

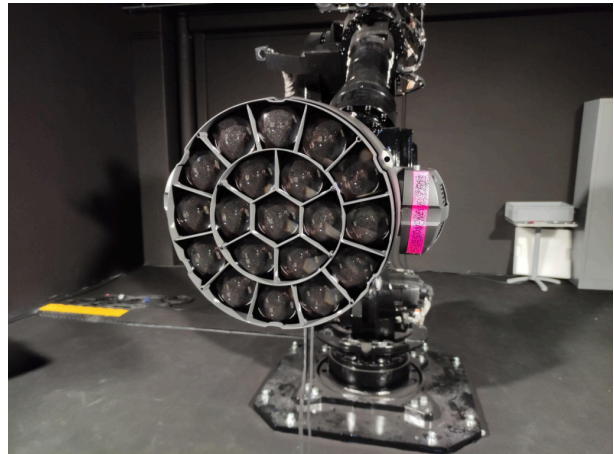


# impression X5 Production Photometric Report

Report 2022-10-18-1

GLP German Light Products GmbH  
GLP LightLab

Maximum Total Lumens	10100 lm
Maximum Intensity	127000 cd
Energy Efficiency Class	B
Energy Efficiency Index	0.81
Power Consumption	495 $\frac{\text{kWh}}{1000\text{h}}$
Lamp	19 x 40 RGBL LEDs
Serial Number	1119802699
Measurement Date	2022-10-18 16:05
Software Version	2.8.2





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# 1 Light Distribution

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

Beam	Beam Angle (50 %)		Field Angle (10 %)		Cutoff Angle (3 %)	
	C0	C90	C0	C90	C0	C90
6500K, RGB HO	18°	18°	25°	25°	28°	28°
5600K, RGB HO	18°	18°	25°	25°	28°	28°
3200K, RGB HO	18°	18°	25°	25°	28°	28°

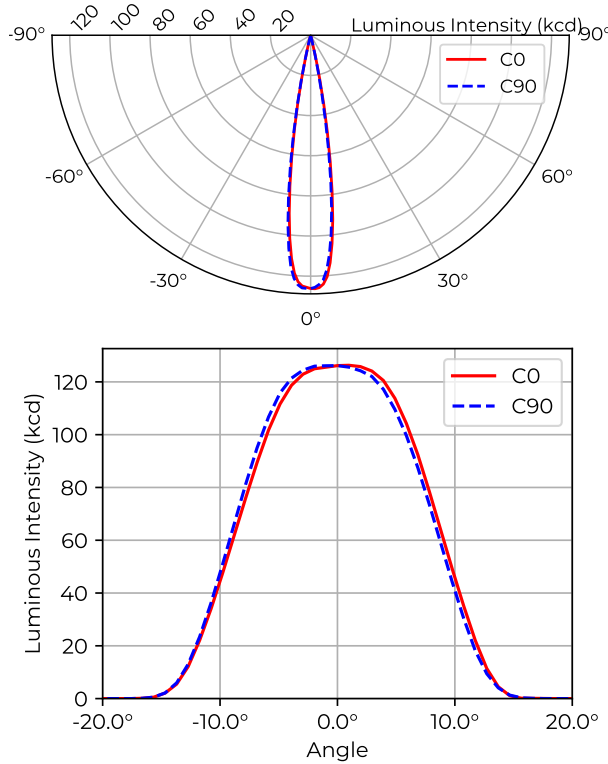
Table 2: Summary of luminous flux and intensity for different fixture configurations.

Beam	Total Lumen Output	Peak Luminous Intensity)
6500K, RGB HO	10.1 klm	127 kcd
5600K, RGB HO	9.87 klm	123 kcd
3200K, RGB HO	8.25 klm	102 kcd

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.

Beam	Parameter	Factor	Projection Distance [m]									
			5	7.5	10	12.5	15	17.5	20	22.5	25	
6500K, RGB HO	Diameter [m]	0.31	1.5	2.3	3.1	3.9	4.6	5.4	6.2	6.9	7.7	
	Illuminance [lx]	126k	5.0k	2.2k	1.3k	810	560	410	320	250	200	
5600K, RGB HO	Diameter [m]	0.31	1.5	2.3	3.1	3.9	4.6	5.4	6.2	7.0	7.7	
	Illuminance [lx]	123k	4.9k	2.2k	1.2k	780	540	400	310	240	200	
3200K, RGB HO	Diameter [m]	0.31	1.6	2.3	3.1	3.9	4.7	5.4	6.2	7.0	7.8	
	Illuminance [lx]	102k	4.1k	1.8k	1.0k	650	450	330	250	200	160	

## 1.1 6500K, RGB HO Beam



Type B measurement, 1296 data points.

Table 4: Opening angles for different intensity thresholds. 6500K, RGB HO

		C0	C90
Beam Angle	50 %	18°	18°
Field Angle	10 %	25°	25°
Cutoff Angle	3 %	28°	28°

Table 5: Luminous flux, integrated over the beam for several minimum threshold intensities. 6500K, RGB HO

		Flux (lm)
Half-Peak Output	@50 %	7200
Tenth-Peak Output	@10 %	9850
Total Lumen Output	@3 %	10 100

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

$$\text{illuminance} = \frac{126\,000 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 1: Polar and cartesian light intensity distributions. 6500K, RGB HO

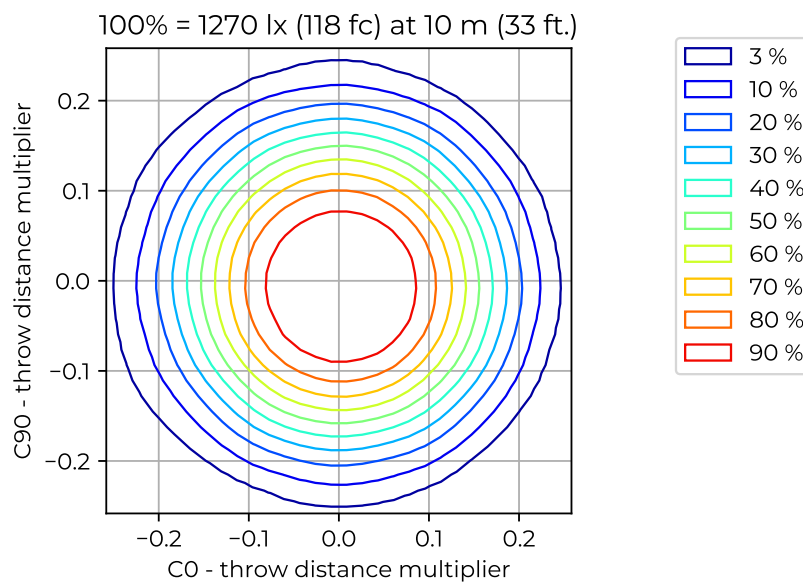
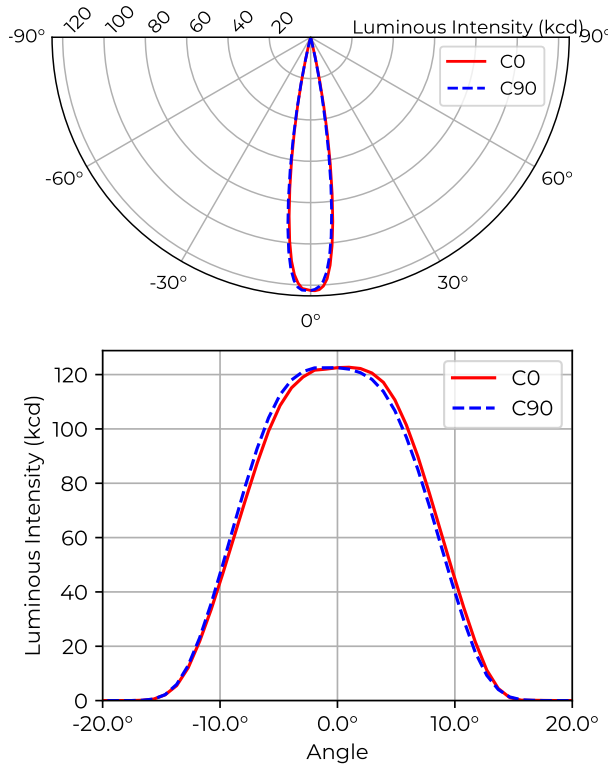


Figure 2: Iso-illuminance diagram of projected beam. 6500K, RGB HO  
dist. from origin = throw dist. × throw dist. multiplier

Table 6: Quick calculation diagram for illuminance and beam diameter. 6500K, RGB HO

		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	6.9	7.7
Illuminance [lx]	126k	5.0k	2.2k	1.3k	810	560	410	320	250	200

## 1.2 5600K, RGB HO Beam



Type B measurement, 1296 data points.

Table 7: Opening angles for different intensity thresholds. 5600K, RGB HO

		C0	C90
Beam Angle	50 %	18°	18°
Field Angle	10 %	25°	25°
Cutoff Angle	3 %	28°	28°

Table 8: Luminous flux, integrated over the beam for several minimum threshold intensities. 5600K, RGB HO

		Flux (lm)
Half-Peak Output	@50 %	7040
Tenth-Peak Output	@10 %	9620
Total Lumen Output	@3 %	9870

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

$$\text{illuminance} = \frac{123\,000 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 3: Polar and cartesian light intensity distributions. 5600K, RGB HO

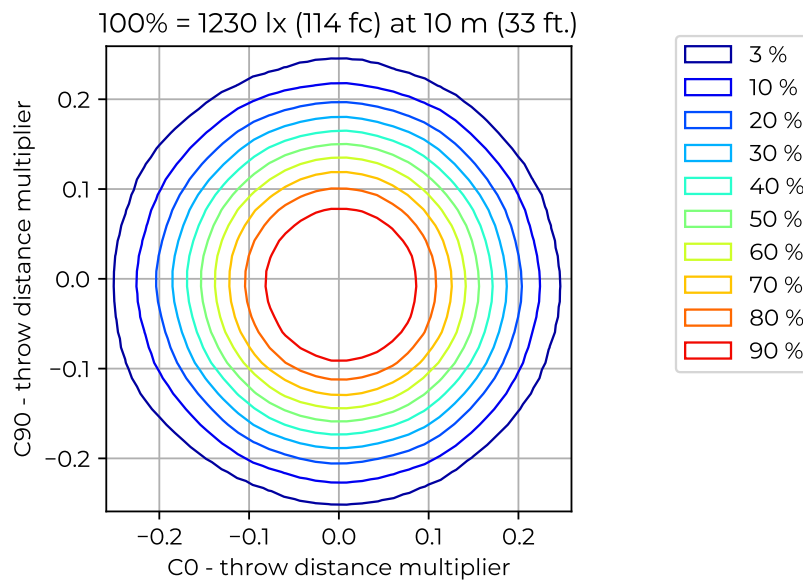
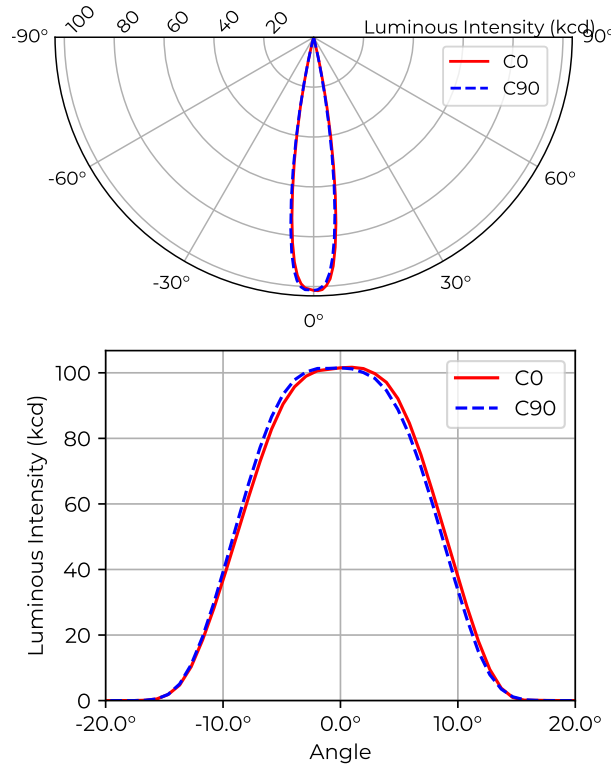


Figure 4: Iso-illuminance diagram of projected beam. 5600K, RGB HO  
dist. from origin = throw dist. × throw dist. multiplier

Table 9: Quick calculation diagram for illuminance and beam diameter. 5600K, RGB HO

		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]	123k	4.9k	2.2k	1.2k	780	540	400	310	240	200

### 1.3 3200K, RGB HO Beam



Type B measurement, 1296 data points.

Table 10: Opening angles for different intensity thresholds. 3200K, RGB HO

		C0	C90
Beam Angle	50 %	18°	18°
Field Angle	10 %	25°	25°
Cutoff Angle	3 %	28°	28°

Table 11: Luminous flux, integrated over the beam for several minimum threshold intensities. 3200K, RGB HO

		Flux (lm)
Half-Peak Output	@50 %	5910
Tenth-Peak Output	@10 %	8050
Total Lumen Output	@3 %	8250

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

$$\text{illuminance} = \frac{102\,000 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 5: Polar and cartesian light intensity distributions. 3200K, RGB HO

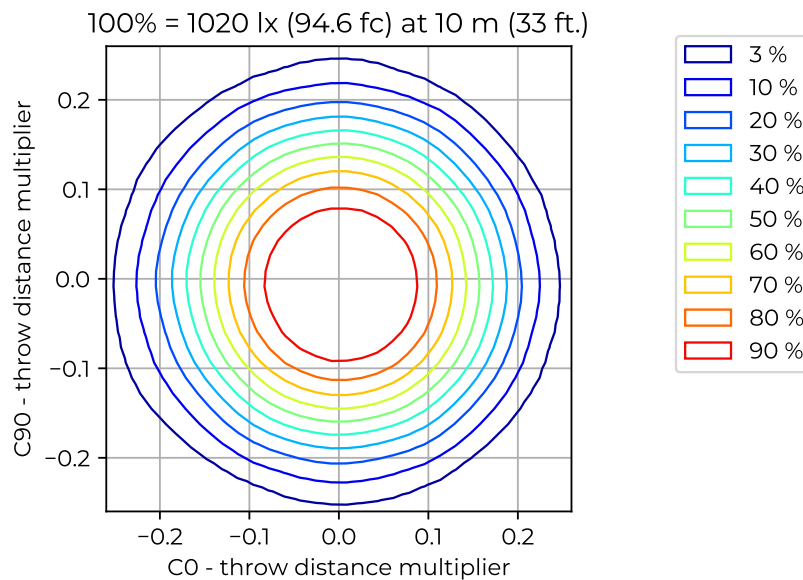


Figure 6: Iso-illuminance diagram of projected beam. 3200K, RGB HO  
dist. from origin = throw dist. × throw dist. multiplier

Table 12: Quick calculation diagram for illuminance and beam diameter. 3200K, RGB HO

Parameter	Factor	Projection Distance [m]								
		5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.31	1.6	2.3	3.1	3.9	4.7	5.4	6.2	7.0	7.8
Illuminance [lx]	102k	4.1k	1.8k	1.0k	650	450	330	250	200	160