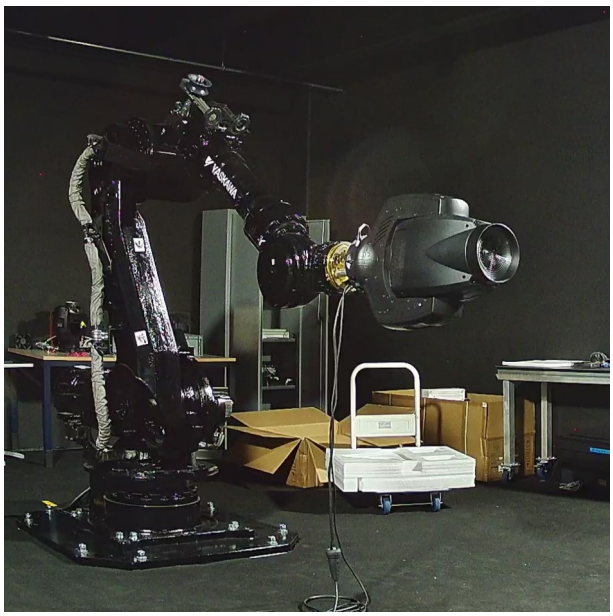
impression S500 Wash HC
Photometric Report

Report 2024-09-28-1

GLP German Light Products GmbH
GLP LightLab

Maximum Total Lumens	13100	lm
Maximum Intensity	771000	cd
Energy Efficiency Class	B	
Energy Efficiency Index	0.60	
Power Consumption	602	$\frac{\text{kW h}}{1000\,\text{h}}$

Serial Number	2012400049
Measurement Date	2024-09-28 01:13
Analysis Date	2024-09-30 07:27



Contents

1 Light Distribution **2**
1.1 Wide, S500WHC Beam 3
1.2 Medium, S500WHC Beam 4
1.3 Narrow, S500WHC Beam 5

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, S500WHC	39°	39°	65°	65°	73°	73°
Medium, S500WHC	18°	17°	30°	30°	37°	37°
Narrow, S500WHC	7.1°	7.1°	12°	12°	17°	17°

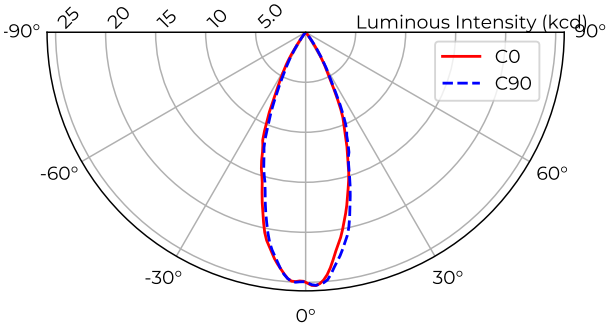
Table 2: Summary of luminous flux and intensity for different fixture configurations.

Beam	Total Lumen Output	Peak Luminous Intensity)
Wide, S500WHC	11.1 klm	25.5 kcd
Medium, S500WHC	13.1 klm	138 kcd
Narrow, S500WHC	12.6 klm	771 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.

			Projection Distance [m]								
Beam	Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Wide, S500WHC	Diameter [m]	0.71	3.6	5.3	7.1	8.9	11	12	14	16	18
	Illuminance [lx]	25.0k	1000	440	250	160	110	82	62	49	40
Medium, S500WHC	Diameter [m]	0.31	1.5	2.3	3.1	3.8	4.6	5.4	6.1	6.9	7.6
	Illuminance [lx]	138k	5.5k	2.4k	1.4k	880	610	450	340	270	220
Narrow, S500WHC	Diameter [m]	0.12	0.62	0.93	1.2	1.5	1.9	2.2	2.5	2.8	3.1
	Illuminance [lx]	765k	31k	14k	7.7k	4.9k	3.4k	2.5k	1.9k	1.5k	1.2k

1.1 Wide, S500WHC Beam



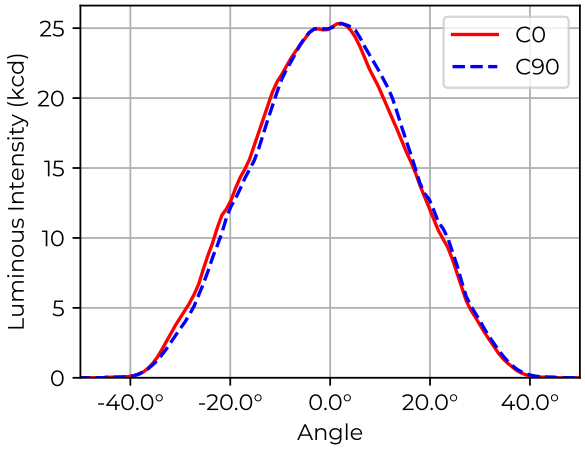


Figure 1: Polar and cartesian light intensity distributions. Wide, S500WHC

Type B measurement, 9801 data points.

Table 4: Opening angles for different intensity thresholds. Wide, S500WHC

		C0	C90
Beam Angle	50 %	39°	39°
Field Angle	10 %	65°	65°
Cutoff Angle	3 %	73°	73°

Table 5: Luminous flux, integrated over the beam for several minimum threshold intensities. Wide, S500WHC

		Flux (lm)
Half-Peak Output	@50 %	6500
Tenth-Peak Output	@10 %	10 700
Total Lumen Output	@3 %	11 100

$$\text{diameter} = 0.71 \times \text{distance}$$

$$\text{illuminance} = \frac{25\,000\,\text{lx}}{(\text{distance [m]})^2}$$

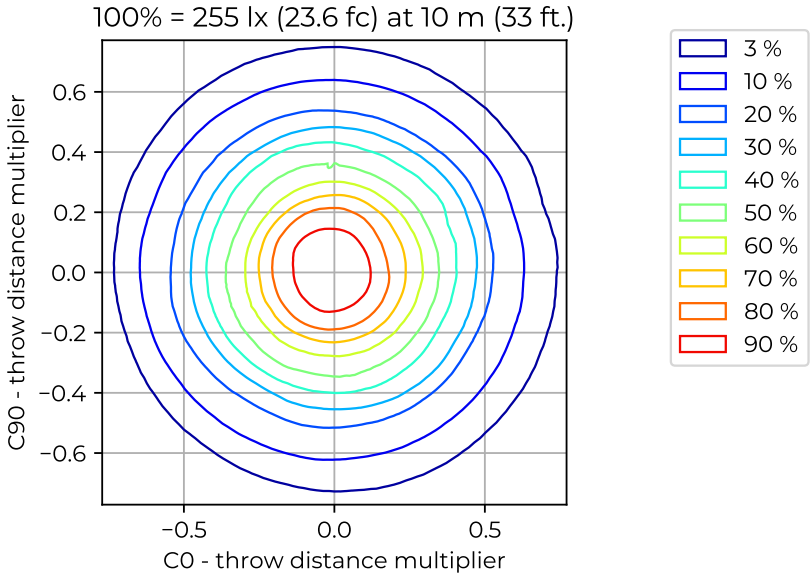
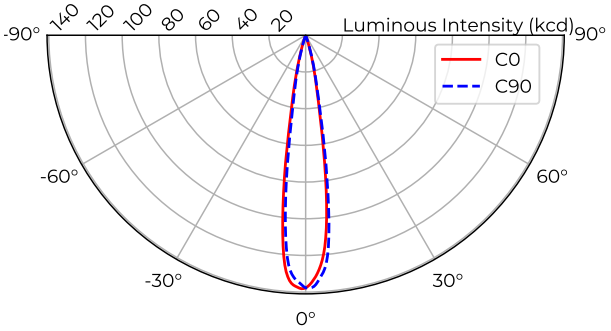


Figure 2: Iso-illuminance diagram of projected beam. Wide, S500WHC
dist. from origin = throw dist. × throw dist. multiplier

Table 6: Quick calculation diagram for illuminance and beam diameter. Wide, S500WHC

		Projection Distance [m]								
Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.71	3.6	5.3	7.1	8.9	11	12	14	16	18
Illuminance [lx]	25.0k	1000	440	250	160	110	82	62	49	40

1.2 Medium, S500WHC Beam



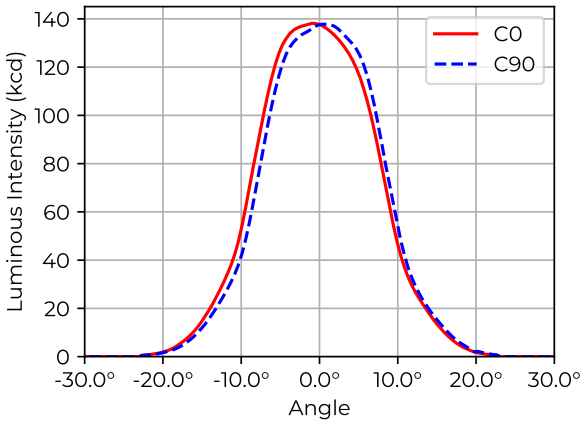


Figure 3: Polar and cartesian light intensity distributions. Medium, S500WHC

Type B measurement, 9801 data points.

Table 7: Opening angles for different intensity thresholds. Medium, S500WHC

		C0	C90
Beam Angle	50 %	18°	17°
Field Angle	10 %	30°	30°
Cutoff Angle	3 %	37°	37°

Table 8: Luminous flux, integrated over the beam for several minimum threshold intensities. Medium, S500WHC

		Flux (lm)
Half-Peak Output	@50 %	7730
Tenth-Peak Output	@10 %	12 300
Total Lumen Output	@3 %	13 100

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

$$\text{illuminance} = \frac{138\,000\ \text{lx}}{(\text{distance [m]})^2}$$

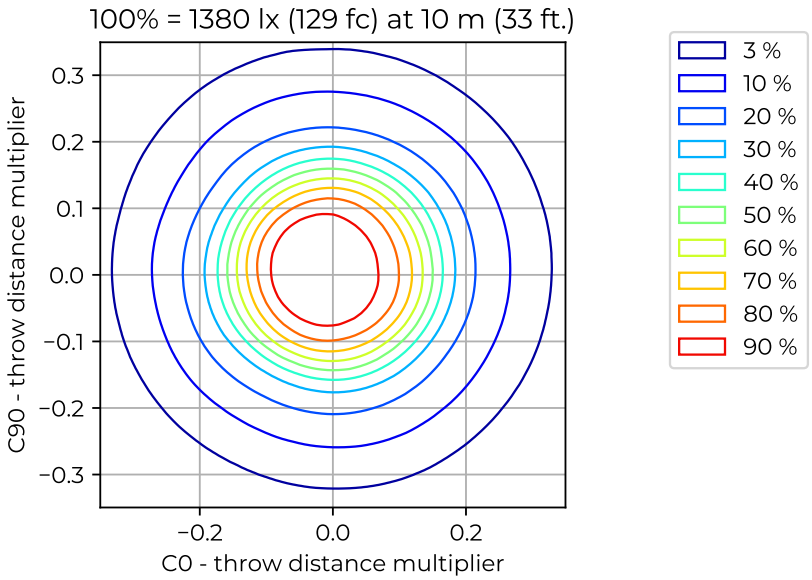
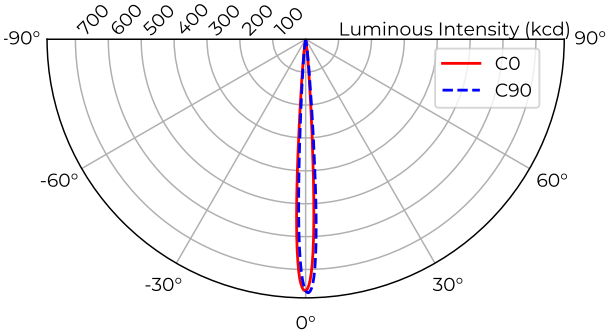


Figure 4: Iso-illuminance diagram of projected beam. Medium, S500WHC
dist. from origin = throw dist. × throw dist. multiplier

Table 9: Quick calculation diagram for illuminance and beam diameter. Medium, S500WHC

		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	3.8	4.6	5.4	6.1	6.9	7.6
Illuminance [lx]	138k	5.5k	2.4k	1.4k	880	610	450	340	270	220

1.3 Narrow, S500WHC Beam



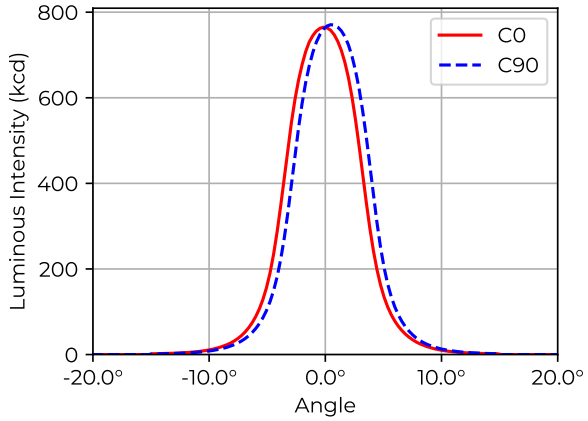


Figure 5: Polar and cartesian light intensity distributions. Narrow, S500WHC

Type B measurement, 9801 data points.

Table 10: Opening angles for different intensity thresholds. Narrow, S500WHC

		C0	C90
Beam Angle	50 %	7.1°	7.1°
Field Angle	10 %	12°	12°
Cutoff Angle	3 %	17°	17°

Table 11: Luminous flux, integrated over the beam for several minimum threshold intensities. Narrow, S500WHC

		Flux (lm)
Half-Peak Output	@50 %	7100
Tenth-Peak Output	@10 %	11 300
Total Lumen Output	@3 %	12 600

$$\text{diameter} = 0.12 \times \text{distance}$$

$$\text{illuminance} = \frac{765\,000\ \text{lx}}{(\text{distance [m]})^2}$$

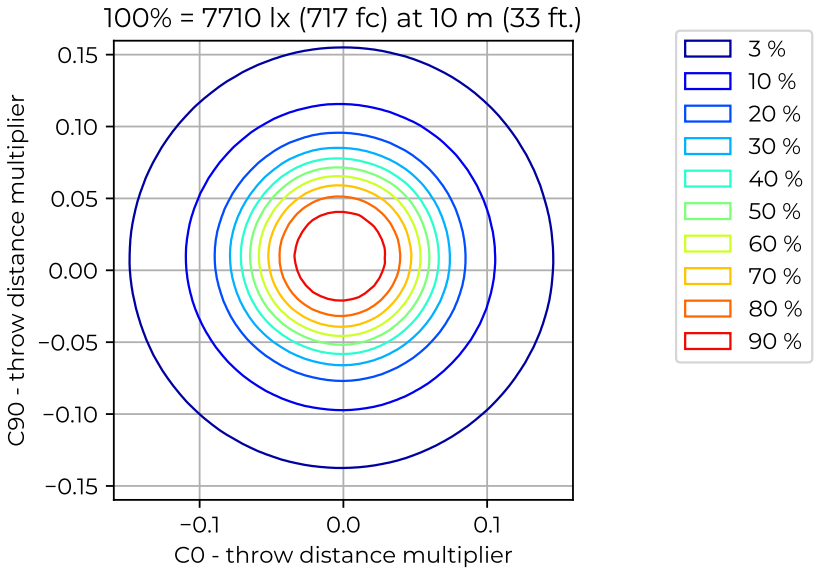


Figure 6: Iso-illuminance diagram of projected beam. Narrow, S500WHC
dist. from origin = throw dist. × throw dist. multiplier

Table 12: Quick calculation diagram for illuminance and beam diameter. Narrow, S500WHC

		Projection Distance [m]								
Parameter	Factor	5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.12	0.62	0.93	1.2	1.5	1.9	2.2	2.5	2.8	3.1
Illuminance [lx]	765k	31k	14k	7.7k	4.9k	3.4k	2.5k	1.9k	1.5k	1.2k