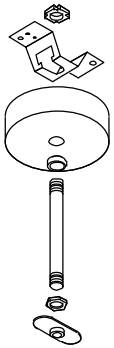


# ACCESSORIES & ADD-ONS



## HANGER SETS--ORDERED SEPARATELY

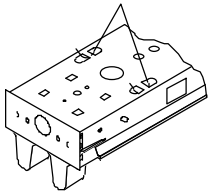
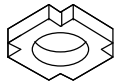


Single Stem Canopy sets (SS) are available for all fixtures. Single Stem canopies for 8 foot fixtures should use 2 per fixture. All canopies furnished with E-Z-One one-man fast hanging crossbar. Also available in 6, 12, 18, 24, 30, 36 inch and longer rods. Specify length rod required. Multiple rod diameters are available upon request. Call for prices. Purchases of canopy and parts available on request.

## Couplers

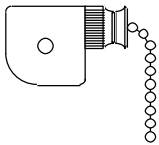
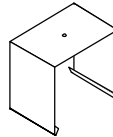


## Lock Nuts

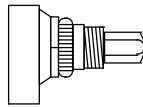


## Wire Hooks

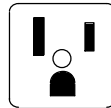
## Tong Hangers for Channels



## Pull Or Push Switch



## Convenience Outlet



## HLR-GLR Fusing

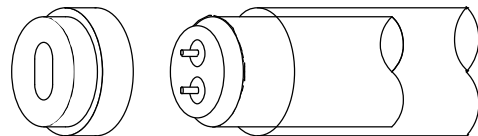
## Electrical Cords

8 ft. 18/2 SPT-1 Cord & Plug (Light)

8 ft. 18/3 SPT-1 Cord & Plug (Light)

8 ft. 18/3 SJ Cord & Plug (Heavy)

## Cold Weather Light Shields

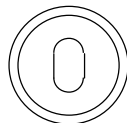


Reusable, non breakable jackets for T12 lamps

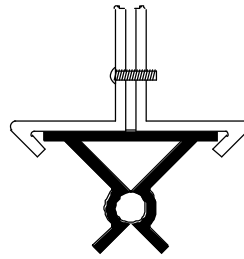
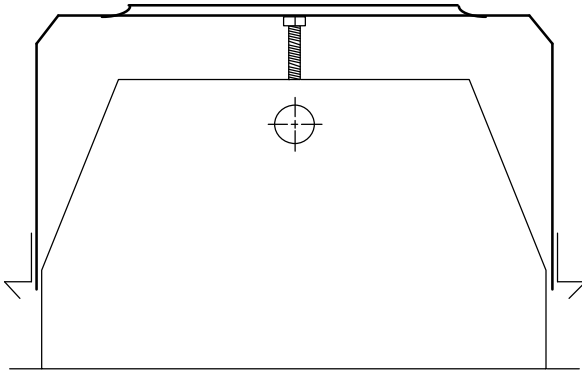
F40 T12 Shield Only

F96 T12 Shield Only

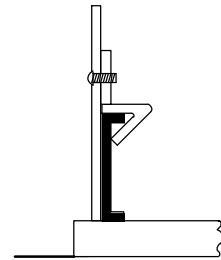
## End Caps Only



**"U" BRACKET OR HANGER BARS FOR ALL RECESS FIXTURES**



**T-BAR**



**U-IRON**

**RECESS OPENING REQUIRED**

20-W att	(2 feet)	12" wide by 24 3/8" long by 7 1/4" deep
40-W att	(4 feet)	12" wide by 48 3/8" long by 7 1/4" deep
55-W att	(6 feet)	12" wide by 72 3/8" long by 7 1/4" deep
75-W att	(8 feet)	12" wide by 96 3/8" long by 7 1/4" deep

**PLASTER FRAMES RECESS FIXTURES**

P4 for 40-W att Individual

P6 for 6-foot

P8 for 8-foot

For continuous runs, advise number of fixtures in each row.

**GERMICIDAL UNITS**

Meat Cooler and General Service Cold Cathode

W 178230 (SB-30) 1-782-30

For above, use Westinghouse Cold Cathode Sterilamps 782L-30.

FKTURE			STARTING TEMPERATURE		STANDARD POWER FACTOR	SOUND RATING	INPUT WATTAGE	NOMINAL VOLTAGE LIMITS, LINE CURRENT					
TYPE	NO. & TYPE OF LAMPS	WATTS PER LAMP	STANDARD	COLD WEATHER (OPTIONAL)				1	2	120 (110-127)	220 (205-232)	240 (220-250)	265 (240-275)
Preheat	115	15	50 F	0 F	Low	B	20	0.36	-	-	-	-	-
	120	20	50 F	0 F	Low	B	25	0.36	-	-	-	-	-
	130	30	50 F	0 F	Low	A	40	0.67	-	-	-	-	-
	140	40	50 F	0 F	Low	A	51	0.67	-	-	-	0.25	-
Trigger Start	115	15	50 F	0 F	Low	A	32	0.28	-	-	-	0.12	-
	120	20	50 F	0 F	Low	A	34	0.28	-	-	-	0.13	-
	220	20	50 F	0 F	Low	A	55	0.48	-	-	-	0.20	-
Rapid Start (430 mA)	130	30	50 F	0 F	Low	A	46	0.40	-	0.18	0.16	0.20	-
	140	40	50 F	0 F	High	A	51	0.48	0.24	0.23	0.22	0.21	0.11
	240	40	50 F	0 F	High	A	88	0.80	0.43	0.42	0.37	0.37	-
	340	40	50 F	0 F	High	A	139	1.28	0.67	0.65	0.59	0.59	-
	440	40	50 F	0 F	High	A	176	1.60	0.86	0.84	0.74	0.74	-
	640	40	50 F	0 F	High	A	264	2.40	1.29	1.26	1.11	1.11	-
840	40	50 F	0 F	High	A	352	3.20	1.72	1.68	1.48	1.48	-	
Slimline (425 mA)	148	38	0 F	0 F	High	C	61	0.60	-	-	-	0.24	-
	172	56	0 F	0 F	High	C	95	0.85	0.44	0.44	0.37	0.39	-
	196	75	0 F	0 F	High	C	101	0.90	0.44	0.44	0.38	0.39	-
	248	38	50 F	0 F	High	C	102	0.85	0.44	0.42	0.40	0.37	-
	272	56	50 F	0 F	High	C	134	1.45	0.75	0.75	0.68	0.67	0.38
	296	75	50 F	0 F	High	C	173	1.45	0.85	0.75	0.68	0.62	0.39
	348	38	50 F	0 F	High	C	163	1.45	-	-	-	0.61	-
	396	75	50 F	0 F	High	C	274	2.35	1.29	1.19	1.06	1.01	-
	448	38	50 F	0 F	High	C	204	1.70	0.88	0.84	0.80	0.74	-
496	75	50 F	0 F	High	C	346	2.90	1.70	1.50	1.36	1.24	0.78	
High Output (800 mA)	148	60	50 F	-20 F	High	C	87	0.75	-	0.90	0.60	0.32	0.18
	196	110	50 F	-20 F	High	C	137	1.20	-	0.90	0.55	0.52	0.31
	248	60	50 F	-20 F	High	C	147	1.30	-	0.90	0.60	0.56	-
	272	85	50 F	-20 F	High	B	201	1.80	1.09	1.20	0.96	0.77	0.50
	296	110	50 F	-20 F	High	B	249	2.10	1.20	1.20	0.96	0.87	0.55
	396	110	50 F	-20 F	High	C	386	3.30	-	2.10	1.51	1.45	0.86
Very High Output (1500 mA)	148	110	-20 F	-20 F	High	C	137	1.28	-	-	-	0.56	-
	196	215	0 F	-20 F	High	D	230	2.20	1.13	1.00	-	0.92	-
	248	110	-20 F	-20 F	High	D	242	2.30	1.10	1.00	-	0.98	-
	296	215	50 F	-20 F	High	D	452	3.95	2.25	2.20	1.70	1.70	0.95

120V and 277V are standard as -20 F CBM. "S" series fixture 1-40 Watt is standard low power factor.

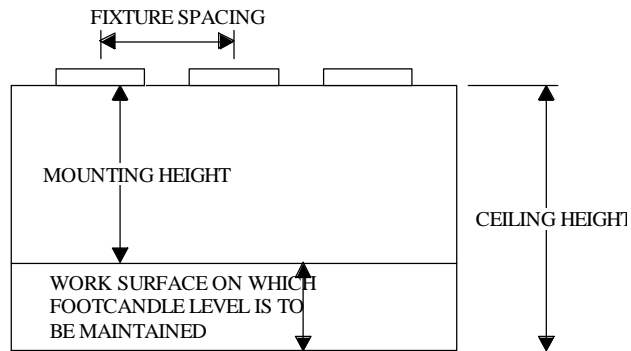
1 High power factor ballasts are available for all configurations except pre-heat.

Rating	Typical Installations	Average Ambient Noise Levels
		Recommended
A	TV or Radio Station, Library, Church, Study Hall	20-24 decibels
B	Residence, Quiet Office, Classroom	25-30 decibels
C	General Office, Commercial Building	31-36 decibels
D	Retail Store, Gym, Noisy Office, Manufacturing	37-42 decibels

3 Voltage Limits—Apply to nominal 60 HZ frequency equipment.

### EXAMPLE

100 FOOT CANDLES		DISTRIBUTION CURVE (4-LAMP 40WRS)	
ROOM SIZE IN SQ. FT.	2 LAMP 40W RS	4 LAMP 40W RS	
0 SQ. FT. FIXTURE	25	43	
TO 250 WATTS SQ. FT.	3.4	4.0	
250 SQ. FT. FIXTURE	33	56	
TO 1000 WATTS SQ. FT.	2.6	3.1	
1000 SQ. FT. FIXTURE	37	64	
TO 4000 WATTS SQ. FT.	2.3	2.7	
4000 SQ. FT. FIXTURE	39	67	
AND UP WATTS SQ. FT.	2.2	2.6	
SMH RATIO	1.4	1.3	



1 Determine Room Size: Width X Length = Area. Relate area to appropriate room size column.  
EXAMPLE: Width = 32, Length = 40, Area = 1290 sq. ft.

3 For levels other than 100 Footcandles, multiply the number of fixtures by the proper factor.  
EXAMPLE: For 50 Footcandles—Fixtures = 20 x 50/100 = 10 fixtures.

2 For 100 Footcandles, divide Area by SQ. FT. FIXTURE figure.  
EXAMPLE: 1280 divided by 64 = 20 fixtures.

4 The resulting WATTS/SQ. FT. given must also be factored for levels other than 100 footcandles.  
EXAMPLE: WATTS/SQ. FT. = 2.7 x 50/100 = 1.35 WATTS/SQ. FT.

5 The SMH RATIO (Spacing-to-Mounting-Height) is determined from photometric testing of each fixture and configuration. To insure uniform illumination, maximum spacing should not be exceeded. Determine maximum fixture spacing by multiplying proposed mounting height by SMH RATIO. (See diagram.)  
EXAMPLE: Mounting height = 10 ft.—Maximum Spacing = 10 x 1.3 = 13 ft. Spacing between fixture centers.

IES Recommended Candle	Minimum Foot Level		
		Fine . . . . .	500
		Medium . . . . .	100
		Molding . . . . .	100
		Pouring, Sorting . . . . .	50
<b>Airplane Manufacturing</b>		<b>Garages--Motor Vehicles</b>	
Assembly, inspection, hangar . . . . .	100	Storage . . . . .	5
Drilling, riveting, screw fastening . . . . .	70	Traffic Lanes	
Welding . . . . .	50	Parking garage . . . . .	10
		Service garage . . . . .	20
		Entrances . . . . .	50
		Repair area . . . . .	100
<b>Assembly</b>		<b>Gymnasiums</b>	
Rough easy seeing . . . . .	30	Assemblies . . . . .	10
Rough difficult seeing . . . . .	50	General exercise & recreation . . . . .	30
Medium . . . . .	100	Exhibitions, matches . . . . .	50
Fine . . . . .	500(a)		
Extra Fine . . . . .	1000(a)	<b>Hospitals</b>	
		Rooms . . . . .	30
<b>Auditoriums</b>		Corridors . . . . .	30
Social activities . . . . .	5	Emergency Room . . . . .	100
Assembly only . . . . .	15	Operating Rooms . . . . .	200
Exhibitions . . . . .	30		
		<b>Iron &amp; Steel Manufacturing</b>	
<b>Automobile Manufacturing</b>		Stock, hot top, checker cellar, calcining . . . . .	10
Final assembly, finishing, inspection . . . . .	200	Building, slag pits, stripping yard . . . . .	20
Body & chassis assembly . . . . .	100	Control platforms, repairs, mixer building . . . . .	30
Body parts manufacturing . . . . .	70	Rolling mills . . . . .	50
Frame assembly . . . . .	50	Shearing . . . . .	50
		Tin plate . . . . .	50
		Motor room, machine room . . . . .	30
		Inspection . . . . .	100
<b>Banks</b>		<b>Laundries</b>	
Lobby, general . . . . .	200	Washing . . . . .	30
Writing areas . . . . .	70*	Ironing . . . . .	100
Tellers stations, posting & keypunch . . . . .	150*		
		<b>Library</b>	
<b>Barber Shops</b> . . . . .	100	Ordinary reading . . . . .	30*
Beauty Parlors . . . . .	100	Book repair & binding . . . . .	50
		Study & notes, cataloging, card files . . . . .	
<b>Chemical works</b> . . . . .	30	check desk . . . . .	70*
		<b>Machine Shops</b>	
<b>Clothing Manufacturer</b>		Rough bench . . . . .	50
Receiving, storing, shipping, winding, measuring . . . . .	30	Medium bench, rough grinding, buffing . . . . .	100
Pattern making, trimming . . . . .	50	<b>Materials Handling</b>	
Shops, marking . . . . .	100	Loading trucking . . . . .	20
Cutting, pressing . . . . .	300(a)	Picking stock, classifying . . . . .	30
Sewing, inspection . . . . .	500(a)	Wrapping, packing, labeling . . . . .	50
<b>Electrical Equipment Manufacturing</b>			
Impregnating . . . . .	50	<b>Offices</b>	
Insulating: coil winding, testing . . . . .	100	Corridors, stairways . . . . .	20(k)
		Reading, transcribing . . . . .	70*
<b>Foundries</b>		Regular office work . . . . .	100*
Annealing furnaces . . . . .	30	Accounting, auditing	
Cleaning . . . . .	30	tabulating, business machine operation, rough drafting . . . . .	150*
Core making . . . . .	100	Cartography, designing, detailed drafting . . . . .	200
Inspection			
		<b>Paint Shop</b>	
		Spraying, rubbing, hand art, stencil . . . . .	50
		Fine hard painting & finishing . . . . .	100
		<b>Paper manufacturing</b>	
		Beaters, grinding . . . . .	30
		Finishing, cutting . . . . .	50
		Hand Counting . . . . .	70
		Paper machine reel, inspection . . . . .	100
		Rewinder . . . . .	150
		<b>Printing</b>	
		Photo engraving, etching, blocking . . . . .	50
		Color inspecting . . . . .	200
		Presses . . . . .	70
		Proofreading . . . . .	150
		Composing room . . . . .	100
		<b>Schools</b>	
		Reading . . . . .	70*
		Typing . . . . .	70*
		Demonstrations . . . . .	150
		Sewing . . . . .	150*
		<b>Sheet Metal Works</b>	
		General . . . . .	50
		Tin plate inspection, galvanized scribing . . . . .	200
		<b>Stores</b>	
		Circulation area, stockroom . . . . .	30
		Merchandising, serviced . . . . .	100
		Merchandising--self service . . . . .	200
		<b>Textile Mills</b>	
		<b>Cotton</b>	
		Picking, carding roving, spinning . . . . .	50
		Beaming & slashing . . . . .	150
		Drawing . . . . .	200
		<b>Others</b> . . . . .	100
		<b>Warehouse, Storage</b>	
		Inactive . . . . .	5
		Active	
		Rough bulky . . . . .	10
		Medium . . . . .	20
		Extra Fine . . . . .	50
		<b>Welding</b>	
		General . . . . .	50
		<b>*EQUIVALENT SPHERE ILLUMINATION</b>	
		<b>FOOTNOTES:</b>	
		(a) Obtained with a combination of general lighting plus specialized supplementary lighting.	
		(k) Or not less than 1/5 the level in adjacent areas.	