

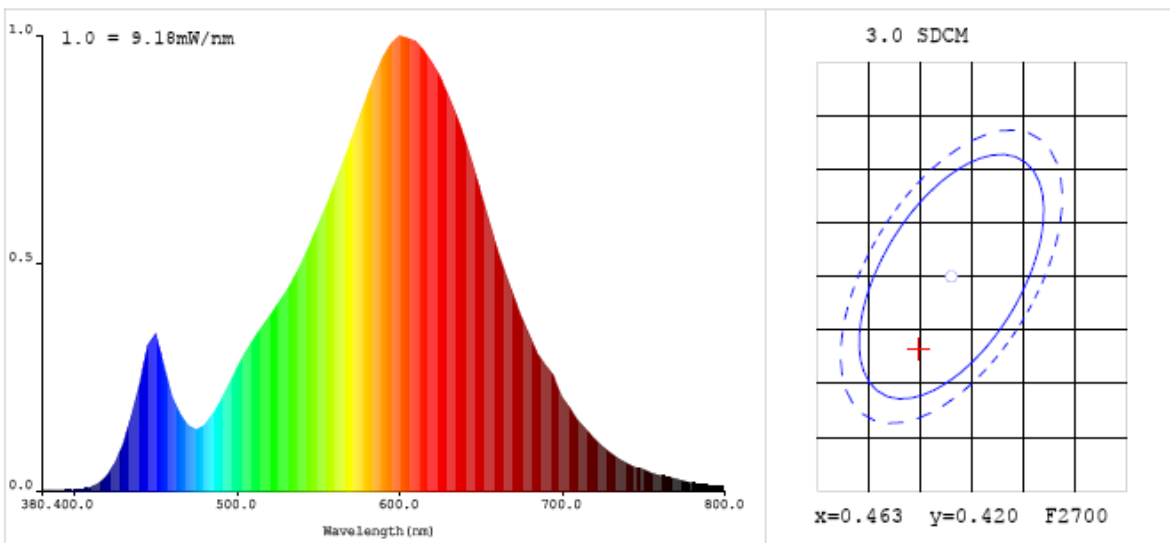


Lighting solutions that don't cost the earth

GO1900L GONIOPHOTOMETER Test Report



Light Source Test Report



CIE Color Parameters:

Chromaticity Coordinate: $x=0.4597$ $y=0.4132$ / $u=0.2613$ $v=0.3522$ ($duv=9.68e-004$)

CCT: $T_c=2722K$ Prcp WaveL: $c\lambda=583.8nm$ Purity=62.0%

Peak WaveL: $\lambda=600nm$ Half Width: $\Delta\lambda=123.6nm$ Ratio: R=24.3% G=73.6% B=2.0%

Average Wave: 597nm

Rendering Index: $R_a=80.4$

R1 =78	R2 =89	R3 =97	R4 =77	R5 =78	R6 =86	R7 =82	R8 =57
R9 =5	R10=75	R11=75	R12=70	R13=80	R14=99	R15=71	

Photo Parameters:

Flux: $\Phi=434.29(lm)$ Luminous Efficacy: 43.84(lm/W) Luminous Power: $P=1.358(W)$

Electrical Parameters:

$U=12.00V$ $I=0.8254A$ $P=9.905W$ $PF=1.000$

Instrument Status:

Scan Range: 380.0nm-800.0nm
REF = 11827

Interval: 5.0nm
% = -0.512%

$I_p = 4237(G=4, D=53)$
TMP (PMT) = 29.6degrees centigrade



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Features

- Light source: 10 watt **SHARP** COB (Chip on Board technology) LED
- Long LED life: More than 40,000 hours
- Low heat, less than 60°C for 10W
- No UV or IR light emittance radiation
- No Mercury or other inorganic chemicals
- Highest Color-rendering index: Ra >85
- Homogeneous flood illumination
- Machined aluminum heat fins with excellent thermal efficiencies
- The 10W NAR111 is available white color temperature 2900K – 3300K (Warm White)
- 10W NAR111 meets equivalent to 50 Watt traditional AR 111 lamps with very low life hours
- 3 years limited warranty

Typical Applications

- Retail Store Lighting
- Commercial Lighting
- Hospitality/Restaurant Lighting
- Mood Lighting/General lighting
- Display Case Accent
- Ceilings
- Spot lighting
- Sustainable Energy
- Energy Saving Programs

PRODUCT SPECIFICATIONS

LIGHT SOURCE	SHARP COB (Chip On Board technology) 10 Watt
OPTICS	Intricate reflector design with metalized coated aluminum reflector
BULB TYPE	NAR111 series
BEAM ANGLE	20° (Spot)±2°
RENDERING INDEX (Ra)	>85
LAMP DIMENSIONS	110*57MM (including pins)
WEIGHT	200 grams
HEATSINK	Heat sink system: CNC system made and anodized finishing
BASE TYPE	lamp base type G53/GU10

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE RANGE	Ambient: -20°C to 40°C; Surface of Lamp: 60°C to 70°C
HUMIDITY RANGE	0 to 95% non-condensing humidity

ELECTRICAL SPECIFICATIONS

VOLTAGE REQUIREMENT	12VAC or 230VAC 50/60HZ
POWER CONSUMPTION	10W
POWER FACTOR	=1 (12VAC) or ≥0.9 (230V AC)

LIMITED WARRANTY

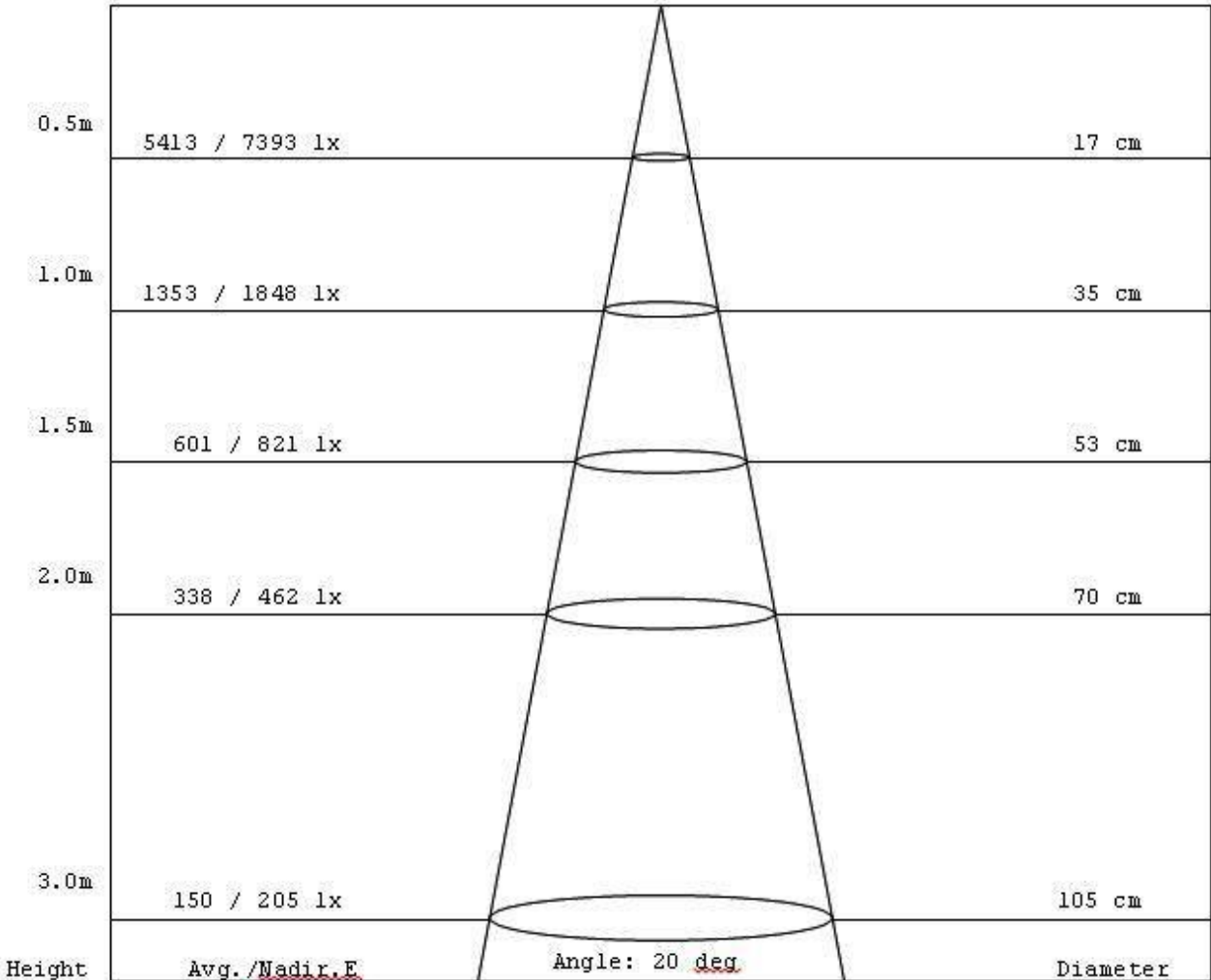
Manufacturer warrants to the Purchaser that each Product manufactured and sold by it will be free from defects in material and workmanship in its intended use (normal wear and tear excepted) for the period of two years from manufactured date. Manufacturer's warranty flows only to Purchaser. If any Product covered by this warranty is returned by Purchaser in accordance with Manufacturer's Products Return Policy, including without limitation its return authorization provisions, within the applicable warranty period set forth above, and upon examination Manufacturer determines to its satisfaction that such Product was defective in material or workmanship at the time of delivery to the Purchaser, Manufacturer will, at its option, repair or replace the Product or the defective part thereof, or reimburse Purchaser for the purchase price. For purposes of clarity, "repair or replace the Product or the defective part thereof" does not include any reinstallation costs or expenses. If Manufacturer chooses to replace the Product and is not able to do so because it has been discontinued or is not available, Manufacturer may replace it with a comparable product. The foregoing notwithstanding, Manufacturer will not be responsible for damage to any Product resulting from misuse, negligence, acts of God or accident or resulting from repairs or alterations made by any person or firm not duly authorized by Manufacturer in writing. Purchaser shall convey with each Product distributed to end users the MANUFACTURER'S LIMITED WARRANTY included by Manufacturer with such Product, and, if Manufacturer determines that the appropriate remedy for a defective product is refund of Purchaser's purchase price, Purchaser shall refund to the end user (or arrange for the refund to the end user of) the full purchase price paid by the end user for such defective Product.



Lighting solutions that don't cost the earth

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Average Illuminance Figure



This innovative AR111 in your hands now has no black spots on walls or ceilings like Megaman, is not point lights like both Osram/Philips blinding your eyes and has the very latest **SHARP** COB Chip with 450 Lm/ 40.000 hrs life inside. The bridge within the lamp is the Anti Glare System. No harm for the human eye, the intricate reflector design new and highly innovative.

Line Lite claims to be the only manufacturer able to submit such technical test reports to 3rd parties as we're transparent in every aspect of what we're bringing to the LED Lighting Industry.

WARNING:
 Patents in China, Europe, USA and Asian Countries have been applied for since October 2014 and we shall not hesitate to bring any manufacturing or distributing parties infringing our Intellectual Property Rights to Court and claim damages.

Dimmer Test Result

Dimmer Electr. Transformer	SIEMENS (25-400W 220-230V)	GZQS (630W 250V 50Hz)	CLIPSAL (KB31RD40 0)	MANK (200W 220V)	Soben (B6MJ)
POSSUM 60VA	NG	OK	OK	OK	OK
LIT LTR-60	OK	OK	NG	OK	OK
FOCUS EXEL60VA	NG	NG	NG	NG	NG
ACTEC MINI60	OK	OK	OK	OK	OK
INET ET60E	NG	OK	NG	OK	OK
PHILIPS ET-E60	NG	NG	NG	OK	OK
OSRAM ET-Z-60	NG	NG	NG	OK	OK
POSO ET60A	NG	NG	NG	OK	OK
ET-60	OK	NG	NG	OK	OK
RiO RT-50MP	NG	NG	NG	OK	OK
NVC ET50S	NG	NG	OK	OK	OK
Prarox 0-70W	OK	NG	NG	NG	OK
OSRAM ET- REDBACK	OK	NG	NG	NG	OK
OSRAM ET-LED 30W	NG	NG	OK	NG	OK
OSRAM ET-A 60/220-240	OK	NG	NG	NG	OK
PHILIPS ET-R 50A22/236l	NG	NG	NG	NG	NG
BARROW 20-60W	NG	NG	NG	NG	OK
MP Lamp 10-60W	NG	NG	NG	NG	NG
EKWAN MR60	NG	NG	OK	NG	NG
TCI Pico w olf 60V2	NG	OK	OK	NG	OK
HES TE 1260	NG	NG	OK	NG	OK



72 hours burn-in test prior to packaging.





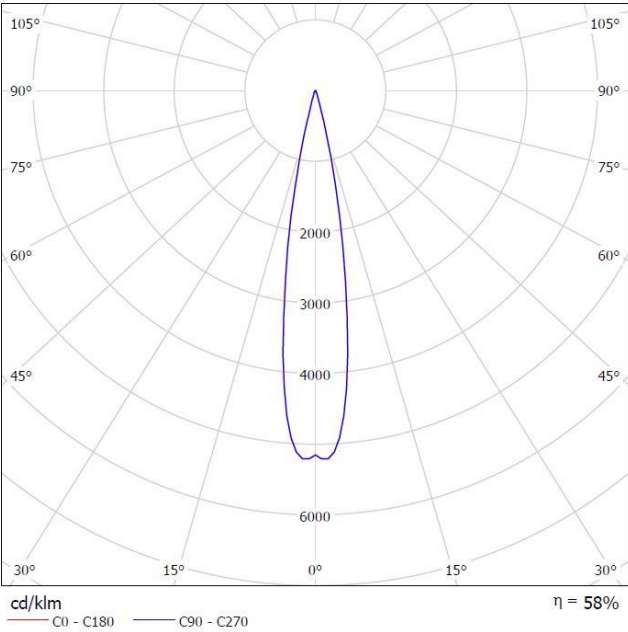
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Lamp Type NAR111- 230 V / 12 V

Luminaire Data Sheet

Luminaire classification according to CIE: 100
 CIE flux code: 98 100 100 100 62

Luminous emittance 1:



Glare Evaluation According to UGR													
ρ Ceiling		70	70	50	50	30	ρ Walls		50	30	50	30	30
ρ Floor		20	20	20	20	20	ρ Floor		20	20	20	20	20
Room Size X	Room Size Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis						
2H	2H	-2.4	-1.8	-2.2	-1.6	-1.4	-2.4	-1.8	-2.2	-1.6	-1.4		
	3H	-2.1	-1.5	-1.8	-1.3	-1.0	-2.1	-1.5	-1.8	-1.3	-1.0		
	4H	-2.2	-1.6	-1.9	-1.4	-1.1	-2.2	-1.6	-1.9	-1.4	-1.1		
	6H	-2.2	-1.7	-1.9	-1.4	-1.2	-2.2	-1.7	-1.9	-1.4	-1.2		
	8H	-2.3	-1.8	-1.9	-1.5	-1.2	-2.3	-1.8	-1.9	-1.5	-1.2		
	12H	-2.3	-1.8	-2.0	-1.5	-1.2	-2.3	-1.8	-2.0	-1.5	-1.2		
4H	2H	-2.2	-1.7	-1.9	-1.4	-1.2	-2.2	-1.7	-1.9	-1.4	-1.2		
	3H	-1.8	-1.4	-1.5	-1.1	-0.8	-1.8	-1.4	-1.5	-1.1	-0.8		
	4H	-1.9	-1.5	-1.5	-1.2	-0.8	-1.9	-1.5	-1.5	-1.2	-0.8		
	6H	-2.0	-1.6	-1.6	-1.3	-0.9	-2.0	-1.6	-1.6	-1.3	-0.9		
	8H	-2.0	-1.7	-1.6	-1.3	-0.9	-2.0	-1.7	-1.6	-1.3	-0.9		
	12H	-2.0	-1.8	-1.6	-1.4	-1.0	-2.0	-1.8	-1.6	-1.4	-1.0		
8H	4H	-2.0	-1.7	-1.6	-1.3	-0.9	-2.0	-1.7	-1.6	-1.3	-0.9		
	6H	-2.1	-1.9	-1.6	-1.4	-1.0	-2.1	-1.9	-1.6	-1.4	-1.0		
	8H	-2.1	-1.9	-1.7	-1.5	-1.0	-2.1	-1.9	-1.7	-1.5	-1.0		
	12H	-2.2	-2.0	-1.7	-1.6	-1.1	-2.2	-2.0	-1.7	-1.6	-1.1		
12H	4H	-2.0	-1.8	-1.6	-1.4	-1.0	-2.0	-1.8	-1.6	-1.4	-1.0		
	6H	-2.1	-1.9	-1.7	-1.5	-1.0	-2.1	-1.9	-1.7	-1.5	-1.0		
	8H	-2.2	-2.0	-1.7	-1.6	-1.1	-2.2	-2.0	-1.7	-1.6	-1.1		
	8H	-2.2	-2.0	-1.7	-1.6	-1.1	-2.2	-2.0	-1.7	-1.6	-1.1		
Variation of the observer position for the luminaire distances S													
S = 1.0H		+1.6 / -1.2					+1.6 / -1.2						
S = 1.5H		+3.3 / -2.4					+3.3 / -2.4						
S = 2.0H		+4.9 / -3.1					+4.9 / -3.1						
Standard table		BK01					BK01						
Correction Summand		-21.8					-21.8						
Corrected Glare Indices referring to 441lm Total Luminous Flux													

Glare Evaluation According to UGR													
The UGR values have been calculated according to CIE Publ. 117 Spacing-to-Height-Ratio = 0.25.													
ρ Ceiling		70	70	50	50	30	ρ Walls		50	30	50	30	30
ρ Floor		20	20	20	20	20	ρ Floor		20	20	20	20	20
Room Size X	Room Size Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis						
2H	2H	-2.4	-1.8	-2.2	-1.6	-1.4	-2.4	-1.8	-2.2	-1.6	-1.4		
	3H	-2.1	-1.5	-1.8	-1.3	-1.0	-2.1	-1.5	-1.8	-1.3	-1.0		
	4H	-2.2	-1.6	-1.9	-1.4	-1.1	-2.2	-1.6	-1.9	-1.4	-1.1		
	6H	-2.2	-1.7	-1.9	-1.4	-1.2	-2.2	-1.7	-1.9	-1.4	-1.2		
	8H	-2.3	-1.8	-1.9	-1.5	-1.2	-2.3	-1.8	-1.9	-1.5	-1.2		
	12H	-2.3	-1.8	-2.0	-1.5	-1.2	-2.3	-1.8	-2.0	-1.5	-1.2		
4H	2H	-2.2	-1.7	-1.9	-1.4	-1.2	-2.2	-1.7	-1.9	-1.4	-1.2		
	3H	-1.8	-1.4	-1.5	-1.1	-0.8	-1.8	-1.4	-1.5	-1.1	-0.8		
	4H	-1.9	-1.5	-1.5	-1.2	-0.8	-1.9	-1.5	-1.5	-1.2	-0.8		
	6H	-2.0	-1.6	-1.6	-1.3	-0.9	-2.0	-1.6	-1.6	-1.3	-0.9		
	8H	-2.0	-1.7	-1.6	-1.3	-0.9	-2.0	-1.7	-1.6	-1.3	-0.9		
	12H	-2.0	-1.8	-1.6	-1.4	-1.0	-2.0	-1.8	-1.6	-1.4	-1.0		
8H	4H	-2.0	-1.7	-1.6	-1.3	-0.9	-2.0	-1.7	-1.6	-1.3	-0.9		
	6H	-2.1	-1.9	-1.6	-1.4	-1.0	-2.1	-1.9	-1.6	-1.4	-1.0		
	8H	-2.1	-1.9	-1.7	-1.5	-1.0	-2.1	-1.9	-1.7	-1.5	-1.0		
	12H	-2.2	-2.0	-1.7	-1.6	-1.1	-2.2	-2.0	-1.7	-1.6	-1.1		
12H	4H	-2.0	-1.8	-1.6	-1.4	-1.0	-2.0	-1.8	-1.6	-1.4	-1.0		
	6H	-2.1	-1.9	-1.7	-1.5	-1.0	-2.1	-1.9	-1.7	-1.5	-1.0		
	8H	-2.2	-2.0	-1.7	-1.6	-1.1	-2.2	-2.0	-1.7	-1.6	-1.1		
	8H	-2.2	-2.0	-1.7	-1.6	-1.1	-2.2	-2.0	-1.7	-1.6	-1.1		
Variation of the observer position for the luminaire distances S													
S = 1.0H		+1.6 / -1.2					+1.6 / -1.2						
S = 1.5H		+3.3 / -2.4					+3.3 / -2.4						
S = 2.0H		+4.9 / -3.1					+4.9 / -3.1						
Standard table		BK01					BK01						
Correction Summand		-21.8					-21.8						
Corrected Glare Indices referring to 441lm Total Luminous Flux													