

DETAILS

Product Number	CA13156_EMERALD-A
Family	EMERALD
Type	Assembly
Color	clear
Diameter	21,6 mm
Height	7,3 mm
Style	round
Optic Material	PMMA
Holder Material	
Fastening	tape, pin
Status	production ready
ROHS Compliant	Yes
Date Updated	8/03/2016



OPTICAL PROPERTIES

LED	Viewing Angle	Light Beam	Efficiency	cd/lm	Connector
XP-E	152+71 deg	Oval	93 %	2.800	-
XB-D	150+63 deg	Oval	88 %	2.300	-
XM-L	152+81 deg	Oval	91 %	1.200	-
XP-G	153+92 deg	Oval	88 %	1.900	-
XT-E	150+64 deg	Oval	88 %	2.000	-
XP-E2	153+70 deg	Oval	93 %	2.900	-
XM-L2	167+71 deg	Oval	92 %	1.200	-
XP-G2	151+75 deg	Oval	91 %	2.040	-
H35C0 (LEMWA33)	153+68 deg	Oval	90 %	1.600	-
H35B0 (LEMWA32)	153+64 deg	Oval	93 %	2.000	-
LUXEON A	151+73 deg	Oval	89 %	1.750	-
LUXEON Rebel	146+64 deg	Oval	88 %	2.900	-
LUXEON R	147+71 deg	Oval	88 %	1.900	-
LUXEON Rebel ES	147+73 deg	Oval	88 %	1.900	-
LUXEON T	151+75 deg	Oval	93 %	1.800	-
LUXEON TX	151+71 deg	Oval	92 %	1.850	-
NCSxx19A	145+64 deg	Oval	88 %	2.200	-
NVSxx19A	147+70 deg	Oval	87 %	1.850	-
NS9x383	150+82 deg	Oval	89 %	1.000	-
NVSxx19B/NVSxx19C	151+77 deg	Oval	87 %	1.600	-
Oslon Square EC	150+76 deg	Oval	89 %	1.850	-
Oslon Square PC	150+86 deg	Oval	89 %	2.000	-
Oslon SSL 150	152+99 deg	Oval	92 %	2.900	-
Oslon SSL 80	148+53 deg	Oval	89 %	2.300	-
Oslon Square Gen3	152+76 deg	Oval	90 %	1.780	-



PRODUCT DATASHEET

EMERALD series

last update 8/3/2016

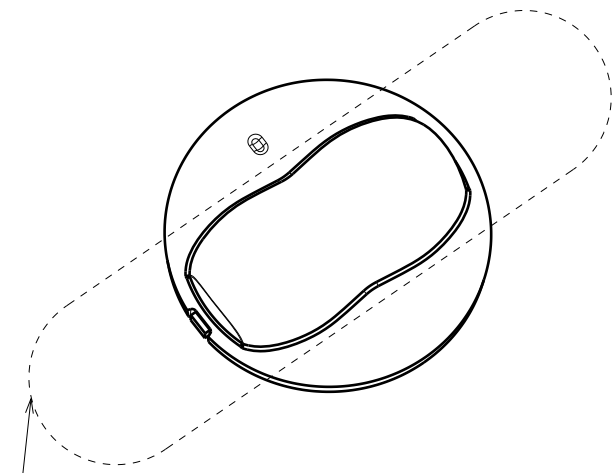
OPTICAL PROPERTIES

LED	Viewing Angle	Light Beam	Effi- ciency	cd/lm	Connector
Z5	TBA deg	Oval	89 %	-	-

INDEX	PART NO	DESCRIPTION	MATERIAL
1	CA13156	EMERALD-A	PMMA + PU FOAM adhesive tape

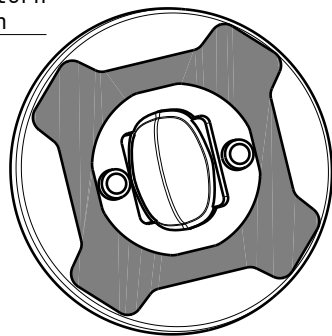
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Isometric view
Scale: 2:1

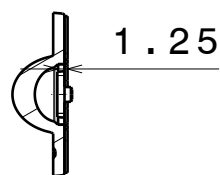


3

Beam pattern direction

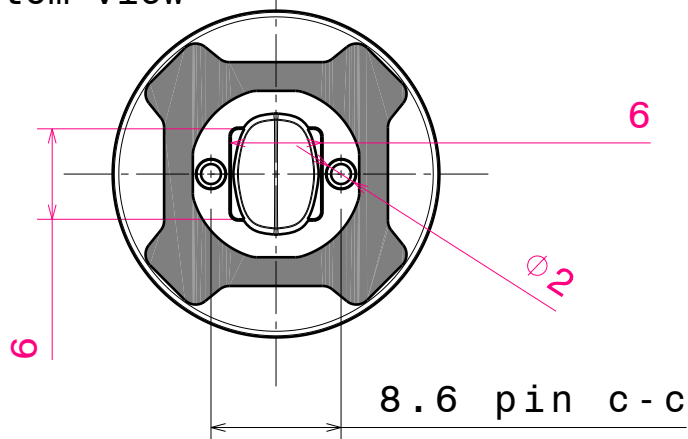


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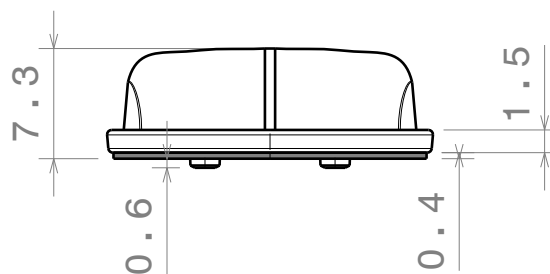


Section view A-A
Scale: 1:1

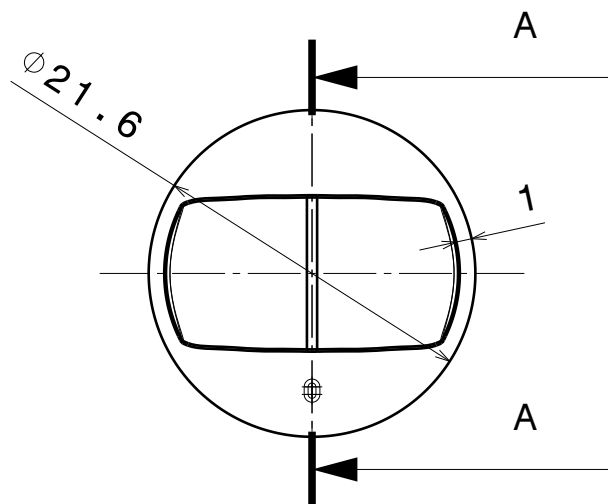
Bottom view



Front view



Top view



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Ledil Oy
Salorankatu 10
FIN 24240 SALO
Finland

DATASHEET TITLE Mechanical Drawing

DRAWN BY
ol
DATE
18.12.2012

CHECKED BY
as
DATE
18.12.2012

DESIGNED BY
ol
DATE
3.10.2012

CA13156 EMERALD-A

SIZE PART NUMBER REV
A4 CA13156 001

SCALE 2:1 WEIGHT SHEET 1/1

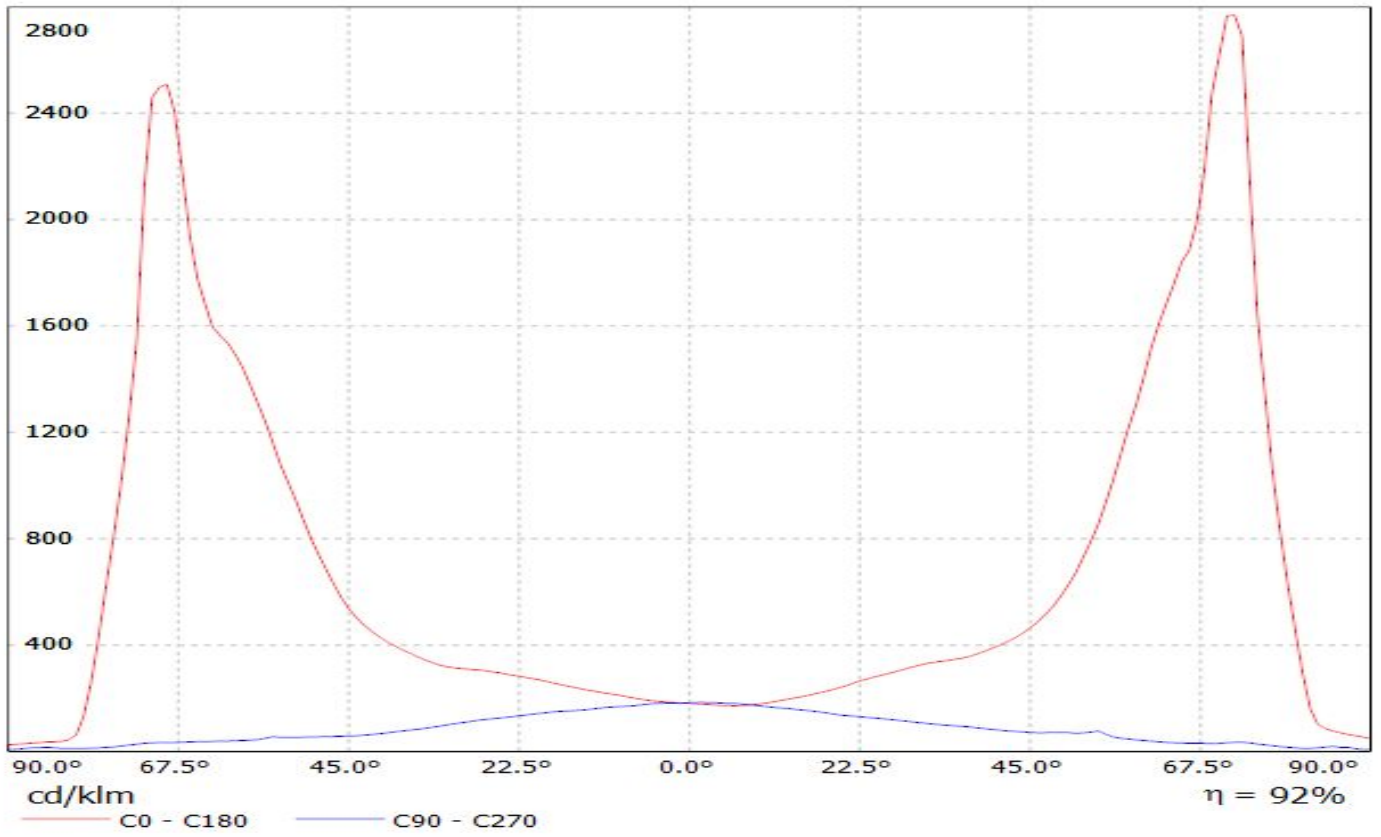
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D

A

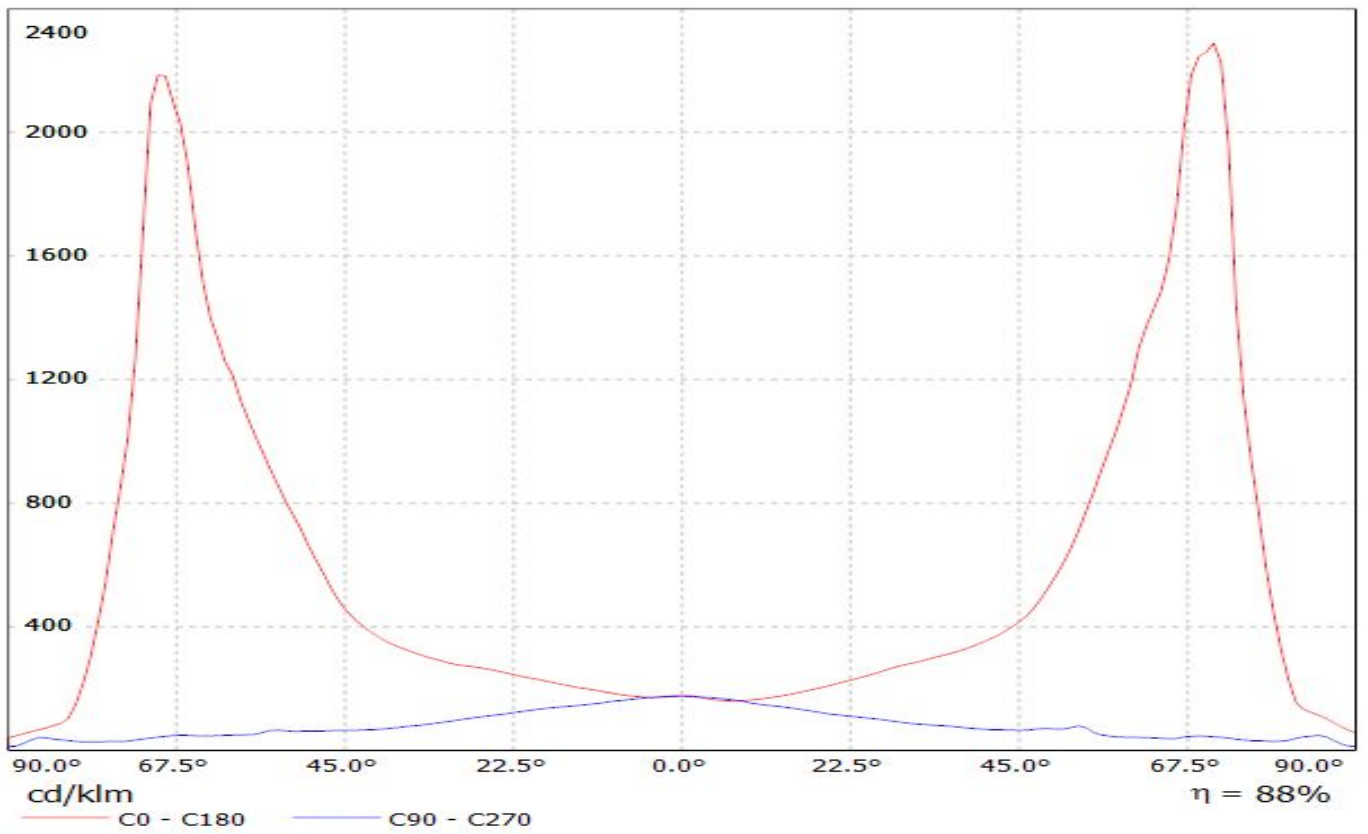
LEDiL Oy CA13156_EMERALD-A_(XP-E) Eff.91.5% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-E) Eff.91.5%
Lamps: 1 x CREE XP-E (51.4197lm@250mA)



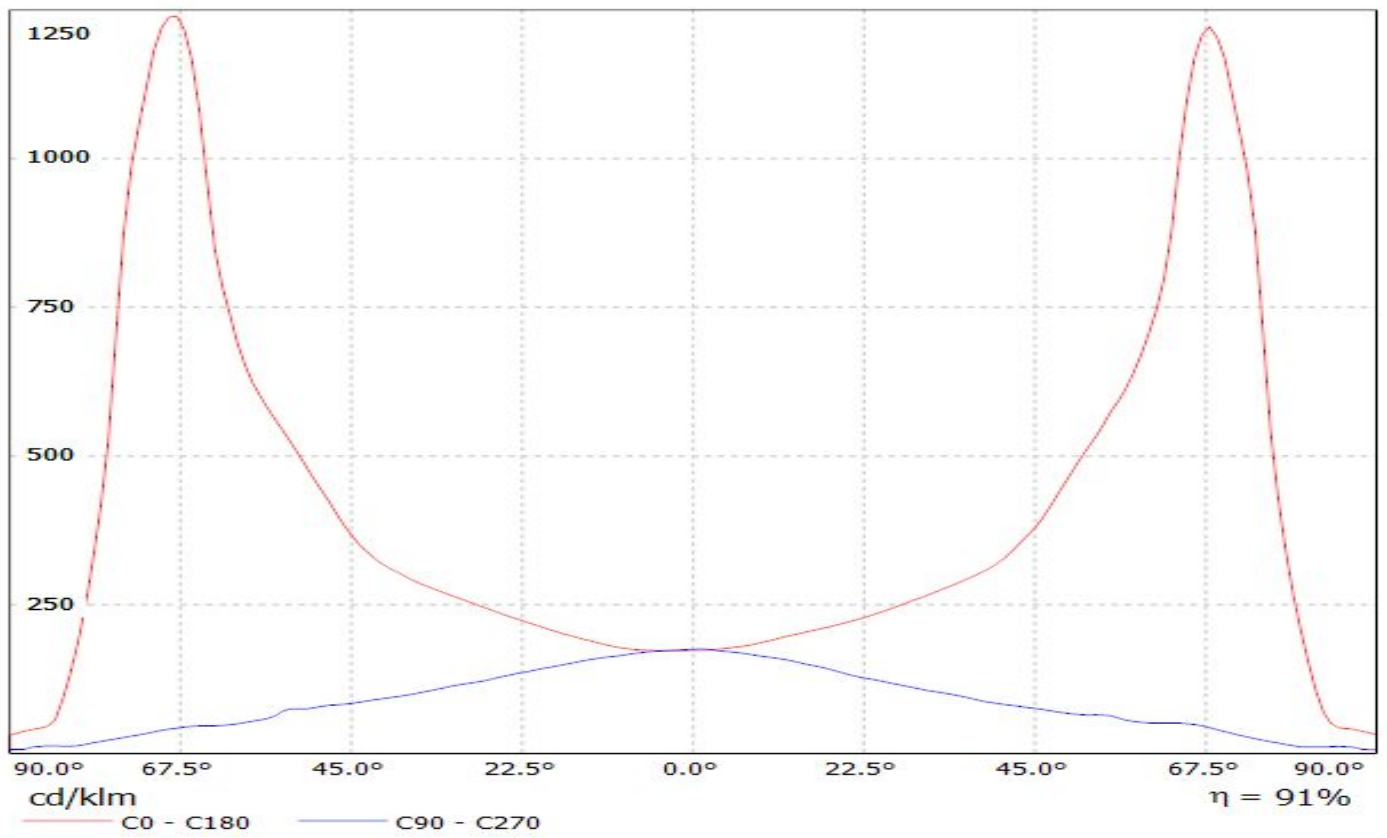
LEDiL Oy CA13156_EMERALD-A_(XB-D) Eff.87.8% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XB-D) Eff.87.8%
Lamps: 1 x Cree XB-D (95lm@250mA)



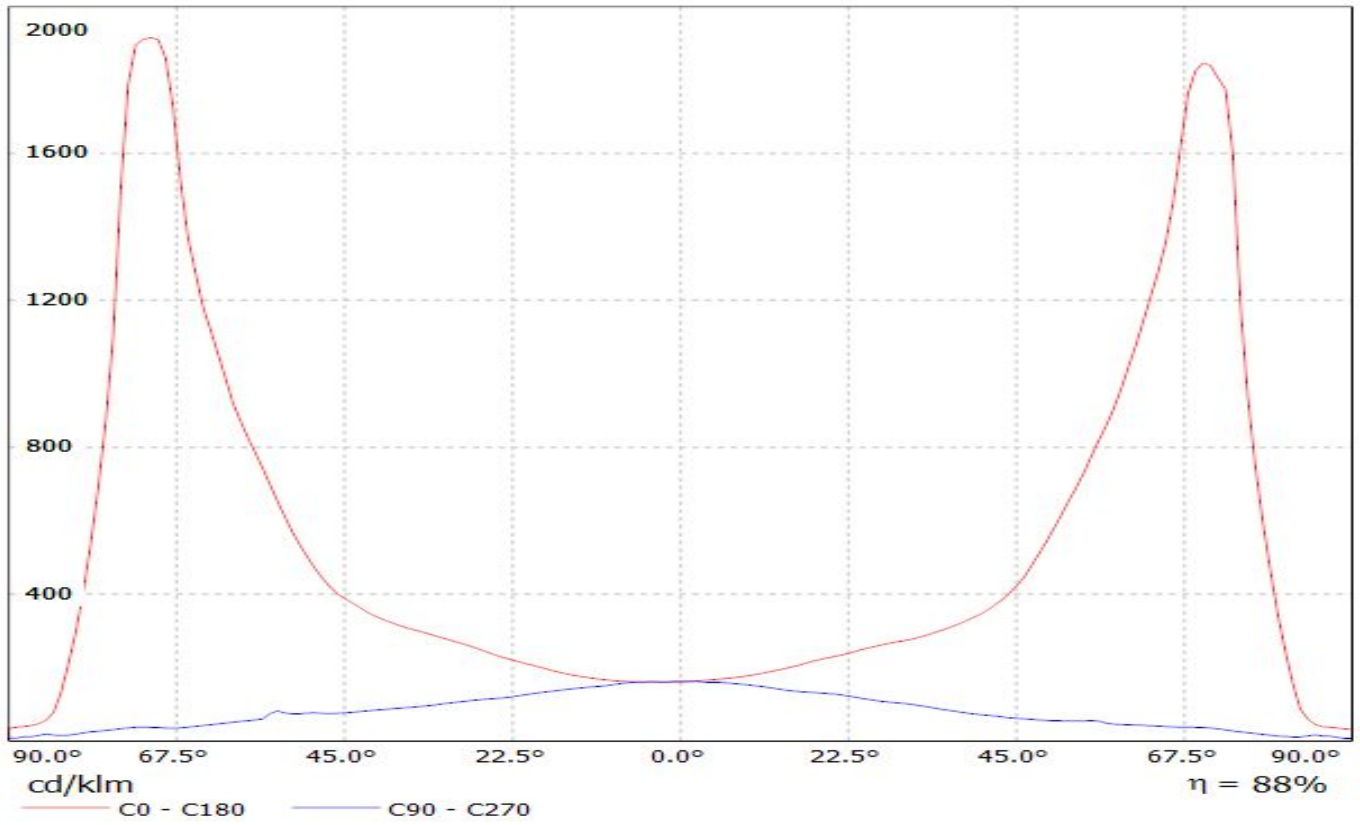
LEDiL Oy CA13156_EMERALD-A_(XM-L) Eff.90.8% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XM-L) Eff.90.8%
Lamps: 1 x Cree XM-L (91.7822lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(XP-G) Eff.88.1% / LDC (Linear)

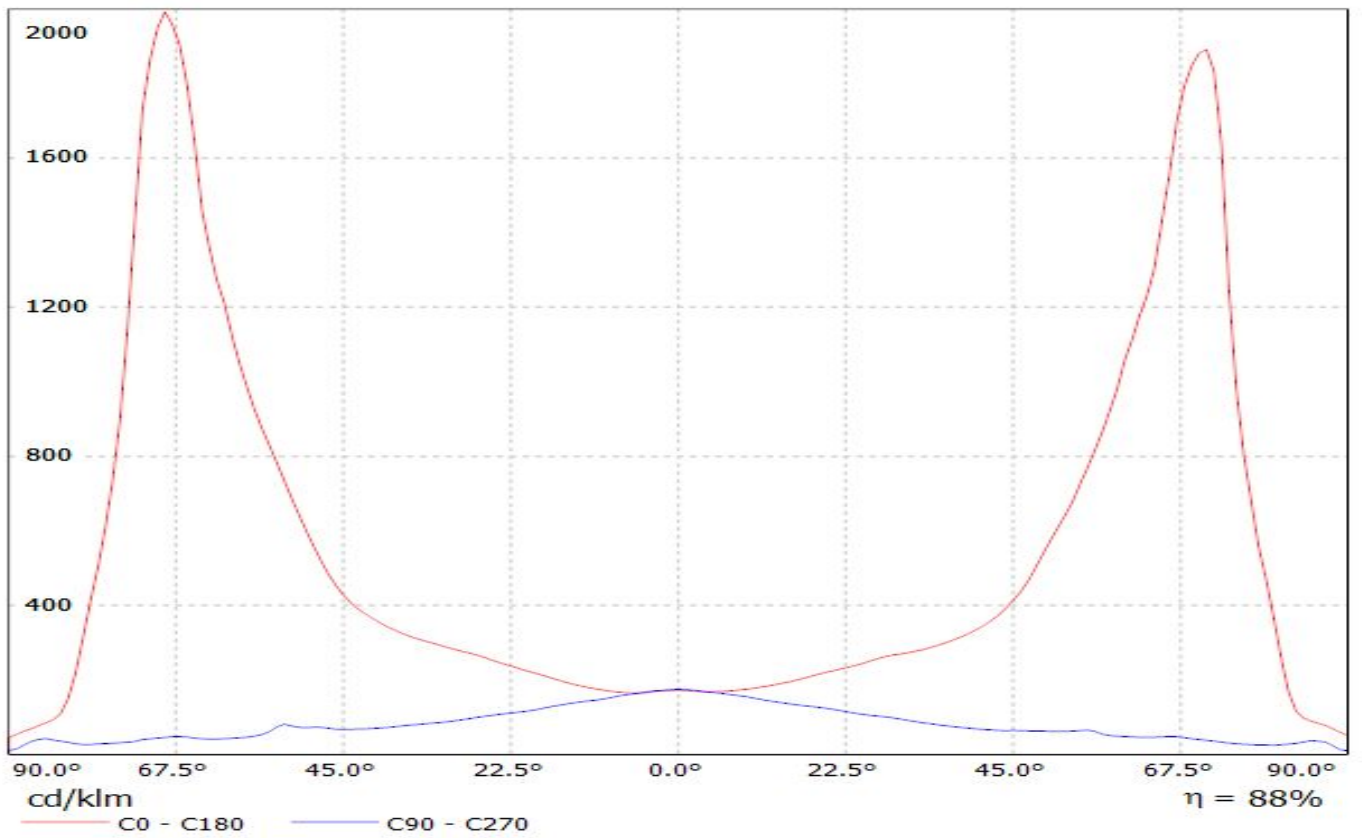
Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-G) Eff.88.1%
Lamps: 1 x XP-G (70.6lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(XT-E) Eff.88.2% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XT-E) Eff.88.2%

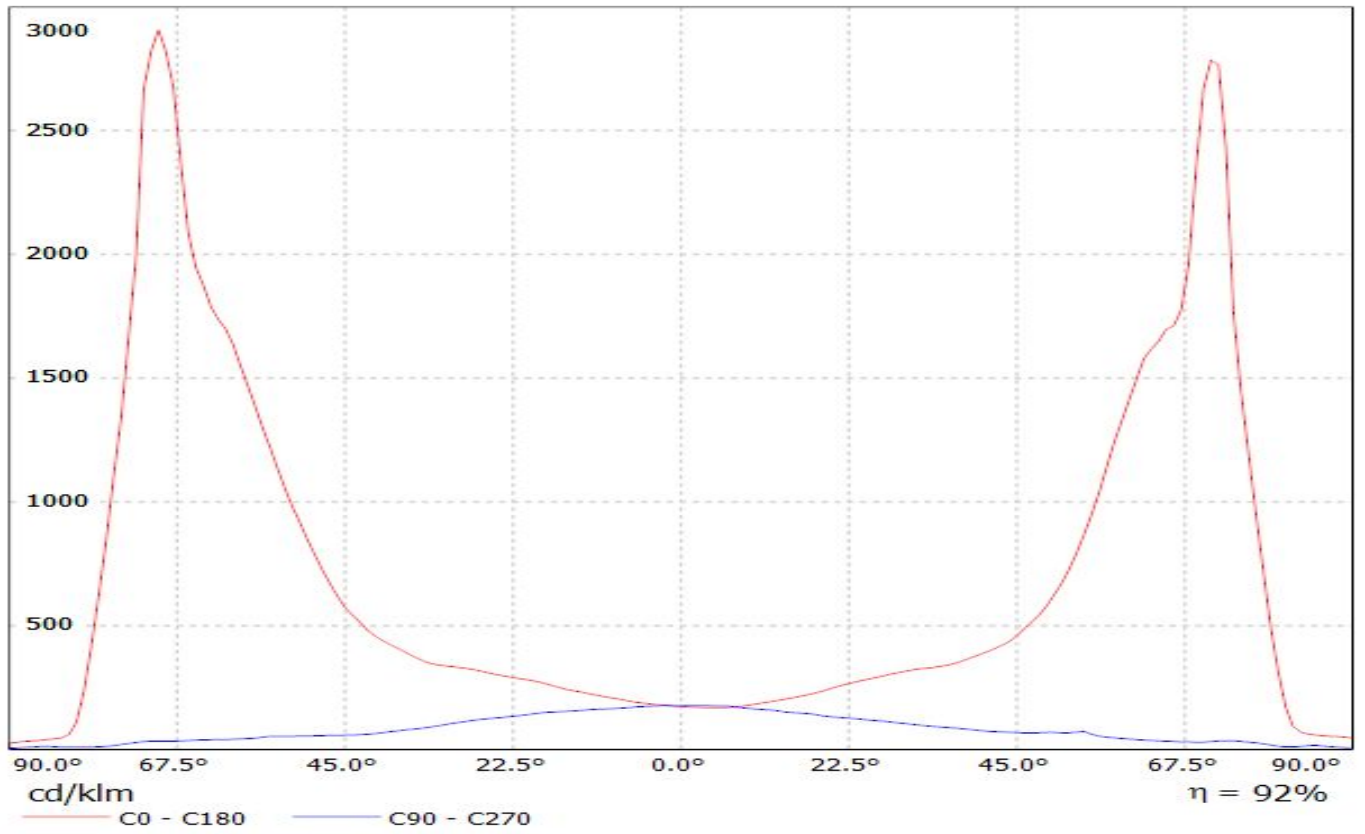
Lamps: 1 x Cree XT-E (102.3lm@250mA)



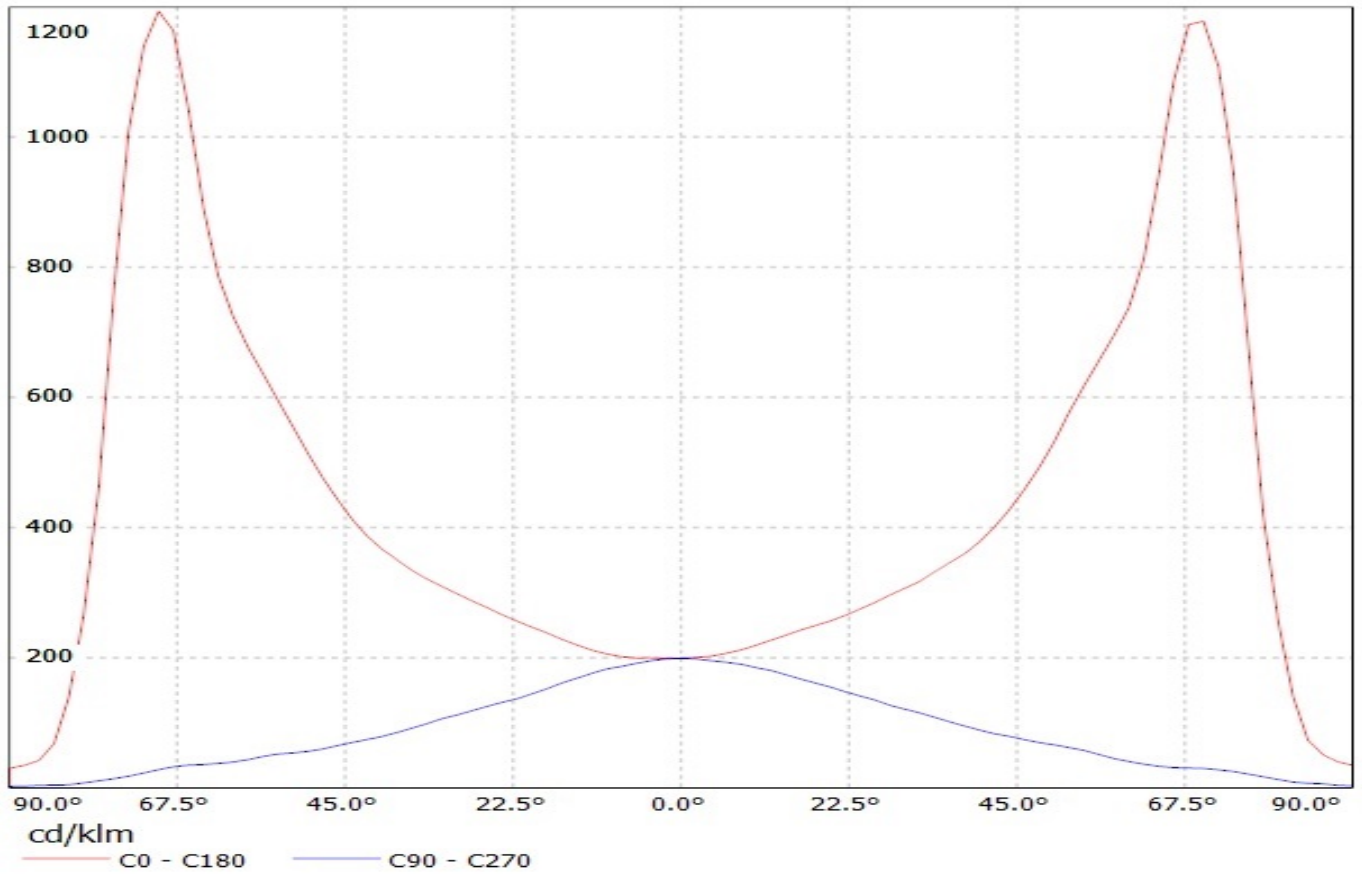
LEDiL Oy CA13156_EMERALD-A_(XP-E2) Eff.91.7% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-E2) Eff.91.7%

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

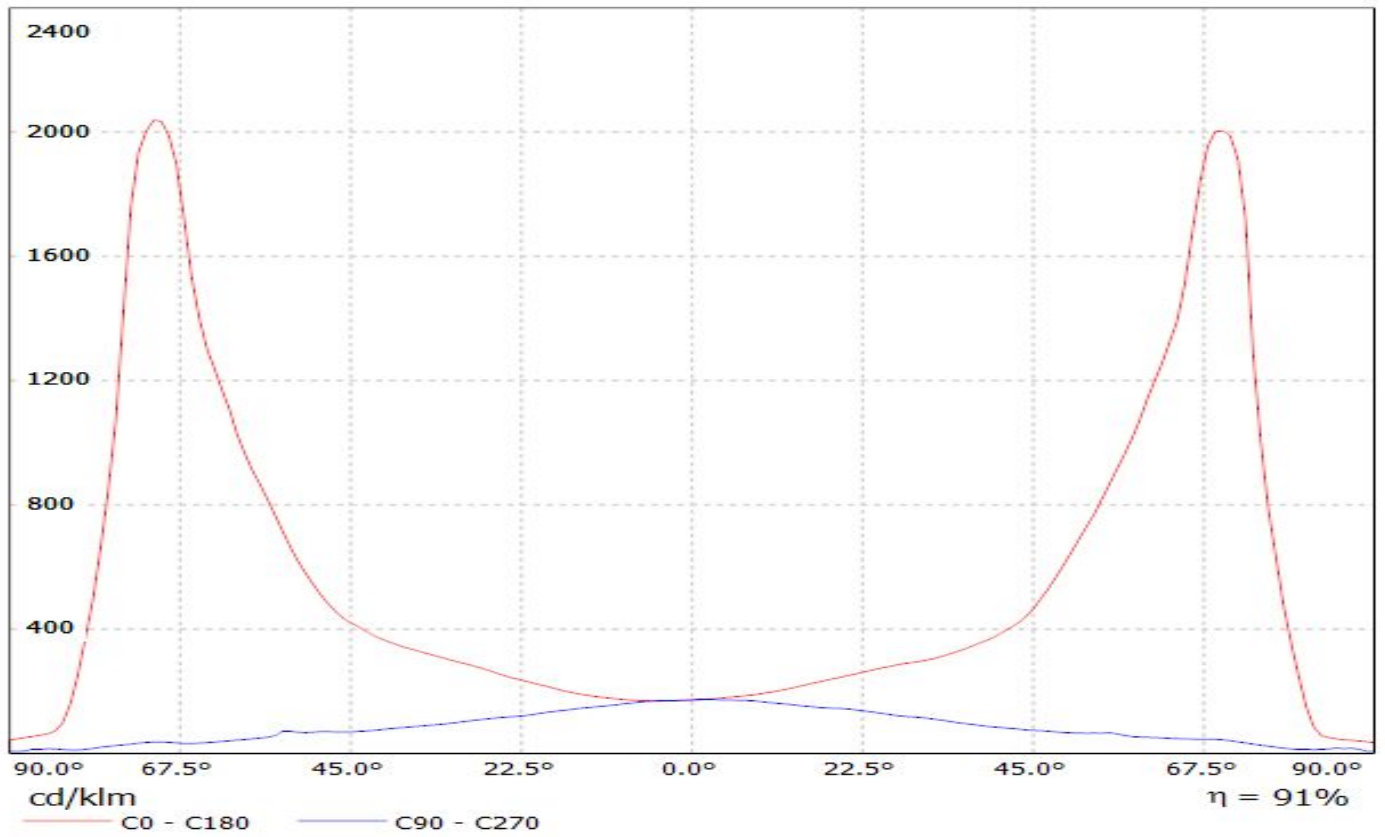


Luminaire: LEDil Oy CA13156_EMERALD-A_(XM-L2) Efficiency=92%
Lamps: 1 x Cree XM-L2 (XMLBWT-0-7B4-T30-0L-0001) 91lm @ 250mA CCT=3200K P=0.7W I=250mA



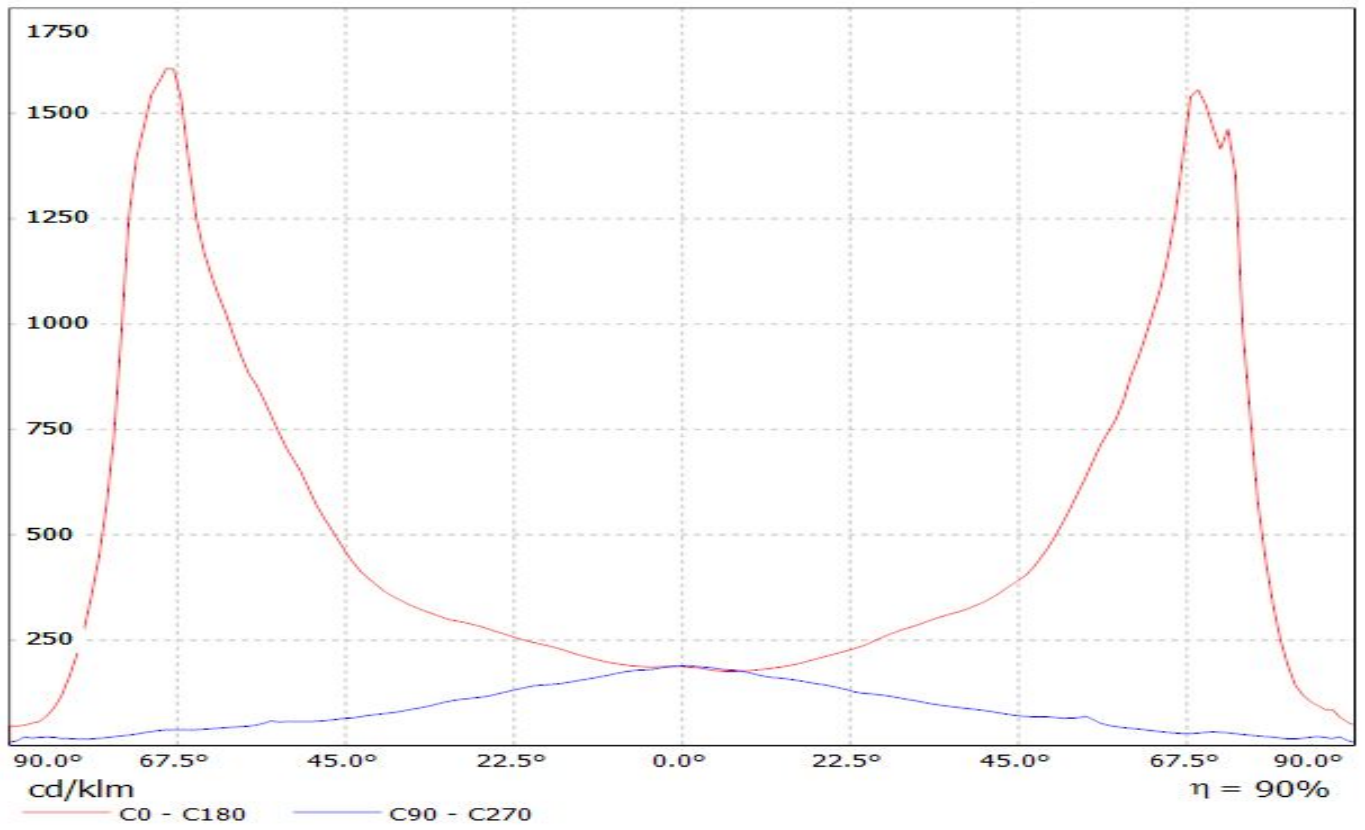
LEDiL Oy CA13156_EMERALD-A_(XP-G2) Eff.91.4% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-G2) Eff.91.4%
Lamps: 1 x CREE XP-G2 (105.7lm@250mA)



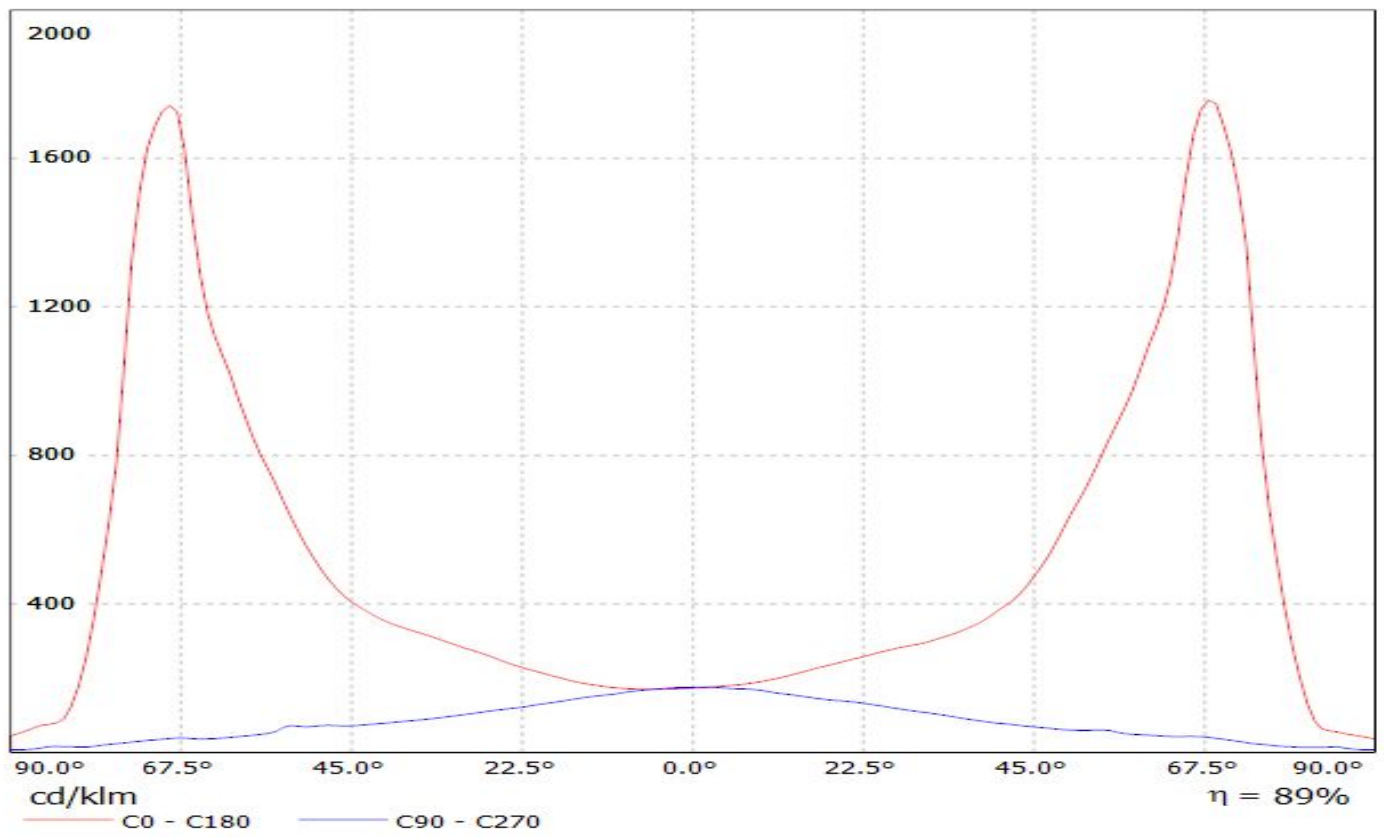
LEDiL Oy CA13156_EMERALD-A_(LG3535) Eff.89.7% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(LG3535) Eff.89.7%
Lamps: 1 x LG 3535 Ceramic (94lm@250mA)

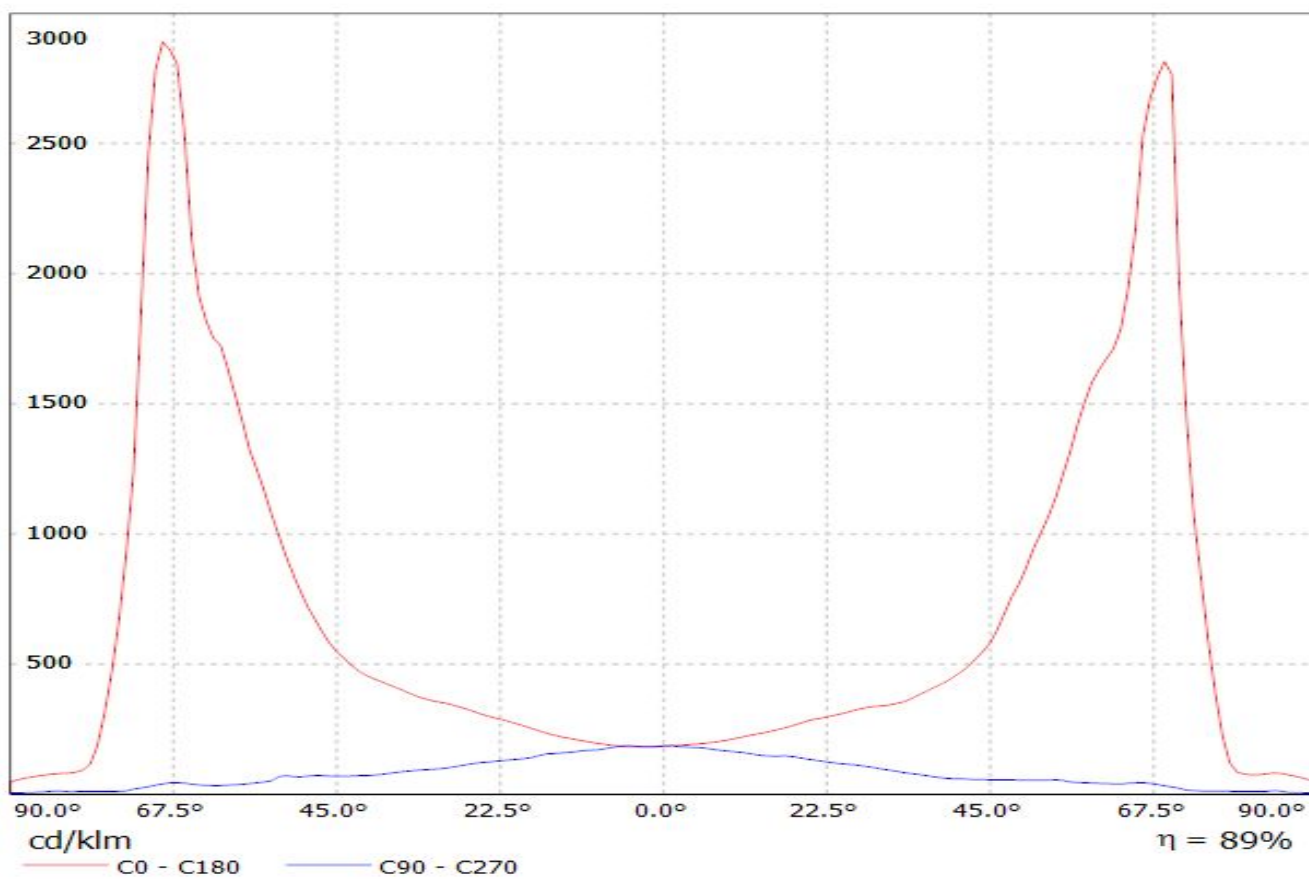


LEDiL Oy CA13156_EMERALD-A_(LUXEON_A) Eff.88.6% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(LUXEON_A) Eff.88.6%
Lamps: 1 x LUXEON_R (67.5lm@250mA)

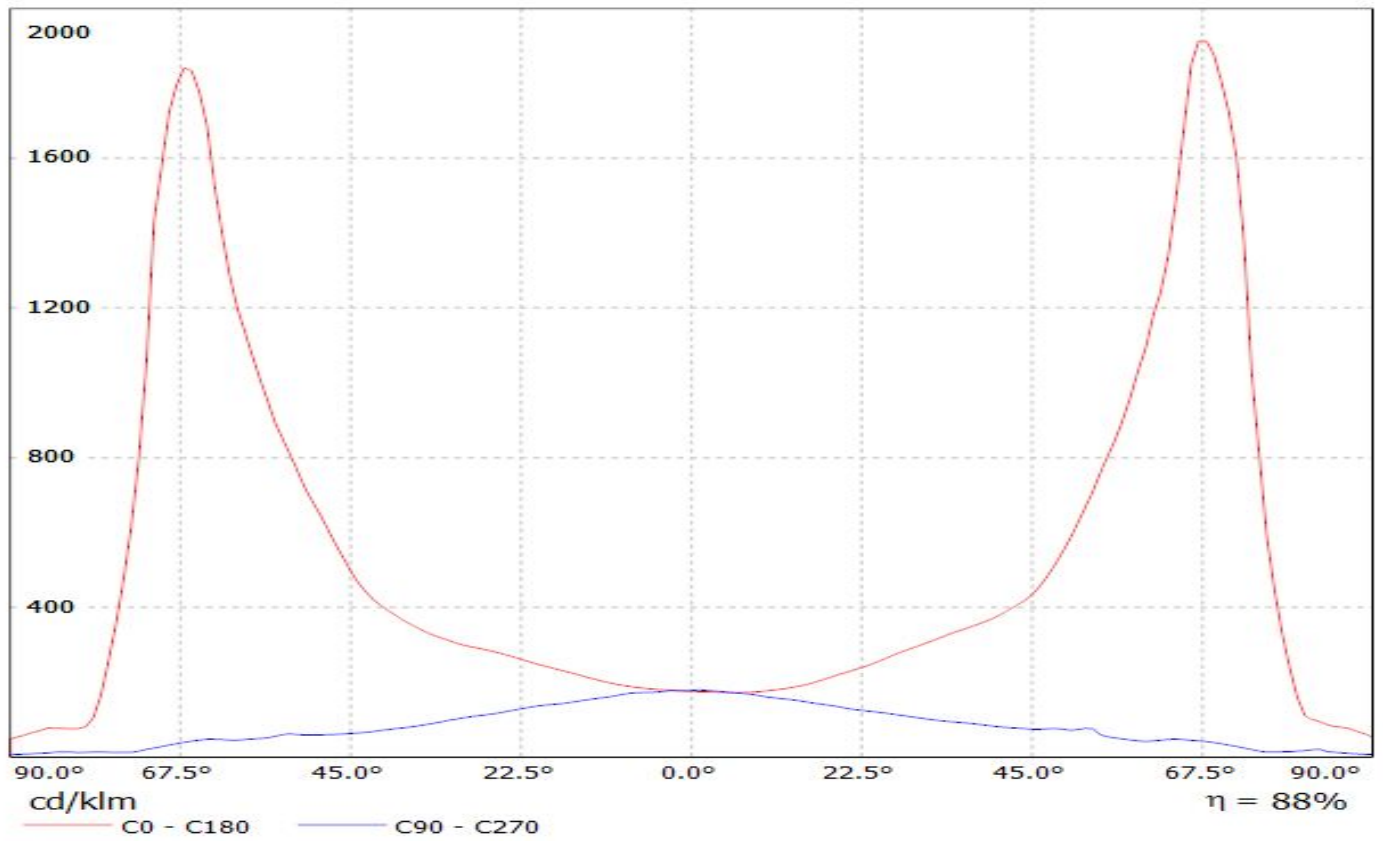


Luminaire: LEDiL Oy CA13156_EMERALD-A_(Rebel) Eff. 88,8%
Lamps: 1 x Luxeon Rebel (82lm@250mA)

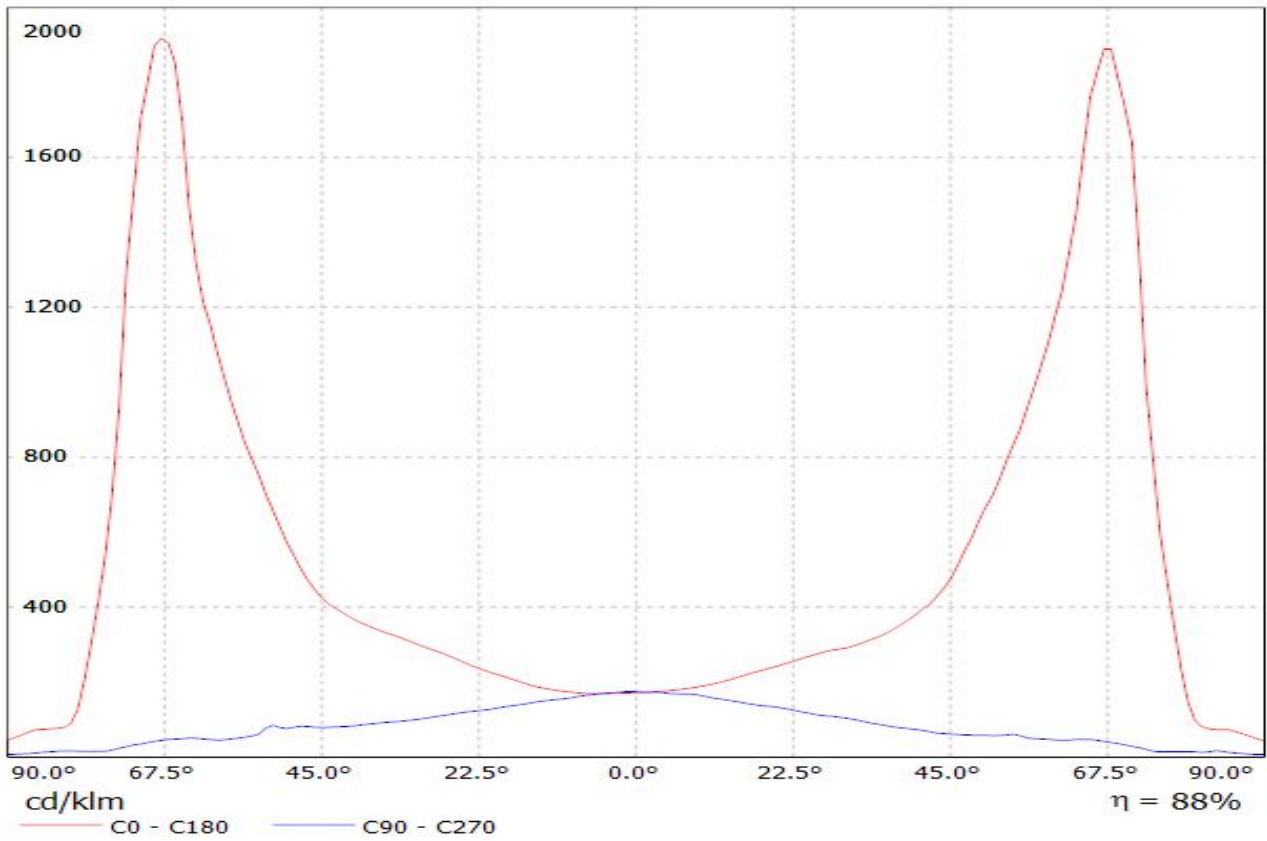


LEDiL Oy CA13156_EMERALD-A_(LUXEON_R) Eff.88.4% / LDC (Linear)

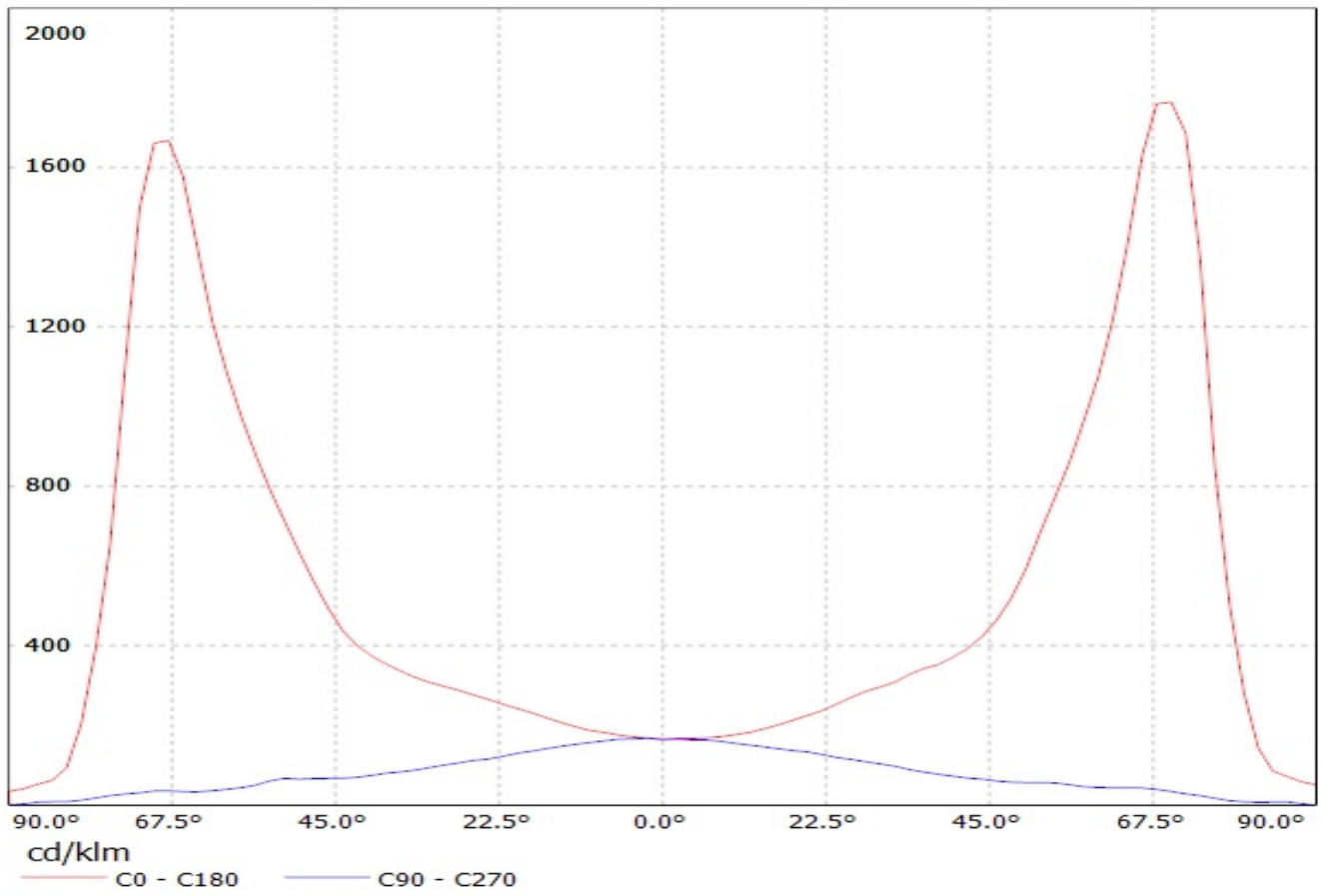
Luminaire: LEDiL Oy CA13156_EMERALD-A_(LUXEON_R) Eff.88.4%
Lamps: 1 x LUXEON_R (85.6lm@250mA)



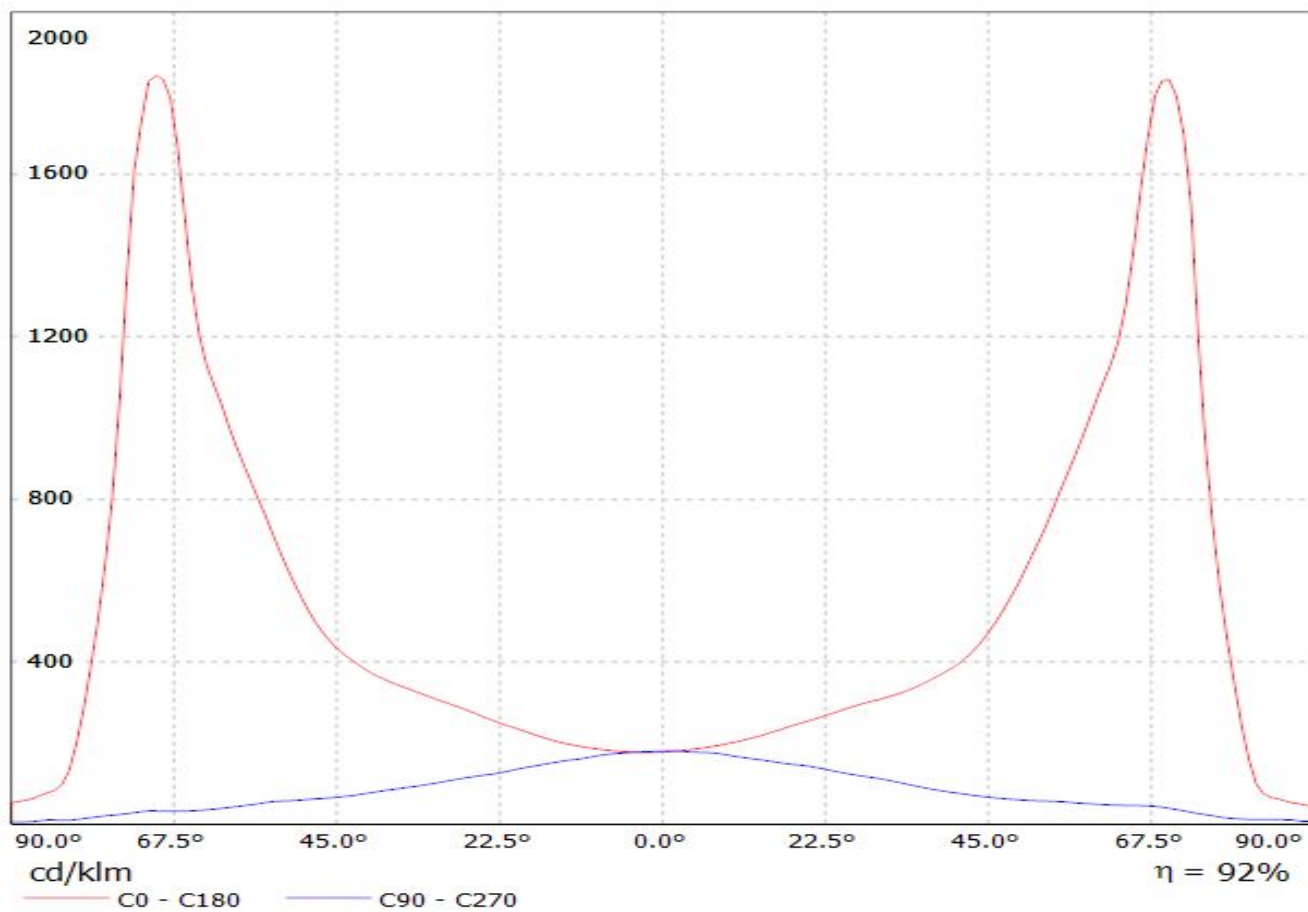
Luminaire: LEDiL Oy CA13156_EMERALD-A_(Rebel-ES) Eff. 88%
Lamps: 1 x Luxeon Rebel-ES (90lm@250mA)



Luminaire: Ledil Oy CA13156_EMERALD-A (Luxeon T 71lm @ 250mA) Efficiency=93%
Lamps: 1 x Luxeon T 71lm @ 250mA

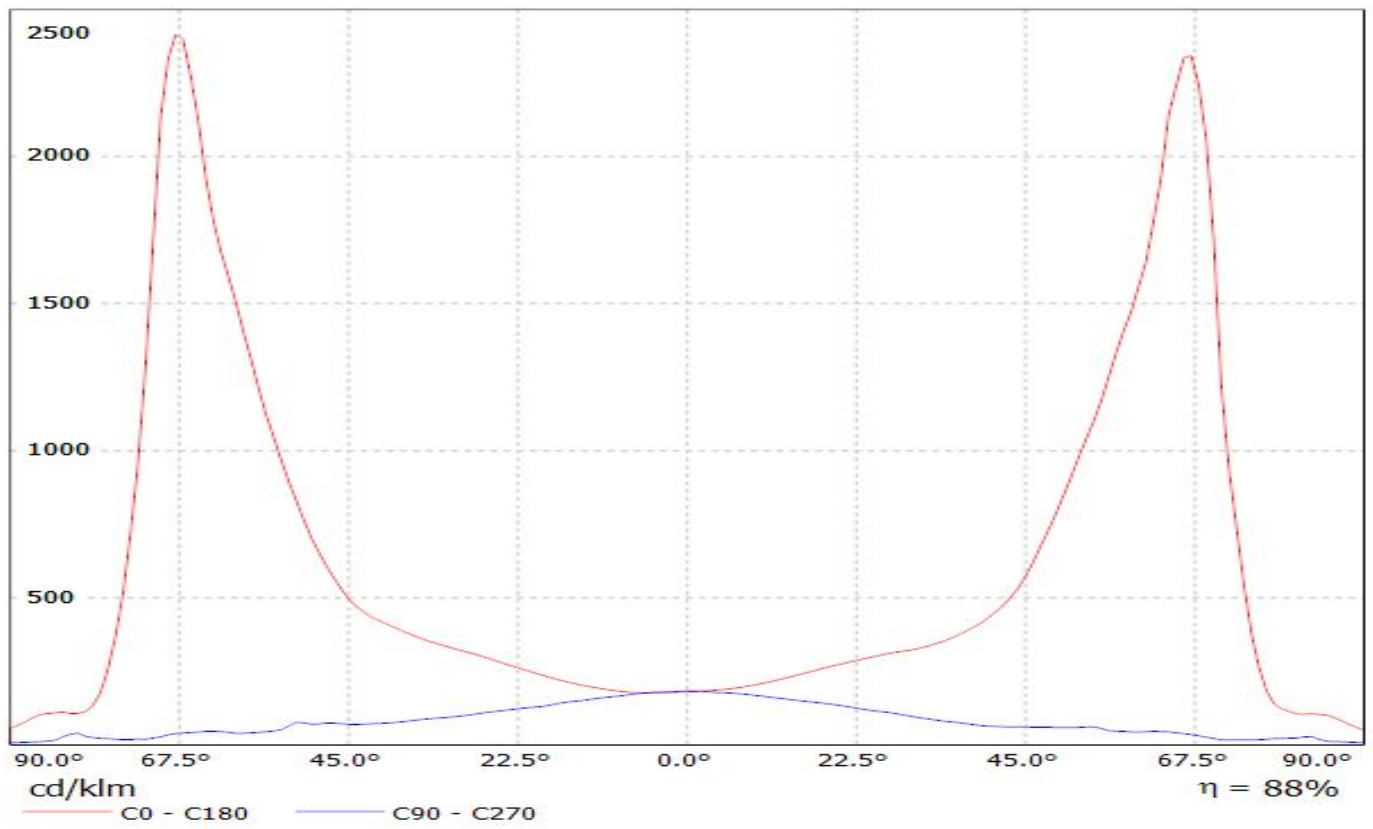


Luminaire: LEDiL Oy CA13156_EMERALD-A (Luxeon_TX) Eff.91.7%
Lamps: 1 x Luxeon_TX (L1T2-3585)_80.1801lm@250mA_CCT=3500K_P=0.731482W_I=249.9mA



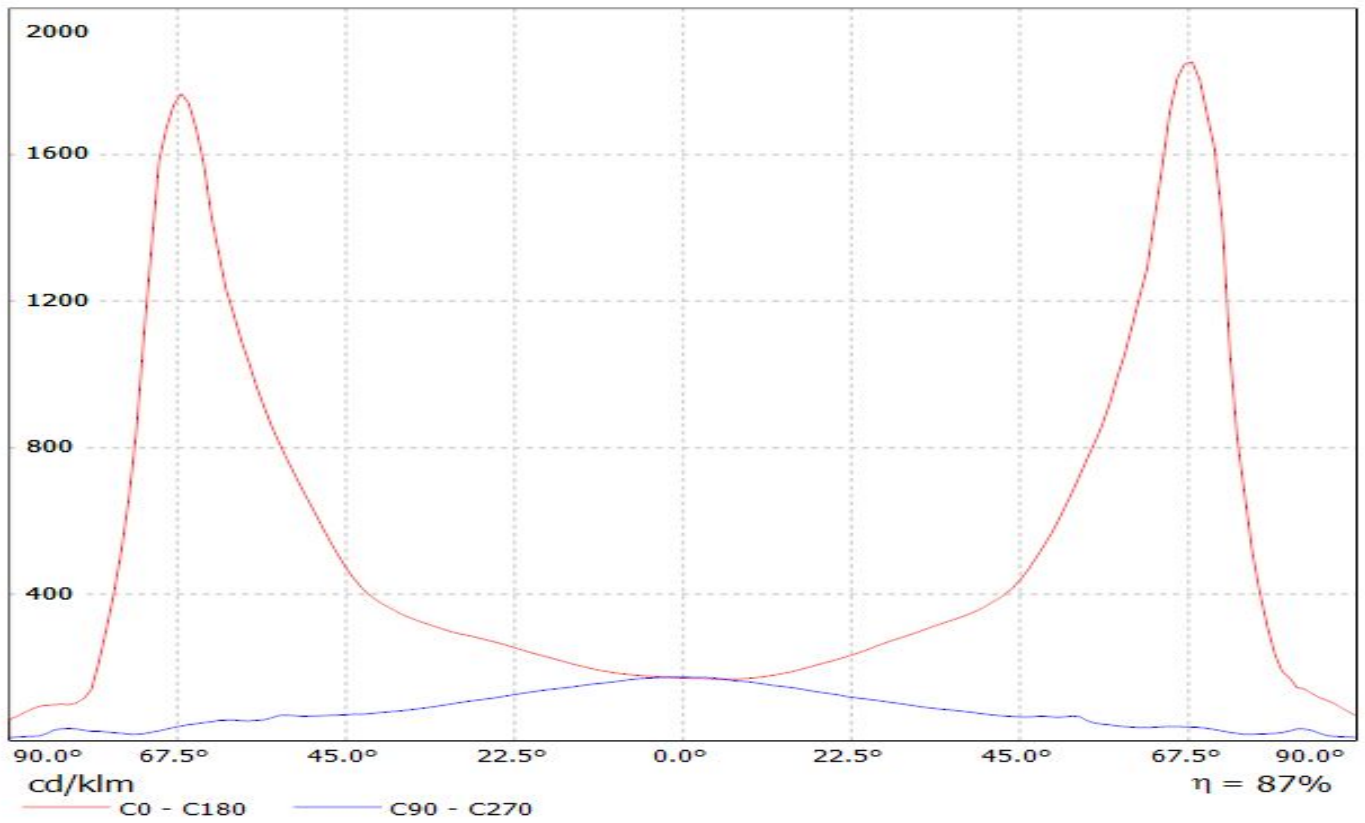
LEDiL Oy CA13156_EMERALD-A_(NCS19) Eff.88.1% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(NCS19) Eff.88.1%
Lamps: 1 x NCS19 (89lm@250mA)

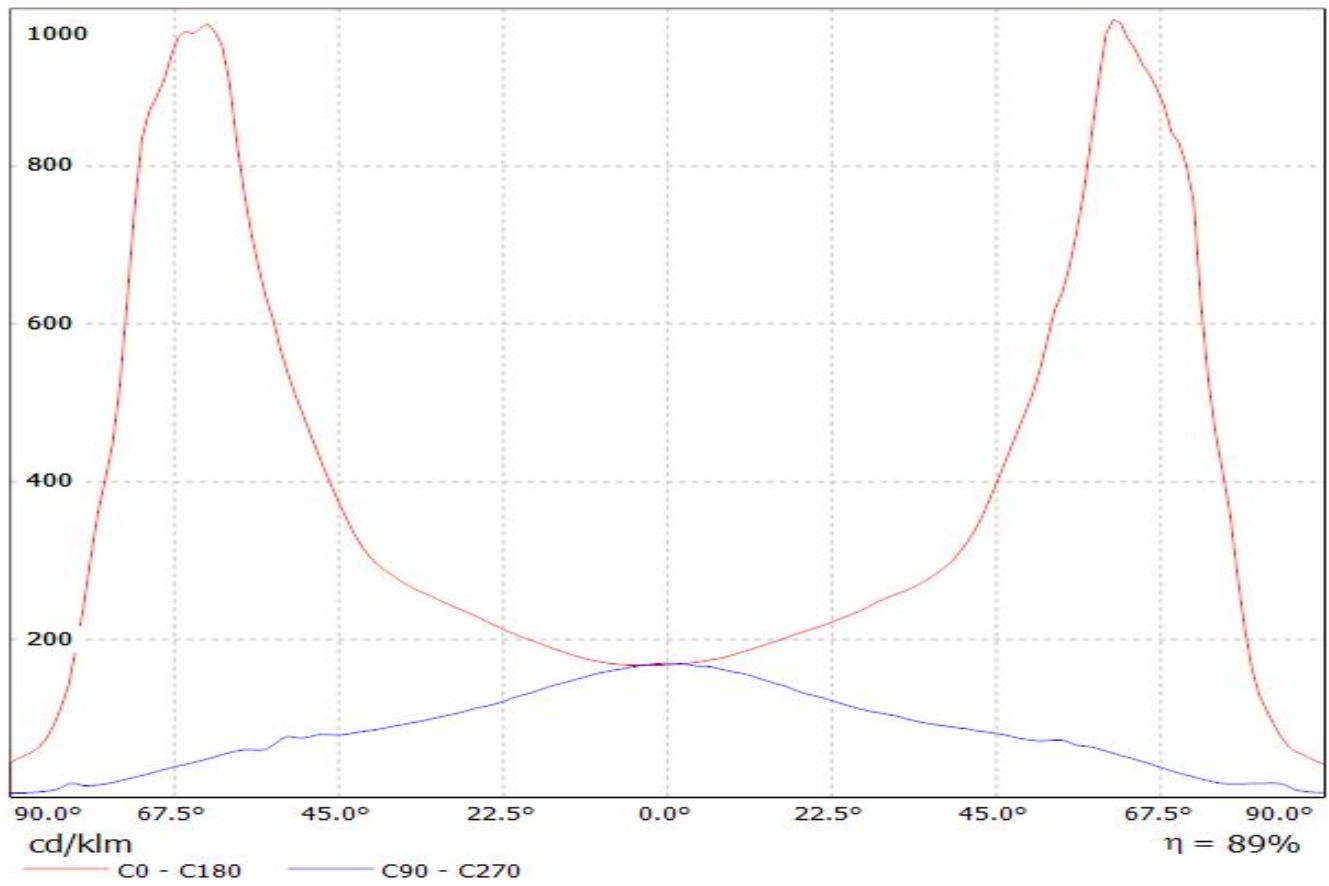


LEDiL Oy CA13156_EMERALD-A_(NVS19) Eff.87.5% / LDC (Linear)

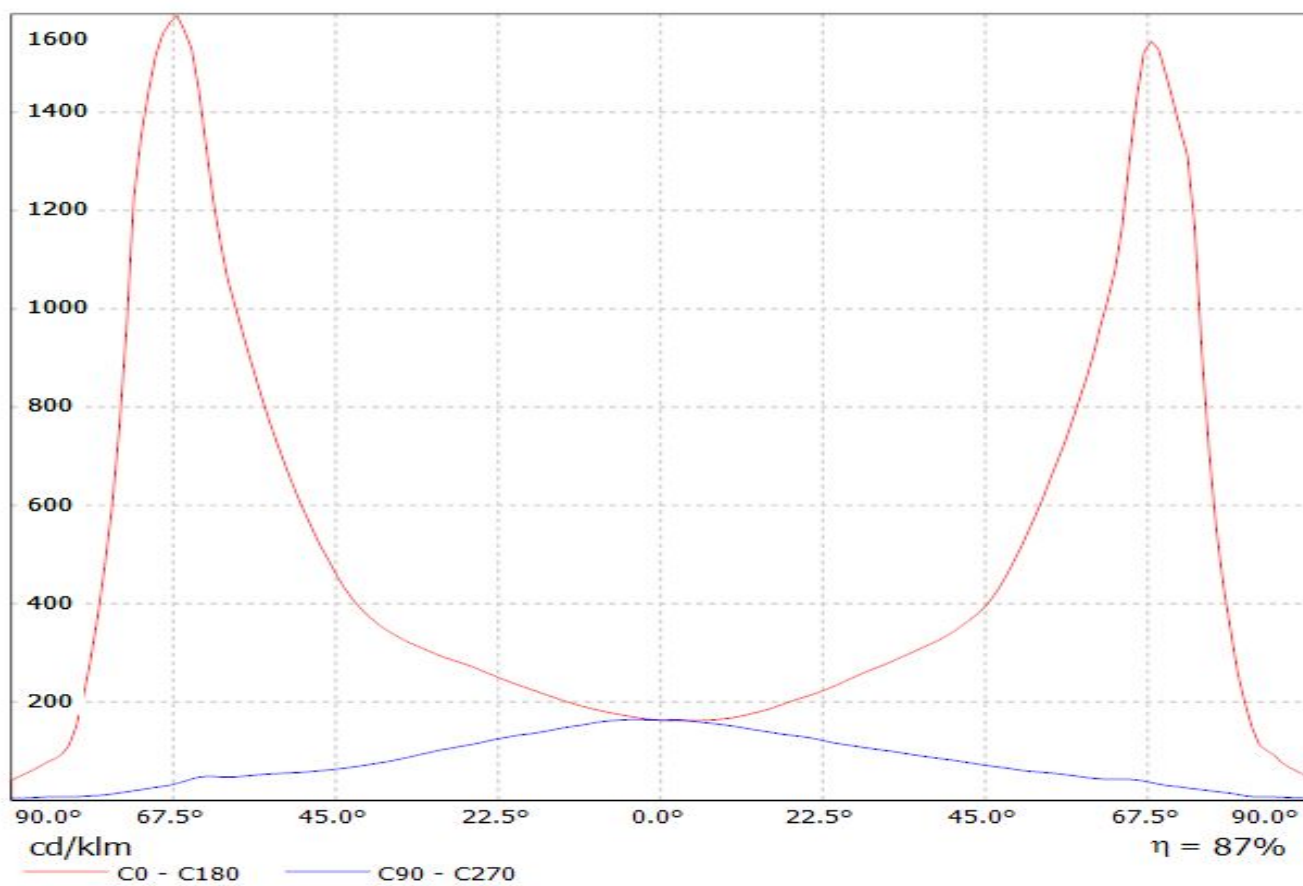
Luminaire: LEDiL Oy CA13156_EMERALD-A_(NVS19) Eff.87.5%
Lamps: 1 x NVS19 (98.3lm@250mA)



Luminaire: LEDiL Oy CA13156_EMERALD-A_(NS9x383) Eff. 89,2%
Lamps: 1 x Nichia NS9x383 (105lm@250mA)

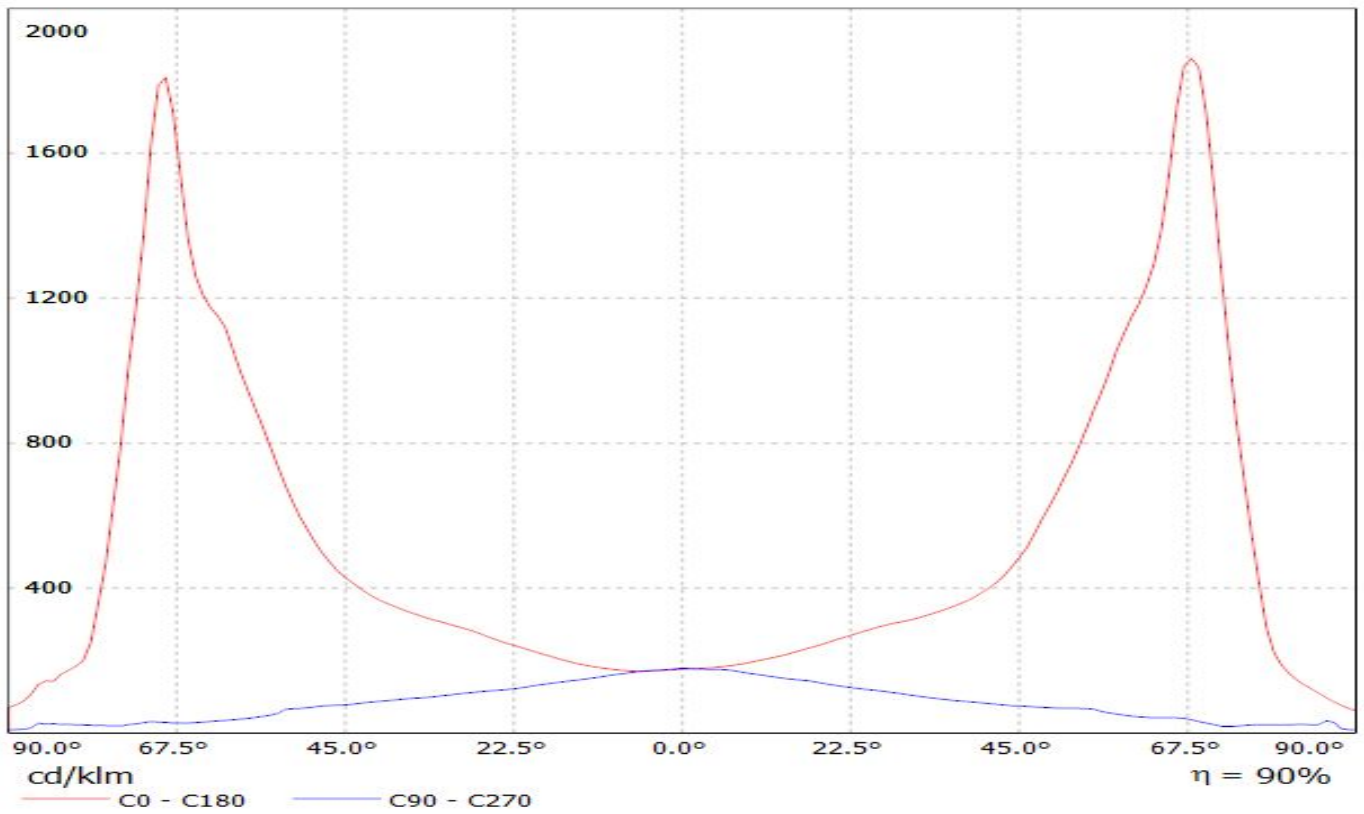


Luminaire: LEDiL Oy CA13156_EMERALD-A_(NVSL219CE)
Lamps: 1 x Nichia_NVSL219CE_101.227lm@250mA_P=0.713404W_I=0.25A



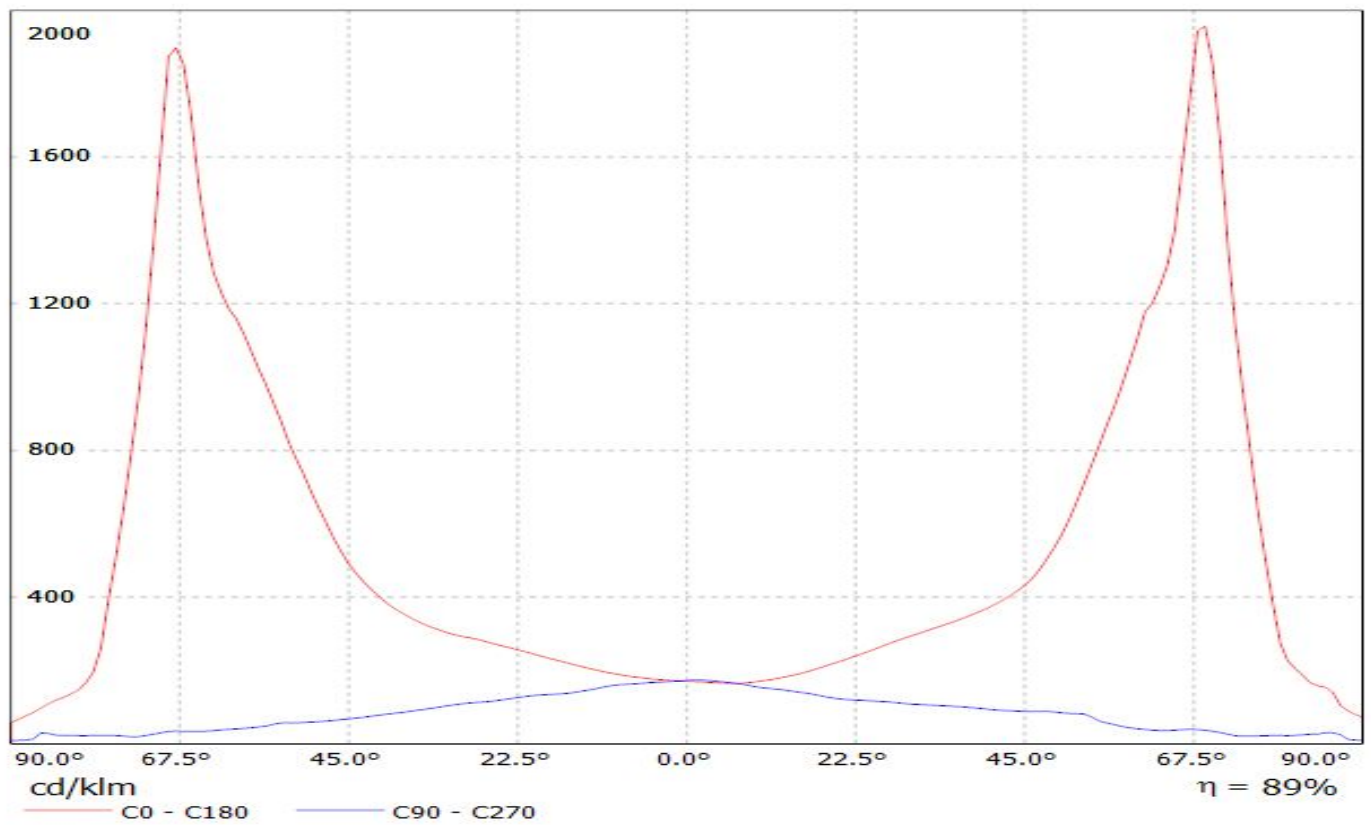
LEDiL Oy CA13156_EMERALD-A_(SQ-EC) Eff.89.6% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(SQ-EC) Eff.89.6%
Lamps: 1 x SQ-EC (64.5908lm@250mA)



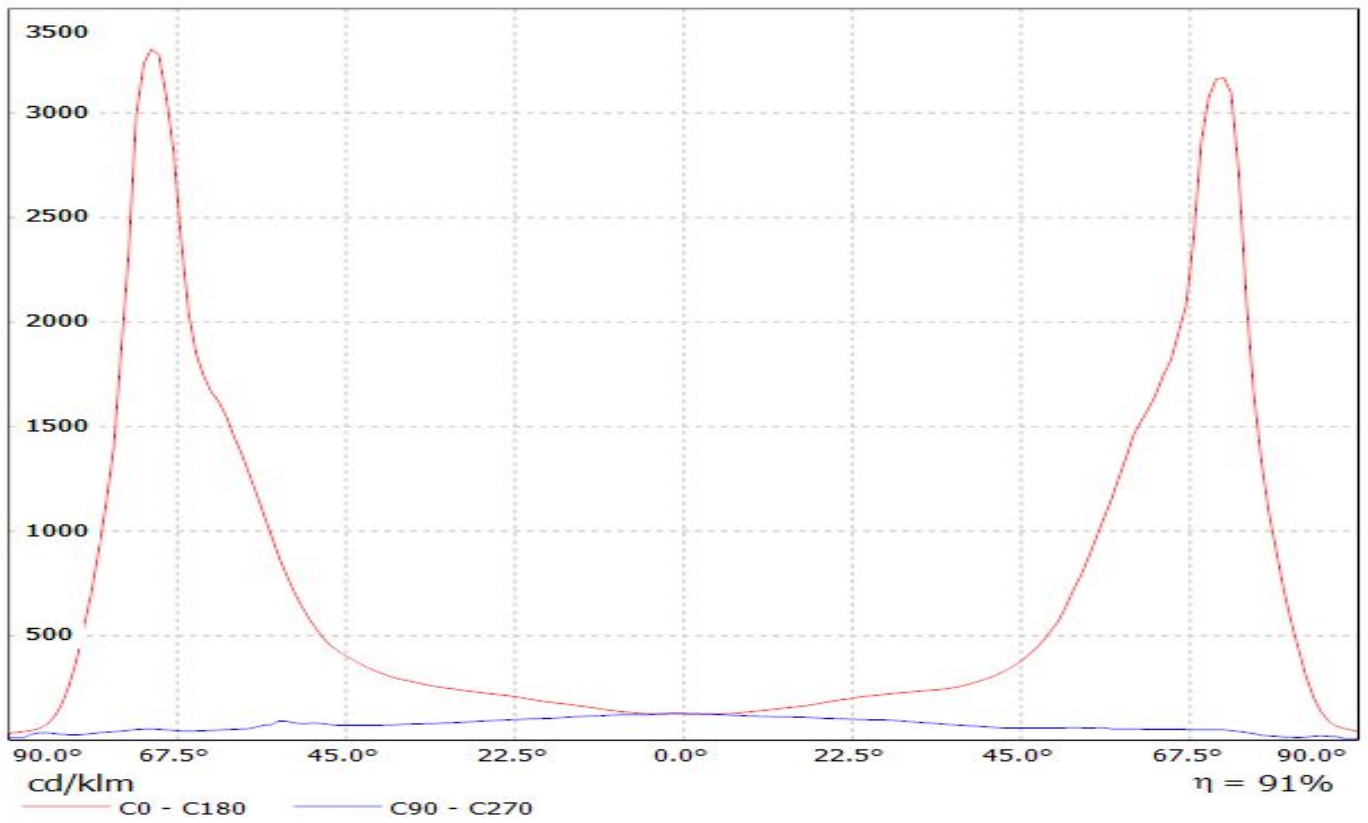
LEDiL Oy CA13156_EMERALD-A_(SQ-PC) Eff.89.1% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(SQ-PC) Eff.89.1%
Lamps: 1 x SQ-PC (79.1971lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(SSL150) Eff.91.4% / LDC (Linear)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(SSL150) Eff.91.4%
Lamps: 1 x Oslon SSL150 (71.5lm@250mA)

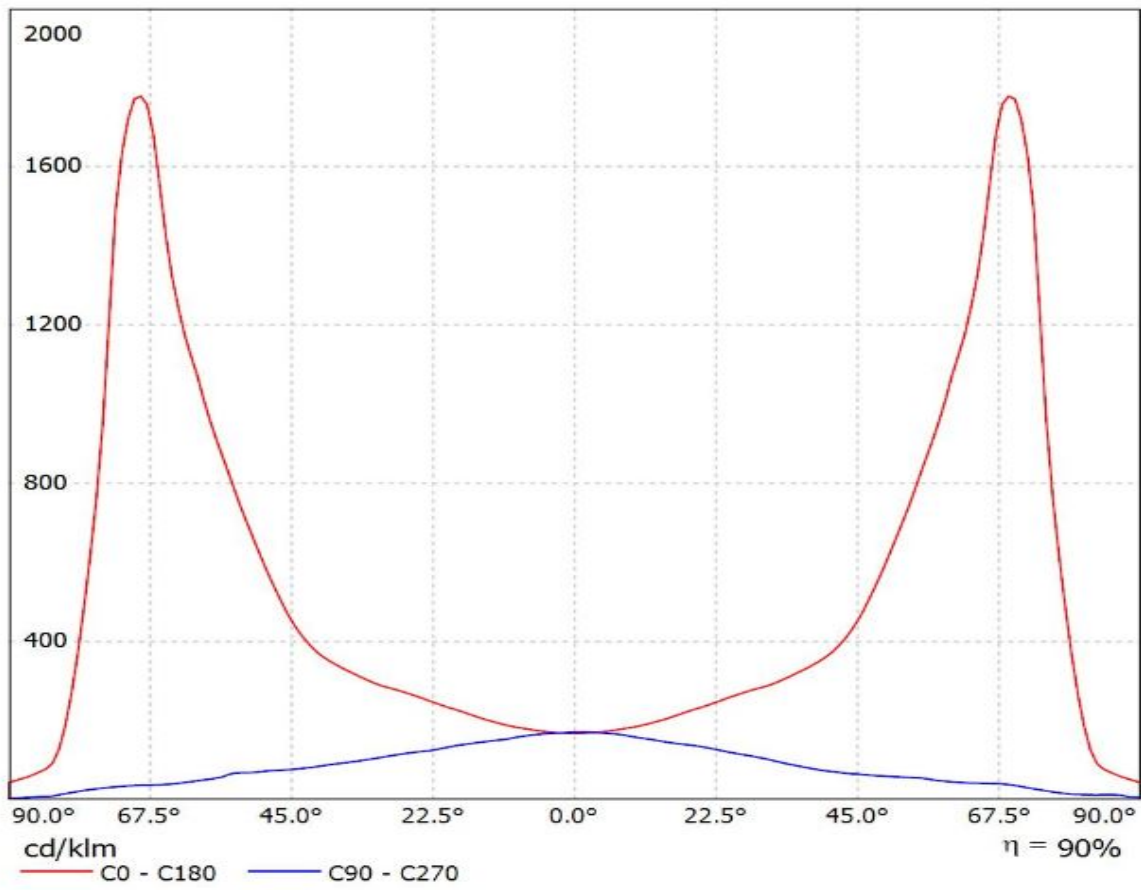


LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.89.4% / LDC (Linear)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.89.4%
Lamps: 1 x Oslon SSL (81.3lm@250mA)



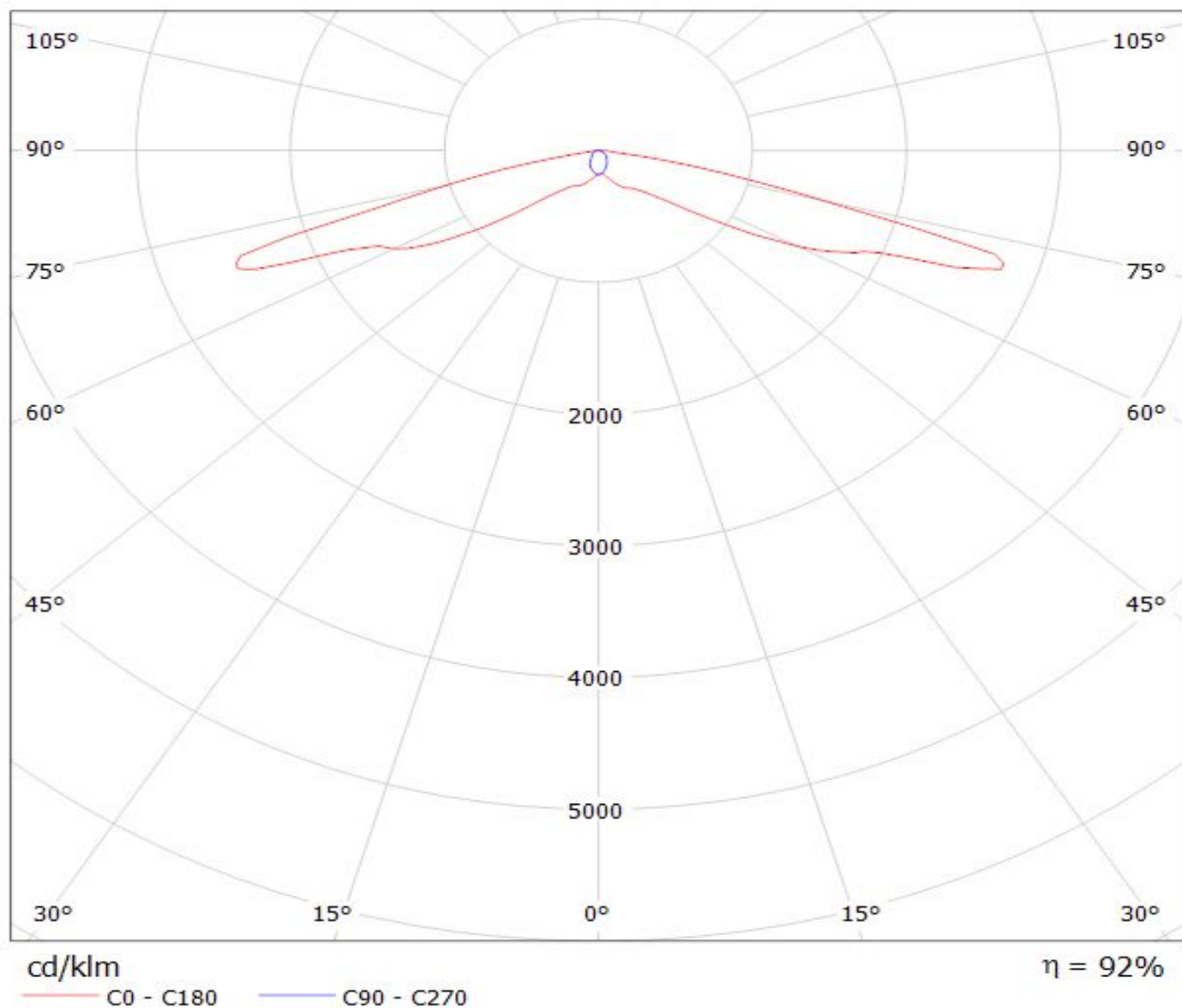
Luminaire: LEDiL Oy CA13156_EMERALD-A_(Square_Giant) Osram_Square_Giant_113.056lm@250mA_P=0.722_I=250mA
Lamps: 1 x Osram_Square_Giant_113.056lm@250mA_P=0.722_I=250mA



LEDiL Oy CA13156_EMERALD-A_(XP-E) Eff.91.5% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-E) Eff.91.5%

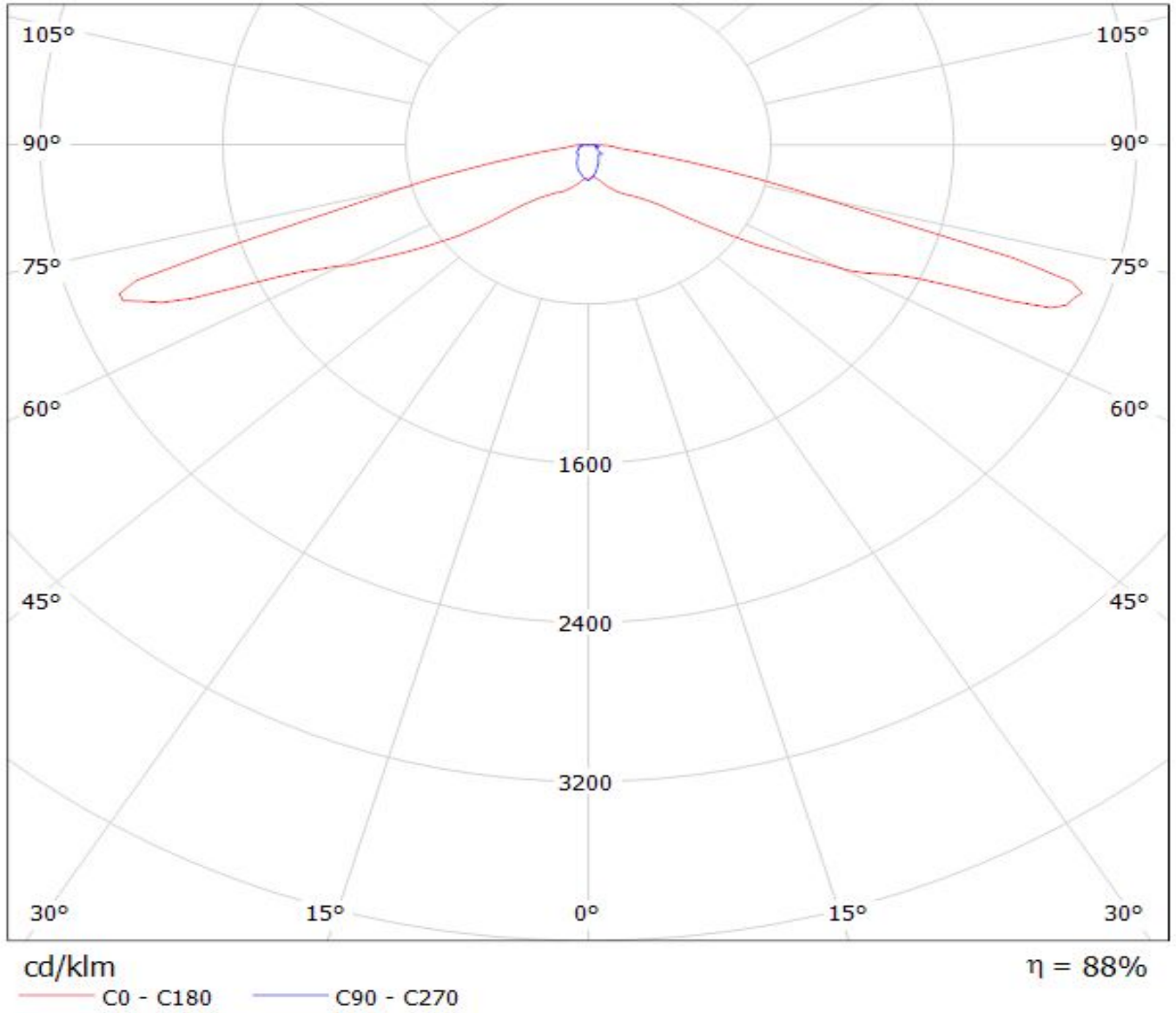
Lamps: 1 x CREE XP-E (51.4197lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(XB-D) Eff.87.8% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XB-D) Eff.87.8%

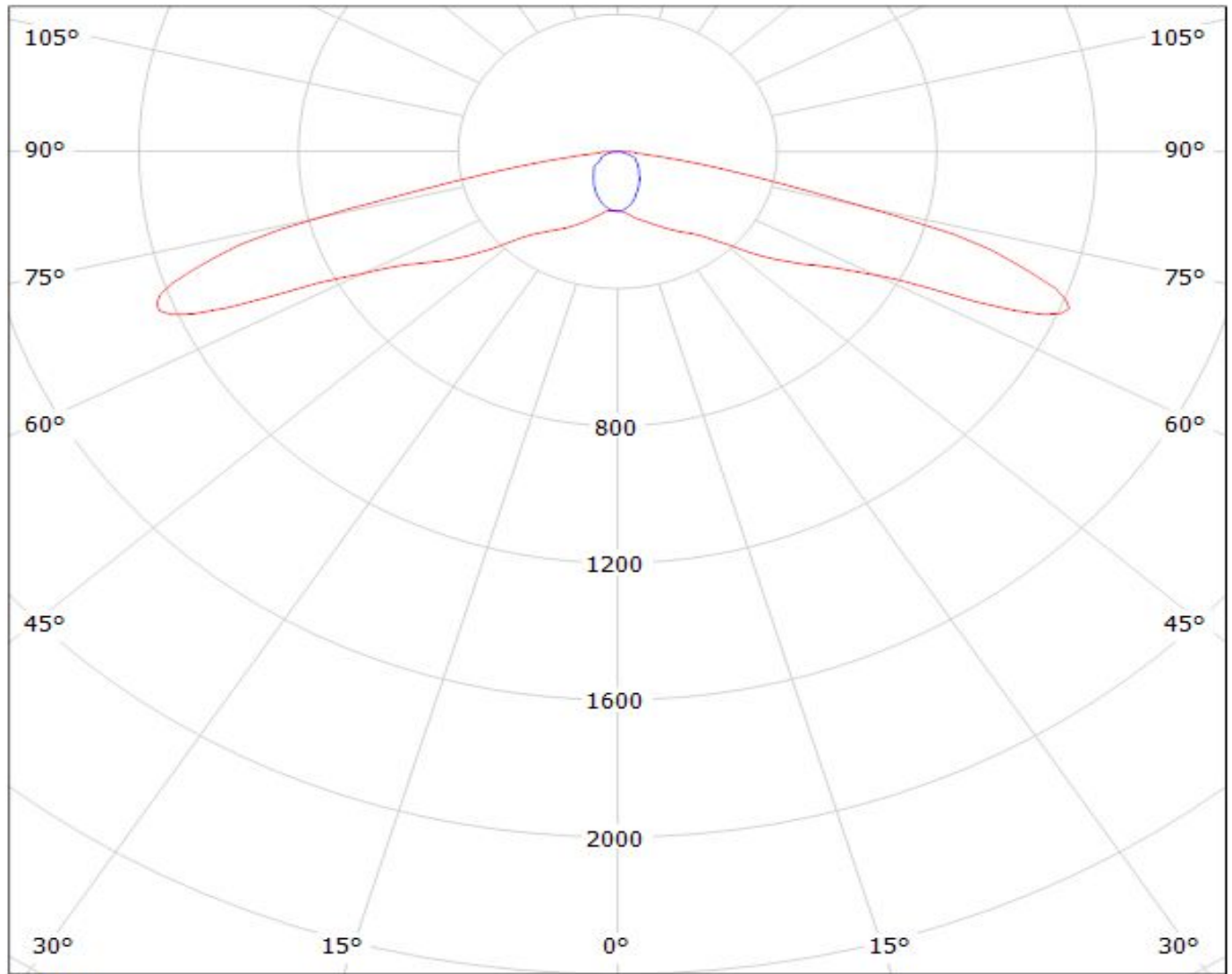
Lamps: 1 x Cree XB-D (95lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(XM-L) Eff.90.8% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XM-L) Eff.90.8%

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



cd/klm

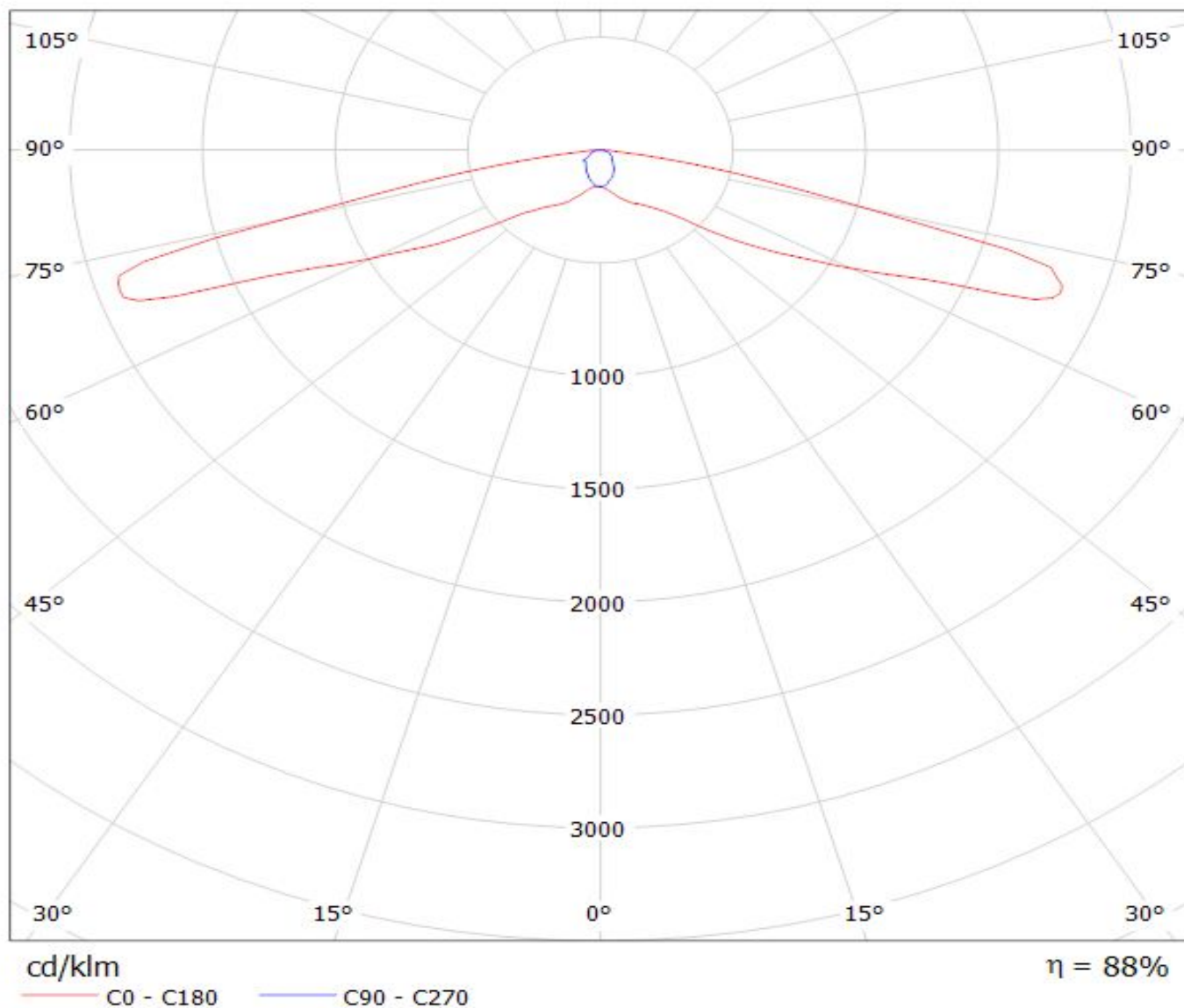
— C0 - C180

— C90 - C270

$\eta = 91\%$

LEDiL Oy CA13156_EMERALD-A_(XP-G) Eff.88.1% / LDC (Polar)

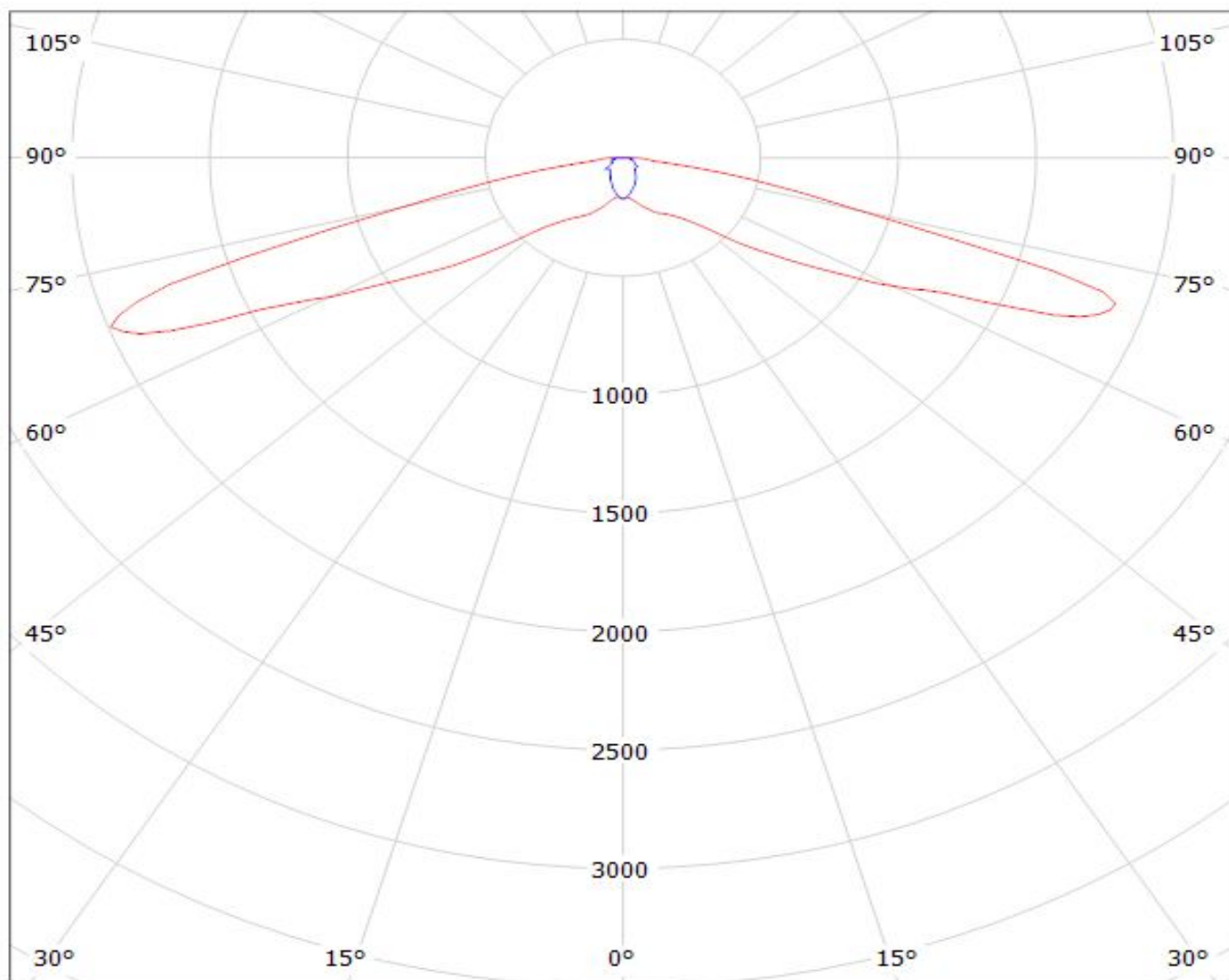
Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-G) Eff.88.1%
Lamps: 1 x XP-G (70.6lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(XT-E) Eff.88.2% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XT-E) Eff.88.2%

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



cd/klm

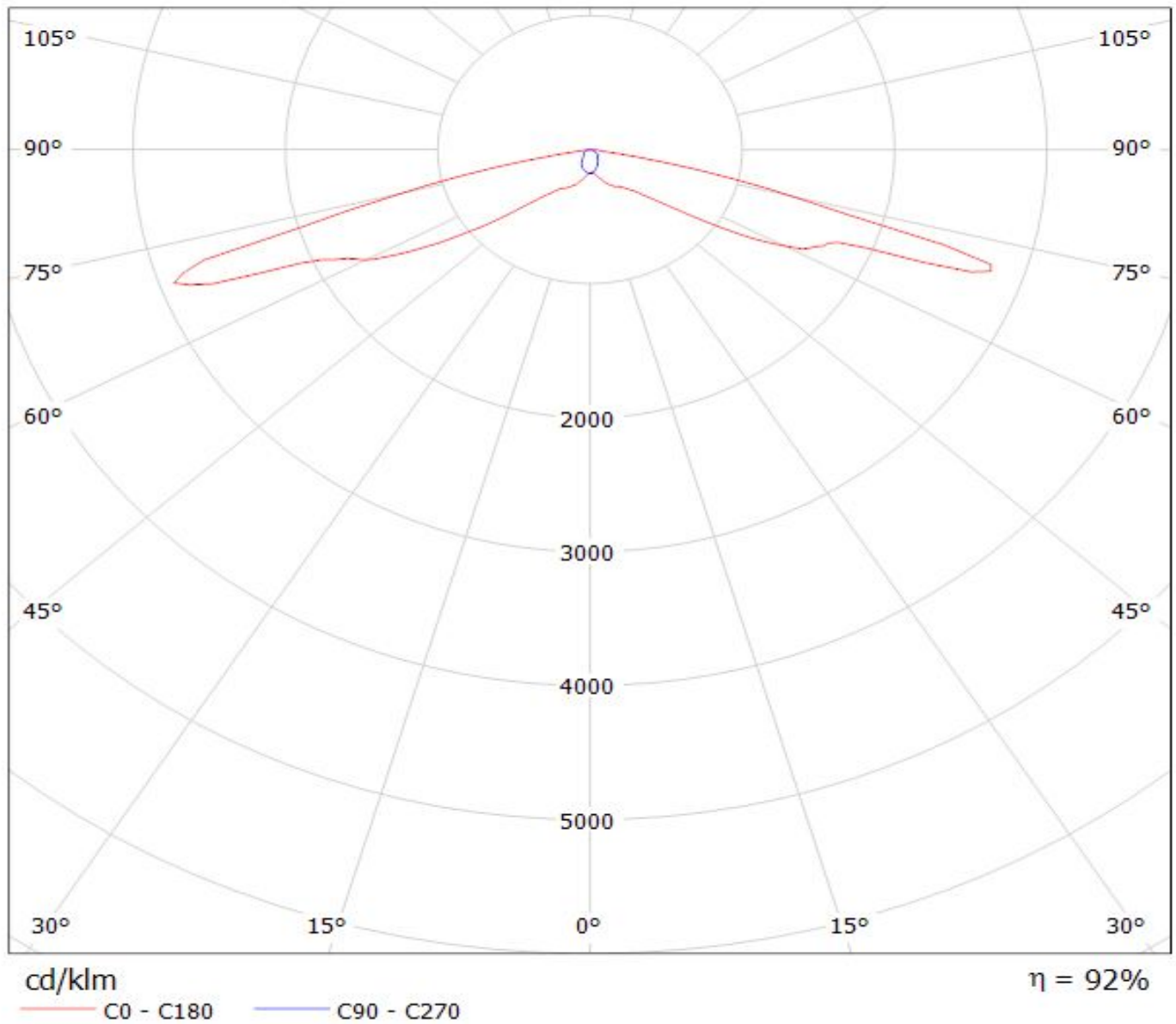
$\eta = 88\%$

— C0 - C180 — C90 - C270

LEDiL Oy CA13156_EMERALD-A_(XP-E2) Eff.91.7% / LDC (Polar)

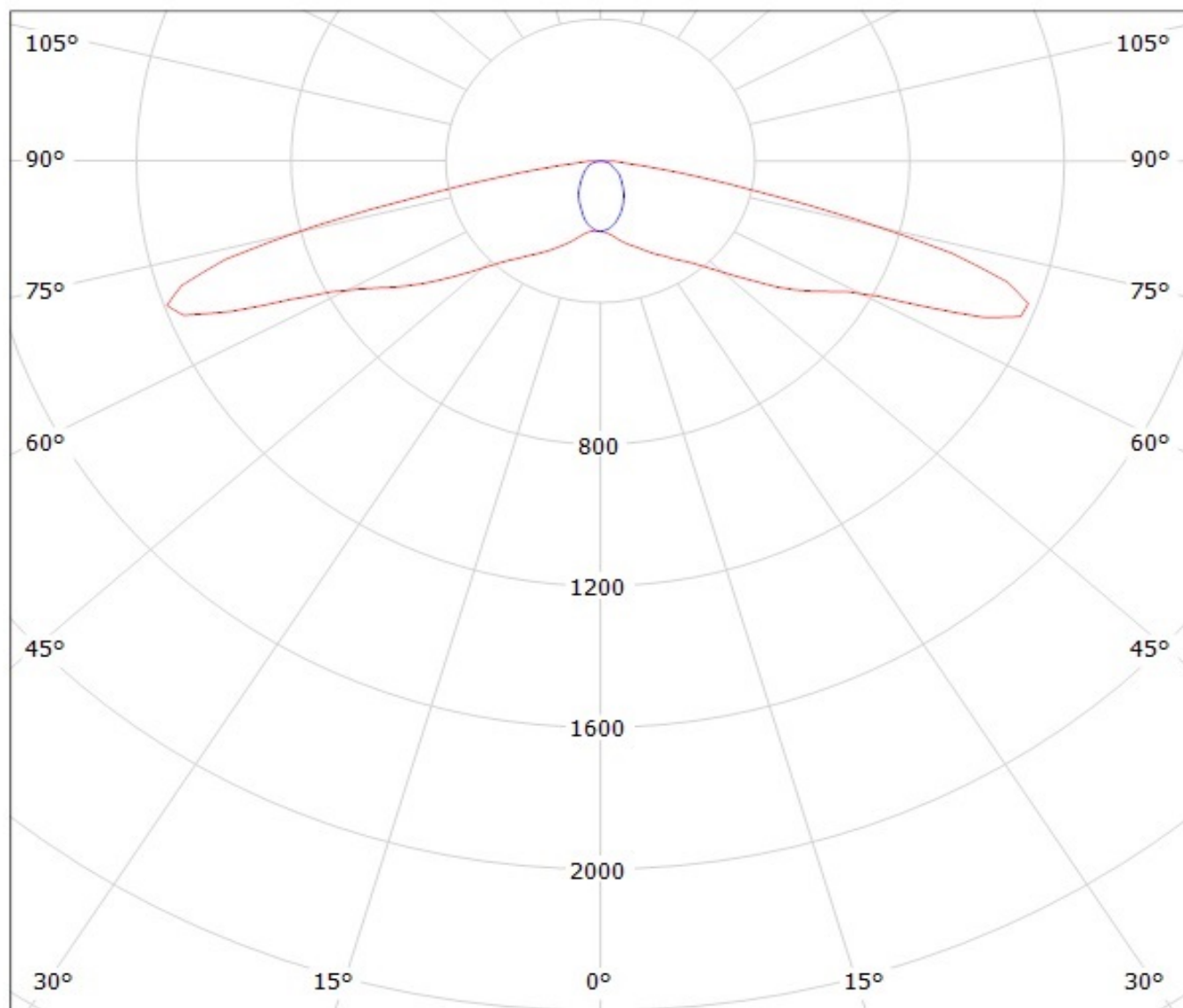
Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-E2) Eff.91.7%

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



Luminaire: LEDil Oy CA13156 EMERALD-A_(XM-L2) Efficiency=92%

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



cd/klm

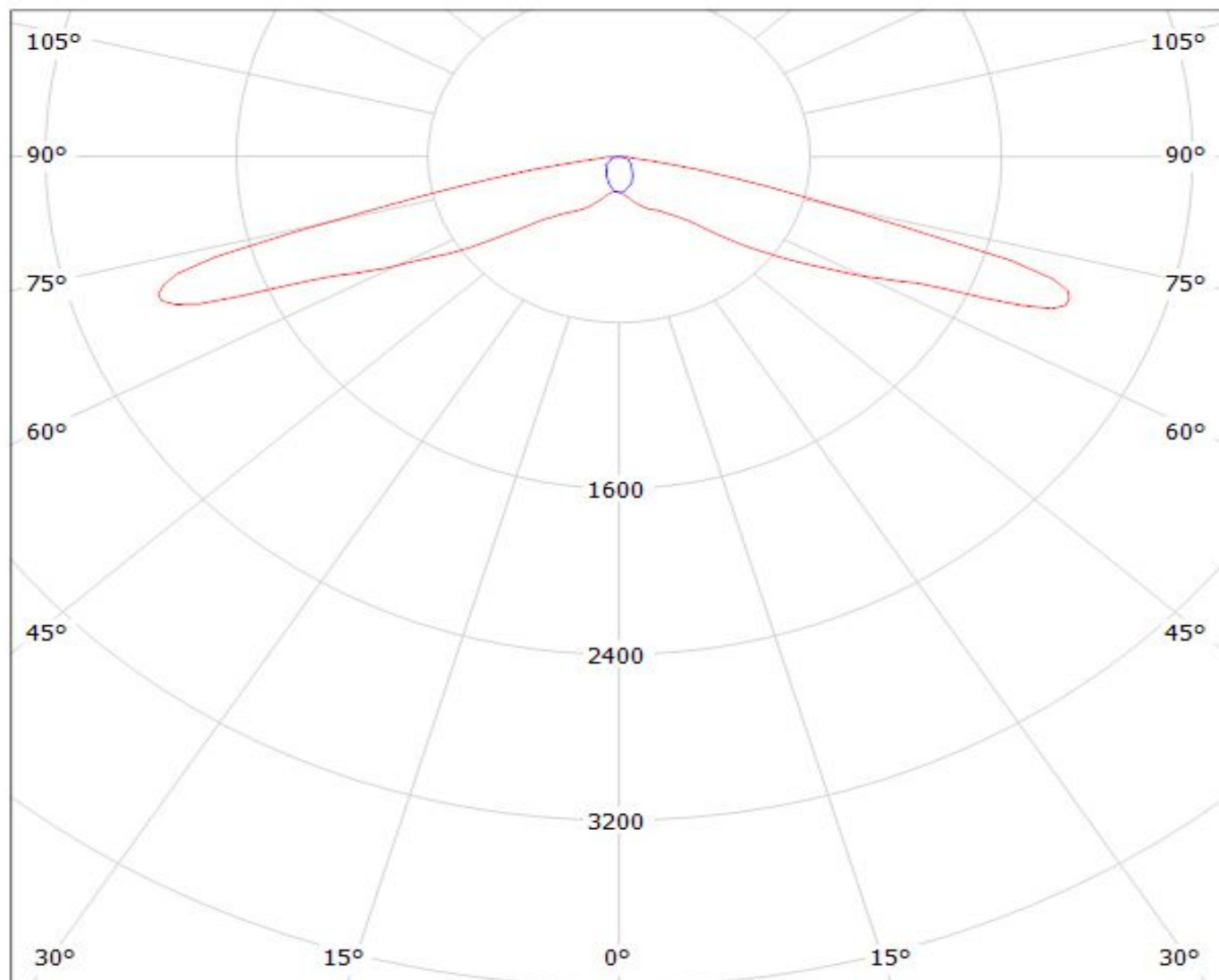
— C0 - C180

— C90 - C270

LEDiL Oy CA13156_EMERALD-A_(XP-G2) Eff.91.4% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(XP-G2) Eff.91.4%

Lamps: 1 x CREE XP-G2 (105.7lm@250mA)



cd/klm

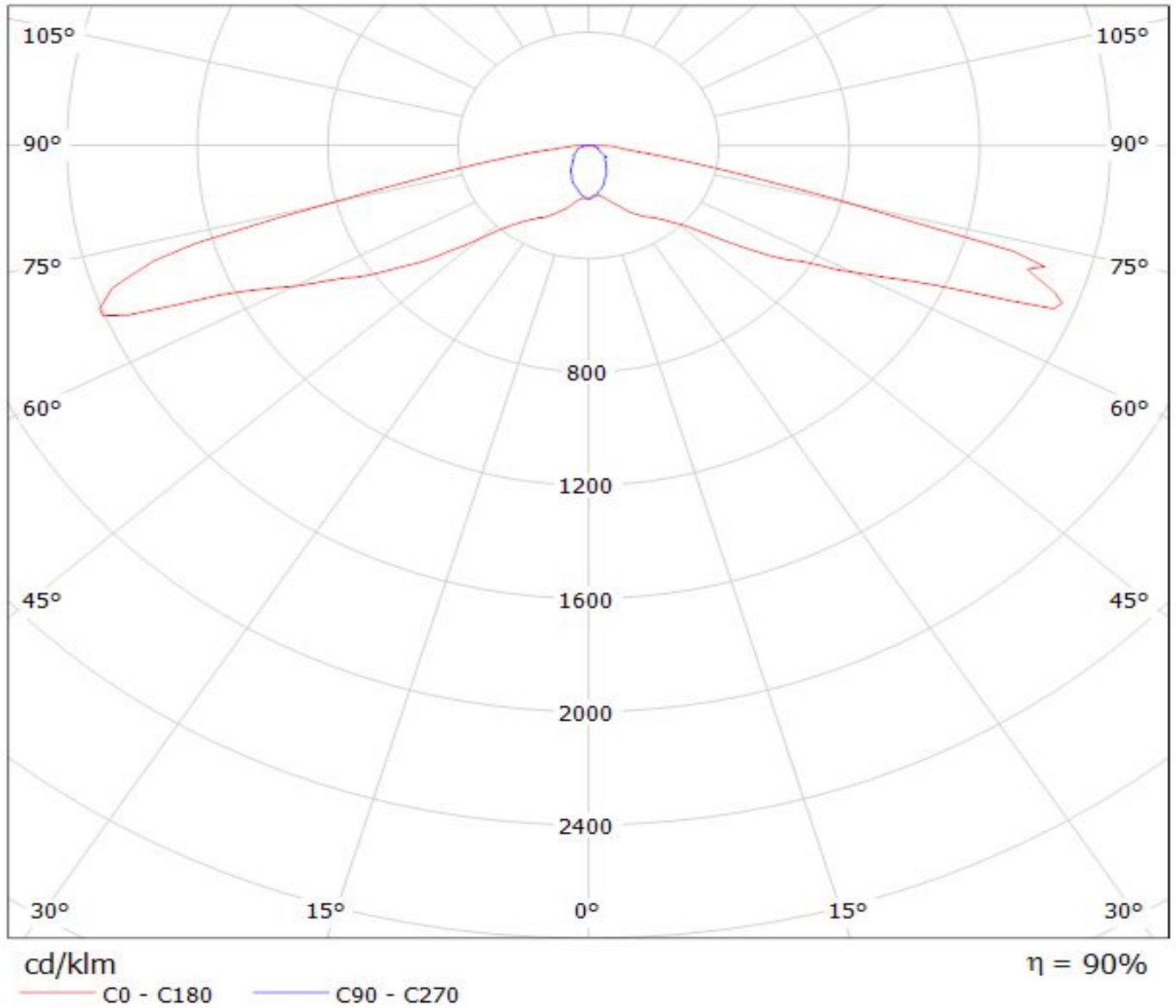
— C0 - C180

— C90 - C270

$\eta = 91\%$

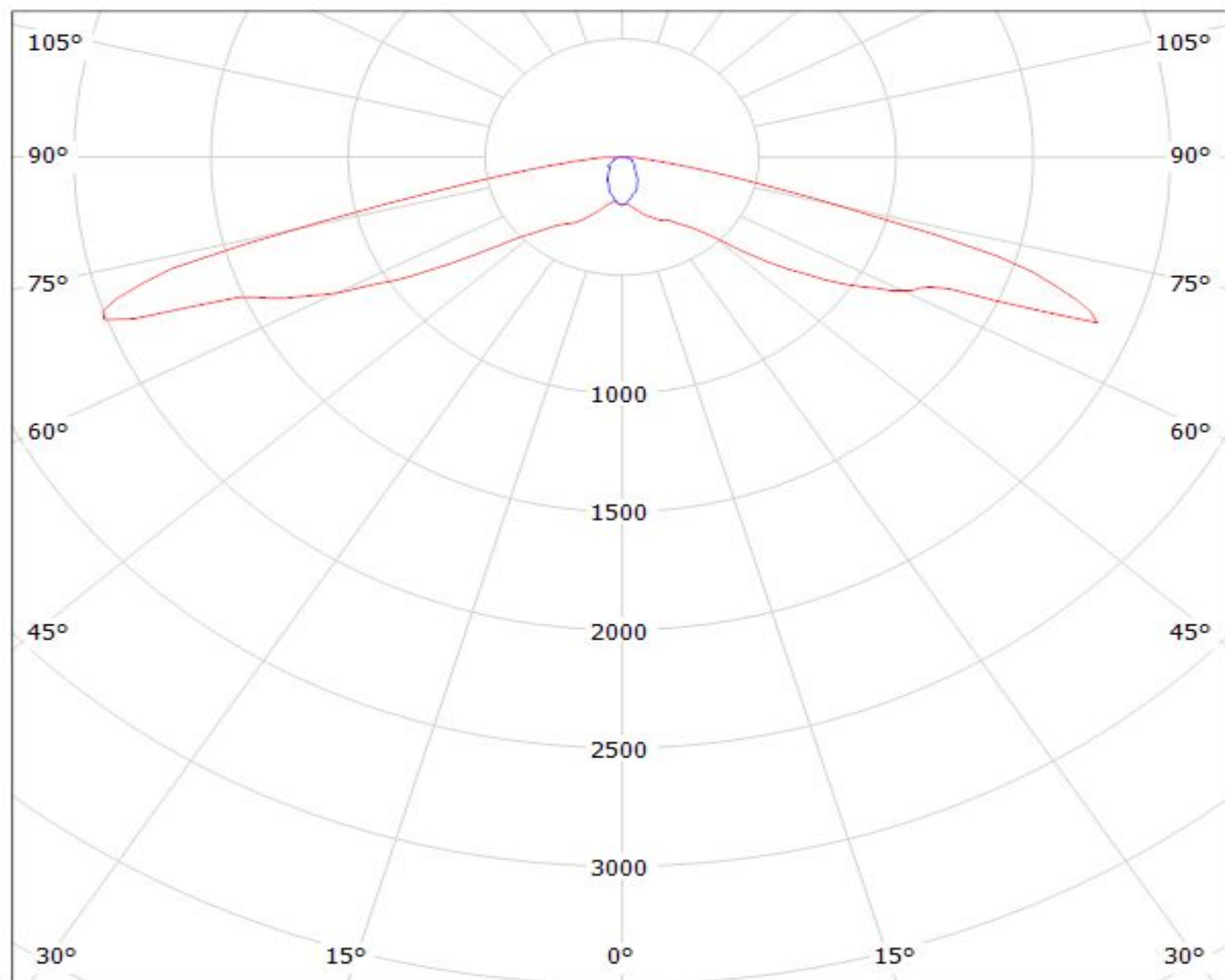
LEDiL Oy CA13156_EMERALD-A_(LG3535) Eff.89.7% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(LG3535) Eff.89.7%
Lamps: 1 x LG 3535 Ceramic (94lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(LG3535_2W) Eff.92.6% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(LG3535_2W) Eff.92.6%
Lamps: 1 x LG3535_2W (97.3629lm@250mA)



cd/klm

— C0 - C180

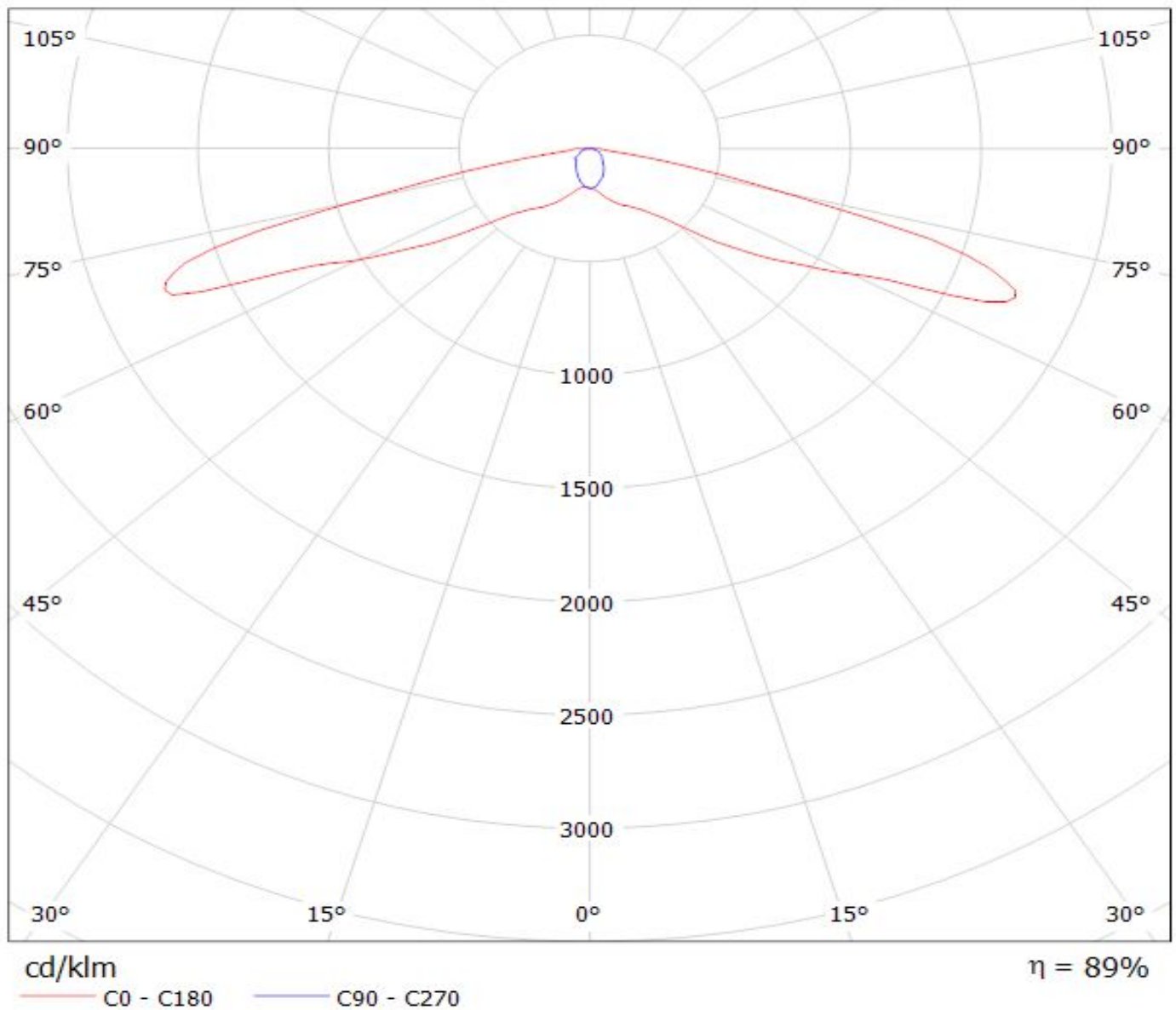
— C90 - C270

η = 93%

LEDiL Oy CA13156_EMERALD-A_(LUXEON_A) Eff.88.6% / LDC (Polar)

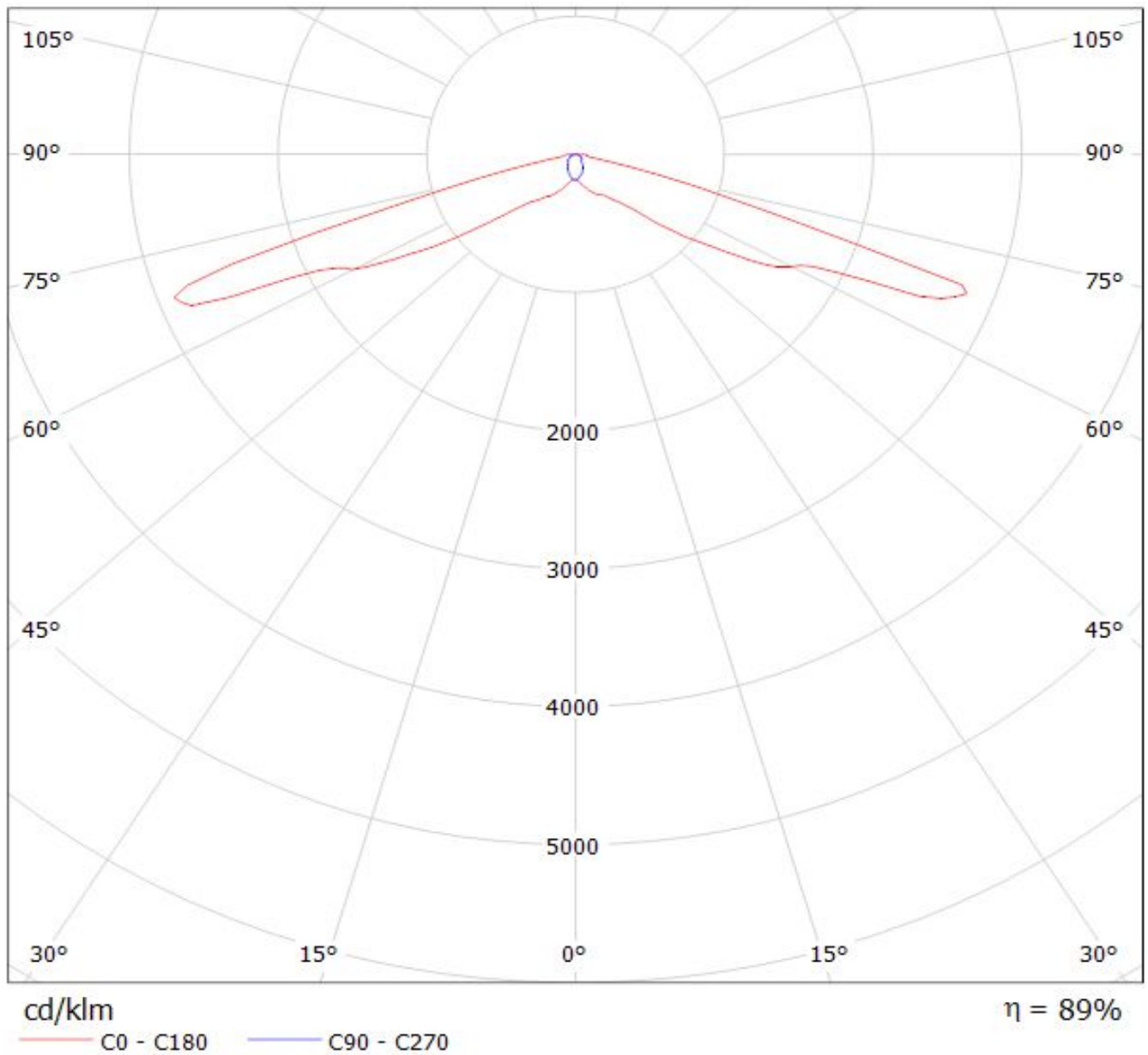
Luminaire: LEDiL Oy CA13156_EMERALD-A_(LUXEON_A) Eff.88.6%

Lamps: 1 x LUXEON_R (67.5lm@250mA)



Luminaire: LEDiL Oy CA13156_EMERALD-A_(Rebel) Eff. 88,8%

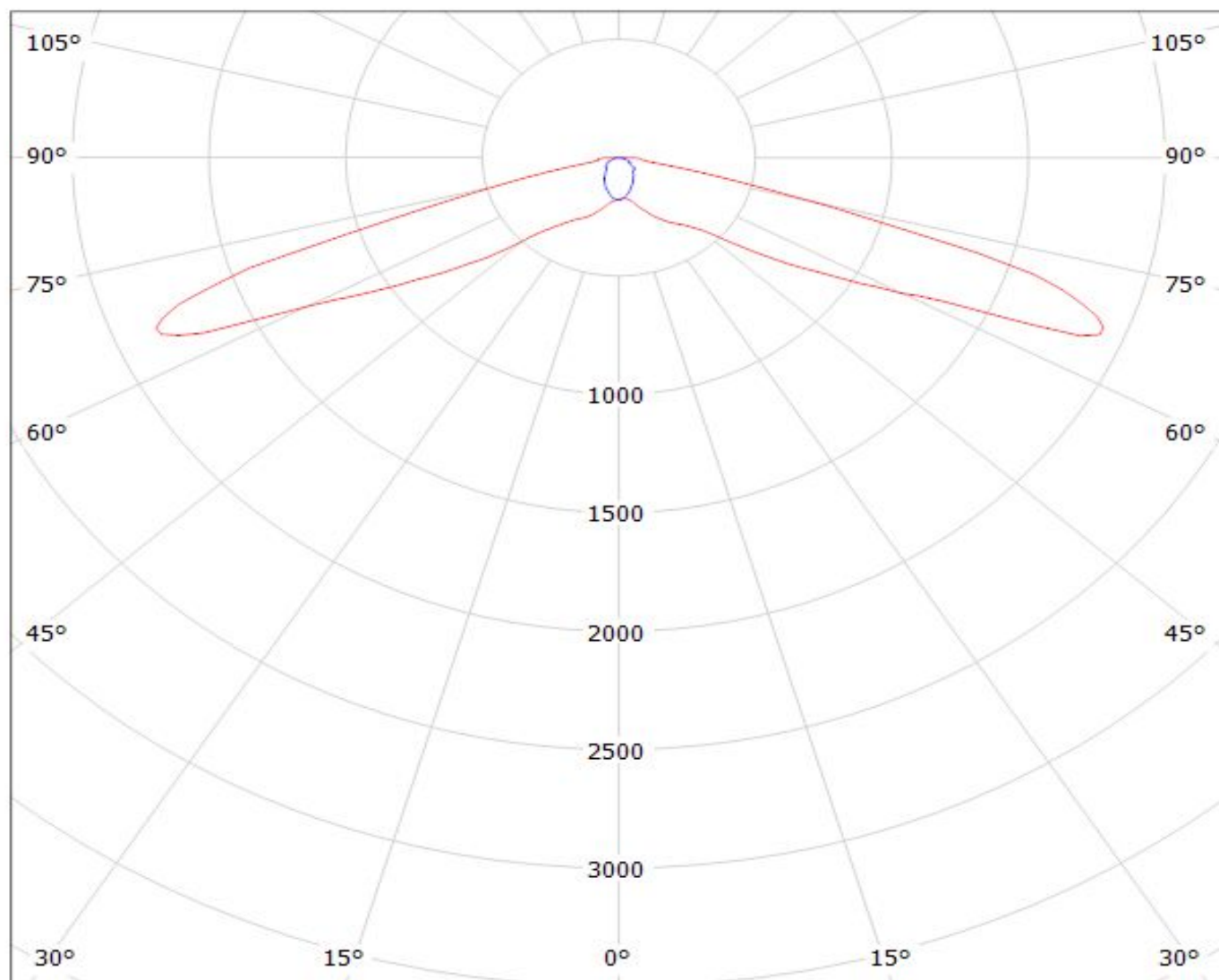
Lamps: 1 x Luxeon Rebel (82lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(LUXEON_R) Eff.88.4% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(LUXEON_R) Eff.88.4%

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



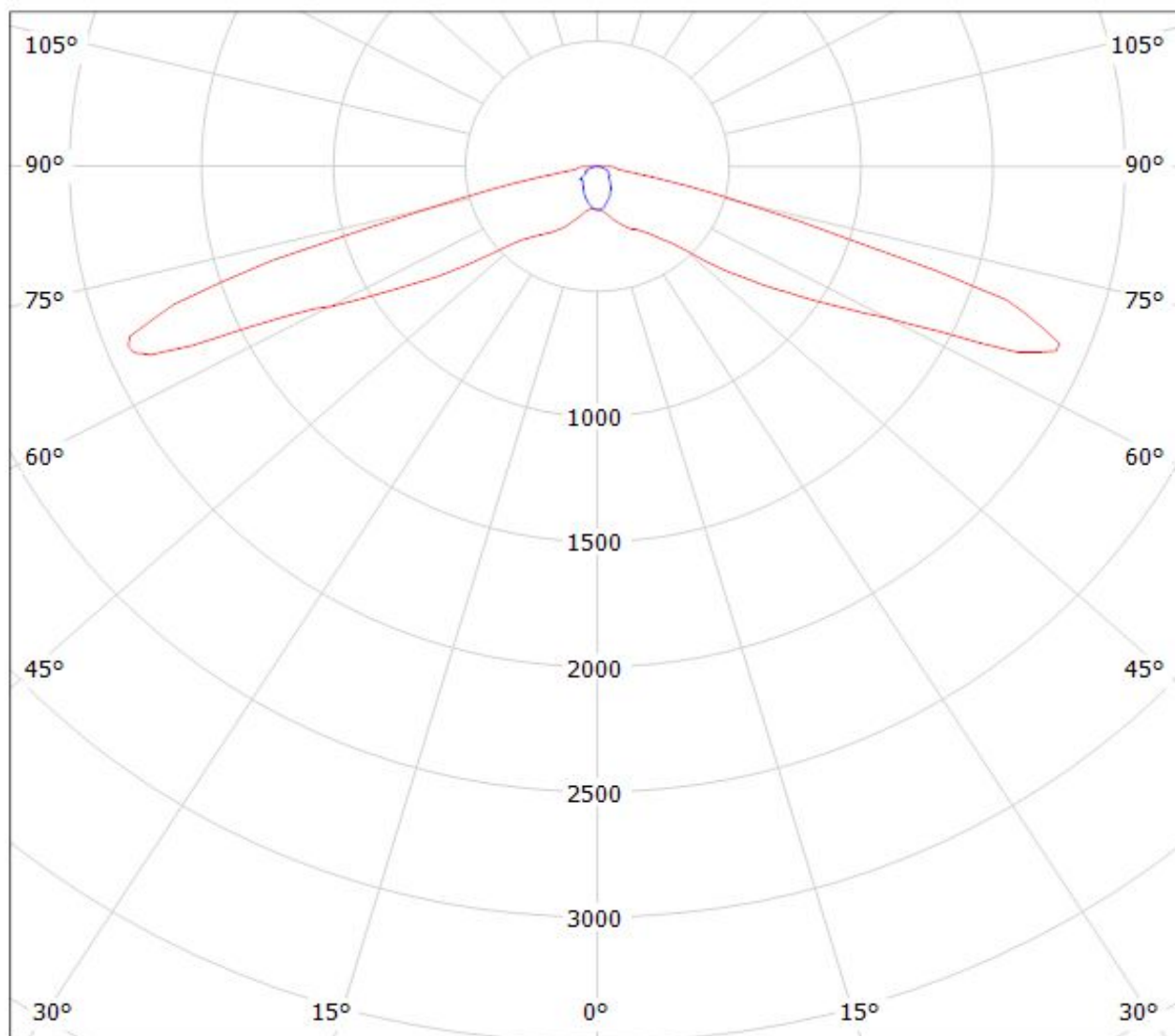
cd/klm

— C0 - C180

— C90 - C270

$\eta = 88\%$

Luminaire: LEDiL Oy CA13156_EMERALD-A_(Rebel-ES) Eff. 88%
Lamps: 1 x Luxeon Rebel-ES (90lm@250mA)

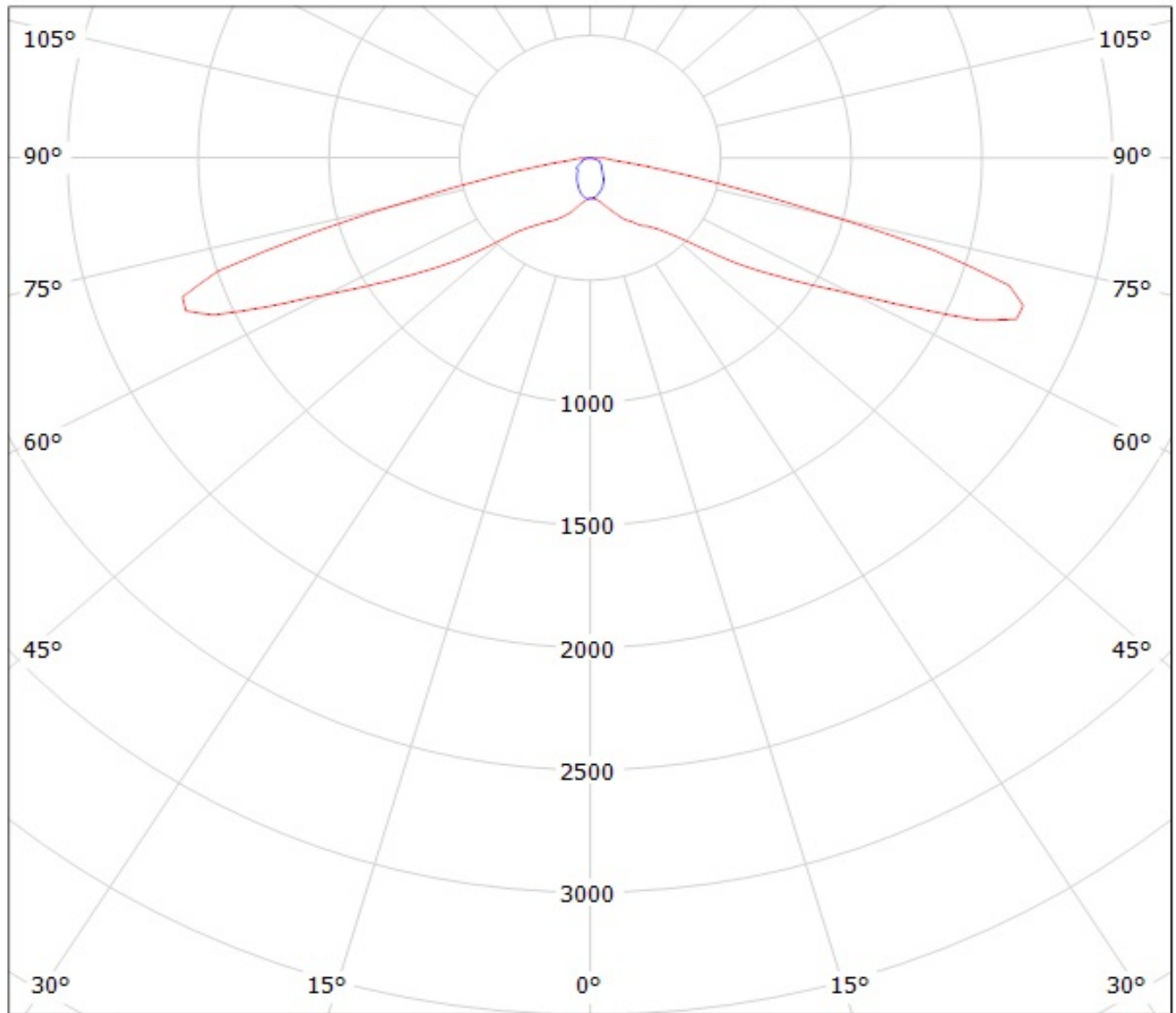


cd/klm

— C0 - C180 — C90 - C270

$\eta = 88\%$

Luminaire: Ledil Oy CA13156_EMERALD-A (Luxeon T 71lm @ 250mA) Efficiency=93%
Lamps: 1 x Luxeon T 71lm @ 250mA



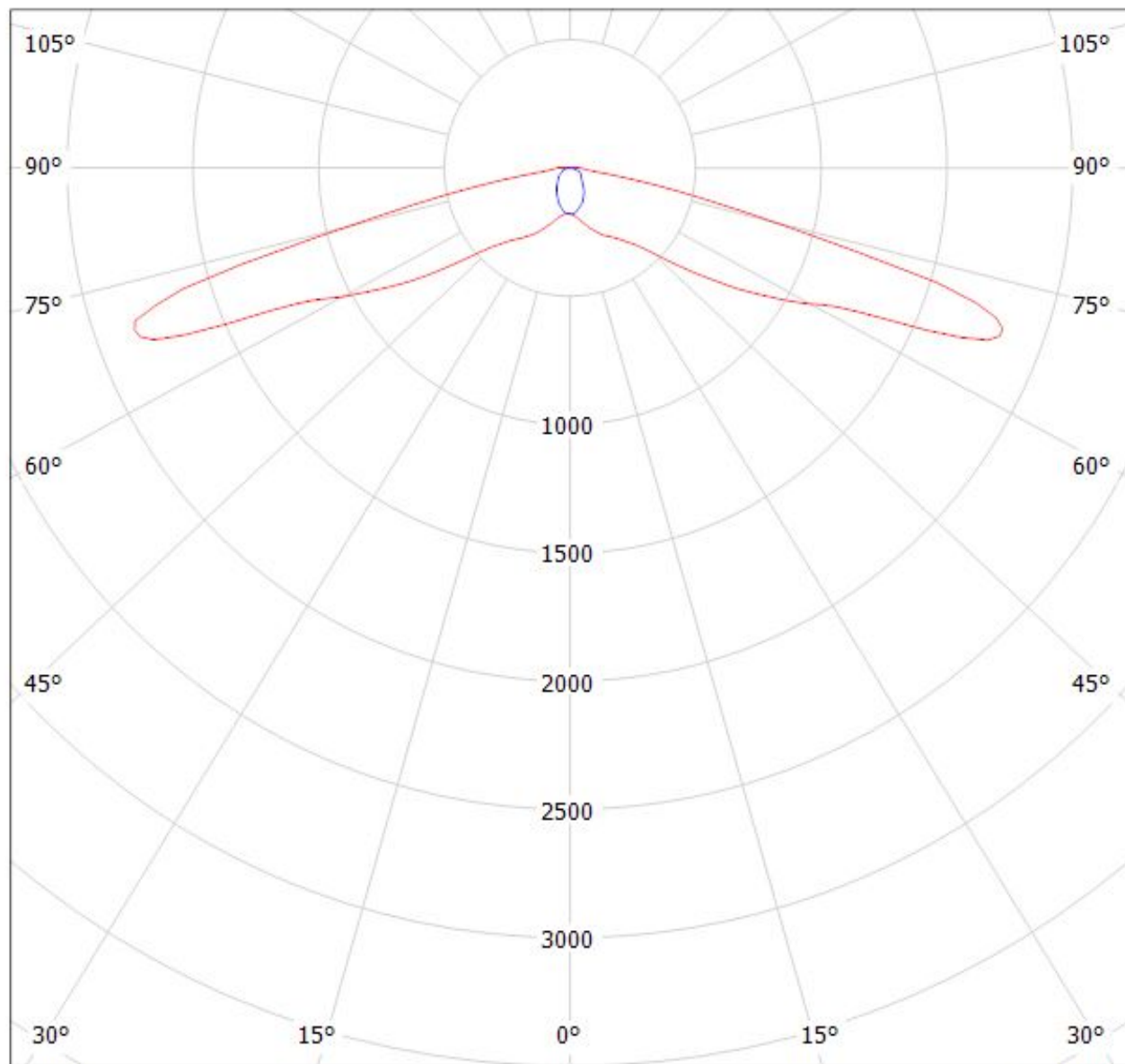
cd/klm

— C0 - C180

— C90 - C270

Luminaire: LEDiL Oy CA13156_EMERALD-A_(Luxeon_TX) Eff.91.7%

Lamps: 1 x Luxeon_TX_(L1T2-3585)_80.1801lm@250mA_CCT=3500K_P=0.731482W_I=249.9mA



cd/klm

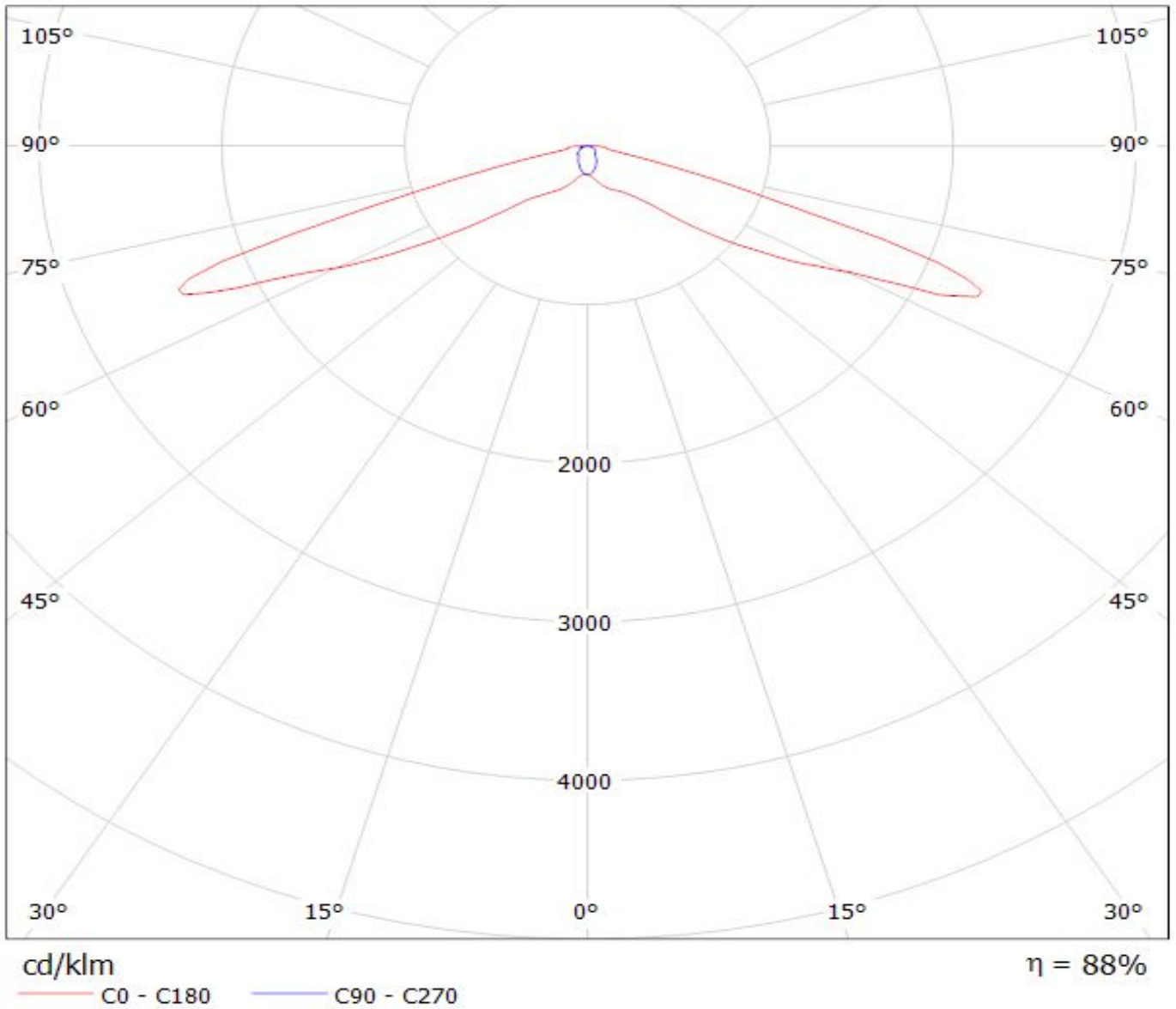
— C0 - C180

— C90 - C270

η = 92%

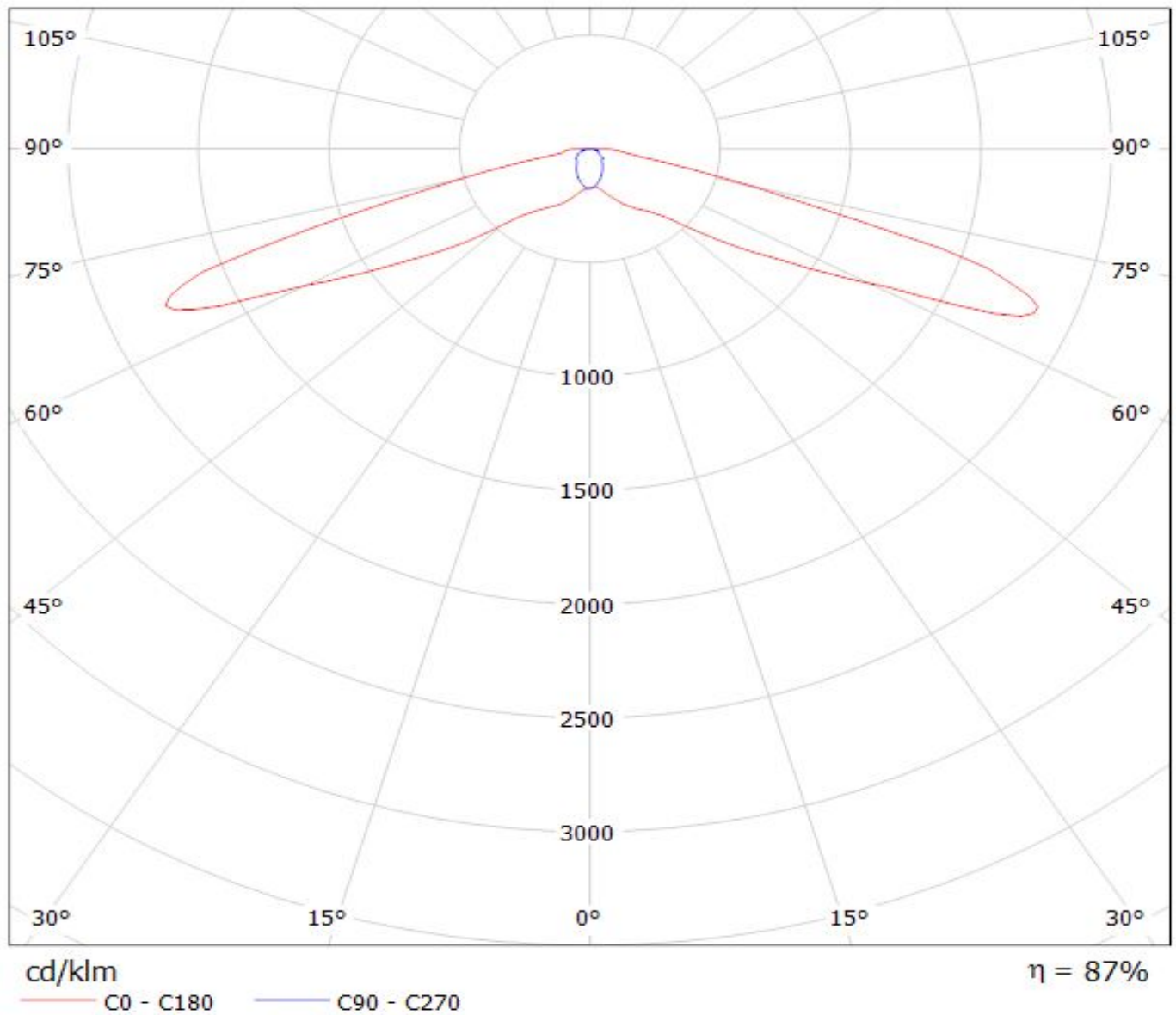
LEDiL Oy CA13156_EMERALD-A_(NCS19) Eff.88.1% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(NCS19) Eff.88.1%
Lamps: 1 x NCS19 (89lm@250mA)

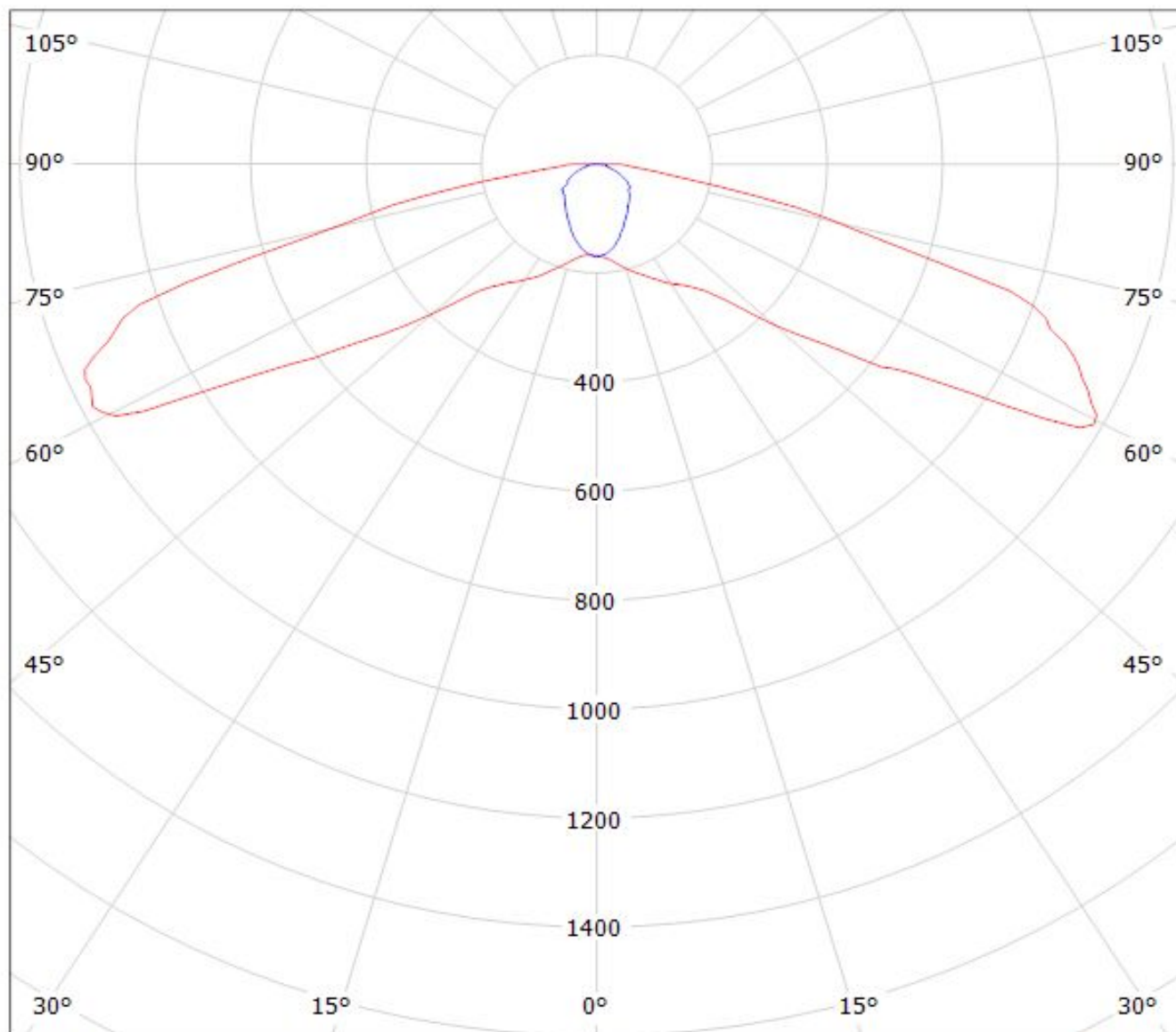


LEDiL Oy CA13156_EMERALD-A_(NVS19) Eff.87.5% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(NVS19) Eff.87.5%
Lamps: 1 x NVS19 (98.3lm@250mA)



Luminaire: LEDiL Oy CA13156_EMERALD-A_(NS9x383) Eff. 89,2%
Lamps: 1 x Nichia NS9x383 (105lm@250mA)



cd/klm

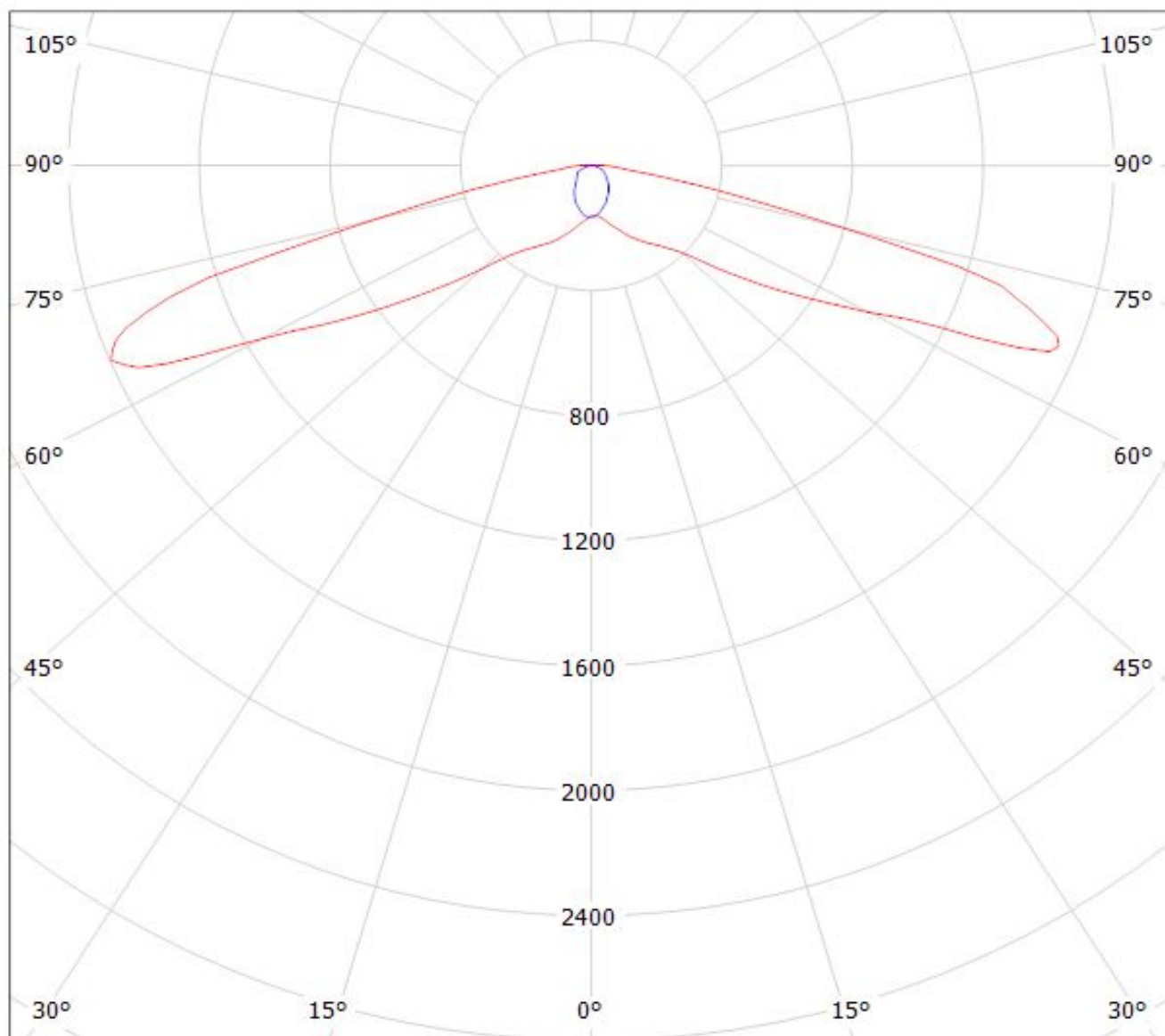
— C0 - C180

— C90 - C270

$\eta = 89\%$

Luminaire: LEDiL Oy CA13156_EMERALD-A_(NVSL219CE)

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



cd/klm

$\eta = 87\%$

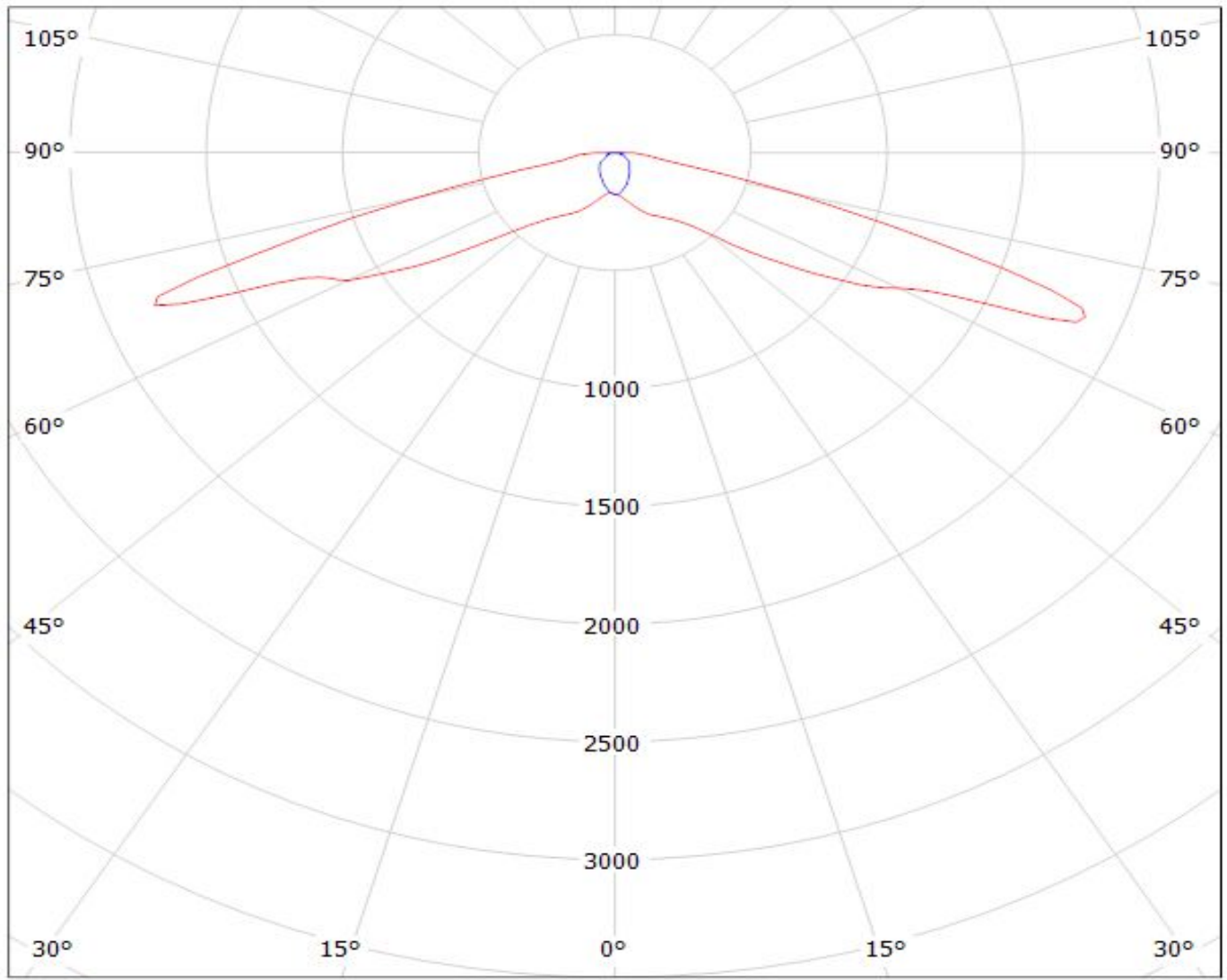
— C0 - C180

— C90 - C270

LEDiL Oy CA13156_EMERALD-A_(SQ-EC) Eff.89.6% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(SQ-EC) Eff.89.6%

Lamps: 1 x SQ-EC (64.5908lm@250mA)



cd/klm

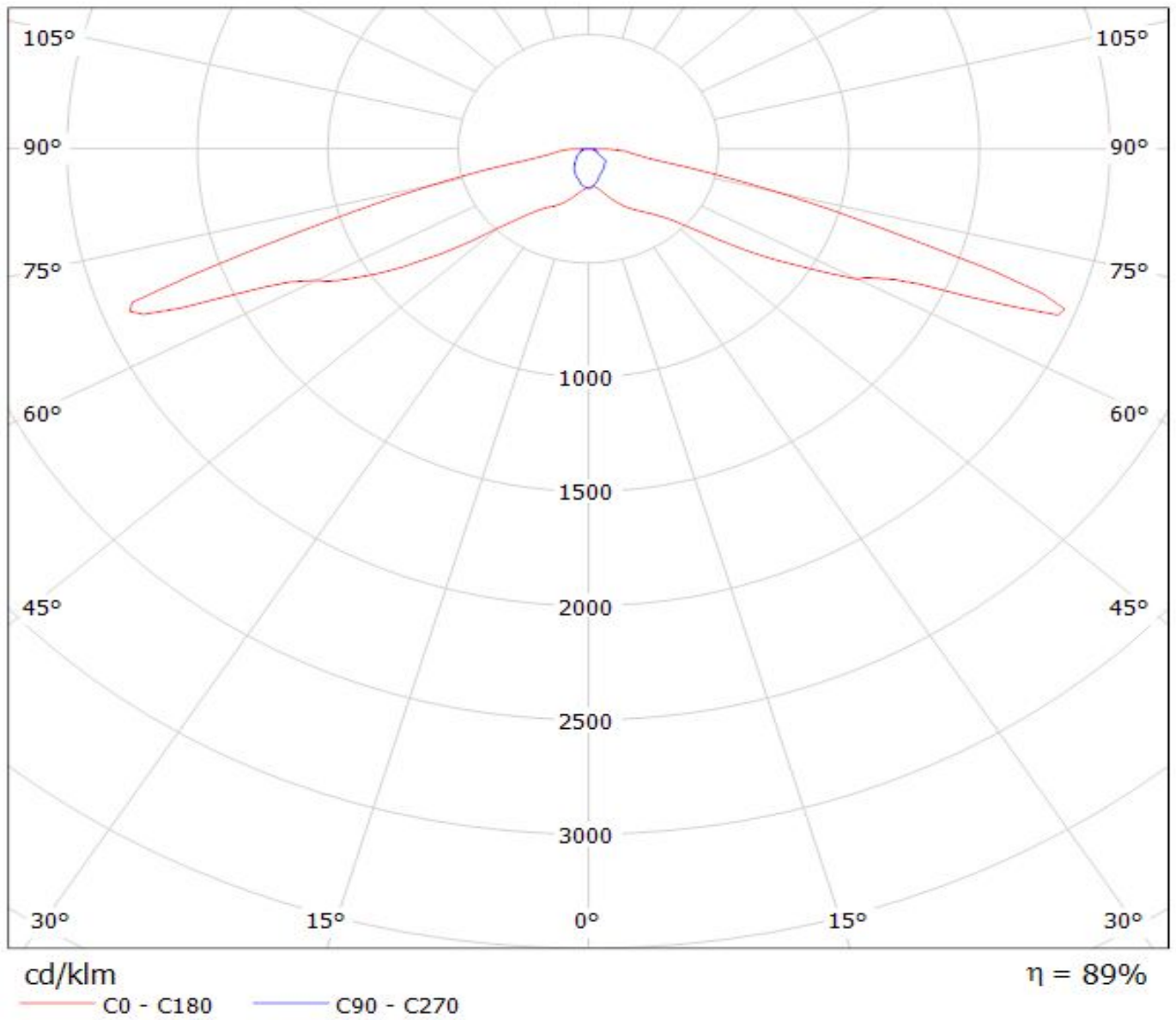
$\eta = 90\%$

— C0 - C180

— C90 - C270

LEDiL Oy CA13156_EMERALD-A_(SQ-PC) Eff.89.1% / LDC (Polar)

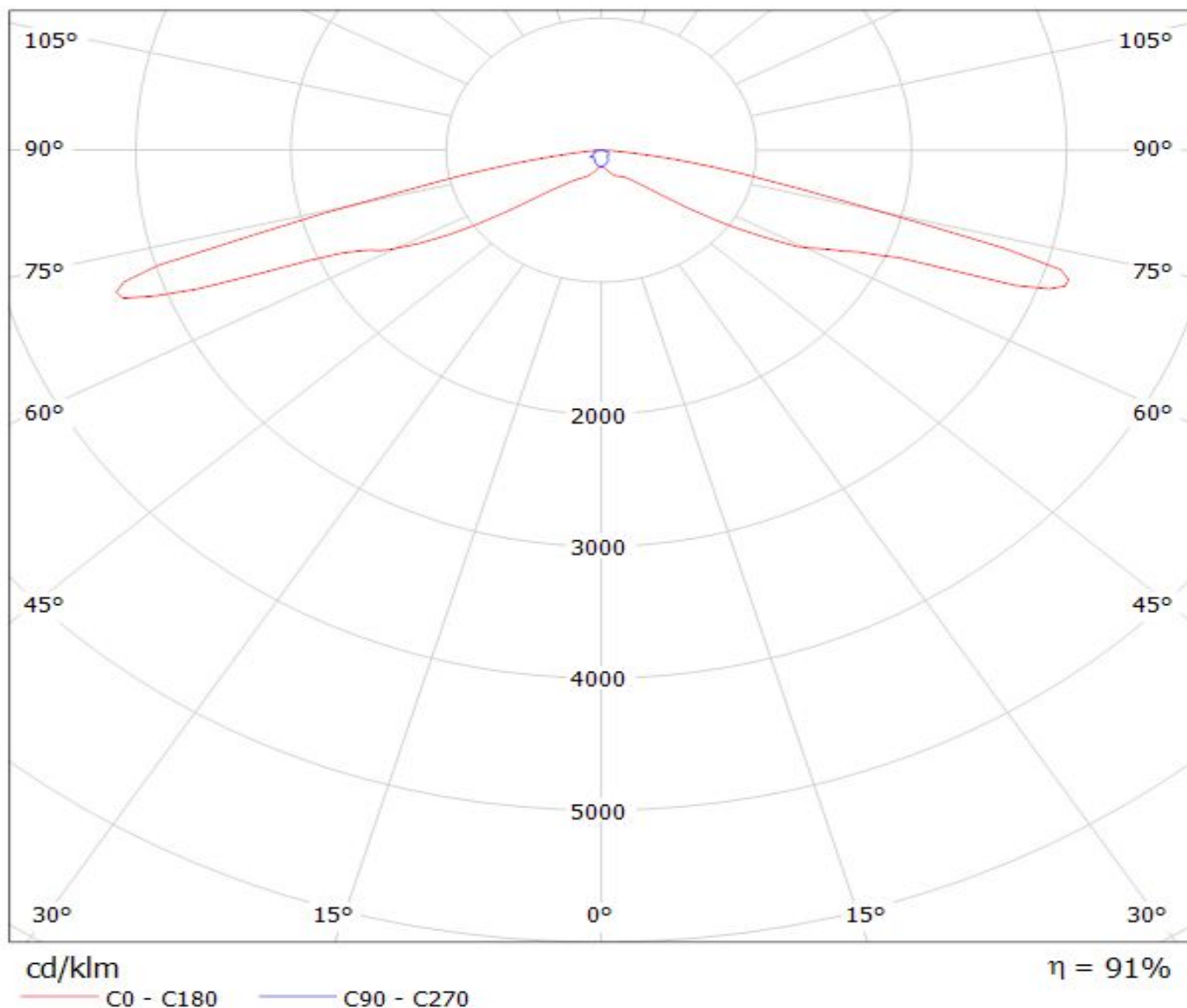
Luminaire: LEDiL Oy CA13156_EMERALD-A_(SQ-PC) Eff.89.1%
Lamps: 1 x SQ-PC (79.1971lm@250mA)



LEDiL Oy CA13156_EMERALD-A_(SSL150) Eff.91.4% / LDC (Polar)

Luminaire: LEDiL Oy CA13156_EMERALD-A_(SSL150) Eff.91.4%

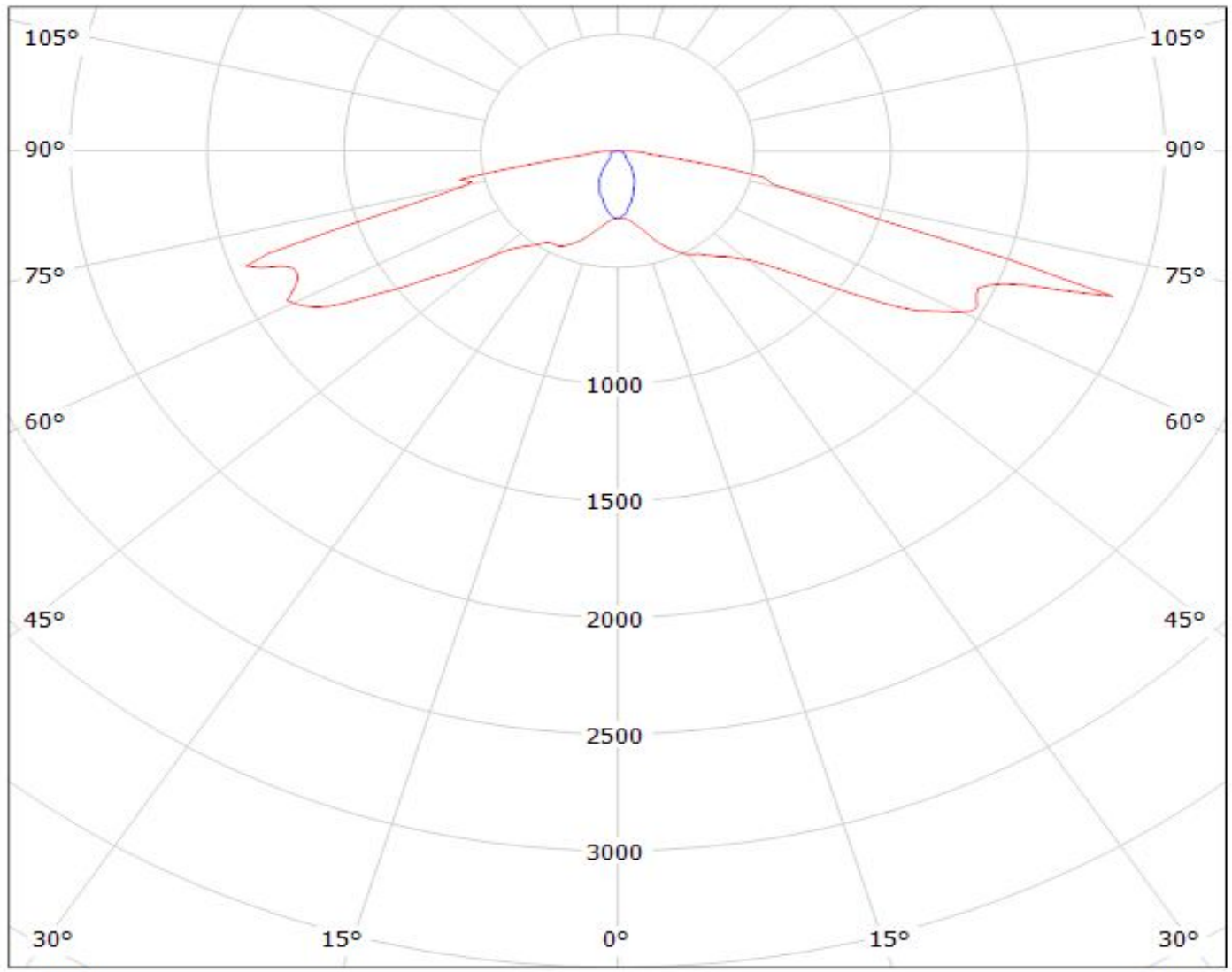
Lamps: 1 x Oslon SSL150 (71.5lm@250mA)



LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.89.4% / LDC (Polar)

Luminaire: LEDiL Oy C13155_EMERALD-A_(SSL80) Eff.89.4%

Lamps: 1 x Oslon SSL (81.3lm@250mA)



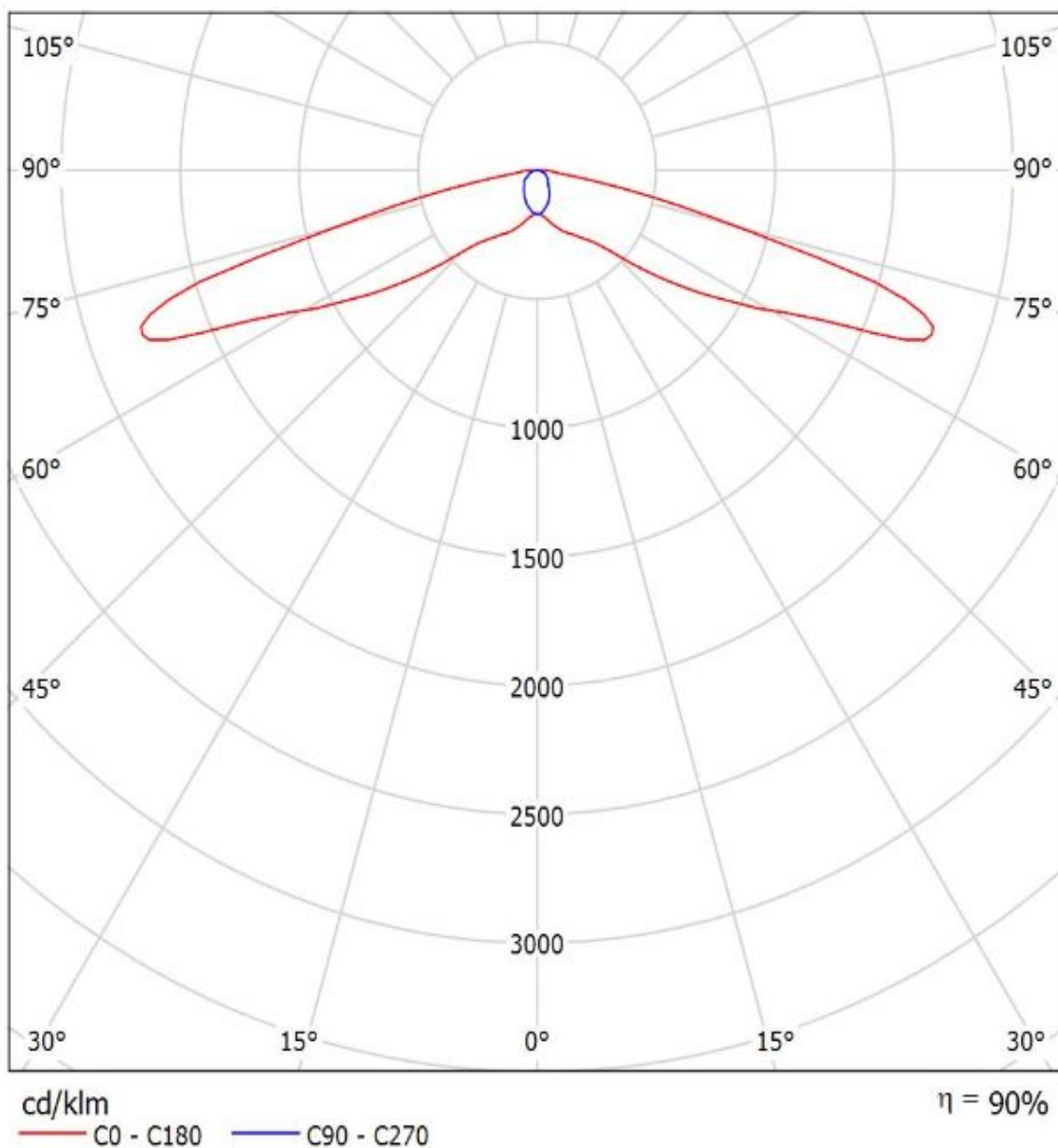
cd/klm

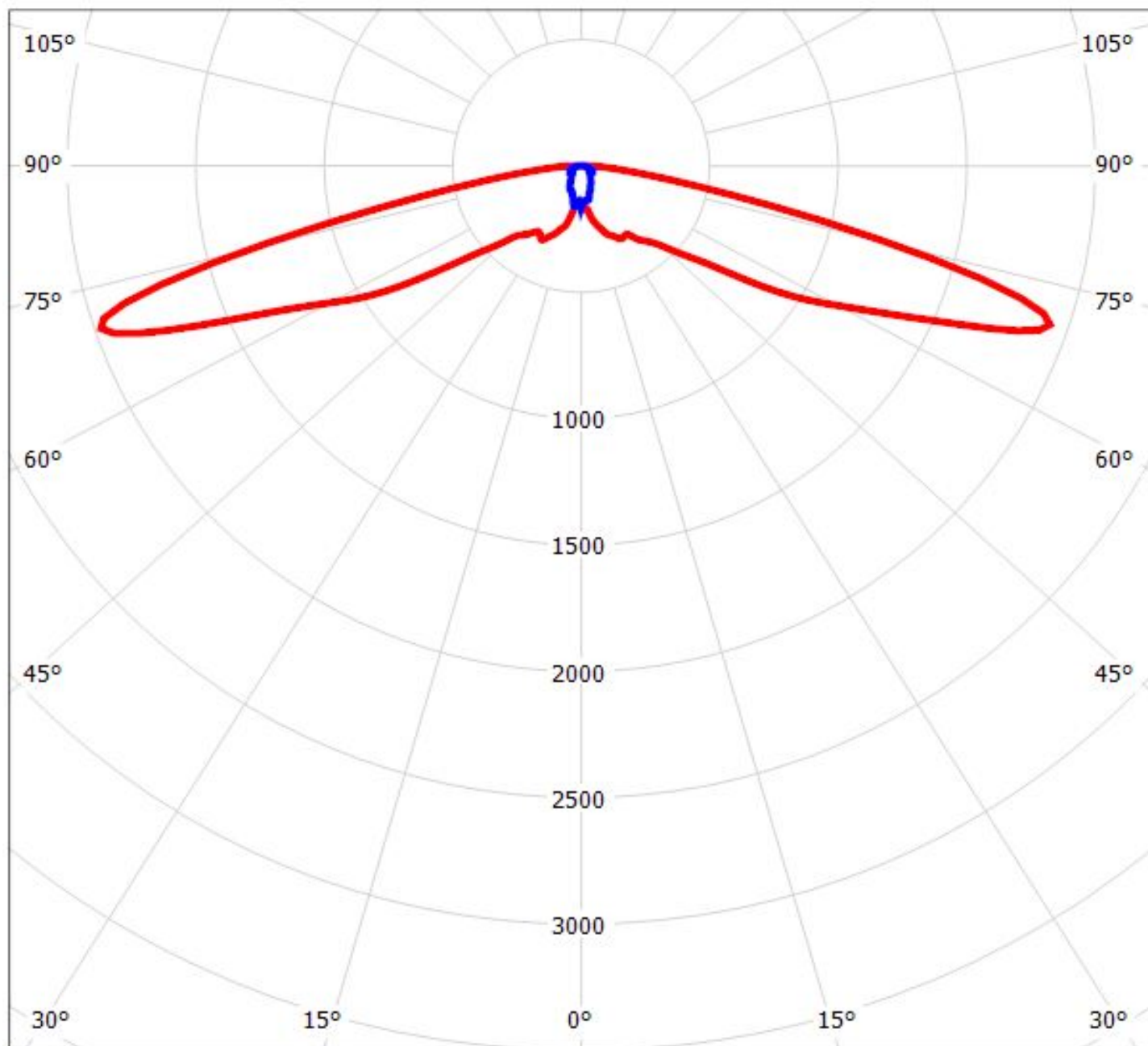
— C0 - C180

— C90 - C270

$\eta = 89\%$

Luminaire: LEDiL Oy CA13156_EMERALD-A_(Square_Giant) Osram_Square_Giant_113.056lm@250mA_P=0.722_I=250mA
Lamps: 1 x Osram_Square_Giant_113.056lm@250mA_P=0.722_I=250mA





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.