Prudential Lighting

Light measurement results

Print date 8/13/2026

Laboratory and Equipment

Test lab	Viso LabSpion - serial: 2435469709 sensor serial: 0895736217 - T
Spectrometer Manufacturer and Model	LabSpion – Type C, horizontal
Measurement date	7/27/2026

Measurement Conditions

Tested c-planes	72 planes – 5.00°
Tested gamma resolution	1.00°
Input Power	42.99 W

Tested Light Source

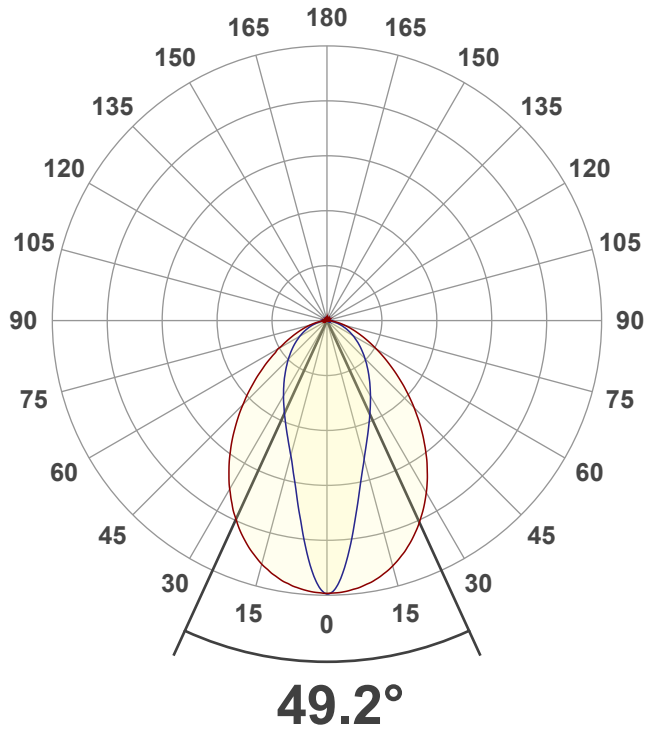
Luminaire	BPRO2-LIN-FLSH-LED35-HO-04-MGZ-NU-SC-DM01
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	4974 lm – 1.684% / 98.32%
Efficiency	115.7 lm/W
Peak Intensity	3822 cd
Correlated Color Temperature, CCT	3457 K
Color Rendering Index	CRI 83.9

Polar light distribution diagram

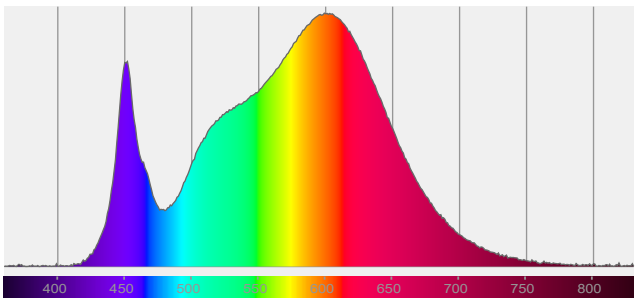
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	3789 cd	3789 cd	3789 cd	3789 cd	3789 cd
5°	3760 cd	3760 cd	3597 cd	3480 cd	3293 cd
15°	3529 cd	3148 cd	2482 cd	2168 cd	1996 cd
25°	3061 cd	2392 cd	1744 cd	1515 cd	1413 cd
35°	2424 cd	1775 cd	1264 cd	1099 cd	1034 cd
45°	1713 cd	1262 cd	901.9 cd	791 cd	747.1 cd
55°	1061 cd	835.3 cd	613.8 cd	543.3 cd	518.5 cd
65°	577.2 cd	492.8 cd	379.6 cd	340.3 cd	323.1 cd
75°	262.1 cd	237.5 cd	189.3 cd	168.7 cd	159.2 cd
85°	64.85 cd	59.12 cd	46.62 cd	39.73 cd	36.64 cd
90°	5.69 cd	4.046 cd	3.052 cd	1.34 cd	4.247 cd

Spectral power distribution



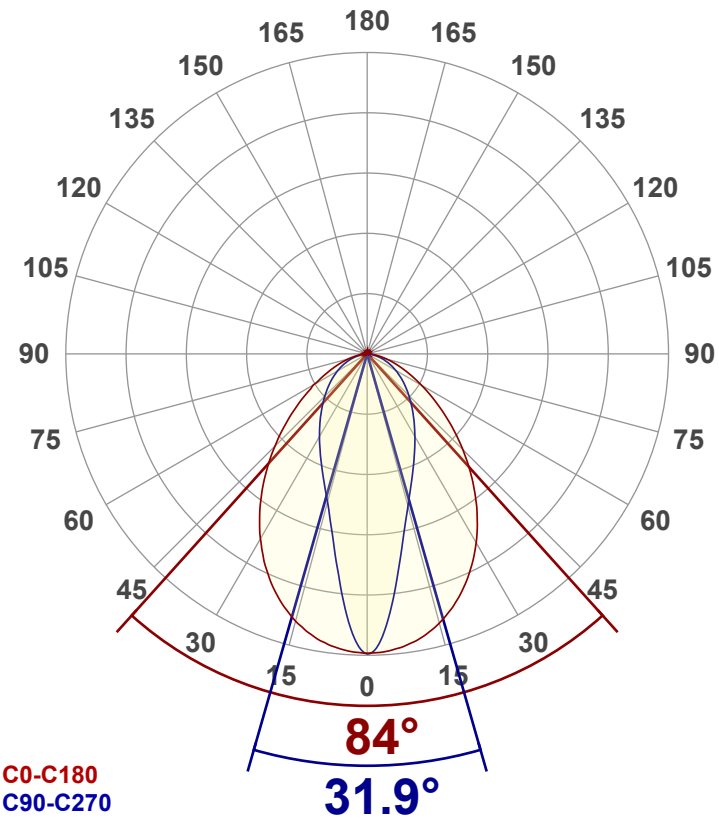
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	4974 lm
Lumen Up% / Down%	1.684% / 98.32%
Peak Intensity	3822 cd
Beam Angle (50%-FWHM)	49.2°

EU Ecodesign parameters

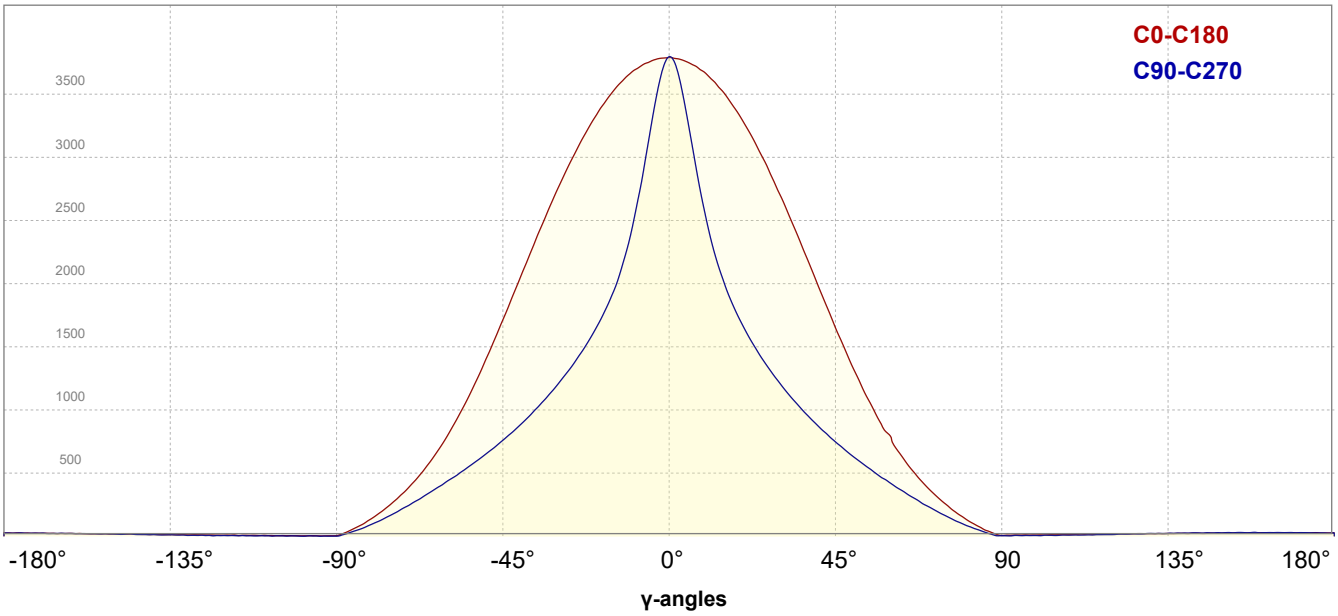
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	3221 lm
Ecodesign Energy Class	F

Intensity Ratio

In 120° cone	84.65%
In 90° cone	64.75%

Linear distribution diagram

Intensity [cd]

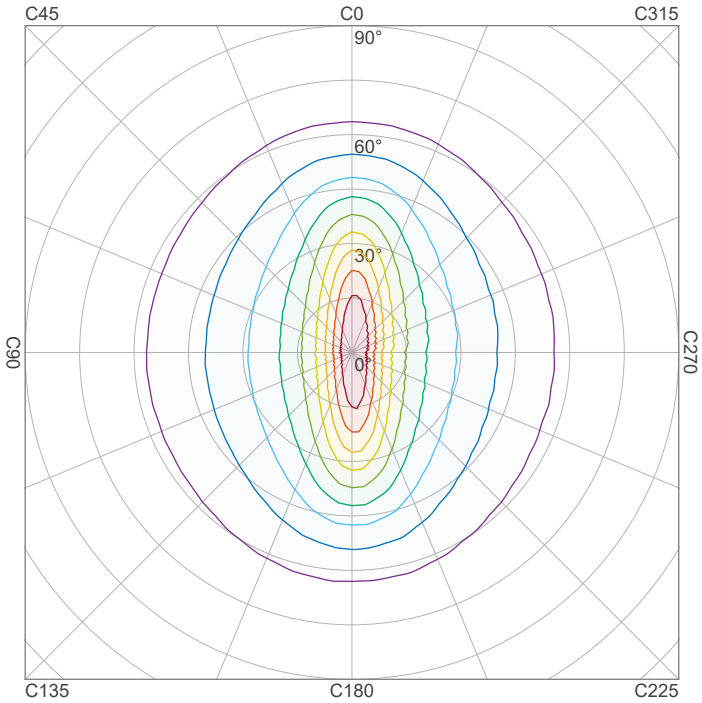


Prudential Lighting

Light measurement results

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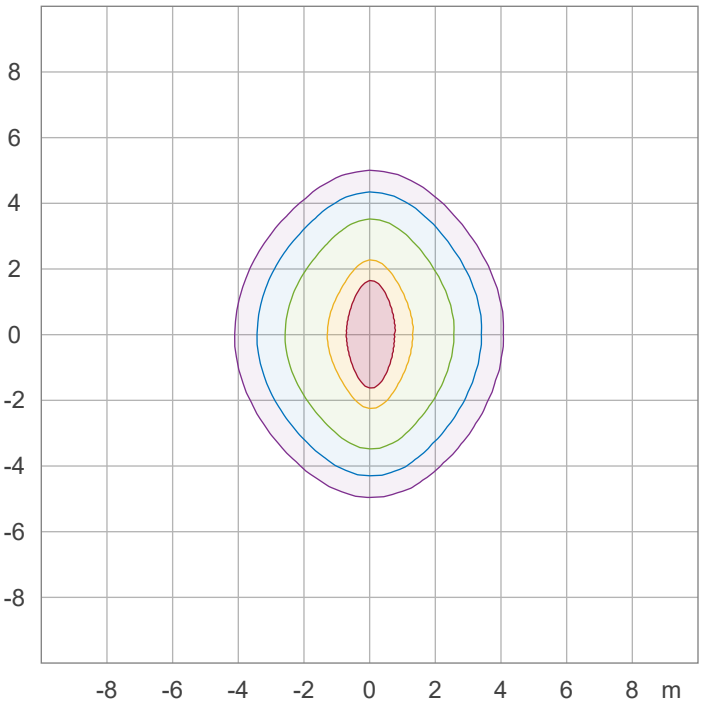
Iso-intensity Diagram (Iso-candela)



90 %	3435.5 cd
80 %	3053.7 cd
70 %	2672.0 cd
60 %	2290.3 cd
50 %	1908.6 cd
40 %	1526.9 cd
30 %	1145.2 cd
20 %	763.4 cd
10 %	381.7 cd

Peak intensity: 3817.2 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	212 lx
30.0 %	127 lx
10.0 %	42.4 lx
5.0 %	21.2 lx
3.0 %	12.7 lx

Peak illuminance: 424 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

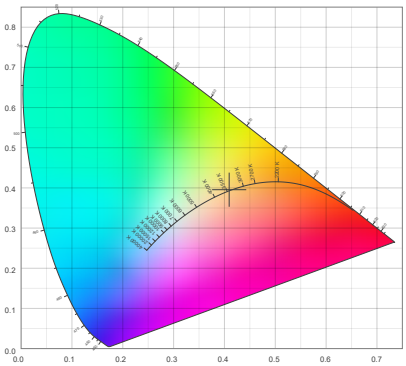
Light measurement results

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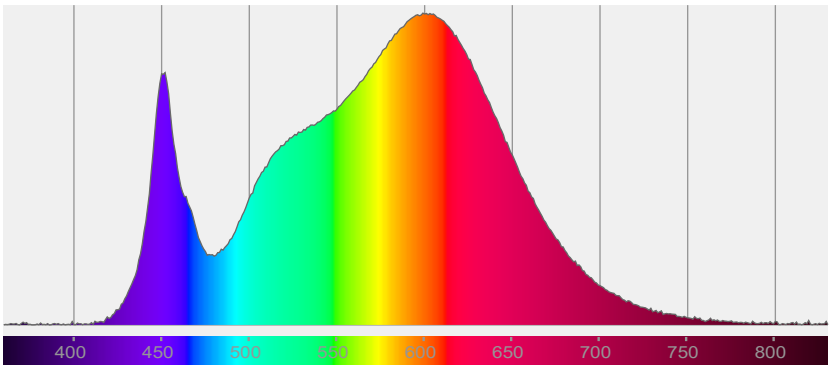
Color details

Correlated Color Temperature, Target	CCT = 3457 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3457 K	Color deviation from BBL	Duv = 0.0012
Color Rendering Index	CRI 83.9	Color coordinates CIE 1931	(x;y) = (0.4093;0.3955)
Color Rendering Index, R9 (red)	R9 = 10.0	Color coordinate CIEs 1960	(u;v) = (0.2363;0.3426)
Color Rendering TM30-18	Rf 85.4	Color coordinate CIEs 1976	(u';v') = (0.2363;0.5138)
	Rg 95.6	Color Quality Scale	CQS = 83.8

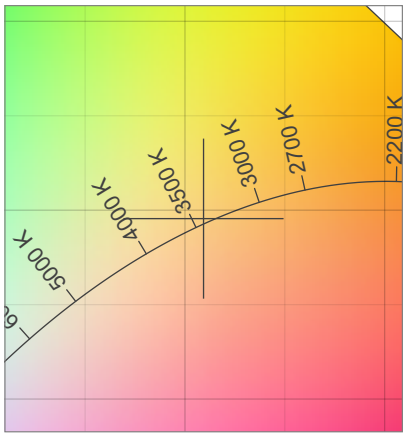
CIE 1931 Chromaticity diagram



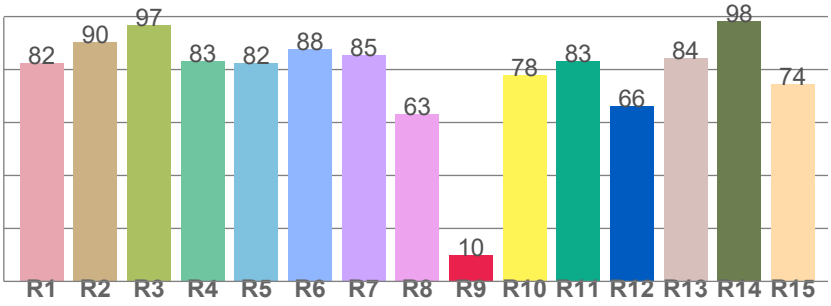
Spectral power distribution



CIE 1931 Chromaticity - zoomed



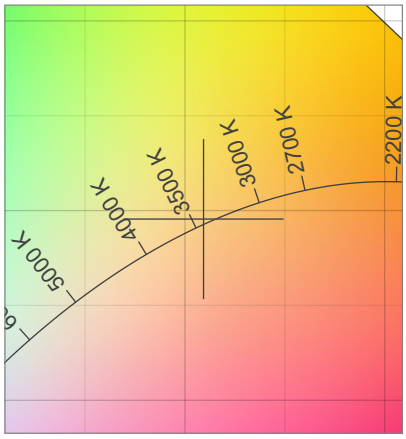
Color Rendering Index per reference color (CIE 1995)



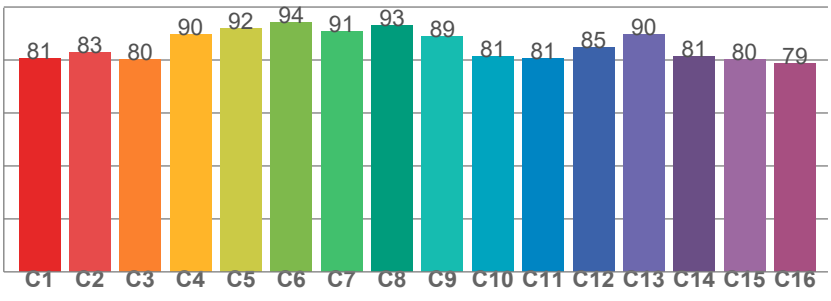
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.4	90.4	96.7	83.3	82.4	87.8	85.3	63.1	10.0	77.8	83.3	66.2	84.4	98.5	74.4

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
80.7	83.0	80.3	89.7	92.1	94.3	90.8	93.0	88.8	81.4	80.6	84.8	89.6	81.4	80.2	78.6

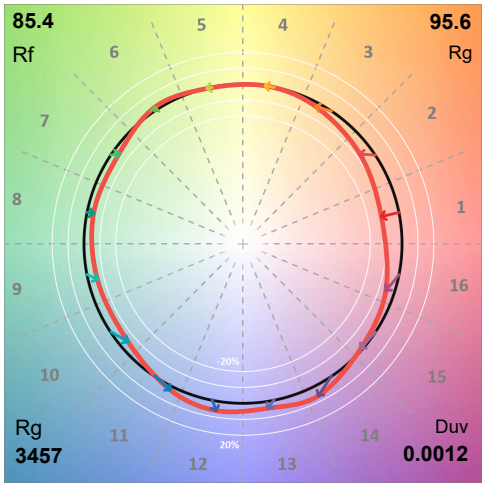
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Color details - ANSI/IES TM-30-18 Color Rendition Report

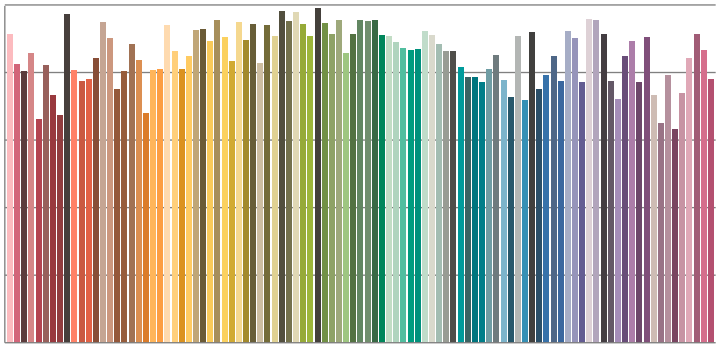
Color Vector Graphic



Color Distortion Graphic

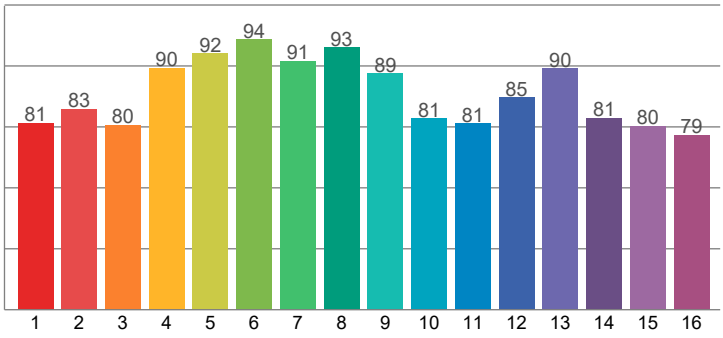


Color Rendition by Color Evaluation Sample (CES)



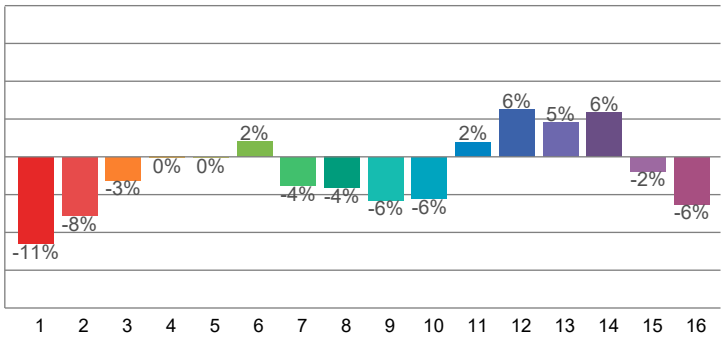
Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



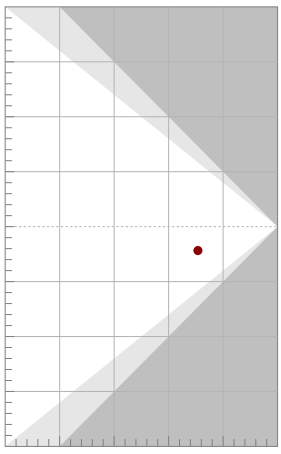
Hue angle bin (j)

Local Chroma Shift (per hue bin)



Hue angle bin (j)

Gamut Index vs. Fidelity Index



Gamut index (Rg)

Fidelity index (Rf)

CIE x	0.4093
CIE y	0.4093
CIE u'	0.2363
CIE v'	0.5138

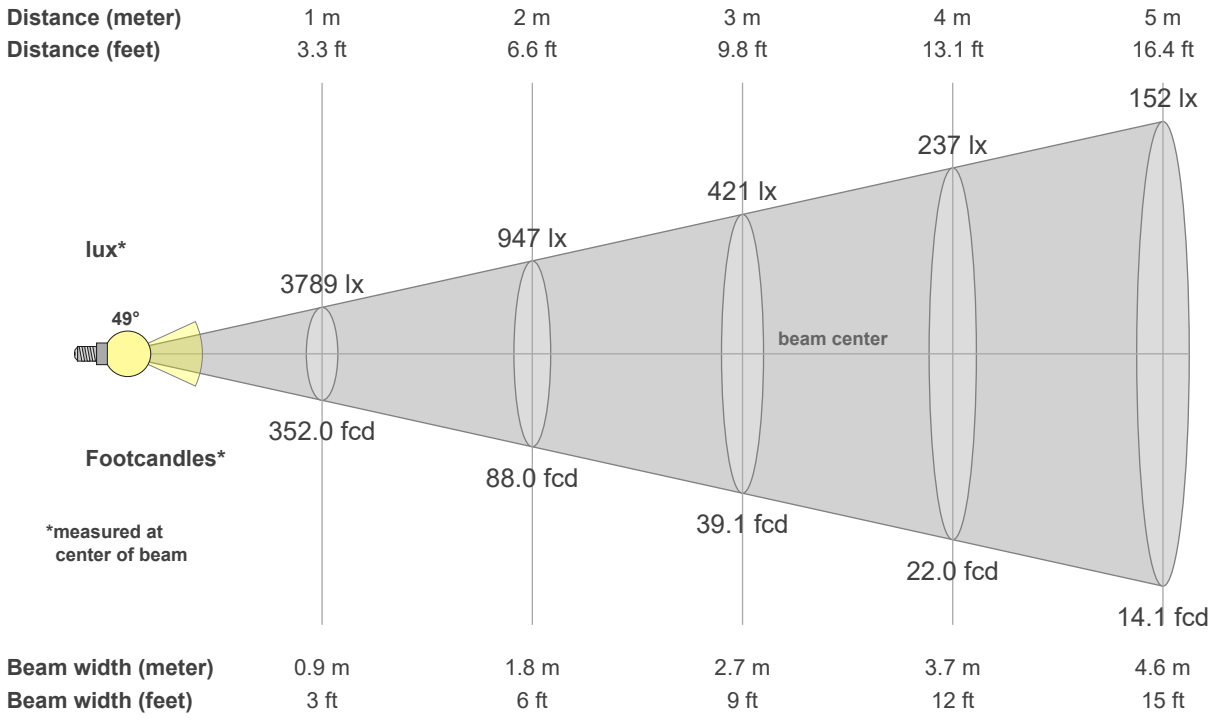
CIE	13.3-1995
Ra	83.9
R9	10.0

Prudential Lighting

Light measurement results

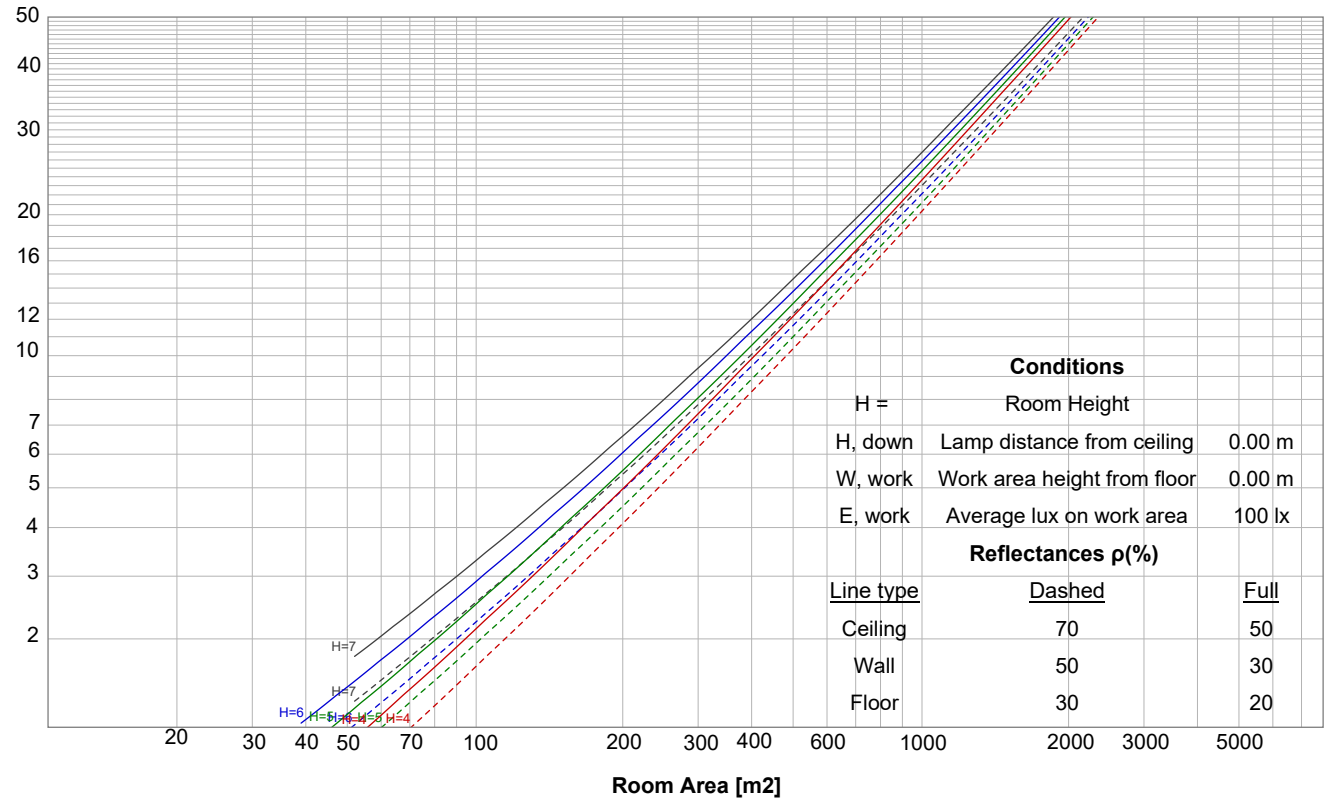
Print date 8/13/2026

Beam details



Luminaire budgetary diagram

LAMPS (number of lamps)



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
3789	947	421	237	152	105	77	59	47	38	31	26	22	19	17	15	13	12	10	9	lux
352	88	39.1	22	14.1	9.8	7.2	5.5	4.3	3.5	2.9	2.4	2.1	1.8	1.6	1.4	1.2	1.1	1	0.9	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
3789	3760	3677	3529	3321	3061	2760	2424	2068	1713	1373	1061	796	577	402	262	150	65	6	3	cd
100%	99%	97%	93%	88%	81%	73%	64%	55%	45%	36%	28%	21%	15%	11%	7%	4%	2%	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
3789	3293	2515	1996	1664	1413	1209	1034	882	747	627	518	418	323	237	159	91	37	4	6	cd
100%	87%	66%	53%	44%	37%	32%	27%	23%	20%	17%	14%	11%	9%	6%	4%	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
3789	3753	3661	3502	3284	3014	2703	2364	2006	1650	1318	1020	781	550	383	250	141	57	7	10	cd
100%	99%	97%	92%	87%	80%	71%	62%	53%	44%	35%	27%	21%	15%	10%	7%	4%	2%	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
3789	3227	2444	1942	1636	1402	1208	1039	890	760	642	534	437	342	253	172	101	43	1	1	cd
100%	85%	64%	51%	43%	37%	32%	27%	23%	20%	17%	14%	12%	9%	7%	5%	3%	1%	0%	0%	of 0°val

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UGR Table

Corrected, comprehensive UGR table according to 117-1995, S/H ratio=0.25

Reflectances											
ρ Ceiling	70	70	50	50	30	70	70	50	50	30
ρ Walls	50	30	50	30	30	50	30	50	30	30
ρ Floor	20	20	20	20	20	20	20	20	20	20
Room size		**Viewed Crosswise**					**Viewed Endwise**				
H = mouting height above eye level		(Viewing direction orthogonal to lamp length axis)					(Viewing direction parallel to lamp length axis)				
X	**Y**										
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variations with the observer position for the luminaire spacings, S:											
n/a		n/a					n/a				
n/a		n/a					n/a				
n/a		n/a					n/a				

UGR data could not be calculated due to missing light source dimensions. Go to Edit -> Photometric -> Dimensions and set the source dimensions.

Coefficients of utilization

Ceiling reflectance	80				70				50			30			10			0
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
RCR	(Room Cavity Ratio)				Room values are expressed as percentage of Lumen delivered to the task surface													
0	118.6	118.6	118.6	118.6	115.7	115.7	115.7	115.7	110.2	110.2	110.2	105.1	105.1	105.1	100.5	100.5	100.5	98.3
1	109.9	105.8	102.1	98.7	107.1	103.4	100.0	97.0	98.9	96.1	93.6	94.7	92.5	90.5	90.9	89.2	87.5	85.4
2	101.3	94.1	88.1	83.1	98.6	92.1	86.7	82.0	88.4	83.8	79.9	85.0	81.2	77.9	81.8	78.7	75.9	73.8
3	93.5	84.2	77.0	71.3	91.0	82.6	75.9	70.6	79.5	73.8	69.2	76.6	71.8	67.8	73.9	69.9	66.5	64.4
4	86.6	75.9	68.1	62.1	84.3	74.5	67.3	61.6	71.9	65.6	60.7	69.5	64.1	59.7	67.2	62.6	58.8	56.7
5	80.4	68.9	60.8	54.9	78.3	67.7	60.2	54.5	65.5	58.9	53.8	63.4	57.7	53.1	61.5	56.5	52.5	50.5
6	74.9	62.9	54.8	49.1	73.0	61.9	54.3	48.8	60.0	53.3	48.3	58.3	52.3	47.7	56.6	51.3	47.2	45.3
7	70.1	57.8	49.8	44.3	68.3	56.9	49.4	44.0	55.3	48.6	43.6	53.8	47.8	43.2	52.4	47.0	42.9	41.0
8	65.7	53.4	45.6	40.3	64.1	52.6	45.2	40.1	51.2	44.5	39.8	49.9	43.9	39.5	48.7	43.2	39.2	37.4
9	61.8	49.5	42.0	36.9	60.4	48.9	41.7	36.8	47.7	41.1	36.5	46.5	40.5	36.2	45.4	40.0	36.0	34.3
10	58.3	46.1	38.8	34.0	57.0	45.6	38.6	33.9	44.5	38.1	33.7	43.5	37.6	33.5	42.6	37.2	33.3	31.7

Prudential Lighting

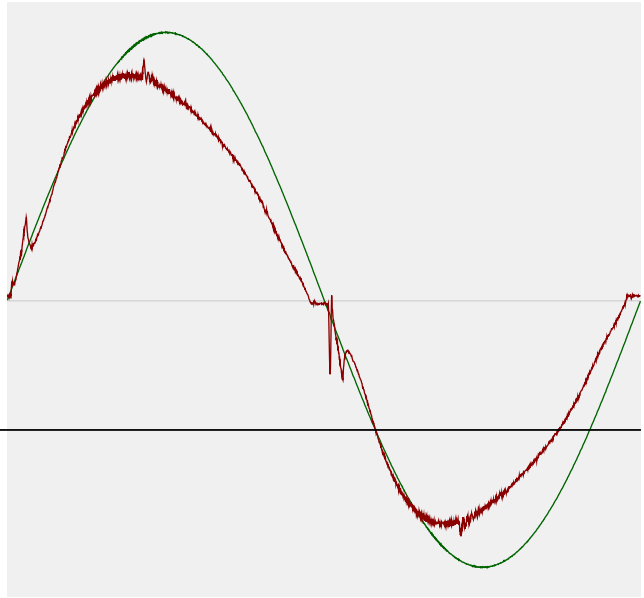
Light measurement results

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Power details

Input power	
Frequency of input power	60.0 Hz
Power feed to light source	42.99 W
RMS Input voltage feed V,RMS	120 V
RMS Input current feed I,RMS	0.36 A
Volt-Amp or apparent power = V,RMS*I,RMS	43.6 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.99
Total harmonic distortion of the current	8.8%
Total harmonic distortion of the voltage	0.0958%

Input power curve



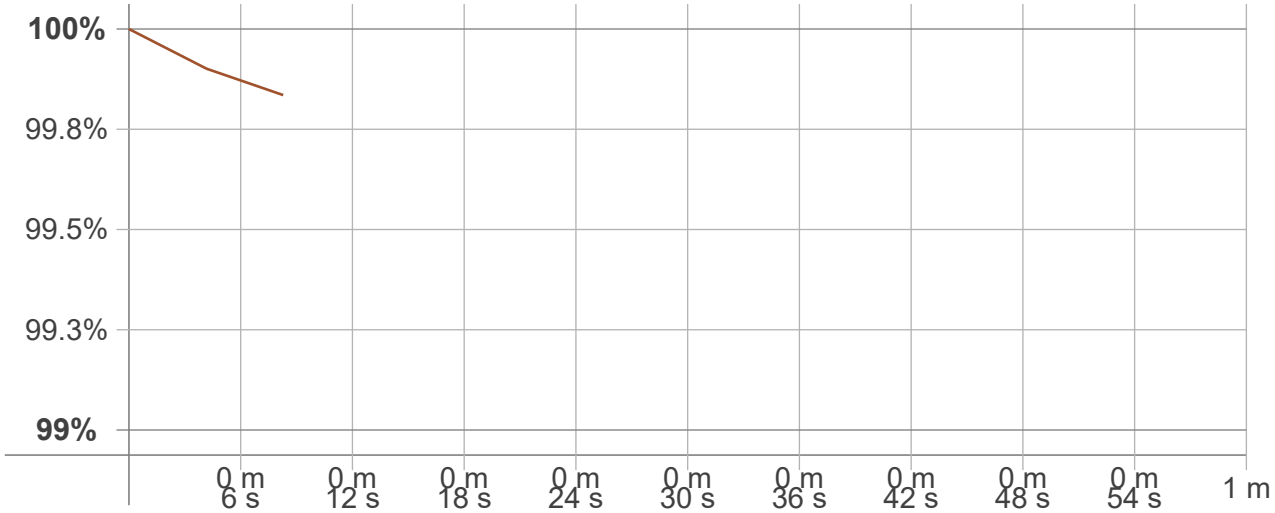
Efficiency

Radiated power efficiency	34.54
Lumen efficiency	115.7 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	3456 K
Stable change max	1%	CCT shift	1 K
Minimum time	15 min	CCT end	3457 K
Warmup Result		**Output Change**	
Total warmup time	Not completed	Output start	4982 lm
Warmup variation	-0.1648%	Output change	-8.2102 lm
		Output end	4974 lm

Stabilization Curve



Prudential Lighting

Flicker TLA details

Flicker Meter Type	Viso Systems LabFlicker
Frequency of input power	60.0 Hz
Flicker/TLA sample rate	NaN samples/s

Measurement time

PstLM	180 sec.
All other indices	1,5 sec,

Flicker indices according to Illuminating Engineering Society (IES)

Flicker frequency	NaN Hz
Percent Flicker	NaN %
Flicker index	NaN

TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC 61000-4-15)

PstLM value (F < 80 Hz)	NaN
SVM value (80 < F < 2000 Hz)	NaN

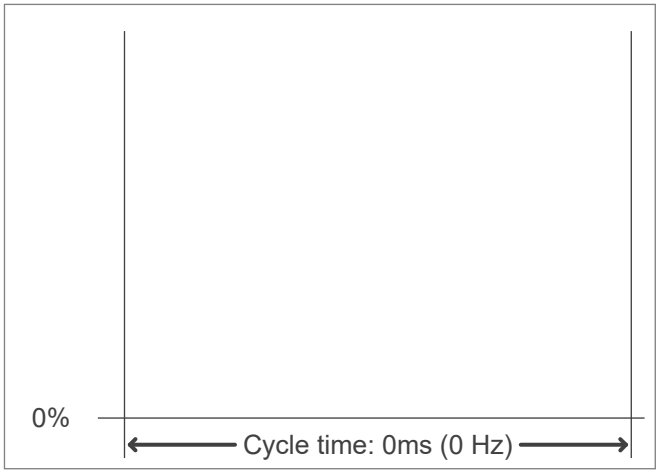
Flicker indices according to California Energy Commission (CEC) 2016b

JA8/10 40 Hz	NaN %
JA8/10 90 Hz	NaN %
JA8/10 200 Hz	NaN %
JA8/10 400 Hz	NaN %
JA8/10 1000 Hz	NaN %

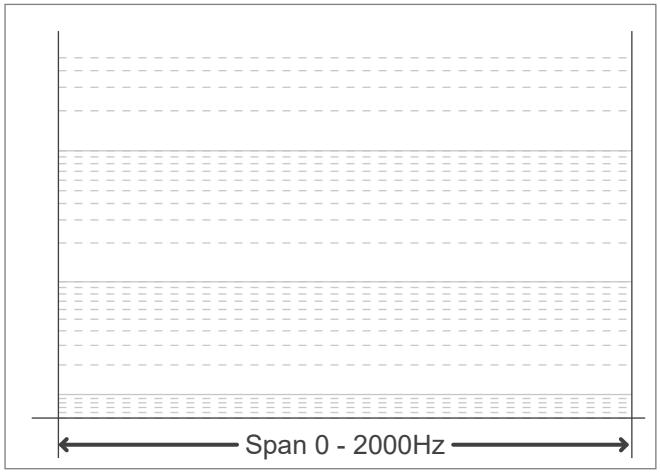
Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp	NaN

Flicker frame (frame of one flicker period in time domain)



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation plot

