

Photometric Data Sheet

Laboratory and Equipment

Test Lab
Spectrometer Manufacturer and Model
Measurement Date

Super Bright LEDs - St. Louis, Missouri
LabSpion – Type C, horizontal
2/20/2026

Measurement Conditions

Tested c-planes
Tested Gamma Resolution
Input Power

16 planes – 22.5°
3.75°
75.3 W

Tested Light Source

Luminaire
Basic Luminous Shape
Manufacturer
Description

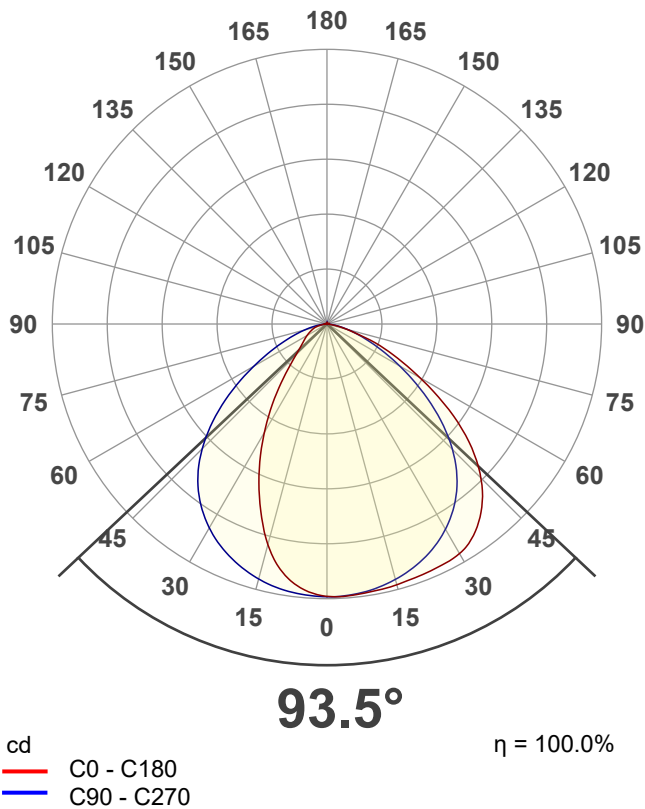
WPA-SW3B80W-H8DBR35 3000K
PANEL
Super Bright LEDs

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index
TM30
SDCM

11376 lm – 0.6% / 99.4%
151 lm/W
5072 cd
3117 K
CRI 72.2
75.9
4.2

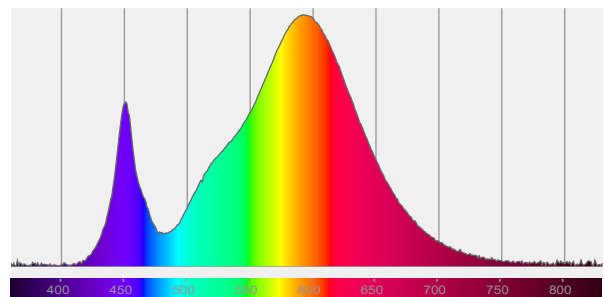
Polar Light Distribution Diagram



Product Photo



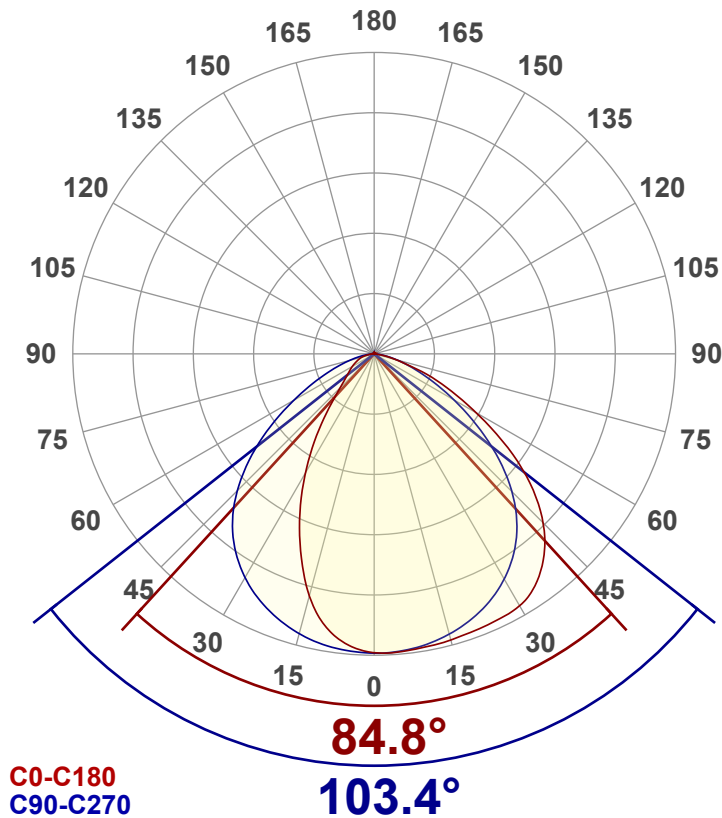
Spectral Power Distribution



Photometric Data Sheet

Luminous Intensity Diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	11376 lm
Lumen Up% / Down%	0.6% / 99.4%
Peak Intensity	5072 cd
Beam Angle (50%-FWHM)	93.55°
Beam Angle - Horizontal	103.4°
Beam Angle - Vertical	84.8°

Cut-off Angle

Average 2.5%	162.2°
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Field Angle

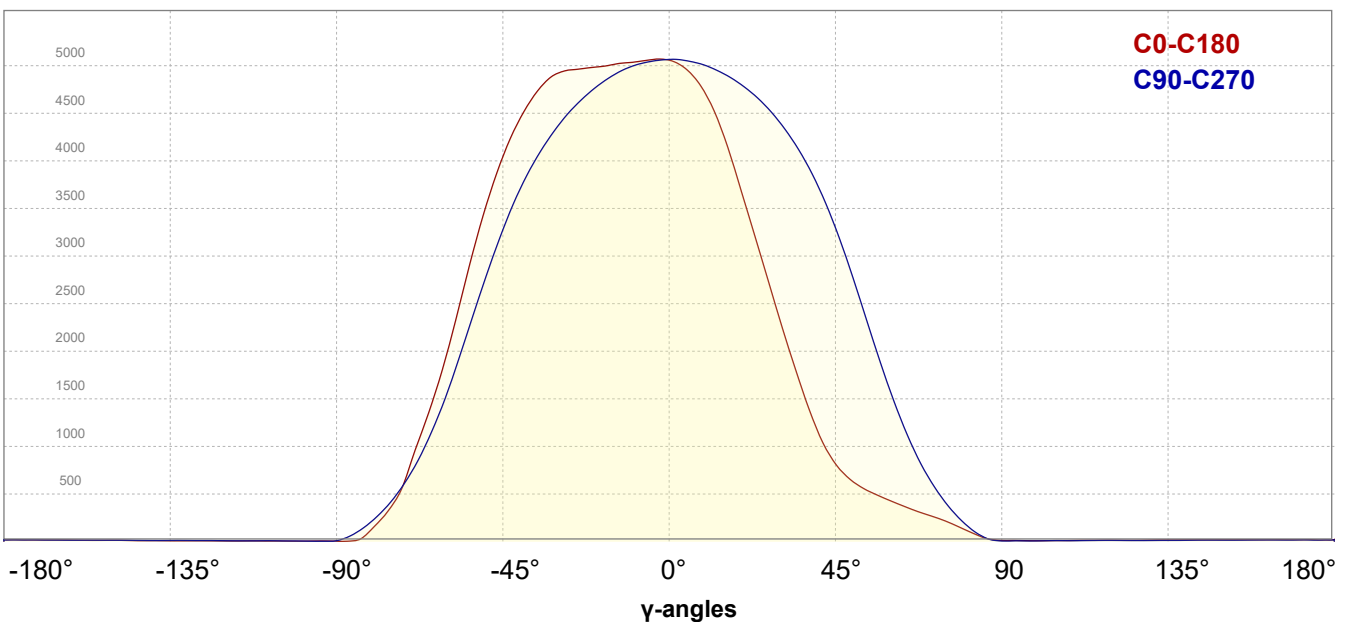
Average 10%	136.8°
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Intensity Ratio

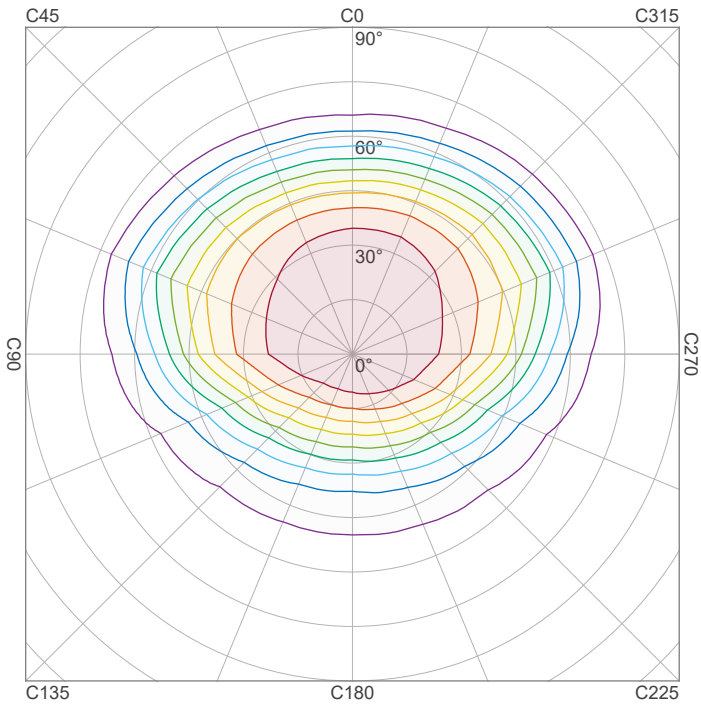
In 120° cone	85.4%
In 90° cone	61.8%

Linear Distribution Diagram

Intensity [cd]



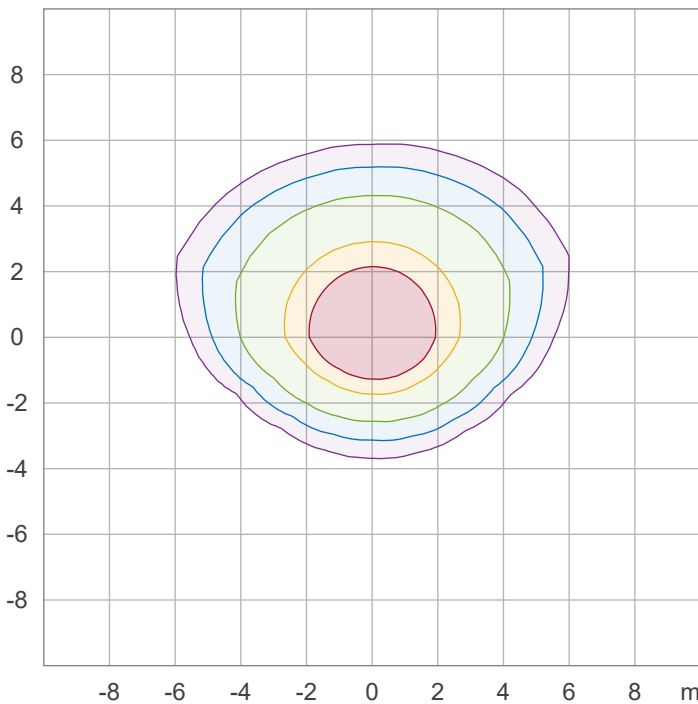
Iso-intensity Diagram (Iso-candela)



90 %	4563.1 cd
80 %	4056.1 cd
70 %	3549.1 cd
60 %	3042.1 cd
50 %	2535.1 cd
40 %	2028.0 cd
30 %	1521.0 cd
20 %	1014.0 cd
10 %	507.0 cd

Peak intensity: 5070.1 cd
 Number of c-planes: 16

Iso-illuminance Diagram (Iso-lux)



50.0 %	281.4 lx
30.0 %	168.8 lx
10.0 %	56.3 lx
5.0 %	28.1 lx
3.0 %	16.9 lx

Peak illuminance: 562.7 lx
 Mounting height: 3.0 m
 Number of c-planes: 16

Photometric Data Sheet

Color Details

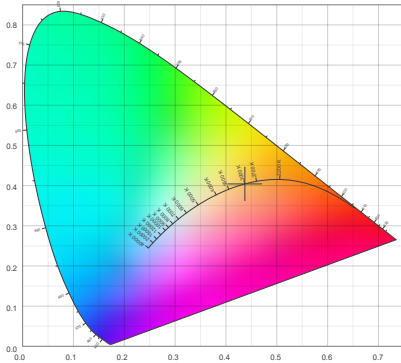
Correlated Color Temperature, Measured
 Color Rendering Index
 Color Rendering Index, R9 (red)
 Color Rendering TM30-18

CCT = 3117 K
 CRI 72.2
 R9 = -35.9
 Rf 75.9
 Rg 93.4

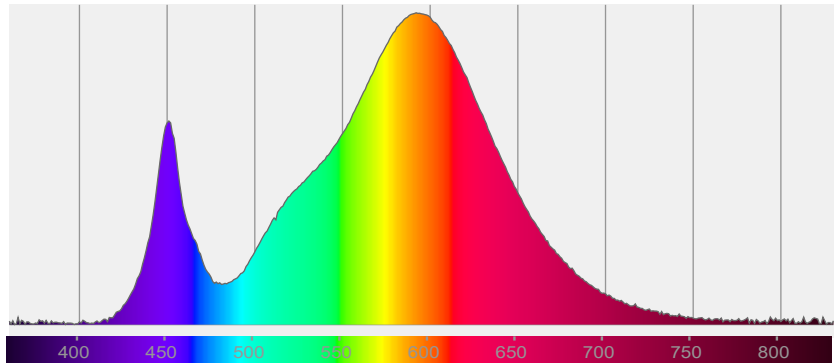
Color deviation from BBL
 Color coordinates CIE 1931
 Color coordinate CIEs 1960
 Color coordinate CIEs 1976
 Color Quality Scale

Duv = -0.0009
 (x;y) = (0.437;0.404)
 (u;v) = (0.251;0.348)
 (u';v') = (0.251;0.521)
 CQS = 71.6

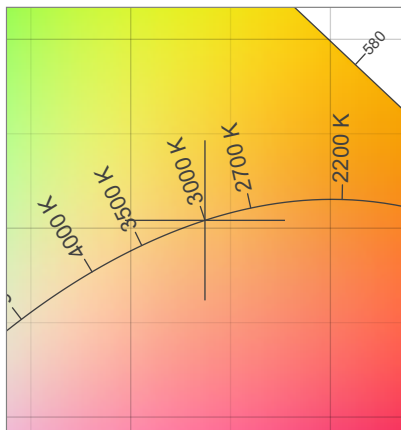
CIE 1931 Chromaticity Diagram



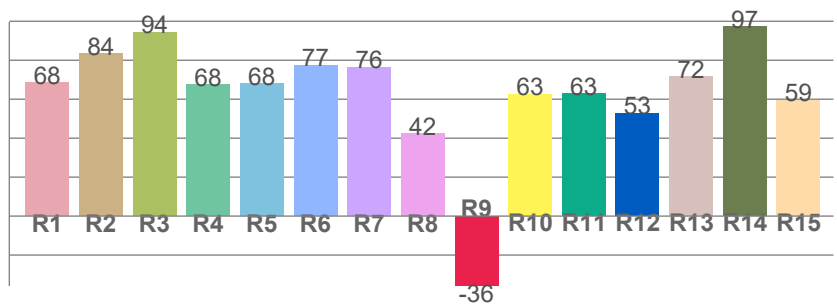
Spectral Power Distribution



CIE 1931 Chromaticity - Zoomed



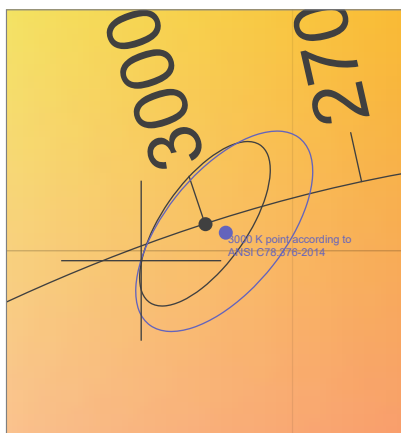
Color Rendering Index per Reference Color (CIE 1995)



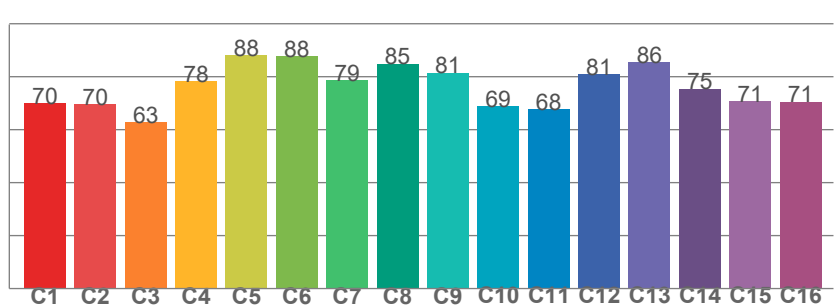
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
68.4	83.5	94.3	67.5	68.0	77.5	76.5	42.3	-35.9	62.6	62.9	52.8	71.5	97.2	59.5

CIE 1931 Chromaticity - SDCM



TM30-18 Rf-values per Hue Bin



TM30-18 Rf-values per hue bin

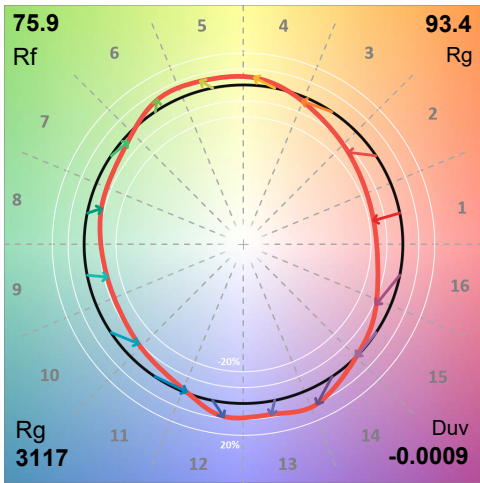
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
69.9	69.6	62.7	78.2	88.1	87.7	78.6	84.9	81.5	68.8	67.8	80.9	85.6	75.4	70.6	70.5



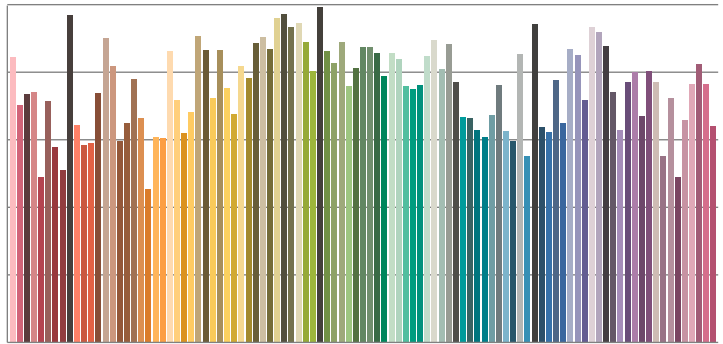
Photometric Data Sheet

Color details - ANSI/IES TM-30-18 Color Rendition Report

Color Vector Graphic



Color Rendition by Color Evaluation Sample (CES)

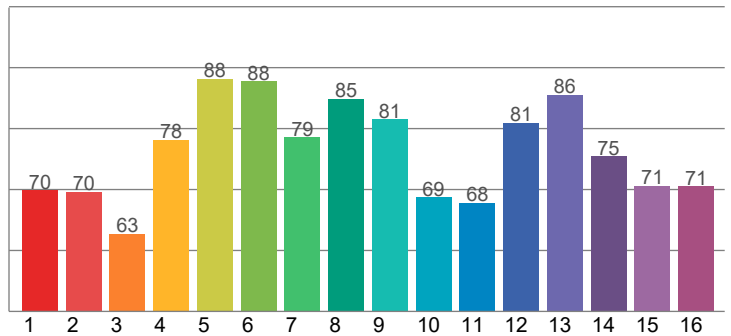


Color evaluation sample CES01 through CES99

Color Distortion Graphic

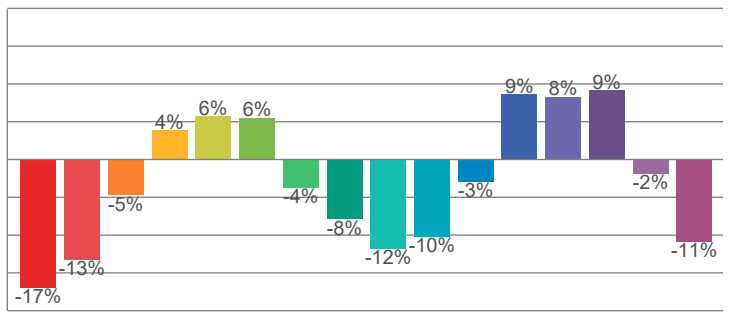


Local Color Fidelity (per hue bin)



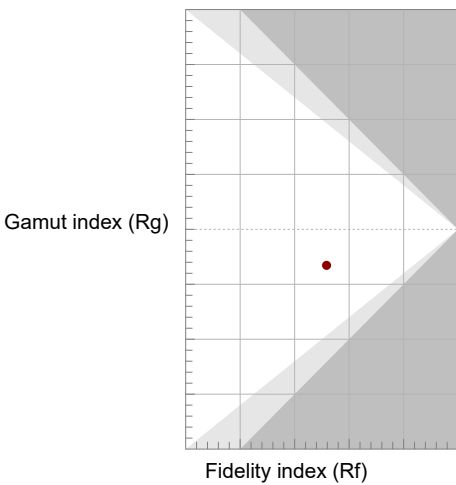
Hue angle bin (j)

Local Chroma Shift (per hue bin)



Hue angle bin (j)

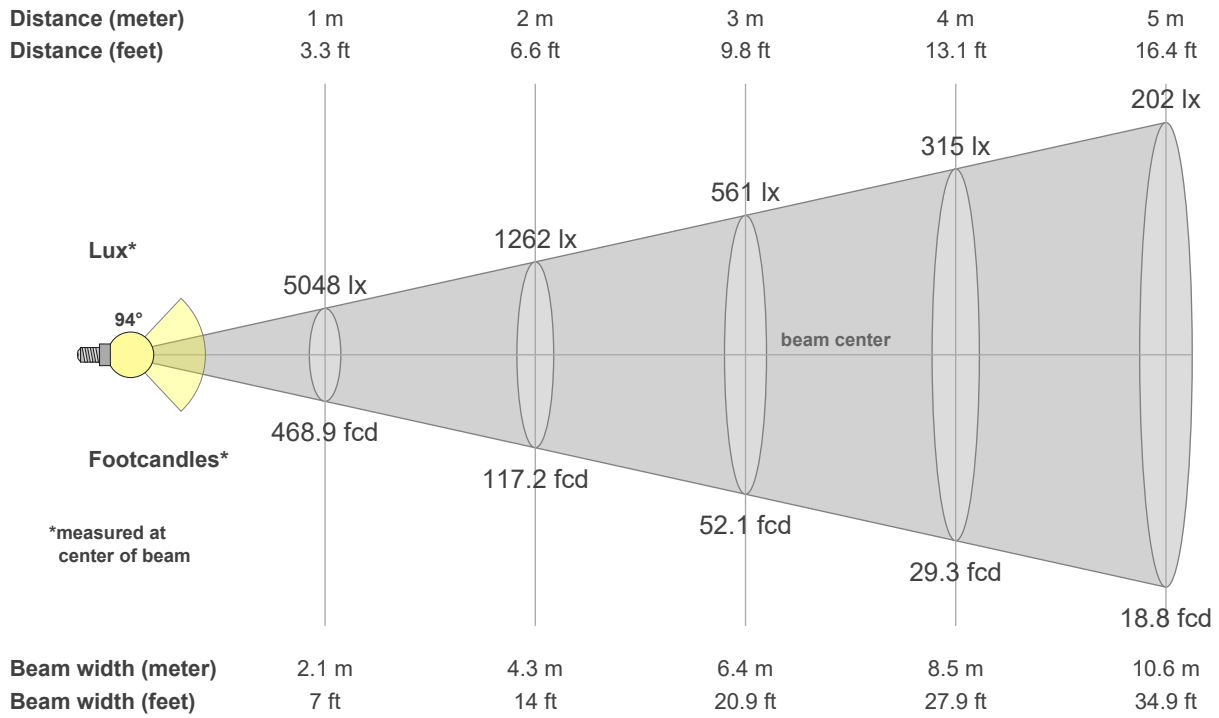
Gamut Index vs. Fidelity Index



x 0.437
y 0.437
u' 0.251
v' 0.521

CIE	13.3-1995
Ra	72.2
R9	-35.9

Beam Details



Intensity 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
5048	1262	561	315	202	140	103	79	62	50	42	35	30	26	22	20	17	16	14	13	lux
468.9	117.2	52.1	29.3	18.8	13	9.6	7.3	5.8	4.7	3.9	3.3	2.8	2.4	2.1	1.8	1.6	1.4	1.3	1.2	fc



Photometric Data Sheet

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
5048	5060	5035	5013	4985	4961	4915	4759	4463	4034	3465	2752	2002	1361	820	388	151	18	5	6	cd
100%	100%	100%	99%	99%	98%	97%	94%	88%	80%	69%	55%	40%	27%	16%	8%	3%	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
5048	5049	4998	4908	4785	4618	4397	4119	3752	3291	2740	2138	1565	1074	692	401	191	56	7	8	cd
100%	100%	99%	97%	95%	91%	87%	82%	74%	65%	54%	42%	31%	21%	14%	8%	4%	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
5048	4948	4681	4231	3619	2975	2325	1716	1188	820	626	513	427	349	280	212	126	45	13	11	cd
100%	98%	93%	84%	72%	59%	46%	34%	24%	16%	12%	10%	8%	7%	6%	4%	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
5048	5043	4992	4900	4768	4591	4368	4087	3725	3270	2733	2146	1572	1094	718	433	232	90	9	4	cd
100%	100%	99%	97%	94%	91%	87%	81%	74%	65%	54%	43%	31%	22%	14%	9%	5%	2%	0%	0%	of 0°val



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

IES Classification (Type I, II, III, IV, V) Type II
 Longitudinal Classification (Short, Medium, Long) Very Short
 Cutoff Classification Cutoff

Forward Light

Low (0-30°)	2048.7	lm	18%
Medium (30-60°)	4178	lm	36.7%
High (60-80°)	1163.1	lm	10.2%
Very High (80-90°)	55.7	lm	0.5%

Back Light

Low (0-30°)	1700.7	lm	15%
Medium (30-60°)	1784.3	lm	15.7%
High (60-80°)	350.1	lm	3.1%
Very High (80-90°)	27.7	lm	0.2%

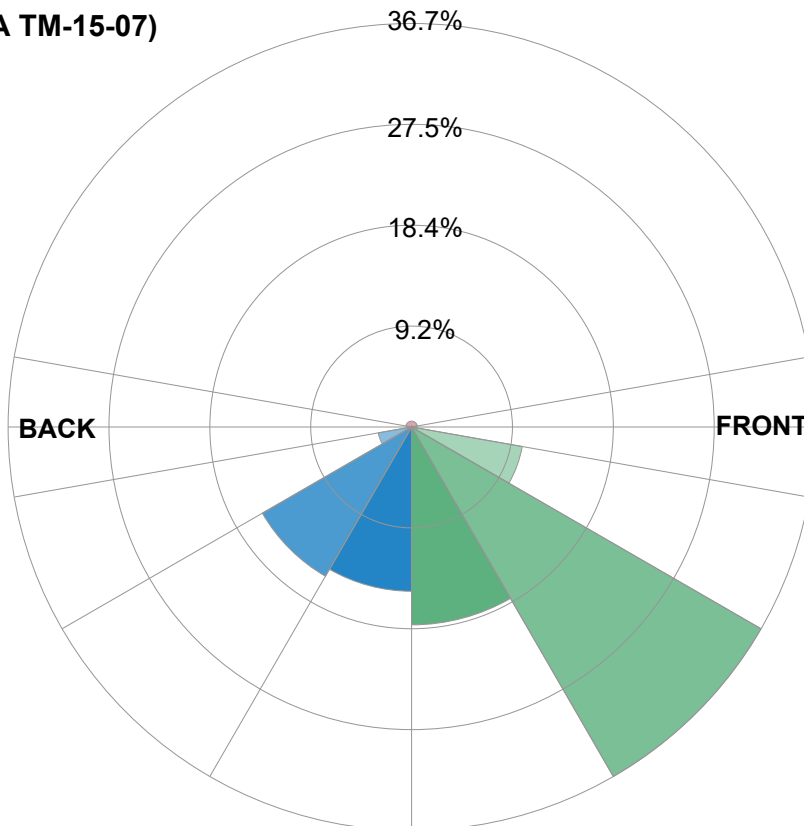
Uplight

Low (90-100°)	8.1	lm	0.1%
High (100-180°)	60.4	lm	0.5%

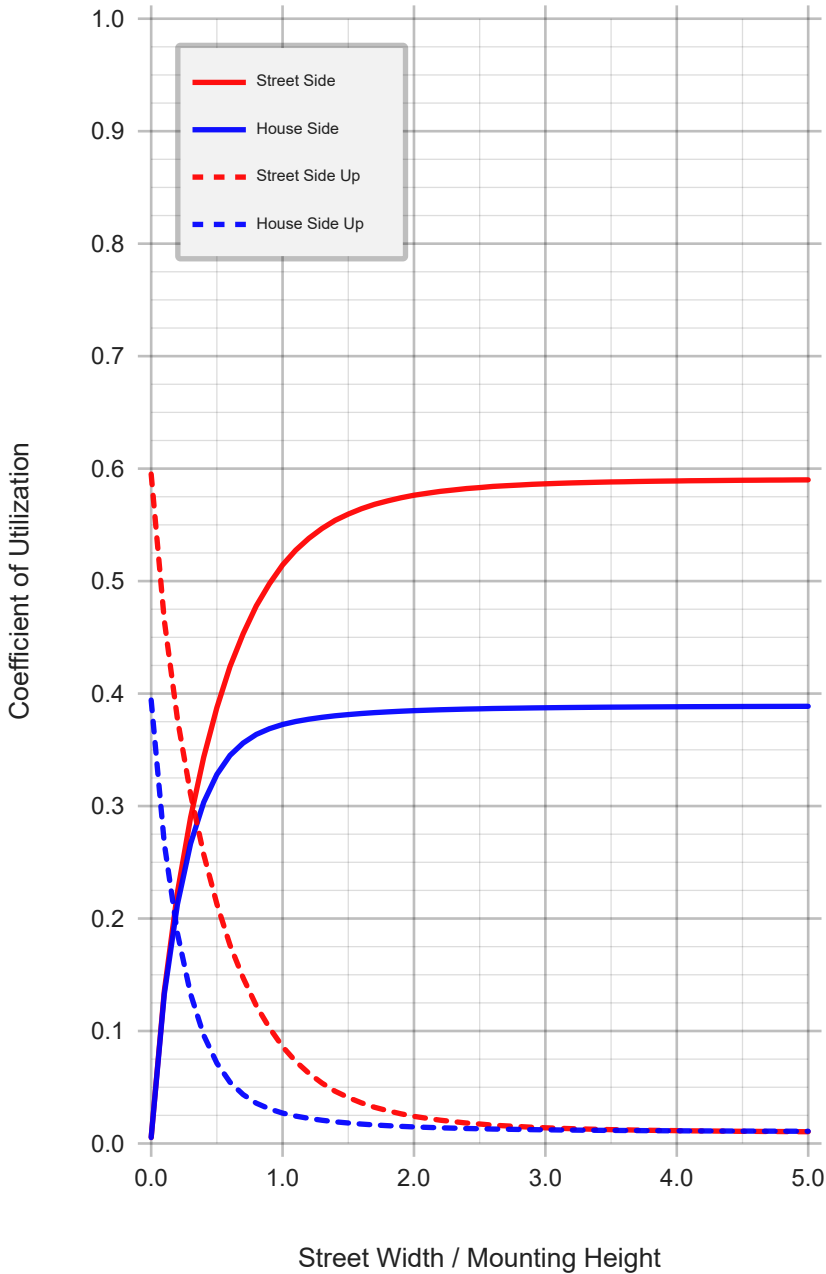
Total

Sum 11375.7 lm 100%

**BUG Rating (IESNA TM-15-07)
B3 U3 G1**

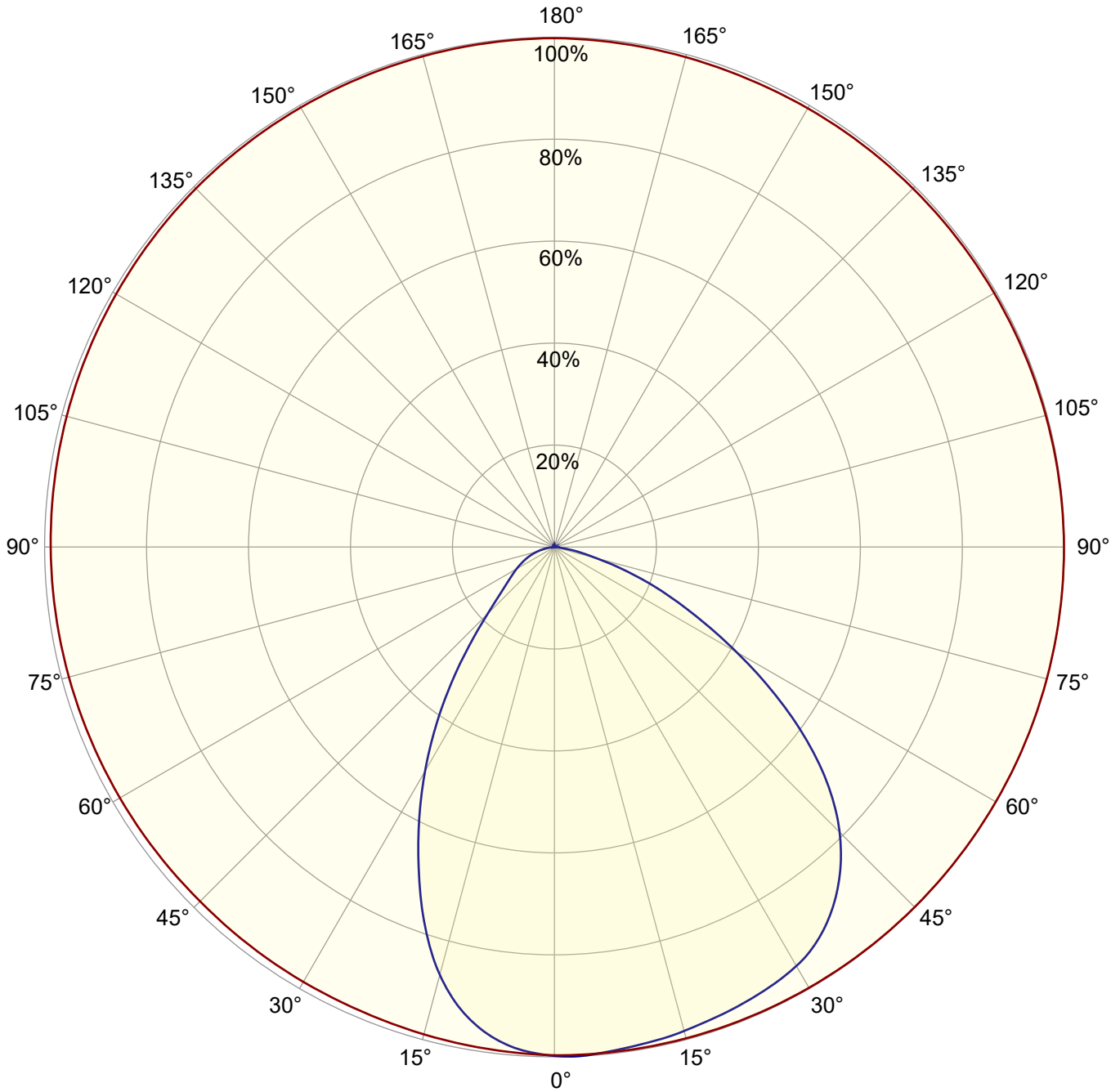


Photometric Data Sheet



	Flux	Percent of lamp
Downward Street Side	7445.49 lm	65.45%
Downward House Side	3862.74 lm	33.96%
Downward Total	11308.23 lm	99.41%
Upward Total	68.49 lm	0.60%
Total Flux	11375.66 lm	100%

Polar Graph - Peak Values



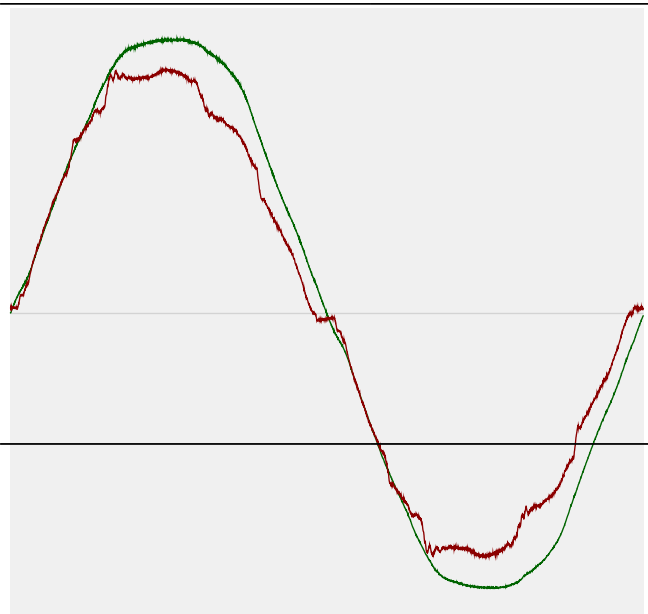
Maximum intensity	5072.4 cd
Max. located at horizontal, vertical angles	0H 4V deg.
Through max.intensity [cd]	Peak plane: C22.5 - C202.5
Horizontal cone through vertical angle	4V

Power Details

Input power

Frequency of input power	60 Hz
Power feed to light source	75.3 W
RMS Input voltage feed V,RMS	121 V
RMS Input current feed I,RMS	0.626 A
Volt-Amp or apparent power = V,RMS*I,RMS	75.78 VA
Displacement factor of AC power feed	1.0
Power factor of AC current feed	0.99
Total harmonic distortion of the current	6.56%
Total harmonic distortion of the voltage	2.99%

Input power curve



Efficiency

Radiated power efficiency 43.0%



Lumen efficiency 151 lm/W



Stabilization details

Warmup Conditions

Stable period	15 min
Stable change max	2.0%
Minimum time	15 min

Color Temperature Change

CCT start	2990 K
CCT end	3117 K

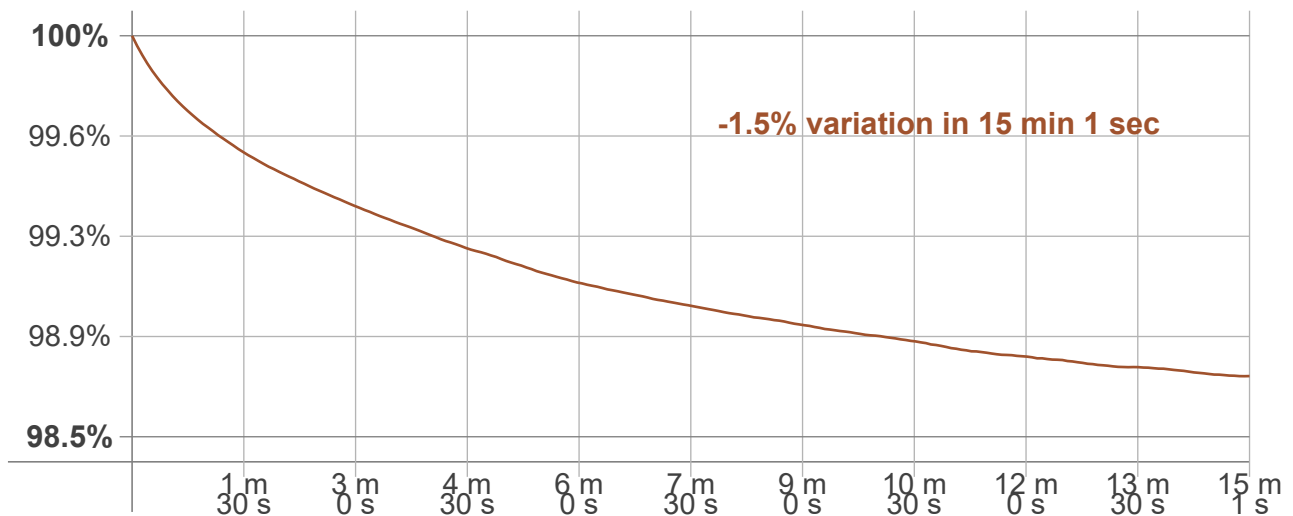
Warmup Result

Total warmup time	Lamp stabilized
Warmup variation	-1.5%

Output Change

Output start	11534 lm
Output change	-158 lm
Output end	11376 lm

Stabilization Curve



Flicker T TLA Details

Flicker Meter Type	Viso Systems LabFlicker
Frequency of input power	60 Hz
Flicker/TLA sample rate	20000 samples/s

Measurement time	
PstLM	180 sec.
All other indices	1.5 sec.

Flicker indices according to Illuminating Engineering Society

Flicker frequency	119.76 Hz
Percent Flicker	29.71 %
Flicker index	0.09

Flicker indices according to California Energy Commission (CEC)

JA8/10 40 Hz	0.1 %
JA8/10 90 Hz	0.42 %
JA8/10 200 Hz	29.35 %
JA8/10 400 Hz	30 %
JA8/10 1000 Hz	29.7 %

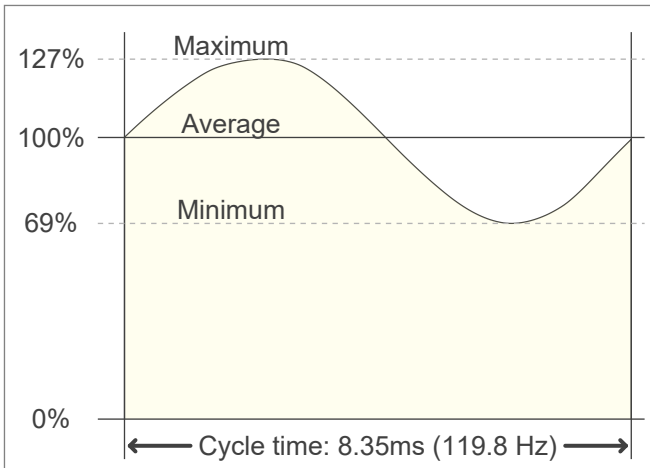
TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC

PstLM value (F < 80 Hz)	0.08
SVM value (80 < F < 2000 Hz)	1.06

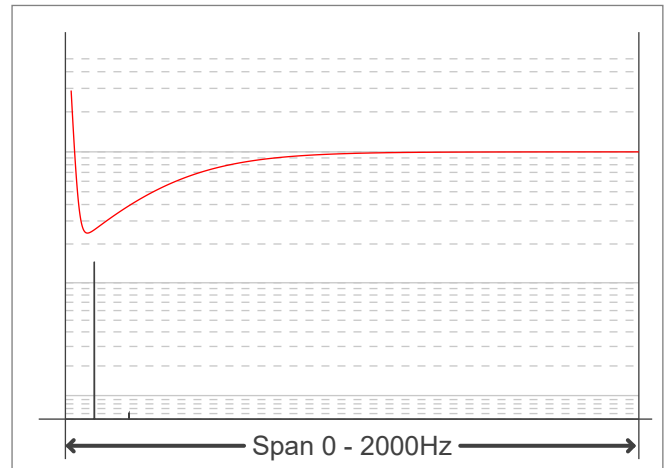
Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp	0.04
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Flicker frame (frame of one flicker period in time domain)



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation Plot

