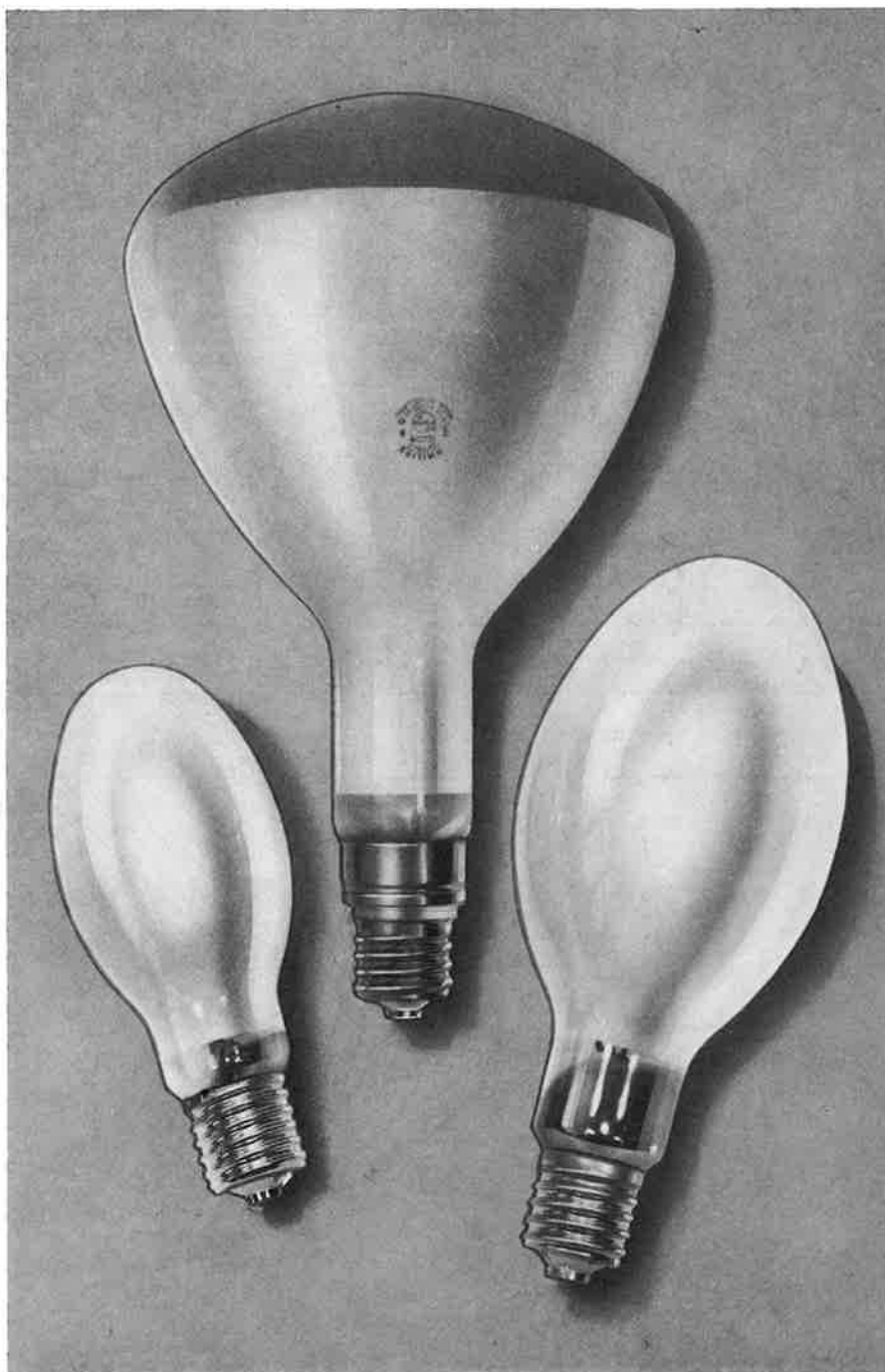


PHILIPS

CI/SfB	(63.9)
UDC	696.6 : 628.94

POWERWHITE MBF/U POWERWHITE DELUXE MBF/U POWERRAY MBFR/U



Mercury fluorescent lamps

PowerWhite and PowerRay lamps are coated on the inside surface with an Europium-activated yttrium vanadate phosphor, which is activated by the UV component in the mercury discharge to add the red component to the visible light from the mercury arc. The results are lamps of high efficacy and acceptable colour rendering which can be burned in any position – although PowerRay lamps are normally burned vertically cap up. They are suitable for many applications.

PowerWhite lamps are housed in ovoid envelopes; PowerRay lamps are of spotlight form, and have an additional reflecting layer of titanium dioxide between the phosphor and the glass, directing the light downwards and rendering the lamp impervious to degradation due to dust settling on the upper surfaces.

Certain ratings of PowerWhite lamps are available with DeLuxe phosphor coatings, which give greatly improved colour rendering properties at no expense of efficacy.

RANGE

PowerWhite MBF/U mercury fluorescent lamps:

Available in ratings of 50W, 80W, 125W, 250W, 400W, 700W, 1000W and 2000W.

PowerWhite DeLuxe MBF/U mercury fluorescent lamps:

Available in ratings of 50W, 80W, 125W, 250W and 400W.

PowerRay MBFR/U mercury fluorescent reflector lamps:

Available in ratings of 125W, 250W, 400W, 700W and 1000W.

DISCHARGE LAMPS



Handbook Ref.

2.2.2

To reorder this data sheet quote

9.77 PL 1768

Replaces

PL 6190/5.5 PL 6190/4.7

APPLICATIONS

Suitable for any application where efficacy, long life and reasonable colour rendering are important, in situations such as:

- Lighting factories and warehouses
- Floodlighting
- Road lighting

In addition, the DeLuxe version is suitable for use in hotels, departmental stores and offices.

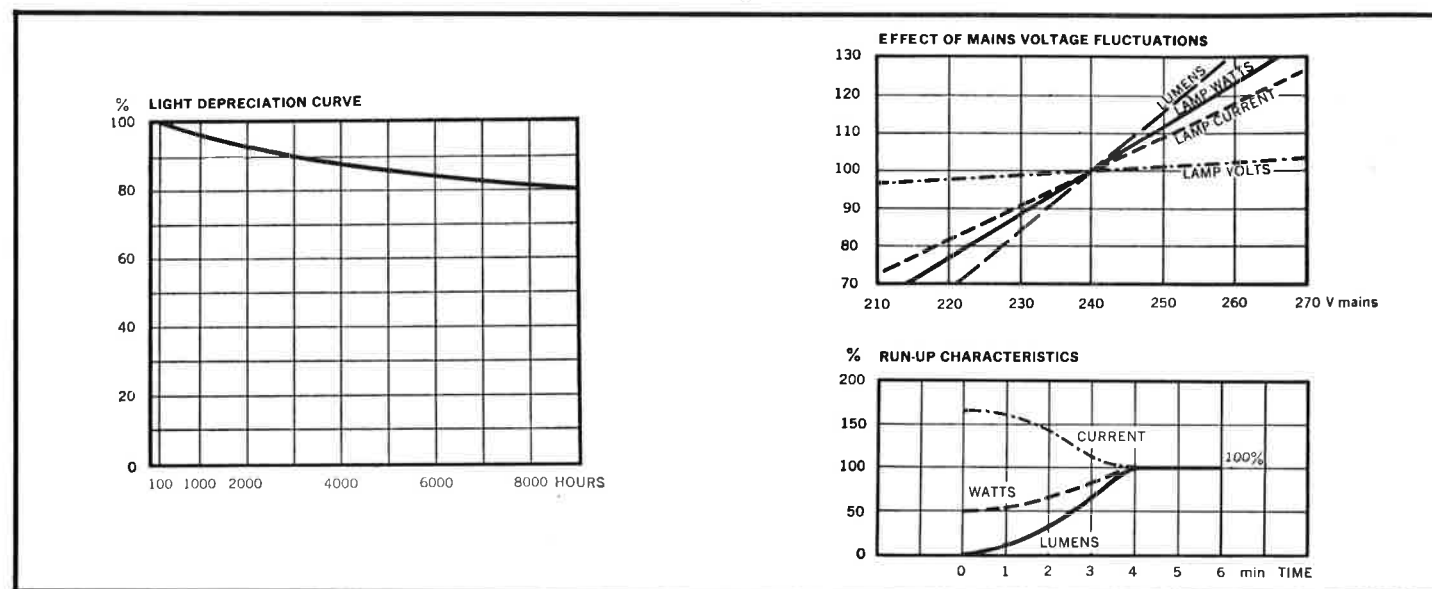
NOTE: Discharge lamps MUST be operated in conjunction with a suitable current-limiting ballast. For details of the control gear manufactured for use with PowerWhite and PowerRay lamps, and relevant circuit diagrams, see Sheet PL1779.

FEATURES

- Short run-up time – 80% of full light output is achieved after only 3½ minutes.
- Reliable starting, even at temperatures down to -30°C (-18°C for 380/440V 1000W lamp).
- Isothermal hard glass outer envelope on sizes from 125W MBF and 250 MBF DeLuxe and MBFR upwards permit use in exposed positions (if weatherproof connections are used).
- Reasonable colour rendering, coupled with high efficacy (around 50 lumens/Watt) permits economical use in many industrial and floodlighting applications.

- Good colour rendering of DeLuxe PowerWhite lamps permits use in offices and other commercial environments, and is also suitable for departmental store lighting.
- Larger versions have GES caps which screw on to preformed outer envelopes, eliminating the danger of the cap becoming loose.
- PowerRay version gives preferential light distribution downwards, and is immune from degradation in use due to dust settling on the upper surfaces. Some upwards light is permitted, to avoid a tunnel effect.

Made in Holland



PHOTOMETRIC, ELECTRICAL & ORDERING DATA

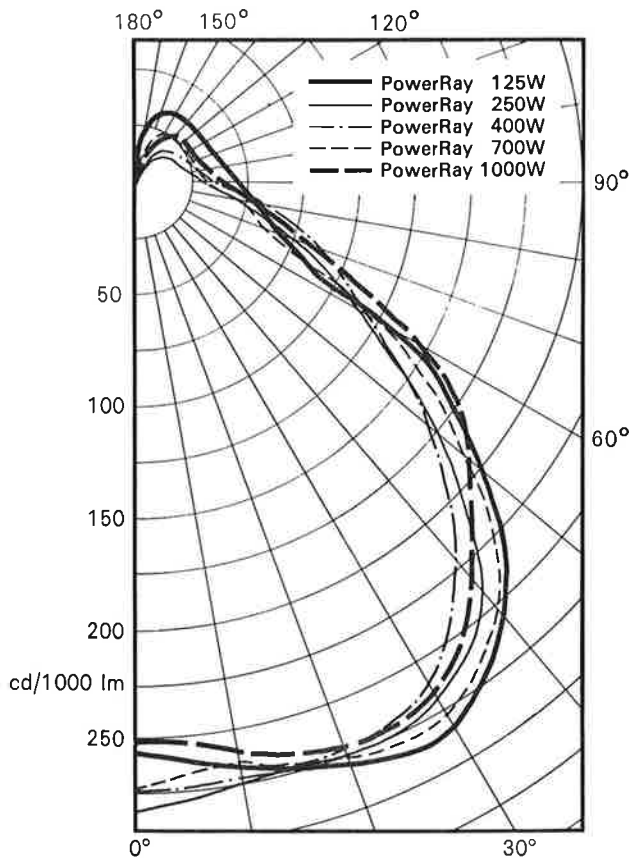
Catalogue Number & Rating	Total Circuit Watts	Lighting Design Lumens	Lamp Volts	Lamp current (Amperes)	Overall length (mm nominal)	Diameter (mm nominal)	Cap	Ballast	PFC Capacitor	Packing Quantity (Lamps)
PowerWhite MBF/U lamps:										
50 MBF/U	62	1,900	95	0.6	129	56	ES	L4053	L4008/07	50
80 MBF/U	88	3,650	115	0.8	156	71	ES/	L5080BX	L4008/07	32
							3-pin BC			
125 MBF/U	137	5,800	125	1.2	177	76	ES, GES	L5125BX	L4008/07	24
							or 3-pin BC			
250 MBF/U	268	12,500	135	2.0	227	91	GES	L5250BX	L4016/07	9
400 MBF/U	424	21,300	140	3.2	290	122	GES	L5400BX	L4020/07	6
700 MBF/U	730	36,500	140	5.6	329	142	GES	L4700BX	2 x L4016/07	6
1000 MBF/U	1040	52,200	145	7.3	410	167	GES	L4990	2 x L4025/07	4
1000 MBF/U*	—	52,200	265	4.0	410	167	GES	Not available		6
2000 MBF/U*	2080	110,000	270	8.0	440	186	GES	L4991	3 x L4025/07 (between phases)	4
PowerWhite DeLuxe MBF/U lamps (quote DeLuxe on order):										
50 MBF/U	62	1,900	95	0.6	129	56	ES	L4053	L4008/07	40
80 MBF/U	88	3,650	115	0.8	156	71	ES	L5080BX	L4008/07	40
125 MBF/U	137	6,200	125	1.2	177	76	ES	L5125BX	L4008/07	24
250 MBF/U	268	13,300	135	2.0	227	91	GES	L5250BX	L4016/07	9
400 MBF/U	424	22,800	140	3.2	290	122	GES	L5400BX	L4020/07	6
PowerRay MBFR/U lamps:										
125 MBFR/U	137	4,900	125	1.2	190	126	ES, GES	L5125BX	L4008/07	9
							or 3-pin BC			
250 MBFR/U	268	10,800	135	2.0	264	166	GES	L5250BX	L4016/07	5
400 MBFR/U	424	18,000	140	3.2	304	181	GES	L5400BX	L4020/07	5
700 MBFR/U	730	35,600	140	5.6	328	202	GES	L4700BX	2 x L4016/07	4
1000 MBFR/U	1040	49,800	145	7.3	380	222	GES	L4990	2 x L4025/07	4

Notes: Please order lamps by catalogue numbers, in multiples of the packing quantity.

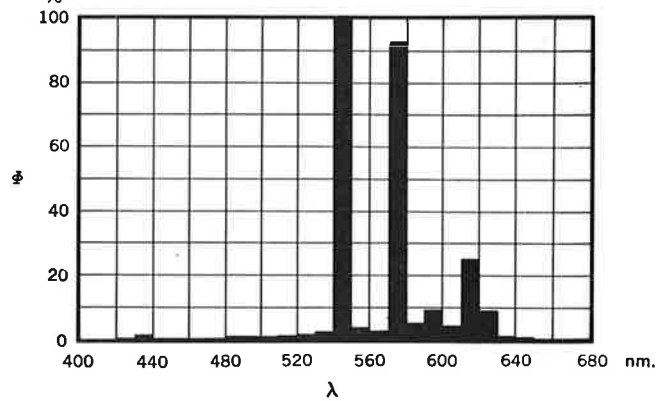
Lighting Design Lumens refers to the light output after 2000 hours' burning, the value used for design purposes.

*For operation on 380/440V supplies only.

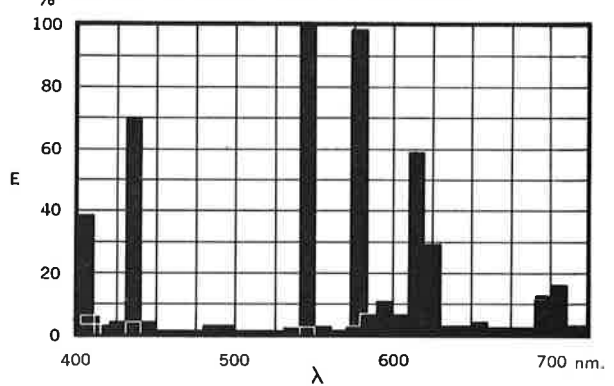
LIGHT DISTRIBUTION



RELATIVE SPECTRAL LIGHT DISTRIBUTION

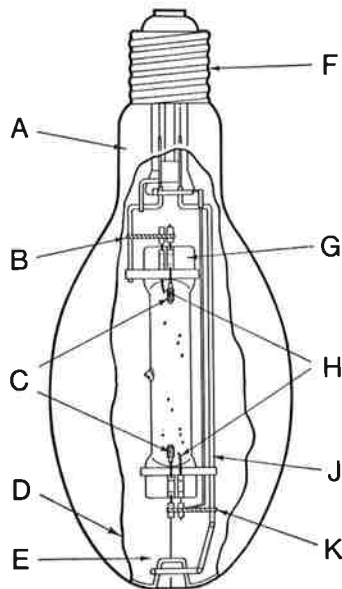


RELATIVE SPECTRAL POWER DISTRIBUTION

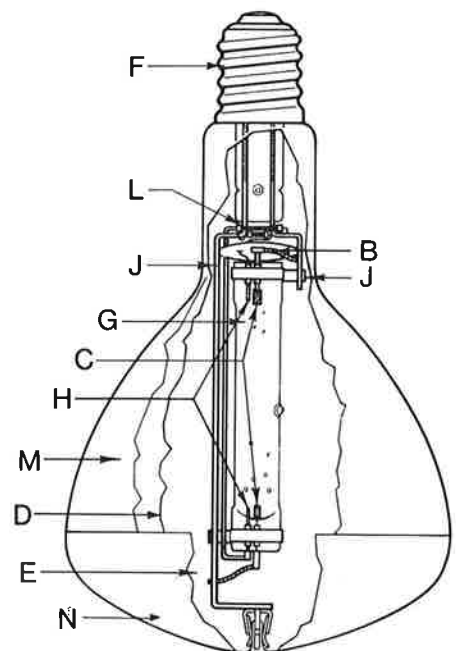


PowerWhite and PowerWhite DeLux MBF/U

- A Isothermal hard glass outer envelope 125w-400w
- B Lead-in wire
- C Main electrodes
- D Internal phosphor coating
- E Inert gas filling
- F Nickel-plated cap
- G Quartz discharge tube
- H Twin auxiliary electrodes
- J Support
- K Lead-in wire
- L Twin auxiliary electrode resistors
- M Outer reflecting layer
- N Hard glass outer envelope satin frosted



PowerRay



Products offered for sale may differ from those described or illustrated in this leaflet due to later production changes in specifications, components or place of manufacture. The contents of this leaflet are therefore not to be treated as representations as to the current availability of products as described, or as to products actually offered for sale.

**PHILIPS
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