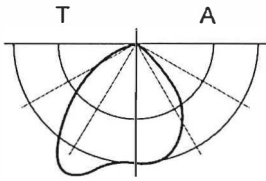


It is often impossible simultaneously to achieve the desired illuminance ratios and vector/scalar ratios without changes in reflectance, and even then it may still be impossible. Wall-washers may be employed to increase the wall-to-task illuminance ratio. The IR charts illustrate that for most cases a proportion of upward light from the luminaire is desirable to achieve acceptable ceiling-to-task illuminance ratios. Table 3.3 shows a typical table of utilisation factors.

**Table 3.3** Typical presentation of utilisation factor table and associated performance data

Nadir intensity*	302 cd/1000 lm				
SHR <sub>max</sub> (square)	1.36				
SHR <sub>max tr</sub> (continuous rows)	1.75				
ULOR*	0.00				
DLOR*	0.64				
LOR*	0.64				
<b>*Correction factors</b>					
	36 W	58 W	32 W	50 W	
Length Factor	1.00	1.00	1.00	1.00	
HF Factor	—	—	1.01	1.01	

**Utilisation Factors (UF<sub>F</sub>) for SHR<sub>nom</sub> of 1.25**

Room Reflectances			Room index (K)								
C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
70	50	20	0.45	0.51	0.56	0.58	0.62	0.64	0.66	0.68	0.69
	30		0.41	0.48	0.52	0.55	0.59	0.62	0.64	0.66	0.68
	10		0.38	0.45	0.49	0.53	0.57	0.60	0.62	0.65	0.66
50	50	20	0.44	0.50	0.54	0.57	0.60	0.62	0.64	0.65	0.67
	30		0.40	0.47	0.51	0.54	0.58	0.60	0.62	0.64	0.65
	10		0.38	0.44	0.49	0.52	0.56	0.58	0.60	0.63	0.64
30	50	20	0.43	0.49	0.53	0.55	0.58	0.60	0.62	0.63	0.64
	30		0.40	0.46	0.50	0.53	0.56	0.59	0.60	0.62	0.63
	10		0.37	0.44	0.48	0.51	0.55	0.57	0.59	0.61	0.62
0	0	0	0.36	0.43	0.47	0.49	0.53	0.55	0.56	0.58	0.59

Using the photometric data given above: DLOR = 0.64, DF<sub>F</sub> (room index  $K = 1.0$ ) = 0.43, therefore DR = 0.67. As the ULOR = 0%, the FFR = 0.

By plotting these values, which apply to reflectances LMM and  $K = 1.0$ , both the illuminance ratios and vector/scalar ratio are outside the 'safe area'. It can be seen that an installation of this luminaire in a small room would produce dark walls and ceilings.

**Note:** The charts in TR15 are based on the British Zonal method (BZ) numbers and charts have been re-plotted for direct ratios. The figures below can be used to produce overlays for use with the IR charts in the last edition of TR15