Pendant Light Fittings

BAD61 Series Explosion-proof Light Fittings

- Explosion protection to
  - -CENELEC
  - -IEC
  - -NEC
- Can be used in
  - Zone 1 and Zone 2
  - Zone 21 and Zone 22
- Available lamp (max. 400W)
  - -Metal halide lamp (HIE)
  - -High pressure mercury lamp (HSE)
  - -High pressure sodium lamp (HME)
- Three enclosure types: 125, 250, 400.
- Integral control gear, easy installation and maintenance.
- Explosion-proof trigger, rapid starting, stable performance and long service life.
- Wireless connection between body and top cover, easy installation and maintenance.
- Powder coated wire guard, white.
- Toughened glass cover resistant to temperature changes.

Catalogue number logic

BAD61-□-□□□

- Mounting
  - D: hook type
  - G: pendant pole type
  - B: wall type
  - X: ceiling type
  - L: pole type
- Lamp wattage (W)
- Lamp
  - HIE: Metal halide lamp
  - HSE: High pressure sodium lamp
  - HME: High pressure mercury lamp
- Enclosure type: 125, 250,400
- Explosion-proof light fittings

Selection table

Type/Ordering code	Available lamp wattage (W)			Lamp holder
	HIE	HSE	HME	
BAD61-125	70, 100, 150	70, 100	80, 125	E27
BAD61-250	175, 250	150, 250	175, 250	E40
BAD61-400	400	400	400	E40

Note

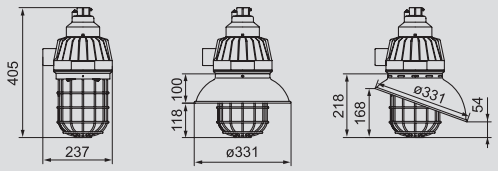
1. The light fittings are supplied without lamp. PHILIPS lamps are recommended.
2. HPI European standard ballast is supplied with HIE light fitting. HPI European standard lamps are recommended.
3. The light fittings are supplied without external reflector. Please specify when ordering.

Zones 1&2; 21&22

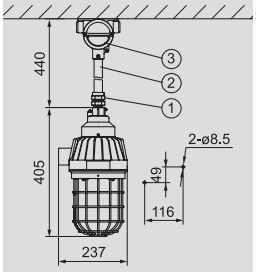
Technical data

Explosion-proof light fittings	BAD61-125-□□□
Explosion protection	Ⓔx II 2 GD Ex d IIC T4/T3 Gb / Ex tD A21 T135℃/T200℃ IP66
Certificates	DNV 10 ATEX 85533X; FM (USA); GOST.R (Russia); IECEx
Conformity to standards	EN 60079-0:2009, EN 60079-1:2007, EN 61241-0:2006, EN 61241-1:2004 IEC 60079-0:2007, IEC 60079-1:2007, IEC 61241-0:2004, IEC 61241-1:2004
Material	
Enclosure	Copper-free aluminium, powder coated external surface, rape yellow (RAL1021)
Wire guard	Powder coated carbon steel, white
Transparent cover	Toughened glass, stands 4J impact
Ballast	Choke ballast, rapid starting, stable performance
Trigger	Explosion-proof trigger
Capacitor	Power factor ⩾ 0.85 (compensated)
Internal reflector	High-purity aluminium
External reflector (optional)	Pure aluminium, anodicoxidation treatment for surface
Exposed fastener	Stainless steel
Lamp	
Lamp holder	E27
Available lamp and lamp wattage (W)	Metal halide lamp (HIE): 70W, 100W, 150W High pressure mercury lamp (HME): 80W, 125W High pressure sodium lamp (HSE): 70W, 100W Note: HPI European standard ballast is available in general
Rated voltage	220～240V AC 50Hz (60Hz is optional)
Earthing protection	M5 (internal & external earth bolt)
Degree of protection	IP66
Ambient temperature	-60℃~+40℃: T4/T135℃; -60℃~+55℃: T3/T200℃
Terminal	3 x 1.5～2.5mm² (L+N+PE)
Cable entries	1 x G3/4″ (pendant pole type and hook type); 4 x M25x1.5 (wall type and ceiling type); 1 x G1″(pole type)
Cable gland	See Mounting Accessories and Spare Parts Table
Available cable outer diameter	Ø10～Ø14 (mm)

Mounting type (all dimensions in mm) - subject to alteration

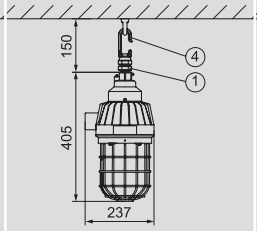


G: pendant pole type



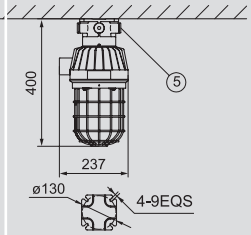
Weight: 10.35kg
Accessories supplied with the light fittings
①.BGJ-III explosion-proof connector G3/4″(M)/M25 x 1.5 (F), carbon steel.
②.Straight pipe(M25 x 1.5), 300mm long.
③.BHD51-F (Ex d IIC, copper-free aluminium), see P3/6.

D: hook type



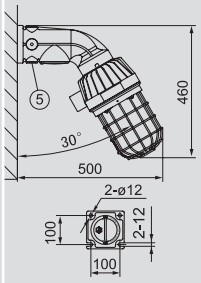
Weight: 9.30kg
Accessories supplied with the light fittings:
①.BGJ-III explosion-proof connector G3/4″(M)/M25 x 1.5 (F), carbon steel.
④.Hook (stainless steel)

X: ceiling type



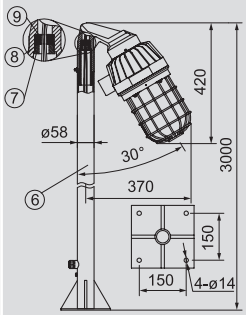
Weight: 9.45kg
Accessories supplied with the light fittings:
⑤.4 x M25 x1.5 Plug; Ex d cable gland (optional): DQM-II (Ex d) or DQM-III (Ex d) is recommended.
Please see P7/20～25.

B: wall type



Weight: 11.20kg
Accessories supplied with the light fittings:
⑤.4 x M25 x1.5 Plug; Ex d cable gland (optional): DQM-II (Ex d) or DQM-III (Ex d) is recommended.
Please see P7/20～25.

L: pole type

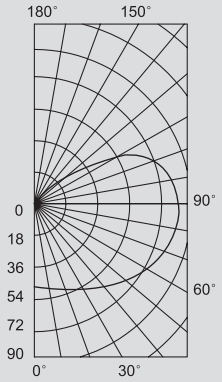


Weight: 9.70kg
Accessories supplied with the light fittings:
⑥.Pole shall be provided by user.
⑦.Locking bolt, 1No,
⑧.Washer, 2 Nos.
⑨.Seal ring, 1 No.

Photometric data (BAD61-125)

Photometric data of 100W high pressure sodium lamp

Rated luminous flux:9000lm;
The data from PHILIPS lamp;
Luminous intensity distribution cd/1000lm

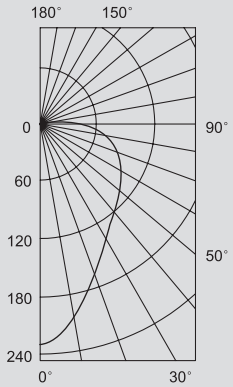


70W High pressure sodium lamp∗0.67
70W Metal halide lamp∗0.56
100W Metal halide lamp∗0.94
80W High pressure mercury lamp∗0.41
125W High pressure mercury lamp∗0.68
150W Metal halide lamp∗1.66

Angle	CP	Angle	CP	Angle	CP
0	423	60	654	120	591
5	256	65	694	125	432
10	205	70	725	130	275
15	181	75	749	135	110
20	199	80	772	140	25
25	252	85	786	145	14
30	314	90	785	150	8
35	379	95	782	155	0
40	436	100	774	160	0
45	552	105	757	165	0
50	600	110	723	170	0
55	611	115	670	175	0
				180	0

Photometric data of 100W high pressure sodium lamp (with wide reflector)

Rated luminous flux:9000lm;
The data from PHILIPS lamp;
Luminous intensity distribution cd/1000lm

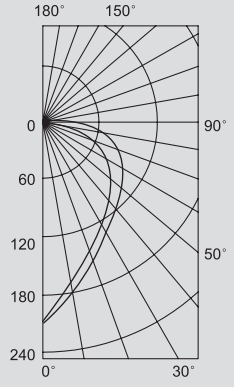


70W High pressure sodium lamp∗0.67
70W Metal halide lamp∗0.56
100W Metal halide lamp∗0.94
80W High pressure mercury lamp∗0.41
125W High pressure mercury lamp∗0.68
150W Metal halide lamp∗1.66

Angle	CP	Angle	CP	Angle	CP
0	2089	60	845	120	4
5	1895	65	841	125	0
10	1685	70	838	130	0
15	1521	75	826	135	0
20	1371	80	661	140	0
25	1240	85	389	145	0
30	1131	90	107	150	0
35	1042	95	25	155	0
40	962	100	17	160	0
45	971	105	13	165	0
50	929	110	7	170	0
55	862	115	5	175	0
				180	0

Photometric data of 100W high pressure sodium lamp (with angle reflector)

Rated luminous flux:9000lm;
The data from PHILIPS lamp;
Luminous intensity distribution cd/1000lm



70W High pressure sodium lamp∗0.67
70W Metal halide lamp∗0.56
100W Metal halide lamp∗0.94
80W High pressure mercury lamp∗0.41
125W High pressure mercury lamp∗0.68
150W Metal halide lamp∗1.66

0° Reflection angle CP			
0	1897	95	265
5	1685	105	29
15	1474	115	20
25	1289	125	14
35	1143	135	0
45	1046	145	0
55	884	155	0
65	834	165	0
75	822	175	0
85	763	180	0
90	523		

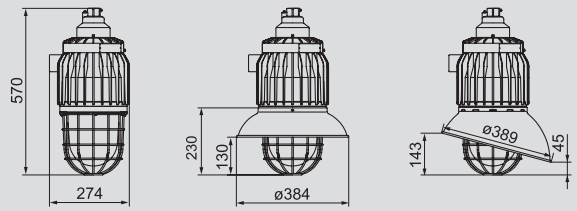
90° Reflection angle CP			
0	1897	95	13
5	1779	105	12
15	1388	115	0
25	1034	125	0
35	762	135	0
45	730	145	0
55	699	155	0
65	394	165	0
75	52	175	0
85	22	180	0
90	16		

We can provide lighting design and data by professional lighting software DIALUX based upon simulated site situation on request.

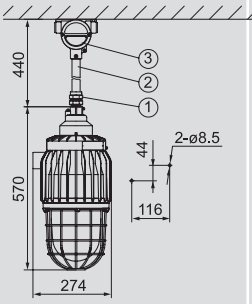
Technical data

Explosion-proof light fittings	BAD61-250- □□□
Explosion protection	
Gas explosion protection	Ⓔx II 2 G Ex d IIC T3
Dust explosion protection	Ex tD A21 T195℃ IP65
Certificates	
For gas explosion protection	LCIE 05 ATEX 6142; IECEx CQM 07.0003; FM (USA); GOST.R (Russia)
For dust explosion protection	PCEC (China)
Conformity to standards	EN 60079-0:2006, EN 60079-1:2004 IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004
Material	
Enclosure	Copper-free aluminium, powder coated external surface, rape yellow (RAL1021)
Wire guard	Powder coated carbon steel, white
Transparent cover	Toughened glass, stands 4J impact
Ballast	Choke ballast, rapid starting, stable performance
Trigger	Explosion-proof electronic trigger
Capacitor	Power factor ⩾ 0.85 (compensated)
Internal reflector	High-purity aluminium
External reflector (optional)	Pure aluminium, anodicoxidation treatment for surface
Exposed fastener	Stainless steel
Lamp	
Lamp holder	E40
Available lamp and lamp wattage (W)	Metal halide lamp (HIE): 175W, 250W High pressure mercury lamp (HME): 175W, 250W High pressure sodium lamp (HSE): 150W, 250W Note: HPI European standard ballast is available in general
Rated voltage	220～240V AC 50Hz (60Hz is optional)
Earthing protection	M5 (internal & external earth bolt)
Degree of protection	IP65
Ambient temperature	-20℃～+55℃
Terminal	3 x 1.5～2.5mm² (L+N+PE)
Cable entries	1 x G3/4˝ (pendant pole type and hook type); 4 x M25x1.5 (wall type and ceiling type); 1 x G1˝ (pole type)
Cable gland	See Mounting Accessories and Spare Parts Table
Available cable outer diameter	Ø10～Ø14 (mm)

Mounting type (all dimensions in mm) - subject to alteration

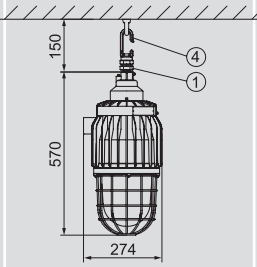


G: pendant pole type



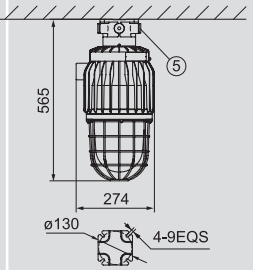
Weight: 17.20kg
Accessories supplied with the light fittings:
①.BGJ-III explosion-proof connector G3/4˝(M)/M25 x 1.5 (F), carbon steel.
②.Straight pipe(M25 x 1.5), 300mm long.
③.BHD51-F(Ex d IIC, cast iron), see P3/6.

D: hook type



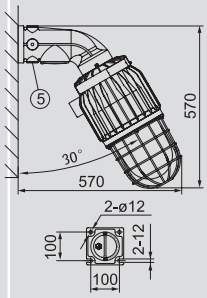
Weight: 14.55kg
Accessories supplied with the light fittings:
①.BGJ-III explosion-proof connector G3/4˝(M)/M25 x 1.5 (F), carbon steel.
④.Hook (stainless steel)

X: ceiling type



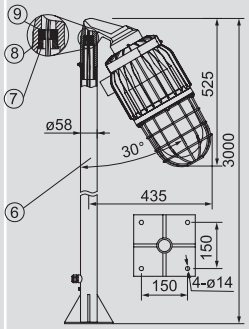
Weight: 15.20kg
Accessories supplied with the light fittings:
⑤.4 x M25 x1.5 Plug; Ex d cable gland (optional): DQM-II (Ex d) or DQM-III (Ex d) is recommended.
Please see P7/20～25.

B: wall type



Weight: 16.95kg
Accessories supplied with the light fittings:
⑤.4 x M25 x1.5 Plug; Ex d cable gland (optional): DQM-II (Ex d) or DQM-III (Ex d) is recommended.
Please see P7/20～25.

L: pole type



Weight: 15.50kg
Accessories supplied with the light fittings:
⑥.Pole shall be provided by user.
⑦.Locking bolt, 1 No.
⑧.Washer, 2 Nos.
⑨.Seal ring, 1 No.

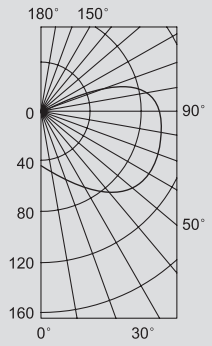
Photometric data (BAD61-250)

Photometric data of 175W metal halide lamp

Rated luminous flux:14000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



150W High pressure sodium lamp∗1.07
250W High pressure sodium lamp∗2
250W Metal halide lamp∗1.64
175W High pressure mercury lamp∗0.53
250W High pressure mercury lamp∗0.91

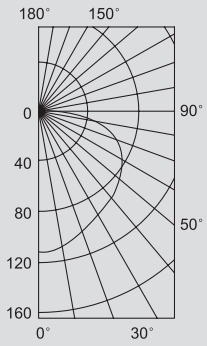
Angle	CP	Angle	CP	Angle	CP
0	669	60	1315	120	116
5	633	65	1367	125	84
10	598	70	1287	130	58
15	562	75	1381	135	47
20	569	80	1365	140	36
25	554	85	1448	145	28
30	565	90	1439	150	23
35	665	95	1440	155	19
40	771	100	1432	160	16
45	990	105	1347	165	10
50	1213	110	1114	170	3
55	1257	115	618	175	2
				180	2

Photometric data of 175W metal halide lamp (with wide reflector)

Rated luminous flux:14000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



150W High pressure sodium lamp∗1.07
250W High pressure sodium lamp∗2
250W Metal halide lamp∗1.64
175W High pressure mercury lamp∗0.53
250W High pressure mercury lamp∗0.91

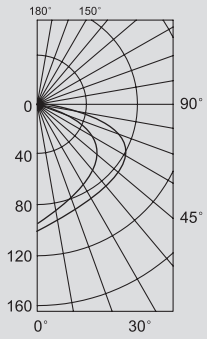
Angle	CP	Angle	CP	Angle	CP
0	1580	60	1127	120	12
5	1479	65	1129	125	8
10	1383	70	1016	130	4
15	1399	75	976	135	3
20	1256	80	938	140	3
25	1166	85	709	145	3
30	1104	90	130	150	3
35	1023	95	56	155	3
40	1033	100	39	160	3
45	958	105	31	165	3
50	1137	110	23	170	3
55	1133	115	16	175	3
				180	3

Photometric data of 175W metal halide lamp (with angle reflector)

Rated luminous flux:14000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



150W High pressure sodium lamp∗1.07
250W High pressure sodium lamp∗2
250W Metal halide lamp∗1.64
175W High pressure mercury lamp∗0.53
250W High pressure mercury lamp∗0.91

0° Reflection angle CP			
0	1358	95	32
5	1259	105	14
15	1246	115	6
25	1061	125	3
35	980	135	3
45	959	145	3
55	1116	155	3
65	1071	165	3
75	564	175	3
85	79	180	3
90	40		

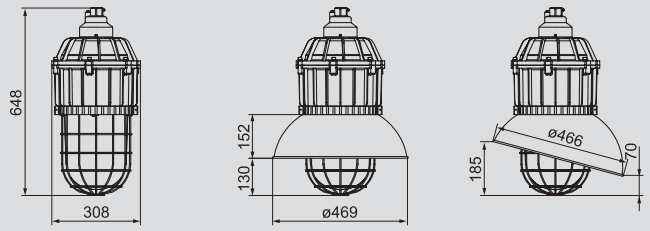
90° Reflection angle CP			
0	1358	95	9
5	1237	105	4
15	1073	115	3
25	962	125	3
35	897	135	3
45	862	145	3
55	983	155	3
65	301	165	3
75	66	175	3
85	25	180	3
90	14		

We can provide lighting design and data by professional lighting software DIALUX based upon simulated site situation on request.

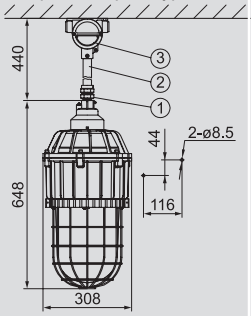
Technical data

Explosion-proof light fittings	BAD61-400-□□□
Explosion protection	
Gas explosion protection	Ⓔx II 2 G Ex d IIC T3
Dust explosion protection	Ex tD A21 T195℃ IP65
Certificates	
For gas explosion protection	LCIE 07 ATEX 6085; IECEx CQM 08.0004; FM (USA); GOST.R (Russia)
For dust explosion protection	PCEC (China)
Conformity to standards	EN 60079-0:2004, EN 60079-1:2004 IEC 60079-0:2004, IEC 60079-1:2003, IEC 61241-0:2004, IEC 61241-1:2004
Material	
Enclosure	Copper-free aluminium, powder coated external surface, rape yellow (RAL1021)
Wire guard	Powder coated carbon steel, white
Transparent cover	Toughened glass, stands 4J impact
Ballast	Choke ballast, rapid starting, stable performance
Trigger	General trigger
Capacitor	Power factor ⩾ 0.85 (compensated)
Internal reflector	High-purity aluminium
External reflector (optional)	Pure aluminium, anodicoxidation treatment for surface
Exposed fastener	Stainless steel
Lamp	
Lamp holder	E40
Available lamp and lamp wattage (W)	Metal halide lamp (HIE): 400W High pressure mercury lamp (HME): 400W High pressure sodium lamp (HSE): 400W Note: HPI European standard ballast is available in general
Rated voltage	220～240V AC 50Hz (60Hz is optional)
Earthing protection	M5 (internal & external earth bolt)
Degree of protection	IP65
Ambient temperature	-20℃～+55℃
Terminal	3 x 1.5～2.5mm^2 (L+N+PE)
Cable entries	1 x G3/4″ (pendant pole type and hook type); 4 x M25x1.5 (wall type and ceiling type); 1 x G1″(pole type)
Cable gland	See Mounting Accessories and Spare Parts Table
Available cable outer diameter	Ø10～Ø14 (mm)

Mounting type (all dimensions in mm) - subject to alteration

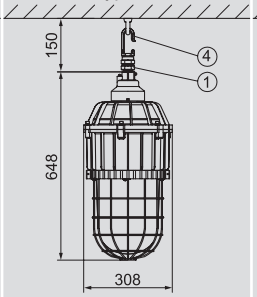


G: pendant pole type



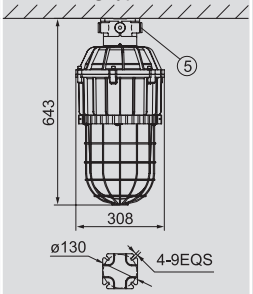
Weight: 23.65kg
Accessories supplied with the light fittings:
①.BGJ-III explosion-proof connector G3/4″(M)/M25 x 1.5 (F), carbon steel.
②.Straight pipe(M25 x 1.5), 300mm long.
③.BHD51-F (Ex d IIC, cast iron), see P3/6.

D: hook type



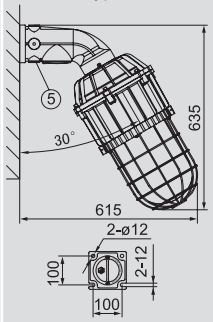
Weight: 20.85kg
Accessories supplied with the light fittings:
①.BGJ-III explosion-proof connector G3/4″(M)/M25 x 1.5 (F), carbon steel.
④.Hook (stainless steel)

X: ceiling type



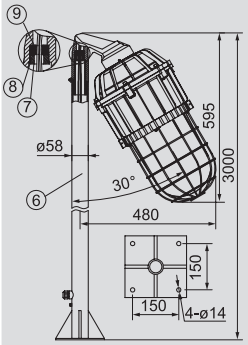
Weight: 21.50kg
Accessories supplied with the light fittings:
⑤.4 x M25 x1.5 Plug; Ex d cable gland (optional): DQM-II (Ex d) or DQM-III (Ex d) is recommended.
Please see P7/20～25.

B: wall type



Weight: 23.25kg
Accessories supplied with the light fittings:
⑤.4 x M25 x1.5 Plug; Ex d cable gland (optional): DQM-II (Ex d) or DQM-III (Ex d) is recommended.
Please see P7/20～25.

L: pole type



Weight: 21.80kg
Accessories supplied with the light fittings:
⑥.Pole shall be provided by user.
⑦.Locking bolt, 1 No.
⑧.Washer, 2 Nos.
⑨.Seal ring, 1 No.

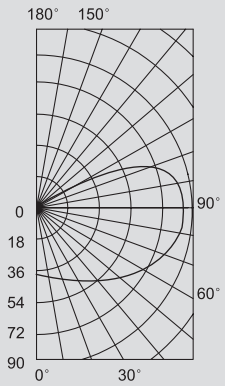
Photometric data (BAD61-400)

Photometric data of 400W metal halide lamp

Rated luminous flux:38000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



400W High pressure sodium lamp∗1.26
400W High pressure mercury lamp∗0.58

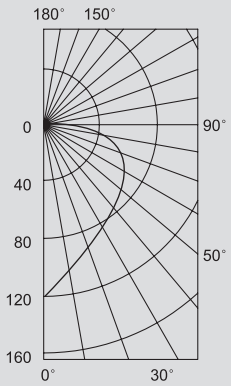
Angle	CP	Angle	CP	Angle	CP
0	1373	60	2538	120	139
5	1324	65	2431	125	110
10	1501	70	2576	130	98
15	1640	75	2838	135	82
20	1531	80	2794	140	70
25	1398	85	2437	145	67
30	1787	90	2318	150	60
35	1961	95	2483	155	55
40	2054	100	2498	160	49
45	1738	105	2197	165	38
50	2255	110	1129	170	28
55	2428	115	215	175	13
				180	7

Photometric data of 400W metal halide lamp (with wide reflector)

Rated luminous flux:38000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



400W High pressure sodium lamp∗1.26
400W High pressure mercury lamp∗0.58

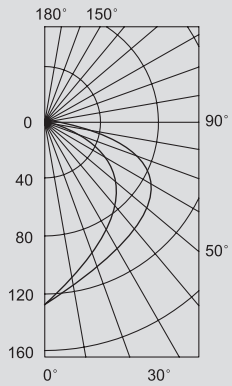
Angle	CP	Angle	CP	Angle	CP
0	4480	60	2137	120	5
5	4884	65	2143	125	5
10	4922	70	1981	130	6
15	4821	75	1711	135	6
20	4682	80	819	140	6
25	4224	85	248	145	0
30	3880	90	91	150	0
35	3394	95	59	155	0
40	3087	100	36	160	0
45	3138	105	19	165	0
50	2935	110	8	170	0
55	2335	115	7	175	0
				180	0

Photometric data of 400W metal halide lamp (with angle reflector)

Rated luminous flux:38000lm;

The data from PHILIPS lamp;

Luminous intensity distribution cd/1000lm



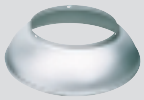
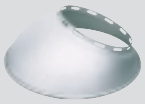
400W High pressure sodium lamp∗1.26
400W High pressure mercury lamp∗0.58

0° Reflection angle CP			
0	4948	95	59
5	5312	105	20
15	5523	115	0
25	4992	125	0
35	4021	135	0
45	3569	145	0
55	2559	155	0
65	2194	165	0
75	1541	175	0
85	216	180	0
90	95		

90° Reflection angle CP			
0	4948	95	6
5	4900	105	6
15	4809	115	0
25	3987	125	0
35	3431	135	0
45	3515	145	0
55	2149	155	0
65	1626	165	0
75	119	175	0
85	130	180	0
90	14		

We can provide lighting design and data by professional lighting software DIALUX based upon simulated site situation on request.

Accessories

Picture	Name	Ordering code	Weight (kg)
	125 Wide reflector	61001	0.15
	250 Wide reflector	61002	0.27
	400 Wide reflector	61003	0.53
	125 Angle reflector	61004	0.15
	250 Angle reflector	61005	0.36
	400 Angle reflector	61006	0.52
	Hook	61020	0.20
	Explosion-proof electronic trigger (125, 250 type)	61034	0.34
	E27 Lamp holder	61035	0.06
	E40 Lamp holder	61036	0.30
	125 Explosion-proof capacitor	61037	0.45
	250 Explosion-proof capacitor	61038	0.50

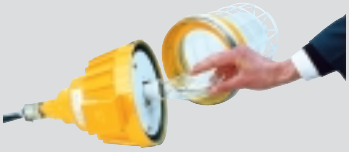
Note: Ballast, 400 type trigger, 400 type capacitor see P2/4

Power connection and lamp replacement

◆ Unscrew lock bolt at top cover, remove top cover and circlip, and take terminal block out.

◆ Connect the cable to terminal block, put terminal block and cirlip back to ensure proper connection.

◆ Screw top cover at light fitting, keep two arrows on two parts in line to ensure proper connection between two spring contact plates.



◆ Unscrew bolts at transparent cover, open the transparent cover and screw lamp into lamp holder. Close cover and screw bolts.