

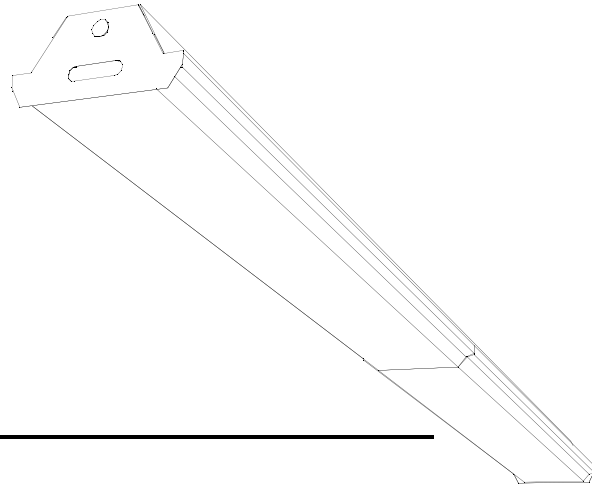
Features

Ideal for schools, hospitals, and office space

Available in T8 and T5 Configurations

Rigid, Four-Bend Press-Brake Formed Body

Endplates embossed for strength and securely fastened with rivets



Technical Data

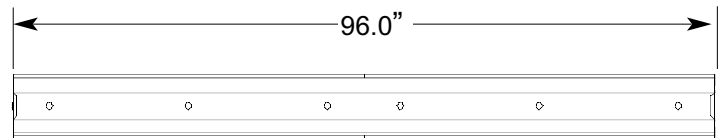
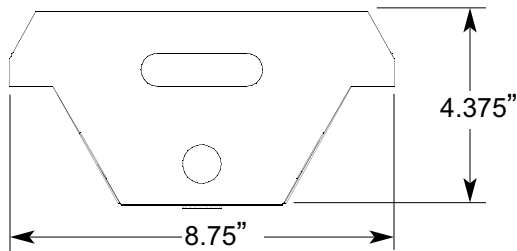
Housing: 20ga. (0.032") pre-painted die formed with sufficient knockouts for mounting and electrical supply.

Finish: All cold rolled steel parts are painted with a smooth, glossy, highly reflective white paint.

Reflector: Can be ordered with a 95% specular, a 85% specular, or a 92% diffuse white enamel. Substrate is 0.020" high quality aluminum. The reflector profile is optimized using computer analysis and manufactured using state of the art CNC equipment. A protective premask is applied to all reflective surfaces prior to manufacture.

Construction: The solid four-bend body provides added rigidity. The endplates are securely attached to the fixture body with rivets. The socket bars are attached with a tab-lock system, allowing ease of maintenance. The reflectors are attached to the socket bars with quarter-turn fasteners. No tools are required for reflector installation and removal. The lens attaches to the reflector with a compression fit.

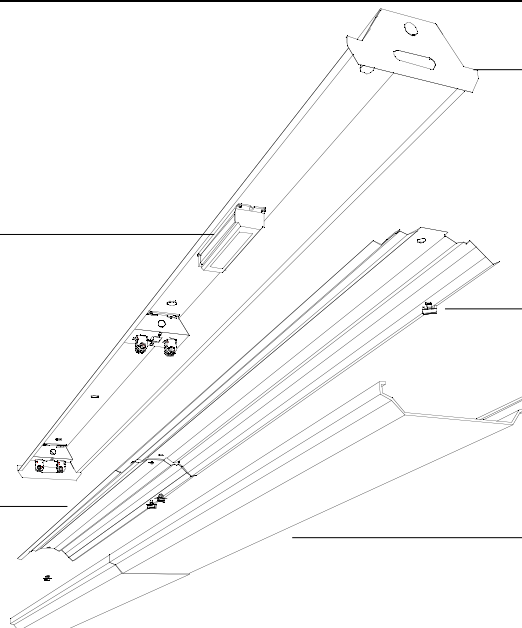
Installation



Highlights

Electronic ballasts available in both standard and high lumen versions

Computer designed, CNC formed 0.020" specular aluminum reflector



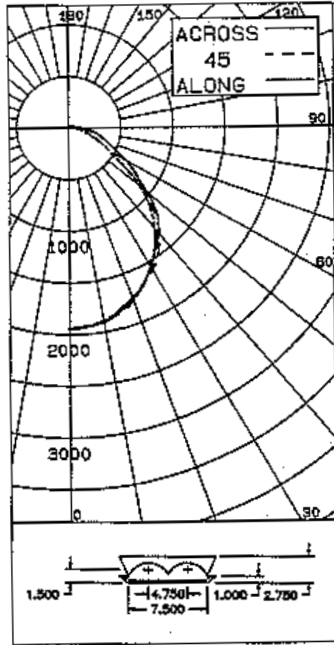
Embossed endplate securely fastened with rivets

Quarter-turn fasteners allow tool-free ballast access

Clear acrylic lens uniformly distributes the light

Photometrics

ENERGY SOLUTIONS CATALOG #LSWRAP01PM 1 X 4 WRAPPED FIXTURE WITH SPECULAR REFLECTOR
TWO FO32/41K 32 WATT FLUORESCENT LAMPS. LUMEN RATING = 2900 LMS.
ENERGY SAVINGS ES-2-T8-32-120-A BALLAST OPERATING AT 120 VAC & 58 WATTS



CANDLEPOWER SUMMARY				OUTPUT LUMENS
ANGLE ALONG	22.5	45	67.5	ACROSS
0	1944	1944	1944	1944
5	1924	1927	1933	1938
15	1840	1841	1860	1844
25	1675	1692	1674	1680
35	1427	1468	1487	1445
45	1096	1164	1159	1172
55	628	751	790	753
65	339	392	484	518
75	170	219	310	329
85	55	109	151	168
90	1	44	86	102
95	0	30	66	75
105	0	12	39	44
115	1	6	24	31
125	2	6	14	21
135	2	5	9	11
145	3	4	7	8
155	5	4	6	7
165	5	5	5	4
175	4	4	5	4
180	4	4	4	4

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1476	25.46	29.68
0-40	2385	41.14	47.96
0-60	3944	68.00	79.29
0-90	4837	83.41	97.25
40-90	2451	42.27	49.29
60-90	893	15.40	17.96
90-180	136	2.36	2.75
0-180	4974	85.77	100.00

** EFFICIENCY = 85.8% **

LUMINANCE SUMMARY - CD./SQ.M.

S/MH = 1.2
SC = 1.2

ANGLE	ALONG	45	ACROSS
45	6672	6472	6463
55	4712	5243	4890
65	3451	4116	3895
75	2832	3821	3556
85	2705	3595	3460

CERTIFIED BY: *Tom Levin* DATE: APR 25, 1996
PREPARED FOR: ENERGY SOLUTIONS INC. ST. PAUL, MN

TESTED ACCORDING TO IES PROCEDURES. TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST LUMINOUS OPENING OF LUMINAIRE.

Case Study

40' x 40' x 10' Classroom

Reflectances

Ceiling 75% Walls 50% Floor 20%

Fixture

ESI Standard Wrap 1' x 8'
Specular Silver Reflector
(4) 32W FO32 T8 Lamps
Standard Power Ballast (0.93)

Layout

20 Fixtures mounted on a
8' by 10' grid

Results

UPS: 1.45 watts/sq.foot
Illuminance: 106fc (at 2.5' from floor)

Summary

Total Fixture Efficiency **85.8** Mounting Height Ratio **1.2**

Coefficients of Utilization (%)

Ceiling Refl	80										70										50									
	Wall Refl	70	50	30	10	70	50	30	50	30	10	70	50	30	50	30	10	70	50	30	50	30	10							
RCR = 0	102	102	102	102	102	99	99	99	94	94	94	99	99	99	94	94	94	99	99	99	94	94	94							
1	93	90	86	83	91	88	84	83	81	79	86	83	79	77	74	70	66	83	80	77	74	70	66							
2	86	79	74	69	84	78	73	74	70	66	77	71	67	63	60	54	50	67	63	59	54	50	46							
3	79	71	64	59	77	69	63	67	61	57	71	62	56	60	54	50	46	63	57	51	46	42	38							
4	73	63	56	51	71	62	56	60	54	50	65	55	49	53	47	43	49	43	37	31	25	21								
5	67	57	49	44	65	55	49	53	47	43	60	50	43	48	42	38	55	45	38	44	37	33								
6	62	51	44	39	60	50	43	48	42	38	56	45	38	44	37	33	51	41	34	39	33	29								
7	57	46	39	34	56	45	38	44	37	33	51	41	34	39	33	29	47	37	30	35	29	25								
8	53	41	34	29	51	41	34	39	33	29	47	37	30	35	29	25	44	33	27	32	26	22								
9	49	37	30	26	47	37	30	35	29	25	44	33	27	32	26	22	44	33	27	32	26	22								
10	45	34	27	23	44	33	27	32	26	22	44	33	27	32	26	22	44	33	27	32	26	22								

Test Report No. LSI12486

Ordering Information

Part Number = Fixture Size + Reflector Material + # Lamps + Lamp Wattage + Voltage + Ballast Type

(Example F-18WPEA432277N = 1'x8' Standard Wrap with an enhanced aluminum reflector, 4-32W lamps, 277 volts, and a standard power ballast)

Size	Reflector	# Lamps	Lamp Watts	Voltage	Ballast
F-14WP - 1' x 4'	EA - Enhanced Alum	2	32	120	N - Normal
F-18WP - 1' x 8'	AA - Anodized Alum	4	54	277	H - High Ballast Factor
	WR - White Enamel			UNV	L - Low Ballast Factor