

# INTENSITY/LUMINOUS RANGE

**TABLE FOR DARKNESS LUMINOUS RANGE IN NAUTICAL MILES**

Intensity in Candelas	T-factor		Intensity in Candelas	T-factor	
	0.74	0.85		0.74	0.85
1	1.0	1.1	450	7.9	10.6
2	1.4	1.5	500	8.1	11.0
3	1.6	1.8	550	8.2	11.3
4	1.8	2.1	600	8.4	11.6
5	2.0	2.3	650	8.6	11.8
6	2.2	2.4	700	8.7	12.0
7	2.3	2.6	800	8.9	12.4
8	2.4	2.7	900	9.2	12.8
9	2.5	2.9	1 000	9.4	13.2
10	2.6	3.0	1 100	9.6	13.5
11	2.6	3.1	1 200	9.8	13.8
12	2.7	3.2	1 300	9.9	14.1
13	2.8	3.3	1 400	10.1	14.3
14	2.9	3.4	1 500	10.2	14.5
15	3.0	3.5	1 600	10.3	14.7
16	3.1	3.6	1 700	10.5	15.0
17	3.2	3.7	1 800	10.6	15.2
18	3.2	3.8	1 900	10.7	15.3
19	3.3	3.9	2 000	10.8	15.5
20	3.3	4.0	2 200	11.0	15.8
25	3.6	4.3	2 400	11.2	16.1
30	3.8	4.6	2 700	11.4	16.5
35	4.0	4.8	3 000	11.7	16.9
40	4.1	5.1	3 500	12.0	17.5
45	4.3	5.3	4 000	12.2	17.9
50	4.4	5.5	5 000	12.7	18.8
55	4.6	5.7	6 000	13.1	19.5
60	4.7	5.8	7 000	13.5	20.0
65	4.8	6.0	8 000	13.8	20.5
70	4.9	6.1	9 000	14.1	21.0
75	5.0	6.2	10 000	14.3	21.4
80	5.1	6.4	15 000	15.2	23.0
85	5.2	6.5	20 000	15.9	24.1
90	5.3	6.7	30 000	16.8	25.8
95	5.4	6.8	40 000	17.5	27.0
100	5.4	6.9	50 000	18.1	28.0
110	5.5	7.1	70 000	18.9	29.4
120	5.6	7.2	100 000	19.8	31.0
130	5.8	7.4	150 000	20.8	32.8
140	5.9	7.6	200 000	21.5	34.1
150	6.0	7.8	300 000	22.6	35.9
160	6.1	8.0	400 000	23.3	37.2
170	6.2	8.1	500 000	23.9	38.3
180	6.3	8.3	700 000	24.8	39.9
190	6.4	8.4	1 000 000	25.7	41.5
200	6.5	8.5	1 500 000	26.8	43.5
220	6.7	8.8	2 000 000	27.6	44.9
240	6.8	9.0	3 000 000	28.6	46.8
270	7.0	9.3	4 000 000	29.4	48.2
300	7.2	9.6	5 000 000	30.0	49.4
330	7.3	9.8	7 000 000	31.0	51.0
360	7.5	10.0	10 000 000	31.9	52.8
400	7.7	10.4			

*Note: These range figures assume an eye illumination of 0.2 microlux and that the lightsource is free from interference by background lighting.*

**TABLE FOR DAYLIGHT**

Nominal range	Intensity	Luminous intensity*
1	1Nm > 1,000cd	0
	2Nm > 12,000cd	4,600
2	3Nm > 45,000cd	25,000
	4Nm > 120,000cd	75,000
3	5Nm > 267,000cd	182,000
	6Nm > 539,000cd	383,000
4	7Nm > 1,020,000cd	745,000
	8Nm > 1,820,000cd	1,400,000
5	9Nm > 3,160,000cd	2,400,000
	10Nm > 5,3330,000cd	4,100,000
6		6,900,000

*Intensity required for given range rounded to nearest sea mile  
 (Appendix IV IALA recommendation No 60).  
 \* See appendix II IALA recommendation No 60.*