



FusionCreos_V2 Photometric Report

Report 2024-08-19-1

GLP German Light Products GmbH
GLP LightLab

Maximum Total Lumens	8520 lm
Maximum Intensity	650000 cd
Energy Efficiency Class	C
Energy Efficiency Index	1.05
Power Consumption	662 $\frac{\text{kWh}}{1000 \text{ h}}$
Lamp	3x6x40WRGBL
Serial Number	6010100113
Measurement Date	2024-08-19 23:23





Contents

1	Light Distribution	2
1.1	Wide, FullOnTLO Beam	3
1.2	Medium, FullOnTLO Beam	4
1.3	Narrow, FullOnTLO Beam	5

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
Wide, FullOnTLO	33°	31°	48°	46°	52°	51°
Medium, FullOnTLO	13°	12°	17°	16°	18°	17°
Narrow, FullOnTLO	4.7°	4.4°	8.1°	7.6°	9.4°	8.6°

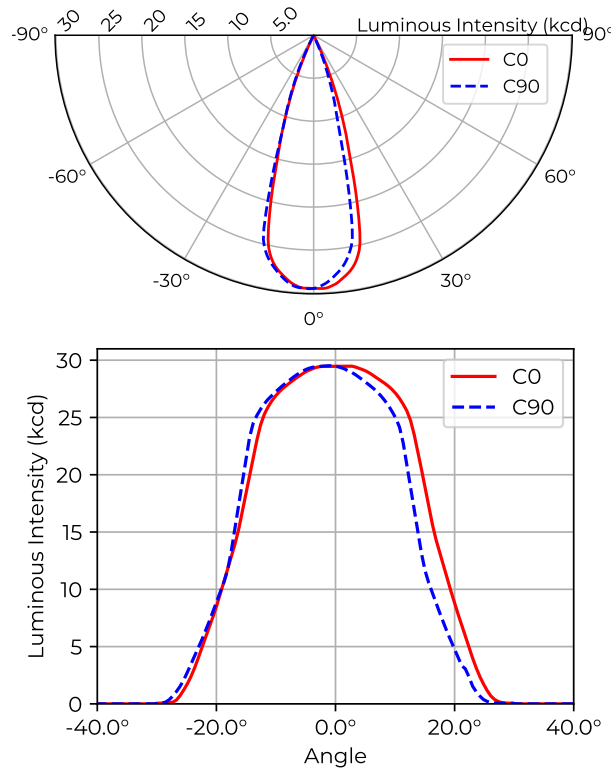
Table 2: Summary of luminous flux and intensity for different fixture configurations.

Beam	Total Lumen Output	Peak Luminous Intensity)
Wide, FullOnTLO	8.52 klm	29.6 kcd
Medium, FullOnTLO	7.08 klm	166 kcd
Narrow, FullOnTLO	4.34 klm	650 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
Wide, FullOnTLO	Diameter [m]	0.58	2.9	4.3	5.8	7.2	8.6	10	12	13	14
	Illuminance [lx]	29.5k	1.2k	520	290	190	130	96	74	58	47
Medium, FullOnTLO	Diameter [m]	0.22	1.1	1.7	2.2	2.8	3.3	3.9	4.4	5.0	5.5
	Illuminance [lx]	164k	6.6k	2.9k	1.6k	1.1k	730	540	410	320	260
Narrow, FullOnTLO	Diameter [m]	0.079	0.40	0.60	0.79	0.99	1.2	1.4	1.6	1.8	2.0
	Illuminance [lx]	603k	24k	11k	6.0k	3.9k	2.7k	2.0k	1.5k	1.2k	970

1.1 Wide, FullOnTLO Beam



Type B measurement, 9801 data points.

Table 4: Opening angles for different intensity thresholds. Wide, FullOnTLO

		C0	C90
Beam Angle	50 %	33°	31°
Field Angle	10 %	48°	46°
Cutoff Angle	3 %	52°	51°

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

		Flux (lm)
Half-Peak Output	@50 %	6380
Tenth-Peak Output	@10 %	8330
Total Lumen Output	@3 %	8520

$$\text{diameter} = 0.58 \times \text{distance}$$

$$\text{illuminance} = \frac{29\,500 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 1: Polar and cartesian light intensity distributions. Wide, FullOnTLO

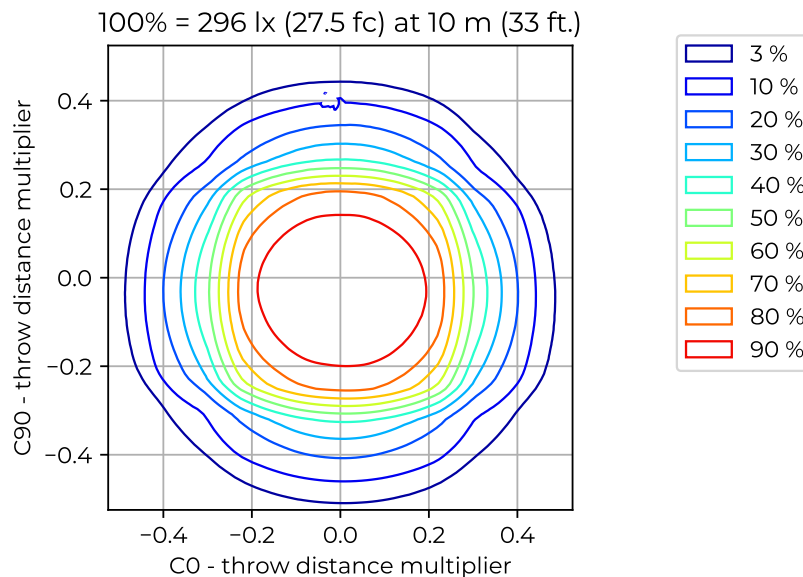
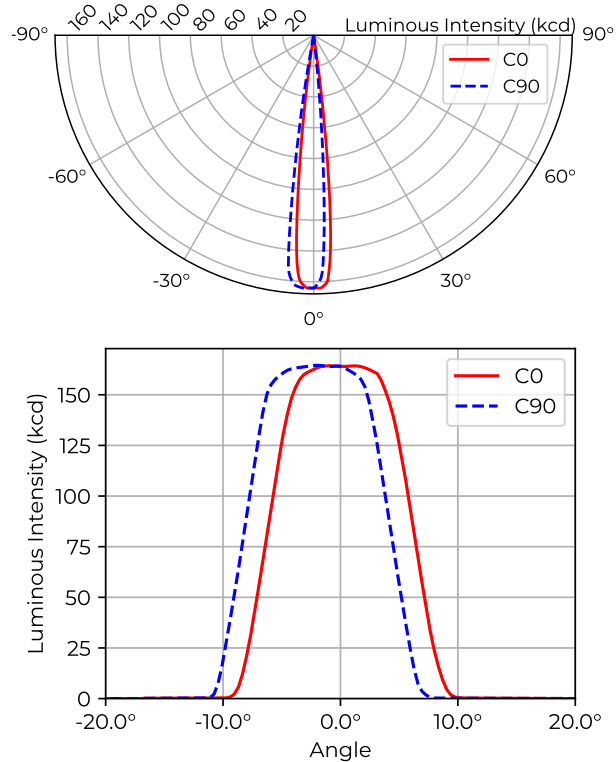


Figure 2: Iso-illuminance diagram of projected beam. Wide, FullOnTLO
dist. from origin = throw dist. × throw dist. multiplier

Table 6: Quick calculation diagram for illuminance and beam diameter. Wide, FullOnTLO

Parameter	Factor	Projection Distance [m]									
		5	7.5	10	12.5	15	17.5	20	22.5	25	
Diameter [m]	0.58	2.9	4.3	5.8	7.2	8.6	10	12	13	14	
Illuminance [lx]	29.5k	1.2k	520	290	190	130	96	74	58	47	

1.2 Medium, FullOnTLO Beam



Type B measurement, 9801 data points.

Table 7: Opening angles for different intensity thresholds. Medium, FullOnTLO

		C0	C90
Beam Angle	50 %	13°	12°
Field Angle	10 %	17°	16°
Cutoff Angle	3 %	18°	17°

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

		Flux (lm)
Half-Peak Output	@50 %	5640
Tenth-Peak Output	@10 %	6970
Total Lumen Output	@3 %	7080

$$\text{diameter} = 0.22 \times \text{distance}$$

$$\text{illuminance} = \frac{164000 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 3: Polar and cartesian light intensity distributions. Medium, FullOnTLO

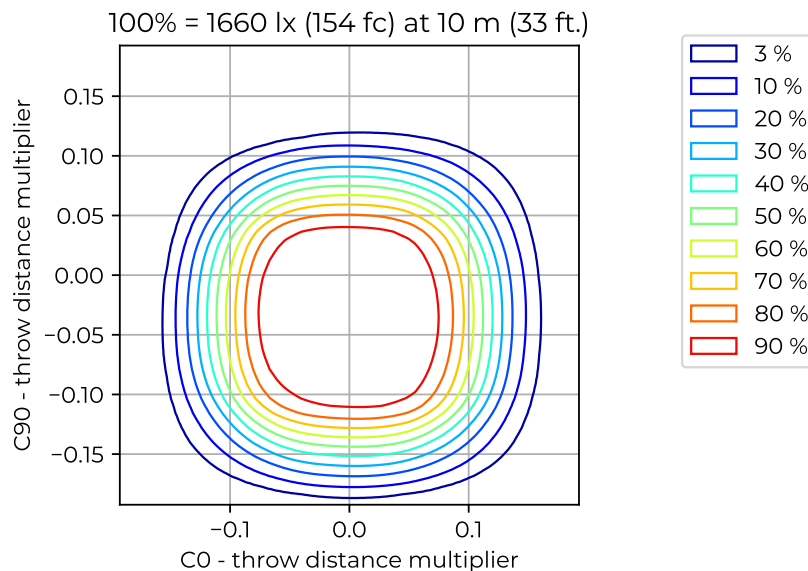
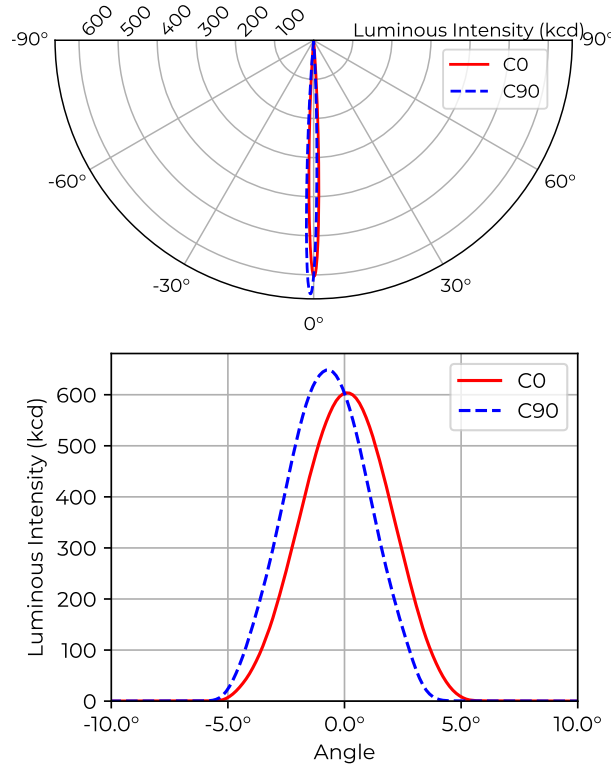


Figure 4: Iso-illuminance diagram of projected beam. Medium, FullOnTLO
dist. from origin = throw dist. × throw dist. multiplier

Table 9: Quick calculation diagram for illuminance and beam diameter. Medium, FullOnTLO

Parameter	Factor	Projection Distance [m]									
		5	7.5	10	12.5	15	17.5	20	22.5	25	
Diameter [m]	0.22	1.1	1.7	2.2	2.8	3.3	3.9	4.4	5.0	5.5	
Illuminance [lx]	164k	6.6k	2.9k	1.6k	1.1k	730	540	410	320	260	

1.3 Narrow, FullOnTLO Beam



Type B measurement, 9801 data points.

Table 10: Opening angles for different intensity thresholds. Narrow, FullOnTLO

		C0	C90
Beam Angle	50 %	4.7°	4.4°
Field Angle	10 %	8.1°	7.6°
Cutoff Angle	3 %	9.4°	8.6°

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

		Flux (lm)
Half-Peak Output	@50 %	2340
Tenth-Peak Output	@10 %	4110
Total Lumen Output	@3 %	4340

$$\text{diameter} = 0.079 \times \text{distance}$$

$$\text{illuminance} = \frac{603\,000 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 5: Polar and cartesian light intensity distributions. Narrow, FullOnTLO

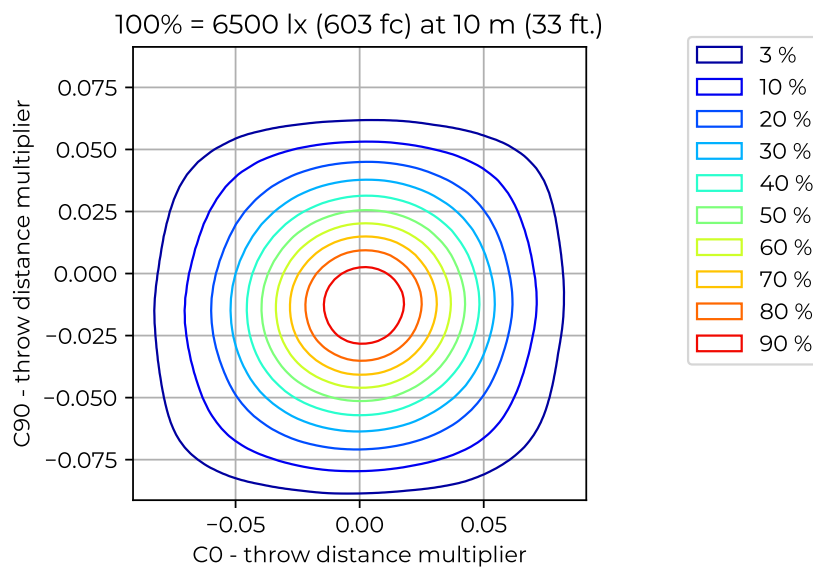


Figure 6: Iso-illuminance diagram of projected beam. Narrow, FullOnTLO
dist. from origin = throw dist. × throw dist. multiplier

Table 12: Quick calculation diagram for illuminance and beam diameter. Narrow, FullOnTLO

Parameter	Factor	Projection Distance [m]									
		5	7.5	10	12.5	15	17.5	20	22.5	25	
Diameter [m]	0.079	0.40	0.60	0.79	0.99	1.2	1.4	1.6	1.8	2.0	
Illuminance [lx]	603k	24k	11k	6.0k	3.9k	2.7k	2.0k	1.5k	1.2k	970	