THORN

Oracle

High performance street and road lighting in a timeless design

More than a vision

Few aluminium lanterns can combine such a high degree of advanced performance and modern styling as the Oracle. Its precision optics deliver better lighting to the designer, the road user and local residents. Whether it's a major traffic route or minor street, Oracle offers minimised installation and maintenance costs and maximised energy savings.

- Versatile in performance, timeless in design and impressively flexible in the variety of optical combinations available, Oracle has the added advantage of being able to incorporate future innovations in light sources and associated controls
- In two sizes, with a power range from 50 to 600 watts, the lantern can be used successfully - either post-top or side entry mounted - in a wide range of applications
- A choice of three optics, Access, Wide and Comfort for improved visibility and reduced obtrusive light
- Wide and Comfort optic versions feature the Optibloc® system for extended maintenance cycles
- Choice of 25 lamp options and first class, energy efficient gear components
- The die-cast aluminium body and high quality materials ensure durability and recyclability
- Fully complies with the WEEE RoHS requirements
- Oracle's design is simple and efficient and includes a number of subtle features which make it vandal proof, vibration proof and suitable for use in harsh environments

Purity, simplicity and long life

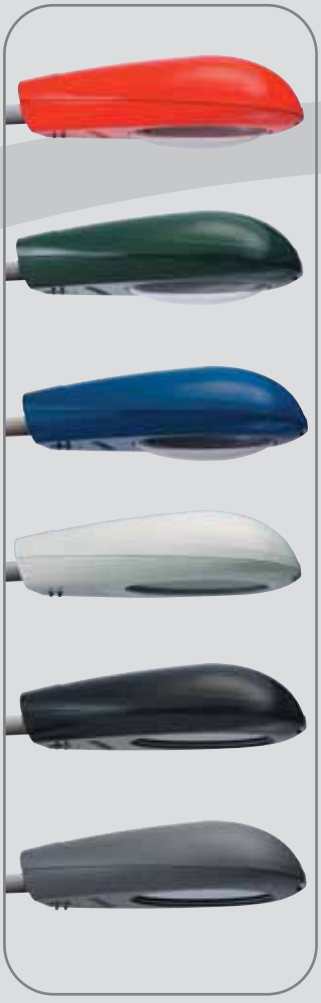
Road and street lighting demands more than just the functional supply of light to enhance vision. There is also the need to incorporate the lighting into the design of the urban setting.

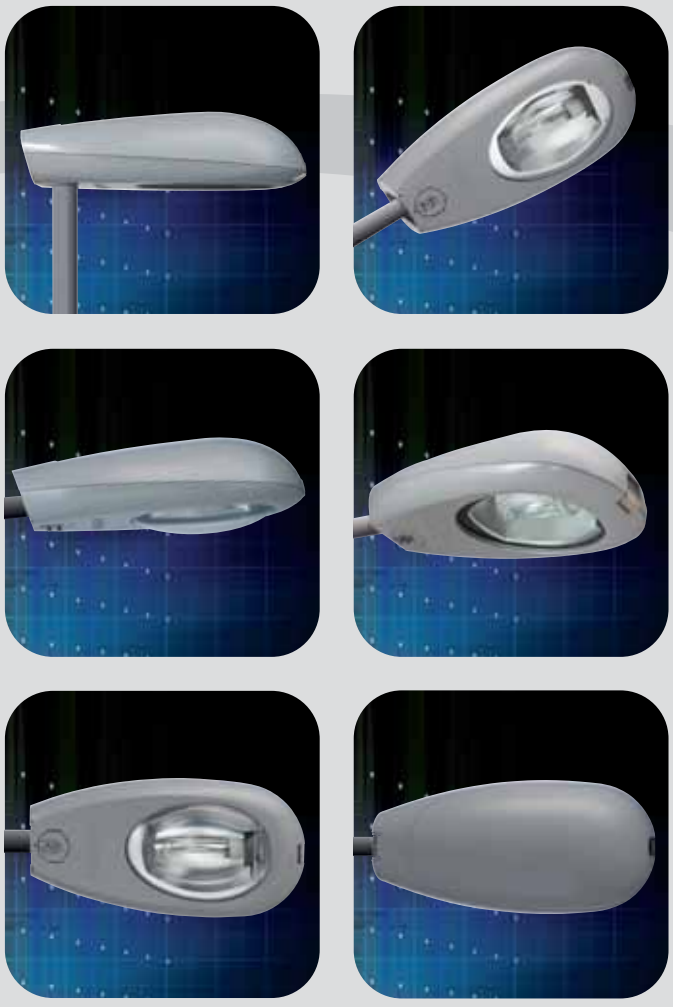
The designers of Oracle made no compromise between function and aesthetics in the quest for better lighting.

The curved shape of the Oracle luminaire, which is available in two sizes, offers a distinctively pure and timeless design which integrates easily in a variety of environments.

- This simple design will not date, increasing the life time of your luminaires
- A choice of glass or polycarbonate enclosures with flat or shallow profiles offers versatility in lighting performance
- Various mounting options for post-top or side entry allow choice of appearance
- Luminaire finished in hardwearing powder coating in aluminium grey (RAL 9006) to complement existing installations. Other finishes available to order

A range of dedicated column packages have been designed to compliment the pure and simple design of the lantern.
(See page 11 for more details)





What are the benefits of aluminium?

Aluminium is a supreme material for the construction of luminaires as it will last significantly longer and has greater U.V. resistance than most construction materials, increasing luminaire life and reducing the amount of maintenance needed.

It is resistant to harsh outdoor conditions including wind, water and pollution and it also offers good vandal resistant qualities in a well designed fitting. Aluminium is easy to dismantle and recycle.

Applications

The flexibility of the Oracle range ensures its suitability in a wide variety of street and road lighting applications because versatility is key to better lighting

- Wattages ranging from 42-600W to address road applications from residential to motorways, through intercity links, car parks and country roads
- All of the latest lamp innovations for road lighting are available in the Oracle range to provide improved ambience and visibility
- Two sizes available to help achieve visual consistency at different mounting heights from 5m to 16m
- Shallow enclosures, offering medium cut-off or flat glass, providing sharp cut-off, give the right light performance for particular project requirements
- Glass enclosures provide extra translucency whilst polycarbonate is more durable for use in residential areas
- Shallow enclosures in both materials have exactly the same profile to allow visual consistency when mixed in a single project
- Road lighting packages can include lighting management and dimming for energy saving during low traffic periods

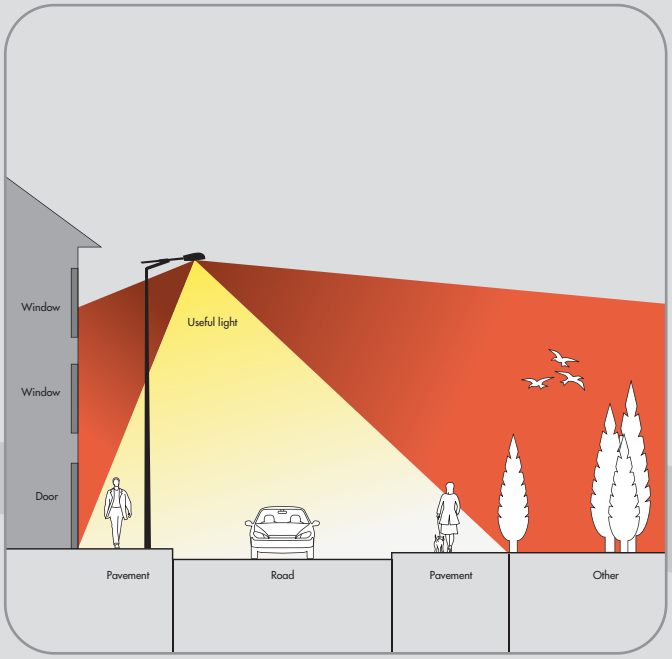
Energy savings and the environment

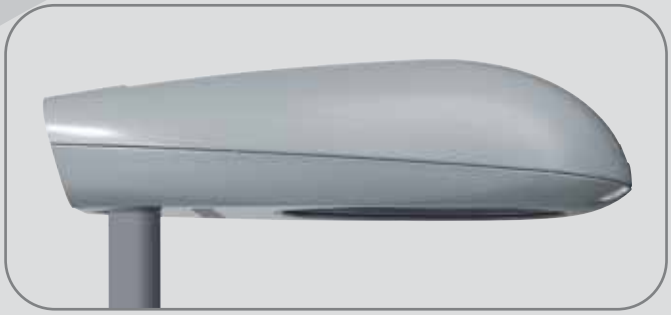
Oracle has the right balance between lighting requirements and impact on the environment

Obtrusive light
Obtrusive light is a growing issue today. Poorly designed or installed street lighting can allow a significant proportion of the light to be emitted above the horizontal. We have used our years of experience and know how to develop light engines that include high performance and innovative reflectors, precise lamp settings plus a choice of enclosures. This allows light to be directed to exactly where it is required taking into account the surface and the project characteristics.

Hence when designed with shallow glass bowls, a minimum quantity of light is emitted above the horizontal. And even when using the flat glass solutions horizontally, the light reaches only the surface where it is needed i.e. on the road resulting in no upward light.

Light control is not just a question of where but also when. The Oracle range also offers a wide variety of solutions to control and reduce light wastage.





Flat glass enclosure option for sharp cut-off of the light distribution

Polycarbonate shallow enclosure with frosted front, rear or both available on request

Did you know?

250W street lamp lit for 7 hours (during the hours of darkness) can single-handedly produce up to one tonne of CO_2 in a year.

Oracle offers the very latest in lamp technology from sodium to metal halide through to fluorescent to help with the reduction of unnecessary CO_2 emissions.

At Thorn we are committed to enhancing quality of life and conserving our natural environment which, at the same time, has the effect of reducing energy costs

Energy savings and the environment
In a world where energy resources are becoming a major issue and capital costs need to be low, Oracle offers the perfect solution.

Energy savings

- Engineered optical engine: with its flexible optics Oracle can be adapted to the special demands of any project
- Reduced lighting points: DLOR and spacing have been optimised for savings in initial expenditure and future maintenance costs
- Photocell options: with a Nema socket or a complete minicell offered as standard, Oracle provides a simple autonomous and cost efficient way of controlling the light installation
- First class gear components: selected for their longevity and low energy loss, no compromise has been made on conventional and electronic devices
- Electronic benefits: electronic ballasts are widely known for their ability to burn less energy and to offer longer lamp life including the opportunity to save on maintenance costs. Oracle offers a wide choice of reliable solutions for HID and fluorescent lamps
- Dimming features: are available for both standard wire wound and electronic gears without the need for an extra control line. Not only can you achieve direct savings but Oracle's dimming function provides a minimum light for safety without altering the colour of light while preserving the uniformity which is essential for perfect visibility
- OLC system: provides intelligence to the luminaire enabling it to communicate with a central terminal for immediate reporting of failure to minimise 'down time' and prevent time consuming visual checks
- New light sources: Oracle is ready to incorporate tomorrow's innovations in light sources, for example the introduction of the new CosmoPolis lamp and reduced cost of energy consumption

Sustainability
Oracle has been designed to comply with the WEEE and RoHS requirements. When the luminaire is decommissioned at the end of its life the majority of its components are recyclable. Consequently the aluminium, glass and plastic parts can be entirely re-used.

Gear tray and fluorescent electronic ballast

Gear tray and powerswitch system

Gear tray and HID electronic ballast

Gear tray with OLC system

Photocell version

Minicell version

What are RoHS and WEEE?

RoHS (Restriction of Hazardous Substances)
Is the European Union's directive on the restriction of the use of certain hazardous substances such as Lead or Mercury in electrical and electronic equipment.

WEEE (Waste Electrical and Electronic Equipment)
Is a directive requiring the collection and treatment of electronic and electrical equipment (EEE) at the end of the products life. With the objective to preserve, protect and improve the quality of the environment, protect human health and utilise natural resources prudently and rationally.

While closely related, RoHS and WEEE deal with different parts of the product life cycle. RoHS seeks to reduce the amount of hazardous materials entering electronic products while WEEE deals with reducing the amount of electronics entering landfills. RoHS is the beginning, and WEEE is the end.

Materials and standards

Oracle's body exploits the benefits of quality materials for sustainability and a contribution to a healthy and comfortable environment

IP66
Oracle is a future proof lantern that offers IP66 protection against ingress of water or dust. This is achieved by a strong oversized neoprene gasket that ensures ingress protection between body, canopy and a breathing system that allows cooling and air circulation.

IK08 or IK10
It is a common misunderstanding that the shock resistance rating is given by the enclosure. While the materials used for the visor is considered it is the total fitting that has to be assessed. Often the weakest part of the fitting is not the enclosure but the hinges, clips or the gasket area. Within Thorn all shock resistance tests are carried out before the IP tests to ensure that the product design first satisfies IK.

CL1 or CL2
Oracle offers both possibilities with either a polypropylene or galvanised steel gear plate. All wiring is then designed towards the earth connection or double insulation.

Wind Resistance
Oracle's lines have been designed to offer as little resistance to wind as possible so that columns do not have to be oversized.
Oracle size1:
0.058 with shallow enclosure
0.067 with flat enclosure
Oracle size2:
0.073 with shallow enclosure
0.083 with flat enclosure

EN, CE, ENEC
Our product design and technology exceed the standards.

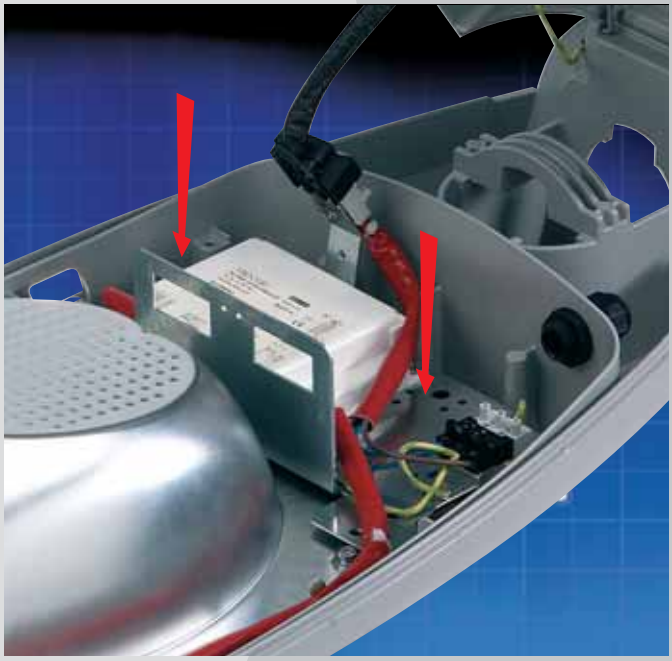
What are ENEC, CE and EN-605998-2-3?

ENEC:
European Norms Electrical Certification. The ENEC certificate gives the certainty that products offer 'European-level' safety which has been officially verified by an independent testing and certification body.

CE is a marking that:
- Indicates a product's conformity with the 'essential requirements' of the directives
- Allows products to be 'placed on the market'
- Ensures the free movement of goods
- Allows the 'withdrawal' of non-conforming goods by Customs

EN-605998-2-3:
This is the harmonised European standard for light fitting design and especially the electrical safety.

1.



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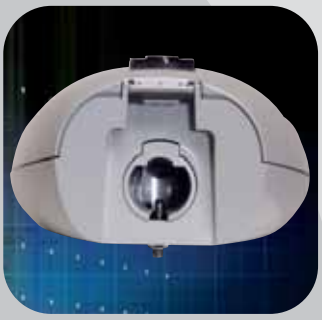


5.

6.

1. Breather filter ensures circulation of air inside the gear compartment for cooling of the components and extra longevity while preserving IP66.

2. The gear (CLI and CLII) is pre-drilled to be fixed to the body by two screws for areas with high vibrations like tramway lines or bridges.

3. Oracle's lines have been designed to offer as much wind resistance as possible so columns do not have to be oversized.

4. Two screws and bolts are used to secure the fitting through the integrated rotating spigot to the bracket or the column offering extra vandal resistance.

5. Shaped Nema socket gasket in silicon follows the contours of the canopy to create an IP66 seal.

6. IP66 optic and gear construction for full protection against water and dust.

Ergonomic Design

The Oracle designers have taken time and consideration to ensure that what's outside the product reflects what's inside to provide a consistent intuitive design

External
Within simple lines Oracle offers intuitive accesses and an understandable layout. The fixing spigot is instantly visible and there is one single entry point to get inside the luminaire.

Internal
Smaller lanterns do not necessarily make for a friendly internal design, this can often be complex with little room for manoeuvre. Oracle optimises its internal space by clever layout and clear understandable positioning.

- You can gain access from above and each side for a safe working position
- Divided into three separate compartments to offer space, easy access and to allow for future evolution
- Plug and socket systems have been generalised
- Leads are fixed
- Cabling is colour coded
- All areas which have to be handled have been designed for ease of use

All these features combine to make simple, safe and friendly lighting.

Dedicated brackets

Simply designed brackets and columns to complement the urban setting

A range of exclusive column and bracket packages has been created to enhance the simple and pure shape of the lantern and provide a stylish appearance from ground to sky.

- Constructed from robust materials to the very latest standards
- Single or twin arm brackets available for post-top use as well as intermediate or wall mounted to match any design scheme
- Brackets finished in aluminium grey (RAL 9006). Other finishes available to order to provide a match with urban furniture by day

Performance

A choice of three efficient optics (Access, Wide, Comfort) contributes to Oracle's intelligent design

Optical systems are employed in Oracle to provide the fine control that is needed to meet the environmental demands. Three optical systems deliver uniform lighting precisely where it is needed according to the lamp choice and application.

Access or Optibloc®?
The Access optic has an IP66 rating and allows maintenance to be quick and easy with extra fast lamp changing. The Optibloc® system has a double IP66 protection to the optical engine, which allows for extension of the maintenance cycles. This is recommended for applications with extreme water or dust levels.

Self-cleaning treatment available on request for the flat or shallow glass enclosures.

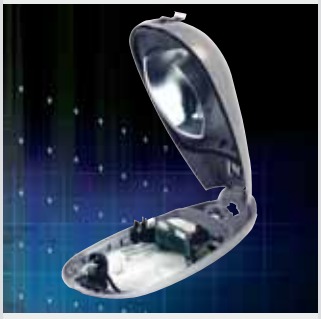
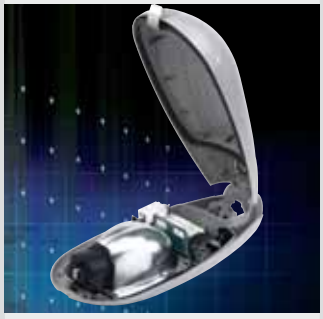
- Dirt retardant reduces diffuser cleaning cycles
- Maintenance factor increases from 0.80 to 0.89
- Up to 10% savings on lamp flux

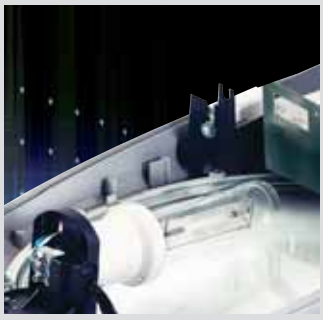
Access Optic:
This version is for projects where the Optibloc® system and its double IP66 protection is not required. It offers direct access to the lamp and lampholder when the canopy is opened. The unique combination of the high performance reflector, multi-lamp settings lampholder and choice of enclosure make it a first class photometric performer for road and street applications.

Wide Optic:
This version is the new generation of Optibloc®. Both the Optibloc® and the body are IP66, thus making it a double IP66 unit. While offering first class photometric performances it enables maximum spacing when TI is not the first constraint.

It is particularly suitable for refurbishment projects where the scheme is already set.

Comfort Optic:
This is a new innovative optical development that has been designed around the EN13201 standards. It maximises comfort by meeting all TI constraints while optimising all other criteria. Also, this brand new generation of reflector operates in a much better way than all other optics, working with all metal halide and the new generation of lamps such as CosmoPolis. The white light trend is then better addressed. This optic is particularly suitable for new projects where reduced amount of energy and better visual comfort are sought.



Wide choice of lamp settings ensures the lamp is positioned precisely to match project requirements and deliver better performance.

What is Glare and the TI ratio?

Glare is the discomfort or impairment of vision experienced when parts of the visual field are excessively bright in relation to the general surroundings.

Discomfort Glare - glare which causes visual discomfort without necessarily impairing the ability to see detail = G

Disability Glare - glare which impairs the ability to see detail without necessarily causing visual discomfort = TI

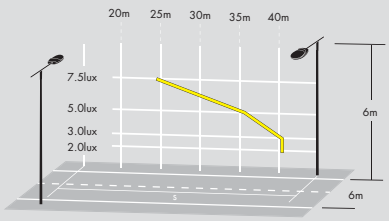
Lighting Schemes

CEN values

	Lave (cd/m²)	UO Min.	UI Min.	TI Max (%)	SR	S	Eav	Emin
Me1	2	0.4	0.7	10	0.5	**S1**	15	5
Me2	1.5	0.4	0.7	10	0.5	**S2**	10	3
Me3a	1	0.4	0.7	15	0.5	**S3**	7.5	1.5
Me3b	1	0.4	0.6	15	0.5	**S4**	5	1
Me3c	1	0.4	0.5	15	0.5	**S5**	3	0.6
Me3c	1	0.4	0.6	15	0.5	**S6**	2	0.6
Me4a	0.75	0.4	0.5	15	0.5			
Me4b	0.75	0.4	0.5	15	0.5			
Me5	0.5	0.35	0.4	15	0.5			
Me6	0.3	0.35	0.4	15				

Wide

Oracle 1 Wide shallow glass
TC-TEL 57W

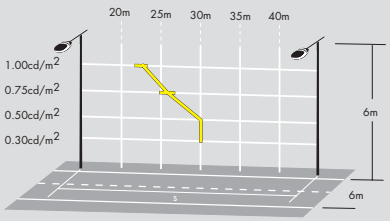


Layout : Staggered
Overhang : 0m
Tilt : 5°
R-Table : C2

Maint. factor : 0.80
Lamp Flux : 4.300lm

Comfort

Oracle 1 Comfort shallow glass
60W - Cosmowhite

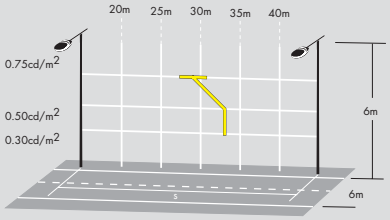


Layout : Single Sided
Overhang : 0m
Tilt : 5°
R-Table : R3

Maint. factor : 0.80
Lamp Flux : 7.100lm

Access

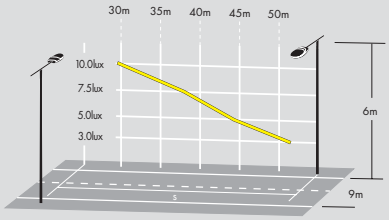
Oracle 1 Access flat glass
HST 70W



Layout : Single Sided
Overhang : 0m
Tilt : 5°
R-Table : N2 (Q0=0.09)

Maint. factor : 0.80
Lamp Flux : 6.500lm

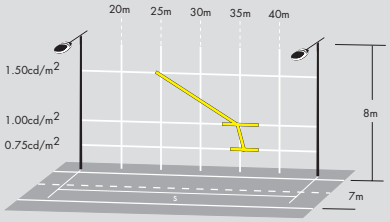
Oracle 1 Wide shallow glass
HST 70W



Layout : Staggered
Overhang : 0.8m
Tilt : 5°
R-Table : C2

Maint. factor : 0.80
Lamp Flux : 6.500lm

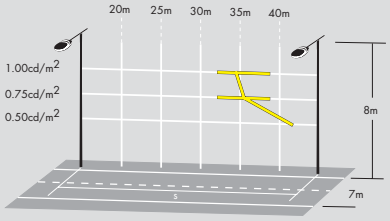
Oracle 1 Comfort flat glass
140W - Cosmowhite



Layout : Single Sided
Overhang : 0m
Tilt : 5°
R-Table : R3

Maint. factor : 0.80
Lamp Flux : 16.500lm

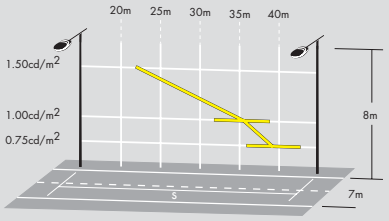
Oracle 1 Access flat glass
HST 100W



Layout : Single Sided
Overhang : 1m
Tilt : 5°
R-Table : N2 (Q0=0.09)

Maint. factor : 0.80
Lamp Flux : 10.500lm

Oracle 1 Wide shallow glass
HST 150W

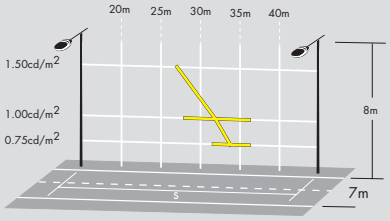


Layout : Single Sided
Overhang : 0m
Tilt : 5°
R-Table : R2

Maint. factor : 0.80
Lamp Flux : 17 500lm

Maint. factor : 0.80
Lamp Flux : 17.5000lm

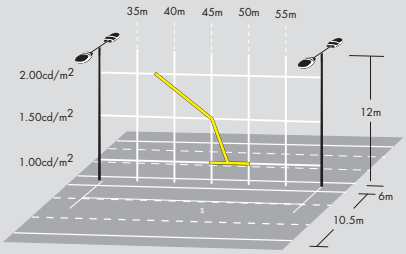
Oracle 1 Comfort shallow glass
HST 150W



Layout : Single Sided
Overhang : 0m
Tilt : 5°
R-Table : R2

Maint. factor : 0.80
Lamp Flux : 17 500lm

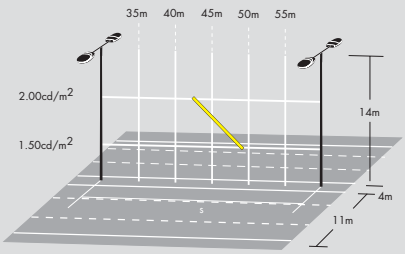
Oracle 2 Access flat glass
HST 250W



Layout : Twin Central (3 lanes)
Overhang : 1.5m
Tilt : 5°
R-Table : N2 (Q0=0.09)

Maint. factor : 0.80
Lamp Flux : 33.000lm

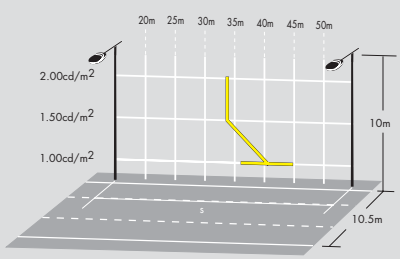
Oracle 2 Wide shallow glass
HST 400W



Layout : Twin Central (3 lanes)
Overhang : 0m
Tilt : 5°
R-Table : C2

Maint. factor : 0.80
Lamp Flux : 55.500lm

Oracle 2 Comfort shallow glass
HST 250W



Layout : Single Sided (3 lanes)
Overhang : 0m
Tilt : 5°
R-Table : R2

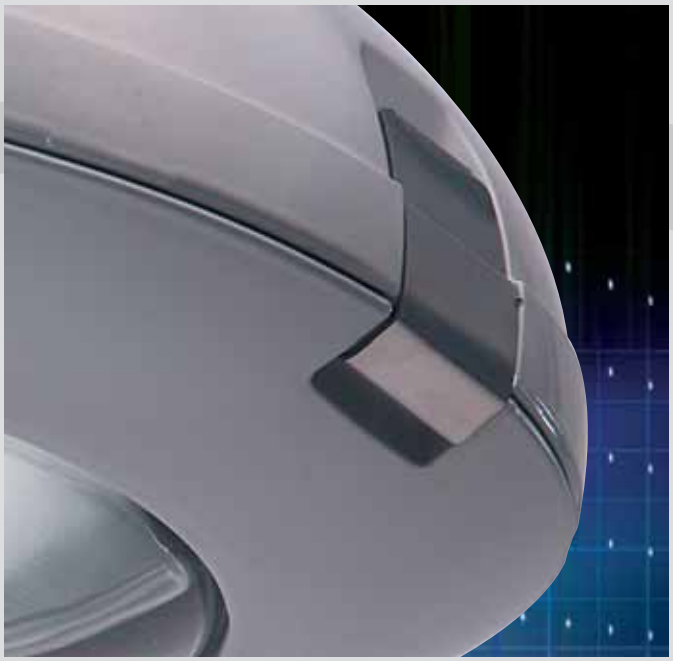
Maint. factor : 0.80
Lamp Flux : 33.000lm

Installation and Maintenance

The installation and maintenance operations are quick and efficient, saving time and increasing the safety of the contractor and the road user

Oracle has been designed with the contractor in mind. Each feature has been considered from the installers point of view for easy use and safety.

- With minimal use of materials Oracle is light weight and easy to carry
- The integrated rotating spigot can take a diameter of up to 60mm for side entry mounting and up to 76mm for post-top mounting without the need for additional attachments
- Simply secured with two screws and bolts to ensure the luminaire does not rotate along the column or bracket but keeps its initial position
- A single robust front clip acts as the entry point of the fitting also supplying quick release and security
- Retaining mechanism to keep canopy open even in high winds
- Access from above allows operations to be performed safely
- Luminaire is delivered complete (no lamp) to limit unnecessary handling and confusion in gear selection which then reduces installation time
- Plug and socket connections have been implemented where possible to aid the tool free installation procedure
- Wiring is comprehensive between the three sections
- Easy to achieve horizontal and vertical lamp settings, additionally the factory lamp settings have been optimised for good performances
- The gear is retained by two springs but for extra security you can use additional two extra screws for applications like bridges and railway stations
- On size two, through wiring can be realised on twin central installation by using a second cable gland thus permitting only one mains cable to be used from ground to luminaire



1.

2.

3.

4.

5.

1. Strong stainless steel clip with easy and safe releasing and securing

2. Two screws and bolts secure the fitting for its lifetime

3. Integral rotating spigot allows 34 to 60mm side entry and 60 to 76mm post-top mounting

4 & 5. Side entry or post-top easily achieved by rotating the spigot

- Oracle's self cleaning shape does not let dust settle ensuring that cleaning operations are reduced to a minimum
- Full IP66 protection ensures that components including lamp, reflector and enclosure are protected against dust and moisture for extended life span and reduced need for cleaning
- TC-TELI lamps are attached to the lampholder through a twist and lock mechanism
- Class I versions are fully earthed for safety of the installer
- Class II versions have automatic disconnection that switches off the mains once the canopy is opened
- Class II gears have a test key included to enable the contractor to do on site checks without closing the canopy
- Gear is released by two springs – no tool needed
- Gear tray has been designed with a handle for easy removal
- The lamp settings are not changed when the lamp or gear is removed, so that your original settings are maintained after an operation has taken place

With the three Oracle optics lamp and gear replacement is possible in seconds without the use of tools

Wide and Comfort optics:
The lamp/gear can easily be removed

Access optic:
Once the luminaire is open, the lamp/gear is directly accessible

Oracle 1 and 2

Conventional gear tray Class I

Photocell version

Power reduction gear tray Class II

Lamps Oracle 1
50-150W HST (ST) high pressure sodium. Cap: E27/40
70-150W HIT-CE (MT) metal halide. Cap: E27/40
80-125 HME (QE) high pressure mercury. Cap: E27
42-57W TC-TEL (FSMH) compact fluorescent. Cap: GX24q-4/5
60-85W TC-TELI (FSMH) compact fluorescent. Cap: 2G8
60-140W HIT-CE (MT) cosmowhite. Cap: PGZ12
65-140W HST (ST) cosmogold. Cap: PGZ12

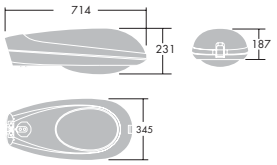
Lamps Oracle 2
100-600*W HST (ST) high pressure sodium. Cap: E40
100-150W HIT-CE (MT) metal halide. Cap: E40
250-400W HIT (MT) metal halide, Cap: E40
250-400W HME (QE) high pressure mercury. Cap: E40
70W TC-TEL (FSMH) compact fluorescent. Cap: GX24q-6
85-120W TC-TELI (FSMH) compact fluorescent. Cap: 2G8
* Remote gear tray

Materials/Finish
Body: die-cast aluminium, powder coated grey (RAL 9006)
Spigot: die cast aluminium powder coated grey (RAL 9006)
Enclosures: UV stabilised polycarbonate or toughened glass, self-cleaning treatment available on request
Gasket: neoprene
Gear plate: galvanised steel or polypropylene
Reflector: high purity anodised aluminium
Screws: stainless steel
Clip: stainless steel

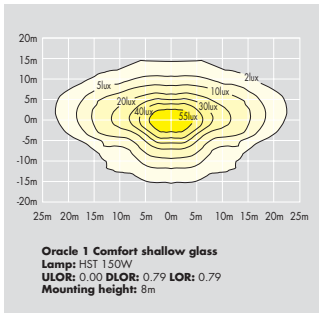
Installation/Mounting
Integral tool free rotating spigot secured by 2 screws with safety bolts
post-top mounting: Ø60/76mm x 80mm long spigot. Tilted to 5°
Lateral mounting: Ø34/42/49/60mm x 120mm long spigot. Tilted to 0°
Cable gland for Ø8 to 13mm cable
Access from above to gear and optic system after quick release of the stainless steel front clip.
Delivered ready to install, complete with factory fitted integral gear tray, all supplied in a single carton (without lamp).

Standards
Designed and manufactured to comply with EN 60598-2-3
Class I electrical or
Class II versions
Ta -20/+35
Weights and maximum windage:
Size 1: <14.9kg and <0.067m²
Size 2: <19.9kg and <0.083m²
IK08 (glass)
IK10 (polycarbonate)
IP66
CE

Specification:
To specify state:
Full IP66 aluminium road and street lighting fitting with silicon shaped gasket for photocell.
For 42 to 600W lamps.
From 34mm side entry to 76mm post-top mounting aided by integral rotating spigot.
Tool free access to and removal of lamp and gear tray with handle and circuit test key.
With options for photocells, electronic gears, dimming and lighting management system.
As Thorn Oracle 1 and 2.



Windage: 0.058 (shallow enclosure) 0.067 (flat glass)

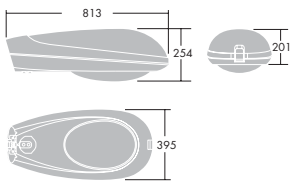


Oracle 1 Comfort shallow glass
Lamp: HST 150W
ULOR: 0.00 **DLOR:** 0.79 **LOR:** 0.79
Mounting height: 8m

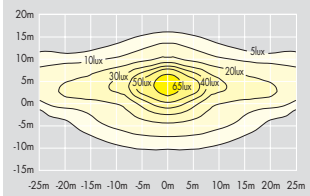
Oracle size 1 Ordering Guide Lamps are to be supplied separately

Optic	Gear type	Description	Ilcos Code	Socket	SAP Code - 240 - CL1 Voltage Flat Glass	Elec. Class Shallow Glass	Enclosure Shallow PC	SAP Code - 230 - CL2 Voltage Flat Glass	Elec. Class Shallow Glass	Enclosure Shallow PC
Access	Conventional	ORACLE 50W HST	ST	E27	96249614	96249616	96220450	96249618	96249619	96249620
		ORACLE 50/70W HST	ST	E27	-	-	-	96232036	96232037	96232038
		ORACLE 70W HID	ST/MT (CE)	E27	96220453	96220454	96220452	96220442	96220443	96220408
		ORACLE 100W HID	ST/MT (CE)	E40	96220456	96220457	96220455	96220445	96220446	96220444
		ORACLE 150W HID	ST/MT (CE)	E40	96220459	96220460	96220458	96220448	96220449	96220447
		ORACLE 80W HME	QE	E27	96249868	96249870	96249872	96249874	96249875	96249876
		ORACLE 125W HME	QE	E27	96250038	96250040	96250042	96250044	96250045	96220471
	Convent/ PowerRed	ORACLE 70W/BP HST	ST	E27	96249828	96249829	96249830	96249831	96249832	96249833
		ORACLE 100W/BP HST	ST	E40	96249998	96249999	96250000	96250001	96250002	96250003
		ORACLE 150W/BP HST	ST	E40	96250158	96250159	96250160	96250161	96250162	96250163
		ORACLE 80W/BP HME	QE	E27	96249898	96249899	96249900	96249901	96249902	96249903
		ORACLE 125W/BP HME	QE	E27	96250068	96250069	96250070	96250071	96250072	96250066
Wide	Conventional	ORACLE 50W HST	ST	E27	96249628	96249630	96220481	96249632	96249633	96249634
		ORACLE 70W HID	ST/MT (CE)	E27	96220483	96220484	96220482	96220472	96220473	96220407
		ORACLE 100W HID	ST/MT (CE)	E40	96220486	96220487	96220485	96220475	96220476	96220474
		ORACLE 150W HID	ST/MT (CE)	E40	96220489	96220490	96220488	96220478	96220480	96220477
		ORACLE 80W HME	QE	E27	96249886	96249888	96249890	96249892	96249893	96249894
		ORACLE 125W HME	QE	E27	96250055	96250057	96250059	96250061	96250062	96250063
	Convent/ PowerRed	ORACLE 70W/BP HST	ST	E27	96249840	96249841	96249842	96249843	96249844	96249845
		ORACLE 100W/BP HST	ST	E40	96250010	96250011	96250012	96250013	96250014	96250015
		ORACLE 150W/BP HST	ST	E40	96250170	96250171	96250172	96250173	96250174	96250175
		ORACLE 80W/BP HME	QE	E27	96249910	96249911	96249912	96249913	96249914	96249915
		ORACLE 125W/BP HME	QE	E27	96250079	96250080	96250081	96250082	96250083	96250084
Comfort	Conventional	ORACLE 50W HST	ST	E27	96249621	96249623	96220511	96249625	96249626	96249627
		ORACLE 70W HID	ST/MT (CE)	E27	96220513	96220514	96220512	96220502	96220504	96220501
		ORACLE 100W HID	ST/MT (CE)	E40	96220516	96220517	96220515	96220506	96220507	96220505
		ORACLE 150W HID	ST/MT (CE)	E40	96220519	96220520	96220518	96220509	96220510	96220508
		ORACLE 80W HME	QE	E27	96249877	96249879	96249881	96249883	96249884	96249885
		ORACLE 125W HME	QE	E27	96250046	96250048	96250050	96250052	96250053	96250054
	Convent/ PowerRed	ORACLE 70W/BP HST	ST	E27	96249834	96249835	96249836	96249837	96249838	96249839
		ORACLE 100W/BP HST	ST	E40	96250004	96250005	96250006	96250007	96250008	96250009
		ORACLE 150W/BP HST	ST	E40	96250164	96250165	96250166	96250167	96250168	96250169
		ORACLE 80W/BP HME	QE	E27	96249904	96249905	96249906	96249907	96249908	96249909
		ORACLE 125W/BP HME	QE	E27	96250073	96250074	96250075	96250076	96250077	96250078

					Voltage 220-250 CLI			Voltage 220-250 CL2		
Access	Electronic	ORACLE 50W HST DGE	ST	E27	96249636	96249638	96249640	96249642	96249643	96249644
		ORACLE 70W HST DGE	ST	E27	96249798	96249800	96249802	96249804	96249805	96249806
		ORACLE 100W HST DGE	ST	E40	96249968	96249970	96249972	96249974	96249975	96249976
		ORACLE 150W HST DGE	ST	E40	96250128	96250130	96250132	96250134	96250135	96250136
		ORACLE 70W HIT DGE	MT	E27	96231885	96231891	96231894	96231897	96231898	96231899
		ORACLE 100W HIT DGE	MT	E40	96231923	96231926	96231929	96231932	96231933	96231934
		ORACLE 150W HIT DGE	MT	E40	96231959	96231966	96231969	96231972	96231973	96231974
		ORACLE 42 TC-TEL	FSMH	Gx24q-4	96249574	96249576	96249578	96249580	96249581	96249582
		ORACLE 57W TC-TEL	FSMH	Gx24q-5	96249686	96249688	96249690	96249692	96249693	96249694
		ORACLE 60W TC-TELI	FSMH	2G8	96249726	96249728	96249730	96249732	96249733	96249734
		ORACLE 85W TC-TELI	FSMH	2G8	96249928	96249930	96249932	96249934	96249935	96249936
	Electro/ Stepdim	ORACLE 70W/BP HST DGE	ST	E27	96250712	96250713	96250714	96250715	96250716	96250717
		ORACLE 100W/BP HST DGE	ST	E40	96250700	96250701	96250702	96250703	96250704	96250705
		ORACLE 150W/BP HST DGE	ST	E40	96250706	96250707	96250708	96250709	96250710	96250711
Wide	Electronic	ORACLE 50W HST DGE	ST	E27	96249654	96249656	96249658	96249660	96249661	96249662
		ORACLE 70W HST DGE	ST	E27	96249816	96249818	96249820	96249822	96249823	96249824
		ORACLE 100W HST DGE	ST	E40	96249986	96249988	96249990	96249992	96249993	96249994
		ORACLE 150W HST DGE	ST	E40	96250146	96250148	96250150	96250152	96250153	96250154
		ORACLE 70W HIT DGE	MT	E27	96231912	96231915	96231918	96231921	96231922	96231884
		ORACLE 100W HIT DGE	MT	E40	96231950	96231953	96231956	96231947	96231948	96231949
		ORACLE 150W HIT DGE	MT	E40	96231987	96231990	96231993	96231996	96231997	96231998
		ORACLE 42 TC-TEL	FSMH	Gx24q-4	96249592	96249594	96249596	96249598	96249599	96249600
		ORACLE 57W TC-TEL	FSMH	Gx24q-5	96249704	96249706	96249708	96249710	96249711	96249712
		ORACLE 60W TC-TELI	FSMH	2G8	96249744	96249746	96249748	96249750	96249751	96249752
		ORACLE 85W TC-TELI	FSMH	2G8	96249946	96249948	96249950	96249952	96249953	96249954
	Electro/ Stepdim	ORACLE 70W/BP HST DGE	ST	E27	96232049	96232050	96232053	96232051	96232039	96232052
		ORACLE 100W/BP HST DGE	ST	E40	96232015	96232016	96232017	96232018	96232019	96232020
		ORACLE 150W/BP HST DGE	ST	E40	96232029	96232030	96232031	96232032	96232033	96232034
Comfort	Electronic	ORACLE 50W HST DGE	ST	E27	96249645	96249647	96249649	96249651	96249652	96249653
		ORACLE 70W HST DGE	ST	E27	96249807	96249809	96249811	96249813	96249814	96249815
		ORACLE 100W HST DGE	ST	E40	96249977	96249979	96249981	96249983	96249984	96249985
		ORACLE 150W HST DGE	ST	E40	96250137	96250139	96250141	96250143	96250144	96250145
		ORACLE 70W HIT DGE	MT	E27	96231900	96231901	96231904	96231907	96231908	96231909
		ORACLE 100W HIT DGE	MT	E40	96231938	96231941	96231944	96231935	96231936	96231937
		ORACLE 150W HIT DGE	MT	E40	96231975	96231977	96231980	96231984	96231985	96231986
		ORACLE 65W CPO-TG	ST	PGZ12	96249782	96249784	96249786	96249788	96249789	96249790
		ORACLE 140W CPO-TG	ST	PGZ12	96250108	96250110	96250112	96250114	96250115	96250116
		ORACLE 60W CPO-TW	MT	PGZ12	96249756	96249758	96249760	96249762	96249763	96249764
		ORACLE 140W CPO-TW	MT	PGZ12	96250096	96250098	96250100	96250102	96250103	96250104
		ORACLE 42 TC-TEL	FSMH	Gx24q-4	96249583	96249585	96249587	96249589	96249590	96249591
		ORACLE 57W TC-TEL	FSMH	Gx24q-5	96249695	96249697	96249699	96249701	96249702	96249703
		ORACLE 60W TC-TELI	FSMH	2G8	96249735	96249737	96249739	96249741	96249742	96249743
		ORACLE 85W TC-TELI	FSMH	2G8	96249937	96249939	96249941	96249943	96249944	96249945
	Electro/ Stepdim	ORACLE 70W/BP HST DGE	ST	E27	96232042	96232044	96232045	96232046	96232047	96232048
		ORACLE 100W/BP HST DGE	ST	E40	96232009	96232010	96232011	96232012	96232013	96232014
		ORACLE 150W/BP HST DGE	ST	E40	96232023	96232024	96232025	96232026	96232027	96232028



Windage: 0.073 (shallow enclosure) 0.083 (flat glass)



Oracle 2 wide shallow glass
Lamp: HST 250W
ULOR: 0.00 **DLOR:** 0.77 **LOR:** 0.77
Mounting height: 10m

Oracle size 2 Ordering Guide Lamps are to be supplied separately

Optic	Gear type	Description	Ilcos Code	Socket	SAP Code - 240 - CL1 Voltage Flat Glass	SAP Code - 240 - CL1 Elec. Class Shallow Glass	SAP Code - 230 - CL2 Enclosure Flat Glass	SAP Code - 230 - CL2 Enclosure Shallow Glass
Access	Conventional	ORACLE 100W HID	ST/MT (CE)	E40	96250254	96250256	96250258	96250259
		ORACLE 150W HID	ST/MT (CE)	E40	96220557	96220558	96220410	96220554
		ORACLE 250W HID	ST/MT	E40	96220559	96220560	96220555	96220556
		ORACLE 400W HID	ST/MT	E40	96250478	96250480	96250482	96250483
		ORACLE 600W HST NG	ST	E40	-	96250633	-	96250635
		ORACLE 250W HME	QE	E40	96250401	96250403	96250405	96250406
		ORACLE 400W HME	QE	E40	96250500	96250502	96250504	96250505
	Convent/ PowerRed	ORACLE 150W/BP HST	ST	E40	96250338	96250339	96250340	96250341
		ORACLE 250W/BP HST	ST	E40	96250387	96250388	96250389	96250390
		ORACLE 400W/BP HST	ST	E40	96250535	96250536	96250537	96250538
		ORACLE 250W/BP HME	QE	E40	96250422	96250423	96250424	96250425
		ORACLE 400W/BP HME	QE	E40	96250521	96250522	96250523	96250524
Wide	Conventional	ORACLE 100W HID	ST/MT (CE)	E40	96250266	96250268	96250270	96250271
		ORACLE 150W HID	ST/MT (CE)	E40	96220568	96232061	96220409	96220565
		ORACLE 250W HID	ST/MT	E40	96220570	96220571	96220566	96220567
		ORACLE 400W HID	ST/MT	E40	96250490	96250492	96250494	96250495
		ORACLE 250W HME	QE	E40	96250413	96250415	96250417	96250418
	Convent/ PowerRed	ORACLE 150W/BP HST	ST	E40	96250346	96250347	96250348	96250349
		ORACLE 250W/BP HST	ST	E40	96250395	96250396	96250397	96250398
		ORACLE 400W/BP HST	ST	E40	96250543	96250544	96250545	96250546
		ORACLE 250W/BP HME	QE	E40	96250430	96250431	96250432	96250433
Comfort	Conventional	ORACLE 100W HID	ST/MT (CE)	E40	96250260	96250262	96250264	96250265
		ORACLE 150W HID	ST/MT (CE)	E40	96232058	96220581	96220576	96220577
		ORACLE 250W HID	ST/MT	E40	96220582	96220583	96220578	96220579
		ORACLE 400W HID	ST/MT	E40	96250484	96250486	96250488	96250489
		ORACLE 250W HME	QE	E40	96250407	96250409	96250411	96250412
	Convent/ PowerRed	ORACLE 150W/BP HST	ST	E40	96250342	96250343	96250344	96250345
		ORACLE 250W/BP HST	ST	E40	96250391	96250392	96250393	96250394
		ORACLE 400W/BP HST	ST	E40	96250539	96250540	96250541	96250542
		ORACLE 250W/BP HME	QE	E40	96250426	96250427	96250428	9650429

					SAP Code - 220-250 - CL1		SAP Code - 220-250 - CL2	
Access	Electronic	ORACLE 100W HST DGE	ST	E40	96250275	96250277	96250279	96250280
		ORACLE 150W HST DGE	ST	E40	96250352	96250354	96250356	96250357
		ORACLE 250W HST DGE	ST	E40	96250436	96250438	96250440	96250441
		ORACLE 400W HST DGE	ST	E40	96250548	96250550	96250552	96250553
		ORACLE 100W HIT DGE	MT	E40	96232083	96232085	96232087	96232088
		ORACLE 150W HIT DGE	MT	E40	96232110	96232112	96232114	96232115
		ORACLE 250W HIT DGE	MT	E40	96232144	96232146	96232148	96232149
		ORACLE 400W HIT DGE	MT	E40	96232172	96232174	96232176	96232177
		ORACLE 70W TC-TEL	FSMH	Gx24q-6	96250198	96250200	96250202	96250203
		ORACLE 85W TC-TELI	FSMH	2G8	96250226	96250228	96250230	96250231
		ORACLE 120W TC-TELI	FSMH	2G8	96250310	96250312	96250314	96250315
	Electro/ Stepdim	ORACLE 150W/BP HST DGE	ST	E40	96250588	96250589	96250590	96250591
		ORACLE 250W/BP HST DGE	ST	E40	96250605	96250606	96250607	96250608
		ORACLE 400W/BP HST DGE	ST	E40	96250619	96250620	96250621	96250622
Wide	Electronic	ORACLE 100W HST DGE	ST	E40	96250287	96250289	96250291	96250292
		ORACLE 150W HST DGE	ST	E40	96250364	96250366	96250368	96250369
		ORACLE 250W HST DGE	ST	E40	96250448	96250450	96250452	96250453
		ORACLE 400W HST DGE	ST	E40	96250560	96250562	96250564	96250565
		ORACLE 100W HIT DGE	MT	E40	96232093	96232095	96232097	96232098
		ORACLE 150W HIT DGE	MT	E40	96232137	96232133	96232122	96232123
		ORACLE 250W HIT DGE	MT	E40	96232153	96232155	96232143	96232157
		ORACLE 400W HIT DGE	MT	E40	96250578	96250579	96250581	96250582
		ORACLE 70W TC-TEL	FSMH	Gx24q-6	96250210	96250212	96250214	96250215
		ORACLE 85W TC-TELI	FSMH	2G8	96250238	96250240	96250242	96250243
		ORACLE 120W TC-TELI	FSMH	2G8	96250322	96250324	96250326	96250327
	Electro/ Stepdim	ORACLE 150W/BP HST DGE	ST	E40	96250601	96250599	96250595	96250596
		ORACLE 250W/BP HST DGE	ST	E40	96250614	96250615	96250604	96250616
		ORACLE 400W/BP HST DGE	ST	E40	96250627	96250628	96250630	96250631
Comfort	Electronic	ORACLE 100W HST DGE	ST	E40	96250281	96250283	96250285	96250286
		ORACLE 150W HST DGE	ST	E40	96250358	96250360	96250362	96250363
		ORACLE 250W HST DGE	ST	E40	96250442	96250444	96250446	96250447
		ORACLE 400W HST DGE	ST	E40	96250554	96250556	96250558	96250559
		ORACLE 100W HIT DGE	MT	E40	96232089	96232090	96232091	96232108
		ORACLE 150W HIT DGE	MT	E40	96232116	96232118	96232136	96232120
		ORACLE 250W HIT DGE	MT	E40	96232150	96232151	96232140	96232152
		ORACLE 400W HIT DGE	MT	E40	96232178	96232181	96250574	96250576
		ORACLE 70W TC-TEL	FSMH	Gx24q-6	96250204	96250206	96250208	96250209
		ORACLE 85W TC-TELI	FSMH	2G8	96250232	96250234	96250236	96250237
		ORACLE 120W TC-TELI	FSMH	2G8	96250316	96250318	96250320	96250321
	Electro/ Stepdim	ORACLE 150W/BP HST DGE	ST	E40	96250592	96250593	96250600	96250594
		ORACLE 250W/BP HST DGE	ST	E40	96250611	96250612	96250603	96250613
		ORACLE 400W/BP HST DGE	ST	E40	96250623	96250624	96250625	96250626

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