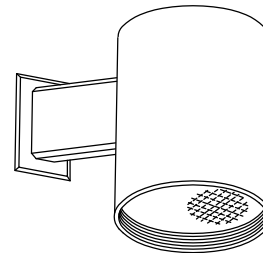
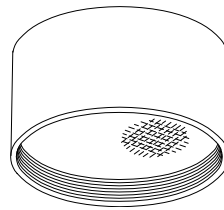


### Surface & Bracket Lensed "Pulse Start" Regressed Downlights: 50 to 150 Watt



12" 100W **HSR-12213**  
9" 150W **HWR-09214**

#### Features

##### Lamp

- Designed for medium base metal halide E-lamps. See chart below for standard and optional wattages.
- See Option -43 and chart below for lower wattage, or HPS availability.

##### Socket

- Medium base. Pulse rated. Horizontal.
- Nickel-plated brass screw shell. Silicone leads. Glazed porcelain.

##### Reflector

- Specular Alzak® aluminum.

##### Trim Assembly

- Seamless tapered black OptiGroove with white self-flanged trim.
- UV absorbing tempered prismatic low brightness C#73 flat glass lens.
- Optional trims and lenses available.

##### Ballast Assembly: Specify Voltage

- WhisperPack™ fully encapsulated 180°C rated HPF pulse start ballast for HWR-09214.

- Core and coil ballast for HSR-12213.
- Class H, high reactance for 120 volt and Options -65, -66; linear reactor, 277 volt.
- Capacitor and ignitor supplied.
- Dimming (-39) and electronic (-96) ballasts available. See Options.
- Cool, quiet, long-life. Silicone leads.

##### Fuse

- Fused primary. Renewable. Not for 480 volt.

##### Housing

- Seamless white acrylic enameled aluminum.
- No visible cylinder hardware.
- Cool: Dissipates heat across entire surface.
- Rustproof: Exceeds 1000 hour ASTM 5% salt spray test.

##### Installation - HSR-12213

- Center point mounting for snug fit to ceiling. Mounting hardware furnished.
- QuickConnect mounting system available (Option -QM). Detail shown, pages 12-13.

- Surface J-box mount available. (Option -80)
- Pendant or wall bracket mount available. (See Options -PM, -WB)
- Indoor or outdoor for covered ceiling use. (See Options -QM, -89)

##### Installation - HWR-09214

- Gasketed prismatic glass WeatherCap, for indirect position, prevents moisture intrusion from above.
- Wall bracket extrusion mounts to housing. Wall plate included, for recessed outlet box.
- Mounting hardware included.
- Indoor or outdoor for covered ceiling use.

##### UL, C-UL (Canada) Listings

- Wet, damp or dry locations, covered ceilings. (See Options -86, -89 for Wet Locations)

##### Three Year Limited Warranty

- Complete standard fixture, including ballast.

#### Wattage Availability

Catalog No.	Lamp/Base	Standard Wattage		Option -43: Lower Wattage		Max. Standby Wattage (-49-65-66-LS)	Fixture Style
		Pulse MH	-24 (HPS)	Pulse MH	-24 (HPS)		
HSR-12213	ED-17/Med	100	100	50-70	35-70	100	Downlight
HWR-09214	ED-17/Med	150	150	50-125	35-100	100	Direct/Indirect

#### Options

##### Sources and Ballasts

- 24 HPS ballast instead. See wattage chart above for available wattages. Specify voltage.
- 39 Remote (10' max.) electronic dimming ballast instead, for pulse start metal halide. Consult factory for wattage and voltage availability.
- 96 Remote (15' max.) electronic MH ballast. Consult factory for internal mounting.

##### Wattage and Voltage

- 43 Lower wattage: See Option -43 chart above for available lower wattages. Specify voltage.
- 120 120 volt, 60 Hz. ballast.
- 277 277 volt, 60 Hz. ballast.
- 347 347 volt, 60 Hz. ballast. Consult factory for dimming or electronic.
- 97 Other voltage ballast. Consult factory.

##### Relays, Standbys, Lamps (See Chart)

- 49 Extra circuit DCB socket. Do not energize simultaneously with main source. Also see -LS. Electronic standby system and DCB socket. Following HID outage, provides immediate light until HID restrikes. Also see -66 and -LS.
- 65 Electronic time delay standby system and DCB socket. Following outage, provides light until HID
- 66 Electronic time delay standby system and DCB socket. Following outage, provides light until HID

- reaches 70% output. Also see Option -LS.
- LP With lamp. Specify source, wattage, color temperature, and clear or coated.
- LS With T-4 DCB tungsten halogen standby lamp. Use only with Options -49, -65 or -66.

##### Lenses and Trims

- 27 Clear 1/4" tempered glass beneath tempered prismatic C#73 flat glass lens for impact resistance.
- 40 White grooveless flare trim assembly instead.
- 45 Gasket between trim and housing.
- 46 Gasket between trim and lens.
- 94 Custom color trim assembly. Consult factory.
- FR Fresnel tempered lens instead.
- HO Holophane concave lens instead.

##### Luminaire (Housing) Finishes

- 35 Natural Aluminum enameled luminaire finish instead.
- 36 Gold enameled luminaire finish instead.
- 37 Dark Bronze enameled luminaire finish instead.
- 38 Black enameled luminaire finish instead.
- 94 Custom color luminaire finish. Consult factory.

##### Mounting Options

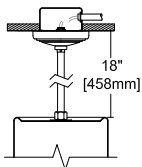
- 54 Safety cable through pendant stem. 12" longer than specified stem length. Anchored to fixture. Use with Option -PM (HSR-12213 only).

- 80 2" concealment collar for mounting luminaire beneath surface outlet box. 1/2" T.S. KO's. For HSR-12213 only.
- 86 Prismatic WeatherCap tempered glass lens for HWR-09214 only (indirect position). Required for Wet Label listing.
- 87 Custom -PM length (HSR-12113 only). Specify up to 4 feet or consult factory for longer lengths with couplers.
- 88 Swivel canopy for sloped ceilings up to 45°. Earthquake rated. Use with Option -PM (HSR-12113 only).
- 89 Sealed top feature for HSR-12213 only. Prevents moisture and insect intrusion from above in outdoor or high humidity areas. Must use with Options -80, -PM or -WB for Wet Label listing.
- PM Pendant mount instead for HSR-12213 only. 3/8" T.S. x 18" standard. Also see Options -54, -87, -88, -89.
- QM QuickConnect mount for HSR-12213 only. For indoor (damp or dry) use only. Housing swings aside for easy wiring, then pivots and locks to matte black collar.
- WB Wall bracket mount instead. Also see Option -89. Standard for HWR-09214.

##### Other Options

- 99 Special modification. Consult factory.

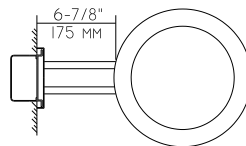
### HSR-12213 HWR-09214



Representative Views:

(Right) With wall bracket

(Left) With pendant mount



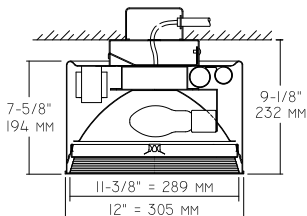
#### Cone of Light Key

- Ft.** Distance from fixture
  - FC** Footcandles (average)
  - Dia.** Circle of light at 50% of FC
- \* Dia. (in ft.) shown is where FC value is half the FC at nadir.

**SC = Spacing Criteria**

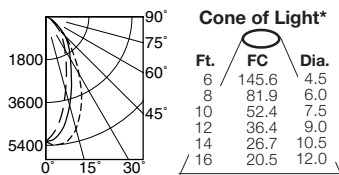
**C.U. (Coefficients of Utilization) Tables are available on request. Please contact your Kirlin representative.**

### HSR-12213 100W



SHOWN WITH OPTION -QM

#### HSR-12213 (Coated Lamp)

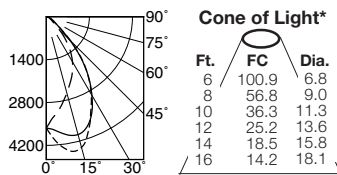


--- 0° SC 0.9 EFFIC: 70.6%  
 --- 90° SC 0.7  
 --- 180° SC 0.6

ITL TEST #53662  
 \*LER = 40.0 \*AEC = \$5.99

CANDLEPOWER DISTRIBUTION					
	0.0	45.0	90.0	135.0	180.0
0	5242	5242	5242	5242	5242
5	5391	5317	5073	4832	4756
15	4880	4446	3849	3393	3200
25	3530	3057	2511	2143	1994
35	2119	1952	1717	1445	1270
45	1142	1160	1108	900	760
55	478	577	549	468	358
65	229	243	229	213	185
75	72	78	86	76	68
85	0	0	0	0	0
90	0	0	0	0	0

#### HSR-12213-FR (Coated Lamp)

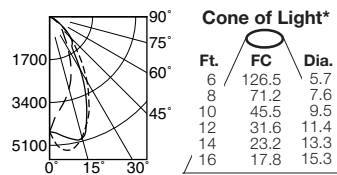


--- 0° SC 1.2 EFFIC: 72.0%  
 --- 90° SC 1.2  
 --- 180° SC 0.8

ITL TEST #53663  
 \*LER = 40.8 \*AEC = \$5.88

CANDLEPOWER DISTRIBUTION					
	0.0	45.0	90.0	135.0	180.0
0	3632	3632	3632	3632	3632
5	4133	4046	3741	3387	3228
15	4418	4547	3982	3037	2585
25	3417	3944	3487	2446	2002
35	2372	2752	2388	1686	1359
45	1126	1276	1075	756	575
55	342	392	366	275	213
65	141	189	195	155	121
75	40	74	82	62	48
85	0	0	0	0	0
90	0	0	0	0	0

#### HSR-12213-HO (Coated Lamp)

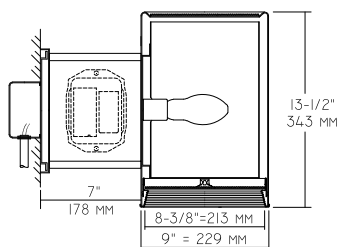


--- 0° SC 1.1 EFFIC: 73.7%  
 --- 90° SC 1.0  
 --- 180° SC 0.7

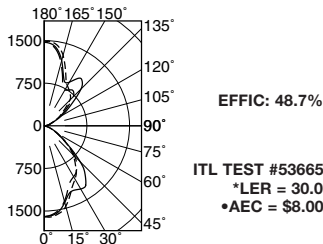
ITL TEST #53664  
 \*LER = 41.8 \*AEC = \$5.74

CANDLEPOWER DISTRIBUTION					
	0.0	45.0	90.0	135.0	180.0
0	4554	4554	4554	4554	4554
5	5246	5134	4697	4092	3823
15	4957	5421	4979	3467	2955
25	3666	4117	3363	2308	1950
35	2231	2165	1614	1234	1065
45	1158	1196	1186	892	671
55	498	585	523	408	322
65	149	179	149	129	92
75	32	60	68	64	44
85	0	0	0	0	0
90	0	0	0	0	0

### HWR-09214 150W



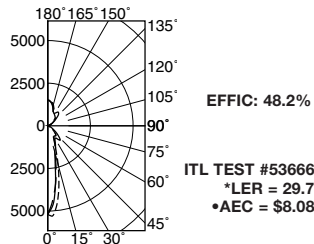
#### HWR-09214 (Coated Lamp)



--- 0° SC 1.0  
 --- 90° SC 1.2  
 --- 180° SC 0.9

CANDLEPOWER DISTRIBUTION					
	0.0	45.0	90.0	135.0	180.0
0	1599	1599	1599	1599	1599
10	1560	1555	1524	1504	1499
30	1084	1212	1284	1094	1034
50	558	600	596	622	588
70	103	105	101	110	108
90	0	0	0	0	0
110	128	130	144	136	135
130	488	601	679	614	565
150	815	946	886	805	729
170	1422	1397	1359	1333	1326
180	1473	1473	1473	1473	1473

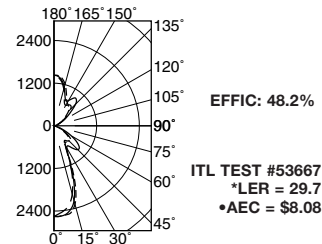
#### HWR-09214-FR (Coated Lamp)



--- 0° SC 0.5  
 --- 90° SC 0.3  
 --- 180° SC 0.4

CANDLEPOWER DISTRIBUTION					
	0.0	45.0	90.0	135.0	180.0
0	5204	5204	5204	5204	5204
10	3747	3254	2595	2578	2828
30	652	824	859	782	736
50	445	594	711	592	491
70	91	109	128	116	98
90	0	0	0	0	0
110	123	124	135	130	126
130	459	571	640	564	515
150	782	910	855	769	697
170	1426	1405	1365	1337	1328
180	1497	1497	1497	1497	1497

#### HWR-09214-HO (Coated Lamp)



--- 0° SC 0.8  
 --- 90° SC 0.7  
 --- 180° SC 0.7

CANDLEPOWER DISTRIBUTION					
	0.0	45.0	90.0	135.0	180.0
0	2552	2552	2552	2552	2552
10	2517	2545	2449	2365	2302
30	631	709	723	666	644
50	563	756	928	728	631
70	114	136	178	150	143
90	0	0	0	0	0
110	121	122	131	124	121
130	453	568	634	563	511
150	749	878	822	738	665
170	1350	1339	1293	1262	1257
180	1421	1421	1421	1421	1421

\* LER (Luminaire Efficacy Rating) = Luminaire Effic. x Total Lamp Lumens x Ballast Factor / Input Watts

\* AEC = Annual Energy Cost per 1000 lumens (based on 3000 hours use @ \$0.08 KWH).

## SUBMITTAL DATA

JOB NAME \_\_\_\_\_  
 TYPE \_\_\_\_\_  
 WATTAGE \_\_\_\_\_ VOLTAGE \_\_\_\_\_  
 CATALOG NUMBER \_\_\_\_\_

## APPROVAL STAMP

LIMITED WARRANTY: CATALOGED KIRLIN FIXTURES ARE WARRANTED FREE OF DEFECTS IN WORKMANSHIP OR MATERIAL FOR THREE YEARS FROM DATE OF PURCHASE, INSTALLED TO N.E.C. IN NORMAL USE. Manufacturer at his option will replace or repair, at no charge, any fixture that is found to be defective in workmanship or material, provided the fixture is returned to the manufacturer within the warranty period. This warranty is void if the fixture is modified, repaired, or altered in any way. This warranty is supplied to the buyer in place of all other warranties, expressed or implied. Seller does not warrant as to merchantability or fitness for a particular use, nor will any oral statement constitute a warranty or amend this specific warranty. Abnormal use, abuse of the fixture, improper installation, or modification of the fixture without prior written authorization from the manufacturer will void the warranty.