Measurement Date:Feb 15,2022

Certificate Number: 2782

Certificate Issue date:Feb 16,2022

Measurement Certificate

Requester	RAYGEARS LLC
Address	7-4-15-4F Honcho, Funabashi-City, Chiba Prefecture, Japan
Product Name	TSUKUYOMI・9
Model	RG9-60STD-HP
Manufacturer	RAYGEARS LLC
Measurement Unit	Illuminance [lx]
Measurement Method	OTCL Calibration procedure(LAB-T001), ANSI / NEMA FL1
Environment of Measurement	Temperature: 23 ℃ ± 2 ℃ Relative Humidity : 65 % ± 20 %
Measurement Date	February 15, 2022
Certificate Issue Date	February 16, 2022

Kyokko Trading Co.,Ltd.

Optical Test & Calibration Laboratory

Optical Metrology Engineer

Takuro Hirano

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KYOKKO TRADING CO., LTD.

旭光通商株式会社 光学試験校正室

光学試験校正室(ISO/IEC 17025 認定校正機関)
〒105-0014 東京都港区芝1-14-4 芝桝田ビルB1F
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Mearsurement Results

1.Measurement Content

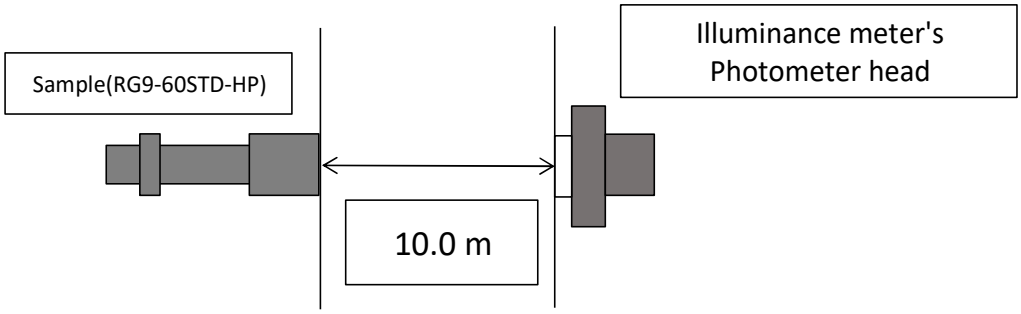
1-1 ：Illuminance Measurement Results

Illuminance[klx]	RG9-60STD-HP
Setting : Strong	3.158
Setting : Weak	0.997

1-2：Measurement Envoirment

Temperature： 21.2 ℃ Relative Humidity： 45.4%

1. A measurement distance is 10.0 m between B520 illuminance meter's photometer head surface and measuring sample's surface.
2. A sample is lit by the built-in battery.
3. The measurement was performed after lighting.
4. A measurement position is adjusted so that the illuminance meter's value was maximized.



1-3：Reference Standards used for calibration

Reference standards	Manufacturer	Model	S/N	Lamp used for Calib.
NIST compliante Spectral Irradiance Working Standard	Optronic Laboratory	OL345RP	90101125	☐
Illuminance meter	LMT	B520	04A5181 / 04A5182	☑

2.PEAK BEAM INTENSITY[cd]

2-1 : PEAK BEAM INTENSITY[cd] Calclation

ANSI/NEMA FL1 Section 2.3.6, obtain the illuminance results and "PEAK BEAM INTENSITY" from distance bytge the following formula(1).

$$\text{Illuminance[lx]} \times (\text{Distance[m]})^2 = \text{PEAK BEAM INTENSITY[cd]} \quad \text{----------(1)}$$

* Illuminance[lx] and Distance[m] from Illuminance measuring results(1-1).

2-2 : PEAK BEAM INTENSITY calcurate results

Settings	PEAK BEAM INTENSITY[cd]
Strong	315,800
Weak	99,700

3.BEAM DISTANCE[m]

3-1 : BEAM DISTANCE[m] calcuration method

ANSI/NEMA FL1 Section 2.2.6, obtain "BEAM DISTANCE" from "PEAK BEAM INTENSITY" by the following formula (2).

$$\sqrt{(\text{PEAK BEAM INTENSITY} / 0.25)} = \text{BEAM DISTANCE} \quad \text{----------(2)}$$

3-2 : BEAM DISTANCE[m] calcuration results

	BEAM DISTANCE[m]
Strong	1124
Weak	632