



## impression S350 Photometric Report

GLP German Light Products GmbH  
Optical Laboratory

Catalog Number	7910
Maximum Output	8923.000 lm
Maximum Intensity	692100.000 cd
Energy Efficiency Class	B
Energy Efficiency Index	0.80
Power Consumption	524.0 $\frac{\text{kWh}}{1000 \text{ h}}$





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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
Maximum Width	31	31	44	44	48	48
Minumum Width	7	7	8	8	8	8
Narrow	8	8	8	8	8	8
Medium	18	18	19	19	19	19
Wide	38	38	41	41	41	41

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

Beam	Total Lumen Output (lm)	Peak Luminous Intensity (cd)
Maximum Width	5622	22560
Minumum Width	7052	692051
Narrow	7226	677233
Medium	8842	140428
Wide	8923	31113

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
Maximum Width	Diameter [m]	0.79	4.0	5.9	7.9	9.9	12.0	14.0	16.0	18.0
	Illuminance [lx]	22600	900.0	400.0	230.0	140.0	100.0	74.0	56.0	45.0
Minumum Width	Diameter [m]	0.14	0.69	1.0	1.4	1.7	2.1	2.4	2.8	3.2
	Illuminance [lx]	692000	28000.0	12000.0	6900.0	4400.0	3100.0	2300.0	1700.0	1400.0
Narrow	Diameter [m]	0.14	0.69	1.0	1.4	1.7	2.1	2.4	2.8	3.2
	Illuminance [lx]	677000	27000.0	12000.0	6800.0	4300.0	3000.0	2200.0	1700.0	1300.0
Medium	Diameter [m]	0.33	1.7	2.5	3.3	4.2	5.0	5.8	6.7	7.6
	Illuminance [lx]	140000	5600.0	2500.0	1400.0	900.0	620.0	460.0	350.0	280.0
Wide	Diameter [m]	0.69	3.5	5.2	6.9	8.6	10.0	12.0	14.0	16.0
	Illuminance [lx]	31100	1200.0	550.0	310.0	200.0	140.0	100.0	78.0	65.0

### 1.1 Maximum Width Beam

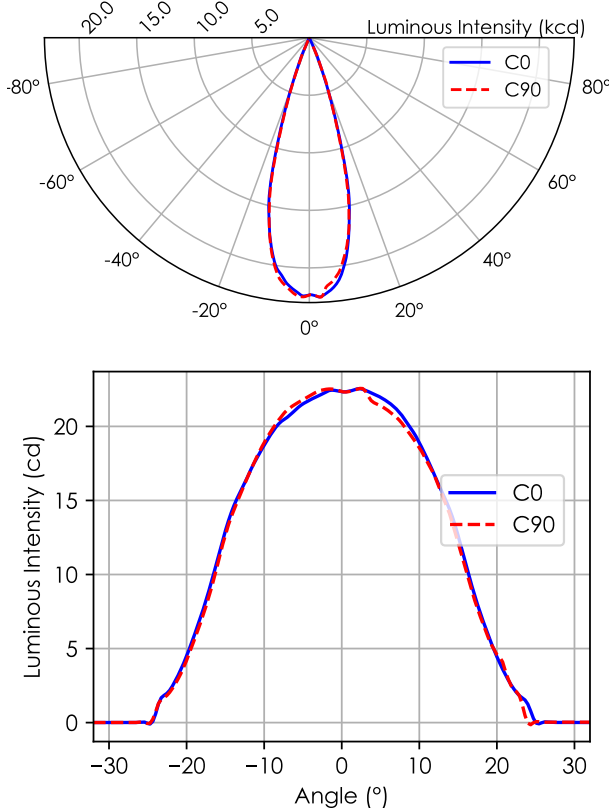


Figure 1: Polar and cartesian light intensity distributions. Maximum Width

Type Type B measurement with a total of 5041 data points.

Table 4: DMX Settings. Maximum Width

	DMX Slot	Value
Focus	17, 18	255, 0
Zoom	19	0

Table 5: Opening angles for different intensity thresholds. Maximum Width

	C0	C90
Beam Angle 50 %	31.4°	31.4°
Field Angle 10 %	44.4°	44.0°
Cutoff Angle 3 %	48.3°	47.6°

Table 6: Luminous flux, integrated over the beam for several minimum threshold intensities. Maximum Width

		Flux (lm)
Half-Peak Output	@50 %	4148
Tenth-Peak Output	@10 %	5490
Total Lumen Output	@3 %	5613

$$\text{diameter} = 0.79 \times \text{distance}$$

$$\text{illuminance} = \frac{22\,600.00 \text{ lx}}{(\text{distance [m]})^2}$$

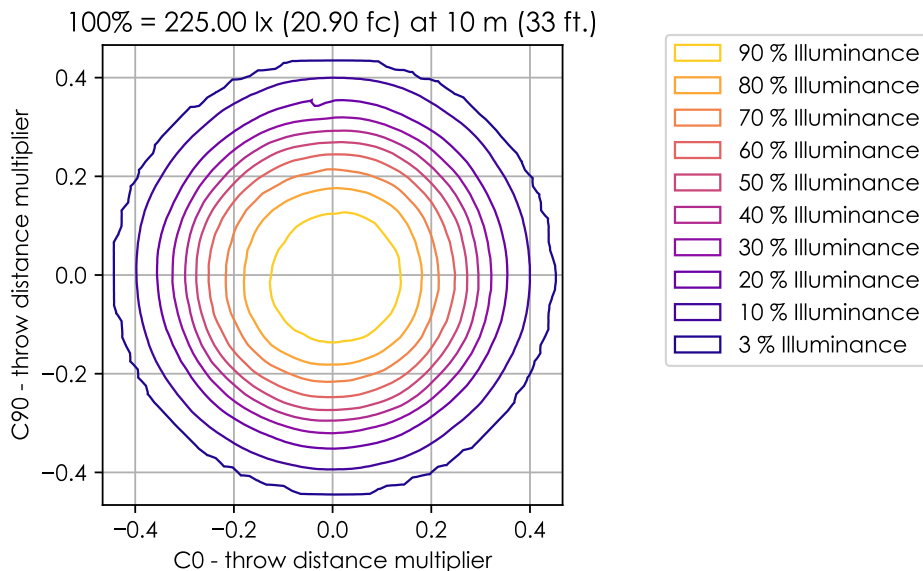


Figure 2: Iso-illuminance diagram of projected beam. Maximum Width dist. from origin = throw dist. × throw dist. multiplier

Table 7: Quick calculation diagram for illuminance and beam diameter. Maximum Width

Parameter	Factor	Projection Distance [m]									
		5	7.5	10	12.5	15	17.5	20	22.5	25	
Diameter [m]	0.79	4.0	5.9	7.9	9.9	12.0	14.0	16.0	18.0	20.0	
Illuminance [lx]	22600	900.0	400.0	230.0	140.0	100.0	74.0	56.0	45.0	36.0	

## 1.2 Minimum Width Beam

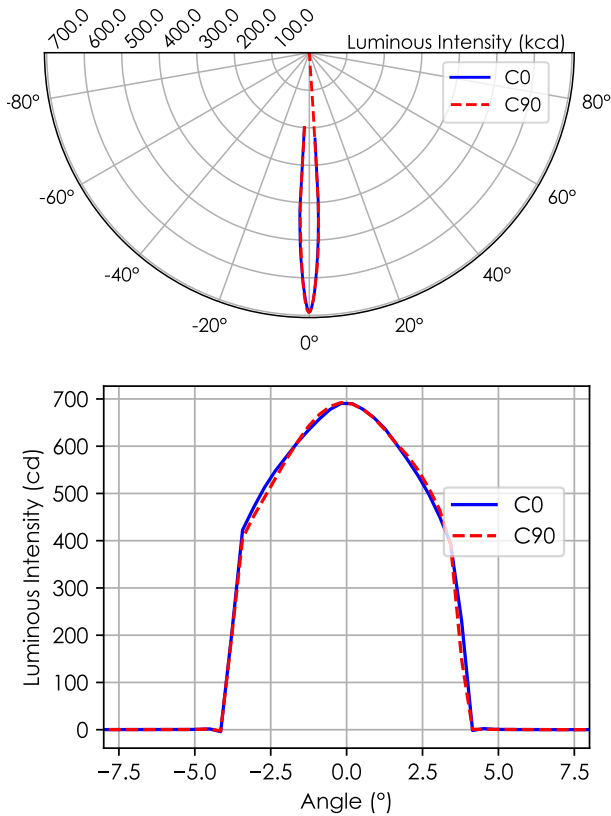


Figure 3: Polar and cartesian light intensity distributions. Minimum Width

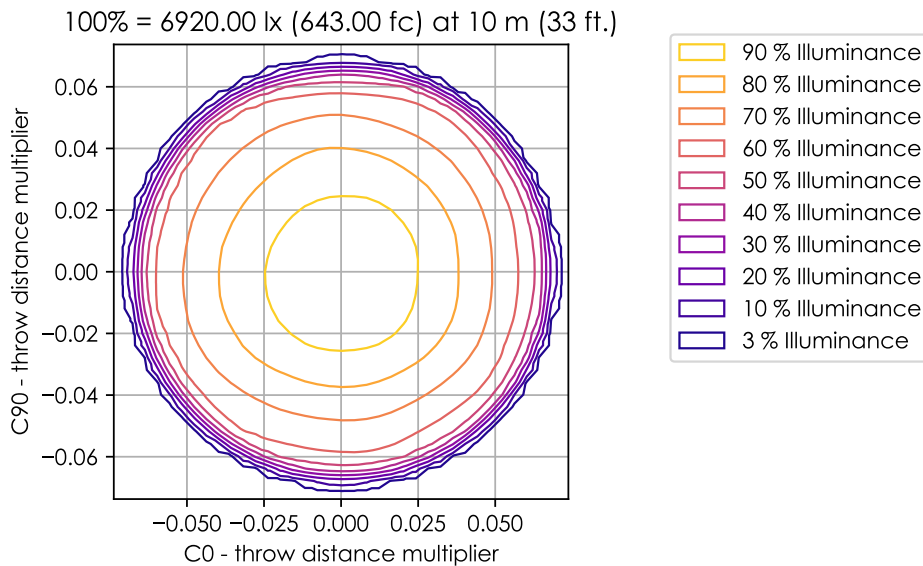


Figure 4: Iso-illuminance diagram of projected beam. Minimum Width dist. from origin = throw dist. × throw dist. multiplier

Type Type B measurement with a total of 5041 data points.

Table 8: DMX Settings. Minimum Width

	DMX Slot	Value
Focus	17, 18	0, 0
Zoom	19	255

Table 9: Opening angles for different intensity thresholds. Minimum Width

	C0	C90
Beam Angle 50 %	7.2°	7.2°
Field Angle 10 %	7.9°	7.9°
Cutoff Angle 3 %	7.9°	7.9°

Table 10: Luminous flux, integrated over the beam for several minimum threshold intensities. Minimum Width

		Flux (lm)
Half-Peak Output	@50 %	6576
Tenth-Peak Output	@10 %	7105
Total Lumen Output	@3 %	7096

$$\text{diameter} = 0.14 \times \text{distance}$$

$$\text{illuminance} = \frac{692000.00 \text{ lx}}{(\text{distance [m]})^2}$$

Table 11: Quick calculation diagram for illuminance and beam diameter. Minimum Width

Parameter	Factor	Projection Distance [m]								
		5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.14	0.69	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.5
Illuminance [lx]	692000	28000.0	12000.0	6900.0	4400.0	3100.0	2300.0	1700.0	1400.0	1100.0

### 1.3 Narrow Beam

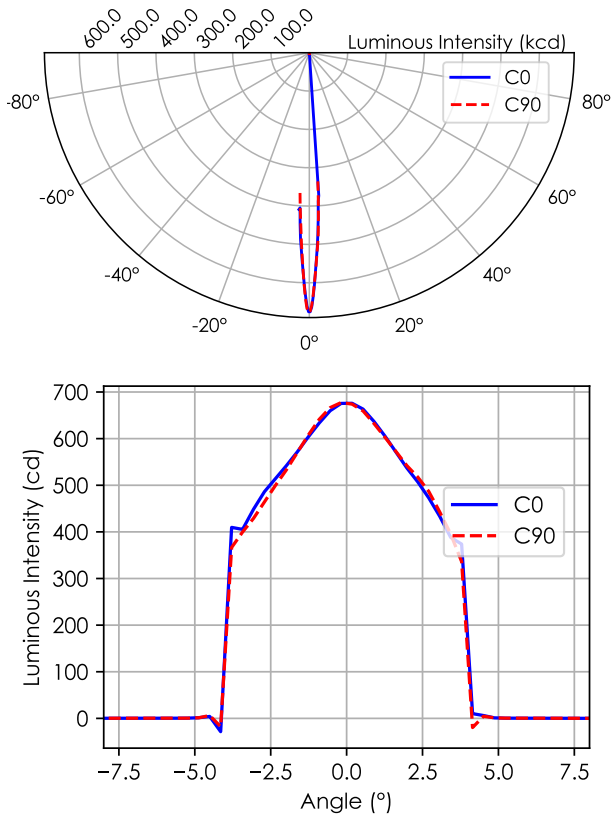


Figure 5: Polar and cartesian light intensity distributions. Narrow

Type Type B measurement with a total of 5041 data points.

Table 12: DMX Settings. Narrow

DMX Slot	Value
Focus	17, 18
Zoom	19

Table 13: Opening angles for different intensity thresholds. Narrow

	C0	C90
Beam Angle 50 %	7.9°	7.6°
Field Angle 10 %	7.9°	7.9°
Cutoff Angle 3 %	7.9°	7.9°

Table 14: Luminous flux, integrated over the beam for several minimum threshold intensities. Narrow

	Flux (lm)
Half-Peak Output @50 %	6891
Tenth-Peak Output @10 %	7225
Total Lumen Output @3 %	7289

$$\text{diameter} = 0.14 \times \text{distance}$$

$$\text{illuminance} = \frac{677\,000.00 \text{ lx}}{(\text{distance [m]})^2}$$

100% = 6770.00 lx (629.00 fc) at 10 m (33 ft.)

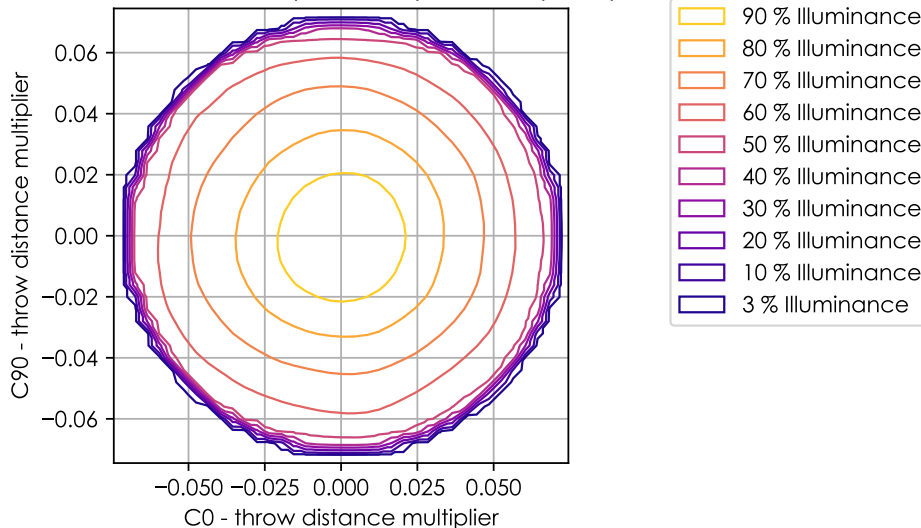


Figure 6: Iso-illuminance diagram of projected beam. Narrow  
dist. from origin = throw dist. × throw dist. multiplier

Table 15: 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]	0.14	0.69	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.5
Illuminance [lx]	677000	27000.0	12000.0	6800.0	4300.0	3000.0	2200.0	1700.0	1300.0	1100.0

### 1.4 Medium Beam

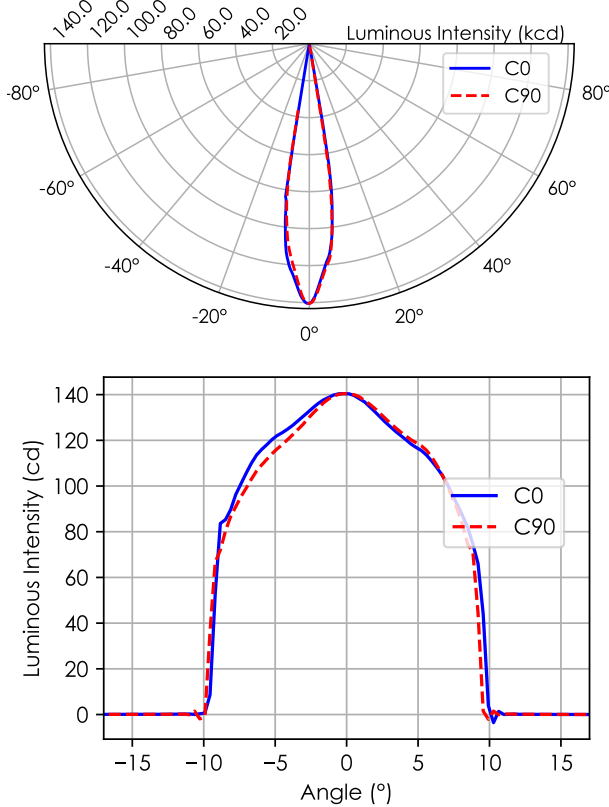


Figure 7: Polar and cartesian light intensity distributions. Medium

Type Type B measurement with a total of 5041 data points.

Table 16: DMX Settings. Medium

	DMX Slot	Value
Focus	17, 18	77, 0
Zoom	19	128

Table 17: Opening angles for different intensity thresholds. Medium

	C0	C90
Beam Angle 50 %	18.0°	18.0°
Field Angle 10 %	19.1°	19.1°
Cutoff Angle 3 %	19.5°	19.1°

Table 18: Luminous flux, integrated over the beam for several minimum threshold intensities. Medium

		Flux (lm)
Half-Peak Output	@50 %	8300
Tenth-Peak Output	@10 %	8860
Total Lumen Output	@3 %	8790

$$\text{diameter} = 0.33 \times \text{distance}$$

$$\text{illuminance} = \frac{140\,000.00 \text{ lx}}{(\text{distance [m]})^2}$$

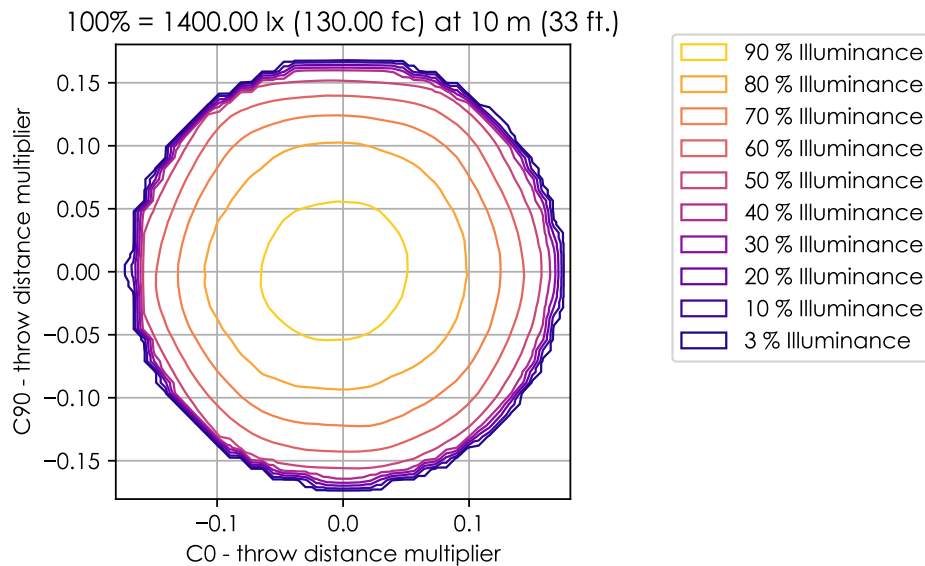


Figure 8: Iso-illuminance diagram of projected beam. Medium  
dist. from origin = throw dist. × throw dist. multiplier

Table 19: 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]	0.33	1.7	2.5	3.3	4.2	5.0	5.8	6.7	7.5	8.3
Illuminance [lx]	140000	5600.0	2500.0	1400.0	900.0	620.0	460.0	350.0	280.0	220.0

### 1.5 Wide Beam

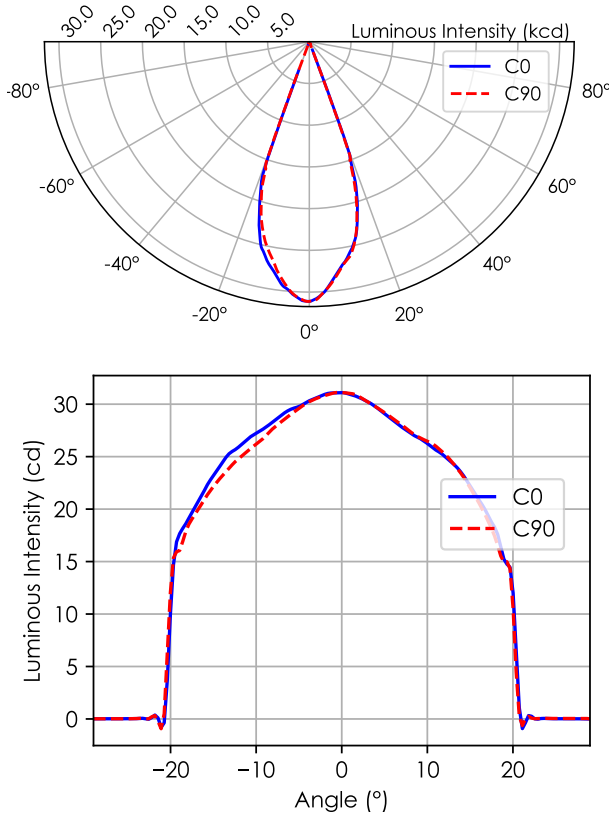


Figure 9: Polar and cartesian light intensity distributions. Wide

Type Type B measurement with a total of 5041 data points.

Table 20: DMX Settings. Wide

	DMX Slot	Value
Focus	17, 18	80, 0
Zoom	19	0

Table 21: Opening angles for different intensity thresholds. Wide

	C0	C90
Beam Angle 50 %	38.2°	37.9°
Field Angle 10 %	41.1°	41.1°
Cutoff Angle 3 %	41.5°	41.1°

Table 22: Luminous flux, integrated over the beam for several minimum threshold intensities. Wide

	Flux (lm)	
Half-Peak Output @50 %		8350
Tenth-Peak Output @10 %		8910
Total Lumen Output @3 %		8880

$$\text{diameter} = 0.69 \times \text{distance}$$

$$\text{illuminance} = \frac{31100.00 \text{ lx}}{(\text{distance [m]})^2}$$

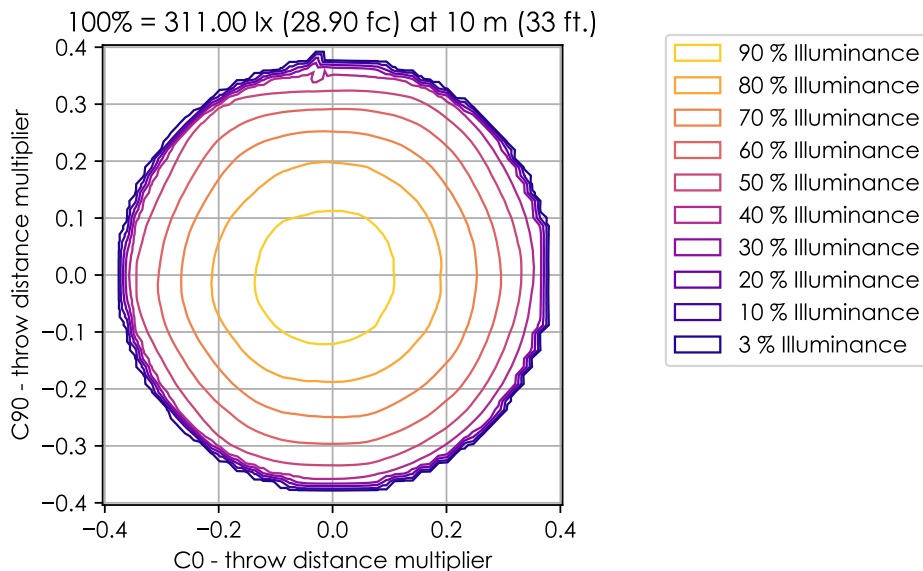


Figure 10: Iso-illuminance diagram of projected beam. Wide  
dist. from origin = throw dist. × throw dist. multiplier

Table 23: Quick calculation diagram for illuminance and beam diameter. Wide

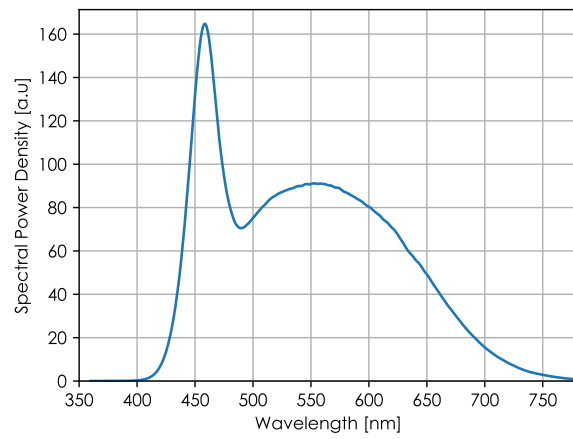
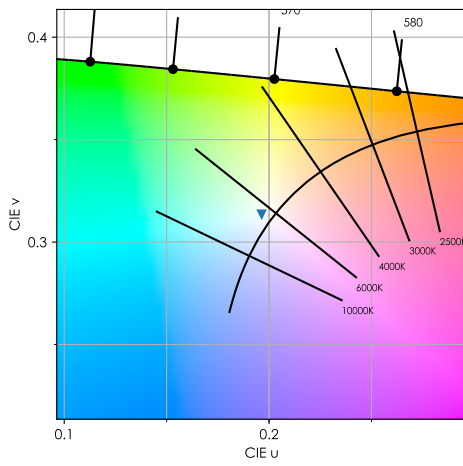
Parameter	Factor	Projection Distance [m]									
		5	7.5	10	12.5	15	17.5	20	22.5	25	
Diameter [m]	0.69	3.5	5.2	6.9	8.6	10.0	12.0	14.0	16.0	17.0	
Illuminance [lx]	31100	1200.0	550.0	310.0	200.0	140.0	100.0	78.0	61.0	50.0	



## 2 White Quality – Open

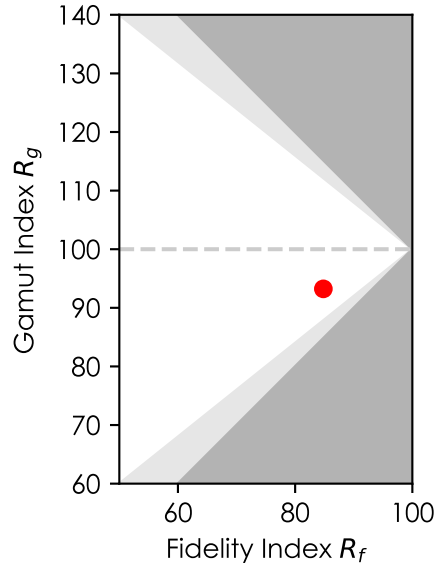
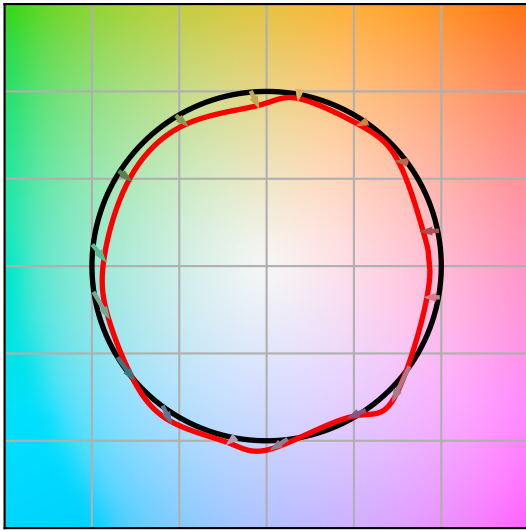
Table 24: Color metrics for Open measurement.

Metric	Value
CCT	6480 K
CCT Duv	+0.005181
CRI Ra	89
TLCI-2015	87
TM-30-15 Rf	85
TM-30-15 Rg	93
CIE 1931 x	0.3126
CIE 1931 y	0.3328
CIE 1960 u	0.1964
CIE 1960 v	0.3136

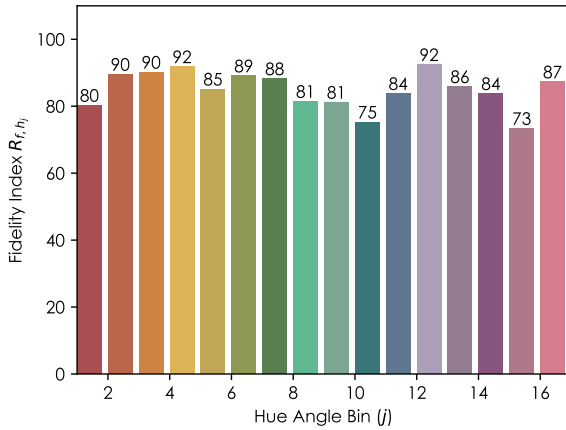


## 2.1 TM-30-15

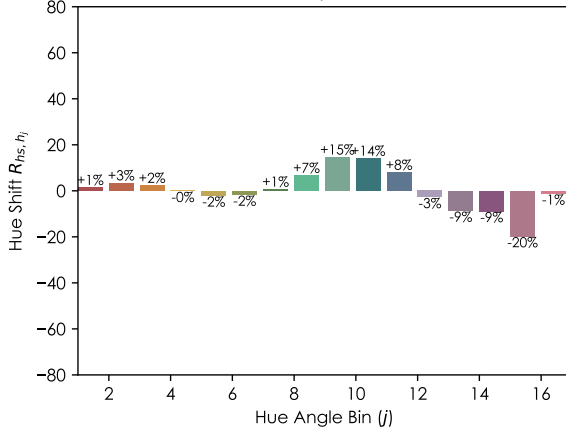
Color Vector Graphic



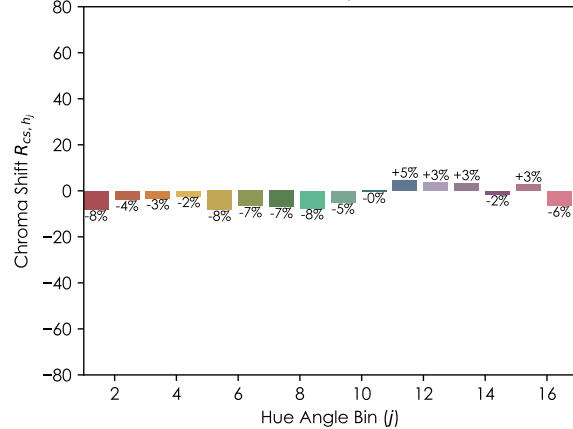
Color Fidelity per Sector

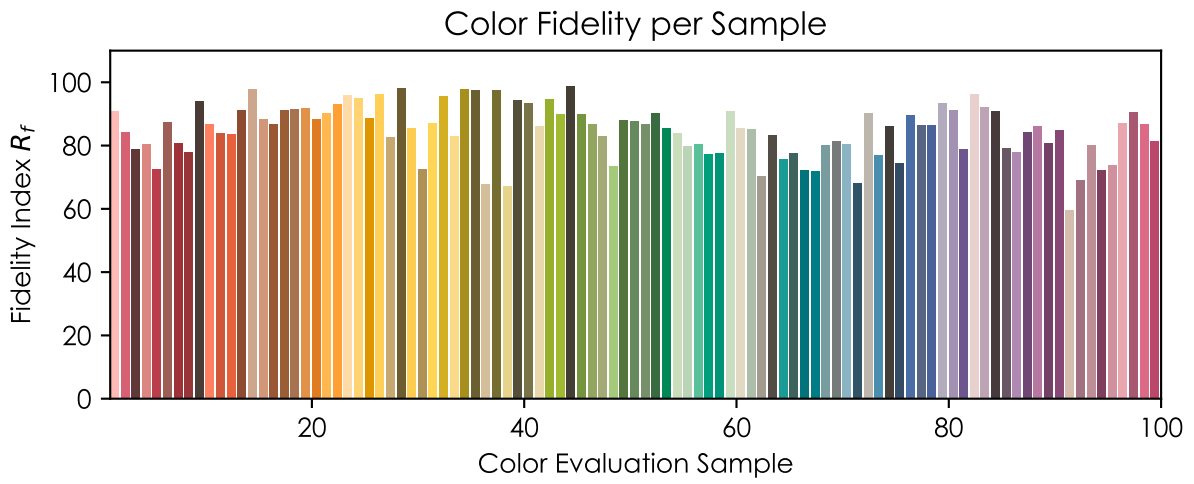


Hue Shift per Sector

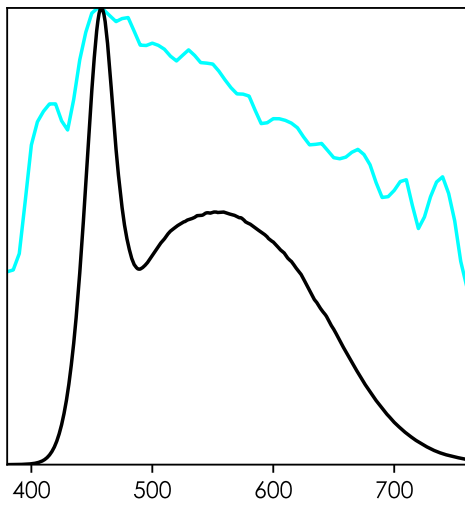
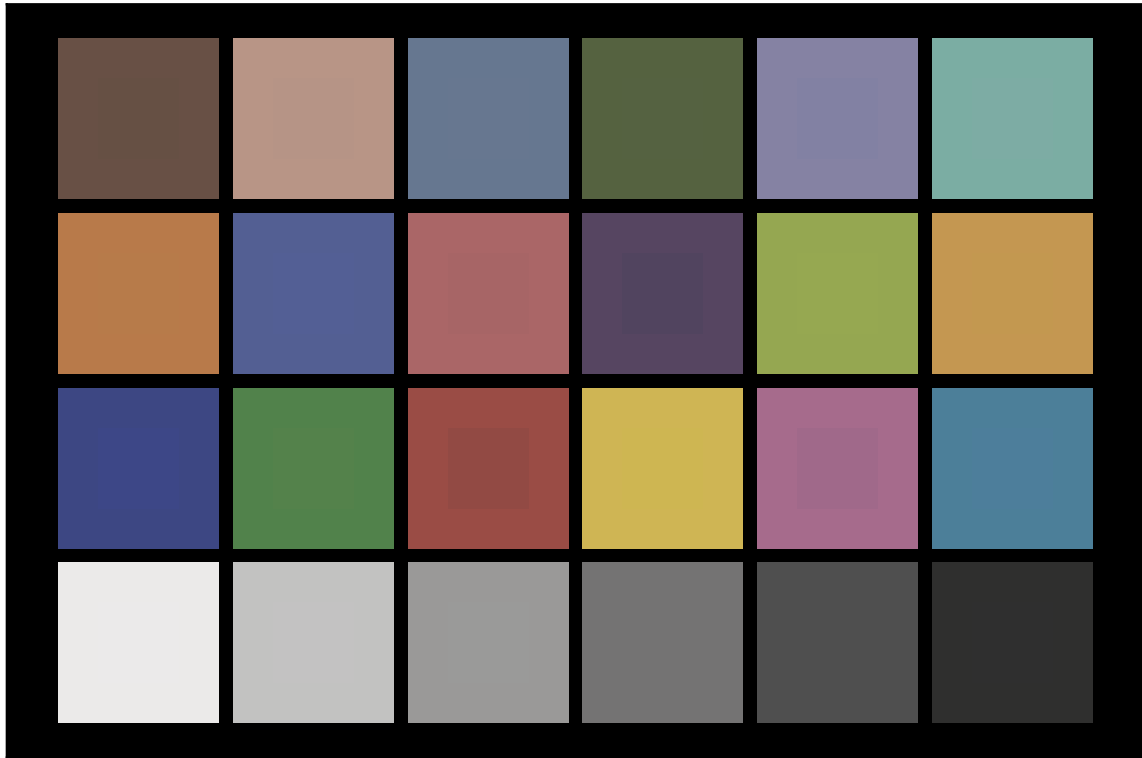


Chroma Shift per Sector





## 2.2 TLCI-2012



Sector	Lightness	Chroma	Hue
R	2	1	0
R/Y	0	0	0
Y	0	0	-1
Y/G	0	0	0
G	0	0	0
G/C	0	0	0
C	0	1	-1
C/B	0	-1	-4
B	0	-1	0
B/M	1	1	2
M	2	1	1
M/R	3	1	1

### 3 Fixed Colors

Planckian Locus  
CIE 1931 Chromaticity Diagram - CIE 1931 2 Degree Standard Observer

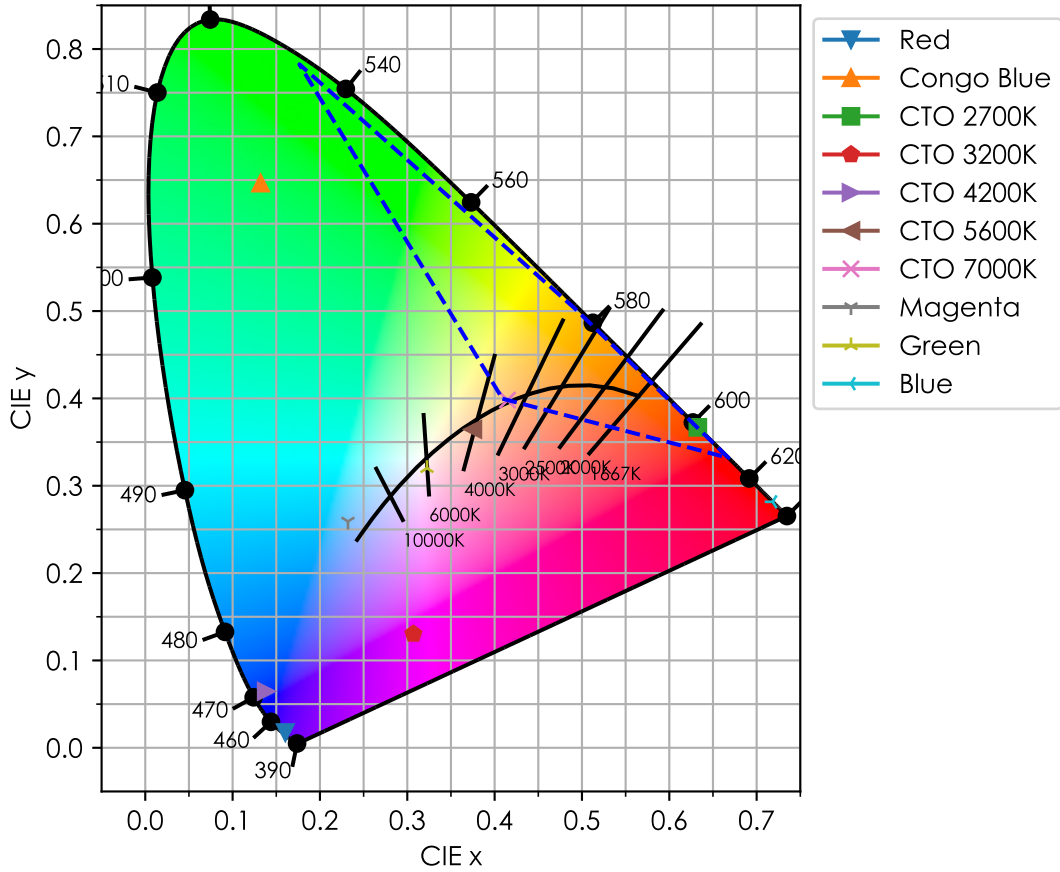


Table 25: Absolute coordinates of fixed colors. The given color swatch is for illustrative purposes only, actual color can differ from print or screen colors.

Color	CIE 1931 xy	CIE UCS uv	Color	CIE 1931 xy	CIE UCS uv
Mix Cyan	0.13, 0.18	0.10, 0.22	CTO 4200K	0.14, 0.06	0.16, 0.11
Mix Magenta	0.33, 0.13	0.33, 0.20	CTO 5600K	0.38, 0.36	0.23, 0.33
Mix Yellow	0.49, 0.50	0.25, 0.37	CTO 7000K	0.41, 0.40	0.24, 0.34
Red	0.16, 0.02	0.22, 0.04	Magenta	0.23, 0.26	0.16, 0.28
Congo Blue	0.13, 0.65	0.05, 0.37	Green	0.32, 0.32	0.21, 0.31
CTO 2700K	0.63, 0.37	0.41, 0.36	Blue	0.72, 0.28	0.58, 0.34
CTO 3200K	0.31, 0.13	0.31, 0.20			