

## Champ® H.I.D. Luminaires

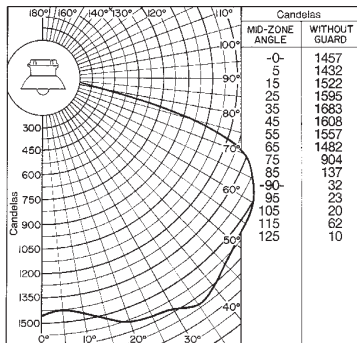
**Lamp: 100W/E-23½ high pressure sodium (HPS)**

**Total bare lamp lumens: 9500**

To determine number and placement of luminaires see Lighting Selector Guide, pages 665 to 689.

NOTE: All data provided is for high pressure sodium luminaires with 100W/E-23½ clear lamps. Use conversion factors (multipliers) shown below for other clear lamp types and wattages. Consult Cooper Crouse-Hinds for additional photometric data on any *Champ* Series luminaire.

### Luminaire with Globe and Dome Reflector



Multipliers (for use with candela curve only).

Luminaire Series	Lamp Watts	Conversion Factor
VMVS	50	0.42
	70	0.67
	150	1.68

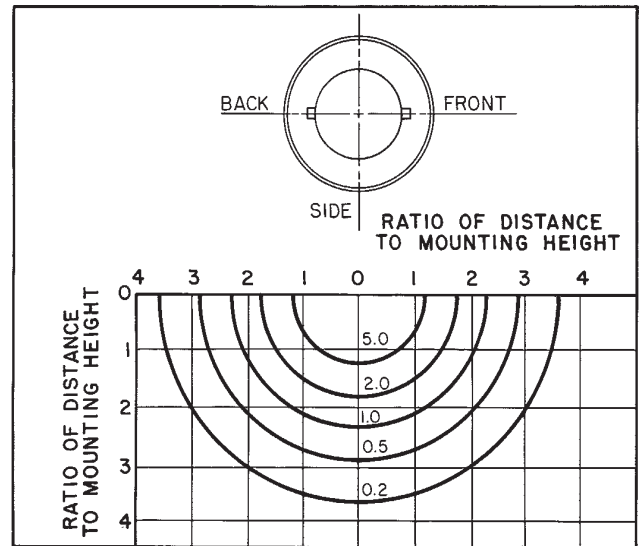
Luminaire spacing ratio: 1.85

### Coefficient of Utilization

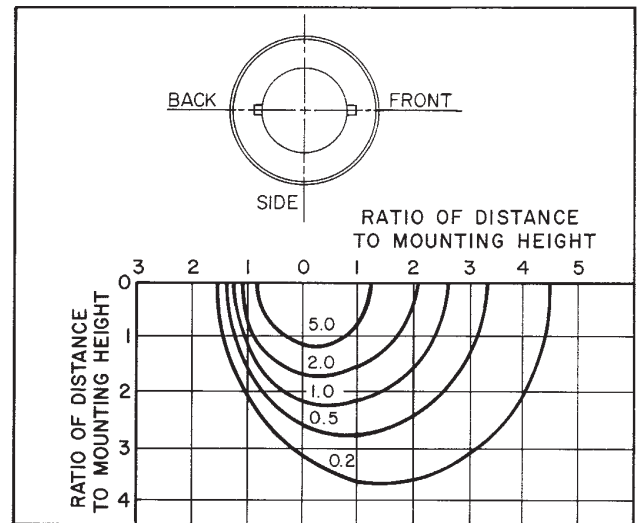
Effective Floor Cavity Reflectance 20%

% Reflectance Eff. Cell	Wall	Room Cavity Ratio				
		1	2	3	4	5
80	50	.823	.707	.610	.529	.464
	30	.784	.646	.538	.451	.384
	10	.749	.594	.482	.391	.324
70	50	.804	.690	.597	.517	.452
	30	.767	.633	.530	.445	.377
	10	.734	.587	.477	.388	.321
50	50	.765	.658	.571	.494	.434
	30	.735	.611	.513	.431	.368
	10	.709	.569	.466	.381	.318
30	50	.731	.629	.546	.473	.416
	30	.708	.591	.497	.419	.357
	10	.685	.555	.456	.375	.312
10	50	.701	.603	.524	.454	.399
	30	.681	.569	.482	.406	.348
	10	.662	.541	.446	.367	.307
0	0	.644	.521	.427	.348	.288
% Reflectance Eff. Cell	Wall	Room Cavity Ratio				
		6	7	8	9	10
80	50	.412	.366	.326	.296	.258
	30	.334	.290	.253	.224	.187
	10	.278	.239	.201	.175	.142
70	50	.403	.359	.320	.291	.252
	30	.329	.285	.250	.221	.187
	10	.274	.235	.200	.174	.142
50	50	.386	.344	.307	.279	.244
	30	.320	.277	.244	.216	.182
	10	.271	.231	.197	.172	.140
30	50	.371	.329	.296	.269	.235
	30	.312	.272	.237	.210	.178
	10	.267	.227	.195	.170	.137
10	50	.357	.319	.285	.260	.227
	30	.304	.266	.232	.206	.173
	10	.263	.224	.192	.167	.135
0	0	.245	.207	.176	.152	.120

### Isofootcandle Chart: Luminaire with Globe and Dome Reflector



### Isofootcandle Chart: Luminaire with Globe and 30° Angle Reflector



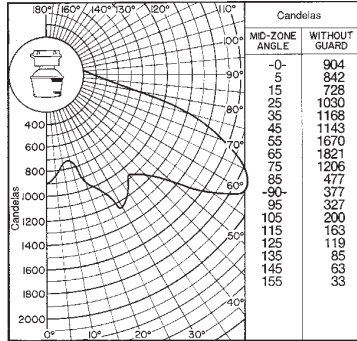
Isofootcandle charts show illumination in footcandles on work plane 10 feet below light center. Multiply by factor shown to convert to other mounting heights.

Height (Ft.)	Factor	Height (Ft.)	Factor
6	2.78	14	0.51
8	1.56	16	0.39
12	0.70		

**Lamp: 100W/E-23½ high pressure sodium (HPS)**

To determine number and placement of luminaires, see Lighting Selector Guide, pages 665 to 689.

**Luminaire with I.E.S. Type V Glass Refractor**



NOTE: Photometric data was developed using a 100 watt clear high pressure sodium lamp (9500 lumens). For other clear lamps, use the following conversion factors (multipliers):

Luminaire Series	Lamp Watts	Conversion Factor
VMVS	50	0.42
	70	0.67
	150	1.68

Luminaire spacing ratio: 2.0

**Coefficient of Utilization**

Effective Floor Cavity Reflectance 20%

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio				
		1	2	3	4	5
80	50	.848	.709	.597	.508	.437
	30	.796	.631	.509	.414	.343
	10	.750	.566	.439	.341	.271
70	50	.818	.682	.576	.489	.419
	30	.770	.611	.493	.402	.331
	10	.726	.552	.428	.334	.264
50	50	.759	.632	.533	.451	.389
	30	.720	.574	.464	.377	.312
	10	.685	.521	.407	.318	.253
30	50	.706	.586	.493	.417	.359
	30	.675	.538	.435	.354	.291
	10	.645	.495	.386	.302	.240
10	50	.658	.544	.457	.385	.331
	30	.632	.504	.408	.331	.274
	10	.608	.469	.366	.286	.227
0	0	.581	.441	.340	.260	.203

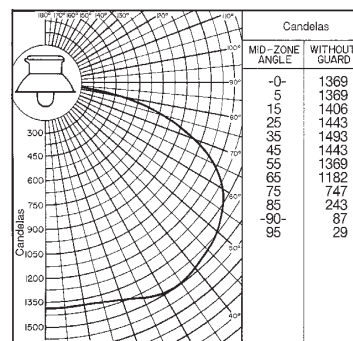
  

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio				
		6	7	8	9	10
80	50	.384	.337	.299	.272	.238
	30	.292	.249	.214	.189	.159
	10	.226	.189	.154	.132	.103
70	50	.369	.325	.288	.262	.229
	30	.283	.240	.203	.183	.156
	10	.218	.182	.150	.130	.105
50	50	.341	.301	.266	.243	.214
	30	.266	.225	.195	.173	.146
	10	.209	.173	.143	.124	.099
30	50	.316	.277	.248	.225	.198
	30	.249	.213	.182	.161	.136
	10	.199	.163	.136	.117	.093
10	50	.292	.258	.223	.209	.134
	30	.233	.200	.171	.151	.127
	10	.188	.154	.128	.110	.087
0	0	.165	.133	.108	.091	.070

**Lamp: 175W/E-28 mercury vapor (MV)**

To determine number and placement of luminaires, see Lighting Selector Guide, pages 665 to 689.

**Luminaire with Globe and Dome Reflector**



NOTE: Photometric data was developed using a 175 watt diffuse mercury vapor lamp (8600 lumens). For other diffuse lamps, use the following conversion factors (multipliers):

Luminaire Series	Lamp Watts	Conversion Factor
VMVC	100	0.49
VMVM	70	0.65
	100	0.91
	175	1.63

Luminaire spacing ratio: 1.60

**Coefficient of Utilization**

Effective Floor Cavity Reflectance 20%

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio				
		1	2	3	4	5
80	50	.793	.682	.591	.515	.453
	30	.753	.623	.522	.440	.376
	10	.718	.572	.468	.382	.319
70	50	.775	.667	.580	.505	.442
	30	.738	.611	.514	.435	.370
	10	.705	.566	.463	.379	.316
50	50	.739	.637	.555	.483	.426
	30	.709	.591	.498	.422	.362
	10	.682	.550	.454	.374	.313
30	50	.707	.611	.532	.484	.409
	30	.683	.572	.485	.411	.352
	10	.660	.537	.445	.388	.309
10	50	.679	.588	.512	.446	.394
	30	.658	.553	.471	.400	.345
	10	.639	.525	.436	.362	.304
0	0	.622	.506	.418	.343	.287

% Reflectance Eff. Ceil.	Wall	Room Cavity Ratio				
		6	7	8	9	10
80	50	.403	.359	.320	.291	.253
	30	.328	.285	.250	.221	.185
	10	.275	.236	.199	.174	.142
70	50	.395	.352	.314	.286	.248
	30	.324	.281	.247	.219	.185
	10	.271	.233	.198	.174	.142
50	50	.379	.339	.303	.276	.241
	30	.316	.274	.241	.215	.181
	10	.298	.230	.196	.172	.140
30	50	.366	.325	.293	.266	.233
	30	.309	.268	.235	.209	.177
	10	.265	.226	.195	.170	.138
10	50	.353	.318	.282	.257	.225
	30	.301	.264	.231	.208	.179
	10	.282	.224	.193	.168	.136
0	0	.245	.208	.177	.153	.122