELIG HIGH LMN	78
1F48HES	1L4' F48HO/EE/STD	80	2F32SSL	2L4 T8/ELIG LOW PWR	52
1F48HSS	1L4' F48HO/STD/STD	85	2F32SSM	2L4' T8/EEMAG	70
2F48HES	2L4' F48HO/EE/STD	135	3F32SSE	3L4' T8/ELIG	88
2F48HSS	2L4' F48HO/STD/STD	145	3F32SSH	3L4' T8/ELIG HIGH LMN	112
3F48HES	3L4' F48HO/EE/STD	215	3F32SSL	3L4 T8/ELIG LOW POWER	76
3F48HSS	3L4' F48HO/STD/STD	230	3F32SSM	3L4' T8/EEMAG	107
4F48HES	4L4' F48HO/EE/STD	270	4F32SSE	4L4' T8/ELIG	112
4F48HSS	4L4' F48HO/STD/STD	290	4F32SSH	4L4' T8/ELIG HIGH LMN	156
			4F32SSL	4L4 T8/ELIG LOW PWR	98
			4F32SSM	4L4' T8/EEMAG	140

<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>	<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>
Four Foot T8 Systems			High Efficiency MH Lamp/Ballast		
5F32SSE	5L4' T8/ELIG	148	1M0750P	750W MH CWA	815
5F32SSH	5L4' T8/ELIG HIH LUMEN	190	1M0750R	750W MH Linear	805
6F32SSE	6L4' T8/ELIG	174	1M1000P	1000W CWA	1080
8F32SSH	8L4' T8/ELIG HIGH LMN	312			
Halogen/Quartz Lamps			High Pressure Sodium		
1T0035	35W HALOGEN LAMP	35	1H0035S	35W HPS	45
1T0040	40W HALOGEN LAMP	40	1H0050S	50W HPS	65
1T0042	42W HALOGEN LAMP	42	1H0070S	70W HPS	90
1T0045	45W HALOGEN LAMP	45	1H0100S	100W HPS	130
1T0050	50W HALOGEN LAMP	50	1H0150S	150W HPS	190
1T0052	52W HALOGEN LAMP	52	1H0200S	200W HPS	240
1T0055	55W HALOGEN LAMP	55	1H0225S	225W HPS	275
1T0060	60W HALOGEN LAMP	60	1H0250S	250W HPS	295
1T0072	72W HALOGEN LAMP	72	1H0310S	310W HPS	350
1T0075	75W HALOGEN LAMP	75	1H0360S	360W HPS	435
1T0090	90W HALOGEN LAMP	90	1H0400S	400W HPS	460
1T0100	100W HALOGEN LAMP	100	1H0600S	600W HPS	675
1T0150	150W HALOGEN LAMP	150	1H0750S	750W HPS	835
1T0200	200W HALOGEN LAMP	200	1H1000S	1000W HPS	1085
1T0250	250W HALOGEN LAMP	250			
1T0300	300W HALOGEN LAMP	300	Incandescent Lamps		
1T0350	350W HALOGEN LAMP	350	1I0015	15W INC	15
1T0400	400W HALOGEN LAMP	400	1I0020	20W INC	20
1T0425	425W HALOGEN LAMP	425	1I0025	25W INC	25
1T0500	500W HALOGEN LAMP	500	1I0034	34W INC	34
1T0750	750W HALOGEN LAMP	750	1I0036	36W INC	36
1T0900	900W HALOGEN LAMP	900	1I0040	40W INC	40
1T1000	1000W HALOGEN LAMP	1000	1I0042	42W INC	42
1T1200	1200W HALOGEN LAMP	1200	1I0045	45W INC	45
1T1500	1500W HALOGEN LAMP	1500	1I0050	50W INC	50
			1I0052	52W INC	52
			1I0054	54W INC	54
			1I0055	55W INC	55
			1I0060	60W INC	60
			1I0065	65W INC	65
			1I0067	67W INC	67
			1I0069	69W INC	69
			1I0072	72W INC	72
			1I0075	75W INC	75
			1I0080	80W INC	80
			1I0085	85W INC	85
			1I0090	90W INC	90
			1I0093	93W INC	93
			1I0100	100W INC	100
			1I0120	120W INC	120
			1I0125	125W INC	125
			1I0135	135W INC	135
			1I0150	150W INC	150
			1I0200	200W INC	200
			1I0300	300W INC	300
			1I0448	448W INC	448
			1I0500	500W INC	500
			1I0750	750W INC	750
High Efficiency MH Lamp/Ballast					
1M0100P	100W MH CWA	128			
1M0100R	100W MH Linear	118			
1M0150P	150W MH CWA	190			
1M0150R	150W MH Linear	172			
1M0175P	175W MH CWA	208			
1M0175R	175W MH Linear	190			
1M0200P	200W CWA	232			
1M0200R	200W LINEAR	218			
1M0250P	250W CWA	288			
1M0250R	250W MH LINEAR	265			
1M0300P	300W CWA	342			
1M0300R	300W Linear	324			
1M0320P	320W CWA	365			
1M0320R	320W LINEAR	345			
1M0350P	350W CWA	400			
1M0350R	350W LINEAR	375			
1M0400P	400W CWA	455			
1M0400R	400W LINEAR	430			
1M0450P	450W MH CWA	508			
1M0450R	450W MH LINEAR	480			

<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>	<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>
Incandescent Lamps			Metal Halide		
1I1000	1000W INC	1000	1M0250S	250W METAL HALIDE	295
1I1500	1500W INC	1500	1M0360S	360W METAL HALIDE	430
LED Exit Signs			1M0400S	400W METAL HALIDE	455
1E0002	2.0 WATT LED	2	1M0750S	750W METAL HALIDE	825
1E0003	3.0 WATT LED	3	1M1000S	1000W METAL HALIDE	1075
1E0005	5.0 WLED	5	1M1500S	1500W METAL HALIDE	1615
1E0005C	0.5 WATT LEC	0.5	1M1800S	1800W METAL HALIDE	1875
1E0008	8.0 WLED	8	Six Foot Systems		
1E0015	1.5 WATT LED	1.5	1F72HSS	1L6' F72HO/STD/STD	113
1E0105	10.5 WATT LED	10.5	1F72SSM	1L6' STD/EEMAG	80
Low Pressure Sodium			1F72SSS	1L6' STD/STD	95
1L0035S	35W LPS	60	2F72HSE	2L6'T8 HO/ELIG	160
1L0055S	55W LPS	85	2F72HSM	2L6' F72HO/STD/EEMAG	193
1L0090S	90W LPS	130	2F72HSS	2L6' F72HO/STD	195
1L0135S	135W LPS	180	2F72SSM	2L6' STD/EEMAG	135
1L0180S	180W LPS	230	2F72SSS	2L6' STD/STD	173
Low Voltage Halogen			T5 Systems		
1R0020	20W LV HALOGEN FIXT	30	10F54HSE	10 54W T5 HO	585
1R0025	25W LV HALOGEN FIXT	35	1F21SSE	1L3' T5/ELIG	27
1R0035	35W LV HALOGEN FIXT	45	1F28SSE	1L4' T5/ELIG	32
1R0042	42W LV HALOGEN FIXT	52	1F39HSE	1L3' T5 HO/ELIG	43
1R0050	50W LV HALOGEN FIXT	60	1F54HSE	1L4' T5 HO/ELIG	59
1R0065	65W LV HALOGEN FIXT	75	2F21SSE	2L3' T5/ELIG	52
1R0075	75W LV HALOGEN FIXT	85	2F28SSE	2L4' T5/ELIG	63
MH Track Lighting			2F39HSE	2L3' T5 HO/ELIG	85
1M0035E	35W MH SPOT	44	2F54HSE	2L4' T5 HO/ELIG	117
1M0070E	70W MH SPOT	80	3F54HSE	3L4' T5 HO/ELIG	177
1M0100E	100W MH SPOT	111	4F54HSE	4L 54W T5 HO	234
Mercury Vapor			5F54HSE	5L4' T5 HO/ELIG	294
1V0040S	40W MERCURY	50	6F54HSE	6L 54W T5 HO	351
1V0050S	50W MERCURY	75	8F54HSE	8L4' T5 HO/ELIG	468
1V0075S	75W MERCURY	95	10F54HSE	10L' 54W T5HO	585
1V0100S	100W MERCURY	120	T8 High Efficient		
1V0175S	175W MERCURY	205	1F25EEH	1L4' 30W T8EE/EELE HIGH PWR	30
1V0250S	250W MERCURY	290	1F25EEE	1L4' 30W T8EE/ELEE	22
1V0400S	400W MERCURY	455	1F25EEL	1L4' 30W T8EE/ELEE LOW PWR	NA
1V0700S	700W MERCURY	775	2F25EEH	2L4' 30WT8EE/EELE HIGH PWR	86
1V1000S	1000W MERCURY	1075	2F25EEE	2L4' 30W T8EE/ELEE	43
2V0400S	2/400W MERCURY	880	2F25EEL	2L4' 30W T8EE/ELEE LOW PWR	57
Metal Halide			3F25EEH	3L4' 30W T8EE/EELE HIGH PWR	86
1M0032S	32W METAL HALIDE	40	3F25EEE	3L4' 30W T8EE/ELEE	66
1M0050S	50W METAL HALIDE	65	3F25EEL	3L4' 30W T8EE/ELEE LOW PWR	57
1M0070S	70W METAL HALIDE	95	4F25EEH	4L4' 30W T8EE/EELE HIGH PWR	112
1M0100S	100W METAL HALIDE	120	4F25EEE	4L4' 30W T8EE/ELEE	86
1M0150S	150W METAL HALIDE	190	4F25EEL	4L4' 30W T8EE/ELEE LOW PWR	75
1M0175S	175W METAL HALIDE	205	1F28EEH	1L4' 28W T8EE/EELE HIGH PWR	33
			1F28EEE	1L4' 28W T8EE/ELEE	24
			1F28EEL	1L4' 28W T8EE/ELEE LOW PWR	22
			2F28EEH	2L4' 28WT8EE/EELE HIGH PWR	65

<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>	<u>Device Code</u>	<u>Device Description</u>	<u>Rated Watts</u>
T8 High Efficient			Tandem-Wired Fluorescent Systems		
2F28EEE	2L4' 28W T8EE/ELEE	49	4D17SSE	4L2' TW T8/ELIG	31
2F28EEL	2L4' 28W T8EE/ELEE LOW PWR	42	4D32EEE	4L4' DTW T8EE/ELIG	51
3F28EEH	3L4' 28W T8EE/EELE HIGH PWR	100	4D32EEL	4L4' DTW T8EE/ELEE LOW PWR	45
3F28EEE	3L4' 28W T8EE/ELEE	73	4D32SSE	4L4' DTW T8/ELIG	53
3F28EEL	3L4' 28W T8EE/ELEE LOW PWR	64	4D32SSL	4L4 DTWT8/ELIG LOW POWER	49
4F28EEH	4L4' 28W T8EE/EELE HIGH PWR	126	4W32SSE	4L4' TW T8/ELIG	27
4F28EEE	4L4' 28W T8EE/ELEE	94	4W32SSL	4L4 TWT8/ELIG LOW POWER	25
4F28EEL	4L4' 28W T8EE/ELEE LOW PWR	83	6F32SSH	6L4' T8/ELIG HIGH LMN	234
1F30EEH	1L4' 30W T8EE/EELE HIGH PWR	39	Three Foot Fluorescent Systems		
1F30EEE	1L4' 30W T8EE/ELEE	29	1F25SSE	1L3'T8/ELIG	24
1F30EEL	1L4' 30W T8EE/ELEE LOW PWR	25	1F30SEM	1L3' EE/EEMAG	38
2F30EEH	2L4' 30WT8EE/EELE HIGH PWR	72	1F30SES	1L3' EE/STD	42
2F30EEE	2L4' 30W T8EE/ELEE	53	1F30SSS	1L3' STD/STD	46
2F30EEL	2L4' 30W T8EE/ELEE LOW PWR	47	2F25SSE	2L3' T8/ELIG	47
3F30EEH	3L4' 30W T8EE/EELE HIGH PWR	106	2F25SSM	2L3' T8/EEMAG	65
3F30EEE	3L4' 30W T8EE/ELEE	84	2F30SEE	2L3' EE/ELIG	49
3F30EEL	3L4' 30W T8EE/ELEE LOW PWR	70	2F30SEM	2L3' EE/EEMAG	66
4F30EEH	4L4' 30W T8EE/EELE HIGH PWR	NA	2F30SES	2L3' EE/STD	73
4F30EEE	4L4' 30W T8EE/ELEE	104	2F30SSS	2L3' STD/STD	80
4F30EEL	4L4' 30W T8EE/ELEE LOW PWR	91	3F25SSE	3L3'T8/ELIG	68
1F32EEH	1L4' T8EE/ELEE/HIGH PWR	38	3F30SES	3L3' EE/STD	127
1F32EEE	1L4' T8EE/ELEE	28	3F30SSS	3L3' STD/STD	140
1F32EEL	1L4' T8EE/ELEE LOW PWR	25	4F25SSE	4L3' T8/ELIG	88
2F32EEH	2L4' T8EE/ELEE/HIGH PWR	73	Two Foot Fluorescent Systems		
2F32EEE	2L4' T8EE/ELEE	53	1F17SSE	1L2'T8/ELIG	17
2F32EEL	2L4' T8EE/ELEE LOW PWR	47	1F20SSS	F20T12/HPF(1)	32
3F32EEH	3L4' T8EE/ELEE/HIGH PWR	111	1F40BXE	1L2' F40BX/ELIG	46
3F32EEE	3L4' T8EE/ELEE	84	1F50BXE	1L2' F50BX/ELIG	54
3F32EEL	3L4' T8EE/ELEE LOW PWR	73	Two Foot Fluorescent Systems		
4F32EEH	4L4' T8EE/ELEE/HIGH PWR	146	1F55BXE	1L2' F55BX/ELIG	56
4F32EEE	4L4' T8EE/ELEE	108	1F80BXE	1L2' F80BXE/ELIG	90
4F32EEL	4L4' T8EE/ELEE LOW PWR	95	2F17SSE	2L2' T8/ELIG	37
Tandem Wired T8 High Efficient			2F17SSL	2L2' T8/ELIG Low Power	27
2W32EEE	2L4' TW T8EE/ELIG	27	2F17SSM	2L2' T8/EEMAG	45
2W32EEL	2L4' TW T8EE/ELEE LOW PWR	24	2F20SSS	F20T12/HPF(2)	56
3W32EEE	3L4' TW T8EE/ELIG	39	2F24HSS	2L2' HO/STD/STD	85
3W32EEL	3L4' TW T8EE/ELEE LOW PWR	34	2F40BXE	2L2' F40BX/ELIG	72
4W32EEE	4L4' TW T8EE/ELIG	51	2F50BXE	2L2' F50BX/ELIG	108
4W32EEL	4L4' TW T8EE/ELEE LOW PWR	45	2F55BXE	2L2'55BXE/ELIG	112
Tandem-Wired Fluorescent Systems			3F17SSE	3L2' T8/ELIG	53
2W32SSE	2L4' TW T8/ELIG	30	3F17SSL	3L2' T8/ELIG Low Power	39
2W32SSH	2L4' TW T8/Hi-LUM	39	3F20SSS	F20T12/HPF(3)	78
2W40SEE	2L4' TW EE/ELIG	30	3F24HSE	3L4' T5HO/ELIG	80
2W40SSE	2L4' TW STD/ELIG	36	3F40BXE	3L2' F40BX/ELIG	102
2W59HSE	2L8' TW T8 HO/ELIG	80	3F50BXE	3L2' F50BX/ELIG	162
2W59SSE	2L8' TW T8/ELIG	55	3F55BXE	3L2' F55BX/ELIG	168
2W96HEE	2L8' TW HO-EE/ELIG	85	4F17SSE	4L2' T8/ELIG	62
2W96HSE	2L8' TW HO-STD/ELIG	98	4F36BXE	4L2' F36BX/ELIG	148
2W96SEE	2L8' TW EE/ELIG	55	4F40BXE	4L2' F40BX/ELIG	144
2W96SSE	2L8' TW STD/ELIG	67	4F40BXH	4L 40W T5 (Std.) High Lumen Ba	170
3W32SSE	3L4' TW T8/ELIG	29			

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Two Foot Fluorescent Systems		
4F50BXE	4L2' F50BX/ELIG	216
4F55BXE	4L2' F55BX/ELIG	224
5F40BXE	5L2' F40BX/ELIG	190
5F50BXE	5L2' F50BX/ELIG	270
5F55BXE	5L2' F55BX/ELIG	280
6F36BXE	6L2' F36BX/ELIG	212
6F40BXE	6L2' F40BX/ELIG	204
6F50BXE	6L2' F50BX/ELIG	324
6F55BXE	6L2' F55BX/ELIG	336
8F36BXE	8L2' F36BX/ELIG	296
8F40BXE	8L2' F40BX/ELIG	288
8F50BXE	8L2' F50BX/ELIG	432
8F55BXE	8L2' F55BX/ELIG	448
9F36BXE	9L2' F36BX/ELIG	318
9F40BXE	9L2' F40BX/ELIG	306
9F50BXE	9L2' F50BX/ELIG	486
9F55BXE	9L2' F55BX/ELIG	504
12F40BE	12L2' F40BX/ELIG	408
12F50BE	12L2' F50BX/ELIG	648
12F55BE	12L2' F55BX/ELIG	672