

# Kingwell

## LED Low/High Bay

Power Consumption : 50/100/120W

Color : CW/NW/WW

CRI : 70/75/80

Field Angle : 40°/60°/90°/120°

*Green Light*

B E Y O N D • I L L U M I N A T I O N



# Saving 70% energy and electricity with High Bay

Comparison of LED High Bay and mercury vapor lamp electricity tariff

Item	120W LED High Bay	400W Mercury Vapor Lamp
Cost of electricity (KWh)*	9.21¢	9.21¢
Year(s)	3	3
Operation in hrs(1 day)	24	24
Operation in days(1 year)	365	365
Annual KWh	24x365x120/1000	24x365x400/1000
1 years KWh	1,051	3,504
2 years KWh	2,102	7,008
3 years KWh	3,153	10,512
Cost of electricity 2 years	<b>US\$ 193.6</b>	<b>US\$ 645.4</b>
Cost of electricity 3 years	<b>US\$ 290.4</b>	<b>US\$ 968.2</b>

\* The average retail price of electricity in California 2009 was 9.21 cents per kilowatt-hour (kWh)

## Comparison of Lifetime



Mercury Vapor Lamp

**6,000 hr**

Increase the replacement cost



LED Low/High Bay

**25,000 hr**

Long lifetime with 2 years warranty

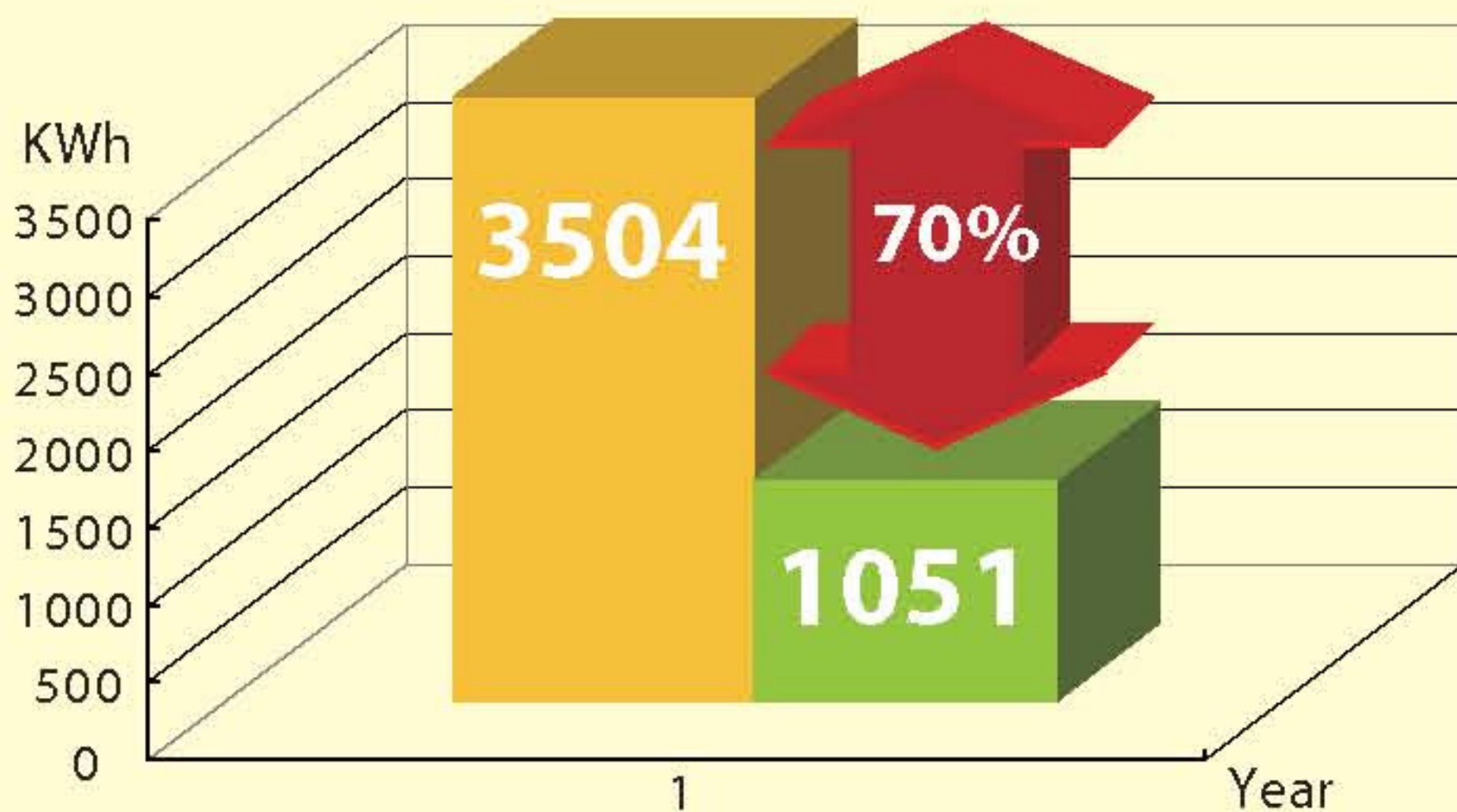
LED High Bay provides long lifetime and **2** years warranty, which can greatly reduced the replacement cost.

## Comparison of energy saving

Mercury Vapor Lamp (400W)

LED High Bay (120W)

Power Reduction by **70%**

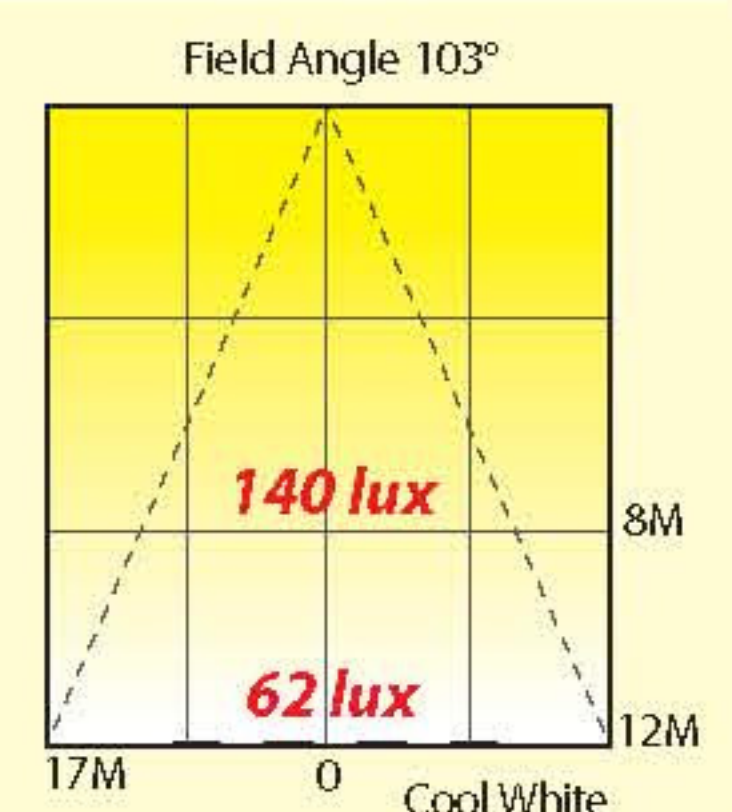
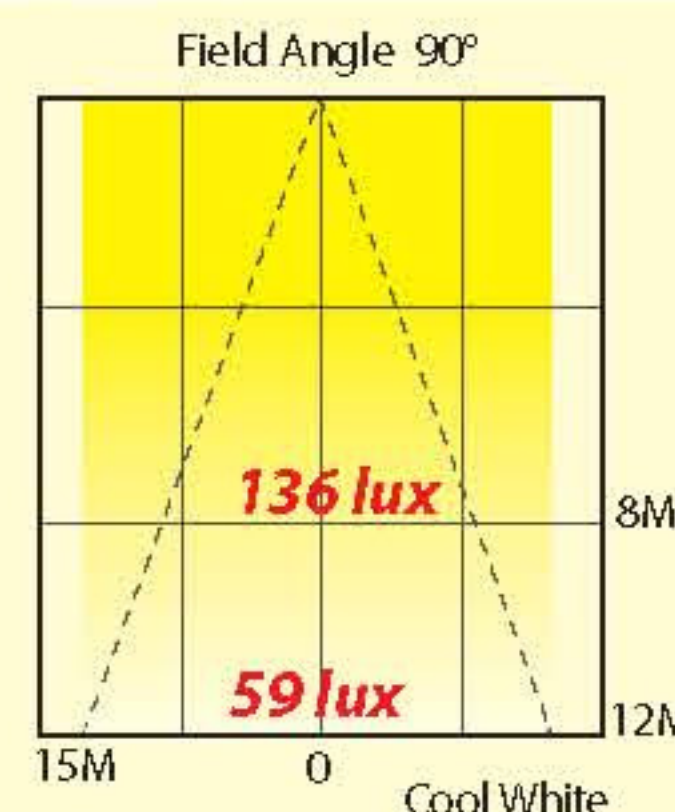


Calculation based on 24 hours of daily operation (9.41/KWh)

## Comparison of illuminance

LED High Bay (120W)

Mercury Vapor Lamp (400W)



## Using LED High Bay yearly make?



Power Reduction by **70%**

=



Reduction of CO<sub>2</sub> emission by **1010kg**

=



Saves **72** trees a year

=



**Environmentally Friendly**



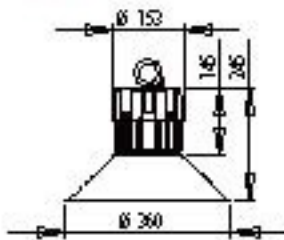
# Specifications

## Specifications

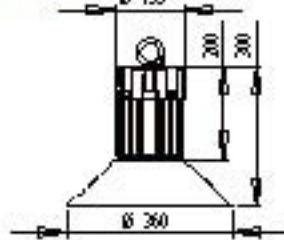
Parameter	Rating	Units
Power Consumption	50 / 100 / 120	W
Field Angle	40° / 60° / 90° / 120°	Degree
Color Temperature	6600 / 4300 / 3000	K

Parameter	Rating	Units
CRI	CW70 / NW75 / WW80	-
Weight	33 / 43 / 48	Kg
AC Input Voltage	100~277	V

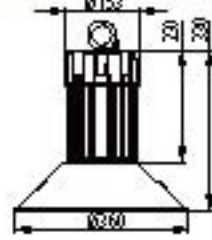
50W



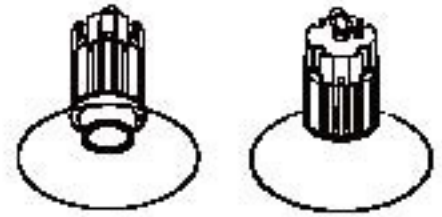
100W



120W



Note: CW=Cool White / NW=Neutral White / WW=Warm White



Unit: mm

## Luminous Flux

(Unit: lm)

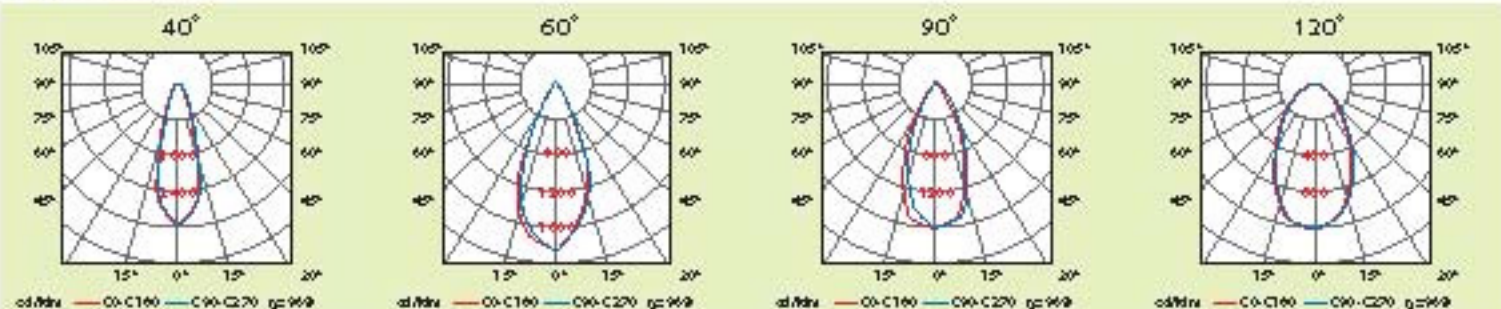
Power	PartNo.	CCT	Field Angle	Flux(min.)	Flux(Typ.)
50W	KW1W-0510	6600K	40°	2100lm	2300lm
	KW1H-0510	4000K	40°	1750lm	1950lm
	KW1X-0510	3000K	40°	1650lm	1850lm
	KW1W-0520	6600K	60°	2350lm	2600lm
	KW1H-0520	4000K	60°	2000lm	2200lm
	KW1X-0520	3000K	60°	1900lm	2100lm
	KW1W-0530	6600K	90°	2400lm	2700lm
	KW1H-0530	4000K	90°	2100lm	2300lm
	KW1X-0530	3000K	90°	2000lm	2200lm
	KW1W-0530	6600K	120°	2350lm	2600lm
KW1H-0530	4000K	120°	2000lm	2200lm	
KW1X-0530	3000K	120°	1900lm	2100lm	
100W	KW1W-1010	6600K	40°	3950lm	4250lm
	KW1H-1010	4000K	40°	3150lm	3500lm
	KW1X-1010	3000K	40°	2750lm	3050lm
	KW1W-1020	6600K	60°	4800lm	4800lm
	KW1H-1020	4000K	60°	3600lm	4000lm
	KW1X-1020	3000K	60°	3100lm	3450lm
	KW1W-1000	6600K	90°	4800lm	5000lm
	KW1H-1000	4000K	90°	3700lm	4100lm
	KW1X-1000	3000K	90°	3300lm	3600lm
	KW1W-1030	6600K	120°	4800lm	4800lm
KW1H-1030	4000K	120°	3600lm	4000lm	
KW1X-1030	3000K	120°	3100lm	3450lm	
120W	KW1W-1210	6600K	40°	5400lm	6000lm
	KW1H-1210	4000K	40°	4850lm	4850lm
	KW1X-1210	3000K	40°	3800lm	4250lm
	KW1W-1220	6600K	60°	6050lm	6700lm
	KW1H-1220	4000K	60°	5000lm	5500lm
	KW1X-1220	3000K	60°	4800lm	4800lm
	KW1W-1200	6600K	90°	6300lm	7000lm
	KW1H-1200	4000K	90°	5100lm	5700lm
	KW1X-1200	3000K	90°	4800lm	5000lm
	KW1W-1230	6600K	120°	6050lm	6700lm
KW1H-1230	4000K	120°	5000lm	5500lm	
KW1X-1230	3000K	120°	4800lm	4800lm	

## Luminous Lux

Lux with different distance (Unit: lux)

Power	PartNo.	4m (Typ.)	6m (Typ.)	8m (Typ.)	10m (Typ.)	12m (Typ.)
50W	KW1W-0510	40	18	10	6.4	4.4
	KW1H-0510	34	15	8.4	5.2	3.6
	KW1X-0510	32	14	8	5	3.4
	KW1W-0520	24	10	5.8	3.8	2.6
	KW1H-0520	20	9	5	3	2
	KW1X-0520	9	8.2	4.6	3	2
	KW1W-0530	205	9	5	3.2	2.2
	KW1H-0530	170	75	4.2	2.6	1.8
	KW1X-0530	160	70	4	2.5	1.7
	KW1W-0530	110	50	2.8	1.8	1.2
KW1H-0530	90	40	2.3	1.4	0.9	
KW1X-0530	88	38	2.2	1.4	0.9	
100W	KW1W-1010	80	35	1.94	1.24	0.84
	KW1H-1010	64	28	1.54	0.96	0.66
	KW1X-1010	56	24	1.36	0.84	0.6
	KW1W-1020	40	20	1.15	0.74	0.5
	KW1H-1020	38	165	9	5.8	4
	KW1X-1020	33	14	8	5	3.6
	KW1W-1000	400	175	97	62	42
	KW1H-1000	320	140	77	49	34
	KW1X-1000	280	120	68	42	30
	KW1W-1030	220	95	53	34	23
KW1H-1030	175	75	42	27	19	
KW1X-1030	155	65	37	23	17	
120W	KW1W-1210	1120	400	270	170	118
	KW1H-1210	900	300	215	138	96
	KW1X-1210	780	330	190	118	84
	KW1W-1220	665	290	161	103	70
	KW1H-1220	535	330	128	82	57
	KW1X-1220	460	195	113	70	50
	KW1W-1200	560	245	136	87	59
	KW1H-1200	480	195	108	69	48
	KW1X-1200	390	165	95	59	42
	KW1W-1230	310	135	75	48	33
KW1H-1230	250	110	60	38	26	
KW1X-1230	210	90	52	32	23	

## Light Pattern





# Applications

## Applications

Kingwell Lighting developed four different angles of the high low bay in order to satisfy various market demands. 40° and 60° low bay suitable for storage aisle lighting, 90° and 120° can be applied to factories, parking lots, gas stations, underpass and other large spaces. Floodlight takes big shopping mall as the main target. Using PC reflector to change the light structure, widen the range of lighting. Kingwell high low bay products have passed CE certification and UL certification is pending.



Rain Tester

Type	Height(m)	Application
40°, 60°	8~12	Storage aisle
90°, 120°	4~8	Factory , parking lots
Floodlight	4~8	Marketplace



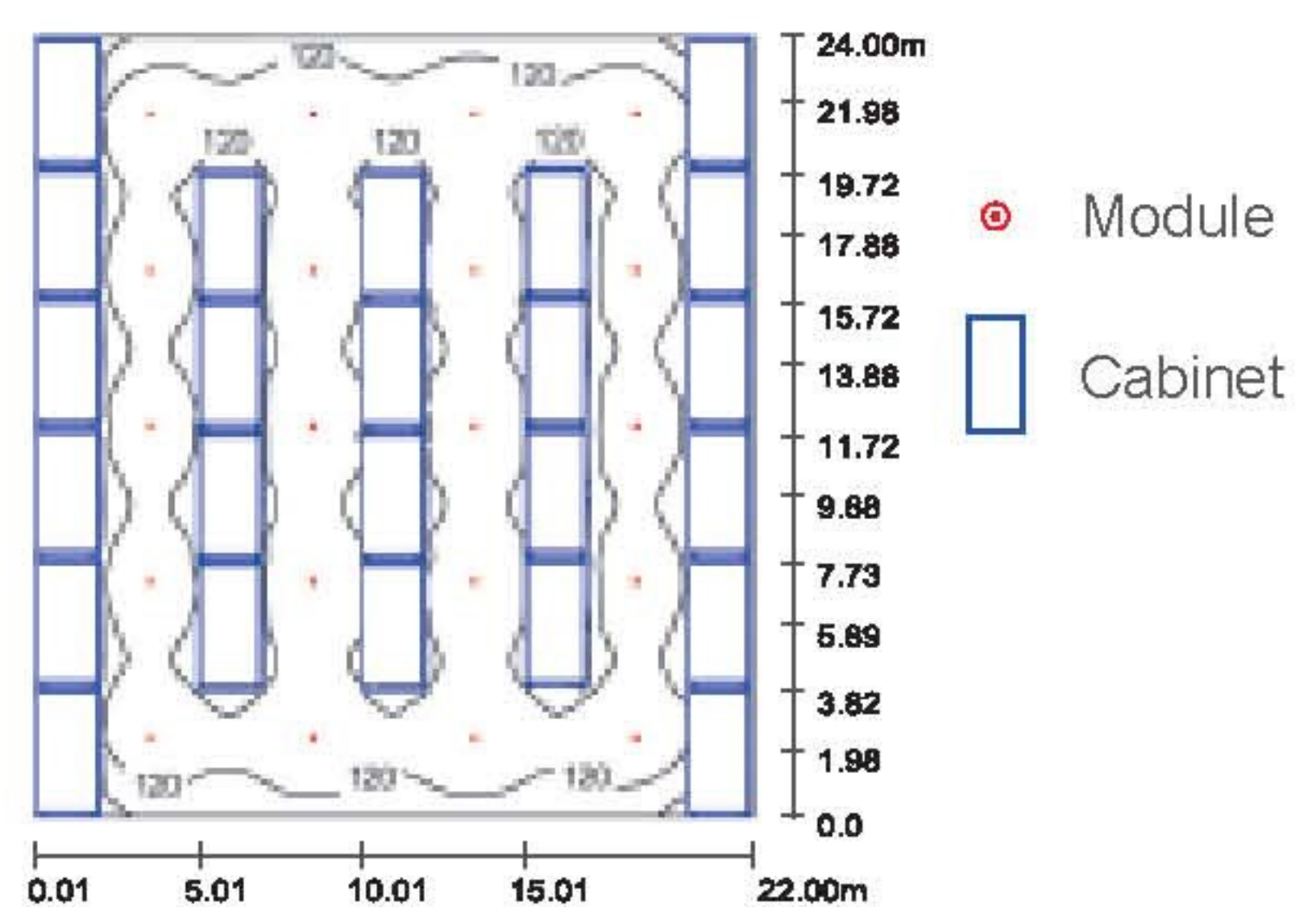
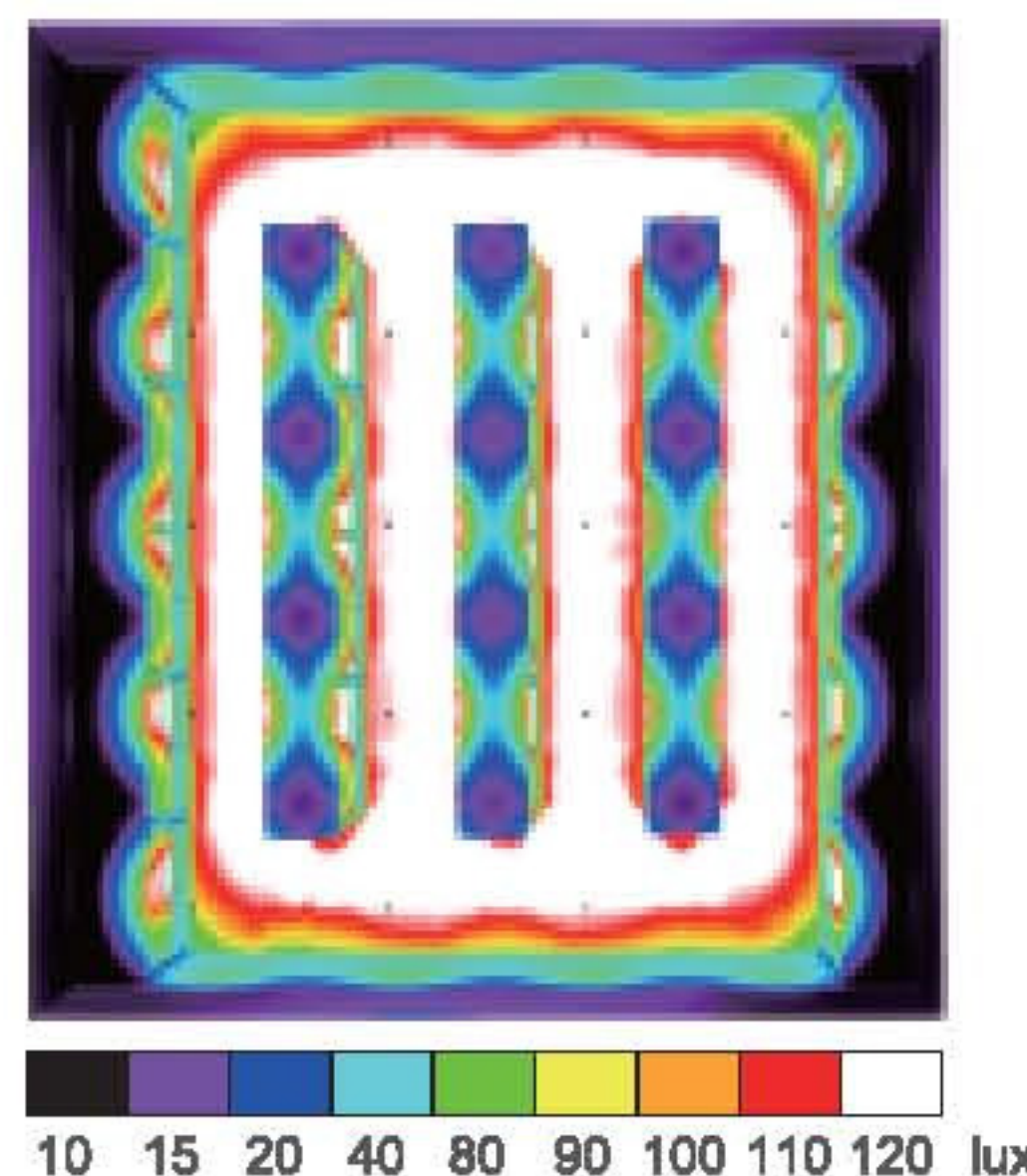
## Example

To minimize maintenance cost, LED High Bay has advantage over traditional such that it offers extended 30,000 life-times and saves 50%~70% power consumption.



Lighting Plan Example : Warehouse

100W LED High Bay



Height of Room: 8.000 m, Mounting Height: 6.400 m,  
Light loss factor: 0.80, Values in Lux, Scale 1:309

No. of module: 20
Flux per module: 5,000lm
Total Power: 2,000W
Area: 528m <sup>2</sup> / 5,683ft <sup>2</sup>
LPD: 1.89 W/m <sup>2</sup> / 0.18 W/ft <sup>2</sup>
Workplan height: 0.85m

Surface	ρ [%]	E <sub>av</sub> [lux]	E <sub>min</sub> [lux]	E <sub>max</sub> [lux]
Workplane(0.85m)	/	124	2.48	159
Floor(0m)	20	82	4.48	147
Ceiling(8m)	70	16	10	21
Walls	50	18	2.76	61