



impression E350 Photometric Report

GLP German Light Products GmbH
Optical Laboratory

Catalog Number	7920
Maximum Output	12270.000 lm
Maximum Intensity	920200.000 cd
Energy Efficiency Class	B
Energy Efficiency Index	0.57
Power Consumption	513.0 $\frac{\text{kWh}}{1000\text{h}}$



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1 Description

The new impression E350 is the brother of the impression S350 LED Moving Head. With its 30% brighter LED engine and very narrow iris, the fixture fits for a variety of applications. With a color temperature of 7500 K, it is able to create sharp midair effects and bright gobo projections.

The optic offers a 1: 6 - zoom (8° - 48°) and has a very even field with a remarkable light output of up to 9500 lm.

The color mixing is done using CMY filters, which are specially calculated for the LED spectrum and provide a color mixture from pastel shades to deep saturated colors. If required, GLP's new CTC function provides continuous color temperature adjustment from 2500 K to 8000 K.

The impression E350 also houses an 8x prism, a 2x frost, a tilttable animation wheel, two gobo wheels, a super tight 14-blade iris, and a 10-color color wheel. Of course, all functions can be used in combination with each other and make the GLP impression E350 the perfect tool for almost any application.

Like the impression S350, the E350 does without a classic base and, with a weight of just 24.5 kg, is one of the real lightweights. The universal power supply, the integrated battery are as self-evident as the optional lumen radio CRMX adapter for wireless DMX.

2 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	7	7	8	8	9	8
Medium	18	17	19	19	19	19
Wide	39	37	41	41	42	42

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

Beam	Total Lumen Output (lm)	Peak Luminous Intensity (cd)
Narrow	9759	920 176
Medium	12 084	192 876
Wide	12 269	42 626

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]	920000	37000.0	16000.0	9200.0	5900.0	4100.0	3000.0	2300.0	1800.0	1500.0
Medium	Diameter [m]	0.34	1.7	2.5	3.4	4.2	5.1	5.9	6.7	7.6	8.4
	Illuminance [lx]	193000	7700.0	3400.0	1900.0	1200.0	860.0	630.0	480.0	380.0	310.0
Wide	Diameter [m]	0.70	3.5	5.3	7.0	8.8	11.0	12.0	14.0	16.0	18.0
	Illuminance [lx]	42600	1700.0	760.0	430.0	270.0	190.0	140.0	110.0	84.0	68.0

2.1 Narrow Beam

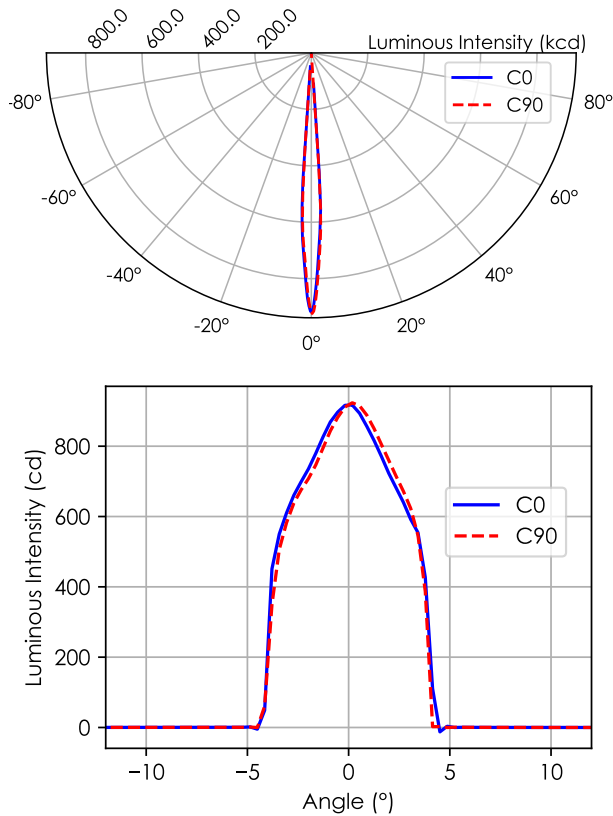


Figure 1: Polar and cartesian light intensity distributions. Narrow

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

Table 4: DMX Settings. Narrow

	DMX Slot	Value
Focus	17, 18	0, 0
Zoom	19	249

Table 5: Opening angles for different intensity thresholds. Narrow

		C0	C90
Beam Angle	50 %	7.2°	7.2°
Field Angle	10 %	8.3°	7.9°
Cutoff Angle	3 %	8.7°	8.3°

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

		Flux (lm)
Half-Peak Output	@50 %	8960
Tenth-Peak Output	@10 %	9690
Total Lumen Output	@3 %	9840

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

$$\text{illuminance} = \frac{920\,000.00 \text{ lx}}{(\text{distance [m]})^2}$$

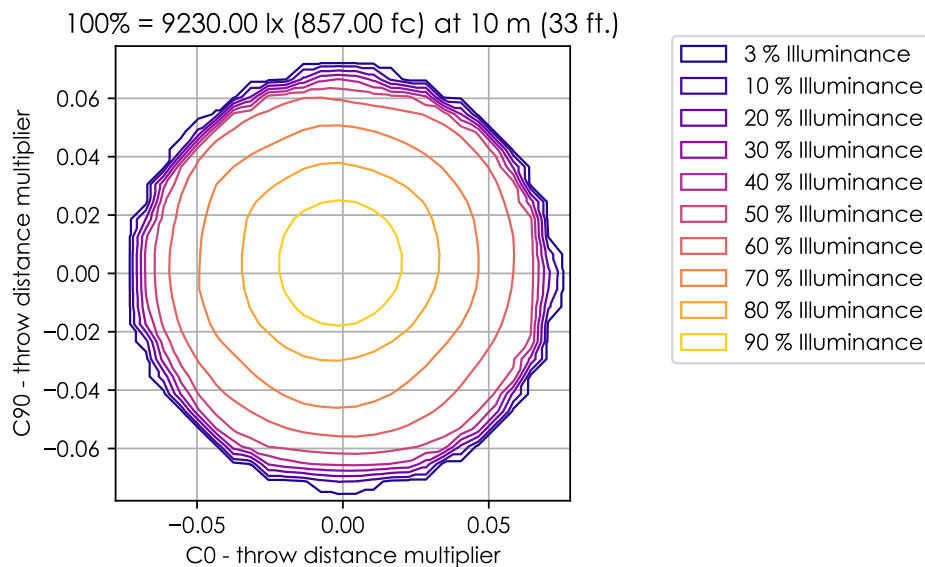


Figure 2: Iso-illuminance diagram of projected beam. Narrow
dist. from origin = throw dist. × throw dist. multiplier

Table 7: 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]	920000	37000.0	16000.0	9200.0	5900.0	4100.0	3000.0	2300.0	1800.0	1500.0

2.2 Medium Beam

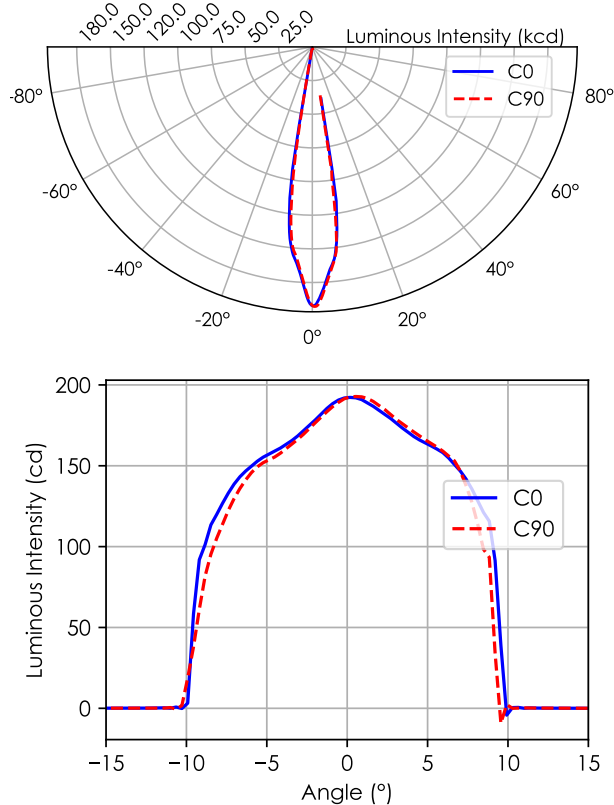


Figure 3: Polar and cartesian light intensity distributions. Medium

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

Table 8: DMX Settings. Medium

	DMX Slot	Value
Focus	17, 18	74, 0
Zoom	19	128

Table 9: Opening angles for different intensity thresholds. Medium

	C0	C90
Beam Angle 50 %	18.0°	17.0°
Field Angle 10 %	19.5°	19.1°
Cutoff Angle 3 %	19.5°	19.5°

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

	Flux (lm)
Half-Peak Output @50 %	11 220
Tenth-Peak Output @10 %	12 120
Total Lumen Output @3 %	12 090

$$\text{diameter} = 0.34 \times \text{distance}$$

$$\text{illuminance} = \frac{193\,000.00 \text{ lx}}{(\text{distance [m]})^2}$$

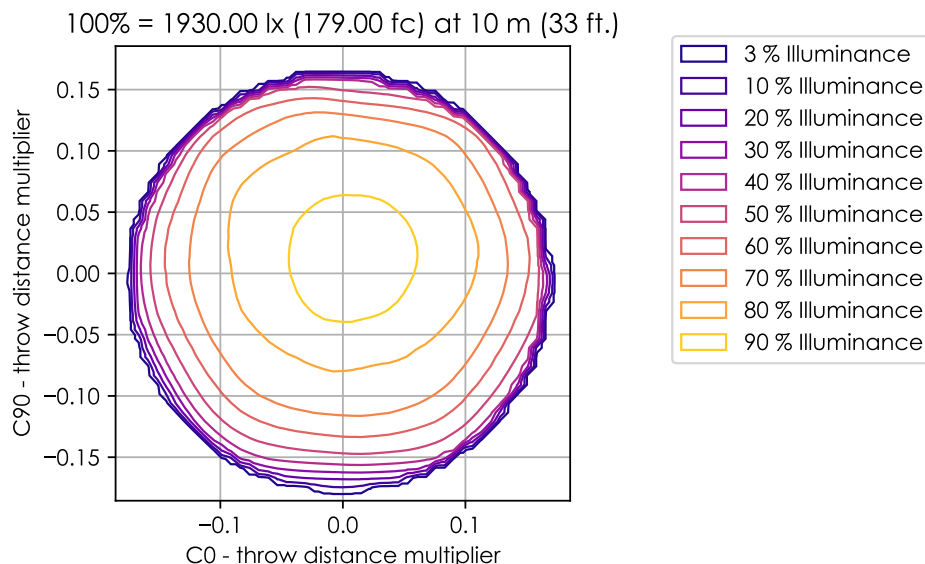


Figure 4: Iso-illuminance diagram of projected beam. Medium
dist. from origin = throw dist. × throw dist. multiplier

Table 11: 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]	0.34	1.7	2.5	3.4	4.2	5.1	5.9	6.7	7.6	8.4	
Illuminance [lx]	193000	7700.0	3400.0	1900.0	1200.0	860.0	630.0	480.0	380.0	310.0	

2.3 Wide Beam

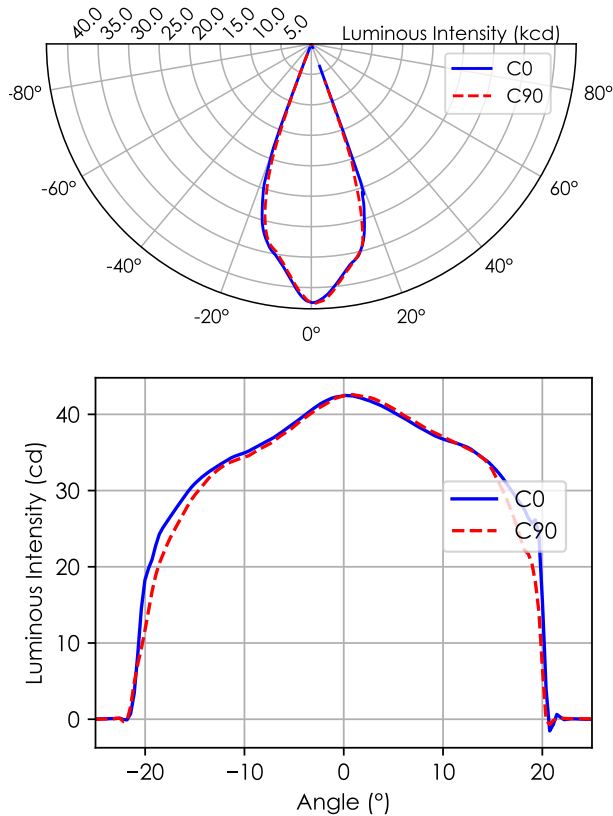


Figure 5: Polar and cartesian light intensity distributions. Wide

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

Table 12: DMX Settings. Wide

	DMX Slot	Value
Focus	17, 18	71, 0
Zoom	19	0

Table 13: Opening angles for different intensity thresholds. Wide

		C0	C90
Beam Angle	50 %	39.0°	37.2°
Field Angle	10 %	41.1°	41.5°
Cutoff Angle	3 %	41.8°	41.8°

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

		Flux (lm)
Half-Peak Output	@50 %	11 520
Tenth-Peak Output	@10 %	12 250
Total Lumen Output	@3 %	12 210

$$\text{diameter} = 0.70 \times \text{distance}$$

$$\text{illuminance} = \frac{42\,600.00 \text{ lx}}{(\text{distance [m]})^2}$$

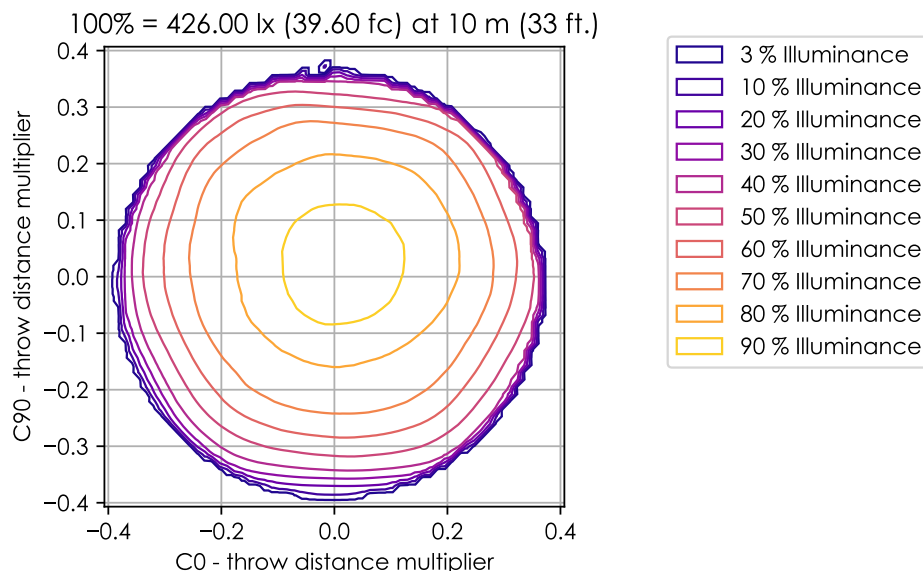


Figure 6: Iso-illuminance diagram of projected beam. Wide
dist. from origin = throw dist. × throw dist. multiplier

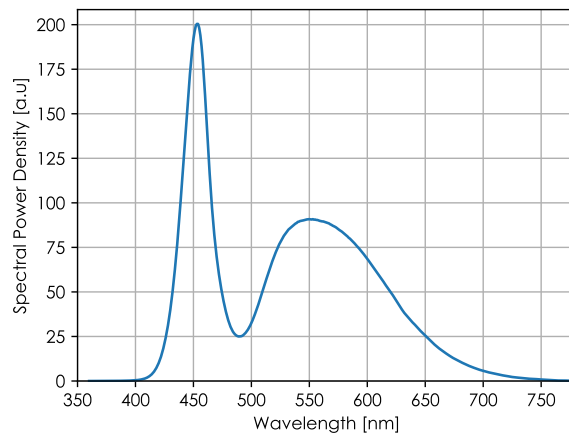
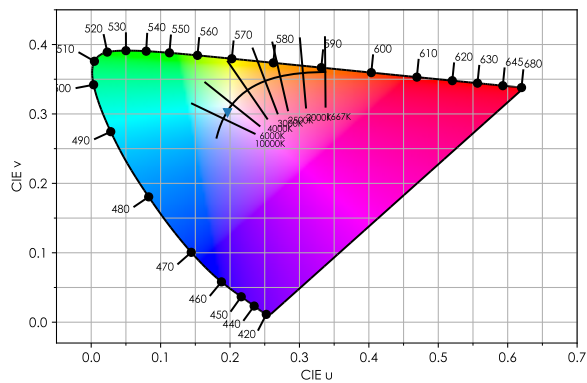
Table 15: Quick calculation diagram for illuminance and beam diameter. Wide

Parameter	Factor	Projection Distance [m]								
		5	7.5	10	12.5	15	17.5	20	22.5	25
Diameter [m]	0.70	3.5	5.3	7.0	8.8	11.0	12.0	14.0	16.0	18.0
Illuminance [lx]	42600	1700.0	760.0	430.0	270.0	190.0	140.0	110.0	84.0	68.0

3 White Quality – Open

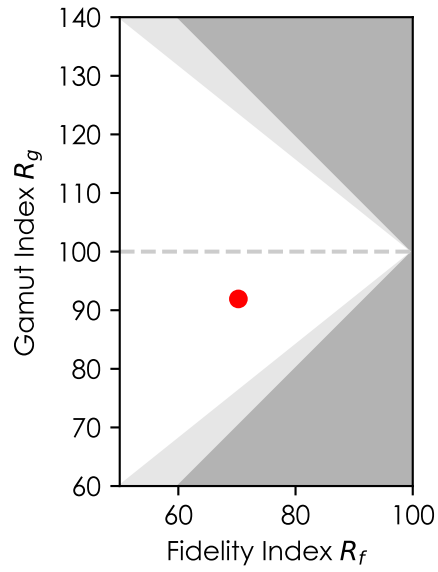
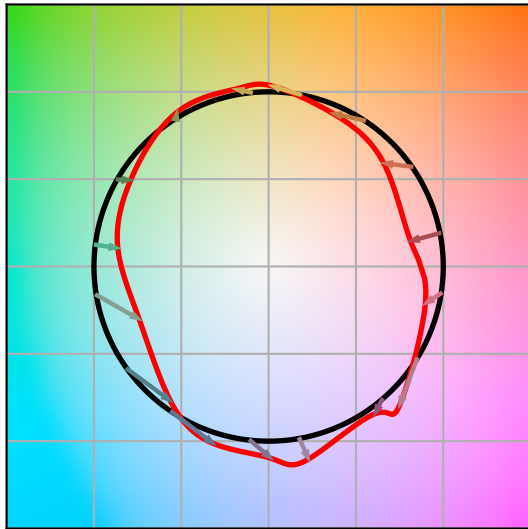
Table 16: Color metrics for Open measurement.

Metric	Value
CCT	7802 K
CCT Duv	-0.001338
CRI Ra	75
TLCI-2015	46
TM-30-15 Rf	70
TM-30-15 Rg	92
CIE 1931 x	0.2977
CIE 1931 y	0.3050
CIE 1960 u	0.1964
CIE 1960 v	0.3017

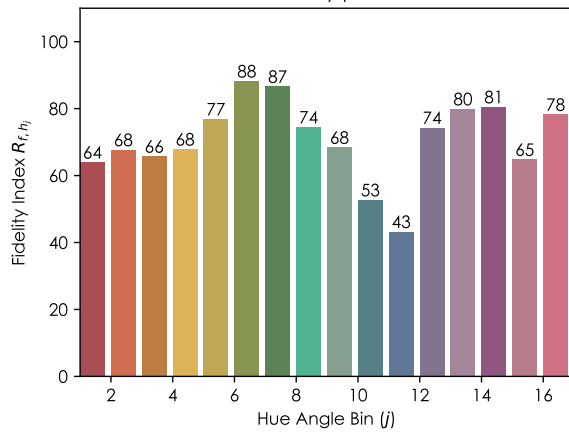


3.1 TM-30-15

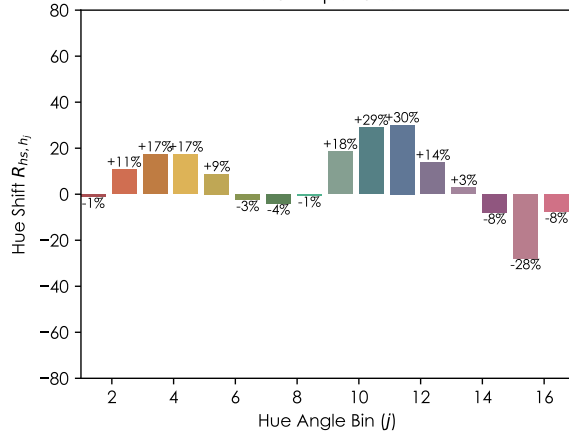
Color Vector Graphic



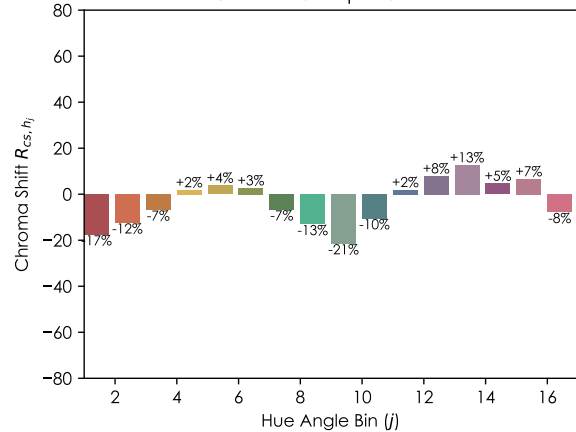
Color Fidelity per Sector

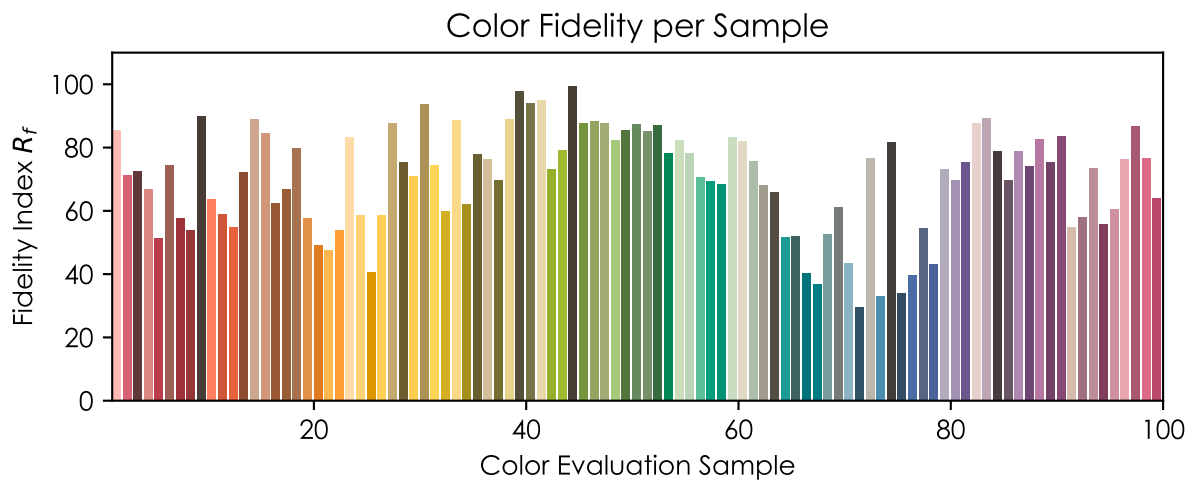


Hue Shift per Sector

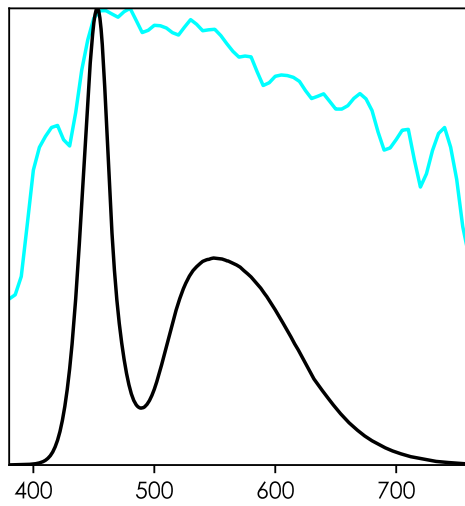
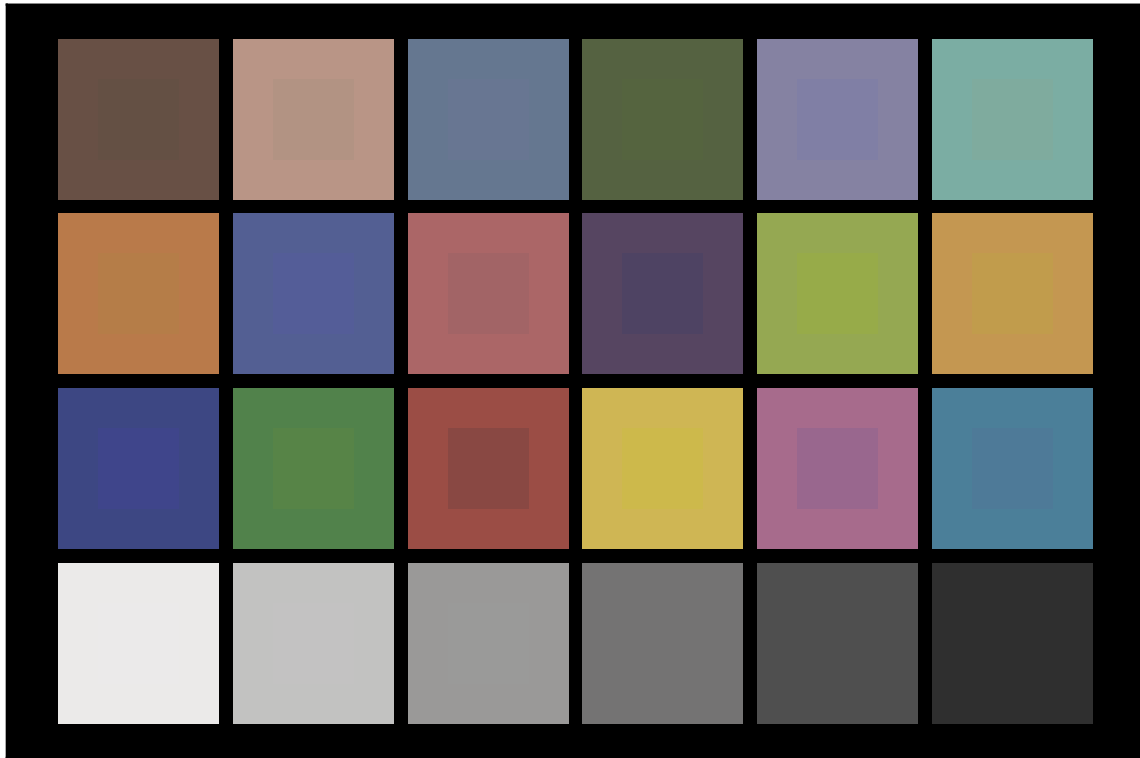


Chroma Shift per Sector





3.2 TLCI-2012



Sector	Lightness	Chroma	Hue
R	6	3	1
R/Y	0	1	-1
Y	-1	-2	-5
Y/G	-1	-2	0
G	-2	-1	3
G/C	0	1	3
C	1	0	0
C/B	3	0	-5
B	0	-3	-2
B/M	2	-1	6
M	4	0	6
M/R	6	0	7

4 Color Mixing

