



impression FR10 Bar
Photometric Report

GLP German Light Products GmbH
Optical Laboratory

Catalog Number	
Maximum Output	5978.000 lm
Maximum Intensity	707300.000 cd
Energy Efficiency Class	A++
Energy Efficiency Index	0.00
Power Consumption	0.0 $\frac{\text{kW h}}{1000 \text{ h}}$





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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
Narrow	5	4	9	6	10	7
Medium	11	11	17	15	19	17
Wide	25	24	32	31	35	33

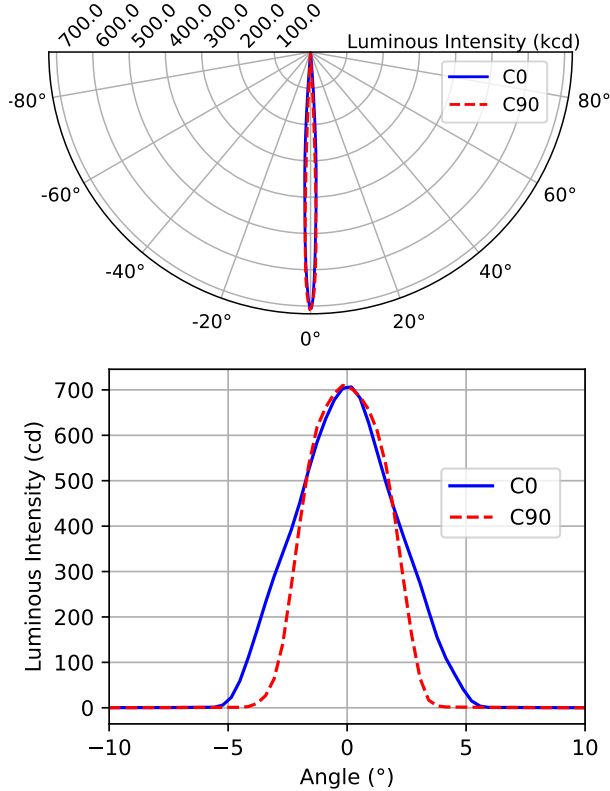
Table 2: Summary of luminous flux and intensity for different fixture configurations.

Beam	Total Lumen Output (lm)	Peak Luminous Intensity (cd)
Narrow	4566	707 292
Medium	5434	168 887
Wide	5978	41 224

Table 3: Summary of luminous flux and intensity for different fixture configurations.

Beam	Parameter	Factor	Projection Distance [m]								
			5	7.5	10	12.5	15	17.5	20	22.5	25
Narrow	Diameter [m]	0.15	0.74	1.1	1.5	1.8	2.2	2.6	3.0	3.3	3.7
	Illuminance [lx]	707000	28000.0	13000.0	7100.0	4500.0	3100.0	2300.0	1800.0	1400.0	1100.0
Medium	Diameter [m]	0.31	1.5	2.3	3.1	3.9	4.6	5.4	6.2	7.0	7.7
	Illuminance [lx]	169000	6800.0	3000.0	1700.0	1100.0	750.0	550.0	420.0	330.0	270.0
Wide	Diameter [m]	0.58	2.9	4.3	5.8	7.2	8.7	10.0	12.0	13.0	14.0
	Illuminance [lx]	41200	1600.0	730.0	410.0	260.0	180.0	130.0	100.0	81.0	66.0

1.1 Narrow Beam



Type Type B measurement with a total of 961 data points.

Table 4: Opening angles for different intensity thresholds. Narrow

		C0	C90
Beam Angle	50 %	5.1°	4.3°
Field Angle	10 %	9.0°	5.8°
Cutoff Angle	3 %	10.1°	6.9°

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

		Flux (lm)
Half-Peak Output	@50 %	2842
Tenth-Peak Output	@10 %	4346
Total Lumen Output	@3 %	4516

$$\text{diameter} = 0.15 \times \text{distance}$$

$$\text{illuminance} = \frac{707\,000.00 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 1: Polar and cartesian light intensity distributions. Narrow

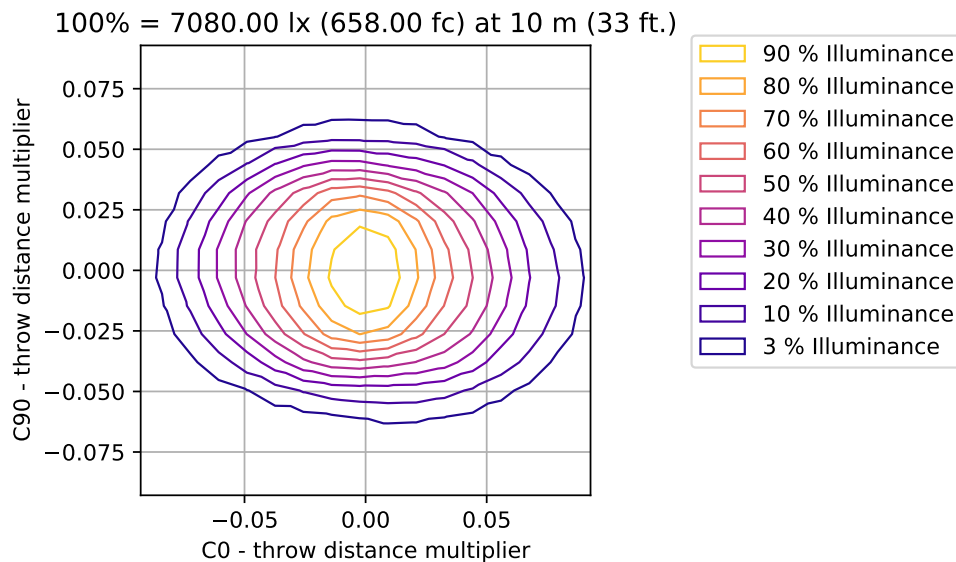
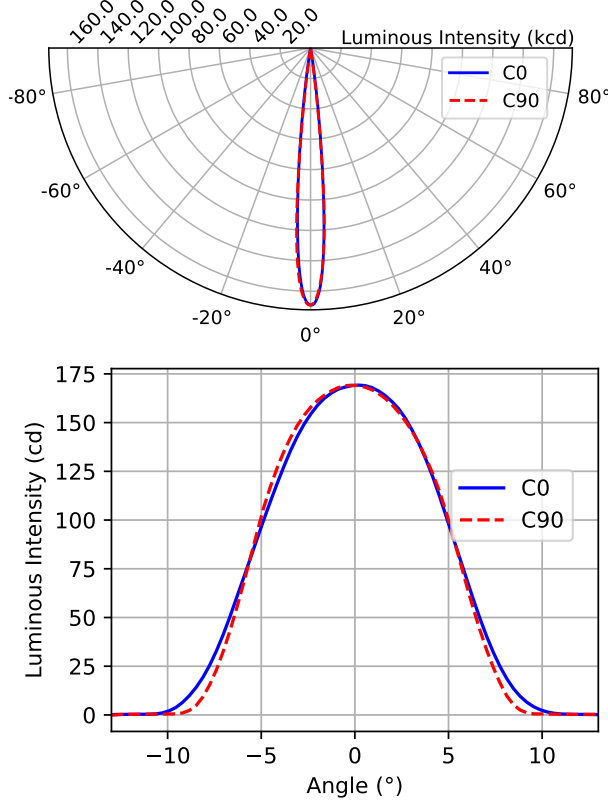


Figure 2: Iso-illuminance diagram of projected beam. Narrow
dist. from origin = throw dist. × throw dist. multiplier

Table 6: Quick calculation diagram for illuminance and beam diameter. Narrow

Parameter	Factor	Projection Distance [m]								
		5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.15	0.74	1.1	1.5	1.8	2.2	2.6	3.0	3.3	3.7
Illuminance [lx]	707000	28000.0	13000.0	7100.0	4500.0	3100.0	2300.0	1800.0	1400.0	1100.0

1.2 Medium Beam



Type Type B measurement with a total of 961 data points.

Table 7: Opening angles for different intensity thresholds. Medium

		C0	C90
Beam Angle	50 %	10.8°	10.8°
Field Angle	10 %	16.6°	15.2°
Cutoff Angle	3 %	18.8°	17.0°

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

		Flux (lm)
Half-Peak Output	@50 %	3797
Tenth-Peak Output	@10 %	5294
Total Lumen Output	@3 %	5472

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

$$\text{illuminance} = \frac{169\,000.00 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 3: Polar and cartesian light intensity distributions. Medium

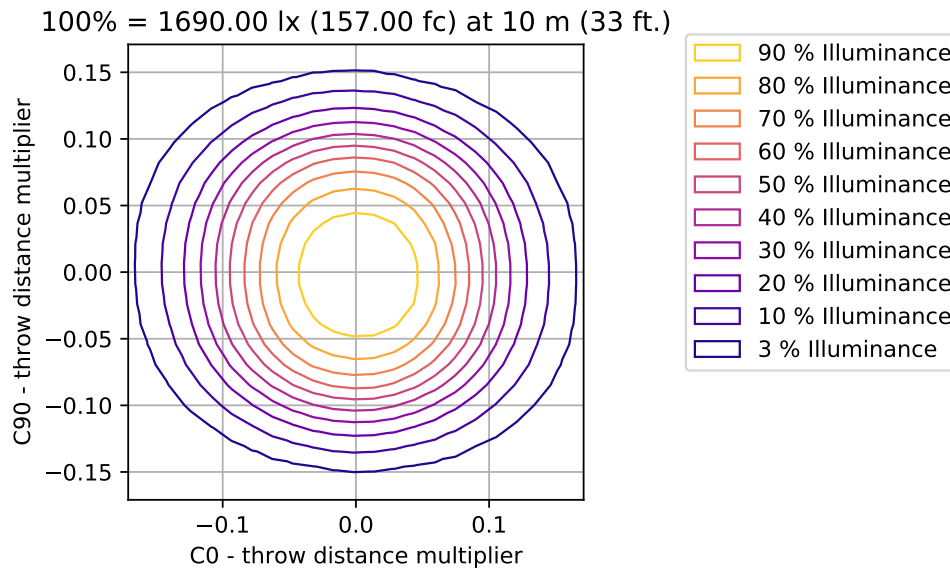
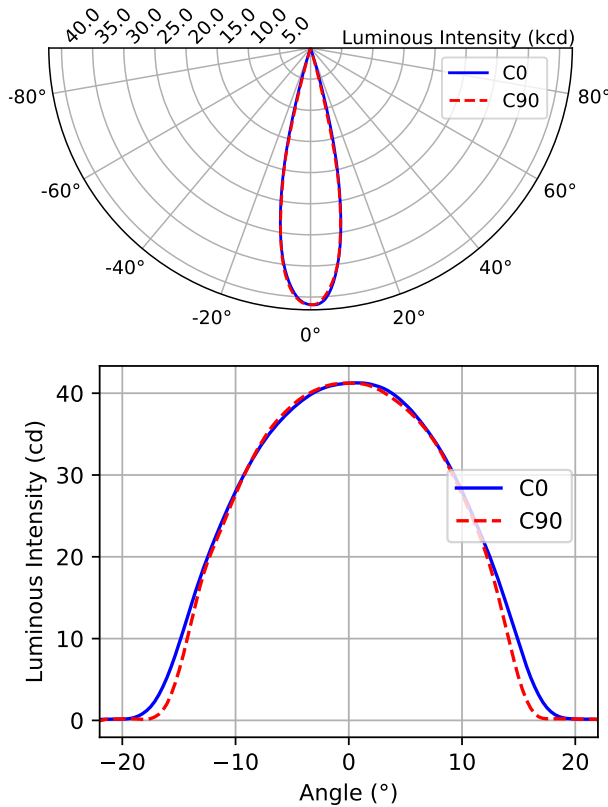


Figure 4: Iso-illuminance diagram of projected beam. Medium
dist. from origin = throw dist. × throw dist. multiplier

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

Parameter	Factor	Projection Distance [m]									
		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]	169000	6800.0	3000.0	1700.0	1100.0	750.0	550.0	420.0	330.0	270.0	

1.3 Wide Beam



Type Type B measurement with a total of 961 data points.

Table 10: Opening angles for different intensity thresholds. Wide

		C0	C90
Beam Angle	50 %	24.5°	24.2°
Field Angle	10 %	32.5°	30.7°
Cutoff Angle	3 %	35.4°	32.8°

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

		Flux (lm)
Half-Peak Output	@50 %	4513
Tenth-Peak Output	@10 %	5881
Total Lumen Output	@3 %	5971

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

$$\text{illuminance} = \frac{41\,200.00 \text{ lx}}{(\text{distance [m]})^2}$$

Figure 5: Polar and cartesian light intensity distributions. Wide

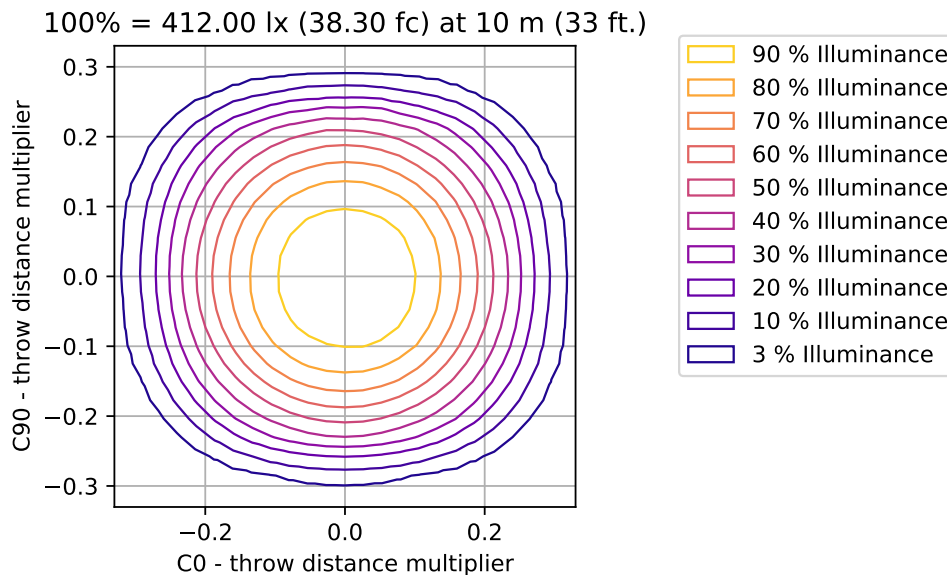


Figure 6: Iso-illuminance diagram of projected beam. Wide
dist. from origin = throw dist. × throw dist. multiplier

Table 12: Quick calculation diagram for illuminance and beam diameter. Wide

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	8.7	10.0	12.0	13.0	14.0	
Illuminance [lx]	41200	1600.0	730.0	410.0	260.0	180.0	130.0	100.0	81.0	66.0	