

# Light Measurement Report

Print date: 22/02/2023

Measurement date and time: 22/02/2023 11:05:15 – Measurement no. VFR-230222-3045-MS

Measurement tracking No. and Link: [VT230222-003405](#)

Operator:



## Laboratory and Equipment

Laboratory Owner and Location  
Goniospectrometer System and Type  
Sensor Name, Calibr. Date and Serial No.  
Spectrometer Manufacturer and Model

DVT Light, Randers SV, Denmark  
LabSpion – Type C, horizontal  
LabSensor Model2 – 15/01/2021 – 3482137104  
Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

## Measurement Conditions

Number of C-planes and Resolution  
 $\gamma$  (gamma)-Resolution  
Test Distance  
Input Power, Power and Displ. Factors  
Input RMS Voltage and Current  
Frequency of Input Power  
Warm-up Time and Variation

2 planes – 180°  
5°  
3,23 m  
244,6 W – PF 0,92 – DPF 0,95  
228 V – 1,17 A  
50 Hz  
Not completed – 2,0%

## Tested Light Source

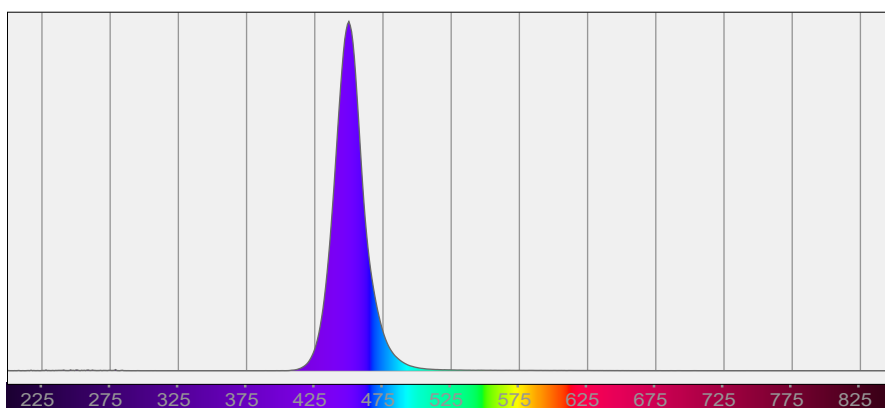
Product Name  
Item No. and Manufacturer  
Product Description (line 1)

PJ-5 Wide Blue  
– DVT Light

## Main Light Measurement Results

Output – Total Lumen (Up% / Down%)  
Efficiency  
Peak Intensity and Beam Angle  
Correlated Color Temperature, Target/Measured  
Color Rendering Index  
Color Rendering TM30-18  
Color Shift, CIE duv and MacAdam Steps  
Flicker

1671 lm – 0,07% / 99,93%  
7 lm/W  
1321 cd – 53,2°  
CCT = 0 K / 0 K  
CRI 0,0  
R<sub>f</sub> 0,0 – R<sub>g</sub> 0,0  
Duv n/a – SDCM n/a  
SVM n/a – PstLM n/a



# Light Measurement Report

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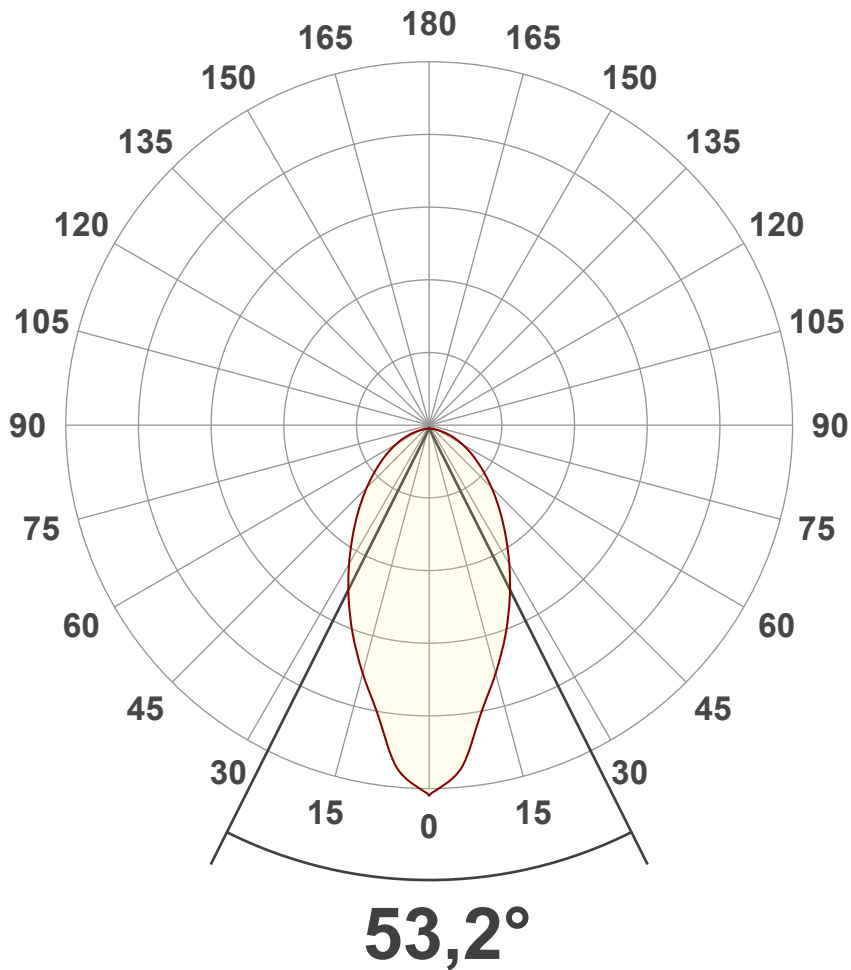
Measurement tracking No. and Link: [VT230222-003405](#)

Operator:



## Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

Output (total Lumen)	1671 lm
Lumen Up% / Down%	0,07% / 99,93%
Peak Intensity	1321 cd
Beam Angle (50%)	53,2°
Beam Angle (90%)	53,2°
Beam Angle (10%)	53,2°

### Cut-off Angle

Average 2,5%	159,8°
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### Field Angle

Average 10%	130,1°
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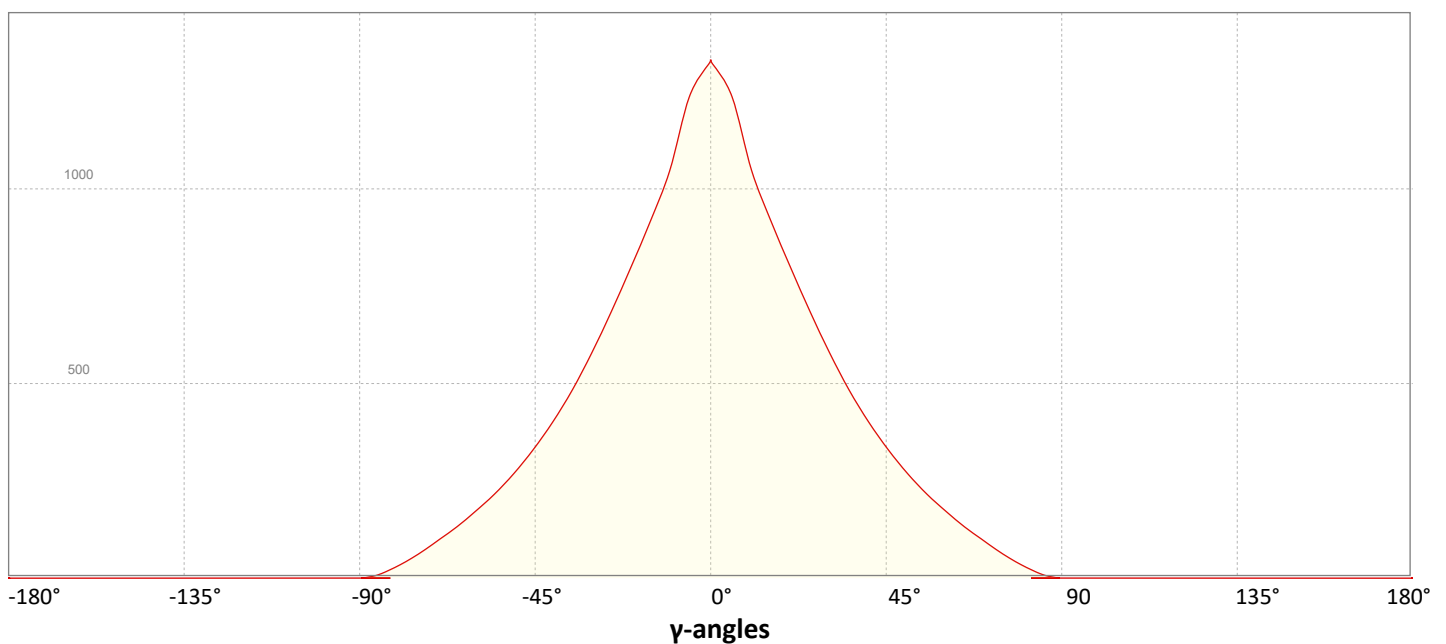
### Intensity Ratio

In 120° cone	87,3%
In 90° cone	68,1%

**C000-C180**

**C090-C270**

## Linear distribution diagram - Intensity (candela) vs $\gamma$ -angle



# Light Measurement Report

Print date: 22/02/2023

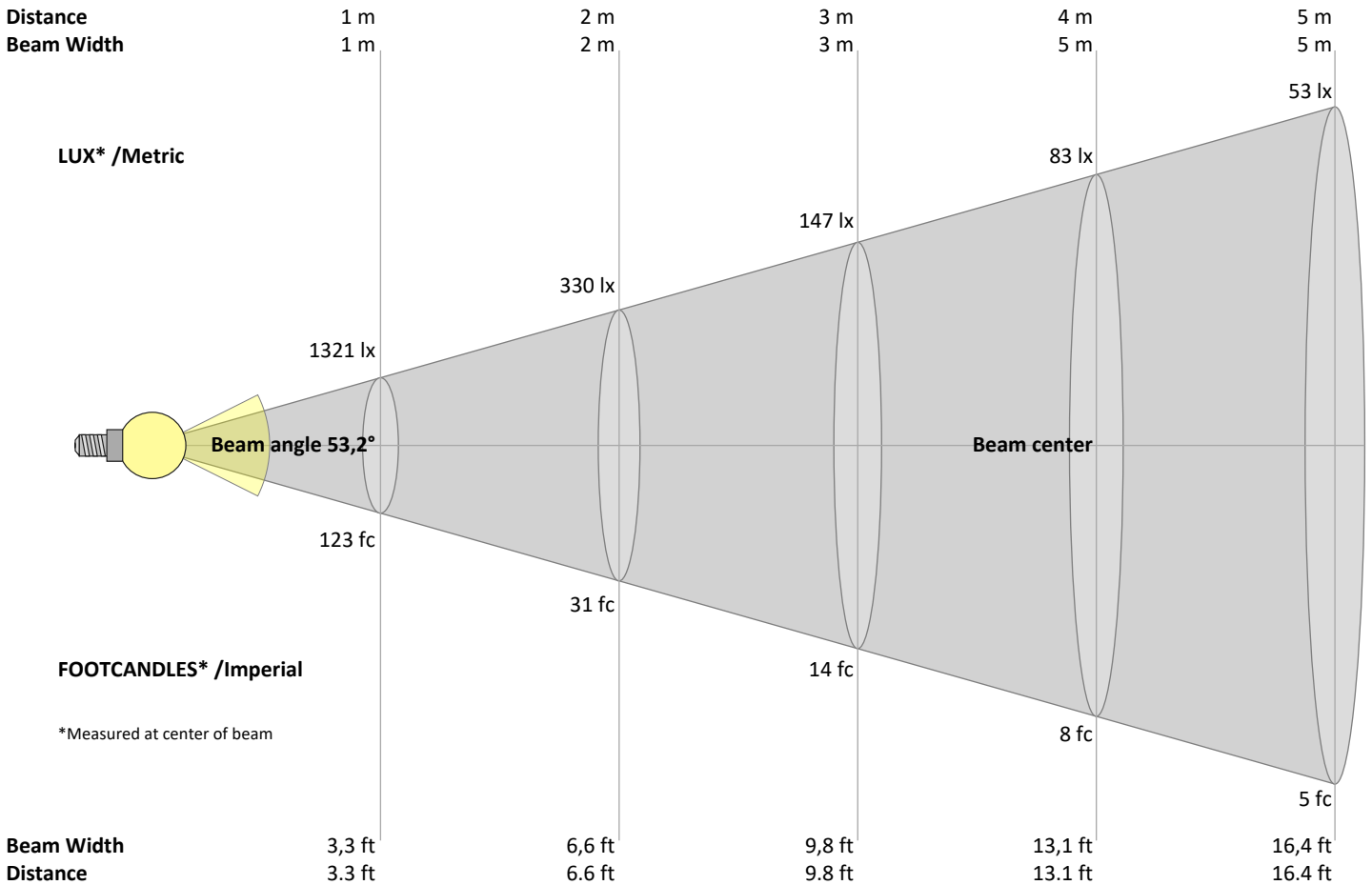
Measurement date and time: 22/02/2023 11:05:15 – Measurement no. VFR-230222-3045-MS

Measurement tracking No. and Link: [VT230222-003405](https://www.dvt-light.com/VT230222-003405)

Operator:



## Beam Details



## Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3,3	6,6	9,8	13,1	16,4	19,7	23	26,2	29,5	32,8	36,1	39,4	42,7	45,9	49,2	52,5	55,8	59,1	62,3	65,6	ft
1321	330	147	83	53	37	27	21	16	13	11	9	8	7	6	5	5	4	4	3	lux
122,7	30,7	13,6	7,7	4,9	3,4	2,5	1,9	1,5	1,2	1	0,9	0,7	0,6	0,5	0,5	0,4	0,4	0,3	0,3	fc

## Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1321	1244	1065	929	809	695	589	492	409	337	274	220	174	132	96	62	32	10	0	0	cd
100%	94%	81%	70%	61%	53%	45%	37%	31%	26%	21%	17%	13%	10%	7%	5%	2%	1%	0%	0%	of 0°val

## Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1321	1244	1065	929	809	695	589	492	409	337	274	220	174	132	96	62	32	10	0	0	cd
100%	94%	81%	70%	61%	53%	45%	37%	31%	26%	21%	17%	13%	10%	7%	5%	2%	1%	0%	0%	of 0°val

## Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1321	1244	1065	929	809	695	589	492	409	337	274	220	174	132	96	62	32	10	0	0	cd
100%	94%	81%	70%	61%	53%	45%	37%	31%	26%	21%	17%	13%	10%	7%	5%	2%	1%	0%	0%	of 0°val

## Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1321	1244	1065	929	809	695	589	492	409	337	274	220	174	132	96	62	32	10	0	0	cd
100%	94%	81%	70%	61%	53%	45%	37%	31%	26%	21%	17%	13%	10%	7%	5%	2%	1%	0%	0%	of 0°val

# Light Measurement Report

Print date: 22/02/2023

Measurement date and time: 22/02/2023 11:02:49 – Measurement no. VFR-230222-3044-MS

Measurement tracking No. and Link: [VT230222-002359](#)

Operator:



## Laboratory and Equipment

Laboratory Owner and Location  
Goniospectrometer System and Type  
Sensor Name, Calibr. Date and Serial No.  
Spectrometer Manufacturer and Model

DVT Light, Randers SV, Denmark  
LabSpion – Type C, horizontal  
LabSensor Model2 – 15/01/2021 – 3482137104  
Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

## Measurement Conditions

Number of C-planes and Resolution  
 $\gamma$  (gamma)-Resolution  
Test Distance  
Input Power, Power and Displ. Factors  
Input RMS Voltage and Current  
Frequency of Input Power  
Warm-up Time and Variation

2 planes – 180°  
5°  
3,23 m  
275,4 W – PF 0,93 – DPF 0,95  
220 V – 1,34 A  
50 Hz  
n/a – n/a%

## Tested Light Source

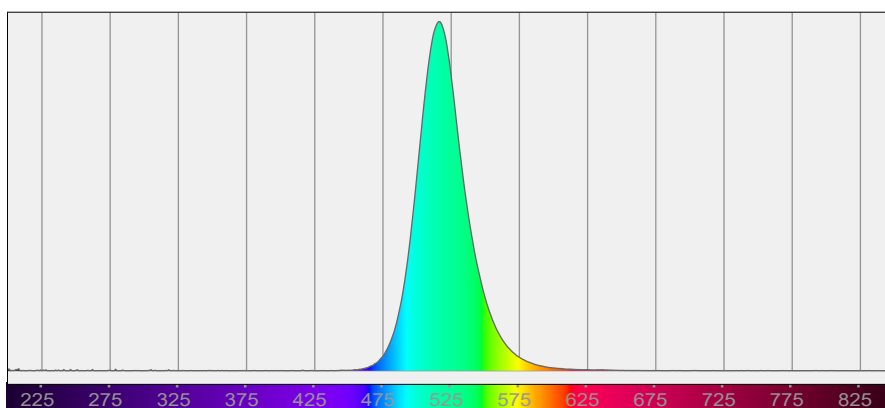
Product Name  
Item No. and Manufacturer  
Product Description (line 1)

PJ-5 Wide Green  
– DVT Light

## Main Light Measurement Results

Output – Total Lumen (Up% / Down%)  
Efficiency  
Peak Intensity and Beam Angle  
Correlated Color Temperature, Target/Measured  
Color Rendering Index  
Color Rendering TM30-18  
Color Shift, CIE duv and MacAdam Steps  
Flicker

6475 lm – 0,08% / 99,92%  
24 lm/W  
6657 cd – 40,6°  
CCT = 0 K / 0 K  
CRI 0,0  
R<sub>f</sub> 0,0 – R<sub>g</sub> 0,0  
Duv n/a – SDCM n/a  
SVM n/a – PstLM n/a



# Light Measurement Report

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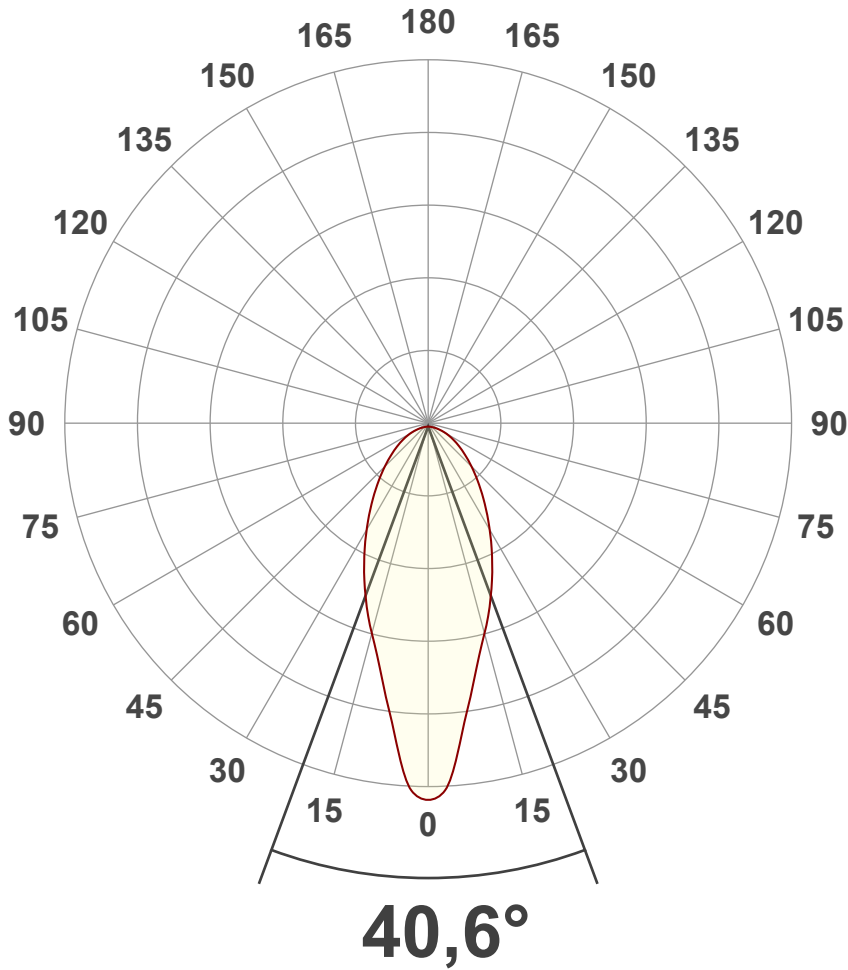
Measurement tracking No. and Link: [VT230222-002359](#)

Operator:



## Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

Output (total Lumen)	6475 lm
Lumen Up% / Down%	0,08% / 99,92%
Peak Intensity	6657 cd
Beam Angle (50%)	40,6°
Beam Angle (90%)	40,6°
Beam Angle (10%)	40,6°

### Cut-off Angle

Average 2,5%	154,7°
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### Field Angle

Average 10%	116,1°
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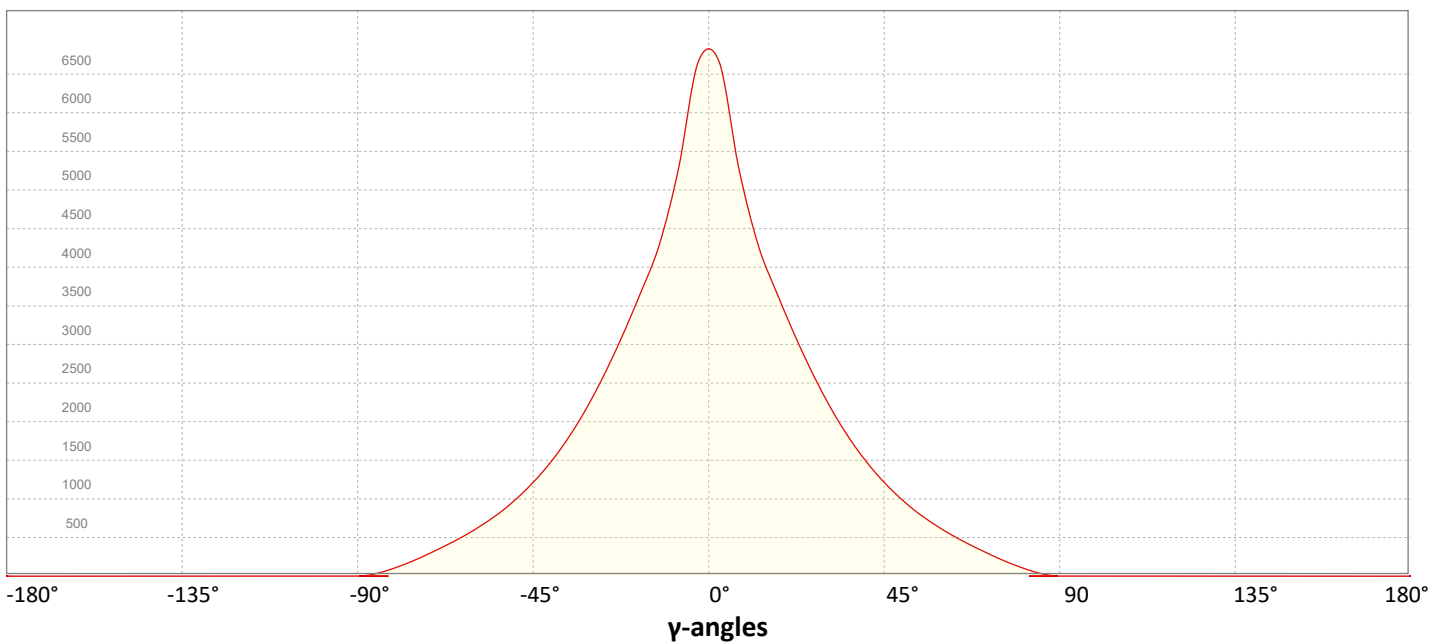
### Intensity Ratio

In 120° cone	88,7%
In 90° cone	71,2%

**C000-C180**

**C090-C270**

## Linear distribution diagram - Intensity (candela) vs $\gamma$ -angle



# Light Measurement Report

Print date: 22/02/2023

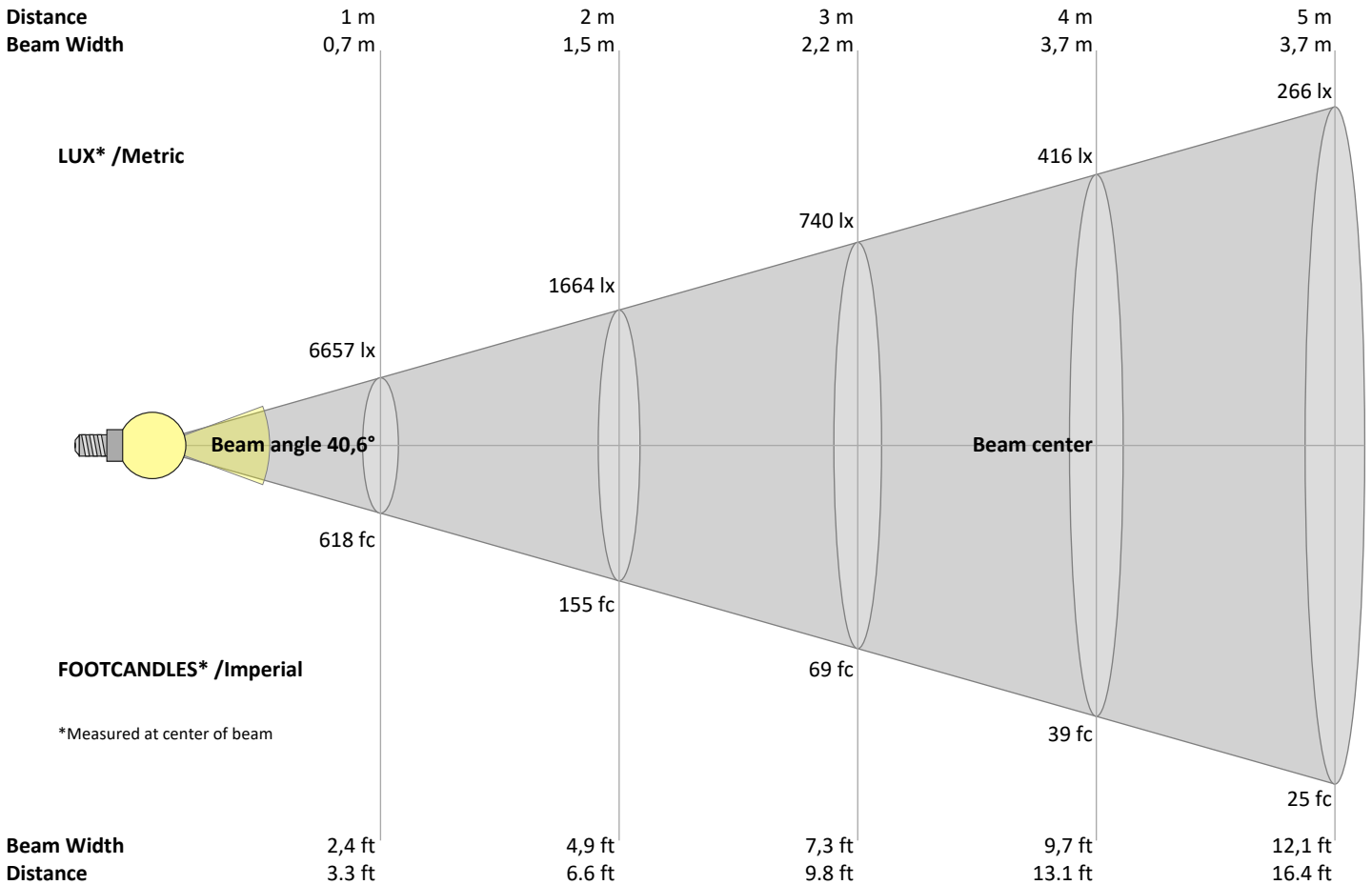
Measurement date and time: 22/02/2023 11:02:49 – Measurement no. VFR-230222-3044-MS

Measurement tracking No. and Link: [VT230222-002359](#)

Operator:



## Beam Details



## Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3,3	6,6	9,8	13,1	16,4	19,7	23	26,2	29,5	32,8	36,1	39,4	42,7	45,9	49,2	52,5	55,8	59,1	62,3	65,6	ft
6657	1664	740	416	266	185	136	104	82	67	55	46	39	34	30	26	23	21	18	17	lux
618,4	154,6	68,7	38,7	24,7	17,2	12,6	9,7	7,6	6,2	5,1	4,3	3,7	3,2	2,7	2,4	2,1	1,9	1,7	1,5	fc

## Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
6657	6023	4824	3987	3366	2803	2303	1874	1516	1220	975	773	604	460	333	216	115	36	1	1	cd
100%	90%	72%	60%	51%	42%	35%	28%	23%	18%	15%	12%	9%	7%	5%	3%	2%	1%	0%	0%	of 0°val

## Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
6657	6023	4824	3987	3366	2803	2303	1874	1516	1220	975	773	604	460	333	216	115	36	1	1	cd
100%	90%	72%	60%	51%	42%	35%	28%	23%	18%	15%	12%	9%	7%	5%	3%	2%	1%	0%	0%	of 0°val

## Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
6657	6023	4824	3987	3366	2803	2303	1874	1516	1220	975	773	604	460	333	216	115	36	1	1	cd
100%	90%	72%	60%	51%	42%	35%	28%	23%	18%	15%	12%	9%	7%	5%	3%	2%	1%	0%	0%	of 0°val

## Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
6657	6023	4824	3987	3366	2803	2303	1874	1516	1220	975	773	604	460	333	216	115	36	1	1	cd
100%	90%	72%	60%	51%	42%	35%	28%	23%	18%	15%	12%	9%	7%	5%	3%	2%	1%	0%	0%	of 0°val

# Light Measurement Report

Print date: 22/02/2023

Measurement date and time: 22/02/2023 11:07:53 – Measurement no. VFR-230222-3047-MS

Measurement tracking No. and Link: [VT230222-007250](#)

Operator:



## Laboratory and Equipment

Laboratory Owner and Location  
Goniospectrometer System and Type  
Sensor Name, Calibr. Date and Serial No.  
Spectrometer Manufacturer and Model

DVT Light, Randers SV, Denmark  
LabSpion – Type C, horizontal  
LabSensor Model2 – 15/01/2021 – 3482137104  
Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

## Measurement Conditions

Number of C-planes and Resolution  
 $\gamma$  (gamma)-Resolution  
Test Distance  
Input Power, Power and Displ. Factors  
Input RMS Voltage and Current  
Frequency of Input Power  
Warm-up Time and Variation

2 planes – 180°  
5°  
3,23 m  
571,3 W – PF 0,96 – DPF 0,98  
222 V – 2,68 A  
50 Hz  
n/a – n/a%

## Tested Light Source

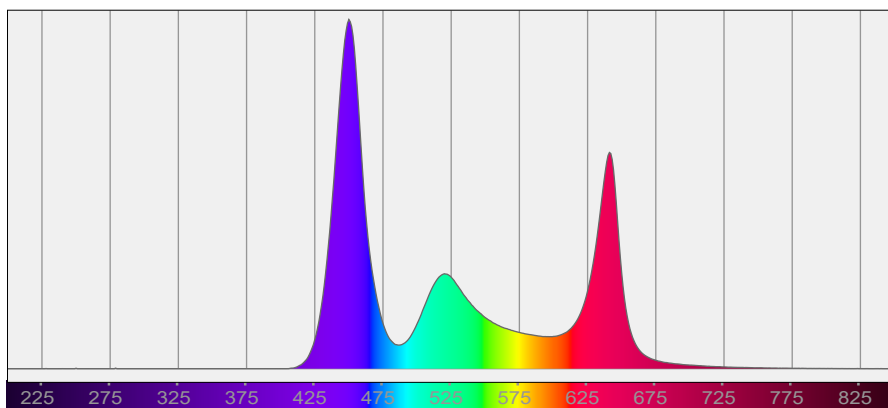
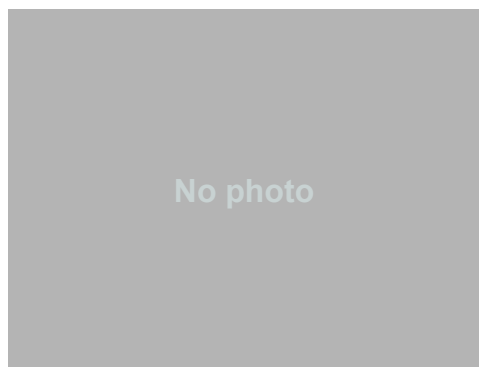
Product Name  
Item No. and Manufacturer  
Product Description (line 1)

PJ-5 Wide raw white peak  
– DVT Light

## Main Light Measurement Results

Output – Total Lumen (Up% / Down%)  
Efficiency  
Peak Intensity and Beam Angle  
Correlated Color Temperature, Target/Measured  
Color Rendering Index  
Color Rendering TM30-18  
Color Shift, CIE duv and MacAdam Steps  
Flicker

16542 lm – 0% / 100%  
29 lm/W  
18892 cd – 36,7°  
CCT = 0 K / 0 K  
CRI 0,0  
 $R_f$  0,0 –  $R_g$  0,0  
Duv n/a – SDCM n/a  
SVM n/a – PstLM n/a



# Light Measurement Report

Print date: 22/02/2023

Measurement date and time: 22/02/2023 11:07:53 – Measurement no. VFR-230222-3047-MS

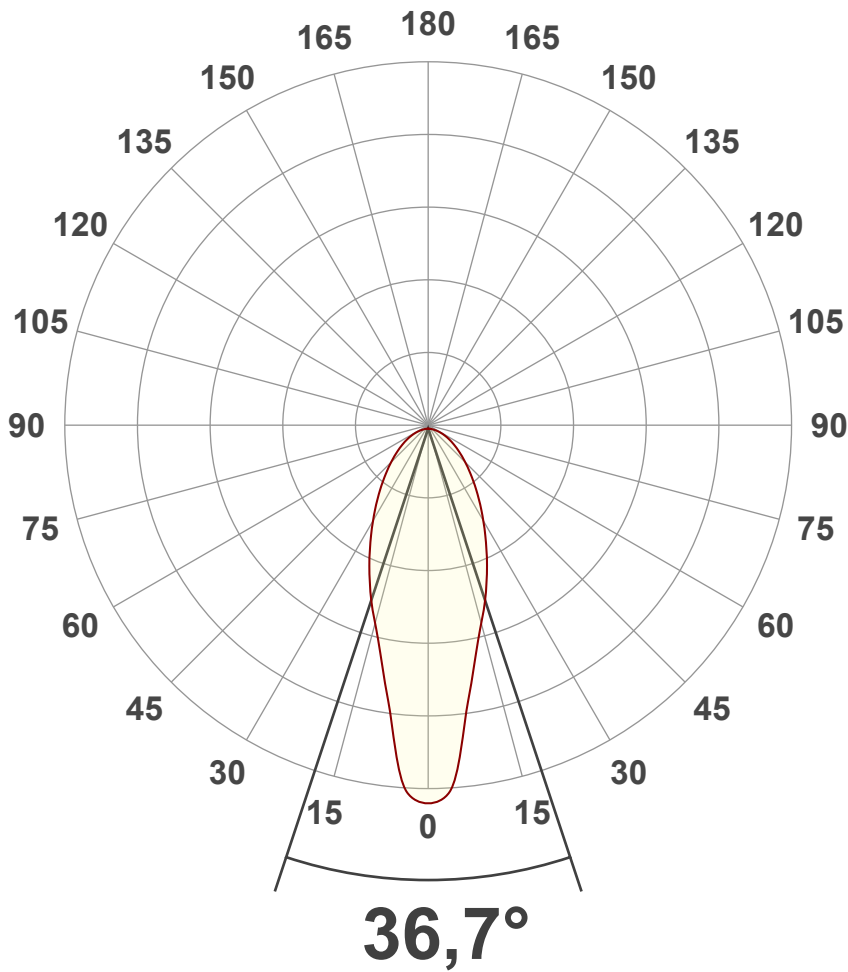
Measurement tracking No. and Link: [VT230222-007250](https://www.dvt-light.com/VT230222-007250)

Operator:



## Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

Output (total Lumen)	16542 lm
Lumen Up% / Down%	0% / 100%
Peak Intensity	18892 cd
Beam Angle (50%)	36,7°
Beam Angle (90%)	36,7°
Beam Angle (10%)	36,7°

### Cut-off Angle

Average 2,5%	151,3°
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### Field Angle

Average 10%	109,8°
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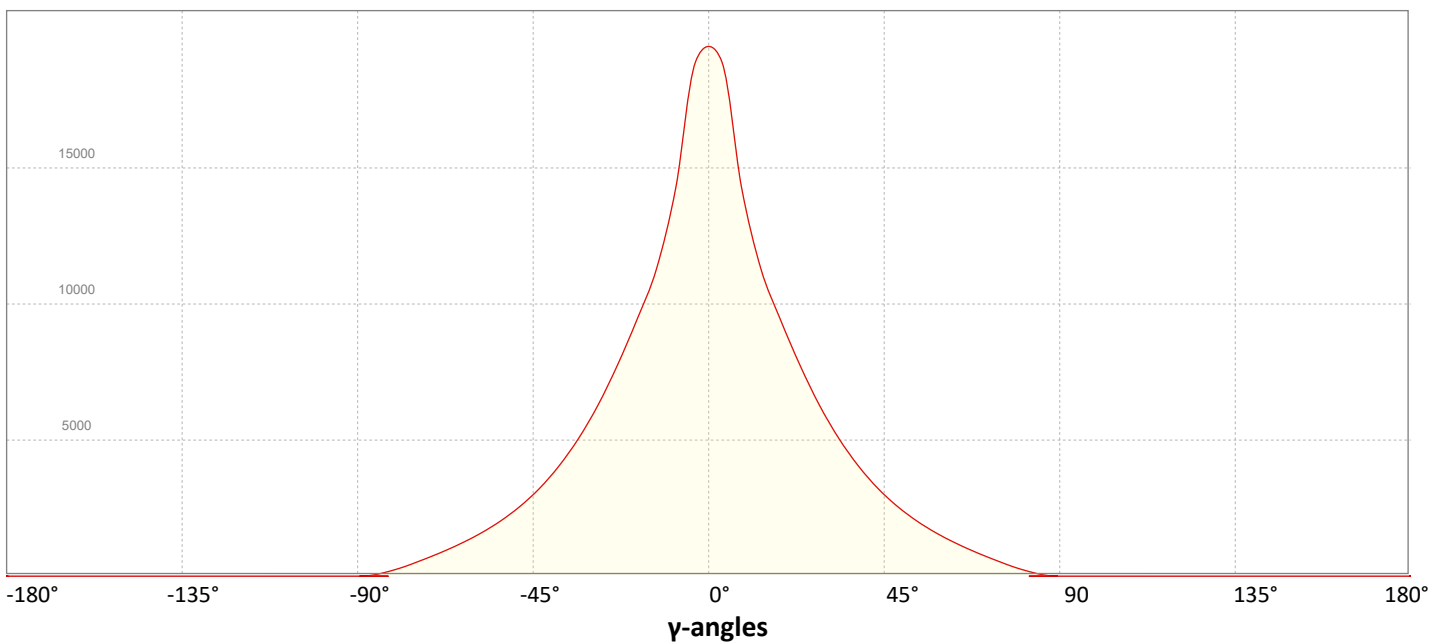
### Intensity Ratio

In 120° cone	89,6%
In 90° cone	72,8%

**C000-C180**

**C090-C270**

## Linear distribution diagram - Intensity (candela) vs $\gamma$ -angle





# Light Measurement Report

Print date: 22/02/2023

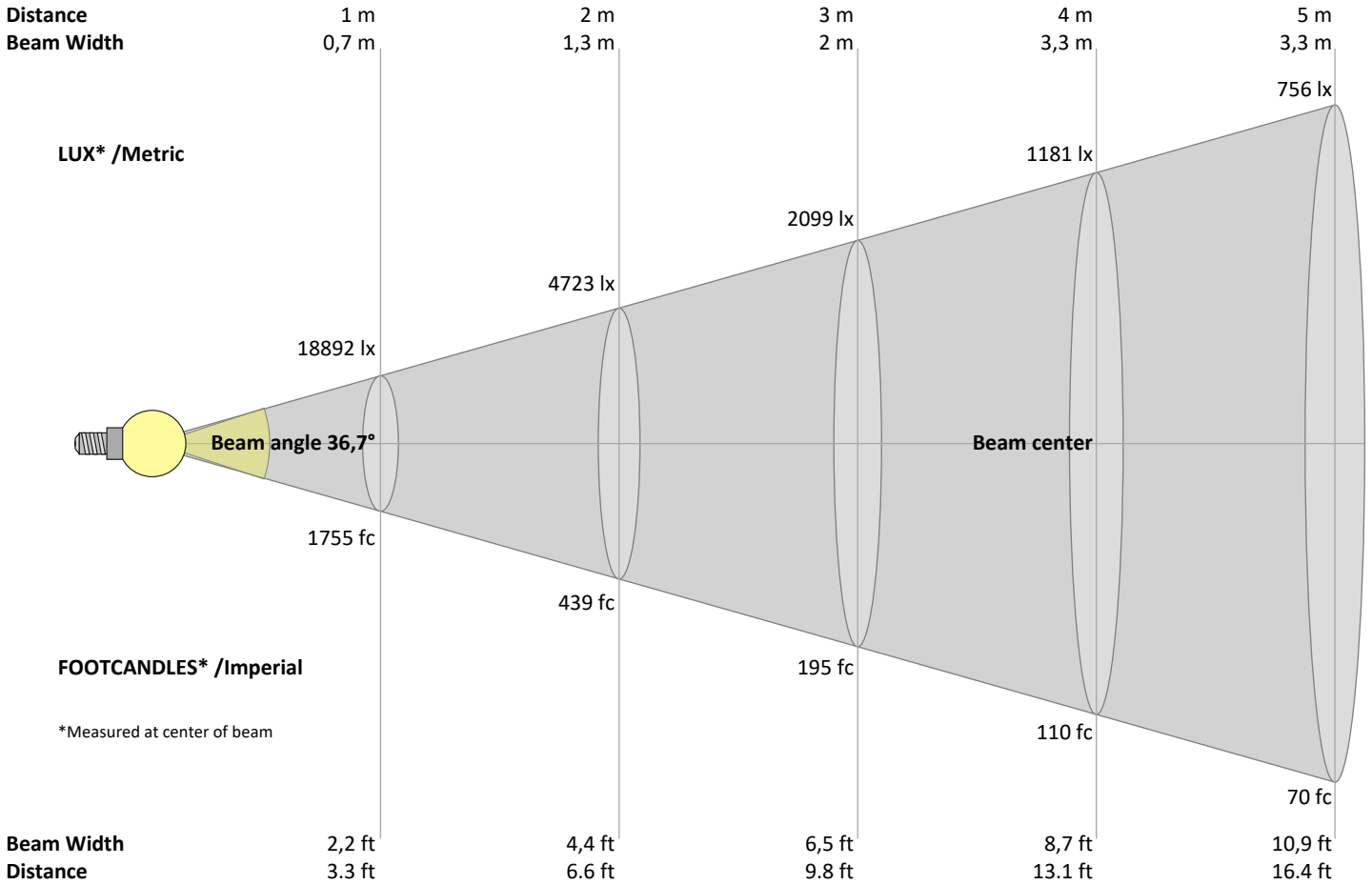
Measurement date and time: 22/02/2023 11:07:53 – Measurement no. VFR-230222-3047-MS

Measurement tracking No. and Link: [VT230222-007250](https://www.vfr-light.com/VT230222-007250)

Operator:



## Beam Details



## Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3,3	6,6	9,8	13,1	16,4	19,7	23	26,2	29,5	32,8	36,1	39,4	42,7	45,9	49,2	52,5	55,8	59,1	62,3	65,6	ft
18892	4723	2099	1181	756	525	386	295	233	189	156	131	112	96	84	74	65	58	52	47	lux
1755,1	438,8	195	109,7	70,2	48,8	35,8	27,4	21,7	17,6	14,5	12,2	10,4	9	7,8	6,9	6,1	5,4	4,9	4,4	fc

## Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
18,9K	17,4K	13,3K	10,7K	8,9K	7,3K	5,9K	4,7K	3,8K	3,0K	2,4K	1,9K	1,5K	1,1K	0,8K	0,5K	0,3K	0,1K	0,0K	0,0K	cd
100%	92%	71%	57%	47%	39%	31%	25%	20%	16%	13%	10%	8%	6%	4%	3%	1%	0%	0%	0%	of 0°val

## Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
18,9K	17,4K	13,3K	10,7K	8,9K	7,3K	5,9K	4,7K	3,8K	3,0K	2,4K	1,9K	1,5K	1,1K	0,8K	0,5K	0,3K	0,1K	0,0K	0,0K	cd
100%	92%	71%	57%	47%	39%	31%	25%	20%	16%	13%	10%	8%	6%	4%	3%	1%	0%	0%	0%	of 0°val

## Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
18,9K	17,4K	13,3K	10,7K	8,9K	7,3K	5,9K	4,7K	3,8K	3,0K	2,4K	1,9K	1,5K	1,1K	0,8K	0,5K	0,3K	0,1K	0,0K	0,0K	cd
100%	92%	71%	57%	47%	39%	31%	25%	20%	16%	13%	10%	8%	6%	4%	3%	1%	0%	0%	0%	of 0°val

## Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
18,9K	17,4K	13,3K	10,7K	8,9K	7,3K	5,9K	4,7K	3,8K	3,0K	2,4K	1,9K	1,5K	1,1K	0,8K	0,5K	0,3K	0,1K	0,0K	0,0K	cd
100%	92%	71%	57%	47%	39%	31%	25%	20%	16%	13%	10%	8%	6%	4%	3%	1%	0%	0%	0%	of 0°val

# Light Measurement Report

Print date: 22/02/2023

Measurement date and time: 22/02/2023 11:01:10 – Measurement no. VFR-230222-3043-MS

Measurement tracking No. and Link: [VT230222-000921](#)

Operator:



## Laboratory and Equipment

Laboratory Owner and Location  
Goniospectrometer System and Type  
Sensor Name, Calibr. Date and Serial No.  
Spectrometer Manufacturer and Model

DVT Light, Randers SV, Denmark  
LabSpion – Type C, horizontal  
LabSensor Model2 – 15/01/2021 – 3482137104  
Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

## Measurement Conditions

Number of C-planes and Resolution  
 $\gamma$  (gamma)-Resolution  
Test Distance  
Input Power, Power and Displ. Factors  
Input RMS Voltage and Current  
Frequency of Input Power  
Warm-up Time and Variation

2 planes – 180°  
5°  
3,23 m  
209,7 W – PF 0,9 – DPF 0,92  
224 V – 1,04 A  
50 Hz  
n/a – n/a%

## Tested Light Source

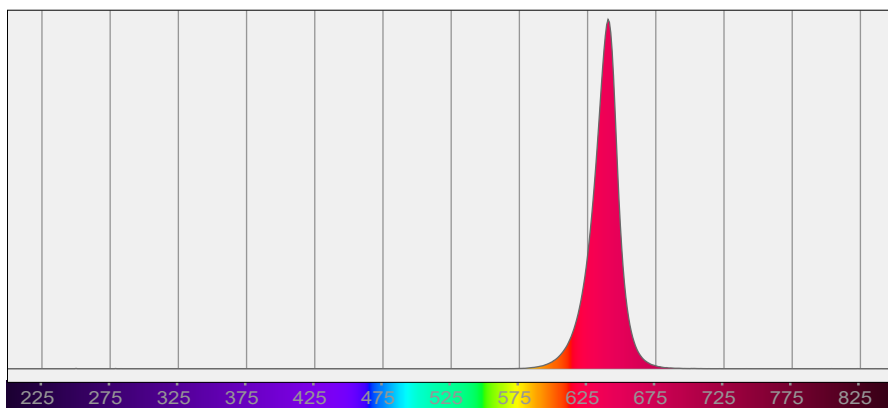
Product Name  
Item No. and Manufacturer  
Product Description (line 1)

PJ-5 Wide Red  
– DVT Light

## Main Light Measurement Results

Output – Total Lumen (Up% / Down%)  
Efficiency  
Peak Intensity and Beam Angle  
Correlated Color Temperature, Target/Measured  
Color Rendering Index  
Color Rendering TM30-18  
Color Shift, CIE duv and MacAdam Steps  
Flicker

3860 lm – 0,02% / 99,98%  
18 lm/W  
6196 cd – 24,7°  
CCT = 0 K / 0 K  
CRI 0,0  
 $R_f$  0,0 –  $R_g$  0,0  
Duv n/a – SDCM n/a  
SVM n/a – PstLM n/a



# Light Measurement Report

Print date: 22/02/2023

Measurement date and time: 22/02/2023 11:01:10 – Measurement no. VFR-230222-3043-MS

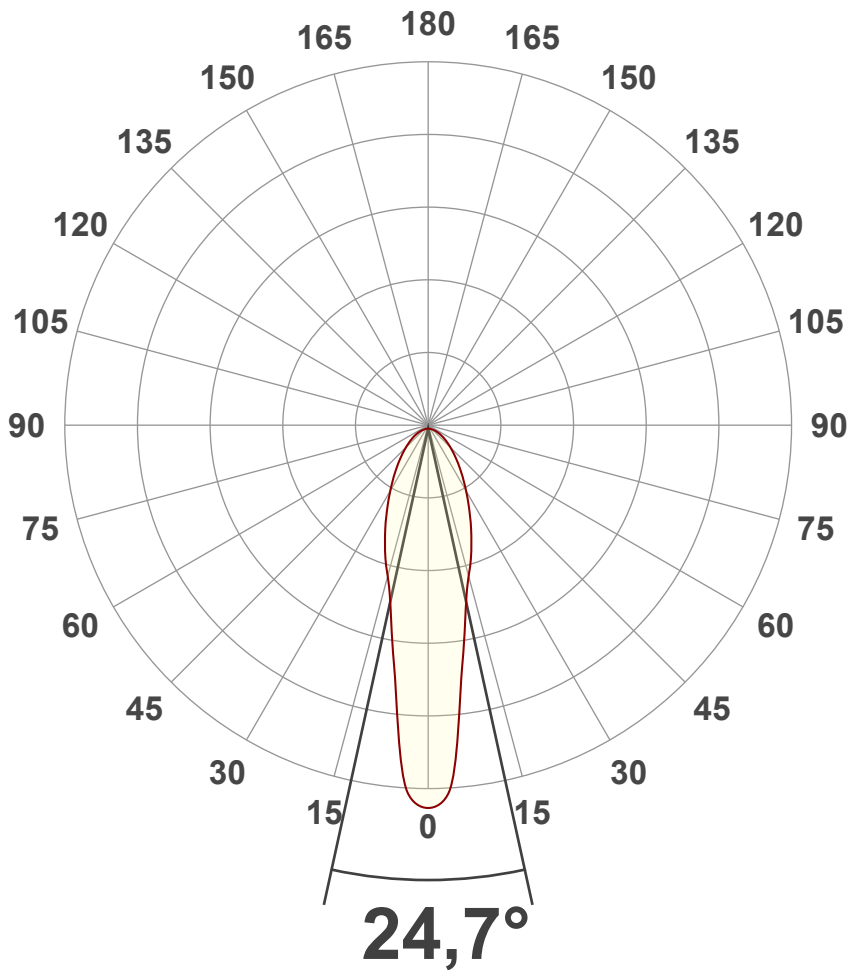
Measurement tracking No. and Link: [VT230222-000921](#)

Operator:



## Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

Output (total Lumen)	3860 lm
Lumen Up% / Down%	0,02% / 99,98%
Peak Intensity	6196 cd
Beam Angle (50%)	24,7°
Beam Angle (90%)	24,7°
Beam Angle (10%)	24,7°

### Cut-off Angle

Average 2,5%	140,6°
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### Field Angle

Average 10%	91,6°
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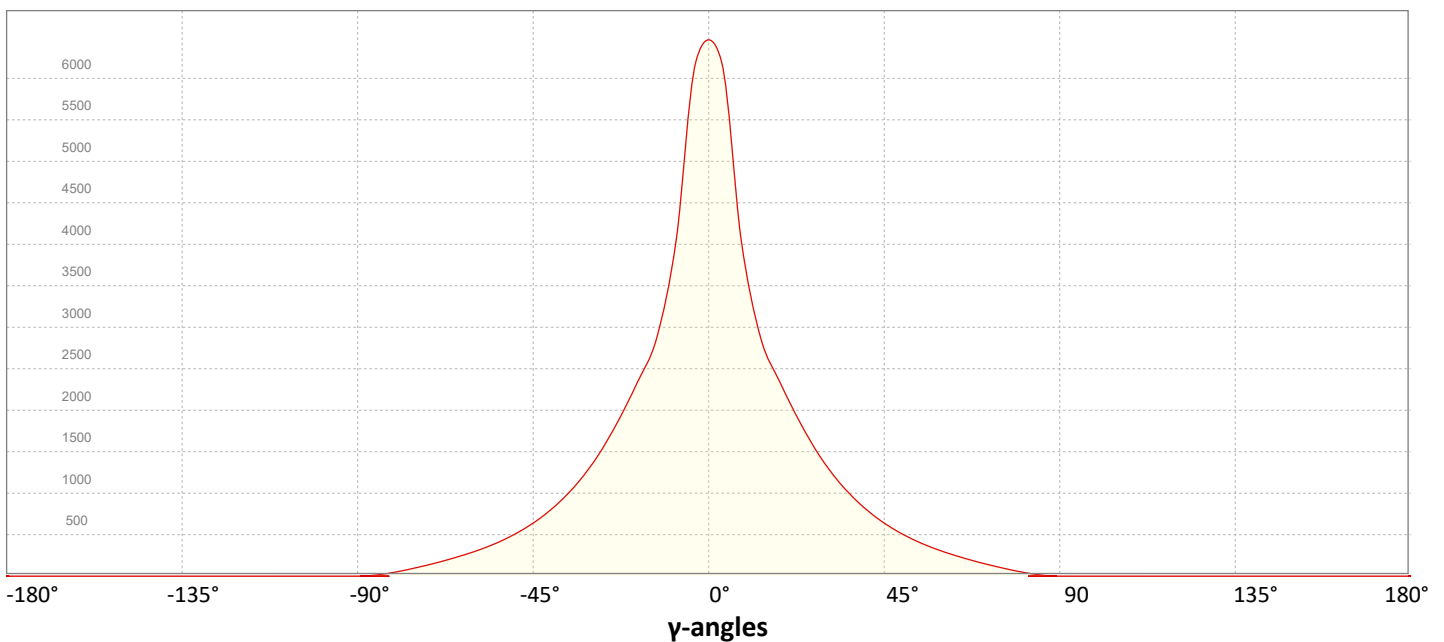
### Intensity Ratio

In 120° cone	90,9%
In 90° cone	76,0%

C000-C180

C090-C270

## Linear distribution diagram - Intensity (candela) vs $\gamma$ -angle



# Light Measurement Report

Print date: 22/02/2023

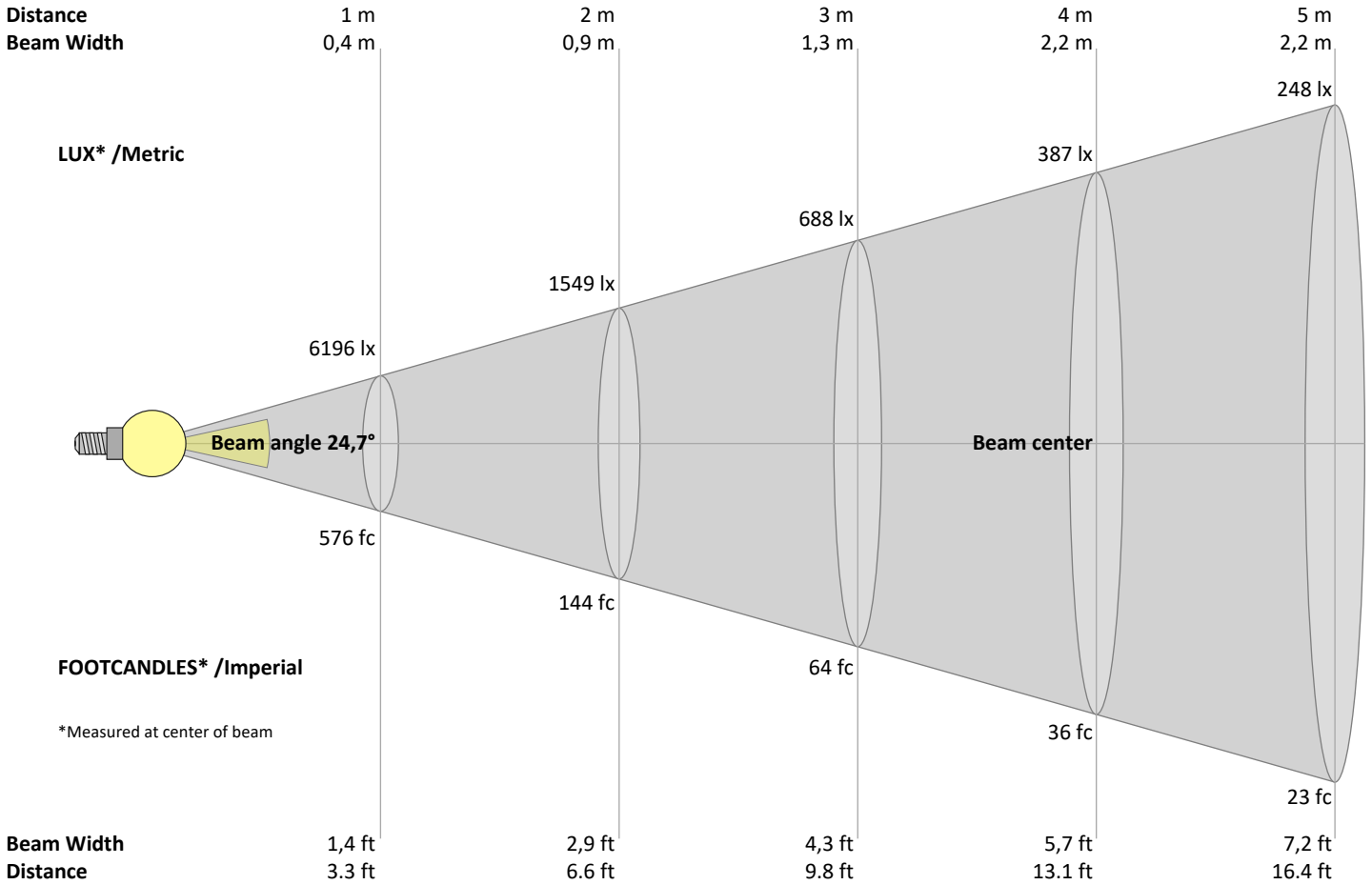
Measurement date and time: 22/02/2023 11:01:10 – Measurement no. VFR-230222-3043-MS

Measurement tracking No. and Link: [VT230222-000921](https://www.dvt-light.com/VT230222-000921)

Operator:



## Beam Details



## Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3,3	6,6	9,8	13,1	16,4	19,7	23	26,2	29,5	32,8	36,1	39,4	42,7	45,9	49,2	52,5	55,8	59,1	62,3	65,6	ft
6196	1549	688	387	248	172	126	97	76	62	51	43	37	32	28	24	21	19	17	15	lux
575,7	143,9	64	36	23	16	11,7	9	7,1	5,8	4,8	4	3,4	2,9	2,6	2,2	2	1,8	1,6	1,4	fc

## Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
6196	6196	5899	5043	4187	3657	3182	2800	2583	2366	2173	1985	1805	1644	1483	1350	1223	1105	1006	906	cd
100%	100%	95%	81%	68%	59%	51%	45%	42%	38%	35%	32%	29%	27%	24%	22%	20%	18%	16%	15%	of 0°val

## Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
6196	6196	5899	5043	4187	3657	3182	2800	2583	2366	2173	1985	1805	1644	1483	1350	1223	1105	1006	906	cd
100%	100%	95%	81%	68%	59%	51%	45%	42%	38%	35%	32%	29%	27%	24%	22%	20%	18%	16%	15%	of 0°val

## Intensities in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
6196	6196	5899	5043	4187	3657	3182	2800	2583	2366	2173	1985	1805	1644	1483	1350	1223	1105	1006	906	cd
100%	100%	95%	81%	68%	59%	51%	45%	42%	38%	35%	32%	29%	27%	24%	22%	20%	18%	16%	15%	of 0°val

## Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
6196	6196	5899	5043	4187	3657	3182	2800	2583	2366	2173	1985	1805	1644	1483	1350	1223	1105	1006	906	cd
100%	100%	95%	81%	68%	59%	51%	45%	42%	38%	35%	32%	29%	27%	24%	22%	20%	18%	16%	15%	of 0°val