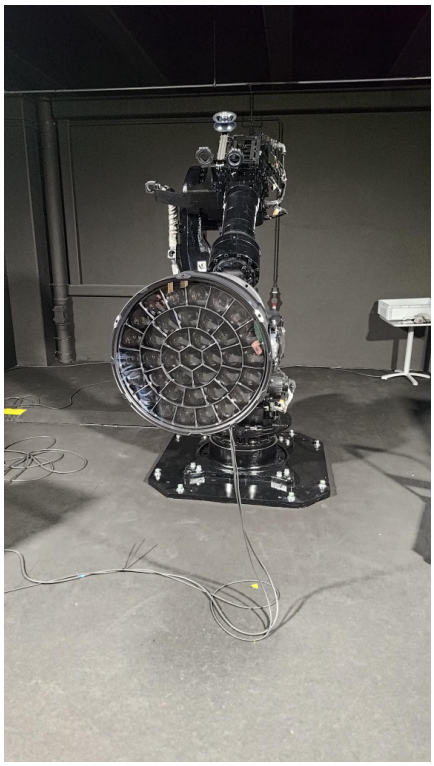
Impression X5 IP Maxx
Photometric Report

Report 2024-01-17-1

GLP German Light Products GmbH
GLP LightLab

Maximum Total Lumens	20900	lm
Maximum Intensity	3560000	cd
Energy Efficiency Class	B	
Energy Efficiency Index	0.81	
Power Consumption	1253	$\frac{\text{kW h}}{1000\,\text{h}}$

Serial Number	2000300010
Measurement Date	2024-01-17 09:00



Contents

1 Light Distribution

Table 1: Summary of beam opening angles for different fixture configurations.

Beam	Beam Angle (50 %) C0	C90	Field Angle (10 %) C0	C90	Cutoff Angle (3 %) C0	C90
Wide Beam , RGBL TLO	37°	37°	55°	55°	66°	65°
Medium Beam , RGBL TLO	18°	18°	25°	25°	27°	27°
Narrow Beam , RGBL TLO	3.3°	3.3°	5.1°	5.3°	6.0°	6.1°

Table 2: Summary of luminous flux and intensity for different fixture configurations.

Beam	Total Lumen Output	Peak Luminous Intensity)
Wide Beam , RGBL TLO	20.9 klm	57.0 kcd
Medium Beam , RGBL TLO	18.2 klm	232 kcd
Narrow Beam , RGBL TLO	11.1 klm	3.56 Mcd

Table 3: Approximate illuminance and beam diameter at different projection distances, calculated with the inverse-square law. The approximation is valid only for large distances, compared to the size of the fixture output port.

			Projection Distance [m]								
Beam	Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Wide Beam , RGBL TLO	Diameter [m]	0.68	3.4	5.1	6.8	8.4	10	12	14	15	17
	Illuminance [lx]	56.8k	2.3k	1.0k	570	360	250	190	140	110	91
Medium Beam , RGBL TLO	Diameter [m]	0.31	1.5	2.3	3.1	3.9	4.6	5.4	6.2	7.0	7.7
	Illuminance [lx]	230k	9.2k	4.1k	2.3k	1.5k	1.0k	750	580	460	370
Narrow Beam , RGBL TLO	Diameter [m]	0.058	0.29	0.44	0.58	0.73	0.87	1.0	1.2	1.3	1.5
	Illuminance [lx]	1.32M	53k	23k	13k	8.4k	5.9k	4.3k	3.3k	2.6k	2.1k

1.1 Wide Beam , RGBL TLO Beam

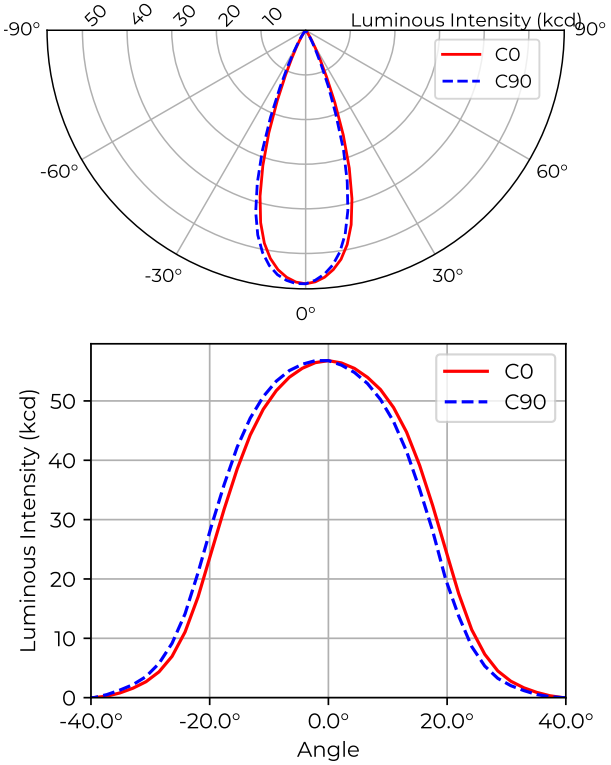


Figure 1: Polar and cartesian light intensity distributions. Wide Beam , RGBL TLO

Type B measurement, 1296 data points.

Table 4: Opening angles for different intensity thresholds. Wide Beam , RGBL TLO

		C0	C90
Beam Angle	50 %	37°	37°
Field Angle	10 %	55°	55°
Cutoff Angle	3 %	66°	65°

Table 5: Luminous flux, integrated over the beam for several minimum threshold intensities. Wide Beam , RGBL TLO

		Flux (lm)
Half-Peak Output	@50 %	14 500
Tenth-Peak Output	@10 %	19 900
Total Lumen Output	@3 %	20 900

$$\text{diameter} = 0.68 \times \text{distance}$$

$$\text{illuminance} = \frac{56\,800\,\text{lx}}{(\text{distance [m]})^2}$$

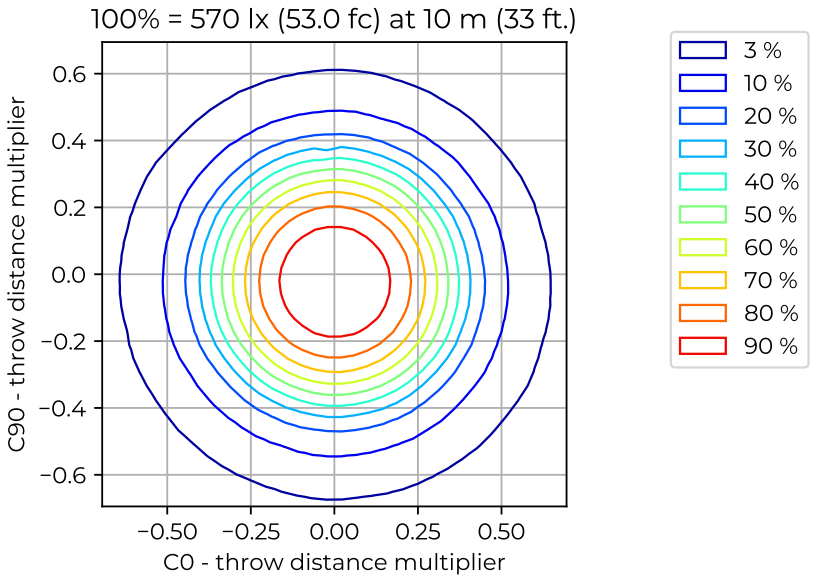


Figure 2: Iso-illuminance diagram of projected beam. Wide Beam , RGBL TLO
dist. from origin = throw dist. × throw dist. multiplier

Table 6: Quick calculation diagram for illuminance and beam diameter. Wide Beam , RGBL TLO

		Projection Distance [m]								
Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.68	3.4	5.1	6.8	8.4	10	12	14	15	17
Illuminance [lx]	56.8k	2.3k	1.0k	570	360	250	190	140	110	91

1.2 Medium Beam , RGBL TLO Beam

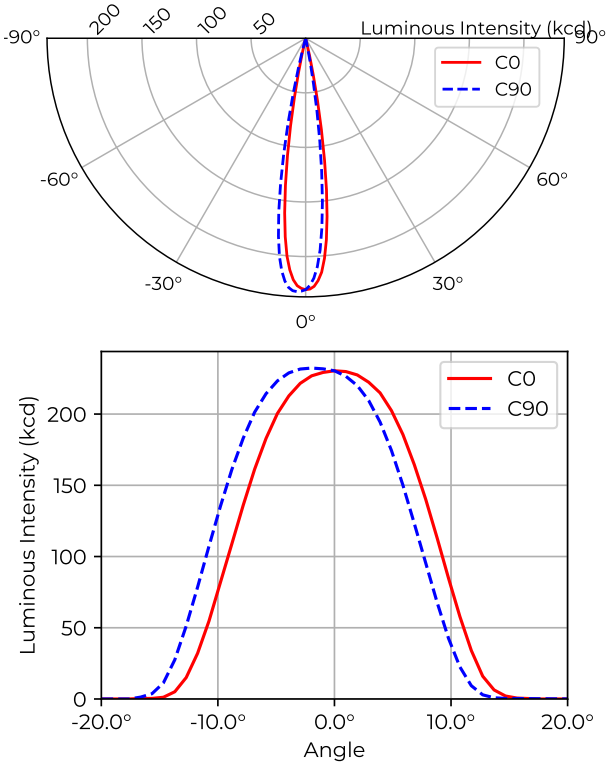


Figure 3: Polar and cartesian light intensity distributions. Medium Beam , RGBL TLO

Type B measurement, 1296 data points.

Table 7: Opening angles for different intensity thresholds. Medium Beam , RGBL TLO

		C0	C90
Beam Angle	50 %	18°	18°
Field Angle	10 %	25°	25°
Cutoff Angle	3 %	27°	27°

Table 8: Luminous flux, integrated over the beam for several minimum threshold intensities. Medium Beam , RGBL TLO

		Flux (lm)
Half-Peak Output	@50 %	13 300
Tenth-Peak Output	@10 %	17 800
Total Lumen Output	@3 %	18 200

$$\text{diameter} = 0.31 \times \text{distance}$$

$$\text{illuminance} = \frac{230\,000\ \text{lx}}{(\text{distance [m]})^2}$$

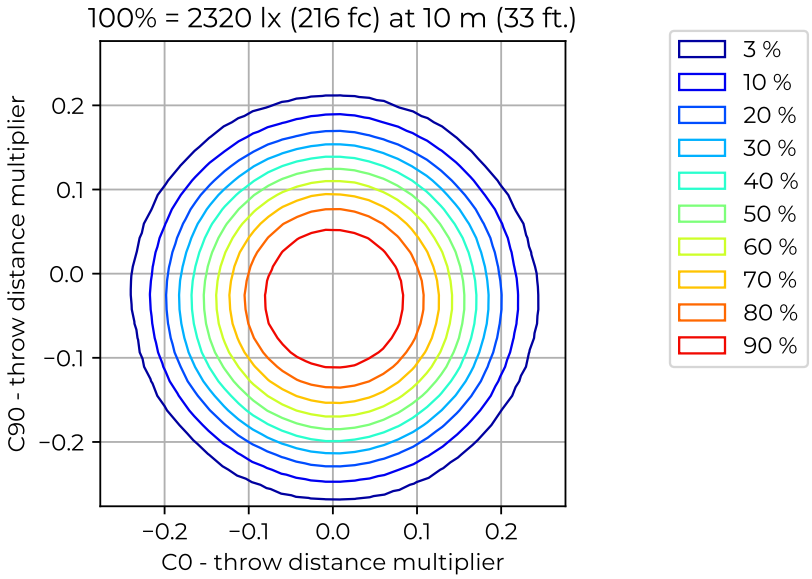


Figure 4: Iso-illuminance diagram of projected beam. Medium Beam , RGBL TLO
dist. from origin = throw dist. × throw dist. multiplier

Table 9: Quick calculation diagram for illuminance and beam diameter. Medium Beam , RGBL TLO

		Projection Distance [m]								
Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.31	1.5	2.3	3.1	3.9	4.6	5.4	6.2	7.0	7.7
Illuminance [lx]	230k	9.2k	4.1k	2.3k	1.5k	1.0k	750	580	460	370

1.3 Narrow Beam , RGBL TLO Beam

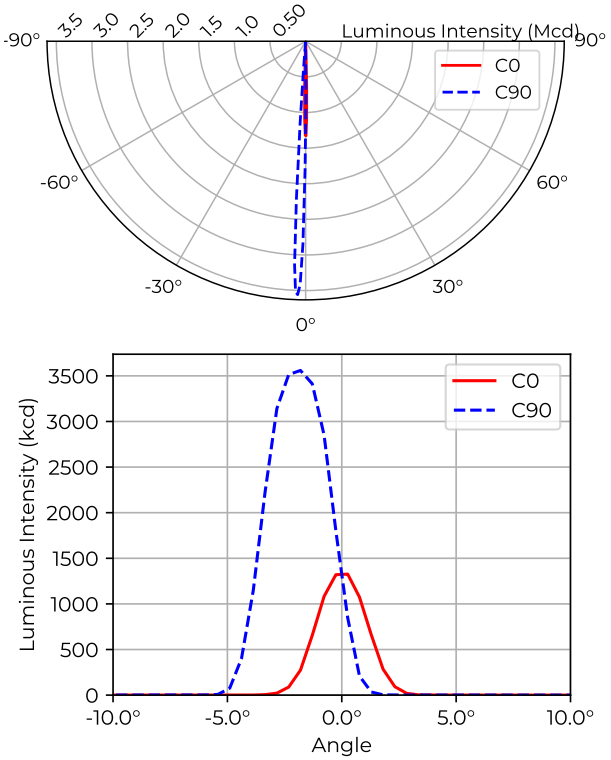


Figure 5: Polar and cartesian light intensity distributions. Narrow Beam , RGBL TLO

Type B measurement, 1296 data points.

Table 10: Opening angles for different intensity thresholds. Narrow Beam , RGBL TLO

		C0	C90
Beam Angle	50 %	3.3°	3.3°
Field Angle	10 %	5.1°	5.3°
Cutoff Angle	3 %	6.0°	6.1°

Table 11: Luminous flux, integrated over the beam for several minimum threshold intensities. Narrow Beam , RGBL TLO

		Flux (lm)
Half-Peak Output	@50 %	7340
Tenth-Peak Output	@10 %	10 600
Total Lumen Output	@3 %	11 100

$$\text{diameter} = 0.058 \times \text{distance}$$

$$\text{illuminance} = \frac{1\,320\,000\,\text{lx}}{(\text{distance}\,[\text{m}])^2}$$

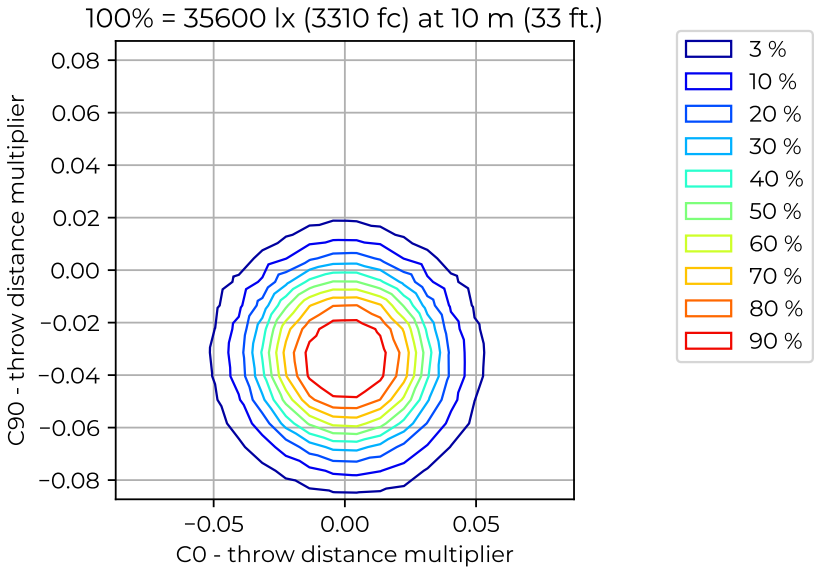


Figure 6: Iso-illuminance diagram of projected beam. Narrow Beam , RGBL TLO
dist. from origin = throw dist. × throw dist. multiplier

Table 12: Quick calculation diagram for illuminance and beam diameter. Narrow Beam , RGBL TLO

		Projection Distance [m]								
Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.058	0.29	0.44	0.58	0.73	0.87	1.0	1.2	1.3	1.5
Illuminance [lx]	1.32M	53k	23k	13k	8.4k	5.9k	4.3k	3.3k	2.6k	2.1k