

DETAILS

Product Number	C13155_EMERALD-A
Family	EMERALD
Type	Lens
Color	clear
Diameter	21,6 mm
Height	6,9 mm
Style	round
Optic Material	PMMA
Holder Material	
Fastening	pin, glue
Status	production ready
ROHS Compliant	Yes
Date Updated	13/10/2015



OPTICAL PROPERTIES

LED	Viewing	Light	Efficiency	cd/lm	Connector
	Angle	Beam			
XP-E	158+73 deg	Oval	93 %	2.300	-
XB-D	157+62 deg	Oval	90 %	2.000	-
XM-L	157+83 deg	Oval	94 %	1.100	-
XP-G	159+79 deg	Oval	89 %	1.600	-
XP-G2	158+79 deg	Oval	94 %	1.800	-
XT-E	157+61 deg	Oval	89 %	1.800	-
XP-E2	156+72 deg	Oval	93 %	2.500	-
XM-L2	169+73 deg	Oval	94 %	1.100	-
XP-L HI	sim: 159	Oval	sim: 89 %	sim: 1.300	-
XHP35 HD	sim: 164+68	Oval	sim: 91 %	sim: 0.770	-
H35C0 (LEMWA33)	159+72 deg	Oval	91 %	1.400	-
H35B0 (LEMWA32)	160+66 deg	Oval	94 %	1.700	-
LUXEON A	156+75 deg	Oval	92 %	1.600	-
LUXEON Rebel	152+67 deg	Oval	92 %	2.500	-
LUXEON R	153+73 deg	Oval	92 %	1.650	-
LUXEON Rebel ES	153+74 deg	Oval	90 %	1.700	-
LUXEON T	155+76 deg	Oval	93 %	2.300	-
LUXEON TX	156+73 deg	Oval	94 %	1.690	-
NCSxx19A	151+65 deg	Oval	92 %	2.200	-
NVSxx19A	153+71 deg	Oval	91 %	1.700	-
NVSxx19B/NVSxx19C	155+80 deg	Oval	92 %	1.400	-
Oslon Square PC	156+83 deg	Oval	93 %	1.700	-
Oslon Square EC	156+80 deg	Oval	93 %	1.700	-
Oslon SSL 80	147+52 deg	Oval	89 %	1.900	-
Oslon SSL 150	157+86 deg	Oval	92 %	2.900	-



PRODUCT DATASHEET
EMERALD series
last update 13/10/2015

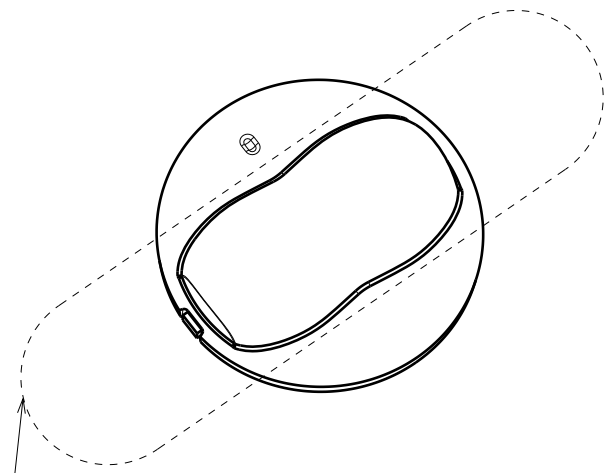
OPTICAL PROPERTIES

LED	Viewing Angle	Light Beam	Efficiency	cd/lm	Connector
LH351Z	154+76 deg	Oval	94 %	1.700	-
Z5	TBA deg	Oval	sim: 89 %	-	-

INDEX	PART NO	DESCRIPTION	MATERIAL
1	C13155	EMERALD-A	PMMA

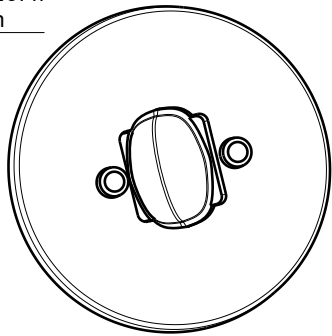
4

Isometric view
Scale: 2:1

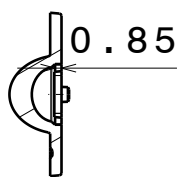


3

Beam pattern direction

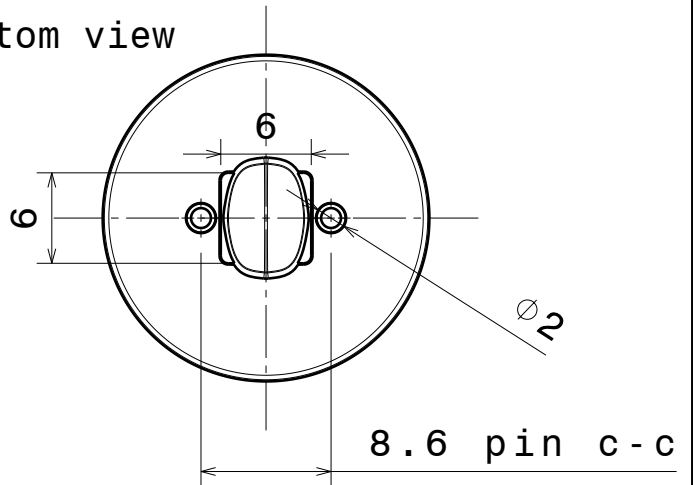


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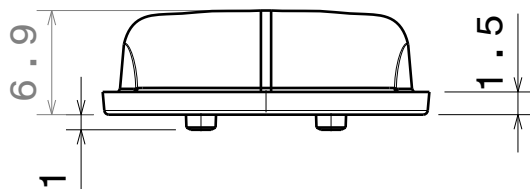


Section view A-A
Scale: 1:1

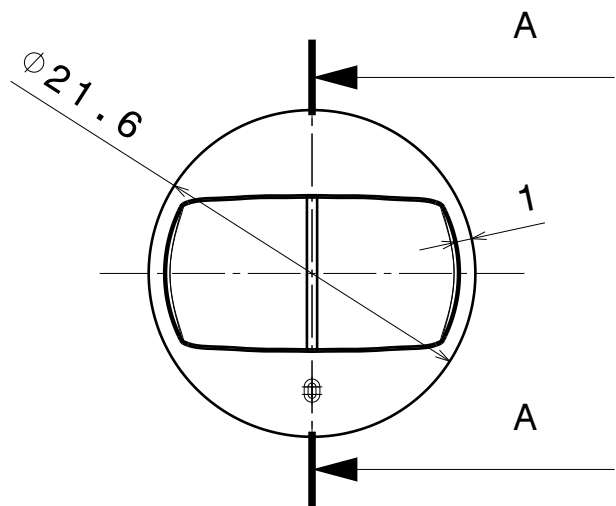
Bottom view



Front view



Top view



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LEDiL Ledil Oy
Salorankatu 10
FIN 24240 SALO
Finland

DATASHEET TITLE Mechanical Drawing

DRAWN BY
ol
DATE
3.10.2012

C13155 EMERALD-A

CHECKED BY
as
DATE
3.10.2012

SIZE A4	PART NUMBER C13155	REV 001
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DESIGNED BY
ol
DATE
3.10.2012

SCALE 2:1	WEIGHT	SHEET 1/1
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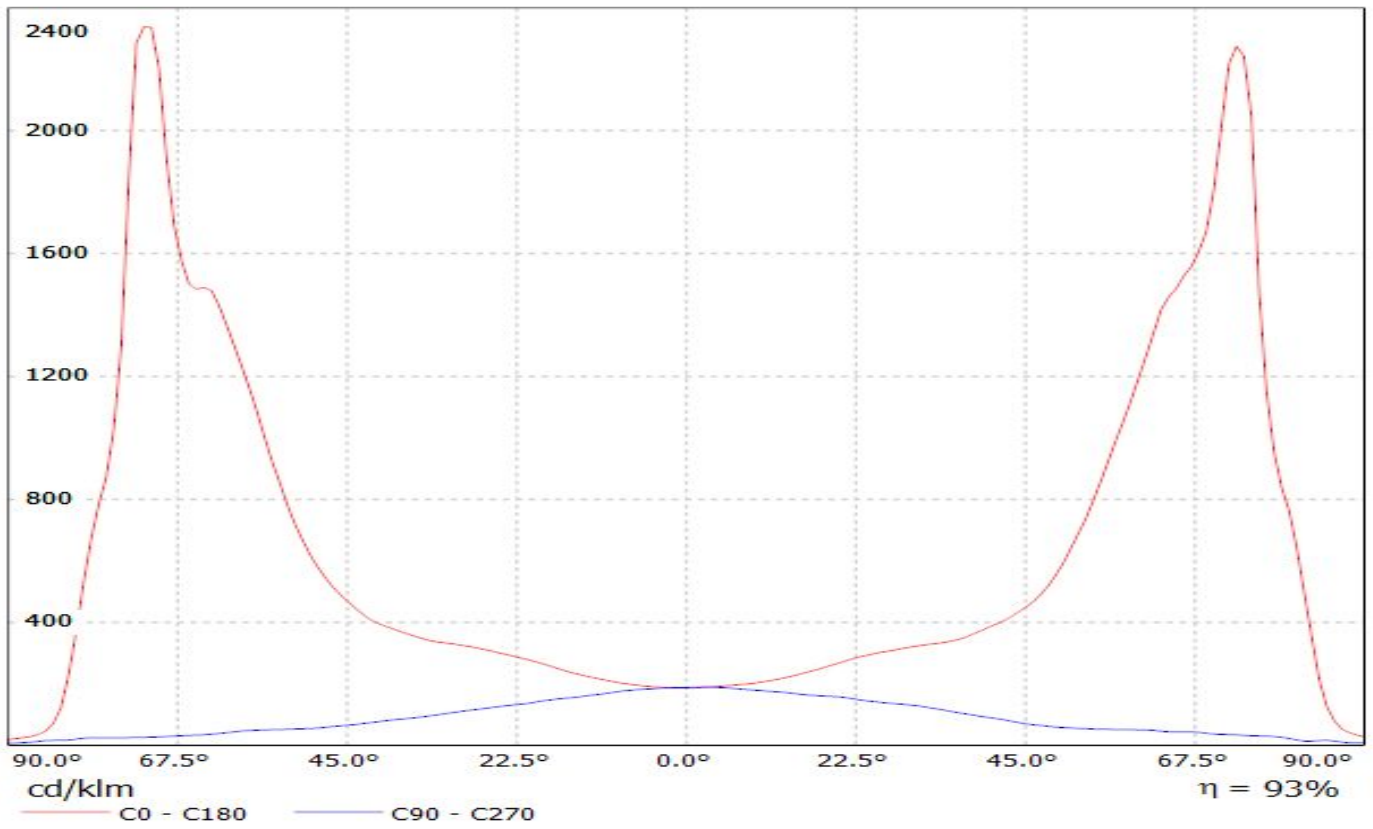
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D

A

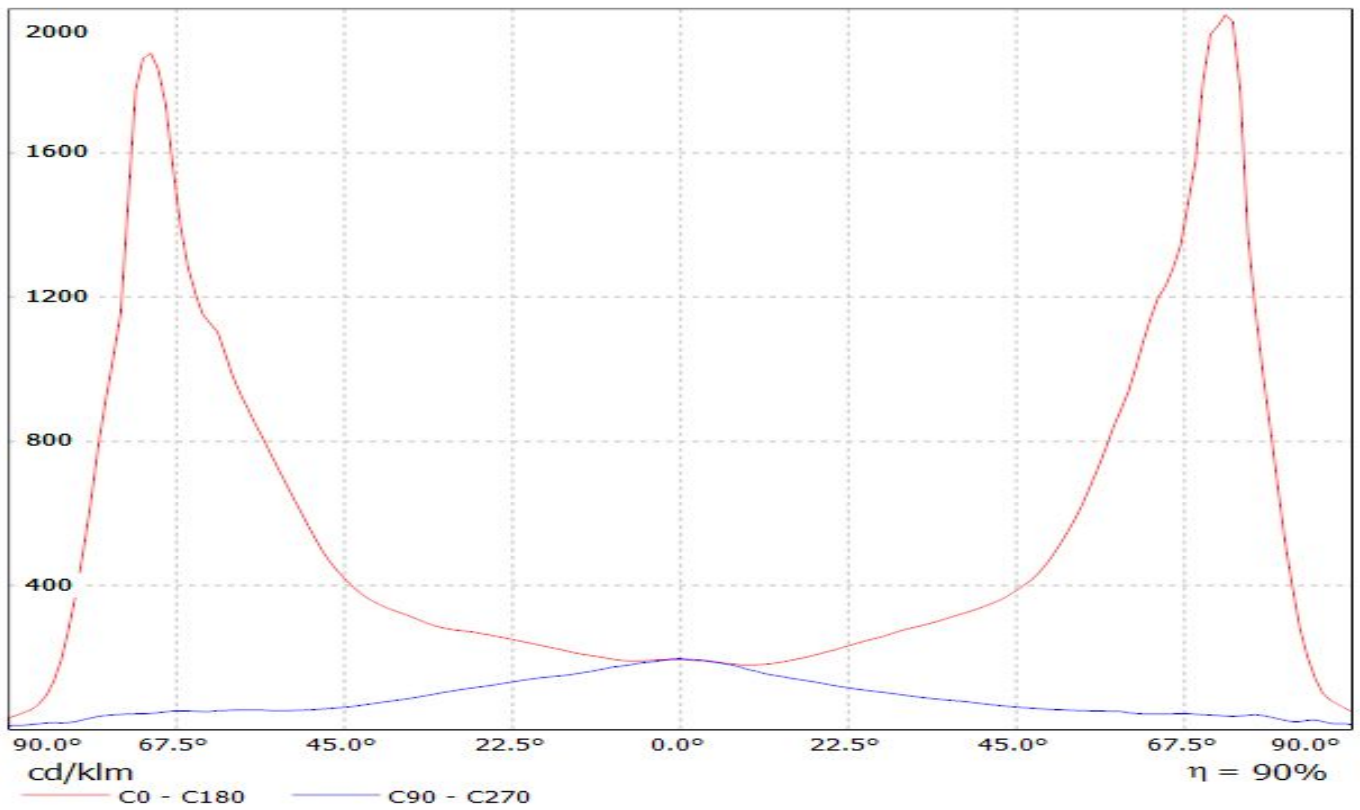
LEDiL Oy C13155_EMERALD-A_(XP-E) Eff.93.3% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-E) Eff.93.3%
Lamps: 1 x CREE XP-E (51.4197lm@250mA)



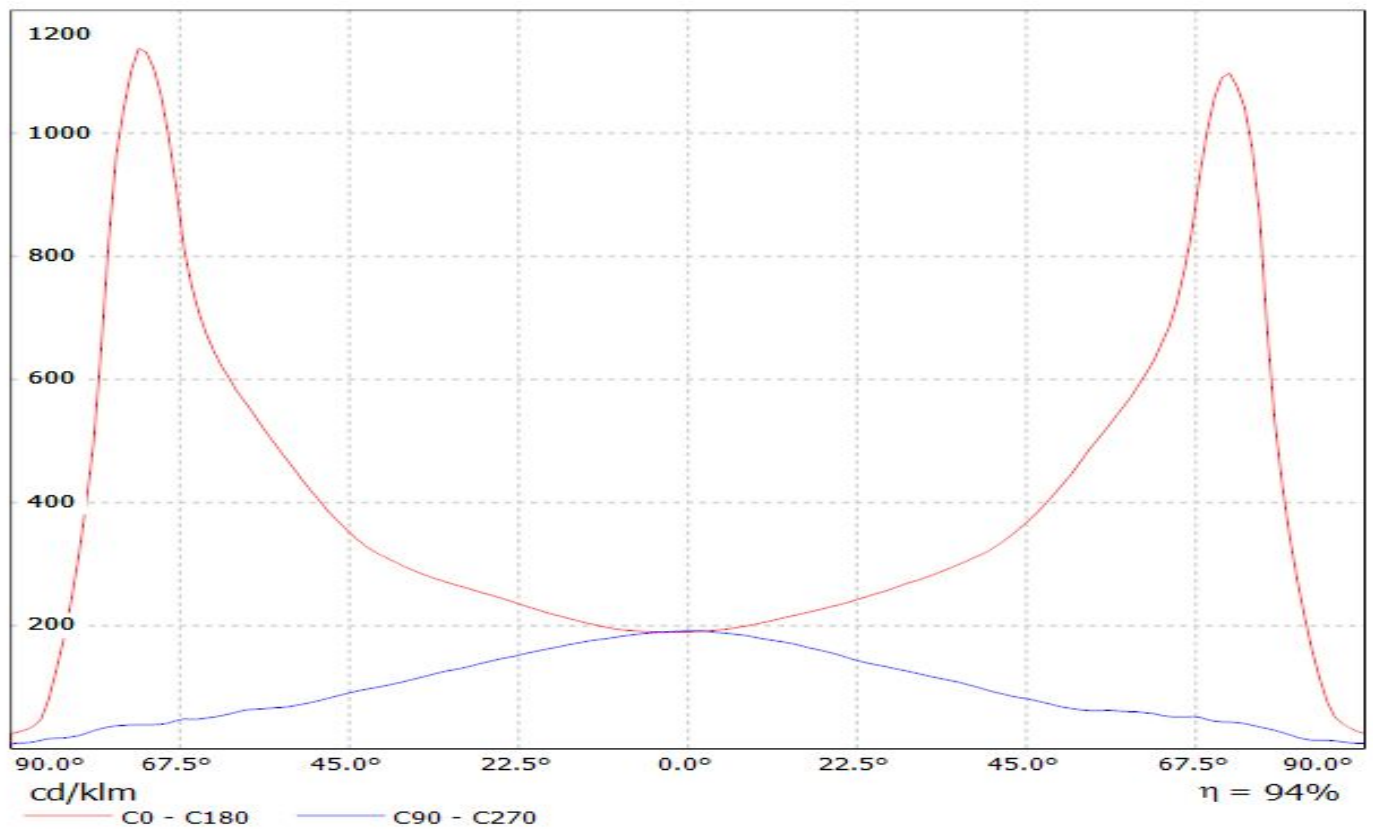
LEDiL Oy C13155_EMERALD-A_(XB-D) / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XB-D)
Lamps: 1 x Cree XB-D (95lm@250mA)



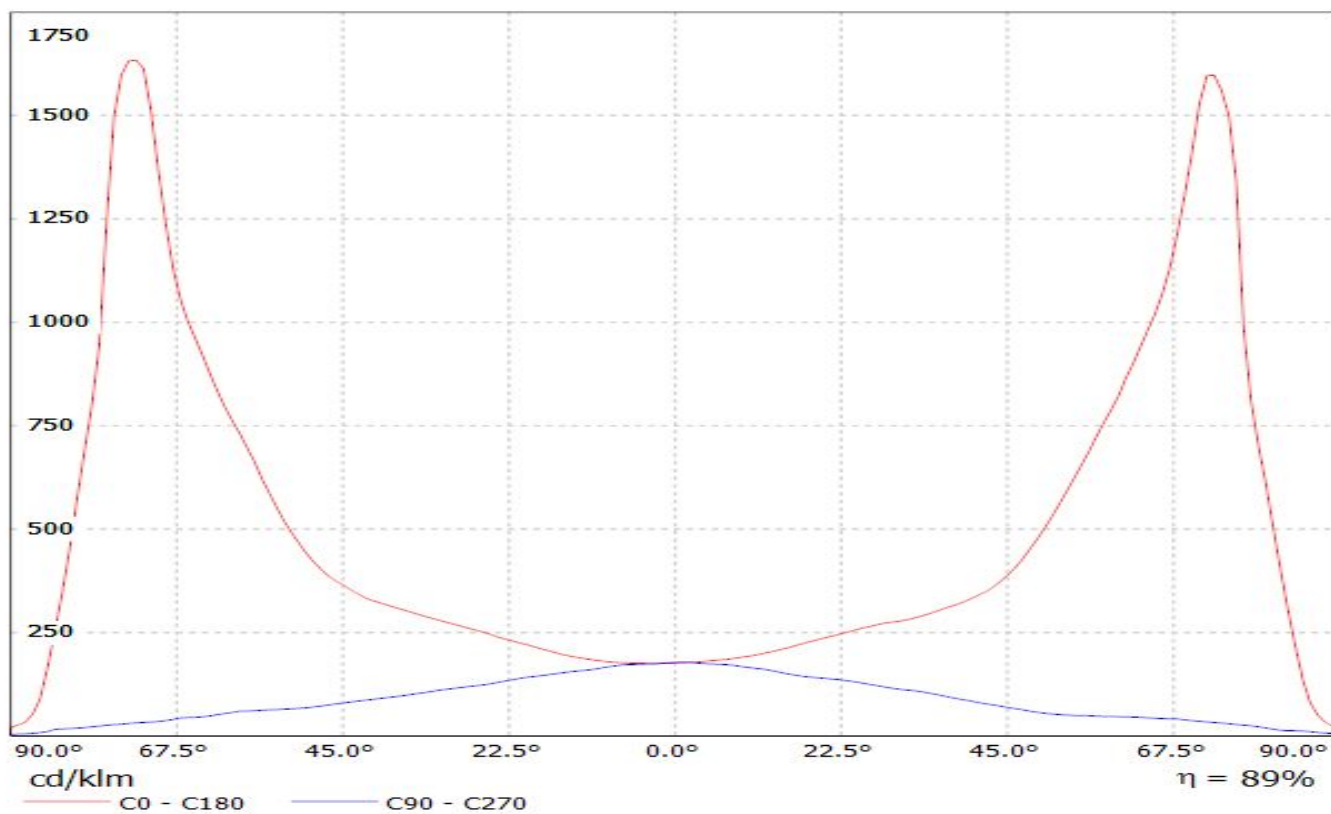
LEDiL Oy C13155_EMERALD-A_(XM-L) Eff.94.5% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XM-L) Eff.94.5%
Lamps: 1 x Cree XM-L (91.7822lm@250mA)



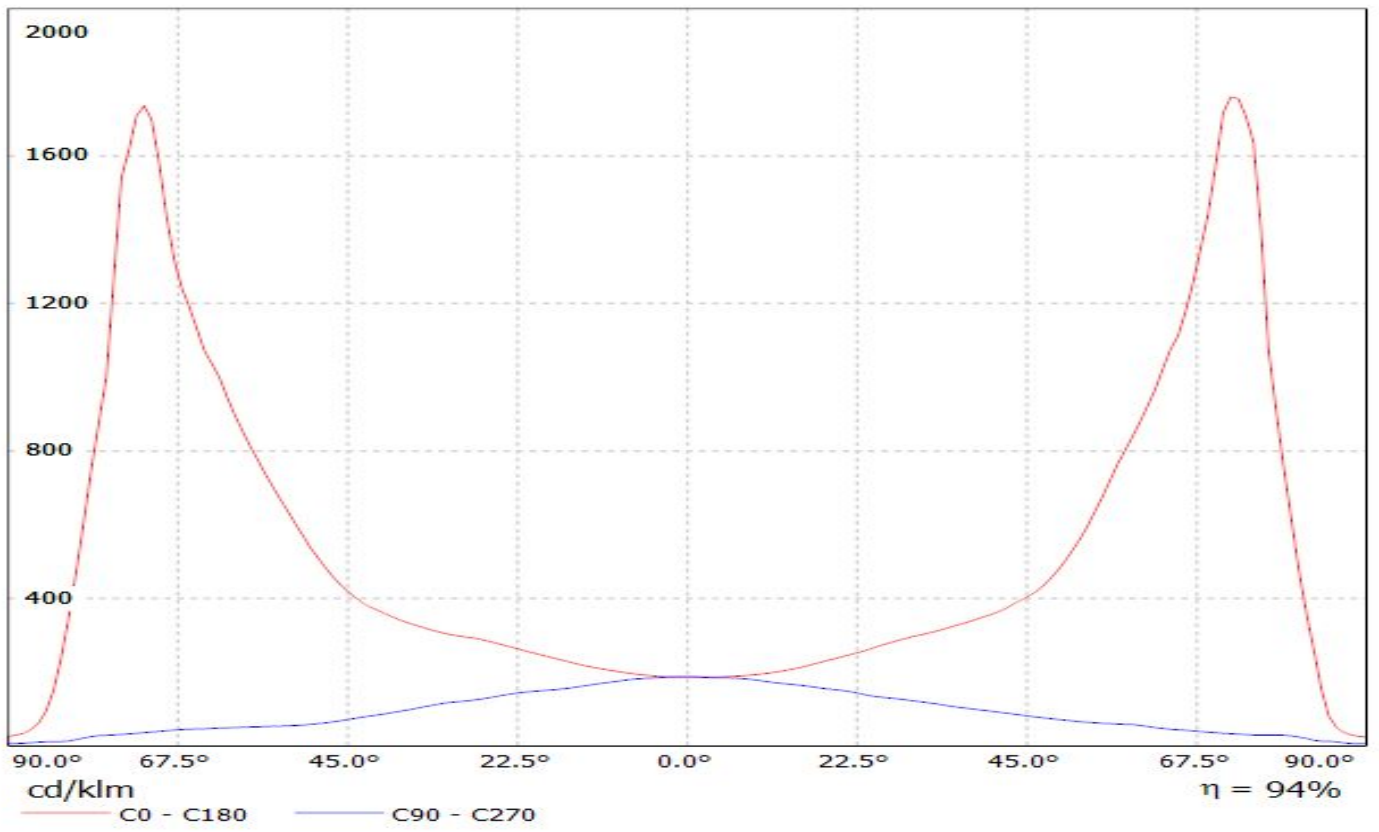
LEDiL Oy C13155_EMERALD-A_(XP-G) Eff.89.2% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-G) Eff.89.2%
Lamps: 1 x XP-G (70.6lm@250mA)



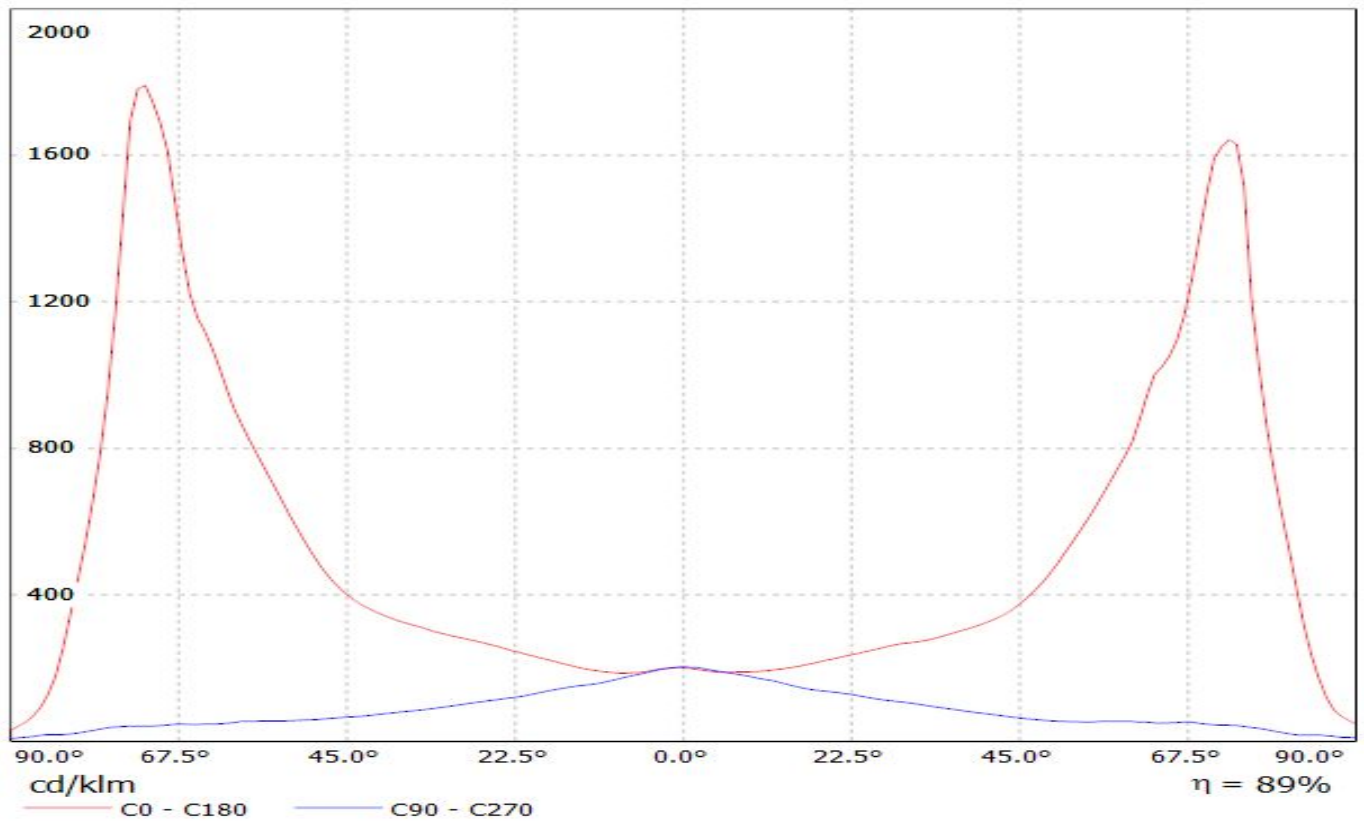
LEDiL Oy C13155_EMERALD-A_(XP-G2) Eff.94.3% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-G2) Eff.94.3%
Lamps: 1 x CREE XP-G2 (51.4197lm@250mA)



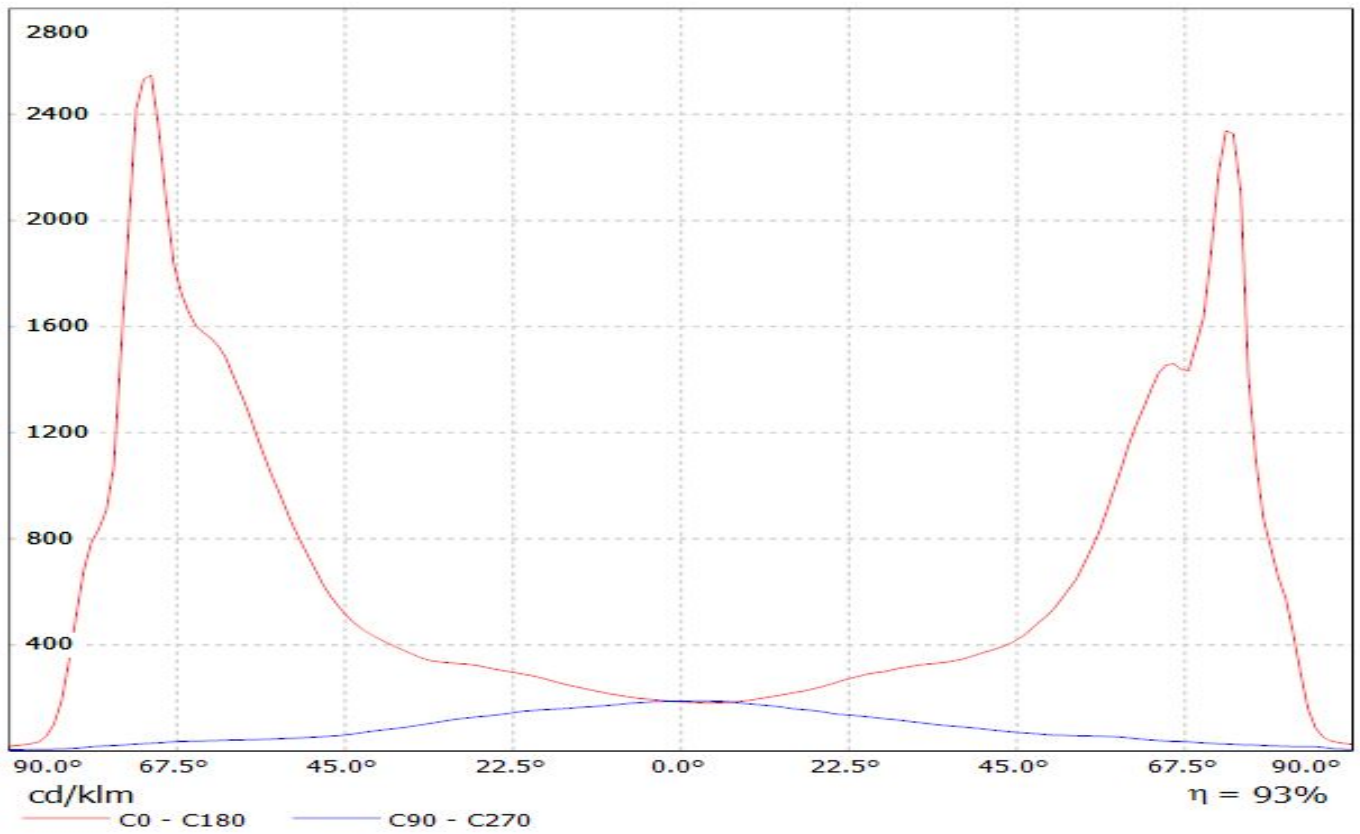
LEDiL Oy C13155_EMERALD-A_(XB-D) Eff.89.2% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XB-D) Eff.89.2%
Lamps: 1 x Cree XT-E (102.3lm@250mA)

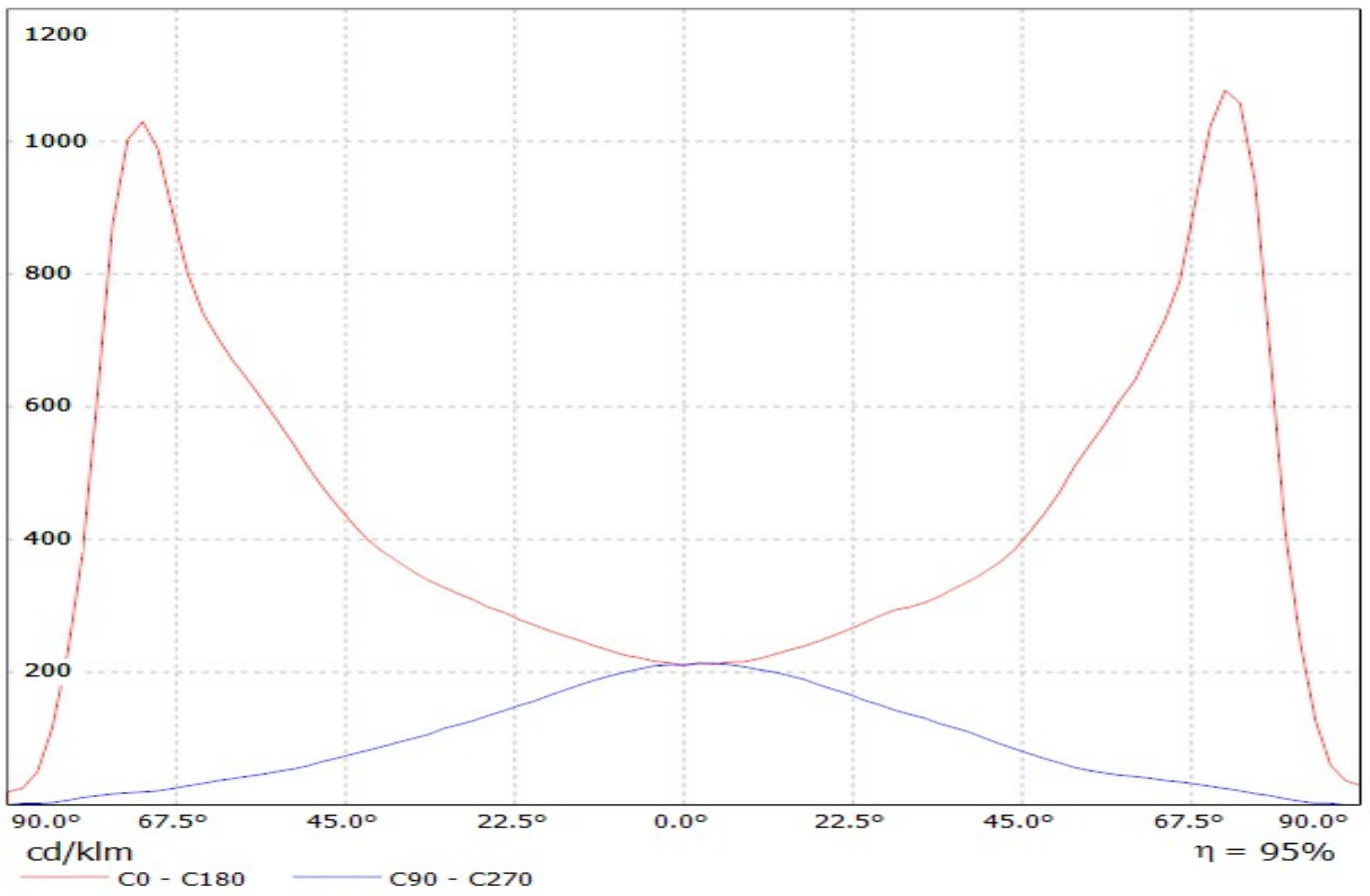


LEDiL Oy C13155_EMERALD-A_(XP-E2) Eff.92.5% / LDC (Linear)

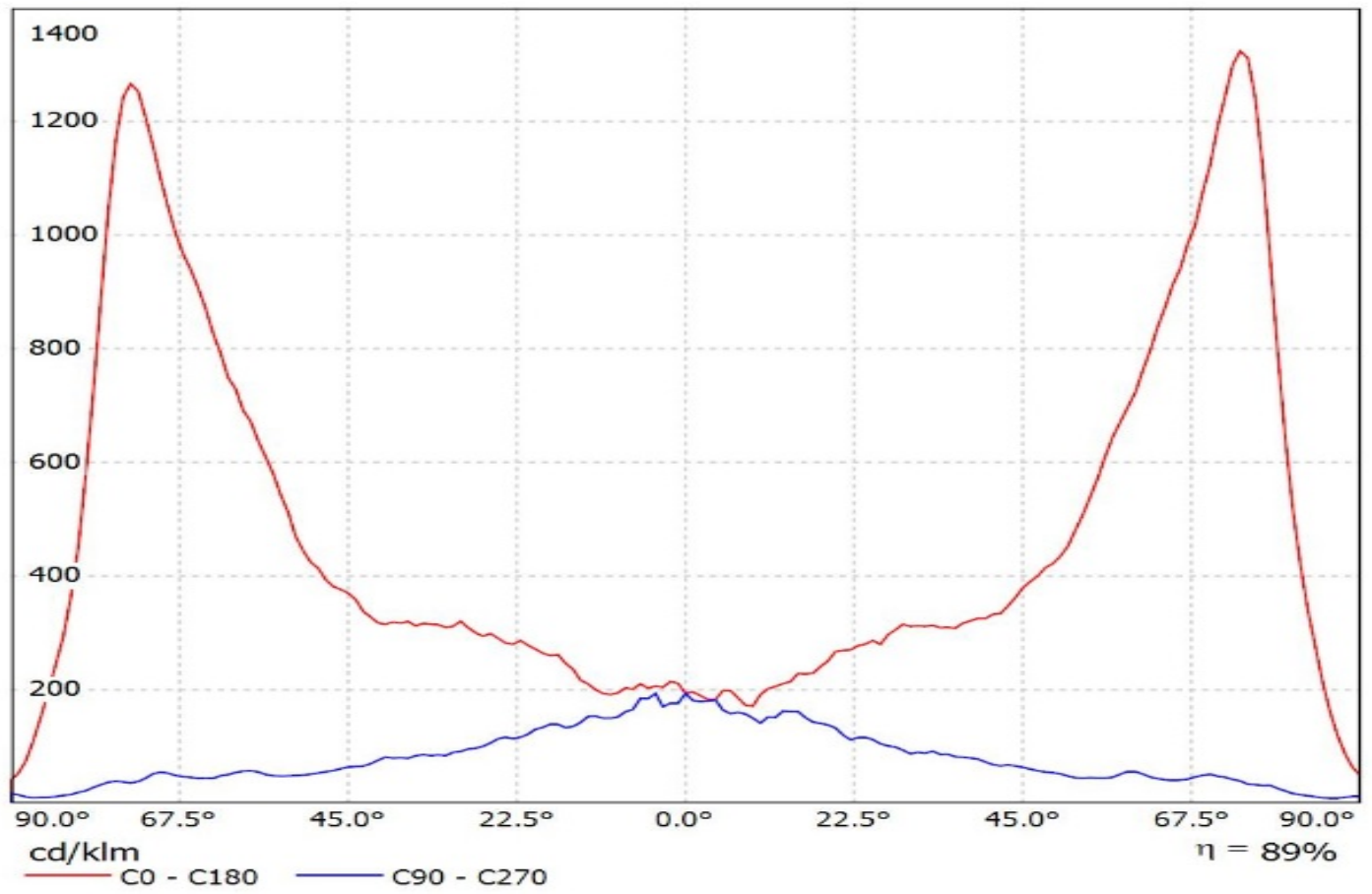
Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-E2) Eff.92.5%
Lamps: 1 x CREE XP-E2 (93.5lm@250mA)



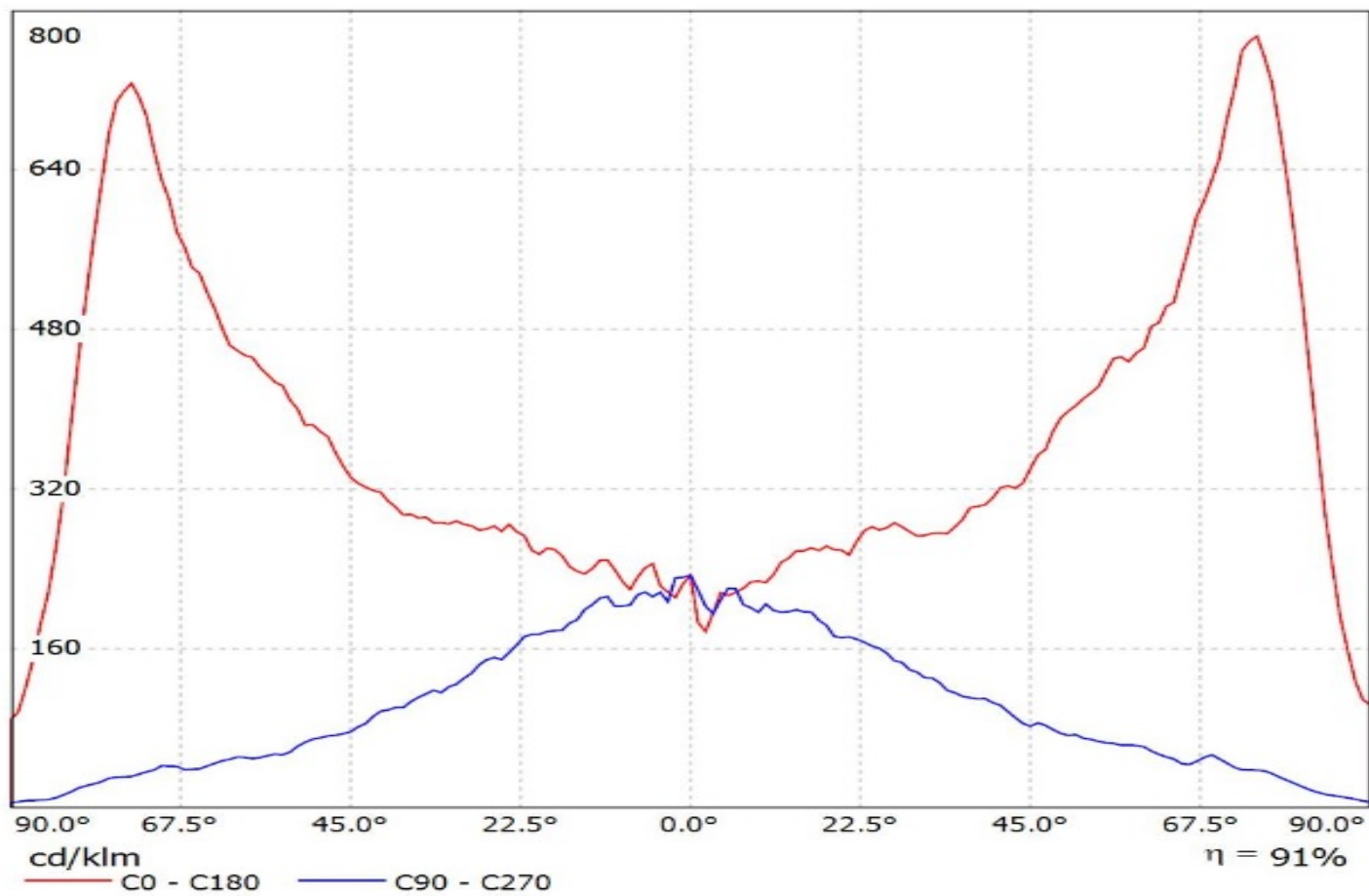
Luminaire: LEDil Oy C13155_EMERALD-A_(XM-L2) Efficiency=94%
Lamps: 1 x Cree XM-L2 (XMLBWT-0-7B4-T30-0L-0001) 91lm @ 250mA CCT=3200K P=0.7W I=250mA



Luminaire: Ledil Oy C13155_EMERALD-A_(XP-L_HI)_SIMULATED
Lamps: 1 x Cree XP-L HI

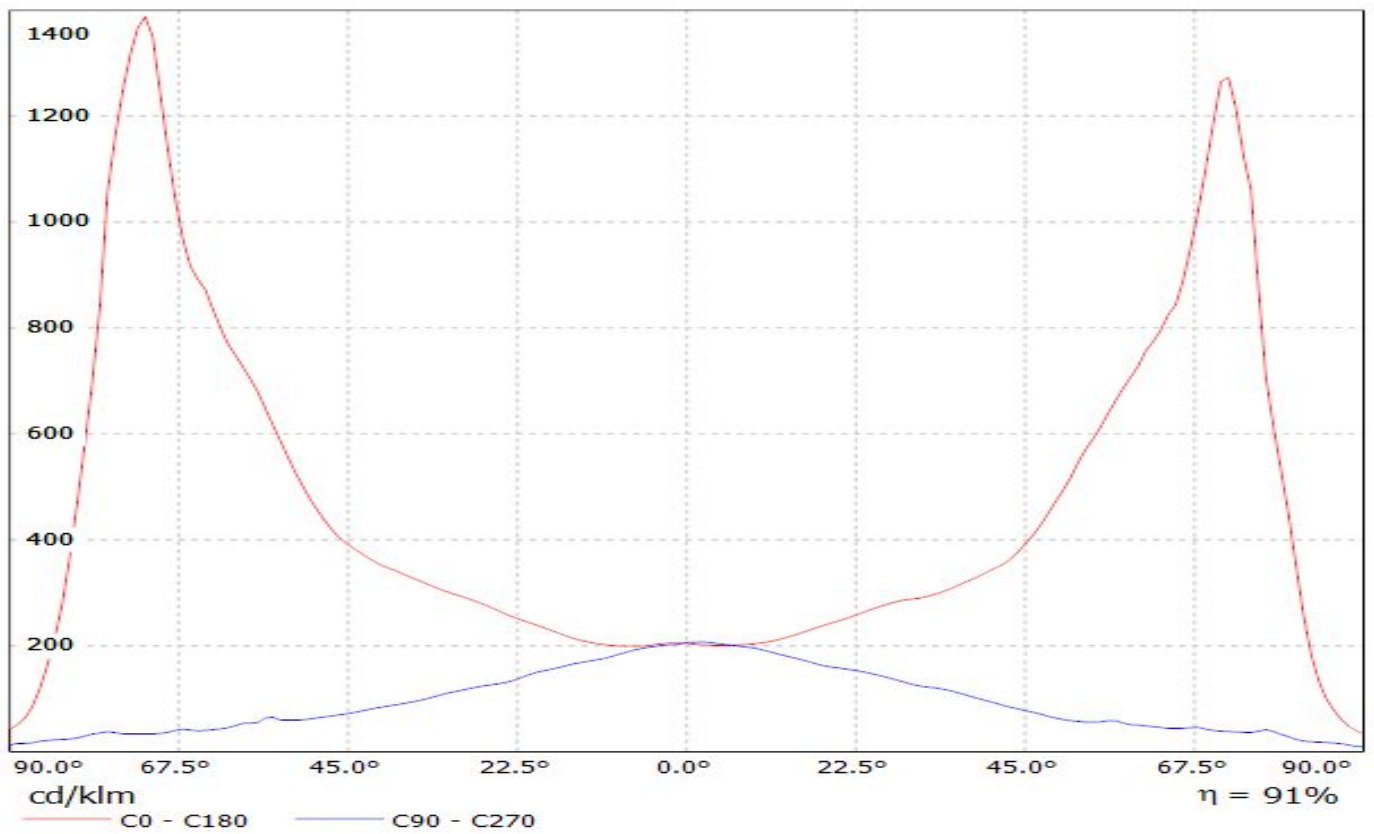


Luminaire: Ledil Oy C13155_EMERALD-A_(XHP35_HD)_SIMULATED
Lamps: 1 x Cree XHP35 HD



LEDiL Oy C13155_EMERALD-A_(LG3535) Eff.90.8% / LDC (Linear)

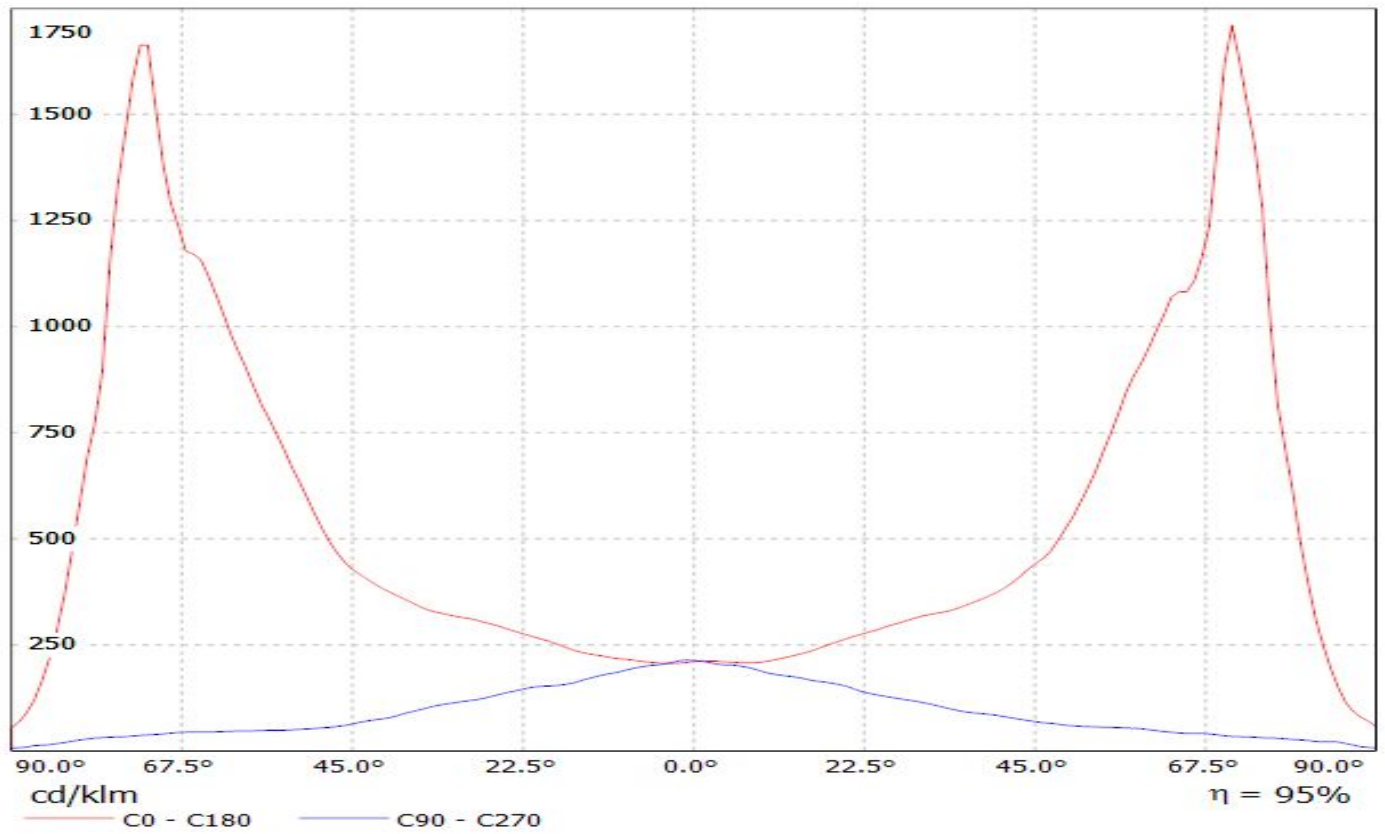
Luminaire: LEDiL Oy C13155_EMERALD-A_(LG3535) Eff.90.8%
Lamps: 1 x LG 3535 Ceramic (94lm@250mA)



LEDiL Oy C13155_EMERALD-A_(LG3535_2W) Eff.95.1% / LDC (Linear)

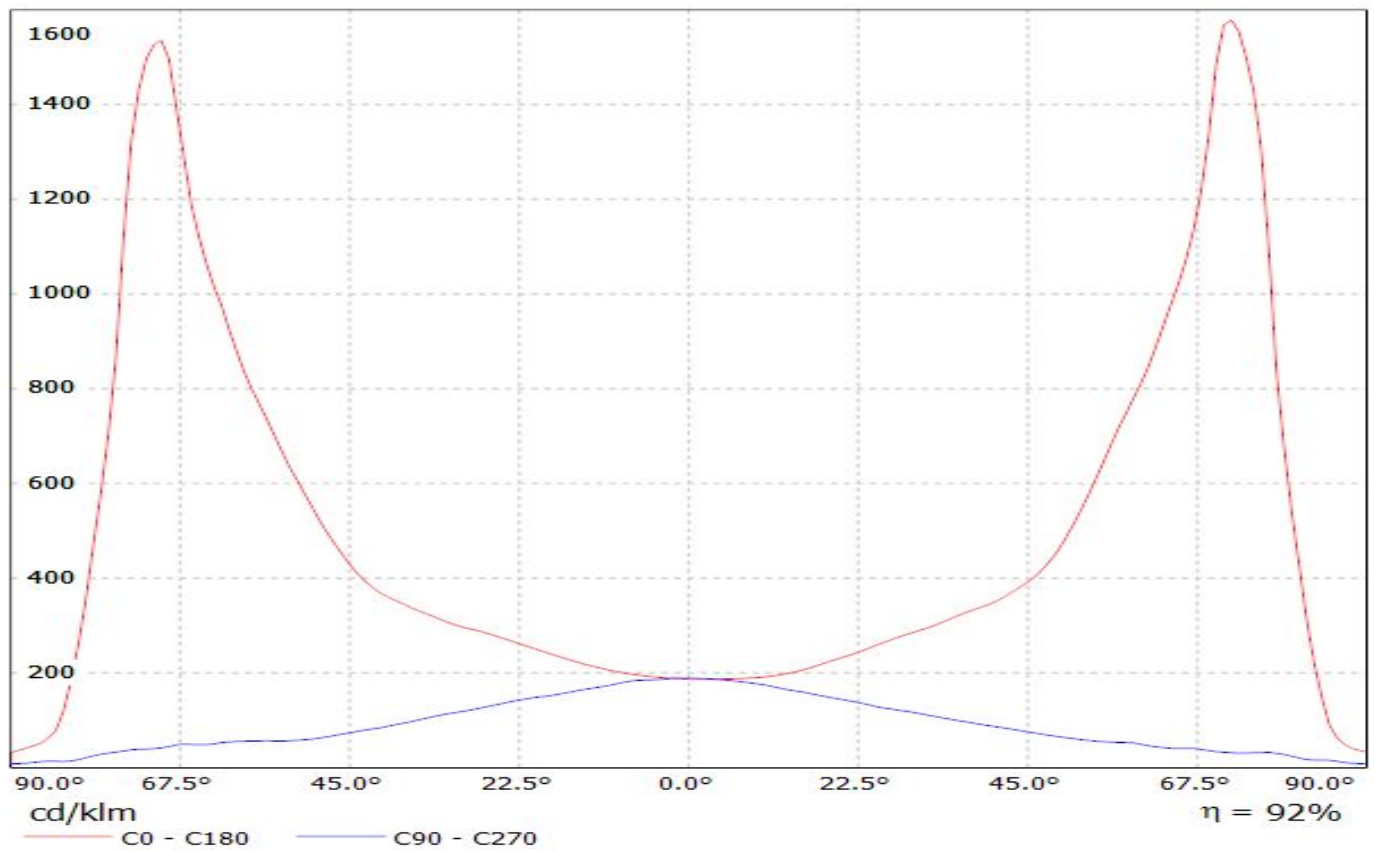
Luminaire: LEDiL Oy C13155_EMERALD-A_(LG3535_2W) Eff.95.1%

Lamps: 1 x LG3535_2W (97.3629lm@250mA)

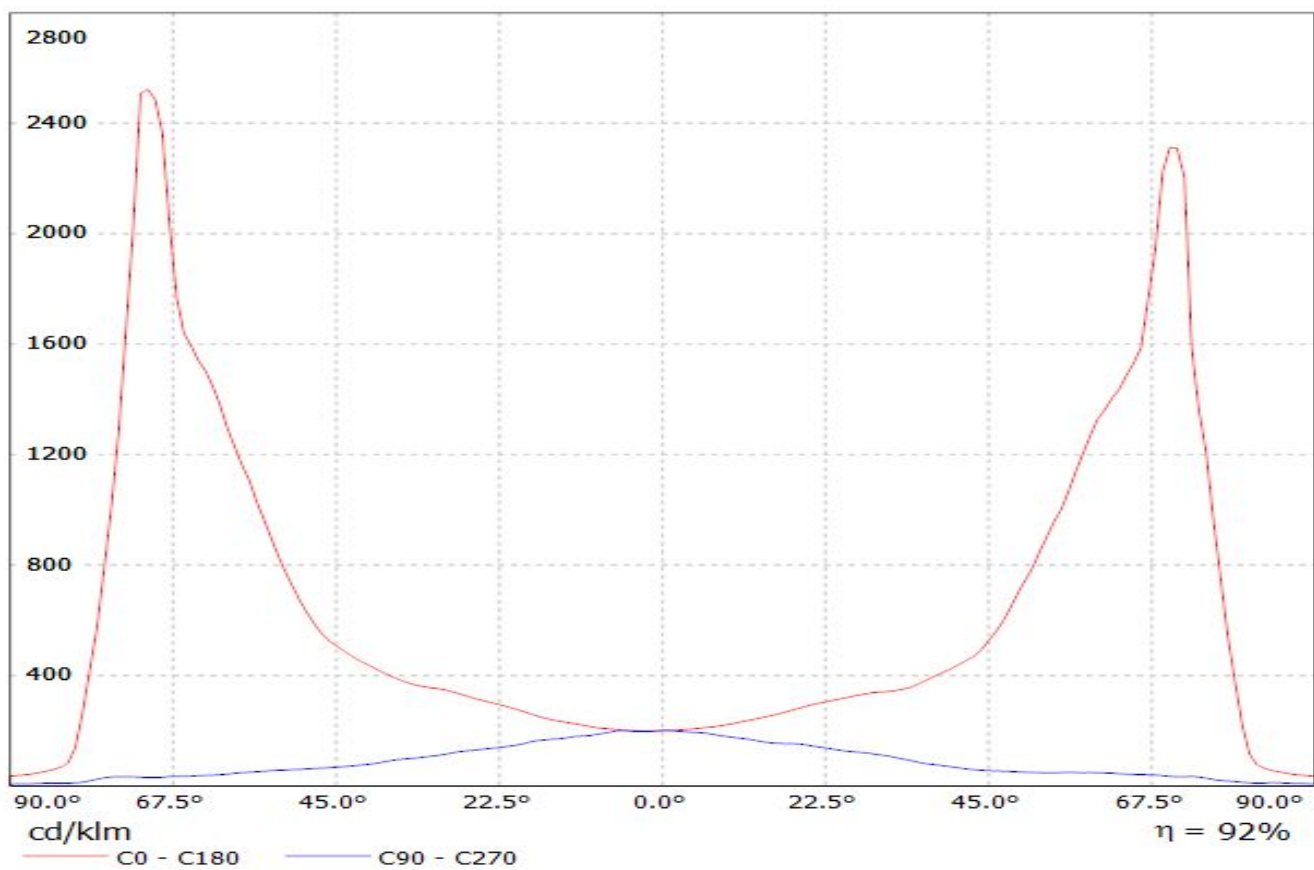


LEDiL Oy C13155_EMERALD-A_(LUXEON_A) Eff.92.0% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(LUXEON_A) Eff.92.0%
Lamps: 1 x LUXEON_R (67.5lm@250mA)

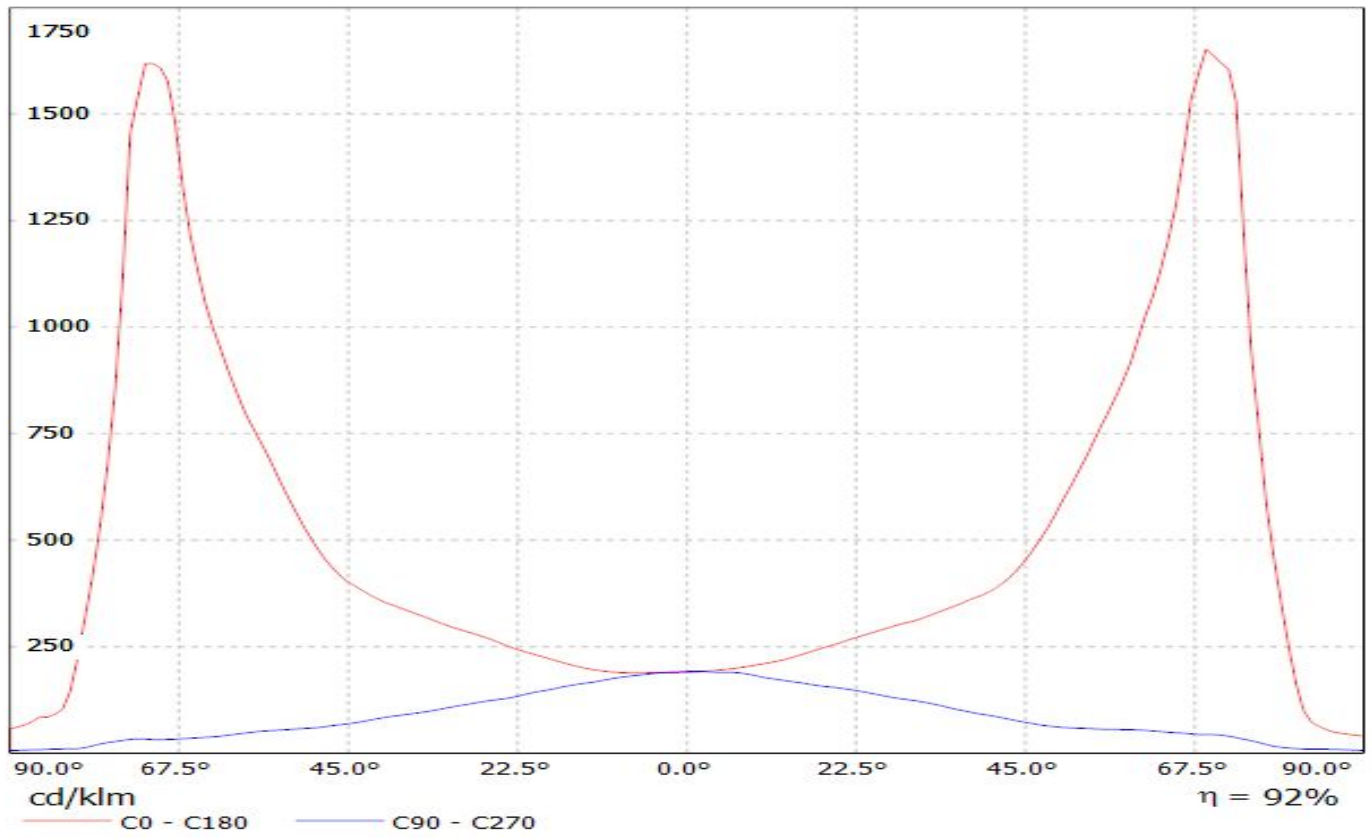


Luminaire: LEDiL Oy C13155_EMERALD-A_(Rebel) Eff. 91,7%
Lamps: 1 x Luxeon Rebel (82lm@250mA)

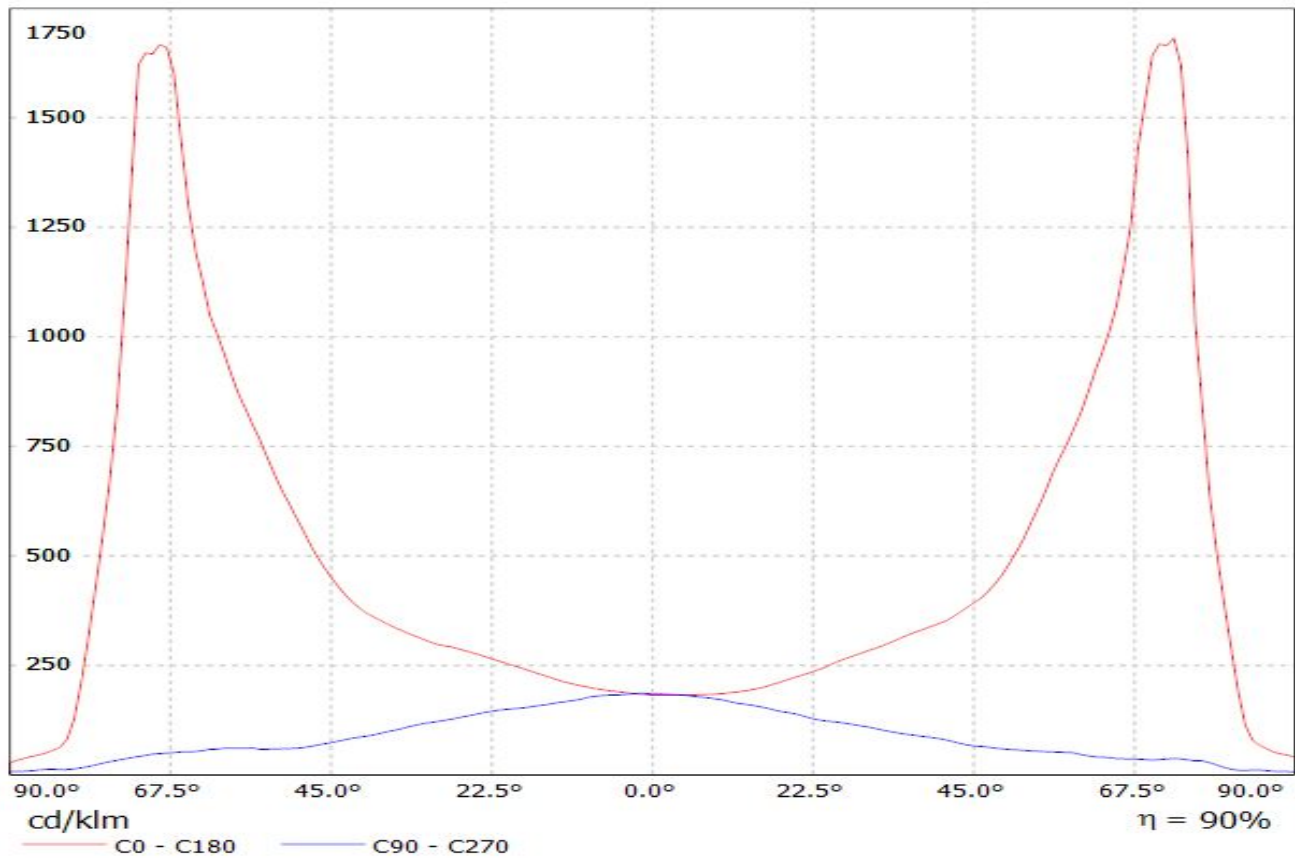


LEDiL Oy C13155_EMERALD-A_(LUXEON_R) Eff.91.7% / LDC (Linear)

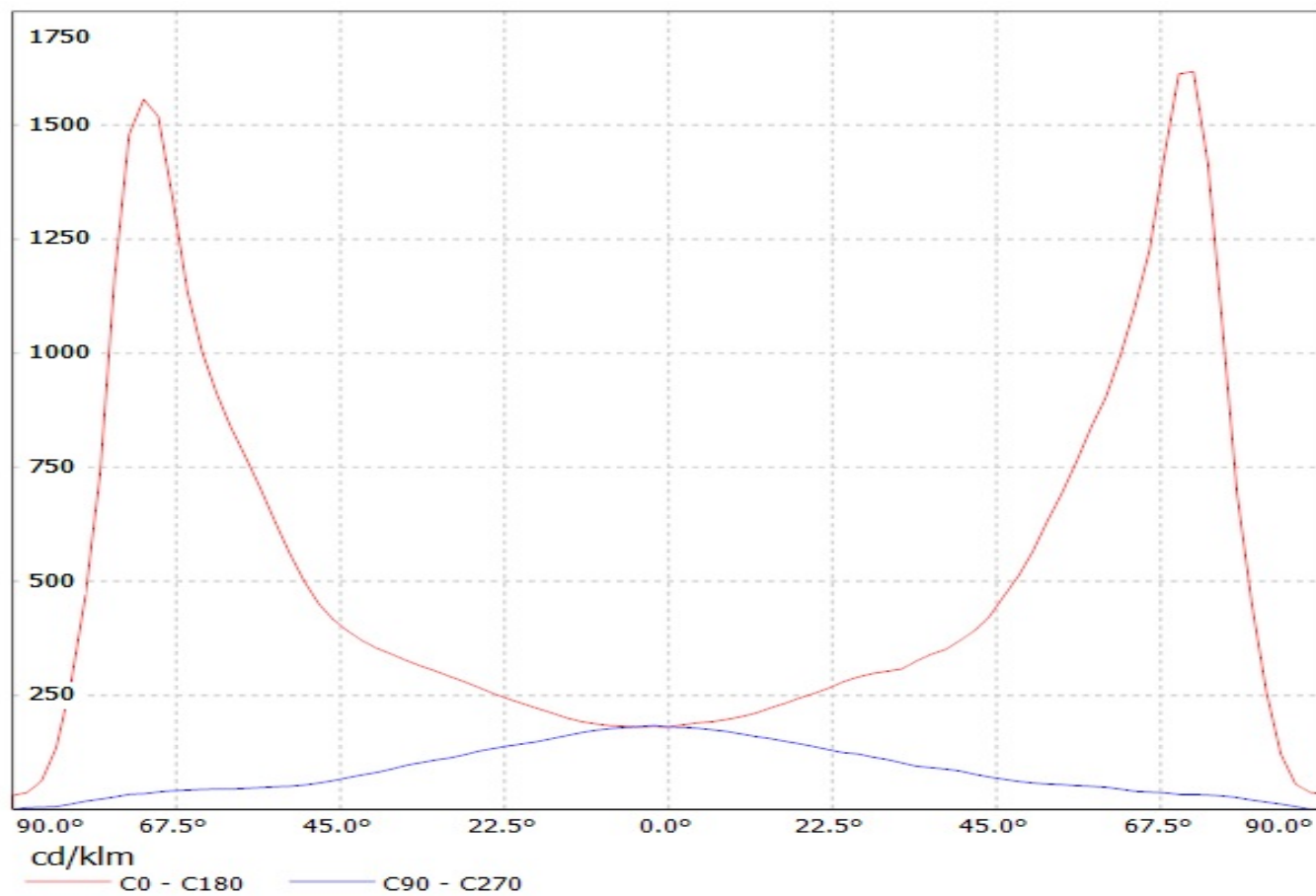
Luminaire: LEDiL Oy C13155_EMERALD-A_(LUXEON_R) Eff.91.7%
Lamps: 1 x LUXEON_R (85.6lm@250mA)



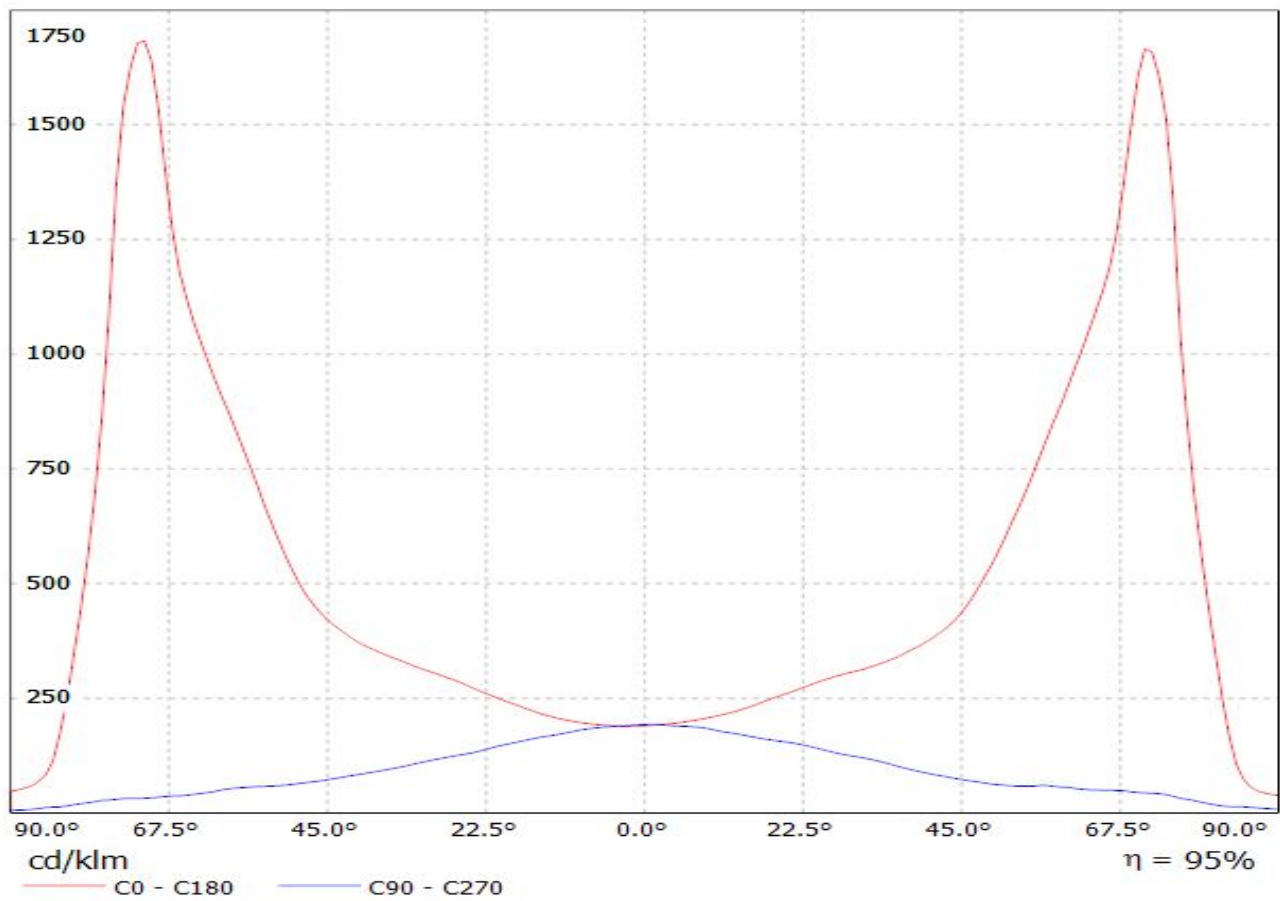
Luminaire: LEDiL Oy C13155_EMERALD-A_(Rebel-ES) Eff. 90,4%
Lamps: 1 x Luxeon Rebel-ES (90lm@250mA)



Luminaire: Ledil Oy C13155_EMERALD-A (Luxeon T 71lm @ 250mA) Efficiency=93%
Lamps: 1 x Luxeon T 71lm @ 250mA

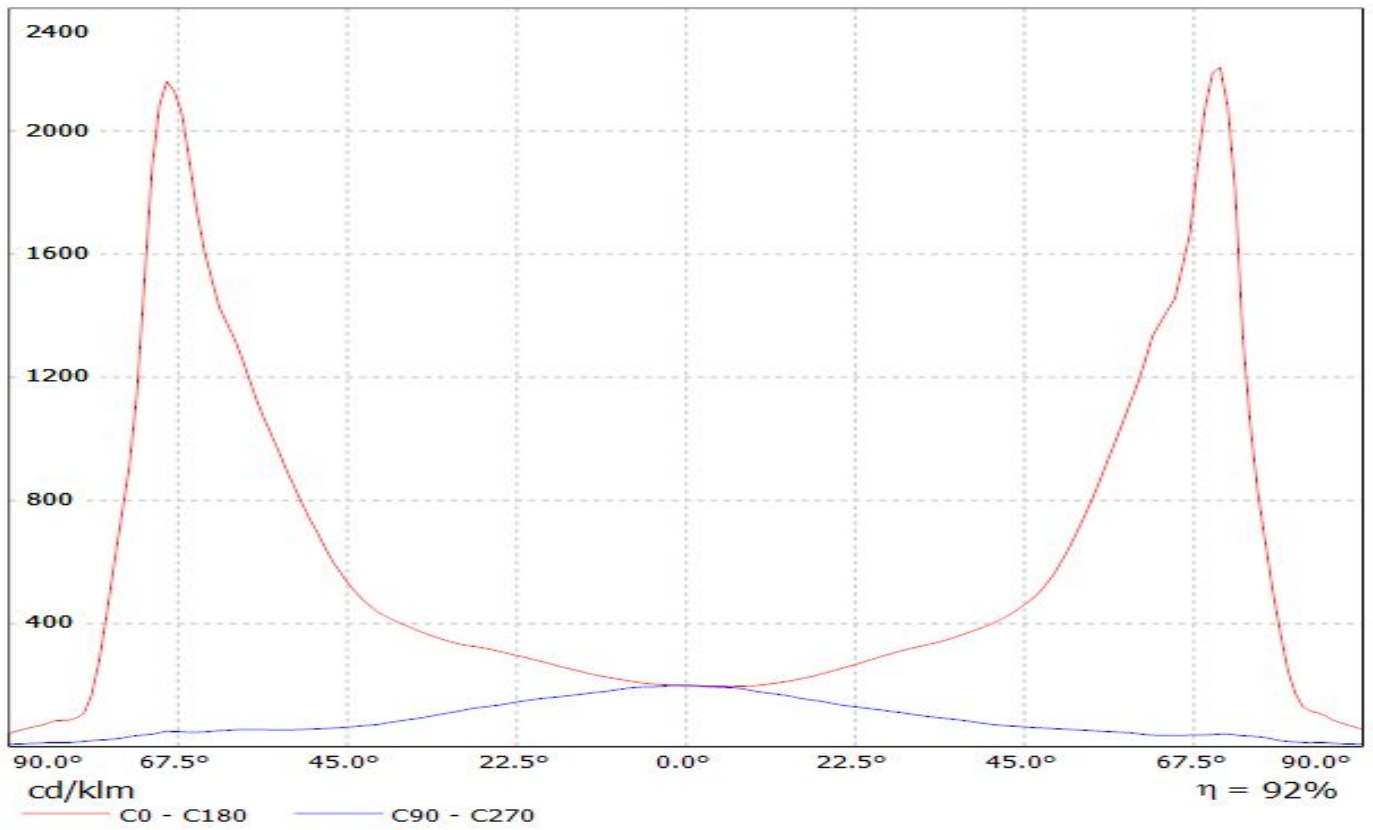


Luminaire: LEDiL Oy C13155_EMERALD-A_(Luxeon_TX) Eff.95.0%
Lamps: 1 x Luxeon_TX_(L1T2-3585)_80.1801lm@250mA_CCT=3500K_P=0.731482W_I=249.9mA



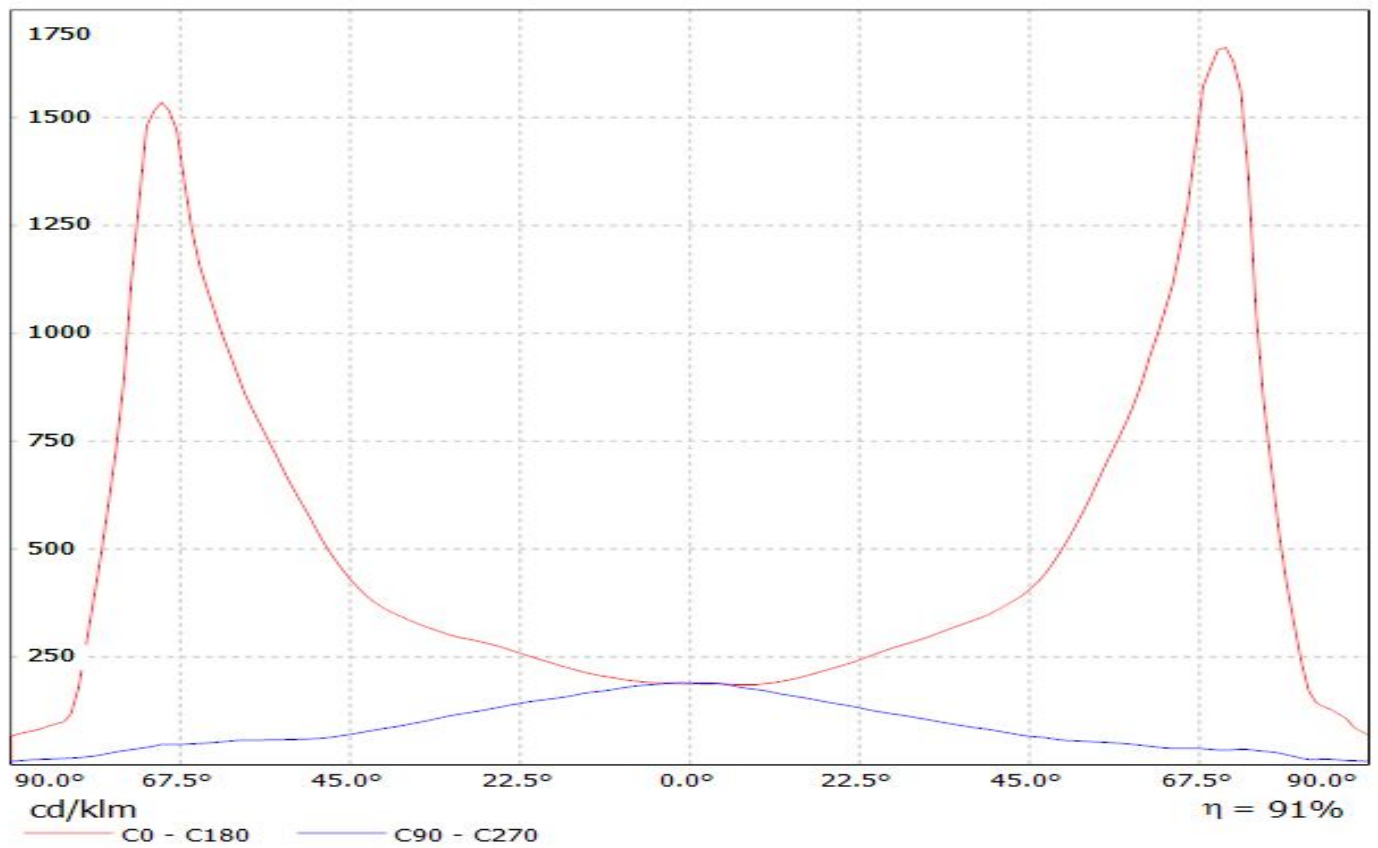
LEDiL Oy C13155_EMERALD-A_(NCS19) Eff.91.8% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(NCS19) Eff.91.8%
Lamps: 1 x NCS19 (89lm@250mA)

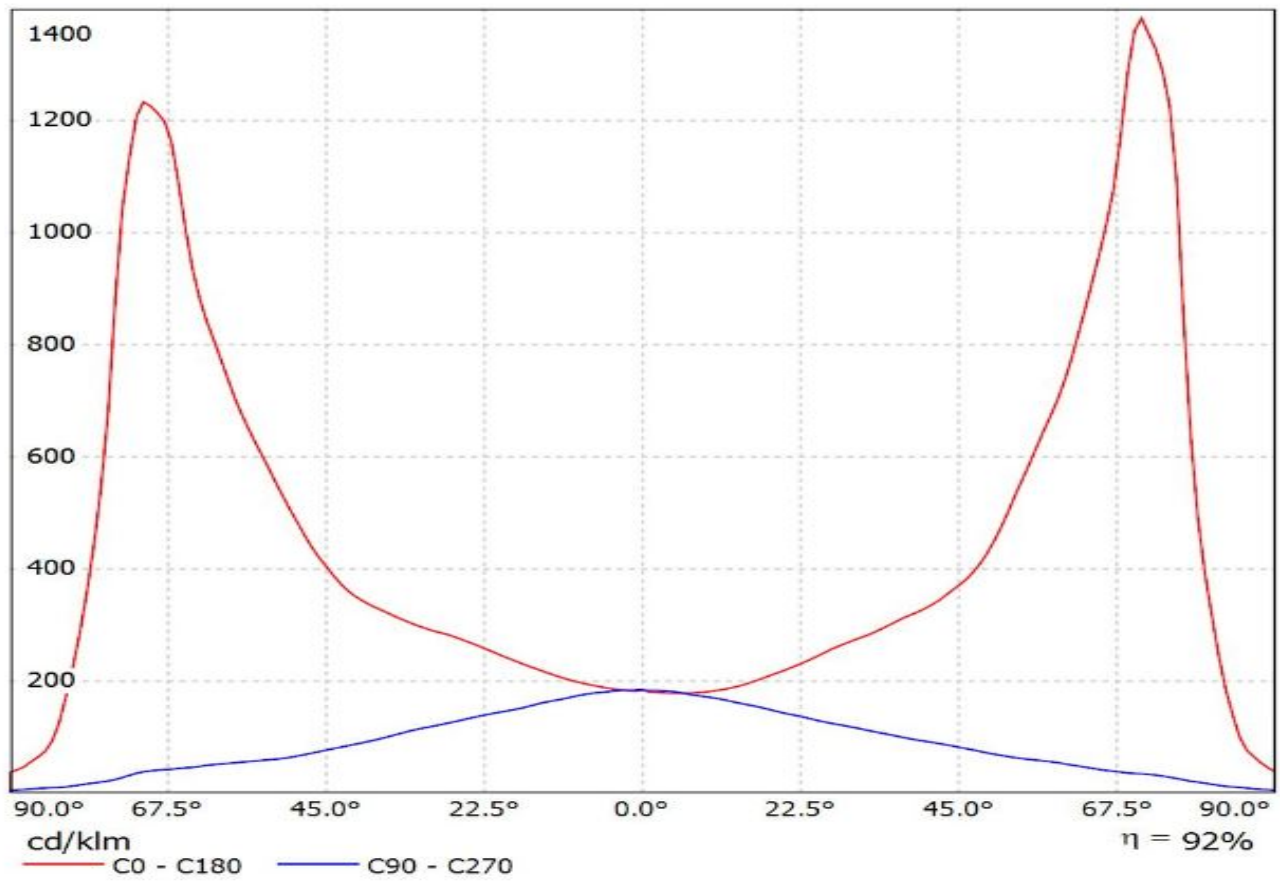


LEDiL Oy C13155_EMERALD-A_(NVS19) Eff.90.8% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(NVS19) Eff.90.8%
Lamps: 1 x NVS19 (98.3lm@250mA)

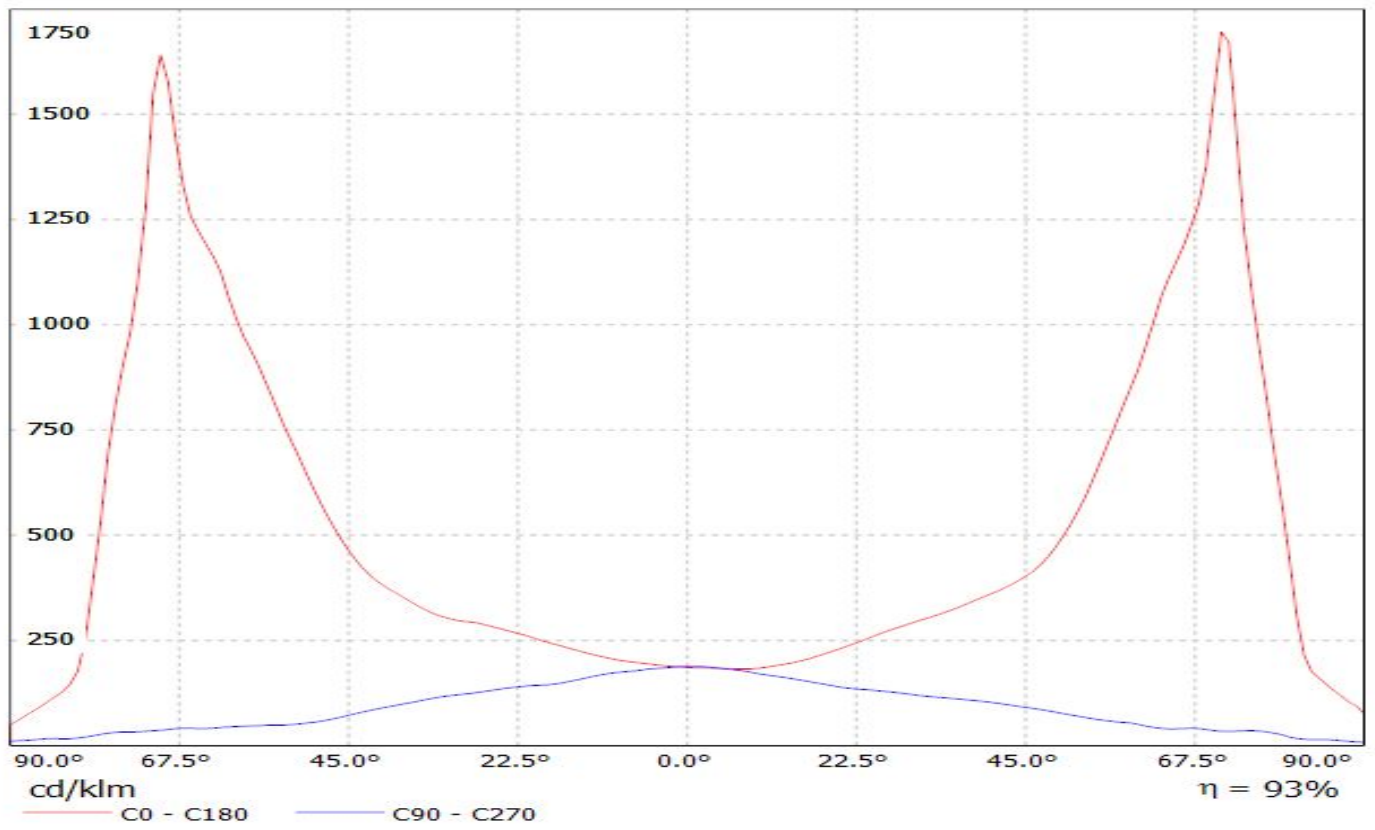


Luminaire: LEDiL Oy C13155_EMERALD-A_(NVSL219CE)
Lamps: 1 x Nichia_NVSL219CE_101.227lm@250mA_P=0.713404W_I=0.25A



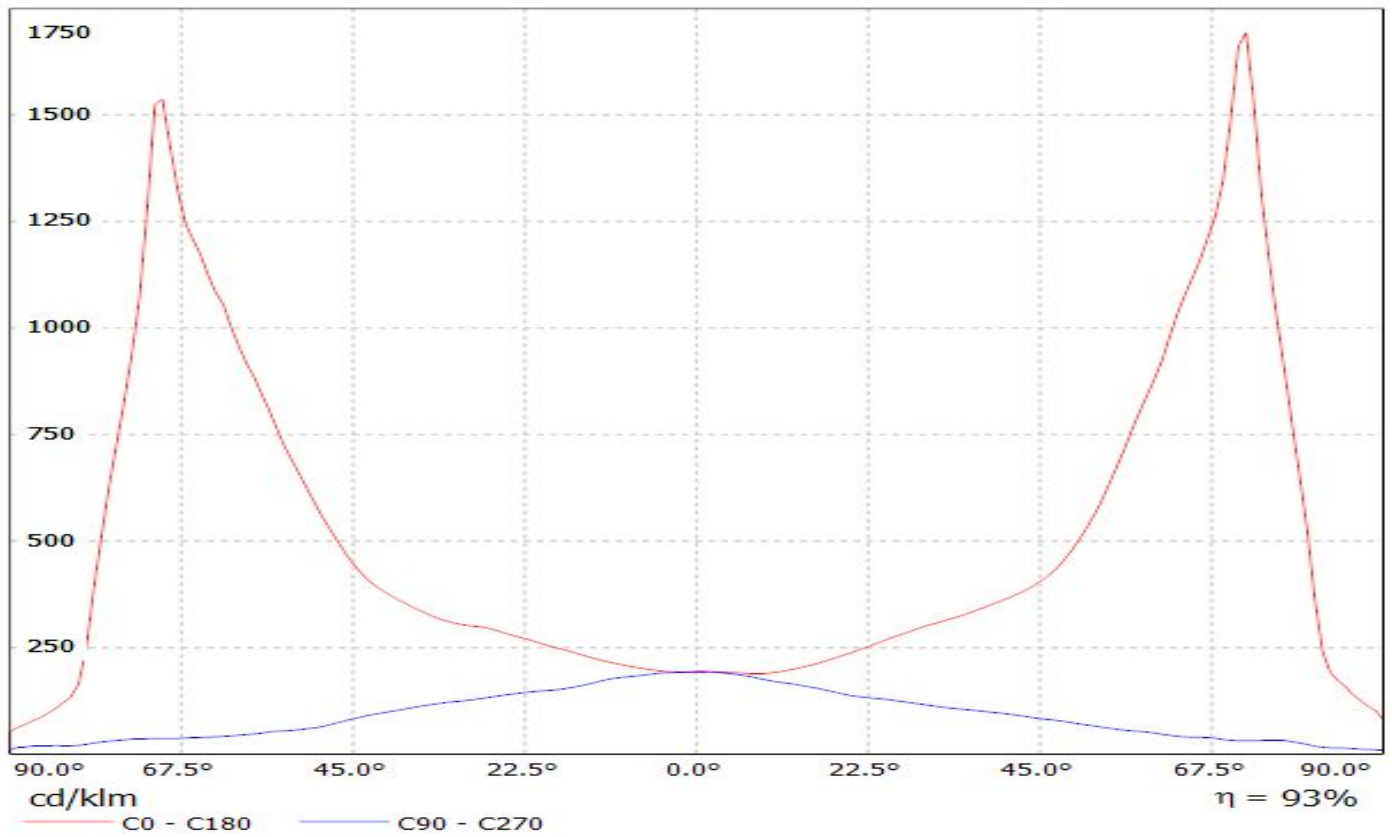
LEDiL Oy C13155_EMERALD-A_(SQ-PC) Eff.93.3% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SQ-PC) Eff.93.3%
Lamps: 1 x SQ-PC (79.1971lm@250mA)



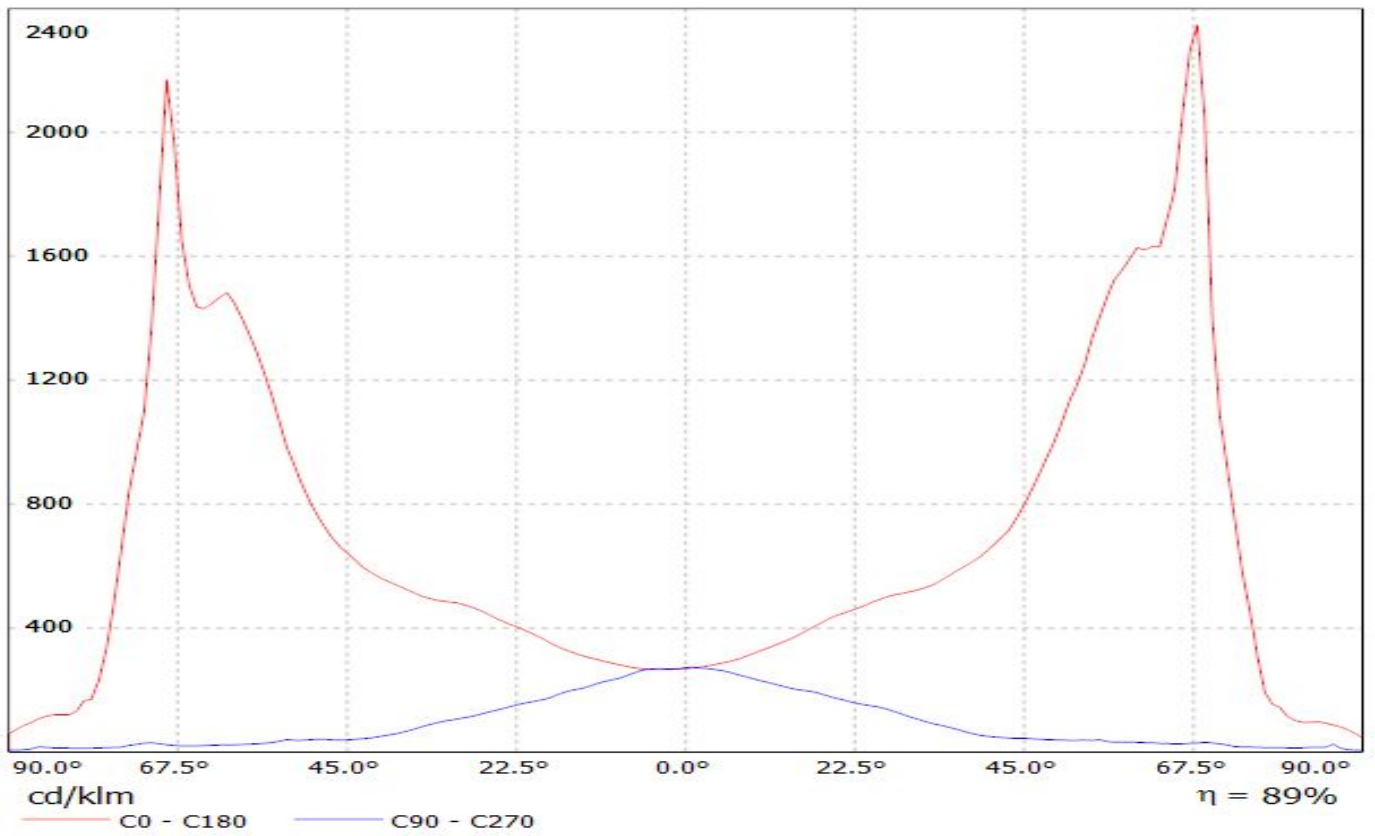
LEDiL Oy C13155_EMERALD-A_(SQ-EC) Eff.92.8% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SQ-EC) Eff.92.8%
Lamps: 1 x SQ-EC (64.5908lm@250mA)



LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.88.6% / LDC (Linear)

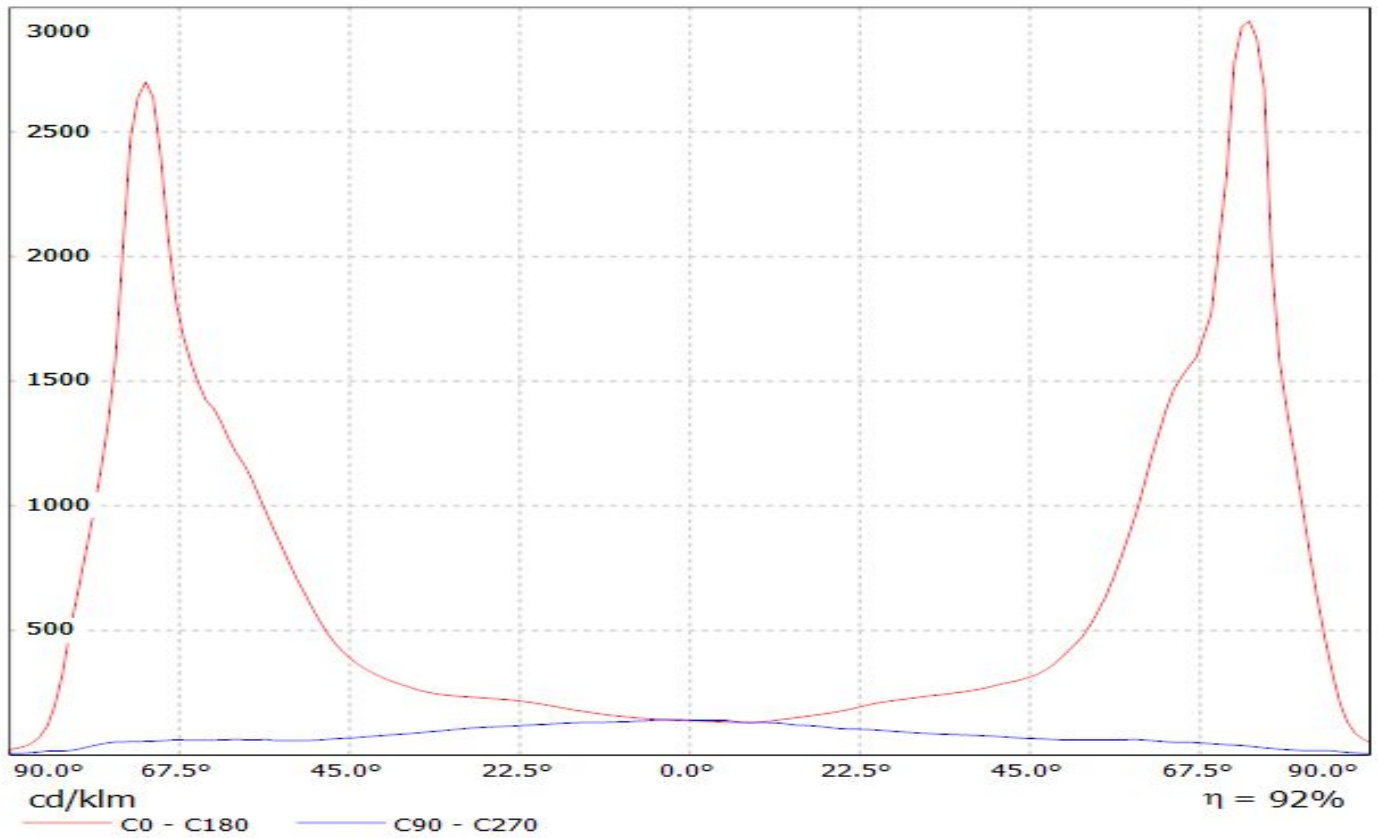
Luminaire: LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.88.6%
Lamps: 1 x OSLOM SSL80 (81.3lm@250mA)



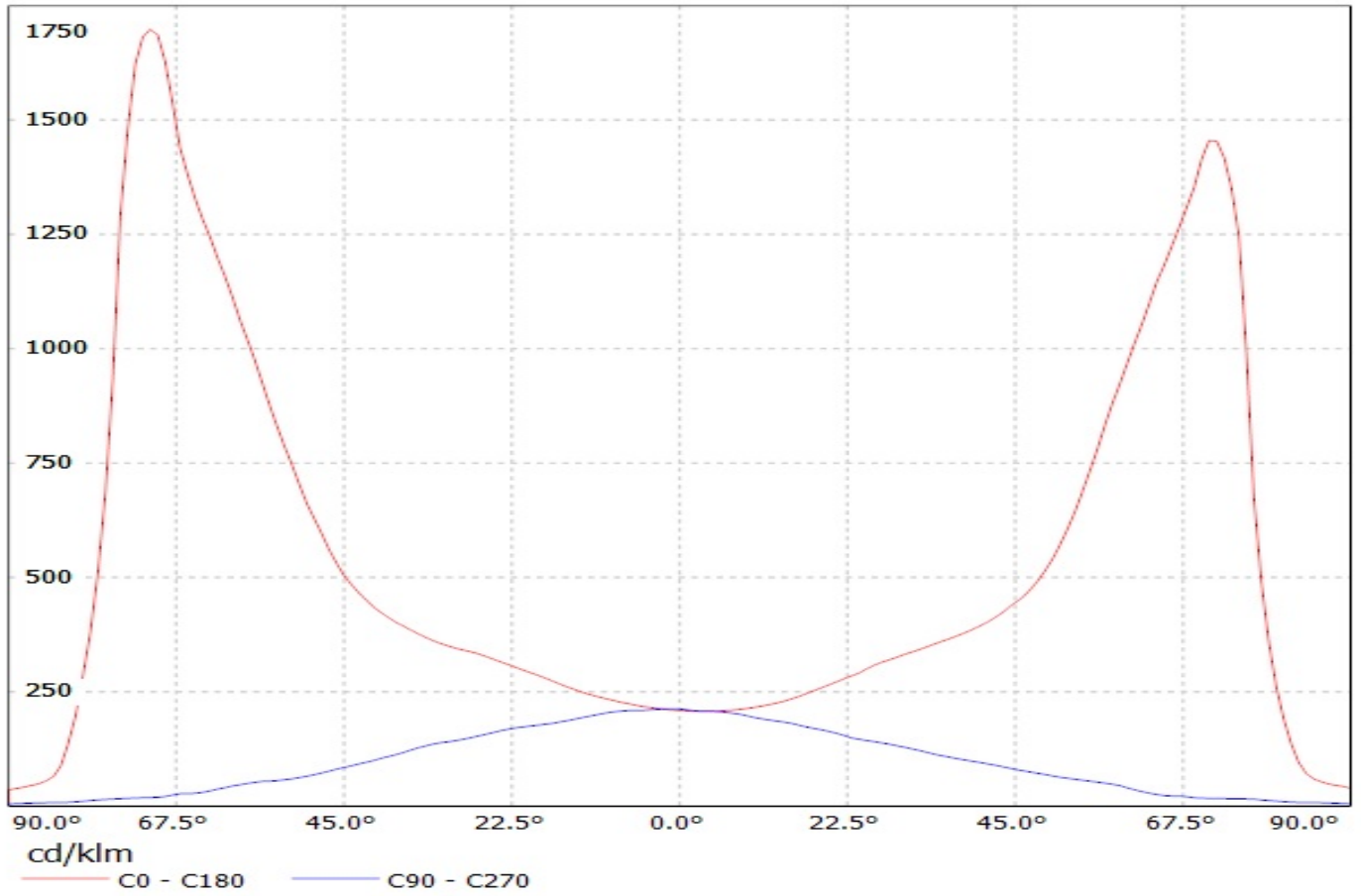
LEDiL Oy C13155_EMERALD-A_(SSL150) Eff.91.6% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SSL150) Eff.91.6%

Lamps: 1 x OSLOM SSL150 (71.5lm@250mA)



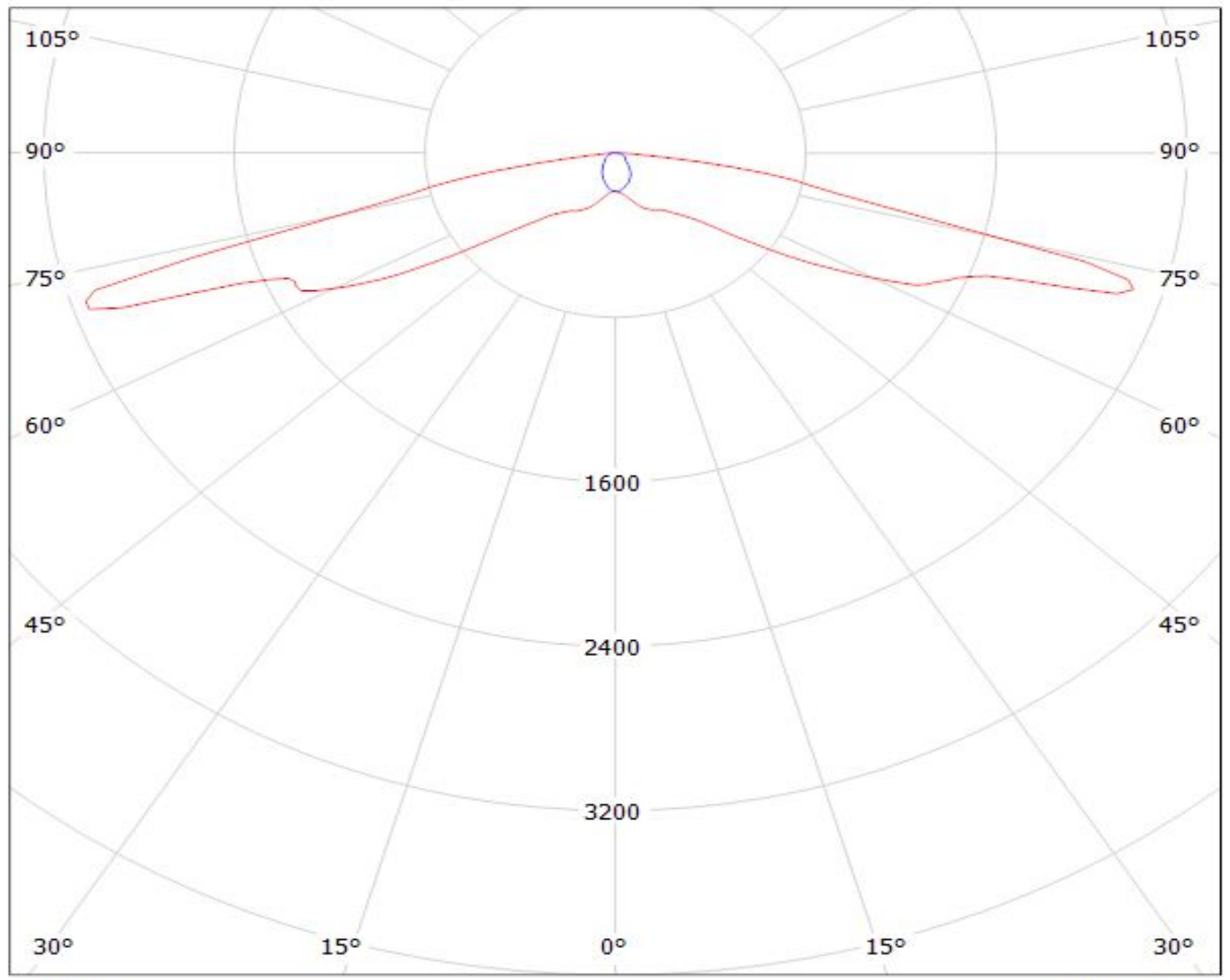
Luminaire: LEDiL Oy C13155_EMERALD-A_(LH351Z) Eff.93.6%
Lamps: 1 x SAMSUNG_LH351Z_90.8111lm@250mA_P=0.748076W_I=249.9mA



LEDiL Oy C13155_EMERALD-A_(XP-E) Eff.93.3% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-E) Eff.93.3%

Lamps: 1 x CREE XP-E (51.4197lm@250mA)



cd/klm

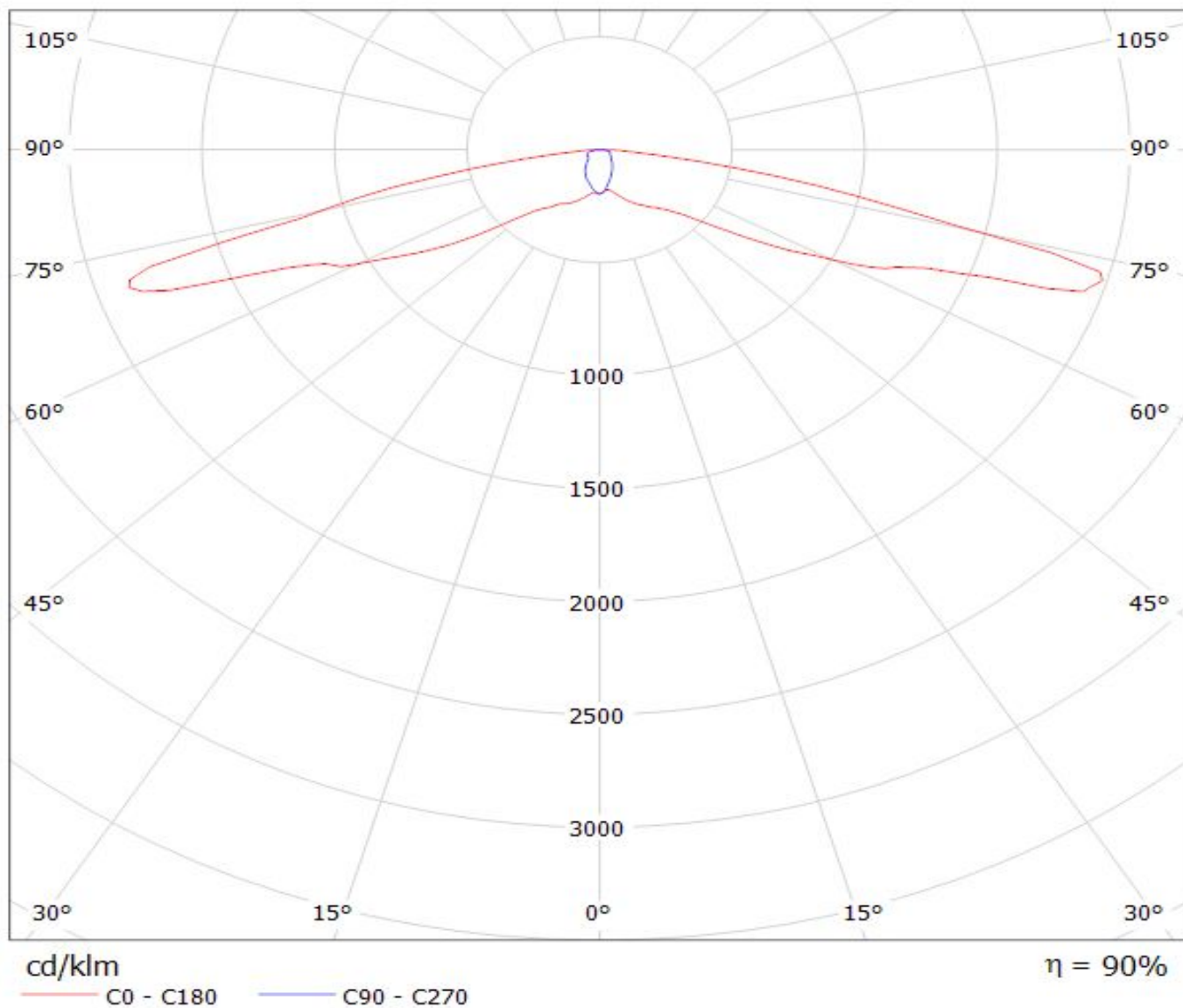
— C0 - C180

— C90 - C270

$\eta = 93\%$

LEDiL Oy C13155_EMERALD-A_(XB-D) / LDC (Polar)

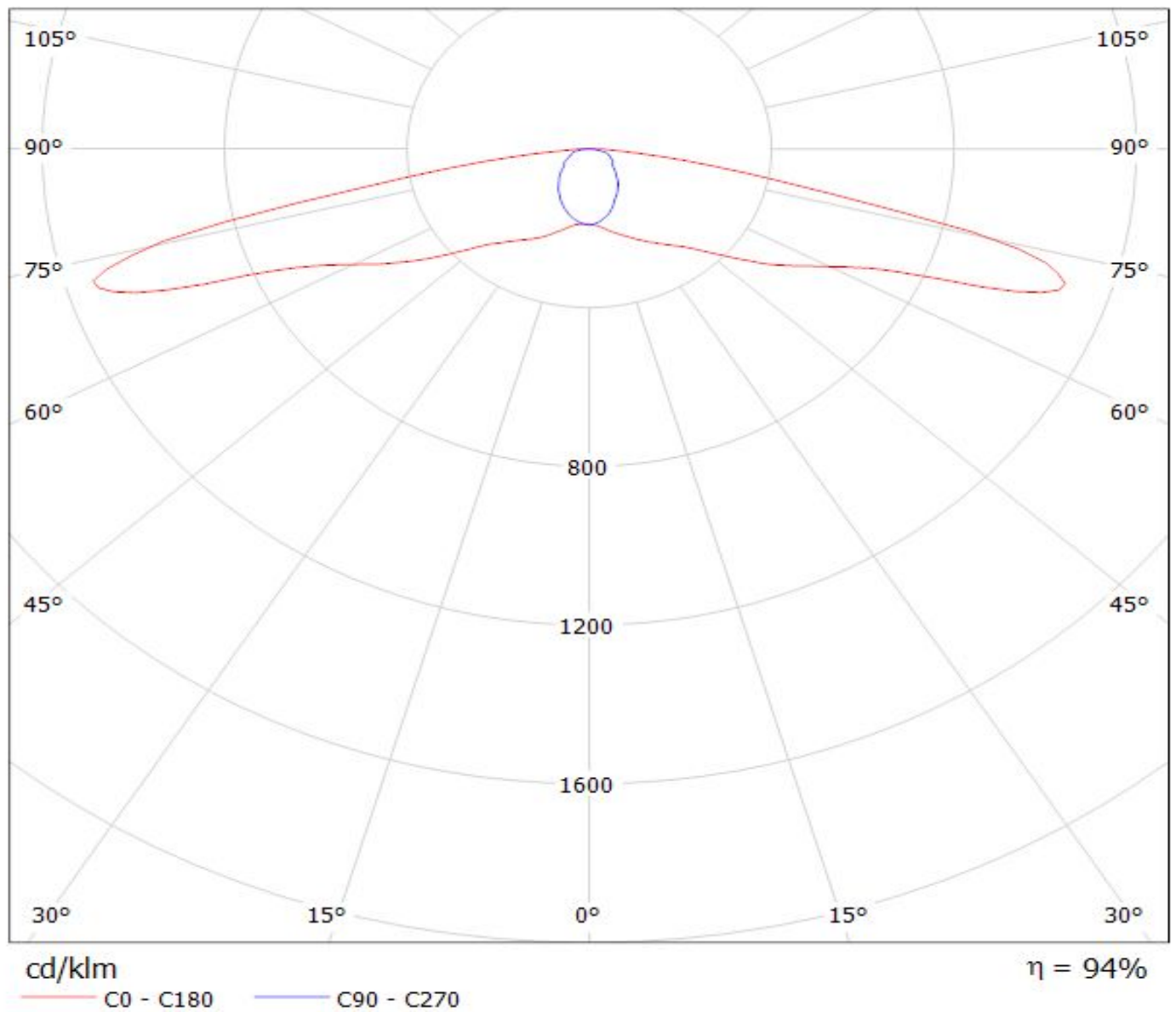
Luminaire: LEDiL Oy C13155_EMERALD-A_(XB-D)
Lamps: 1 x Cree XB-D (95lm@250mA)



LEDiL Oy C13155_EMERALD-A_(XM-L) Eff.94.5% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XM-L) Eff.94.5%

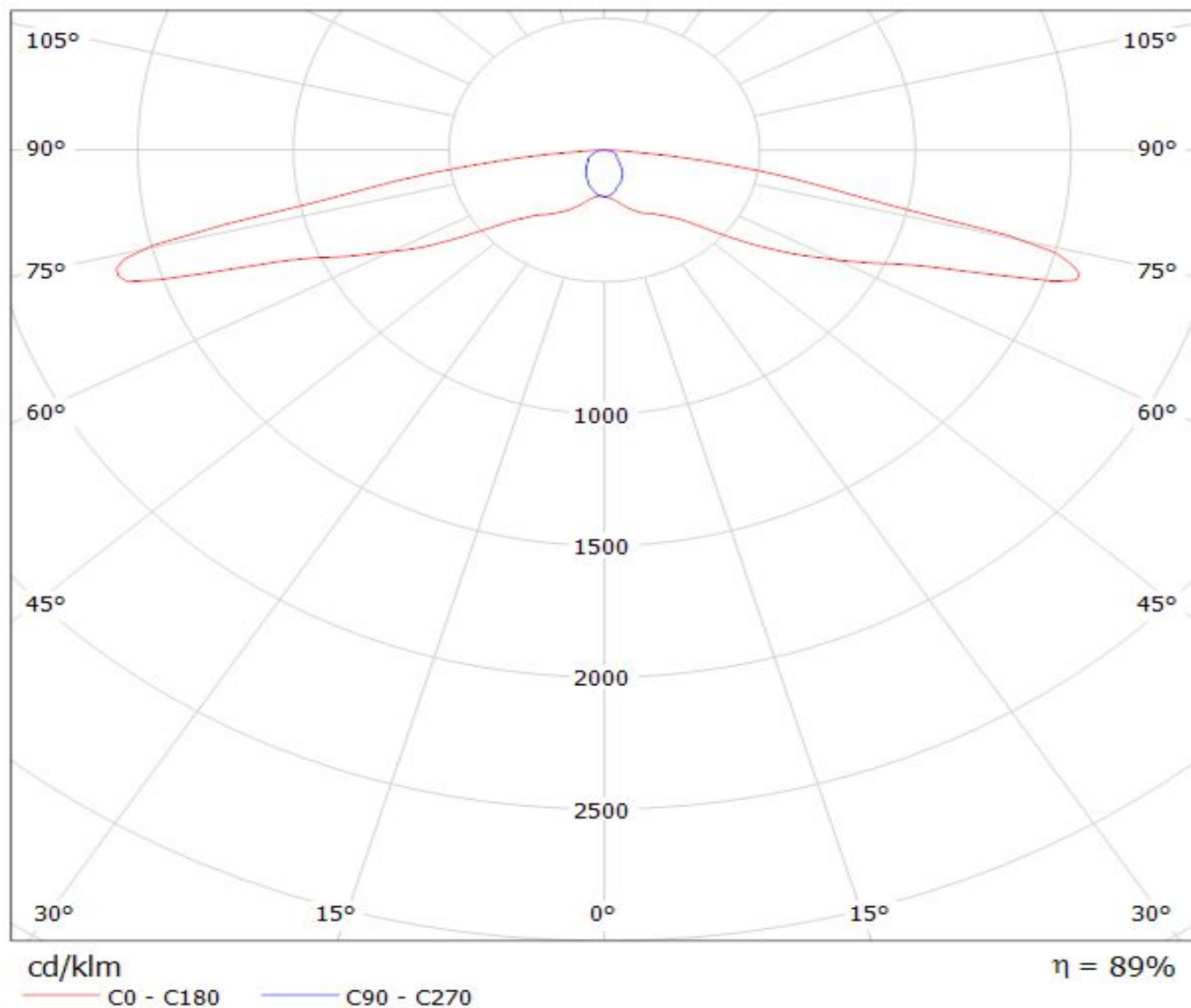
Lamps: 1 x Cree XM-L (91.7822lm@250mA)



LEDiL Oy C13155_EMERALD-A_(XP-G) Eff.89.2% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-G) Eff.89.2%

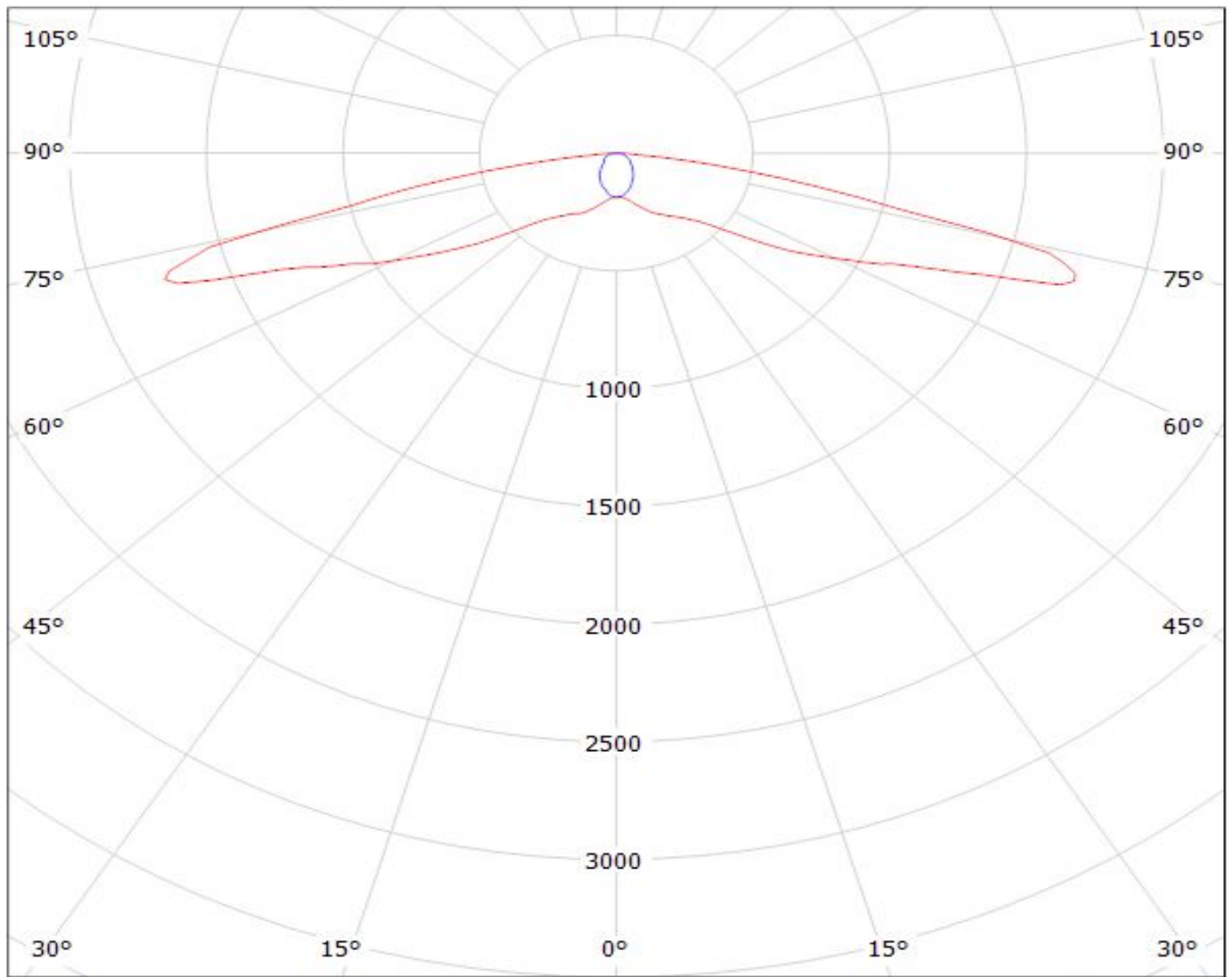
Lamps: 1 x XP-G (70.6lm@250mA)



LEDiL Oy C13155_EMERALD-A_(XP-G2) Eff.94.3% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-G2) Eff.94.3%

Lamps: 1 x CREE XP-G2 (51.4197lm@250mA)



cd/klm

— C0 - C180

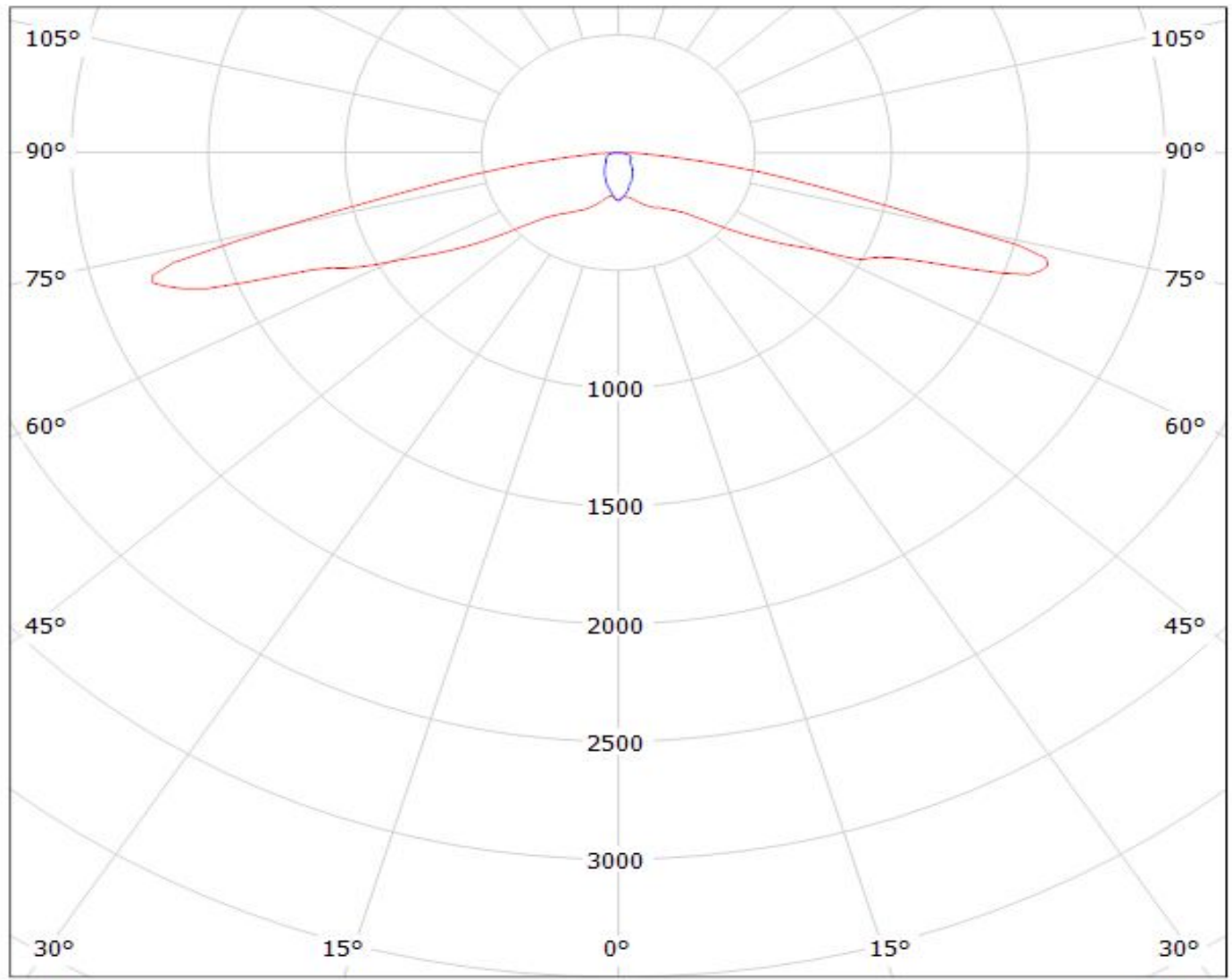
— C90 - C270

$\eta = 94\%$

LEDiL Oy C13155_EMERALD-A_(XB-D) Eff.89.2% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(XB-D) Eff.89.2%

Lamps: 1 x Cree XT-E (102.3lm@250mA)



cd/klm

— C0 - C180

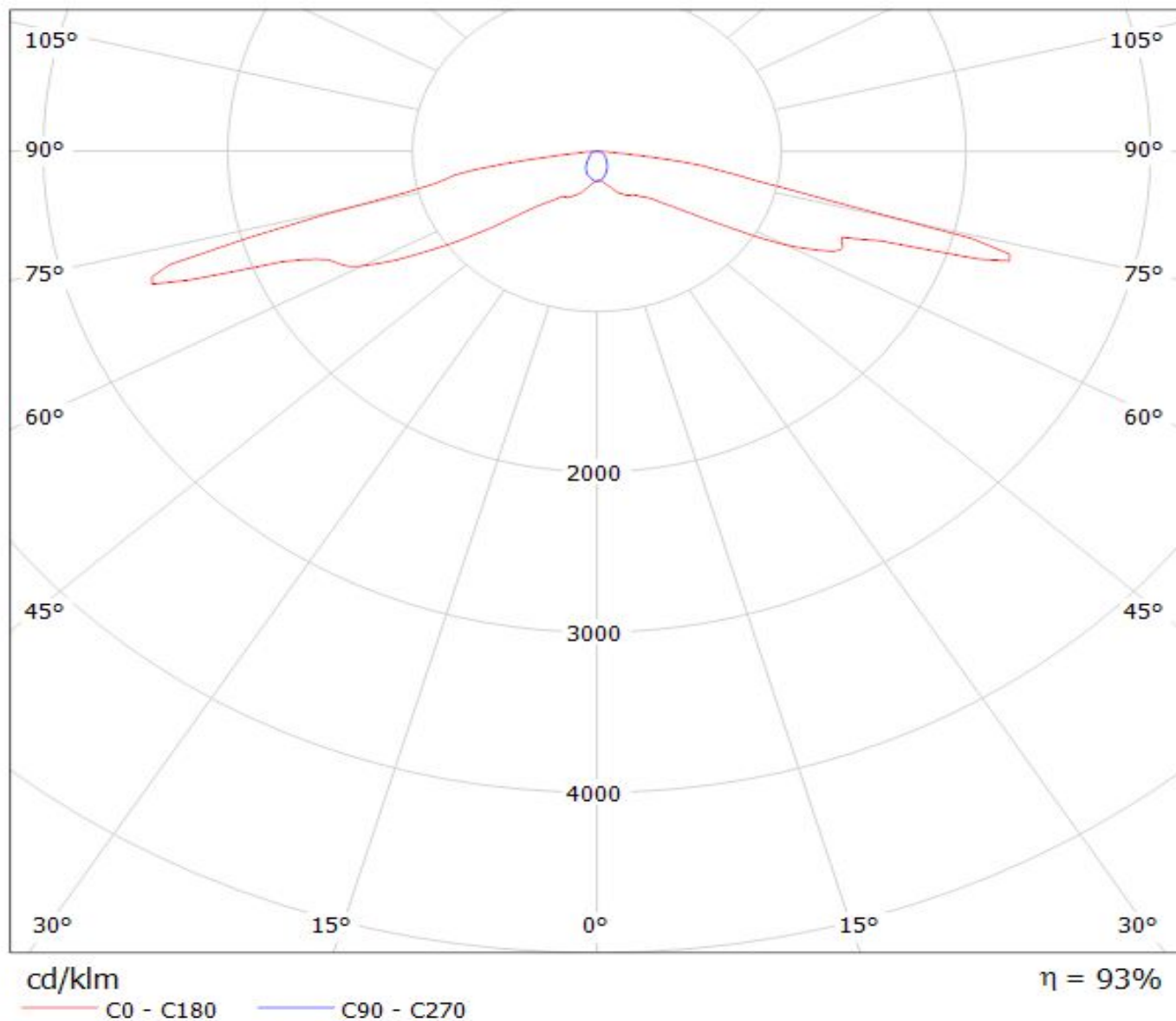
— C90 - C270

η = 89%

LEDiL Oy C13155_EMERALD-A_(XP-E2) Eff.92.5% / LDC (Polar)

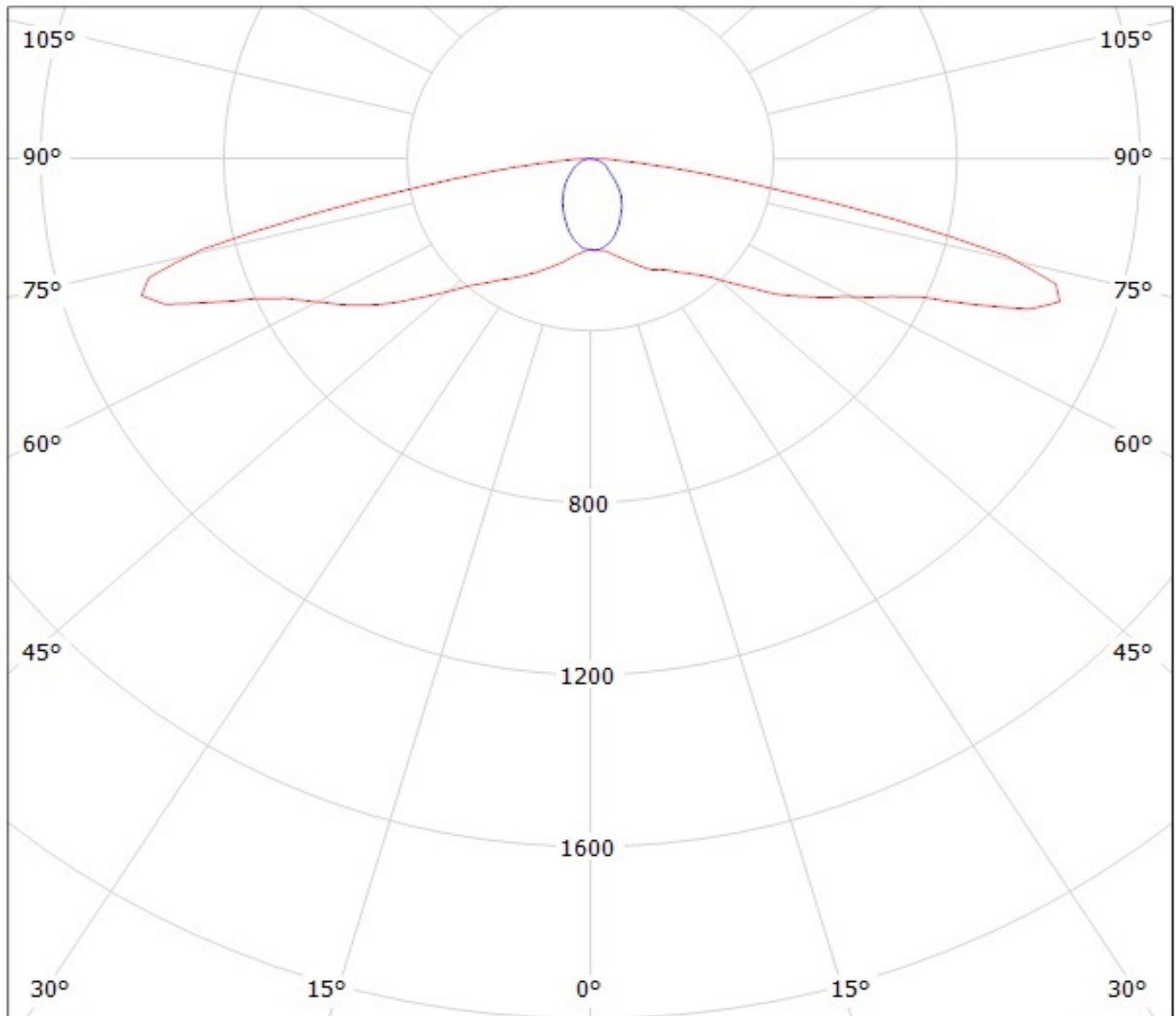
Luminaire: LEDiL Oy C13155_EMERALD-A_(XP-E2) Eff.92.5%

Lamps: 1 x CREE XP-E2 (93.5lm@250mA)



Luminaire: LEDil Oy C13155_EMERALD-A_(XM-L2) Efficiency=94%

Lamps: 1 x Cree XM-L2 (XMLBWT-0-7B4-T30-0L-0001) 91lm @ 250mA CCT=3200K P=0.7W I=250mA

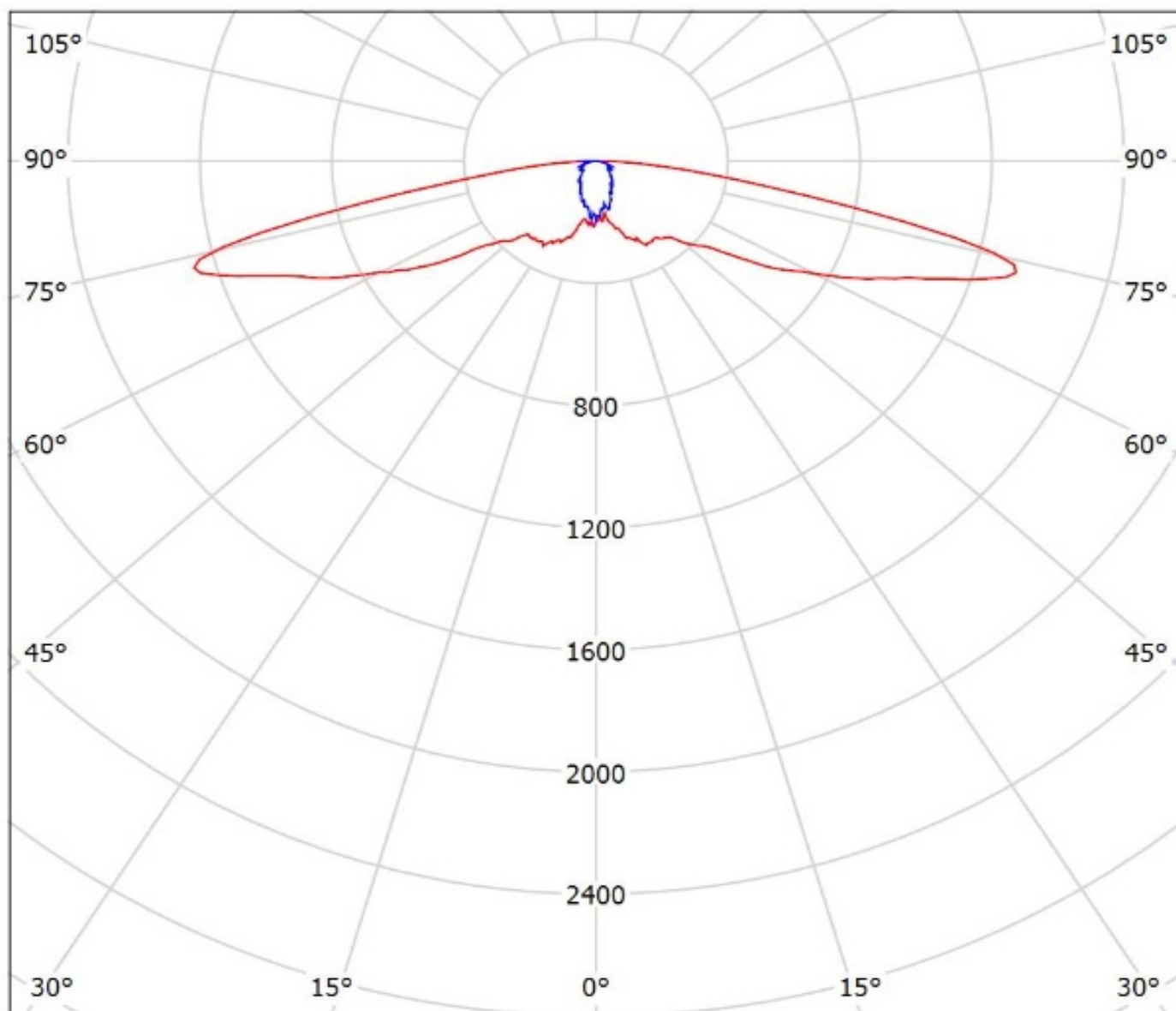


cd/klm

— C0 - C180

— C90 - C270

Luminaire: Ledil Oy C13155_EMERALD-A_(XP-L_HI)_SIMULATED
Lamps: 1 x Cree XP-L HI

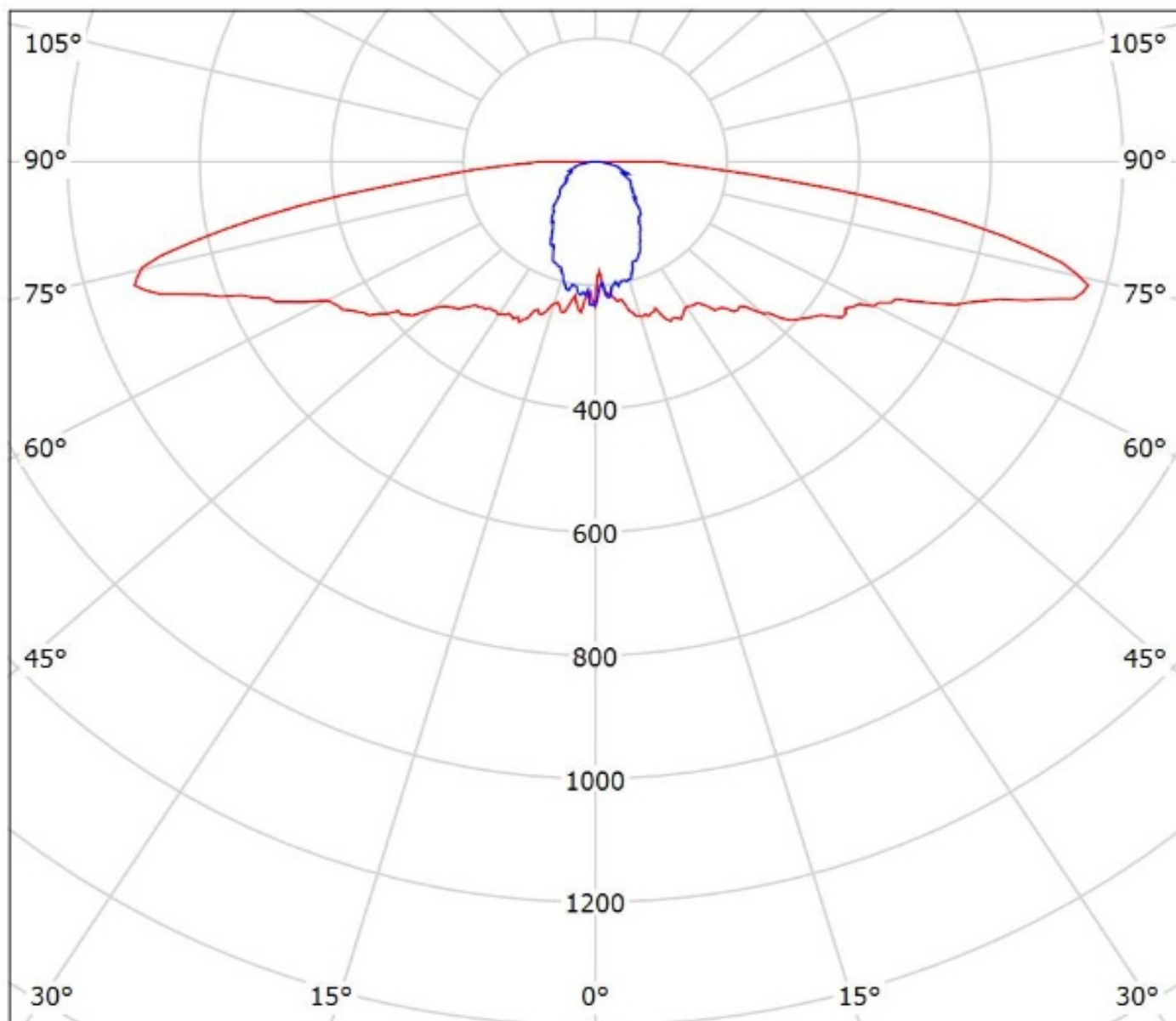


cd/klm
— C0 - C180 — C90 - C270

$\eta = 89\%$

Luminaire: Ledil Oy C13155_EMERALD-A_(XHP35_HD)_SIMULATED

Lamps: 1 x Cree XHP35 HD



cd/klm

— C0 - C180

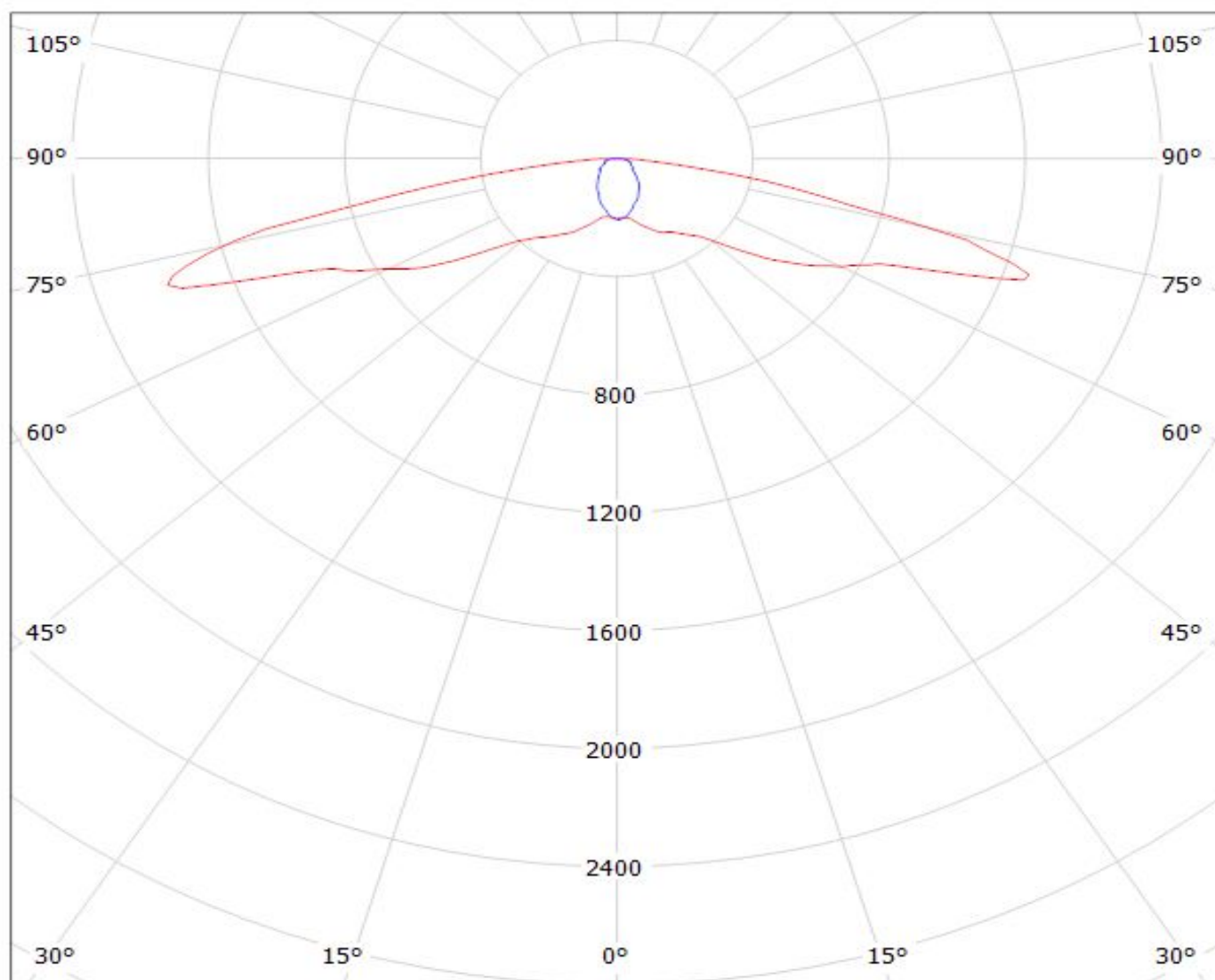
— C90 - C270

$\eta = 91\%$

LEDiL Oy C13155_EMERALD-A_(LG3535) Eff.90.8% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(LG3535) Eff.90.8%

Lamps: 1 x LG 3535 Ceramic (94lm@250mA)



cd/klm

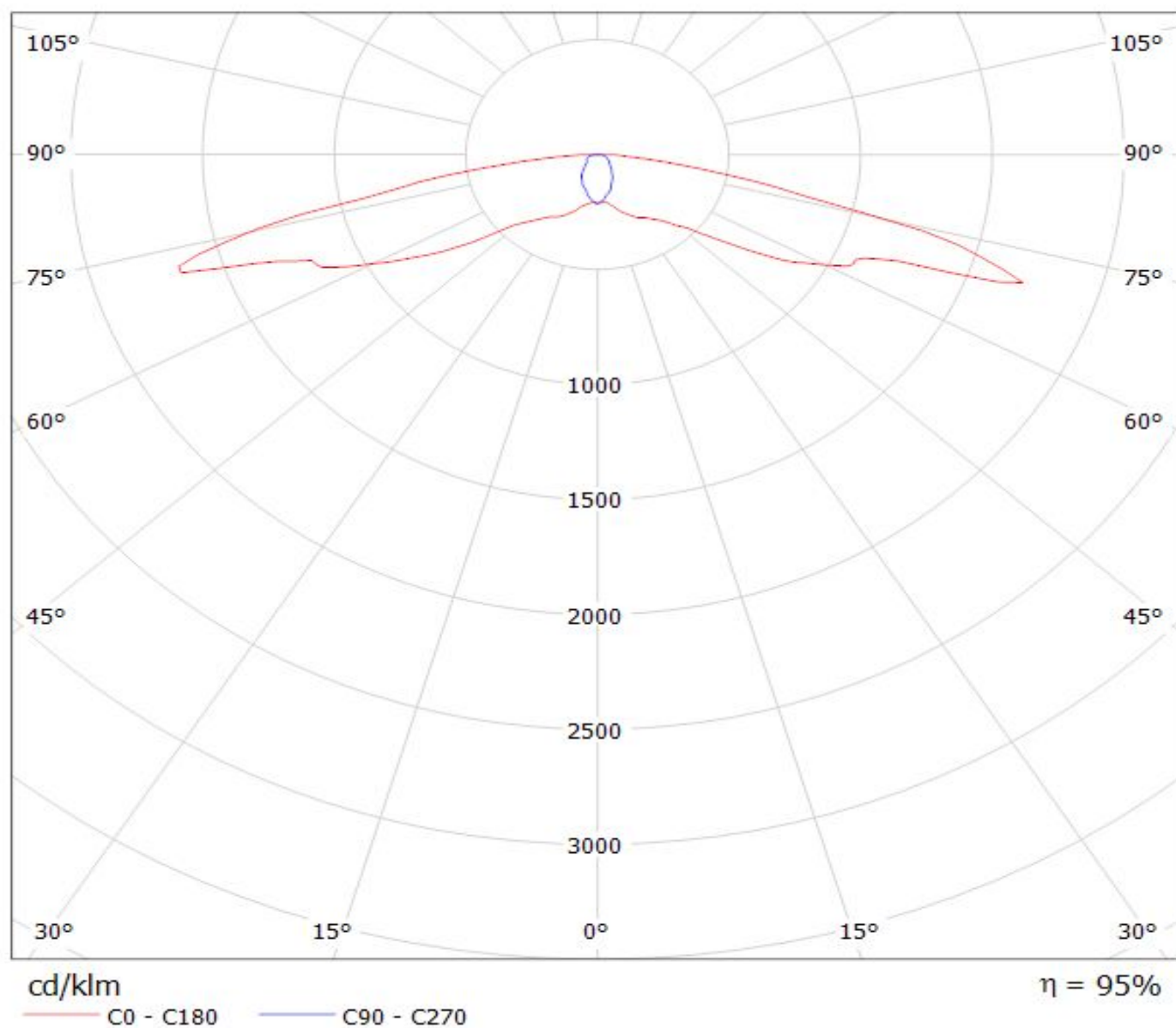
— C0 - C180

— C90 - C270

η = 91%

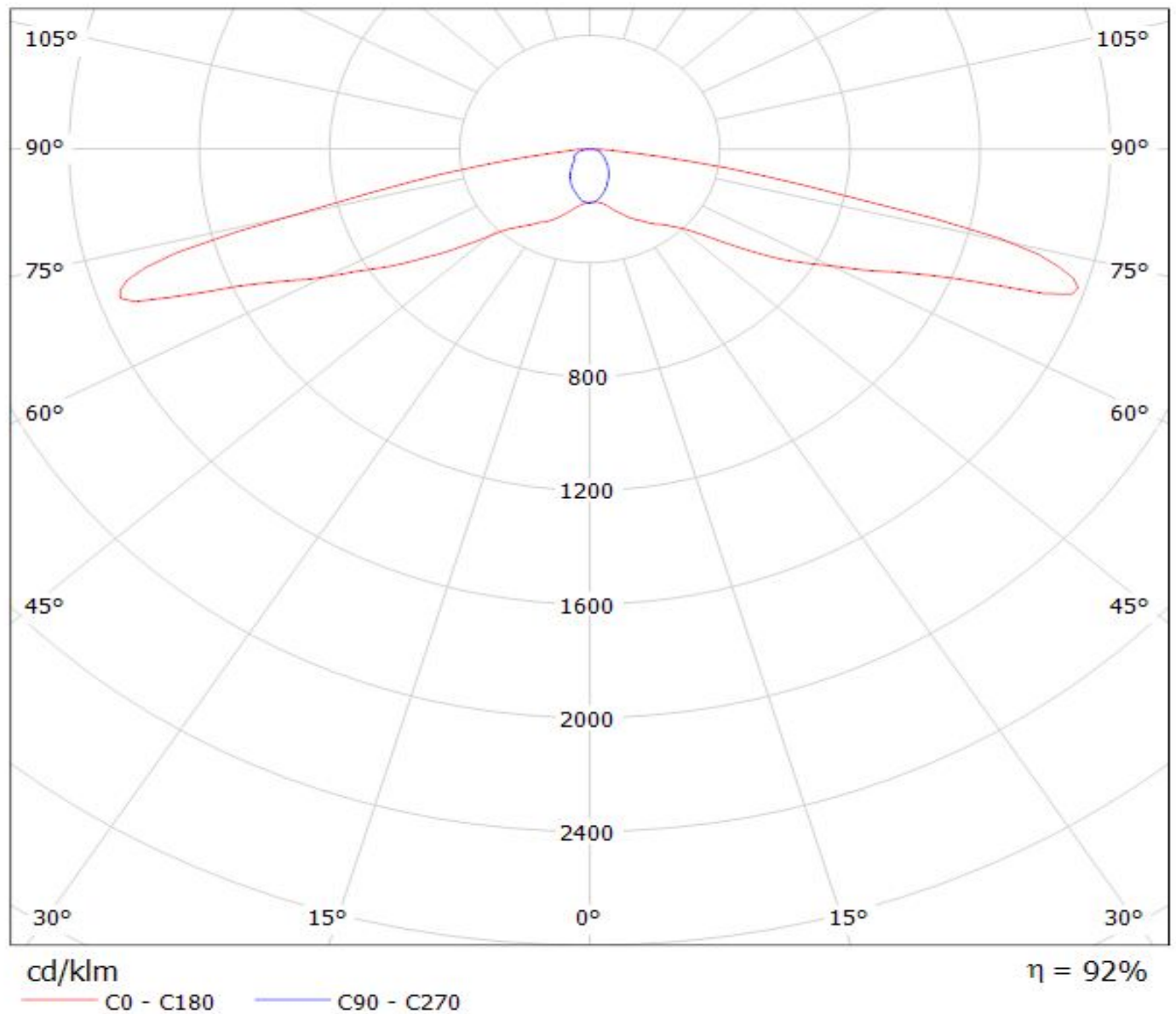
LEDiL Oy C13155_EMERALD-A_(LG3535_2W) Eff.95.1% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(LG3535_2W) Eff.95.1%
Lamps: 1 x LG3535_2W (97.3629lm@250mA)

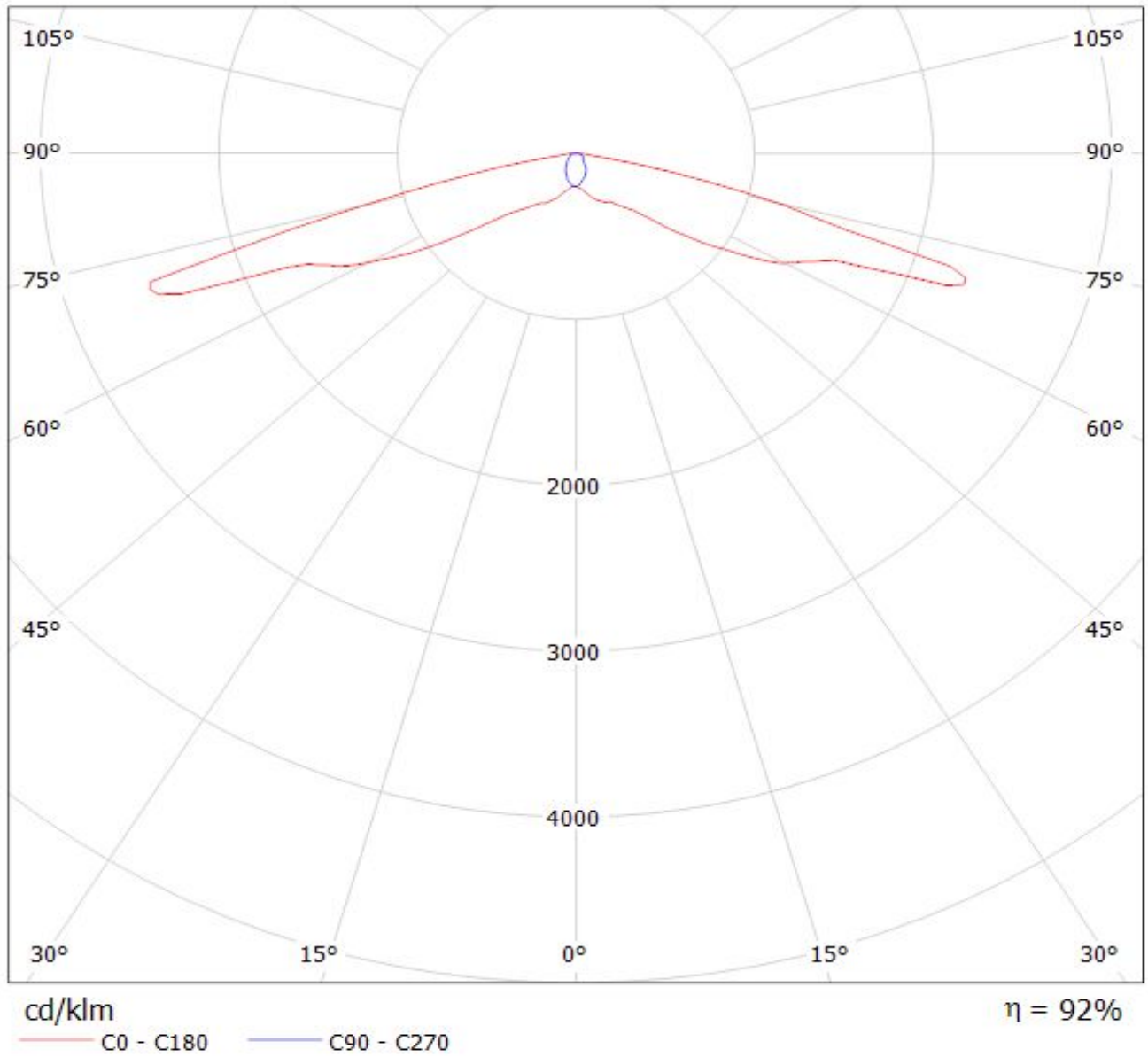


LEDiL Oy C13155_EMERALD-A_(LUXEON_A) Eff.92.0% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(LUXEON_A) Eff.92.0%
Lamps: 1 x LUXEON_R (67.5lm@250mA)



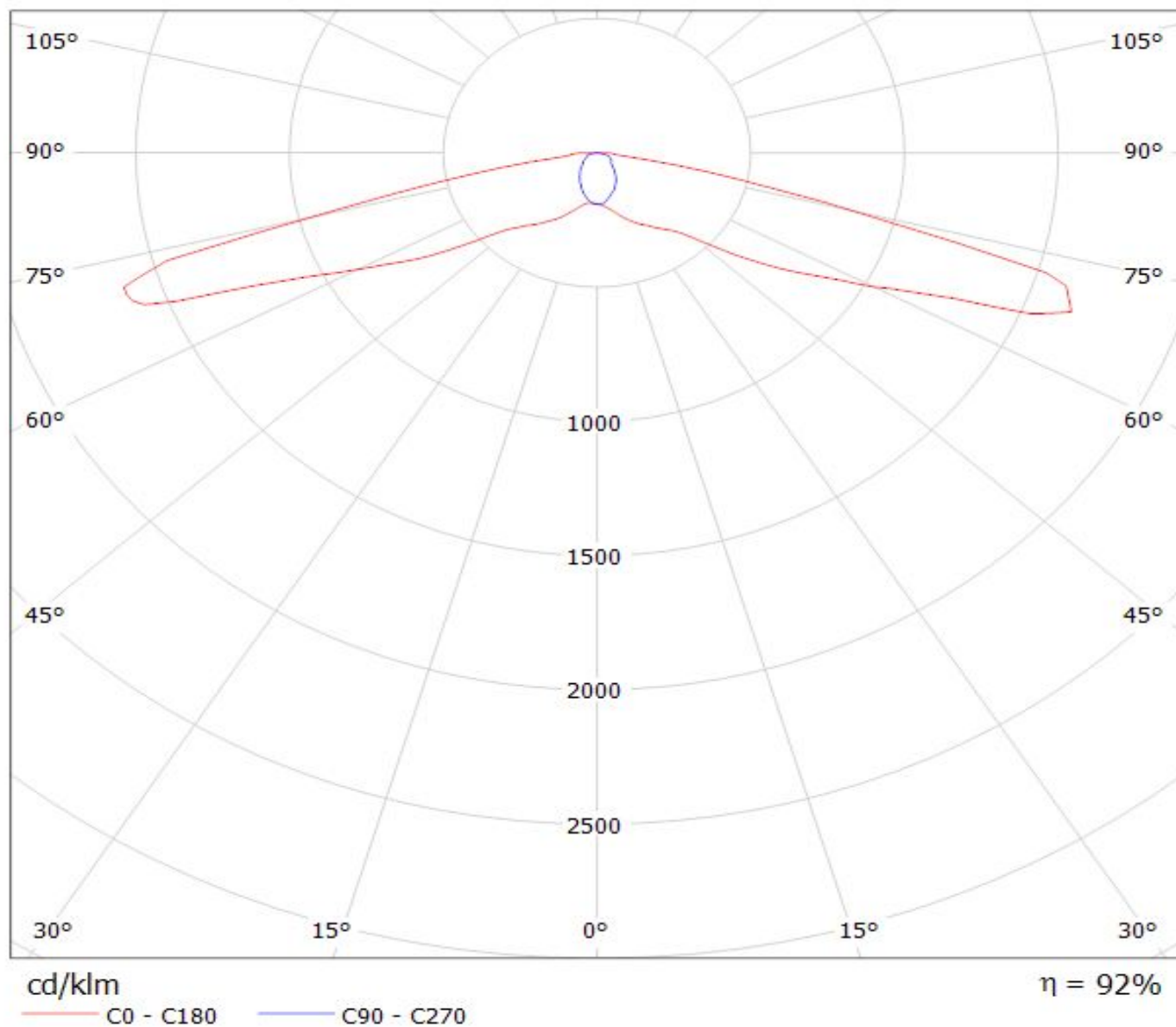
Luminaire: LEDiL Oy C13155_EMERALD-A_(Rebel) Eff. 91,7%
Lamps: 1 x Luxeon Rebel (82lm@250mA)



LEDiL Oy C13155_EMERALD-A_(LUXEON_R) Eff.91.7% / LDC (Polar)

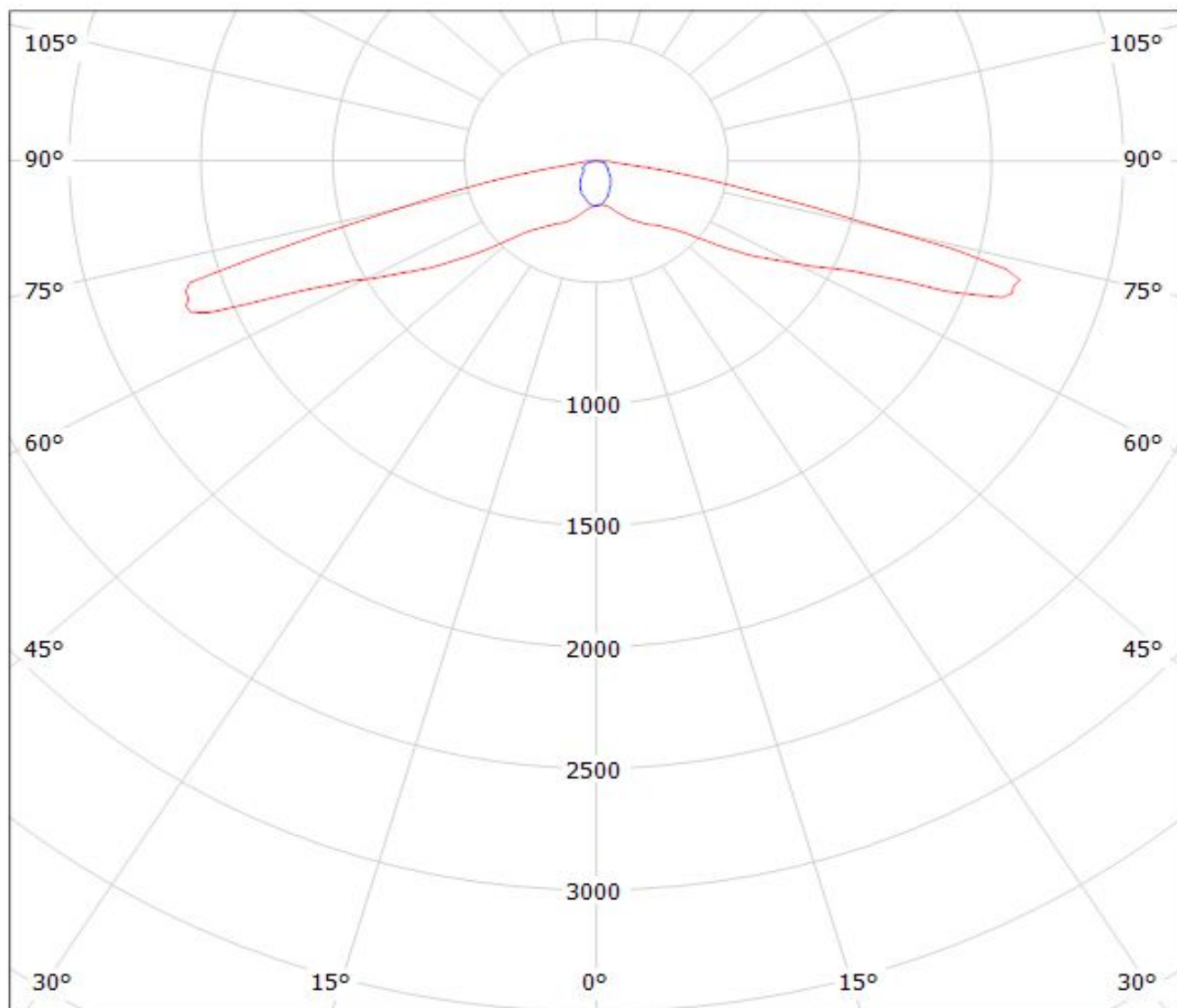
Luminaire: LEDiL Oy C13155_EMERALD-A_(LUXEON_R) Eff.91.7%

Lamps: 1 x LUXEON_R (85.6lm@250mA)



Luminaire: LEDiL Oy C13155_EMERALD-A_(Rebel-ES) Eff. 90,4%

Lamps: 1 x Luxeon Rebel-ES (90lm@250mA)



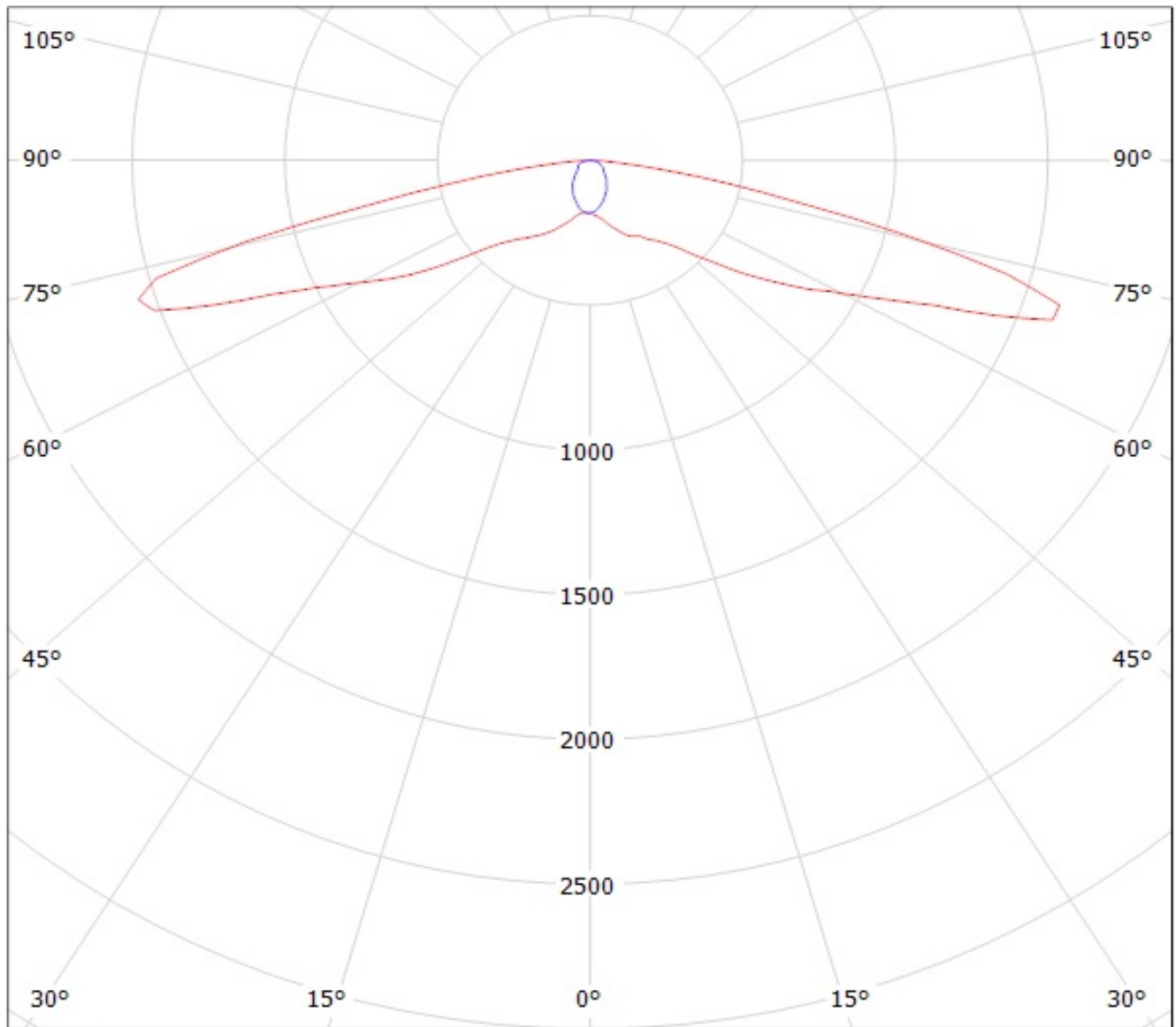
cd/klm

— C0 - C180

— C90 - C270

$\eta = 90\%$

Luminaire: Ledil Oy C13155_EMERALD-A (Luxeon T 71lm @ 250mA) Efficiency=93%
Lamps: 1 x Luxeon T 71lm @ 250mA



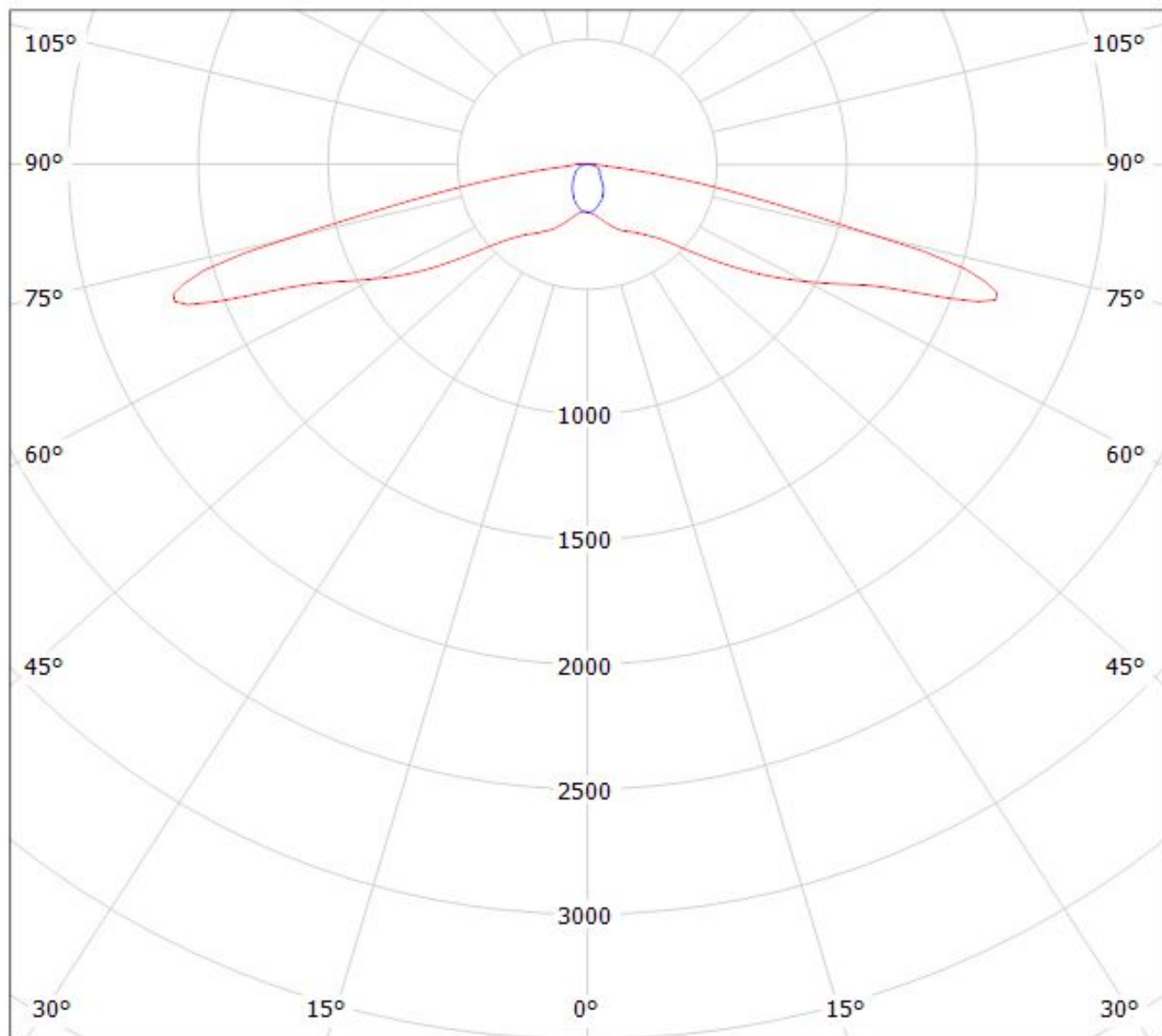
cd/klm

— C0 - C180

— C90 - C270

Luminaire: LEDiL Oy C13155_EMERALD-A_(Luxeon_TX) Eff.95.0%

Lamps: 1 x Luxeon_TX_(L1T2-3585)_80.180lm@250mA_CCT=3500K_P=0.731482W_I=249.9mA



cd/klm

— C0 - C180

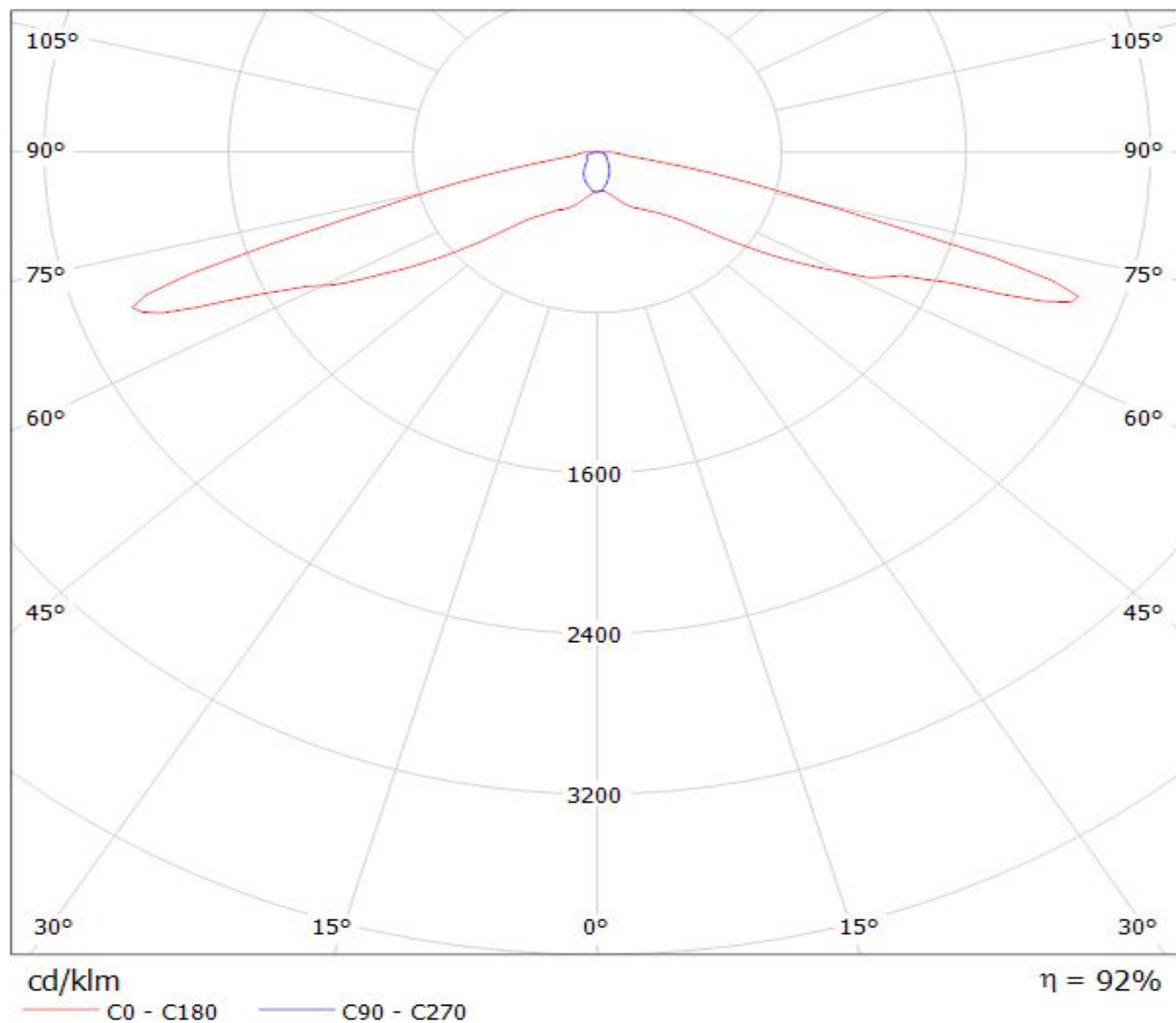
— C90 - C270

$\eta = 95\%$

LEDiL Oy C13155_EMERALD-A_(NCS19) Eff.91.8% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(NCS19) Eff.91.8%

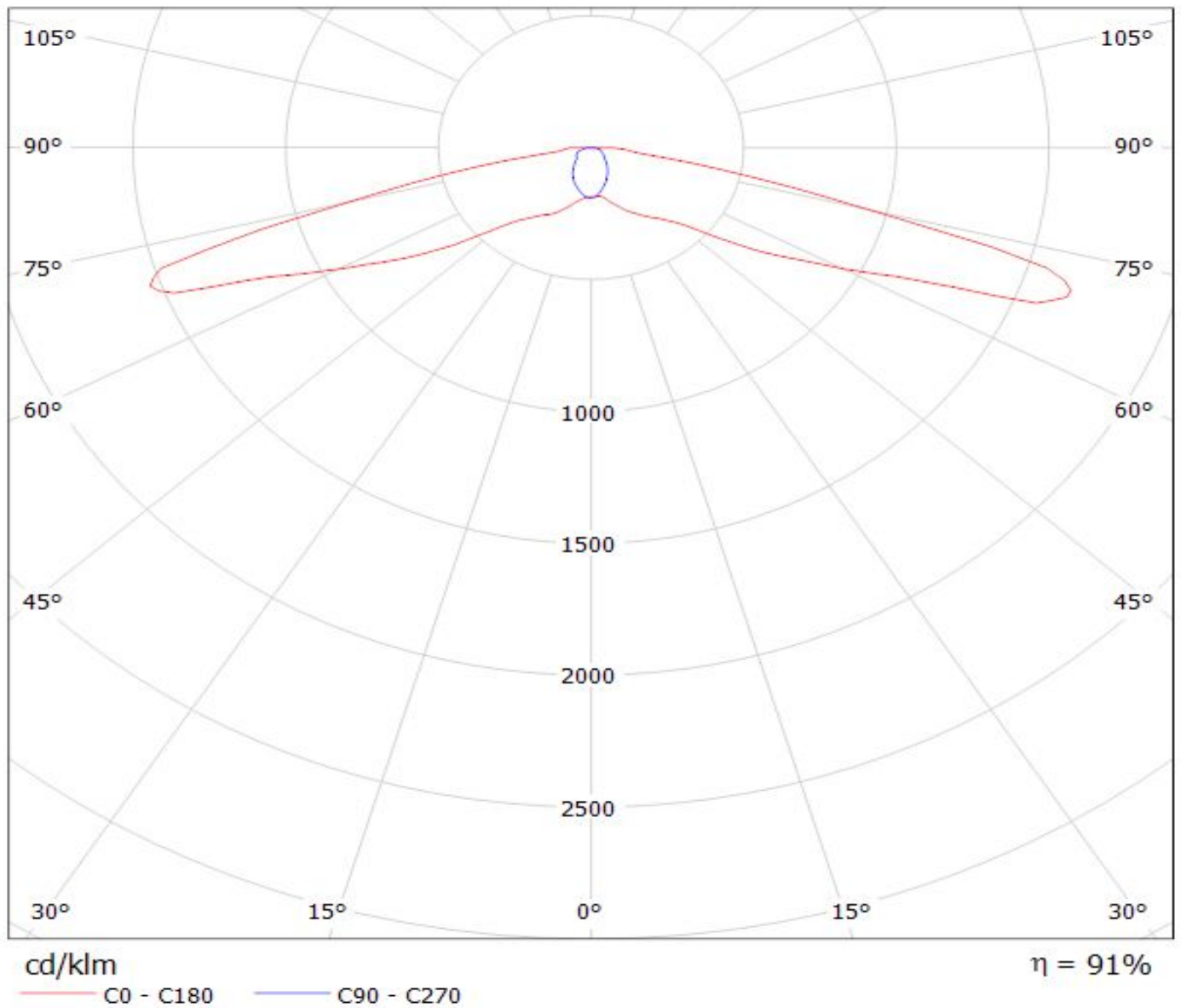
Lamps: 1 x NCS19 (89lm@250mA)



LEDiL Oy C13155_EMERALD-A_(NVS19) Eff.90.8% / LDC (Polar)

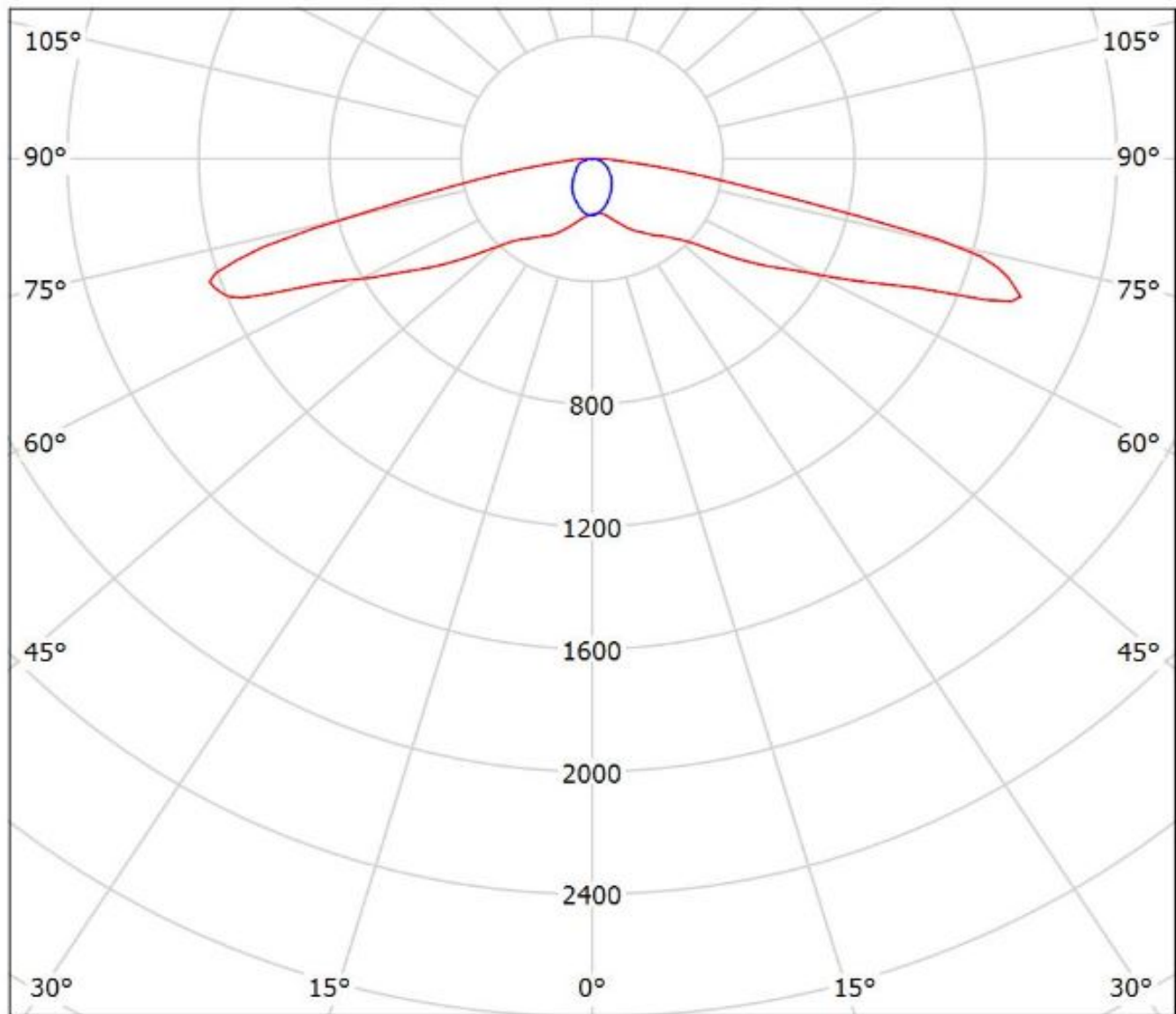
Luminaire: LEDiL Oy C13155_EMERALD-A_(NVS19) Eff.90.8%

Lamps: 1 x NVS19 (98.3lm@250mA)



Luminaire: LEDiL Oy C13155_EMERALD-A_(NVSL219CE)

Lamps: 1 x Nichia_NVSL219CE_101.227lm@250mA_P=0.713404W_I=0.25A



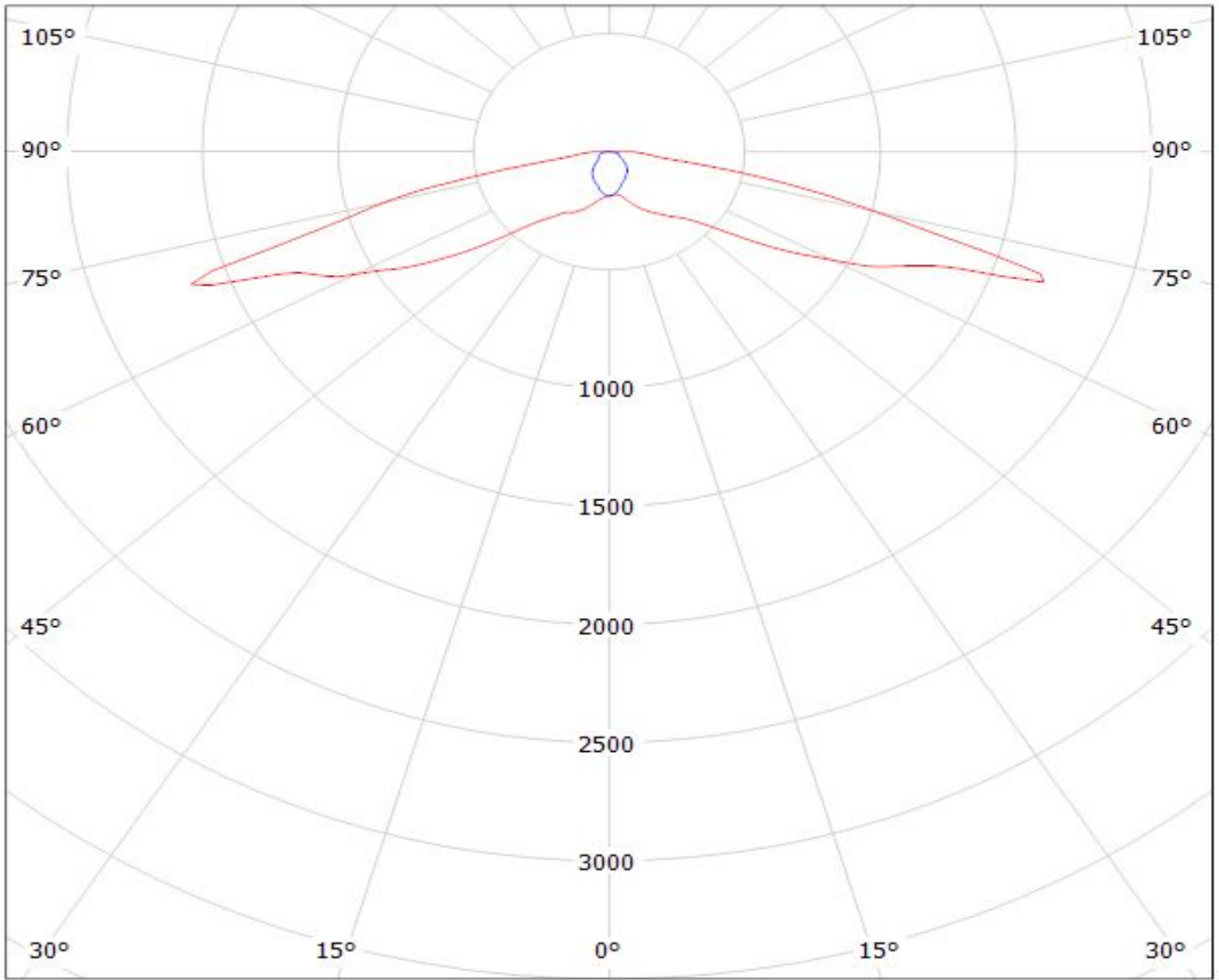
cd/klm

— C0 - C180 — C90 - C270

$\eta = 92\%$

LEDiL Oy C13155_EMERALD-A_(SQ-PC) Eff.93.3% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SQ-PC) Eff.93.3%
Lamps: 1 x SQ-PC (79.1971lm@250mA)



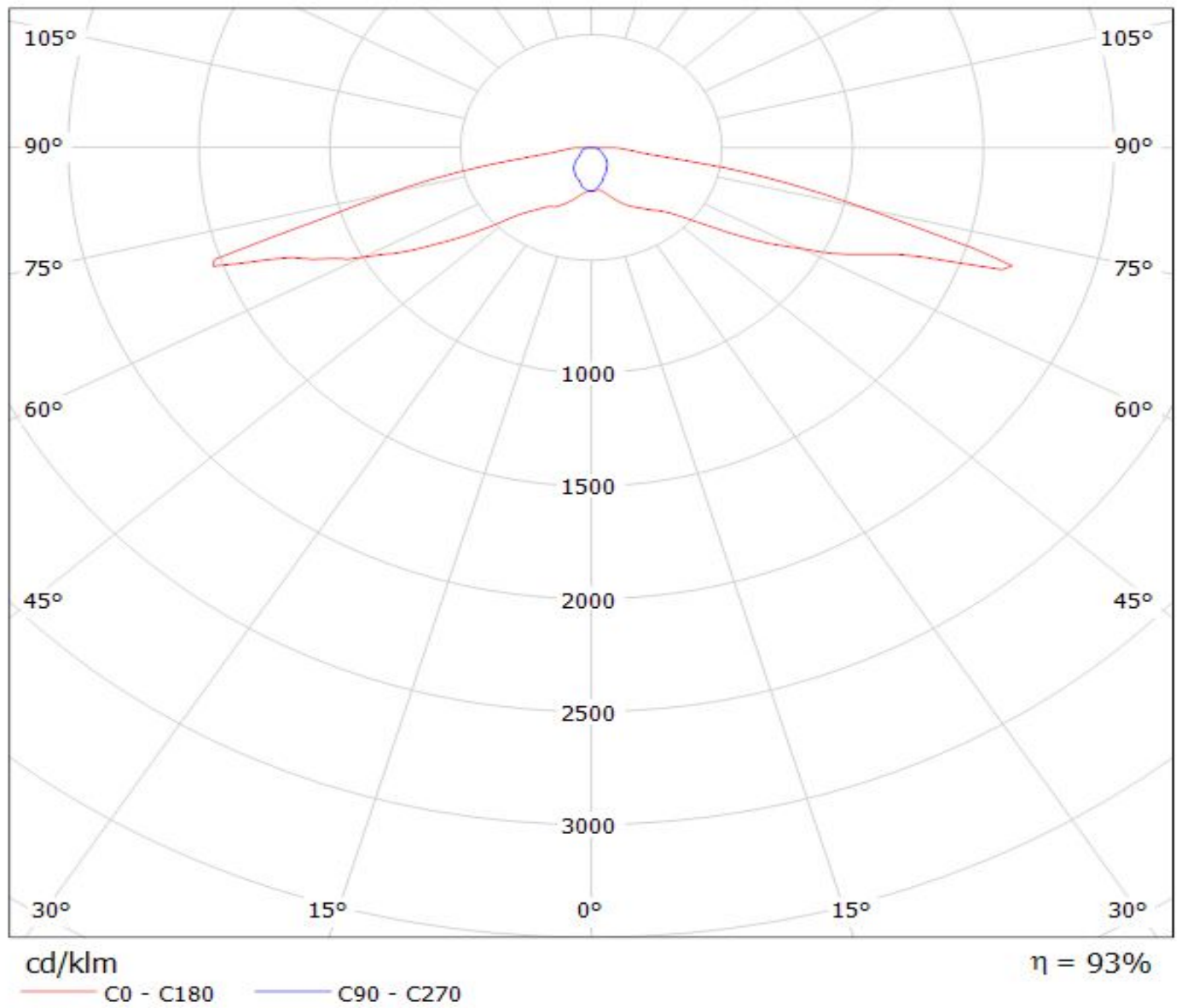
cd/klm

— C0 - C180 — C90 - C270

$\eta = 93\%$

LEDiL Oy C13155_EMERALD-A_(SQ-EC) Eff.92.8% / LDC (Polar)

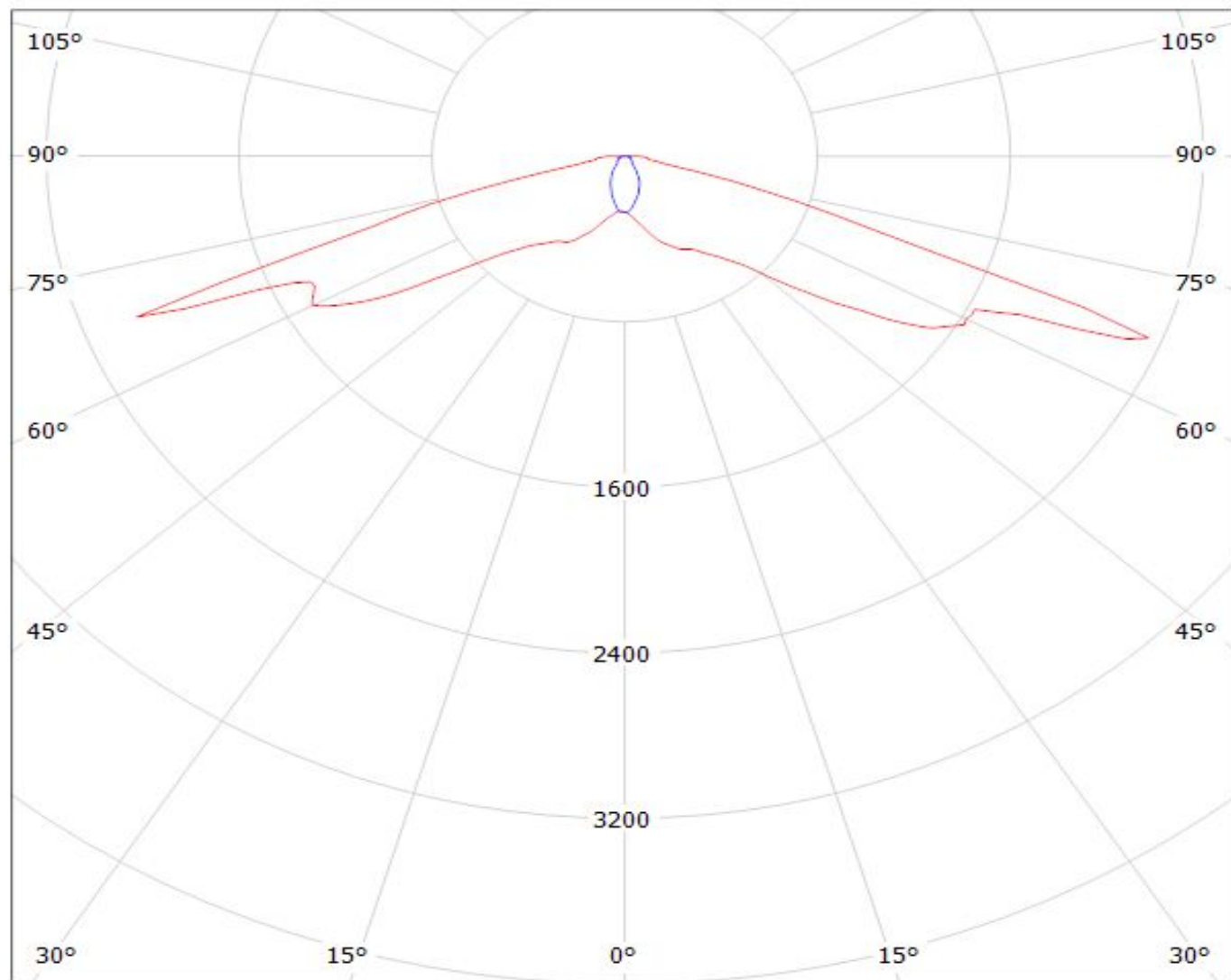
Luminaire: LEDiL Oy C13155_EMERALD-A_(SQ-EC) Eff.92.8%
Lamps: 1 x SQ-EC (64.5908lm@250mA)



LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.88.6% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.88.6%

Lamps: 1 x OSLOM SSL80 (81.3lm@250mA)



cd/klm

— C0 - C180

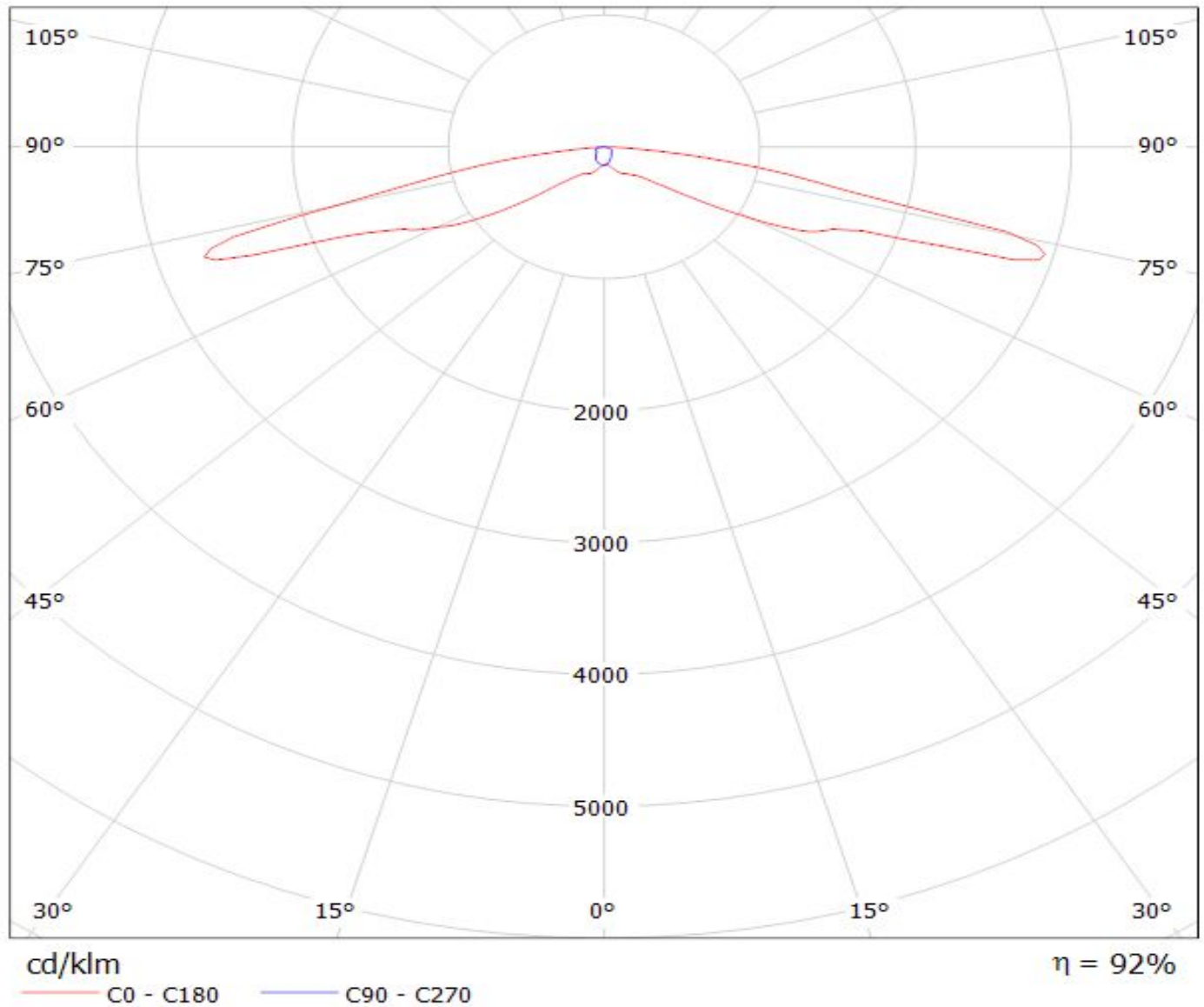
— C90 - C270

$\eta = 89\%$

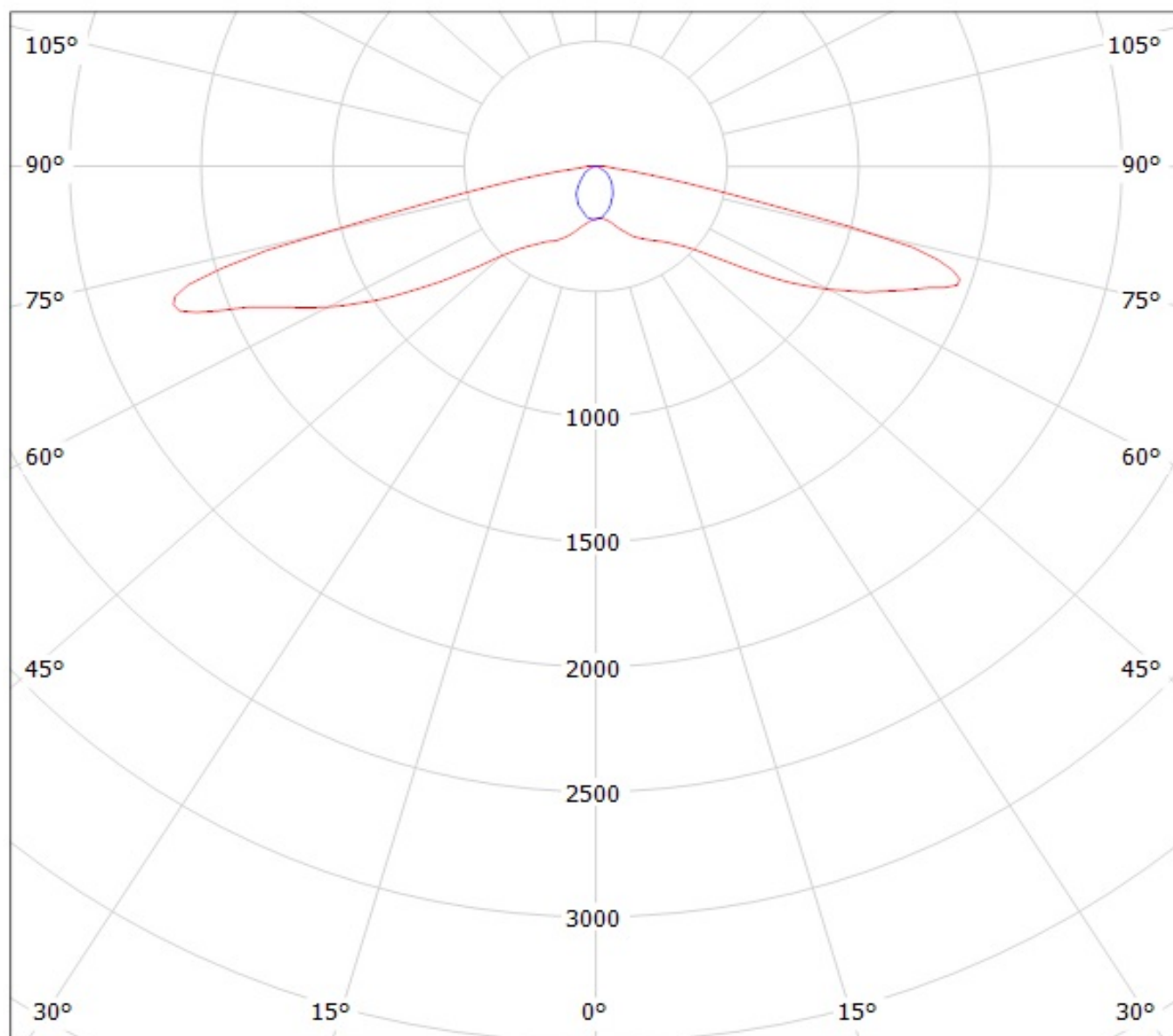
LEDiL Oy C13155_EMERALD-A_(SSL150) Eff.91.6% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SSL150) Eff.91.6%

Lamps: 1 x OSLOM SSL150 (71.5lm@250mA)

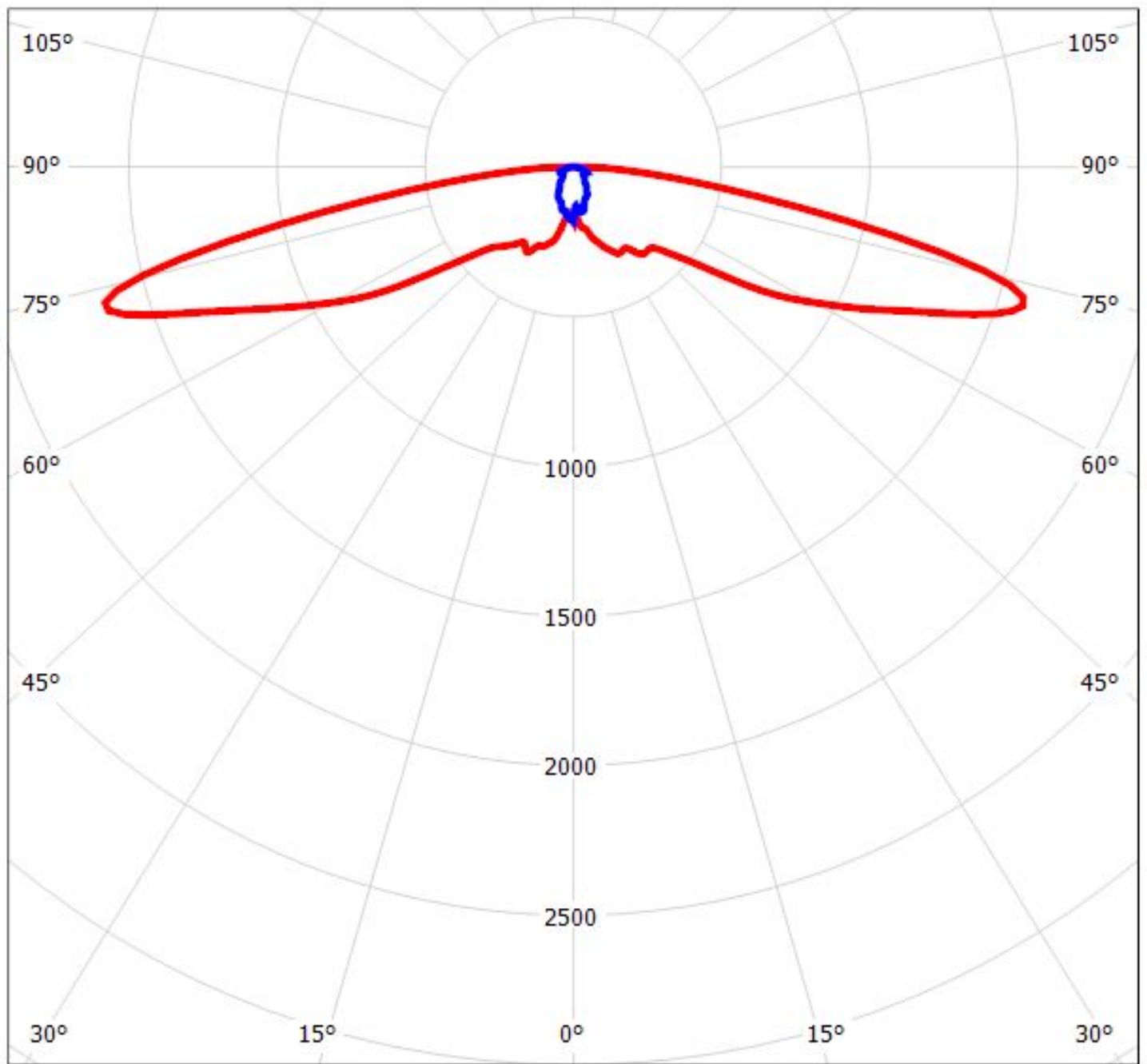


Luminaire: LEDiL Oy C13155_EMERALD-A_(LH351Z) Eff.93.6%
Lamps: 1 x SAMSUNG_LH351Z_90.8111lm@250mA_P=0.748076W_I=249.9mA



cd/klm

— C0 - C180 — C90 - C270



cd/klm

— C0 - C180

— C90 - C270

$\eta = 89\%$

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.