

## DETAILS

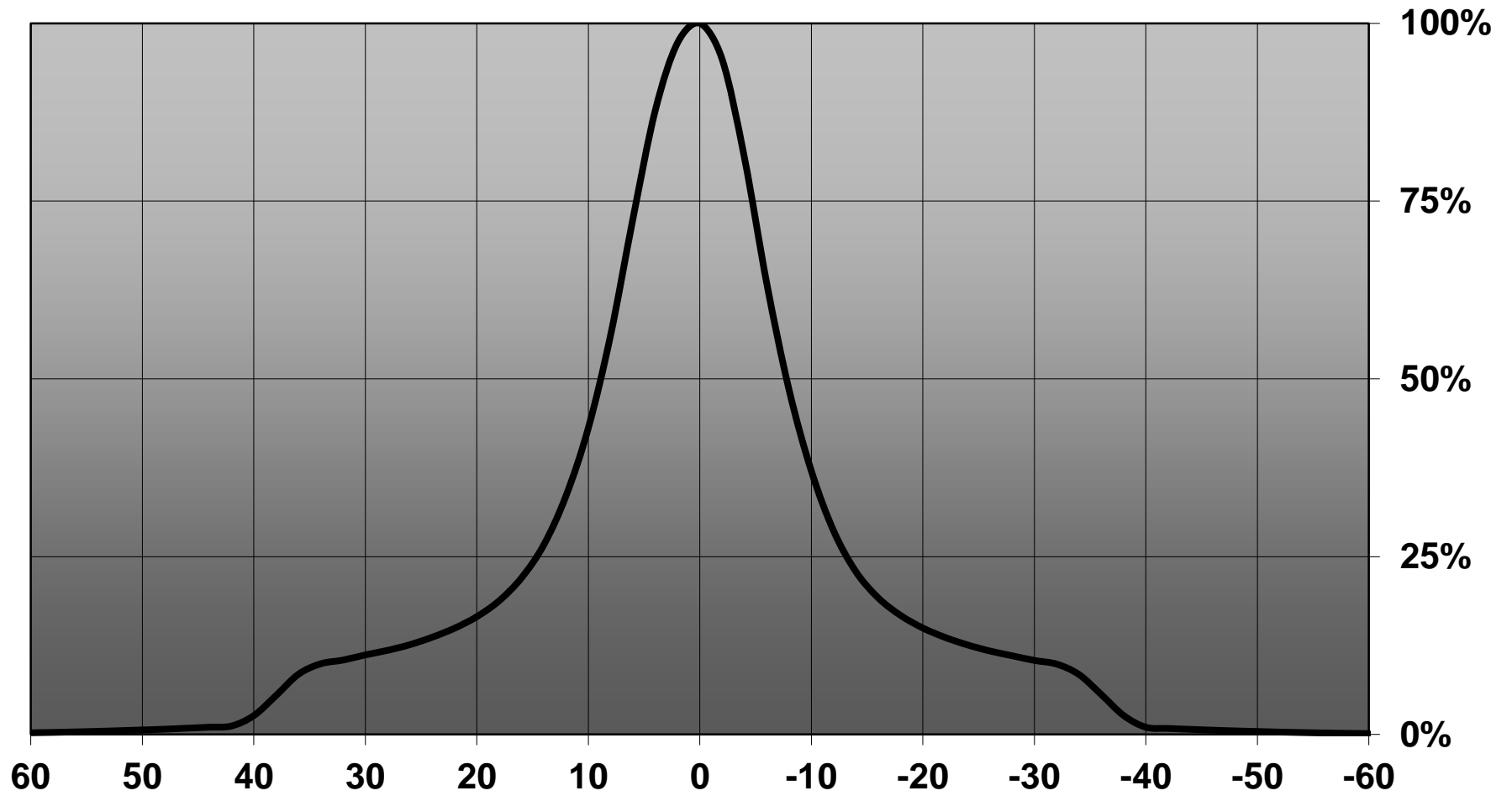
<b>Product Number</b>	FCN13706_ANGELA-M
<b>Family</b>	ANGELA
<b>Type</b>	RefPack
<b>Color</b>	metal
<b>Diameter</b>	119,5 mm
<b>Height</b>	79,31 mm
<b>Style</b>	round
<b>Optic Material</b>	
<b>Holder Material</b>	
<b>Fastening</b>	
<b>Status</b>	production ready
<b>ROHS Compliant</b>	Yes
<b>Date Updated</b>	3/11/2016



## OPTICAL PROPERTIES

LED	Viewing Angle	Light Beam	Efficiency	cd/lm	Connector
VERO18	19 deg	Medium	85 %	3.000	LEDiL: LEDiL
VERO13	16 deg	Medium	87 %	3.600	LEDiL: LEDiL
V15 Gen6	17 deg	Medium	92 %	3.900	Bender Wirth: 456 Typ L2
V10 Gen7	sim: 15	Medium	sim: 90 %	sim: 7.030	Bender Wirth: 434 Typ L1
CLU720/721	14 deg	Medium	83 %	4.000	Bender Wirth: 433 Typ L1
CLL03x/CLU03x	17 deg	Medium	88 %	3.400	Bender Wirth: 433 Typ L1
CLU700/701	12 deg	Medium	83 %	5.200	Bender Wirth: 434 Typ L1
CLL02x/CLU02x (LES10)	14 deg	Medium	84 %	4.300	Bender Wirth: 434 Typ L1
CXA/B 1816 & CXA/B 1820 & CXA 1850	15 deg	Medium	83 %	3.800	Bender Wirth: 437 Typ L1
CXA/B 15xx	13 deg	Medium	84 %	4.700	Bender Wirth: 441 Typ L1
LUXEON CoB 1202/1203	13 deg	Medium	84 %	4.500	Bender Wirth: 438 Typ L1
CXM-14	sim: 17	Medium	sim: 83 %	sim: 3.400	Bender Wirth: 433 Typ L1
CXM-9	sim: 14	Medium	sim: 84 %	sim: 4.300	Bender Wirth: 434 Typ L1
COB L-Type (LES 9)	13 deg	Medium	85 %	4.500	Bender Wirth: 438 Typ L1
COB J-Type	17 deg	Medium	83 %	3.500	Bender Wirth: 463 Typ L2
COB L-Type (LES 11)	15 deg	Medium	83 %	3.900	Bender Wirth: 438 Typ L1
Soleriq P9	13 deg	Medium	88 %	4.200	Bender Wirth: 461 Typ L1
Soleriq P13	16 deg	Medium	88 %	3.600	Bender Wirth: 437 Typ L1
Soleriq S13	15 deg	Medium	83 %	3.800	Bender Wirth: 437 Typ L1
LC026B/LC040B	19 deg	Medium	83 %	3.000	Bender Wirth: 450 Typ L2
ZC12/18	sim: 17	Medium	sim: 83 %	sim: 3.400	Bender Wirth: 433 Typ L1
ZC4/6	sim: 14	Medium	sim: 84 %	sim: 4.300	Bender Wirth: 434 Typ L1
SLE G5 LES11	14 deg	Medium	84 %	4.400	Bender Wirth: 434 Typ L1

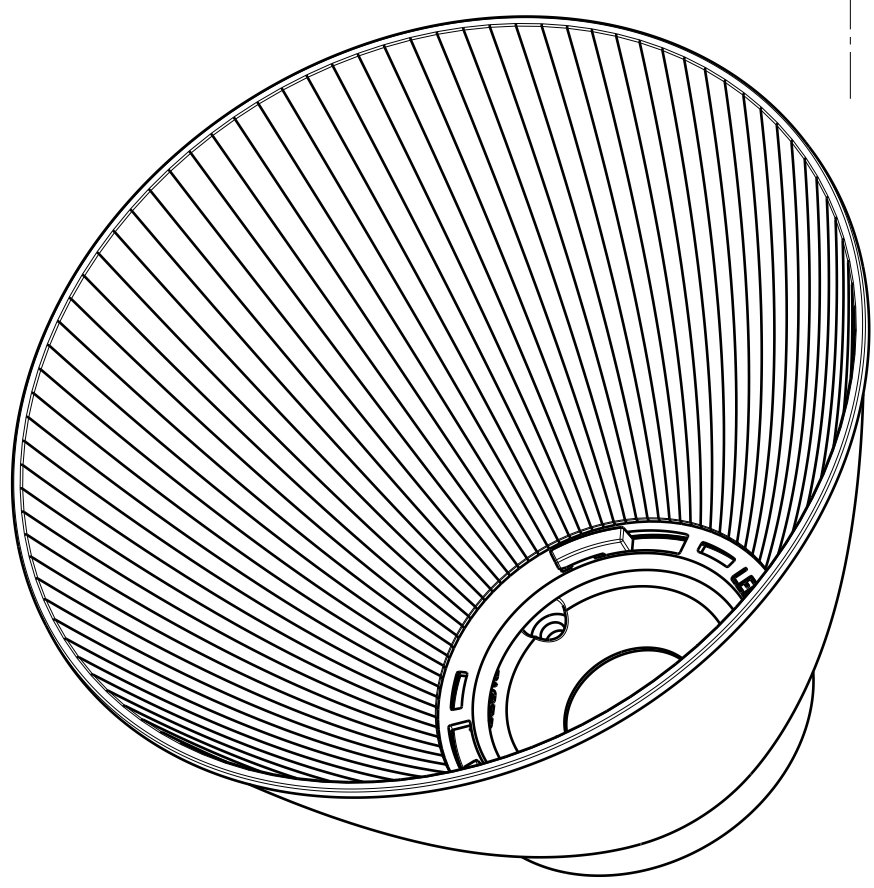
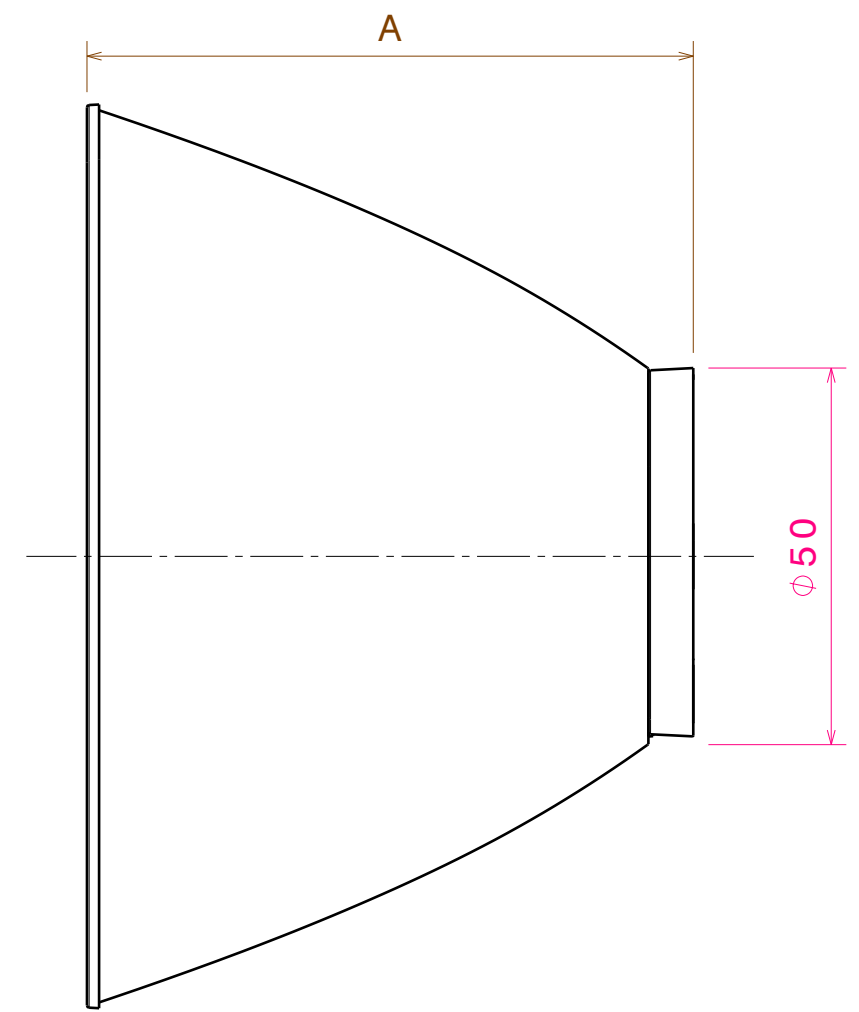
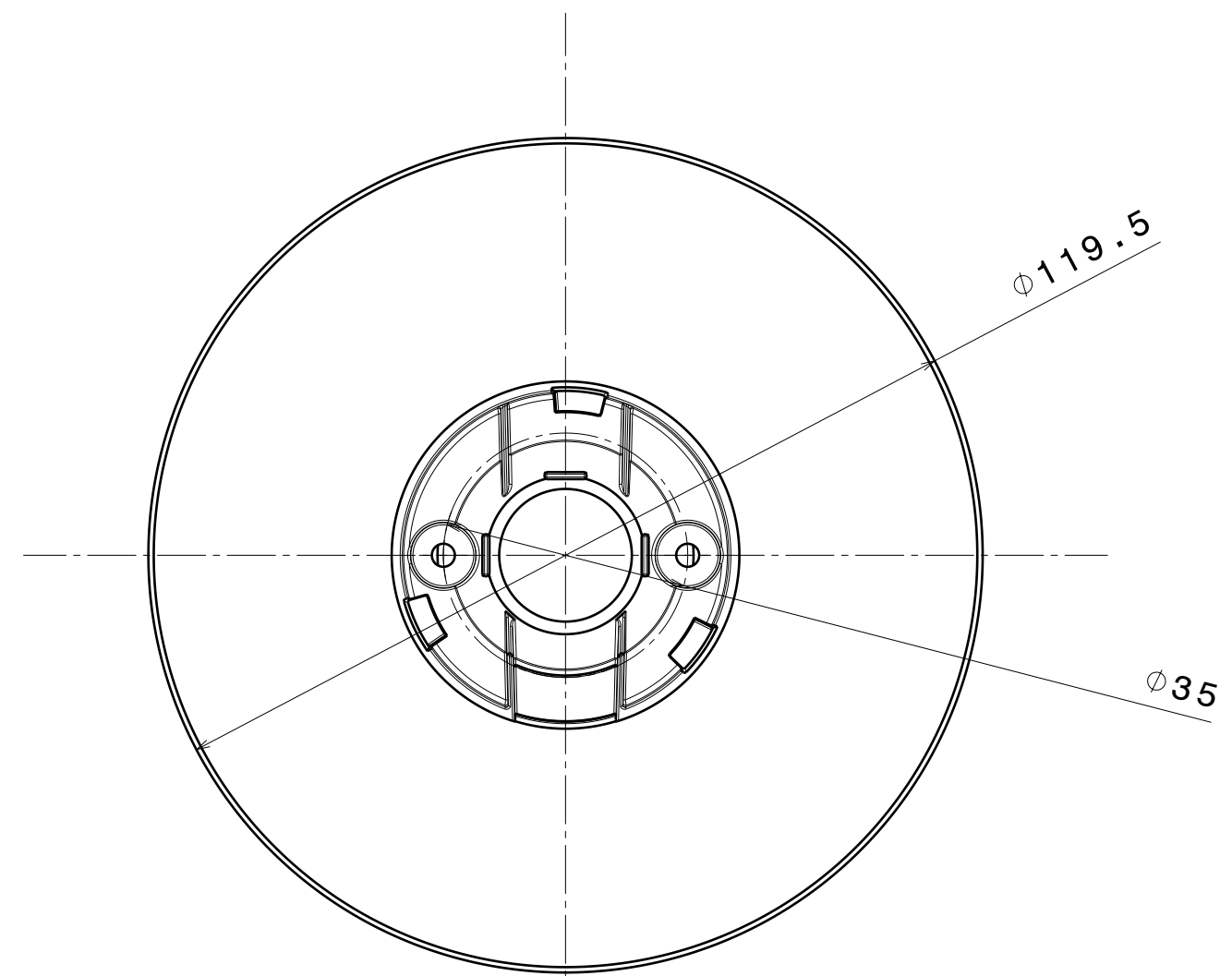
Relative intensity of FCN13706\_ANGELA-M\_(V15)



H G F E D C B A

4  
3  
2  
1

4  
3  
2  
1



	DIMENSION A
WITH LEDIL LUXEON S SOCKETS	80.5 mm
WITH TYCO SOCKET	80.5 mm
WITH LEDIL BRIDGELUX VERO SOCKETS 13-18	79.5 mm

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  
**DATA SHEET ANGELA**

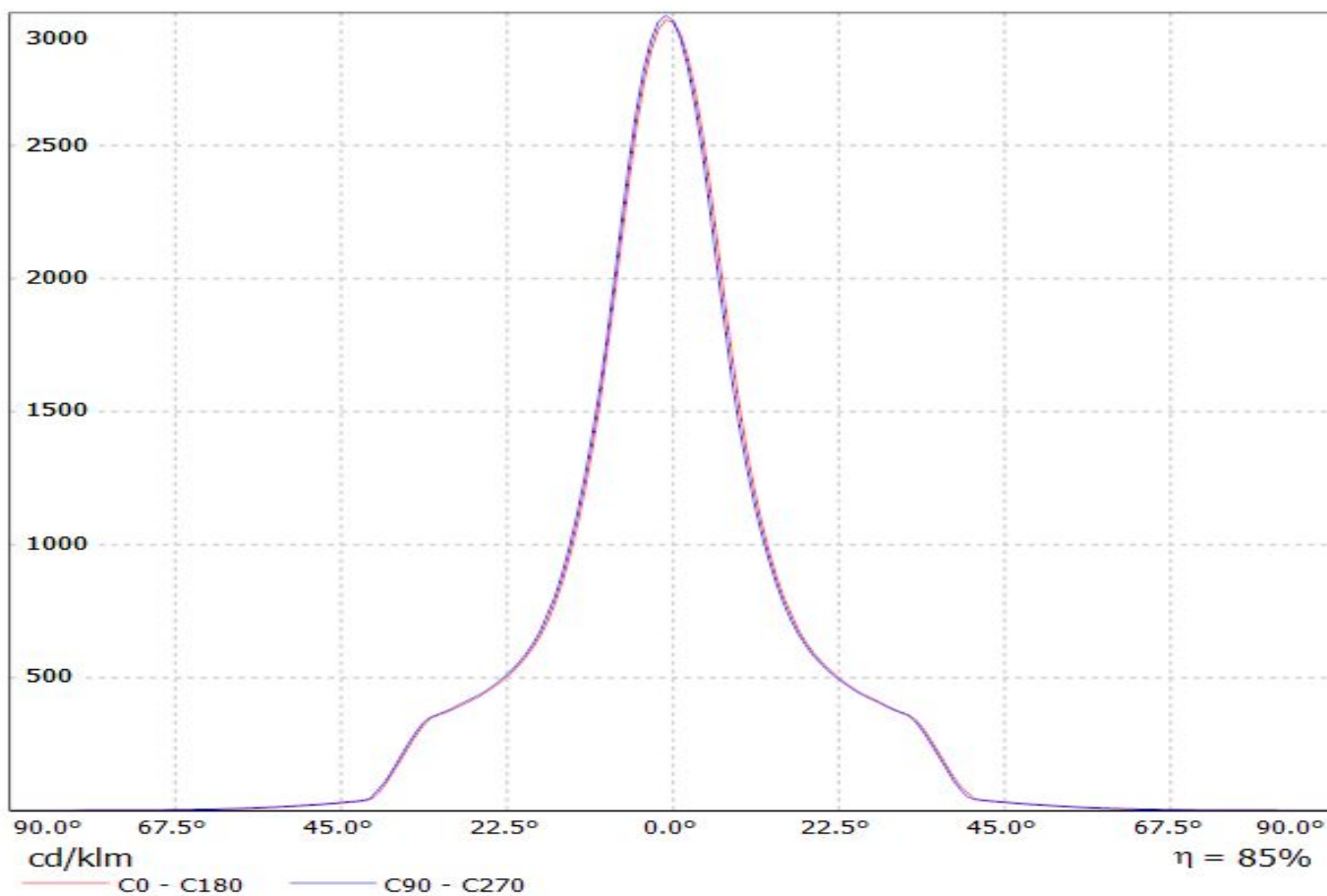
This drawing is the property of LEDiL Oy. It may not be reproduced, copied or communicated without a written agreement with LEDiL Oy."

SIZE **A3** PART NUMBER -

SCALE 1:1 WEIGHT - SHEET 1/1

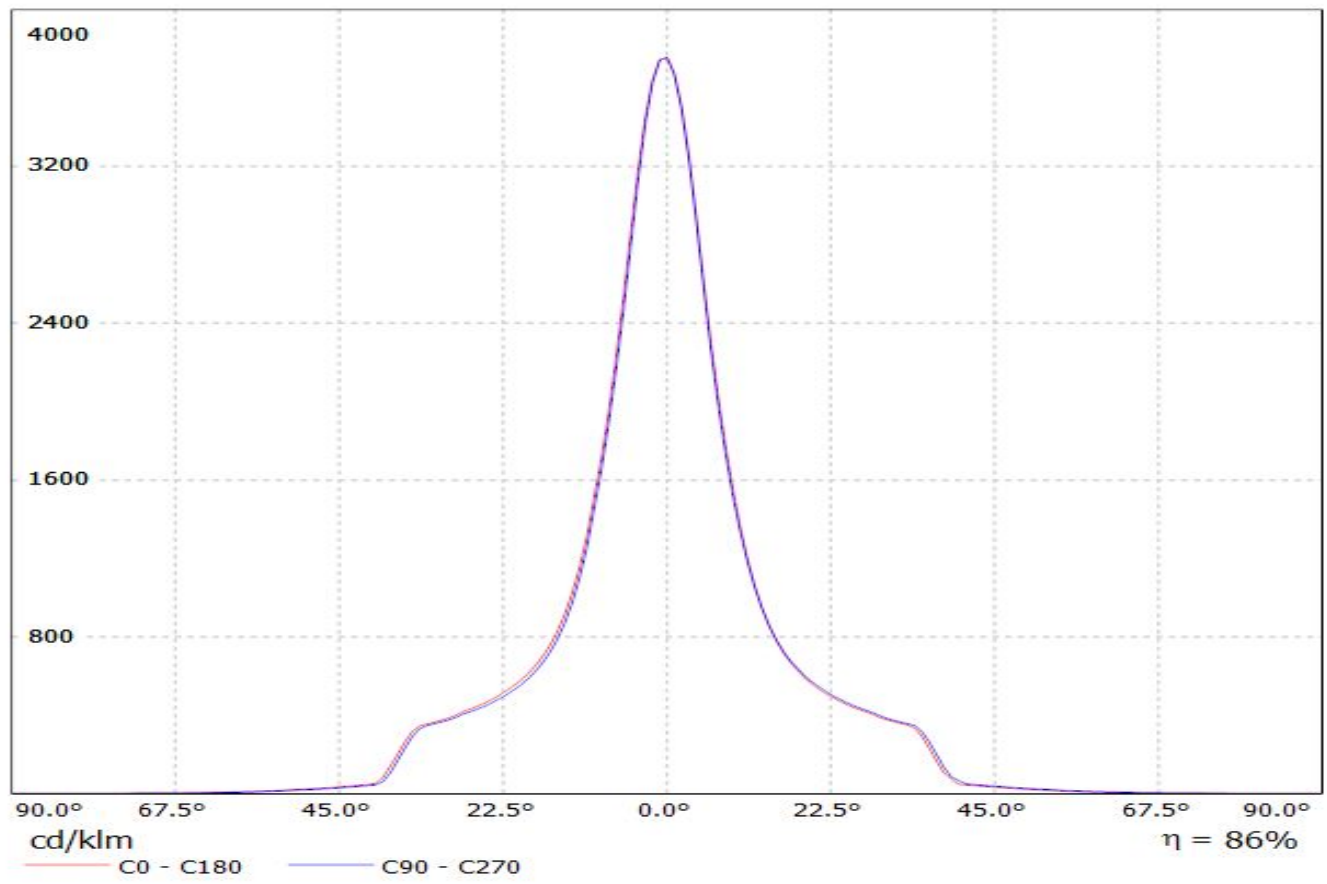
H G B A

Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(Vero18) Eff.85.0%  
Lamps: 1 x VERO18\_(BXRC30E4000F)\_882.261lm@250mA P=6.73161W I=249.8mA

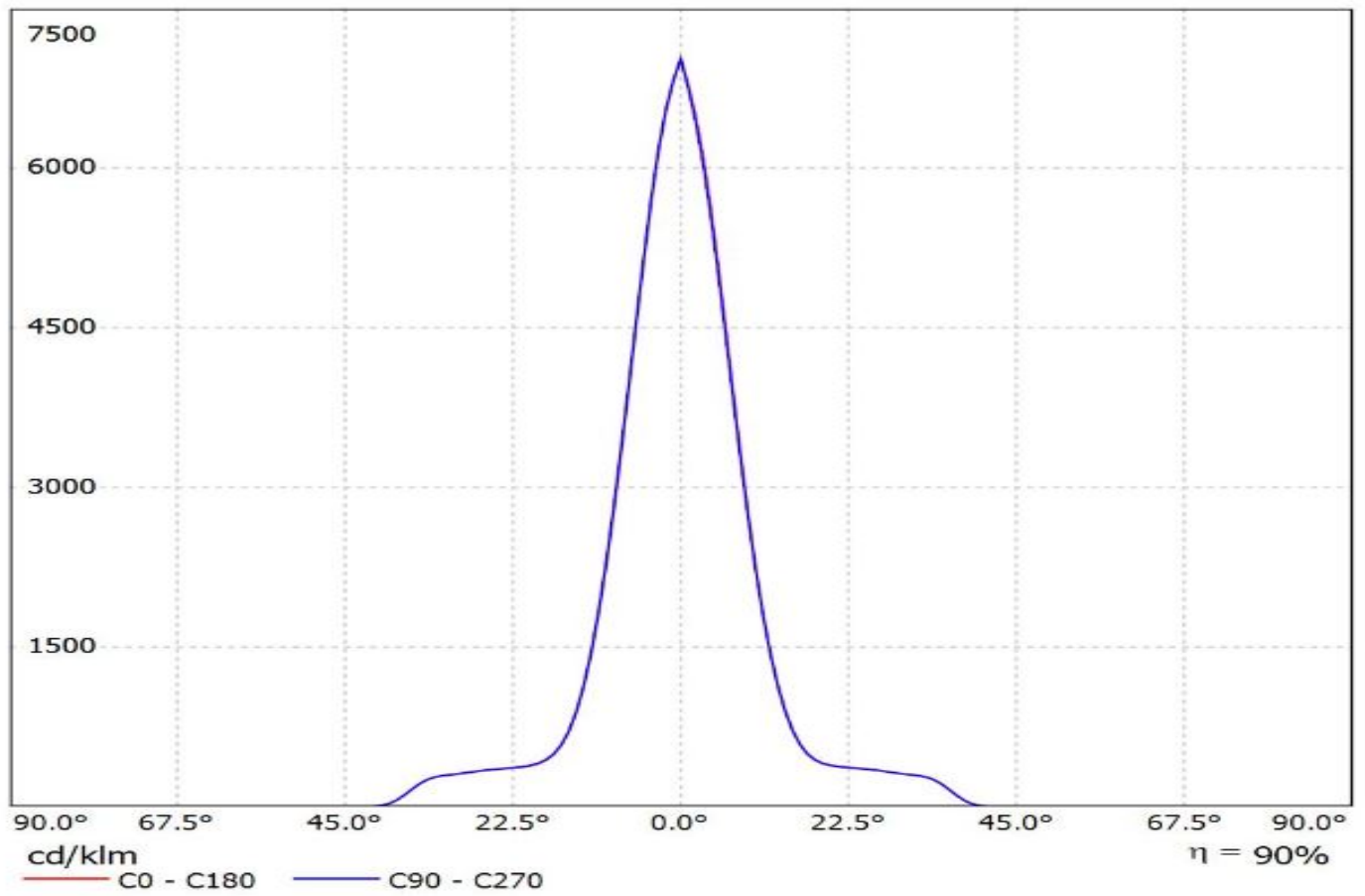


Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(VERO13)

Lamps: 1 x Bridgelux\_VERO13\_(BXRC-30E2000C)\_1065.93lm@250mA\_P=7.63514W\_I=249.8mA



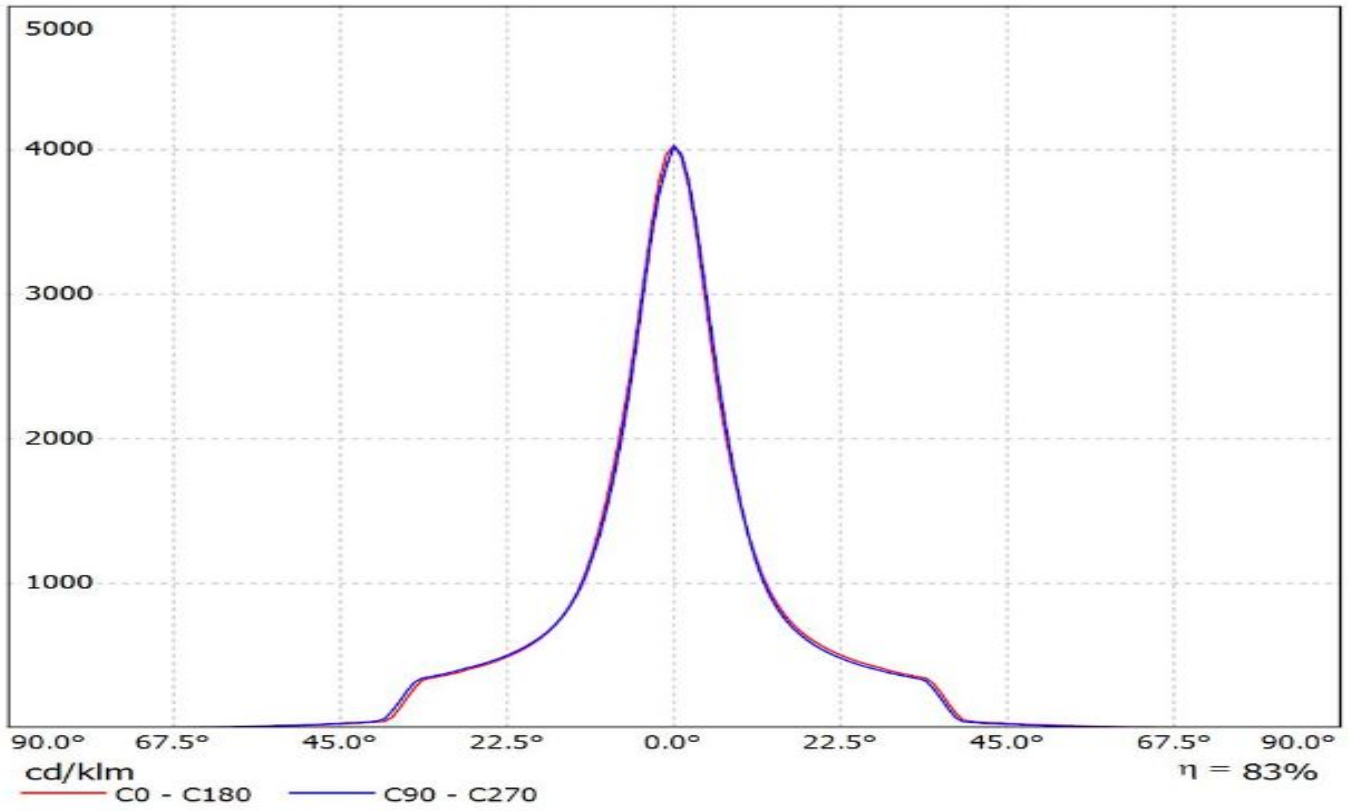
Luminaire: Ledil Oy FCN13706\_ANGELA-M+\_B+W\_434\_TypL1\_BRIDGELUX\_V10\_Gen7\_SIMULATED  
Lamps: 1 x BRIDGELUX V10 Gen7



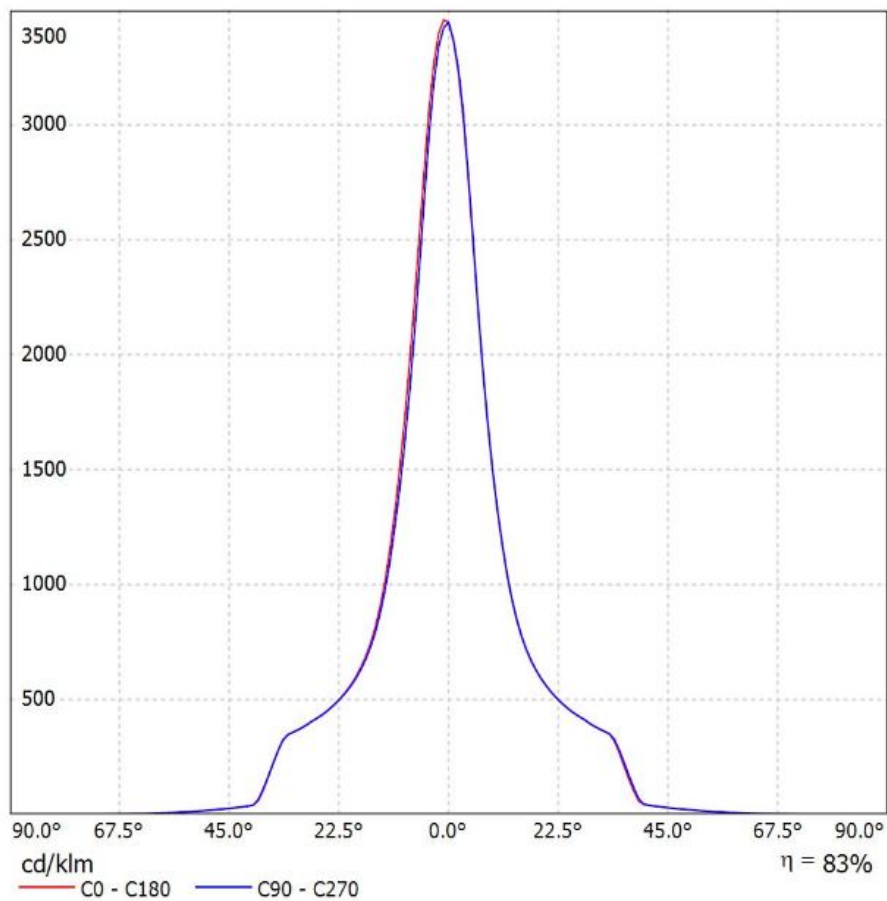
**Ledil FCN13706\_ANGELA-M\_(CLU720)\_(433\_Typ\_L1) / LDC (Linear)**

Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU720)\_(433\_Typ\_L1)

Lamps: 1 x Citizen\_CLU720\_(CLU720-1206B8-273M2G1)\_1225.89lm@250mA\_P=8.3W\_I=0.25A

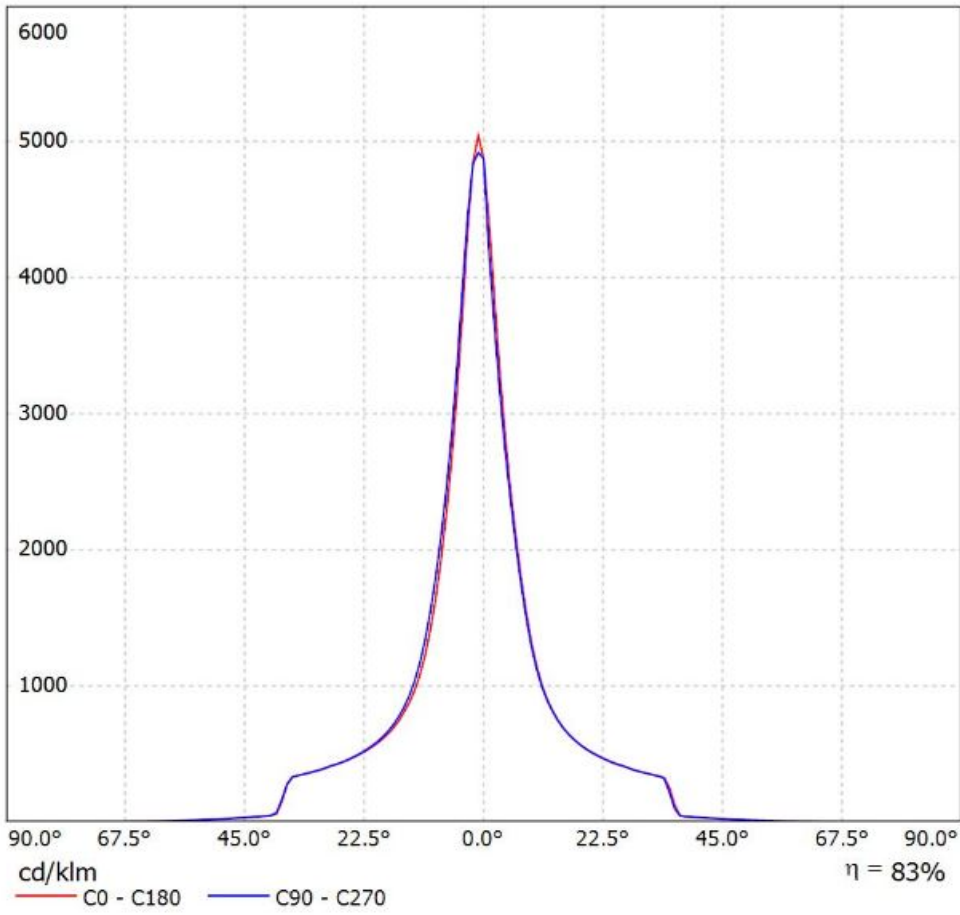


Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU034)\_ (433\_Typ\_L1)\_ (C13658) Citizen\_CLU034\_(CLU034-1205B8-303M1A2)\_1180.79lm@250mA\_P=8.50075W\_I=0.25A  
Lamps: 1 x Citizen\_CLU034\_(433\_Typ\_L1)\_ (C13658)\_1173.16lm@250mA\_P=8.475W\_I=0.25A

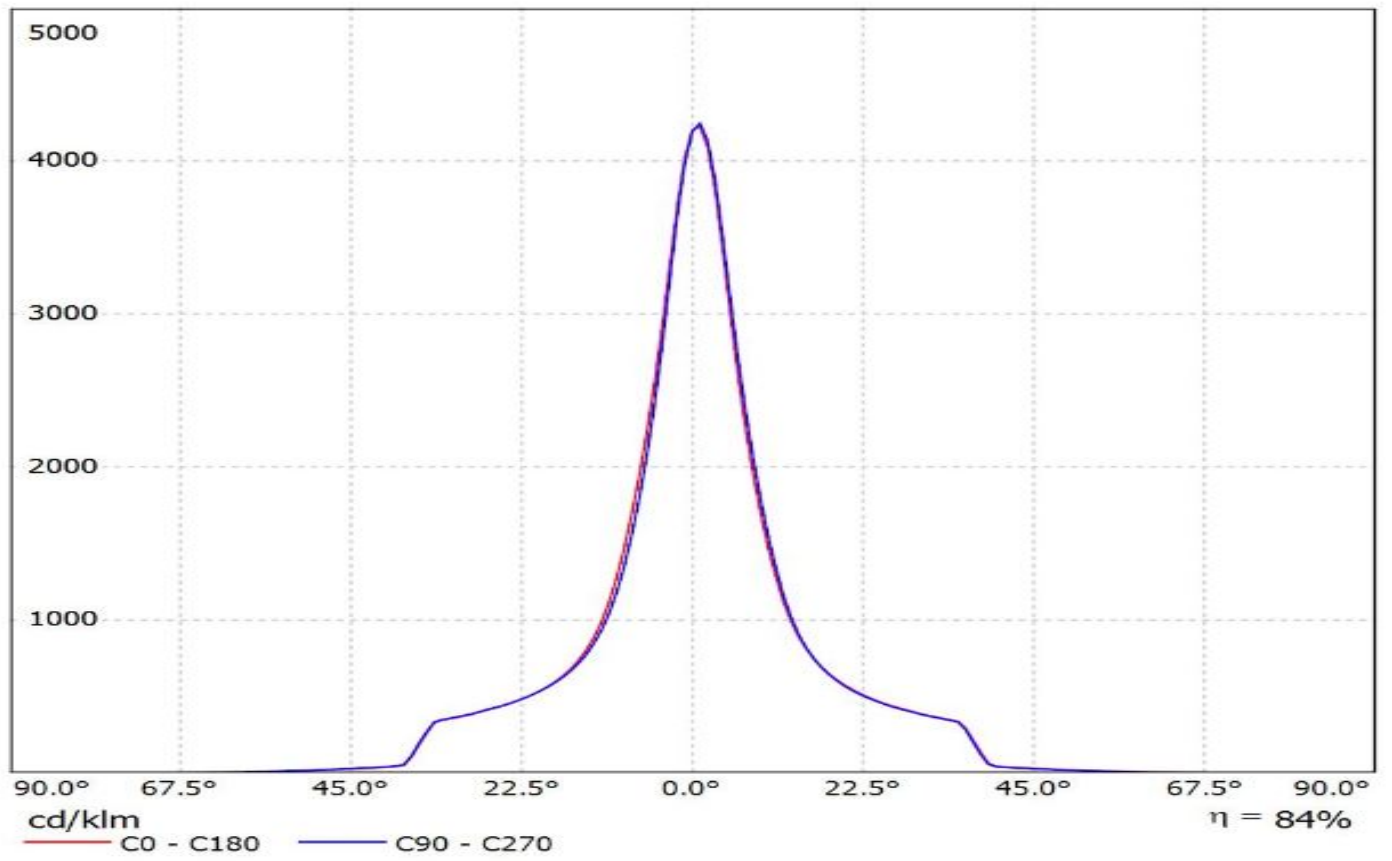




Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU700)\_434\_Typ\_L1 Citizen\_CLU700\_(CLU700-1002B8-273M2G1)\_390.128lm@100mA\_P=3W\_I=0.10A  
Lamps: 1 x Citizen\_CLU700\_(CLU700-1002B8-273M2G1)\_388.036lm@100mA\_P=3W\_I=0.10A

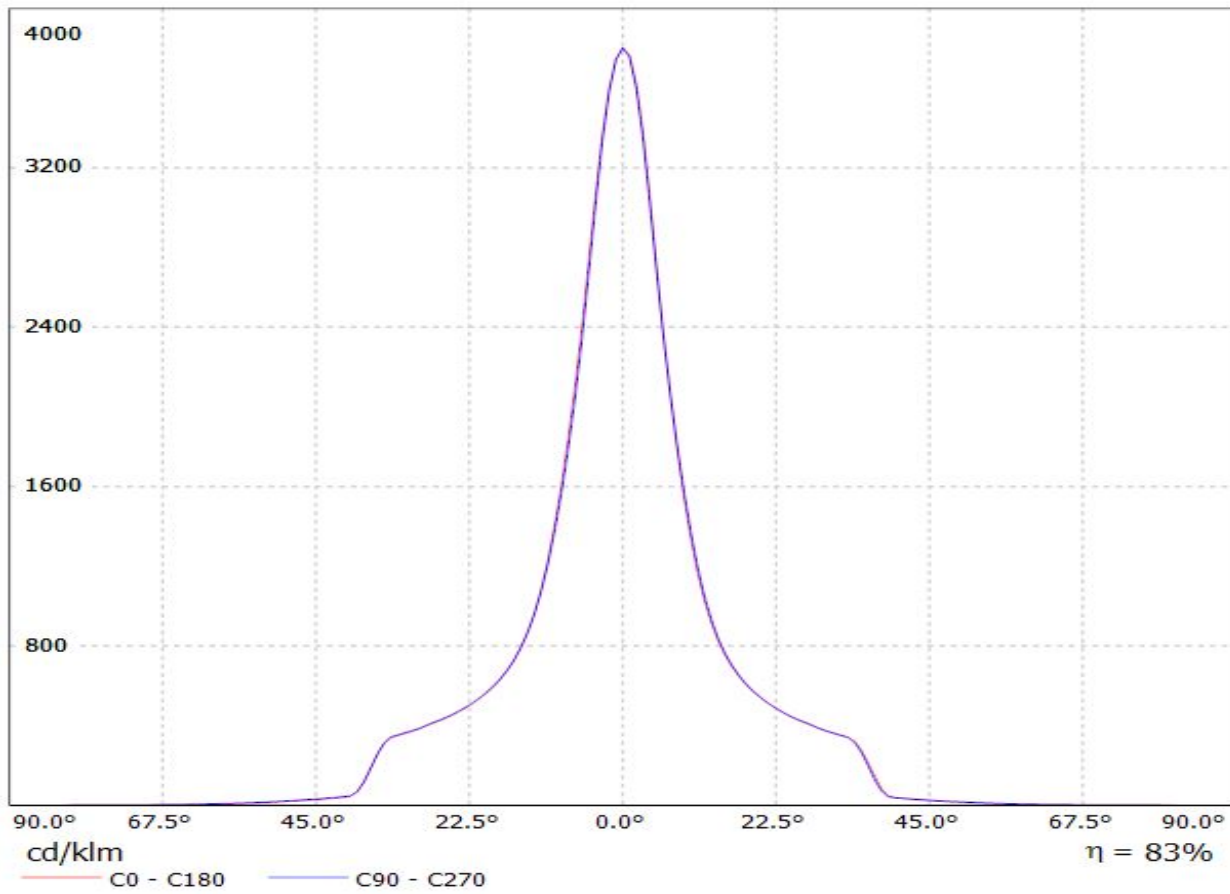


Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU024)\_(433\_Typ\_L1) Citizen\_CLU024\_(433\_Typ\_L1)\_  
(C13658\_CLAMP-VERO13-18)\_1071.07lm@250mA\_P=8.43W\_I=0.25A  
Lamps: 1 x Citizen\_CLU024\_(433\_Typ\_L1)\_(C13658\_CLAMP-VERO13-18)  
\_1071.07lm@250mA\_P=8.43W\_I=0.25A



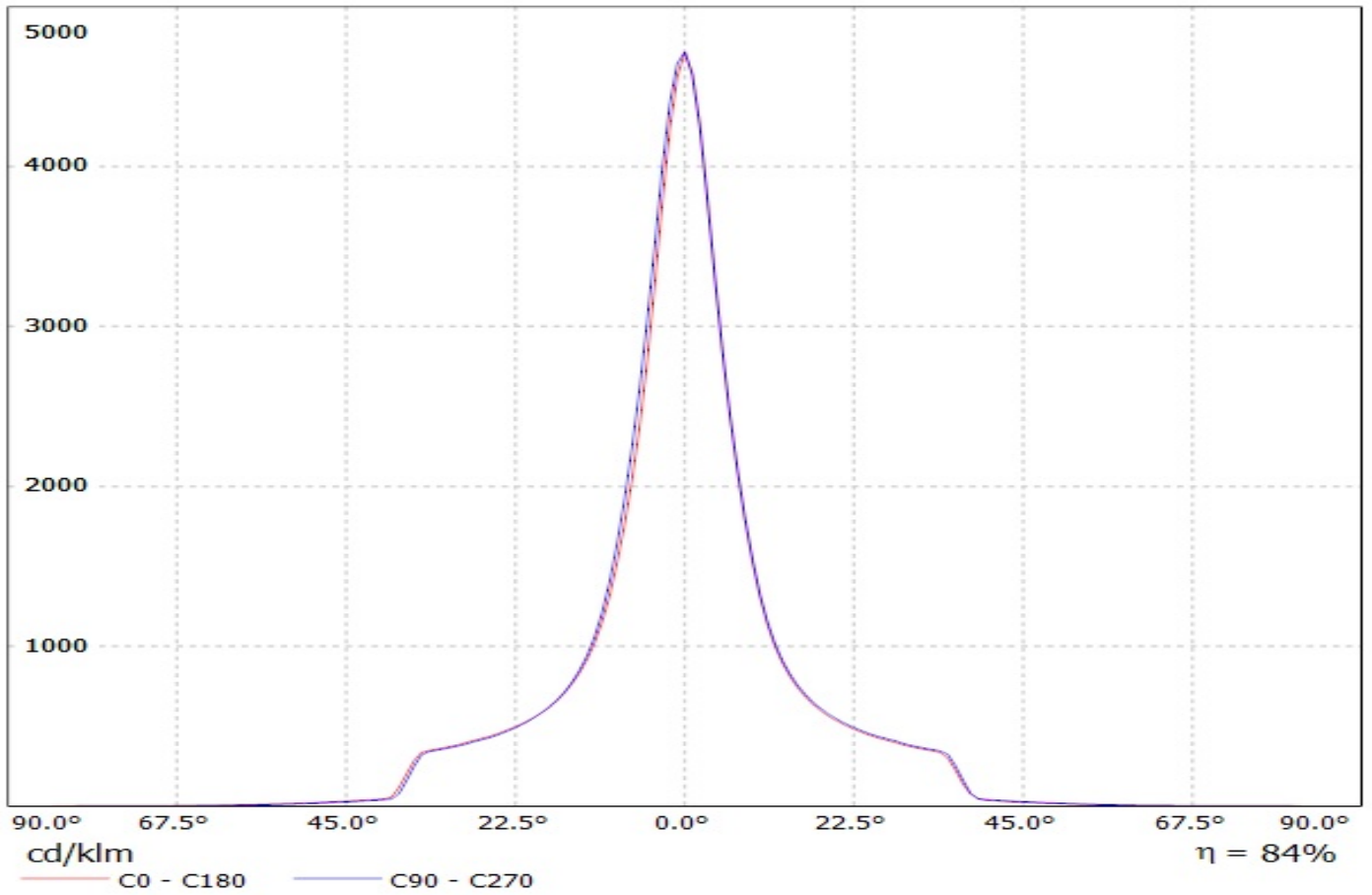
Luminaire: Ledil FCN13706\_ANGELA-M\_(CXA1850)

Lamps: 1 x CREE\_CXA1850\_(CXA1850-30F-T4-N0Y-00001)\_831.914lm@250mA\_CCT=3000K\_P=8.27W\_I=0.25A

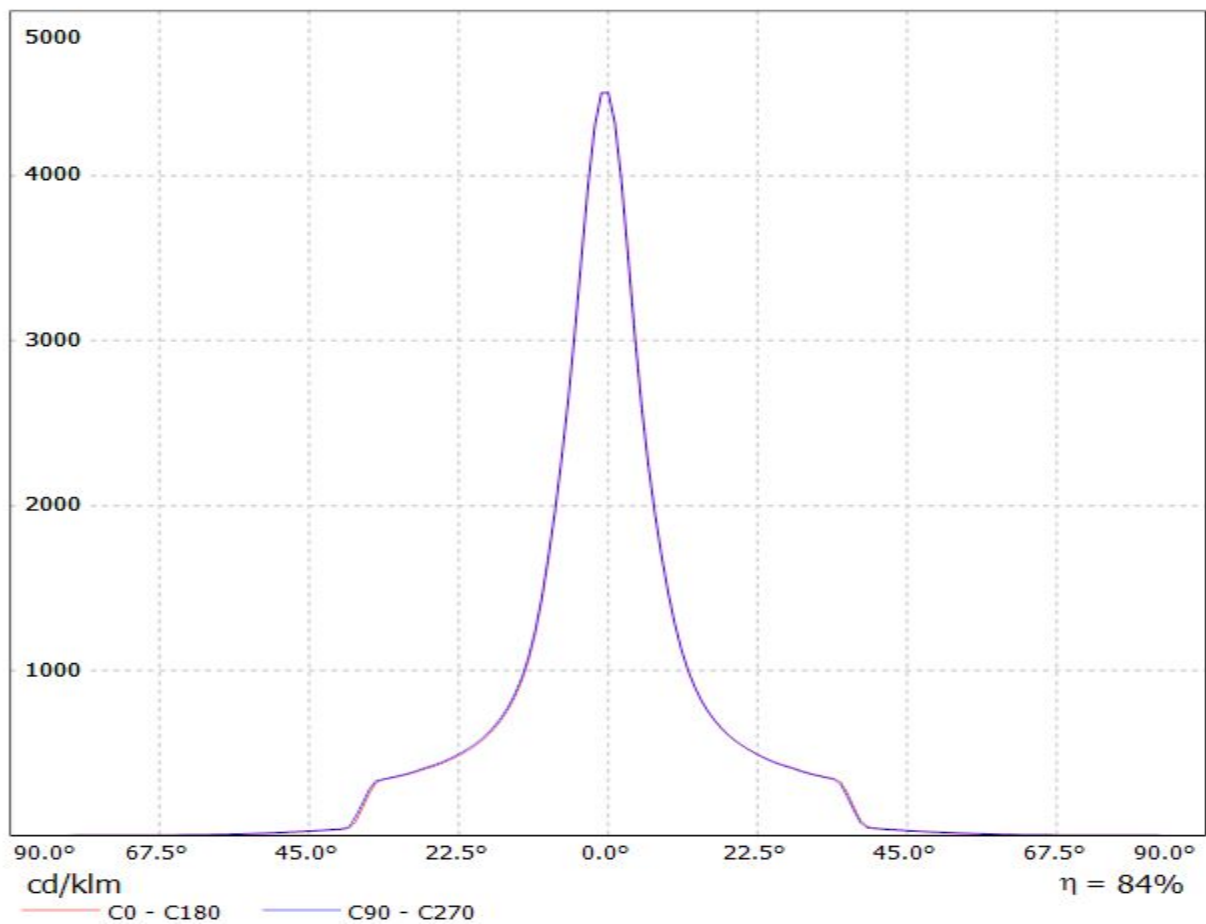


Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(CXA1520)\_ (441\_Typ\_L1)

Lamps: 1 x Cree\_CXA1520\_(CXA1520-30F-N4-00H-00001)\_993.209lm@250mA\_P=8.74575W\_η=0.2499A

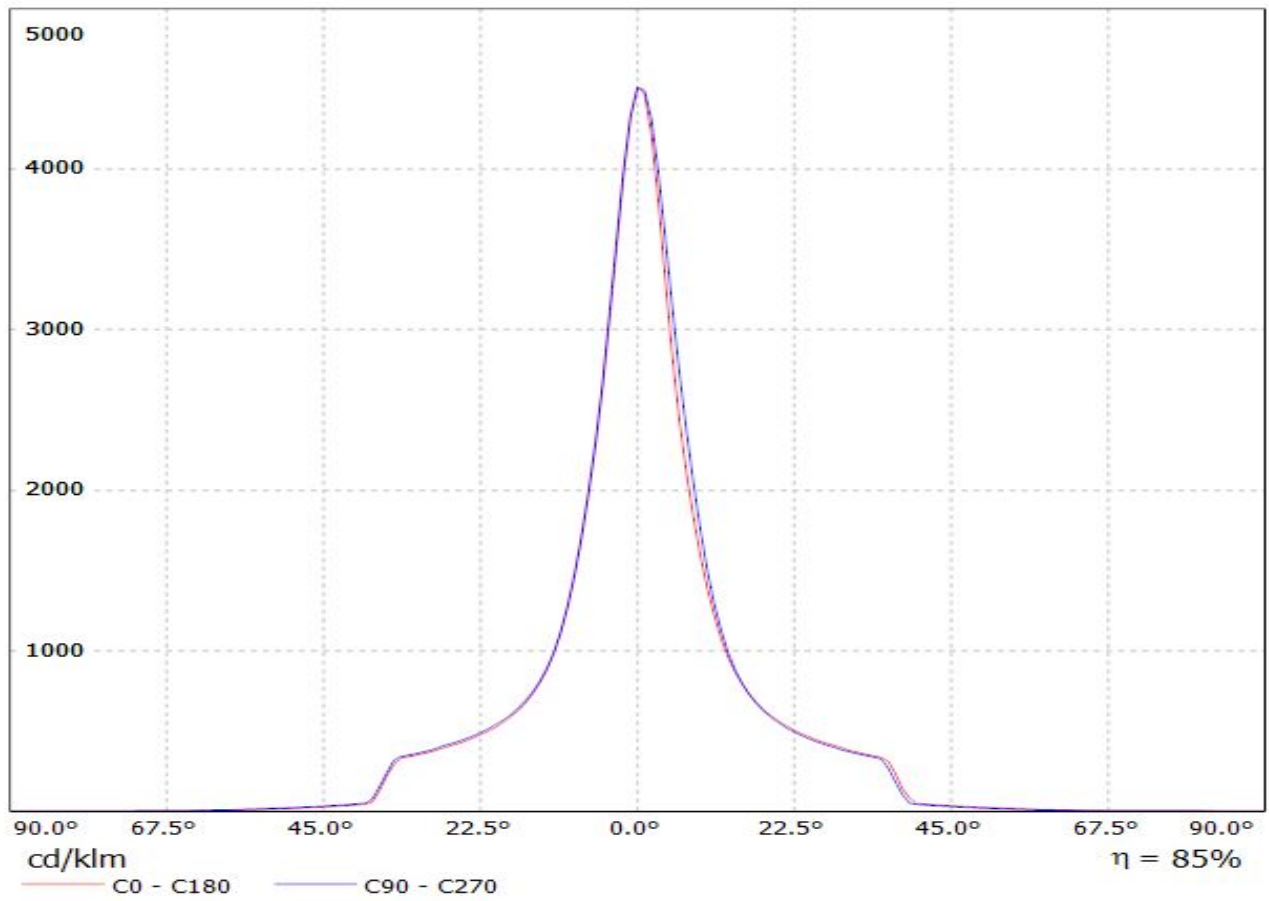


Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(LUXEON\_CoB\_1203)\_ (438\_Typ\_L1)\_ (C13658\_CLAMP-VERO13-18)  
Lamps: 1 x LUXEON\_CoB\_1203\_(438\_Typ\_L1)\_ (C13658\_CLAMP-VERO13-18)\_984.561lm@250mA\_P=8.6828W\_I=0.25A

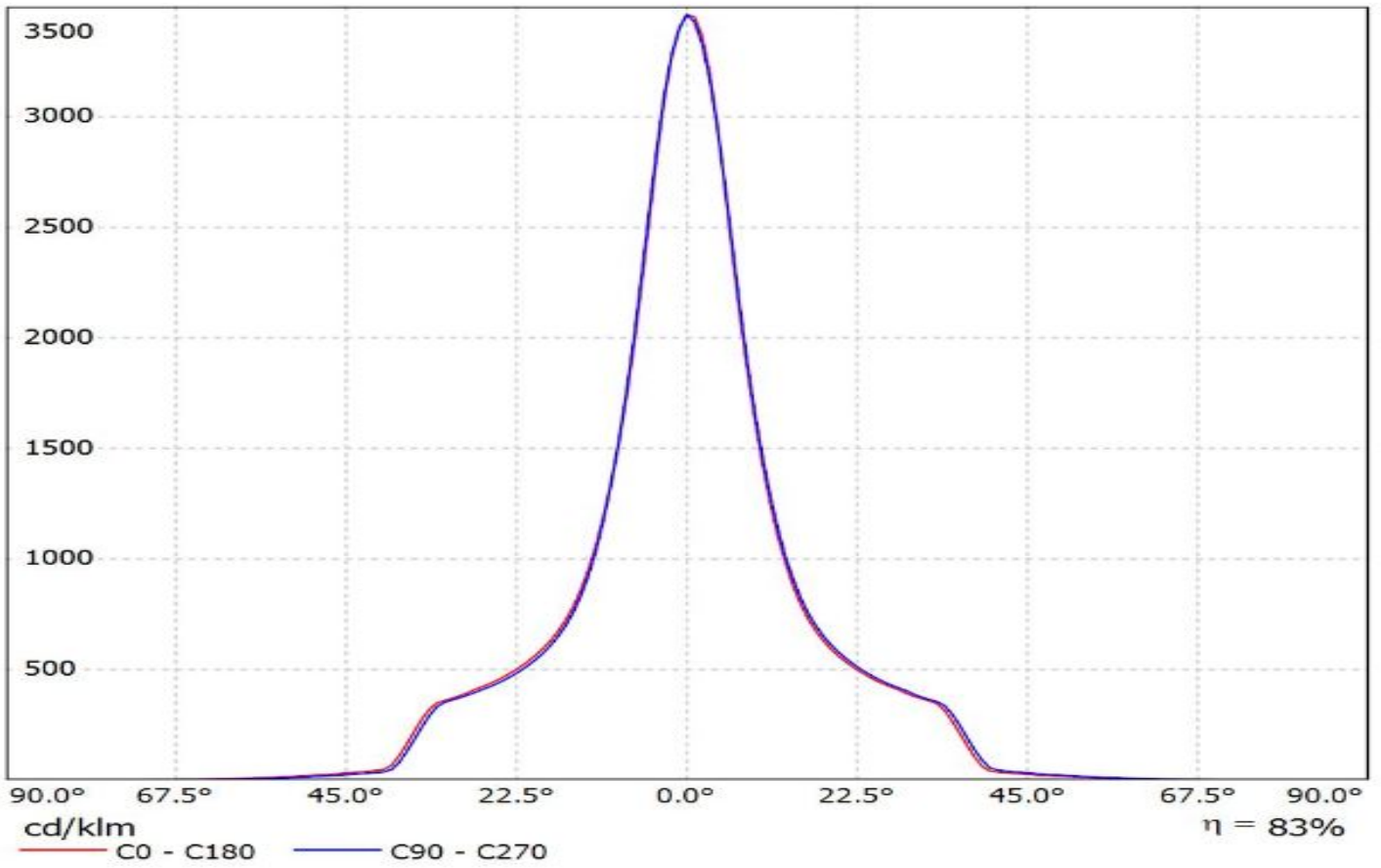


Luminaire: LEDiL Oy FCN13706\_ANGELA-M (NFCLL036B)

Lamps: 1 x Nichia NFCLL036B (sm403J1300R8000)\_541.131lm@100mA\_CCT=4000K\_P=3.34324W\_I=0.100A

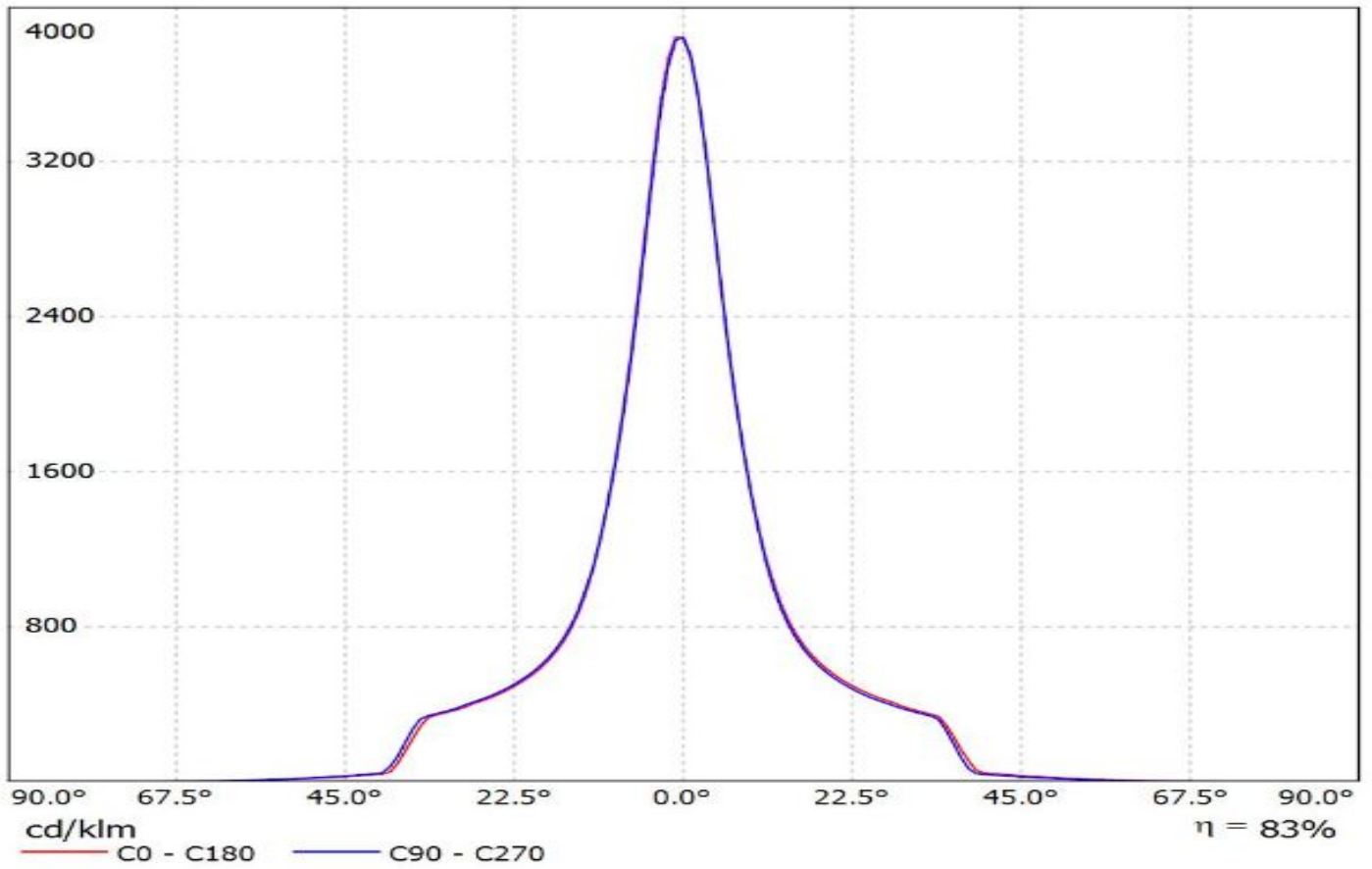


Luminaire: Ledil FCN13706\_ANGELA-M\_(NFDxJ130B)  
Lamps: 1 x Nichia\_NFDxJ130B\_(463 Typ L2)\_C13658\_CLAMP-  
VERO13\_1504.8lm@250mA\_P=8.27W\_I=0.25A



Luminaire: Ledil FCN13706\_ANGELA-M\_(NFCLL060B)

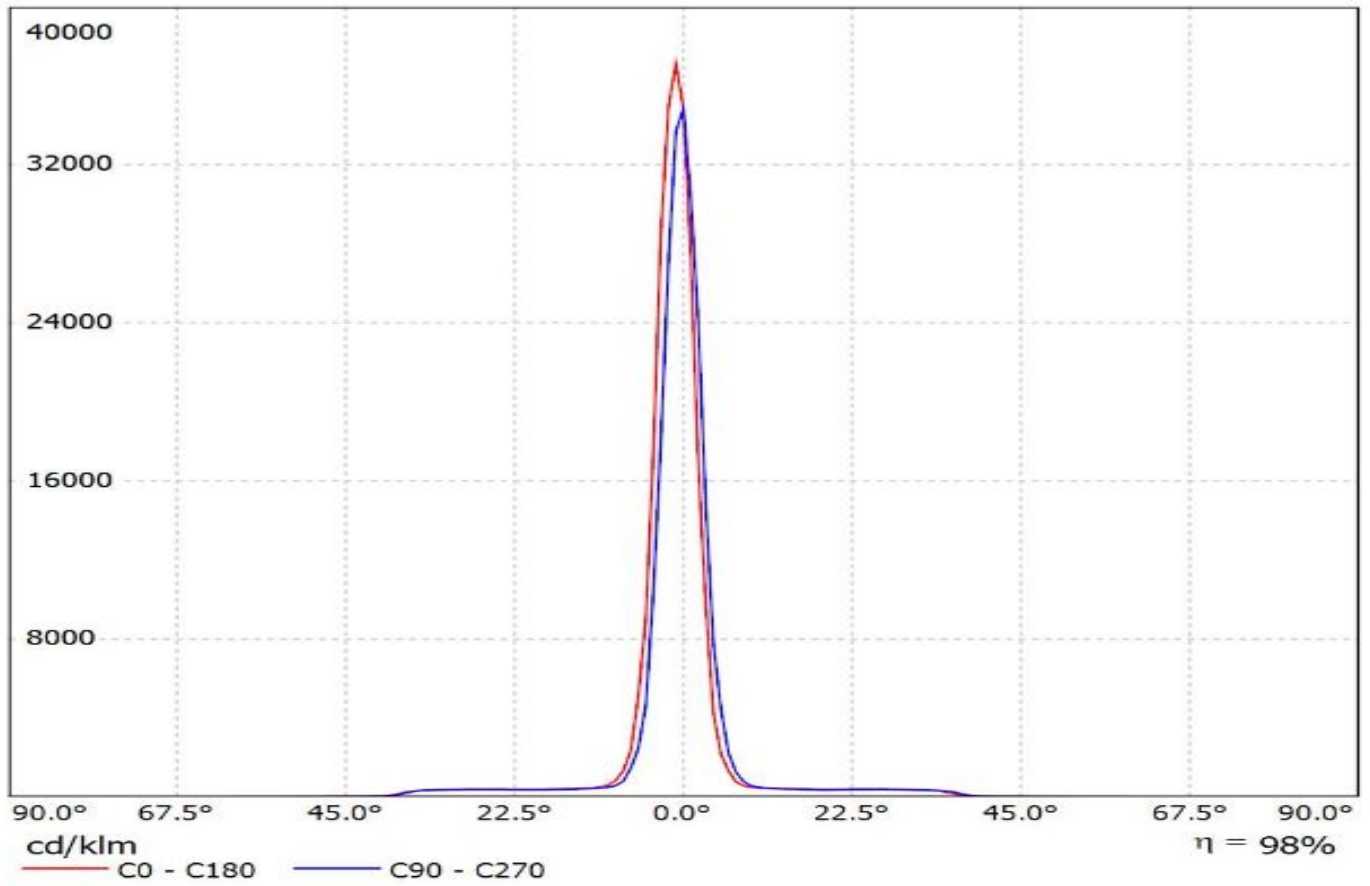
Lamps: 1 x Nichia\_NFCLL060B\_(438\_TYP\_L1)\_C13658\_1356.65lm@250mA\_P=8.375W\_I=0.25A





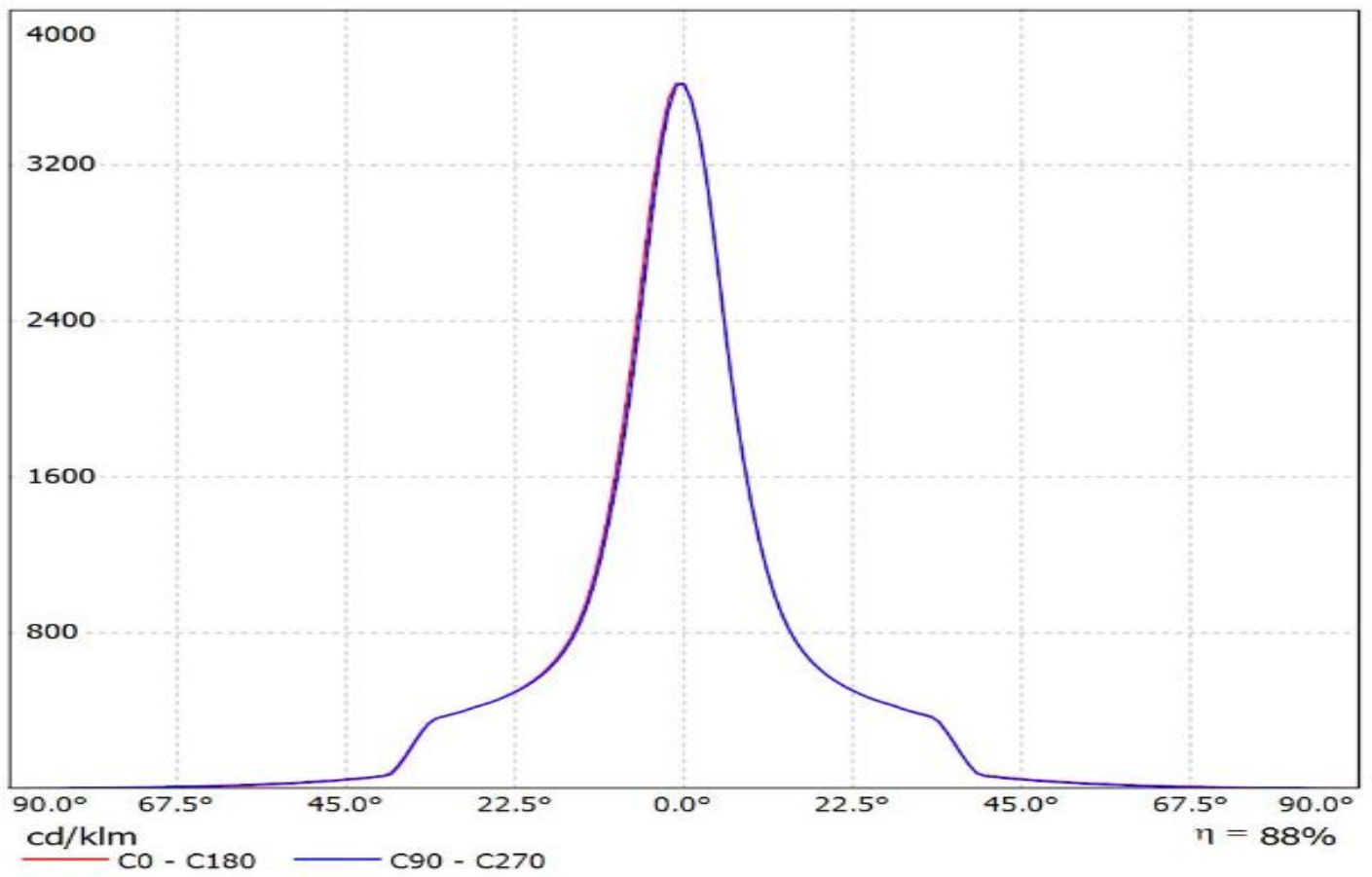
Luminaire: Ledil FCN13705\_ANGELA-S\_(Soleriq\_P9)

Lamps: 1 x Osram\_Soleriq\_P9\_(GW\_MAFJB1.EM)\_972.417lm@250mA\_CCT=4299K\_P=6.9W\_I=0.25A



Luminaire: Ledil FCN13706\_ANGELA-M\_(Soleriq\_P13)

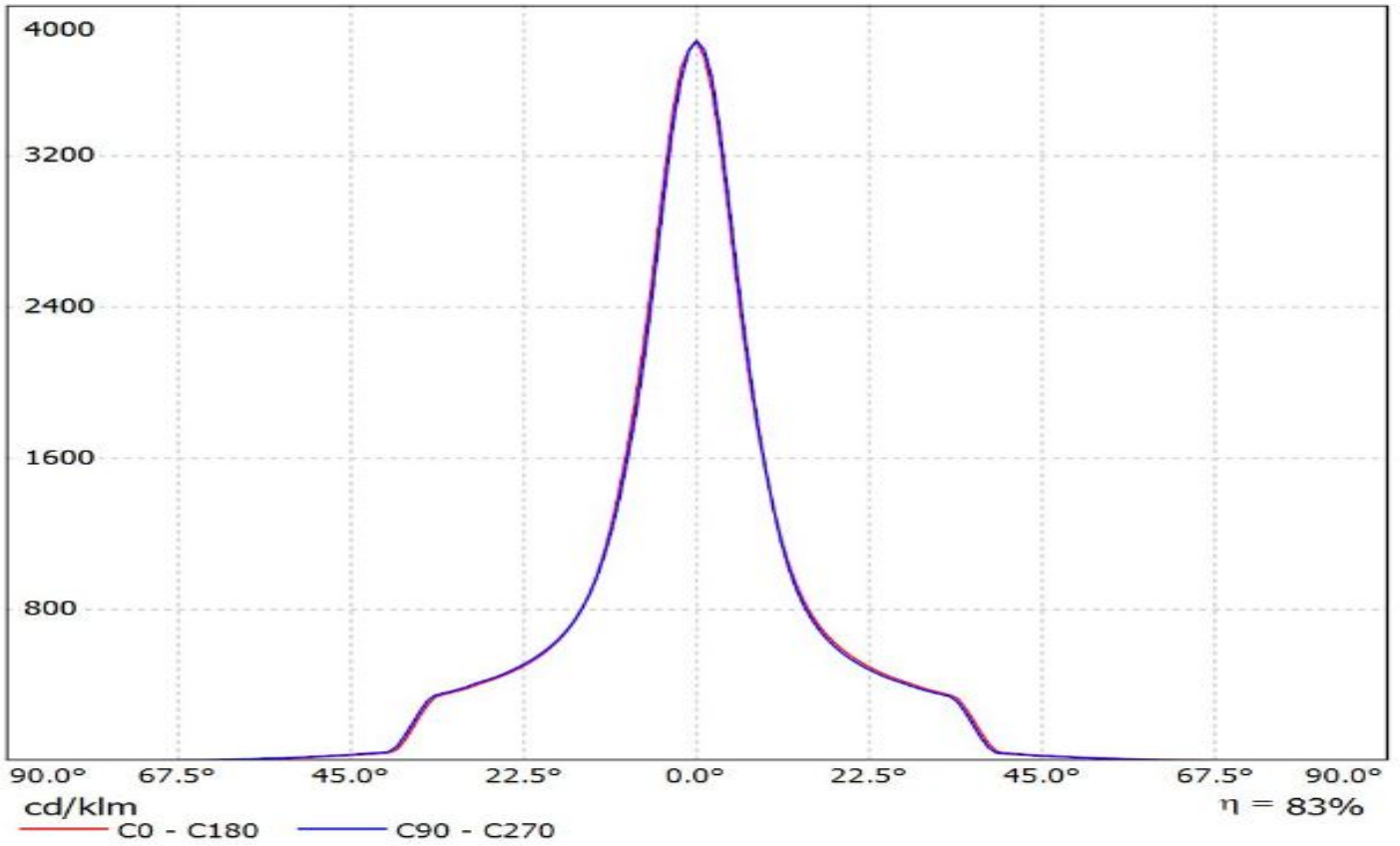
Lamps: 1 x Osman\_Soleriq\_P13\_1009.11lm@250mA\_P=6.9385W\_I=0.25A



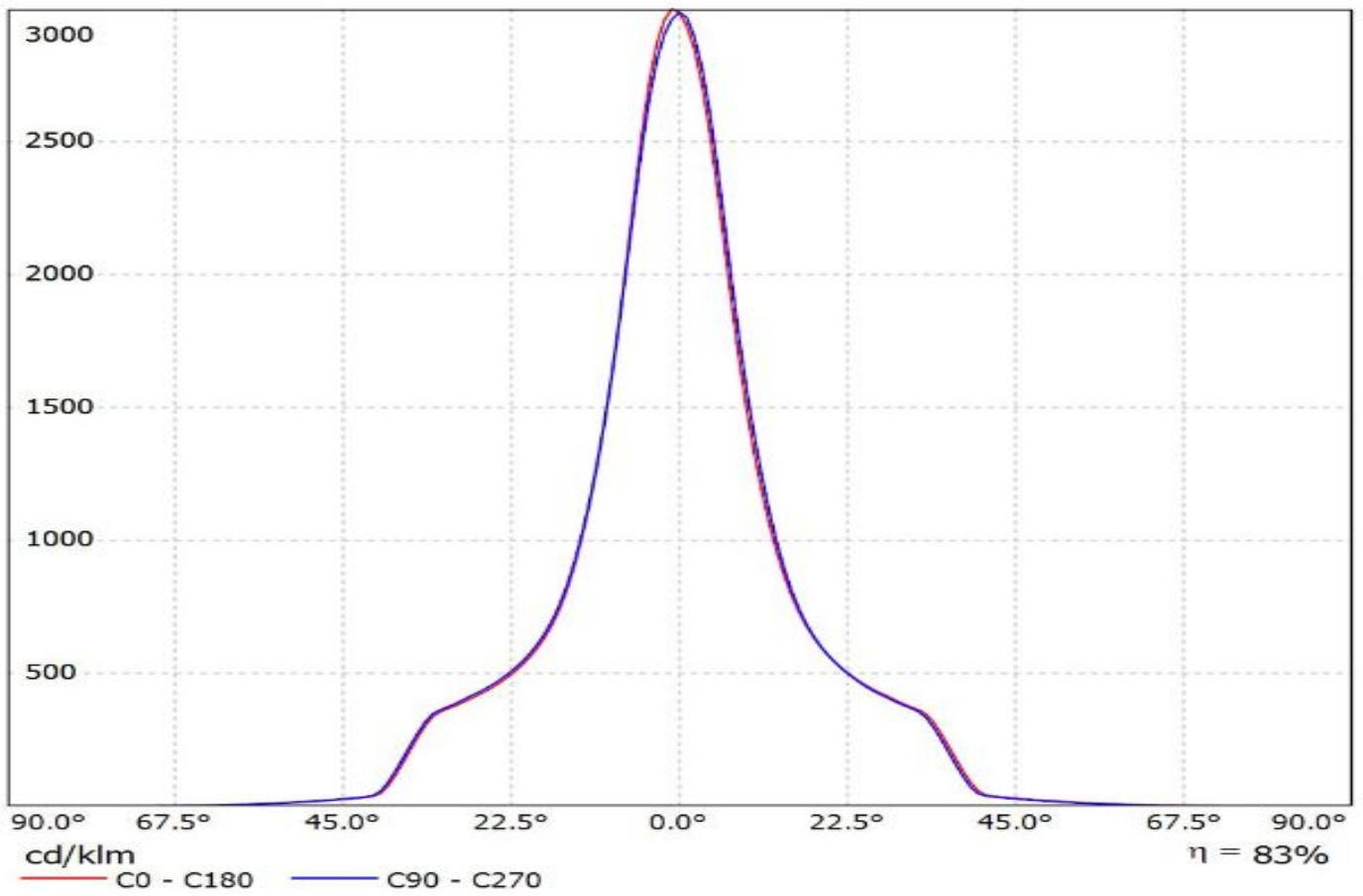
# Ledil FCN13706\_ANGELA-M\_(Soleriq\_S13) / LDC (Linear)

Luminaire: Ledil FCN13706\_ANGELA-M\_(Soleriq\_S13)

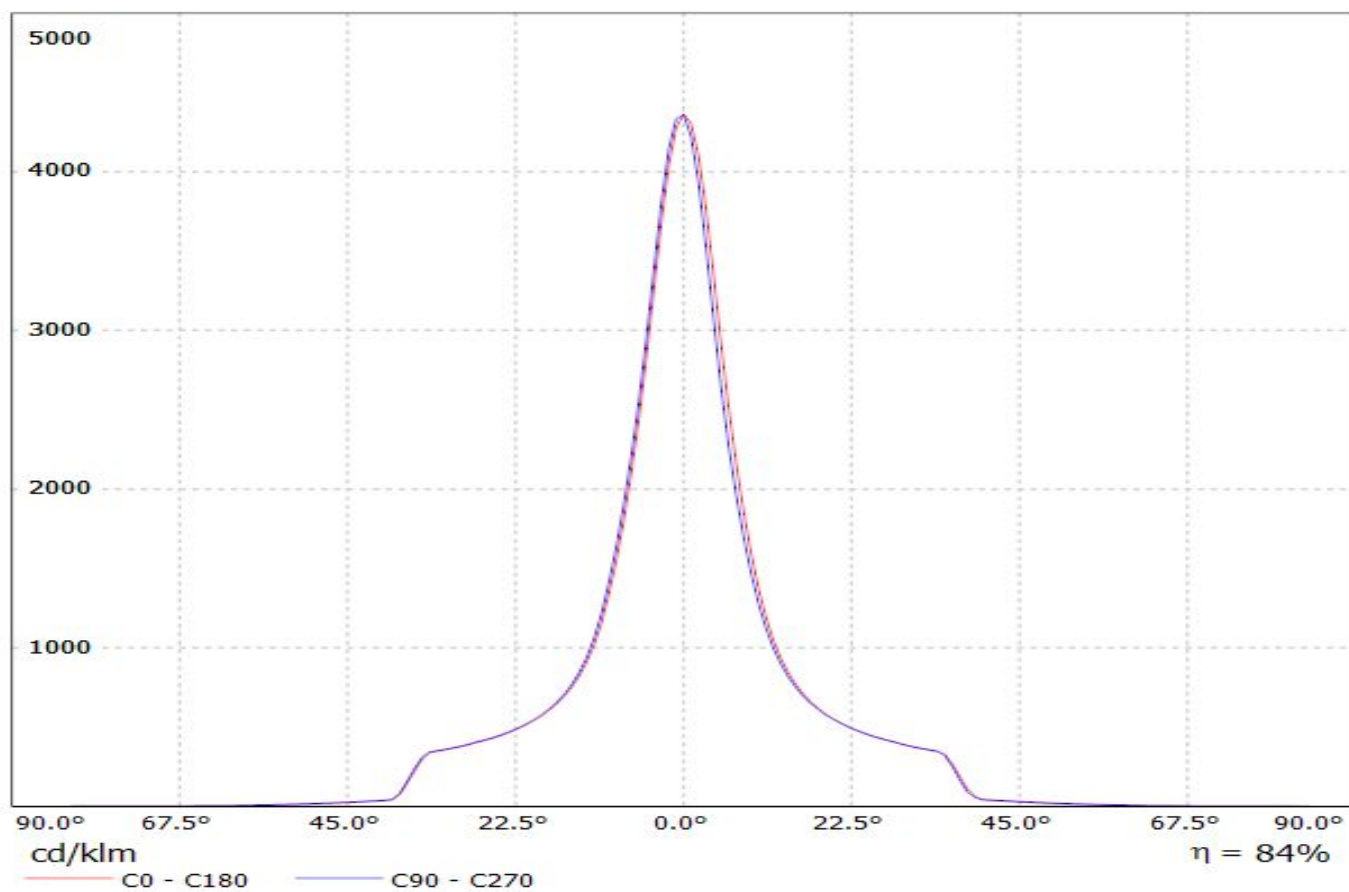
Lamps: 1 x Osram\_Soleriq\_S13\_(GW\_KAGHB1.EM)\_896.727lm@250mA\_P=7.44679W\_I=250mA



Luminaire: Ledil FCN13706\_ANGELA-M\_(450\_Typ\_L2)\_(C13658\_CLAMP-VERO13-18)\_(LC040B)  
Lamps: 1 x Samsung\_LC040B\_CCT=3000K\_(SPHWW1HDNE25010101)\_(450\_Typ\_L2)\_(C13658\_CLAMP-VERO13-18)\_1109.31lm@250mA\_P=8.2W\_I=0.25A

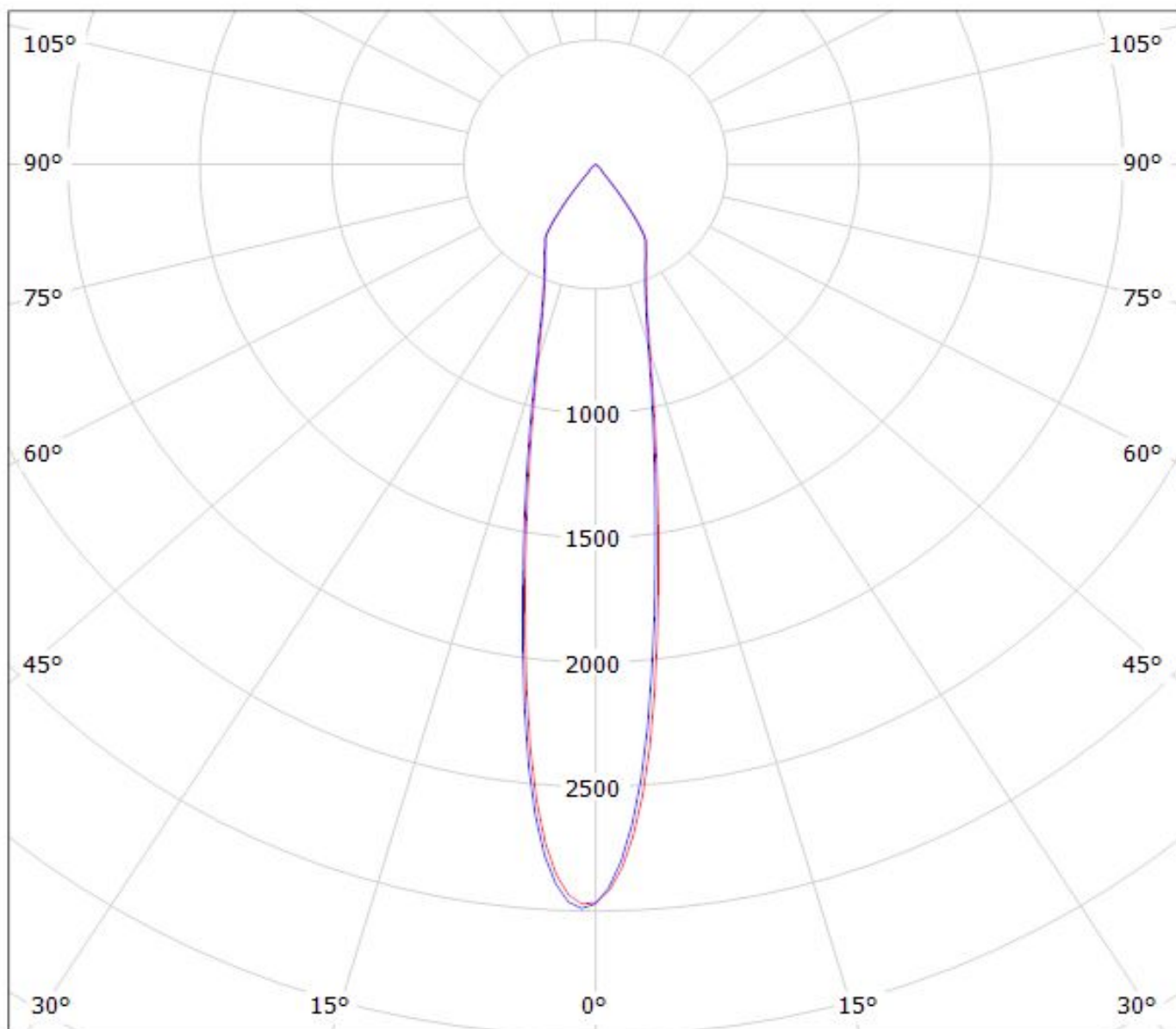


Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(SLE-G5\_LES-11)  
Lamps: 1 x Tridonic\_SLE-G5\_LES-11\_1137.55lm@250mA\_P=8.4177W\_I=0.250A



Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(Vero18) Eff.85.0%

Lamps: 1 x VERO18\_(BXRC30E4000F)\_882.261lm@250mA P=6.73161W I=249.8mA



cd/klm

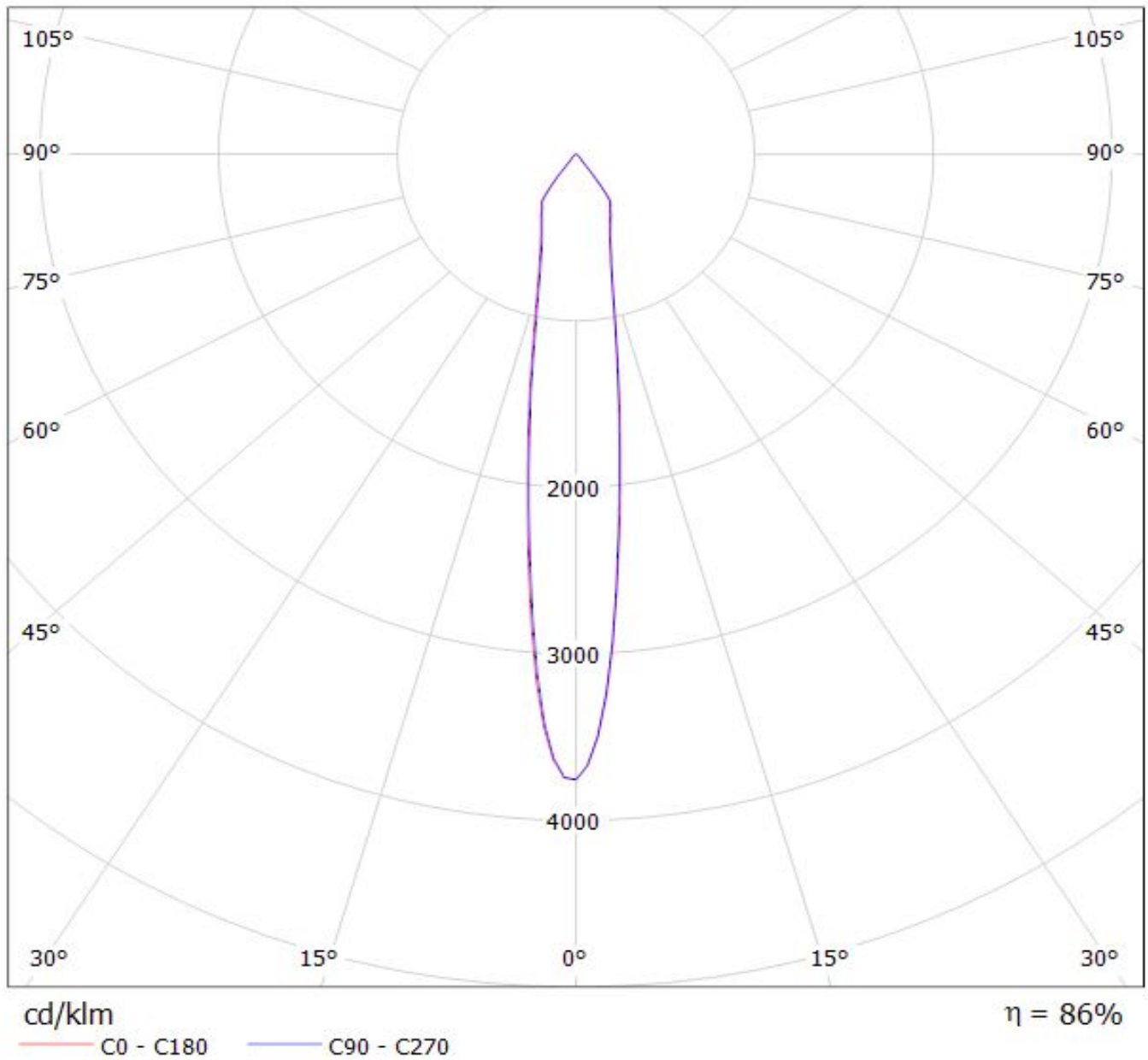
— C0 - C180

— C90 - C270

$\eta = 85\%$

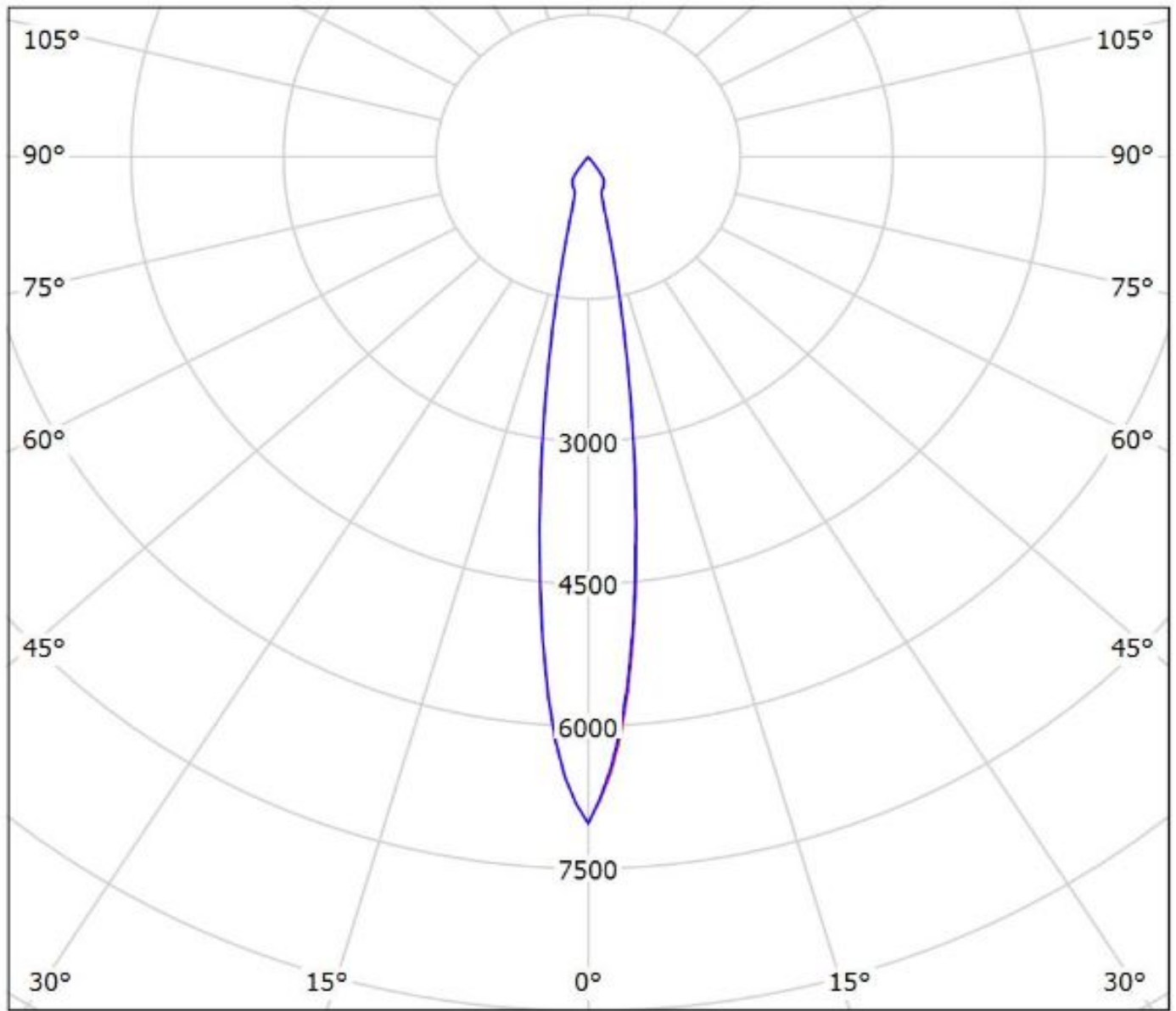
Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(VERO13)

Lamps: 1 x Bridgelux\_VERO13\_(BXRC-30E2000C)\_1065.93lm@250mA\_P=7.63514W\_I=249.8mA





Luminaire: Ledil Oy FCN13706\_ANGELA-M+\_B+W\_434\_TypL1\_BRIDGELUX\_V10\_Gen7\_SIMULATED  
Lamps: 1 x BRIDGELUX V10 Gen7



cd/klm

— C0 - C180 — C90 - C270

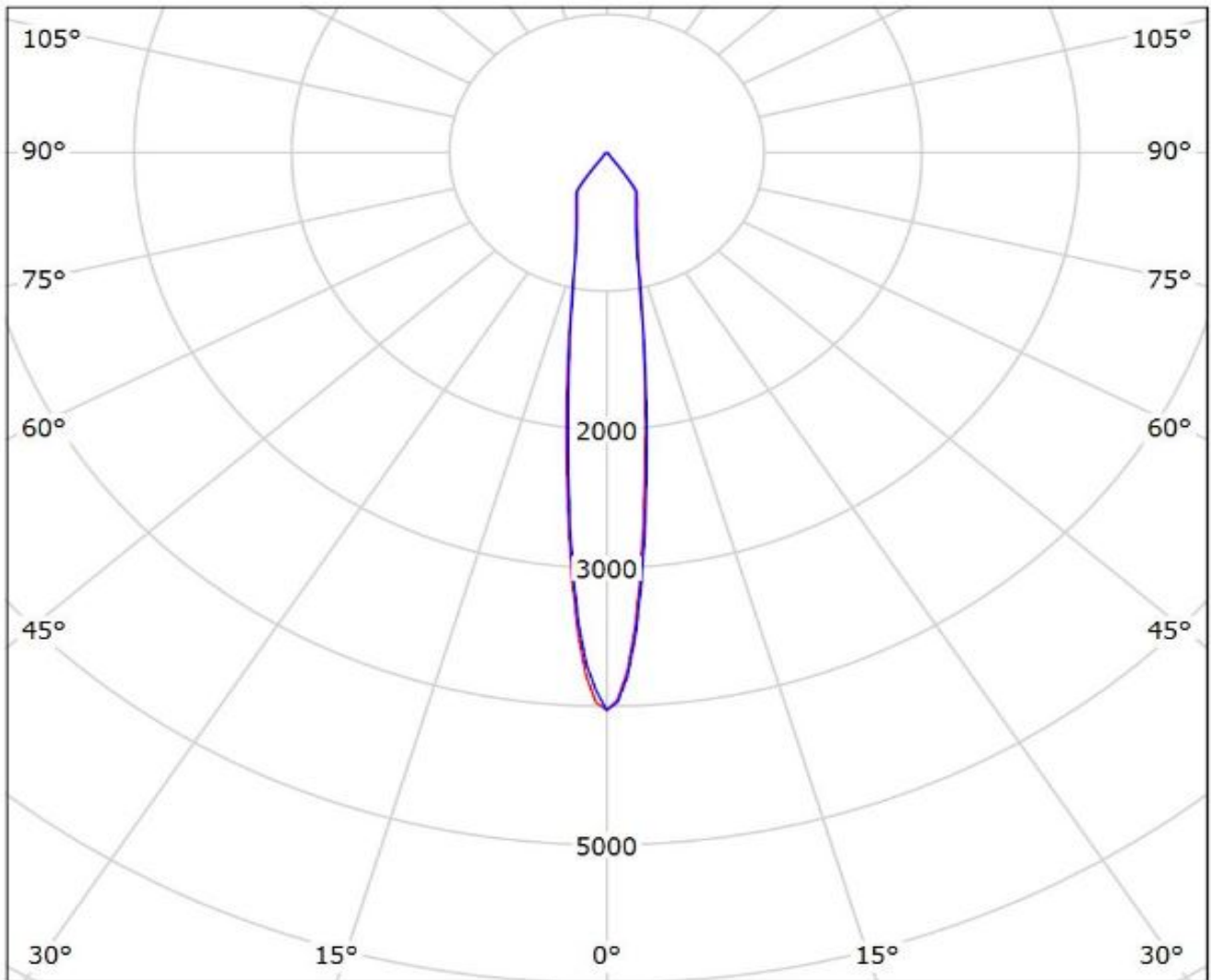
$\eta = 90\%$



# Ledil FCN13706\_ANGELA-M\_(CLU720)\_(433\_Typ\_L1) / LDC (Polar)

Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU720)\_(433\_Typ\_L1)

Lamps: 1 x Citizen\_CLU720\_(CLU720-1206B8-273M2G1)\_1225.89lm@250mA\_P=8.3W\_I=0.25A



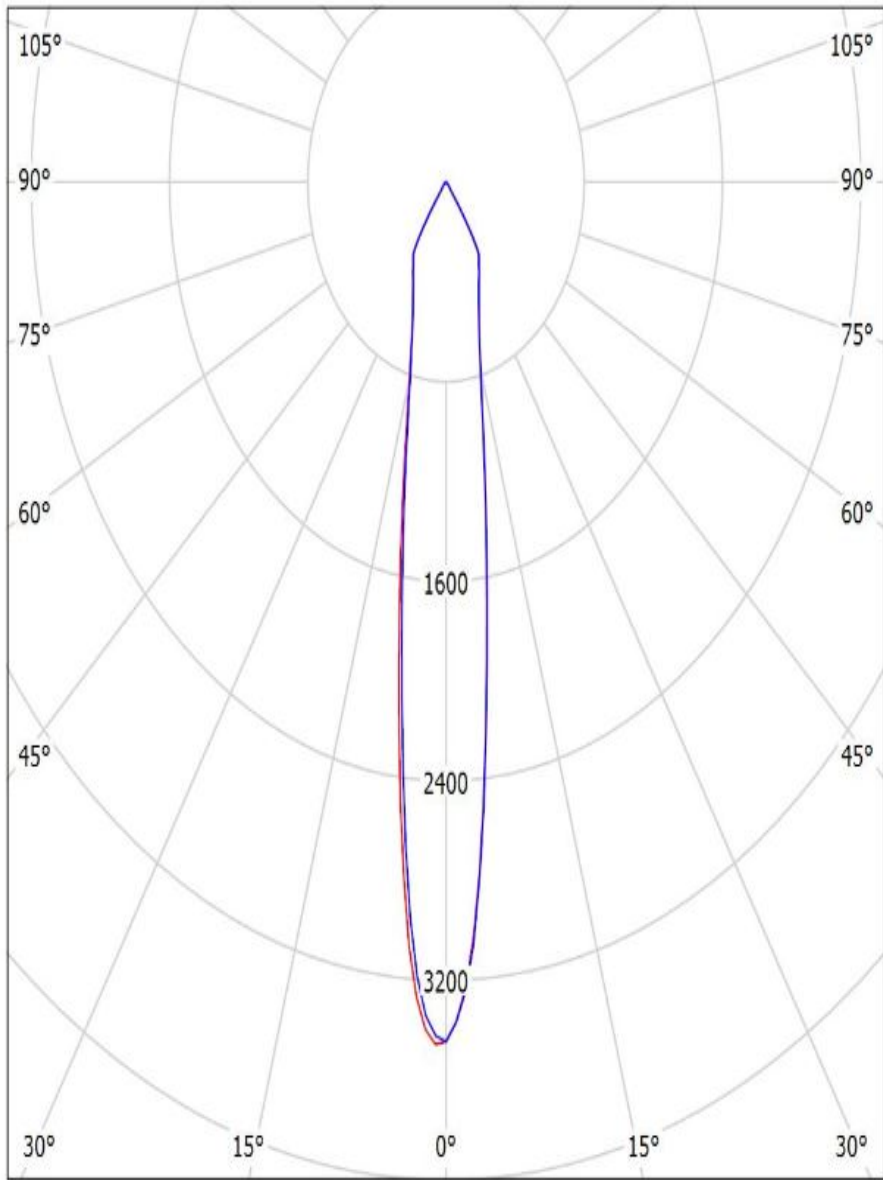
cd/klm

— C0 - C180

— C90 - C270

$\eta = 83\%$

Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU034)\_ (433\_Typ\_L1)\_ (C13658) Citizen\_CLU034\_(CLU034-1205B8-303M1A2)\_1180.79lm@250mA\_P=8.50075W\_I=0.25A  
Lamps: 1 x Citizen\_CLU034\_(433\_Typ\_L1)\_ (C13658)\_1173.16lm@250mA\_P=8.475W\_I=0.25A

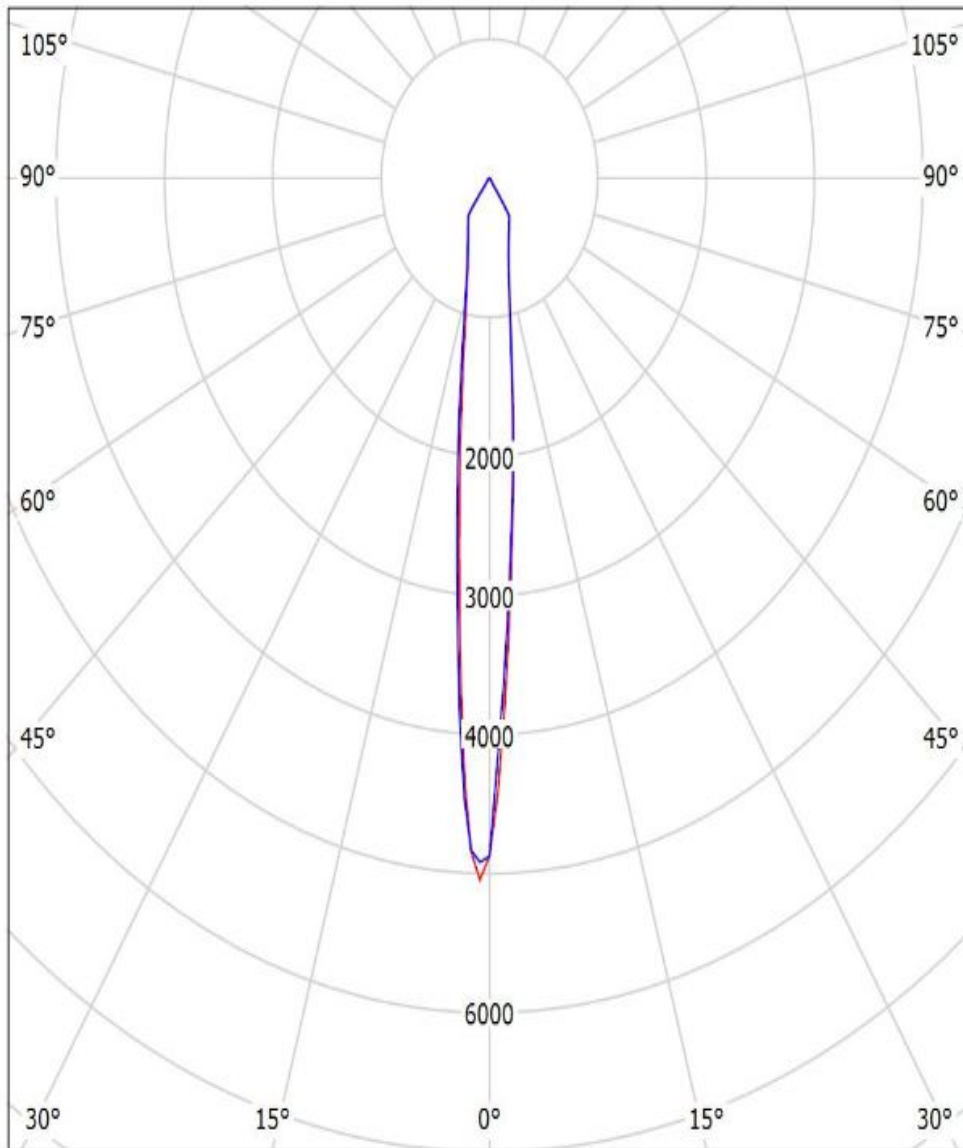


cd/klm

— C0 - C180 — C90 - C270

$\eta = 83\%$

Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU700)\_ (434\_Typ\_L1) Citizen\_CLU700\_(CLU700-1002B8-273M2G1)\_390.128lm@100mA\_P=3W\_I=0.10A  
Lamps: 1 x Citizen\_CLU700\_(CLU700-1002B8-273M2G1)\_388.036lm@100mA\_P=3W\_I=0.10A

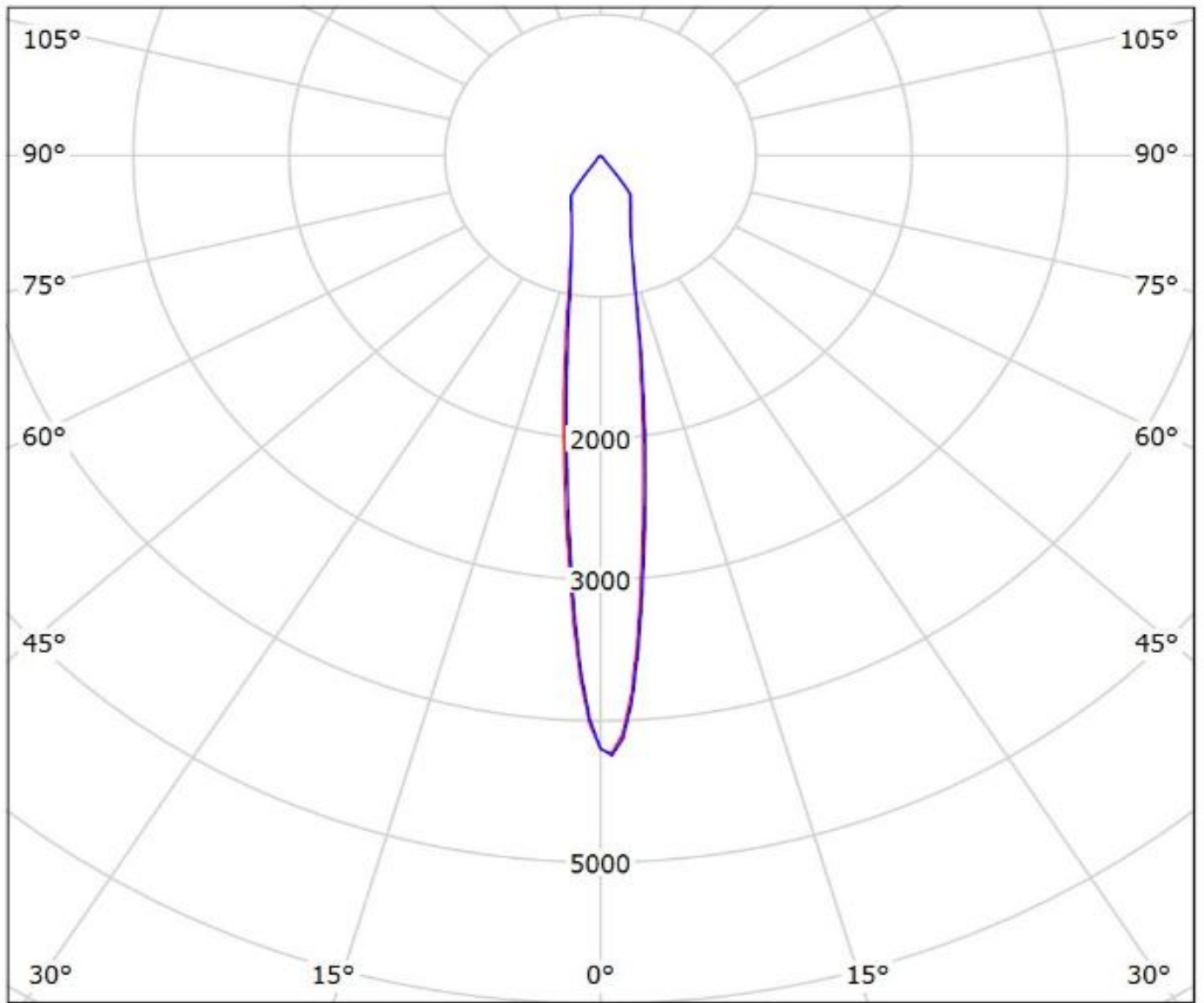


cd/klm

— C0 - C180 — C90 - C270

$\eta = 83\%$

Luminaire: Ledil FCN13706\_ANGELA-M\_(CLU024)\_(433\_Typ\_L1) Citizen\_CLU024\_(433\_Typ\_L1)  
(C13658\_CLAMP-VERO13-18)\_1071.07lm@250mA\_P=8.43W\_I=0.25A  
Lamps: 1 x Citizen\_CLU024\_(433\_Typ\_L1)\_(C13658\_CLAMP-VERO13-18)  
\_1071.07lm@250mA\_P=8.43W\_I=0.25A



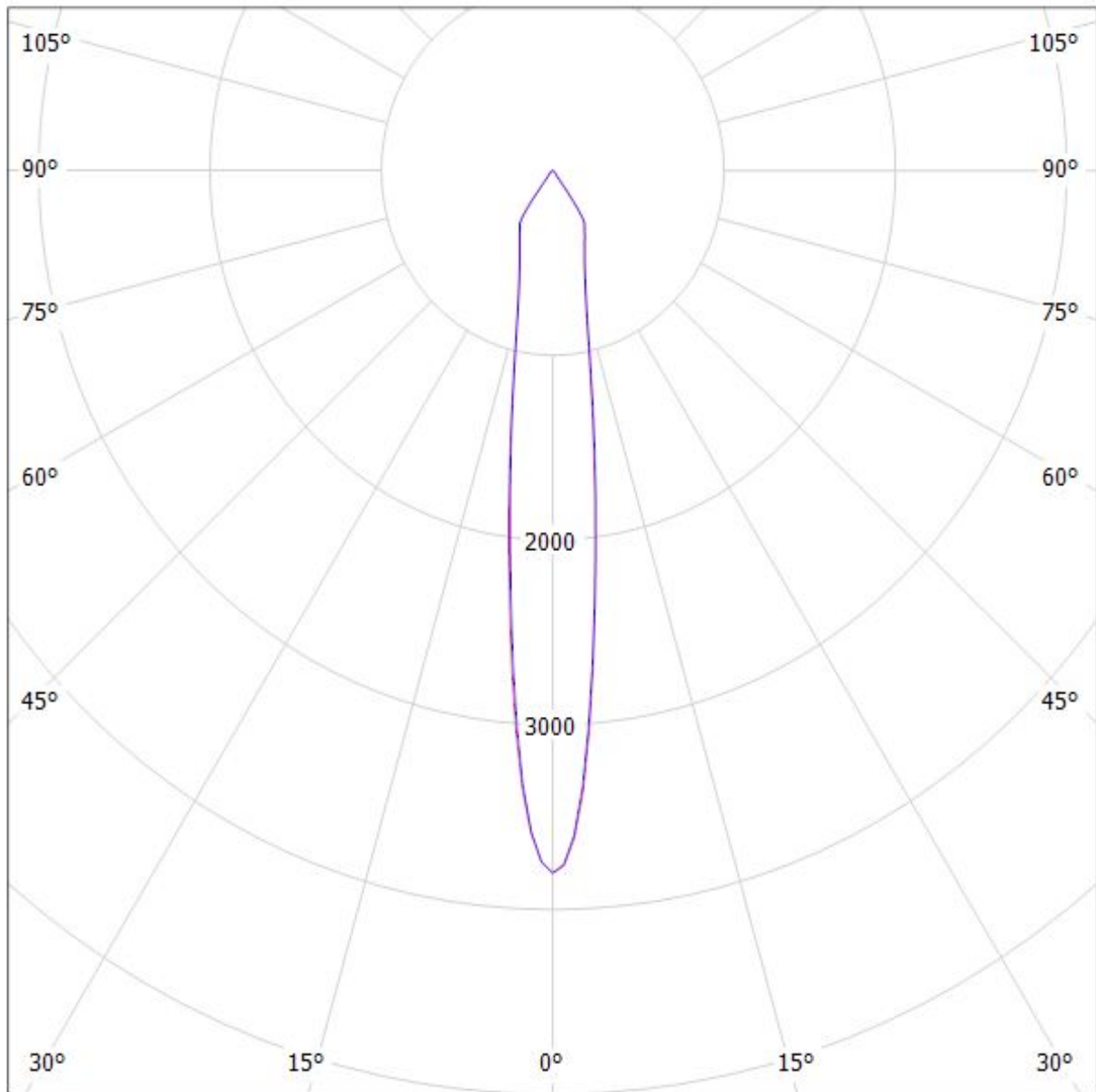
cd/klm

— C0 - C180 — C90 - C270

$\eta = 84\%$

Luminaire: Ledil FCN13706\_ANGELA-M\_(CXA1850)

Lamps: 1 x CREE\_CXA1850\_(CXA1850-30F-T4-N0Y-00001)\_831.914lm@250mA\_CCT=3000K\_P=8.27W\_I=0.25A



cd/klm

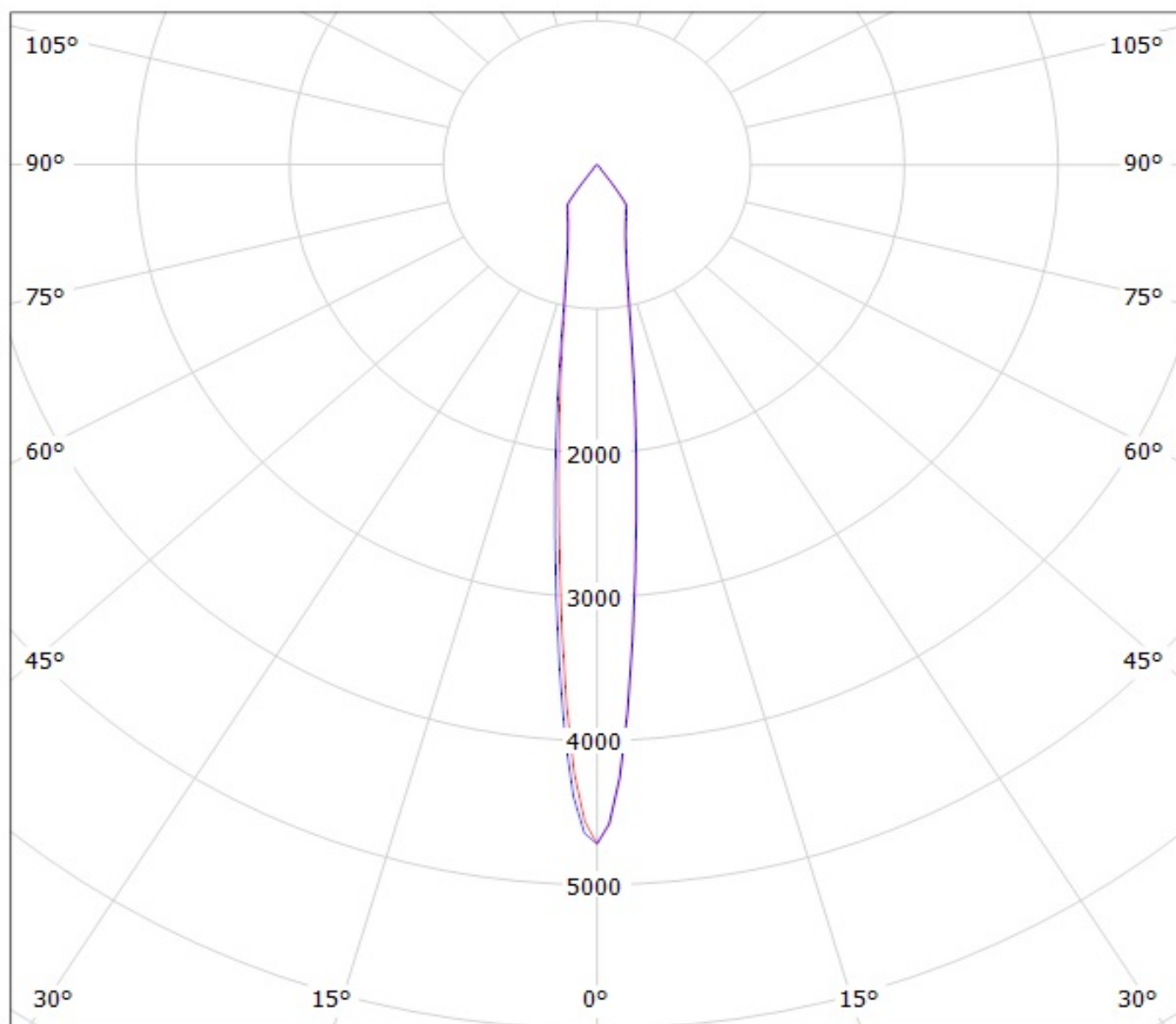
— C0 - C180

— C90 - C270

$\eta = 83\%$

Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(CXA1520)\_ (441\_Typ\_L1)

Lamps: 1 x Cree\_CXA1520\_(CXA1520-30F-N4-00H-00001)\_993.209lm@250mA\_P=8.74575W\_I=0.2499A



cd/klm

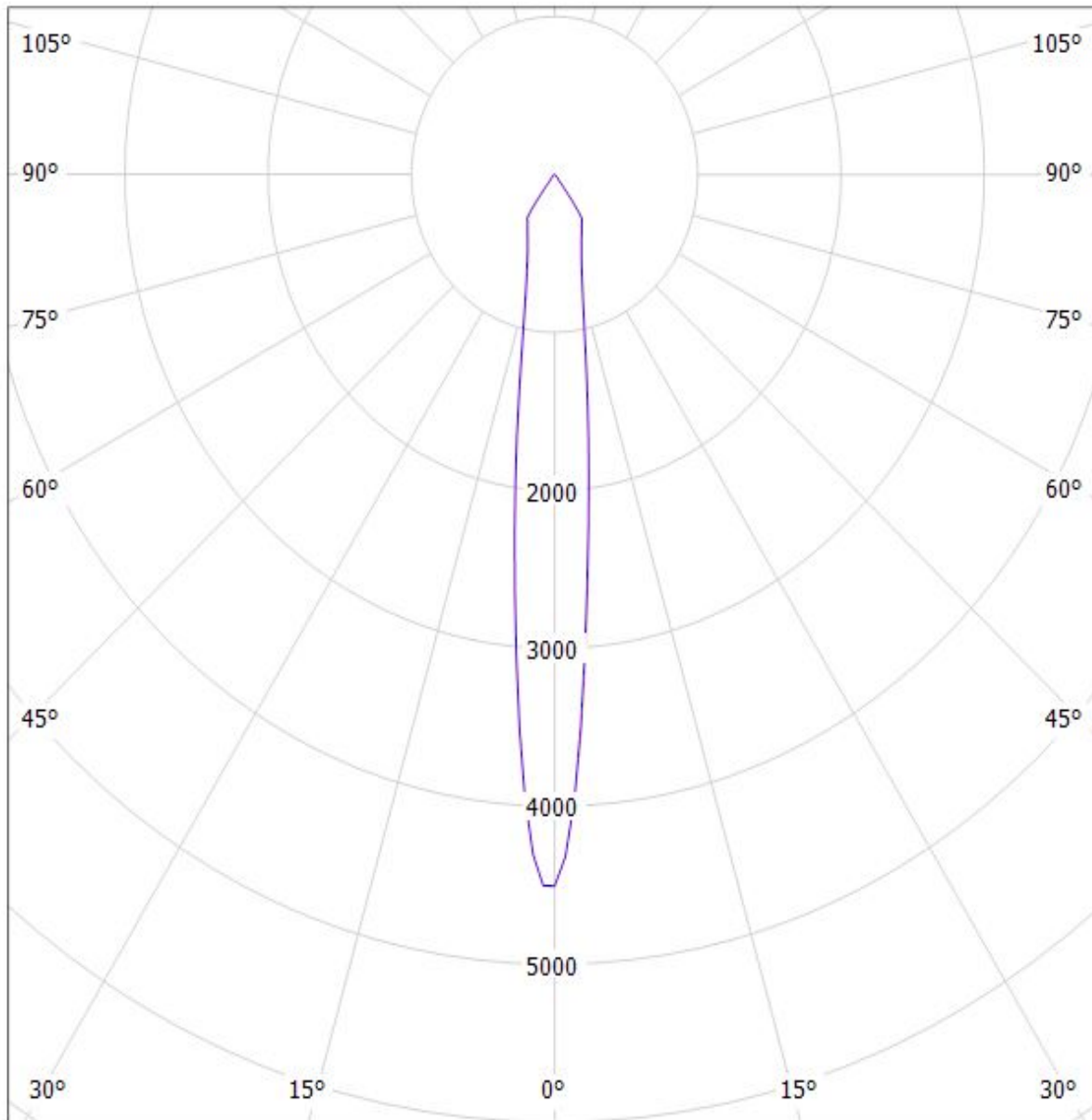
$\eta = 84\%$

— C0 - C180

— C90 - C270



Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(LUXEON\_CoB\_1203)\_ (438\_Typ\_L1)\_ (C13658\_CLAMP-VERO13-18)  
Lamps: 1 x LUXEON\_CoB\_1203\_(438\_Typ\_L1)\_ (C13658\_CLAMP-VERO13-18)\_984.561lm@250mA\_P=8.6828W\_I=0.25A



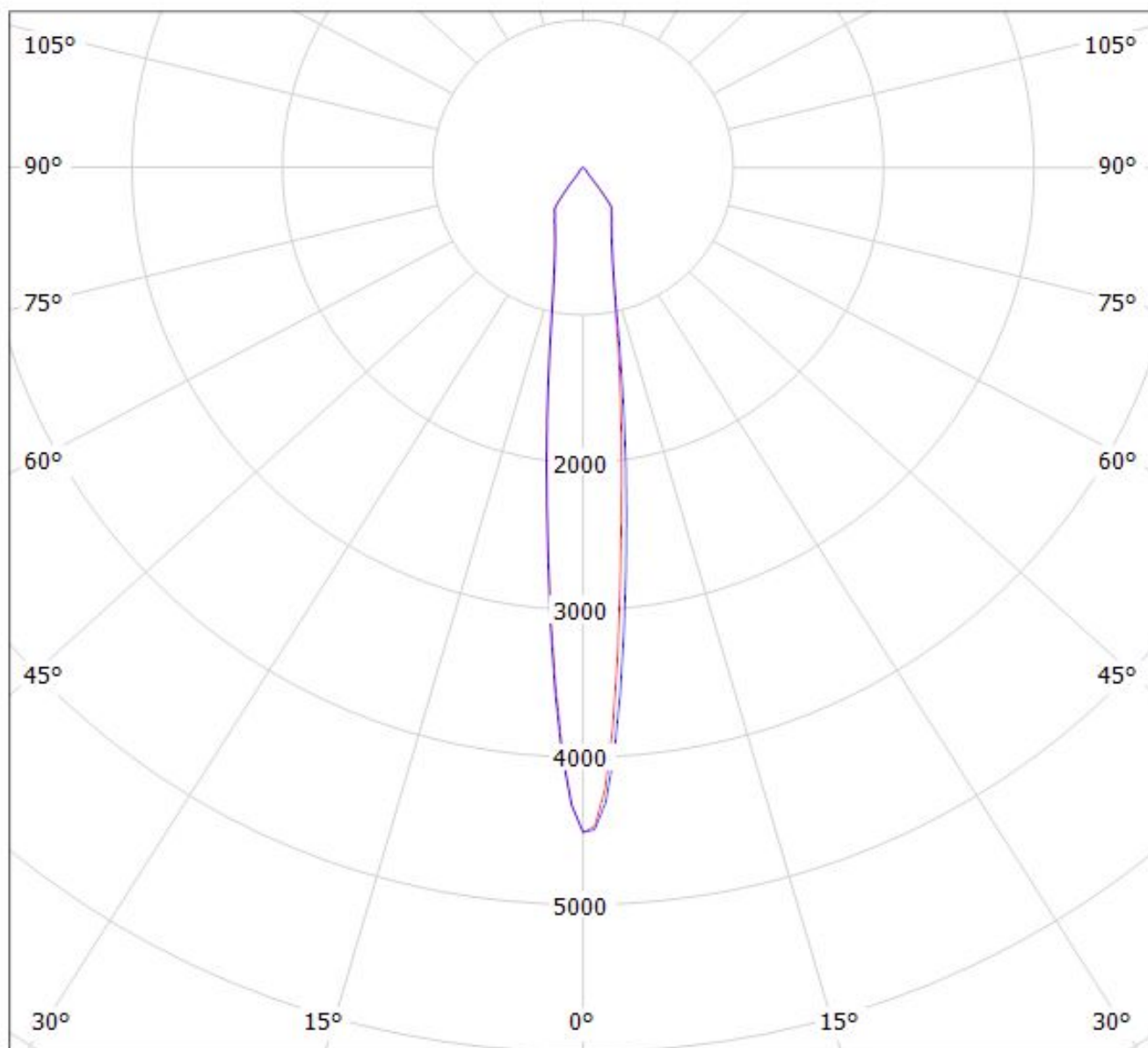
cd/klm

— C0 - C180 — C90 - C270

$\eta = 84\%$

Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(NFCLL036B)

Lamps: 1 x Nichia NFCLL036B (sm403J1300R8000)\_541.131lm@100mA\_CCT=4000K\_P=3.34324W\_I=0.100A



cd/klm

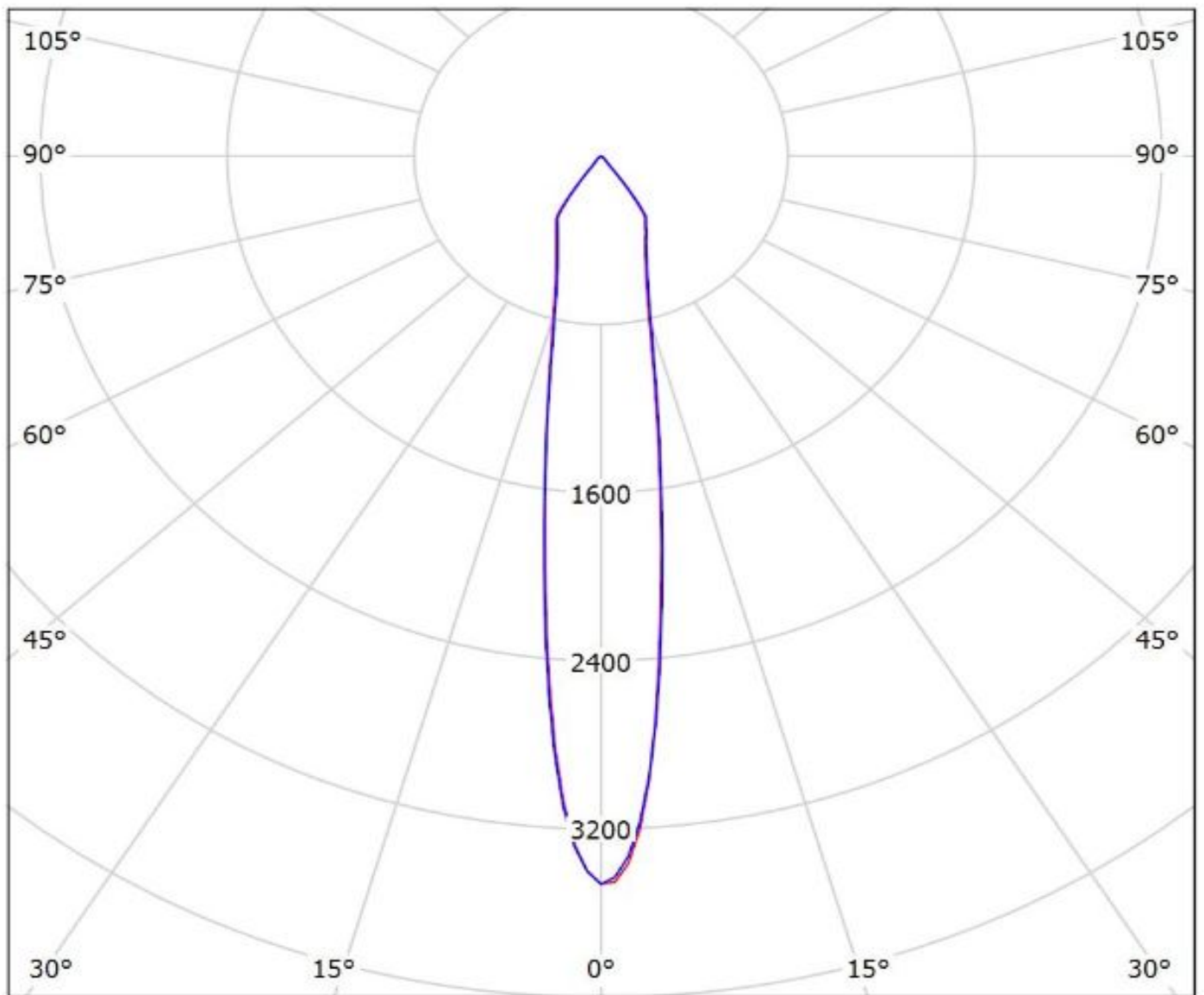
— C0 - C180

— C90 - C270

$\eta = 85\%$



Luminaire: Ledil FCN13706\_ANGELA-M\_(NFDxJ130B)  
Lamps: 1 x Nichia\_NFDxJ130B\_(463 Typ L2)\_C13658\_CLAMP-  
VERO13\_1504.8lm@250mA\_P=8.27W\_I=0.25A

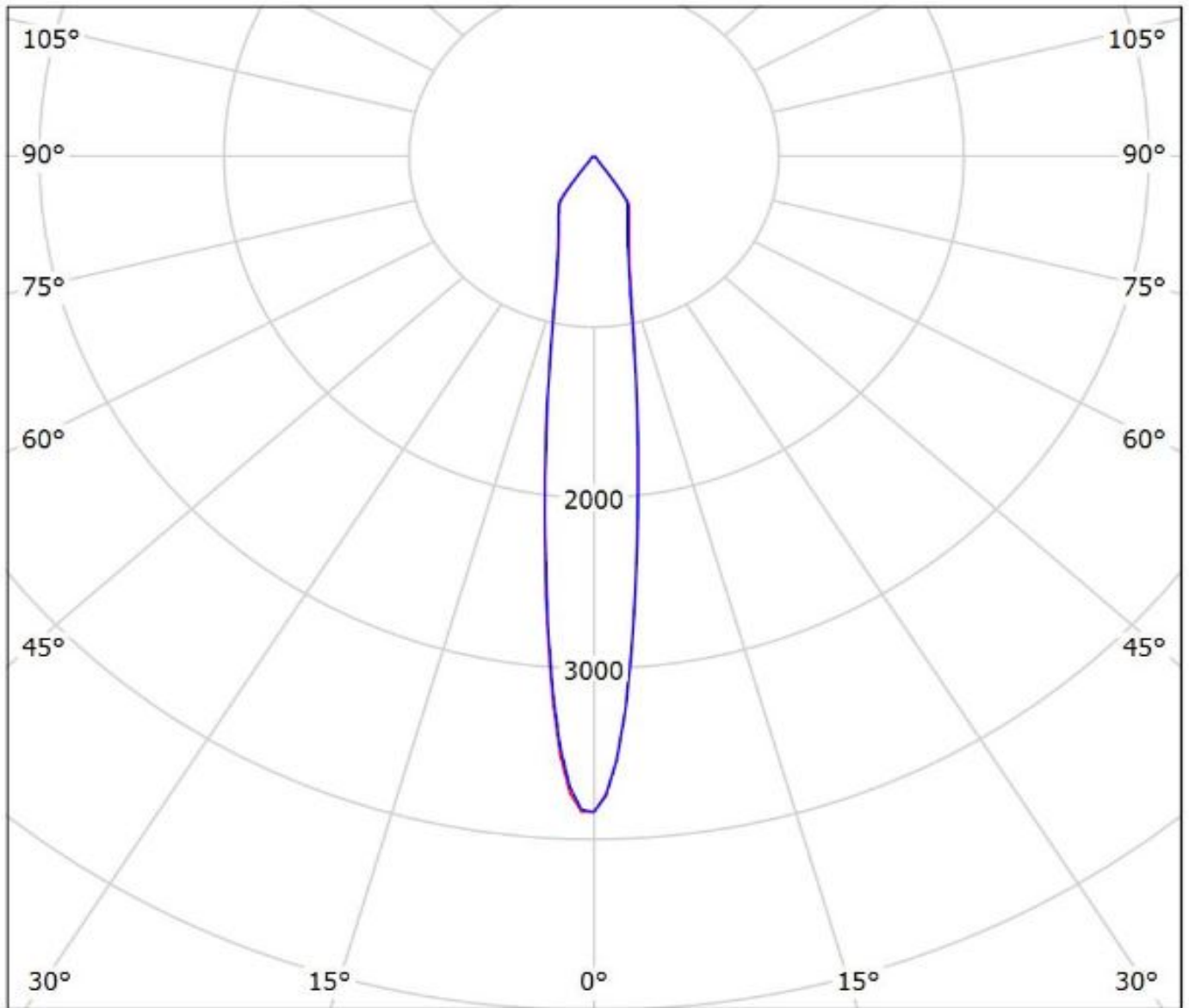


cd/klm  
— C0 - C180 — C90 - C270

$\eta = 83\%$

Luminaire: Ledil FCN13706\_ANGELA-M\_(NFCLL060B)

Lamps: 1 x Nichia\_NFCLL060B\_(438\_TYP\_L1)\_C13658\_1356.65lm@250mA\_P=8.375W\_I=0.25A



cd/klm

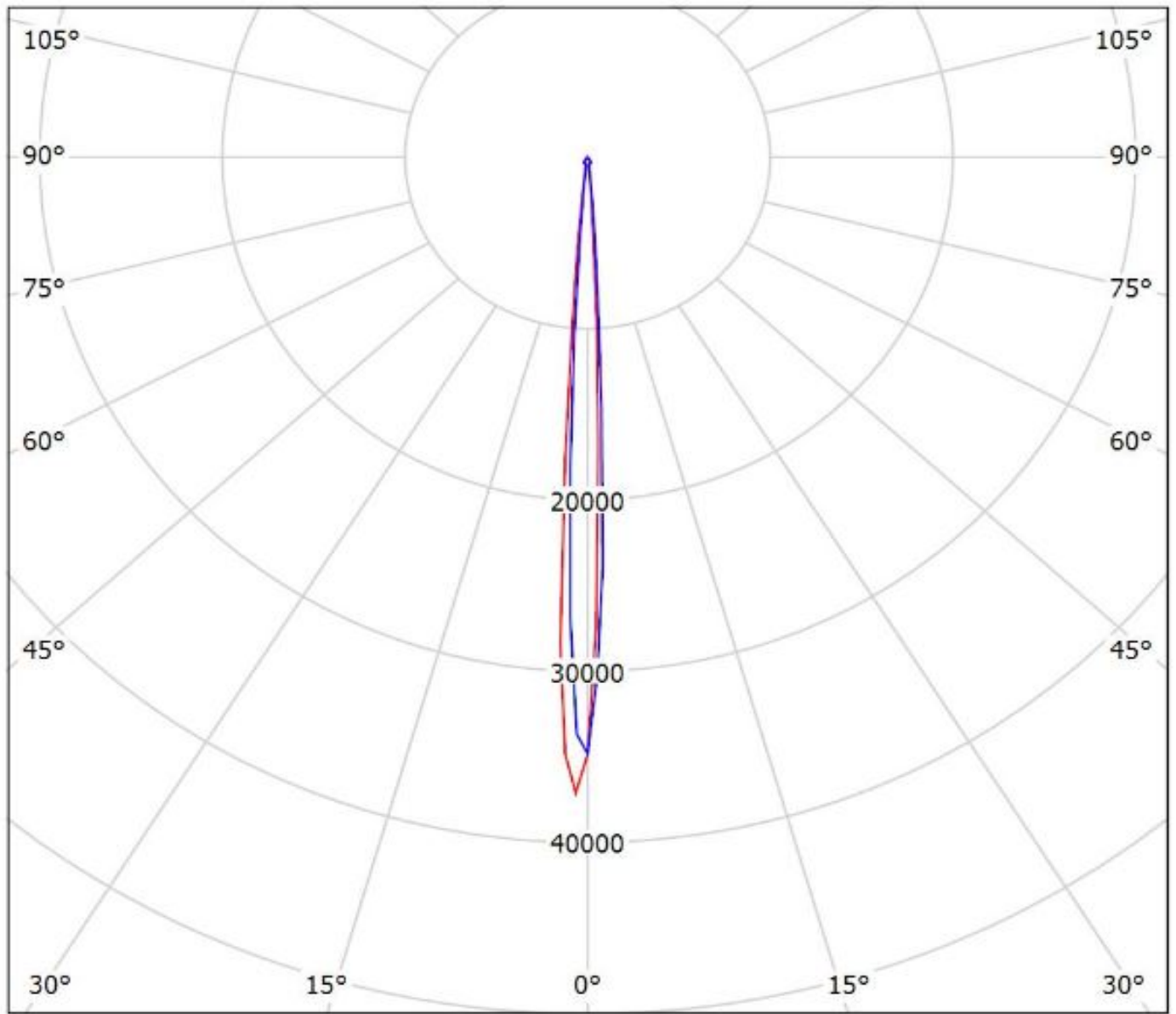
— C0 - C180

— C90 - C270

$\eta = 83\%$

Luminaire: Ledil FCN13705\_ANGELA-S\_(Soleriq\_P9)

Lamps: 1 x Osram\_Soleriq\_P9\_(GW\_MAFJB1.EM)\_972.417lm@250mA\_CCT=4299K\_P=6.9W\_I=0.25A



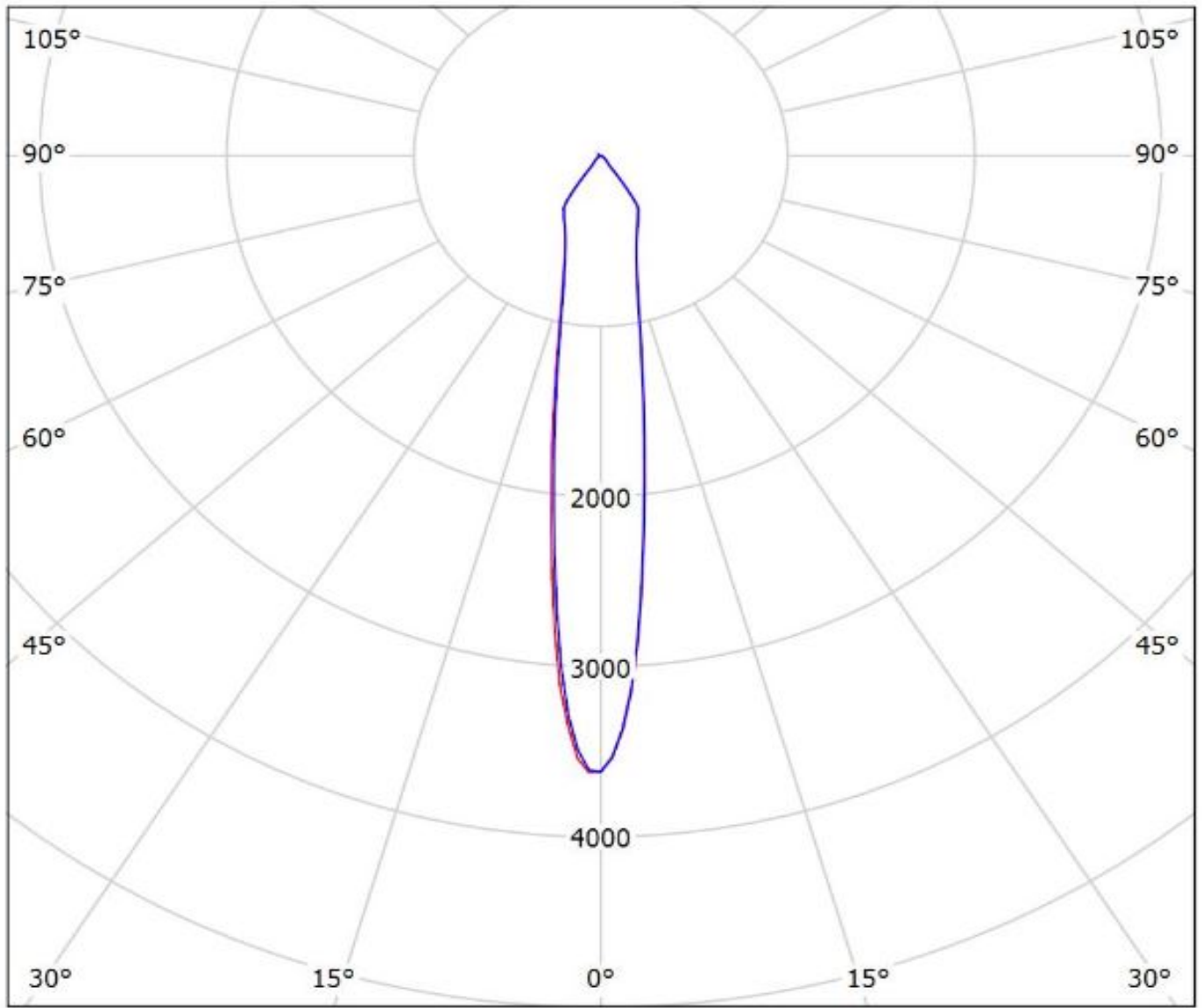
cd/klm

— C0 - C180 — C90 - C270

$\eta = 98\%$

Luminaire: Ledil FCN13706\_ANGELA-M (Soleriq\_P13)

Lamps: 1 x Osman\_Soleriq\_P13\_1009.11lm@250mA\_P=6.9385W\_I=0.25A



cd/klm

— C0 - C180

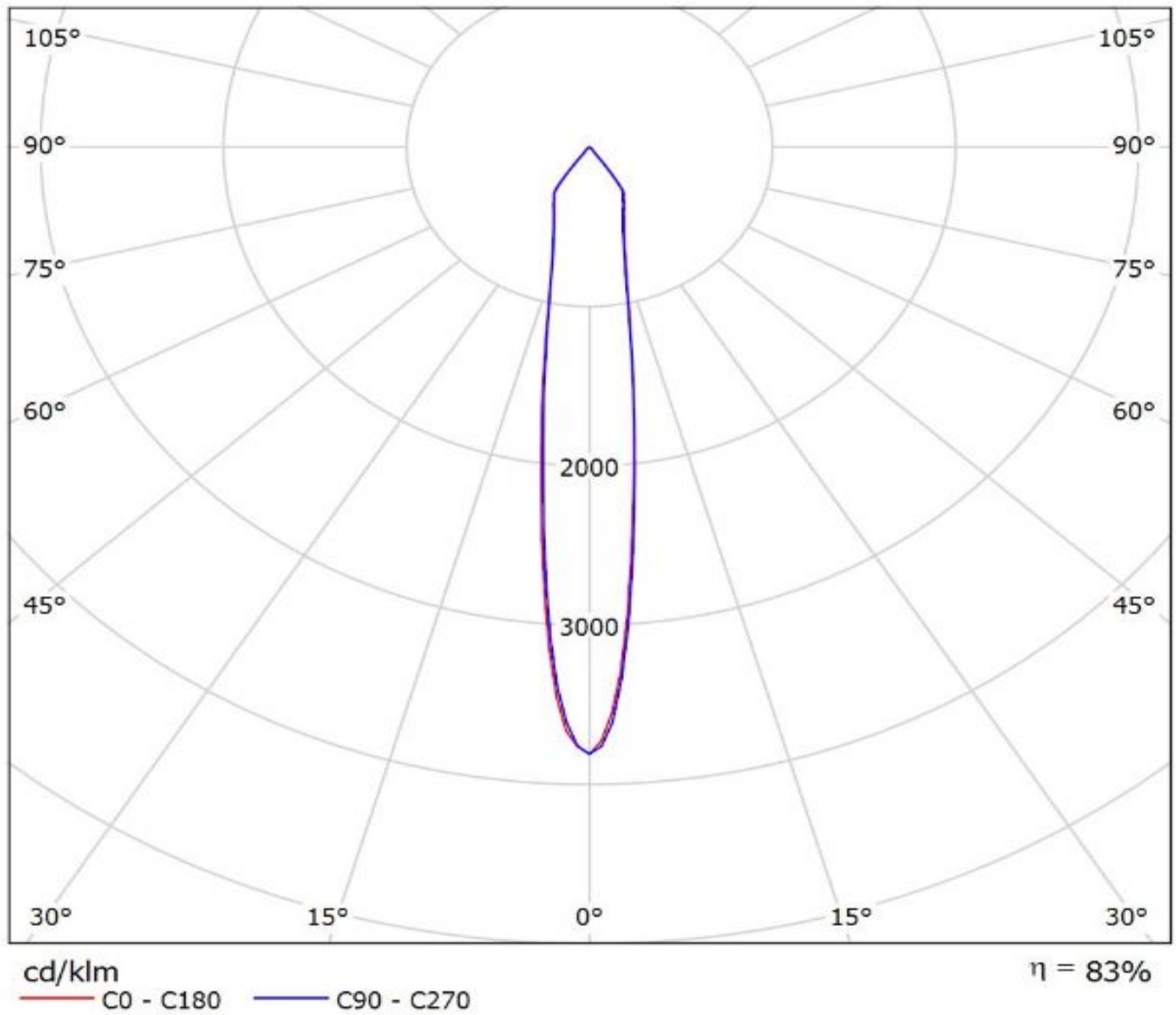
— C90 - C270

$\eta = 88\%$

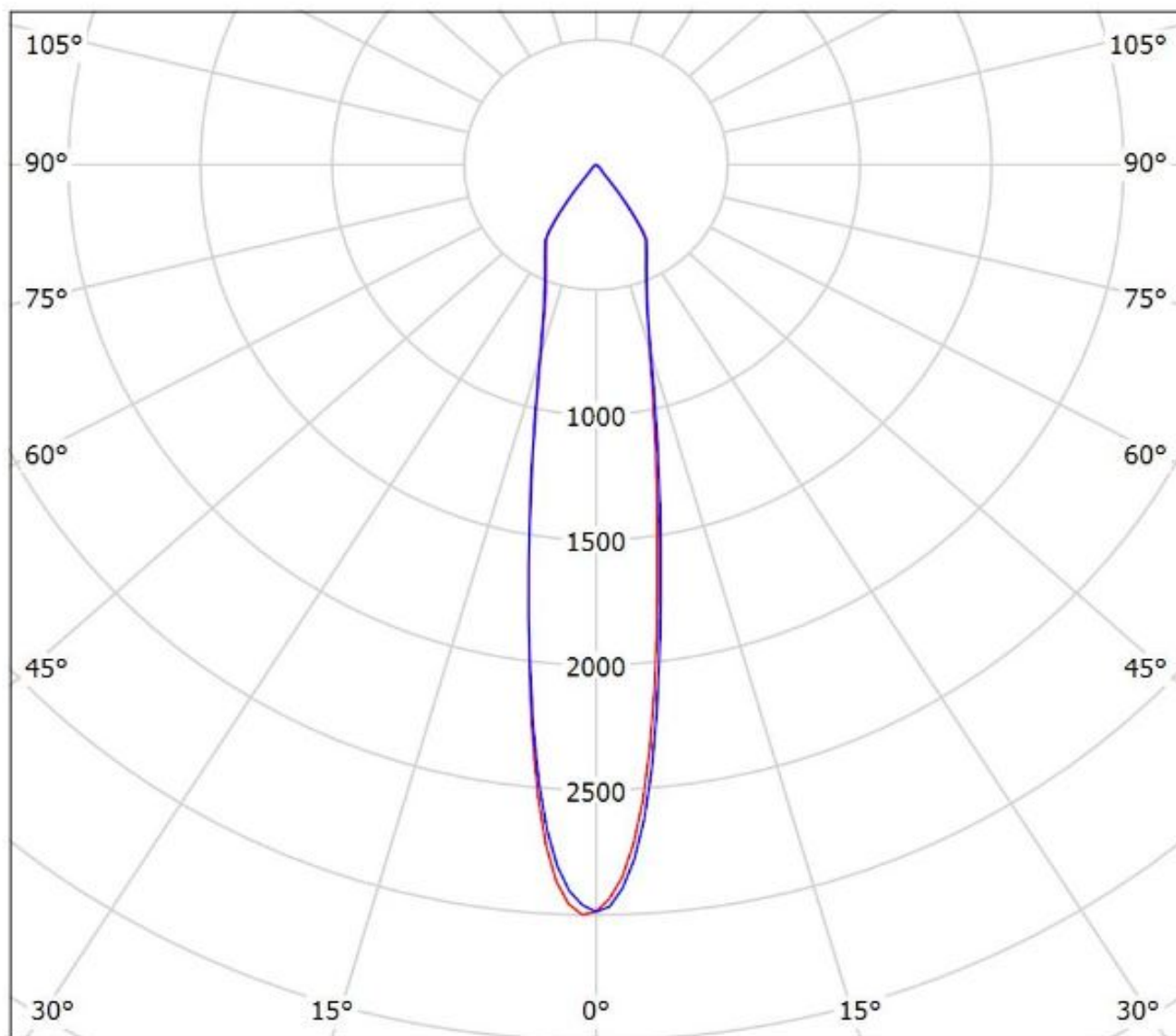
# Ledil FCN13706\_ANGELA-M\_(Soleriq\_S13) / LDC (Polar)

Luminaire: Ledil FCN13706\_ANGELA-M\_(Soleriq\_S13)

Lamps: 1 x Osram\_Soleriq\_S13\_(GW\_KAGHB1.EM)\_896.727lm@250mA\_P=7.44679W\_I=250mA



Luminaire: Ledil FCN13706\_ANGELA-M\_(450\_Typ\_L2)\_(C13658\_CLAMP-VERO13-18)\_(LC040B)  
Lamps: 1 x Samsung\_LC040B\_CCT=3000K\_(SPHWW1HDNE25010101)\_(450\_Typ\_L2)\_(C13658\_CLAMP-VERO13-18)\_1109.31lm@250mA\_P=8.2W\_I=0.25A



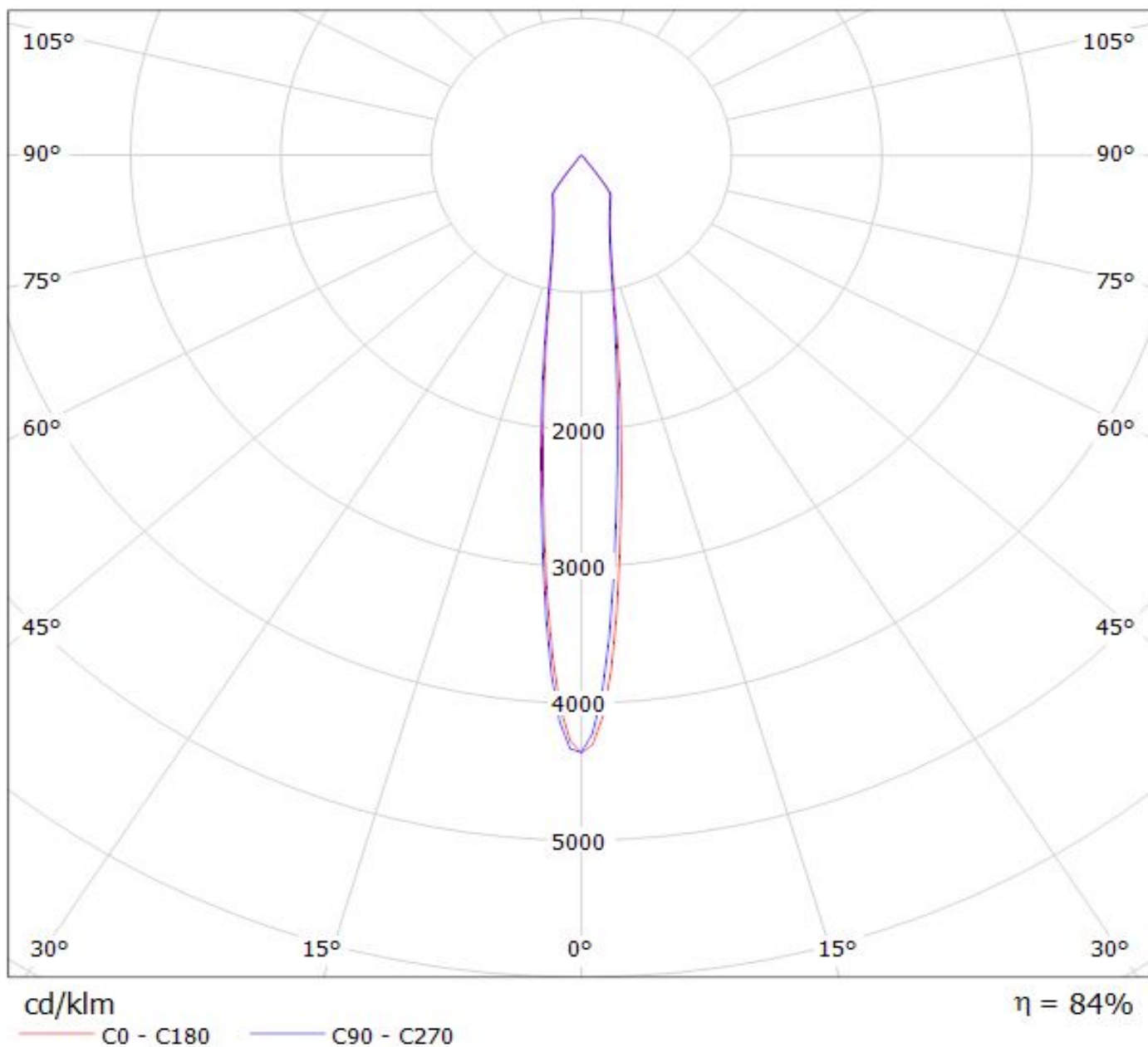
cd/klm

— C0 - C180 — C90 - C270

$\eta = 83\%$



Luminaire: LEDiL Oy FCN13706\_ANGELA-M\_(SLE-G5\_LES-11)  
Lamps: 1 x Tridonic\_SLE-G5\_LES-11\_1137.55lm@250mA\_P=8.4177W\_I=0.250A



**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.**

### **GENERAL INFORMATION**

- Product series especially designed & optimized for series of LEDs.
- Special care taken to make light distribution as uniform as possible.

Note! Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.