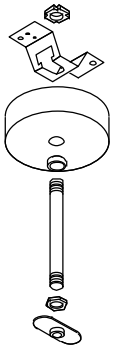


# ACCESSORIES & ADD-ONS



## HANGER SETS--ORDERED SEPARATELY

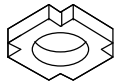


Single Stem Canopy sets (SS) are available for all fixtures. Single Stem canopies for 8 foot fixtures should use 2 per fixture. All canopies furnished with E-Z-One one-man fast hanging crossbar. Also available in 6, 12, 18, 24, 30, 36 inch and longer rods. Specify length rod required. Multiple rod diameters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

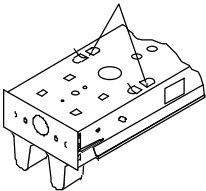
### Couplers



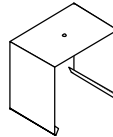
### Lock Nuts



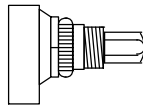
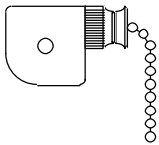
### Wire Hooks



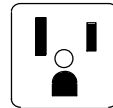
### Tong Hangers for Channels



### Pull Or Push Switch



### Convenience Outlet

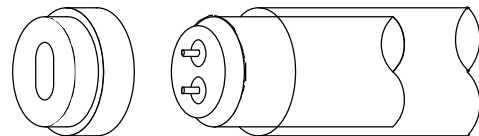


### HLR-GLR Fusing

### Electrical Cords

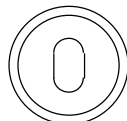
- 8 ft. 18/2 SPT-1 Cord & Plug (Light)
- 8 ft. 18/3 SPT-1 Cord & Plug (Light)
- 8 ft. 18/3 SJ Cord & Plug (Heavy)

### Cold Weather Light Shields

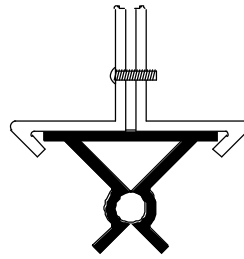
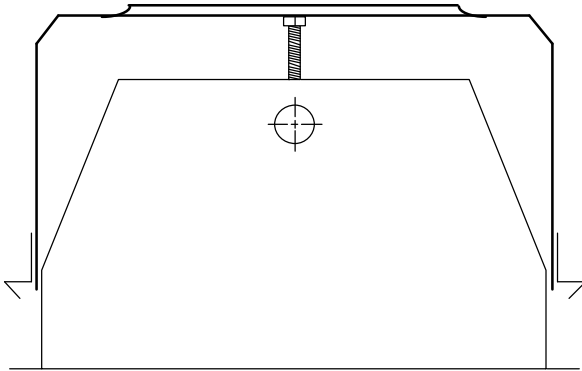


Reusable, non breakable jackets for T12 lamps  
 F40 T12 Shield Only  
 F96 T12 Shield Only

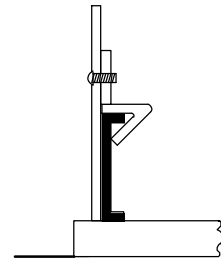
### End Caps Only



**"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.

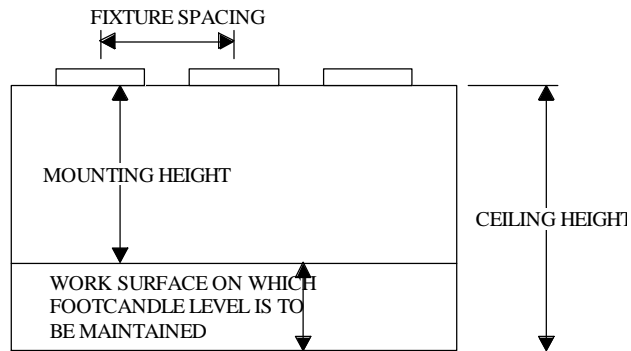
2 Minimum Sound

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 TO 250 WATTS SQ. FT.	25	43	0%
250 SQ. FT. FIXTURE TO 1000 WATTS SQ. FT.	3.4	4.0	100%
1000 SQ. FT. FIXTURE TO 4000 WATTS SQ. FT.	2.6	3.1	
4000 SQ. FT. FIXTURE AND UP	2.2	2.7	
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.

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.

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.

IES Recommended Candle	Minimum Foot Level		
<b>Airplane Manufacturing</b>		Fine . . . . .	500
Assembly, inspection, hangar . . . . .	100	Medium . . . . .	100
Drilling, riveting, screw fastening . . . . .	70	Molding . . . . .	100
Welding . . . . .	50	Pouring, Sorting . . . . .	50
<b>Assembly</b>		<b>Garages--Motor Vehicles</b>	
Rough easy seeing . . . . .	30	Storage . . . . .	5
Rough difficult seeing . . . . .	50	Traffic Lanes	
Medium . . . . .	100	Parking garage . . . . .	10
Fine . . . . .	500(a)	Service garage . . . . .	20
Extra Fine . . . . .	1000(a)	Entrances . . . . .	50
<b>Auditoriums</b>		Repair area . . . . .	100
Social activities . . . . .	5	<b>Gymnasiums</b>	
Assembly only . . . . .	15	Assemblies . . . . .	10
Exhibitions . . . . .	30	General exercise & recreation . . . . .	30
<b>Automobile Manufacturing</b>		Exhibitions, matches . . . . .	50
Final assembly, finishing, inspection . . . . .	200	<b>Hospitals</b>	
Body & chassis assembly . . . . .	100	Rooms . . . . .	30
Body parts manufacturing . . . . .	70	Corridors . . . . .	30
Frame assembly . . . . .	50	Emergency Room . . . . .	100
<b>Banks</b>		Operating Rooms . . . . .	200
Lobby, general . . . . .	200	<b>Iron &amp; Steel Manufacturing</b>	
Writing areas . . . . .	70*	Stock, hot top, checker cellar, calcining . . . . .	10
Tellers stations, posting & keypunch . . . . .	150*	Building, slag pits, stripping yard . . . . .	20
<b>Barber Shops</b> . . . . .	100	Control platforms, repairs, mixer building . . . . .	30
Beauty Parlors . . . . .	100	Rolling mills . . . . .	50
<b>Chemical works</b> . . . . .	30	Shearing . . . . .	50
<b>Clothing Manufacturer</b>		Tin plate . . . . .	50
Receiving, storing, shipping, winding, measuring . . . . .	30	Motor room, machine room . . . . .	30
Pattern making, trimming . . . . .	50	Inspection . . . . .	100
Shops, marking . . . . .	100	<b>Laundries</b>	
Cutting, pressing . . . . .	300(a)	Washing . . . . .	30
Sewing, inspection . . . . .	500(a)	Ironing . . . . .	100
<b>Electrical Equipment Manufacturing</b>		<b>Library</b>	
Impregnating . . . . .	50	Ordinary reading . . . . .	30*
Insulating: coil winding, testing . . . . .	100	Book repair & binding . . . . .	50
<b>Foundries</b>		Study & notes, cataloging, card files . . . . .	70*
Annealing furnaces . . . . .	30	check desk . . . . .	70*
Cleaning . . . . .	30	<b>Machine Shops</b>	
Core making . . . . .	100	Rough bench . . . . .	50
Inspection		Medium bench, rough grinding, buffing . . . . .	100
		<b>Materials Handling</b>	
		Loading trucking . . . . .	20
		Picking stock, classifying . . . . .	30
		Wrapping, packing, labeling . . . . .	50
		<b>Offices</b>	
		Corridors, stairways . . . . .	20(k)
		Reading, transcribing . . . . .	70*
		Regular office work . . . . .	100*
		Accounting, auditing	
		tabulating, business machine operation, rough drafting . . . . .	150*
		Cartography, designing, detailed drafting . . . . .	200
		<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.	