

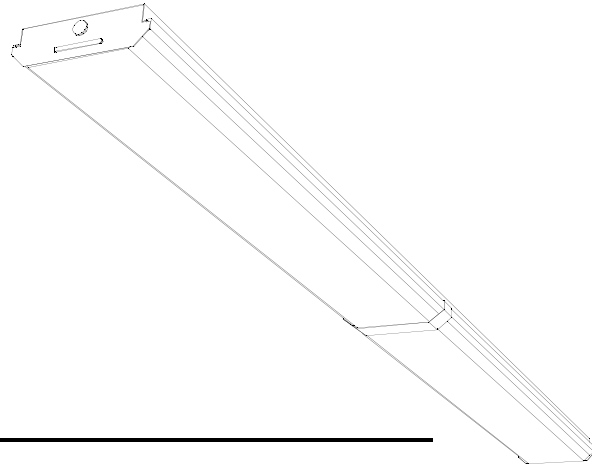
**Features**

*Ideal for schools, hospitals, and office space*

*Superior Light Quality, 89.2% Photometric Efficiency*

*Rigid, Four-Bend Press-Brake Formed Body*

*Endplates embossed for strength and securely fastened with rivets*



**Technical Data**

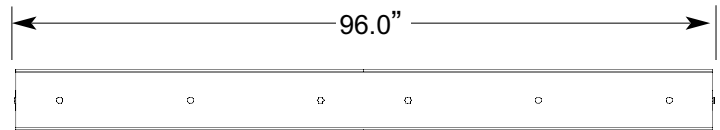
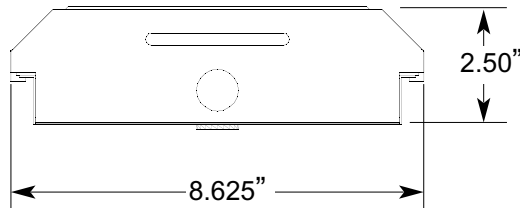
**Housing:** 20ga. (0.032") pre-painted die formed with sufficient knockouts for mounting and supply.

**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 brackets are attached with a tab-lock system, allowing ease of maintenance. The reflectors are attached to the brackets with a tab-lock fastening system. No tools or fasteners are required for reflector installation / removal.

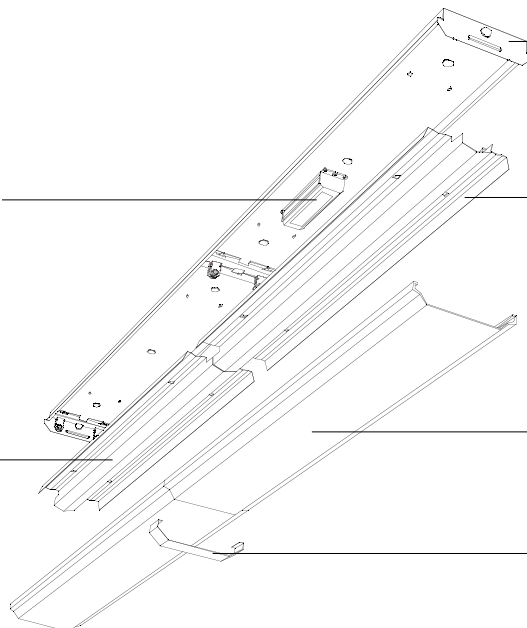
**Installation**



**Highlights**

Electronic ballasts available in both standard and high output versions

Computer designed, CNC formed 0.020" specular aluminum reflector



Embossed endplate securely fastened with rivets

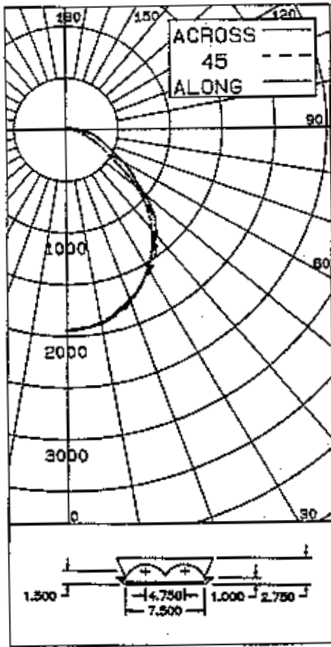
Tab-lock system allows reflector removal/installation without tools or fasteners

Clear acrylic lens uniformly distributes the light

Formed metal band conceals the union of the lens sections

Photometrics

ENERGY SOLUTIONS CATALOG #LSSWRAP01PM 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



ANGLE ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	1944	1944	1944	1944	1944
5	1924	1927	1933	1938	1931
15	1840	1841	1860	1844	1831
25	1678	1692	1674	1680	1668
35	1427	1468	1487	1445	1440
45	1096	1164	1159	1172	1199
55	628	751	790	753	773
65	339	392	484	518	490
75	170	219	310	329	319
85	55	109	151	168	176
90	1	44	86	102	100
95	0	30	66	75	74
105	0	12	39	44	45
115	1	6	24	31	33
125	2	6	14	21	25
135	2	5	9	11	14
145	3	4	7	8	9
155	5	4	6	7	8
165	5	5	5	4	5
175	4	4	5	4	6
180	4	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% \*\*  
 S/MH = 1.2  
 SC = 1.2

ANGLE	ALONG	45	ACROSS
45	6672	6172	6463
55	4712	5243	4890
55	3451	4116	3895
75	2832	3821	3556
85	2705	3595	3460

CERTIFIED BY: *Tom Lewis* 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 Low Profile 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**

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	99	99	99	99	94	94	94	94	94	94	94	94	94	94	94	94	94	94								
1	93	90	86	83	91	88	84	83	81	79	86	83	79	77	74	70	66	63	61	57	54	50								
2	86	79	74	69	84	78	73	74	70	66	77	71	67	63	61	57	54	50	47	43	40	36								
3	79	71	64	59	77	69	63	67	61	57	71	62	56	60	54	50	47	43	40	36	33	29								
4	73	63	56	51	71	62	56	60	54	50	67	57	49	44	65	55	49	53	47	43	40	36								
5	67	57	49	44	65	55	49	53	47	43	62	51	44	39	60	50	43	48	42	38	35	31								
6	62	51	44	39	60	50	43	48	42	38	57	46	39	34	56	45	38	44	37	33	30	26								
7	57	46	39	34	56	45	38	44	37	33	53	41	34	29	51	41	34	39	33	29	26	22								
8	53	41	34	29	51	41	34	39	33	29	49	37	30	26	47	37	30	35	29	25	22	18								
9	49	37	30	26	47	37	30	35	29	25	45	34	27	23	44	33	27	32	26	22	18	14								
10	45	34	27	23	44	33	27	32	26	22	42	31	24	20	42	31	24	29	23	19	15	11								

Test Report No. LSI12486

Ordering Information

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

(Example F-18LPEA432277N = 1'x8' Low Profile Wrap with an enhanced aluminum reflector, 4-32W lamps, 277 volts, and a standard power ballast)

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