Prudential Lighting

Light measurement results

Print date 9/29/2026

Laboratory and Equipment

Test lab	Viso LabSpion - serial: 2435469709 sensor serial: 0895736217 - T
Spectrometer Manufacturer and Model	LabSpion – Type C, horizontal
Measurement date	9/23/2026

Measurement Conditions

Tested c-planes	72 planes – 5.00°
Tested gamma resolution	1.50°
Input Power	23.31 W

Tested Light Source

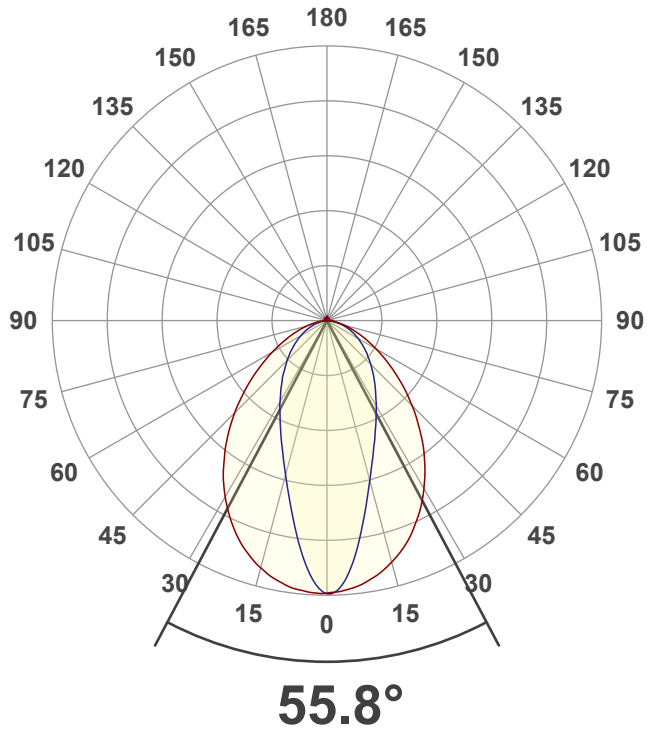
Luminaire	BPRO2-LIN-FLSH-LED35-MO-04-WGZ-NU-SC-DM01
Basic Luminous Shape	NONE
Item No.	
Manufacturer	Prudential Lighting
Description	

Main Light Measurement Results

Output – Total Lumen (Up% / Down%)	2597 lm – 2.315% / 97.68%
Efficiency	111.4 lm/W
Peak Intensity	1840 cd
Correlated Color Temperature, CCT	3434 K
Color Rendering Index	CRI 84.3

Polar light distribution diagram

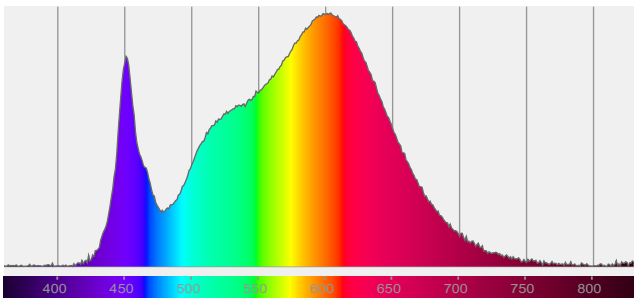
Unit: 0-100% of peak intensity



Zonal Lumen Summary:

VA/HA	0°	22.5°	45°	67.5°	90°
0°	1808 cd	1808 cd	1808 cd	1808 cd	1808 cd
5°	1786 cd	1723 cd	1649 cd	1587 cd	1674 cd
15°	1659 cd	1423 cd	1187 cd	1057 cd	1099 cd
25°	1432 cd	1102 cd	853.3 cd	750.9 cd	766.5 cd
35°	1129 cd	824 cd	621.4 cd	551.3 cd	561 cd
45°	799.1 cd	586.1 cd	445 cd	398.9 cd	411.1 cd
55°	501 cd	389.4 cd	304.9 cd	278.4 cd	291.8 cd
65°	274.3 cd	230.9 cd	187.4 cd	177.8 cd	191.1 cd
75°	119.9 cd	109.5 cd	93 cd	91.01 cd	100.3 cd
85°	27.15 cd	27.86 cd	25.08 cd	25.41 cd	29.81 cd
90°	8.041 cd	6.795 cd	4.659 cd	5.18 cd	3.771 cd

Spectral power distribution



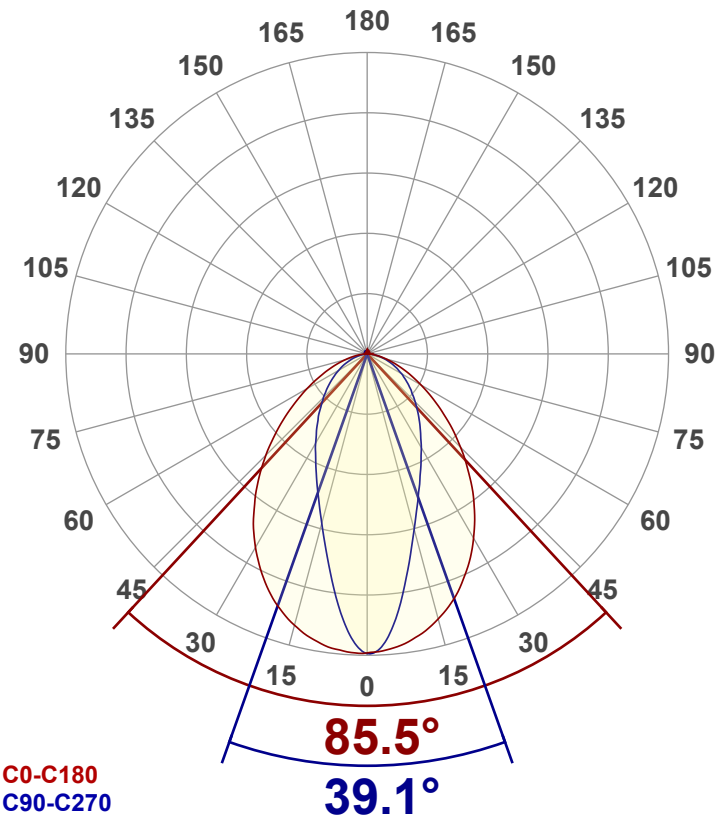
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	2597 lm
Lumen Up% / Down%	2.315% / 97.68%
Peak Intensity	1840 cd
Beam Angle (50%-FWHM)	55.8°

EU Ecodesign parameters

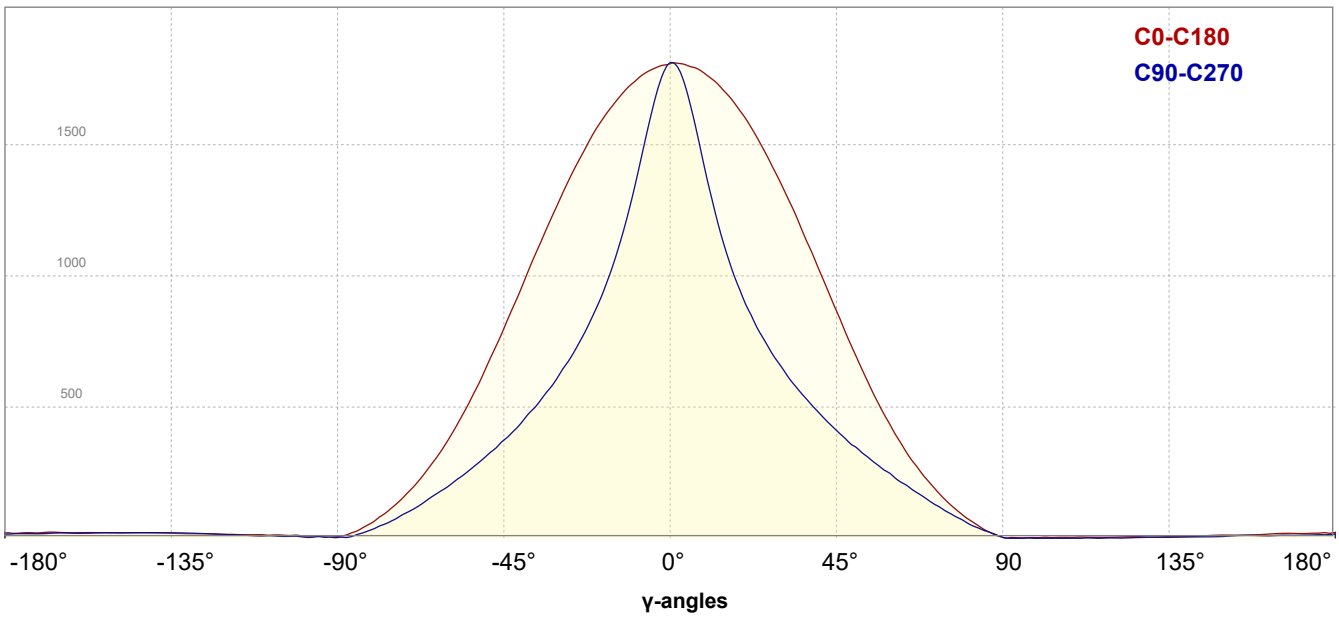
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	1673 lm
Ecodesign Energy Class	G

Intensity Ratio

In 120° cone	84.21%
In 90° cone	64.43%

Linear distribution diagram

Intensity [cd]

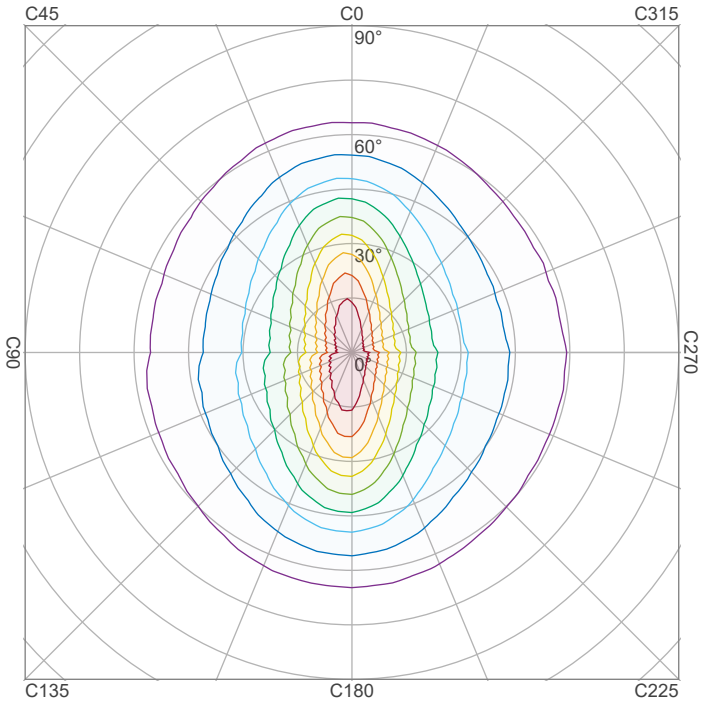


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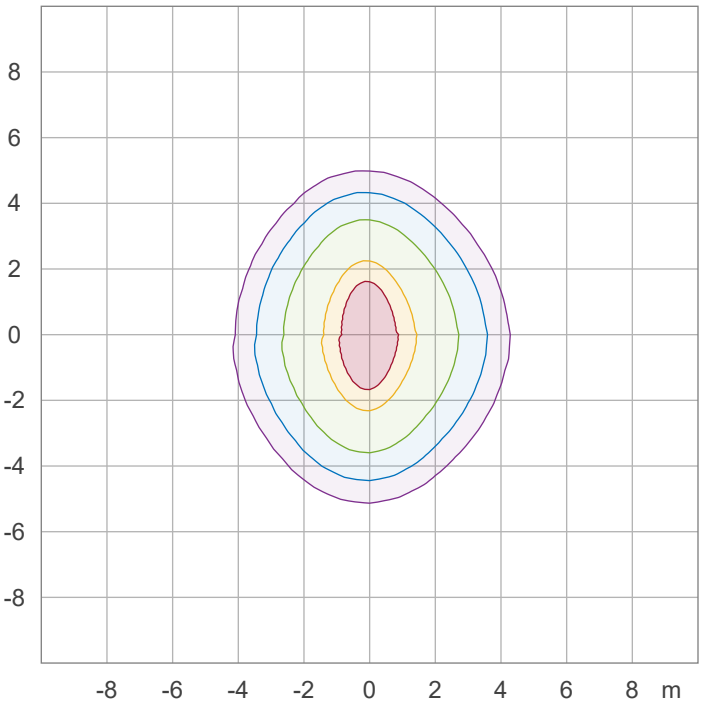
Iso-intensity Diagram (Iso-candela)



90 %	1653.6 cd
80 %	1469.9 cd
70 %	1286.1 cd
60 %	1102.4 cd
50 %	918.7 cd
40 %	734.9 cd
30 %	551.2 cd
20 %	367.5 cd
10 %	183.7 cd

Peak intensity: 1837.3 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	102 lx
30.0 %	61.1 lx
10.0 %	20.4 lx
5.0 %	10.2 lx
3.0 %	6.11 lx

Peak illuminance: 204 lx
Mounting height: 3 m
Number of c-planes: 72

Prudential Lighting

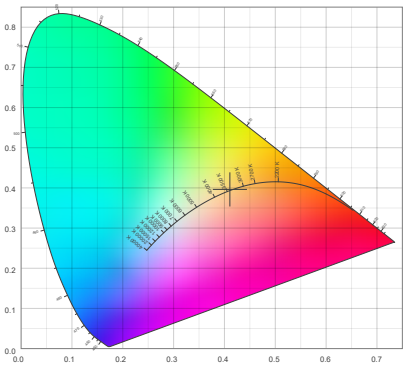
Light measurement results

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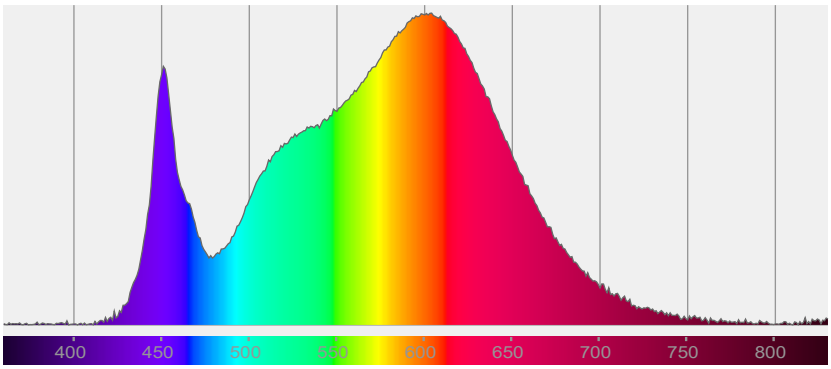
Color details

Correlated Color Temperature, Target	CCT = 3434 K	MacAdam Steps	SDCM = NaN
Correlated Color Temperature, Measured	CCT = 3434 K	Color deviation from BBL	Duv = 0.0013
Color Rendering Index	CRI 84.3	Color coordinates CIE 1931	(x;y) = (0.4107;0.3963)
Color Rendering Index, R9 (red)	R9 = 11.3	Color coordinate CIEs 1960	(u;v) = (0.2369;0.3429)
Color Rendering TM30-18	Rf 85.5	Color coordinate CIEs 1976	(u';v') = (0.2369;0.5143)
	Rg 96.0	Color Quality Scale	CQS = 84.0

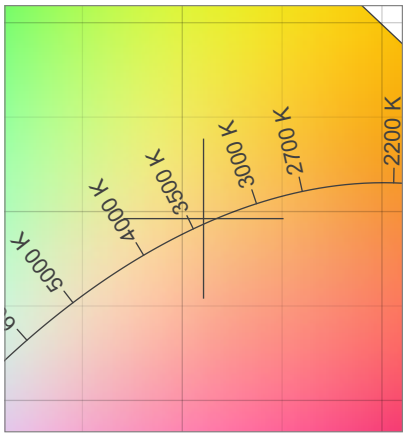
CIE 1931 Chromaticity diagram



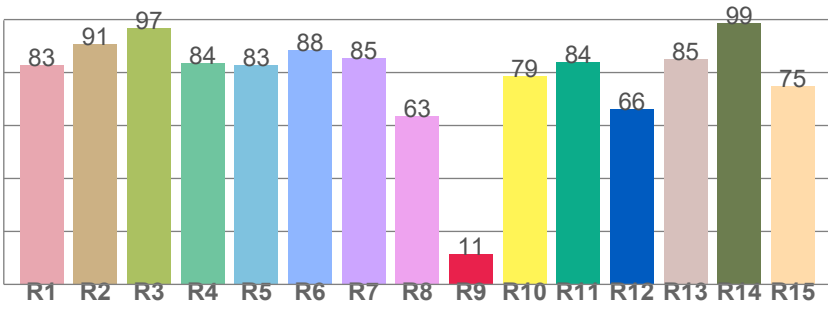
Spectral power distribution



CIE 1931 Chromaticity - zoomed



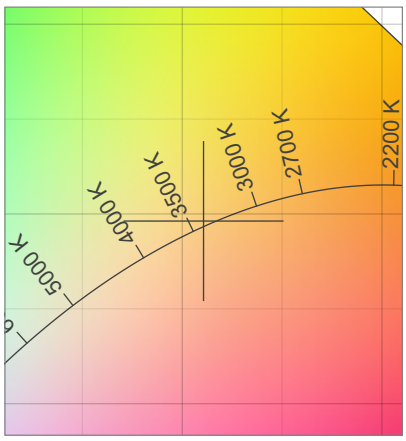
Color Rendering Index per reference color (CIE 1995)



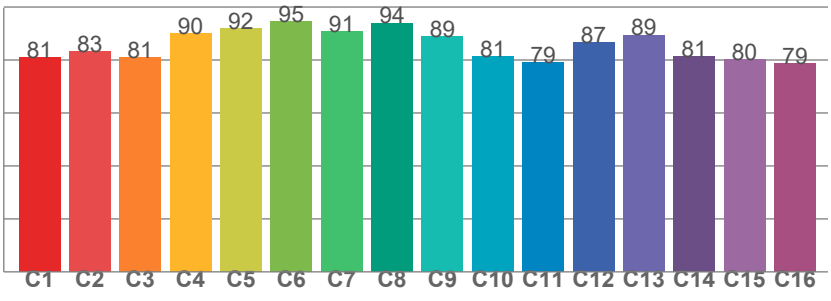
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.9	90.8	96.9	83.7	82.8	88.3	85.4	63.4	11.3	78.7	83.8	66.2	84.9	98.6	74.8

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
80.8	83.4	81.0	90.0	92.1	94.6	90.9	94.0	89.0	81.3	79.2	86.6	89.5	81.3	80.3	78.7

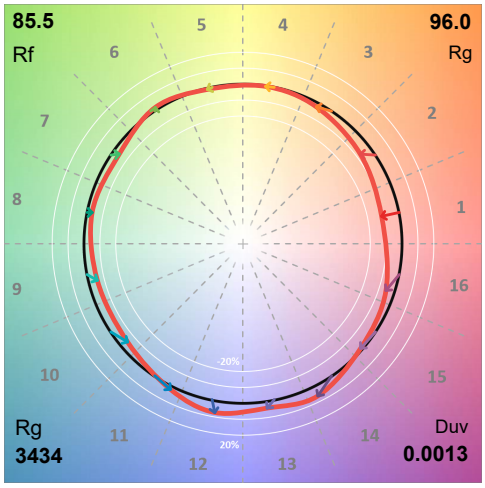
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Color details - ANSI/IES TM-30-18 Color Rendition Report

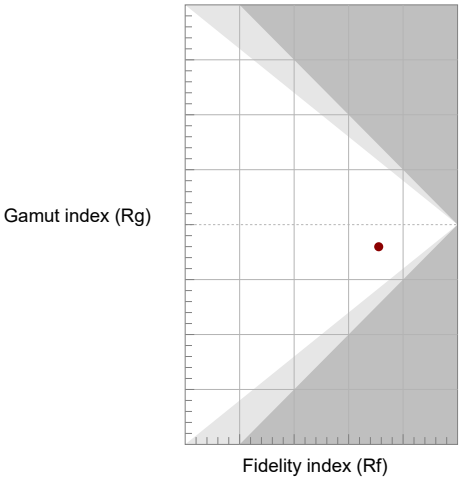
Color Vector Graphic



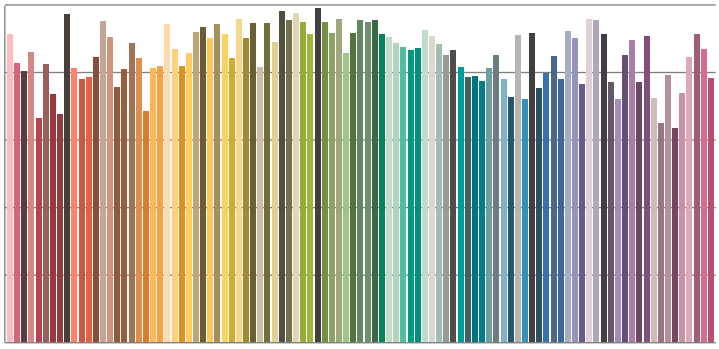
Color Distortion Graphic



Gamut Index vs. Fidelity Index

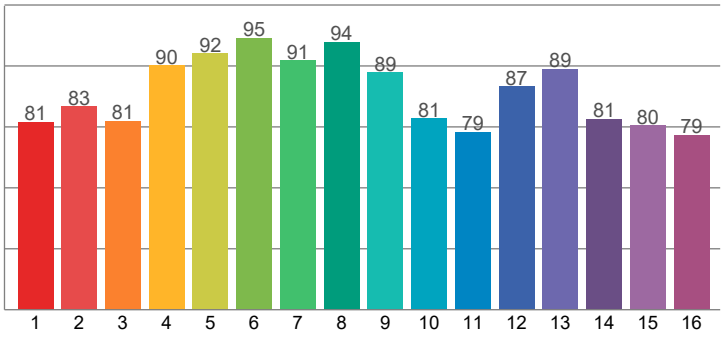


Color Rendition by Color Evaluation Sample (CES)

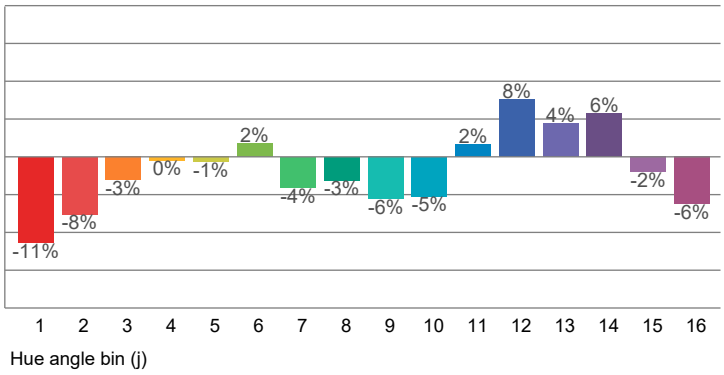


Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



Local Chroma Shift (per hue bin)



CIE x	0.4107
CIE y	0.4107
CIE u'	0.2369
CIE v'	0.5143

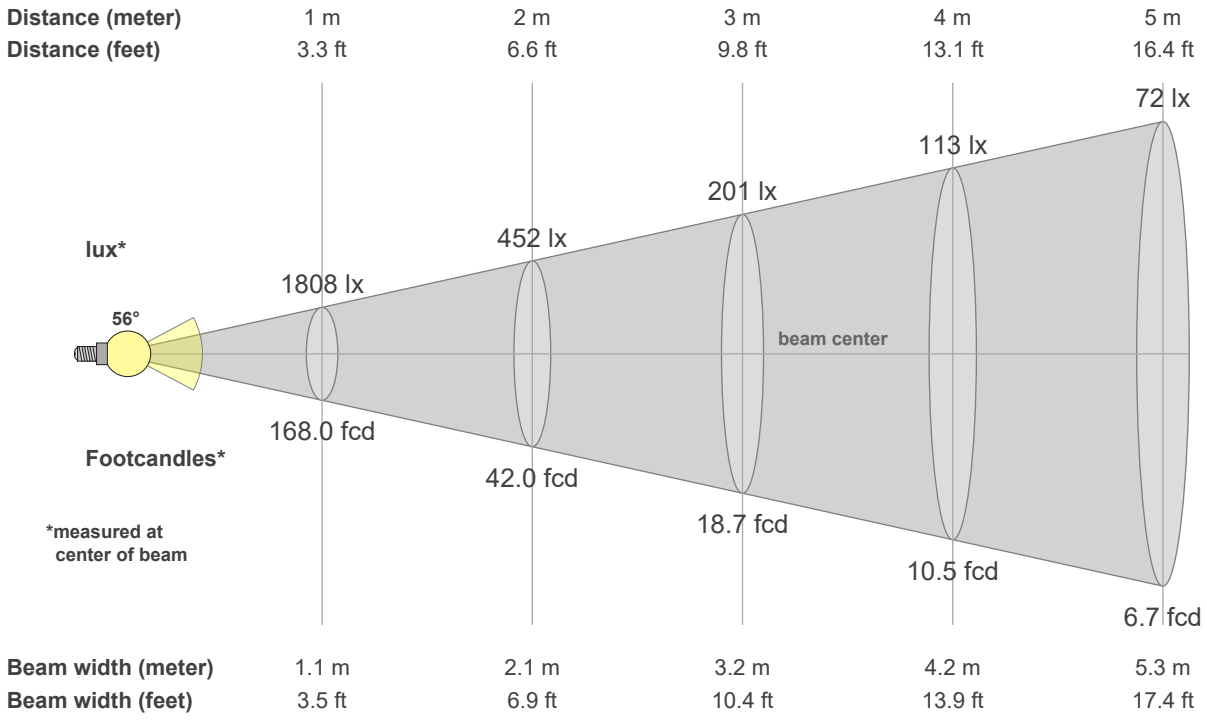
CIE	13.3-1995
Ra	84.3
R9	11.3

Prudential Lighting

Light measurement results

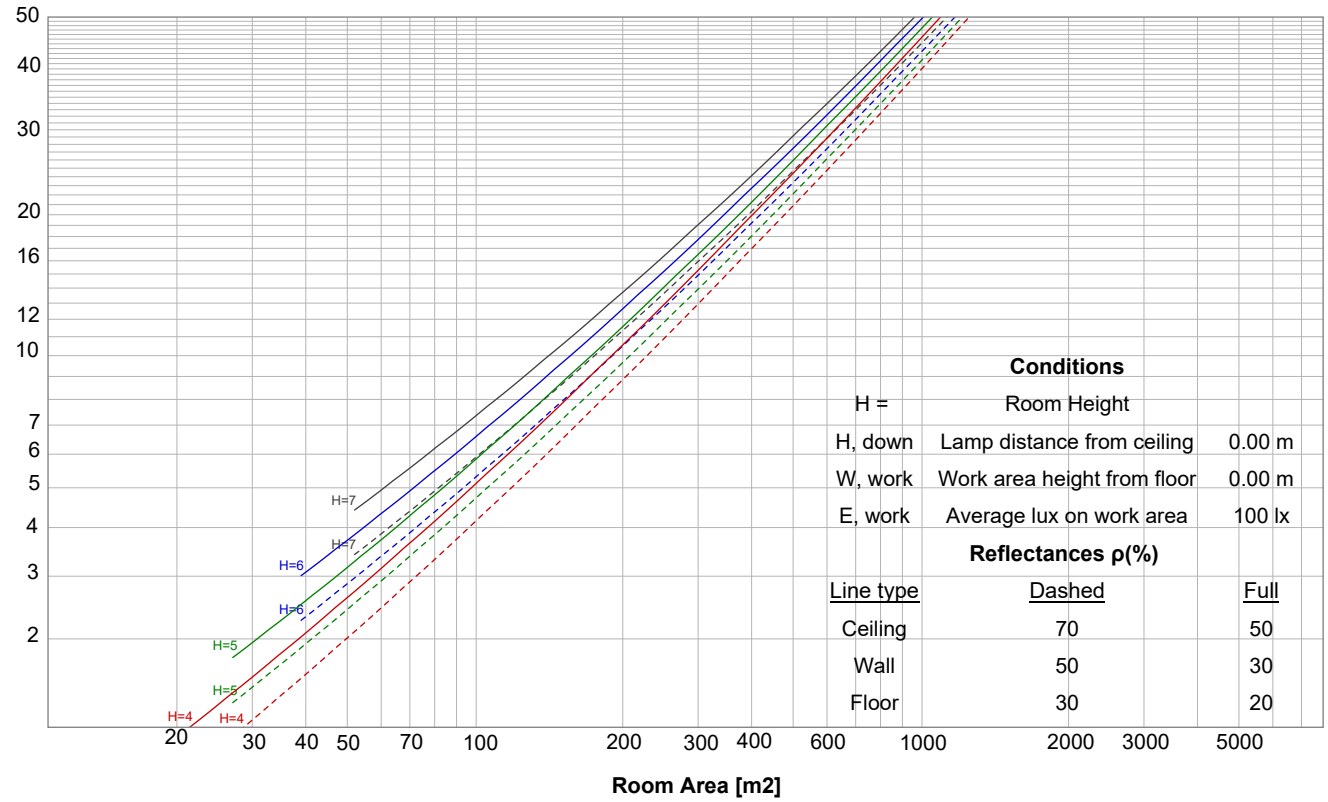
Print date 9/29/2026

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
1808	452	201	113	72	50	37	28	22	18	15	13	11	9	8	7	6	6	5	5	lux
168	42	18.7	10.5	6.7	4.7	3.4	2.6	2.1	1.7	1.4	1.2	1	0.9	0.7	0.7	0.6	0.5	0.5	0.4	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
1808	1786	1736	1659	1561	1432	1287	1129	963	799	644	500	376	274	188	120	66	26	8	9	cd
100%	99%	96%	92%	86%	79%	71%	62%	53%	44%	36%	28%	21%	15%	10%	7%	4%	1%	0%	1%	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
1808	1675	1368	1099	906	766	655	561	482	411	349	291	241	191	144	100	62	29	4	0	cd
100%	93%	76%	61%	50%	42%	36%	31%	27%	23%	19%	16%	13%	11%	8%	6%	3%	2%	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
1808	1800	1764	1698	1608	1489	1351	1197	1033	866	703	551	420	305	215	139	80	33	4	1	cd
100%	100%	98%	94%	89%	82%	75%	66%	57%	48%	39%	30%	23%	17%	12%	8%	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
1808	1623	1316	1062	877	735	623	527	445	374	310	252	199	153	107	69	37	13	3	6	cd
100%	90%	73%	59%	48%	41%	34%	29%	25%	21%	17%	14%	11%	8%	6%	4%	2%	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
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	118.5	118.5	118.5	118.5	115.5	115.5	115.5	115.5	109.8	109.8	109.8	104.7	104.7	104.7	99.9	99.9	99.9	97.7
1	109.7	105.6	101.9	98.6	106.9	103.1	99.8	96.8	98.5	95.8	93.3	94.3	92.1	90.1	90.4	88.7	87.0	84.9
2	101.2	94.0	88.0	83.0	98.5	91.9	86.5	81.9	88.1	83.6	79.6	84.6	80.8	77.5	81.3	78.2	75.5	73.4
3	93.4	84.1	76.9	71.2	90.8	82.4	75.8	70.4	79.2	73.6	68.9	76.2	71.5	67.5	73.5	69.5	66.1	64.0
4	86.4	75.8	68.0	62.0	84.1	74.4	67.1	61.5	71.7	65.4	60.4	69.1	63.8	59.4	66.8	62.2	58.4	56.3
5	80.3	68.7	60.7	54.7	78.1	67.5	60.0	54.4	65.3	58.7	53.6	63.1	57.4	52.8	61.1	56.1	52.1	50.1
6	74.8	62.8	54.7	48.9	72.8	61.7	54.1	48.6	59.8	53.0	48.0	58.0	52.0	47.5	56.2	51.0	46.9	45.0
7	69.9	57.6	49.7	44.1	68.1	56.7	49.2	43.8	55.1	48.3	43.4	53.5	47.5	43.0	52.0	46.6	42.5	40.7
8	65.5	53.2	45.4	40.1	63.9	52.4	45.0	39.9	51.0	44.3	39.5	49.6	43.6	39.2	48.3	42.9	38.8	37.1
9	61.6	49.3	41.8	36.7	60.2	48.6	41.5	36.5	47.4	40.8	36.2	46.2	40.2	36.0	45.1	39.7	35.7	34.0
10	58.1	45.9	38.6	33.8	56.8	45.3	38.4	33.7	44.2	37.8	33.4	43.2	37.3	33.2	42.2	36.9	33.0	31.3

Prudential Lighting

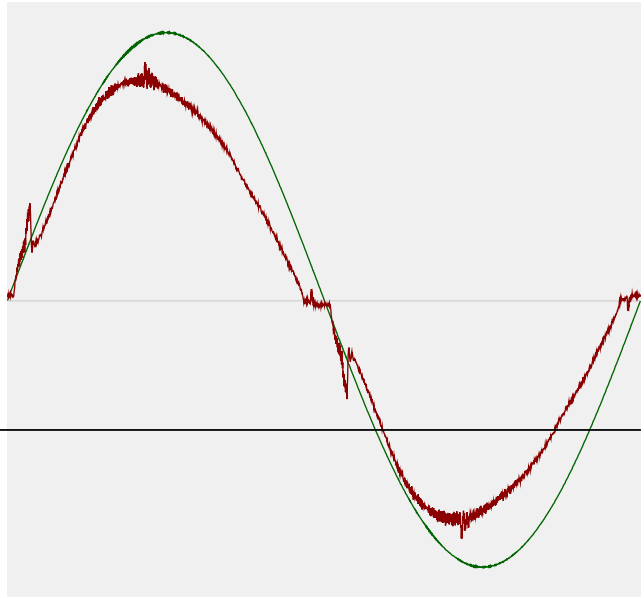
Light measurement results

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Power details

Input power	
Frequency of input power	60.0 Hz
Power feed to light source	23.31 W
RMS Input voltage feed V,RMS	120 V
RMS Input current feed I,RMS	0.20 A
Volt-Amp or apparent power = V,RMS*I,RMS	23.6 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.99
Total harmonic distortion of the current	8.45%
Total harmonic distortion of the voltage	0.0455%

Input power curve



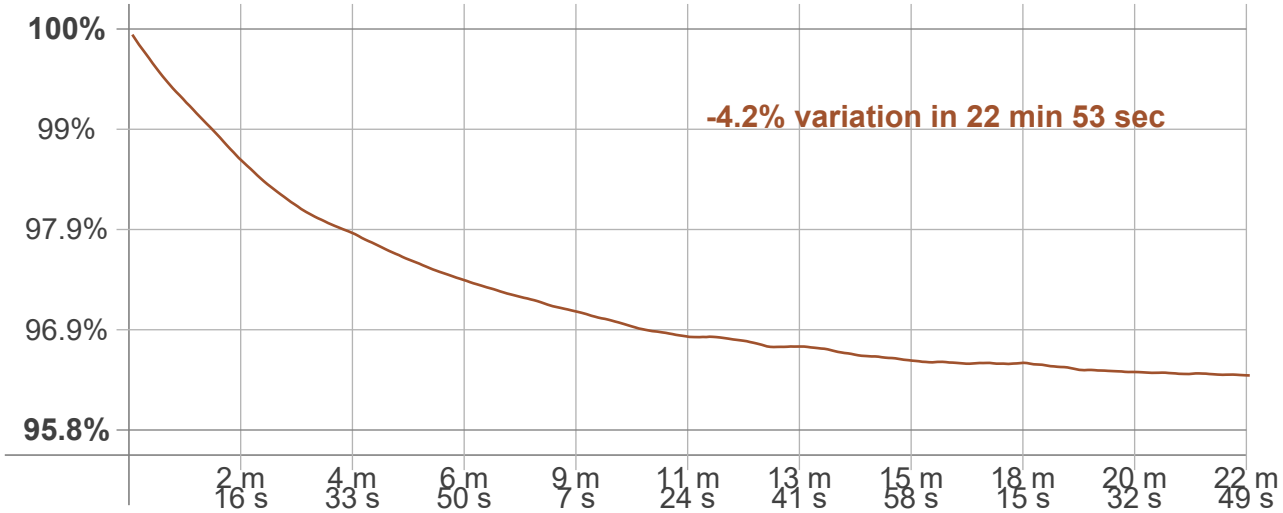
Efficiency

Radiated power efficiency	33.32
Lumen efficiency	111.4 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	3428 K
Stable change max	1%	CCT shift	6 K
Minimum time	15 min	CCT end	3434 K
Warmup Result		**Output Change**	
Total warmup time	Lamp stabilized in :	Output start	2702 lm
Warmup variation	-4.1578%	Output change	-105.46 lm
		Output end	2597 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

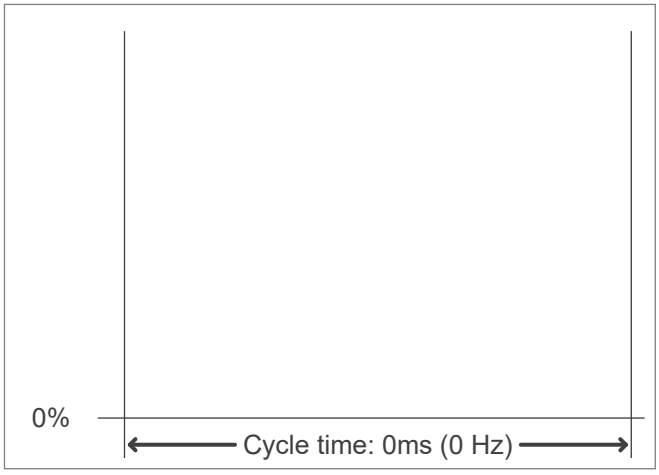
Flicker indices according to California Energy Commission (CEC) 2016b

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 %

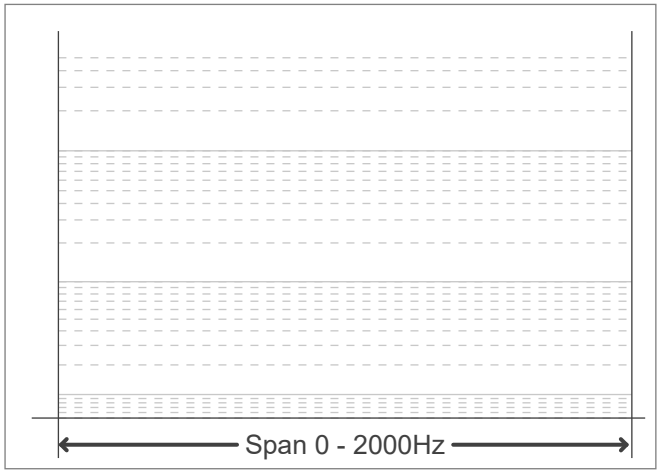
Flicker indices according to Lighting Research Center (2015)

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

