Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: IRiS

Report Number: P1251456

Luminaire Tested: P3A09R159030DE010 E3CD1MMS

Issue Date: 1/30/2026

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P1251456
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2601-647-4)
Test Lab:	INNOVATION CENTER
Issue Date:	1/30/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	IRiS
Catalog Number:	P3A09R159030DE010 E3CD1MMS
Description:	3in Adjustable LED luminaire with, R15 optic, 3000K CCT AND, 90CRI , E3CD1MMS TRIM
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	925.0 lumens
Efficiency:	N/A
Efficacy:	83.3 lumens/watt
Spacing Criteria (0/90/45):	0.3 / 0.3 / 0.29
Luminous Opening:	Circular (Dia: 0.25' x H: 0')
CIE Type:	Direct

Input Watts (W):	11.1
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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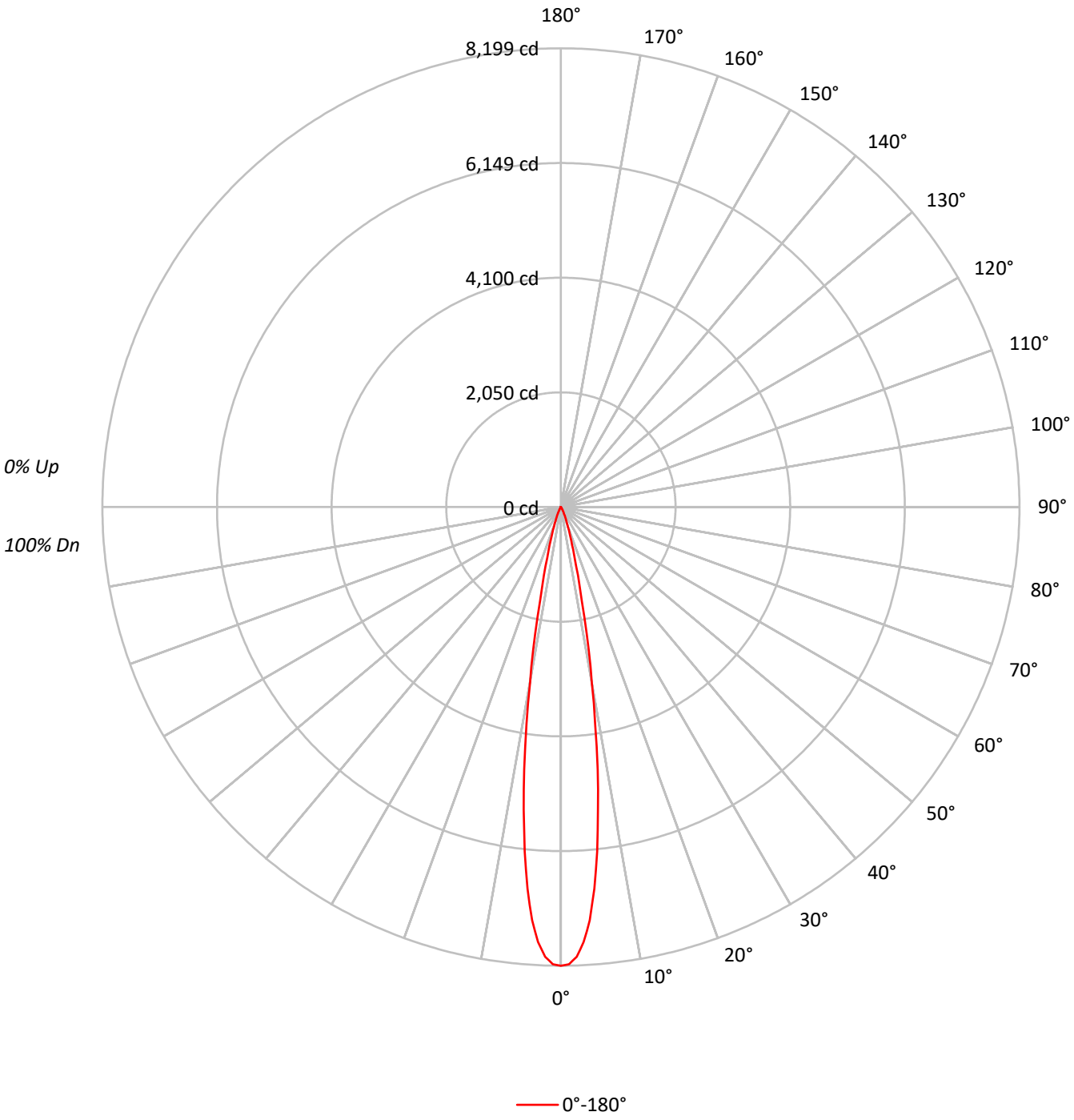
Scaled Data Report

TEST NUMBER: P1251456
CATALOG NUMBER: P3A09R159030DE010 E3CD1MMS

Luminous Intensity Polar Plot



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Scaled Data Report

TEST NUMBER: P1251456
CATALOG NUMBER: P3A09R159030DE010 E3CD1MMS

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	116	114	112	111	113	112	110	109	108	107	106	104	103	103	101	100	100	98
2	113	110	107	105	111	108	106	104	105	103	101	102	101	99	99	98	97	96
3	110	106	103	100	108	105	102	100	102	100	98	100	98	97	98	97	95	94
4	107	103	100	97	106	102	99	97	100	97	95	98	96	94	97	95	93	92
5	105	100	97	94	104	99	96	94	98	95	93	96	94	92	95	93	92	91
6	103	98	94	92	102	97	94	92	96	93	91	95	92	91	94	92	90	89
7	101	96	92	90	100	95	92	90	94	91	89	93	91	89	92	90	89	88
8	99	94	90	88	98	93	90	88	92	90	88	92	89	87	91	89	87	86
9	97	92	89	87	97	92	89	87	91	88	86	90	88	86	90	87	86	85
10	96	90	87	85	95	90	87	85	89	87	85	89	86	85	88	86	85	84

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1797970
5°	1506886
10°	709806
15°	214008
20°	79177
25°	30776
30°	11470
35°	3534
40°	1260
45°	682
50°	512
55°	573
60°	658
65°	363
70°	449
75°	593
80°	0
85°	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 682 cd/sqm

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Scaled Data Report

TEST NUMBER: P1251456
CATALOG NUMBER: P3A09R159030DE010 E3CD1MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	529.2	57.2
10°-20°	314.6	34.0
20°-30°	66.1	7.1
30°-40°	10.7	1.2
40°-50°	1.8	0.2
50°-60°	1.3	0.1
60°-70°	0.8	0.1
70°-80°	0.5	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	909.9	98.4
0°-40°	920.6	99.5
0°-60°	923.7	99.9
0°-90°	925.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	925.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	8199	
5°	6846	529
15°	943	315
25°	127	66
35°	13	11
45°	2	2
55°	2	1
65°	1	1
75°	1	0
85°	0	0
90°	0	

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Scaled Data Report

TEST NUMBER: P1251456
CATALOG NUMBER: P3A09R159030DE010 E3CD1MMS

CANDELA DISTRIBUTION (FULL):

	0°
0°	8199.4
1°	8173.8
2°	8043.7
3°	7783.3
4°	7401.6
5°	6845.8
6°	6192.7
7°	5446.1
8°	4733.0
9°	3925.7
10°	3187.8
12.5°	1720.0
15°	942.7
17.5°	552.1
20°	339.3
22.5°	207.7
25°	127.2
27.5°	76.8
30°	45.3
32.5°	25.6
35°	13.2
37.5°	7.3
40°	4.4
42.5°	2.9
45°	2.2
47.5°	1.5
50°	1.5
52.5°	1.5
55°	1.5
57.5°	1.5
60°	1.5
62.5°	0.7
65°	0.7
67.5°	0.7
70°	0.7
72.5°	0.7
75°	0.7
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

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LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

IRiS

Report Number: SP1-2504-409-28

Test Date: 05/16/2025

Luminaire Tested: LD3A09R159030D010 E3D1H

Data in this report applies to families of products including LD3A

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

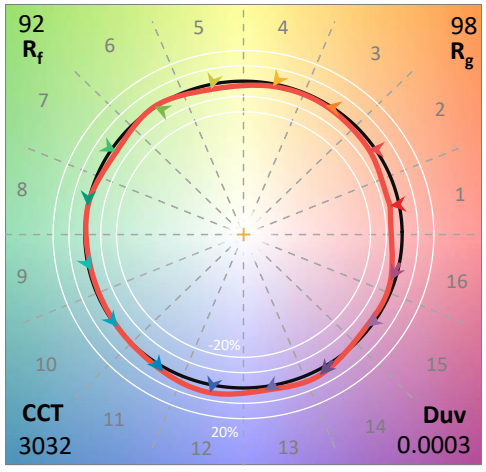
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2504-409-28
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	01/06/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	IRiS
Catalog Number:	**LD3A09R159030D010 E3D1H**
Description:	3in Adjustabled LED luminaire with, R15 optic, 3000K CCT AND, 90CRI LEDS, E3D1H TRIM

Spectral Parameters

CCT (K):	3032	CRI (Ra):	92.8		
CIE u':	0.2493	R1:	93.5	R9:	51.3
CIE v':	0.5211	R2:	97.3	R10:	93.2
Duv:	0.0003	R3:	98.7	R11:	96.4
CIE x:	0.4351	R4:	93.9	R12:	82.1
CIE y:	0.4042	R5:	93.6	R13:	94.8
CIE z:	0.1608	R6:	96.7	R14:	99.6
Peak Wavelength (nm):	615	R7:	90.3	R15:	87.6
Dominant Wavelength (nm):	582	R8:	78.4		
Purity:	51.90029				

Rf:	91.6
Rg:	98.2



Test Conditions

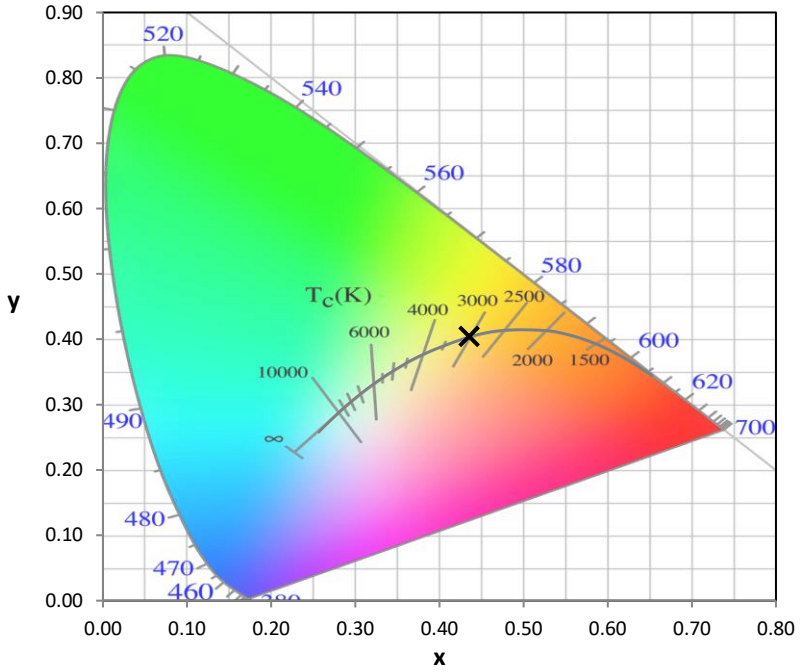
Stabilization Time:	40M
Operation Time:	1H 40M
Sphere Temperature (°C):	25.1

REPORT NUMBER: SP1-2504-409-28

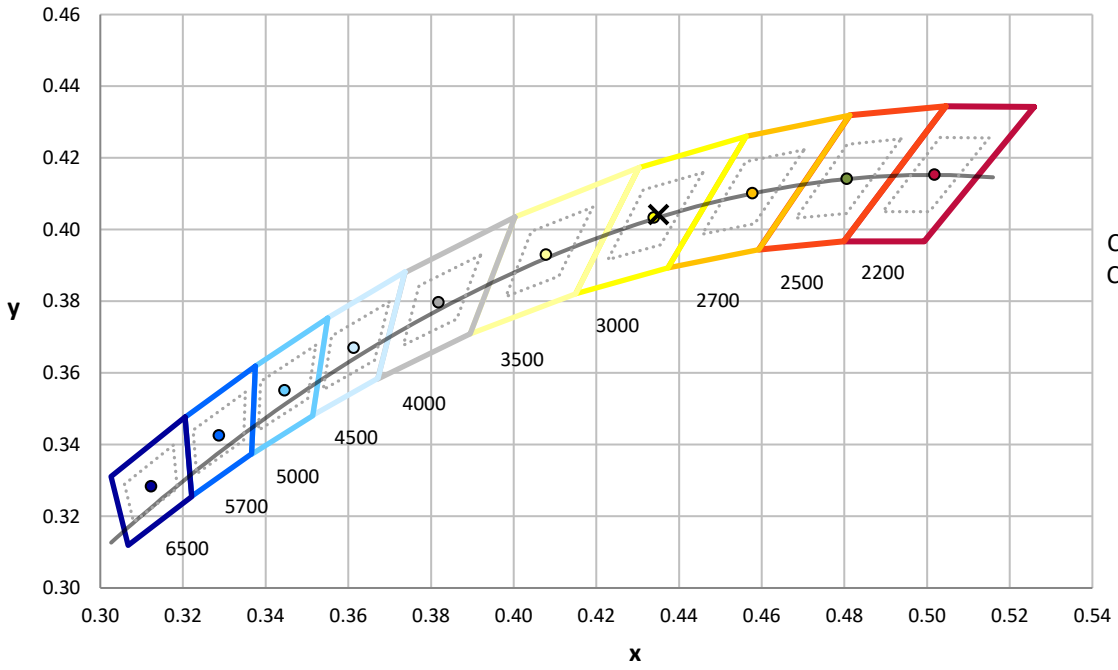
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2024	6/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2504-409-28

CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

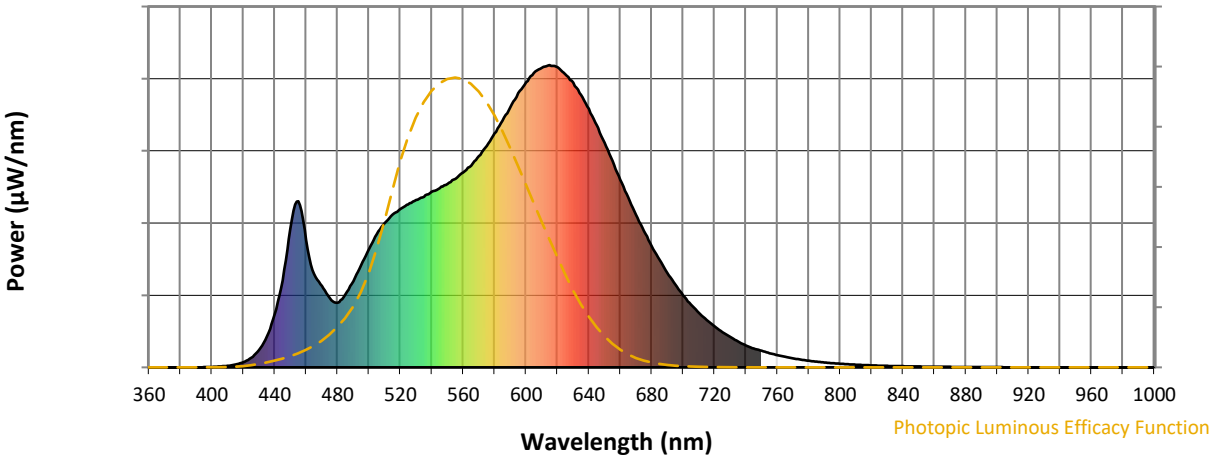


CCT = 3032K
CIE x = 0.4351
CIE y = 0.4042
Duv = 0.0003

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2504-409-28

Photopic Flux vs. Wavelength

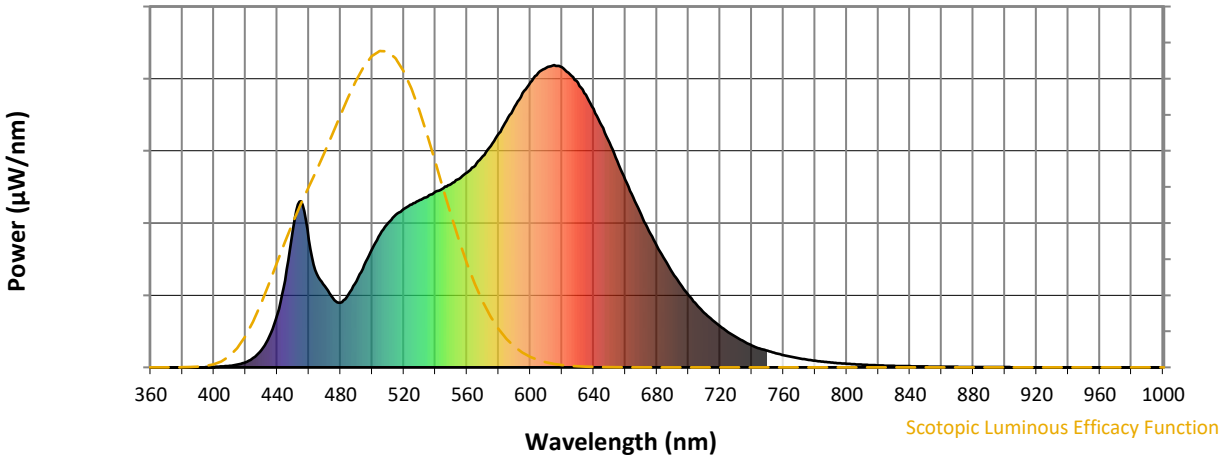


Photopic Lumens: NR

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	285	NR	620	993	NR	750	55	NR	880	1	NR
365	0	NR	495	338	NR	625	970	NR	755	47	NR	885	1	NR
370	0	NR	500	392	NR	630	942	NR	760	41	NR	890	1	NR
375	0	NR	505	440	NR	635	902	NR	765	35	NR	895	1	NR
380	0	NR	510	478	NR	640	855	NR	770	30	NR	900	1	NR
385	0	NR	515	505	NR	645	800	NR	775	26	NR	905	1	NR
390	0	NR	520	524	NR	650	743	NR	780	22	NR	910	0	NR
395	1	NR	525	539	NR	655	682	NR	785	19	NR	915	0	NR
400	2	NR	530	554	NR	660	621	NR	790	16	NR	920	0	NR
405	3	NR	535	565	NR	665	563	NR	795	14	NR	925	1	NR
410	5	NR	540	581	NR	670	505	NR	800	12	NR	930	0	NR
415	10	NR	545	593	NR	675	451	NR	805	10	NR	935	0	NR
420	17	NR	550	606	NR	680	401	NR	810	9	NR	940	0	NR
425	32	NR	555	623	NR	685	356	NR	815	8	NR	945	0	NR
430	57	NR	560	645	NR	690	313	NR	820	7	NR	950	0	NR
435	103	NR	565	667	NR	695	274	NR	825	6	NR	955	0	NR
440	175	NR	570	699	NR	700	238	NR	830	5	NR	960	0	NR
445	287	NR	575	732	NR	705	208	NR	835	4	NR	965	0	NR
450	460	NR	580	774	NR	710	180	NR	840	4	NR	970	0	NR
455	550	NR	585	816	NR	715	157	NR	845	3	NR	975	0	NR
460	423	NR	590	862	NR	720	136	NR	850	3	NR	980	0	NR
465	309	NR	595	907	NR	725	117	NR	855	2	NR	985	0	NR
470	269	NR	600	943	NR	730	100	NR	860	2	NR	990	0	NR
475	229	NR	605	974	NR	735	86	NR	865	2	NR	995	0	NR
480	214	NR	610	991	NR	740	72	NR	870	2	NR	1000	0	NR
485	241	NR	615	1000	NR	745	62	NR	875	1	NR			

REPORT NUMBER: SP1-2504-409-28

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.44**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	285	NR	620	993	NR	750	55	NR	880	1	NR
365	0	NR	495	338	NR	625	970	NR	755	47	NR	885	1	NR
370	0	NR	500	392	NR	630	942	NR	760	41	NR	890	1	NR
375	0	NR	505	440	NR	635	902	NR	765	35	NR	895	1	NR
380	0	NR	510	478	NR	640	855	NR	770	30	NR	900	1	NR
385	0	NR	515	505	NR	645	800	NR	775	26	NR	905	1	NR
390	0	NR	520	524	NR	650	743	NR	780	22	NR	910	0	NR
395	1	NR	525	539	NR	655	682	NR	785	19	NR	915	0	NR
400	2	NR	530	554	NR	660	621	NR	790	16	NR	920	0	NR
405	3	NR	535	565	NR	665	563	NR	795	14	NR	925	1	NR
410	5	NR	540	581	NR	670	505	NR	800	12	NR	930	0	NR
415	10	NR	545	593	NR	675	451	NR	805	10	NR	935	0	NR
420	17	NR	550	606	NR	680	401	NR	810	9	NR	940	0	NR
425	32	NR	555	623	NR	685	356	NR	815	8	NR	945	0	NR
430	57	NR	560	645	NR	690	313	NR	820	7	NR	950	0	NR
435	103	NR	565	667	NR	695	274	NR	825	6	NR	955	0	NR
440	175	NR	570	699	NR	700	238	NR	830	5	NR	960	0	NR
445	287	NR	575	732	NR	705	208	NR	835	4	NR	965	0	NR
450	460	NR	580	774	NR	710	180	NR	840	4	NR	970	0	NR
455	550	NR	585	816	NR	715	157	NR	845	3	NR	975	0	NR
460	423	NR	590	862	NR	720	136	NR	850	3	NR	980	0	NR
465	309	NR	595	907	NR	725	117	NR	855	2	NR	985	0	NR
470	269	NR	600	943	NR	730	100	NR	860	2	NR	990	0	NR
475	229	NR	605	974	NR	735	86	NR	865	2	NR	995	0	NR
480	214	NR	610	991	NR	740	72	NR	870	2	NR	1000	0	NR
485	241	NR	615	1000	NR	745	62	NR	875	1	NR			

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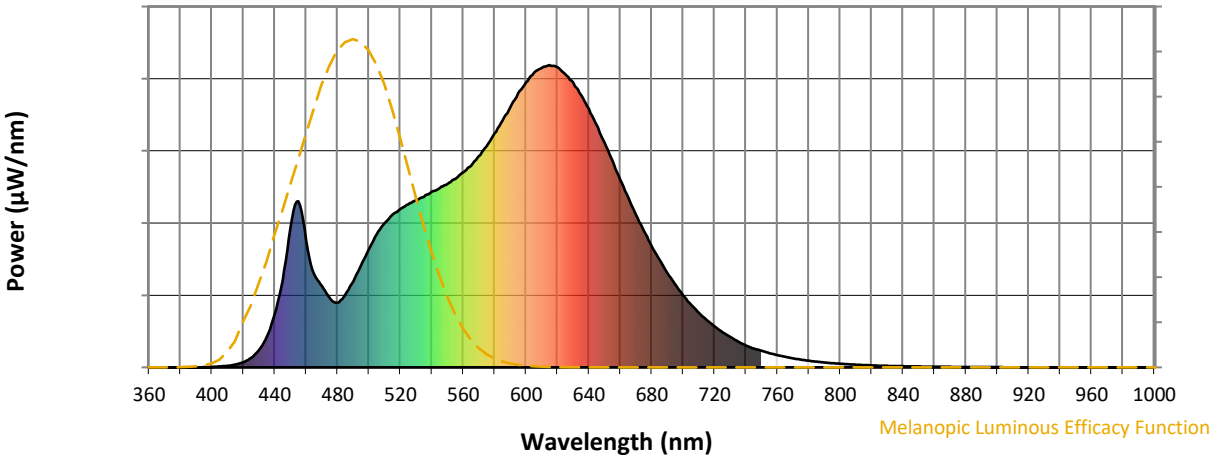
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.84**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	285	NR	620	993	NR	750	55	NR	880	1	NR
365	0	NR	495	338	NR	625	970	NR	755	47	NR	885	1	NR
370	0	NR	500	392	NR	630	942	NR	760	41	NR	890	1	NR
375	0	NR	505	440	NR	635	902	NR	765	35	NR	895	1	NR
380	0	NR	510	478	NR	640	855	NR	770	30	NR	900	1	NR
385	0	NR	515	505	NR	645	800	NR	775	26	NR	905	1	NR
390	0	NR	520	524	NR	650	743	NR	780	22	NR	910	0	NR
395	1	NR	525	539	NR	655	682	NR	785	19	NR	915	0	NR
400	2	NR	530	554	NR	660	621	NR	790	16	NR	920	0	NR
405	3	NR	535	565	NR	665	563	NR	795	14	NR	925	1	NR
410	5	NR	540	581	NR	670	505	NR	800	12	NR	930	0	NR
415	10	NR	545	593	NR	675	451	NR	805	10	NR	935	0	NR
420	17	NR	550	606	NR	680	401	NR	810	9	NR	940	0	NR
425	32	NR	555	623	NR	685	356	NR	815	8	NR	945	0	NR
430	57	NR	560	645	NR	690	313	NR	820	7	NR	950	0	NR
435	103	NR	565	667	NR	695	274	NR	825	6	NR	955	0	NR
440	175	NR	570	699	NR	700	238	NR	830	5	NR	960	0	NR
445	287	NR	575	732	NR	705	208	NR	835	4	NR	965	0	NR
450	460	NR	580	774	NR	710	180	NR	840	4	NR	970	0	NR
455	550	NR	585	816	NR	715	157	NR	845	3	NR	975	0	NR
460	423	NR	590	862	NR	720	136	NR	850	3	NR	980	0	NR
465	309	NR	595	907	NR	725	117	NR	855	2	NR	985	0	NR
470	269	NR	600	943	NR	730	100	NR	860	2	NR	990	0	NR
475	229	NR	605	974	NR	735	86	NR	865	2	NR	995	0	NR
480	214	NR	610	991	NR	740	72	NR	870	2	NR	1000	0	NR
485	241	NR	615	1000	NR	745	62	NR	875	1	NR			

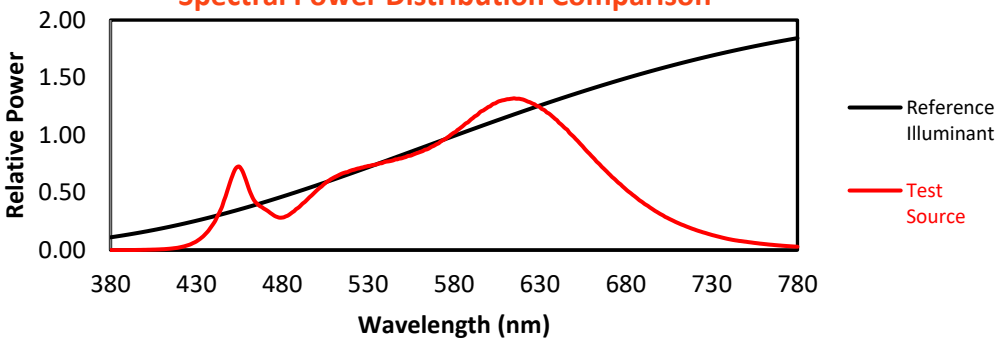
REPORT NUMBER: SP1-2504-409-28

TM-30-18

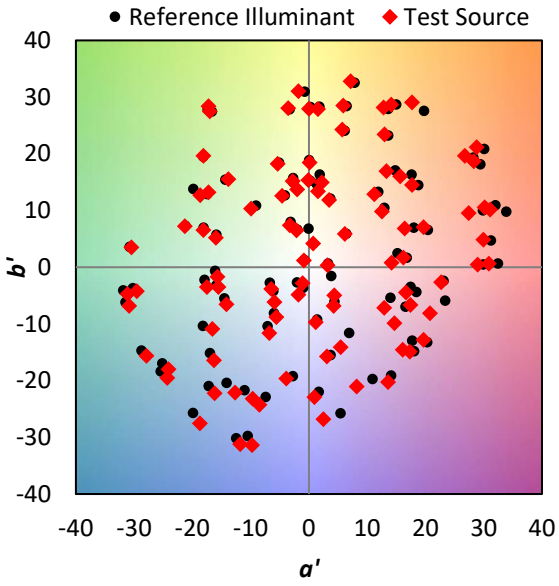
Summary

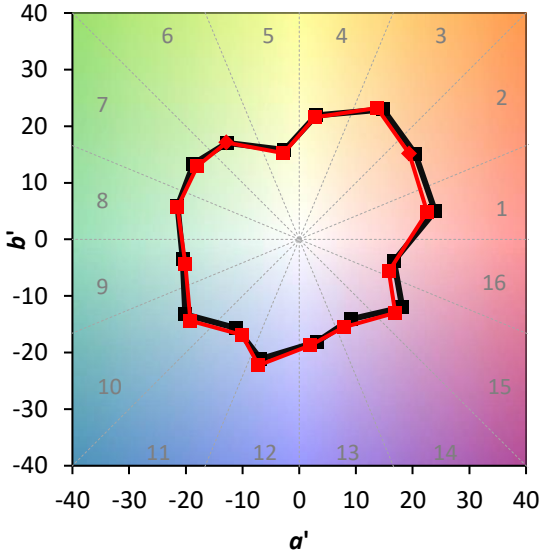
R_f = 91.6
R_g = 98.2
CIE R_a = 92.8
R_9 = 51.3

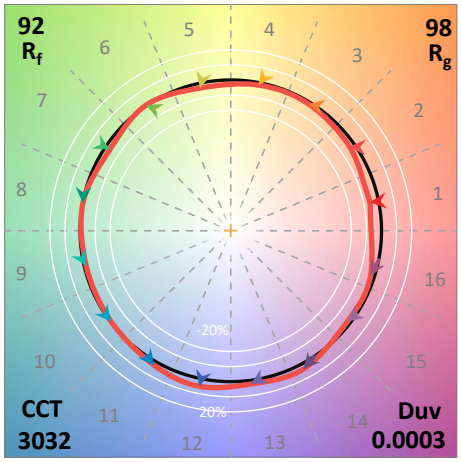
Spectral Power Distribution Comparison

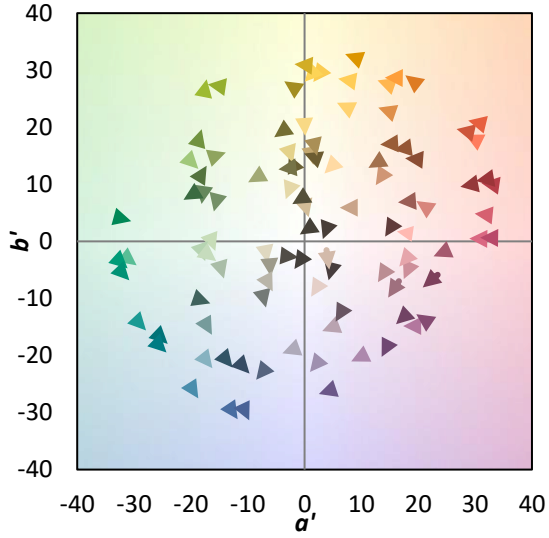


Color Vector Graphics









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TM-30-18

Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 96	CES51 = 97	CES76 = 92
CES02 = 63	CES27 = 91	CES52 = 99	CES77 = 88
CES03 = 32	CES28 = 98	CES53 = 98	CES78 = 88
CES04 = 70	CES29 = 97	CES54 = 93	CES79 = 91
CES05 = 50	CES30 = 90	CES55 = 91	CES80 = 92
CES06 = 51	CES31 = 97	CES56 = 94	CES81 = 78
CES07 = 43	CES32 = 93	CES57 = 93	CES82 = 96
CES08 = 42	CES33 = 97	CES58 = 94	CES83 = 95
CES09 = 29	CES34 = 97	CES59 = 97	CES84 = 95
CES10 = 76	CES35 = 98	CES60 = 93	CES85 = 80
CES11 = 59	CES36 = 82	CES61 = 93	CES86 = 79
CES12 = 65	CES37 = 98	CES62 = 87	CES87 = 91
CES13 = 44	CES38 = 86	CES63 = 94	CES88 = 95
CES14 = 74	CES39 = 98	CES64 = 92	CES89 = 84
CES15 = 72	CES40 = 97	CES65 = 89	CES90 = 94
CES16 = 48	CES41 = 96	CES66 = 90	CES91 = 77
CES17 = 50	CES42 = 97	CES67 = 89	CES92 = 76
CES18 = 57	CES43 = 96	CES68 = 91	CES93 = 86
CES19 = 72	CES44 = 99	CES69 = 92	CES94 = 76
CES20 = 67	CES45 = 99	CES70 = 89	CES95 = 83
CES21 = 86	CES46 = 96	CES71 = 85	CES96 = 91
CES22 = 79	CES47 = 93	CES72 = 95	CES97 = 96
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CES24 = 90	CES49 = 97	CES74 = 90	CES99 = 89
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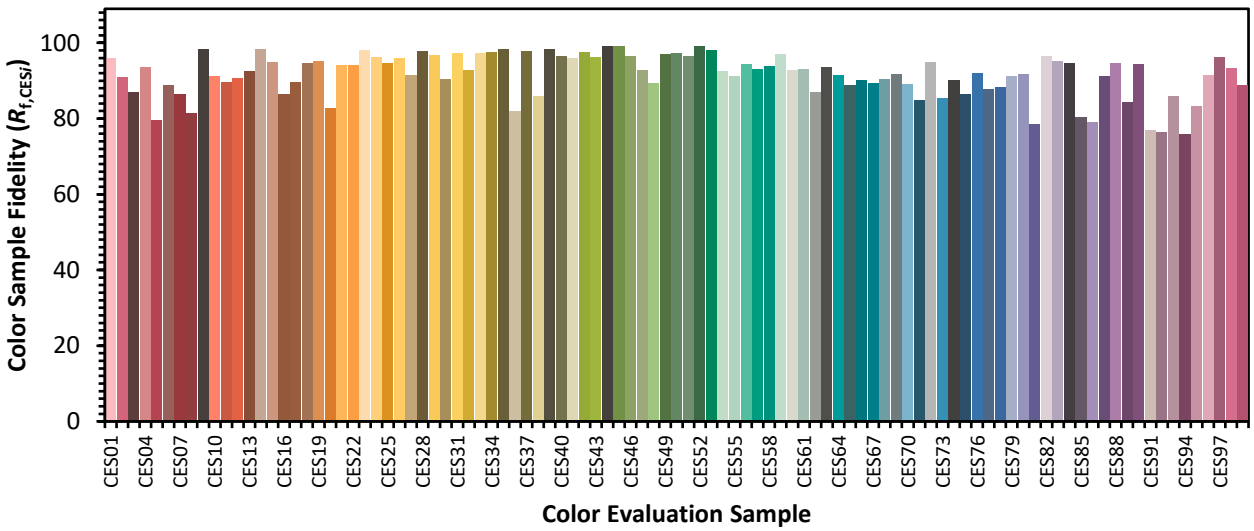

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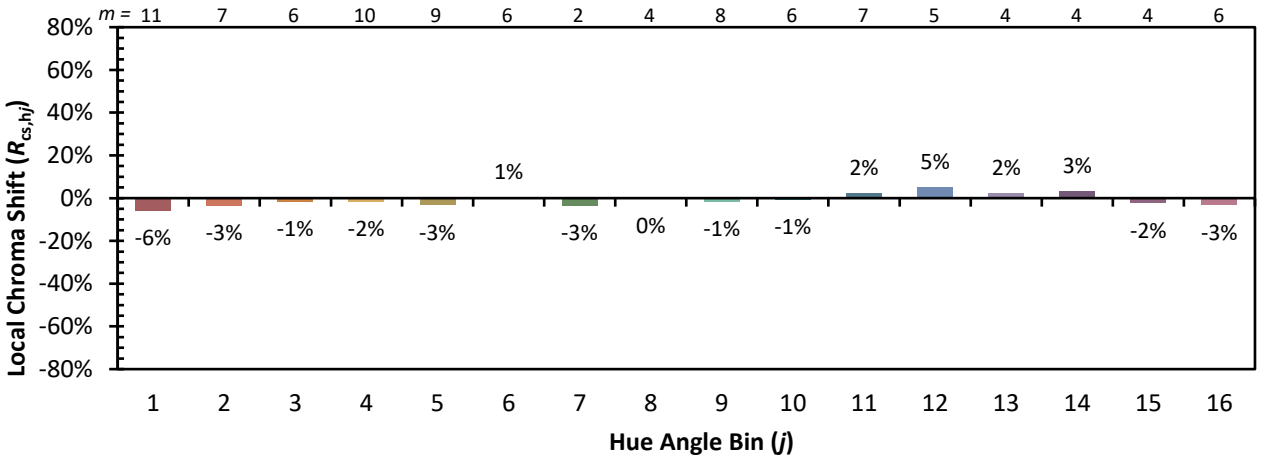
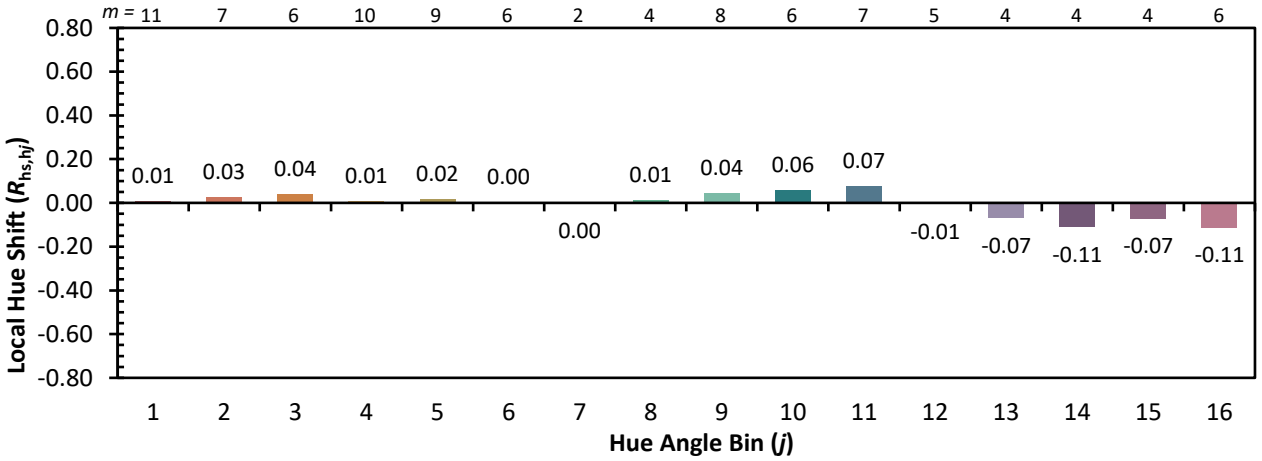
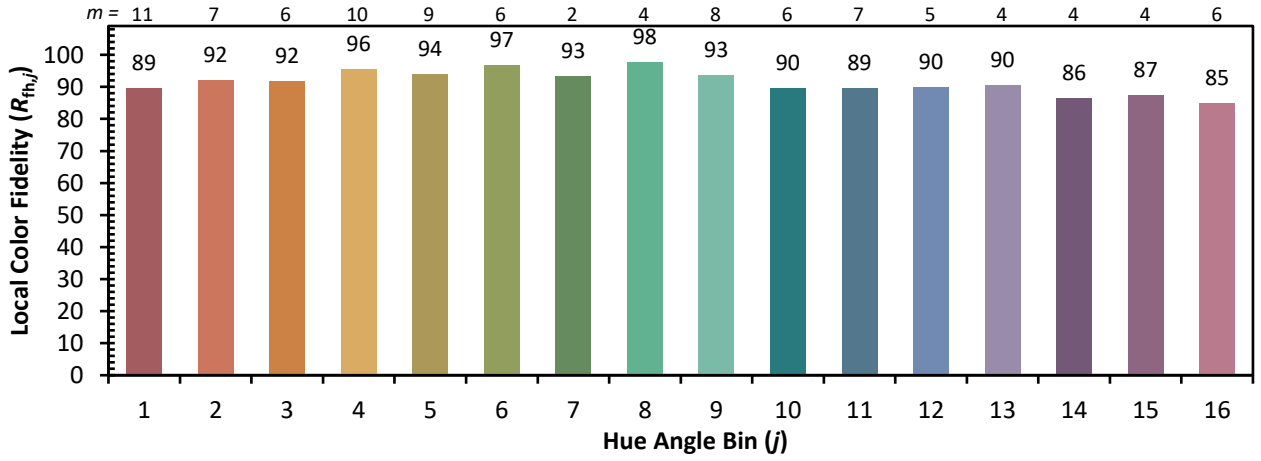
Color Rendition by Hue-Angle Bin







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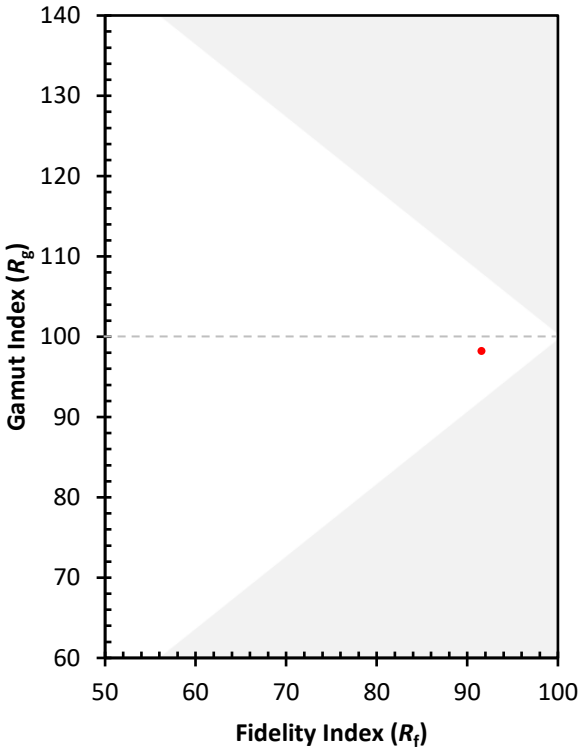
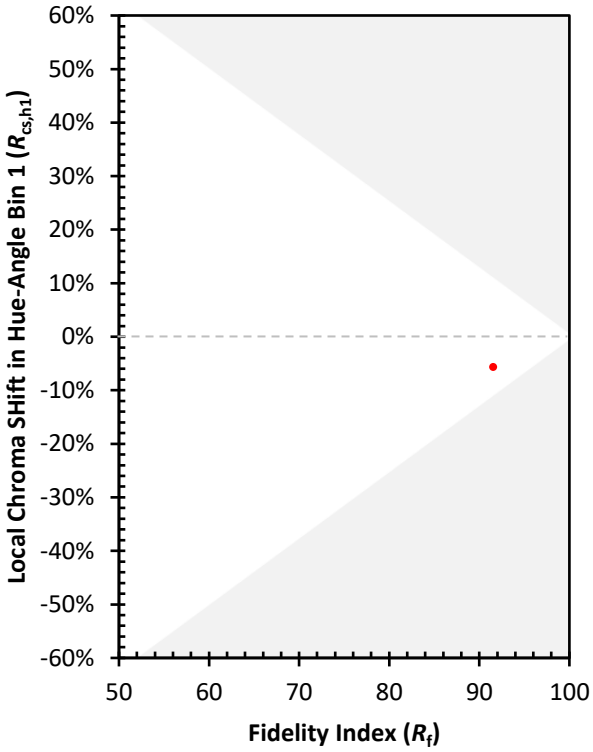
Measure Comparisons





(END OF REPORT)