

EFFECTIVE INTENSITY TABLES (Schmidt-Clausen Method of Calculation)

6-Lens Carousel

Lamp Size	Hor. Div. ¹ (deg)	Ver. Div. ² (deg)	Fix Int. ³ (cd)	Effective Intensity (E.F.I.) in White															
				120 sec 0.5 rpm	90 sec .666 rpm	72 sec .833 rpm	60 sec 1.0 rpm	48 sec 1.25 rpm	40 sec 1.5 rpm	30 sec 2.0 rpm	24 sec 2.5 rpm	20 sec 3.0 rpm	15 sec 4.0 rpm	12 sec 5.0 rpm	10 sec 6.0 rpm	9 sec 6.66 rpm	8 sec 7.5 rpm	7 sec 8.57 rpm	6 sec 10.0 rpm
12V/10W** On-Time	1.05°	1.47°	144,836	47,271 0.350	39,015 0.263	33,184 0.210	28,870 0.175	24,166 0.140	20,781 0.117	16,232 0.087	13,317 0.070	11,291 0.058	8,655 0.044	7,013 0.035	5,900 0.029	5,335 0.026	4,764 0.023	4,105 0.020	3,605 0.017
20W* On-Time	1.10°	1.55°	335,851	121,840 0.367	101,688 0.275	87,181 0.220	76,298 0.183	64,283 0.147	55,538 0.122	43,659 0.092	35,966 0.073	30,578 0.061	23,529 0.046	19,121 0.037	16,104 0.031	14,572 0.028	13,021 0.024	11,457 0.021	9,872 0.018
35W* On-Time	1.20°	1.70°	508,904	203,491 0.400	171,796 0.300	148,523 0.240	130,802 0.200	110,981 0.160	96,377 0.133	76,296 0.100	63,140 0.080	53,854 0.066	41,614 0.050	33,908 0.040	28,609 0.033	25,913 0.030	23,177 0.027	20,412 0.023	17,605 0.020
50W* On-Time	1.30°	1.90°	629,343	264,095 0.433	224,341 0.325	194,837 0.260	172,191 0.217	146,670 0.173	127,738 0.144	101,527 0.108	84,242 0.086	71,987 0.072	55,761 0.054	45,505 0.043	38,435 0.036	34,832 0.033	31,172 0.029	27,468 0.025	23,705 0.022
75W** On-Time	1.40°	2.00°	652,474	300,366 0.467	258,448 0.350	226,630 0.280	201,788 0.233	173,344 0.187	151,928 0.156	121,826 0.117	101,679 0.093	87,251 0.078	67,963 0.058	55,659 0.047	47,127 0.039	42,761 0.035	38,316 0.031	33,808 0.027	29,214 0.023
100W** On-Time	1.40°	2.16°	972,732	445,312 0.467	382,858 0.350	335,444 0.280	298,598 0.233	256,367 0.187	224,601 0.156	179,996 0.117	150,171 0.093	128,826 0.078	100,310 0.058	82,130 0.047	69,529 0.039	63,083 0.035	56,521 0.031	49,865 0.027	43,086 0.023
110W/12V On-Time	1.40°	2.50°	996,468	446,064 0.467	382,275 0.350	334,120 0.280	296,859 0.233	254,324 0.187	222,450 0.156	177,867 0.117	148,172 0.093	126,977 0.078	98,724 0.058	80,757 0.047	68,323 0.039	61,969 0.035	55,504 0.031	48,952 0.027	42,282 0.023
70W**/120VAC On-Time	1.90°	3.32°	1,277,613	679,689 0.633	598,449 0.475	534,212 0.380	482,429 0.317	421,295 0.253	373,911 0.211	305,249 0.158	257,891 0.127	223,255 0.106	175,983 0.079	145,232 0.063	123,629 0.053	112,487 0.048	101,077 0.042	89,439 0.037	77,512 0.032

8-Lens Carousel

Lamp Size	Hor. Div. ¹ (deg)	Ver. Div. ² (deg)	Fix Int. ³ (cd)	Effective Intensity (E.F.I.) in White															
				120 sec 0.5 rpm	90 sec .666 rpm	72 sec .833 rpm	60 sec 1.0 rpm	48 sec 1.25 rpm	40 sec 1.5 rpm	30 sec 2.0 rpm	24 sec 2.5 rpm	20 sec 3.0 rpm	15 sec 4.0 rpm	12 sec 5.0 rpm	10 sec 6.0 rpm	9 sec 6.66 rpm	8 sec 7.5 rpm	7 sec 8.57 rpm	6 sec 10.0 rpm
12V/10W** On-Time	0.85°	1.60°	117,382	35,408 0.283	29,006 0.213	24,542 0.170	21,268 0.142	17,728 0.113	15,199 0.094	11,824 0.071	9,676 0.057	8,188 0.047	6,263 0.035	5,071 0.028	4,260 0.024	3,849 0.021	3,435 0.019	3,019 0.017	2,597 0.014
20W* On-Time	1.00°	1.65°	259,965	89,147 0.333	73,950 0.250	63,125 0.200	55,064 0.167	46,227 0.133	39,834 0.111	31,204 0.083	25,647 0.067	21,770 0.056	16,692 0.042	13,568 0.033	11,417 0.028	10,326 0.025	9,223 0.022	8,112 0.019	6,986 0.017
35W* On-Time	1.10°	1.83°	396,299	149,650 0.367	125,472 0.275	107,929 0.220	94,690 0.183	79,999 0.147	69,256 0.122	54,591 0.092	45,052 0.073	38,351 0.061	29,558 0.046	24,045 0.037	20,266 0.031	18,345 0.028	16,398 0.024	14,434 0.021	12,442 0.018
50W* On-Time	1.15°	2.00°	499,528	200,807 0.383	169,642 0.288	146,696 0.230	129,274 0.192	109,730 0.153	95,319 0.128	75,491 0.096	62,492 0.077	53,319 0.064	41,205 0.048	33,579 0.038	28,336 0.032	25,666 0.029	22,958 0.026	20,220 0.022	17,441 0.019
75W** On-Time	1.35°	2.10°	465,540	208,498 0.450	178,693 0.338	156,226 0.270	138,778 0.225	118,899 0.180	104,001 0.150	83,162 0.113	69,279 0.090	59,369 0.075	46,162 0.056	37,762 0.045	31,948 0.038	28,977 0.034	25,954 0.030	22,891 0.026	19,772 0.023
100W** On-Time	1.35°	2.25°	743,576	332,501 0.450	284,909 0.338	249,046 0.270	221,203 0.225	189,490 0.180	165,729 0.150	132,500 0.113	110,371 0.090	94,575 0.075	73,529 0.056	60,145 0.045	50,882 0.038	46,149 0.034	41,335 0.030	36,455 0.026	31,487 0.023
110W/12V On-Time	1.35°	2.45°	723,697	312,927 0.450	266,891 0.338	232,484 0.270	205,934 0.225	175,868 0.180	153,463 0.150	122,301 0.113	101,659 0.090	86,978 0.075	67,406 0.056	55,132 0.045	46,600 0.038	42,247 0.034	37,822 0.030	33,341 0.026	28,784 0.023
70W**/120VAC On-Time	1.80°	3.25°	998,416	518,072 0.600	454,217 0.450	404,107 0.360	363,956 0.300	316,830 0.240	280,509 0.200	228,191 0.150	192,320 0.120	166,195 0.100	130,689 0.075	107,684 0.060	91,565 0.050	83,264 0.045	74,777 0.040	66,128 0.035	57,273 0.030

*HP (High Pressure) ¹Horizontal Divergence (degrees)
 **Halogen ²Vertical Divergence (degrees)
 ***Metal Halide – UVP ³Fixed Intensity (cd)

Time to complete one revolution in seconds

NOTE: Fixed Intensity figures are the result of measurements through the lens only.
 Effective Intensity figures are reduced by 10% for glazing losses.

To correct effective intensity for coloured lenses, multiply intensity by 0.3 for red and green and by 0.65 for yellow.

All lamps listed herein were measured within the 6-lens carousel and the 8-lens carousel at the U.S. Coast Guard light range, and the IALA recommended Schmidt-Clausen Method of Calculation has been used to determine the effective intensities (E.F.I.) shown in these tables.