

Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

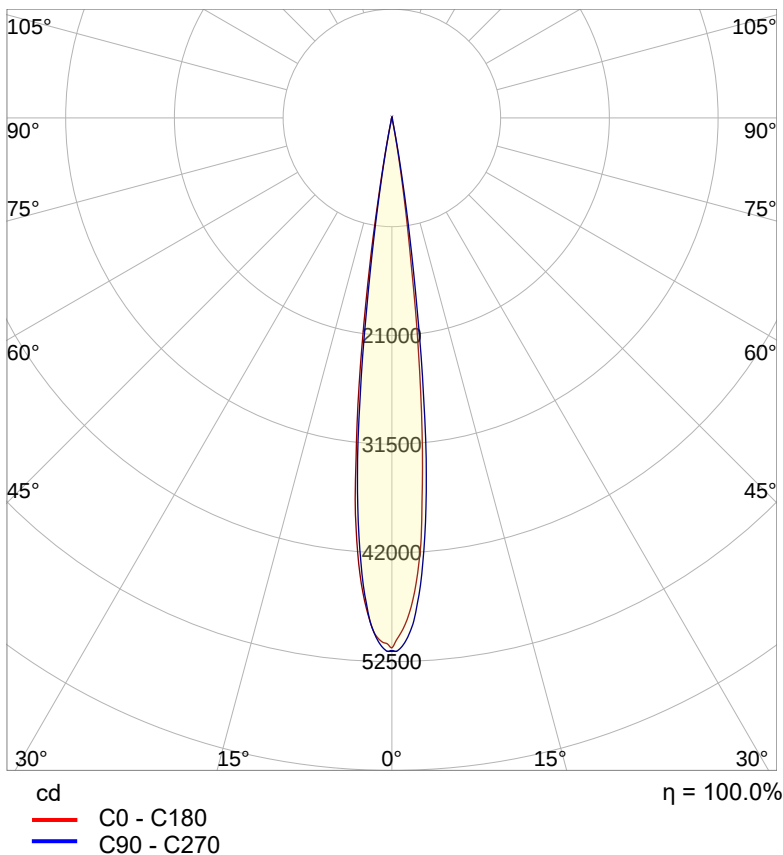
QuikPunch_OutputGain_Enabled_13D_2700K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2545 lm – 0% / 100%
n/a lm/W
51492 cd
2700 K
CRI 0.0

Polar light distribution diagram

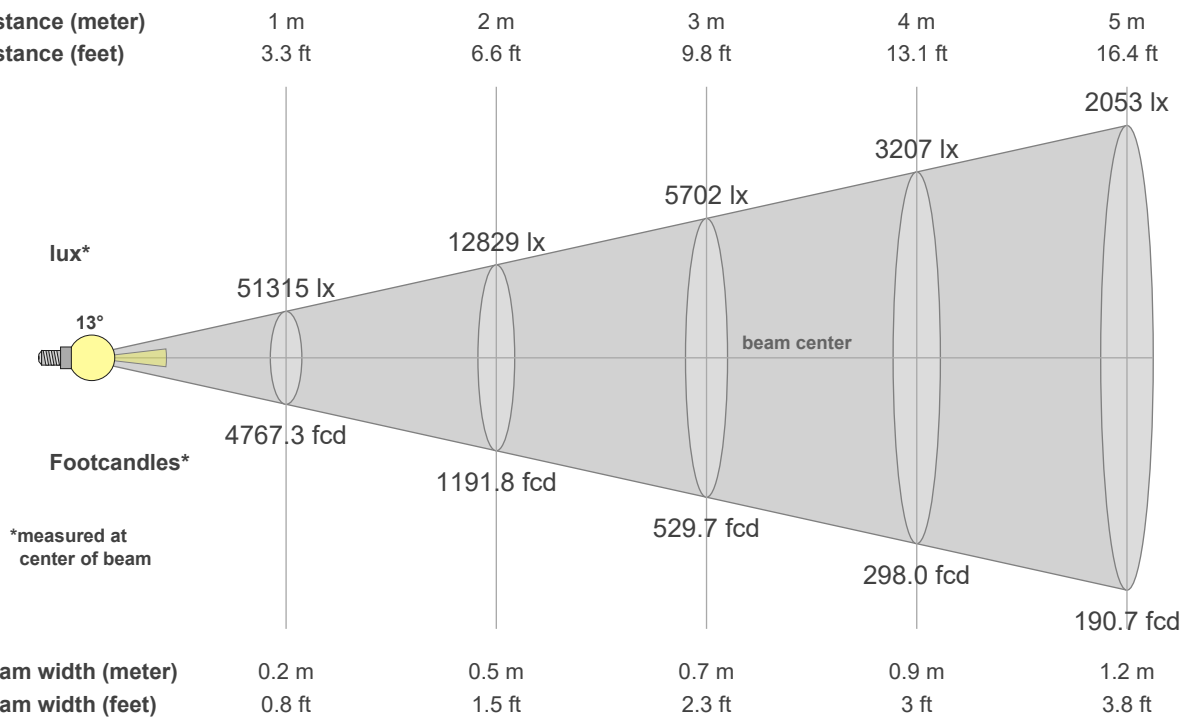


Test report

Light measurement results

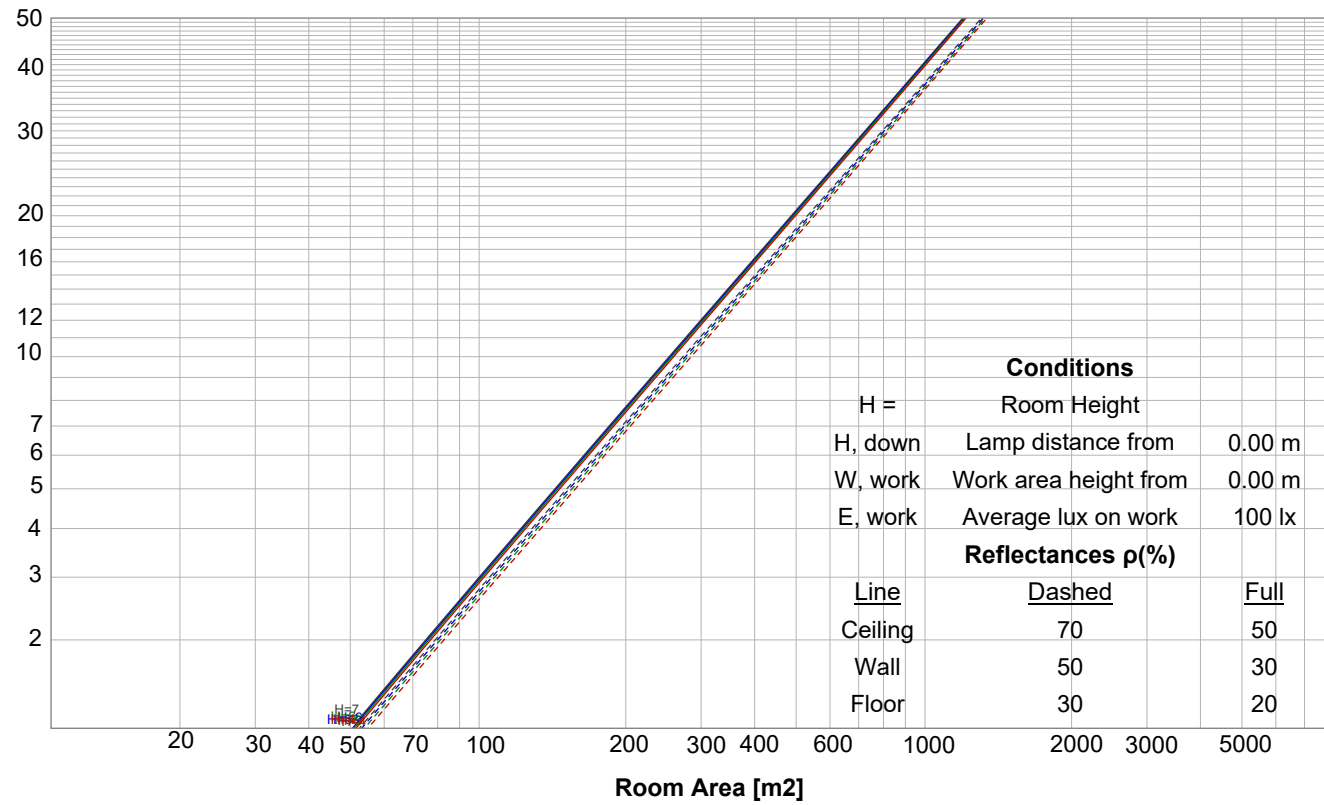
Print date 9/26/2025

Beam details

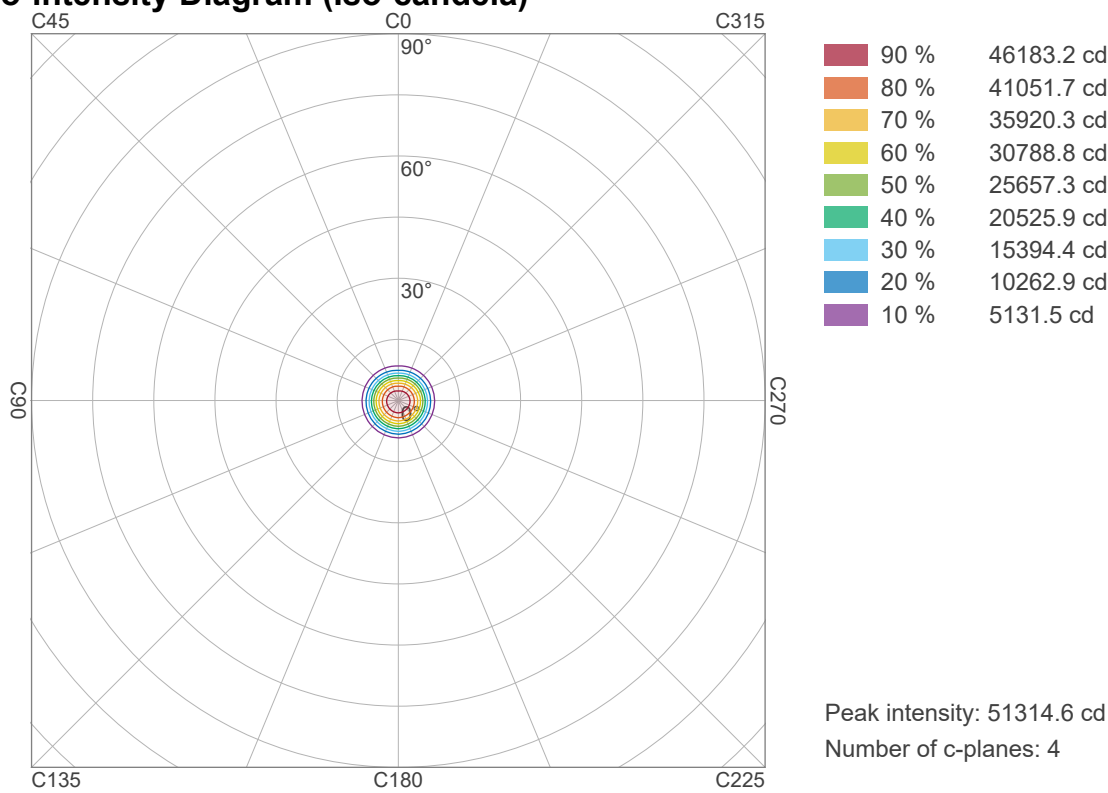


Luminaire budgetary diagram

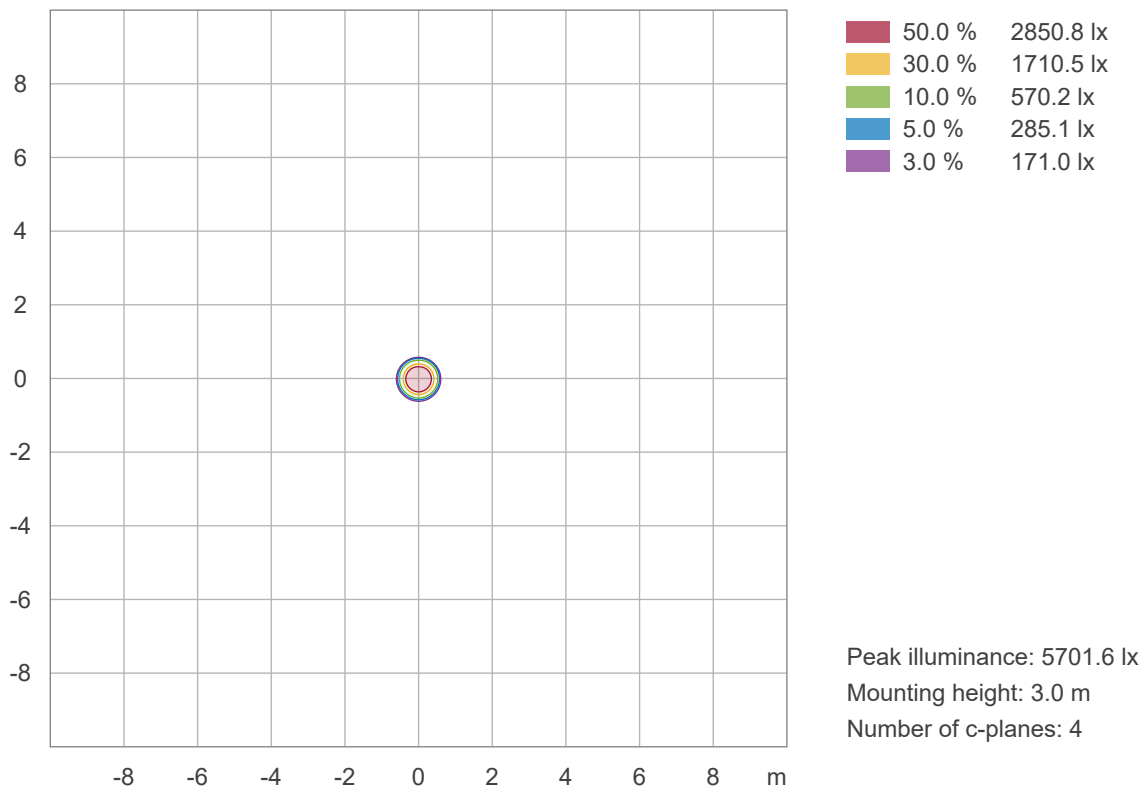
LAMPS (number of lamps)



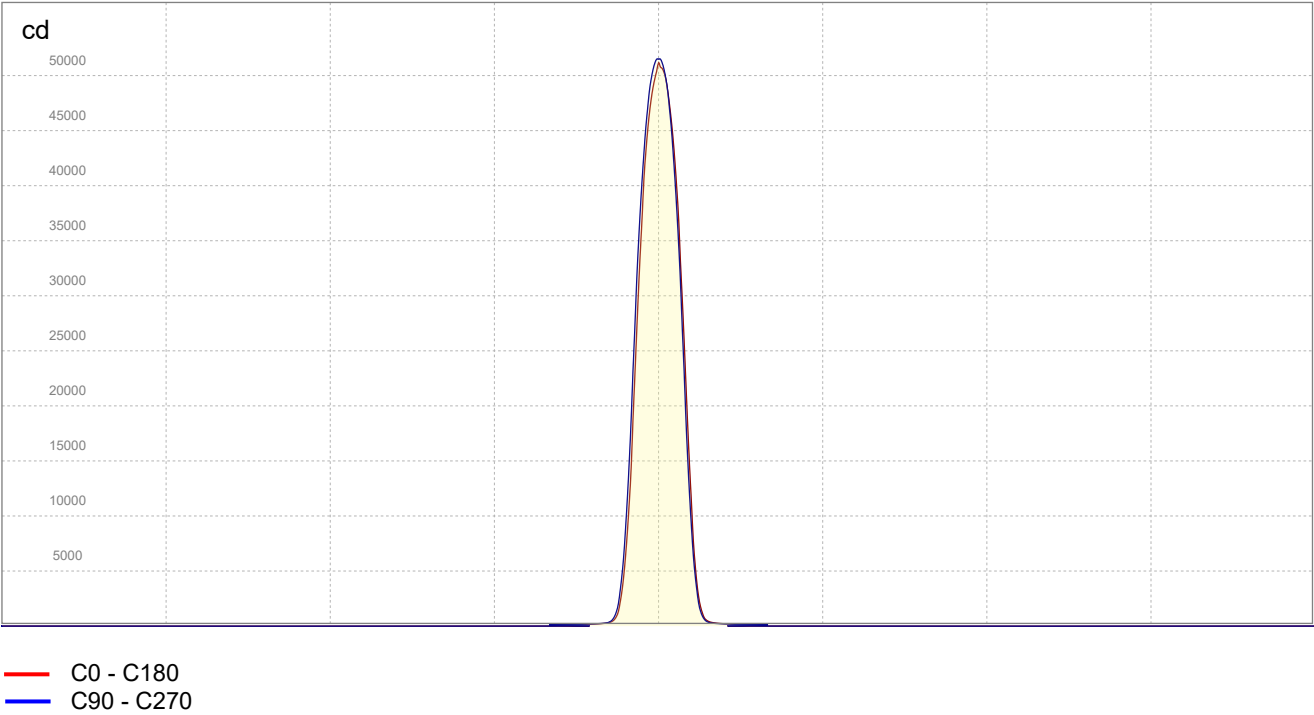
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

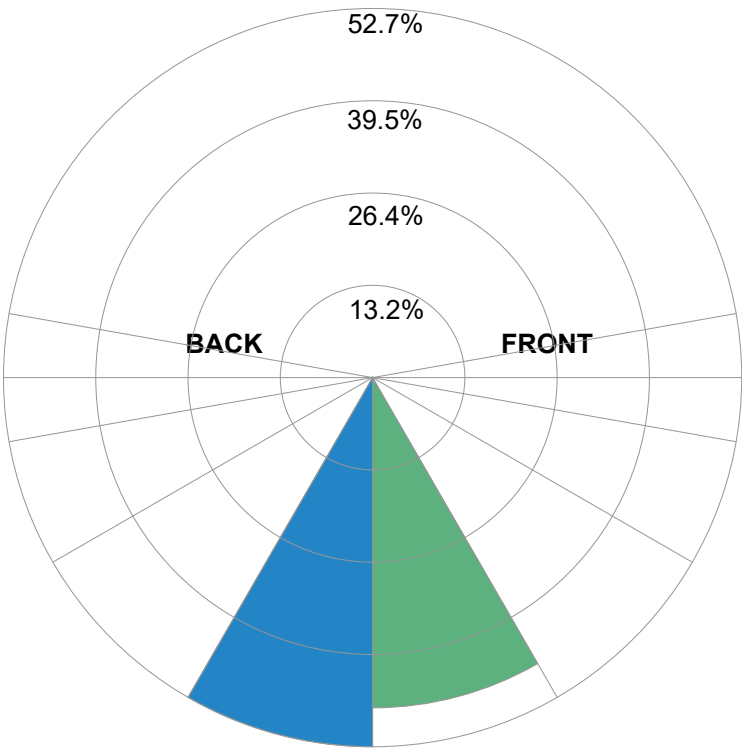


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1200.5 lm	47.2%
Medium (30-60°)	1.2 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1341.9 lm	52.7%
Medium (30-60°)	1.3 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2545 lm	100%
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n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

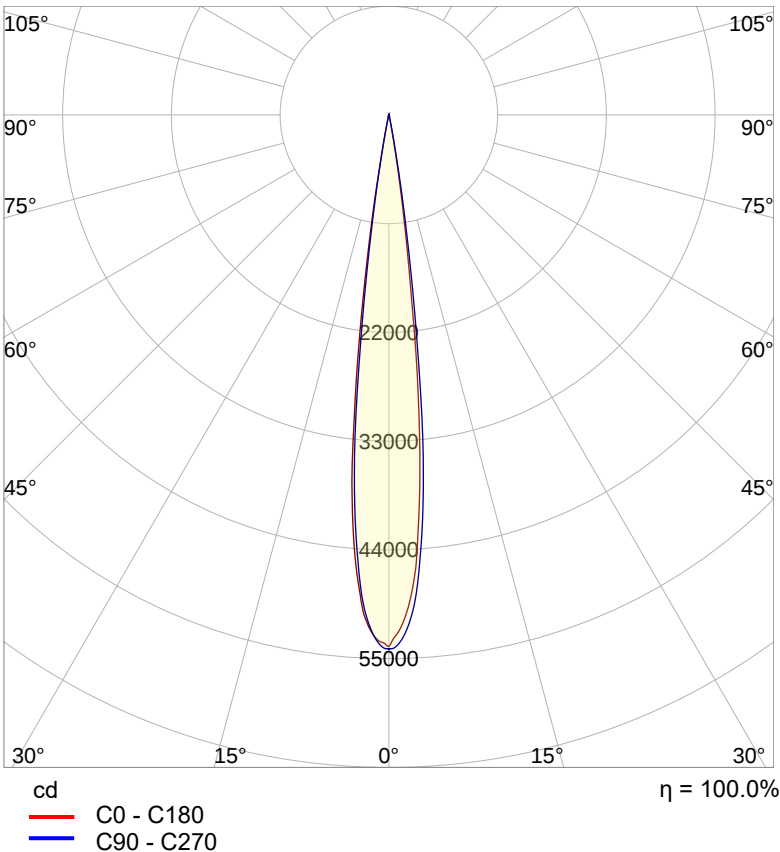
QuikPunch_OutputGain_Enabled_13D_3200K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2673 lm – 0% / 100%
n/a lm/W
54020 cd
3200 K
CRI 0.0

Polar light distribution diagram

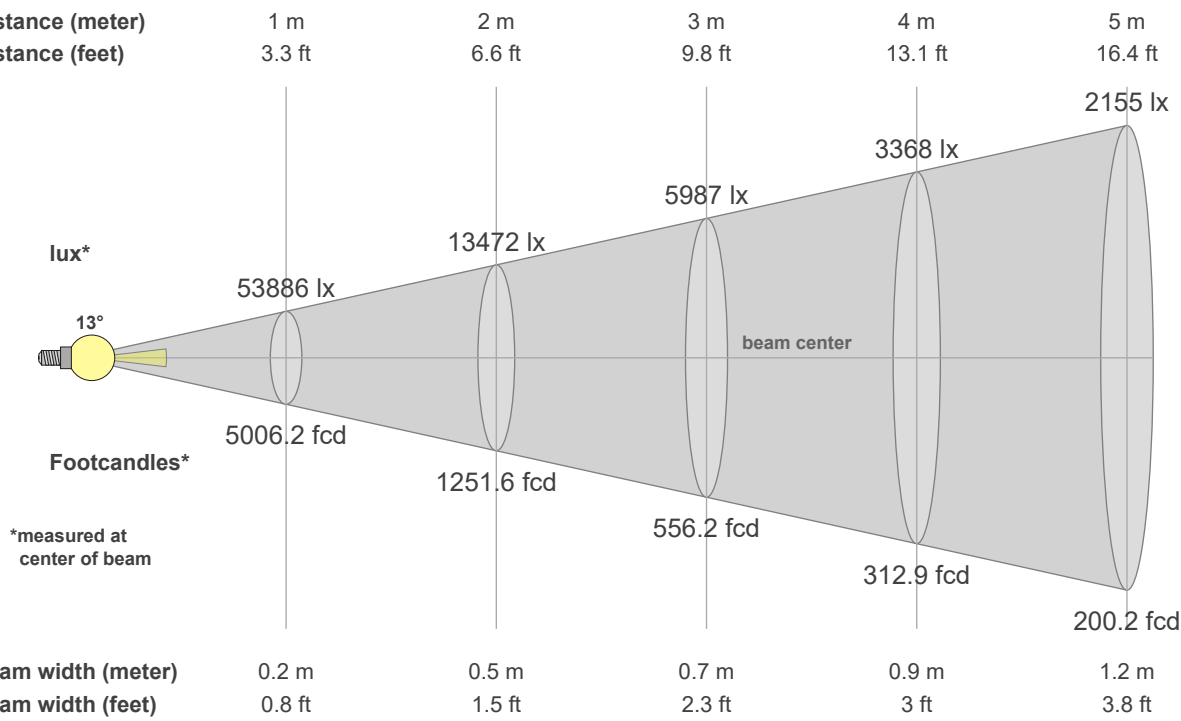


Test report

Light measurement results

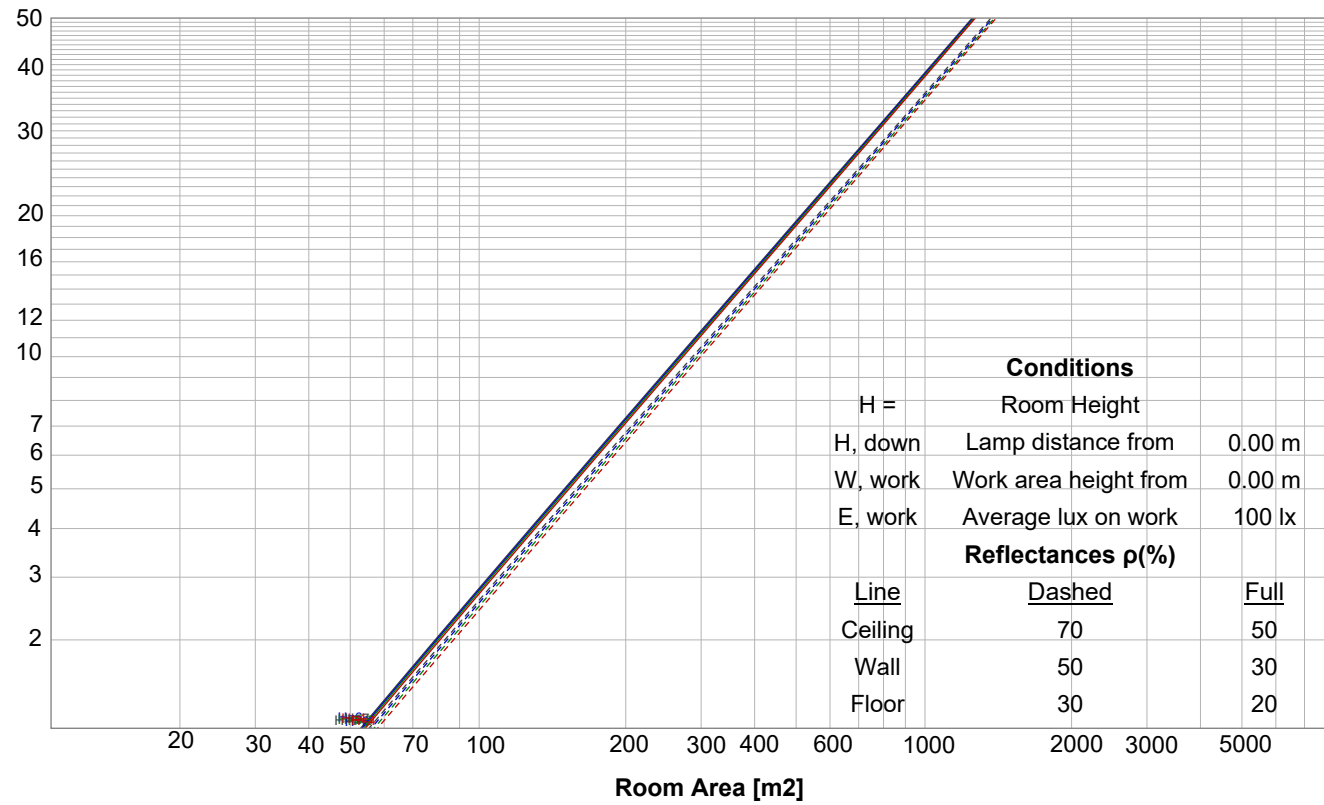
Print date 9/26/2025

Beam details

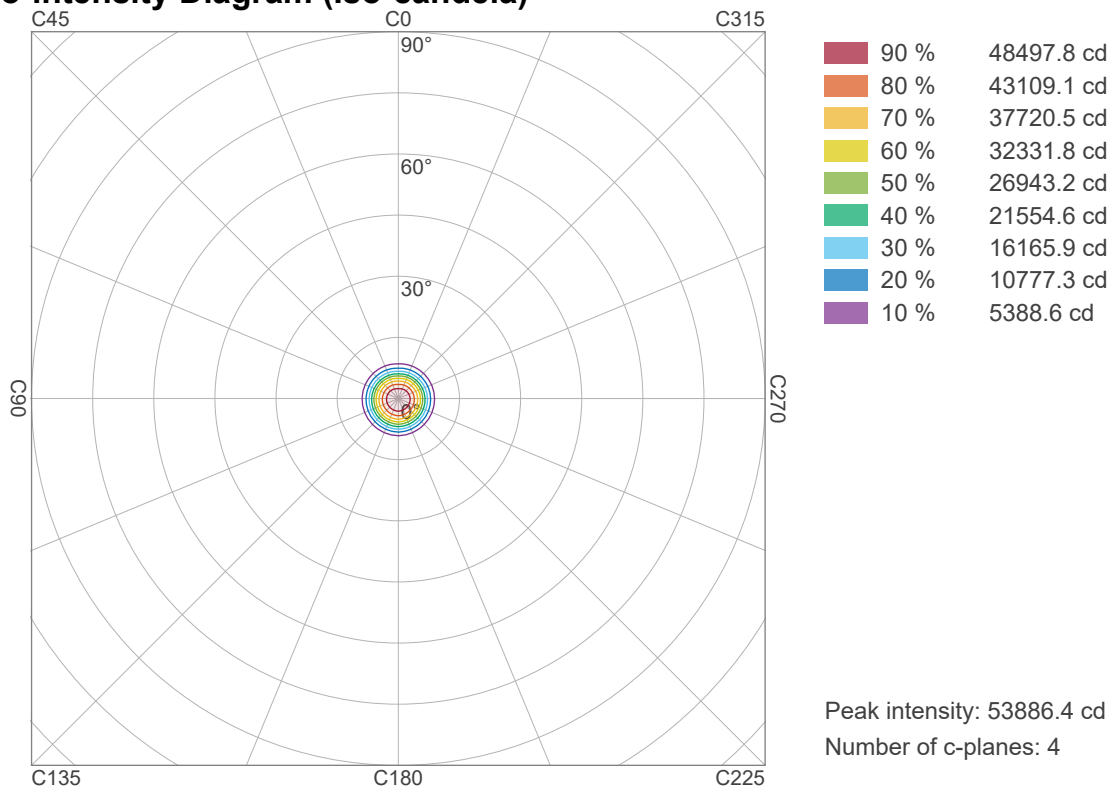


Luminaire budgetary diagram

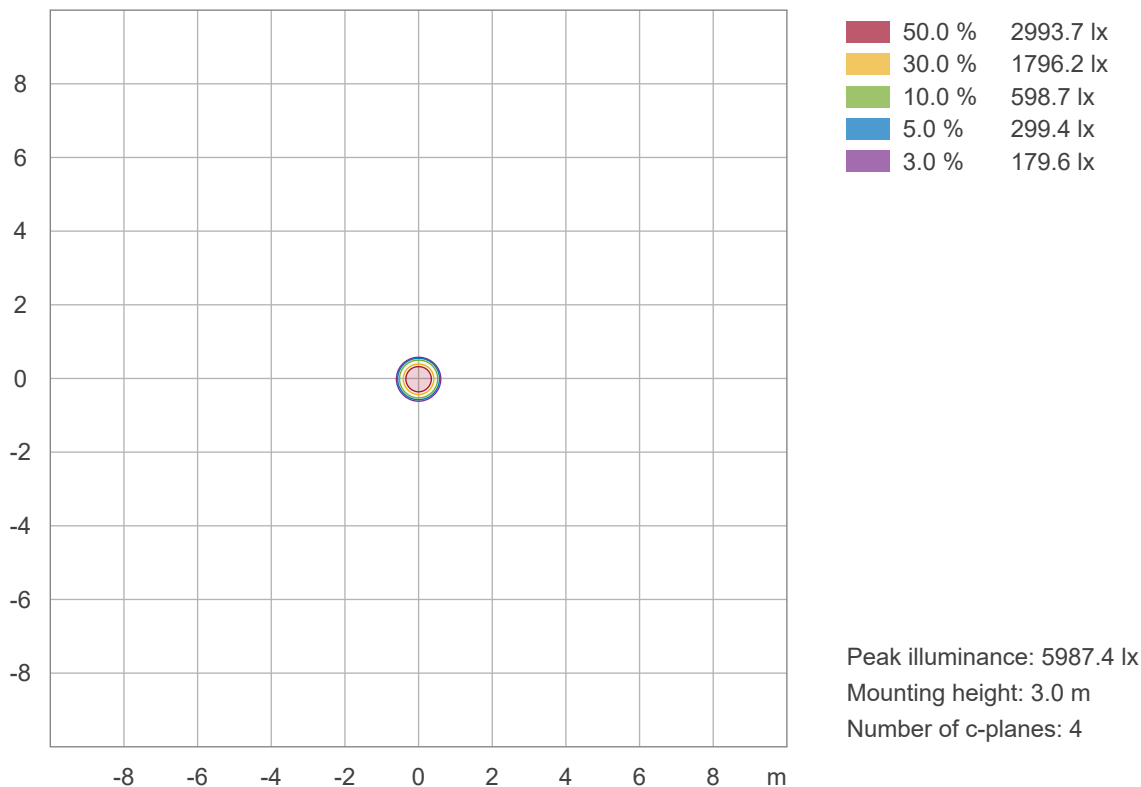
LAMPS (number of lamps)



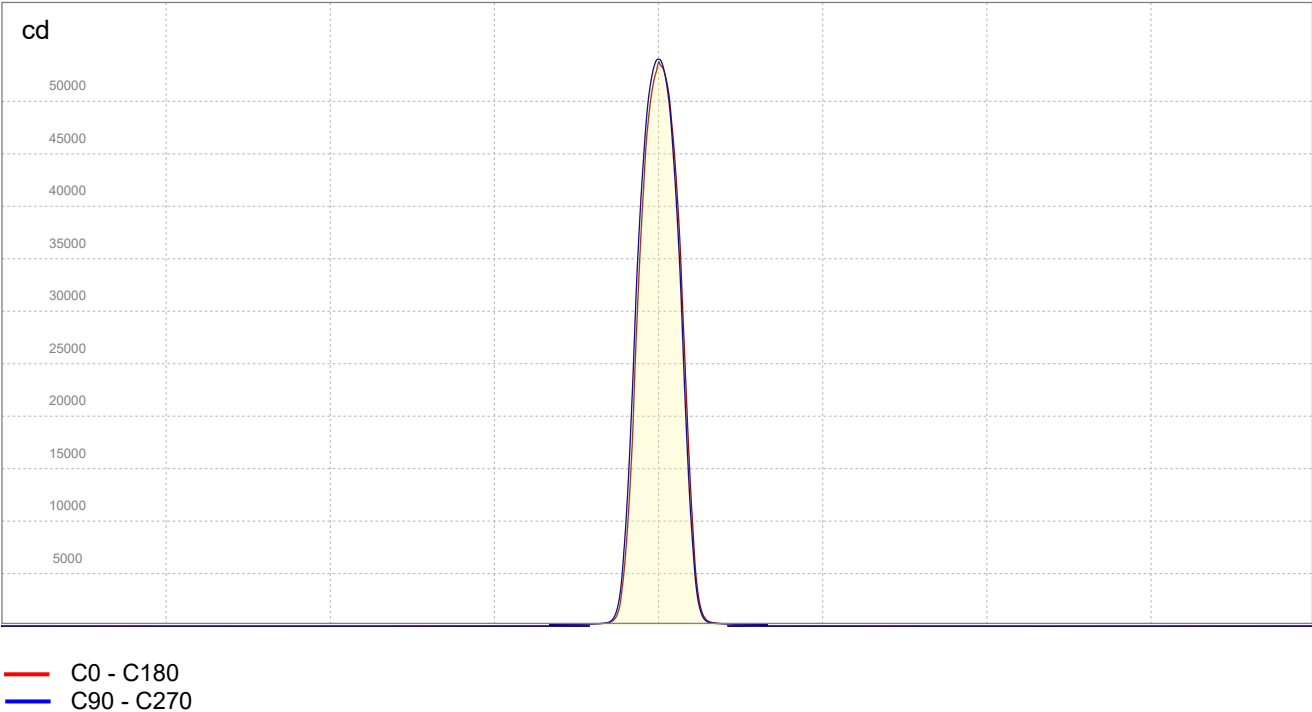
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

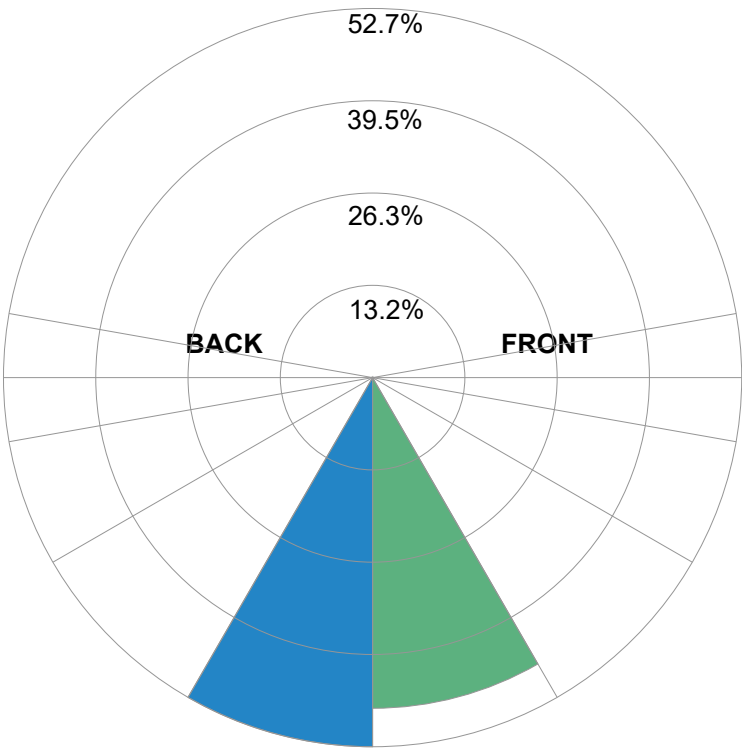


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1261.8 lm	47.2%
Medium (30-60°)	1.3 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1408.6 lm	52.7%
Medium (30-60°)	1.3 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2673 lm	100%
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n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

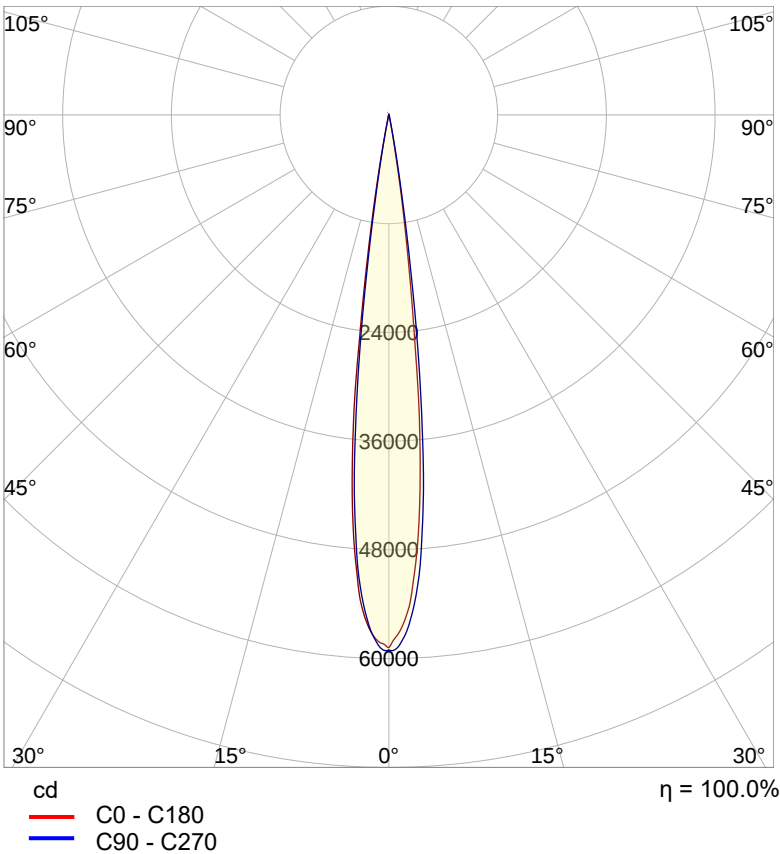
QuikPunch_OutputGain_Enabled_13D_4000K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2921 lm – 0% / 100%
n/a lm/W
59091 cd
4000 K
CRI 0.0

Polar light distribution diagram

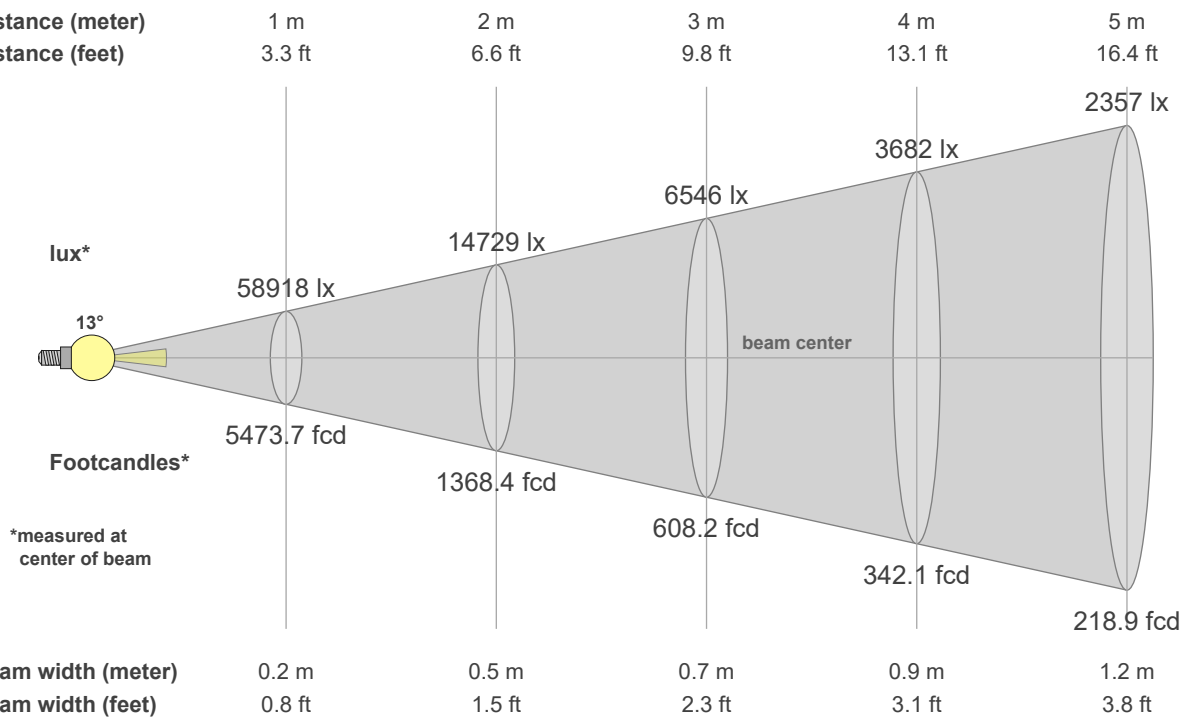


Test report

Light measurement results

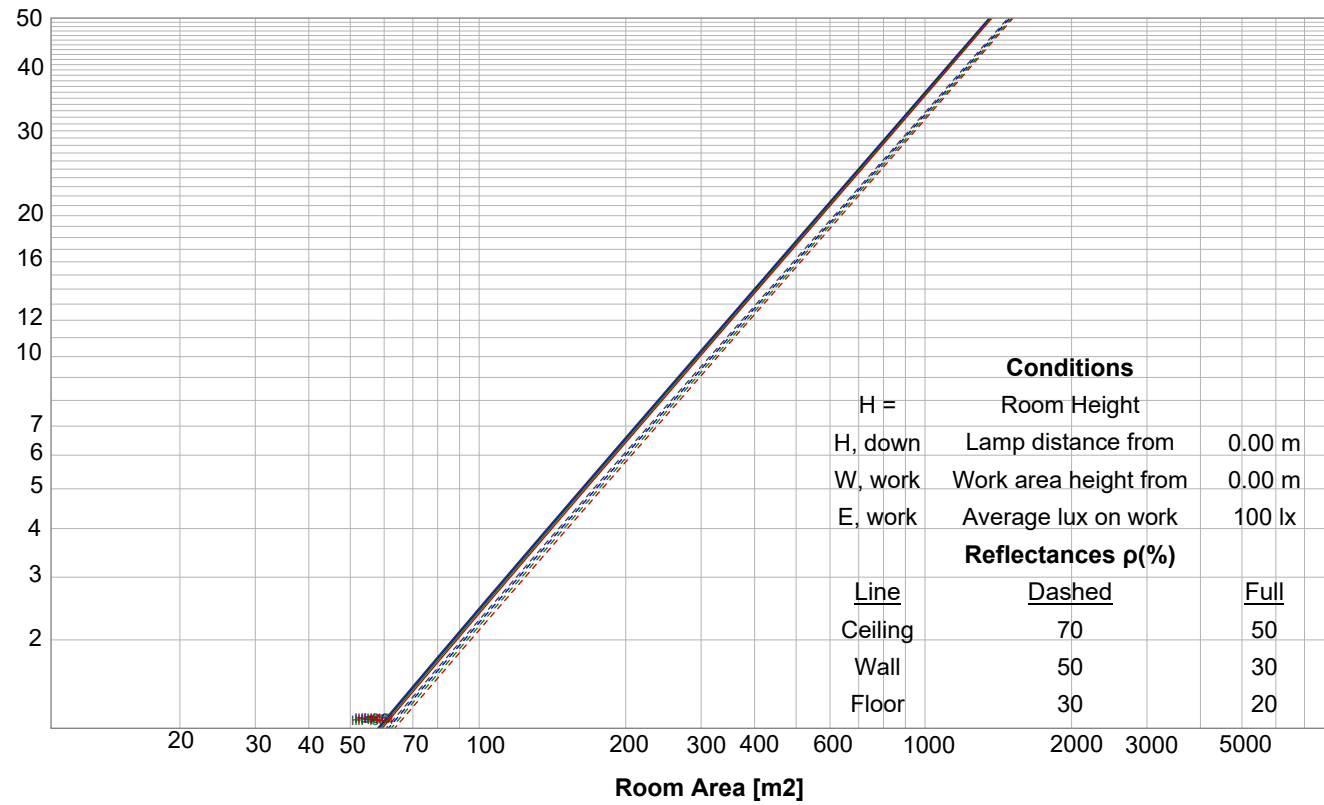
Print date 9/26/2025

Beam details

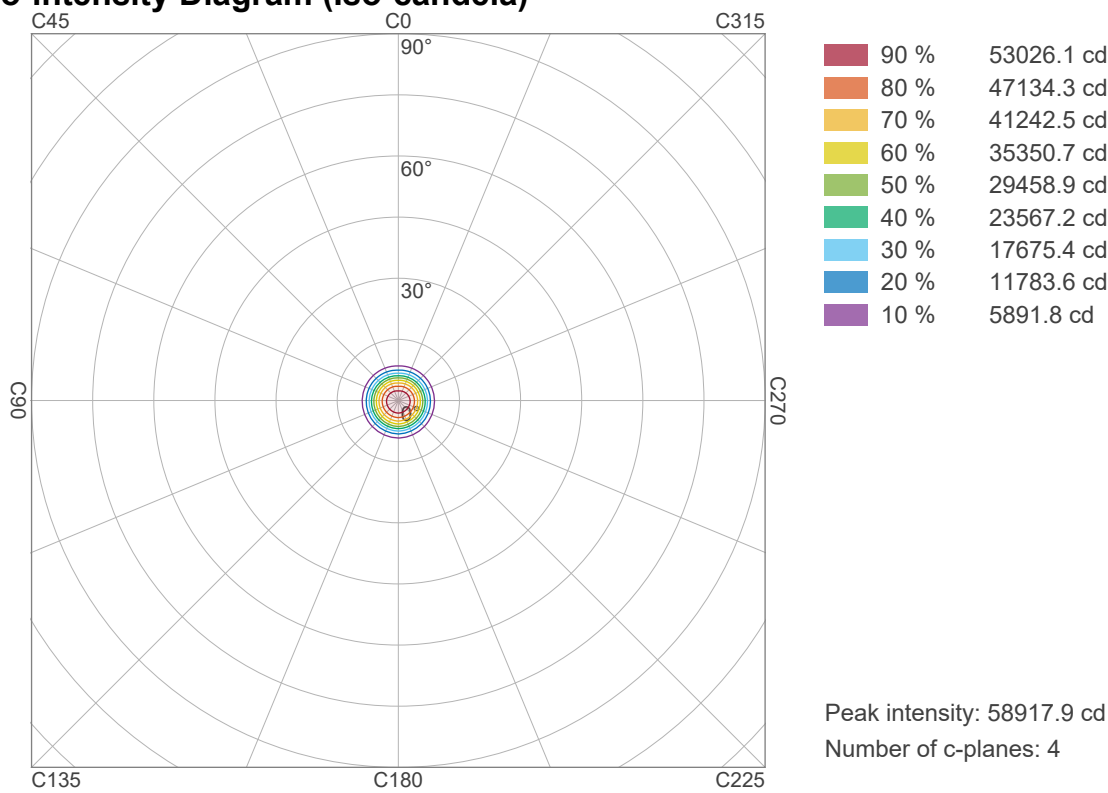


Luminaire budgetary diagram

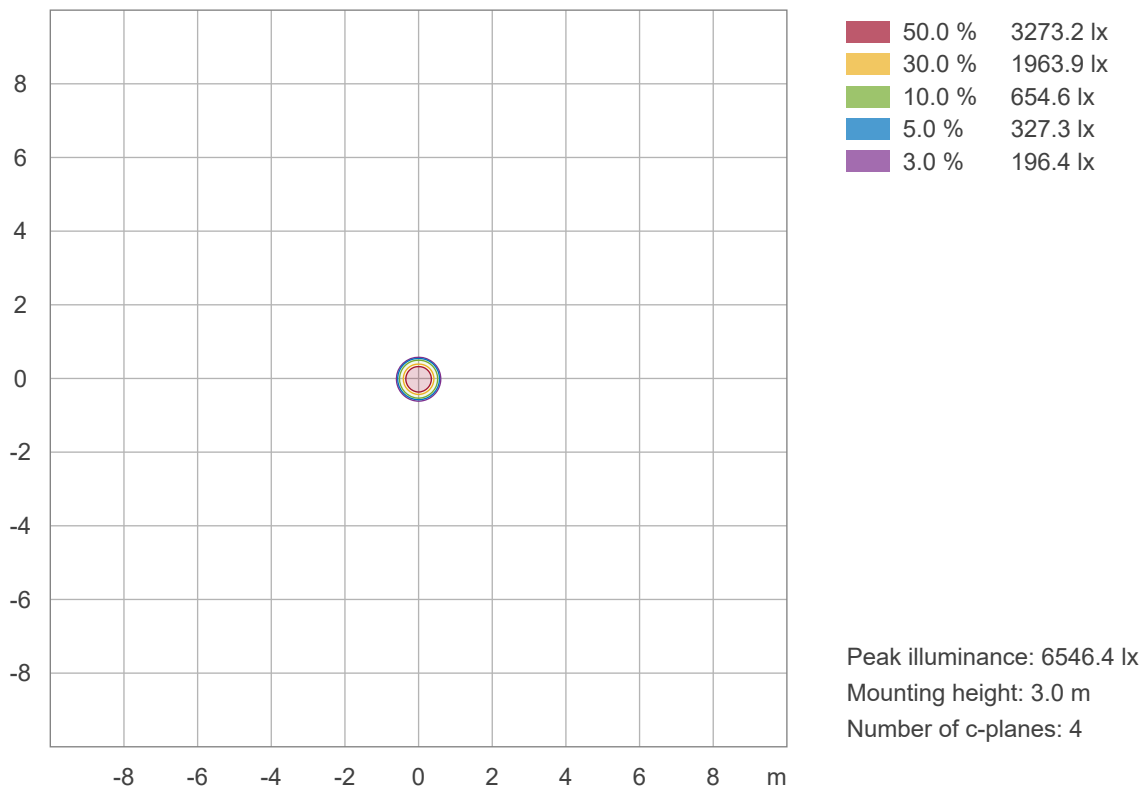
LAMPS (number of lamps)



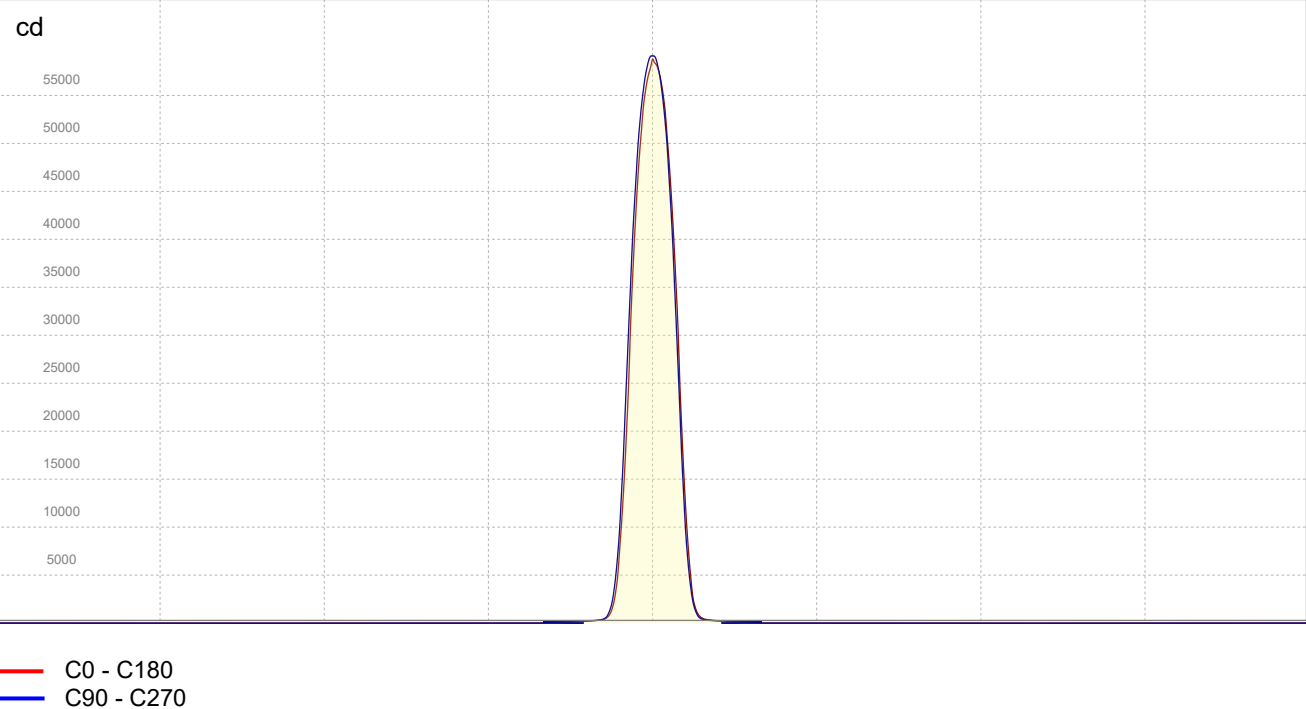
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

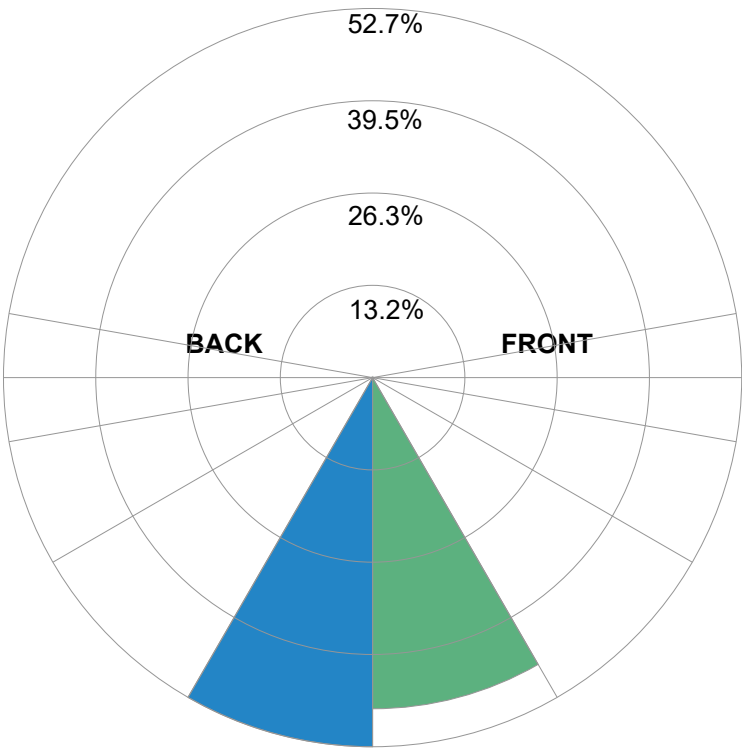


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1380.1 lm	47.2%
Medium (30-60°)	1.4 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1538.4 lm	52.7%
Medium (30-60°)	1.5 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2921 lm	100%
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Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

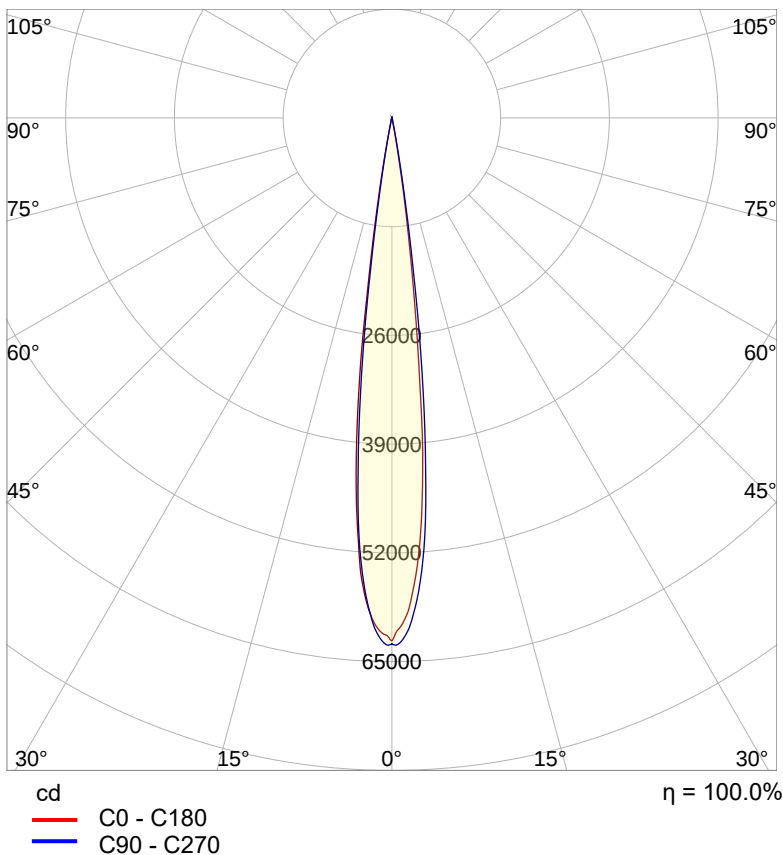
QuikPunch_OutputGain_Enabled_13D_5500
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3103 lm – 0% / 100%
n/a lm/W
63019 cd
5500 K
CRI 0.0

Polar light distribution diagram

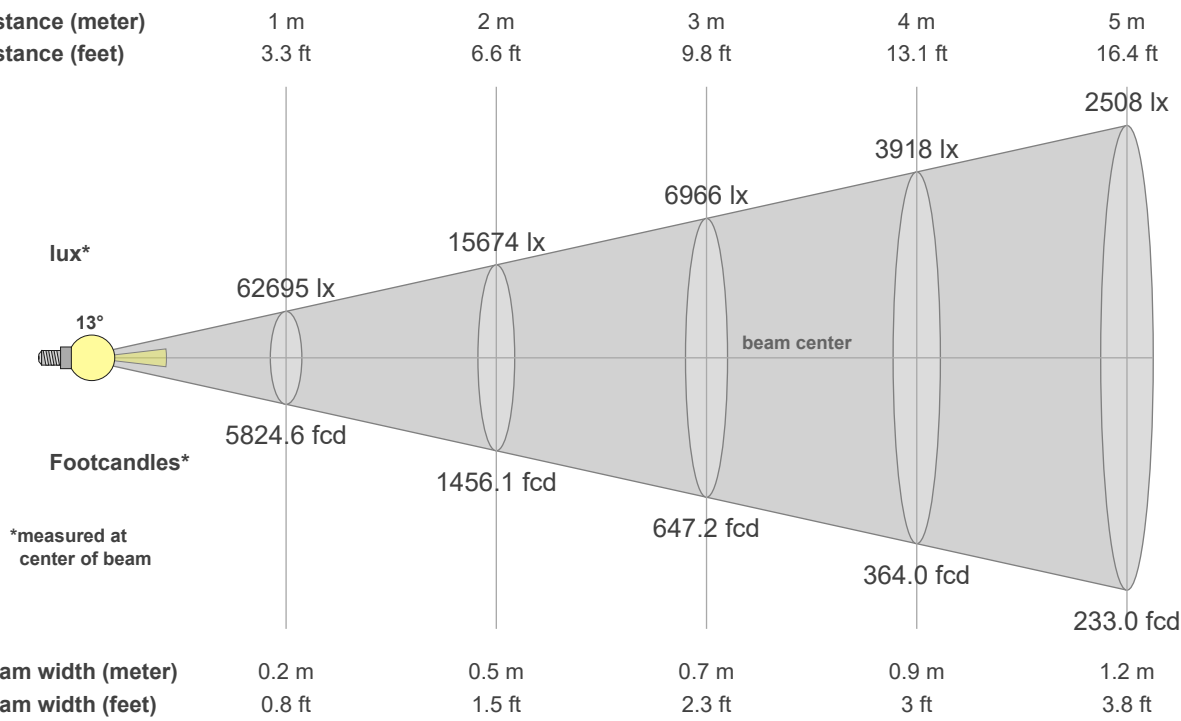


Test report

Light measurement results

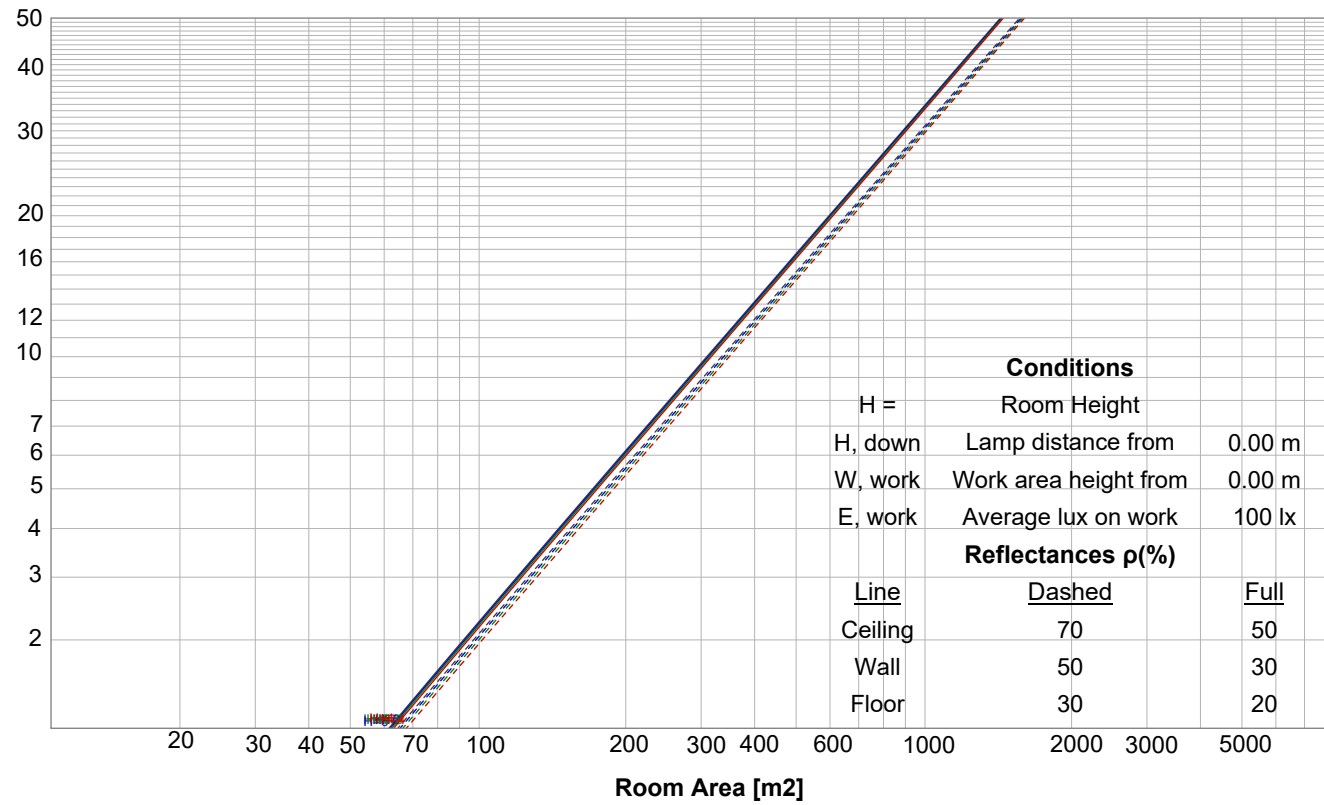
Print date 9/26/2025

Beam details

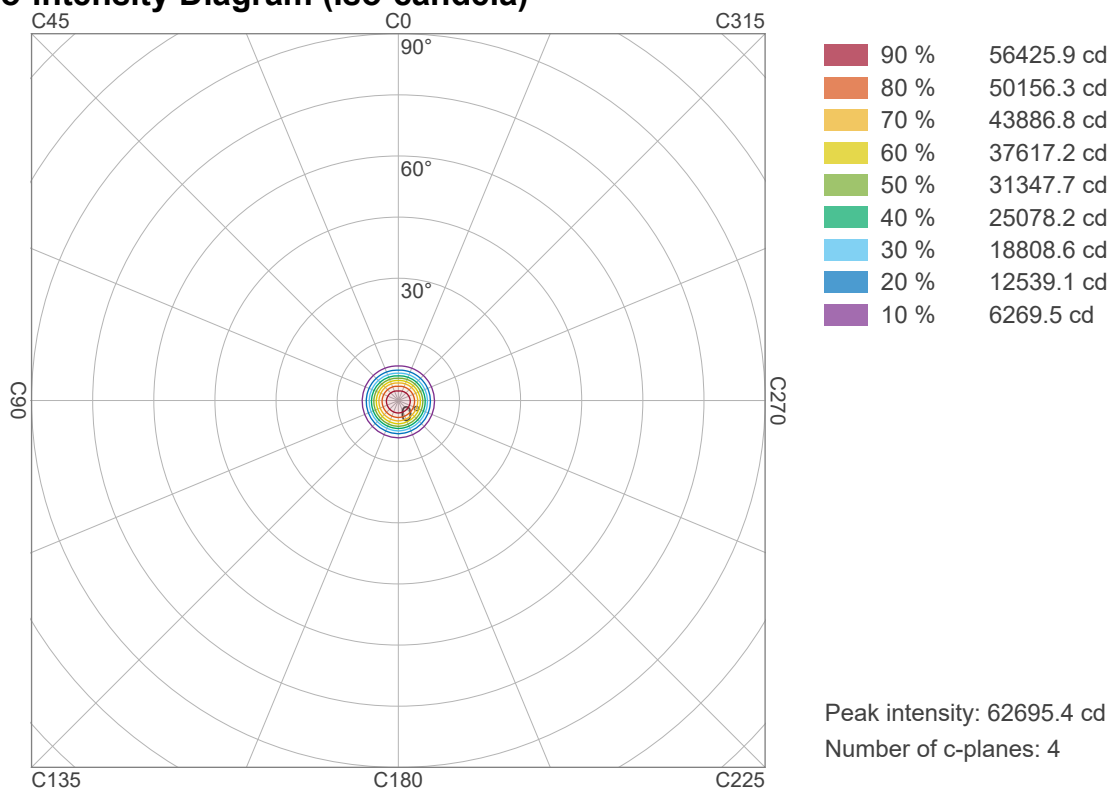


Luminaire budgetary diagram

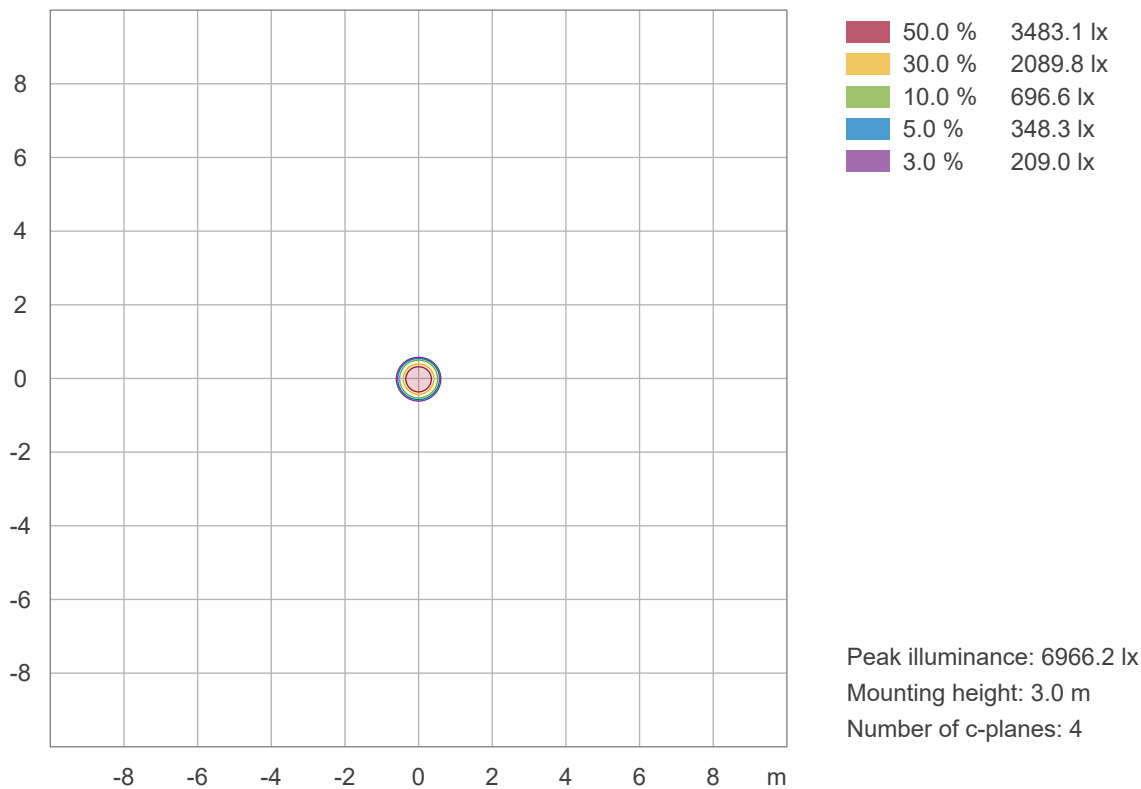
LAMPS (number of lamps)



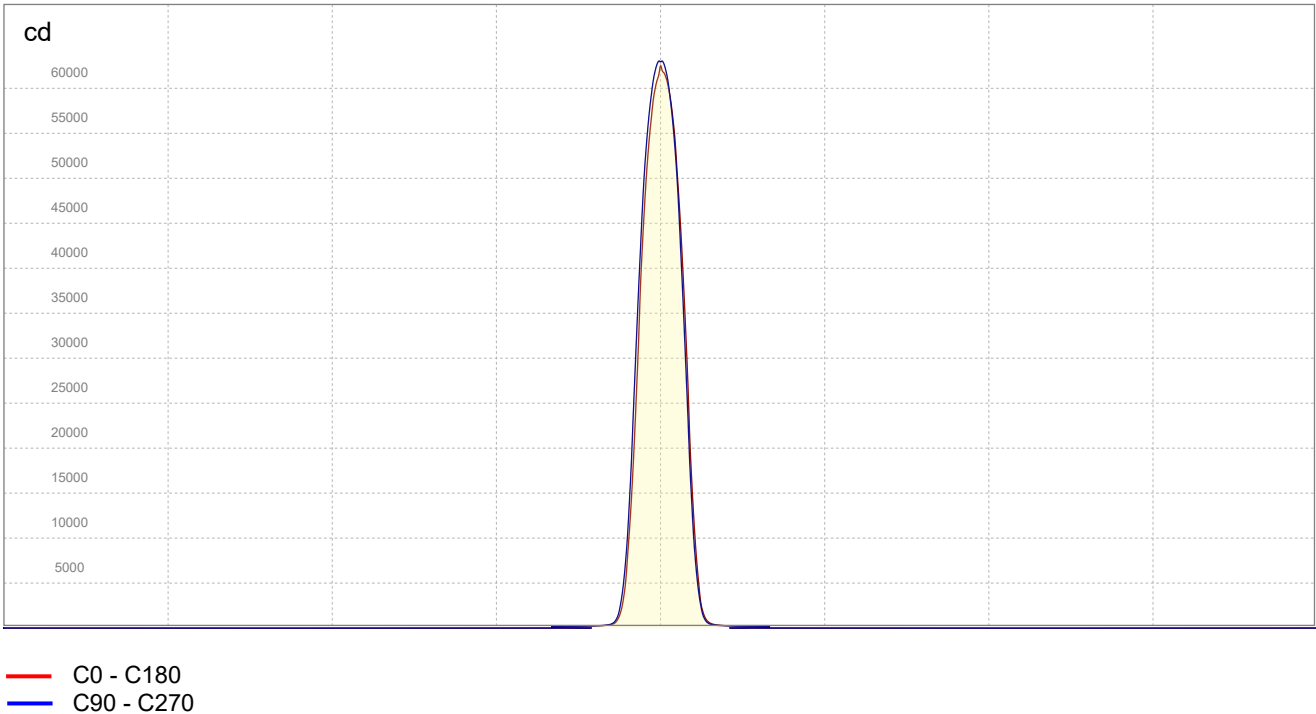
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

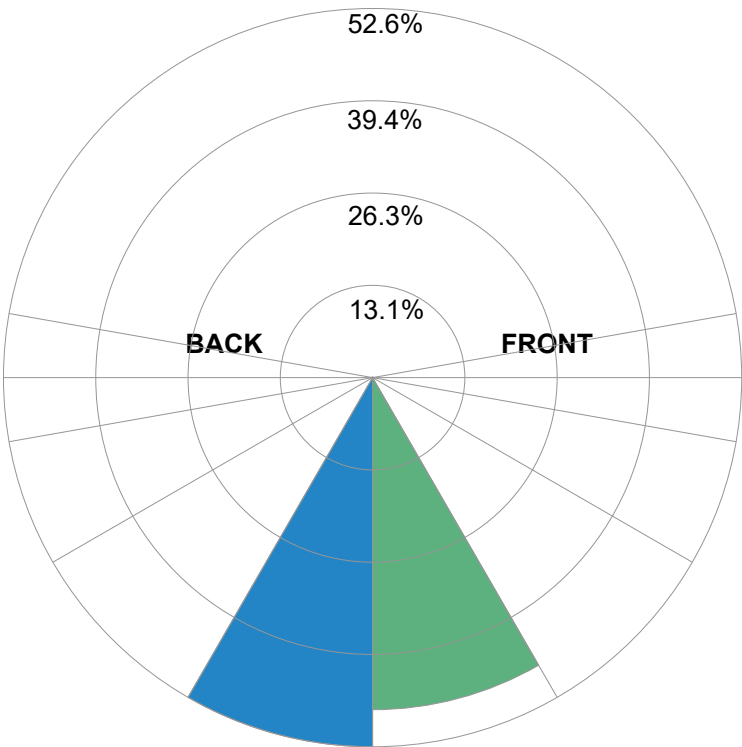


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1467.9 lm	47.3%
Medium (30-60°)	1.5 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1631.7 lm	52.6%
Medium (30-60°)	1.6 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3103 lm	100%
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Test report

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Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

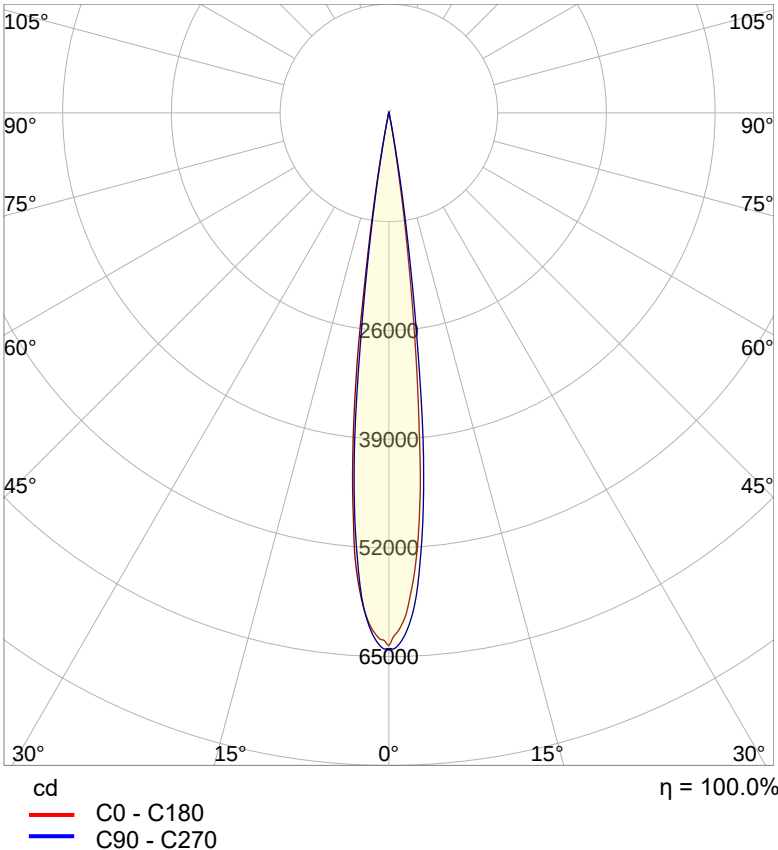
QuikPunch_OutputGain_Enabled_13D_6500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3155 lm – 0% / 100%
n/a lm/W
64084 cd
6500 K
CRI 0.0

Polar light distribution diagram

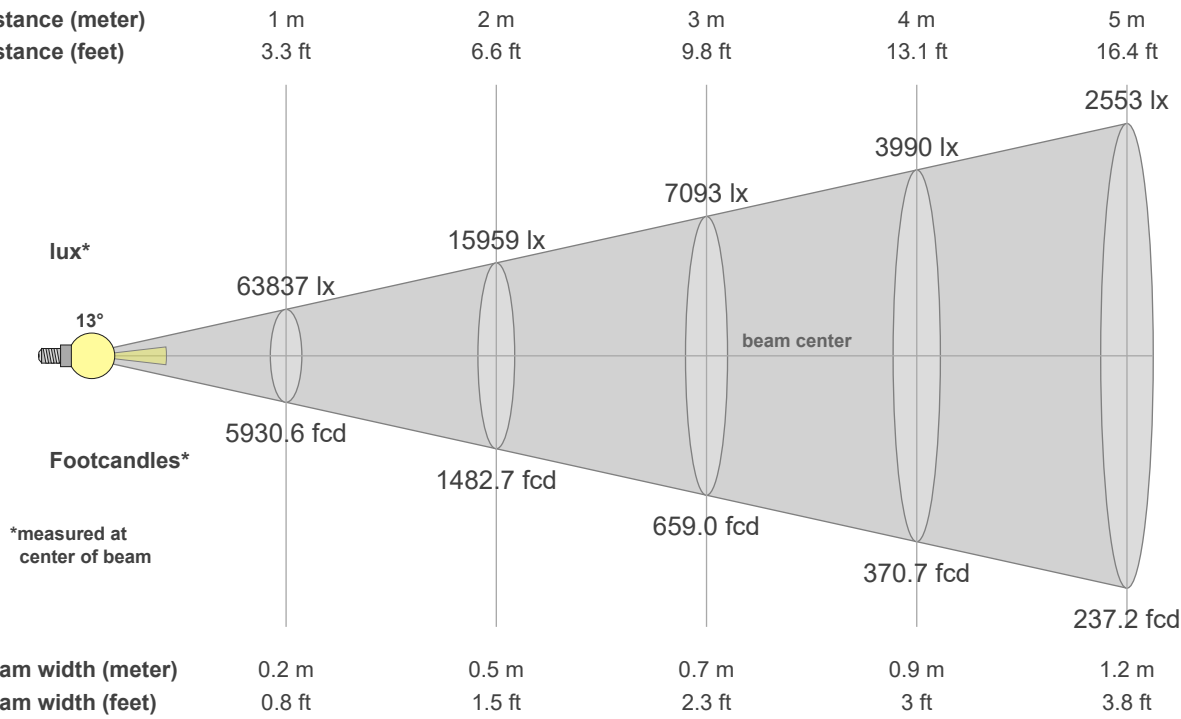


Test report

Light measurement results

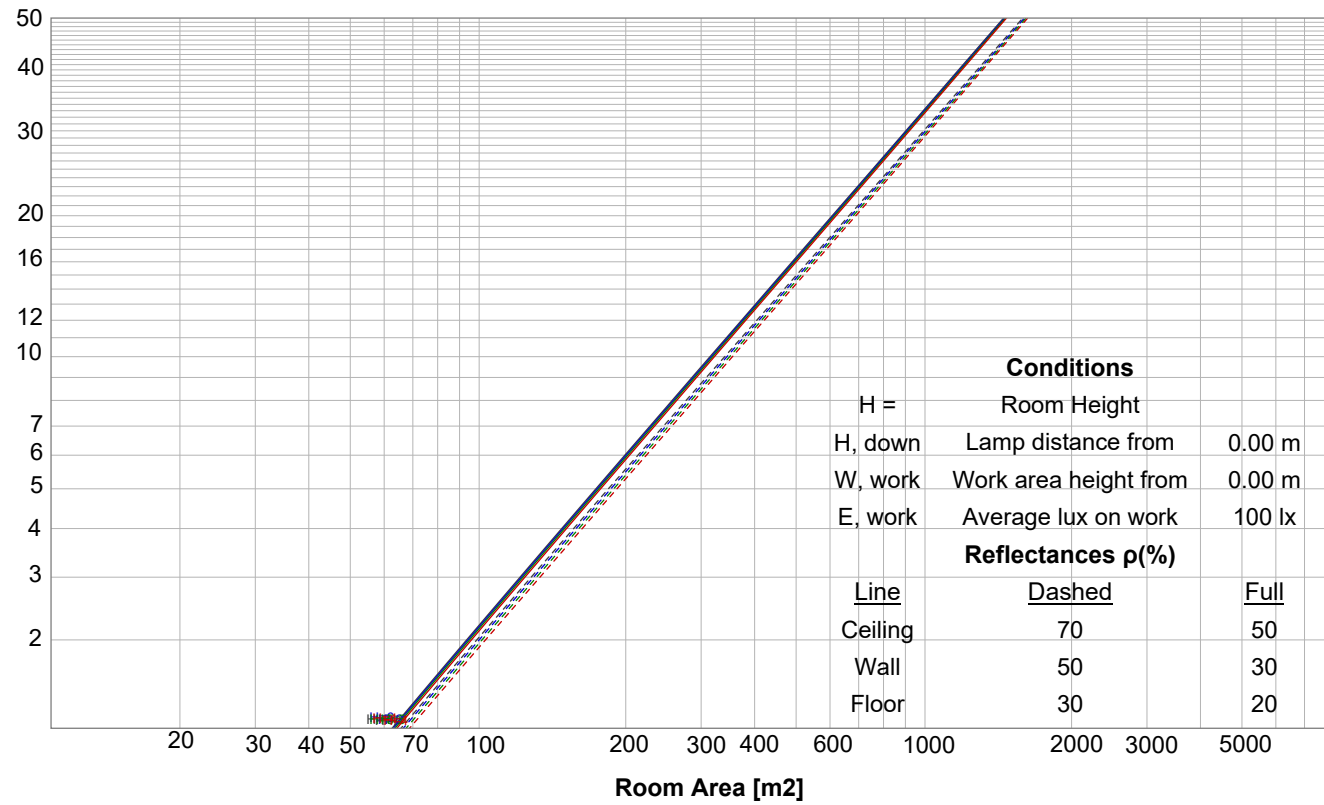
Print date 9/26/2025

Beam details

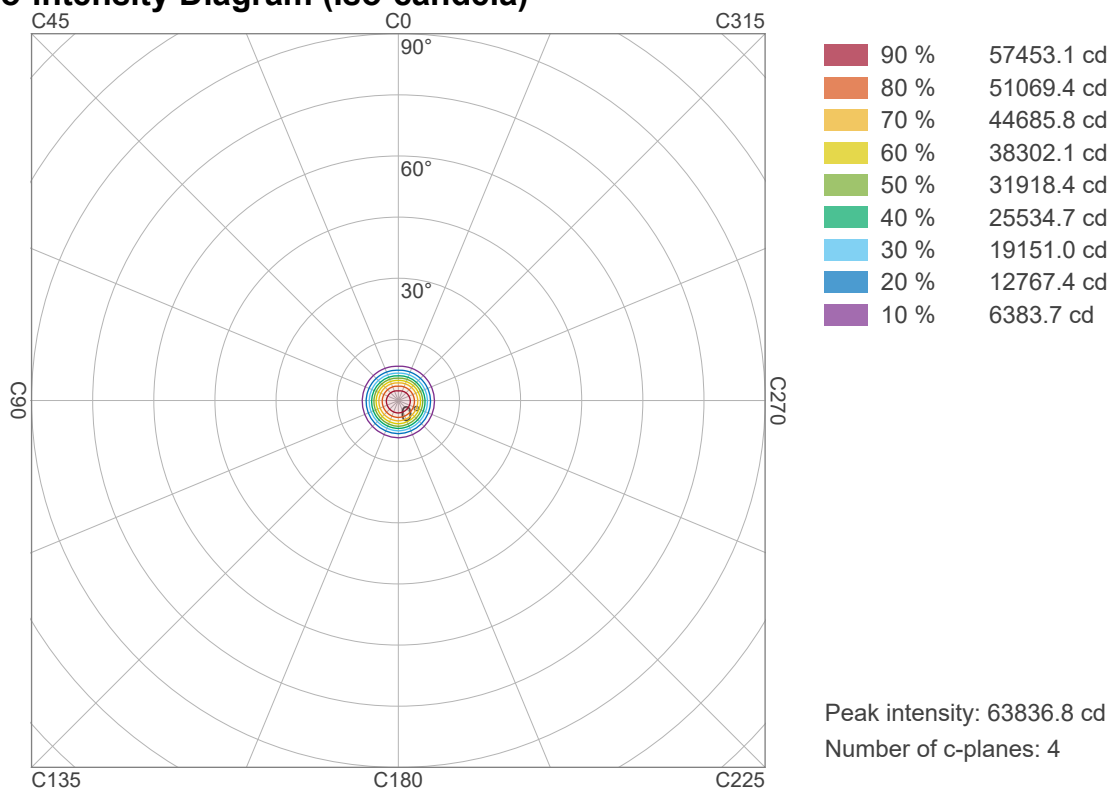


Luminaire budgetary diagram

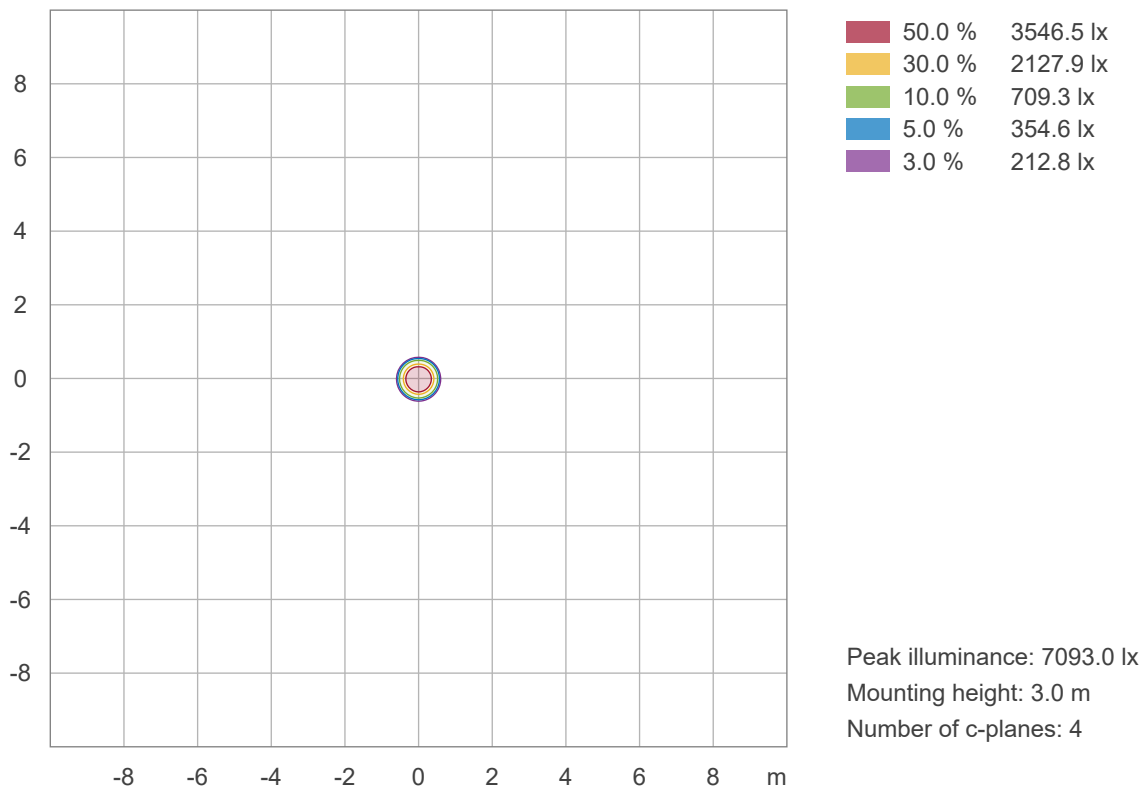
LAMPS (number of lamps)



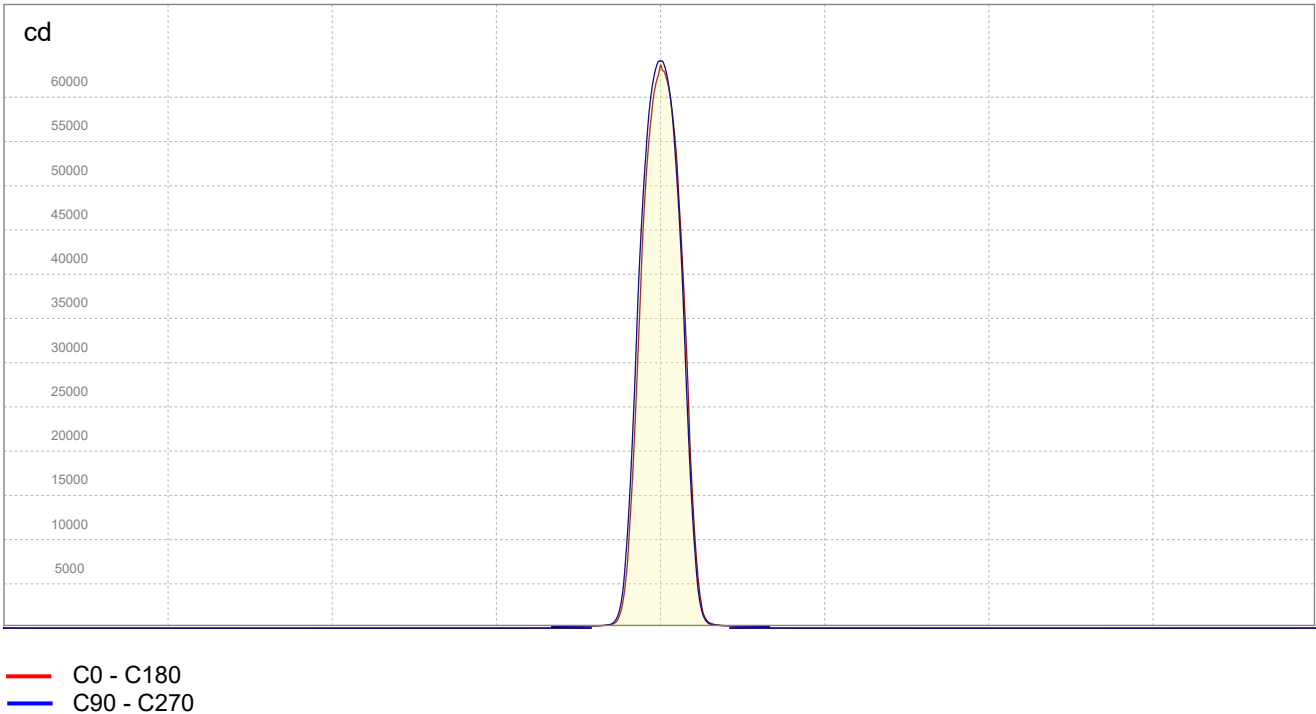
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

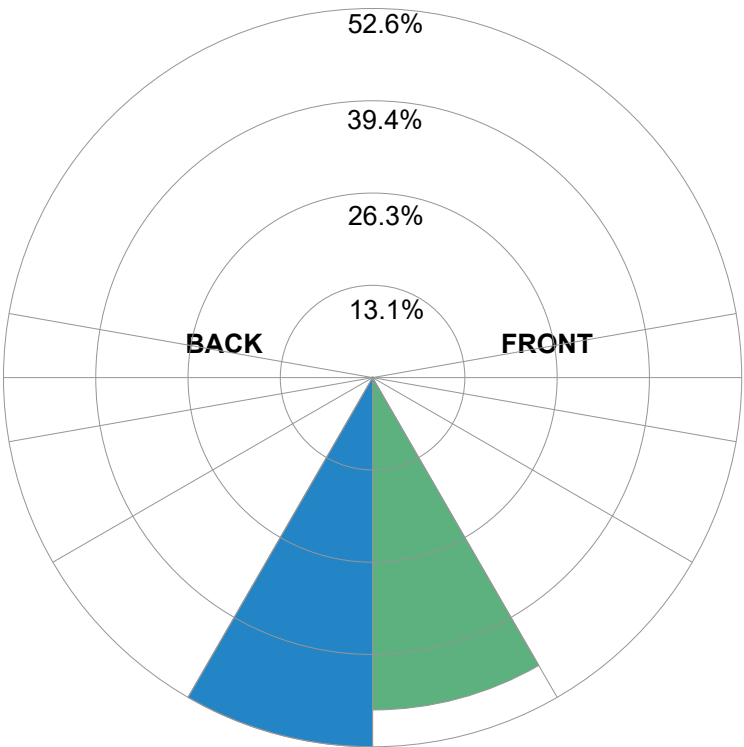


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1493.1 lm	47.3%
Medium (30-60°)	1.5 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1658.4 lm	52.6%
Medium (30-60°)	1.6 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3155 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab

n/a - serial: n/a sensor serial: n/a

Spectrometer Manufacturer and Model

n/a, n/a – n/a

Measurement date

9/26/2025

Measurement Conditions

Tested c-planes

5 – distance {C_PLANES_DIST}°

Tested gamma angles

361 – {H_PLANES_DIST}°

Input Power

- W

Tested Light Source

Luminaire

QuikPunch_OutputGain_Enabled_30D_2700K

Basic Luminous Shape

SPOT

Item No.

Manufacturer

Astera

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)

3136 lm – 0% / 100%

Efficiency

n/a lm/W

Peak Intensity

11841 cd

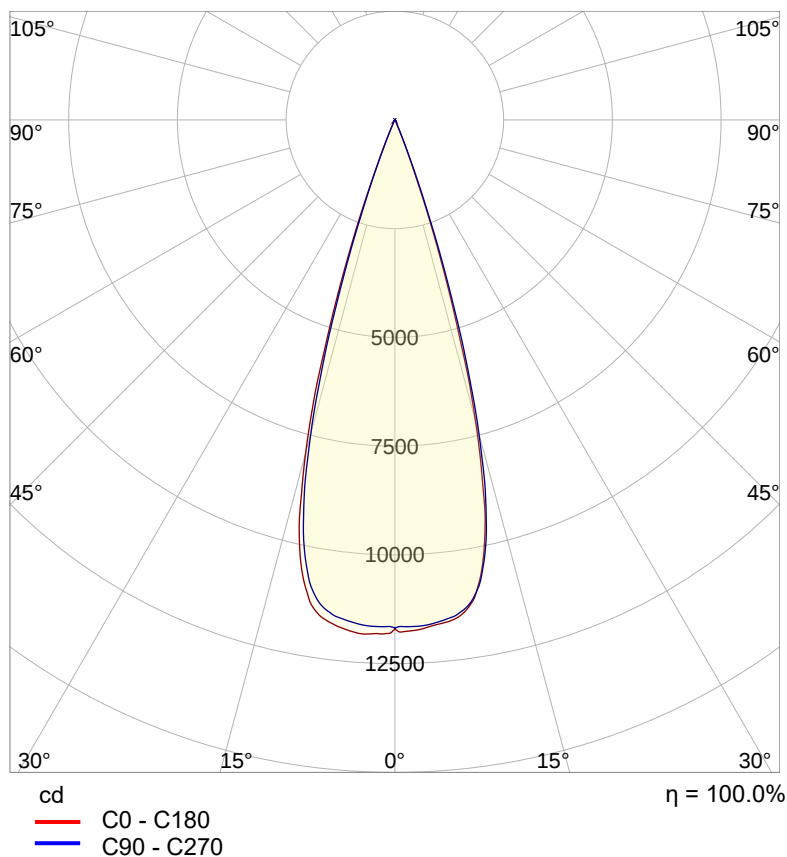
Correlated Color Temperature, CCT

2700 K

Color Rendering Index

CRI 0.0

Polar light distribution diagram

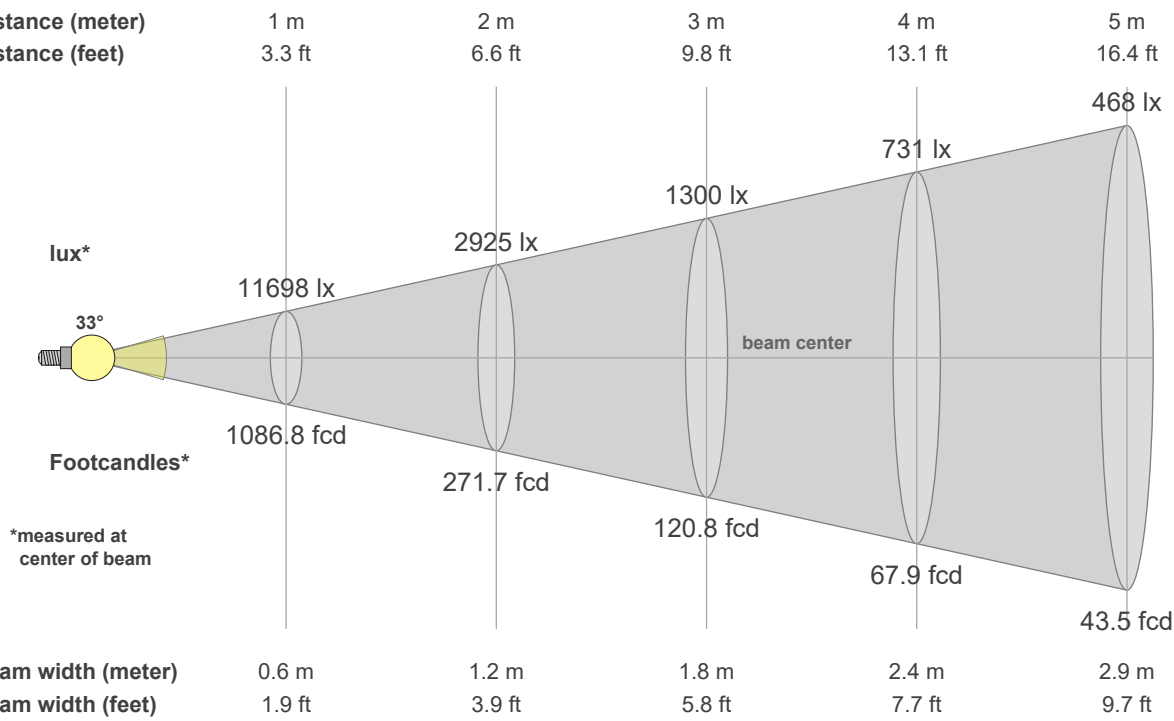


Test report

Light measurement results

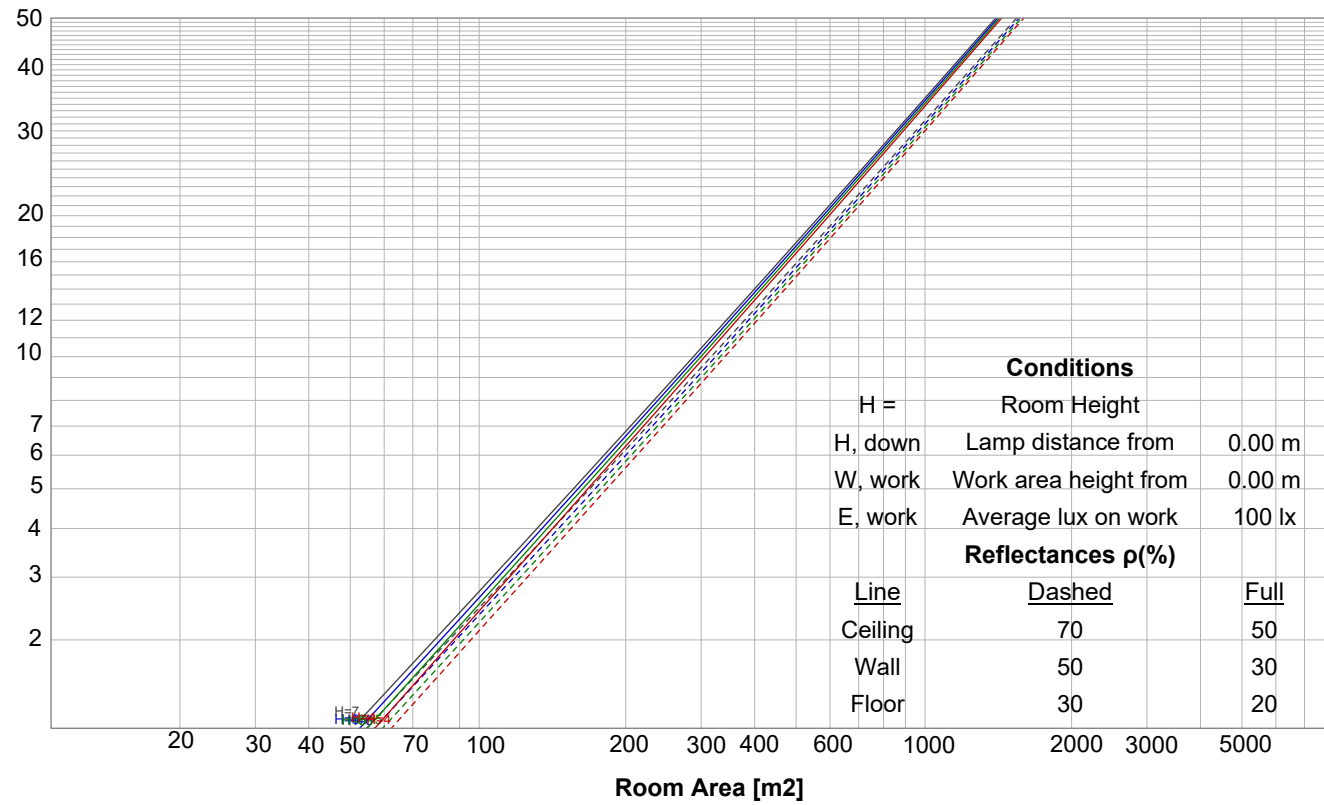
Print date 9/26/2025

Beam details

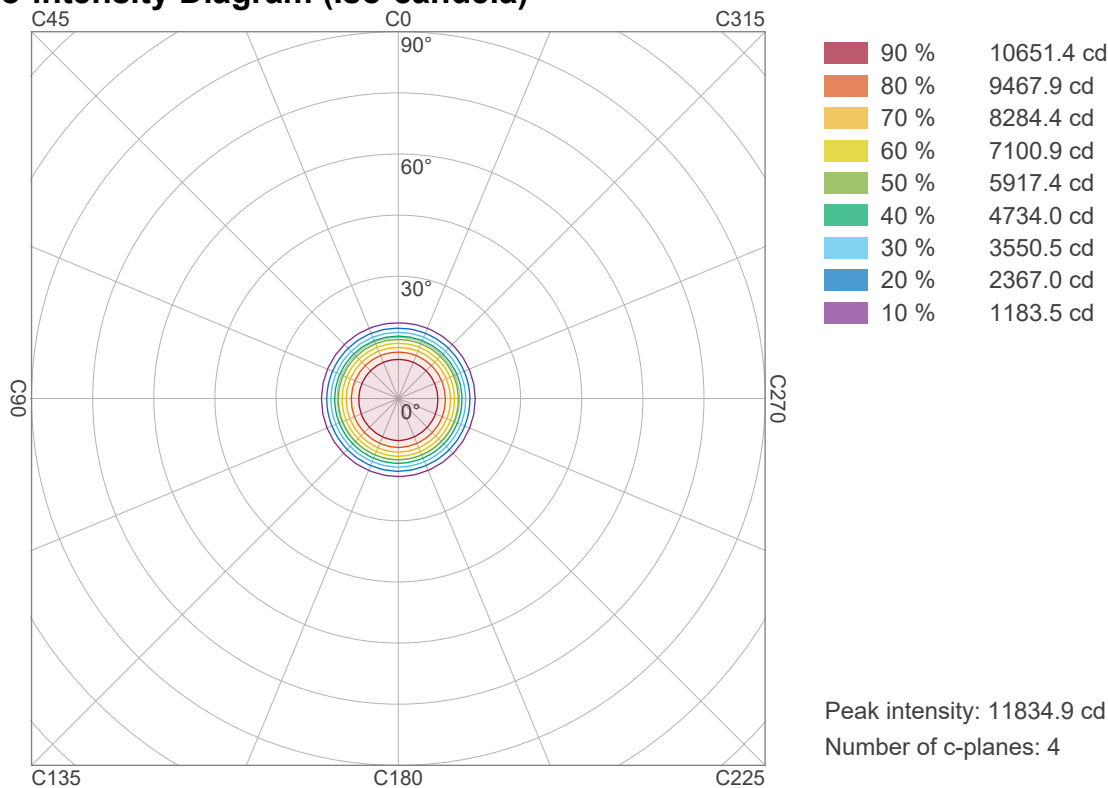


Luminaire budgetary diagram

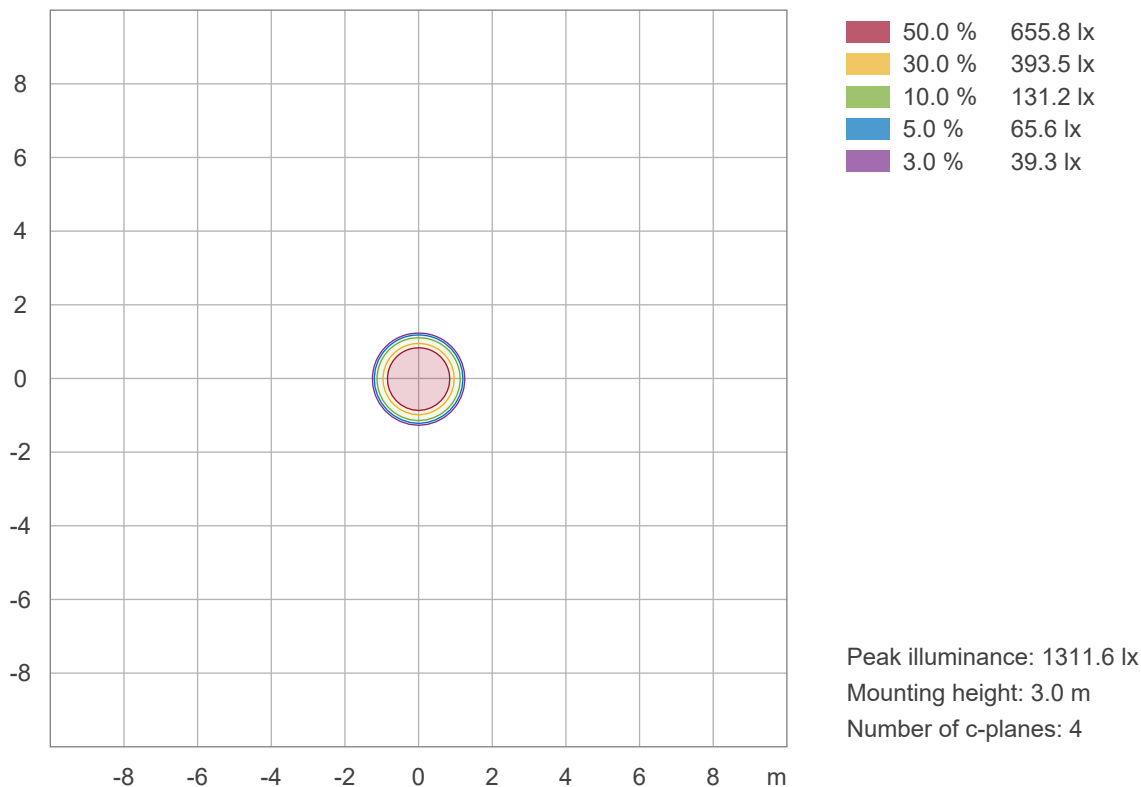
LAMPS (number of lamps)



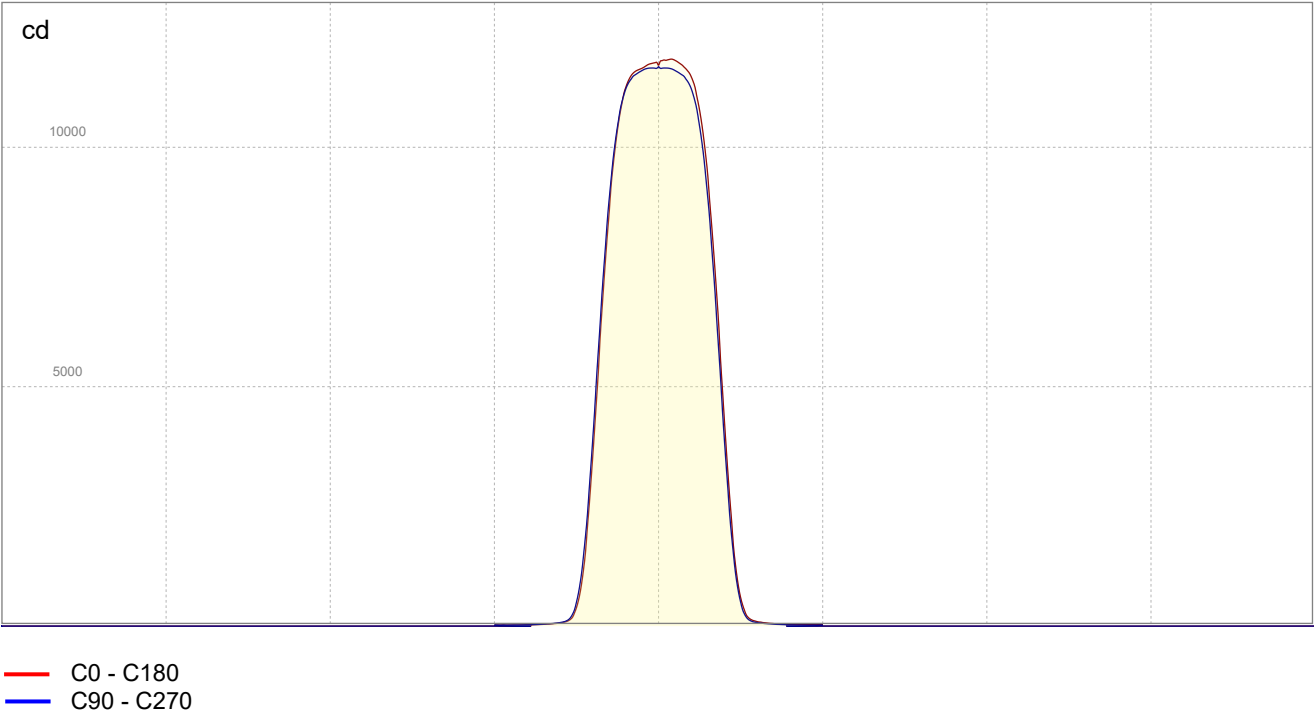
Iso-intensity Diagram (Iso-candela)



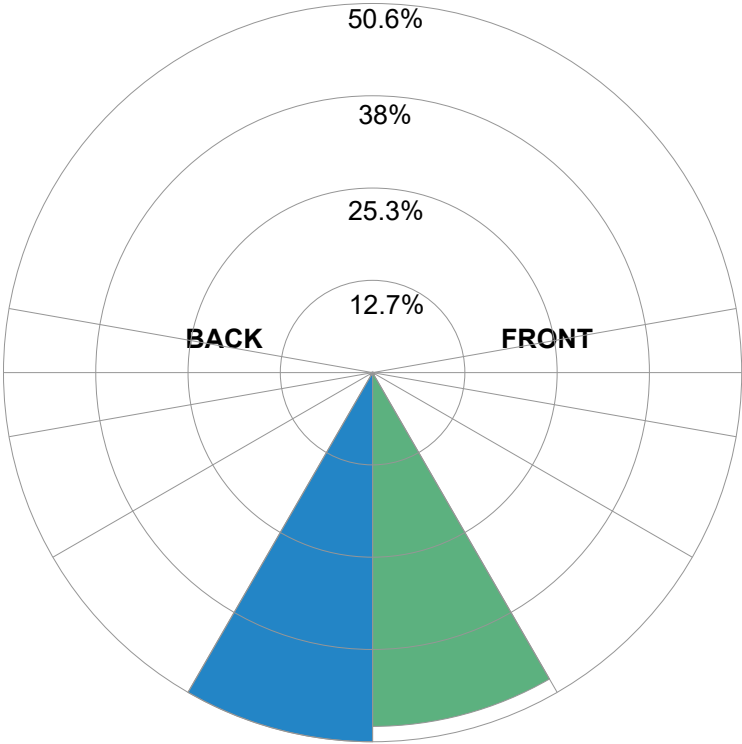
Iso-illuminance Diagram (Iso-lux)



Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires
BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1521.3 lm	48.5%
Medium (30-60°)	12.2 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1587.3 lm	50.6%
Medium (30-60°)	14.8 lm	0.5%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3136 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

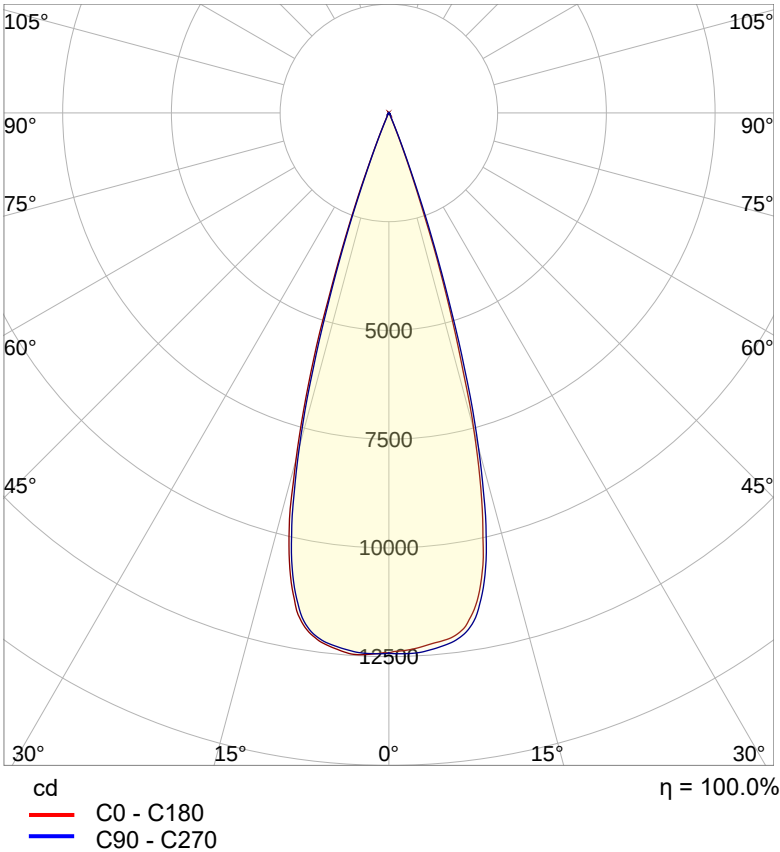
QuikPunch_OutputGain_Enabled_30D_3200K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3312 lm – 0% / 100%
n/a lm/W
12474 cd
3200 K
CRI 0.0

Polar light distribution diagram

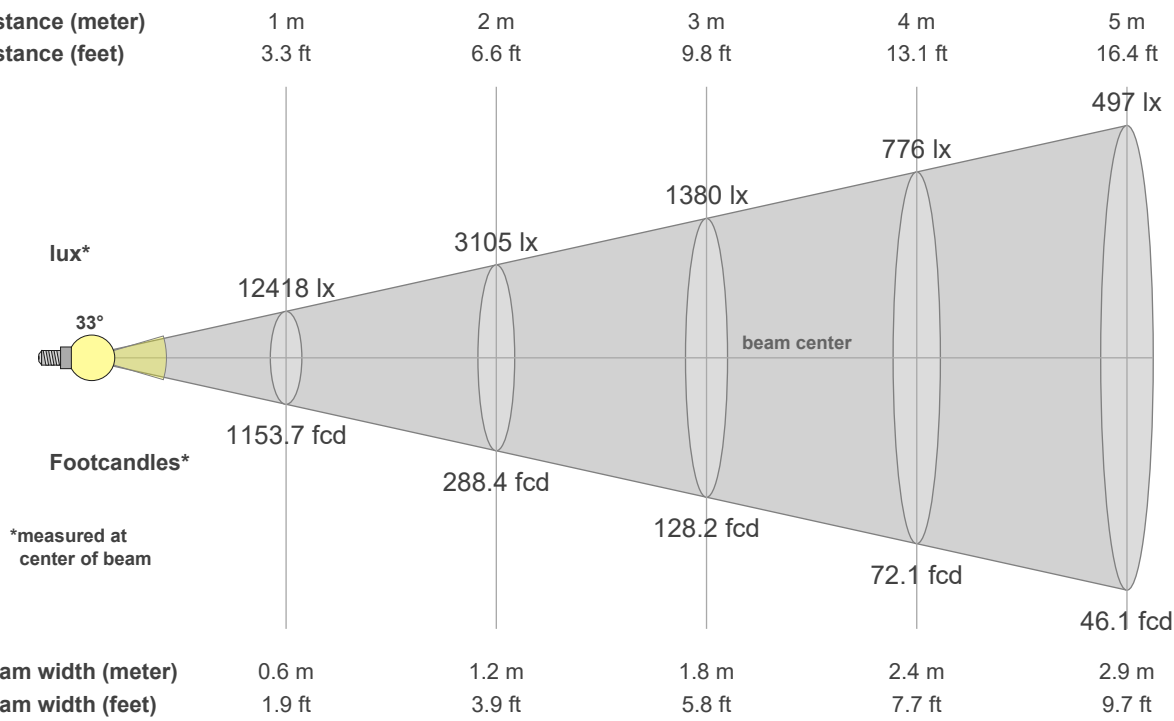


Test report

Light measurement results

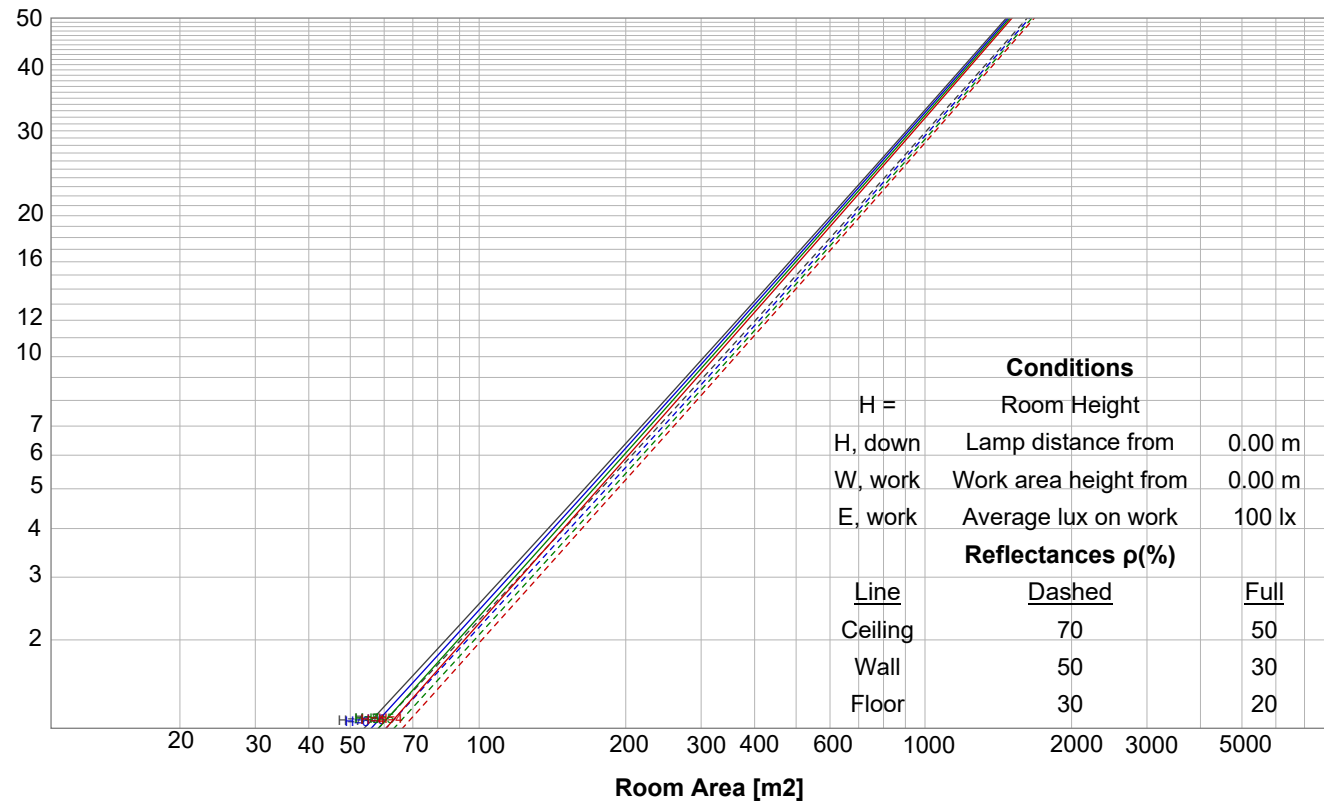
Print date 9/26/2025

Beam details

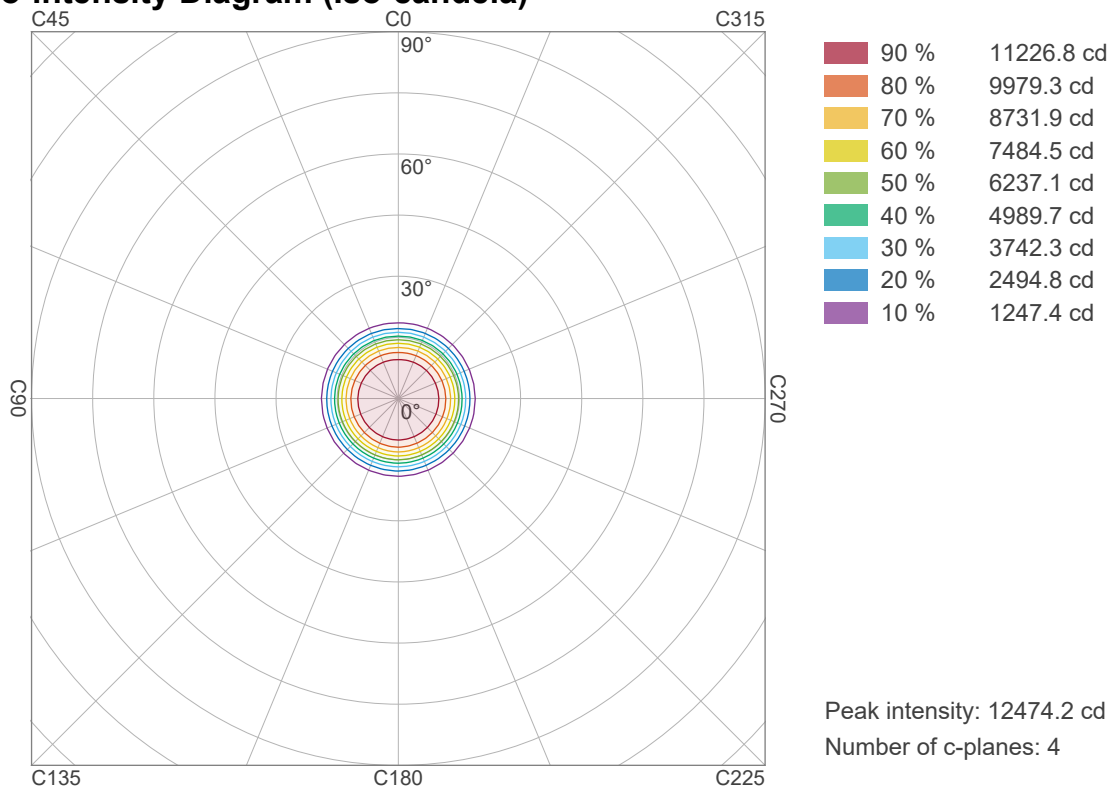


Luminaire budgetary diagram

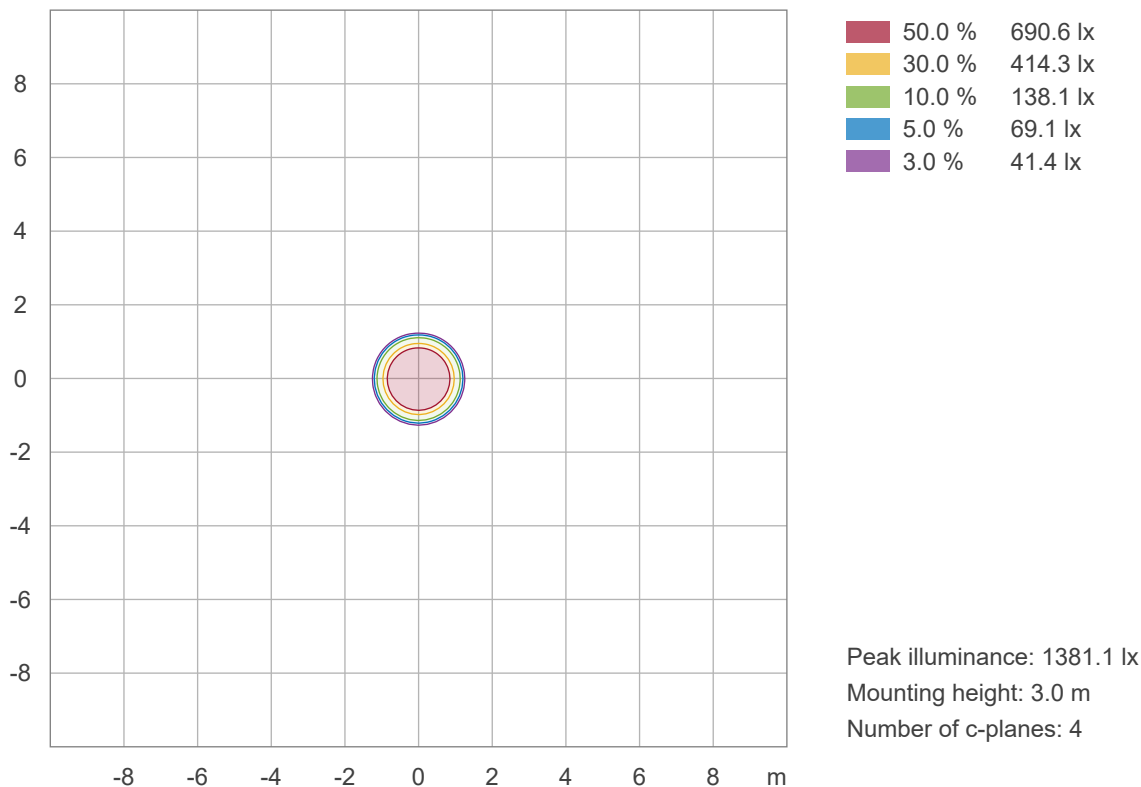
LAMPS (number of lamps)



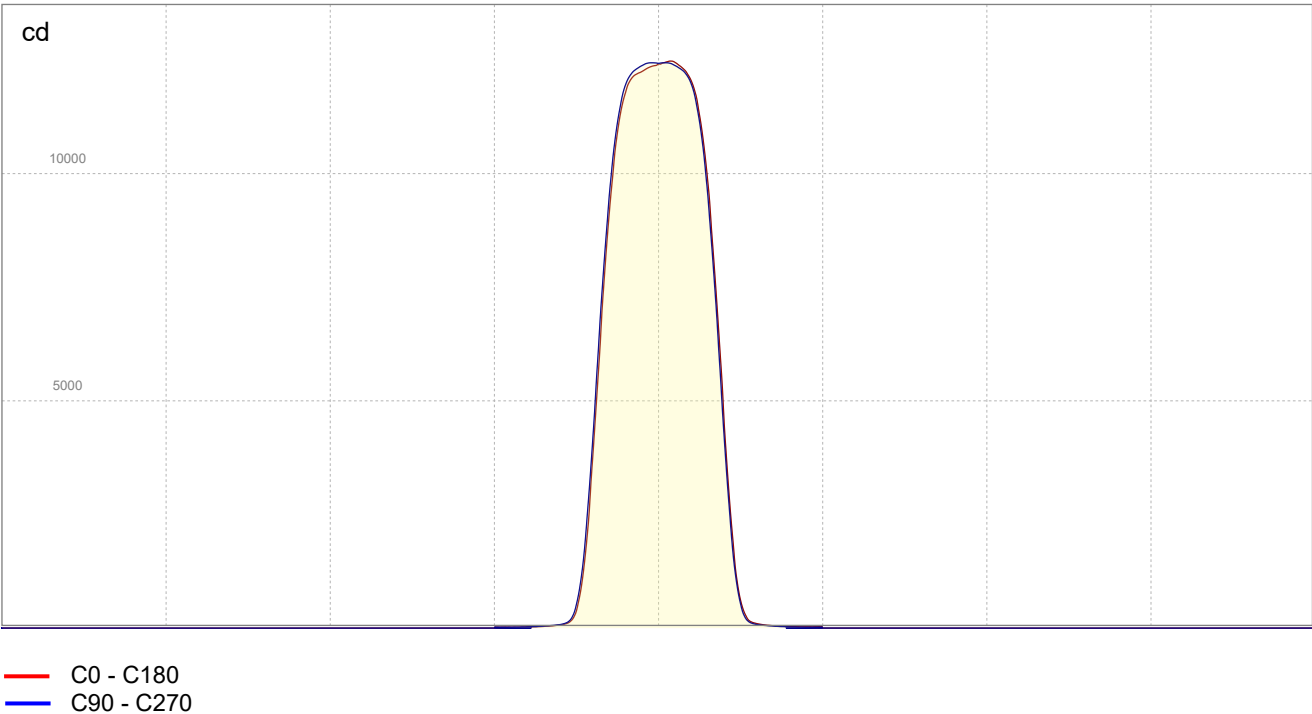
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

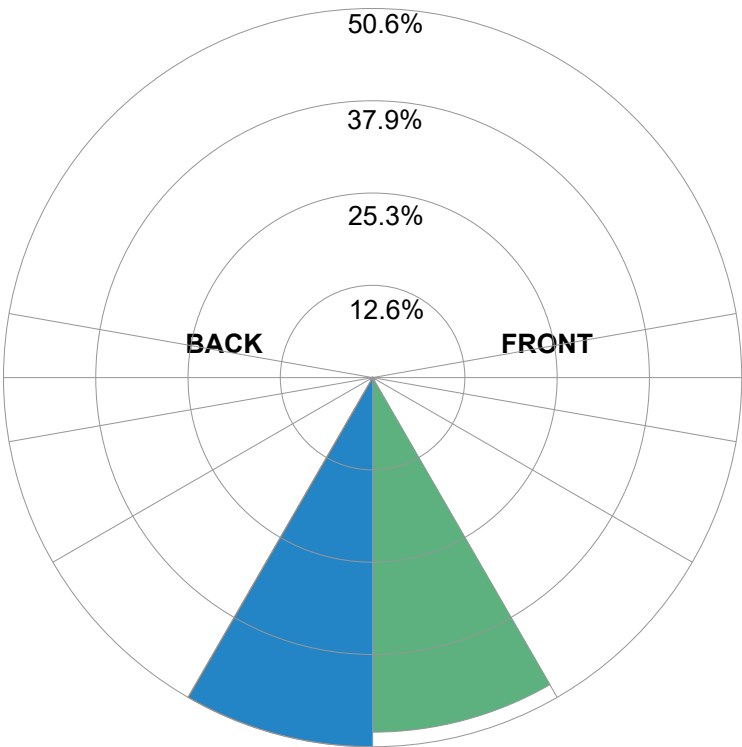


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1609.4 lm	48.6%
Medium (30-60°)	12.5 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1675.6 lm	50.6%
Medium (30-60°)	14.5 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3312 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab

n/a - serial: n/a sensor serial: n/a

Spectrometer Manufacturer and Model

n/a, n/a - n/a

Measurement date

9/26/2025

Measurement Conditions

Tested c-planes

5 - distance {C_PLANES_DIST}°

Tested gamma angles

361 - {H_PLANES_DIST}°

Input Power

- W

Tested Light Source

Luminaire

QuikPunch_OutputGain_Enabled_30D_4000K

Basic Luminous Shape

SPOT

Item No.

Manufacturer

Astera

Main Light Measurement Results

Output - Total Lumen (Up% / Down%)

3668 lm - 0% / 100%

Efficiency

n/a lm/W

Peak Intensity

13847 cd

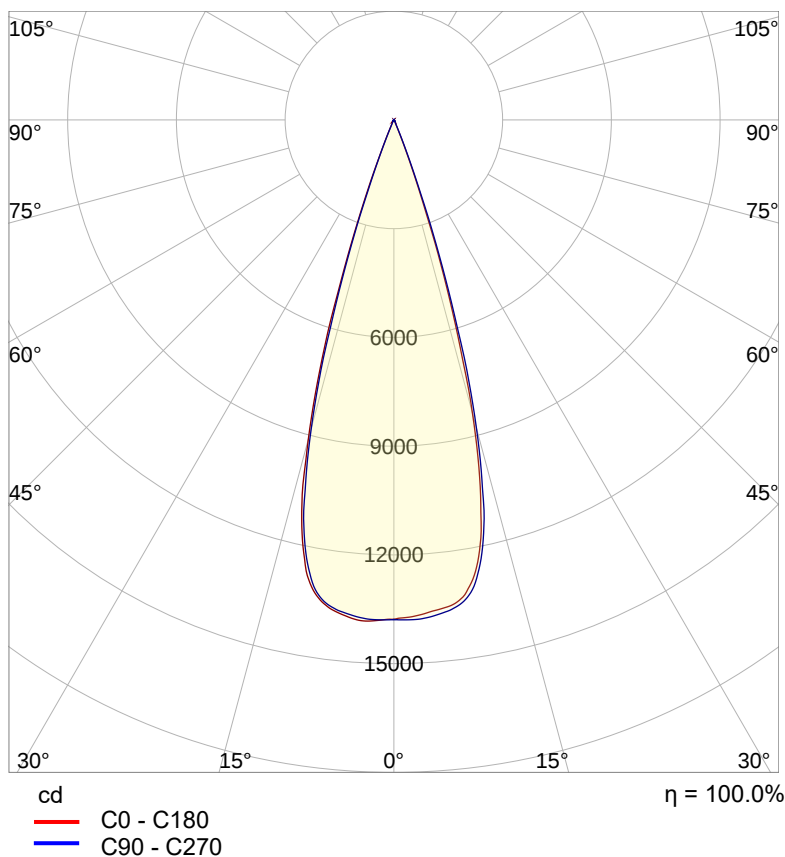
Correlated Color Temperature, CCT

4000 K

Color Rendering Index

CRI 0.0

Polar light distribution diagram

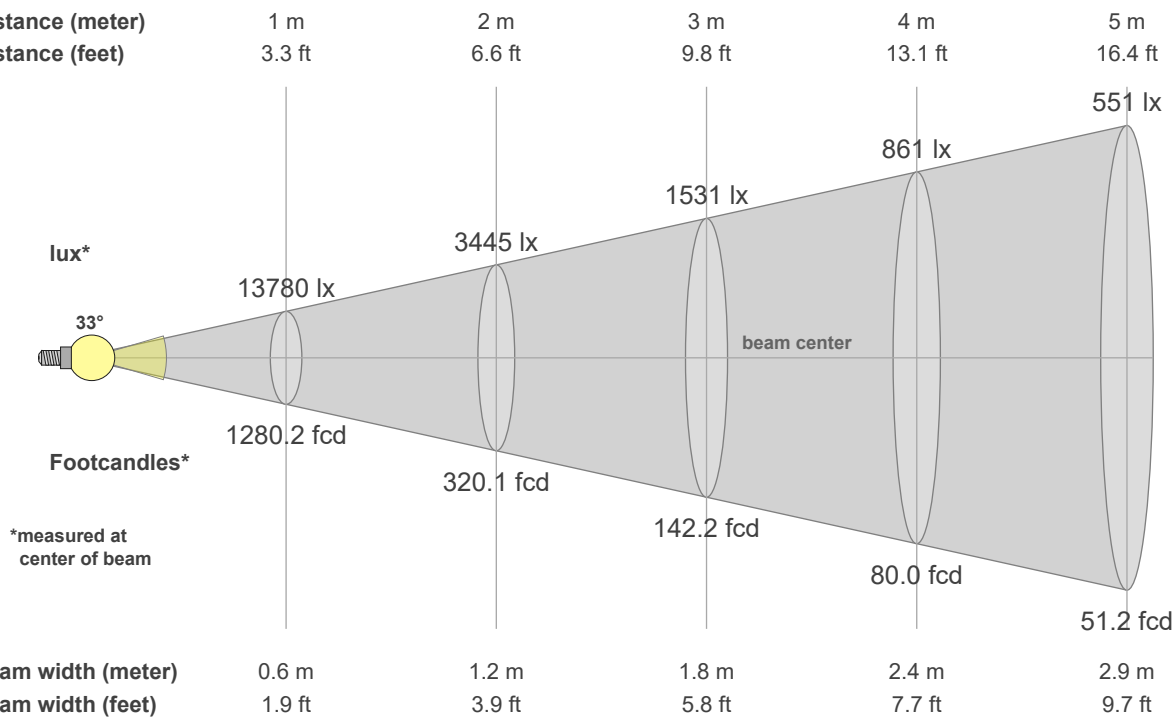


Test report

Light measurement results

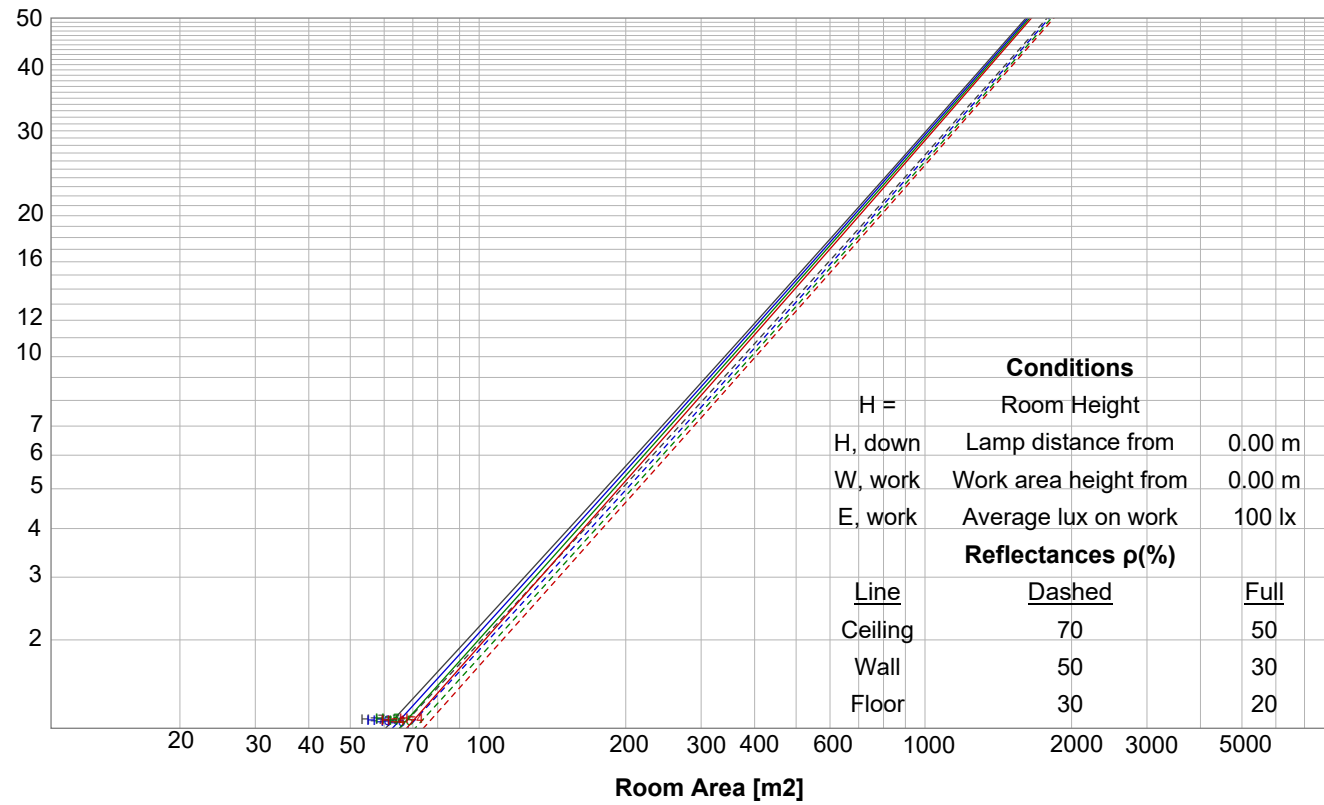
Print date 9/26/2025

Beam details

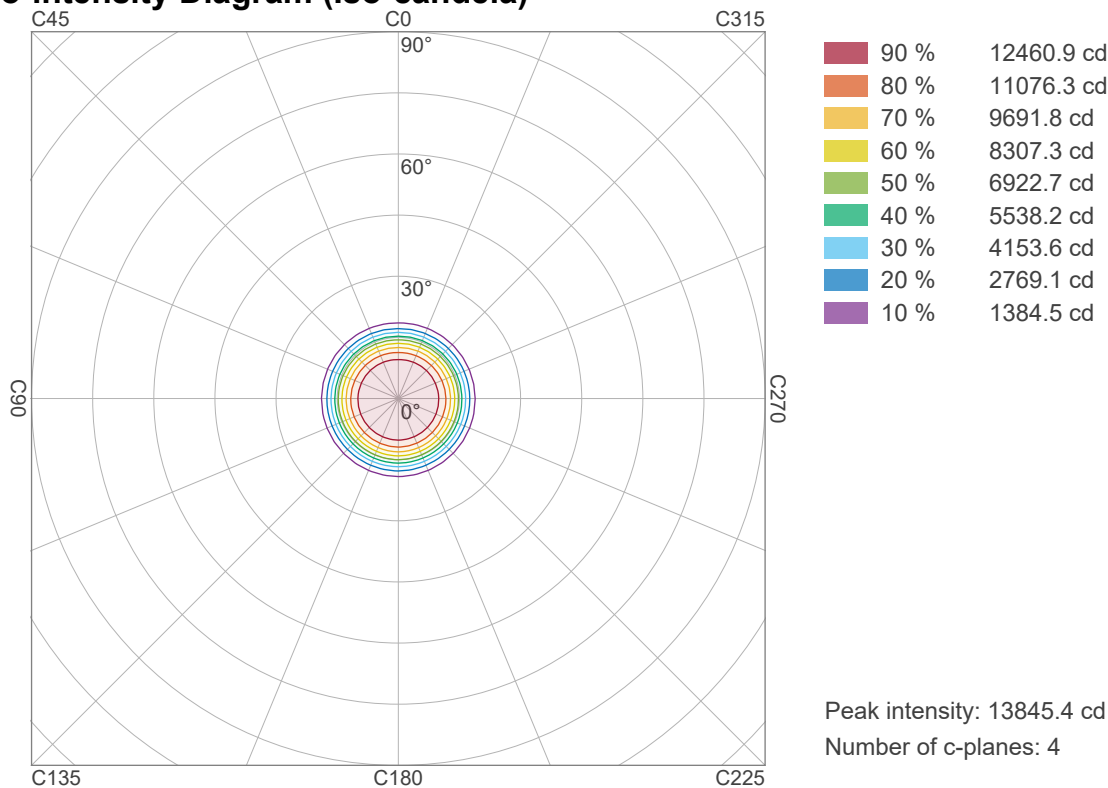


Luminaire budgetary diagram

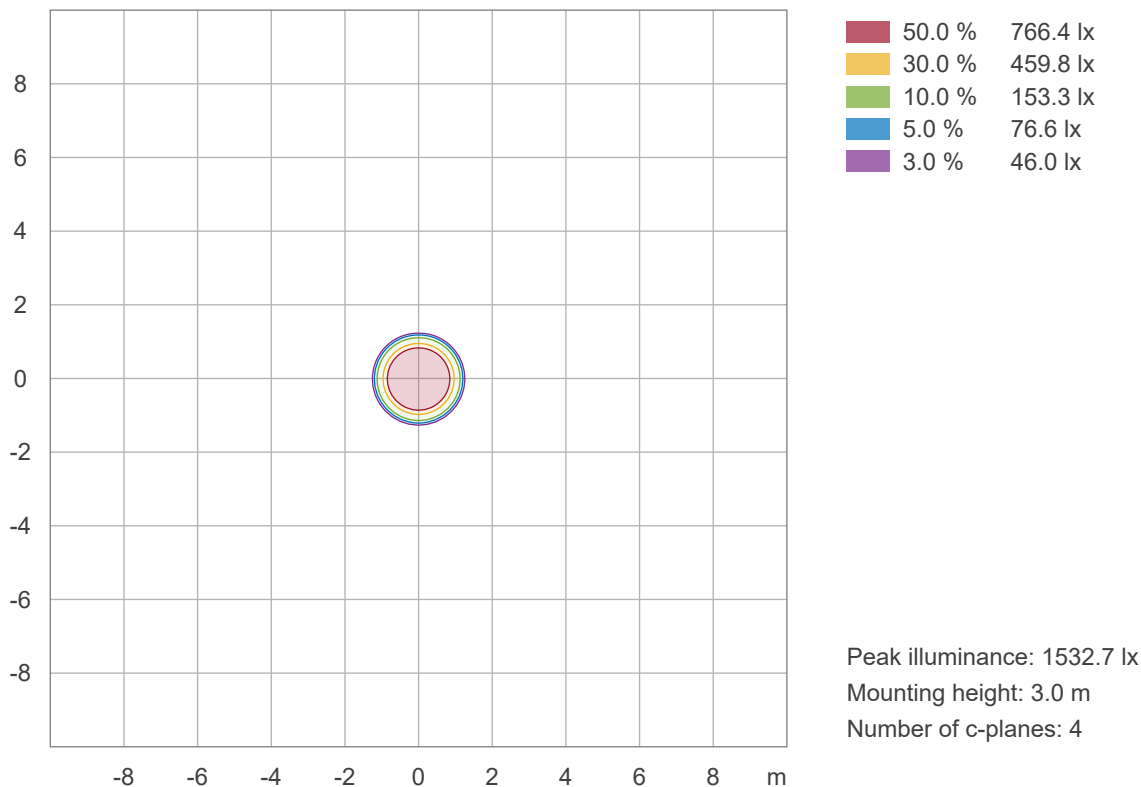
LAMPS (number of lamps)



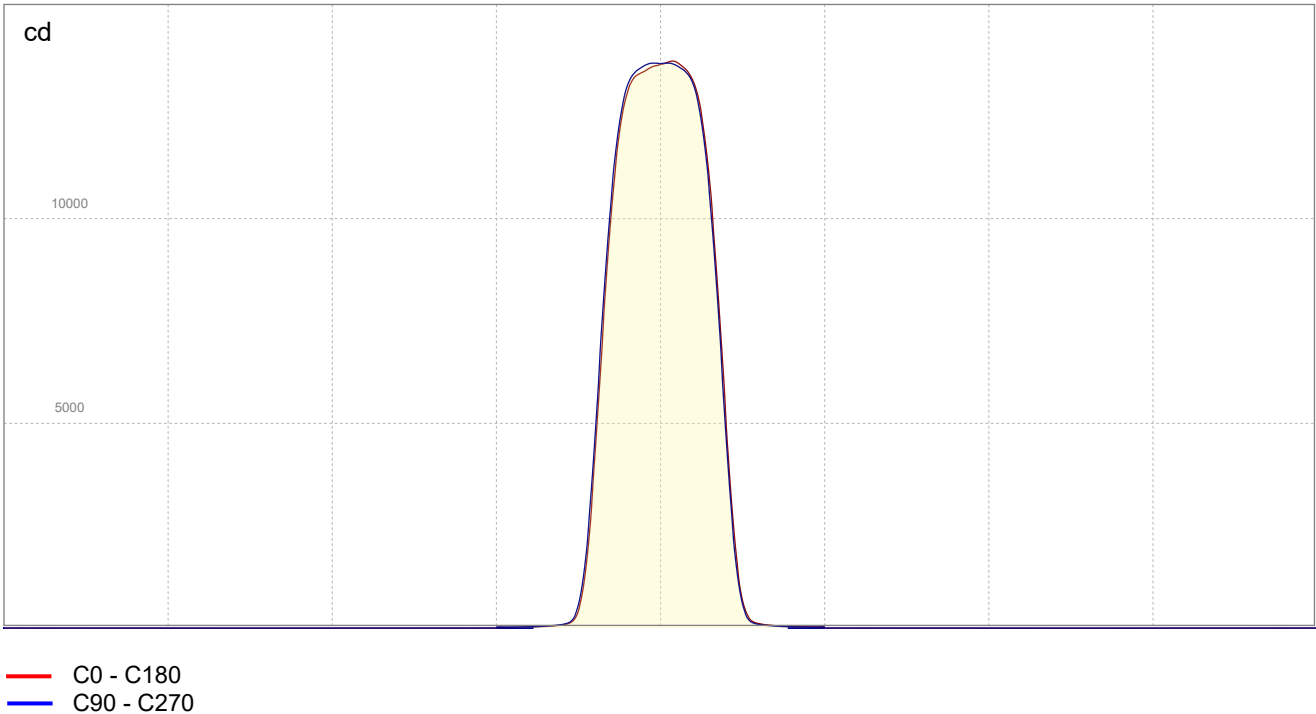
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

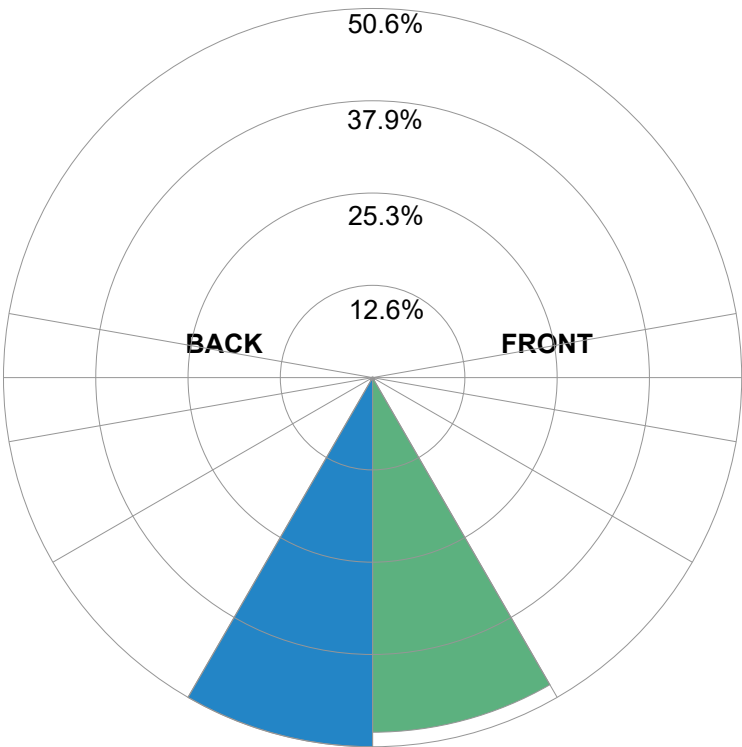


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1782.4 lm	48.6%
Medium (30-60°)	13.9 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1855.4 lm	50.6%
Medium (30-60°)	16.3 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3668 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

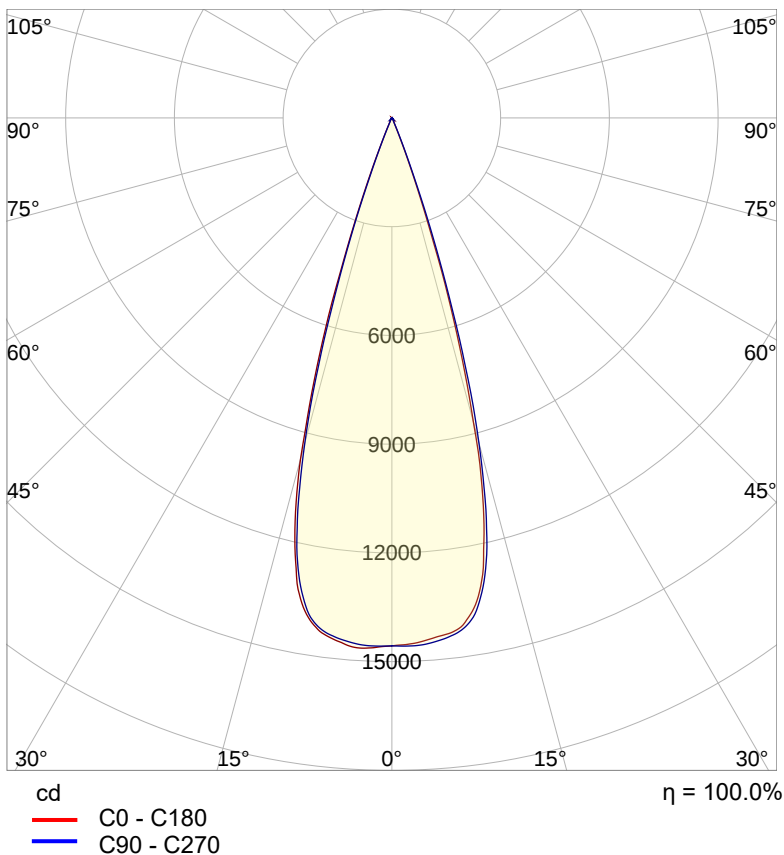
QuikPunch_OutputGain_Enabled_30D_5500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3870 lm – 0% / 100%
n/a lm/W
14651 cd
5500 K
CRI 0.0

Polar light distribution diagram

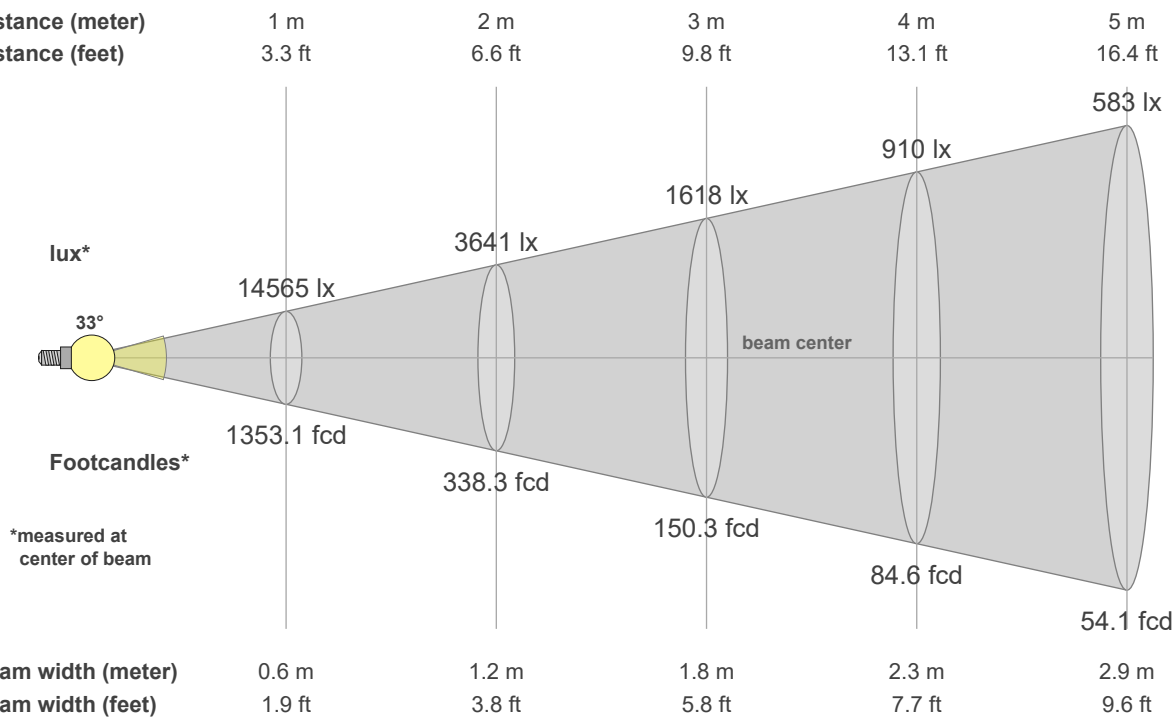


Test report

Light measurement results

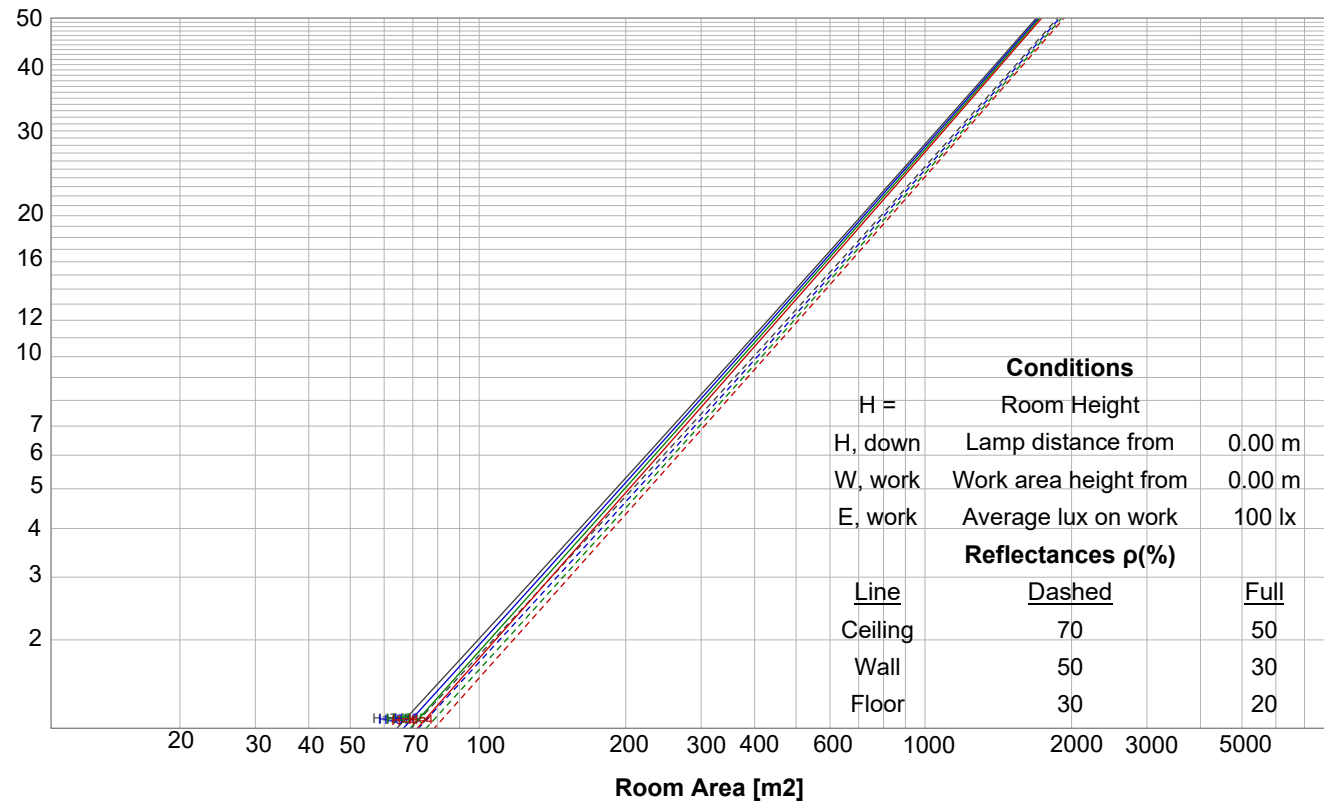
Print date 9/26/2025

Beam details

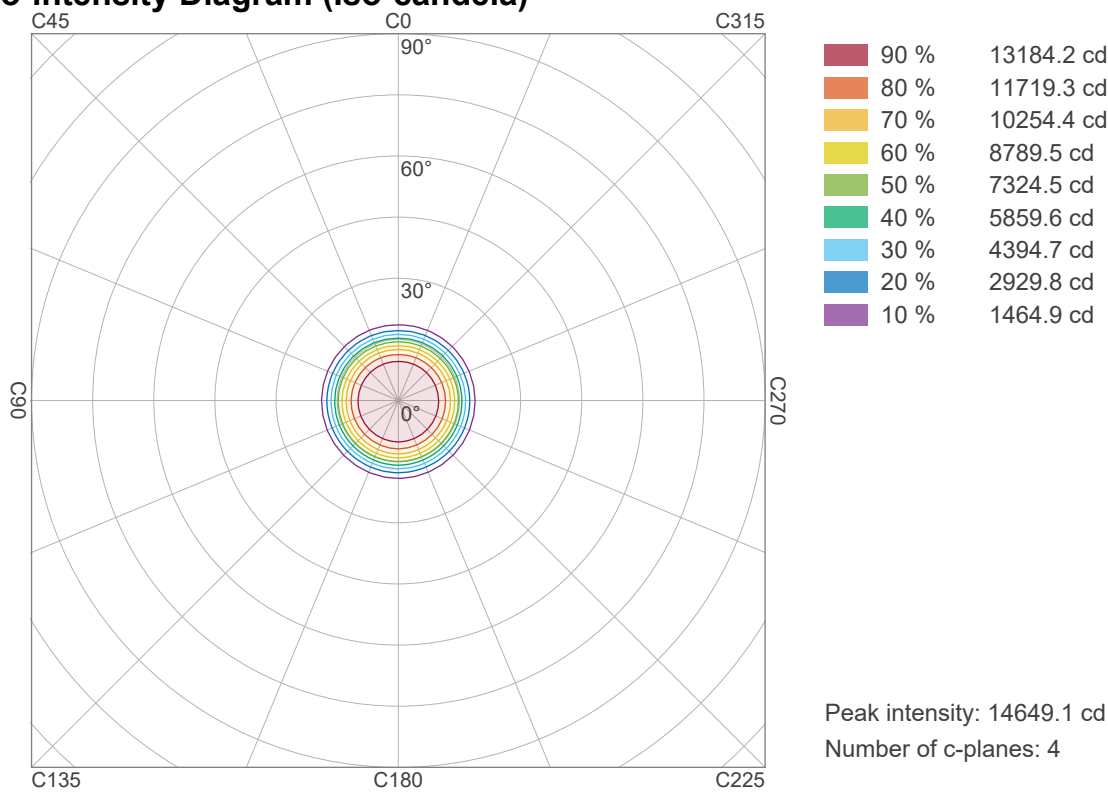


Luminaire budgetary diagram

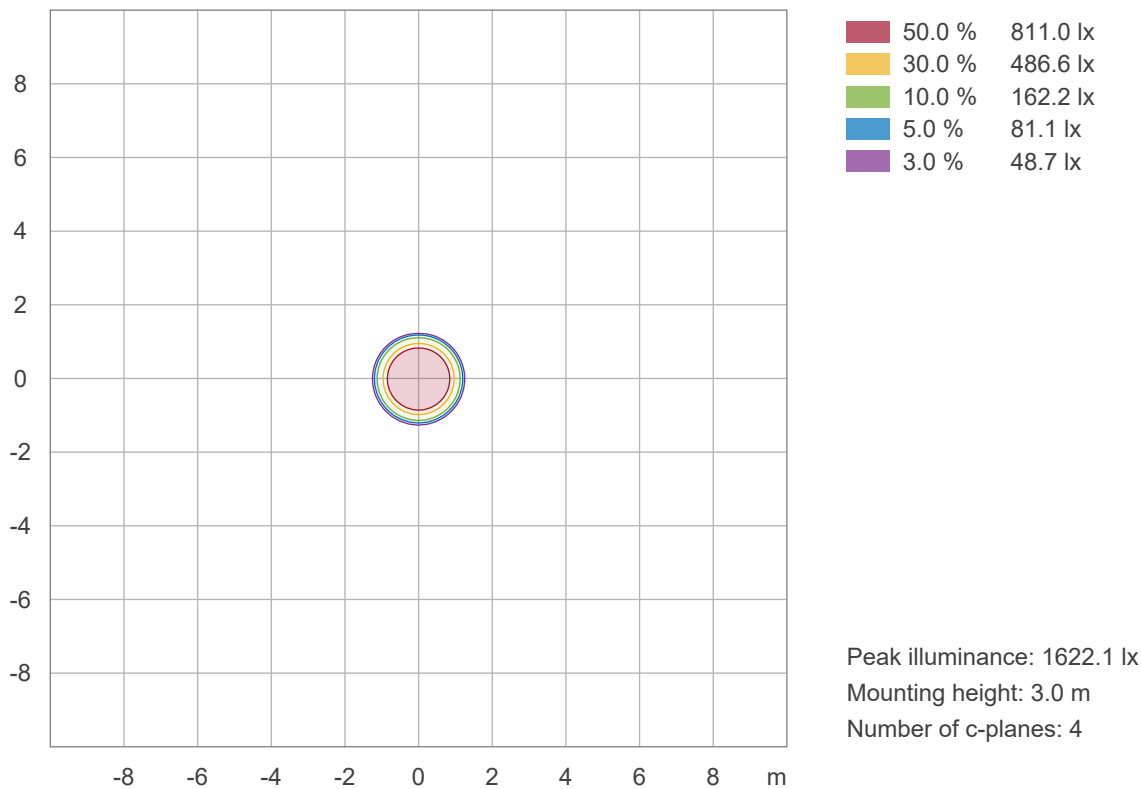
LAMPS (number of lamps)



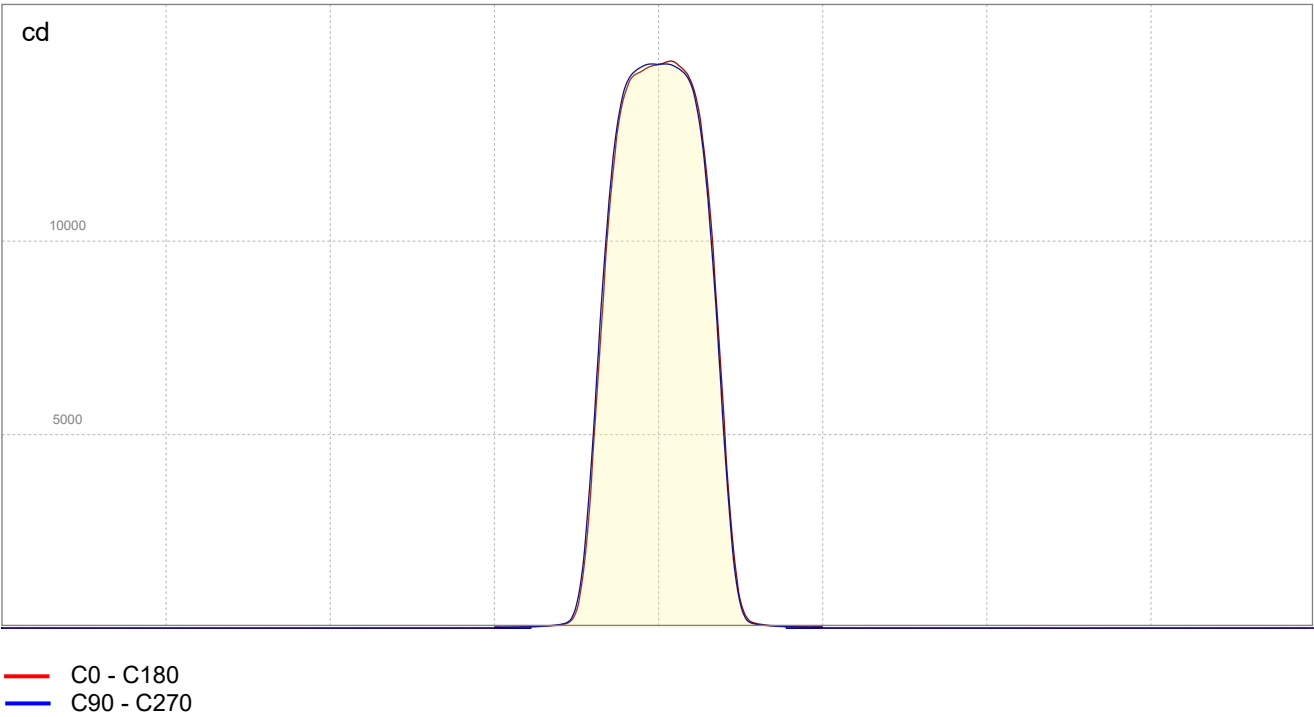
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

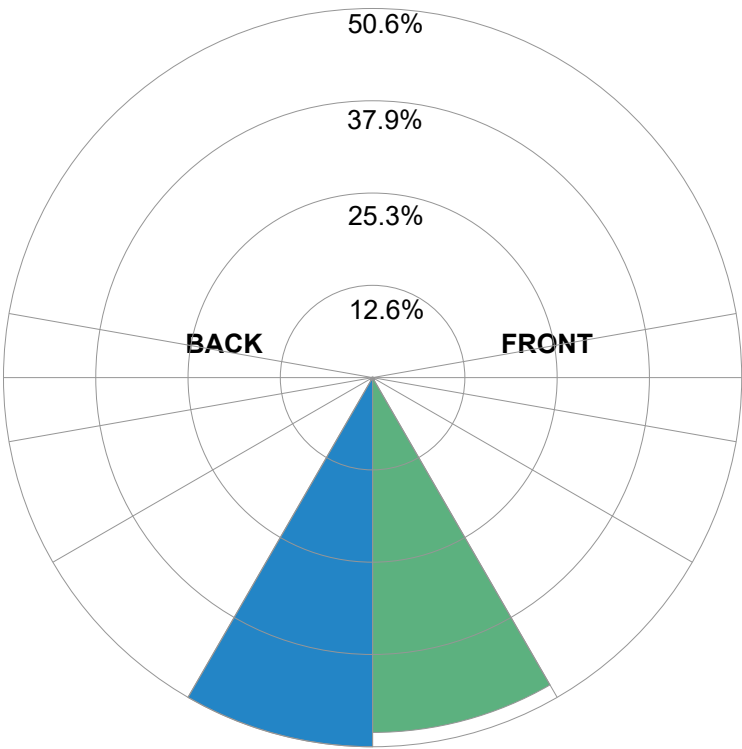


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1881.3 lm	48.6%
Medium (30-60°)	14.8 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1957.1 lm	50.6%
Medium (30-60°)	17.2 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3870 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

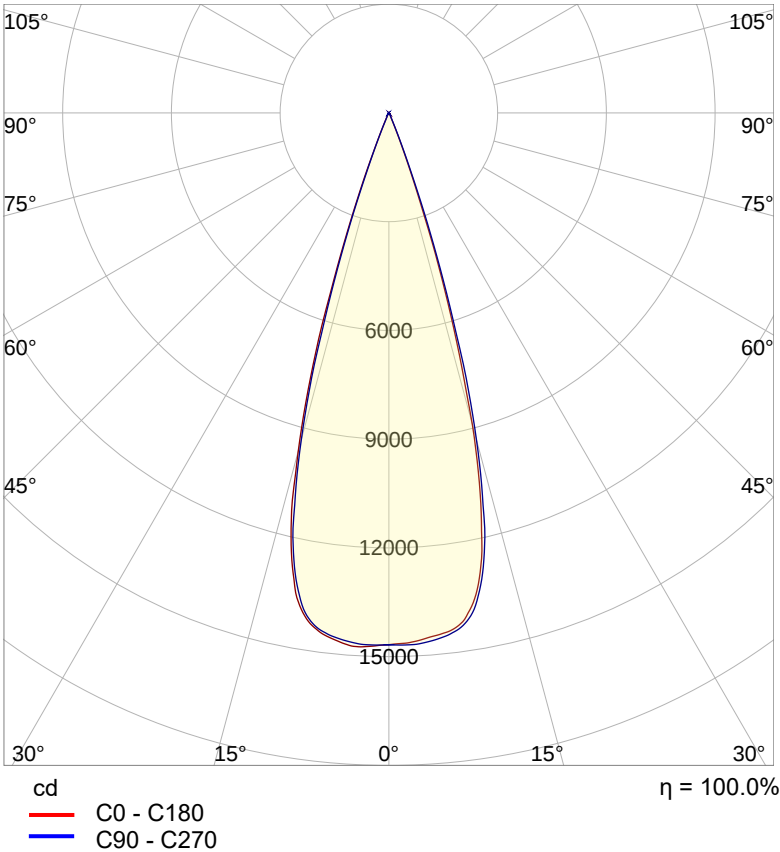
QuikPunch_OutputGain_Enabled_30D_6500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3896 lm – 0% / 100%
n/a lm/W
14751 cd
6500 K
CRI 0.0

Polar light distribution diagram

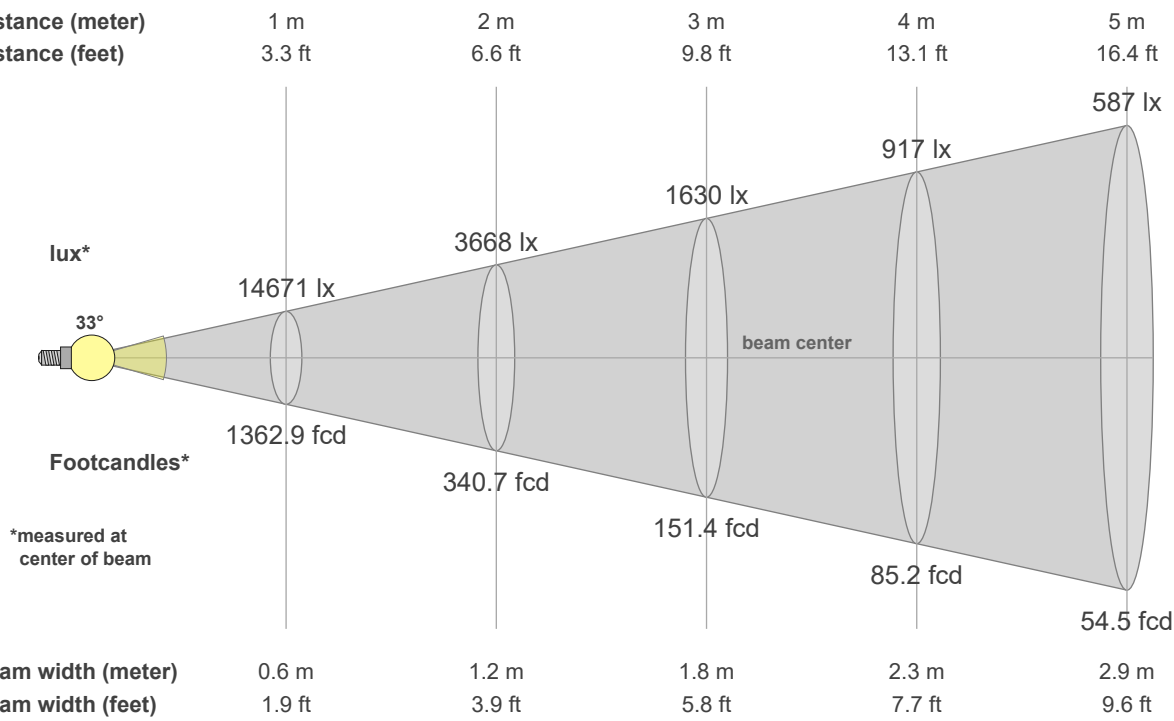


Test report

Light measurement results

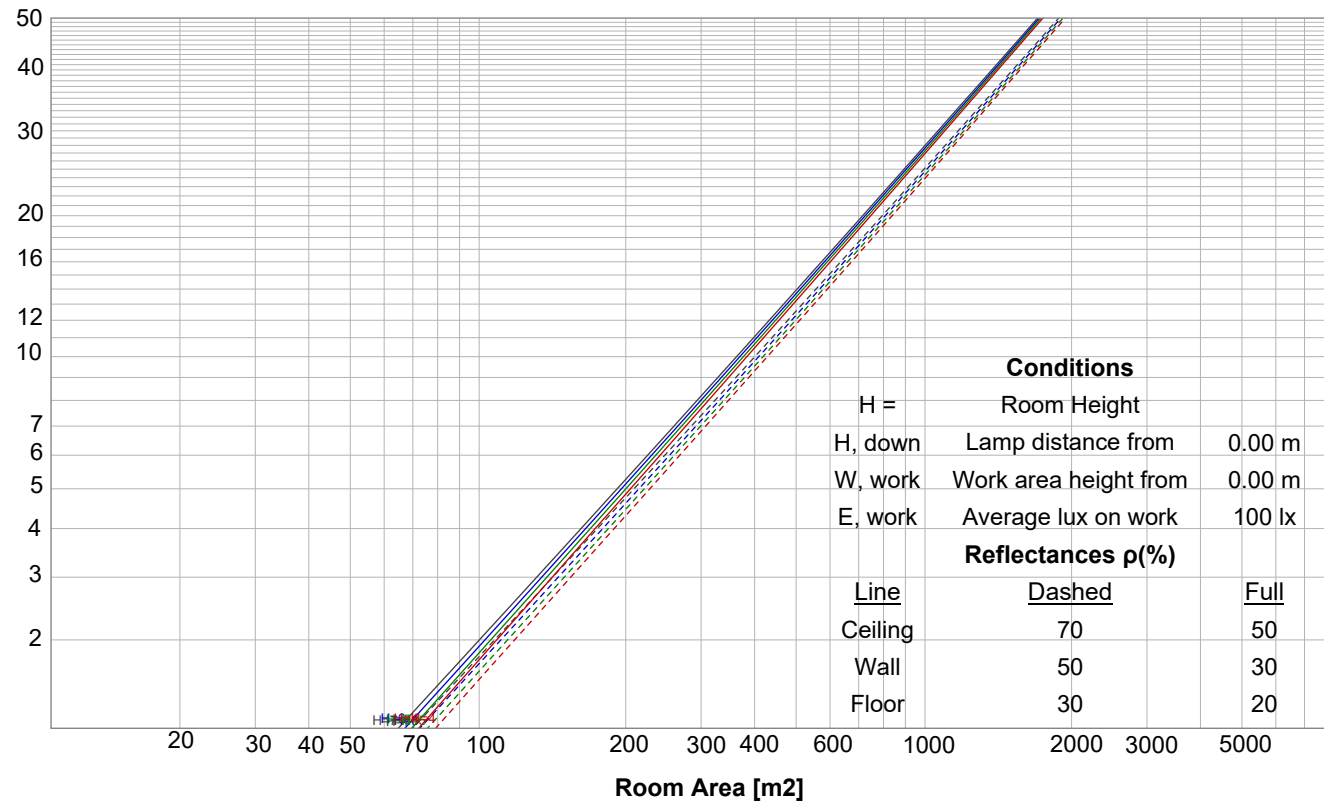
Print date 9/26/2025

Beam details

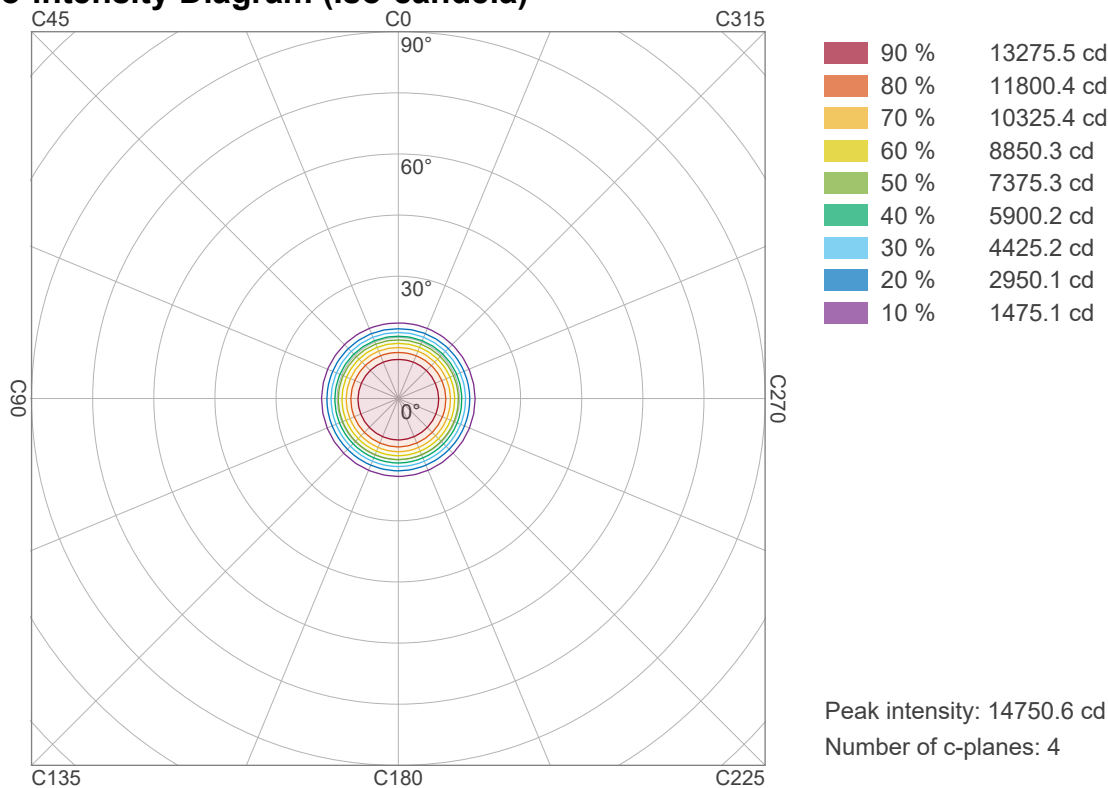


Luminaire budgetary diagram

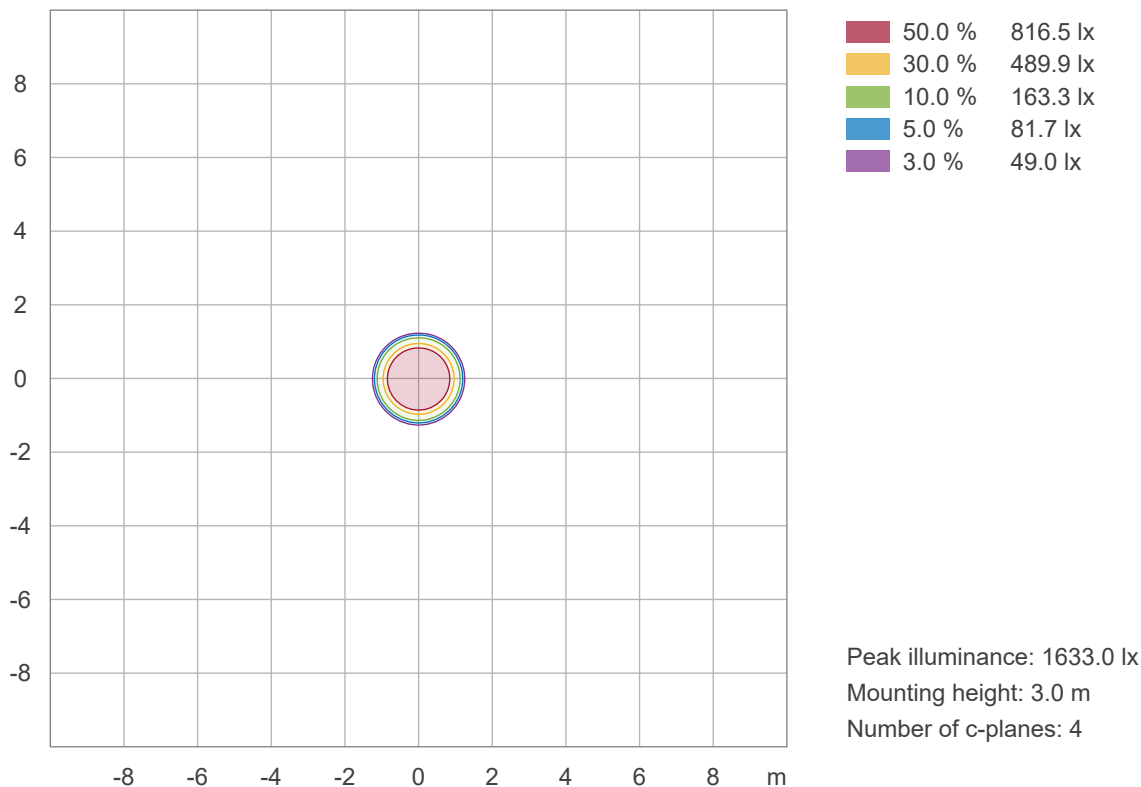
LAMPS (number of lamps)



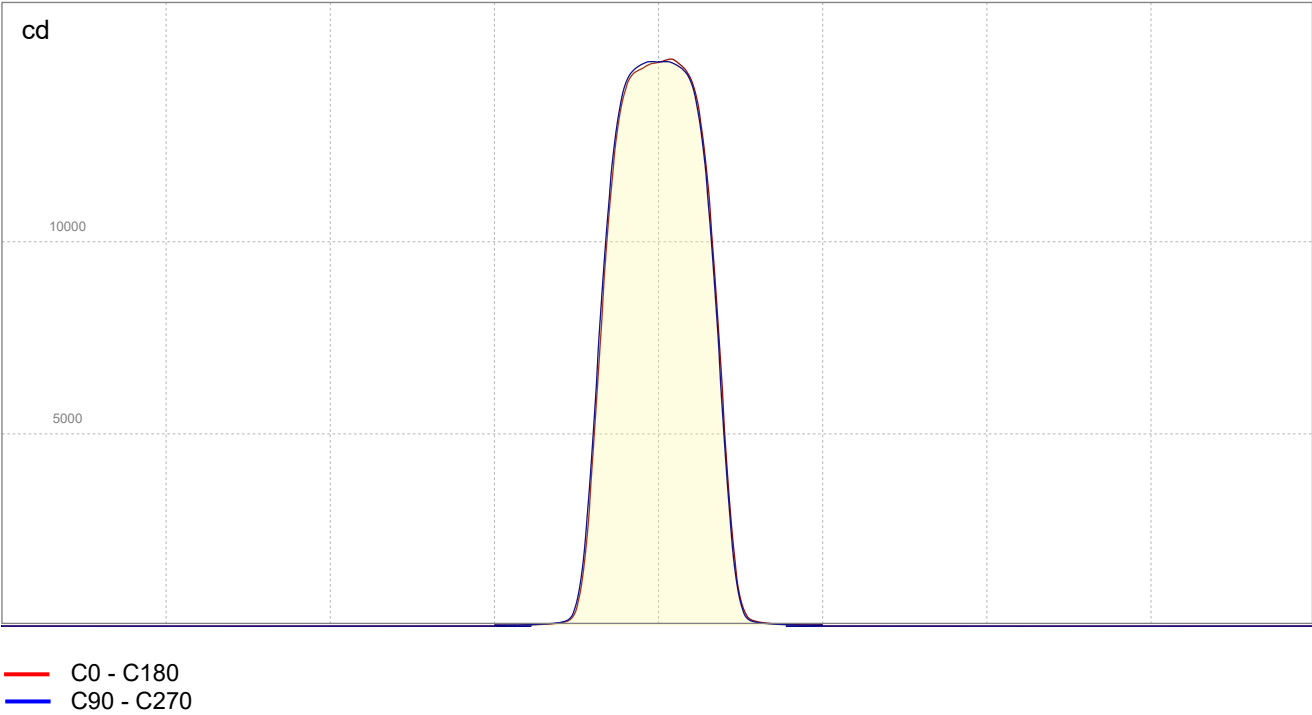
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

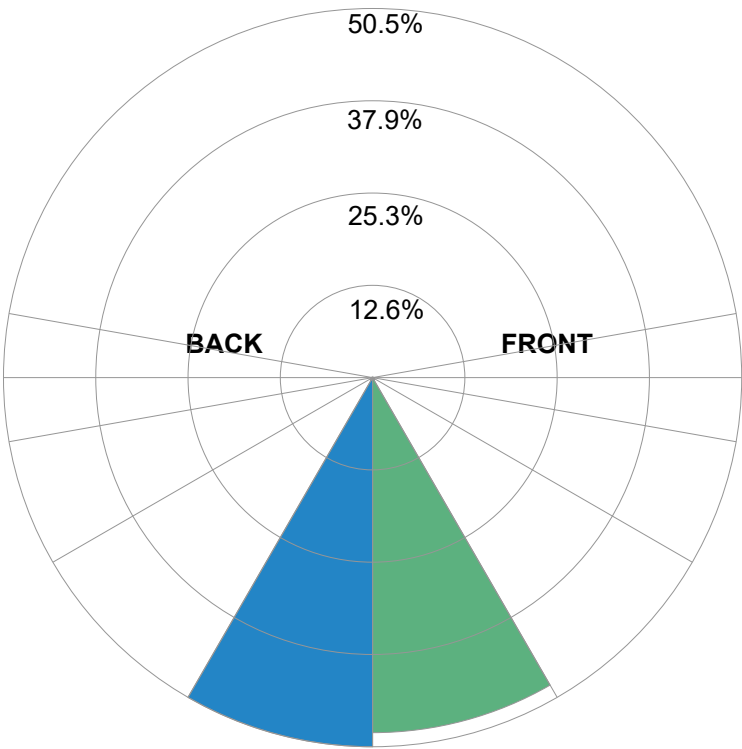


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1893.9 lm	48.6%
Medium (30-60°)	15.3 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1969 lm	50.5%
Medium (30-60°)	17.6 lm	0.5%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3896 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab

n/a - serial: n/a sensor serial: n/a

Spectrometer Manufacturer and Model

n/a, n/a - n/a

Measurement date

9/26/2025

Measurement Conditions

Tested c-planes

5 - distance {C_PLANES_DIST}°

Tested gamma angles

181 - {H_PLANES_DIST}°

Input Power

- W

Tested Light Source

Luminaire

QuikPunch_OutputGain_Enabled_60D_2700K

Basic Luminous Shape

SPOT

Item No.

Manufacturer

Astera

Main Light Measurement Results

Output - Total Lumen (Up% / Down%)

3173 lm - 0% / 100%

Efficiency

n/a lm/W

Peak Intensity

3930 cd

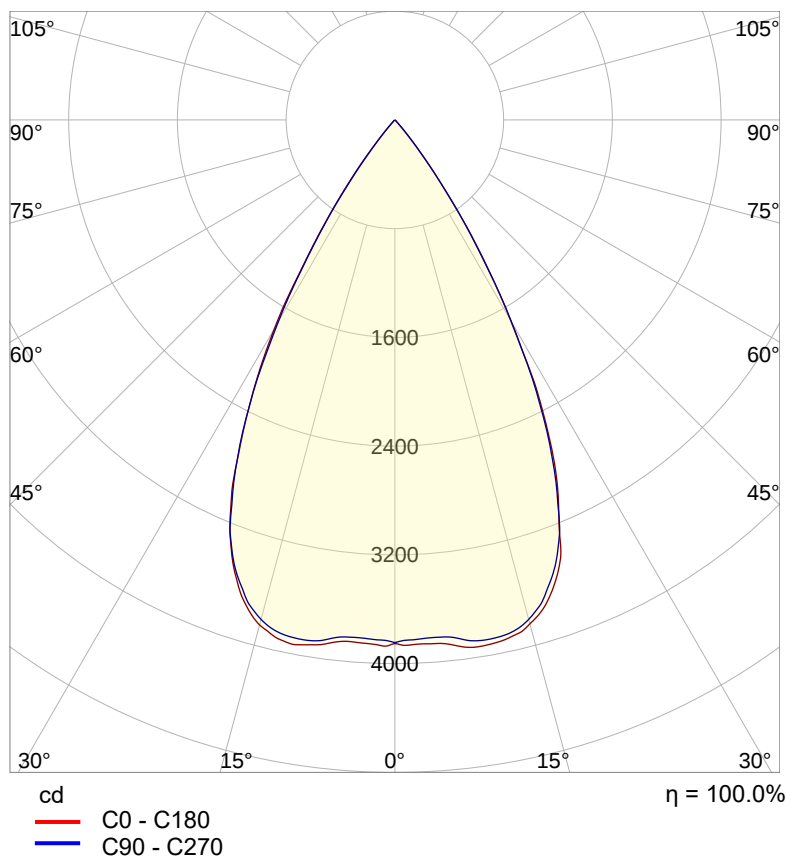
Correlated Color Temperature, CCT

2700 K

Color Rendering Index

CRI 0.0

Polar light distribution diagram

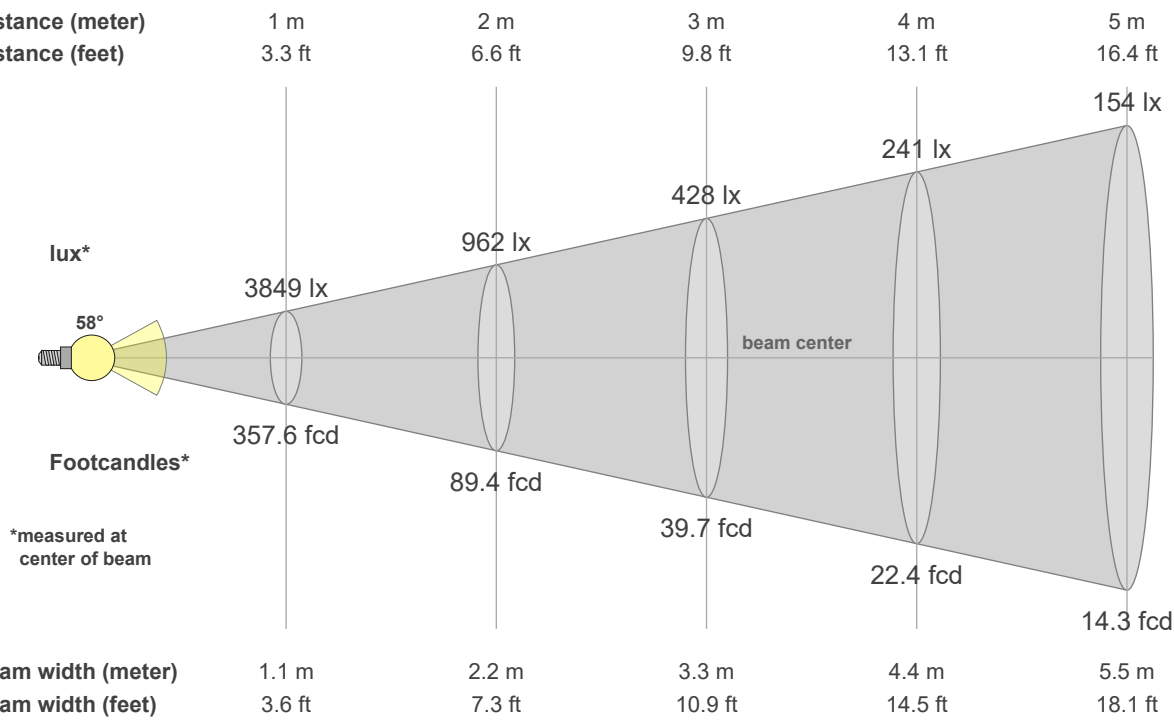


Test report

Light measurement results

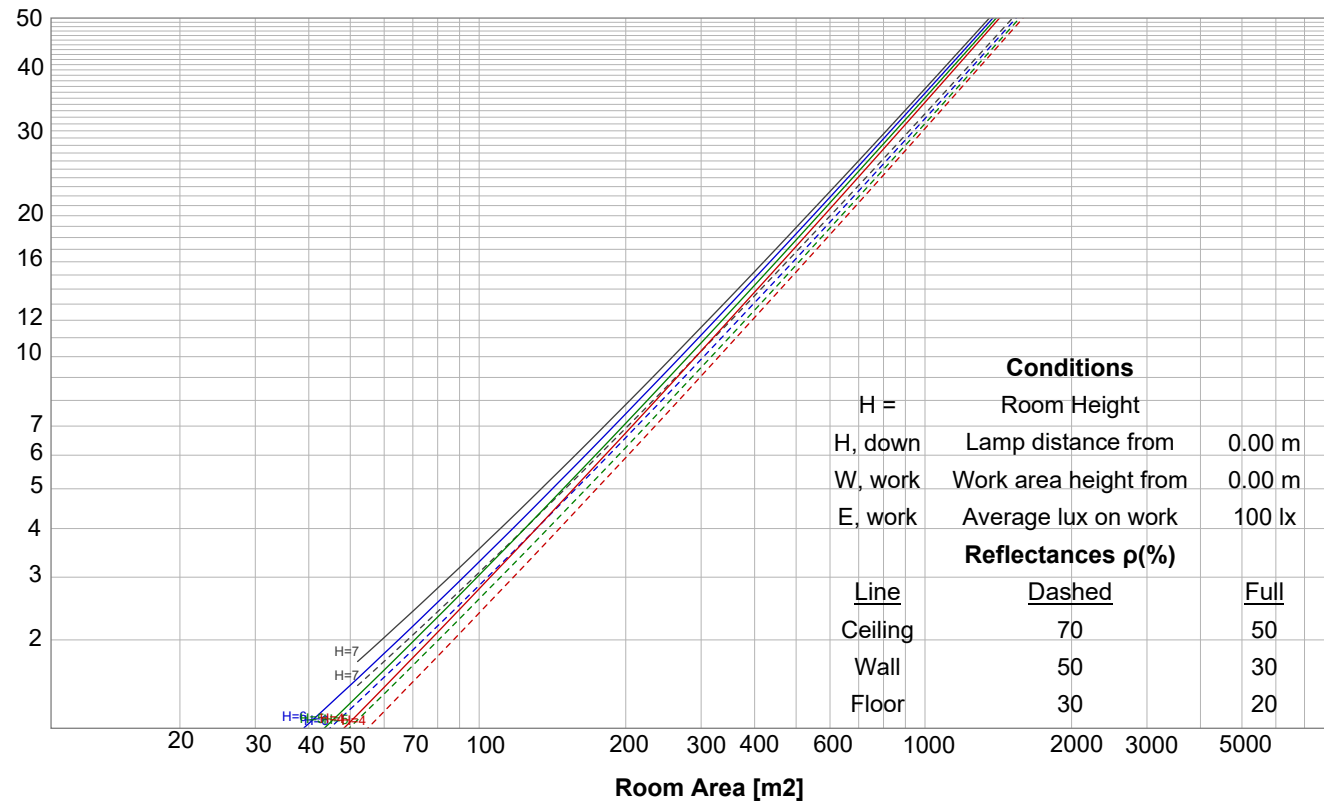
Print date 9/26/2025

Beam details

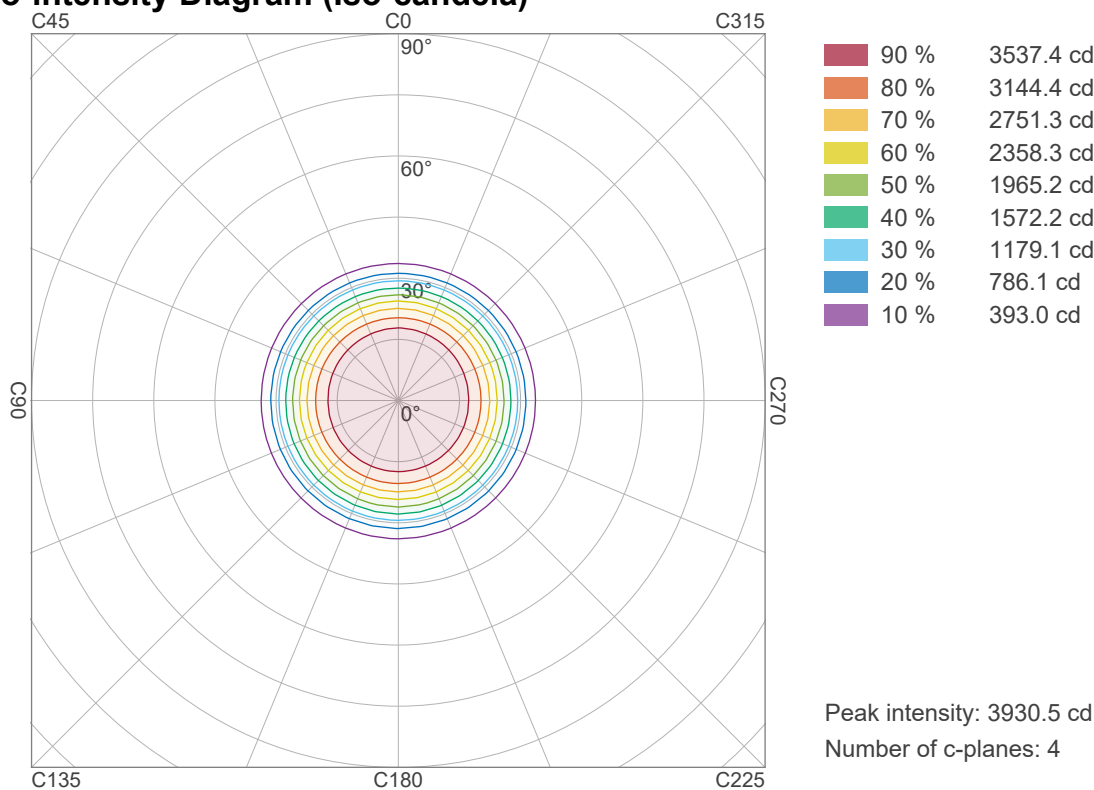


Luminaire budgetary diagram

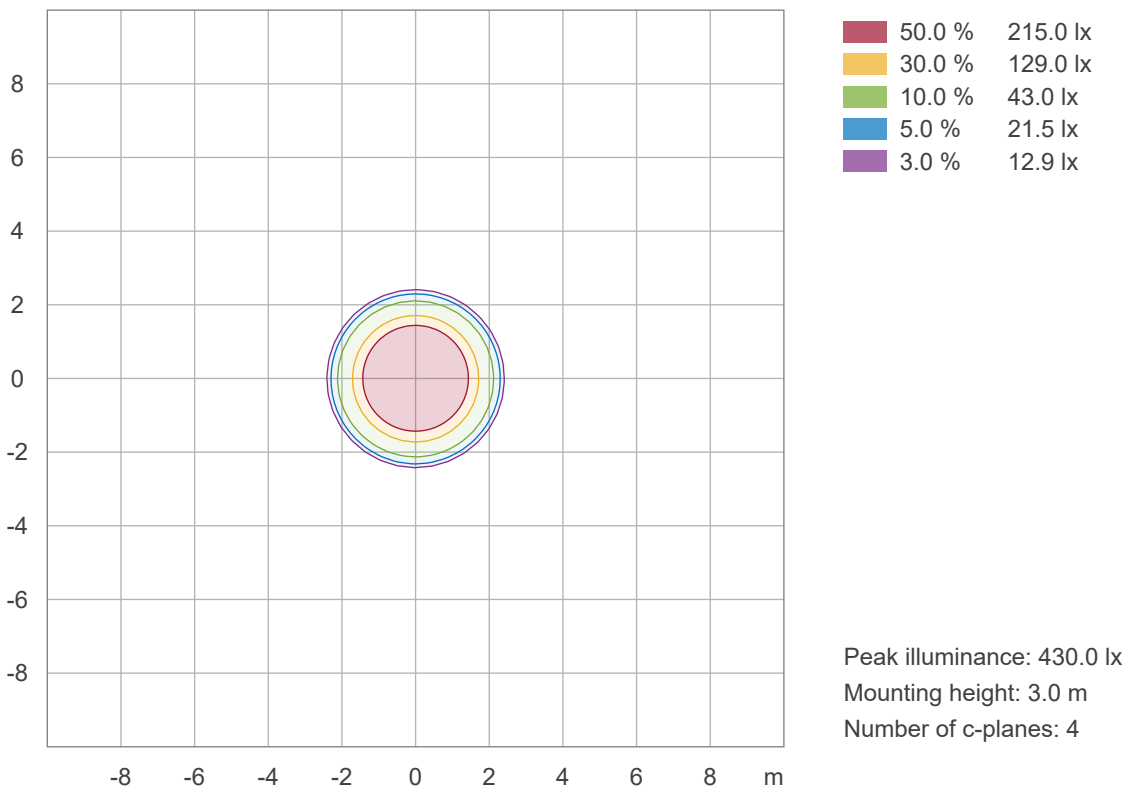
LAMPS (number of lamps)



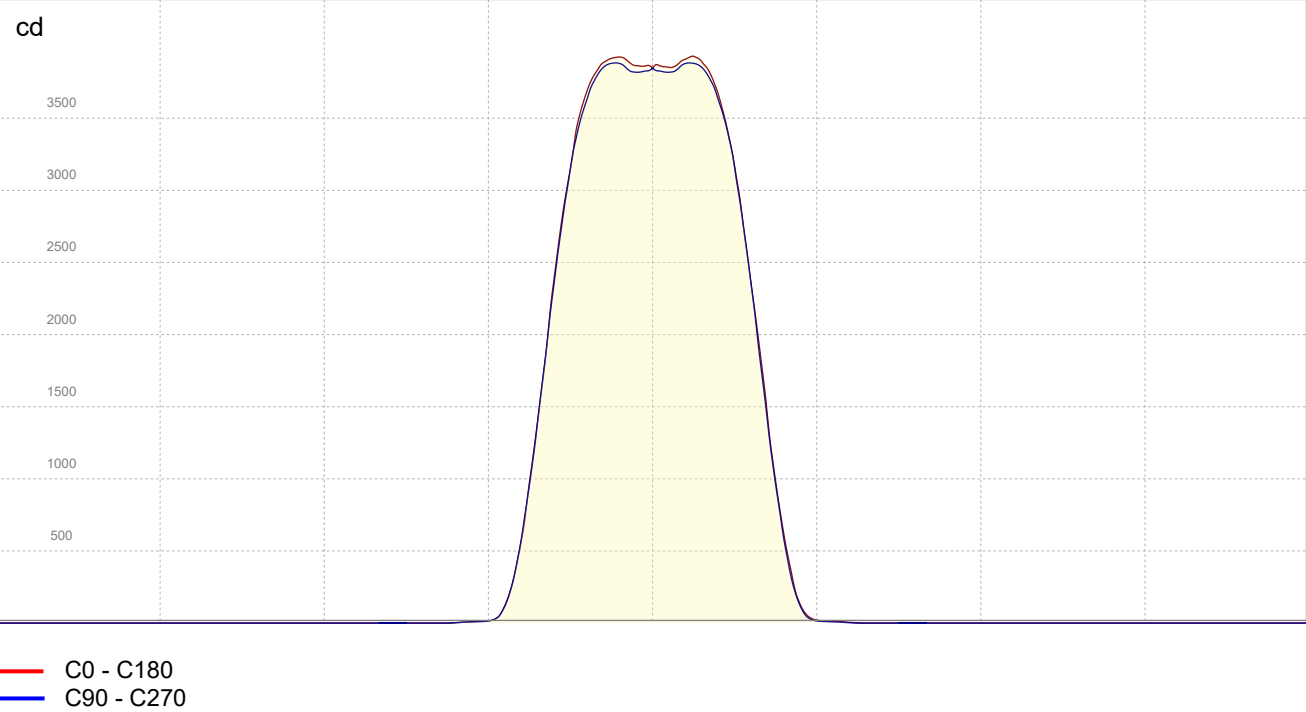
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

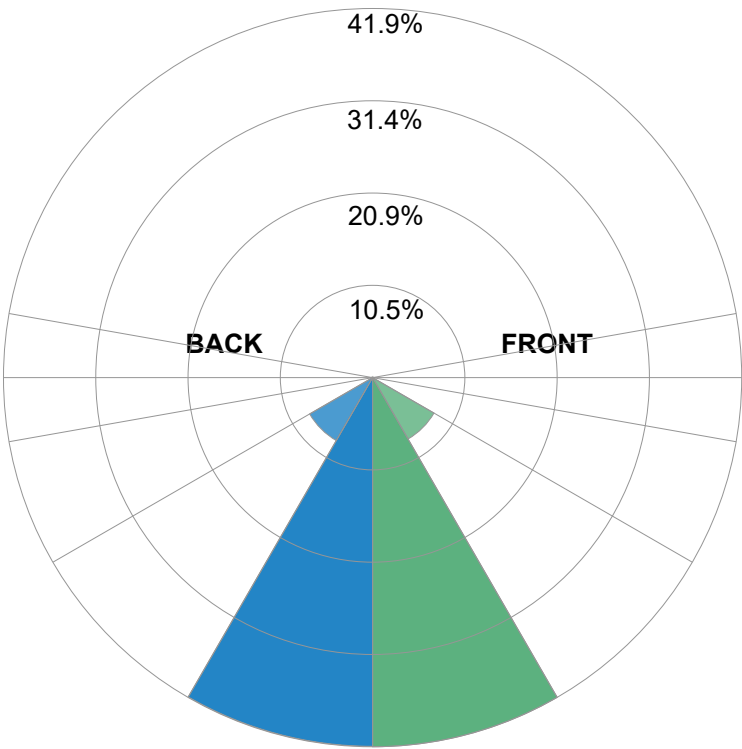


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1329.1 lm	41.9%
Medium (30-60°)	255.2 lm	8%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1327.4 lm	41.8%
Medium (30-60°)	261.6 lm	8.2%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3173 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

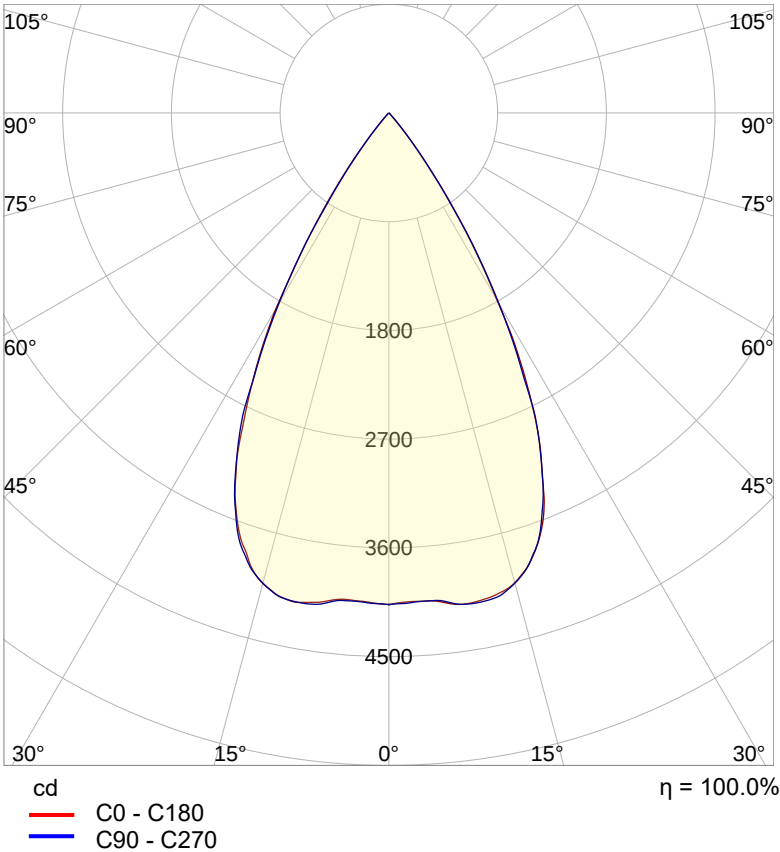
QuikPunch_OutputGain_Enabled_60D_3200K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3348 lm – 0% / 100%
n/a lm/W
4123 cd
3200 K
CRI 0.0

Polar light distribution diagram

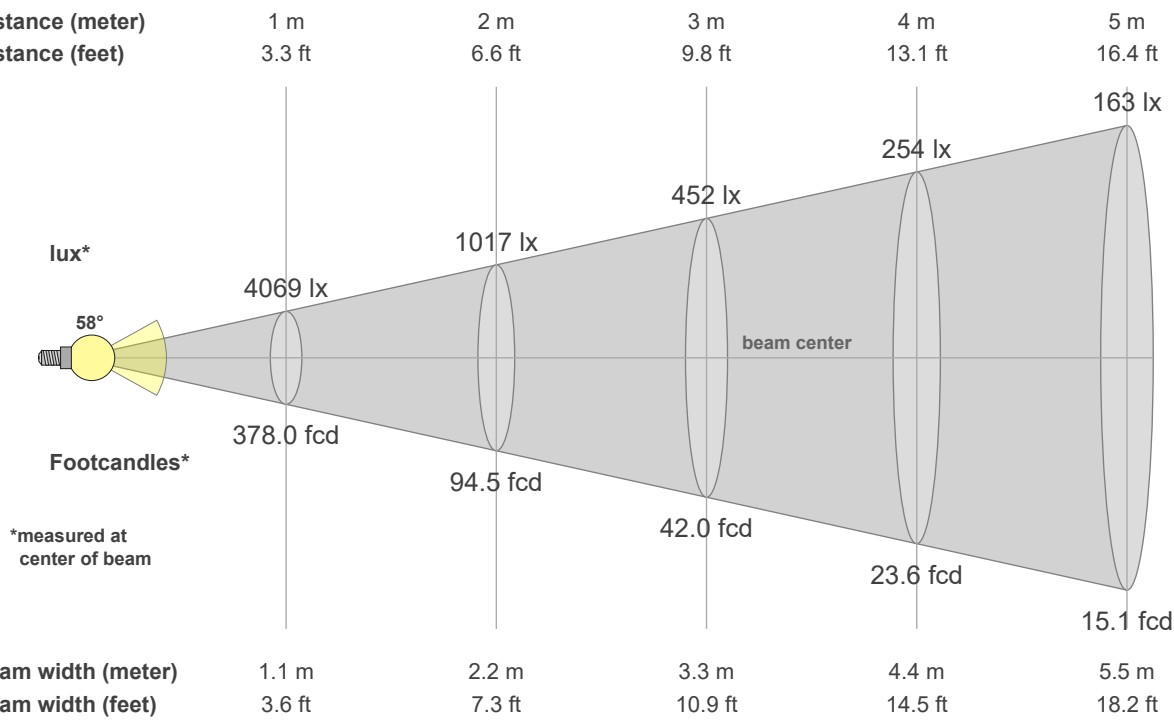


Test report

Light measurement results

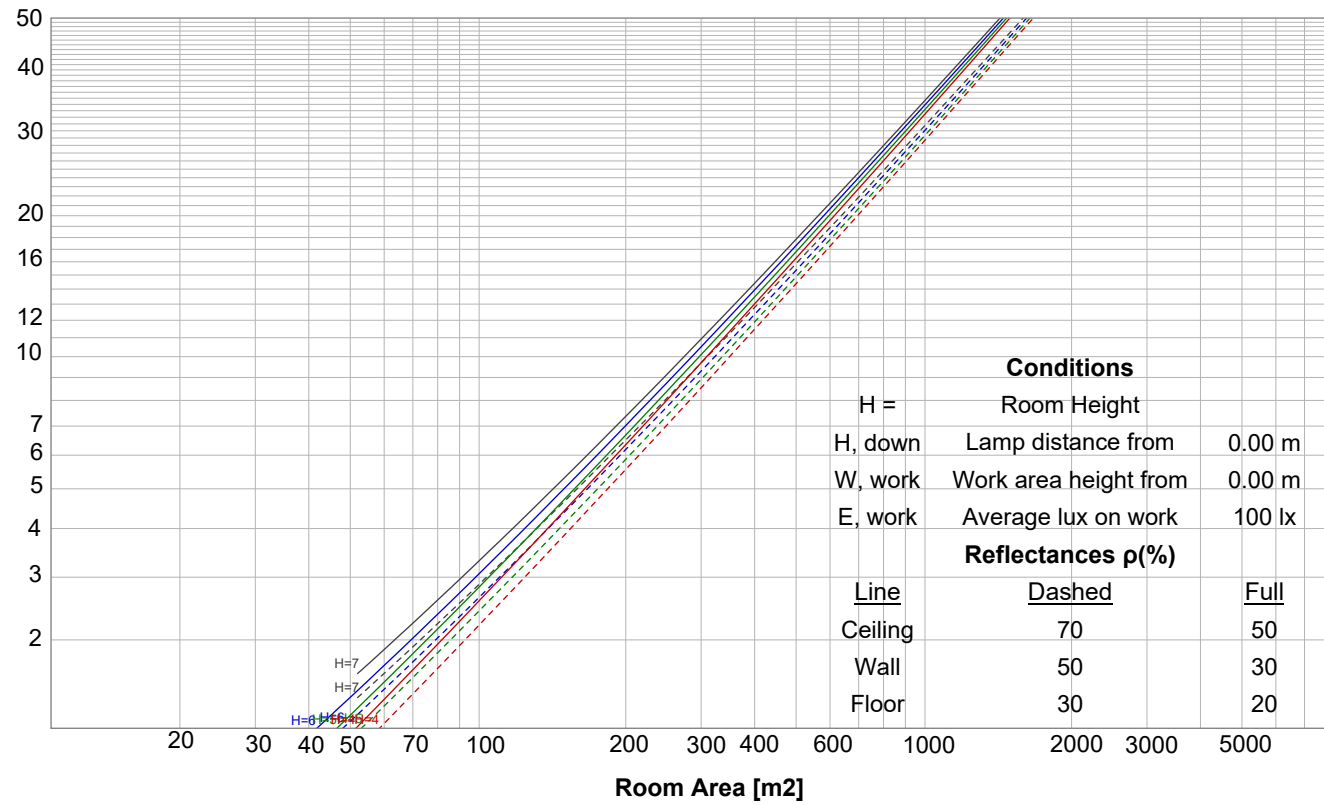
Print date 9/26/2025

Beam details

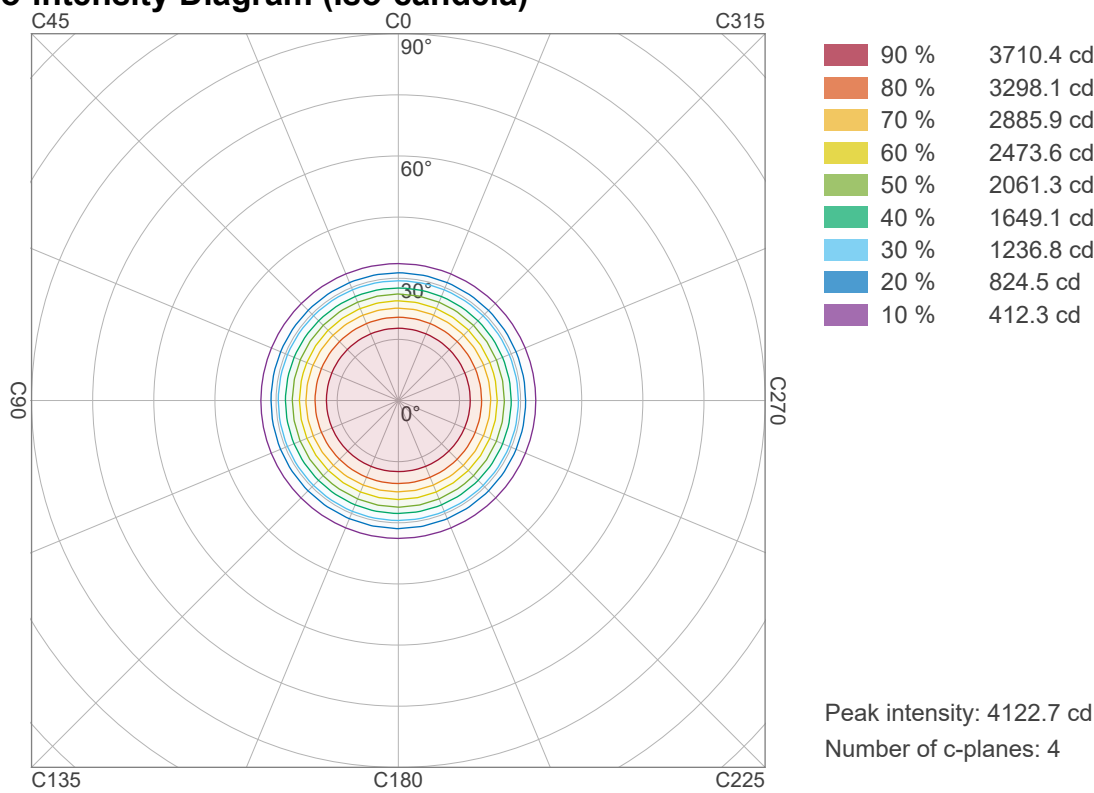


Luminaire budgetary diagram

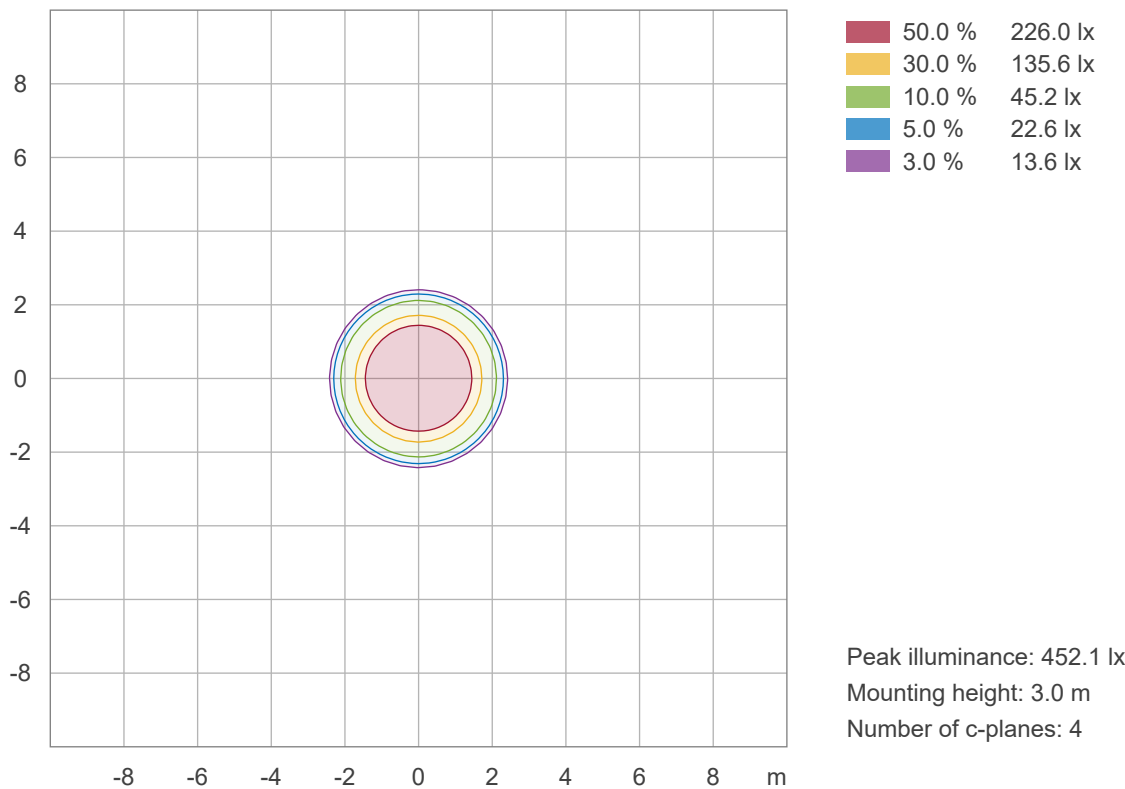
LAMPS (number of lamps)



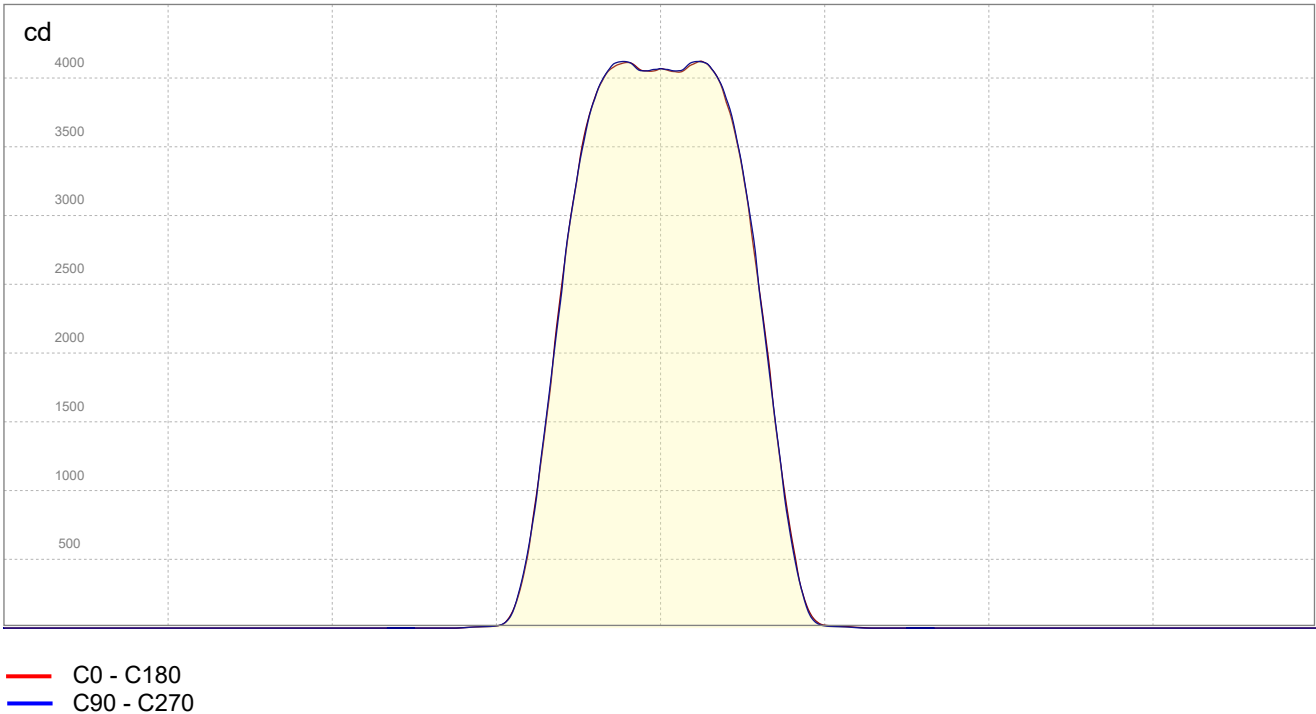
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

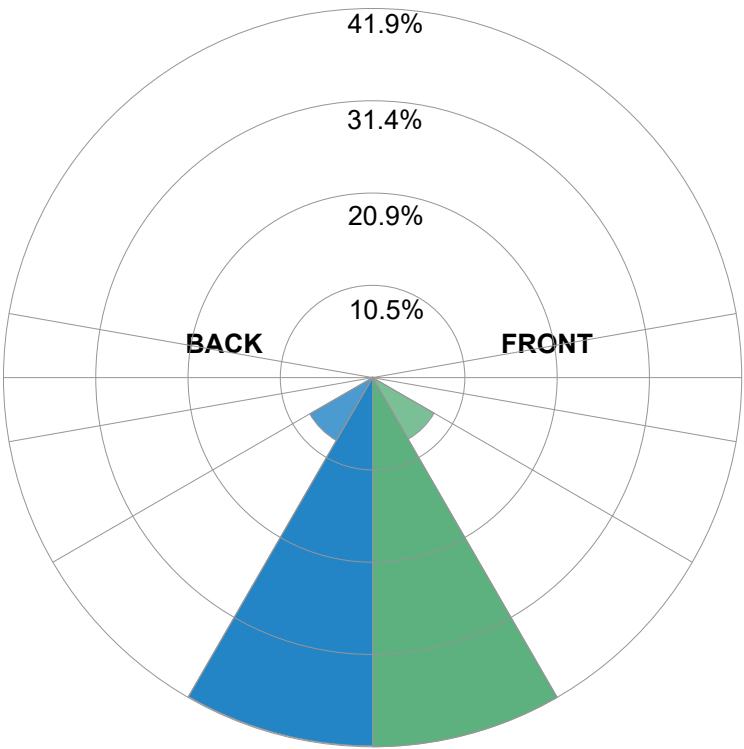


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1402.6 lm	41.9%
Medium (30-60°)	270 lm	8.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1399.4 lm	41.8%
Medium (30-60°)	275.8 lm	8.2%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3348 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

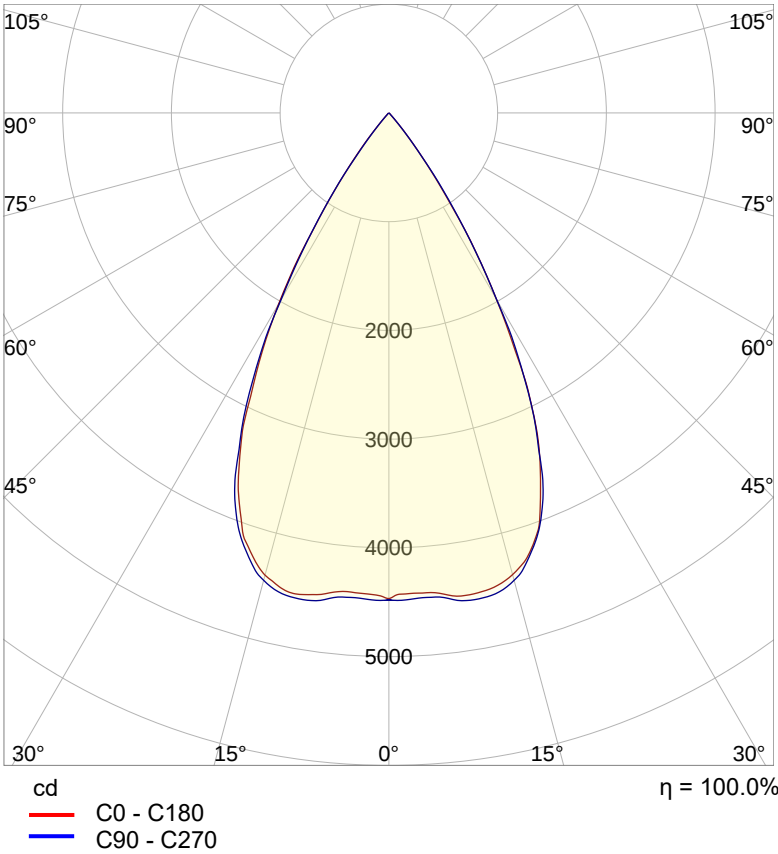
QuikPunch_OutputGain_Enabled_60D_4000K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3679 lm – 0% / 100%
n/a lm/W
4545 cd
4000 K
CRI 0.0

Polar light distribution diagram

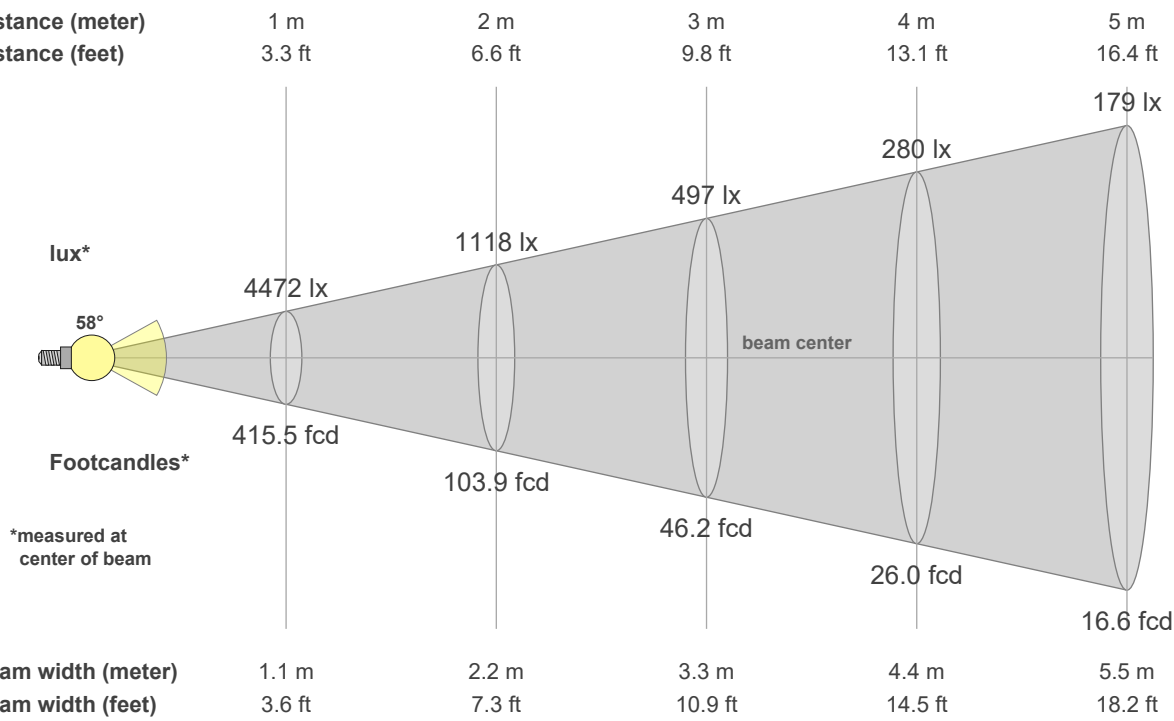


Test report

Light measurement results

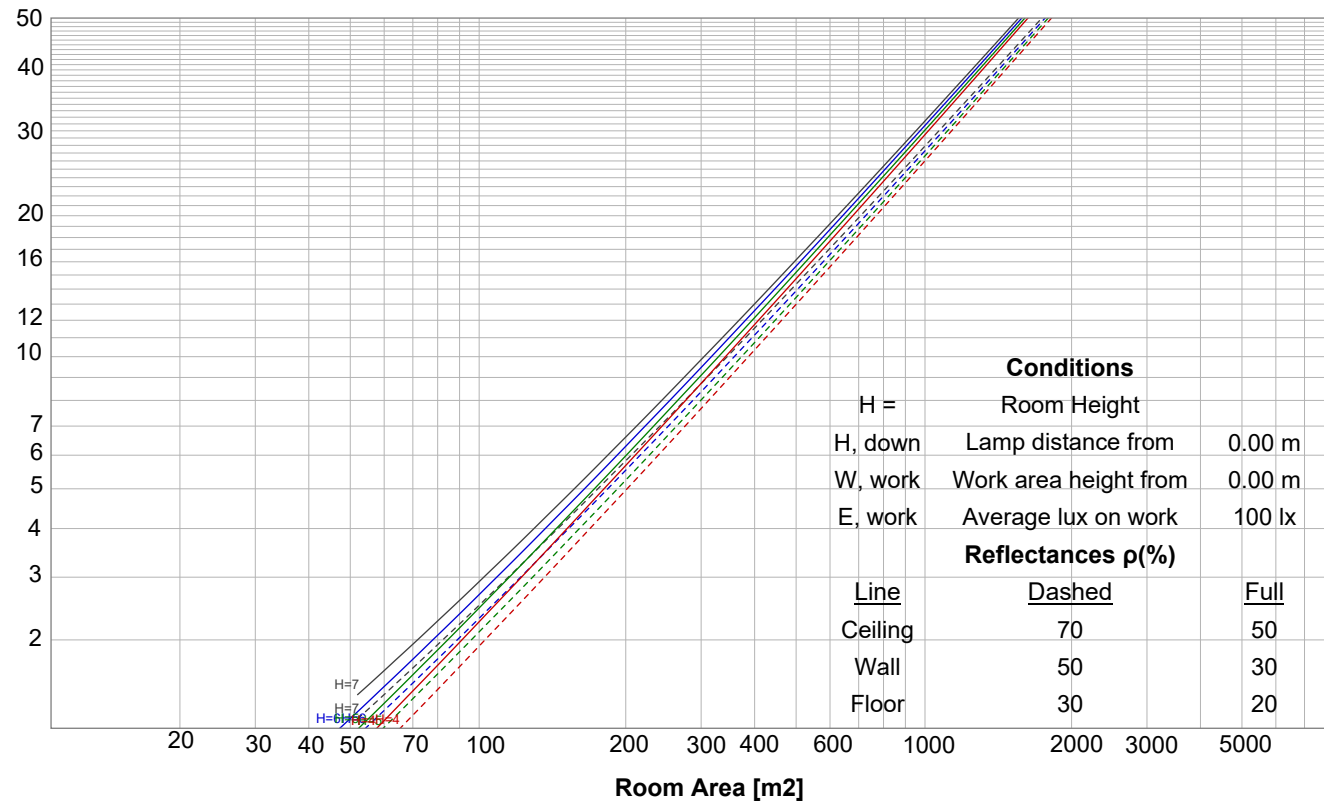
Print date 9/26/2025

Beam details

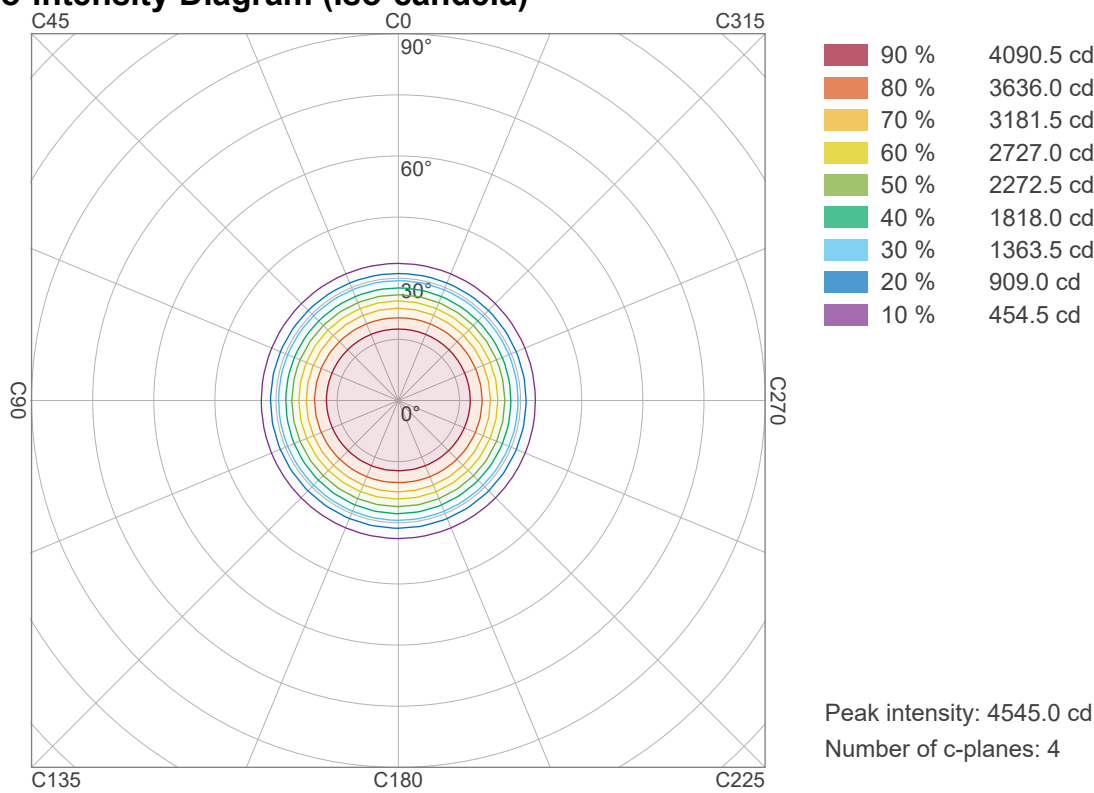


Luminaire budgetary diagram

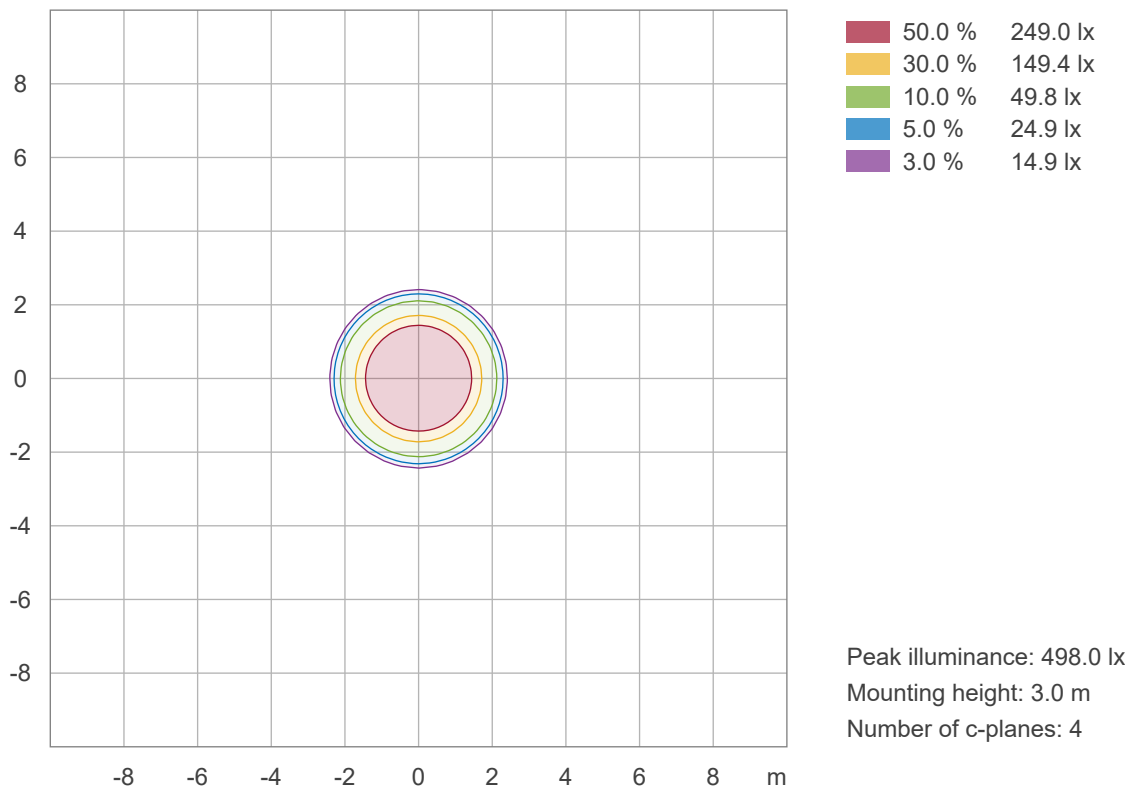
LAMPS (number of lamps)



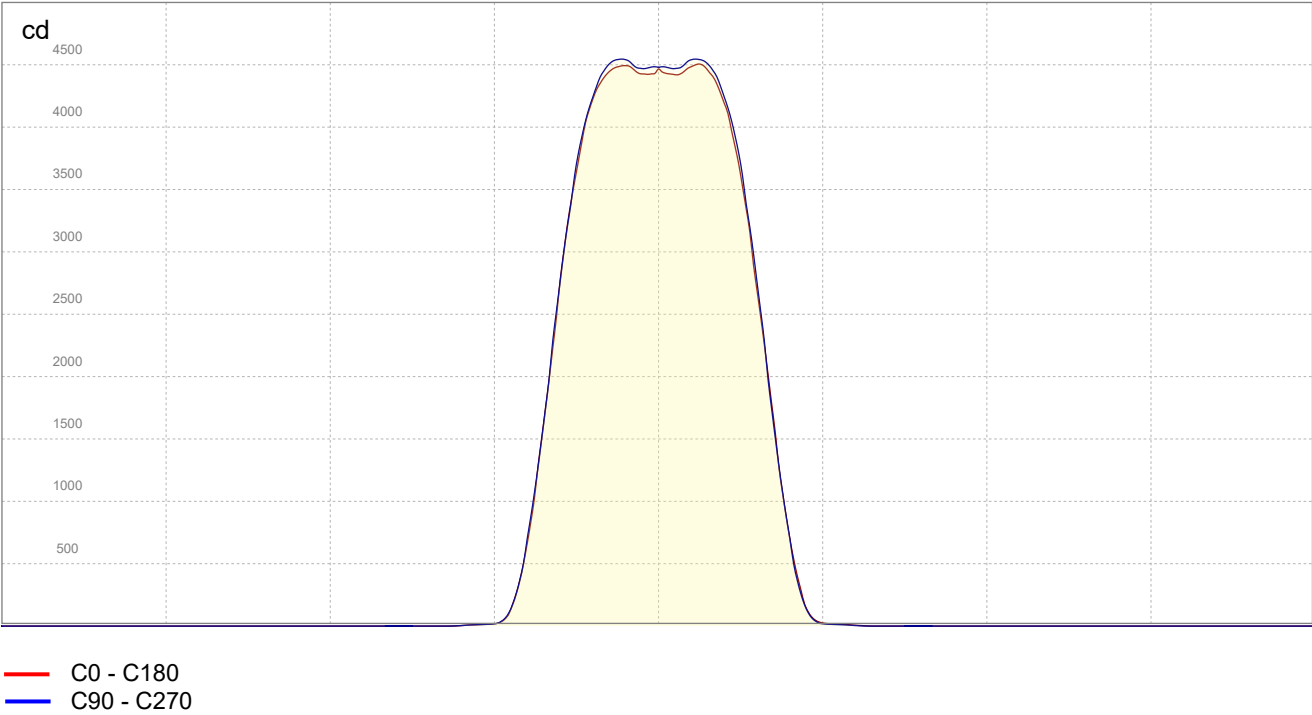
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

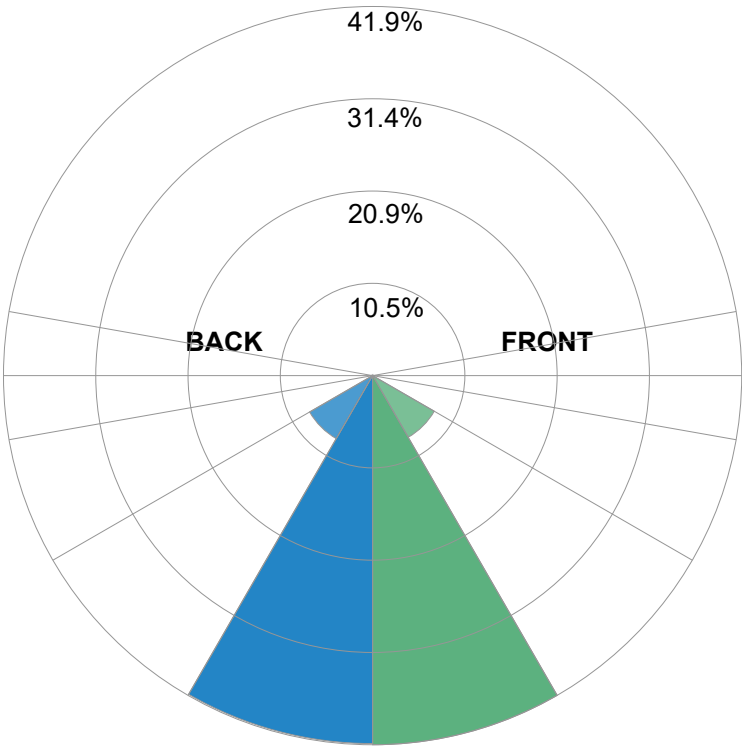


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1541.2 lm	41.9%
Medium (30-60°)	297.3 lm	8.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1536.4 lm	41.8%
Medium (30-60°)	303.7 lm	8.3%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3679 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

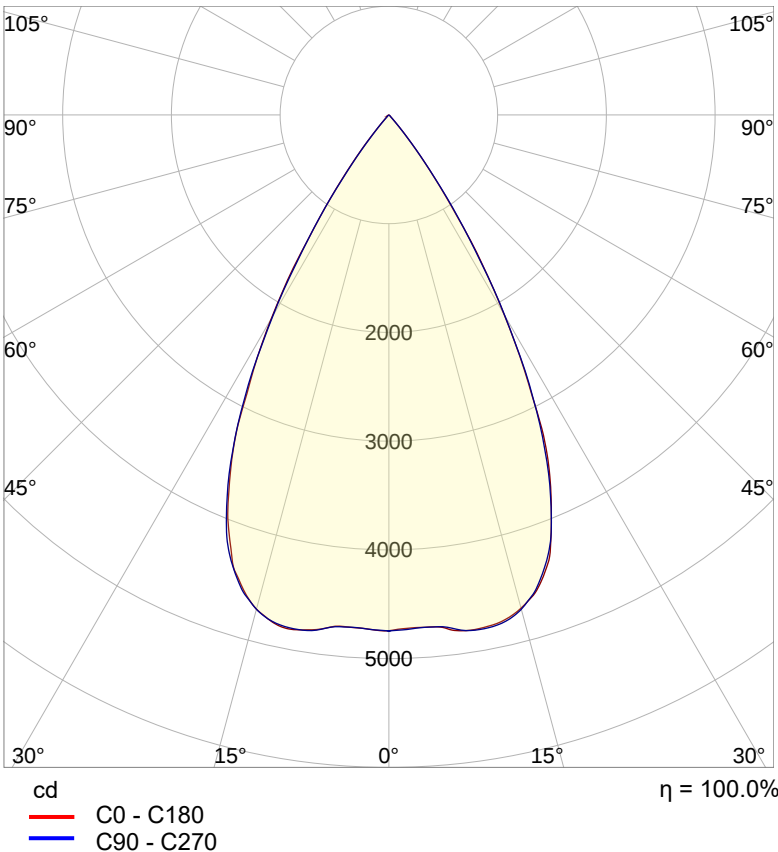
QuikPunch_OutputGain_Enabled_60D_5500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3918 lm – 0% / 100%
n/a lm/W
4816 cd
5500 K
CRI 0.0

Polar light distribution diagram

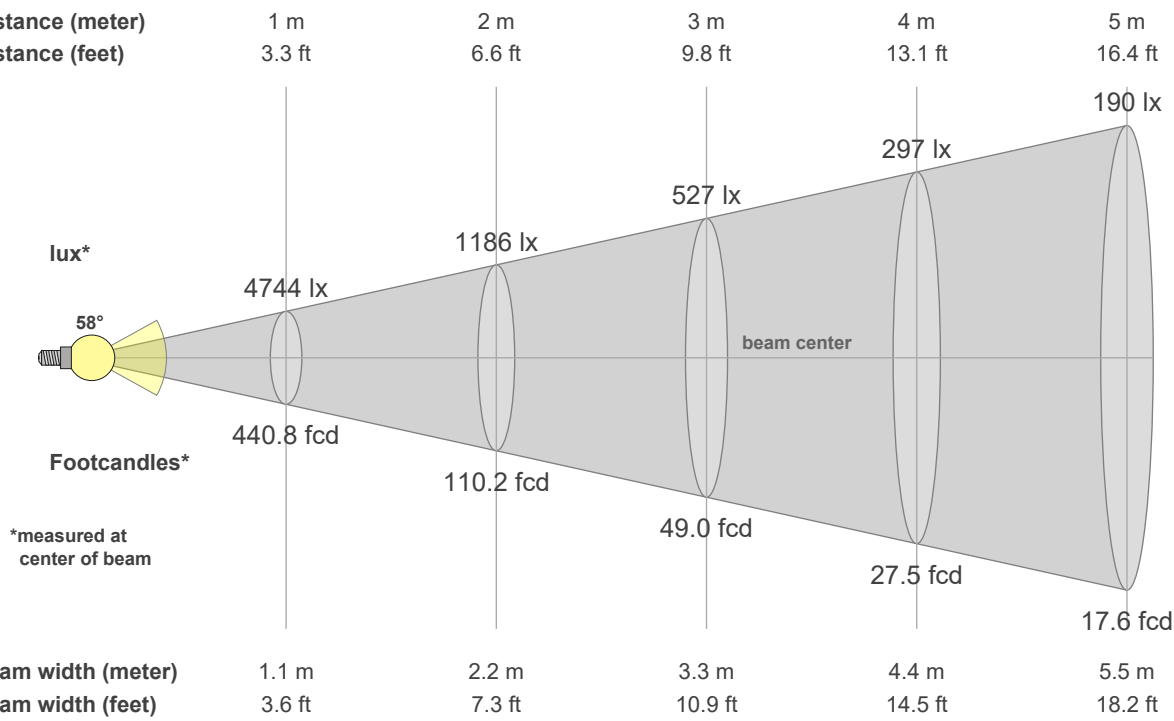


Test report

Light measurement results

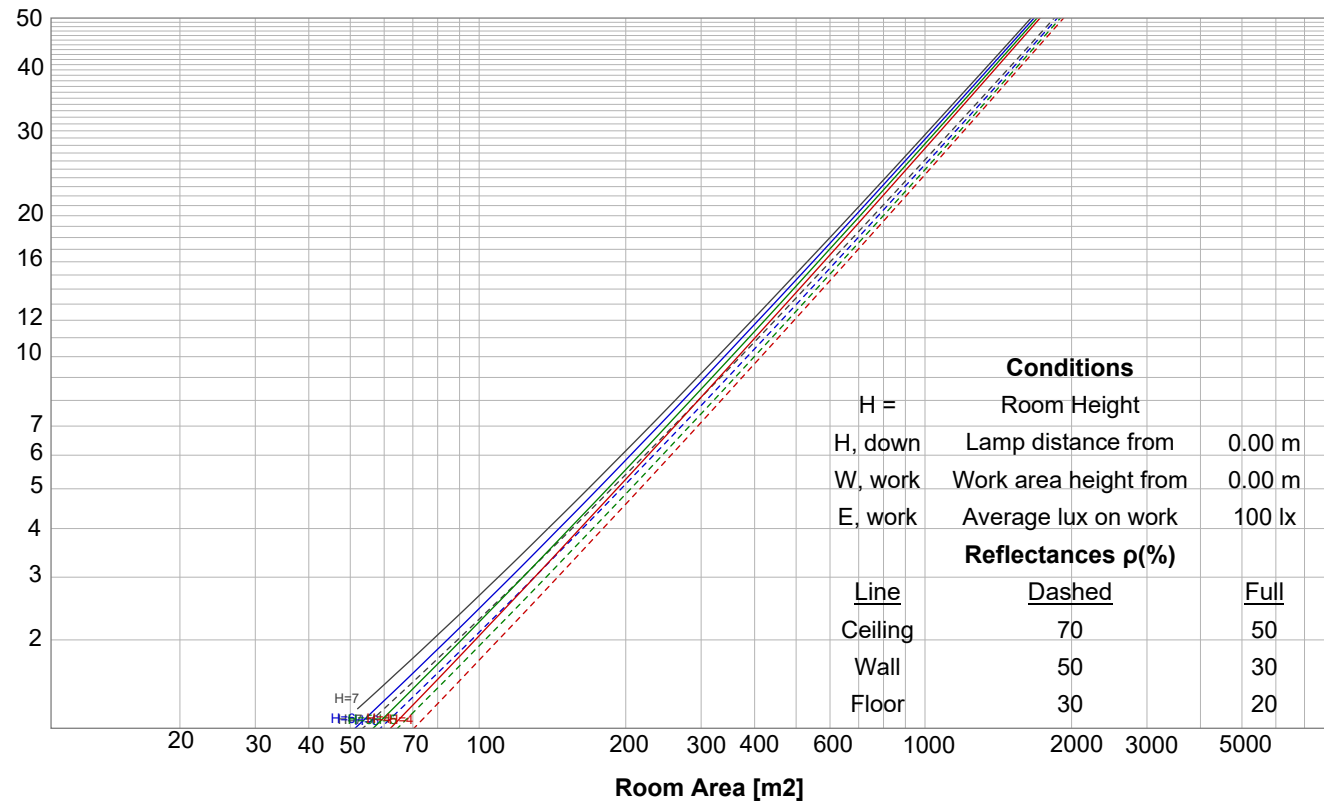
Print date 9/26/2025

Beam details

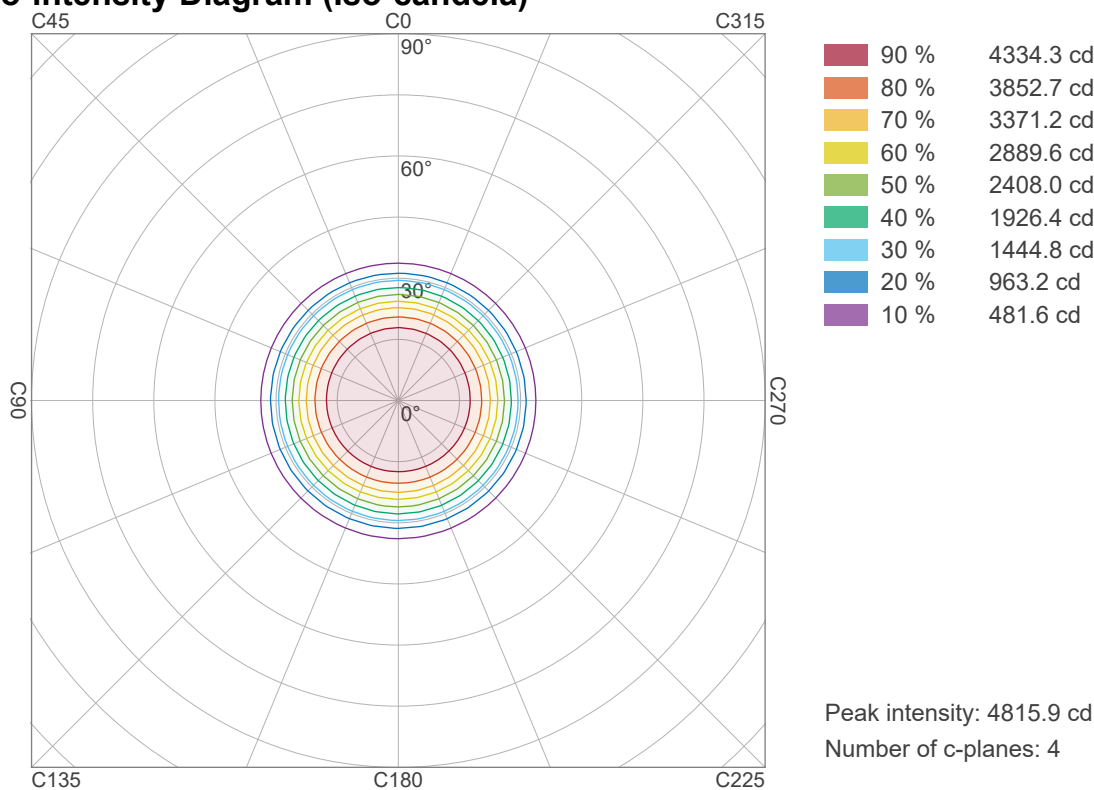


Luminaire budgetary diagram

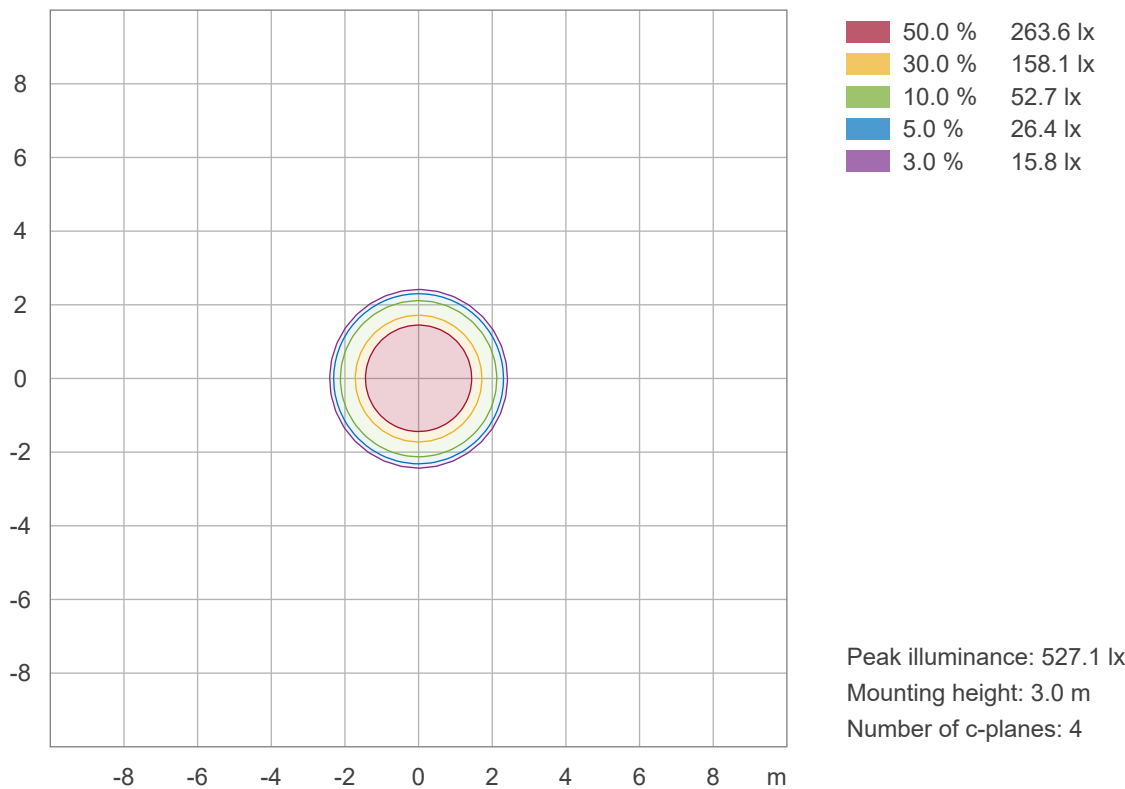
LAMPS (number of lamps)



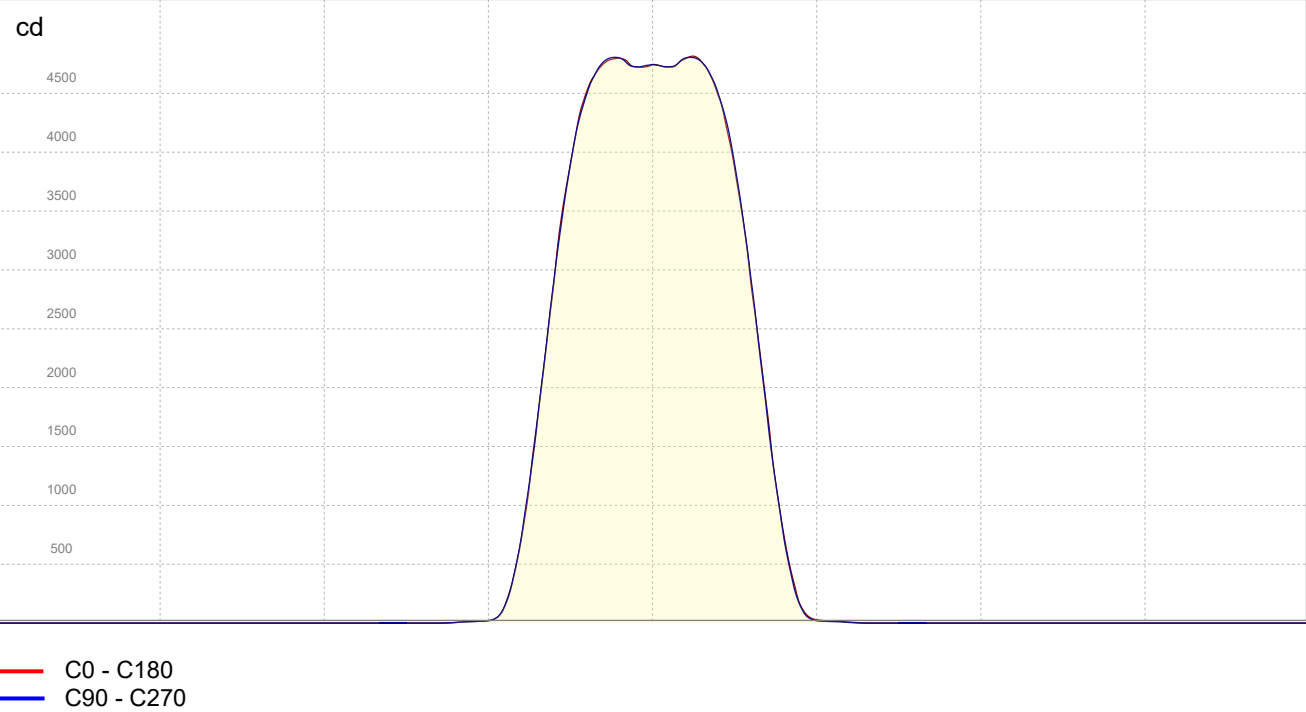
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

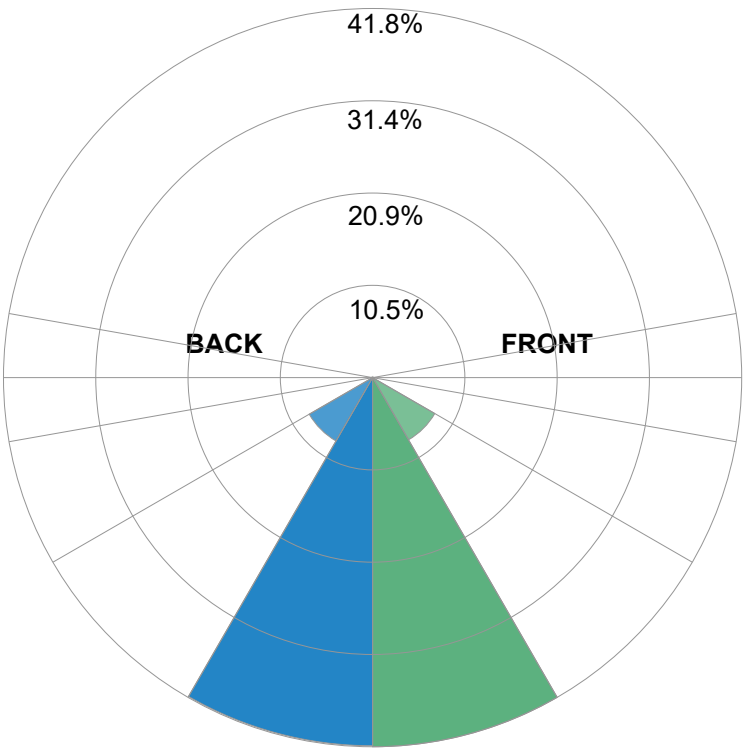


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1639.1 lm	41.8%
Medium (30-60°)	318.9 lm	8.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1634.8 lm	41.7%
Medium (30-60°)	324.9 lm	8.3%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3918 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

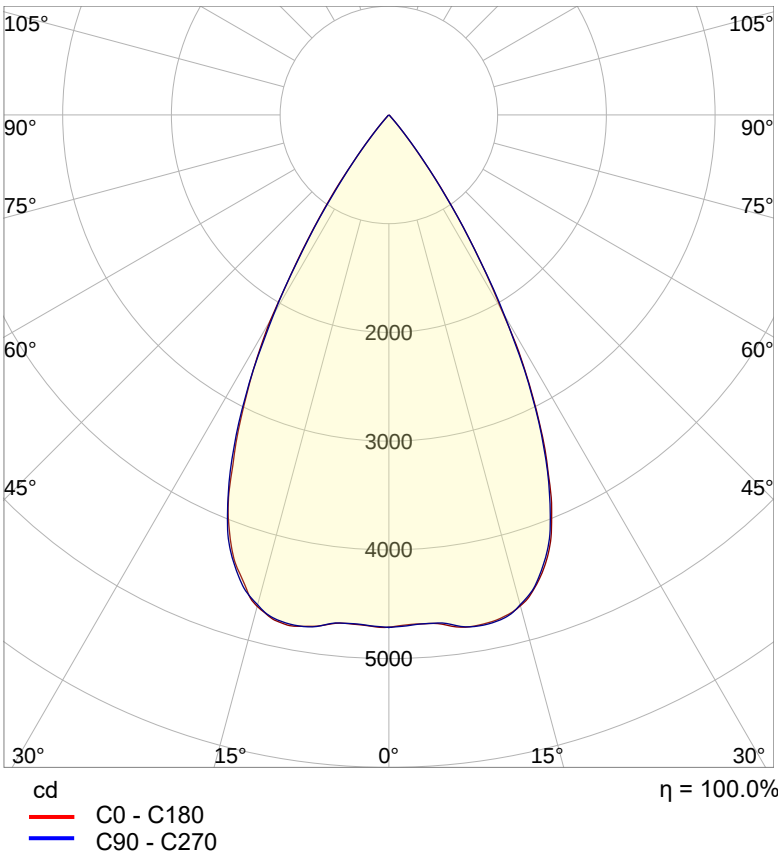
QuikPunch_OutputGain_Enabled_60D_6500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3891 lm – 0% / 100%
n/a lm/W
4784 cd
6500 K
CRI 0.0

Polar light distribution diagram

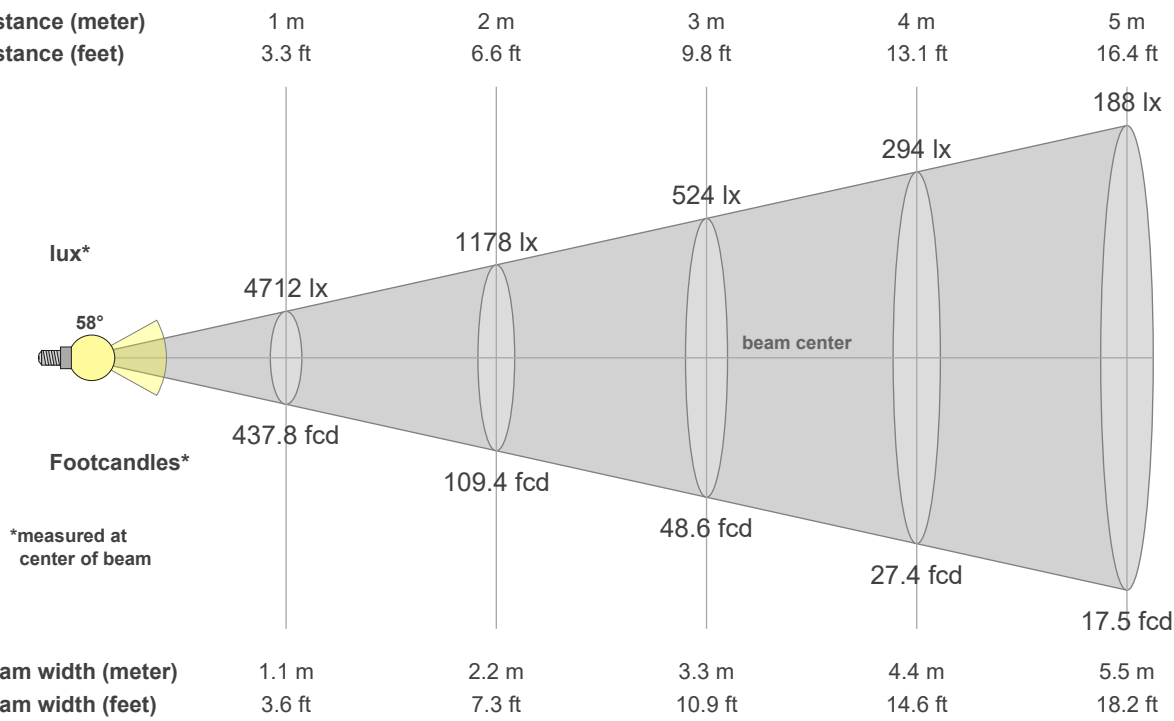


Test report

Light measurement results

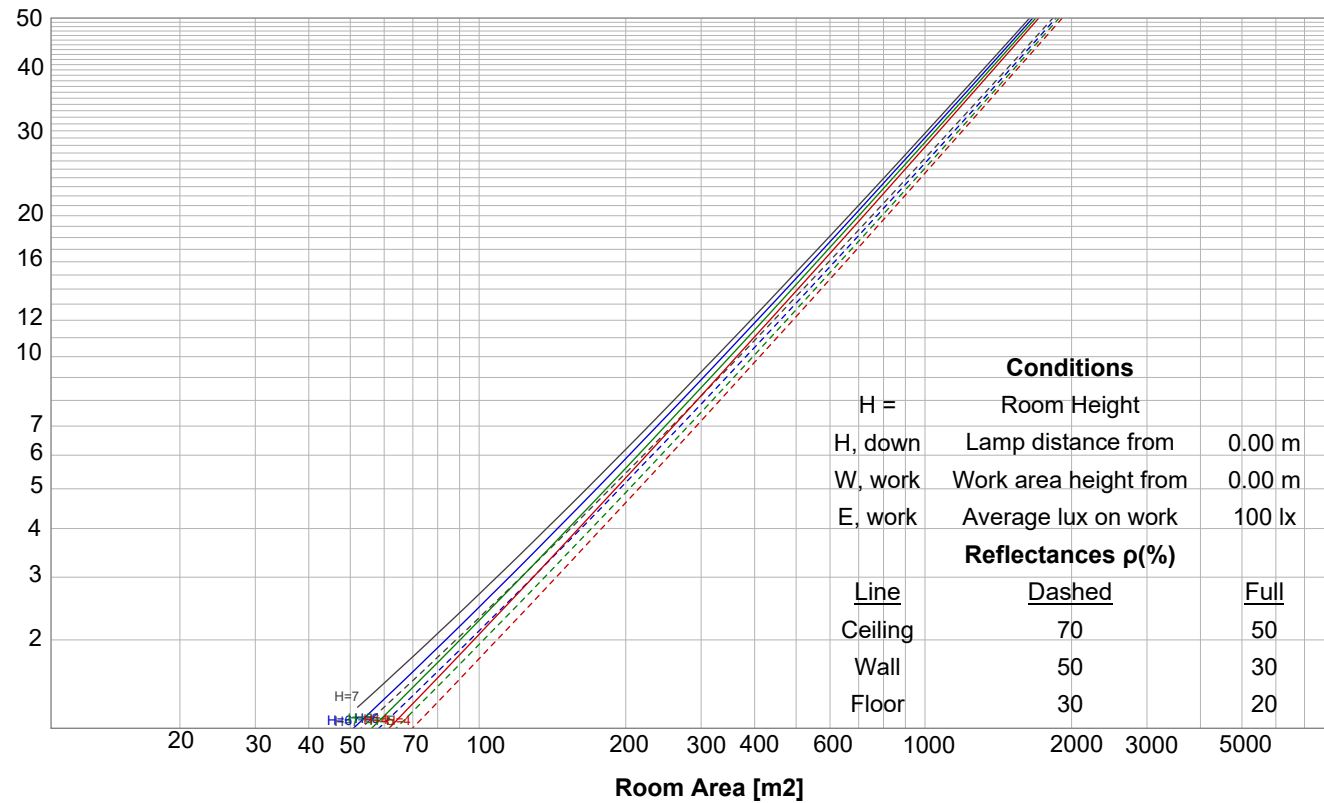
Print date 9/26/2025

Beam details

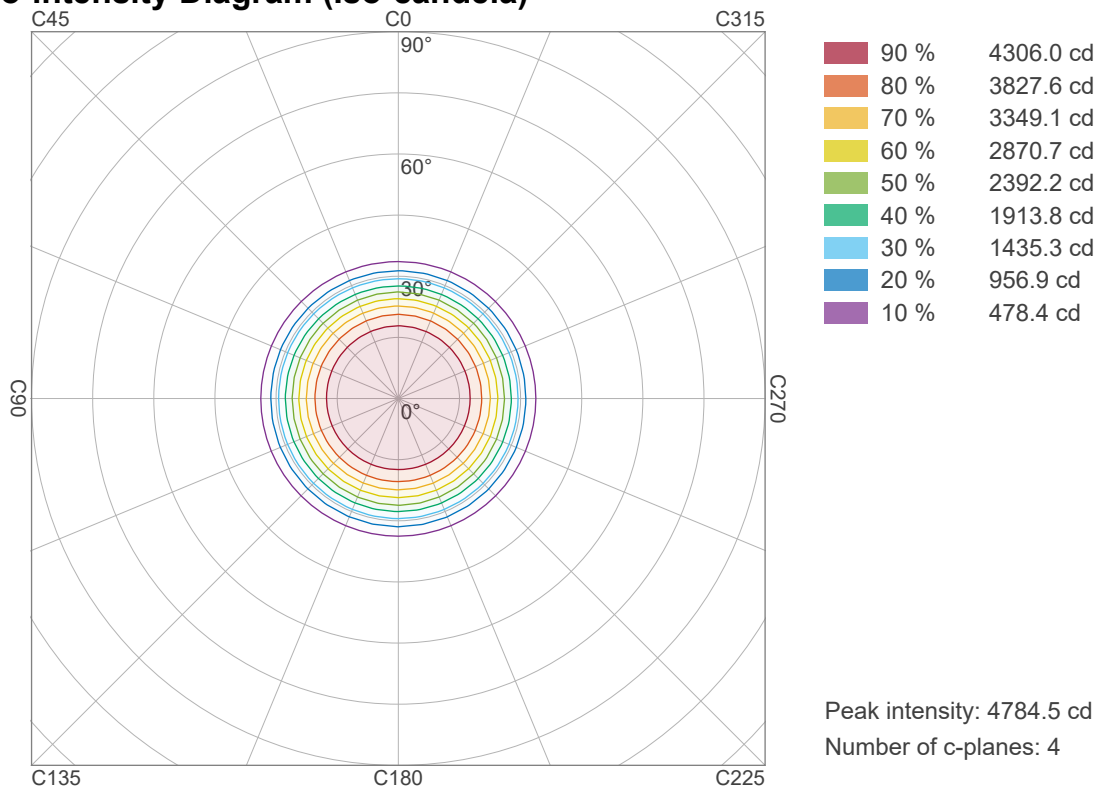


Luminaire budgetary diagram

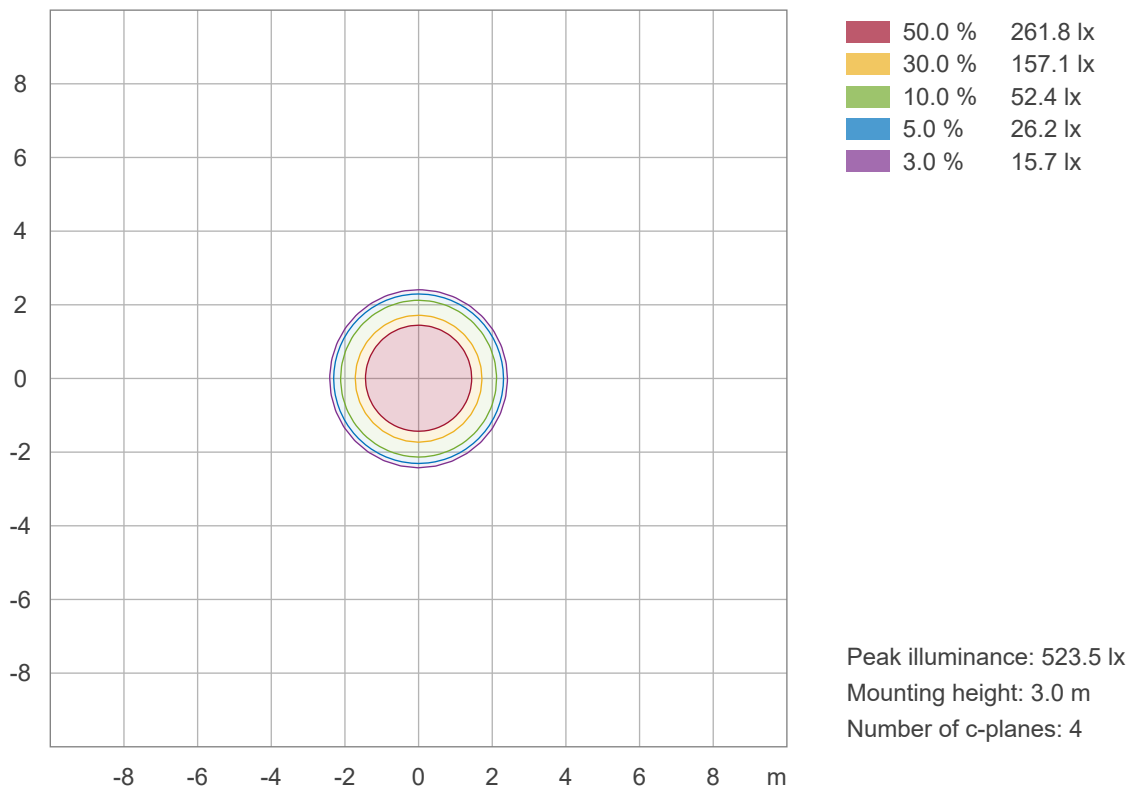
LAMPS (number of lamps)



Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

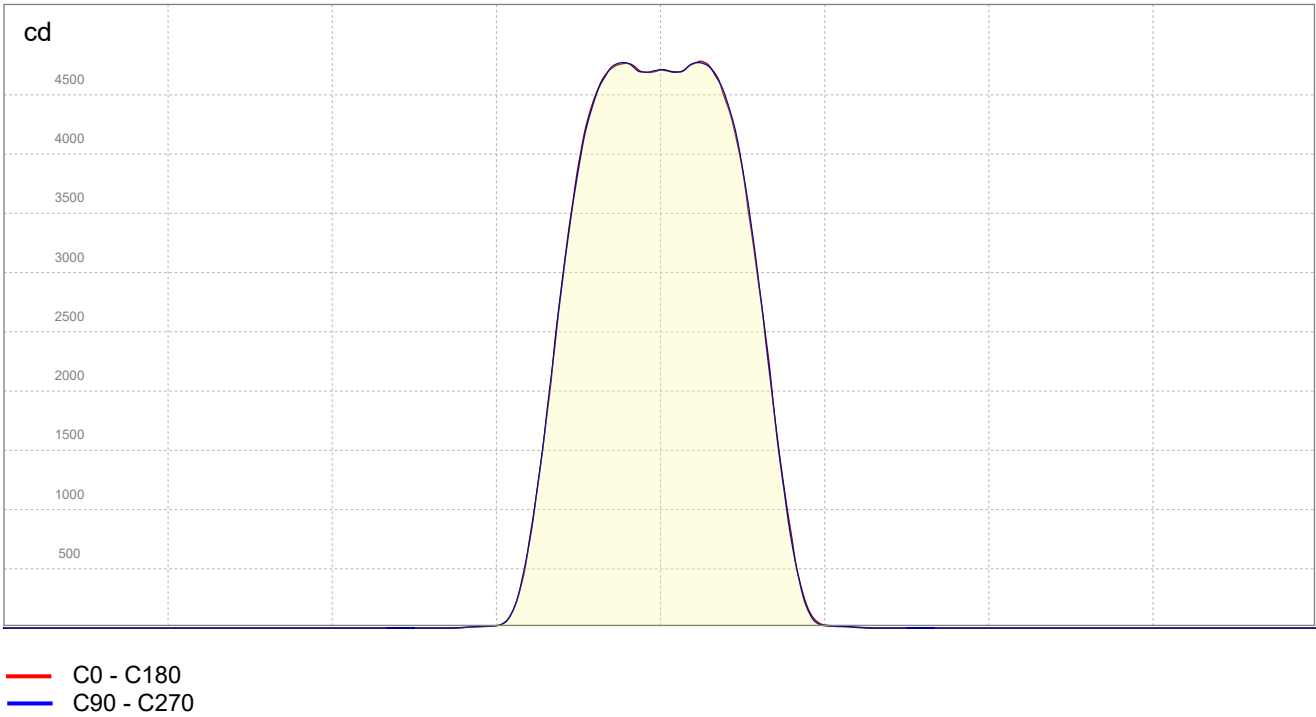


Test report

Light measurement results

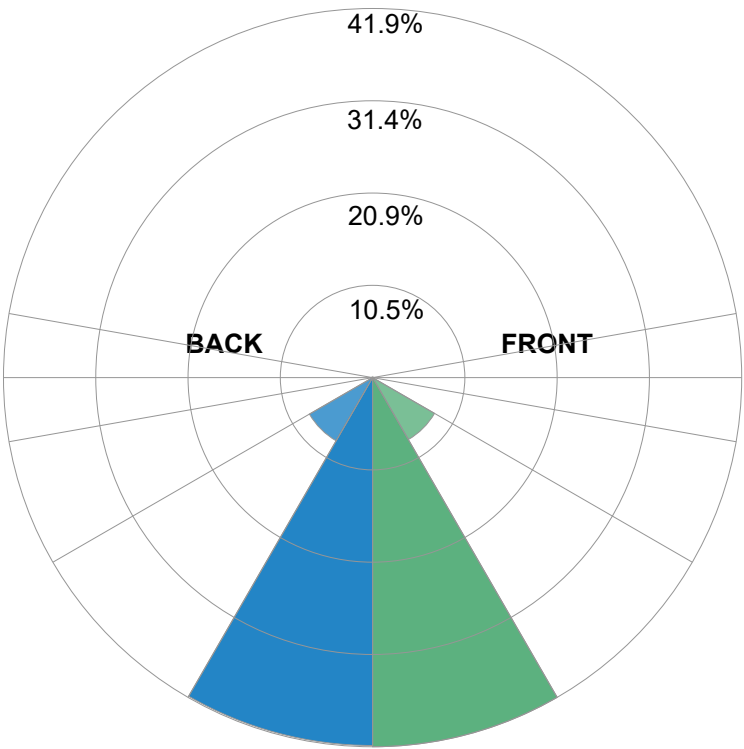
Print date 9/26/2025

Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1629.6 lm	41.9%
Medium (30-60°)	315.7 lm	8.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1624.1 lm	41.7%
Medium (30-60°)	322 lm	8.3%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3891 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

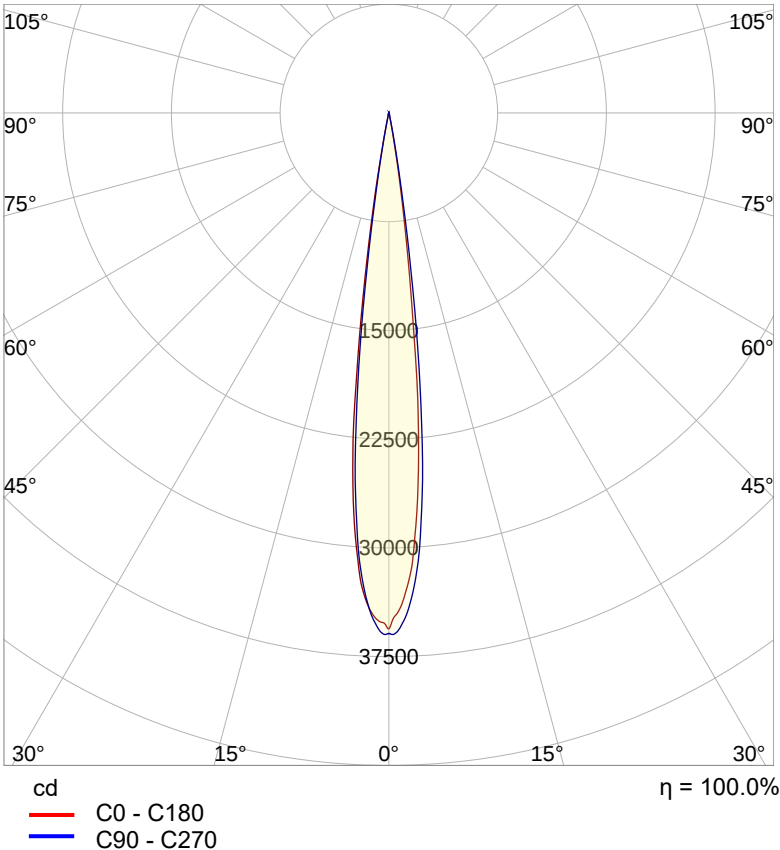
QuikPunch_OutputGain_Disabled_13D_2700K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

1785 lm – 0% / 100%
n/a lm/W
35968 cd
2700 K
CRI 0.0

Polar light distribution diagram

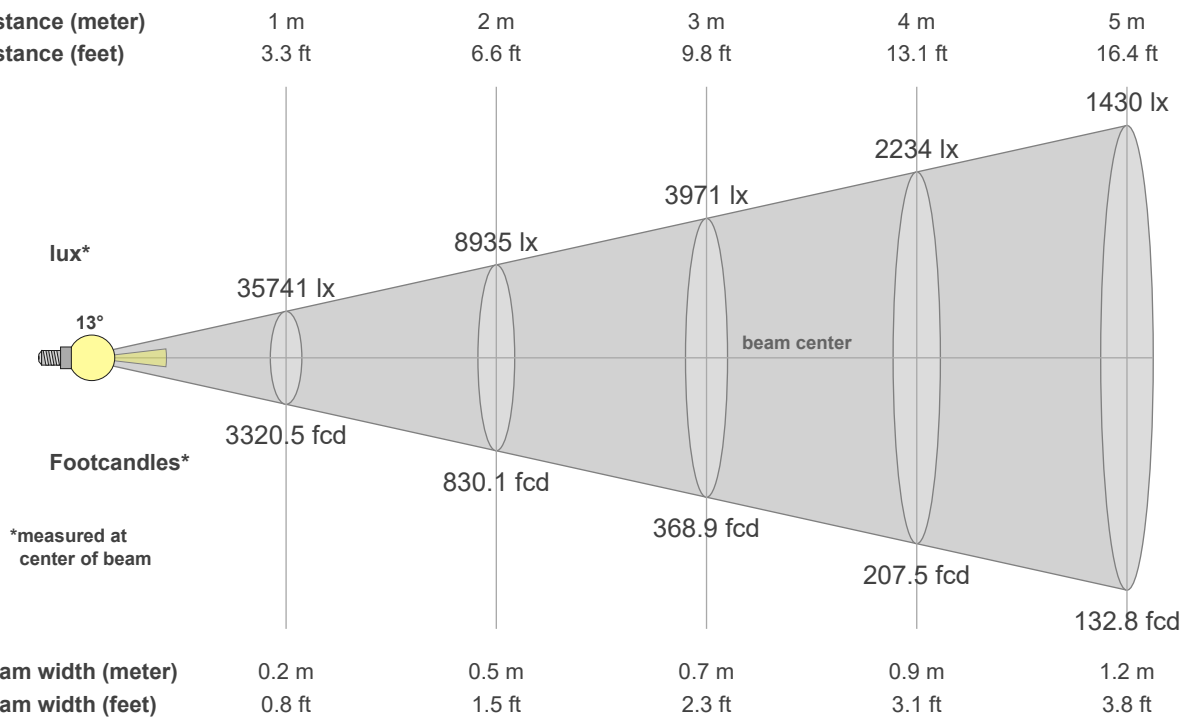


Test report

Light measurement results

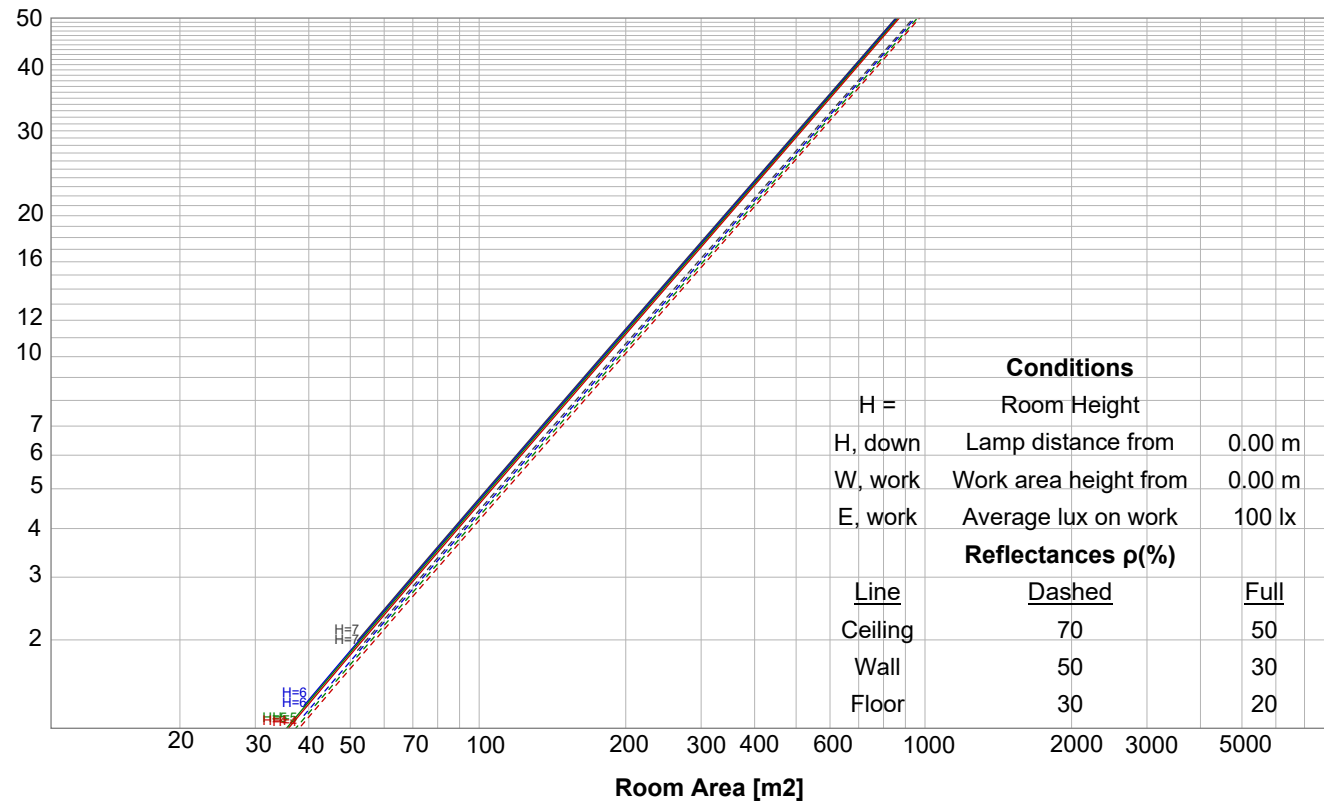
Print date 9/26/2025

Beam details

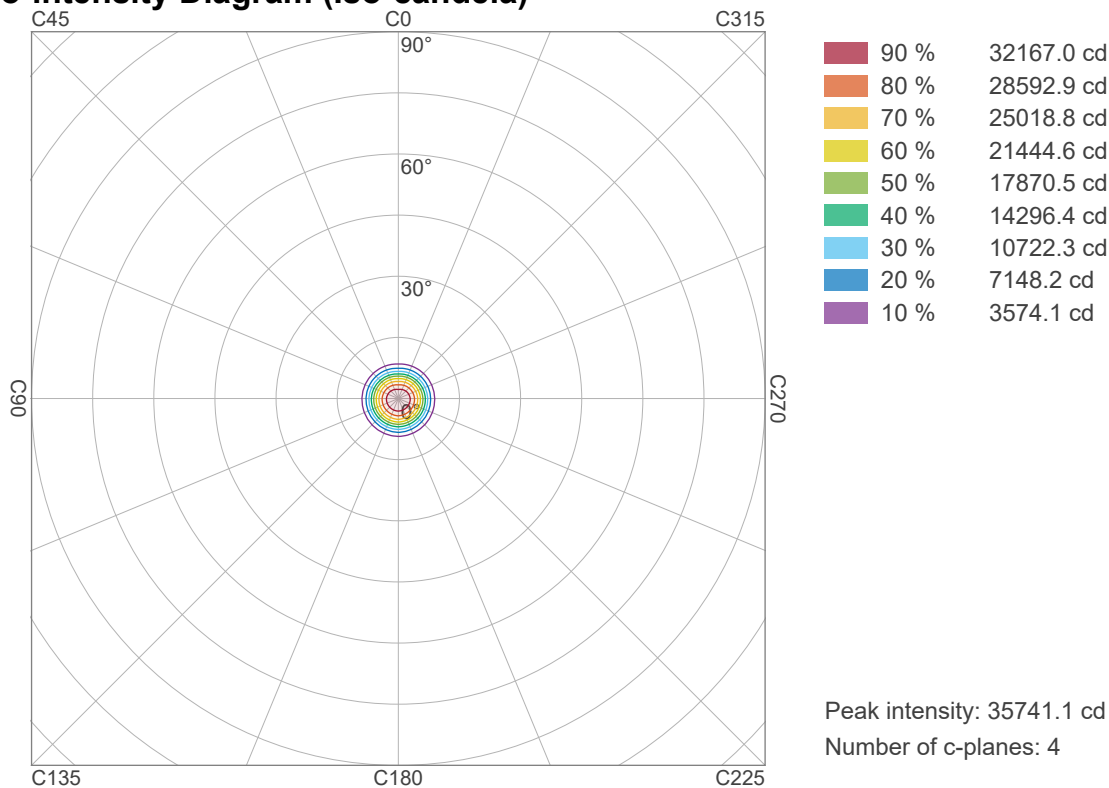


Luminaire budgetary diagram

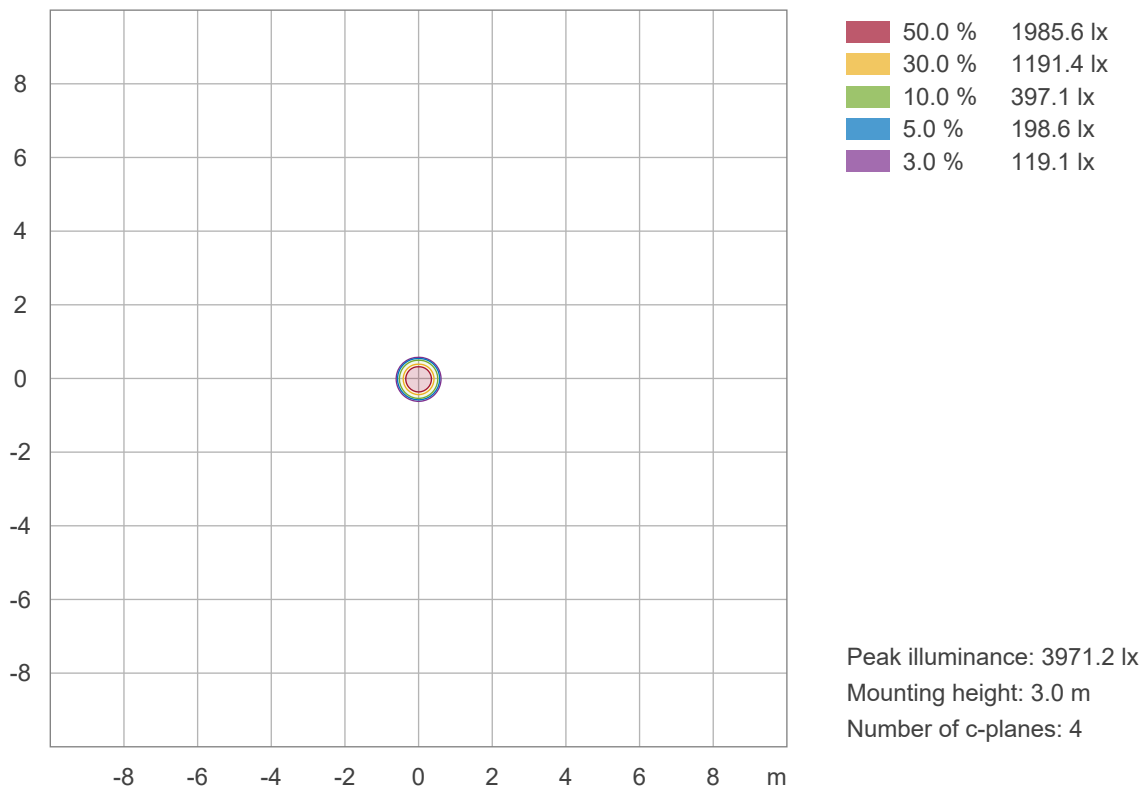
LAMPS (number of lamps)



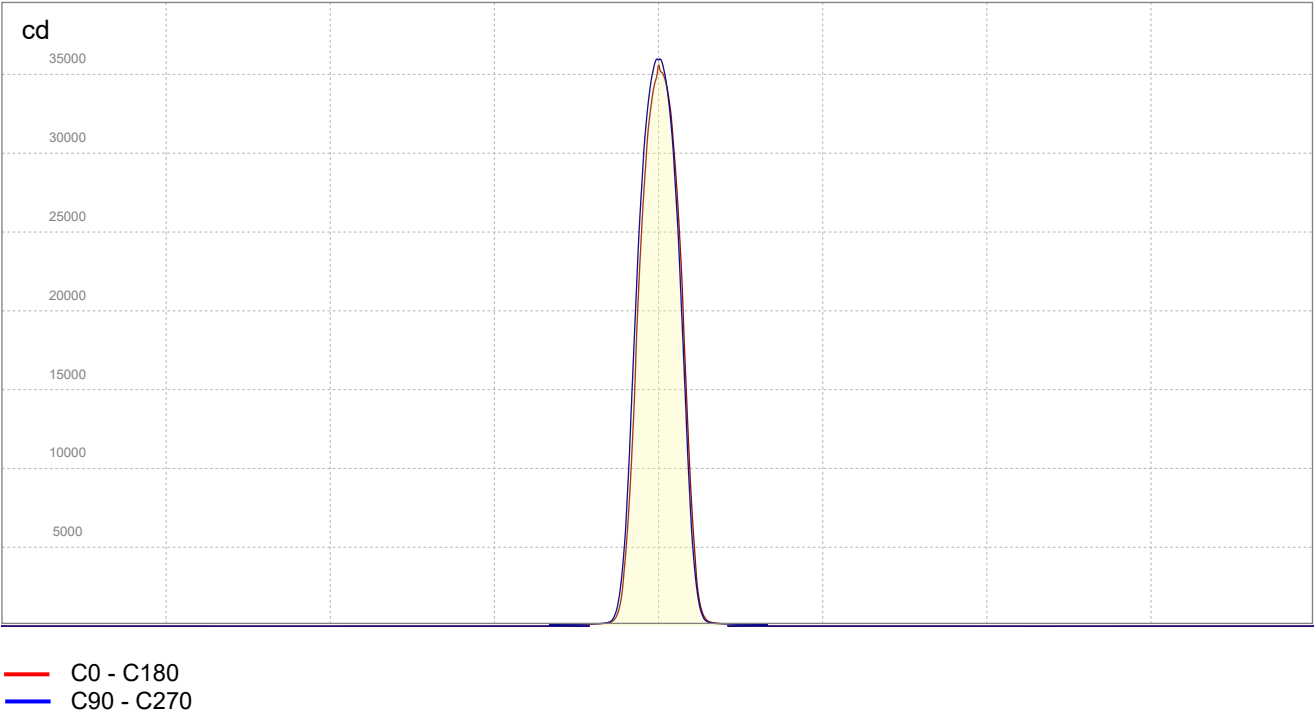
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

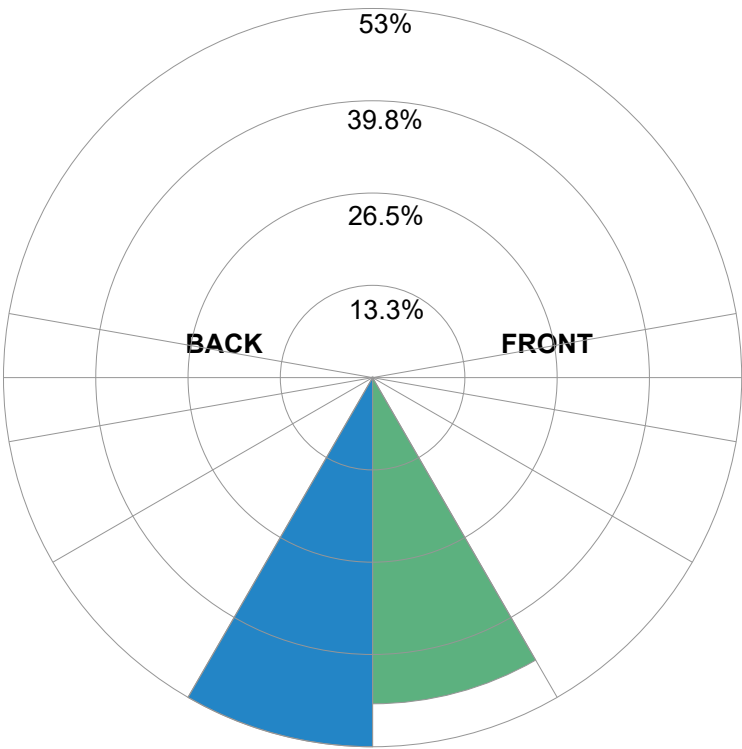


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B2 U0 G0



Forward Light

Low (0-30°)	836.4	lm	46.9%
Medium (30-60°)	0.9	lm	0%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Back Light

Low (0-30°)	946.5	lm	53%
Medium (30-60°)	0.9	lm	0.1%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Uplight

Low (90-100°)	0	lm	0%
High (100-180°)	0	lm	0%

Total

Sum	1785	lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

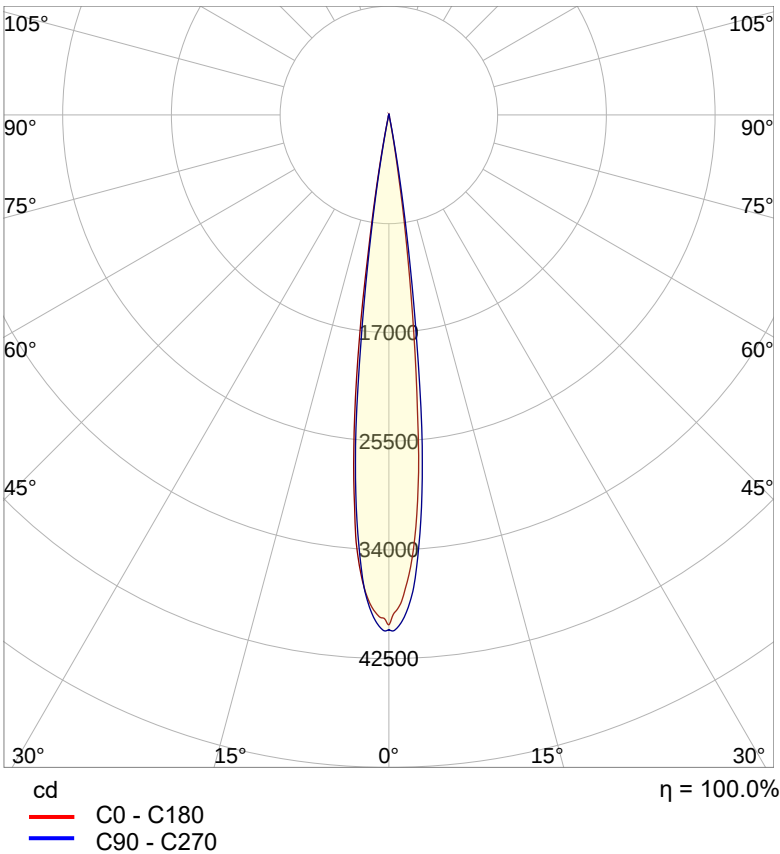
QuikPunch_OutputGain_Disabled_13D_3200K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

1999 lm – 0% / 100%
n/a lm/W
40330 cd
3200 K
CRI 0.0

Polar light distribution diagram

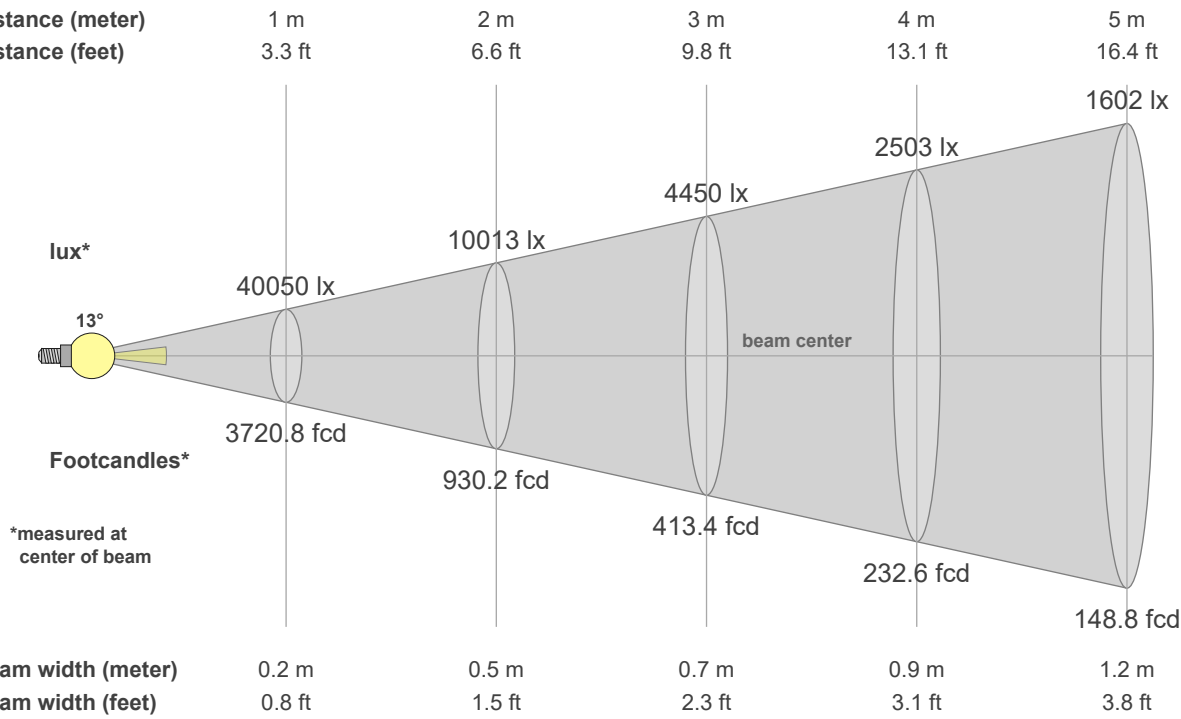


Test report

Light measurement results

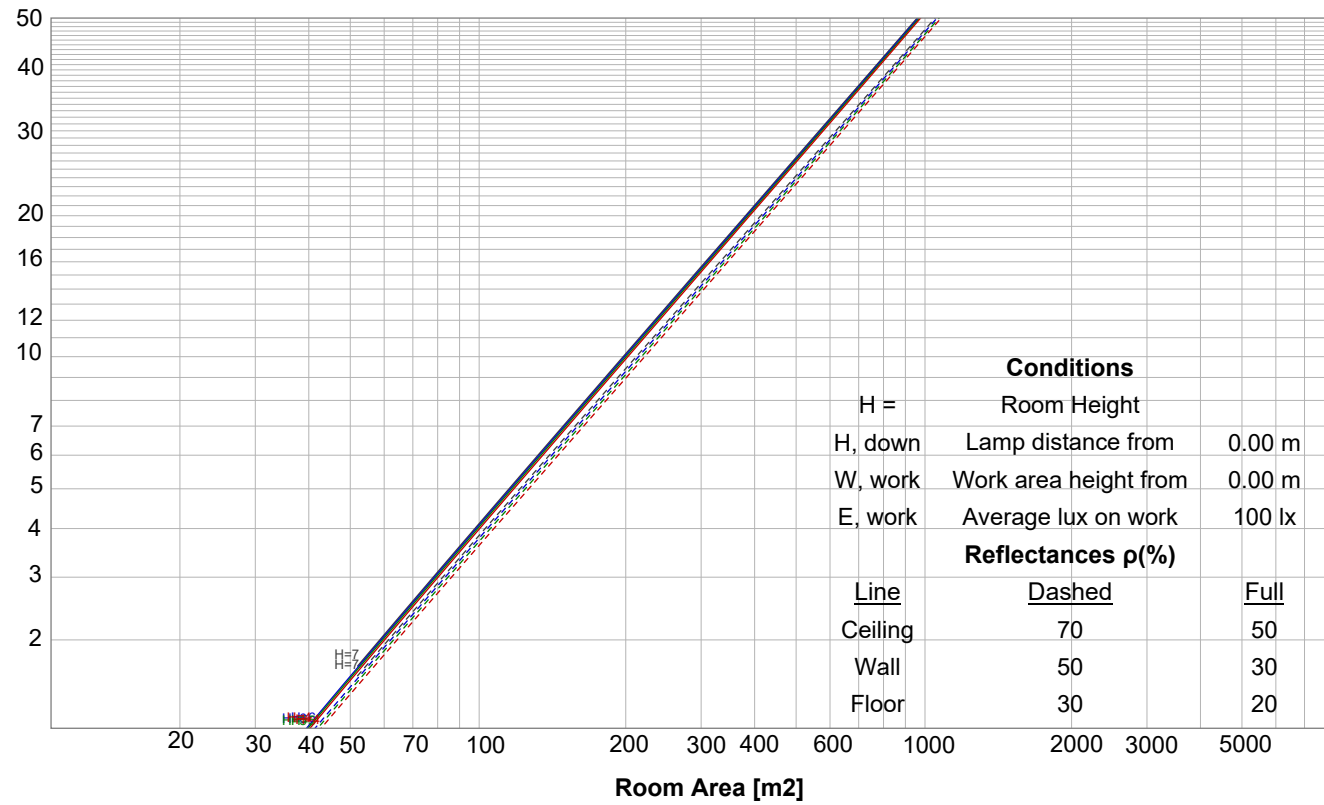
Print date 9/26/2025

Beam details

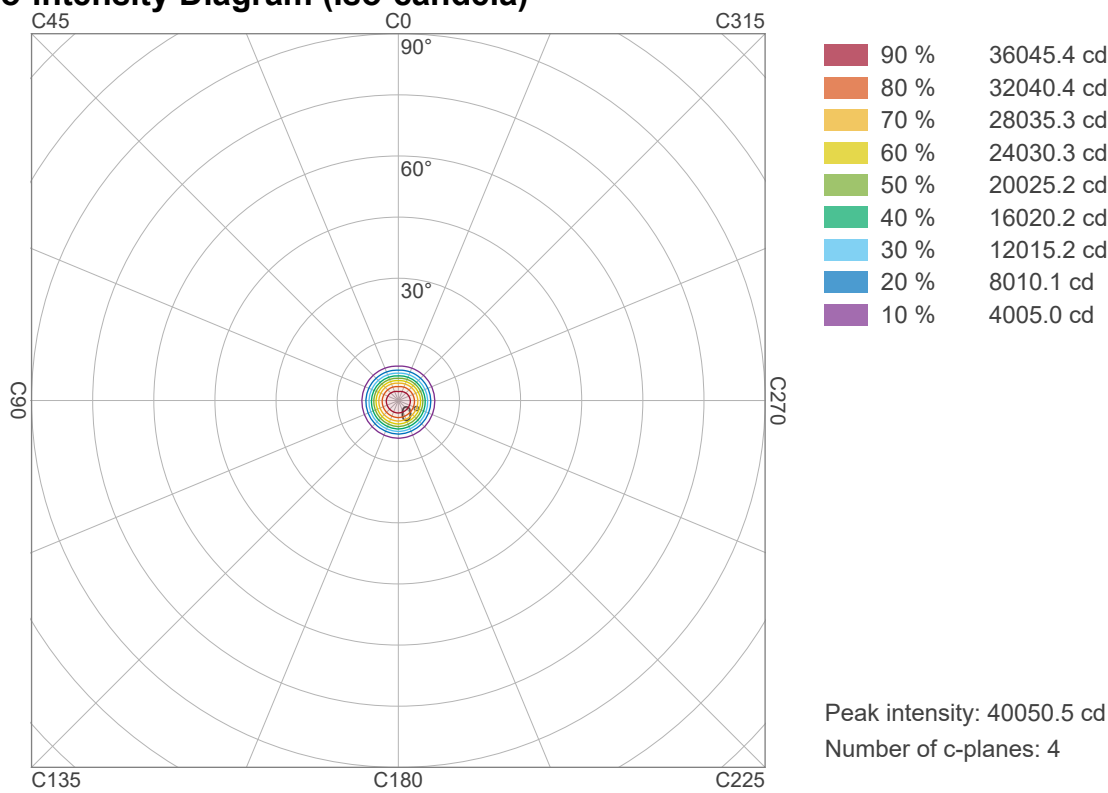


Luminaire budgetary diagram

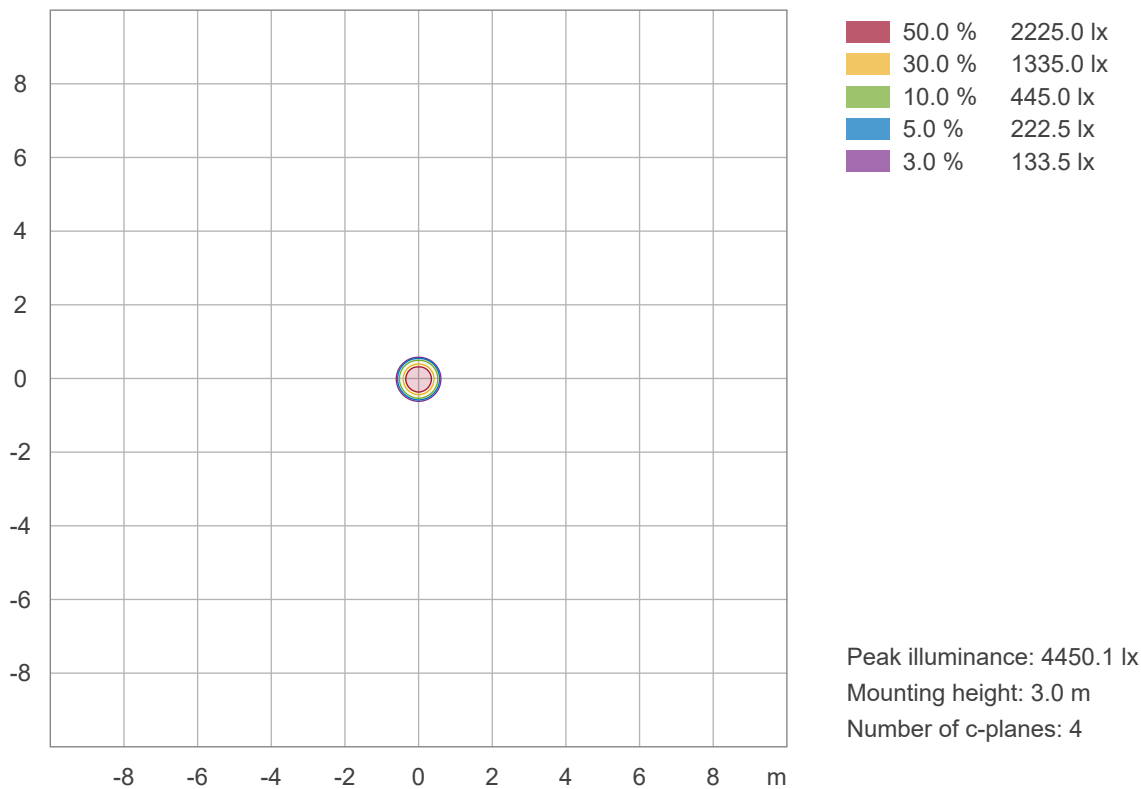
LAMPS (number of lamps)



Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)



Test report

Light measurement results

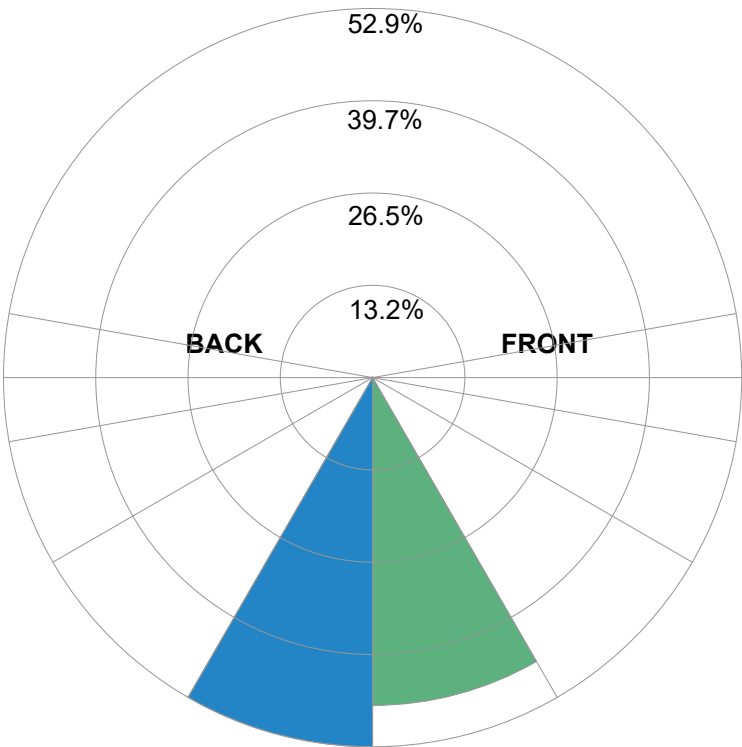
Print date 9/26/2025

Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	939.1	lm	47%
Medium (30-60°)	1	lm	0%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Back Light

Low (0-30°)	1057.6	lm	52.9%
Medium (30-60°)	1	lm	0.1%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Uplight

Low (90-100°)	0	lm	0%
High (100-180°)	0	lm	0%

Total

Sum	1999	lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

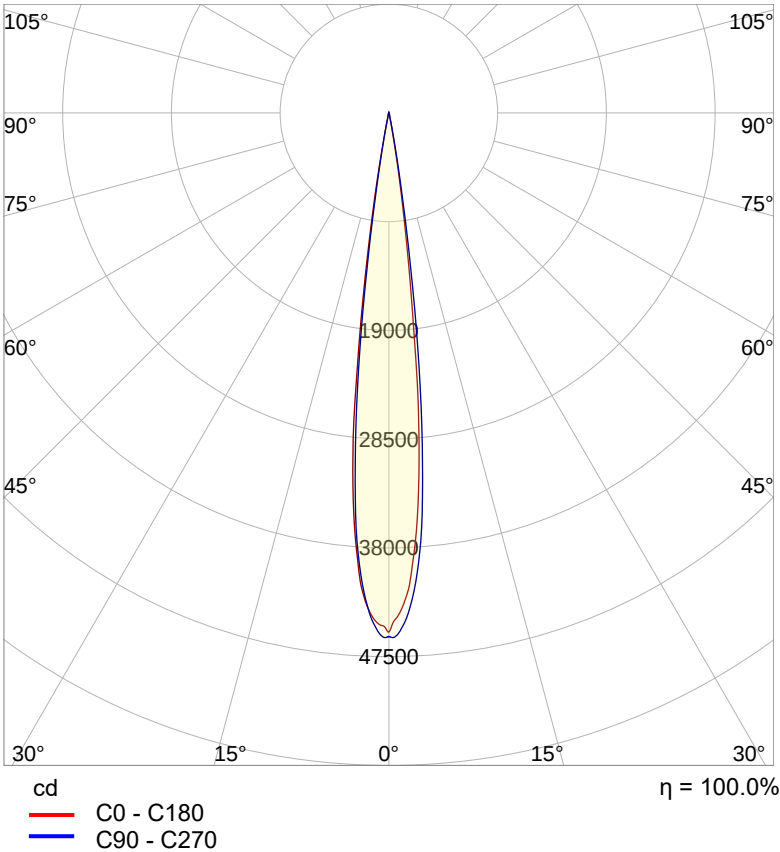
QuikPunch_OutputGain_Disabled_13D_4000K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2269 lm – 0% / 100%
n/a lm/W
45831 cd
4000 K
CRI 0.0

Polar light distribution diagram

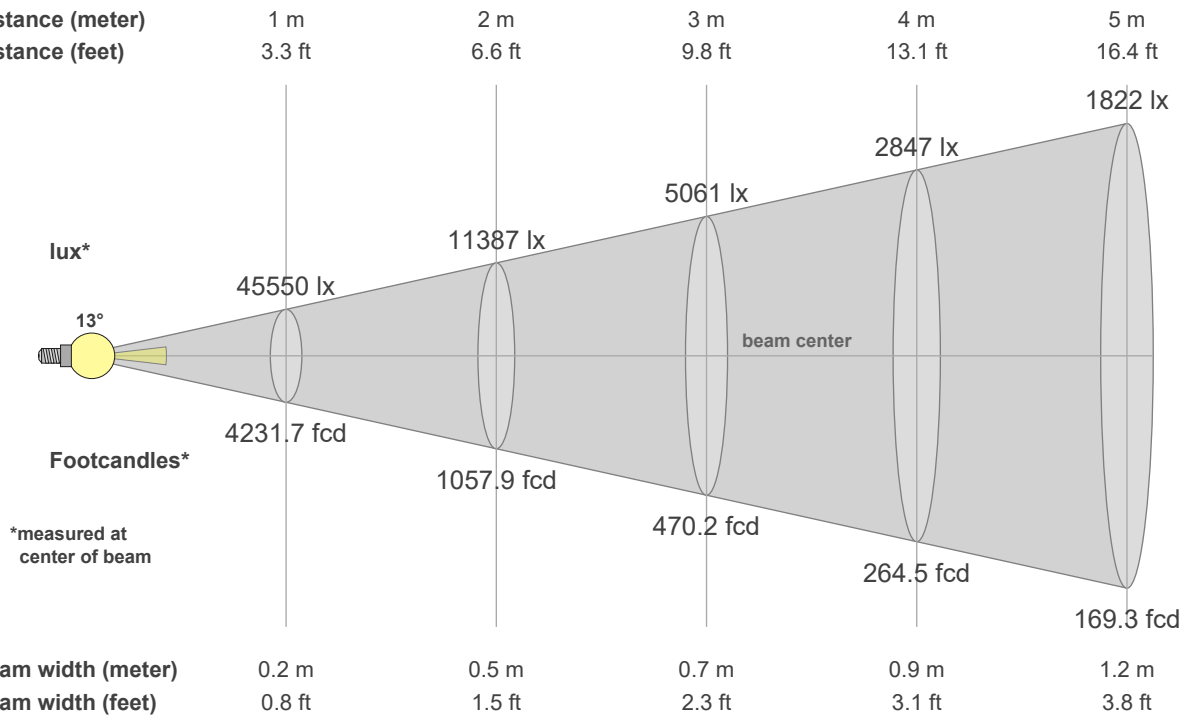


Test report

Light measurement results

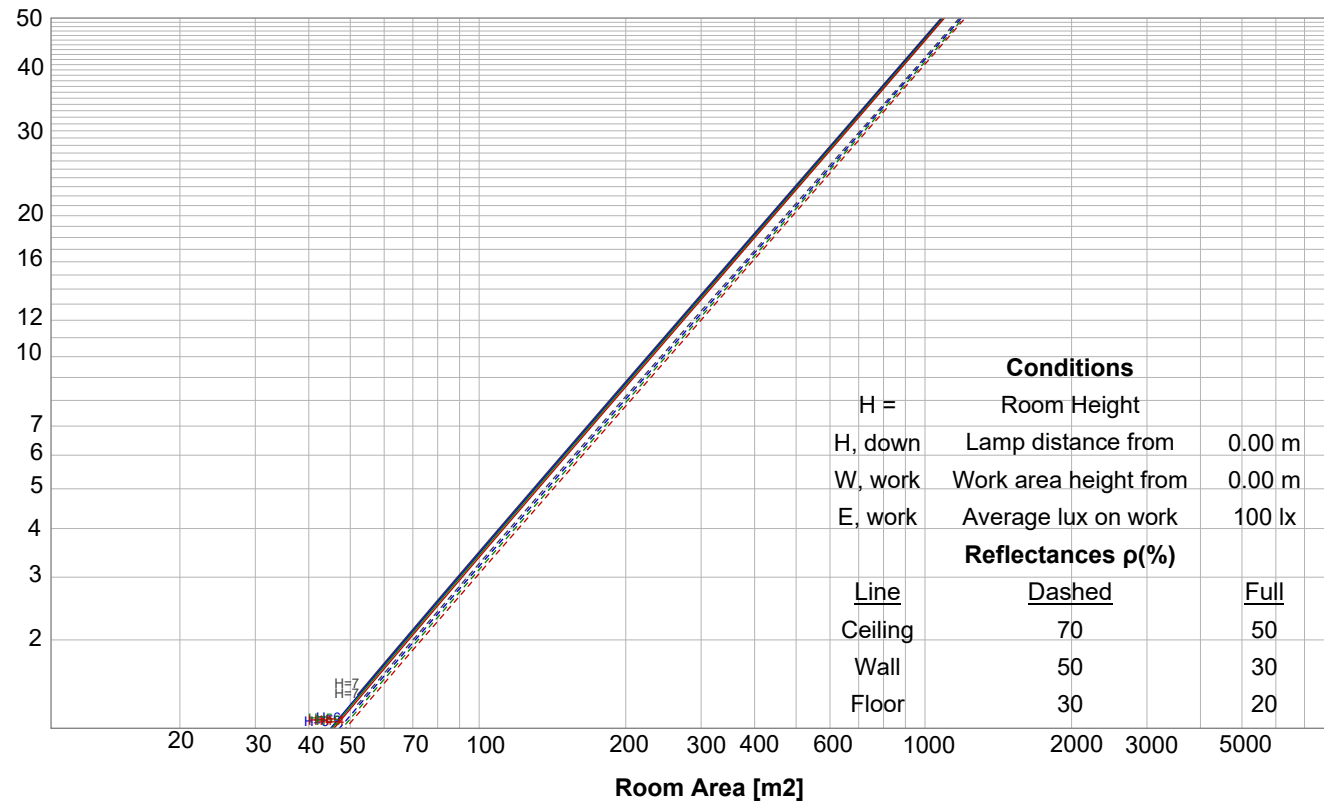
Print date 9/26/2025

Beam details

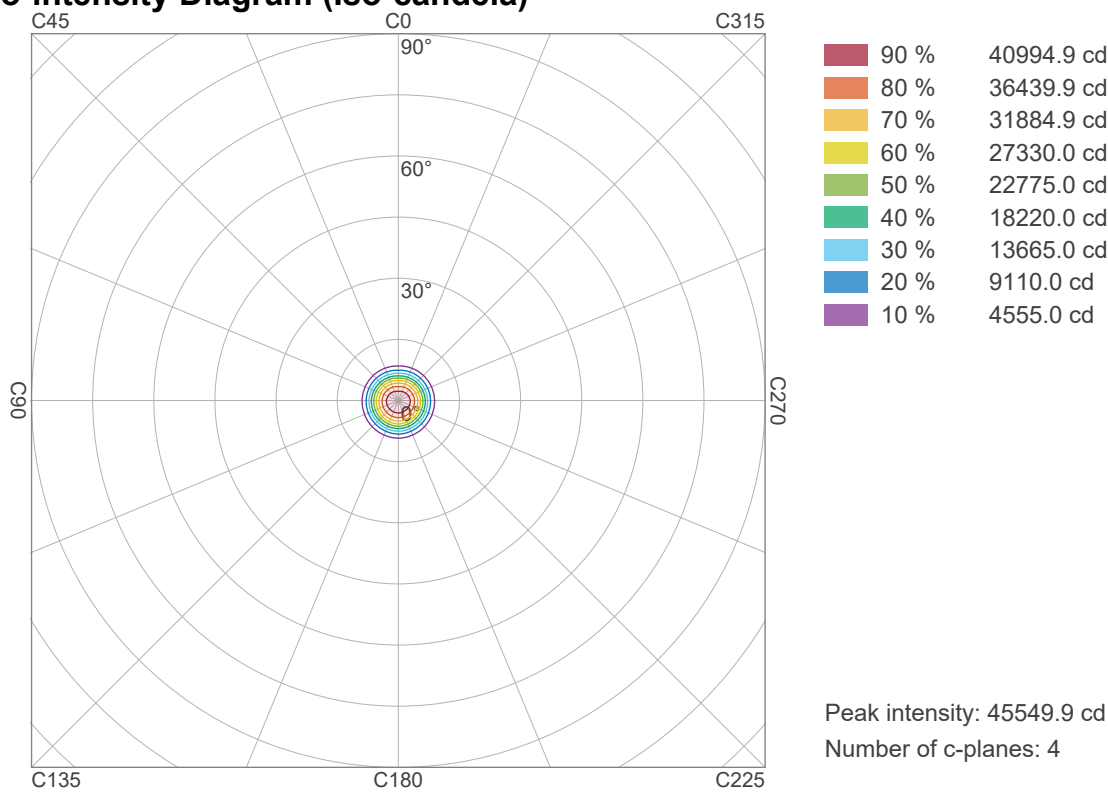


Luminaire budgetary diagram

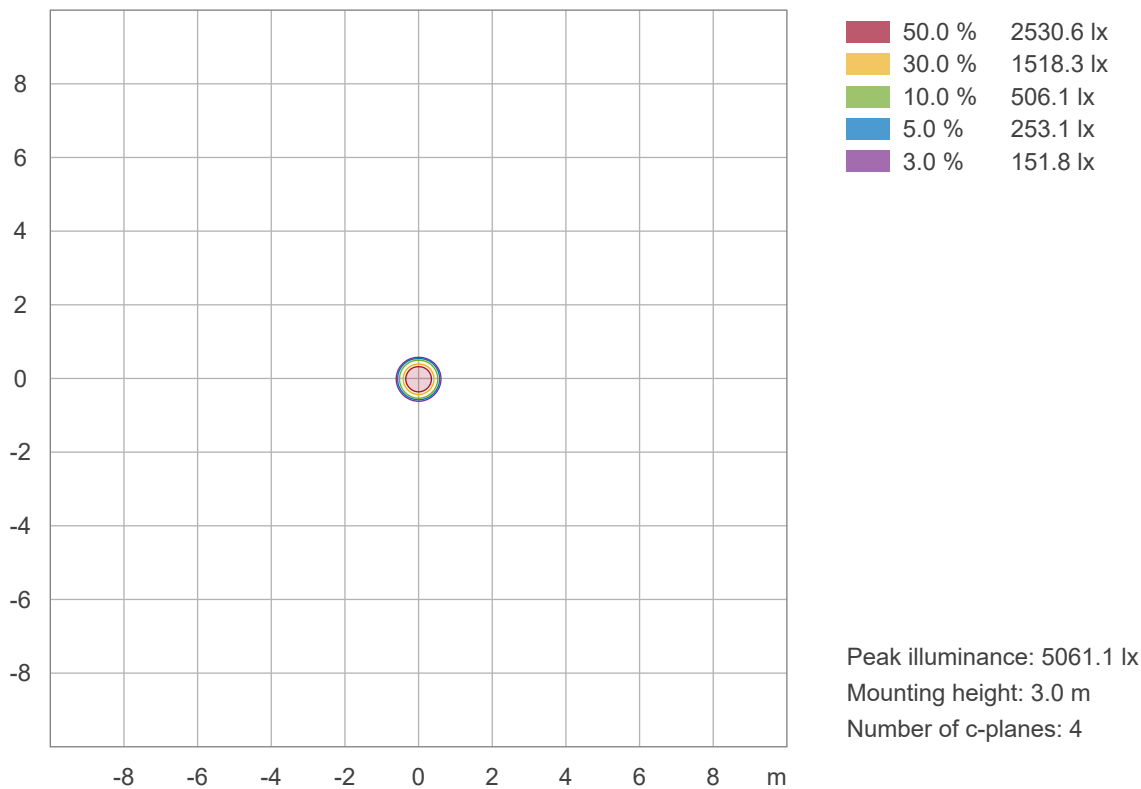
LAMPS (number of lamps)



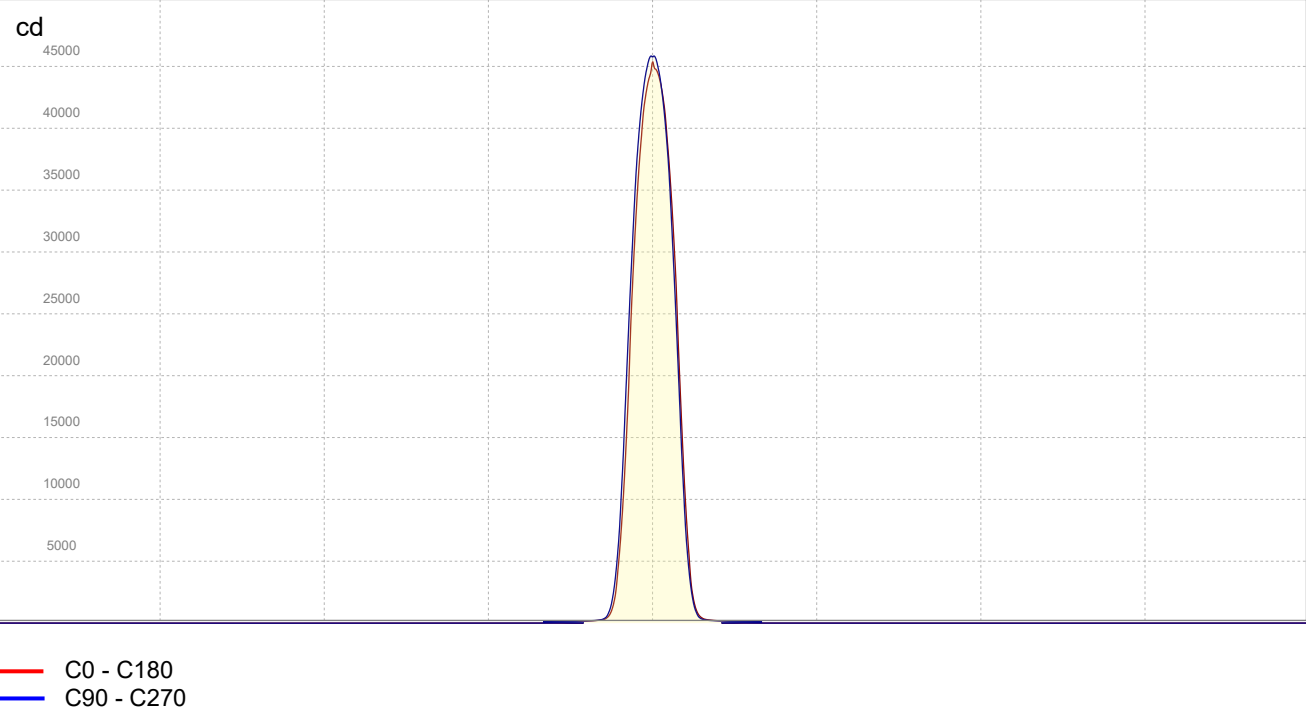
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

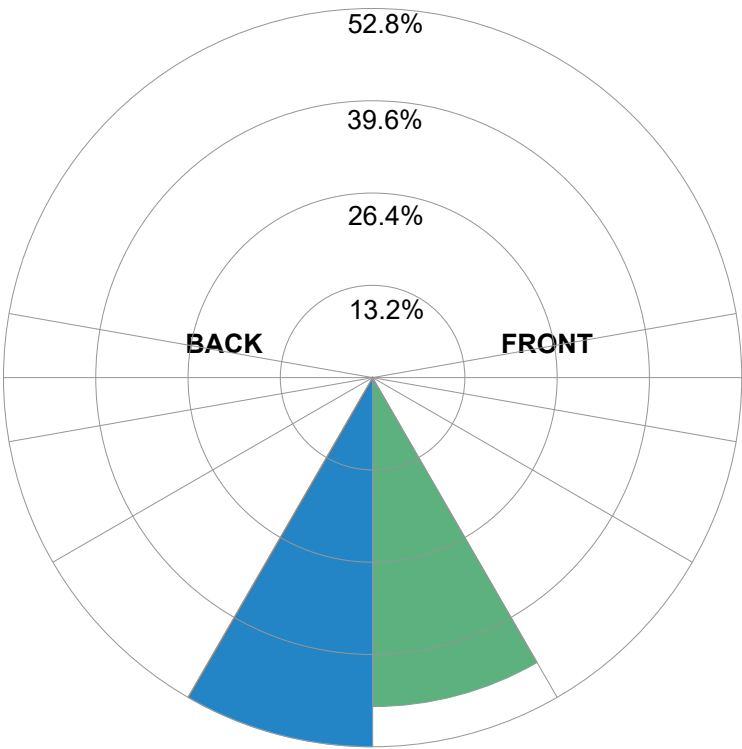


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1067.9 lm	47.1%
Medium (30-60°)	1.1 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1198.4 lm	52.8%
Medium (30-60°)	1.2 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2269 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

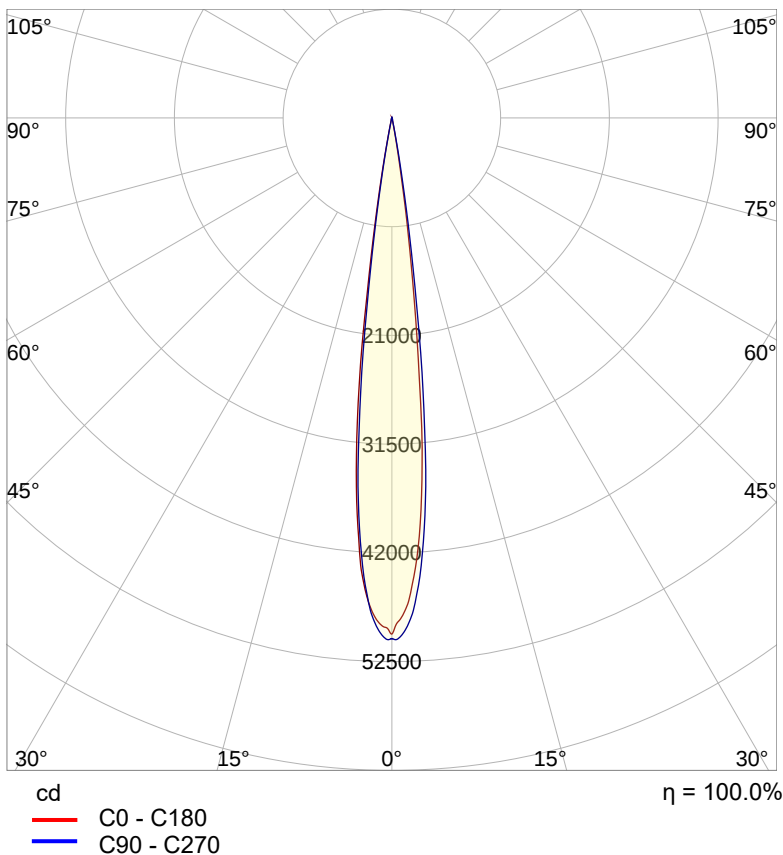
QuikPunch_OutputGain_Disabled_13D_5500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2488 lm – 0% / 100%
n/a lm/W
50373 cd
5500 K
CRI 0.0

Polar light distribution diagram

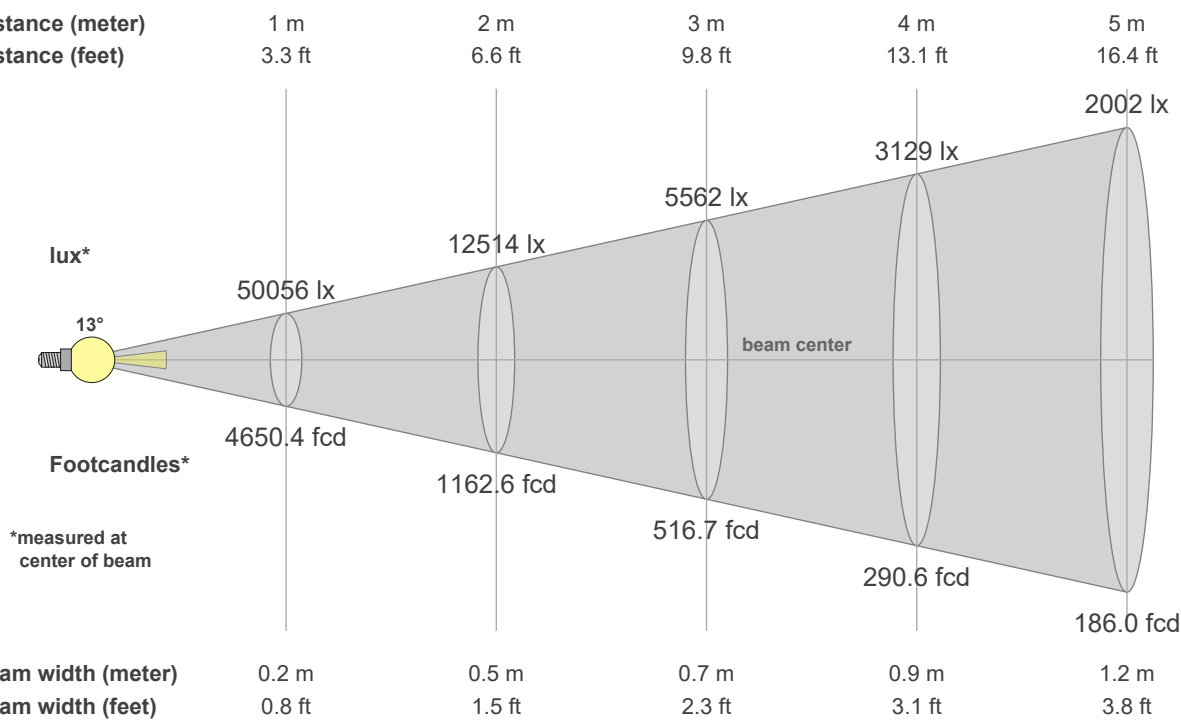


Test report

Light measurement results

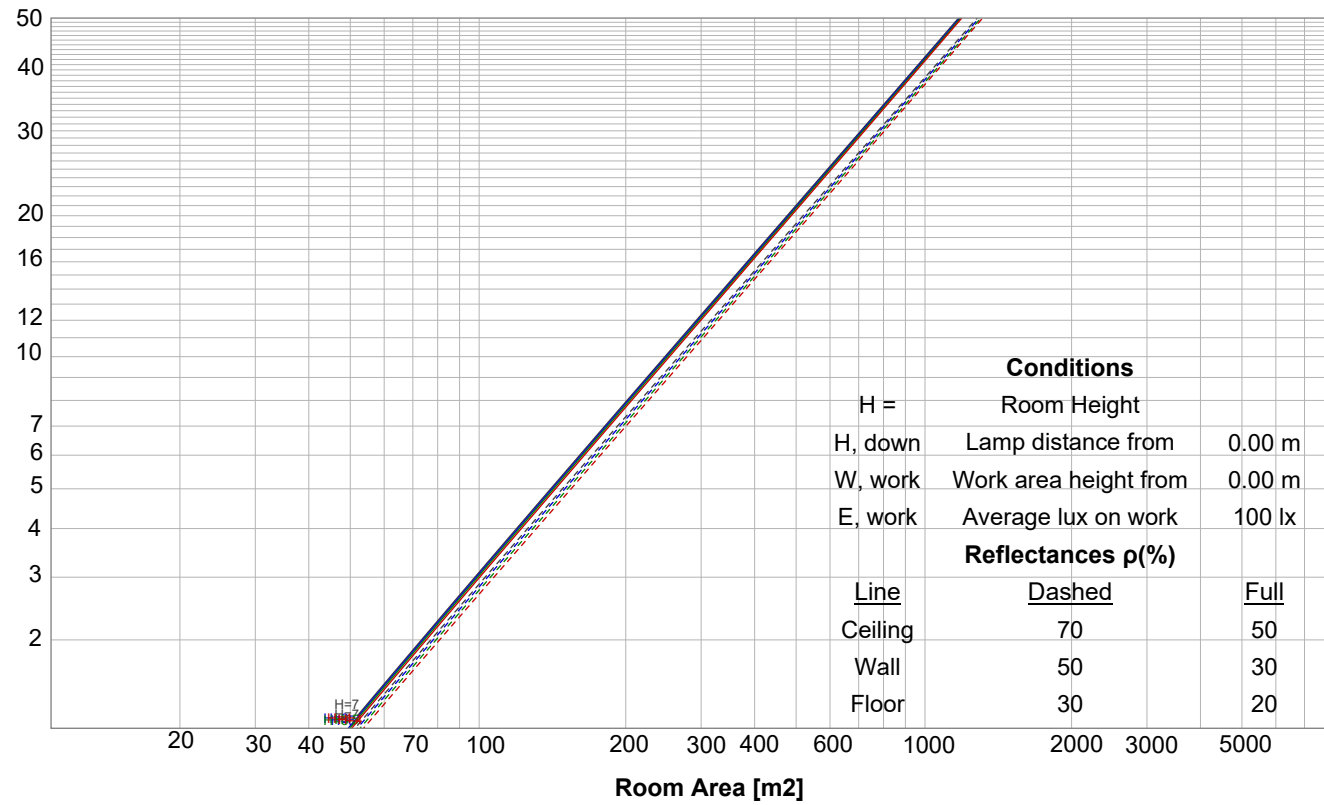
Print date 9/26/2025

Beam details

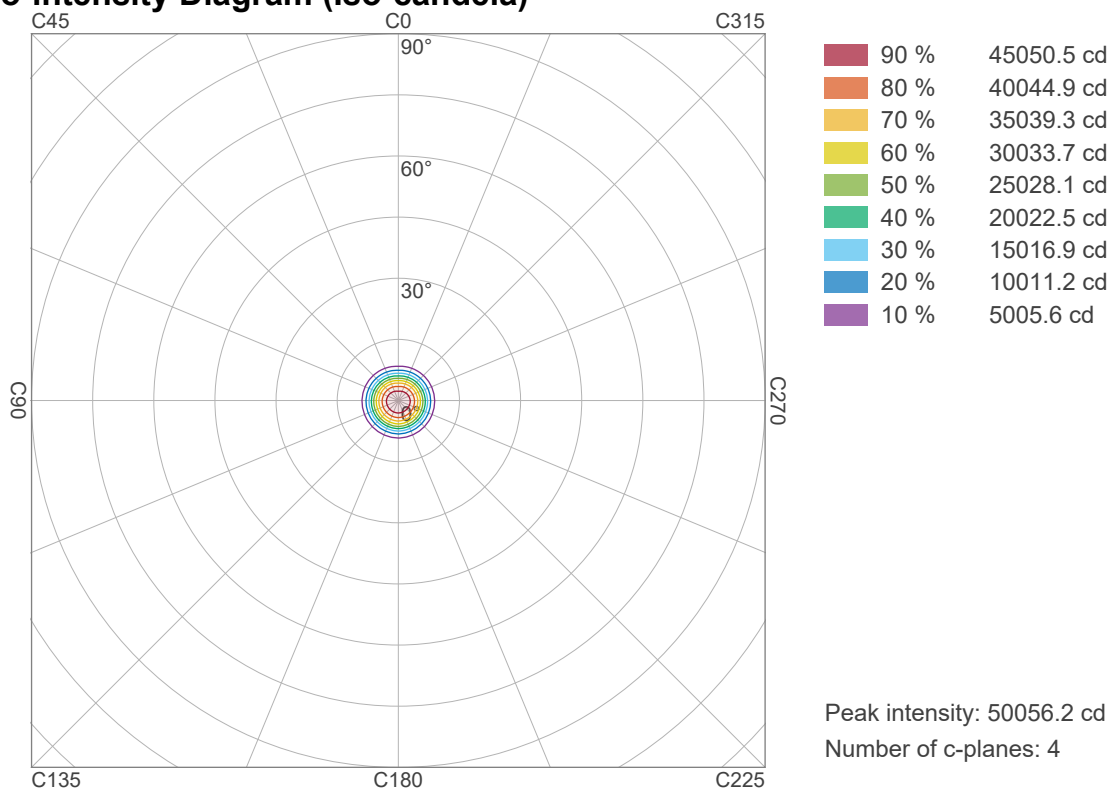


Luminaire budgetary diagram

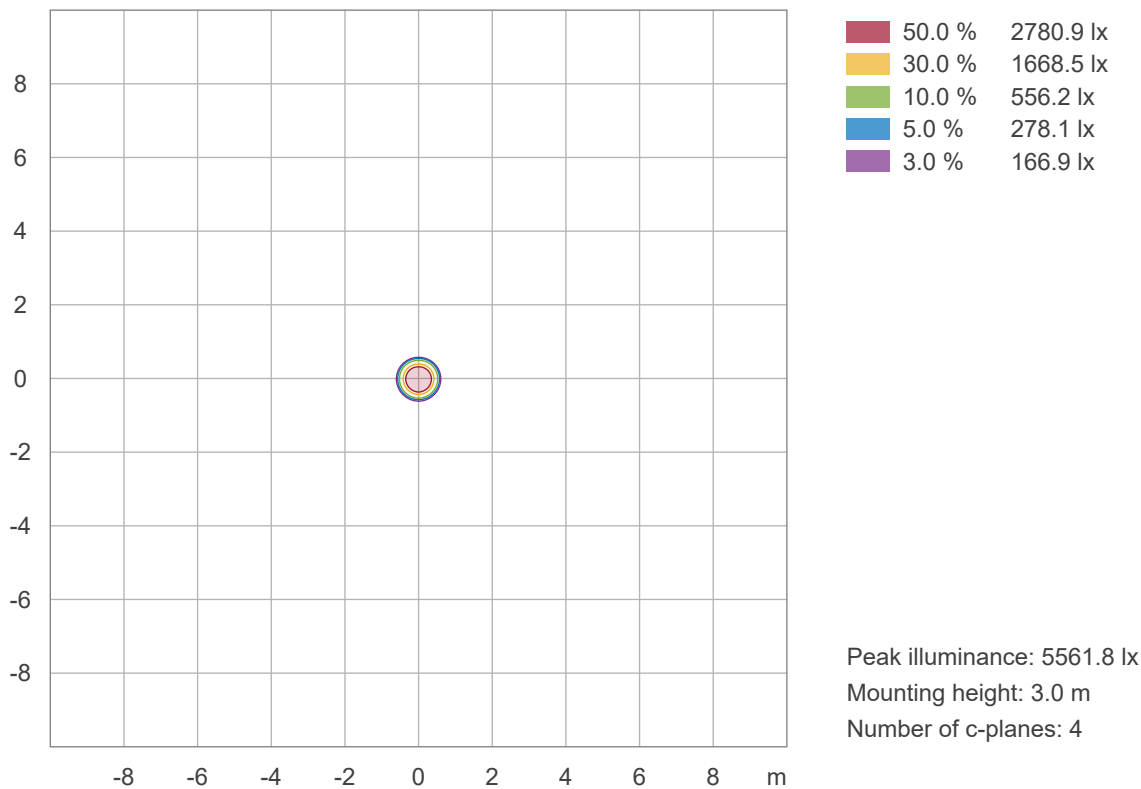
LAMPS (number of lamps)



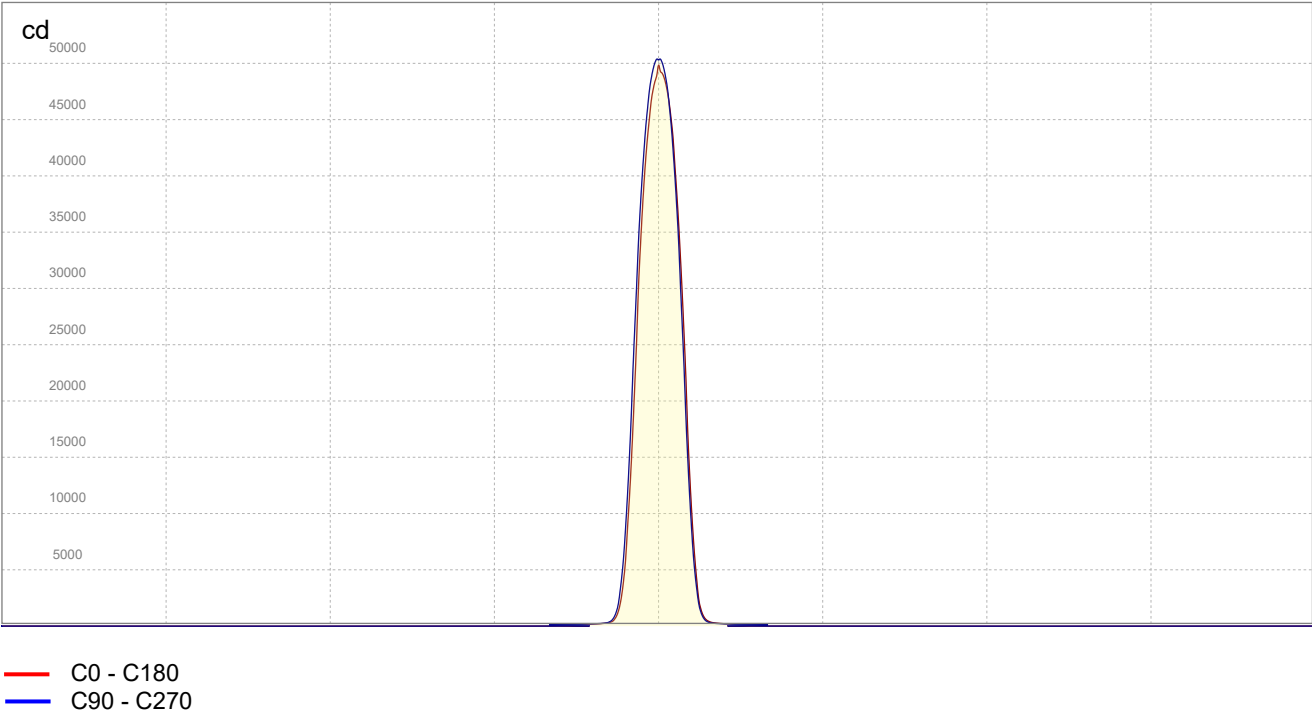
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

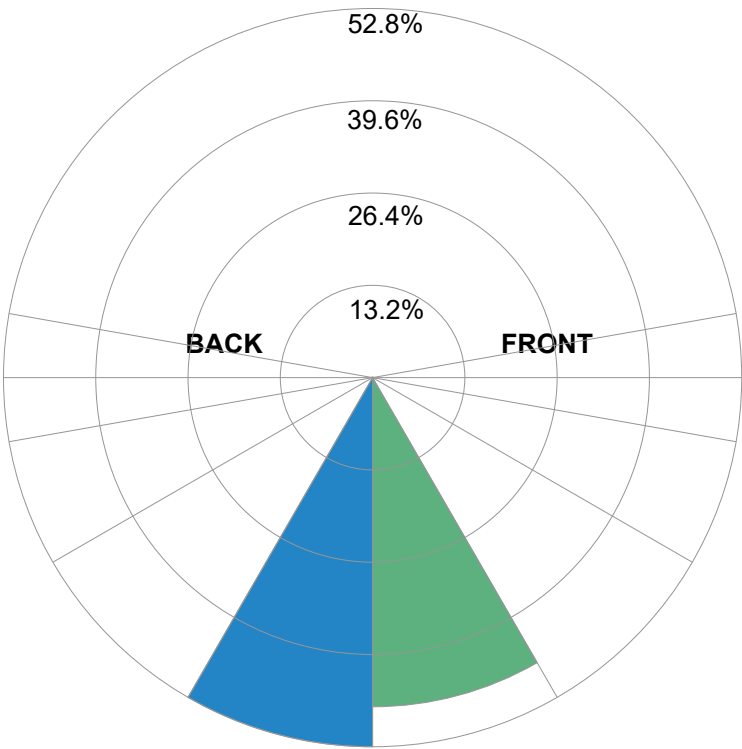


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1171.7 lm	47.1%
Medium (30-60°)	1.2 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1314 lm	52.8%
Medium (30-60°)	1.3 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2488 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

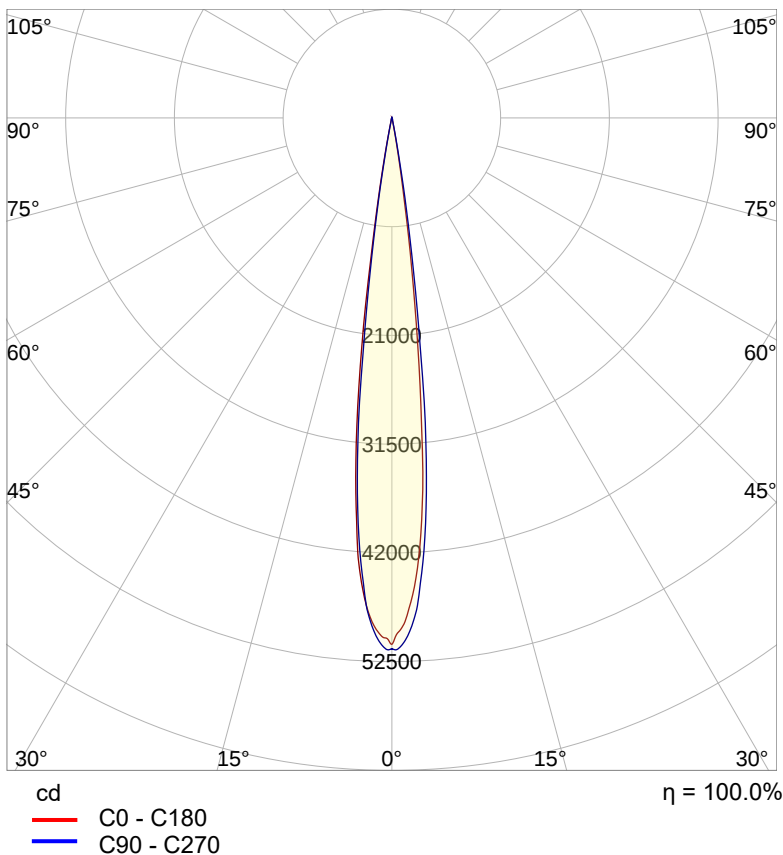
QuikPunch_OutputGain_Disabled_13D_6500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2536 lm – 0% / 100%
n/a lm/W
51350 cd
6500 K
CRI 0.0

Polar light distribution diagram

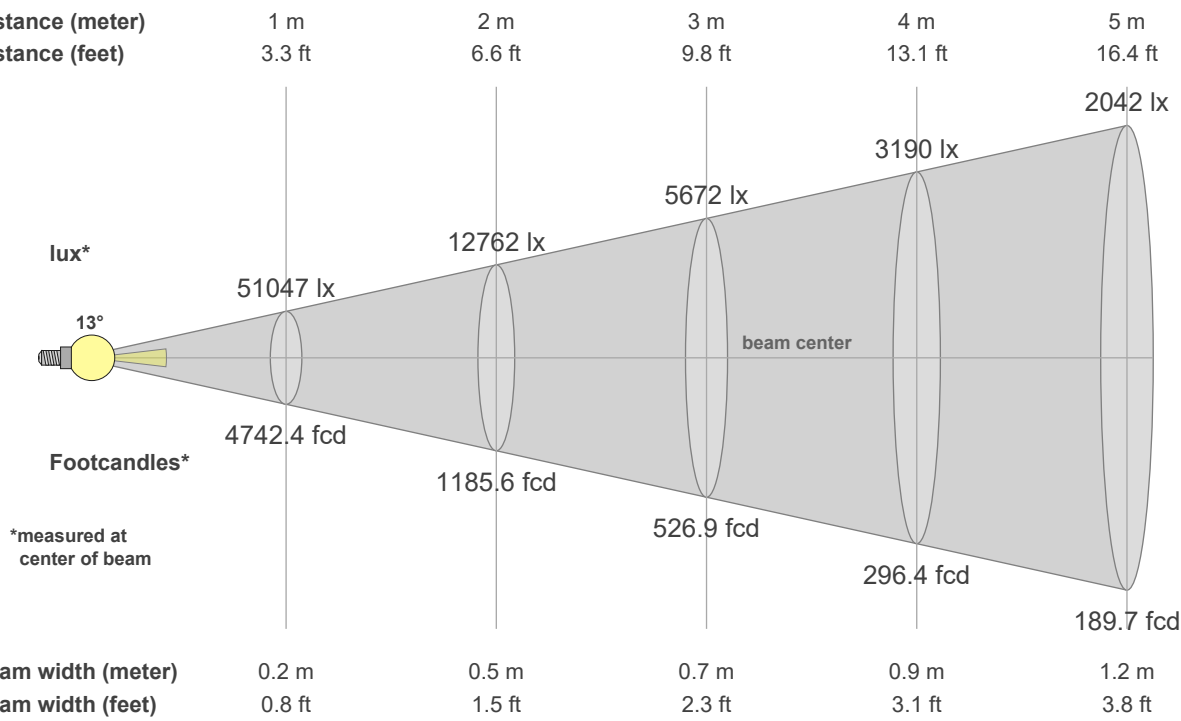


Test report

Light measurement results

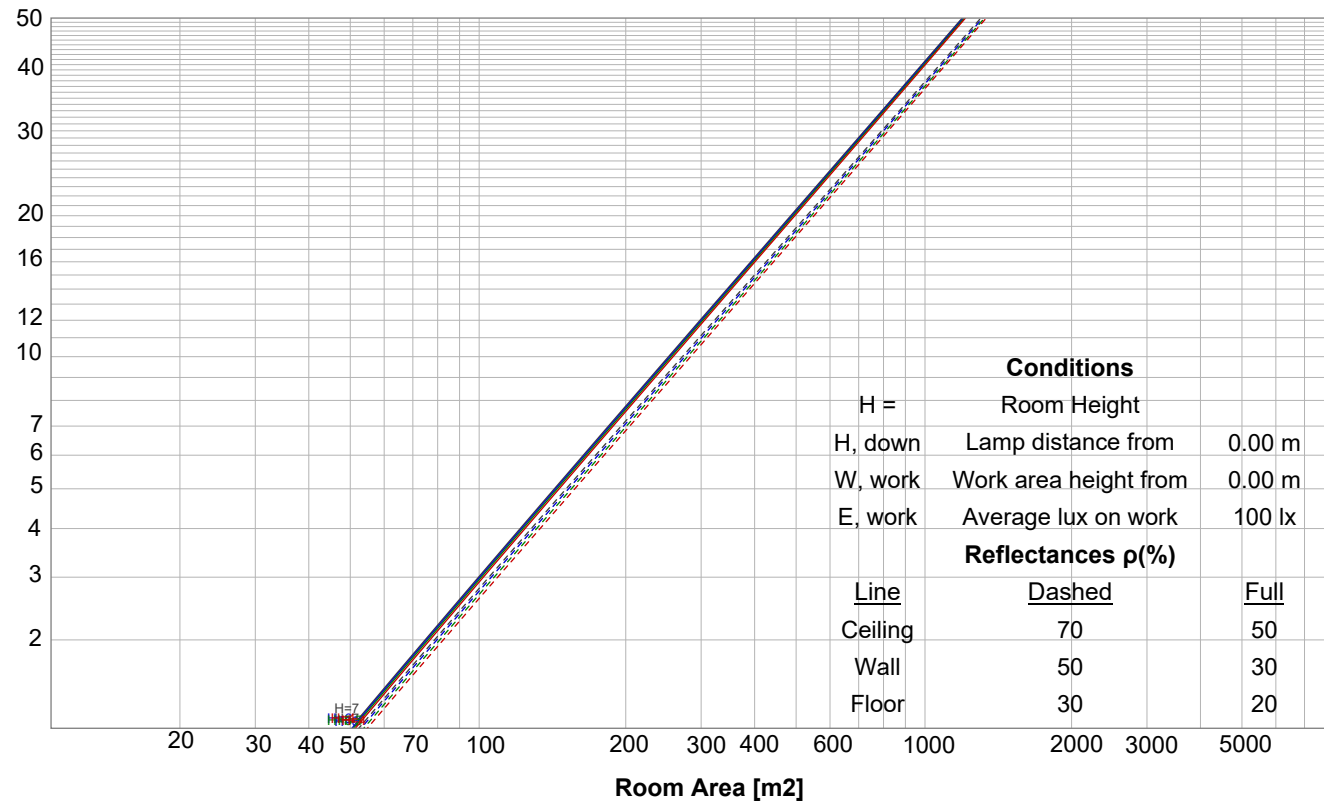
Print date 9/26/2025

Beam details

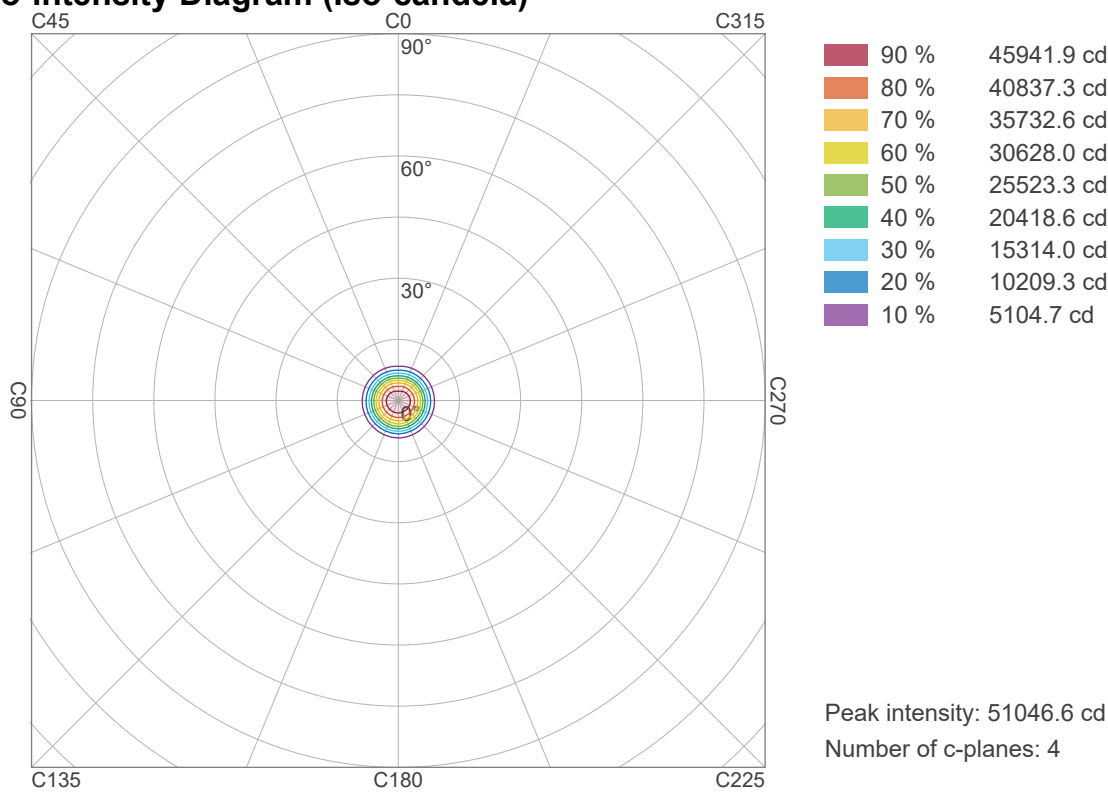


Luminaire budgetary diagram

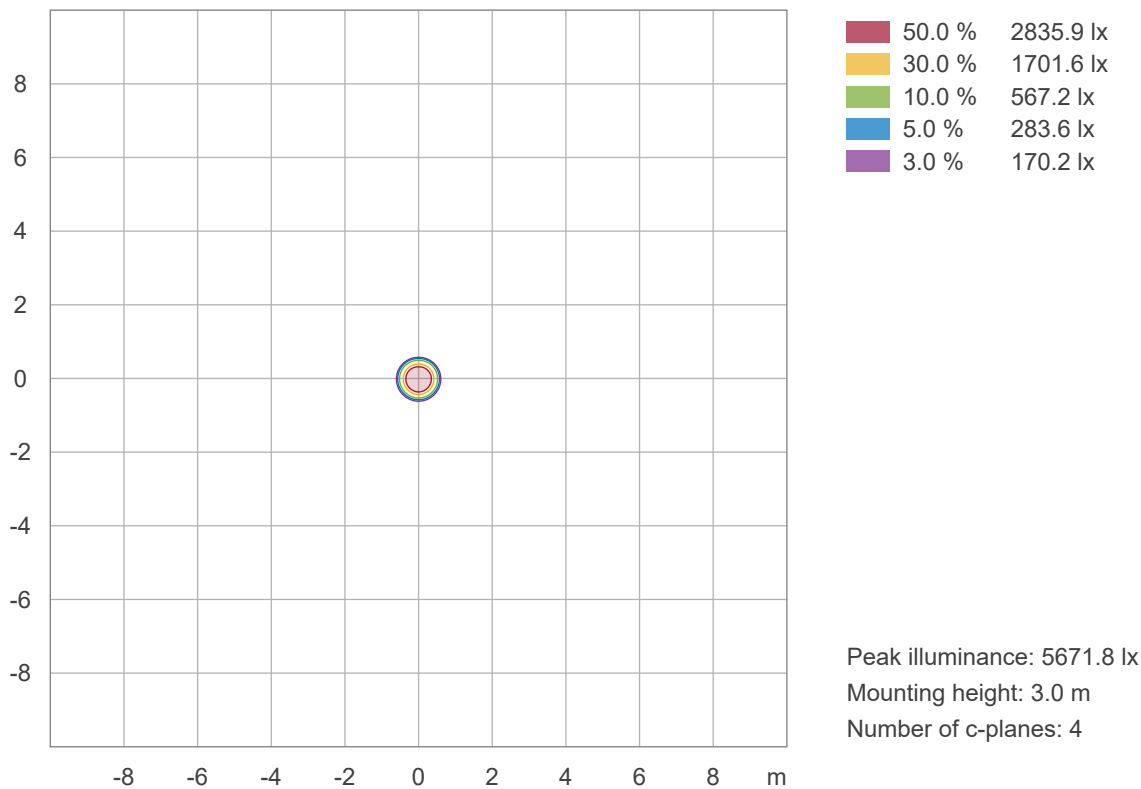
LAMPS (number of lamps)



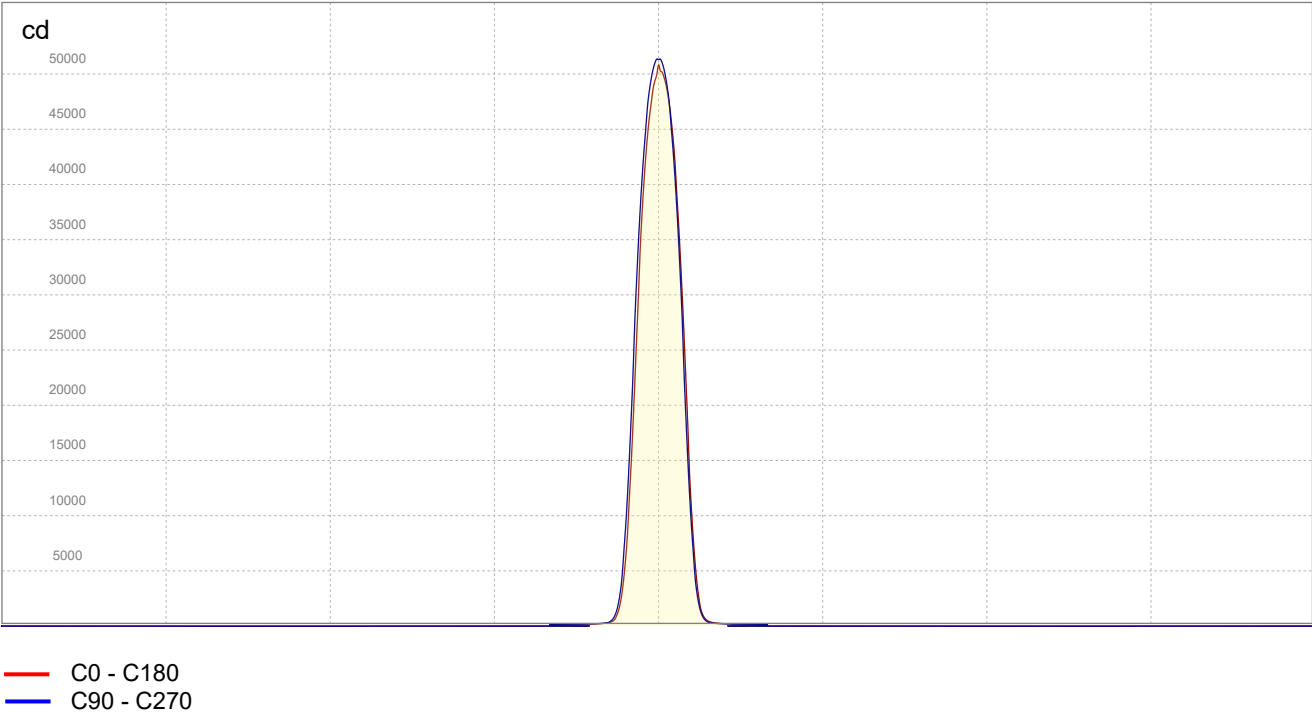
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

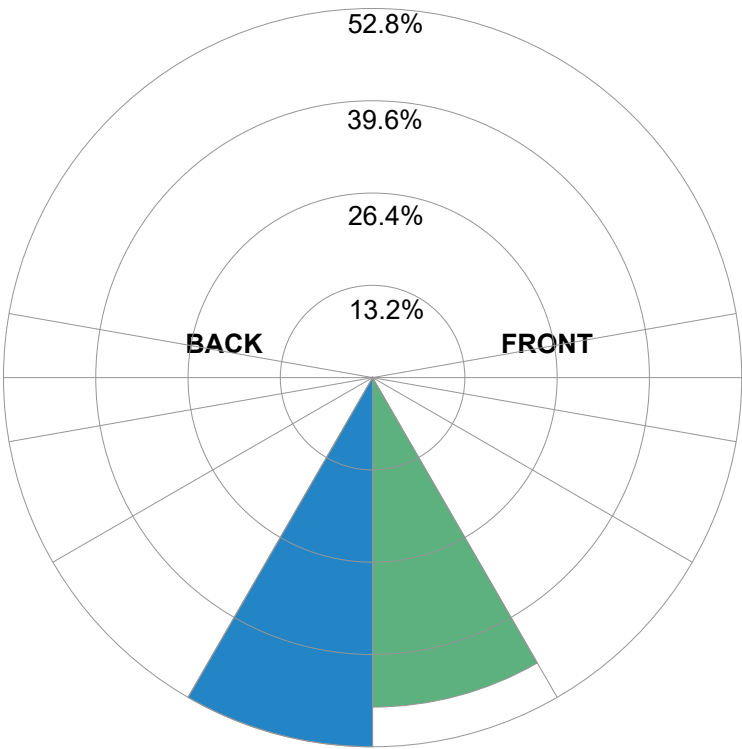


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1194.9 lm	47.1%
Medium (30-60°)	1.2 lm	0%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1338.8 lm	52.8%
Medium (30-60°)	1.3 lm	0.1%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2536 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

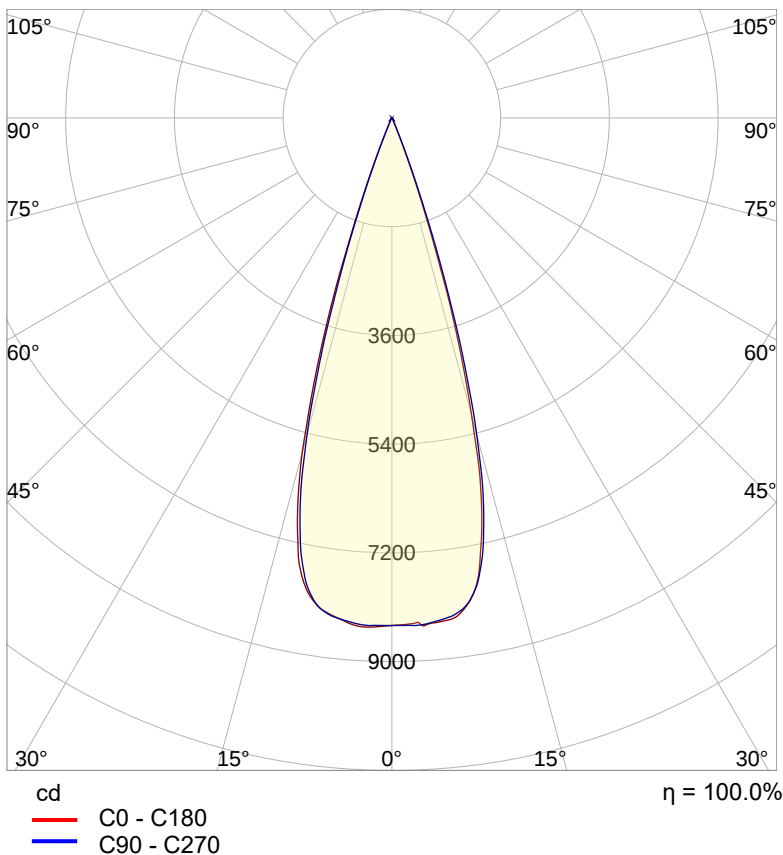
QuikPunch_OutputGain_Disabled_30D_2700K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2261 lm – 0% / 100%
n/a lm/W
8439 cd
2700 K
CRI 0.0

Polar light distribution diagram

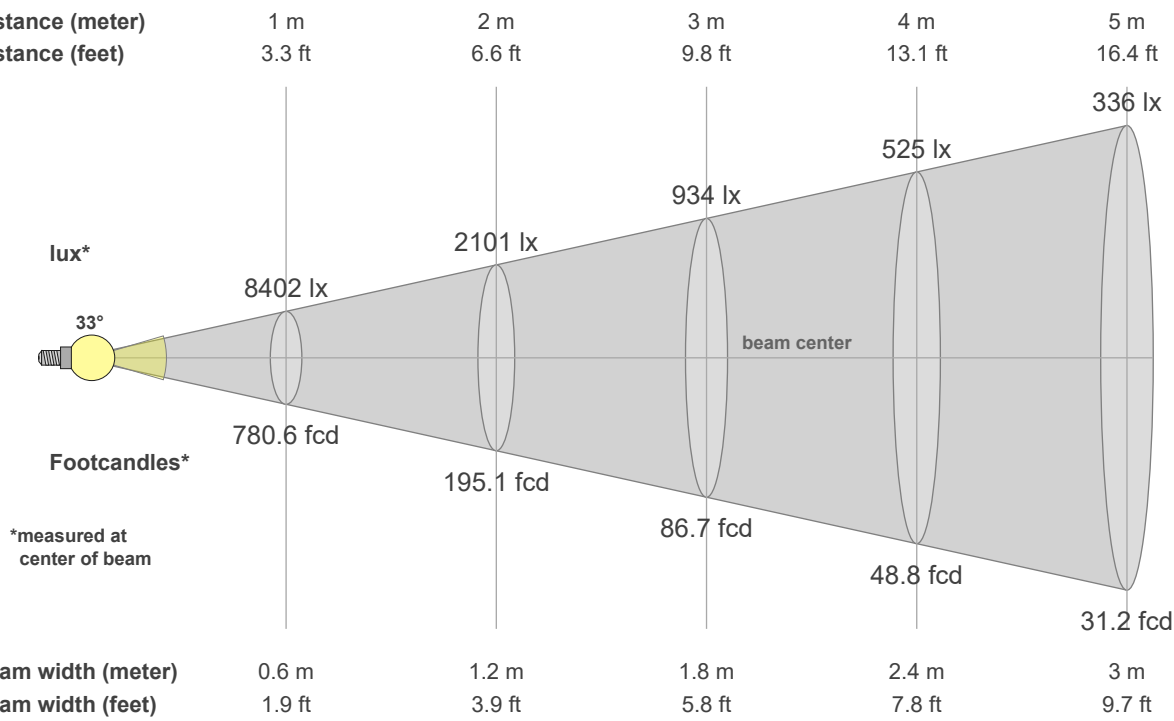


Test report

Light measurement results

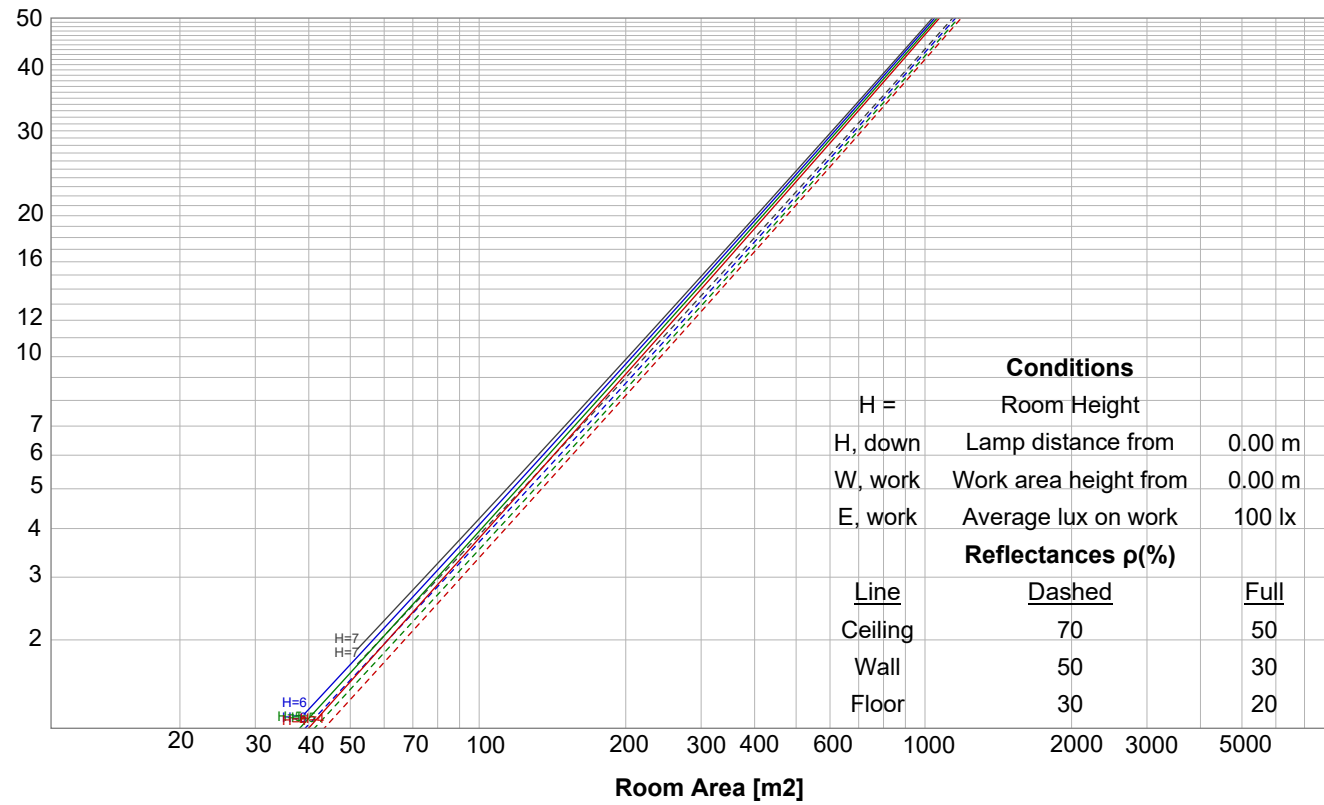
Print date 9/26/2025

Beam details

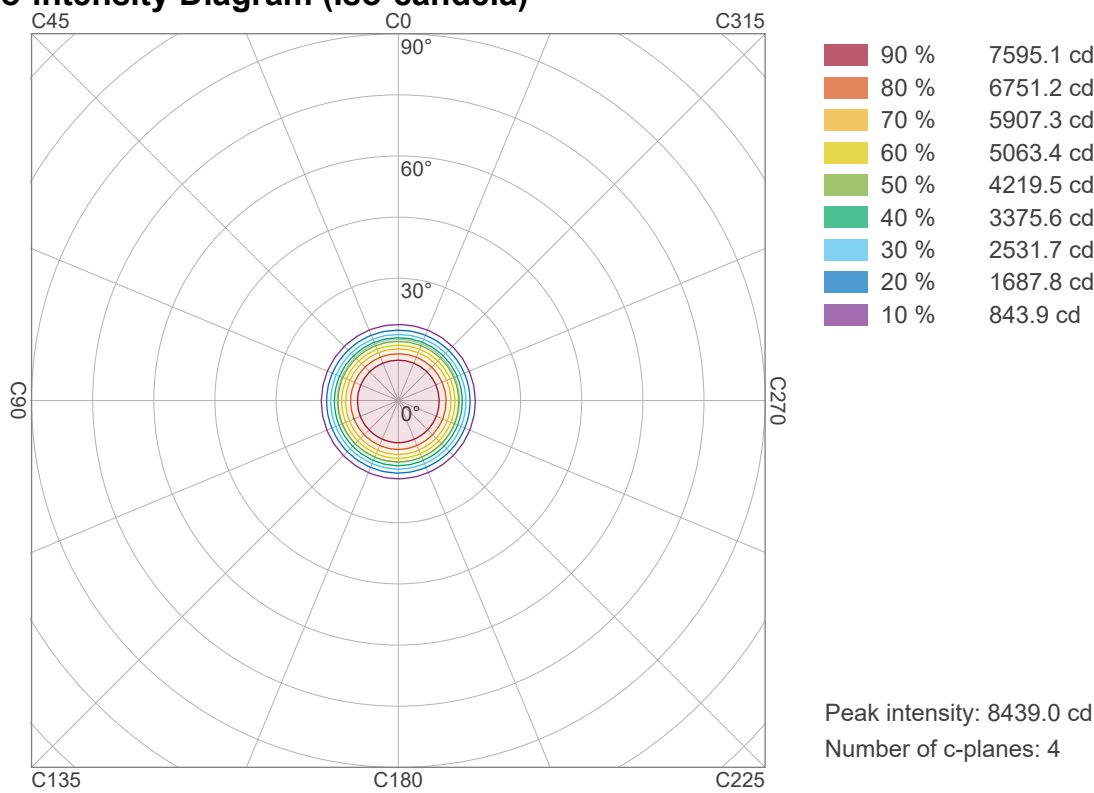


Luminaire budgetary diagram

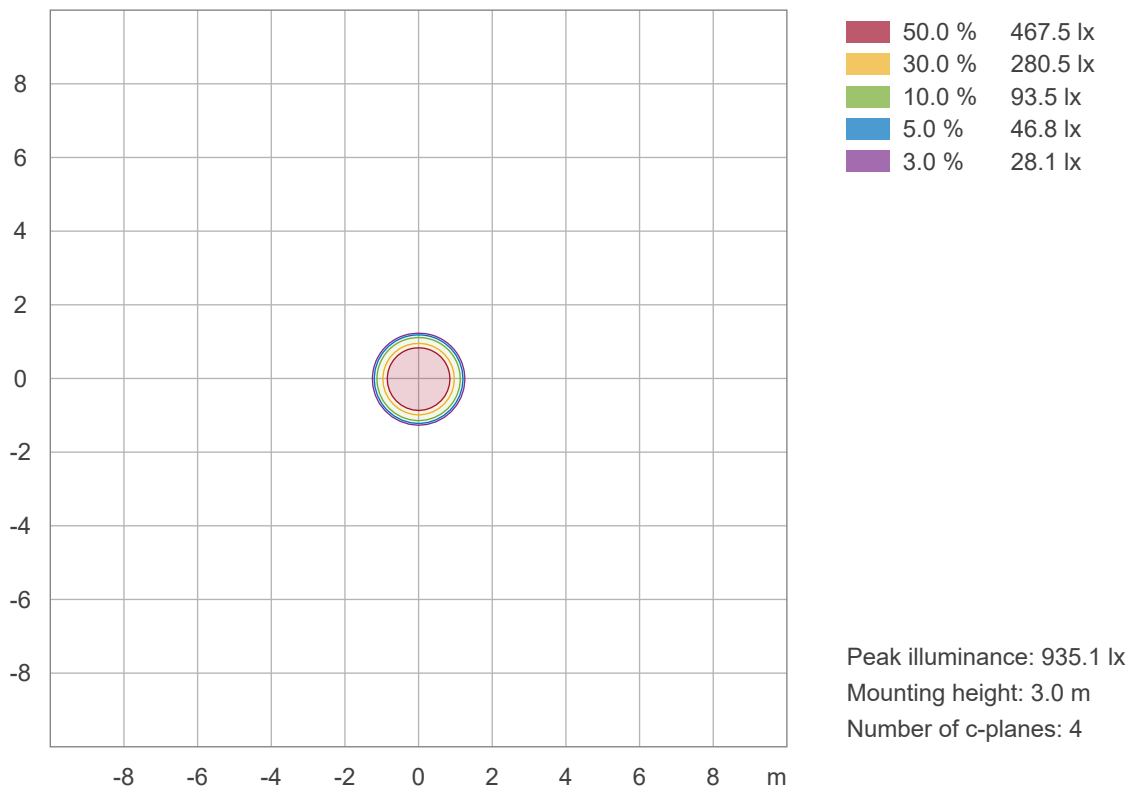
LAMPS (number of lamps)



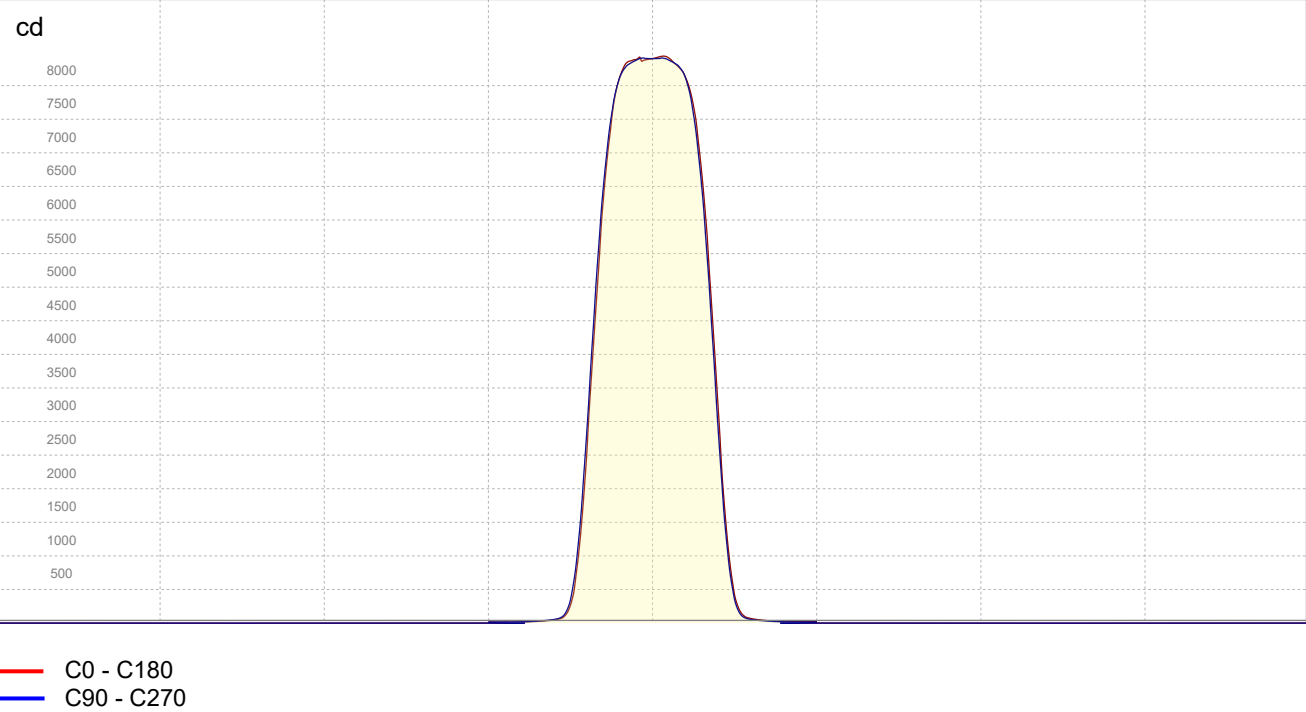
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

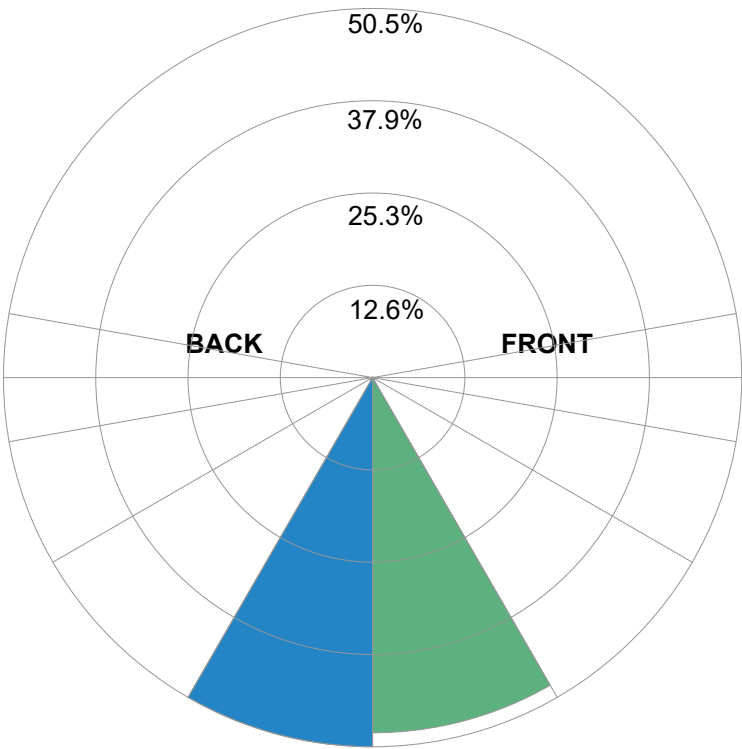


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light			
Low (0-30°)	1099.2 lm	48.6%	
Medium (30-60°)	8.8 lm	0.4%	
High (60-80°)	0 lm	0%	
Very High	0 lm	0%	
Back Light			
Low (0-30°)	1142.3 lm	50.5%	
Medium (30-60°)	10.7 lm	0.5%	
High (60-80°)	0 lm	0%	
Very High	0 lm	0%	
Uplight			
Low (90-100°)	0 lm	0%	
High (100-180°)	0 lm	0%	
Total			
Sum	2261 lm	100%	

Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

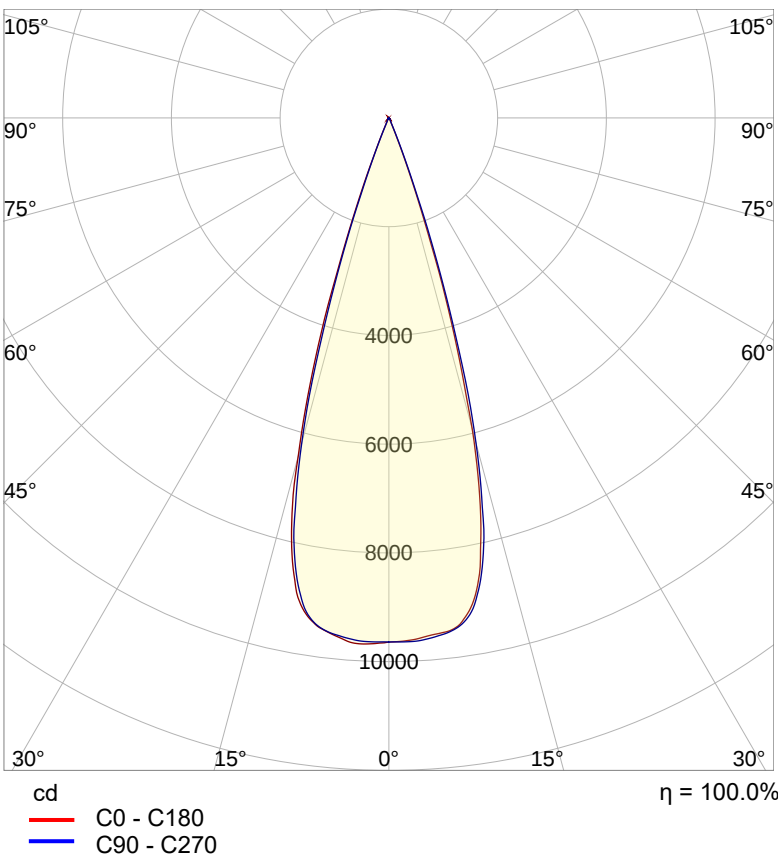
QuikPunch_OutputGain_Disabled_30D_3200K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2580 lm – 0% / 100%
n/a lm/W
9688 cd
3200 K
CRI 0.0

Polar light distribution diagram

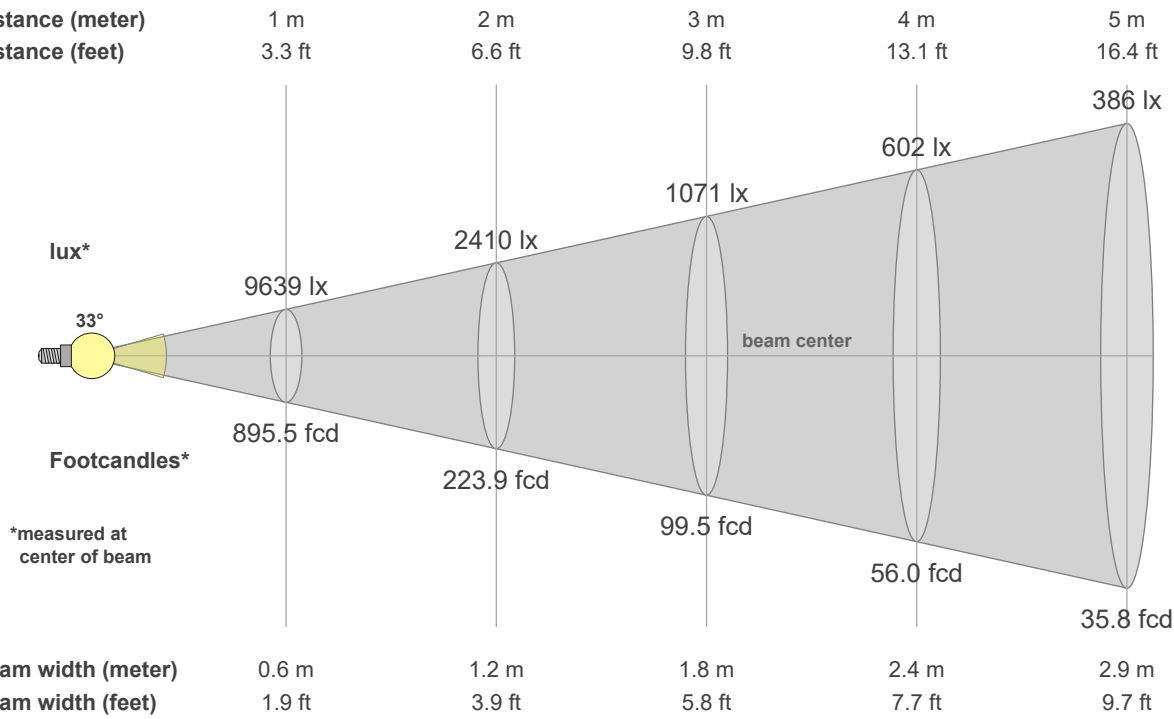


Test report

Light measurement results

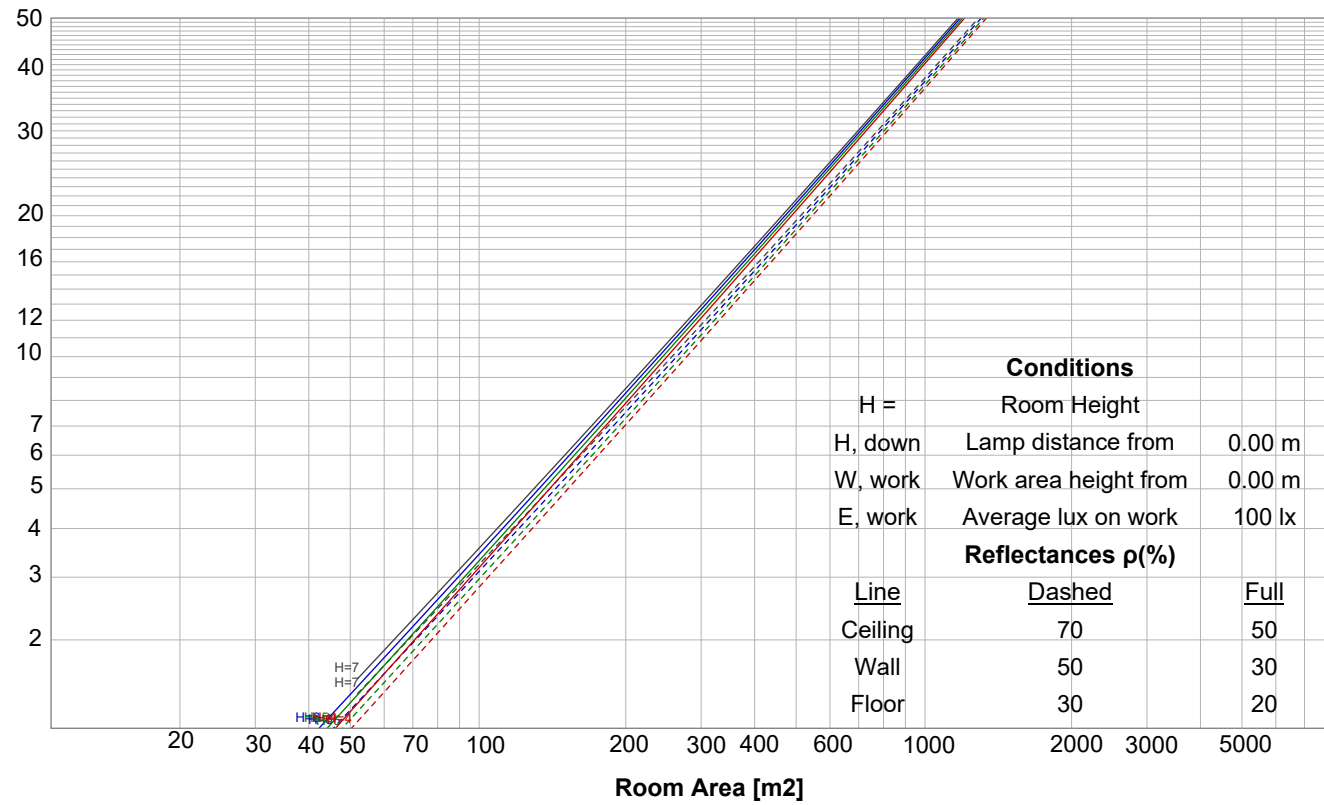
Print date 9/26/2025

Beam details

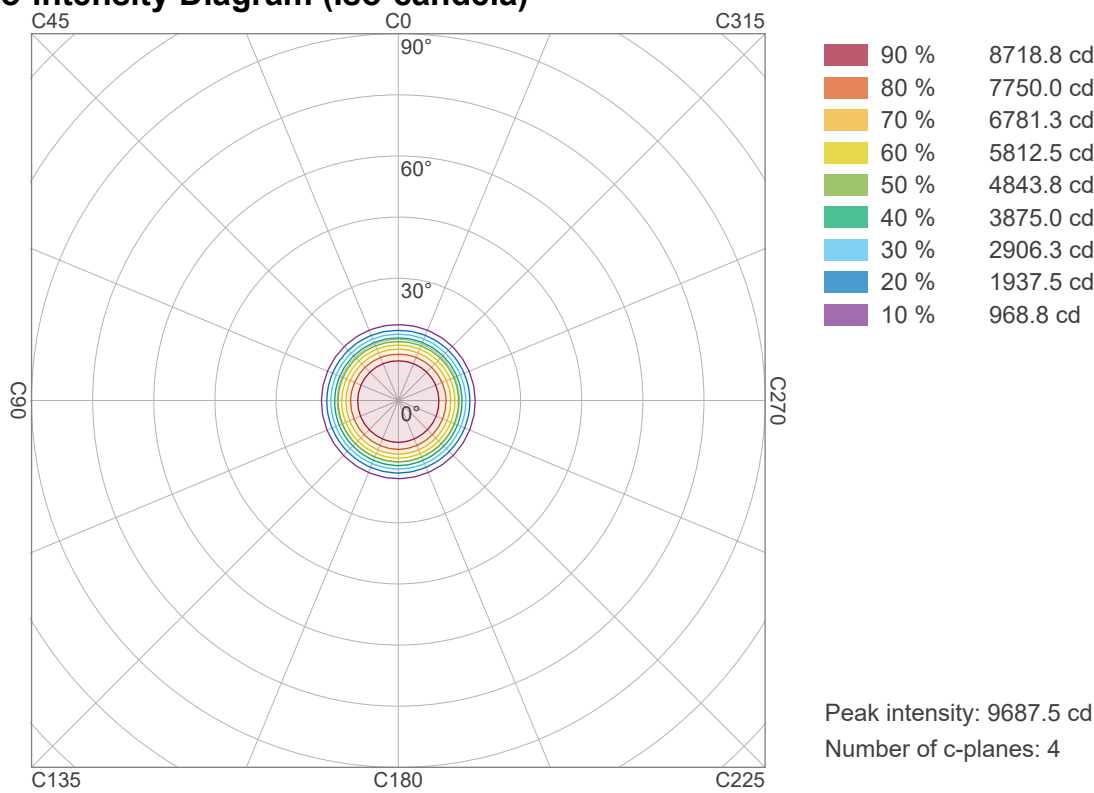


Luminaire budgetary diagram

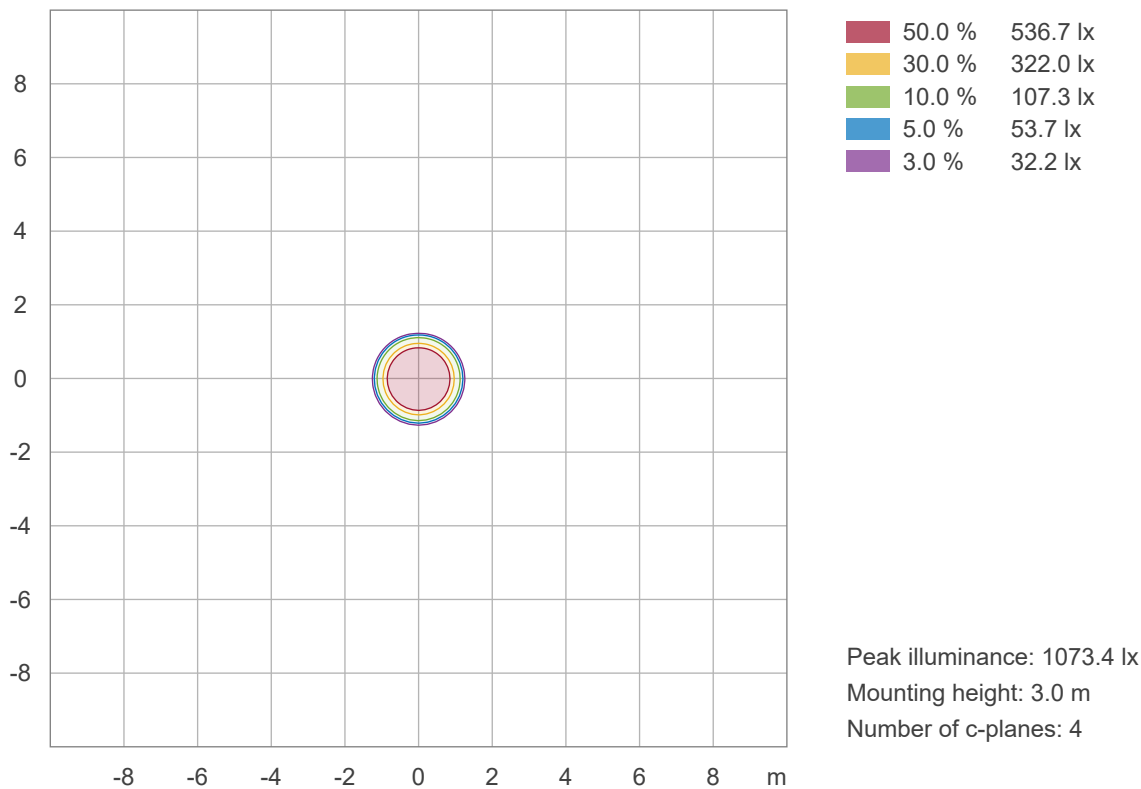
LAMPS (number of lamps)



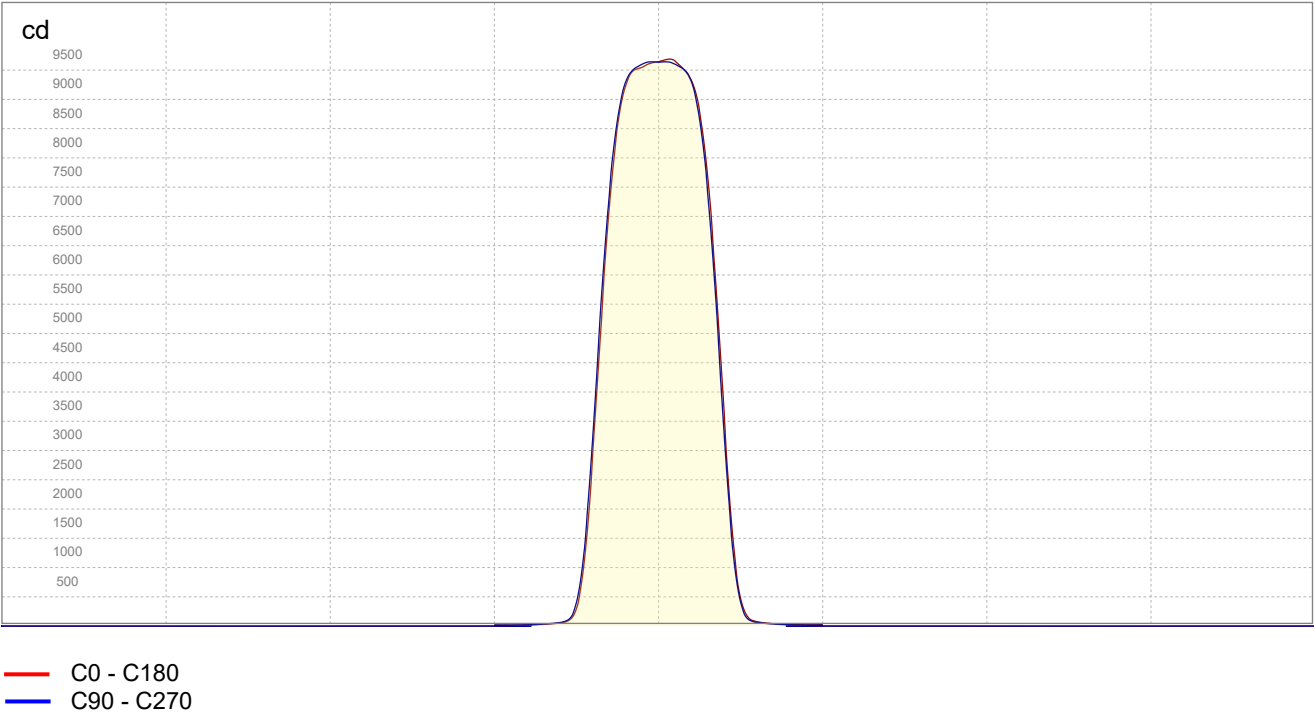
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

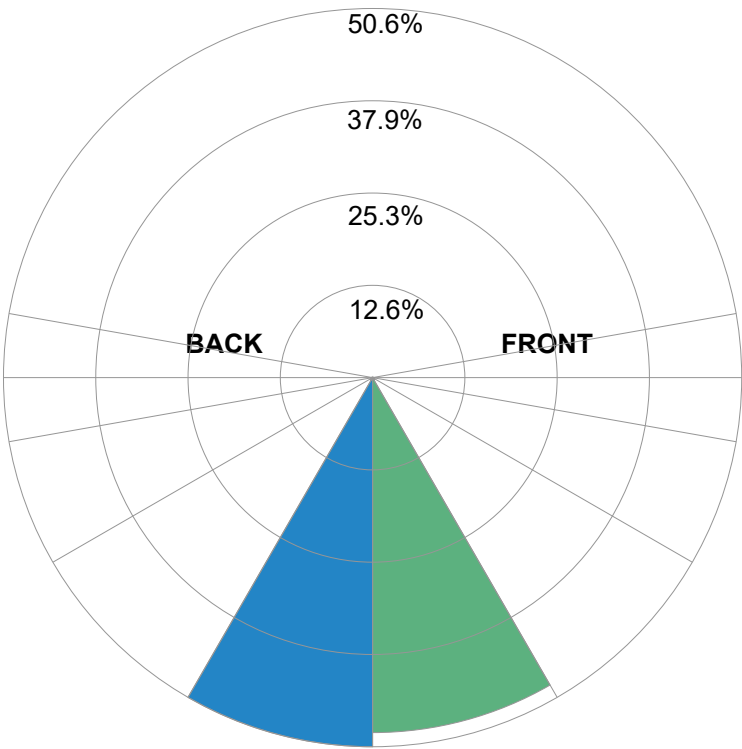


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1254.2 lm	48.6%
Medium (30-60°)	10.1 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1304.1 lm	50.6%
Medium (30-60°)	11.5 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2580 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

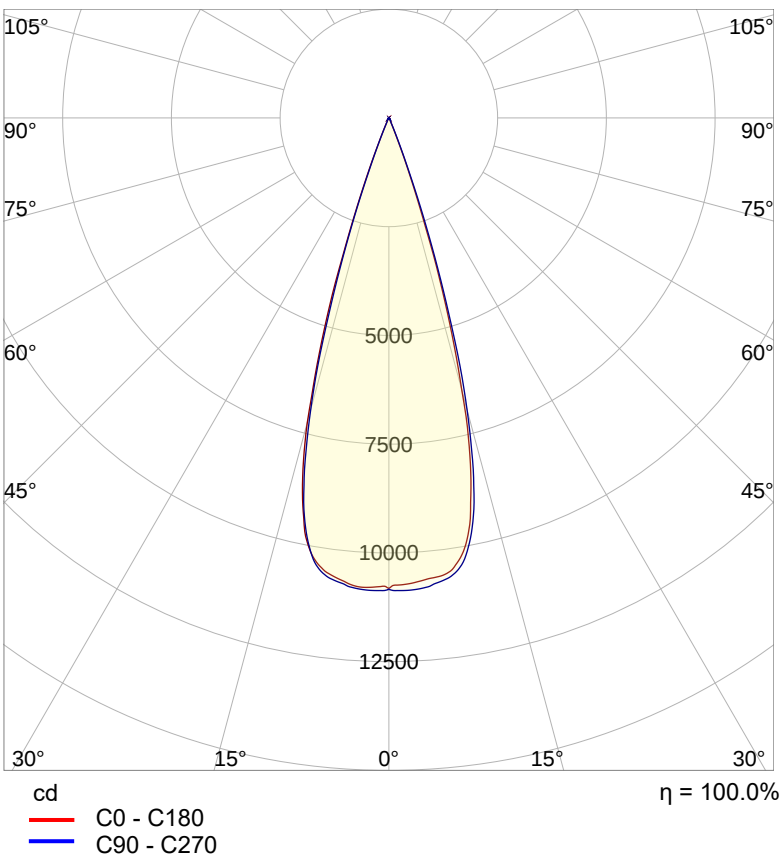
QuikPunch_OutputGain_Disabled_30Degrees_4C
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2882 lm – 0% / 100%
n/a lm/W
10871 cd
4000 K
CRI 0.0

Polar light distribution diagram

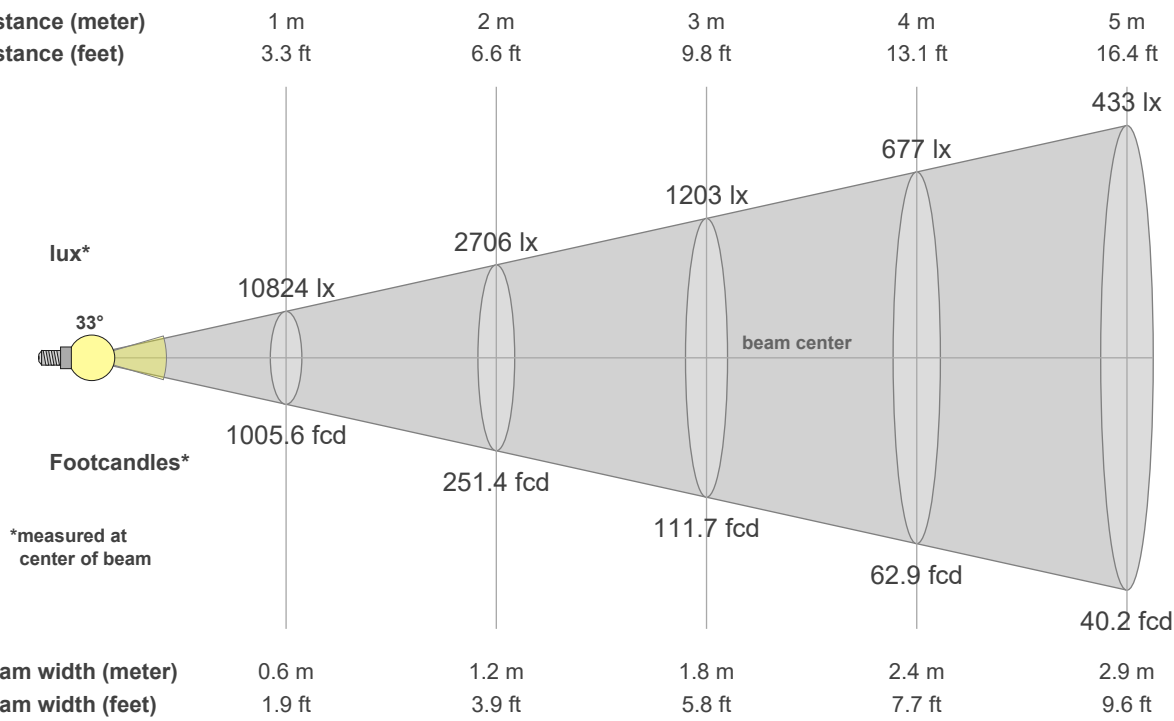


Test report

Light measurement results

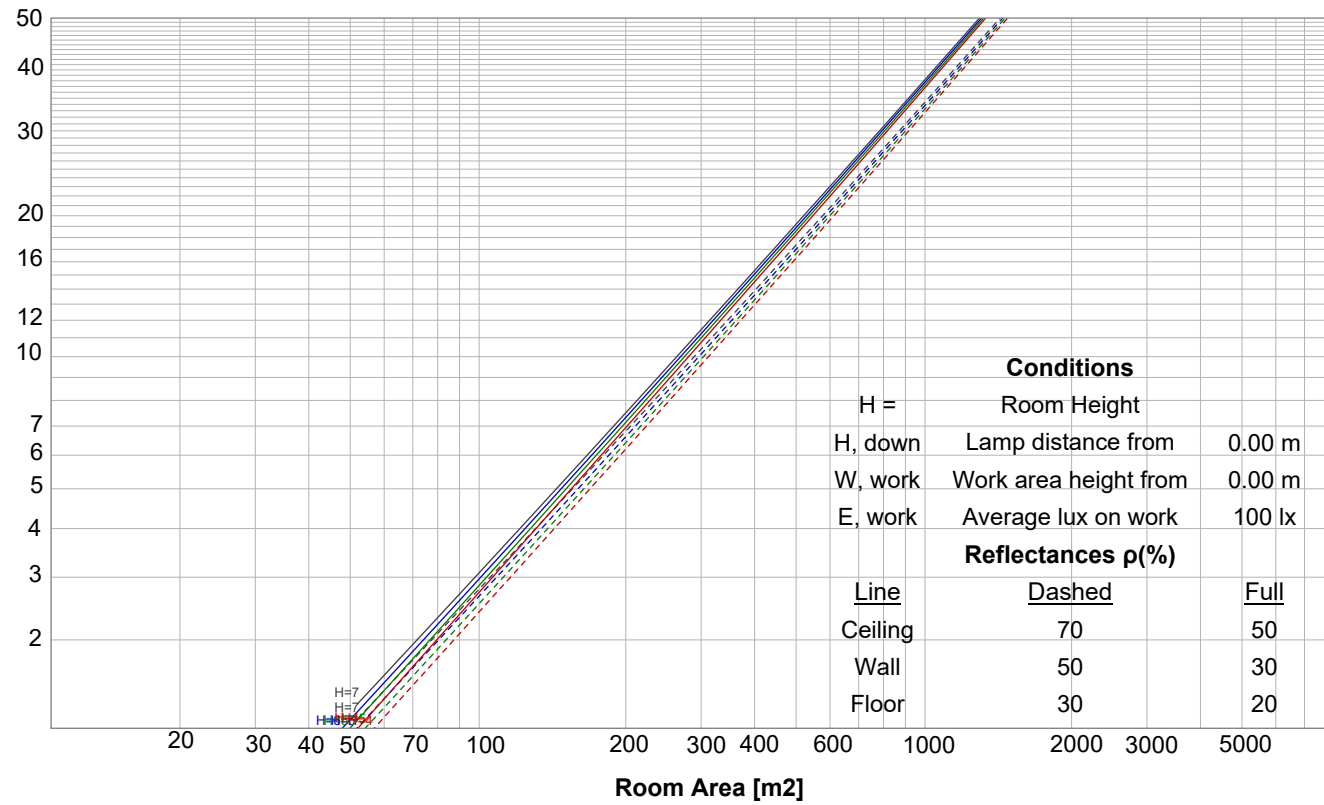
Print date 9/26/2025

Beam details

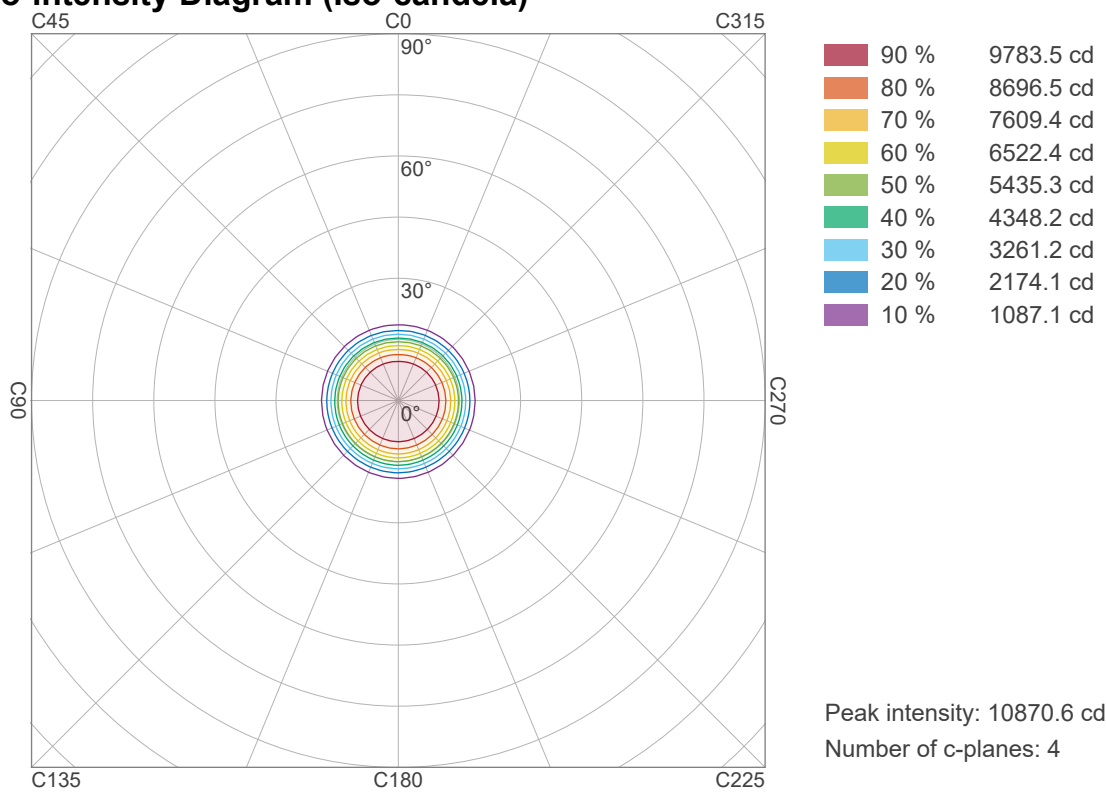


Luminaire budgetary diagram

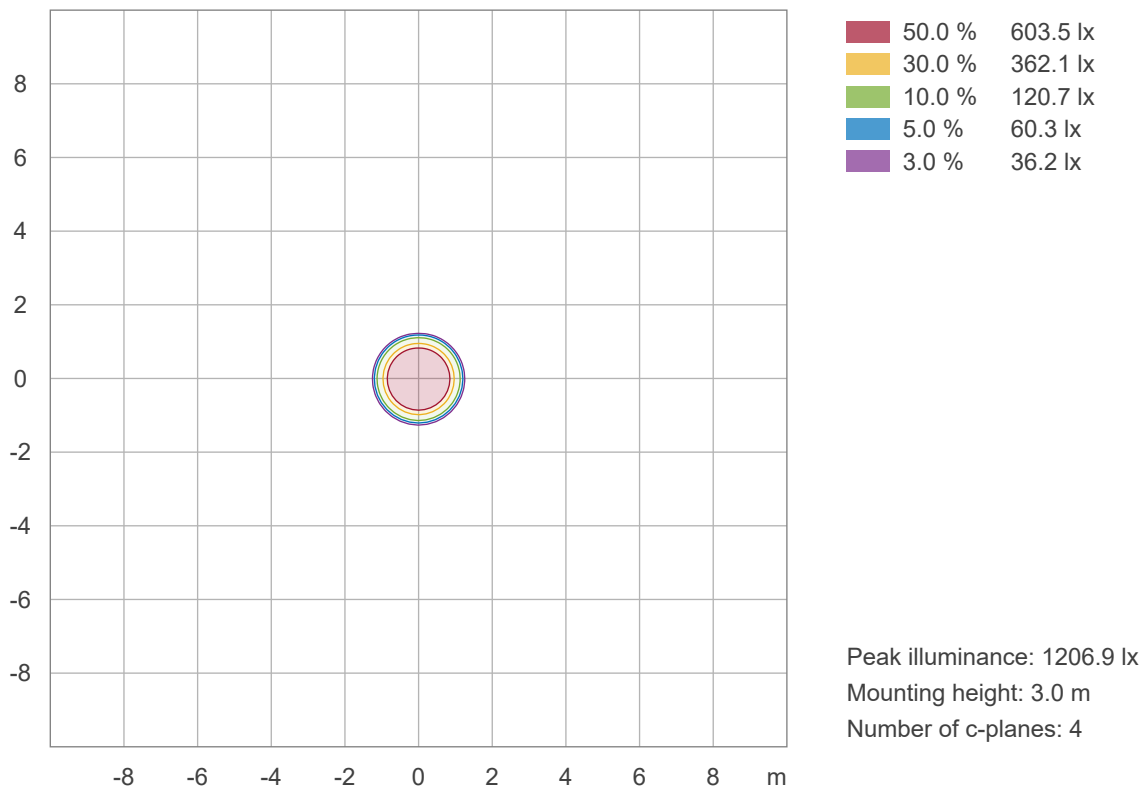
LAMPS (number of lamps)



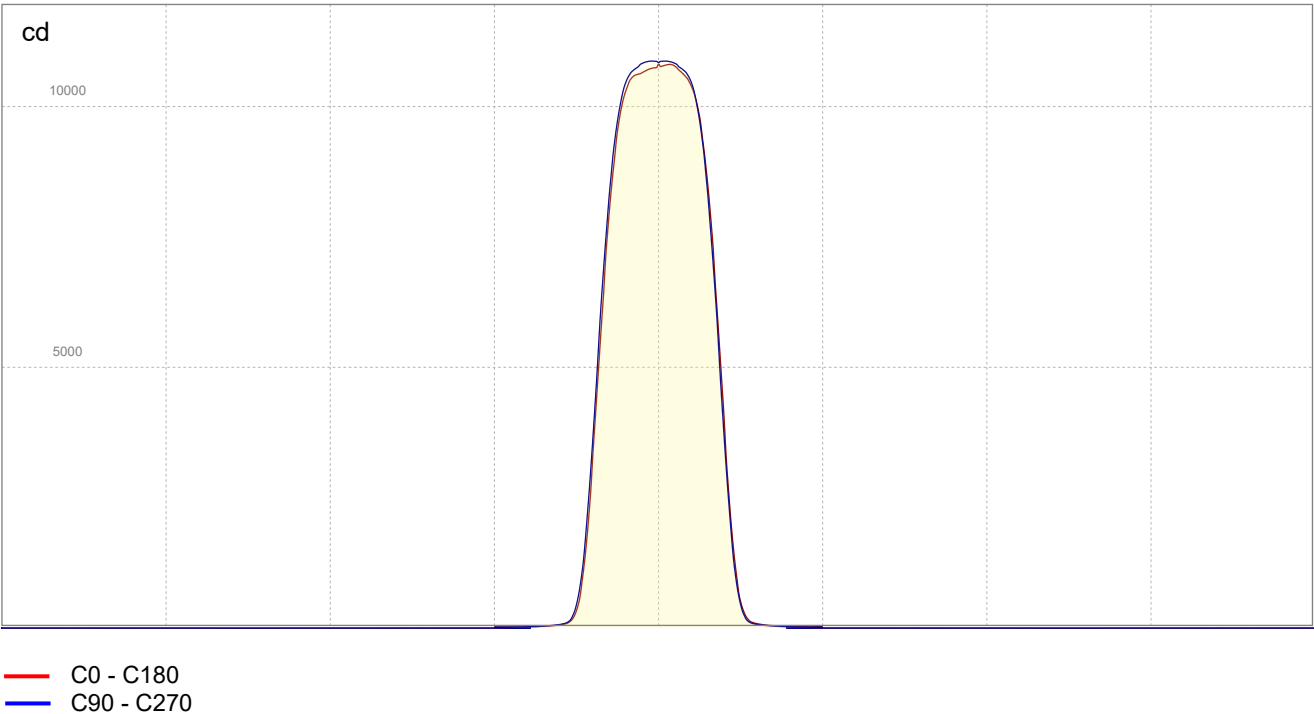
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

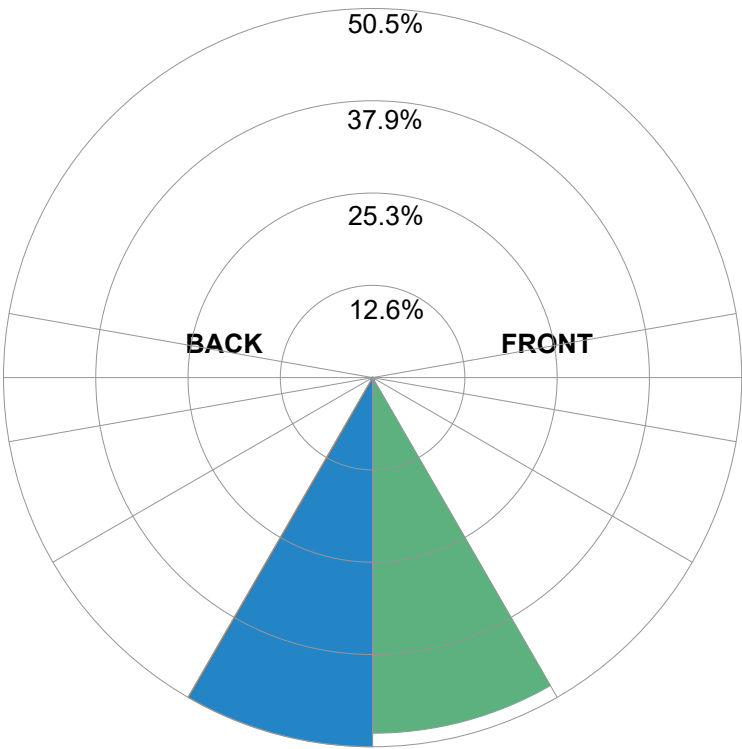


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1402.2 lm	48.7%
Medium (30-60°)	11.4 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1455.6 lm	50.5%
Medium (30-60°)	13 lm	0.5%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2882 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

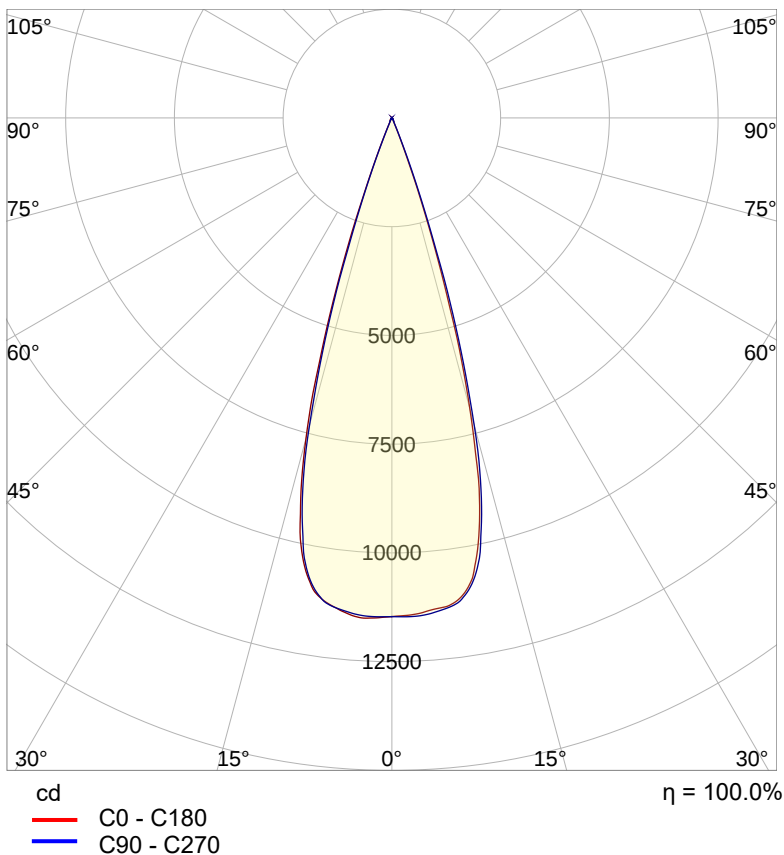
QuikPunch_OutputGain_Disabled_30D_5500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3051 lm – 0% / 100%
n/a lm/W
11517 cd
5500 K
CRI 0.0

Polar light distribution diagram

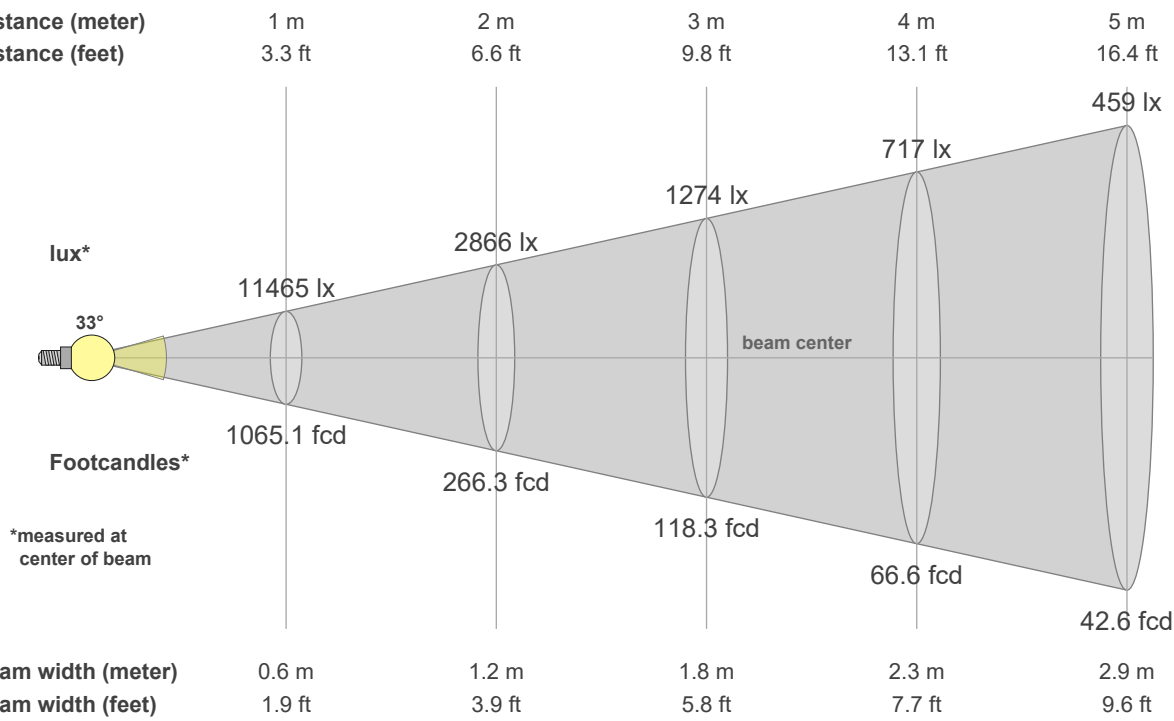


Test report

Light measurement results

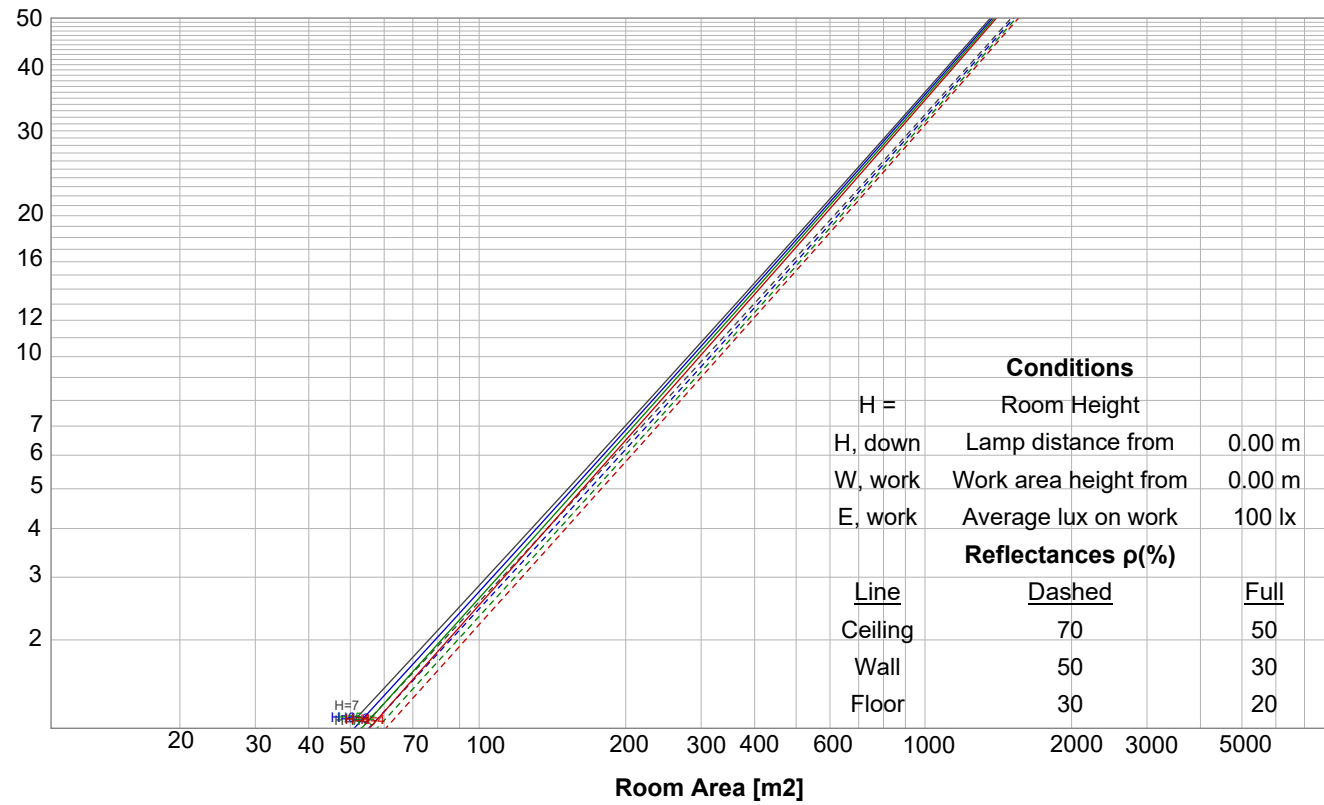
Print date 9/26/2025

Beam details

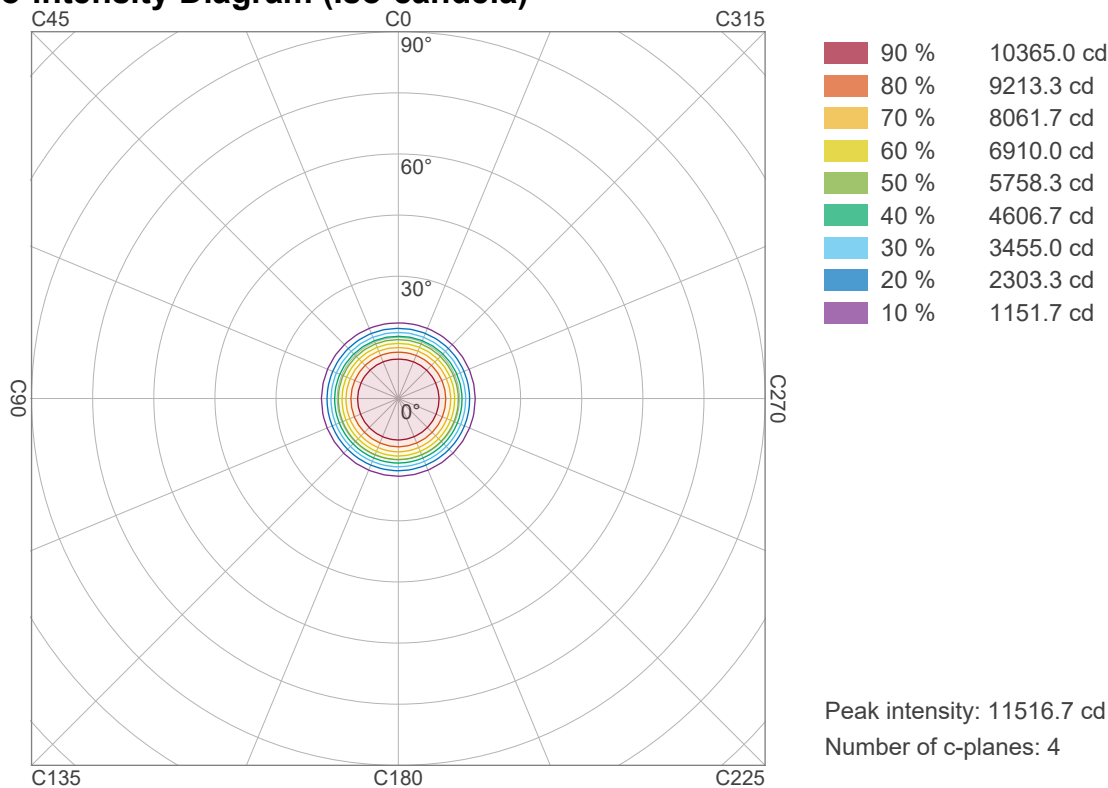


Luminaire budgetary diagram

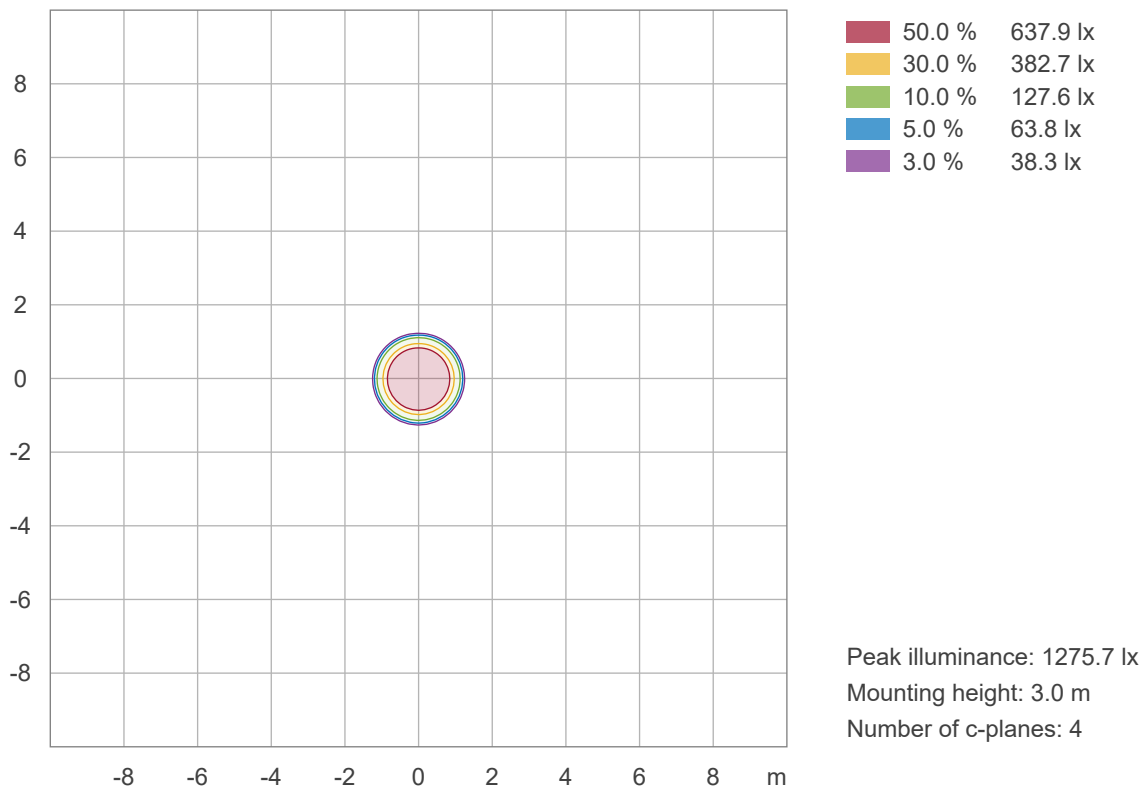
LAMPS (number of lamps)



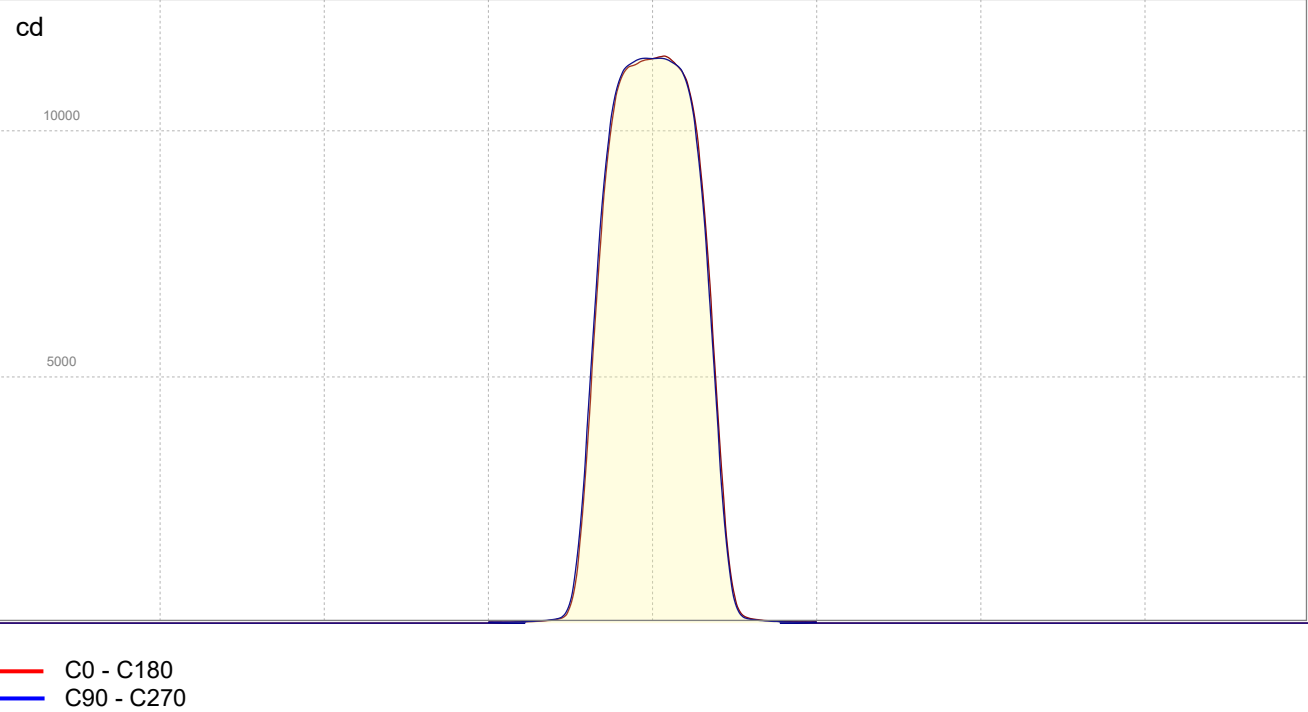
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

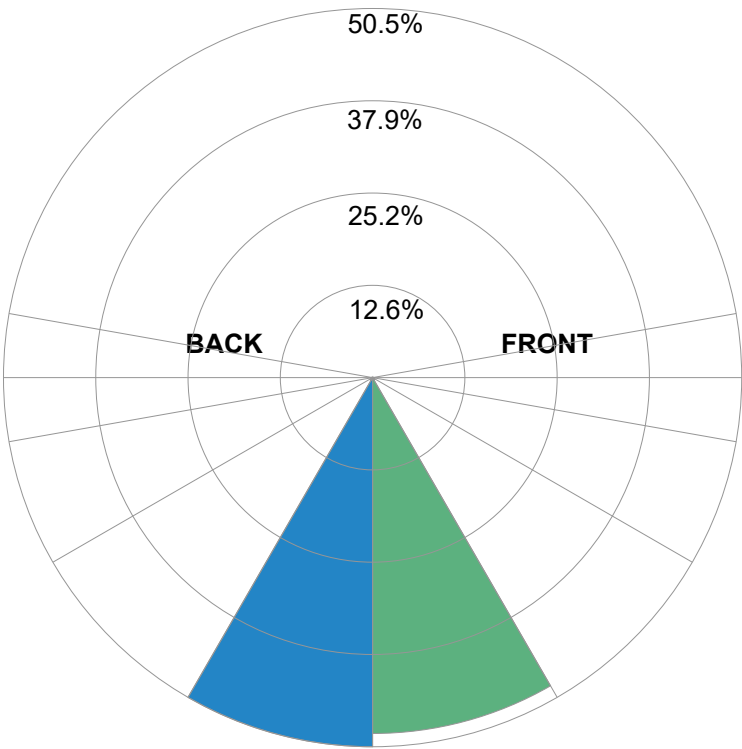


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1484.6 lm	48.7%
Medium (30-60°)	12.2 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1539.9 lm	50.5%
Medium (30-60°)	14 lm	0.5%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3051 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
361 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

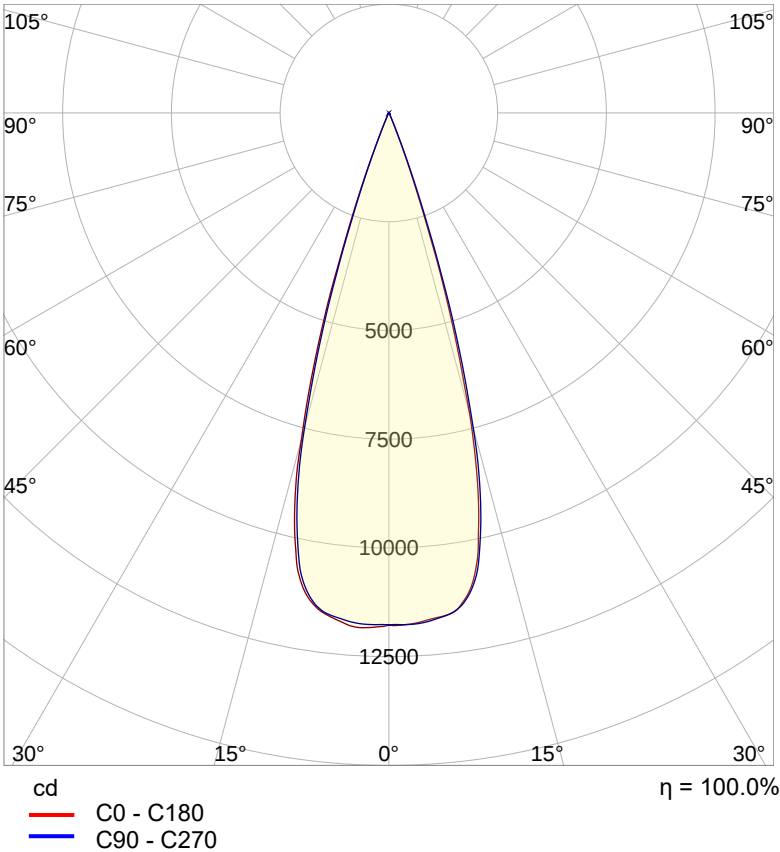
QuikPunch_OutputGain_Disabled_30D_6500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3131 lm – 0% / 100%
n/a lm/W
11851 cd
6500 K
CRI 0.0

Polar light distribution diagram

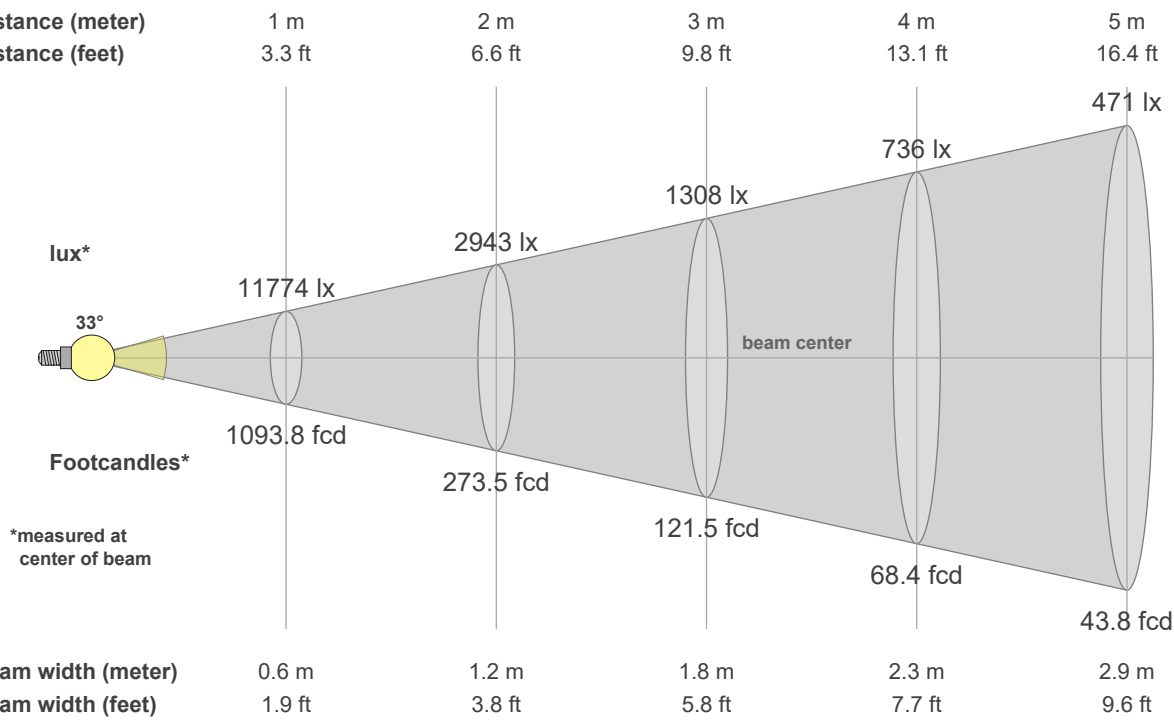


Test report

Light measurement results

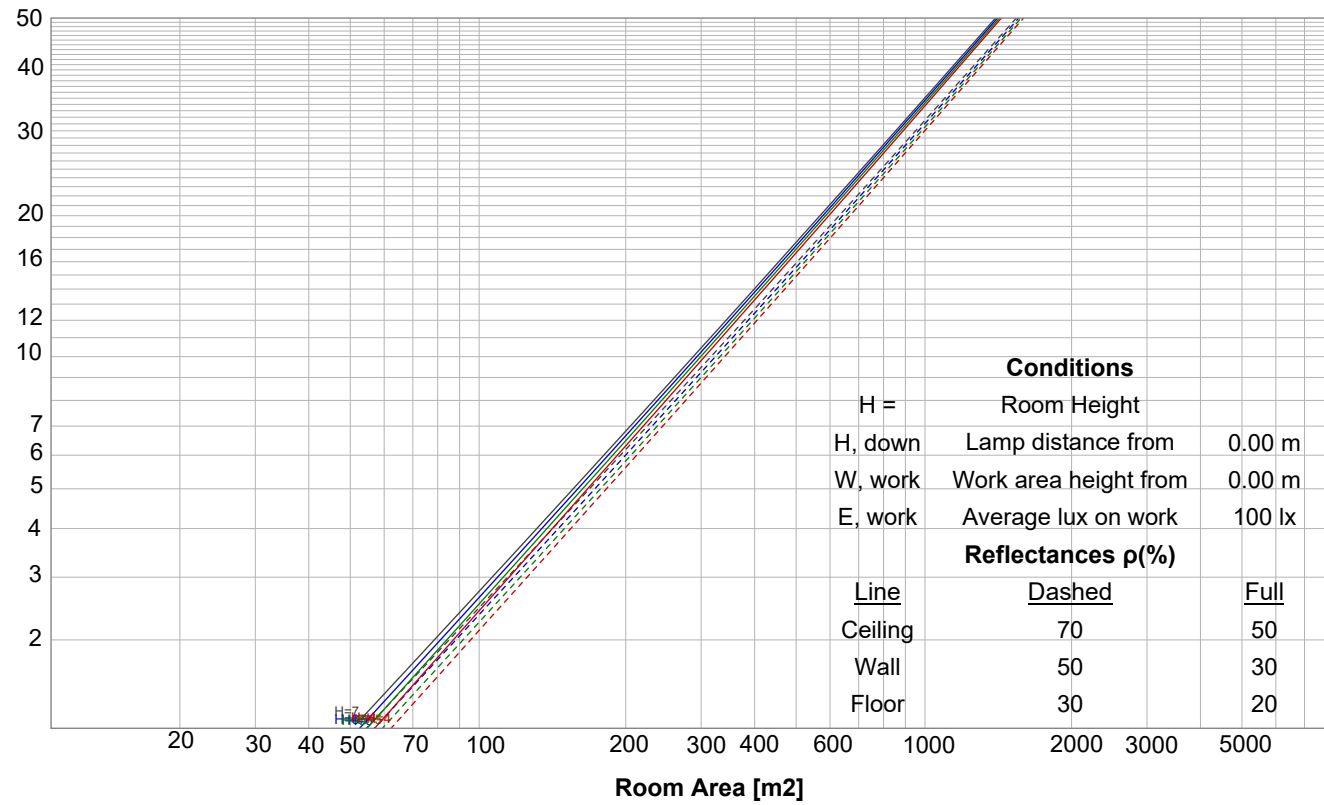
Print date 9/26/2025

Beam details

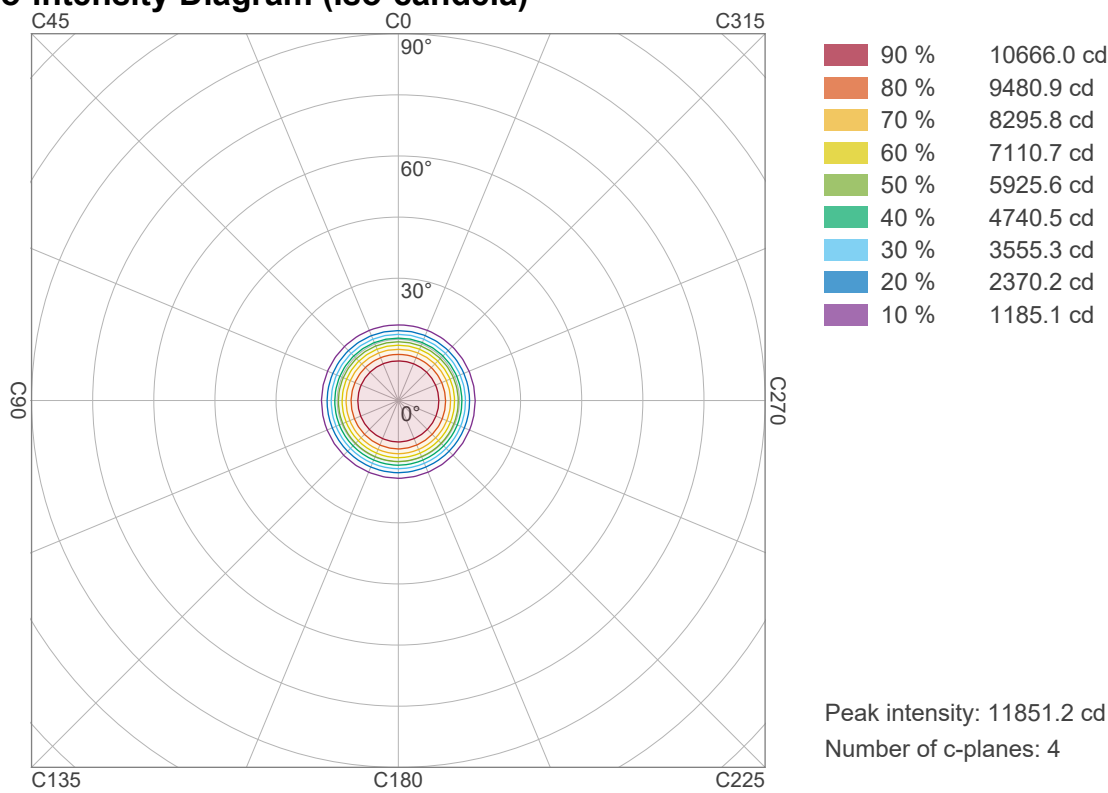


Luminaire budgetary diagram

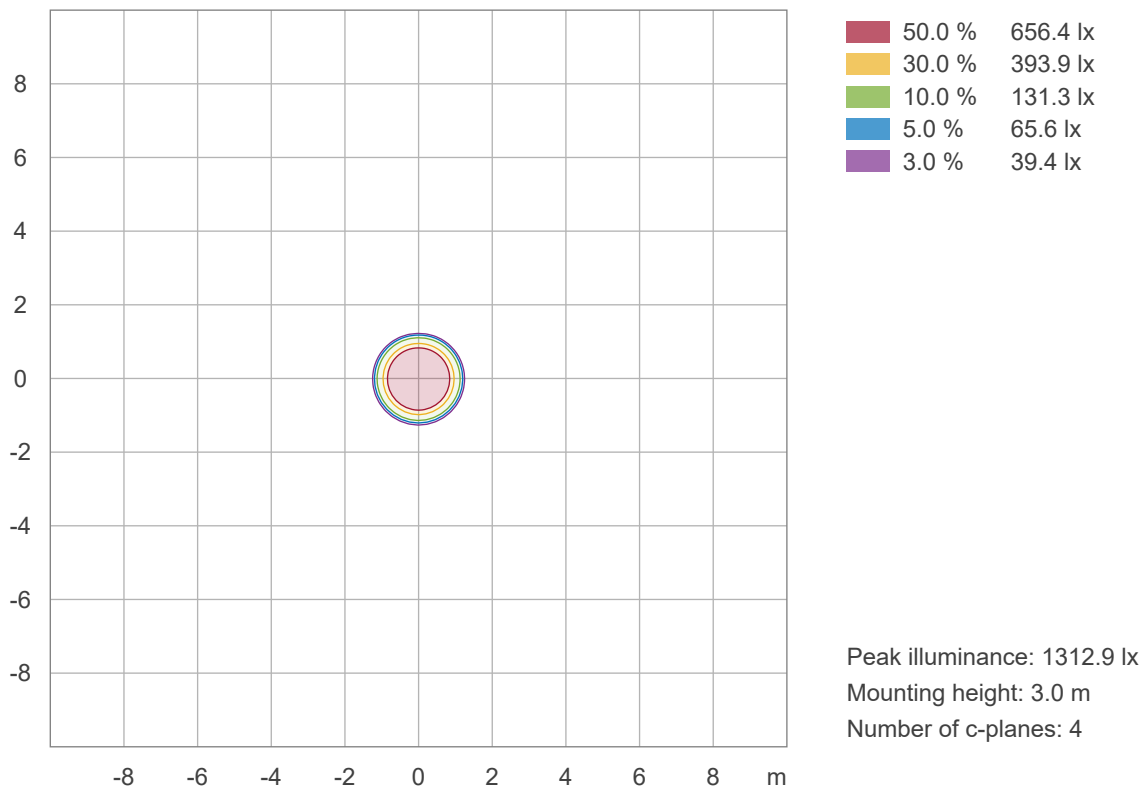
LAMPS (number of lamps)



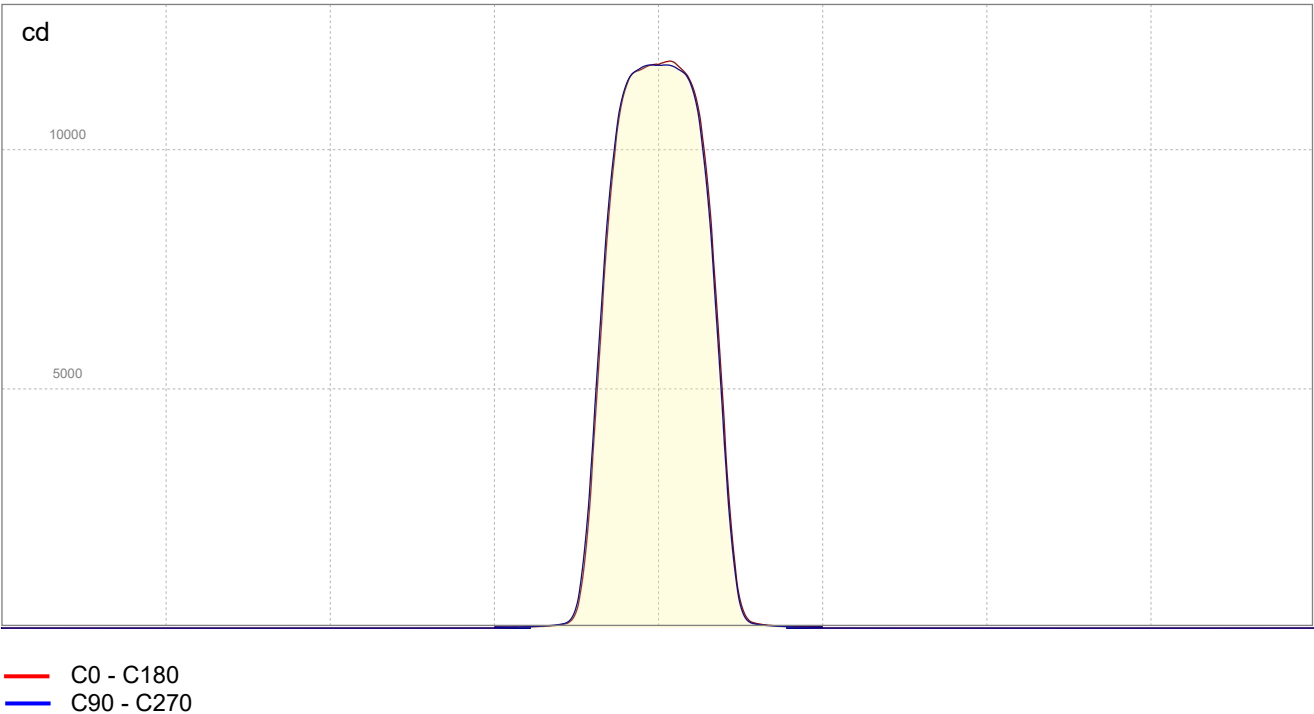
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

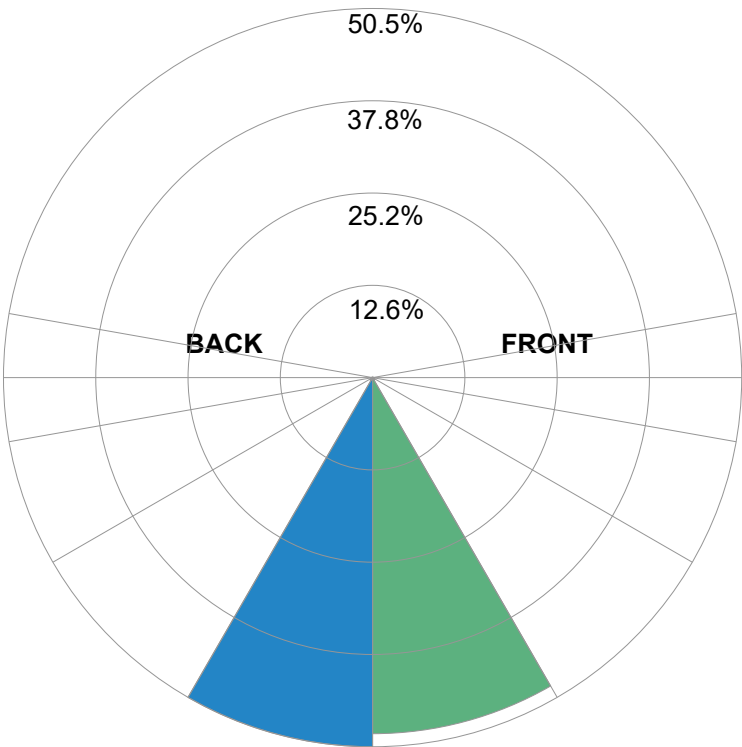


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1523.9 lm	48.7%
Medium (30-60°)	12.8 lm	0.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1579.7 lm	50.5%
Medium (30-60°)	14.6 lm	0.5%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3131 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

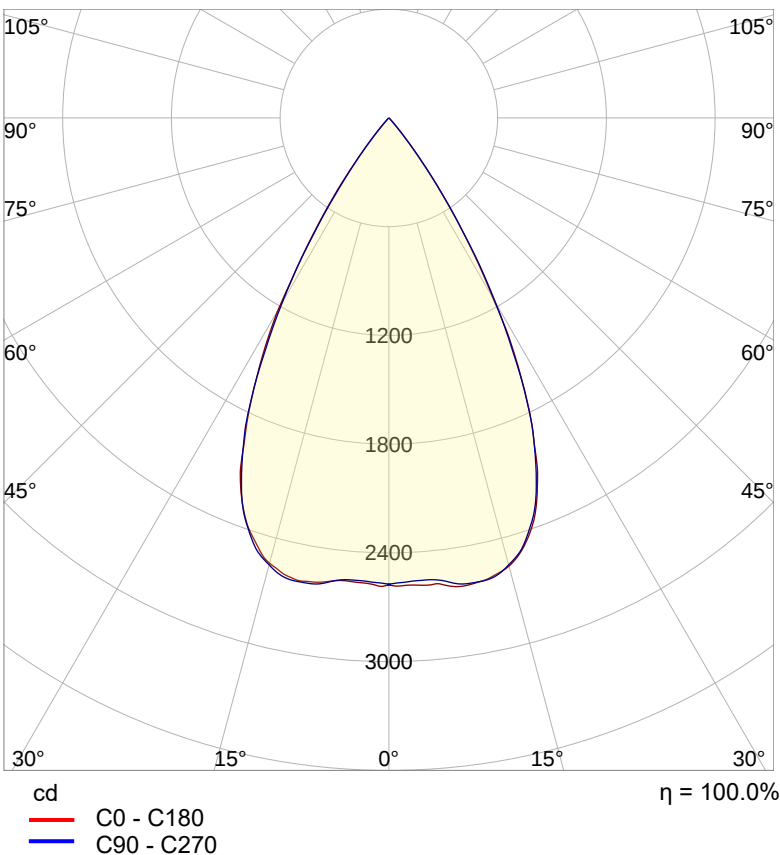
QuikPunch_OutputGain_Disabled_60Degrees_27
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2143 lm – 0% / 100%
n/a lm/W
2616 cd
2700 K
CRI 0.0

Polar light distribution diagram

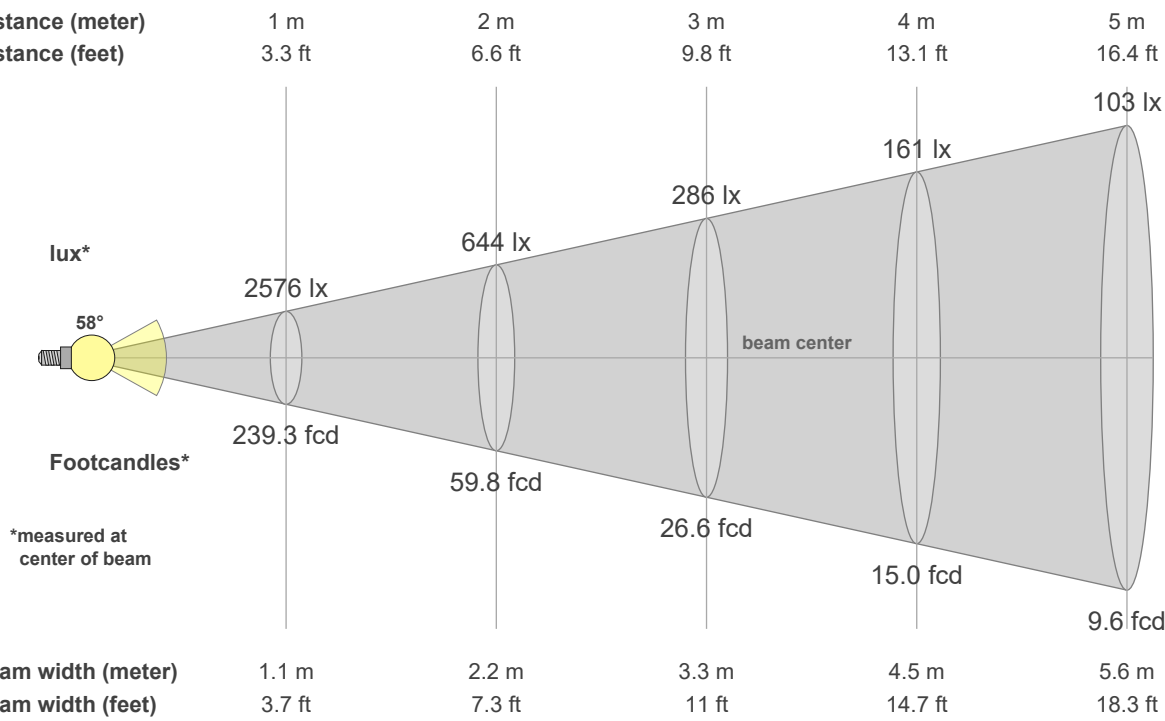


Test report

Light measurement results

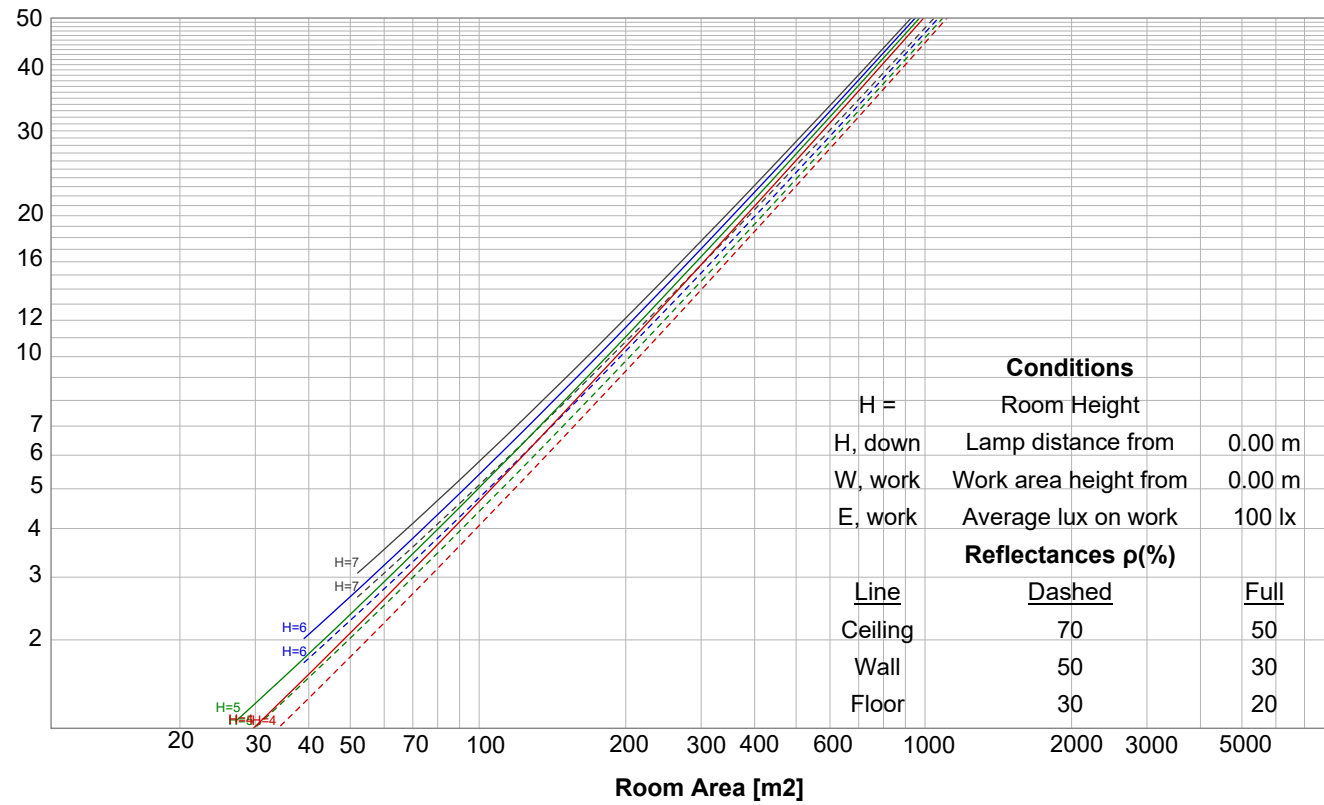
Print date 9/26/2025

Beam details

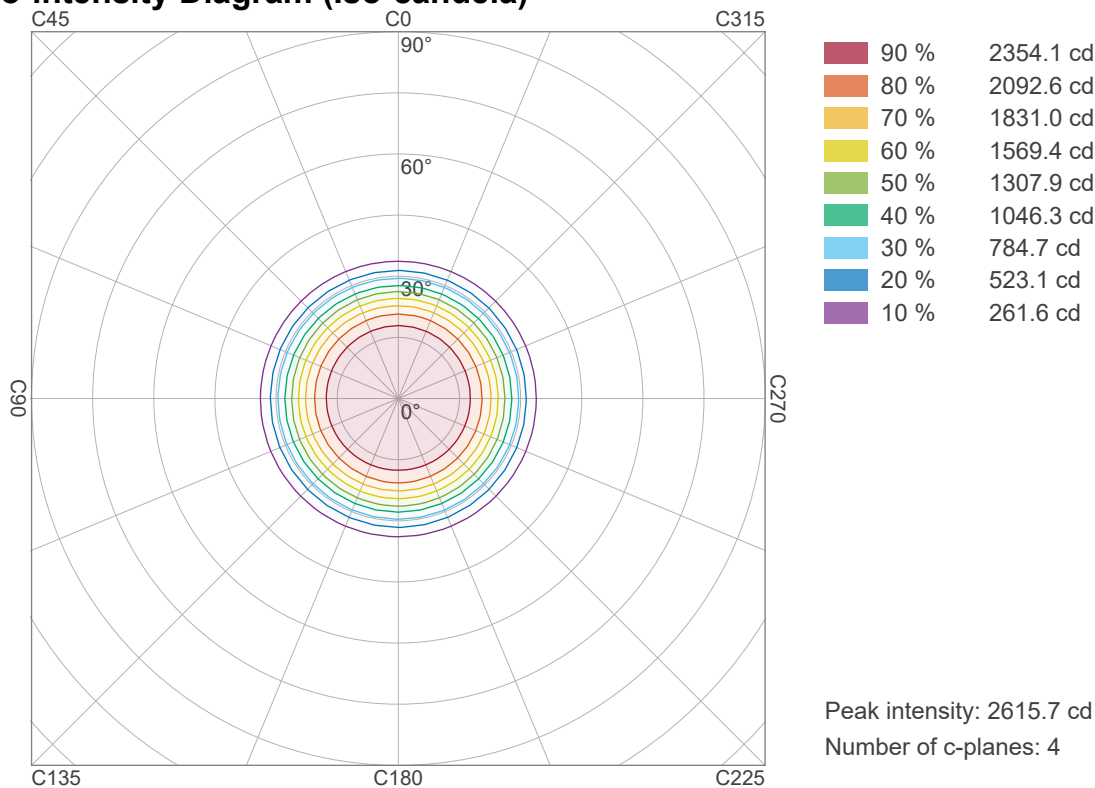


Luminaire budgetary diagram

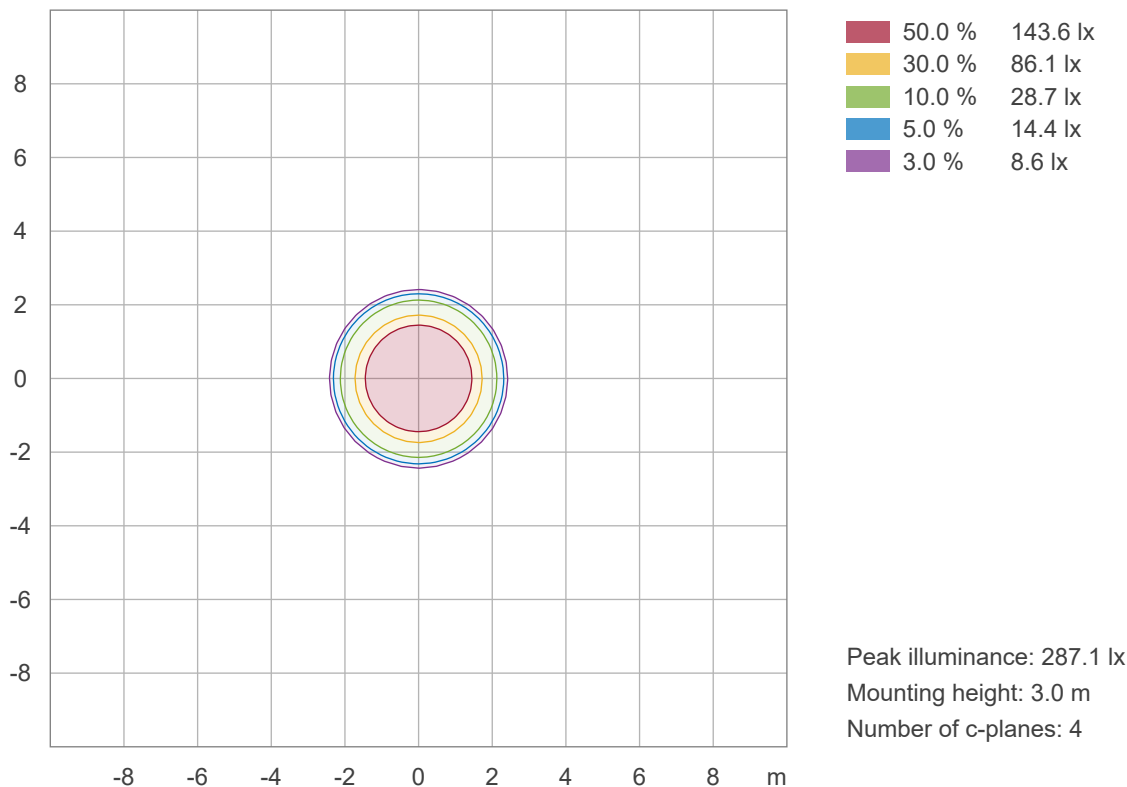
LAMPS (number of lamps)



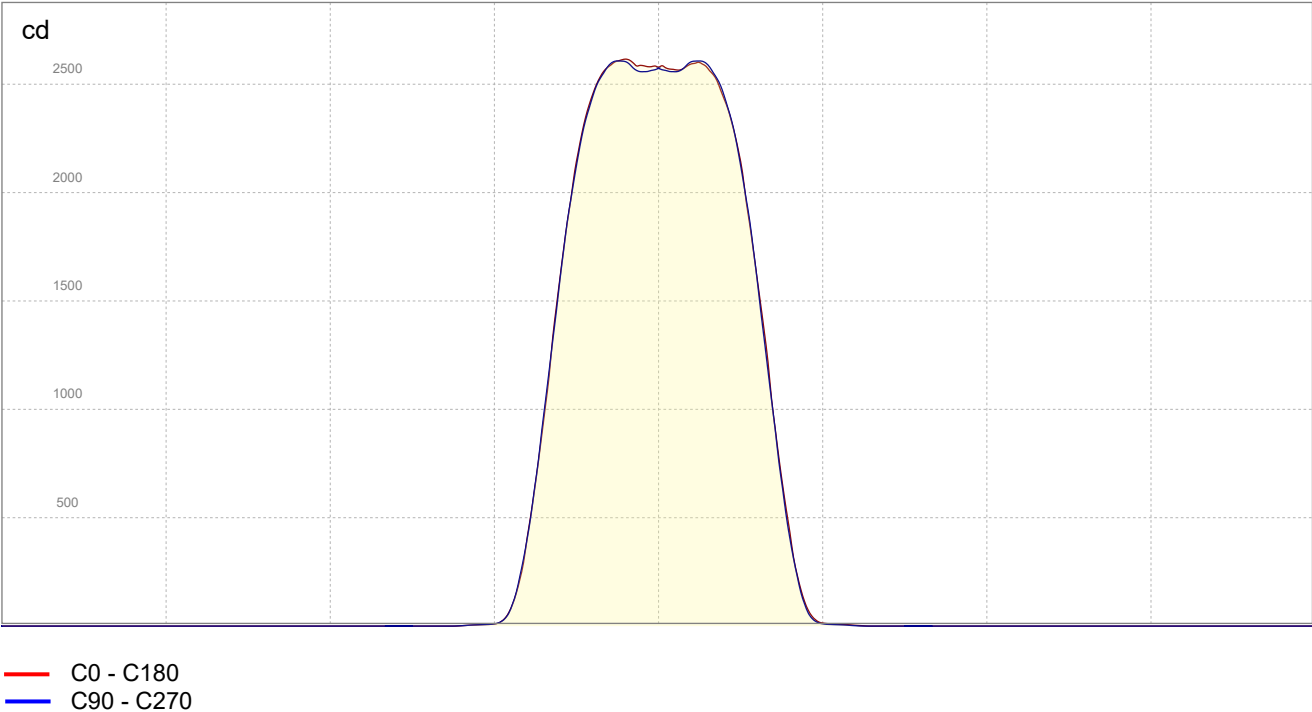
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

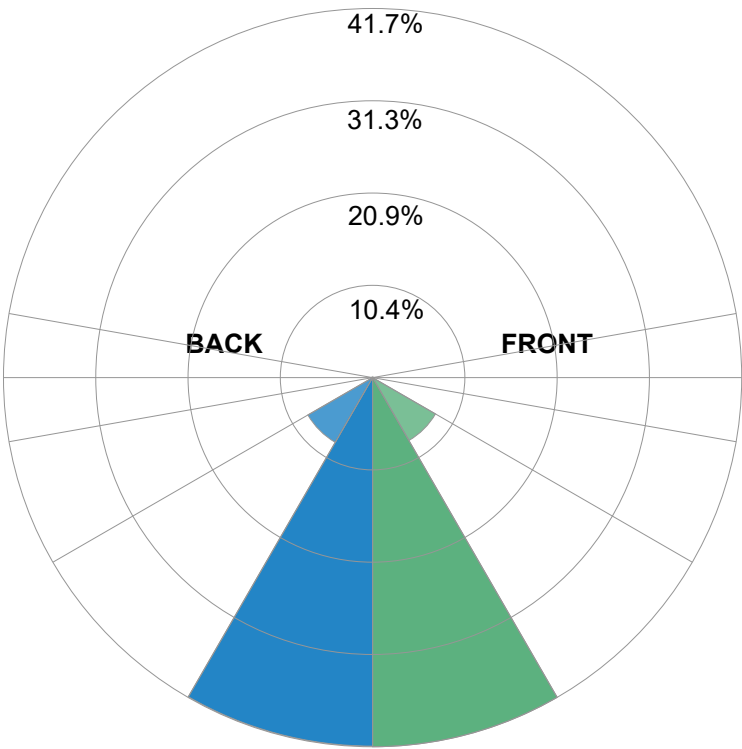


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B2 U0 G0



Forward Light

Low (0-30°)	894	lm	41.7%
Medium (30-60°)	175.8	lm	8.2%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Back Light

Low (0-30°)	892.5	lm	41.6%
Medium (30-60°)	180.9	lm	8.4%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Uplight

Low (90-100°)	0	lm	0%
High (100-180°)	0	lm	0%

Total

Sum	2143	lm	100%
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Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

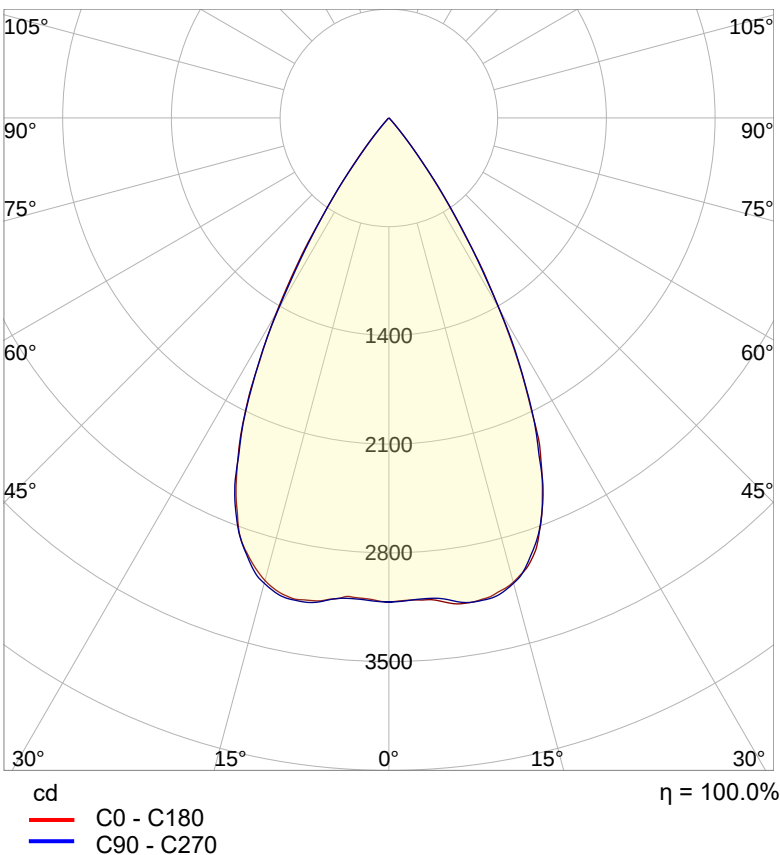
QuikPunch_OutputGain_Disabled_60D_3200K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2596 lm – 0% / 100%
n/a lm/W
3164 cd
3200 K
CRI 0.0

Polar light distribution diagram

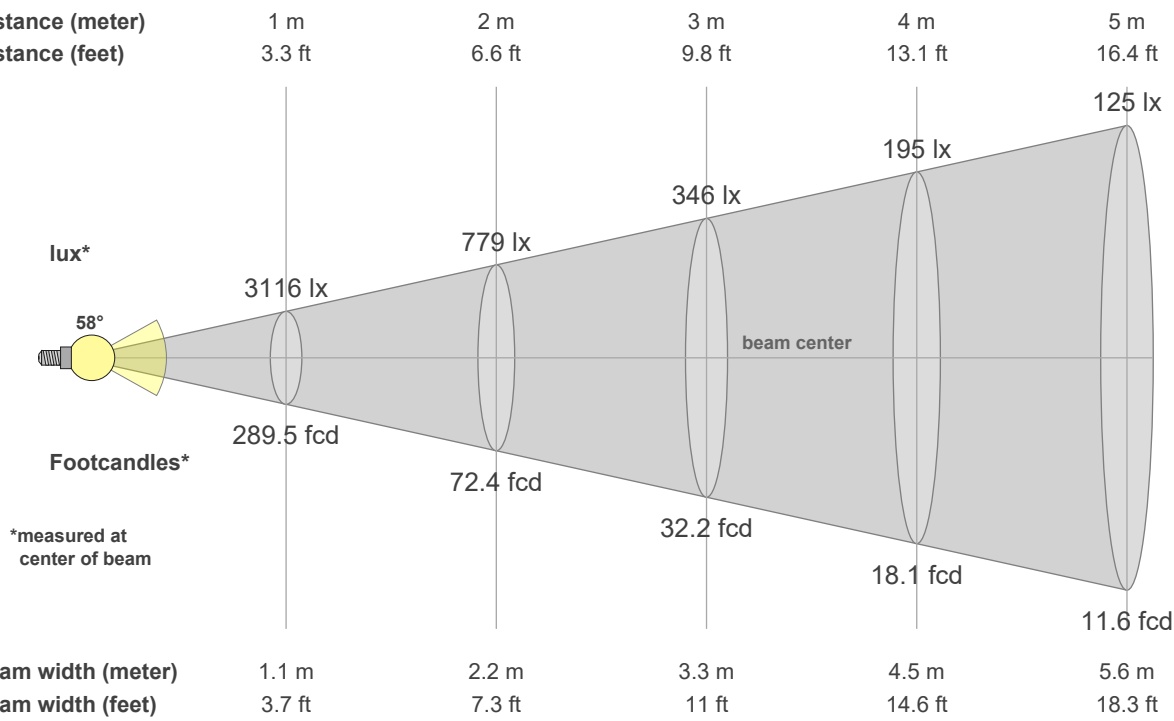


Test report

Light measurement results

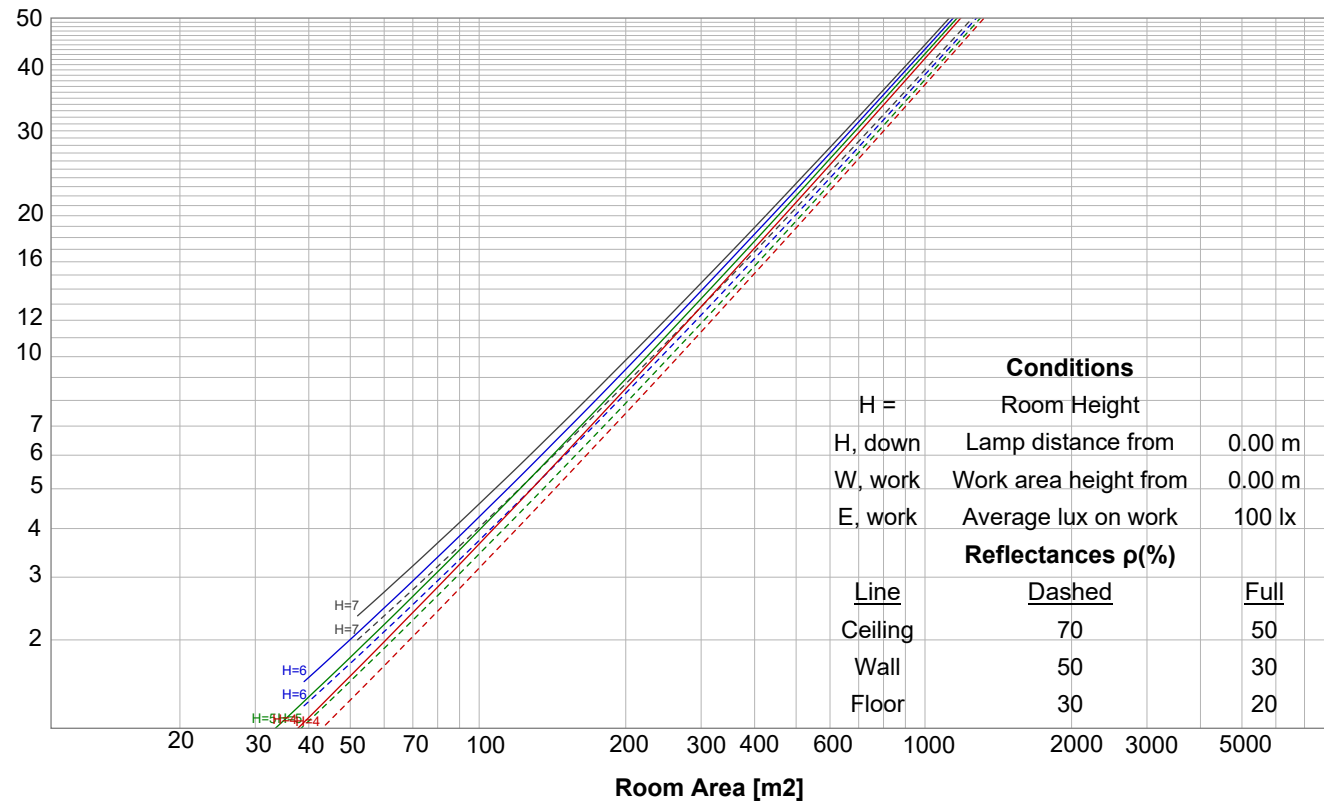
Print date 9/26/2025

Beam details

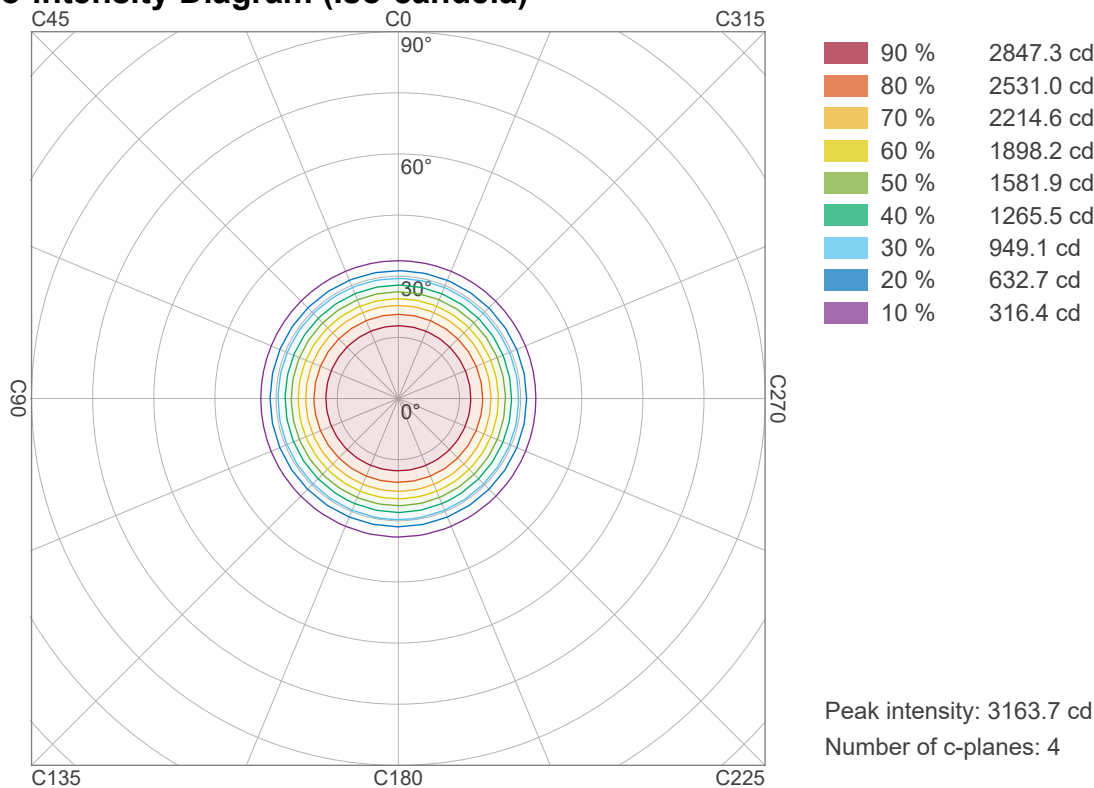


Luminaire budgetary diagram

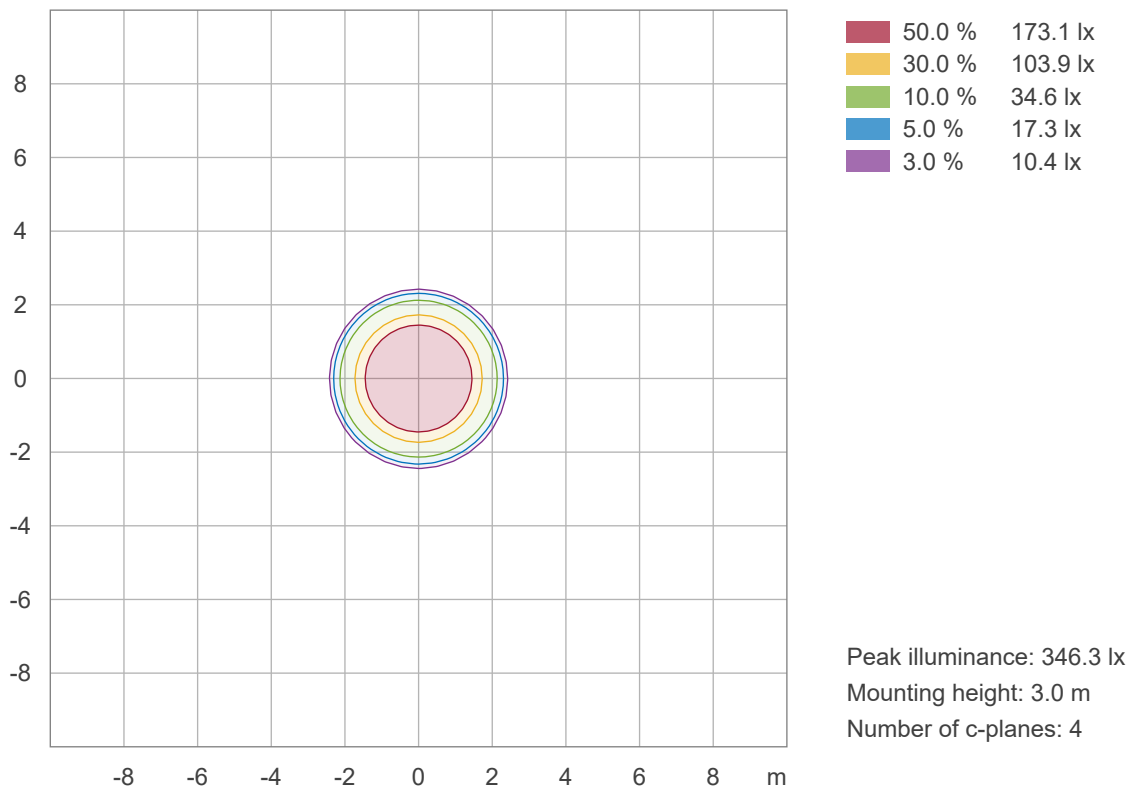
LAMPS (number of lamps)



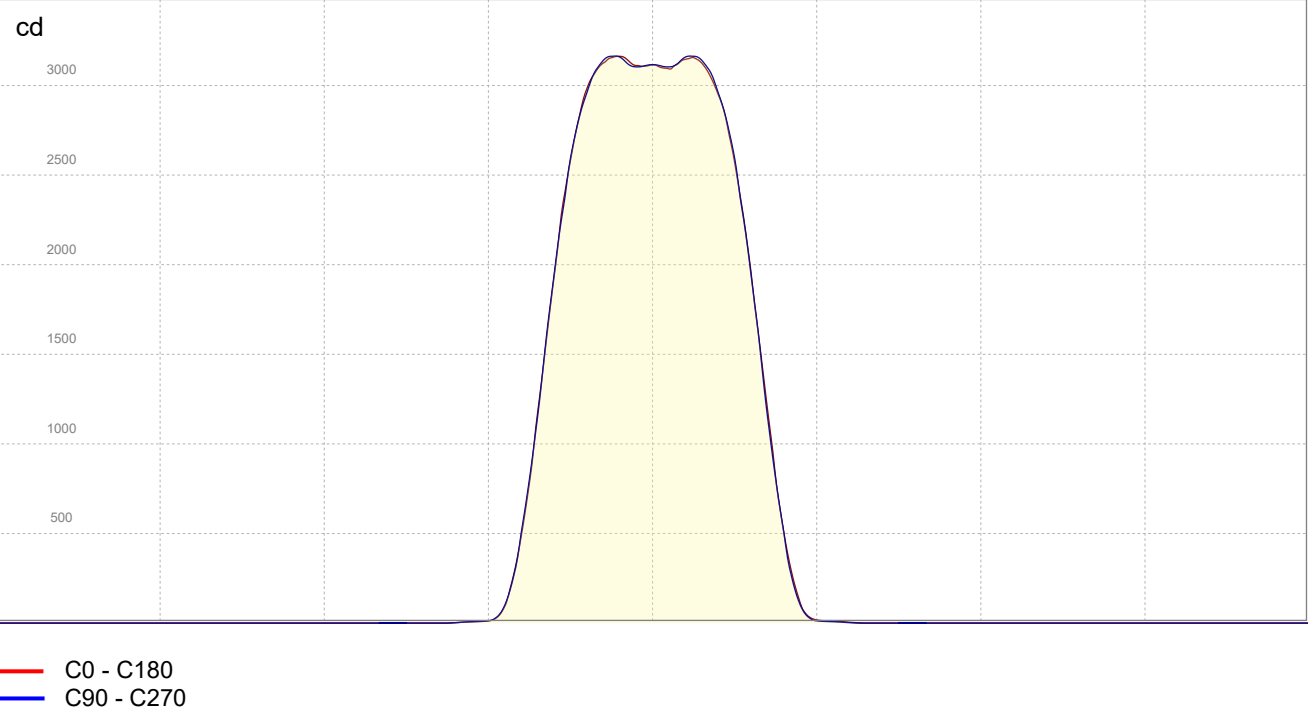
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

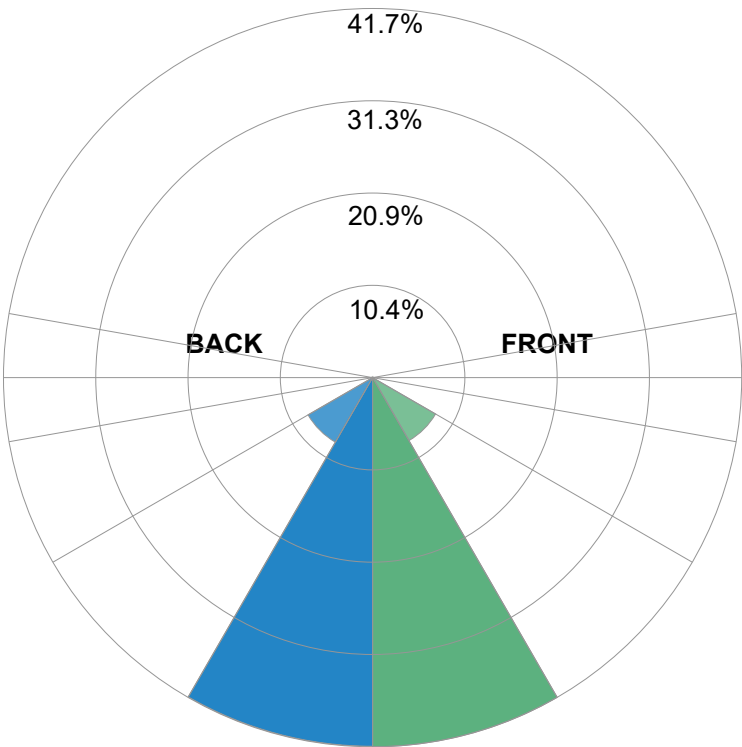


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1082.9 lm	41.7%
Medium (30-60°)	213.2 lm	8.2%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1081.5 lm	41.7%
Medium (30-60°)	218.6 lm	8.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2596 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a - n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

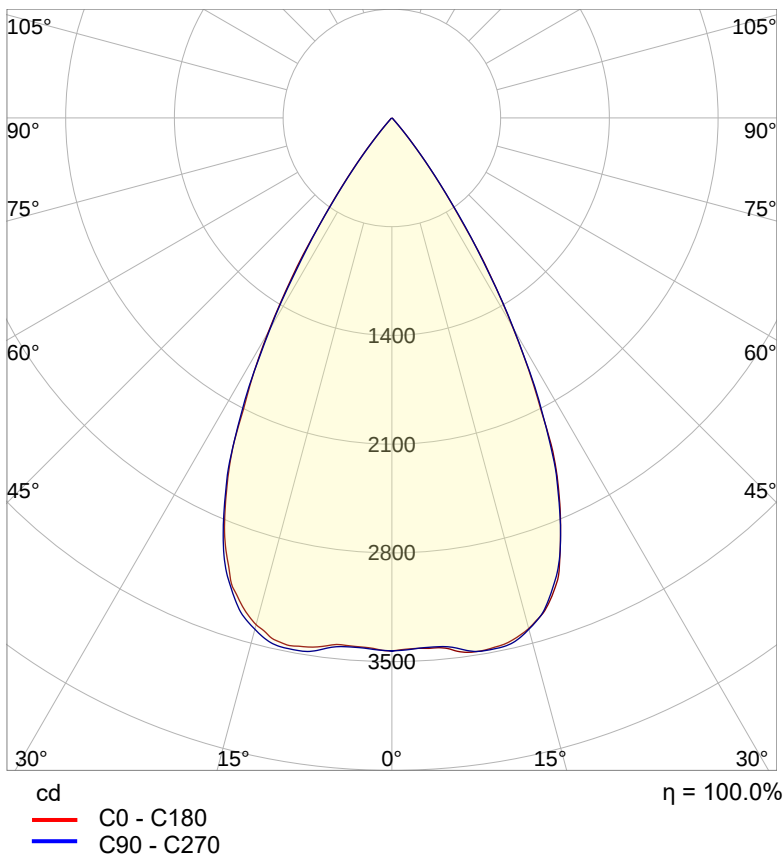
QuikPunch_OutputGain_Disabled_60D_4000K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

2854 lm – 0% / 100%
n/a lm/W
3481 cd
4000 K
CRI 0.0

Polar light distribution diagram

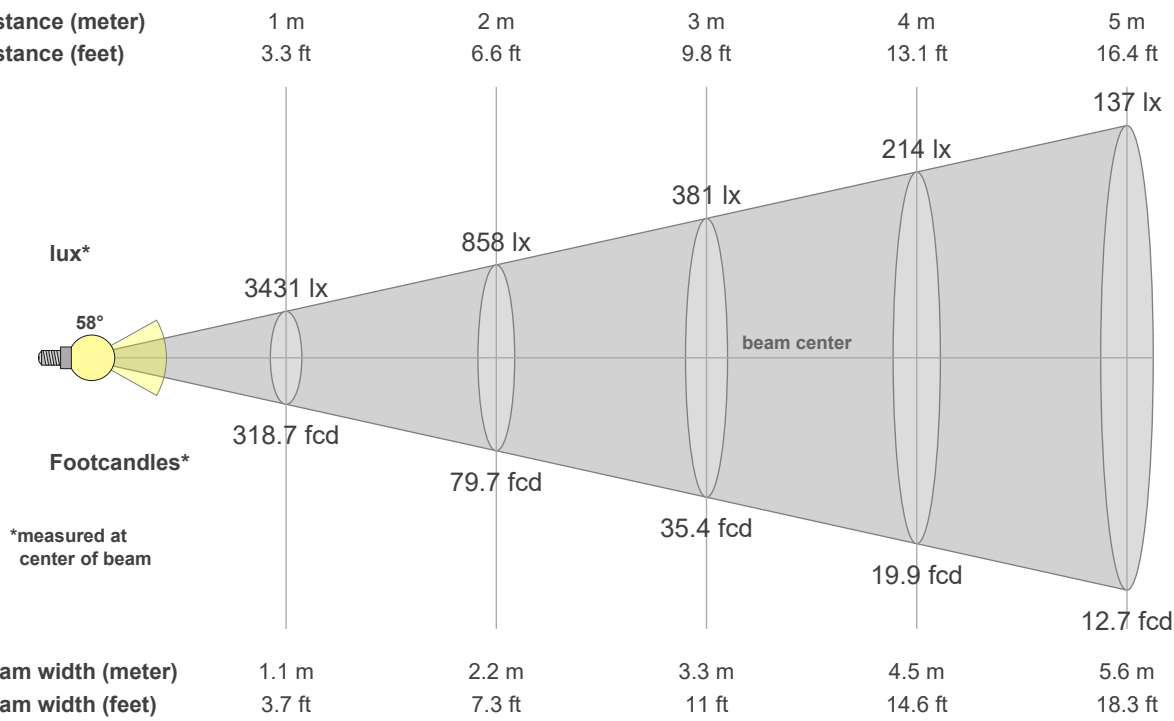


Test report

Light measurement results

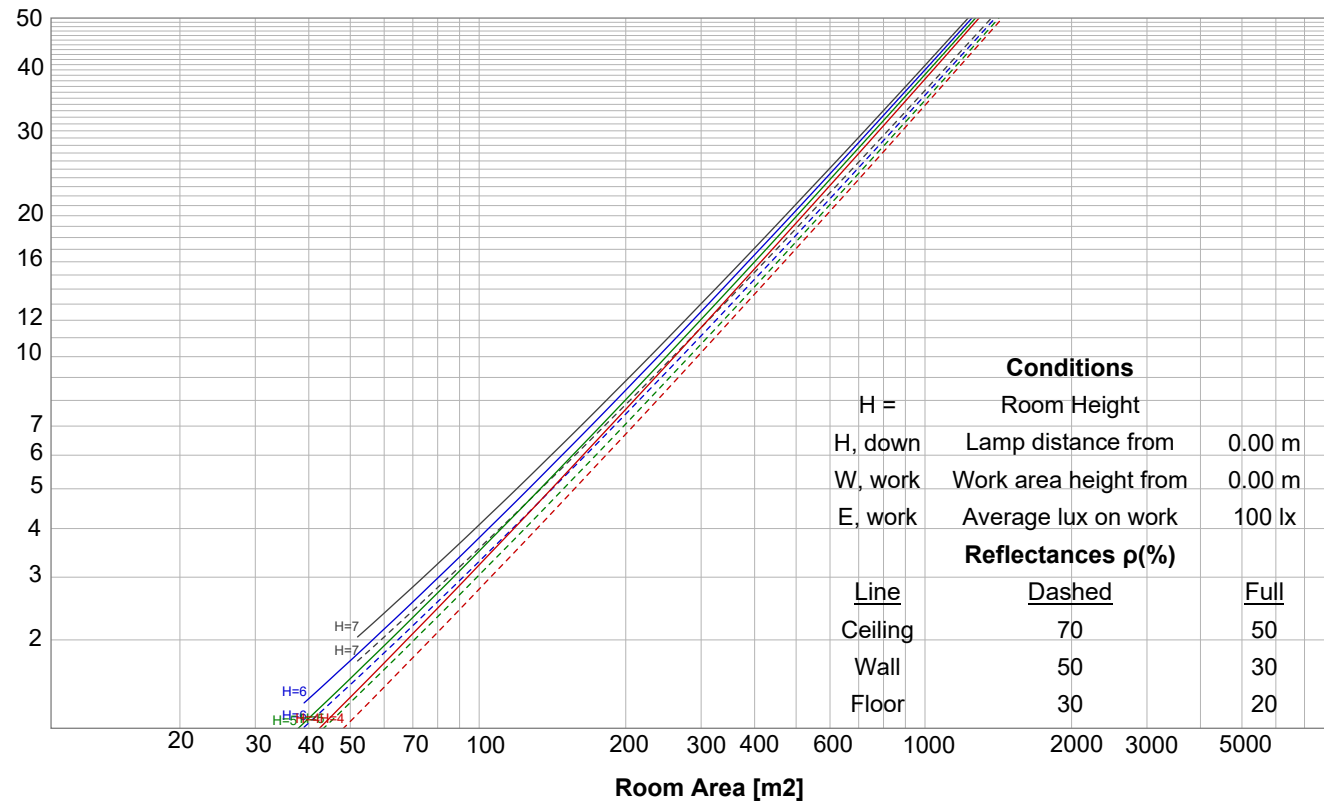
Print date 9/26/2025

Beam details

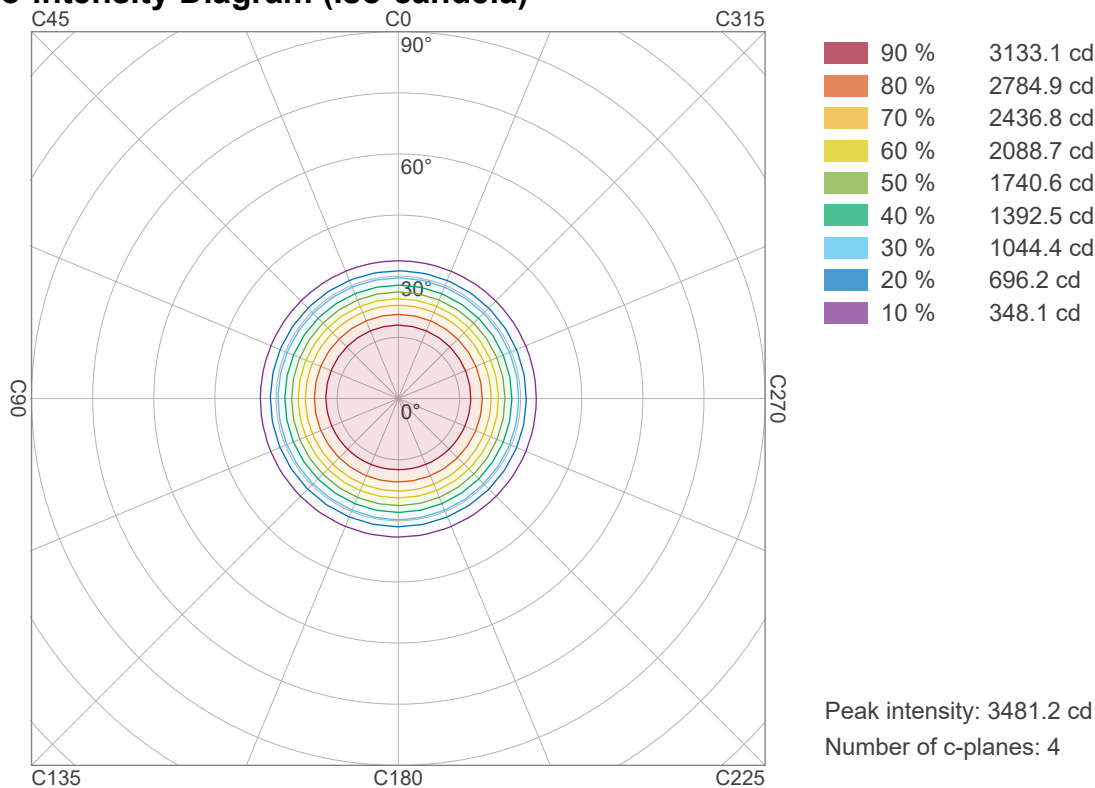


Luminaire budgetary diagram

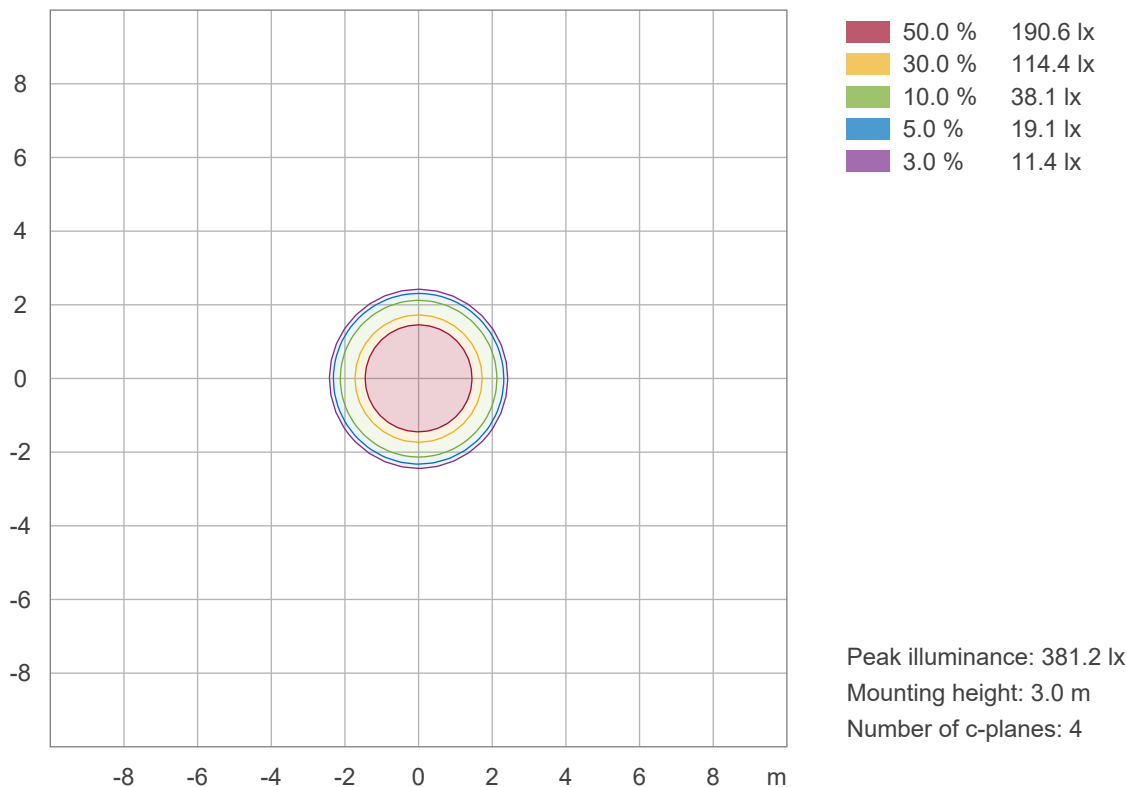
LAMPS (number of lamps)



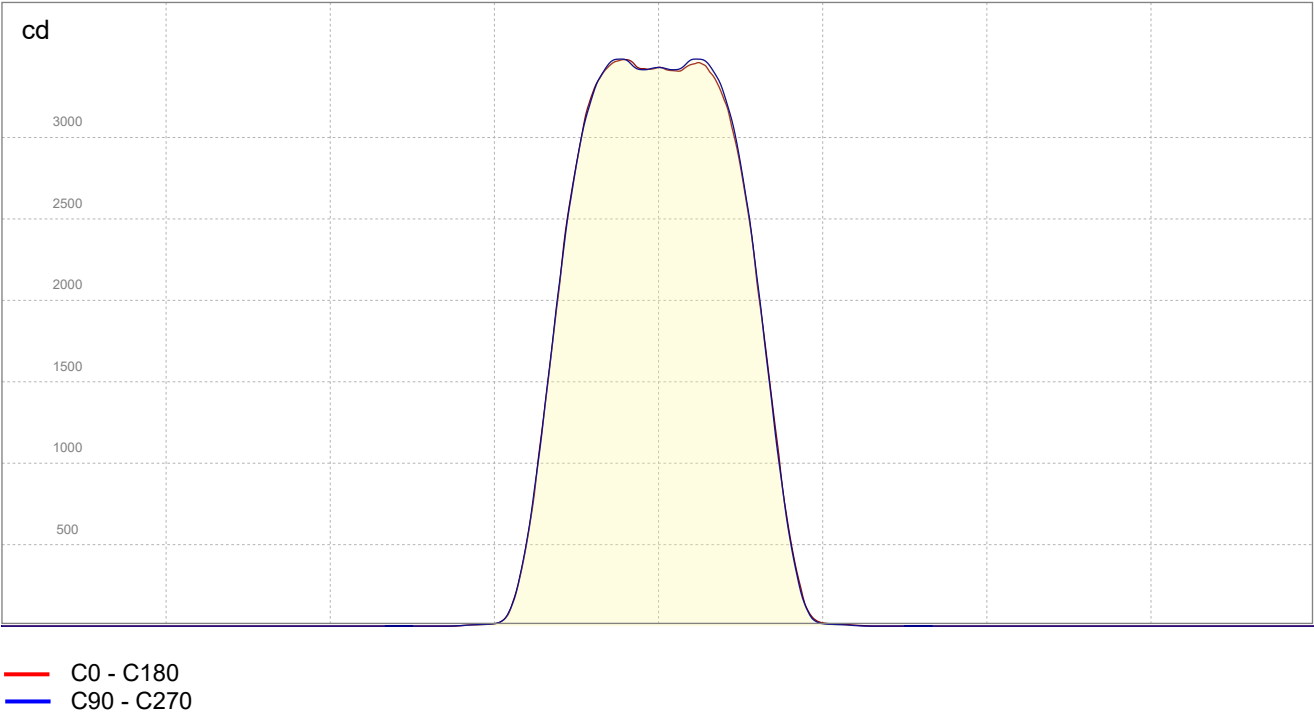
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

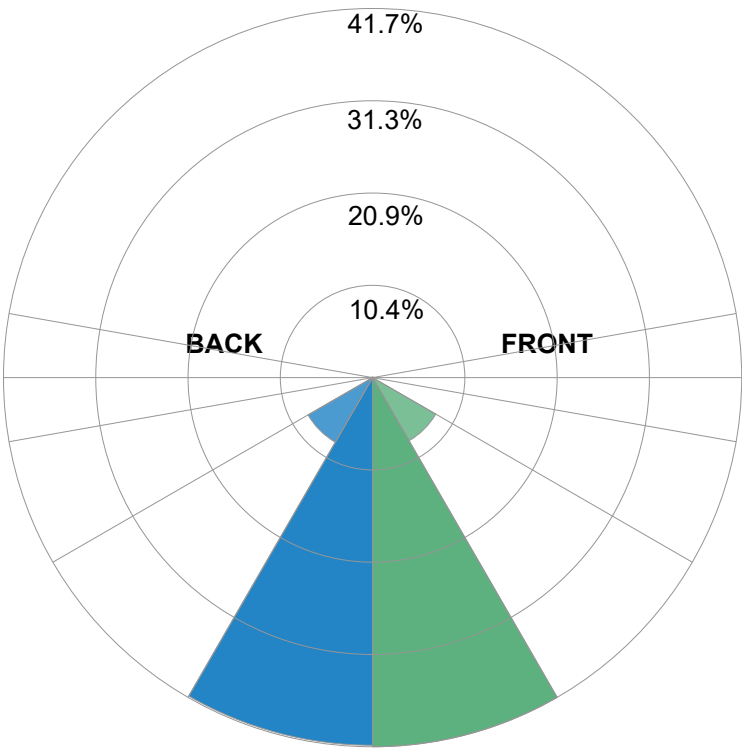


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1191.3 lm	41.7%
Medium (30-60°)	235.2 lm	8.2%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1186.6 lm	41.6%
Medium (30-60°)	240.6 lm	8.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	2854 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

n/a - serial: n/a sensor serial: n/a
n/a, n/a – n/a
9/26/2025

Measurement Conditions

Tested c-planes
Tested gamma angles
Input Power

5 – distance {C_PLANES_DIST}°
181 – {H_PLANES_DIST}°
- W

Tested Light Source
Luminaire
Basic Luminous Shape
Item No.
Manufacturer

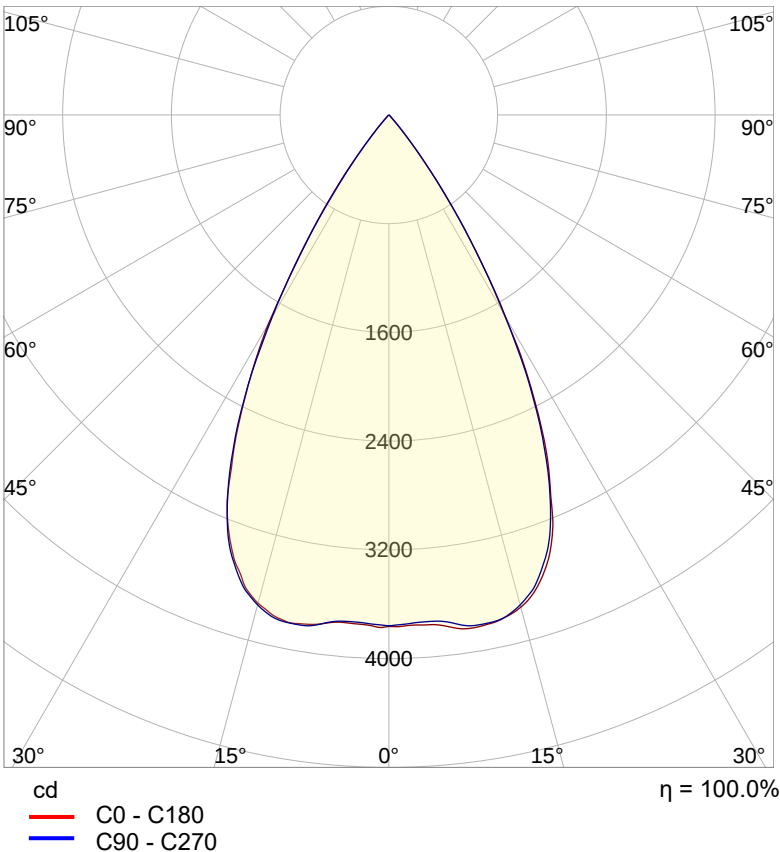
QuikPunch_OutputGain_Disabled_60D_5500K
SPOT

Astera

Main Light Measurement Results
Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3133 lm – 0% / 100%
n/a lm/W
3824 cd
5500 K
CRI 0.0

Polar light distribution diagram

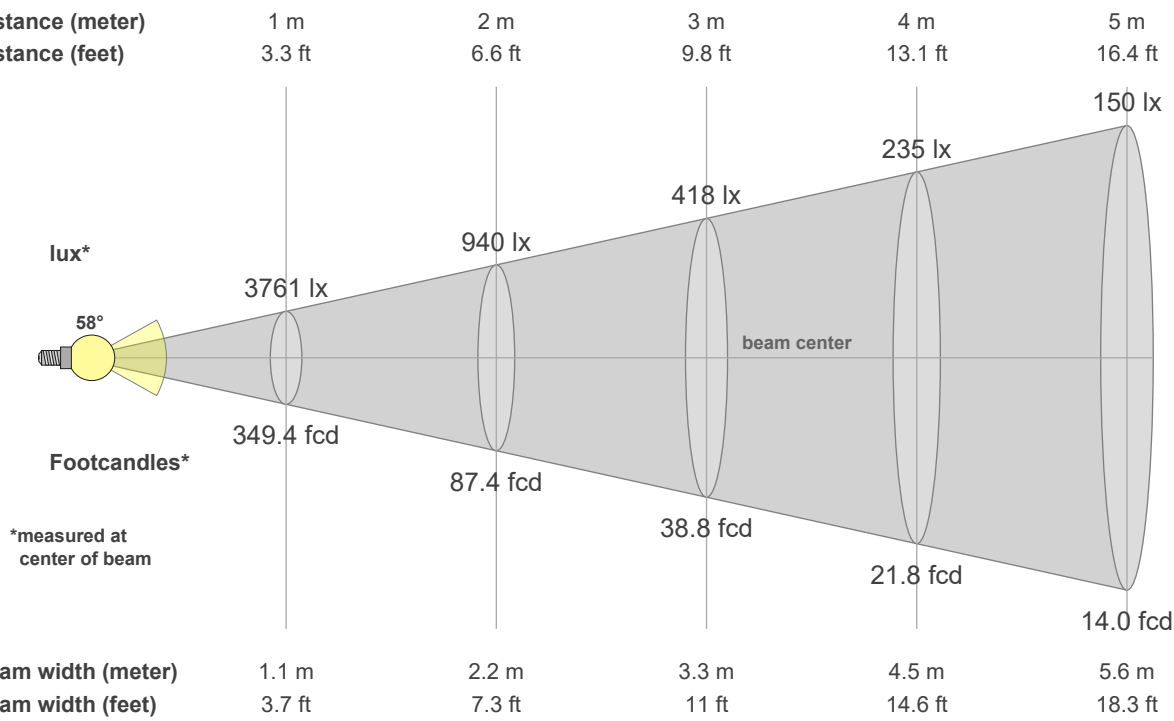


Test report

Light measurement results

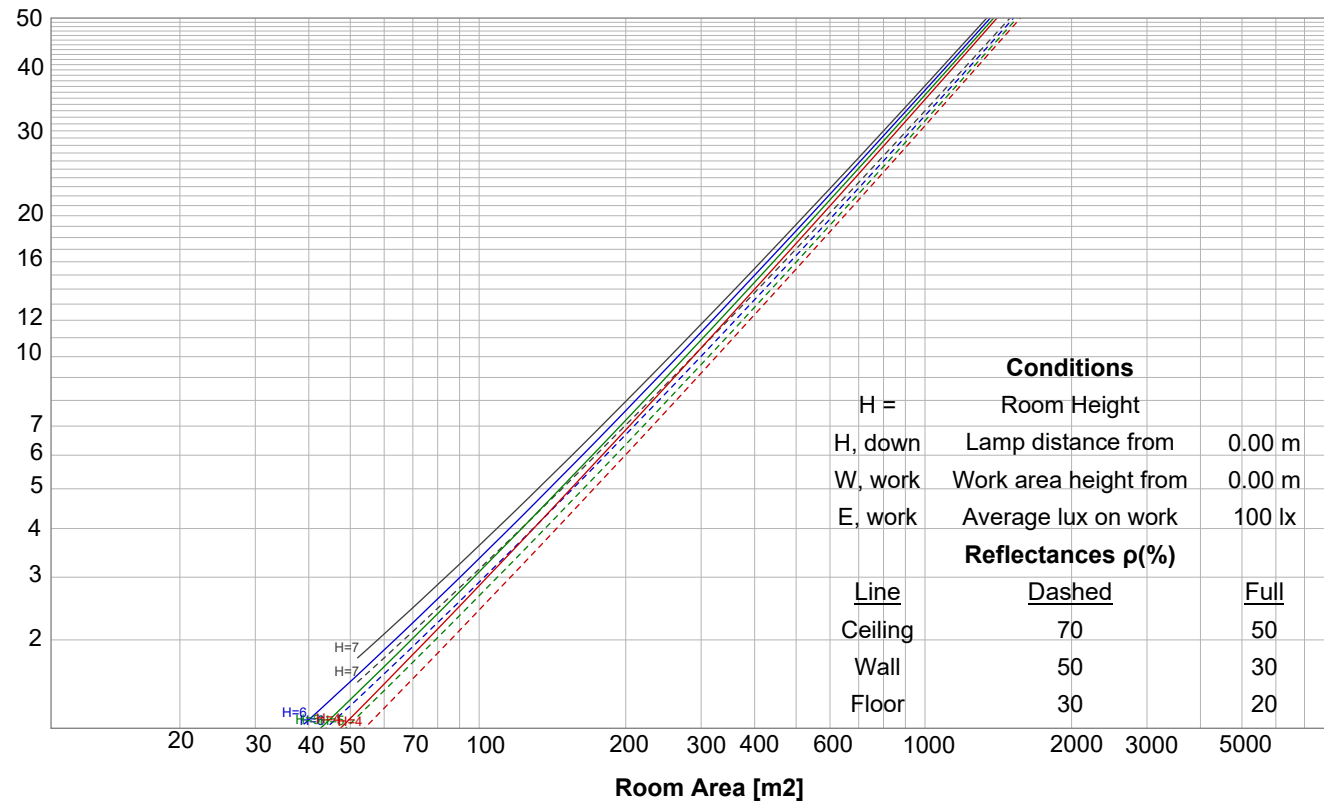
Print date 9/26/2025

Beam details

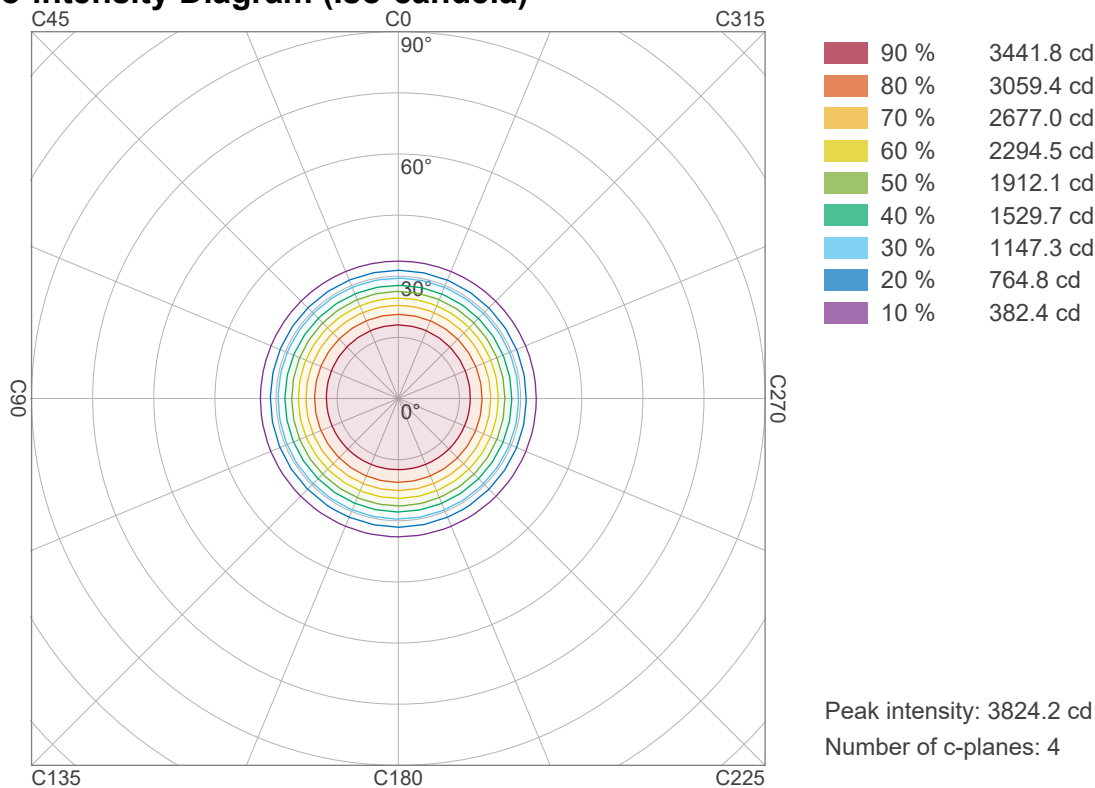


Luminaire budgetary diagram

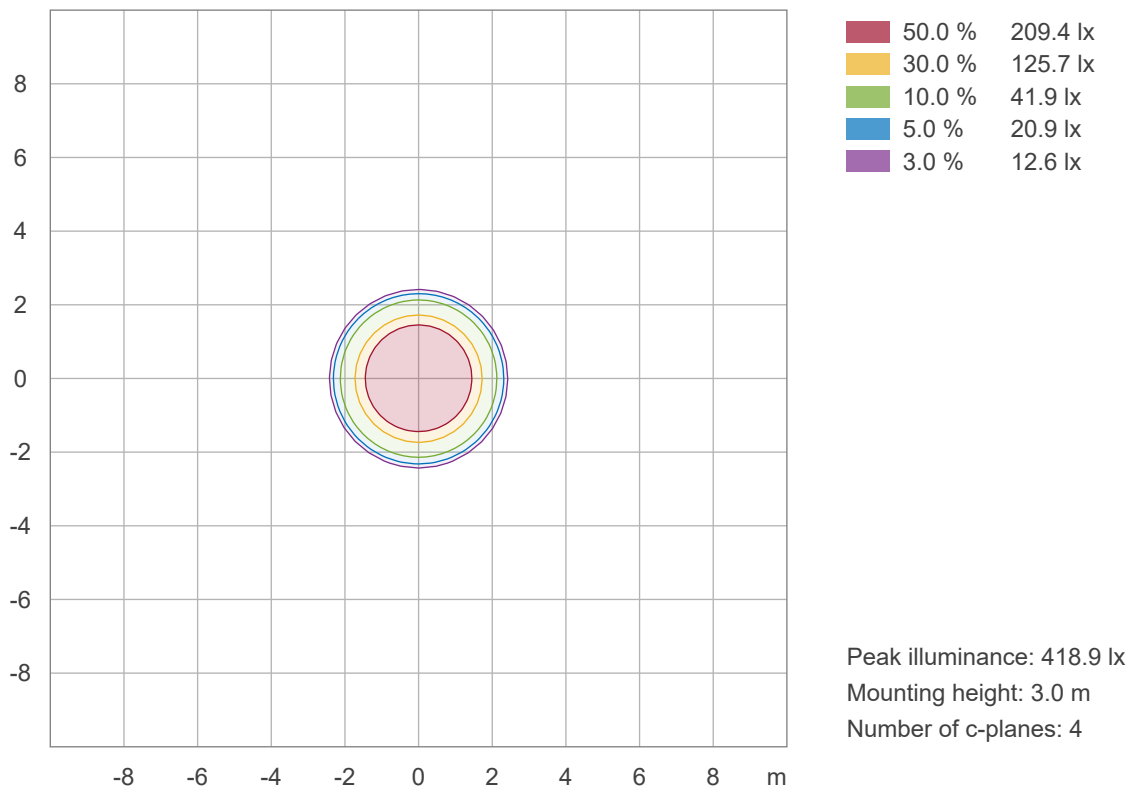
LAMPS (number of lamps)



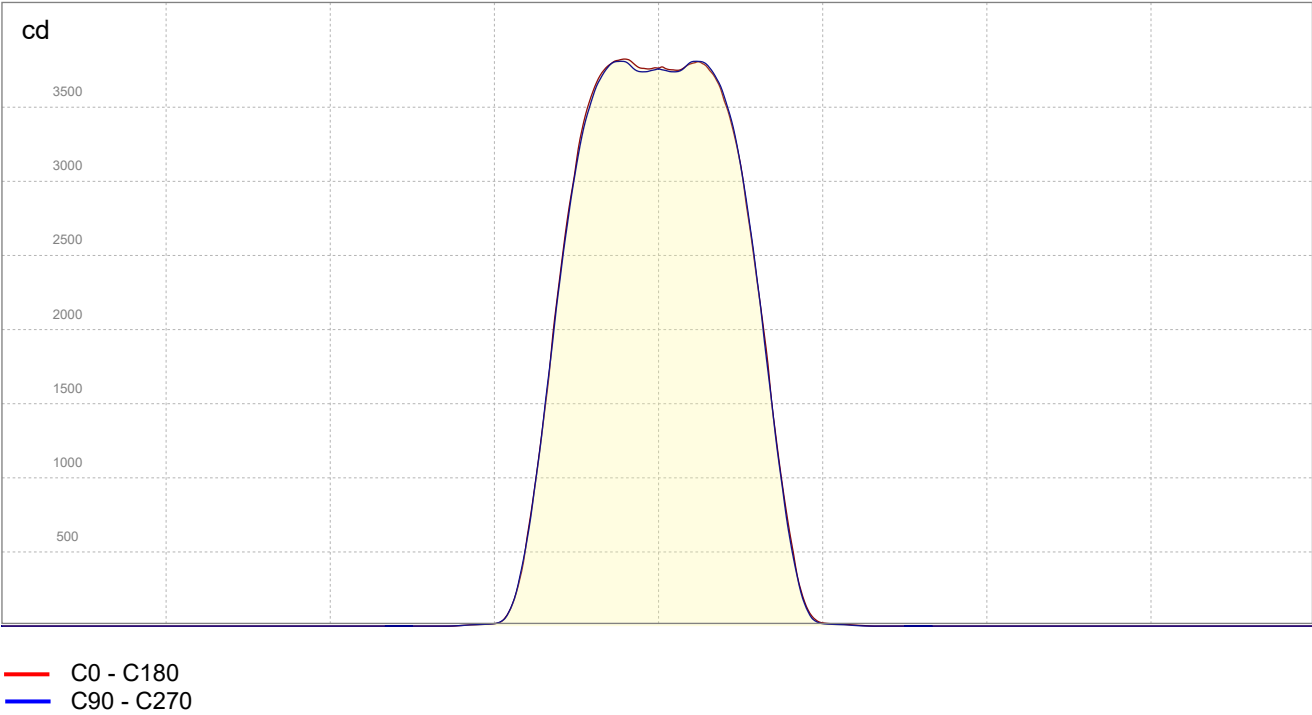
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

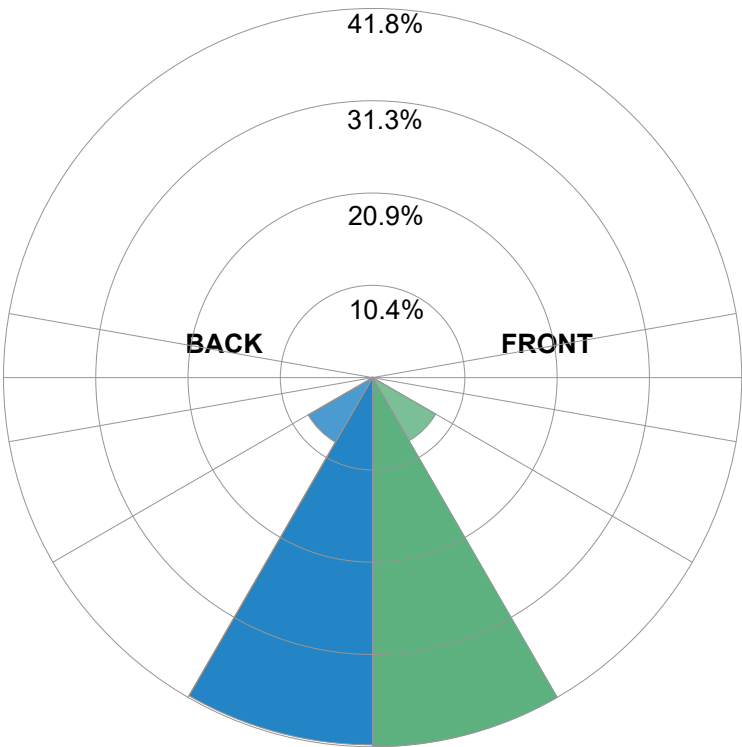


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1308.7 lm	41.8%
Medium (30-60°)	258.4 lm	8.2%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Back Light

Low (0-30°)	1302 lm	41.6%
Medium (30-60°)	263.9 lm	8.4%
High (60-80°)	0 lm	0%
Very High	0 lm	0%

Uplight

Low (90-100°)	0 lm	0%
High (100-180°)	0 lm	0%

Total

Sum	3133 lm	100%
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Test report

Light measurement results

Print date 9/26/2025

Laboratory and Equipment

Test lab

n/a - serial: n/a sensor serial: n/a

Spectrometer Manufacturer and Model

n/a, n/a - n/a

Measurement date

9/26/2025

Measurement Conditions

Tested c-planes

5 - distance {C_PLANES_DIST}°

Tested gamma angles

181 - {H_PLANES_DIST}°

Input Power

- W

Tested Light Source

Luminaire

QuikPunch_OutputGain_Disabled_60D_6500K

Basic Luminous Shape

SPOT

Item No.

Manufacturer

Astera

Main Light Measurement Results

Output - Total Lumen (Up% / Down%)

3230 lm - 0% / 100%

Efficiency

n/a lm/W

Peak Intensity

3938 cd

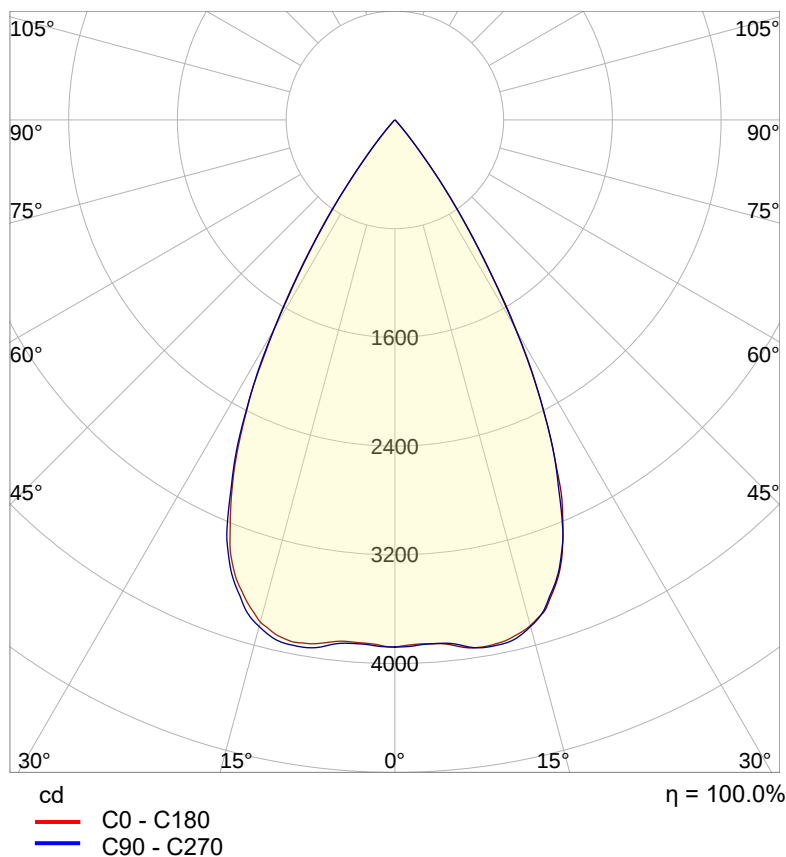
Correlated Color Temperature, CCT

6500 K

Color Rendering Index

CRI 0.0

Polar light distribution diagram

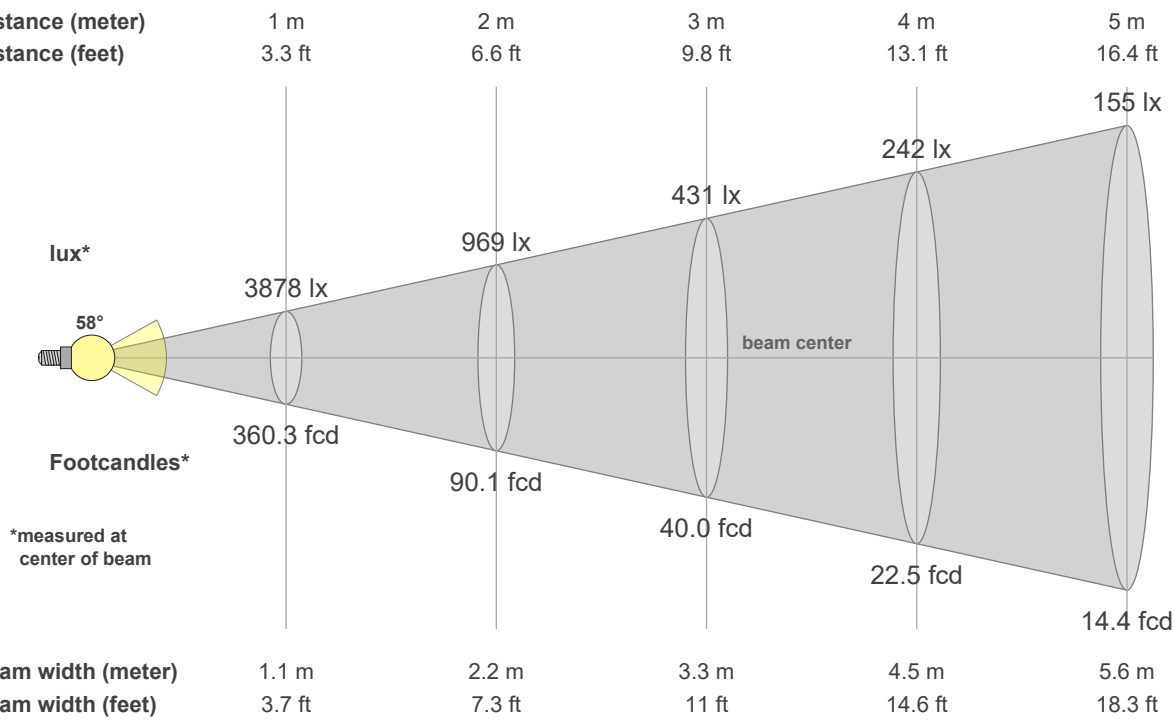


Test report

Light measurement results

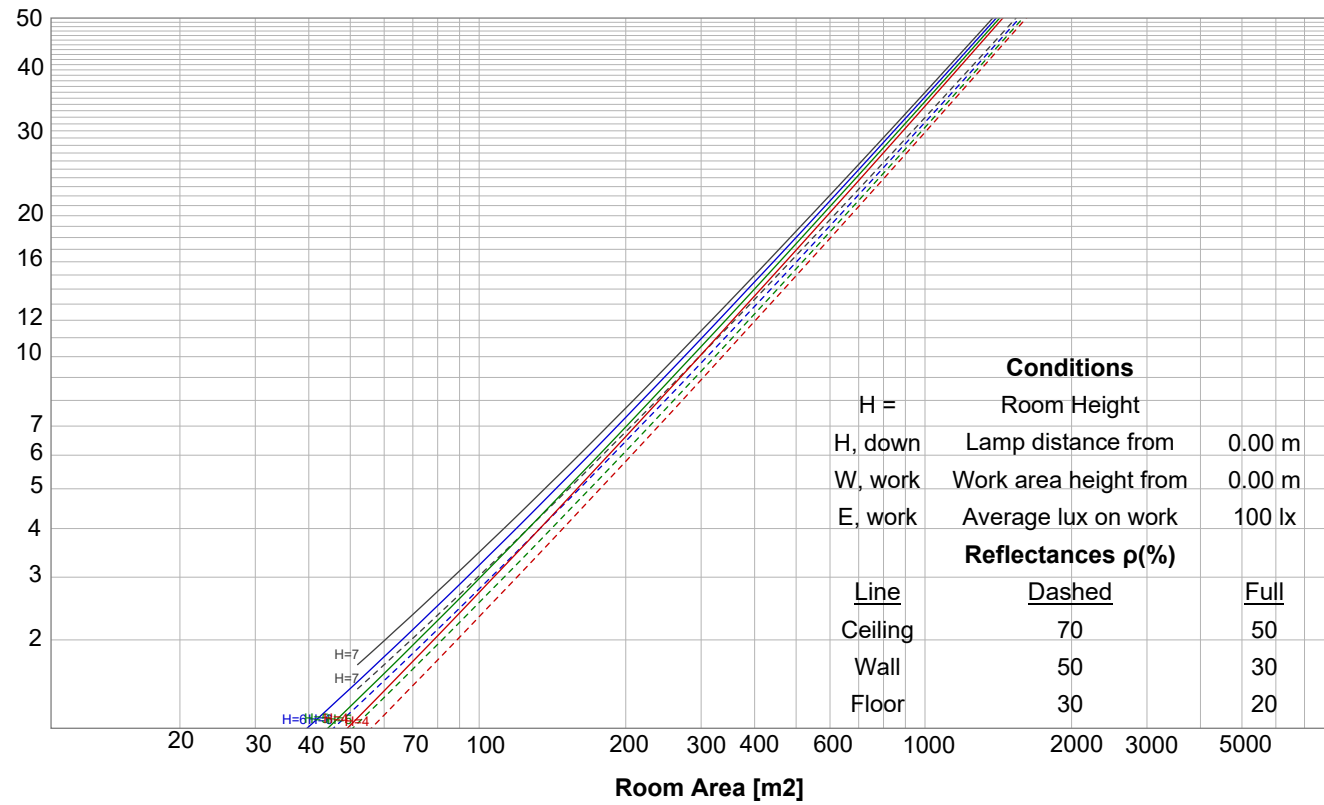
Print date 9/26/2025

Beam details

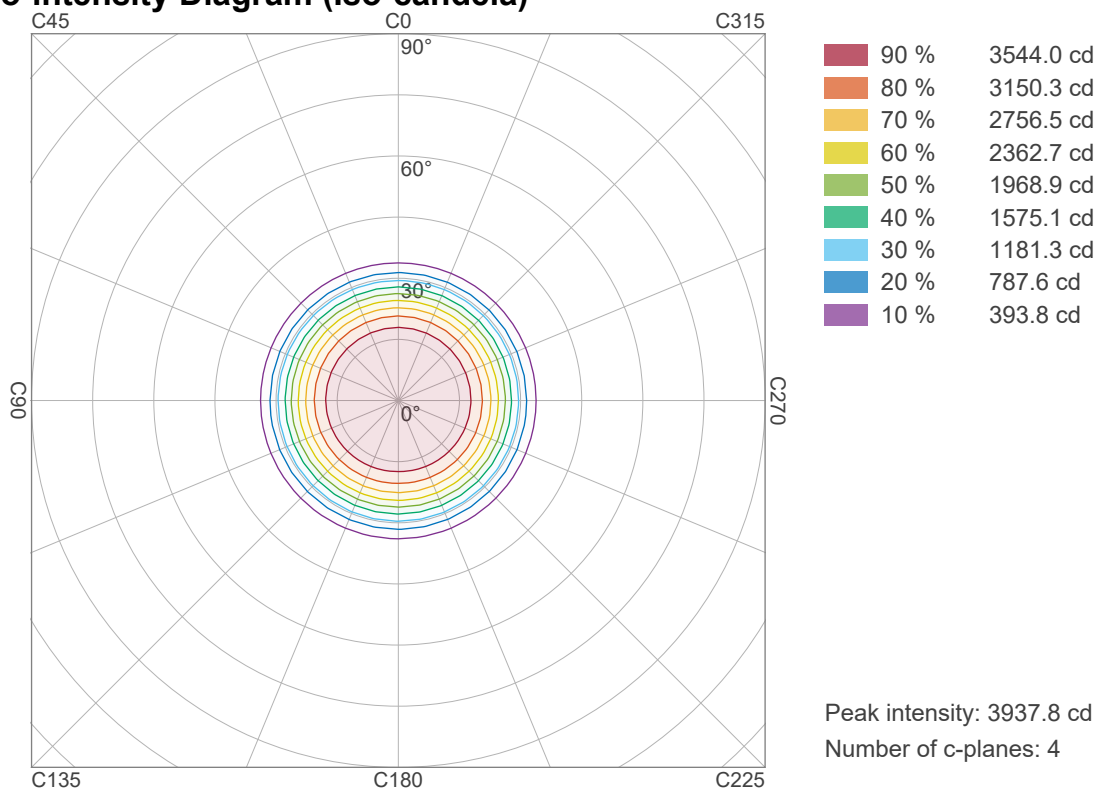


Luminaire budgetary diagram

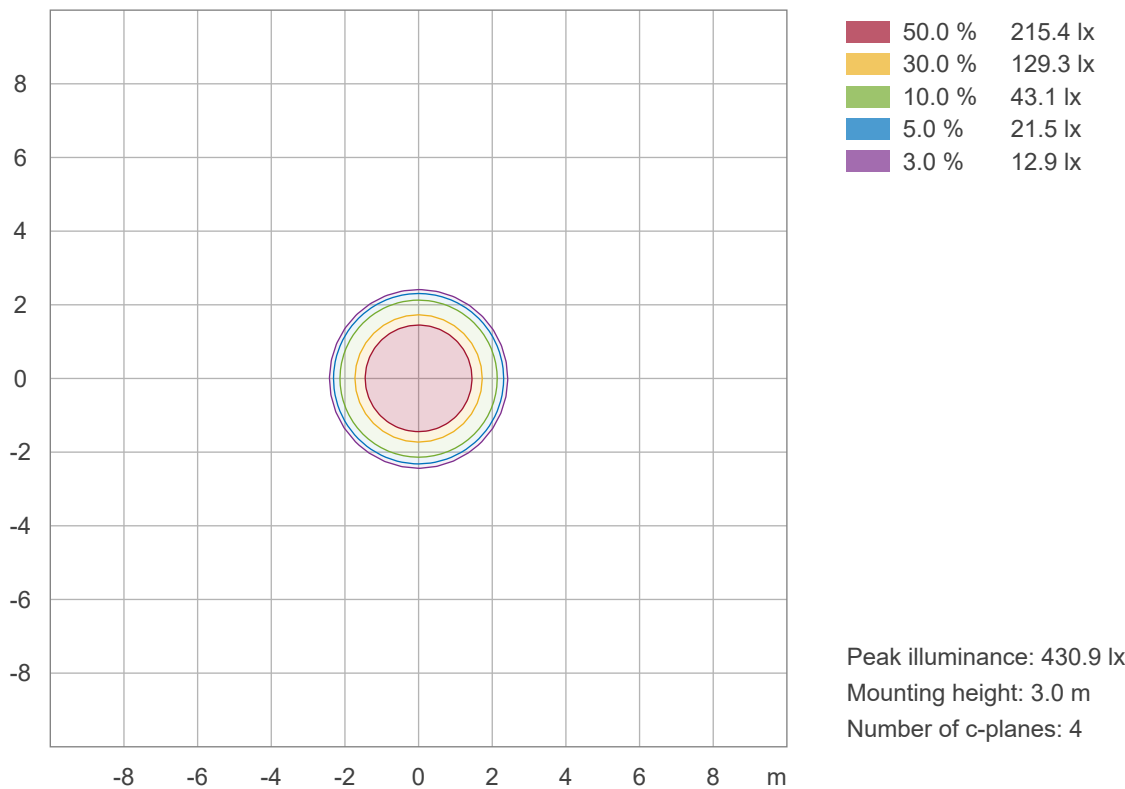
LAMPS (number of lamps)



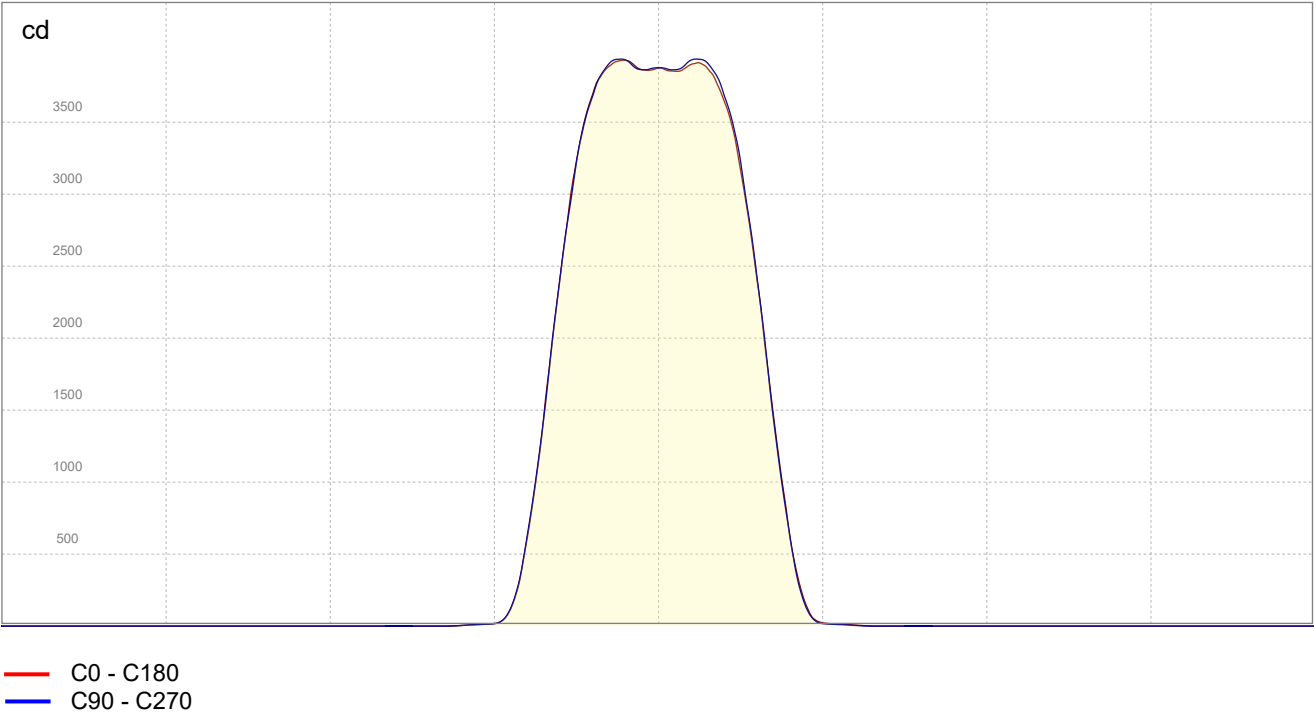
Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)

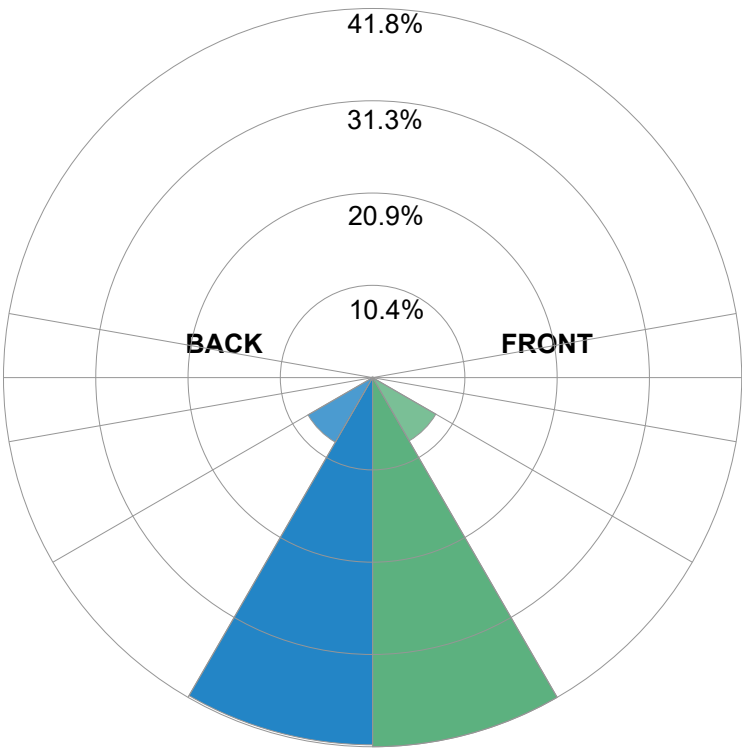


Linear intensity distribution



IESNA TM-15-07 Luminaire Classification System For Outdoor Luminaires

BUG rating B3 U0 G0



Forward Light

Low (0-30°)	1349	lm	41.8%
Medium (30-60°)	266.8	lm	8.3%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Back Light

Low (0-30°)	1341.8	lm	41.5%
Medium (30-60°)	272.4	lm	8.4%
High (60-80°)	0	lm	0%
Very High	0	lm	0%

Uplight

Low (90-100°)	0	lm	0%
High (100-180°)	0	lm	0%

Total

Sum	3230	lm	100%
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