

## DETAILS

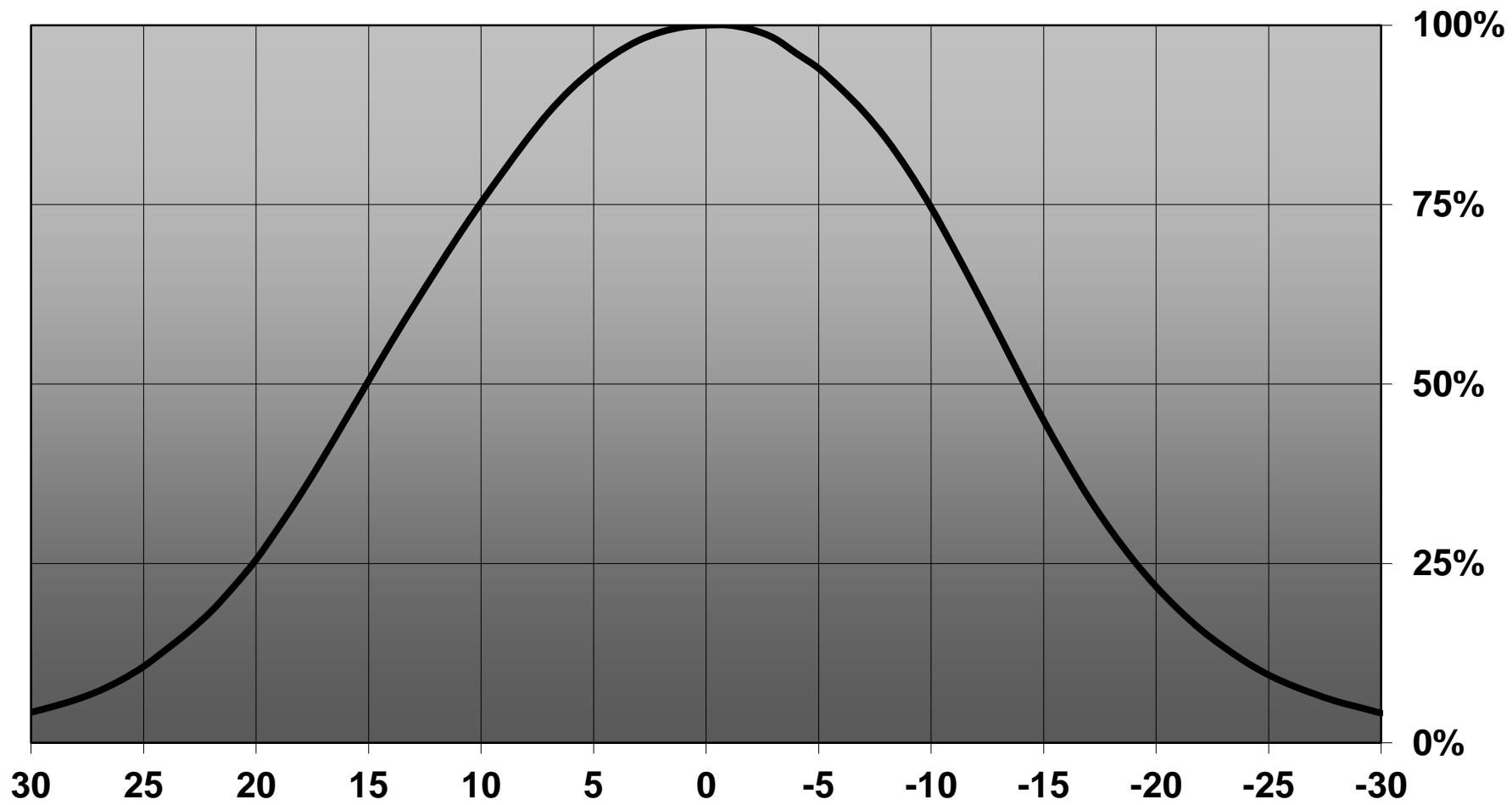
<b>Product Number</b>	CA12377_TINA2-M
<b>Family</b>	Tina
<b>Type</b>	Assembly
<b>Color</b>	black
<b>Diameter</b>	16 mm
<b>Height</b>	9,5 mm
<b>Style</b>	round
<b>Optic Material</b>	PMMA
<b>Holder Material</b>	
<b>Fastening</b>	tape, pin
<b>Status</b>	production ready
<b>ROHS Compliant</b>	Yes
<b>Date Updated</b>	10/04/2017



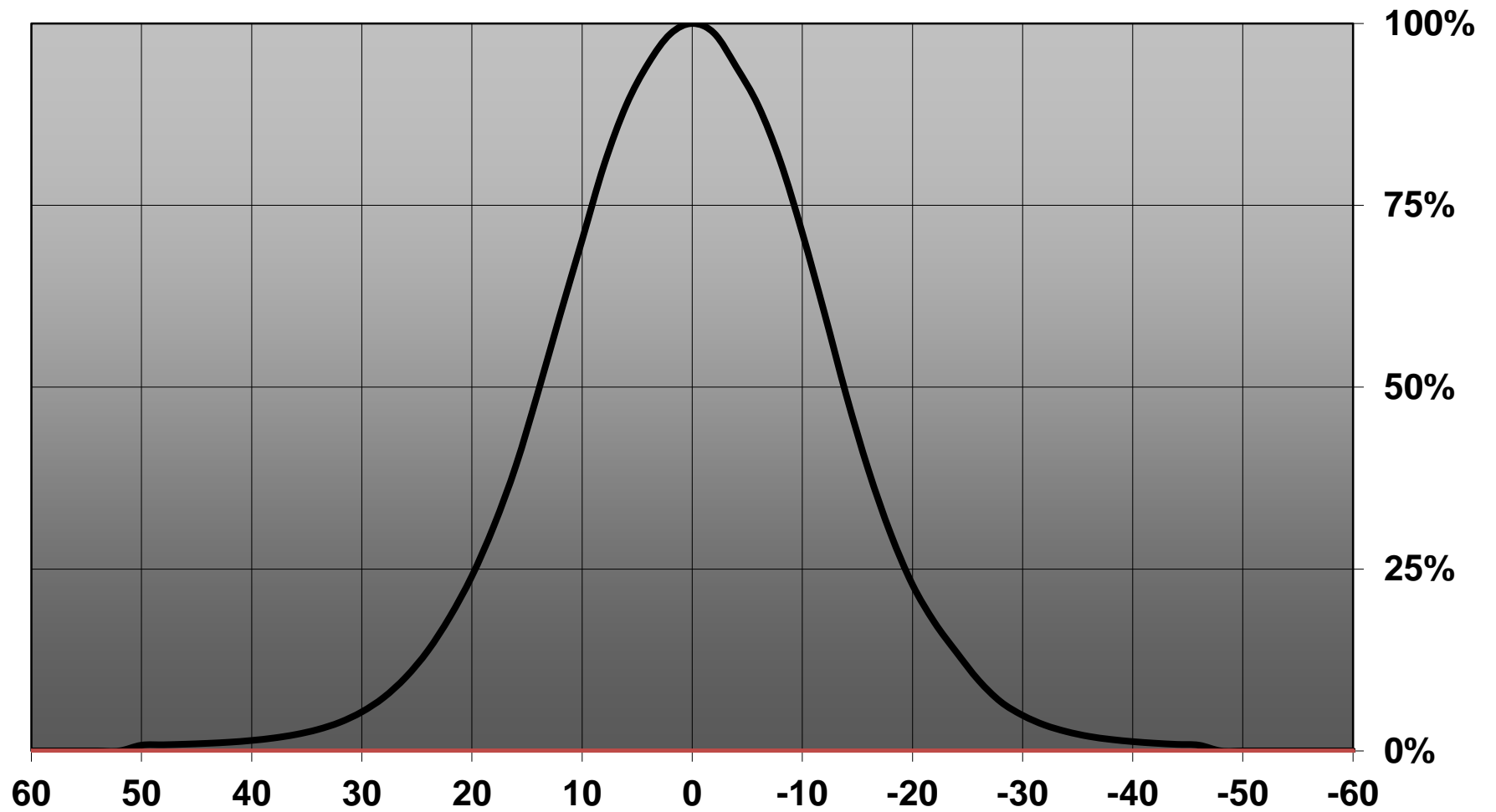
## OPTICAL PROPERTIES

LED	Viewing	Light	Effi-		Connector
	Angle	Beam	ciency	cd/lm	
XB-H	31 deg	Medium	85 %	2.700	-
XQ-E	29 deg	Medium	84 %	3.200	-
LUXEON Z ES	31 deg	Medium	88 %	3.200	-
LUXEON TX	30 deg	Medium	86 %	2.800	-
LUXEON C	sim: 30	Medium	sim: 93 %	sim: 2.900	-
NWSx229A	26 deg	Medium	86 %	2.200	-
NVSxx19B/NVSxx19C	29 deg	Medium	85 %	2.700	-
Oslon Square PC	29 deg	Medium	86 %	2.400	-
Oslon SSL 80	31 deg	Medium	84 %	2.280	-
Oslon SSL 150	30 deg	Medium	87 %	2.500	-
SFH 4715S	28 deg	Medium	sim: 86 %	-	-
Oslon Square EC	30 deg	Medium	85 %	2.200	-
SFH 4725S	27 deg	Medium	-	-	-
Duris S5 (2 chip)	sim: 29	Medium	sim: 92 %	sim: 2.980	-
SFH 4770S	sim: 27	Medium	sim: 85 %	sim: 3.200	-
Synios P2720 1 mm	sim: 27	Medium	sim: 91 %	sim: 3.560	-
Synios P2720 1/4 mm	sim: 28	Medium	sim: 91 %	sim: 3.140	-
Synios P2720 1/2 mm	sim: 29	Medium	sim: 93 %	sim: 3.370	-
Oslon Black Flat	sim: 28	Medium	sim: 91 %	sim: 3.500	-

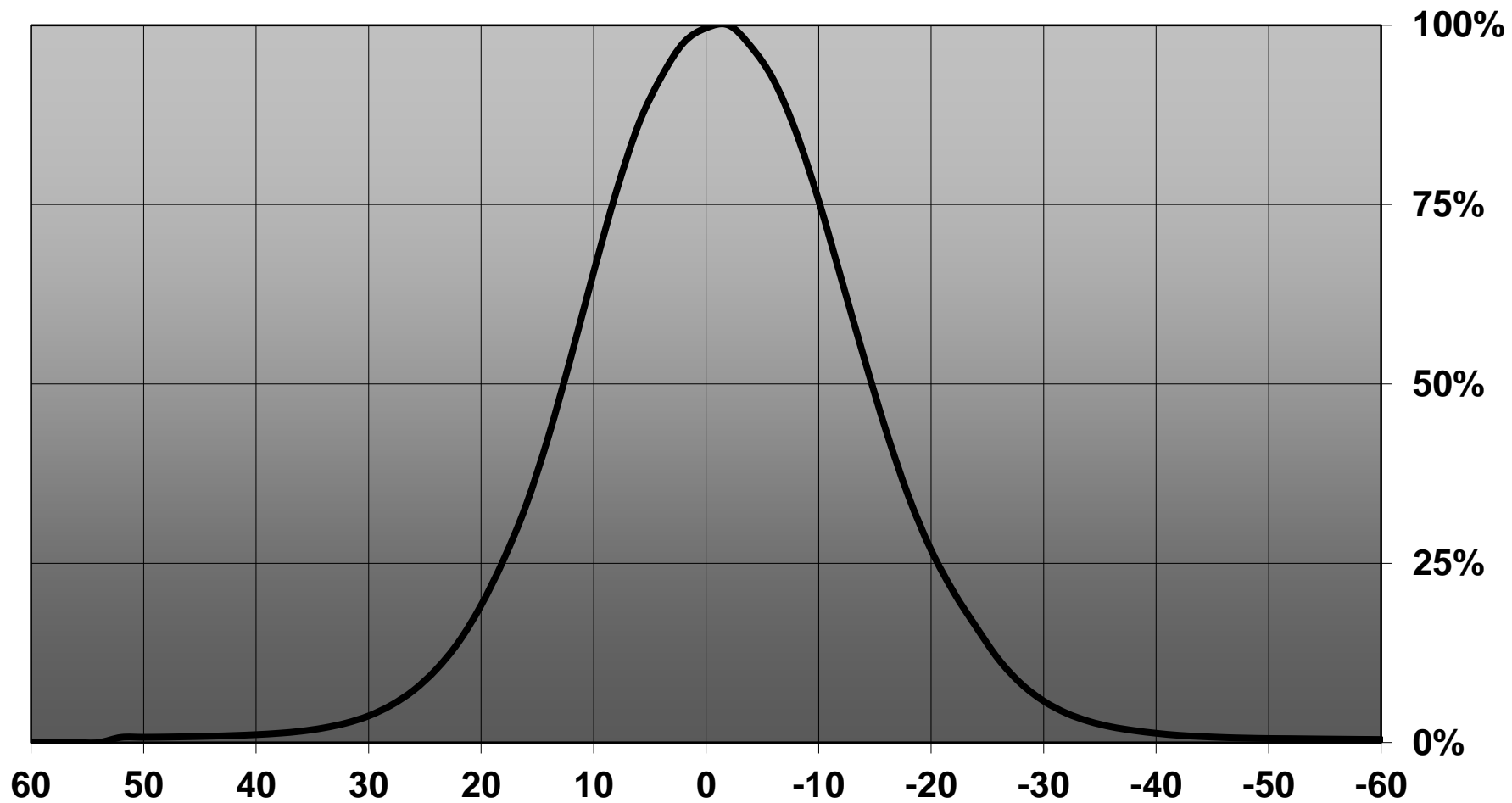
Relative intensity of CA12377\_TINA2-M\_(XQ-E)



### Relative intensity of CA12377\_TINA2-M-SFH4715S



### Relative intensity of CA12377\_TINA2-M\_(SFH4725S)

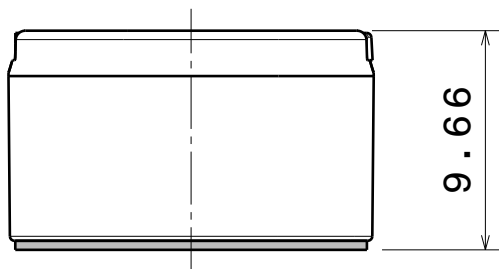


D

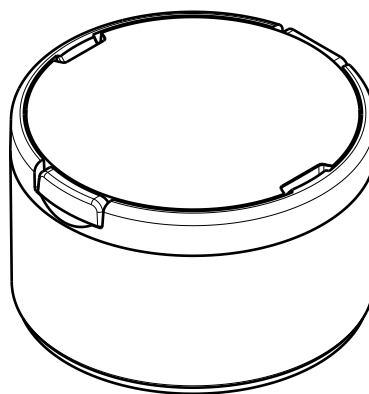
C

B

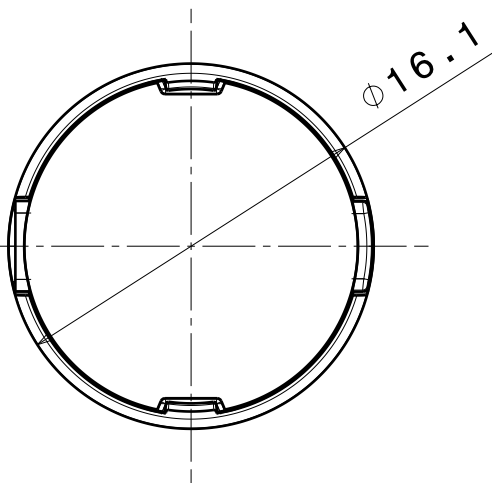
A



Bottom view  
Scale: 3:1

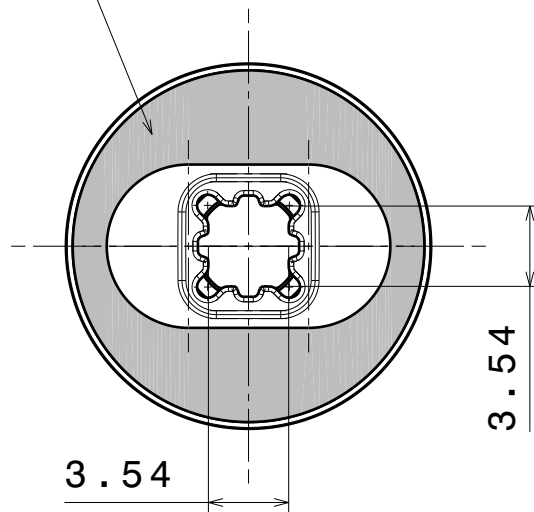


Isometric view  
Scale: 3:1



Front view  
Scale: 3:1

PU foam tape 0.4mm



Rear view  
Scale: 3:1

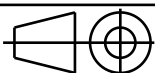
INDEX	PART NO	DESCRIPTION	MATERIAL	COLOUR
1	-	TINA2-lens	PMMA	
2	C11418	TINA2-XP-HLD-TAPE-BLK	PC	black

Tolerances if not otherwise shown  
According to DIN ISO 2768-1  
Linear measures:  
Up to 30mm class M, otherwise class C.  
According to DIN ISO 2768-2  
Form and position: class L

**LEDiL**

Ledil Oy  
Salorankatu 10  
FIN 24240 SALO  
Finland

THIRD ANGLE PROJECTION:



DRAWING TITLE

TINA2-XP-series assembly

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of LEDiL Oy. It may not be  
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agreement with LEDiL Oy.

SIZE PART NUMBER

A4

-

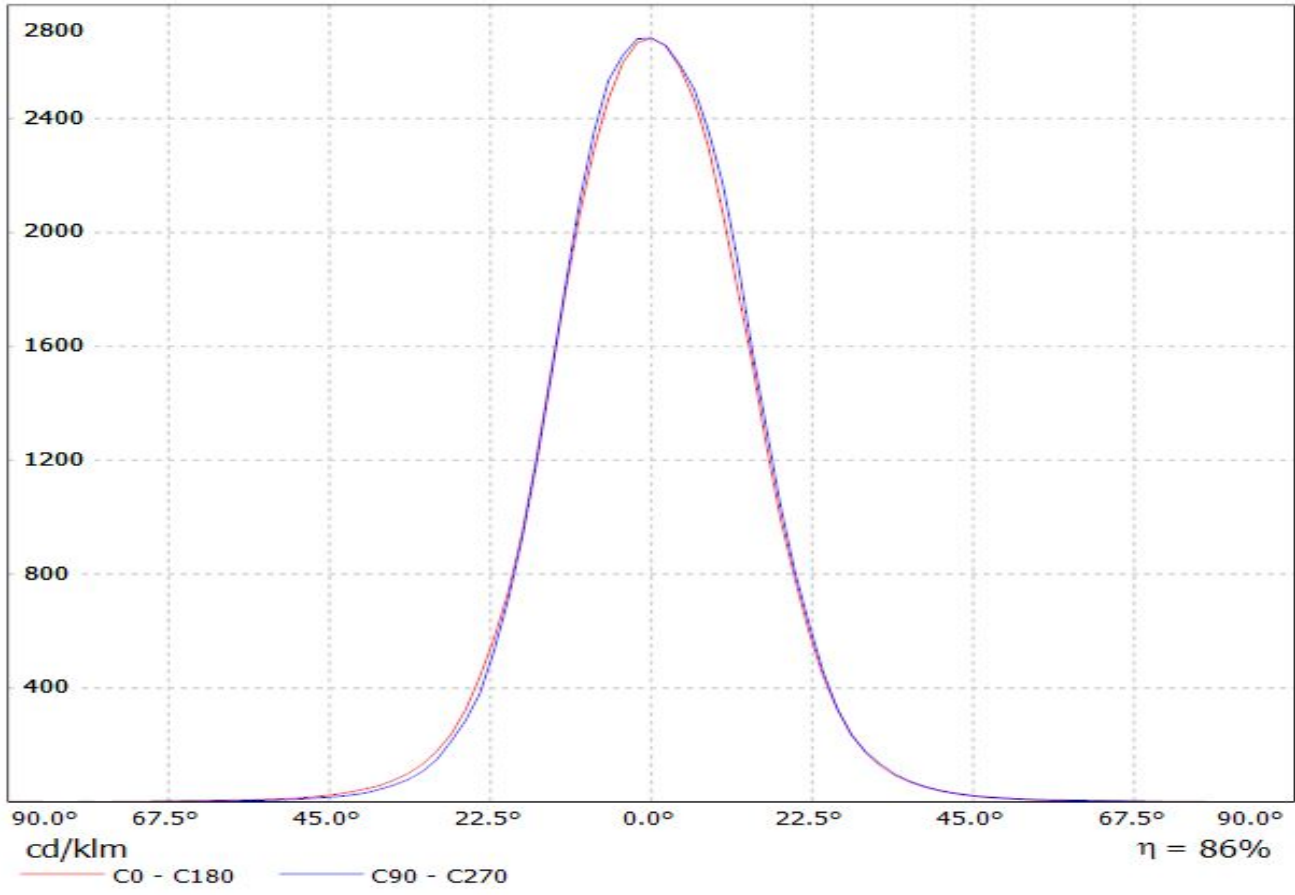
SCALE 3:1 WEIGHT 1,3 g SHEET 1/1

D

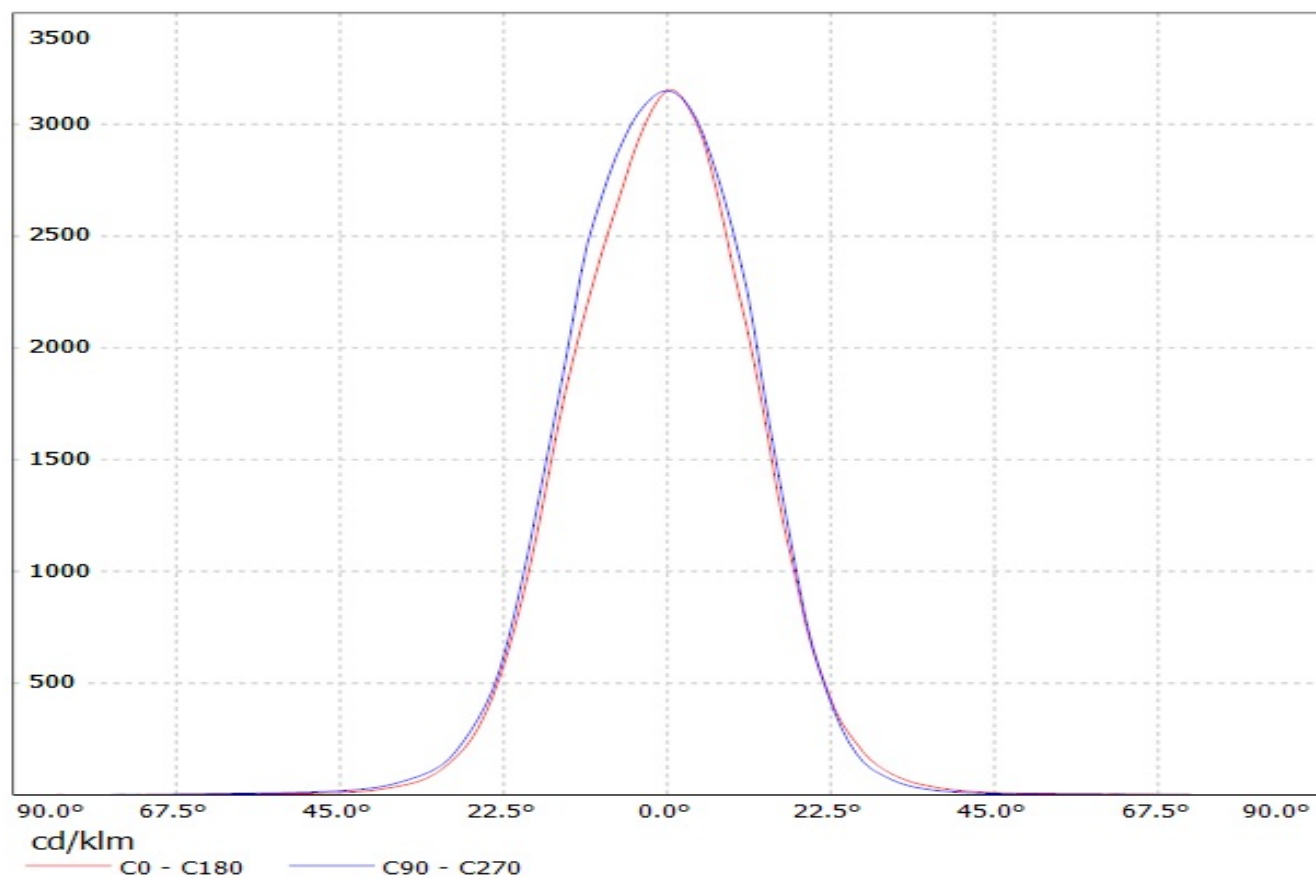
A

Luminaire: Ledil Oy CA12377\_TINA2-M\_(XB-H)

Lamps: 1 x Cree XB-H (XBHAWT-0-3C0-T50-0B-0001) 106lm @ 250mA CCT= P=0.73W I=250mA

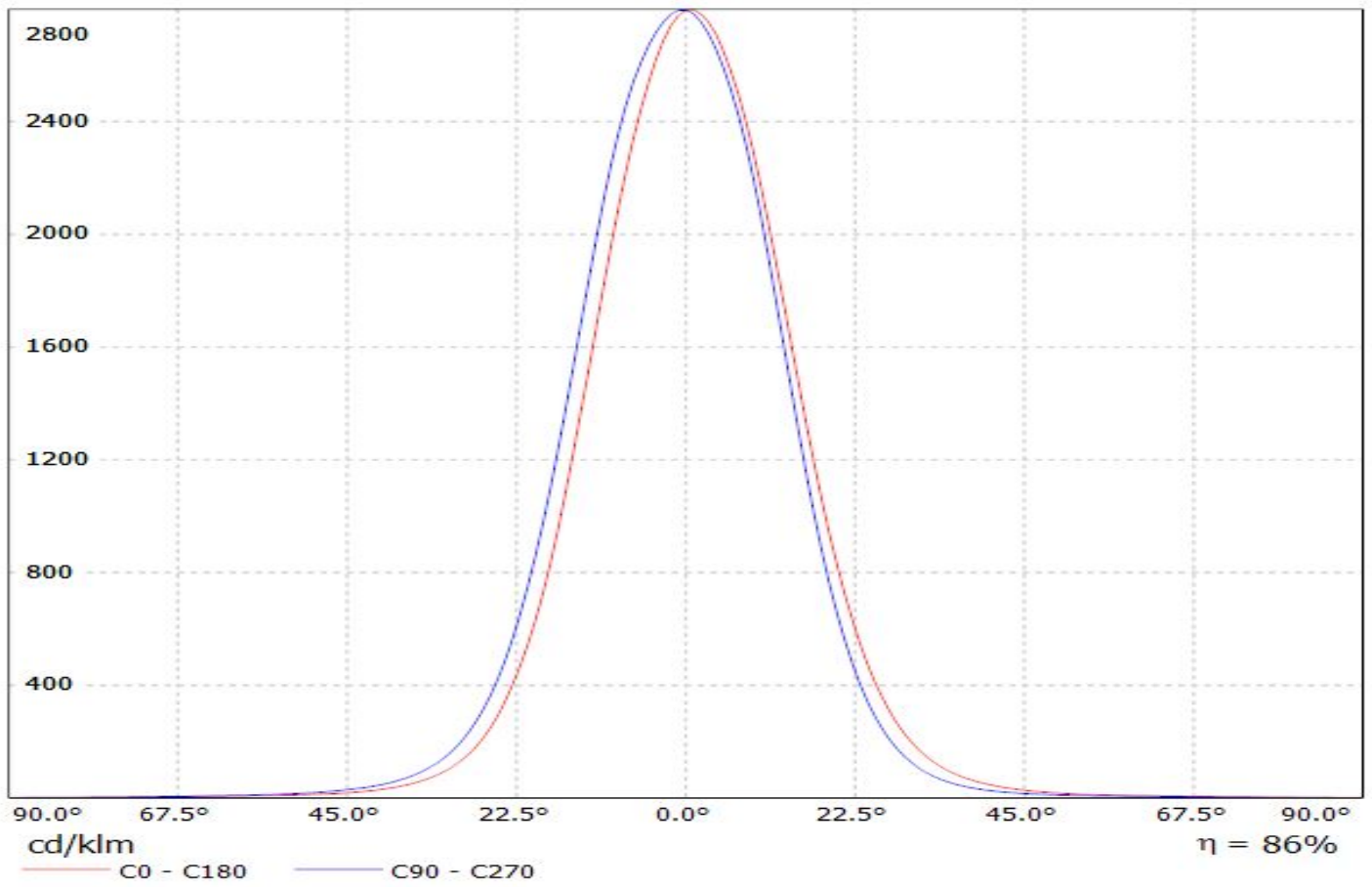


Luminaire: Ledil Oy CA12377\_TINA2-M\_(Luxeon\_Z\_ES) Efficiency=87%  
Lamps: 1 x Luxeon Z ES (LXZ2-3090) 51.1lm @ 250mA CCT=3000K P=0.7W I=250mA



Luminaire: LEDiL Oy CA12377\_TINA2-M\_(TX)

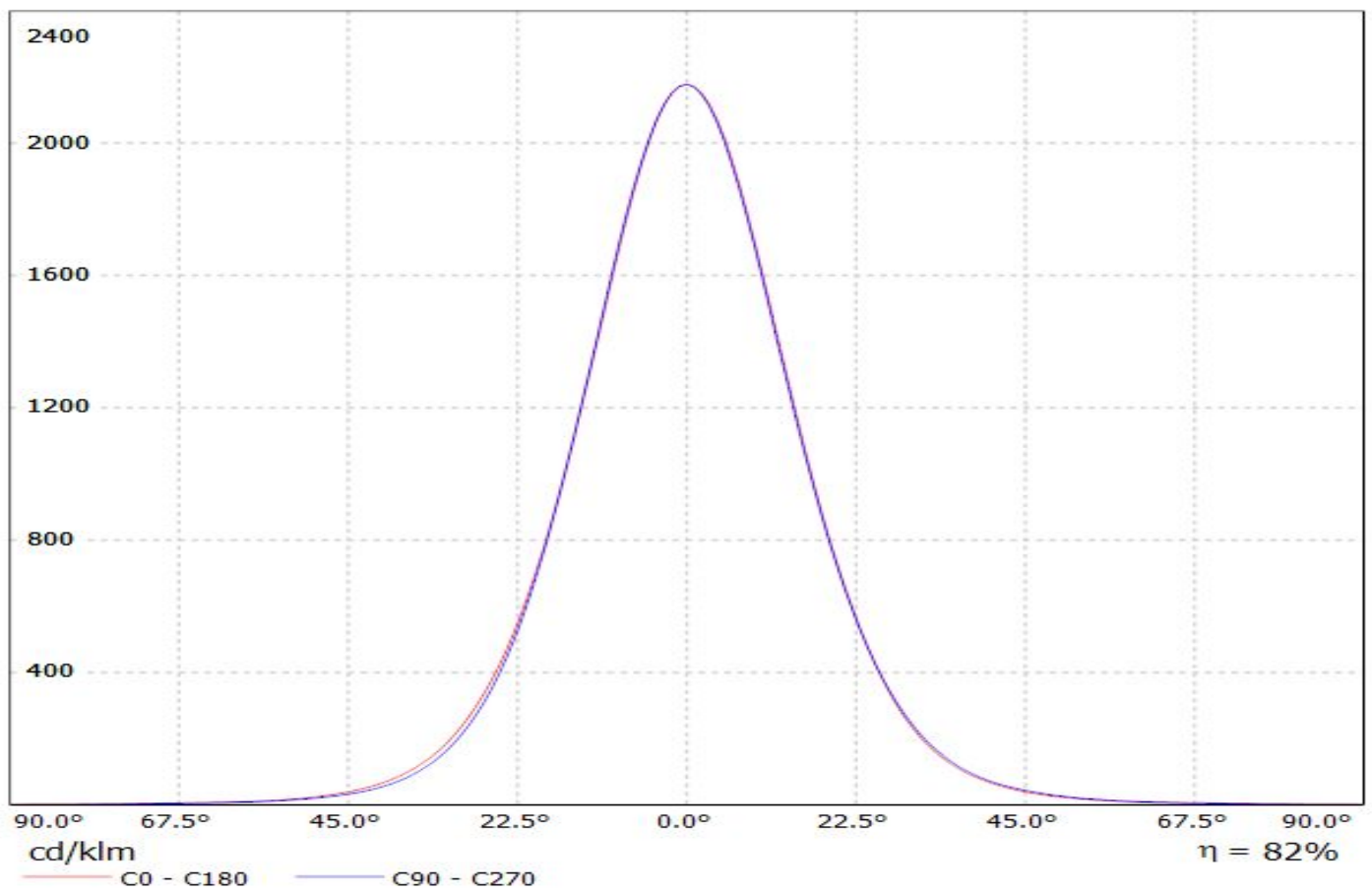
Lamps: 1 x Luxeon\_TX\_(L1T2-5770)\_109.051lm@250mA\_P=0.732157W\_I=0.2499A





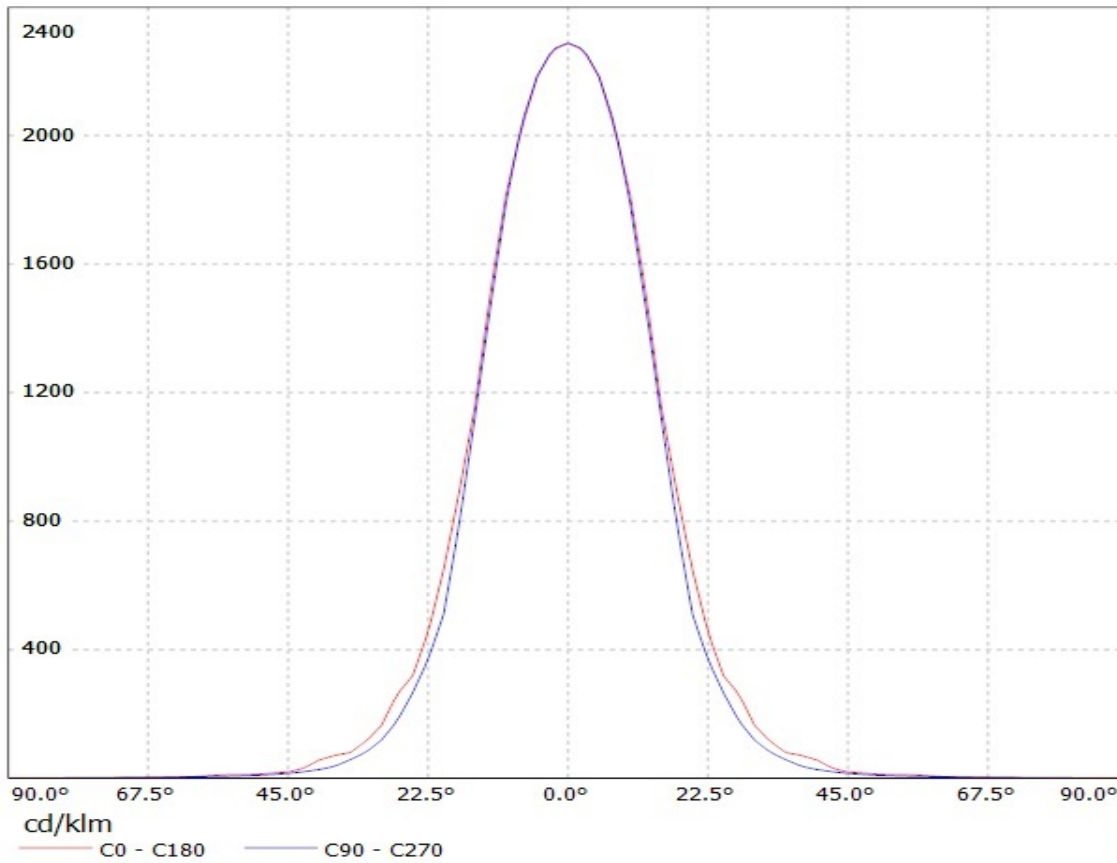
Luminaire: LEDiL Oy CA12377\_TINA2-M\_(NWSL229AE)

Lamps: 1 x Nichia\_NWSL229AE\_120.54lm@250mA\_P=0.7128W\_I=0.250A



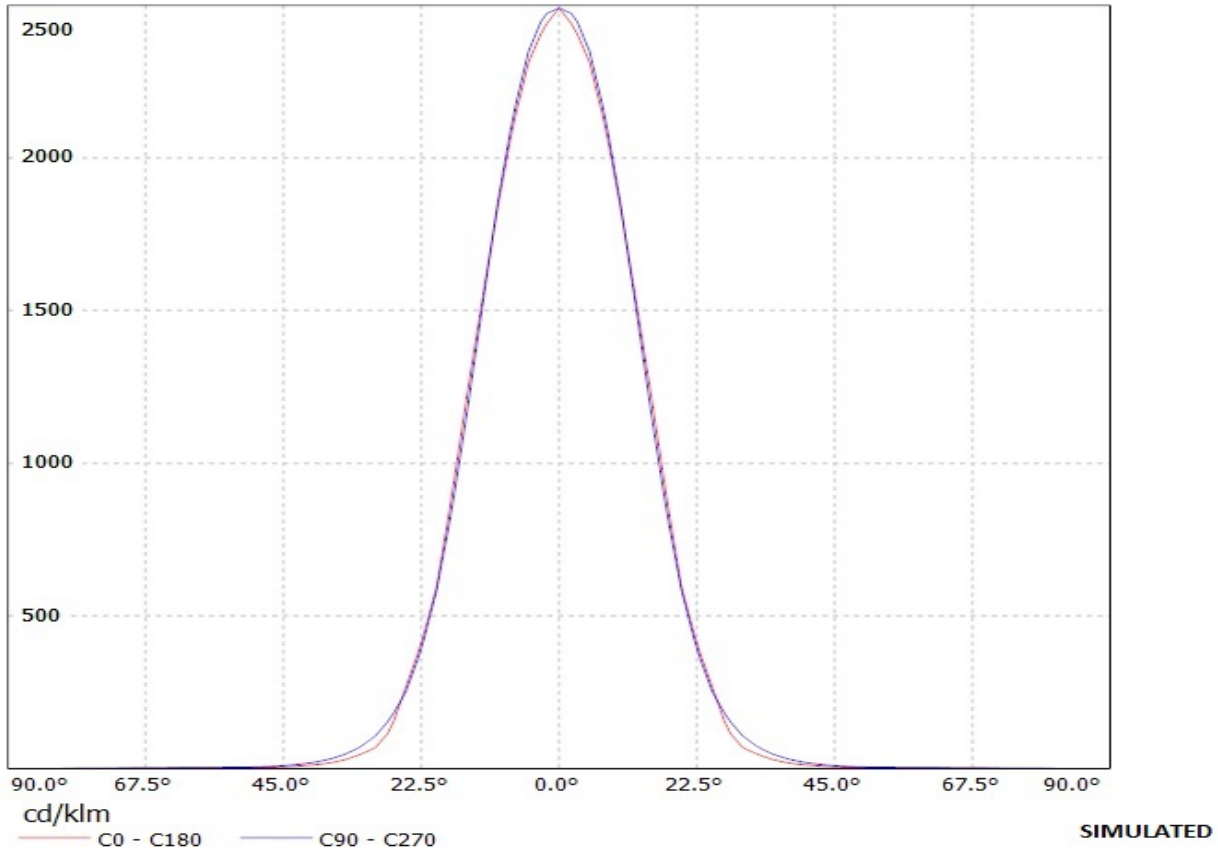
**Ledil Oy CA12377\_Tina2-M-OSL80 LOR=84% / LDC (Linear)**

Luminaire: Ledil Oy CA12377\_Tina2-M-OSL80 LOR=84%  
Lamps: 1 x Osram OSL80 250mA 87lm

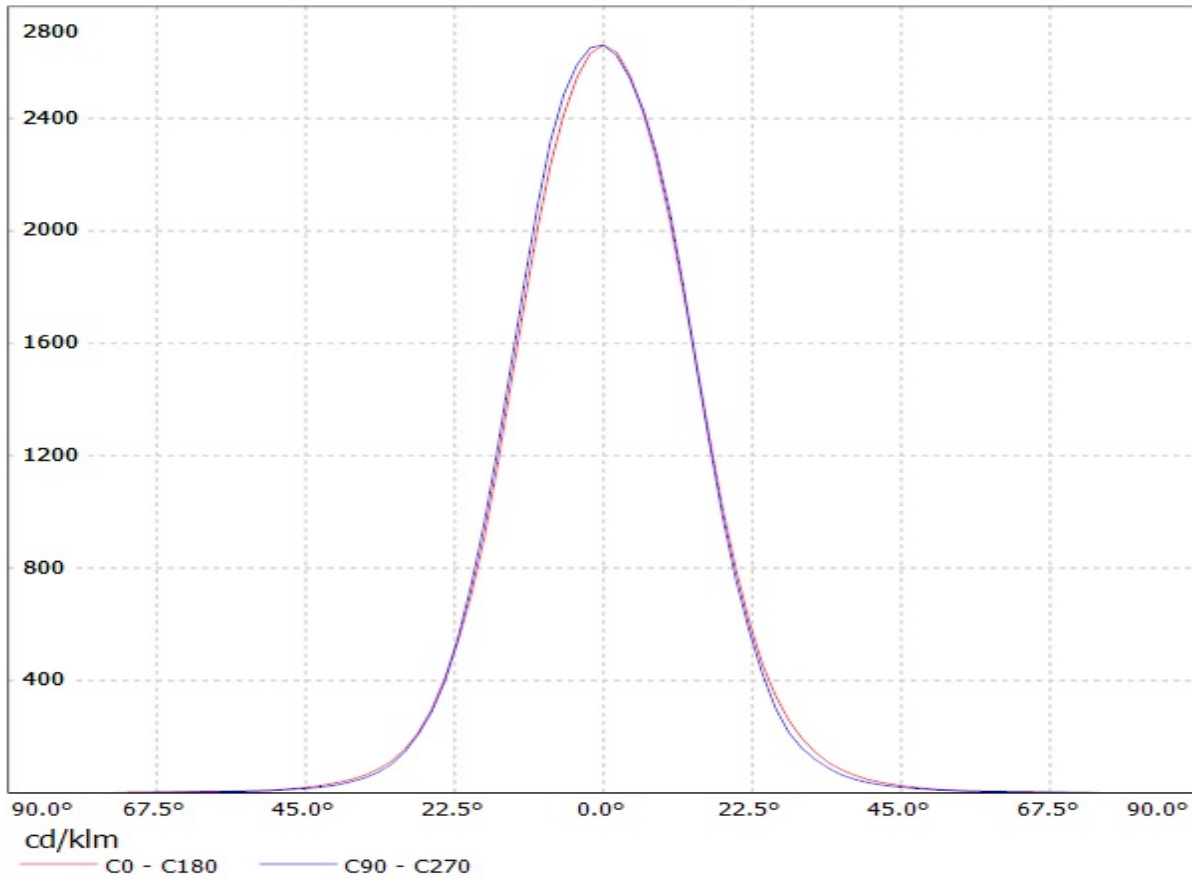


**Ledil Oy CA12377\_Tina2-M-OSL150 LOR=87% / LDC (Linear)**

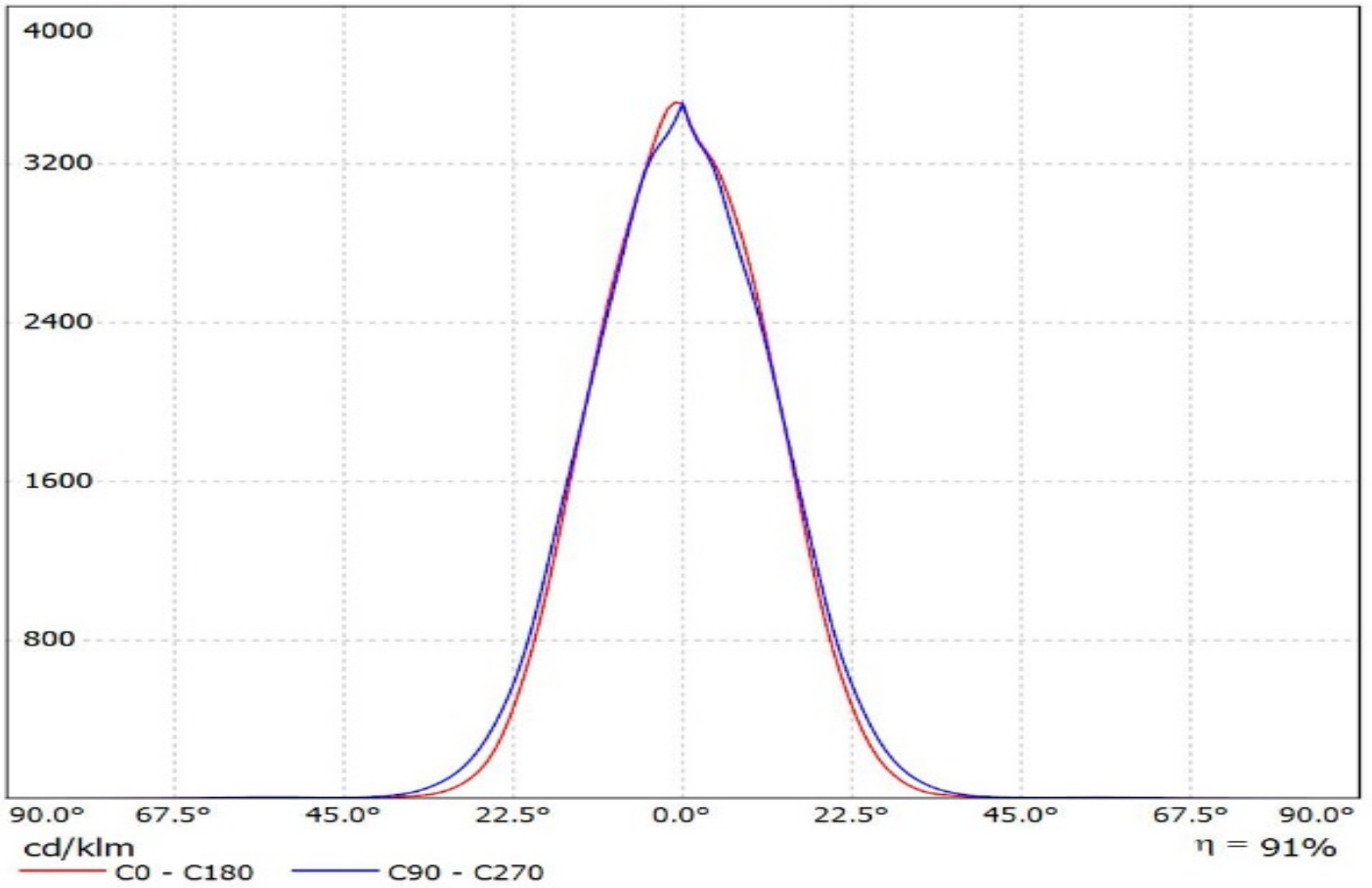
Luminaire: Ledil Oy CA12377\_Tina2-M-OSL150 LOR=87%  
Lamps: 1 x Osram OSL150 250mA 110lm



Luminaire: LEDil Oy CA12376\_TINA2-SS\_(Oslon\_Square\_EC) Efficiency=83%  
Lamps: 1 x Osram Oslon Square- EC (LCW CQAR-EC-MQMS-5R8T-35) 77.7lm @ 250mA CCT=3200K P=0.8 I=250mA

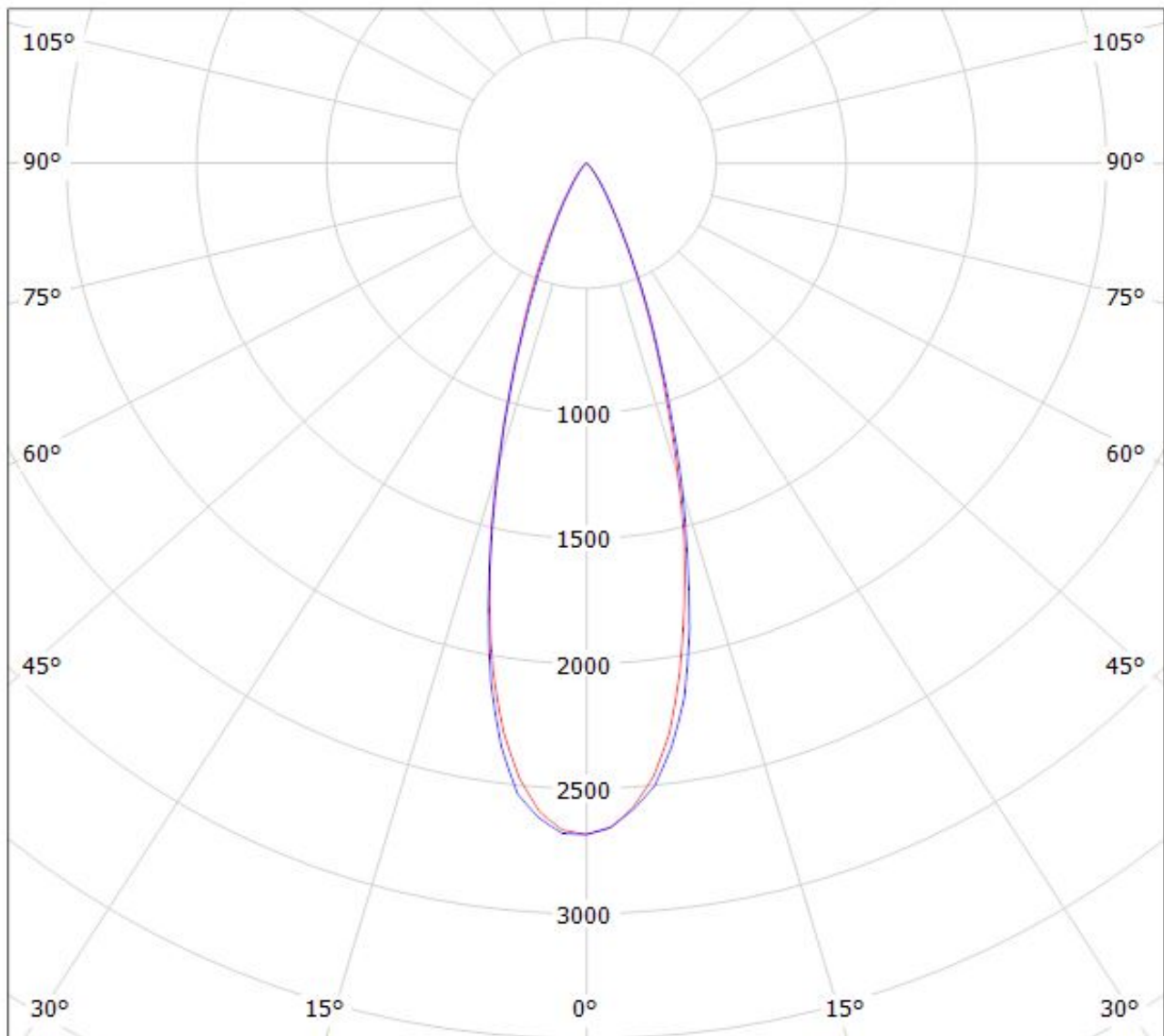


Luminaire: Ledil Oy CA12377\_TINA2-M\_(Oslon\_Black\_Flat)\_SIMULATED  
Lamps: 1 x Osram Oslon Black Flat (LUW HWQP)



Luminaire: Ledil Oy CA12377\_TINA2-M\_(XB-H)

Lamps: 1 x Cree XB-H (XBHAWT-0-3C0-T50-0B-0001) 106lm @ 250mA CCT= P=0.73W I=250mA



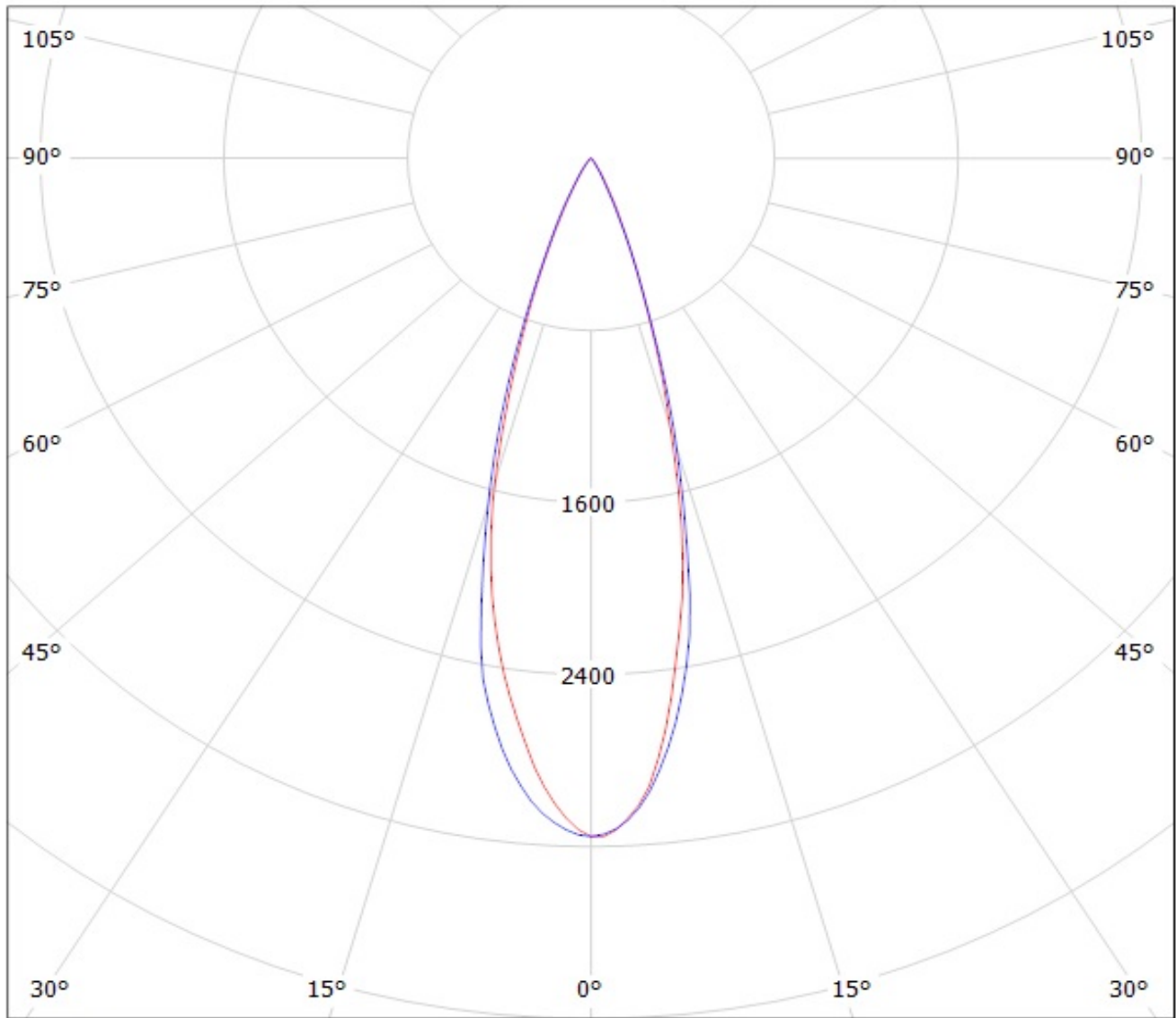
cd/klm

— C0 - C180

— C90 - C270

$\eta = 86\%$

Luminaire: Ledil Oy CA12377\_TINA2-M\_(Luxeon\_Z\_ES) Efficiency=87%  
Lamps: 1 x Luxeon Z ES (LXZ2-3090) 51.1lm @ 250mA CCT=3000K P=0.7W I=250mA



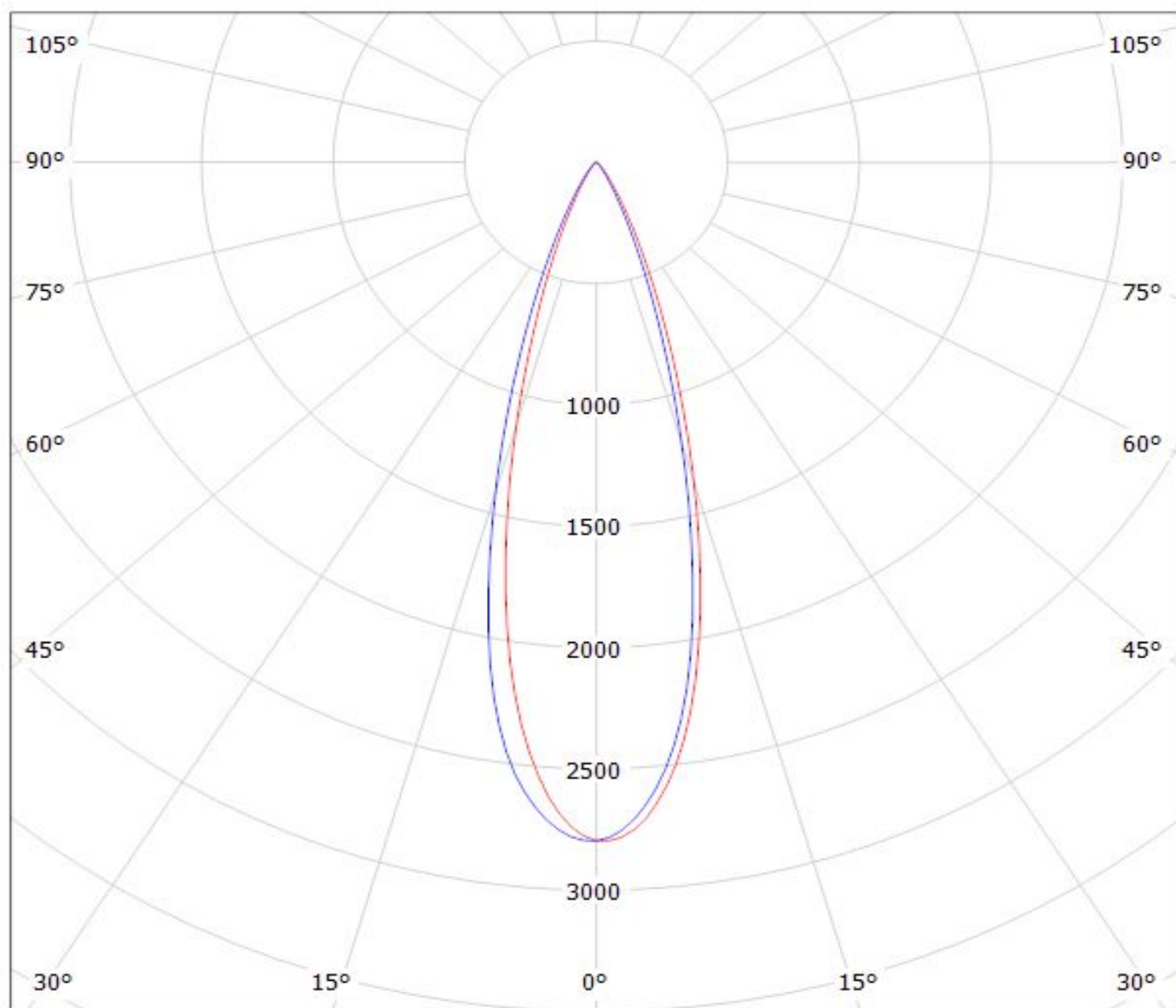
cd/klm

— C0 - C180

— C90 - C270

Luminaire: LEDiL Oy CA12377\_TINA2-M\_(TX)

Lamps: 1 x Luxeon\_TX\_(L1T2-5770)\_109.051lm@250mA\_P=0.732157W\_I=0.2499A



cd/klm

— C0 - C180

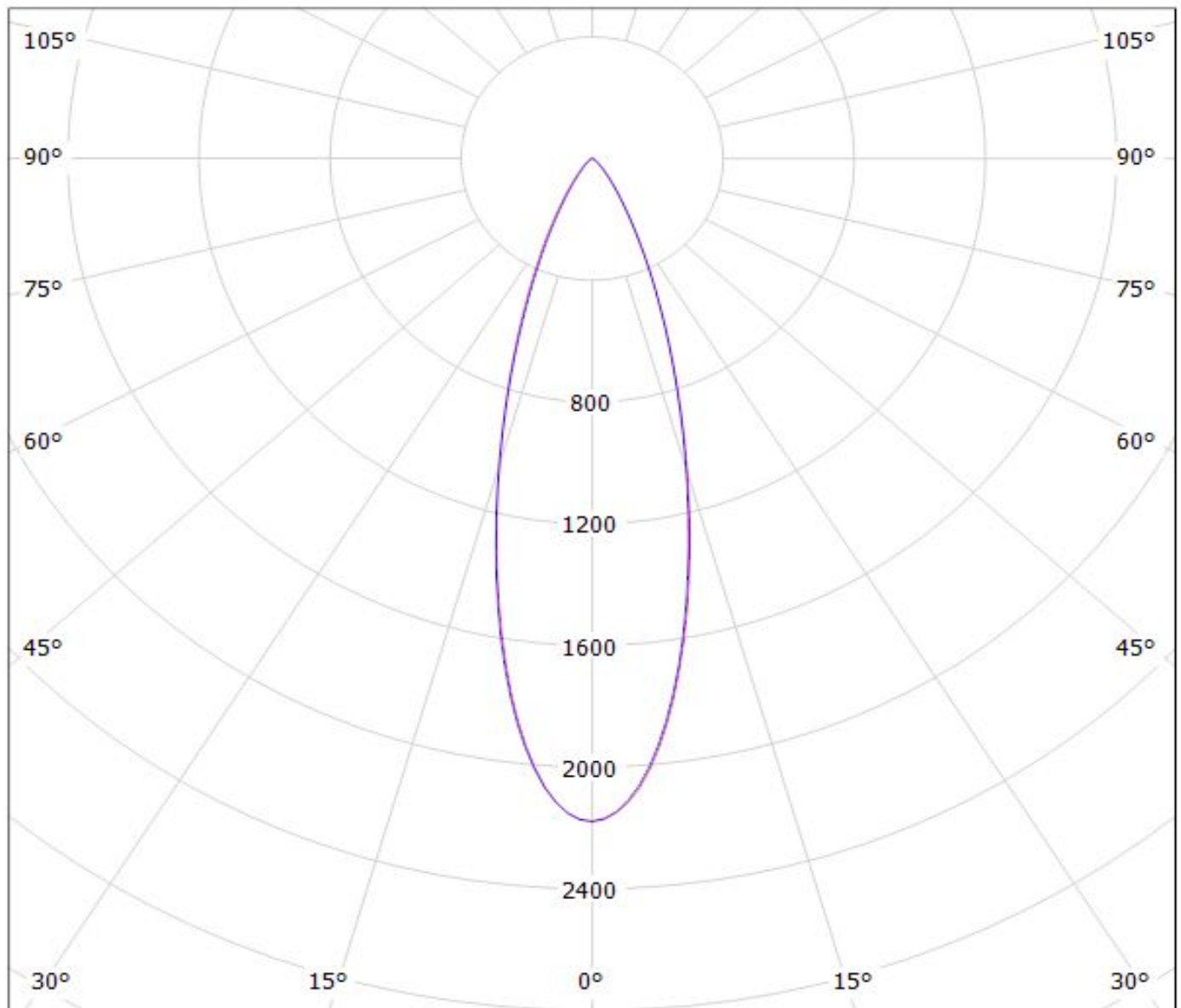
— C90 - C270

$\eta = 86\%$



Luminaire: LEDiL Oy CA12377\_TINA2-M\_(NWSL229AE)

Lamps: 1 x Nichia\_NWSL229AE\_120.54lm@250mA\_P=0.7128W\_I=0.250A



cd/klm

— C0 - C180

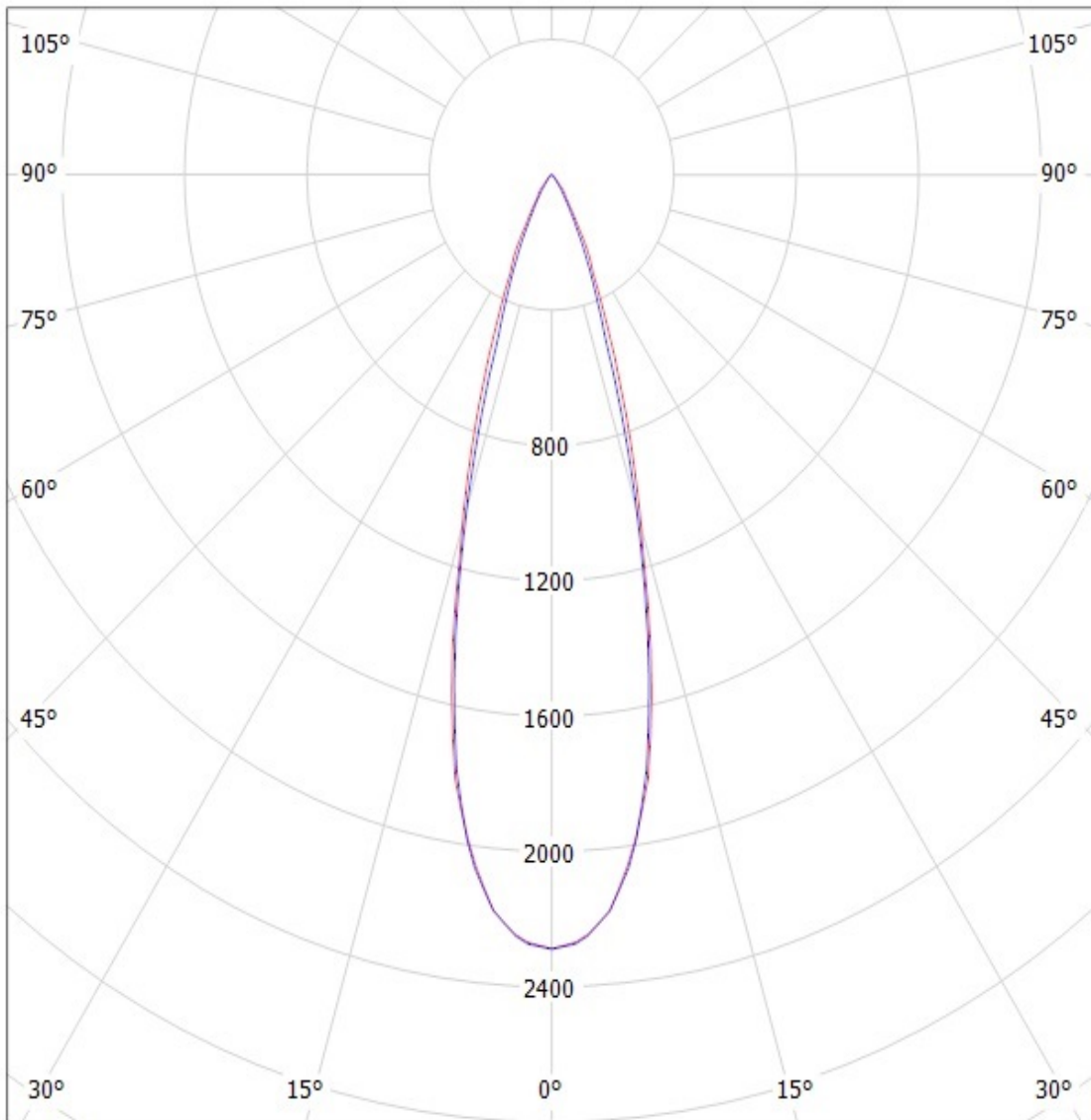
— C90 - C270

$\eta = 82\%$

# Ledil Oy CA12377\_Tina2-M-OSL80 LOR=84% / LDC (Polar)

Luminaire: Ledil Oy CA12377\_Tina2-M-OSL80 LOR=84%

Lamps: 1 x Osram OSL80 250mA 87lm



cd/klm

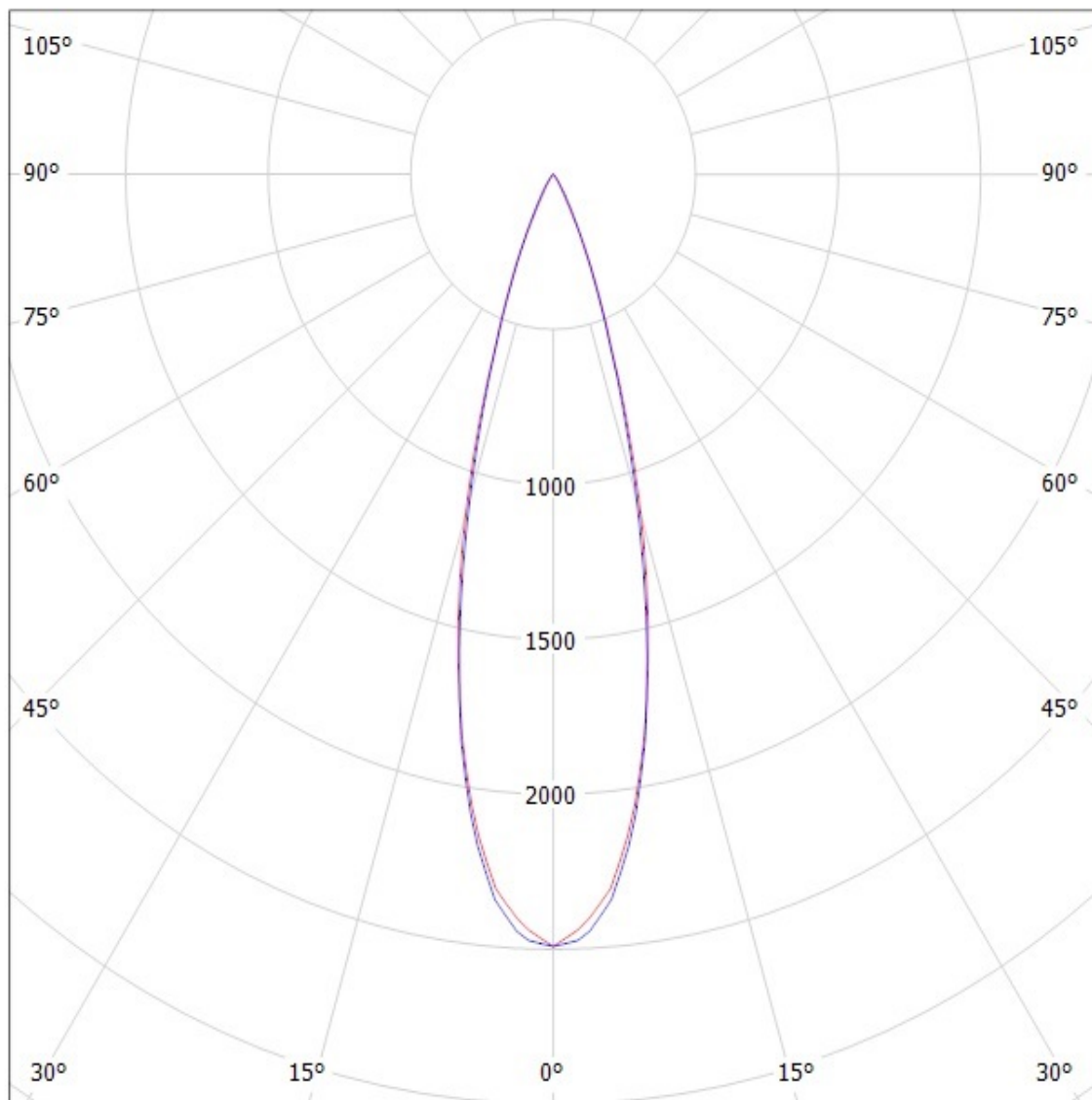
— C0 - C180 — C90 - C270

**SIMULATED**

# Ledil Oy CA12377\_Tina2-M-OSL150 LOR=87% / LDC (Polar)

Luminaire: Ledil Oy CA12377\_Tina2-M-OSL150 LOR=87%

Lamps: 1 x Osram OSL150 250mA 110lm



cd/klm

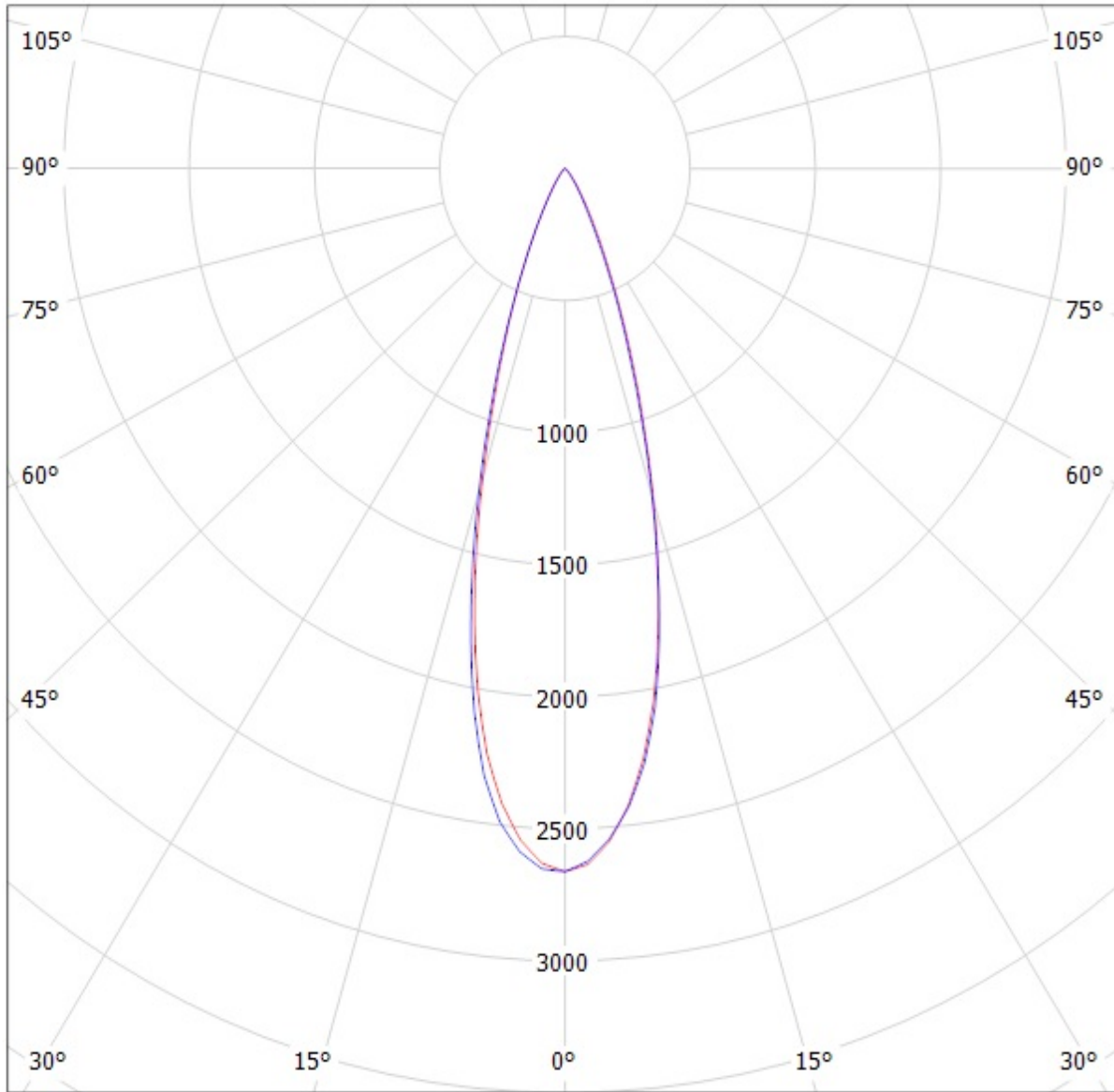
— C0 - C180

— C90 - C270

SIMULATED

Luminaire: LEDil Oy CA12376\_TINA2-SS\_(Oslon\_Square\_EC) Efficiency=83%

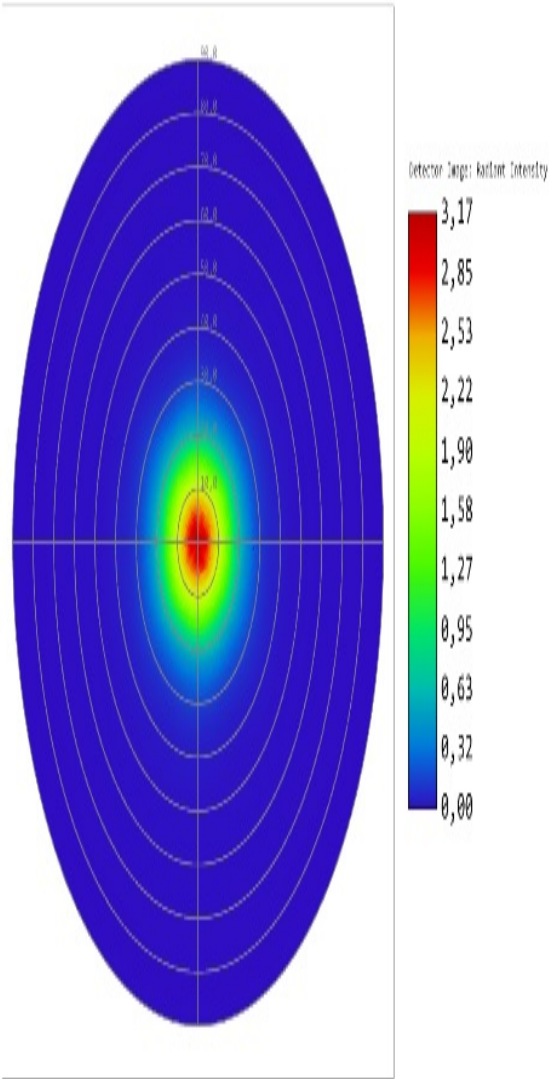
Lamps: 1 x Osram Oslon Square- EC (LCW CQAR-EC-MQMS-5R8T-35) 77.7lm @ 250mA CCT=3200K P=0.8 I=250mA



cd/klm

— C0 - C180

— C90 - C270

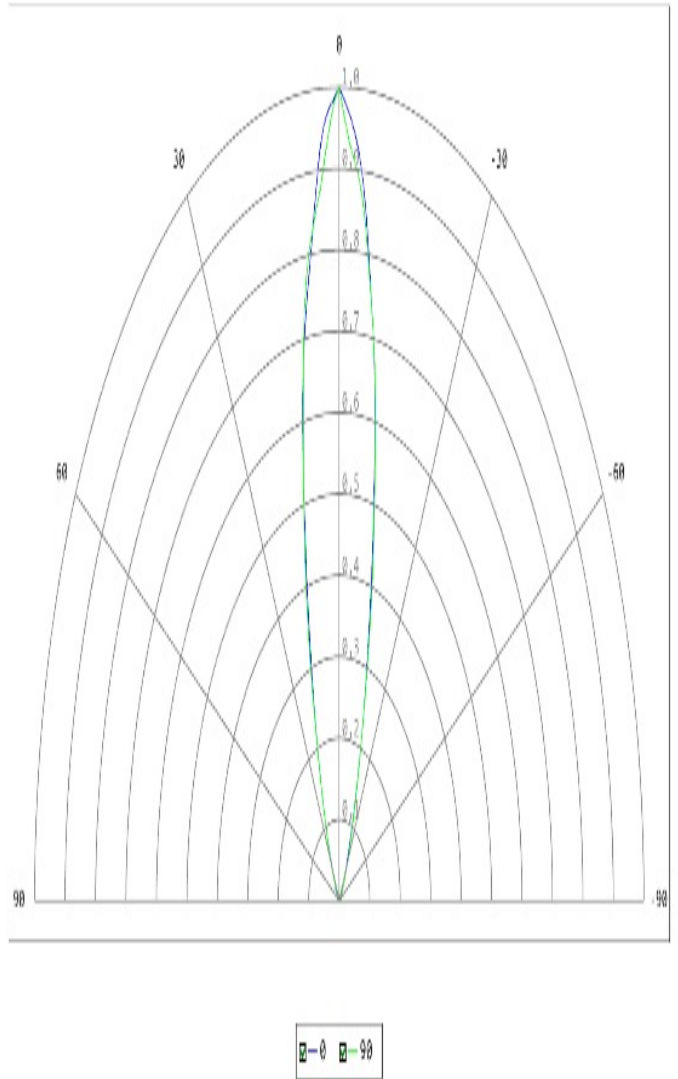


Detector Image: Radiant Intensity

14.4.2016  
 Detector 5, NSCG Surface 1:  
 Max polar angle: 90,00 deg, Total Hits = 848382  
 Peak Intensity : 3,167E+000 Watts/Steradian  
 Total Power : 8,484E-001 Watts

Zemax  
 Zemax OpticStudio 15.5 SP2

CA12377\_TDI42-II (SFH\_47705)\_SIMULATED.zmx  
 Configuration 1 of 1



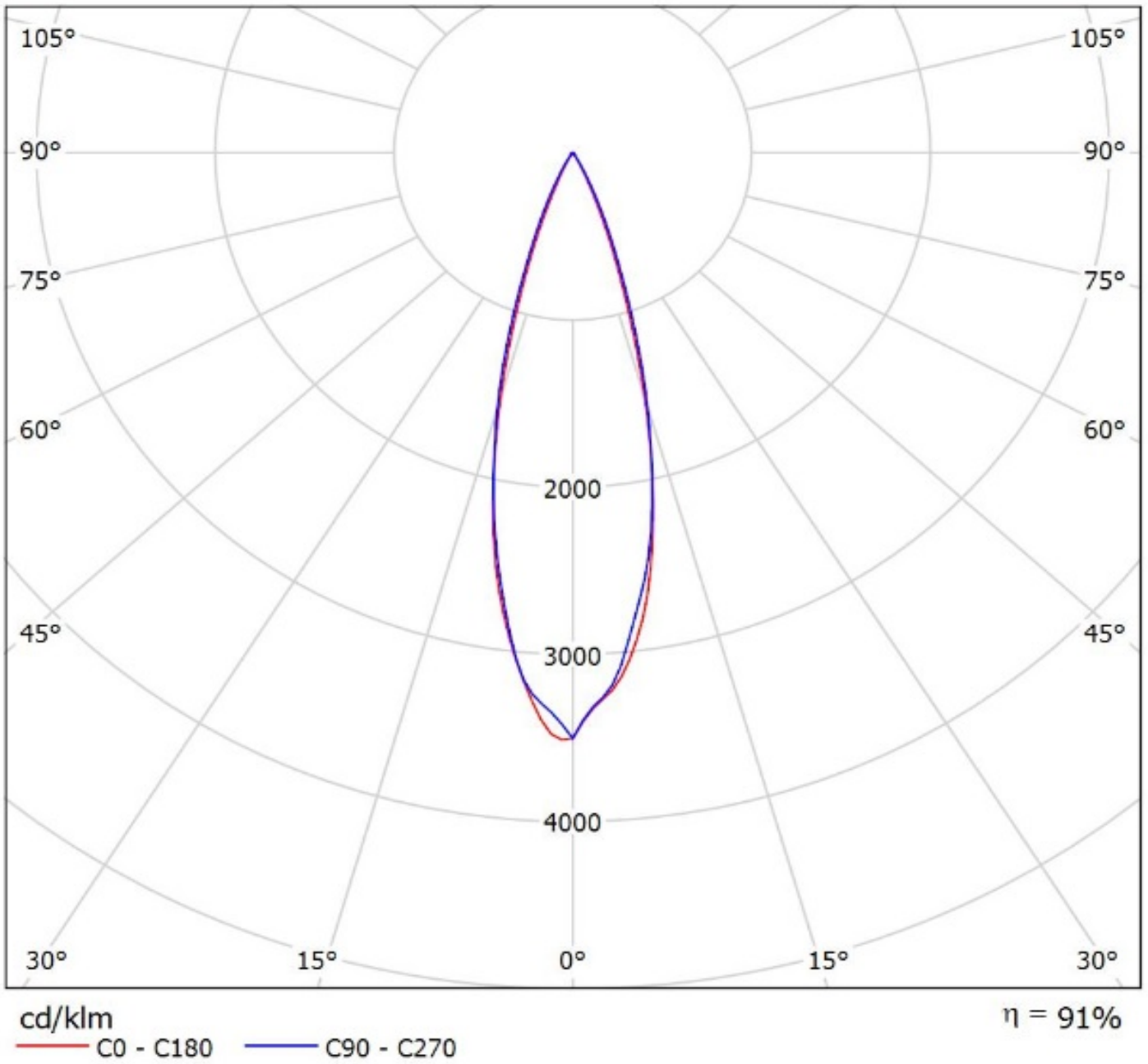
Detector Image: Radiant Intensity

14.4.2016  
 Detector 5, NSCG Surface 1:  
 Scan Angles: 0, 90  
 Peak Intensity : 3,167E+000 Watts/Steradian

Zemax  
 Zemax OpticStudio 15.5 SP2

CA12377\_TDI42-II (SFH\_47705)\_SIMULATED.zmx  
 Configuration 1 of 1

Luminaire: Ledil Oy CA12377\_TINA2-M\_(Oslon\_Black\_Flat)\_SIMULATED  
Lamps: 1 x Osram Oslon Black Flat (LUW HWQP)



**NOTE: The typical divergence will be changed by different color, chip size and chip position tolerance. The typical total divergence is the full angle measured where the luminous intensity is half of the peak value.**