Classified

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

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P895862

Luminaire Tested: **GRZ-15L-940-30x60-X-UNV-STD-1F**

Issue Date: 11/20/2024

Report Generated By 670245763 / DESKTOP-DVLU35A

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

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P895862
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	11/20/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	io LED
Catalog Number:	GRZ-15L-940-30x60-X-UNV-STD-1F
Description:	iO LED 90CRI 4000K GRAZER 1500 lumens per ft WITH 30 deg x 60 deg OPTIC
Light Source:	4000K CCT, 90 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1194.0 lumens
Efficiency:	N/A
Efficacy:	80.1 lumens/watt
Spacing Criteria (0/90/45):	0.53 / 1.01 / 0.76
Luminous Opening:	Rectangular (W 1' x L: 0.17' x H: 0')
CIE Type:	Direct

Input Watts (W):	14.9
Input Voltage (V):	120
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:	25 FT

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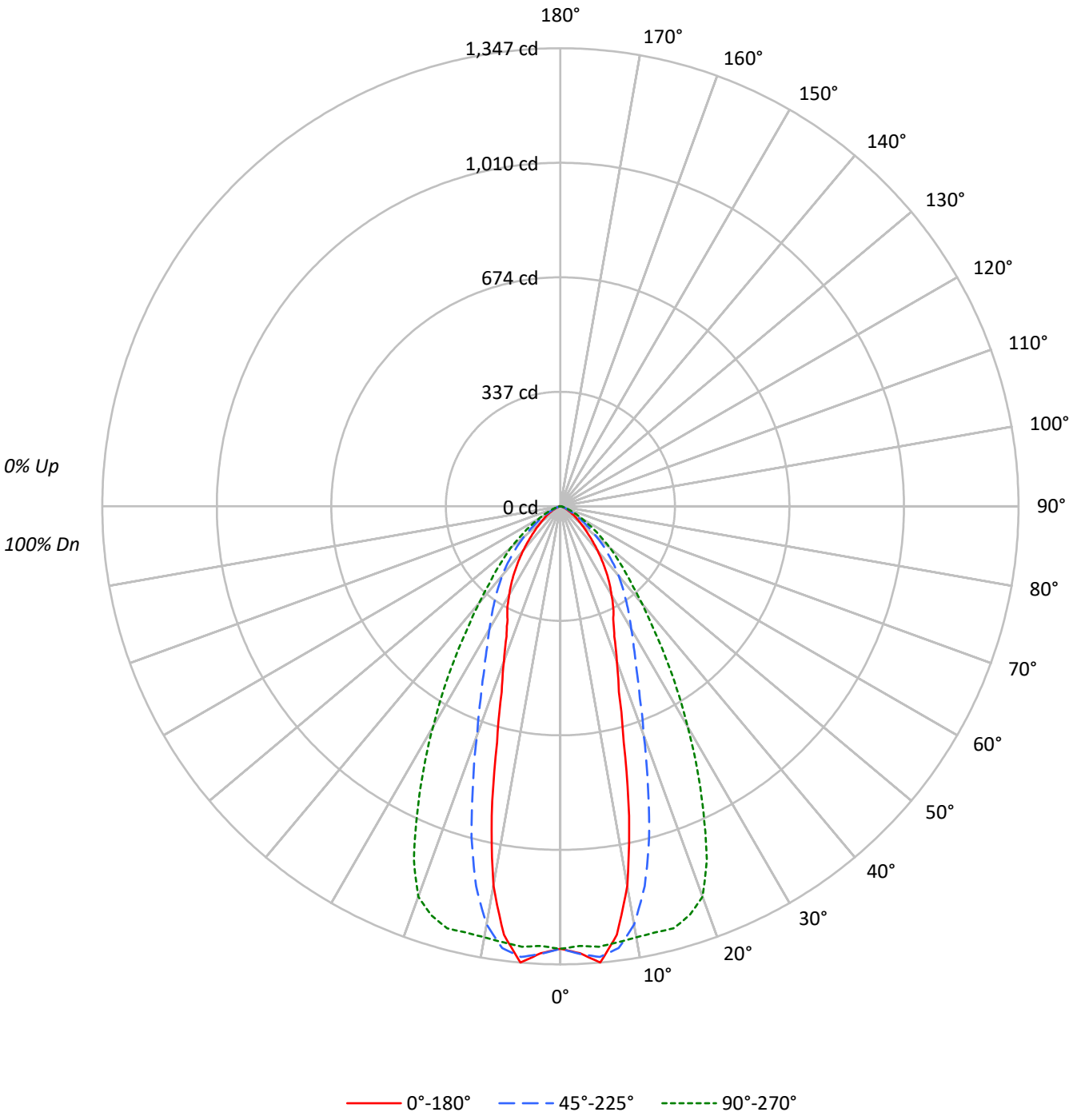
Luminous Intensity Polar Plot



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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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60	59
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51
9	71	60	54	49	70	60	53	49	59	53	49	58	53	49	57	52	49	47
10	67	57	50	46	66	56	50	46	55	50	46	55	49	46	54	49	46	44

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	84013	84013	84013
5°	87289	86226	84256
10°	74248	81853	84384
15°	48064	67403	85880
20°	33313	49248	83935
25°	26197	37717	70918
30°	22442	31084	55793
35°	18461	26399	42101
40°	14321	22413	31390
45°	10584	18081	24281
50°	7765	13873	19297
55°	5798	9884	14106
60°	4081	6651	9518
65°	2857	4293	6432
70°	1982	2870	4191
75°	1472	1746	2919
80°	855	1301	2194
85°	889	889	889

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CATALOG NUMBER: GRZ-15L-940-30x60-X-UNV-STD-1F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	10.3
10°-20°	280.3	23.5
20°-30°	286.5	24.0
30°-40°	229.3	19.2
40°-50°	153.3	12.8
50°-60°	80.8	6.8
60°-70°	30.5	2.6
70°-80°	9.0	0.8
80°-90°	1.4	0.1
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°	689.9	57.8
0°-40°	919.1	77.0
0°-60°	1153.1	96.6
0°-90°	1194.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1194.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1347	1327	1330	1310	1300	121
15°	719	793	1008	1224	1285	205
25°	368	397	529	870	995	173
35°	234	255	335	485	534	146
45°	116	134	198	262	266	91
55°	52	58	88	120	125	47
65°	19	21	28	38	42	19
75°	6	6	7	10	12	7
85°	1	1	1	1	1	1
90°	0	0	0	0	0	

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CATALOG NUMBER: GRZ-15L-940-30x60-X-UNV-STD-1F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	*1301.1*	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1	1301.1
2.5°	*1315.1*	1313.9	1326.8	1317.4	1321.0	1317.4	1306.9	1301.1	1299.9	1288.2	1294.0
5°	*1346.7*	*1328.0*	*1331.5*	*1325.6*	*1331.5*	*1330.3*	*1318.6*	*1311.6*	*1305.7*	*1298.7*	*1299.9*
7.5°	*1270.6*	1273.0	1283.5	1288.2	1304.6	1310.4	1304.6	1299.9	1295.2	1291.7	1292.9
10°	*1132.4*	1140.6	1155.8	1186.3	1220.3	1248.4	1260.1	1273.0	1283.5	1284.7	1287.0
12.5°	*932.2*	943.9	968.5	1001.3	1076.2	1144.1	1201.6	1246.0	1271.8	1285.8	1283.5
15°	*719.0*	722.5	753.0	806.8	888.9	1008.3	1121.8	1212.1	1258.9	1291.7	1284.7
17.5°	*572.7*	577.4	601.9	642.9	721.3	853.8	1023.5	1158.1	1243.7	1267.1	1261.3
20°	*484.8*	481.2	500.0	534.1	599.6	716.7	893.6	1073.8	1181.7	1214.4	1221.5
22.5°	*414.5*	418.0	429.7	456.7	514.2	611.3	772.9	963.8	1083.2	1119.5	1125.3
25°	*367.7*	371.2	382.9	401.6	448.5	529.4	668.7	840.7	957.9	993.1	995.4
27.5°	*337.3*	334.9	343.1	357.2	398.1	467.2	582.0	724.9	833.7	869.0	871.3
30°	*301.0*	299.8	308.0	323.2	356.0	416.9	514.2	630.0	707.3	741.2	748.3
32.5°	*268.2*	267.0	276.4	289.3	322.0	374.7	459.0	549.3	601.9	630.0	637.1
35°	*234.2*	235.4	242.4	258.8	288.1	334.9	412.2	475.4	513.0	527.0	534.1
37.5°	*201.5*	202.6	212.0	228.4	257.7	299.8	361.8	411.0	433.3	443.8	442.6
40°	*169.9*	172.2	178.1	196.8	226.1	265.9	316.2	352.5	367.7	368.9	372.4
42.5°	*141.6*	141.6	151.0	166.2	194.4	231.9	276.4	302.1	313.9	312.7	310.3
45°	*115.9*	117.1	122.9	138.1	163.9	198.0	236.6	260.0	267.0	262.3	265.9
47.5°	*94.8*	96.0	100.7	114.7	137.0	169.9	200.3	222.5	228.4	224.9	224.9
50°	*77.3*	78.4	81.9	92.5	111.2	138.1	166.2	185.1	190.9	189.8	192.1
52.5°	*63.2*	63.2	66.7	74.9	90.1	112.4	134.6	151.0	155.7	154.5	153.3
55°	*51.5*	51.5	53.8	59.7	71.4	87.8	106.5	119.4	122.9	124.1	125.3
57.5°	*41.0*	41.0	42.1	46.8	55.0	67.9	81.9	91.3	94.8	96.0	97.2
60°	*31.6*	31.6	33.9	36.3	43.3	51.5	60.9	67.9	72.6	72.6	73.7
62.5°	*24.6*	24.6	25.8	28.1	32.8	38.6	44.5	50.3	52.7	55.0	56.2
65°	*18.7*	18.7	19.9	21.1	24.6	28.1	32.8	37.5	39.8	41.0	42.1
67.5°	*14.0*	14.0	14.0	16.4	18.7	21.1	23.4	26.9	28.1	30.4	31.6
70°	*10.5*	10.5	10.5	11.7	12.9	15.2	16.4	18.7	21.1	22.2	22.2
72.5°	*8.2*	8.2	8.2	8.2	9.4	10.5	11.7	12.9	15.2	16.4	16.4
75°	*5.9*	5.9	5.9	5.9	7.0	7.0	8.2	9.4	10.5	11.7	11.7
77.5°	*4.7*	4.7	3.5	4.7	4.7	4.7	5.9	5.9	7.0	8.2	8.2
80°	*2.3*	2.3	2.3	2.3	3.5	3.5	3.5	4.7	4.7	4.7	5.9
82.5°	*1.2*	1.2	1.2	1.2	2.3	2.3	2.3	2.3	2.3	3.5	3.5
85°	*1.2*	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

iO LED

Report Number: SP1-2101-124-4

Luminaire Tested: GRZ-05L-940-10X10-X-UNV-STD-2F

Test Date: 02/11/2021

Report Generated By controller / USPTCWHP6086842

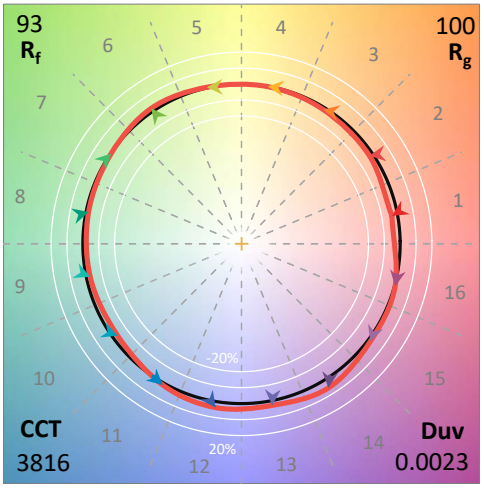
Test Information

Test Method:	LM-79-08
Report Number:	SP1-2101-124-4
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1
Measurement Geometry:	4π
Issue Date:	02/11/2021
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	iO LED
Catalog Number:	**GRZ-05L-940-10X10-X-UNV-STD-2F**
Description:	IO LED Wall Grazer GRZ

Spectral Parameters

CCT (K):	3816	CRI (Ra):	93.3		
CIE u':	0.2273	R1:	93.7	R9:	69.2
CIE v':	0.5079	R2:	94.3	R10:	85.8
Duv:	0.0023	R3:	93.9	R11:	94.6
CIE x:	0.3907	R4:	94.7	R12:	78.9
CIE y:	0.3879	R5:	92.9	R13:	93.7
CIE z:	0.2214	R6:	92.1	R14:	96.1
Peak Wavelength (nm):	614	R7:	95.7		
Dominant Wavelength (nm):	578	R8:	88.8		
Purity:	33.8				

Rf:	93.1
Rg:	100.2



Test Conditions

Stabilization Time:	162M
Operation Time:	12H
Room Temperature (°C) / RH%:	25.1/41%
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2101-124-4

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	1/31/2021	7/31/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020	12/1/2021
Room Thermometer	IN0046	12/1/2020	12/1/2021

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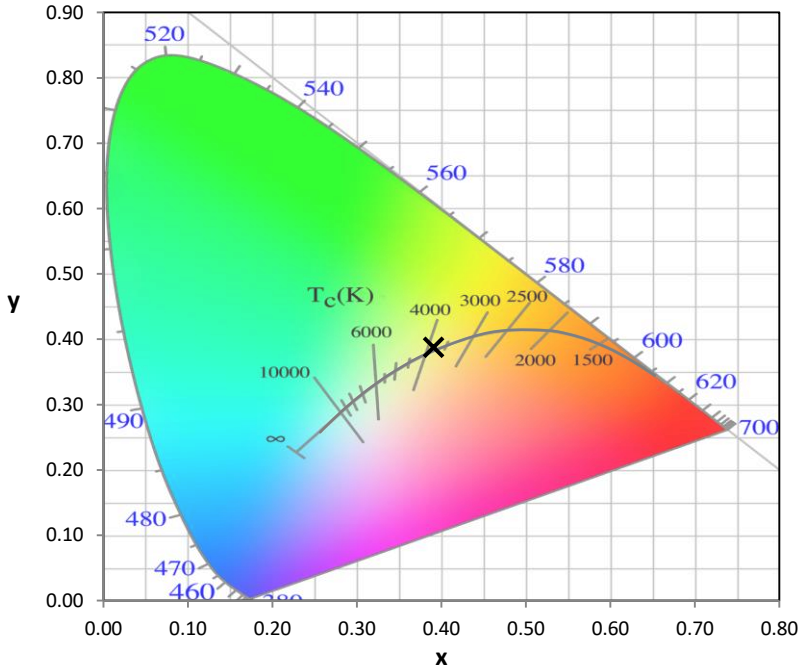
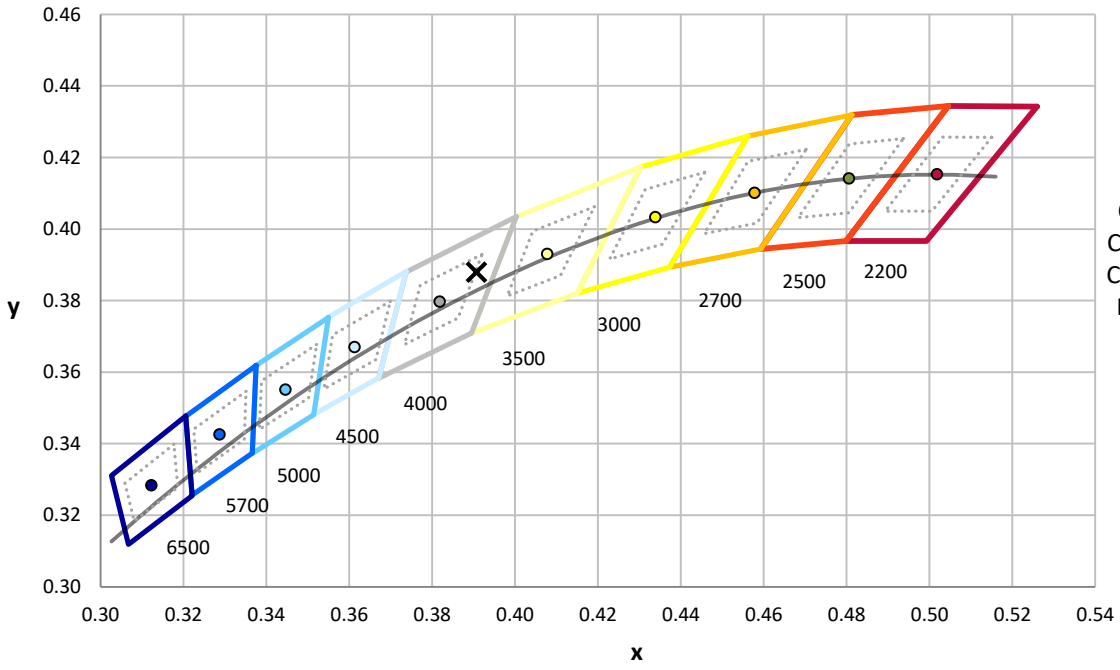
CIE 1931 Chromaticity Diagram



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



CCT = 3816K
CIE x = 0.3907
CIE y = 0.3879
Duv = 0.0023

Point lies inside the ANSI 4000K 7-step quadrangle

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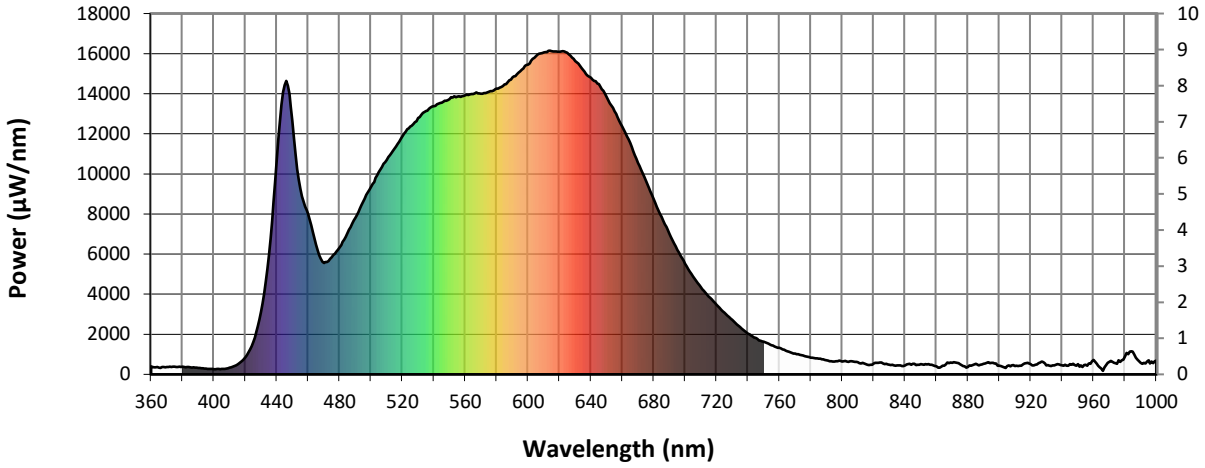
Photopic Flux vs. Wavelength



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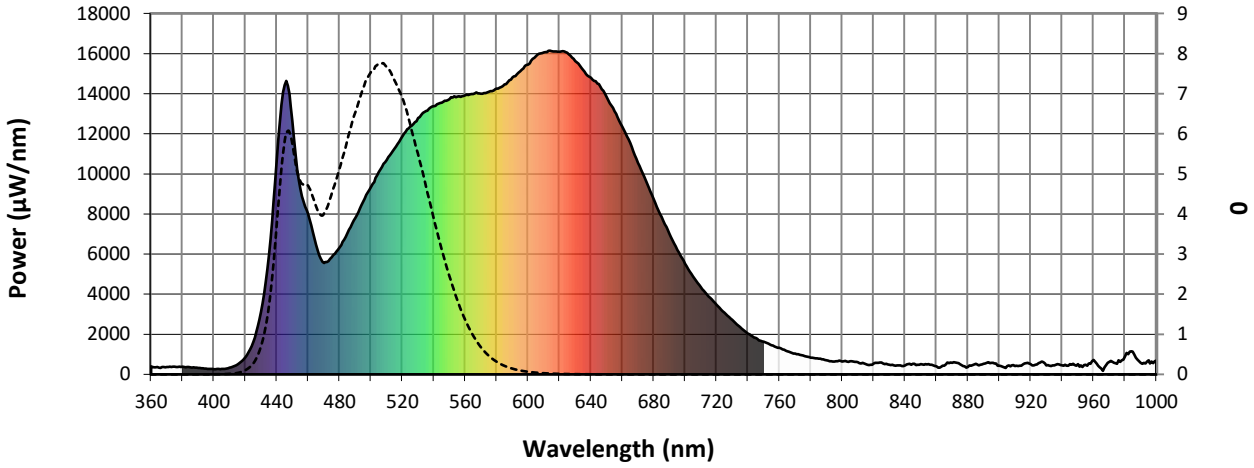
λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	405	0.0	490	7814	1.1	620	16090	4.2	750	1625	0.0	880	367	0.0
365	335	0.0	495	8606	1.6	625	16048	3.5	755	1453	0.0	885	533	0.0
370	363	0.0	500	9360	2.1	630	15632	2.8	760	1318	0.0	890	535	0.0
375	388	0.0	505	10093	2.8	635	15196	2.3	765	1153	0.0	895	583	0.0
380	378	0.0	510	10690	3.7	640	14791	1.8	770	1033	0.0	900	438	0.0
385	344	0.0	515	11247	4.7	645	14481	1.4	775	948	0.0	905	410	0.0
390	323	0.0	520	11881	5.8	650	13840	1.0	780	831	0.0	910	413	0.0
395	292	0.0	525	12359	6.6	655	13125	0.8	785	778	0.0	915	489	0.0
400	261	0.0	530	12780	7.5	660	12353	0.5	790	708	0.0	920	518	0.0
405	272	0.0	535	13137	8.1	665	11536	0.4	795	643	0.0	925	563	0.0
410	331	0.0	540	13369	8.7	670	10559	0.2	800	645	0.0	930	452	0.0
415	497	0.0	545	13551	9.0	675	9658	0.2	805	648	0.0	935	454	0.0
420	847	0.0	550	13731	9.3	680	8746	0.1	810	610	0.0	940	446	0.0
425	1620	0.0	555	13860	9.5	685	7852	0.1	815	505	0.0	945	516	0.0
430	3114	0.0	560	13921	9.5	690	7031	0.0	820	544	0.0	950	514	0.0
435	5958	0.1	565	13987	9.3	695	6210	0.0	825	591	0.0	955	487	0.0
440	10649	0.2	570	14001	9.1	700	5517	0.0	830	484	0.0	960	723	0.0
445	14435	0.3	575	14097	8.8	705	4890	0.0	835	440	0.0	965	281	0.0
450	12623	0.3	580	14256	8.5	710	4342	0.0	840	452	0.0	970	627	0.0
455	9257	0.3	585	14467	8.0	715	3886	0.0	845	527	0.0	975	532	0.0
460	8011	0.3	590	14814	7.7	720	3470	0.0	850	515	0.0	980	902	0.0
465	6473	0.3	595	15120	7.2	725	3080	0.0	855	517	0.0	985	1126	0.0
470	5561	0.3	600	15449	6.7	730	2713	0.0	860	406	0.0	990	578	0.0
475	5845	0.5	605	15859	6.1	735	2357	0.0	865	434	0.0	995	699	0.0
480	6344	0.6	610	16059	5.5	740	2032	0.0	870	578	0.0	1000	687	0.0
485	7040	0.8	615	16120	4.9	745	1812	0.0	875	517	0.0			

REPORT NUMBER: SP1-2101-124-4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 1669.3 **S/P: 1.71**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	405	0.0	490	7814	12.0	620	16090	0.2	750	1625	0.0	880	367	0.0
365	335	0.0	495	8606	13.9	625	16048	0.1	755	1453	0.0	885	533	0.0
370	363	0.0	500	9360	15.7	630	15632	0.1	760	1318	0.0	890	535	0.0
375	388	0.0	505	10093	17.2	635	15196	0.1	765	1153	0.0	895	583	0.0
380	378	0.0	510	10690	18.1	640	14791	0.0	770	1033	0.0	900	438	0.0
385	344	0.0	515	11247	18.6	645	14481	0.0	775	948	0.0	905	410	0.0
390	323	0.0	520	11881	18.9	650	13840	0.0	780	831	0.0	910	413	0.0
395	292	0.0	525	12359	18.5	655	13125	0.0	785	778	0.0	915	489	0.0
400	261	0.0	530	12780	17.6	660	12353	0.0	790	708	0.0	920	518	0.0
405	272	0.0	535	13137	16.4	665	11536	0.0	795	643	0.0	925	563	0.0
410	331	0.0	540	13369	14.8	670	10559	0.0	800	645	0.0	930	452	0.0
415	497	0.1	545	13551	13.0	675	9658	0.0	805	648	0.0	935	454	0.0
420	847	0.1	550	13731	11.2	680	8746	0.0	810	610	0.0	940	446	0.0
425	1620	0.4	555	13860	9.5	685	7852	0.0	815	505	0.0	945	516	0.0
430	3114	1.1	560	13921	7.8	690	7031	0.0	820	544	0.0	950	514	0.0
435	5958	2.7	565	13987	6.3	695	6210	0.0	825	591	0.0	955	487	0.0
440	10649	6.0	570	14001	4.9	700	5517	0.0	830	484	0.0	960	723	0.0
445	14435	9.7	575	14097	3.8	705	4890	0.0	835	440	0.0	965	281	0.0
450	12623	9.8	580	14256	2.9	710	4342	0.0	840	452	0.0	970	627	0.0
455	9257	8.1	585	14467	2.2	715	3886	0.0	845	527	0.0	975	532	0.0
460	8011	7.7	590	14814	1.6	720	3470	0.0	850	515	0.0	980	902	0.0
465	6473	6.8	595	15120	1.2	725	3080	0.0	855	517	0.0	985	1126	0.0
470	5561	6.4	600	15449	0.9	730	2713	0.0	860	406	0.0	990	578	0.0
475	5845	7.3	605	15859	0.6	735	2357	0.0	865	434	0.0	995	699	0.0
480	6344	8.6	610	16059	0.4	740	2032	0.0	870	578	0.0	1000	687	0.0
485	7040	10.2	615	16120	0.3	745	1812	0.0	875	517	0.0			

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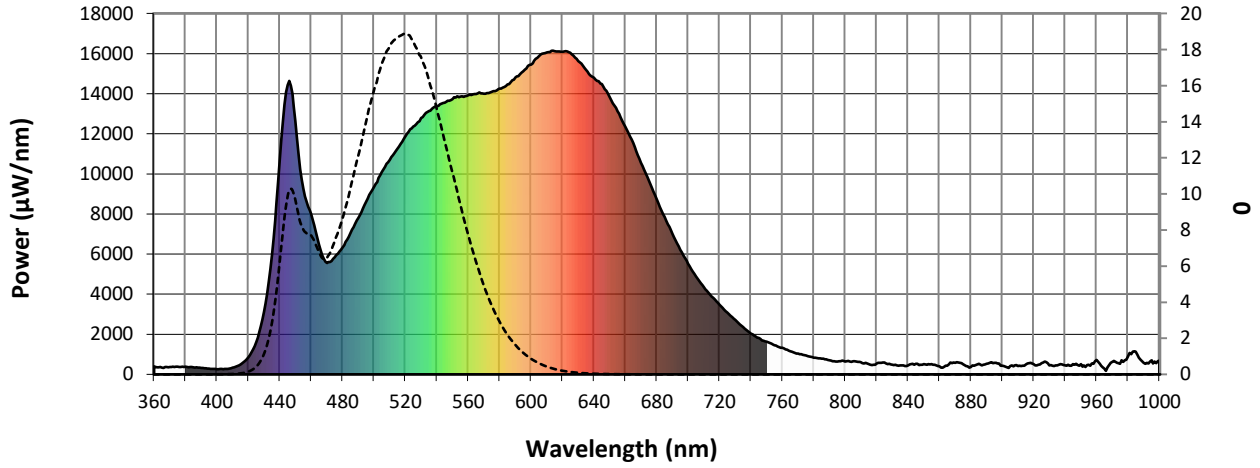
Melanopic Flux vs. Wavelength



Melanopic Lumens: 670.2 **M/P: 0.69**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	405	0.0	490	7814	6.5	620	16090	0.0	750	1625	0.0	880	367	0.0
365	335	0.0	495	8606	7.1	625	16048	0.0	755	1453	0.0	885	533	0.0
370	363	0.0	500	9360	7.5	630	15632	0.0	760	1318	0.0	890	535	0.0
375	388	0.0	505	10093	7.7	635	15196	0.0	765	1153	0.0	895	583	0.0
380	378	0.0	510	10690	7.7	640	14791	0.0	770	1033	0.0	900	438	0.0
385	344	0.0	515	11247	7.3	645	14481	0.0	775	948	0.0	905	410	0.0
390	323	0.0	520	11881	6.9	650	13840	0.0	780	831	0.0	910	413	0.0
395	292	0.0	525	12359	6.3	655	13125	0.0	785	778	0.0	915	489	0.0
400	261	0.0	530	12780	5.5	660	12353	0.0	790	708	0.0	920	518	0.0
405	272	0.0	535	13137	4.7	665	11536	0.0	795	643	0.0	925	563	0.0
410	331	0.0	540	13369	3.9	670	10559	0.0	800	645	0.0	930	452	0.0
415	497	0.0	545	13551	3.1	675	9658	0.0	805	648	0.0	935	454	0.0
420	847	0.1	550	13731	2.5	680	8746	0.0	810	610	0.0	940	446	0.0
425	1620	0.3	555	13860	1.9	685	7852	0.0	815	505	0.0	945	516	0.0
430	3114	0.7	560	13921	1.4	690	7031	0.0	820	544	0.0	950	514	0.0
435	5958	1.6	565	13987	1.0	695	6210	0.0	825	591	0.0	955	487	0.0
440	10649	3.6	570	14001	0.7	700	5517	0.0	830	484	0.0	960	723	0.0
445	14435	5.7	575	14097	0.5	705	4890	0.0	835	440	0.0	965	281	0.0
450	12623	5.8	580	14256	0.3	710	4342	0.0	840	452	0.0	970	627	0.0
455	9257	4.9	585	14467	0.2	715	3886	0.0	845	527	0.0	975	532	0.0
460	8011	4.7	590	14814	0.1	720	3470	0.0	850	515	0.0	980	902	0.0
465	6473	4.2	595	15120	0.1	725	3080	0.0	855	517	0.0	985	1126	0.0
470	5561	4.0	600	15449	0.1	730	2713	0.0	860	406	0.0	990	578	0.0
475	5845	4.5	605	15859	0.0	735	2357	0.0	865	434	0.0	995	699	0.0
480	6344	5.1	610	16059	0.0	740	2032	0.0	870	578	0.0	1000	687	0.0
485	7040	5.8	615	16120	0.0	745	1812	0.0	875	517	0.0			

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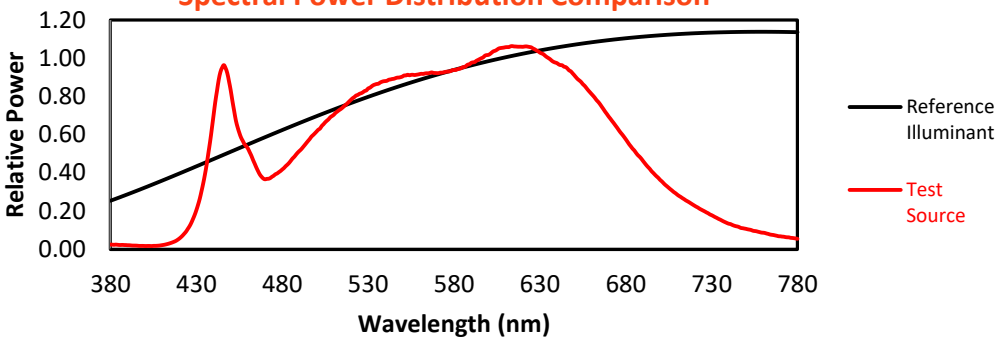
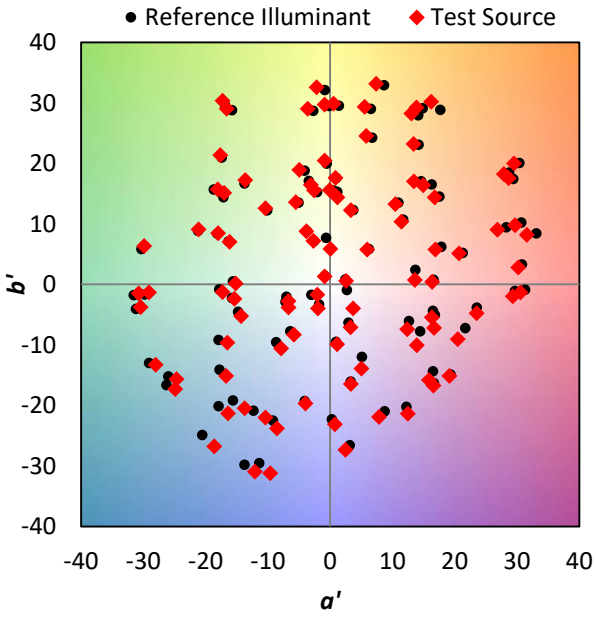
Summary

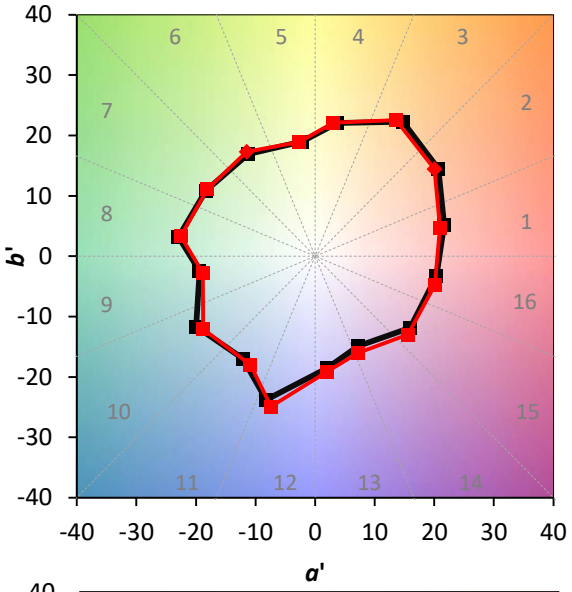
R_f = 93.1
R_g = 100.2
CIE R_a = 93.3
R_9 = 69.2

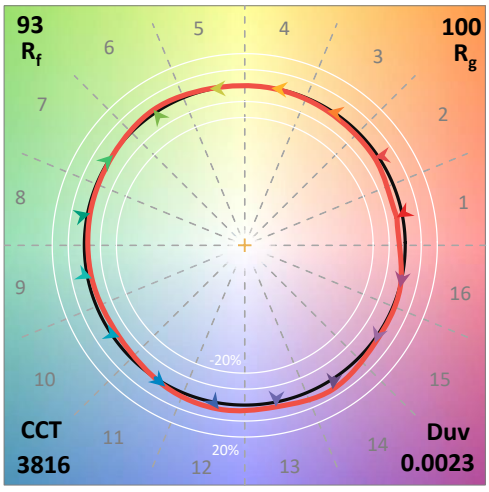
Spectral Power Distribution Comparison

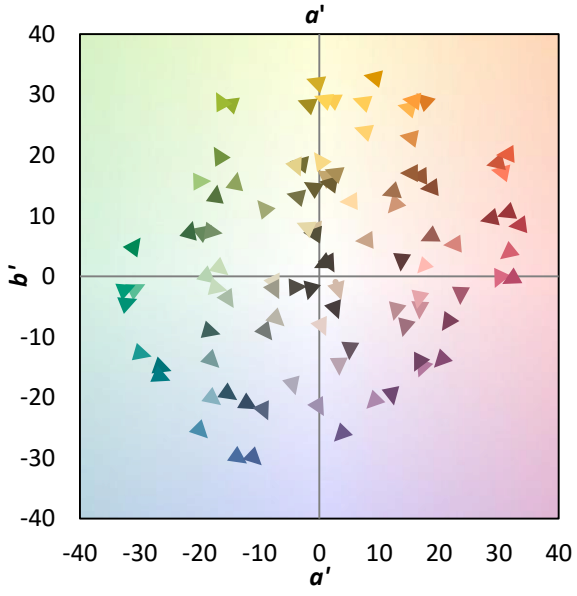


Color Vector Graphics









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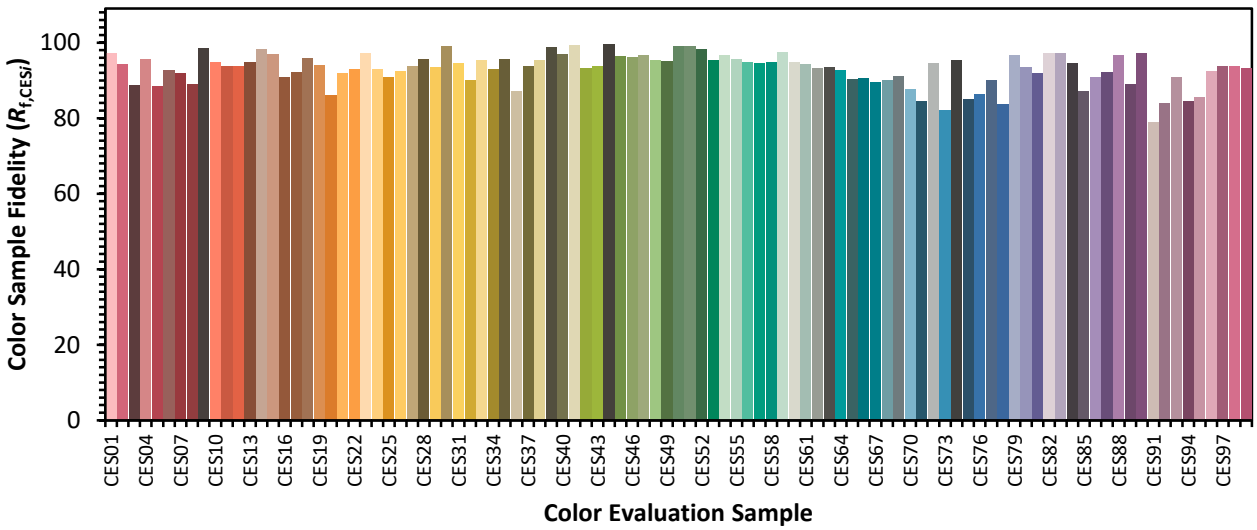
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 93	CES51 = 99	CES76 = 86
CES02 = 62	CES27 = 94	CES52 = 98	CES77 = 90
CES03 = 31	CES28 = 96	CES53 = 95	CES78 = 84
CES04 = 69	CES29 = 94	CES54 = 97	CES79 = 97
CES05 = 49	CES30 = 99	CES55 = 96	CES80 = 94
CES06 = 51	CES31 = 95	CES56 = 95	CES81 = 92
CES07 = 42	CES32 = 90	CES57 = 94	CES82 = 97
CES08 = 41	CES33 = 96	CES58 = 95	CES83 = 97
CES09 = 29	CES34 = 93	CES59 = 97	CES84 = 95
CES10 = 74	CES35 = 96	CES60 = 95	CES85 = 87
CES11 = 57	CES36 = 87	CES61 = 94	CES86 = 91
CES12 = 63	CES37 = 94	CES62 = 93	CES87 = 92
CES13 = 43	CES38 = 95	CES63 = 94	CES88 = 97
CES14 = 74	CES39 = 99	CES64 = 93	CES89 = 89
CES15 = 71	CES40 = 97	CES65 = 90	CES90 = 97
CES16 = 47	CES41 = 99	CES66 = 91	CES91 = 79
CES17 = 49	CES42 = 93	CES67 = 90	CES92 = 84
CES18 = 56	CES43 = 94	CES68 = 90	CES93 = 91
CES19 = 71	CES44 = 100	CES69 = 91	CES94 = 85
CES20 = 66	CES45 = 96	CES70 = 88	CES95 = 86
CES21 = 85	CES46 = 96	CES71 = 85	CES96 = 93
CES22 = 78	CES47 = 97	CES72 = 95	CES97 = 94
CES23 = 91	CES48 = 96	CES73 = 82	CES98 = 94
CES24 = 90	CES49 = 95	CES74 = 95	CES99 = 93
CES25 = 71	CES50 = 99	CES75 = 85	



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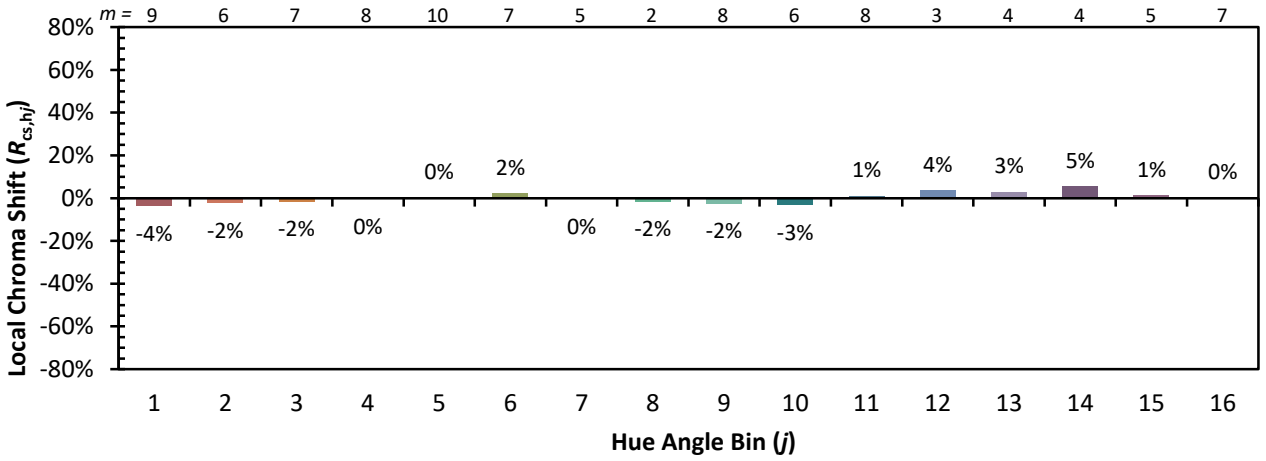
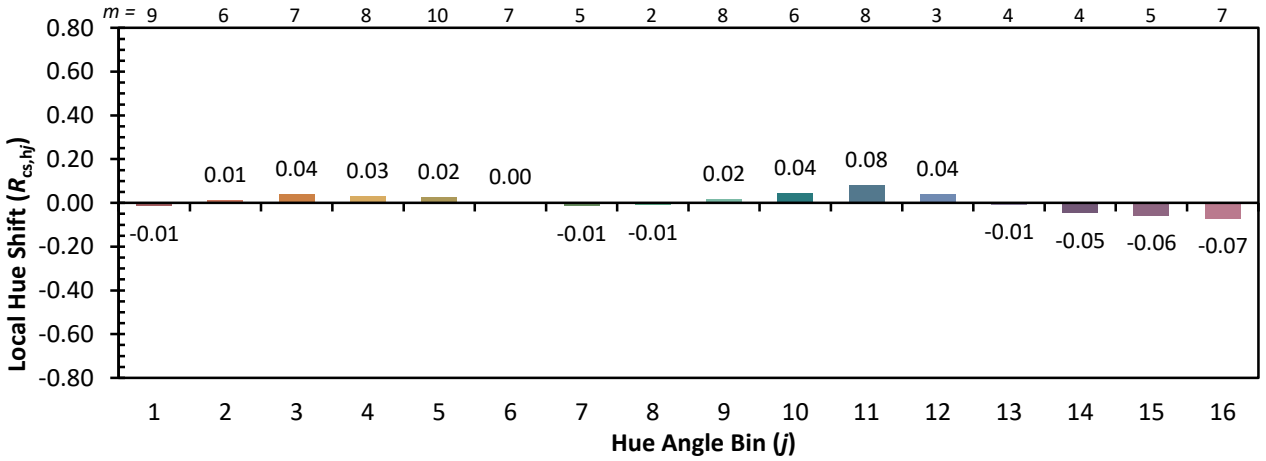
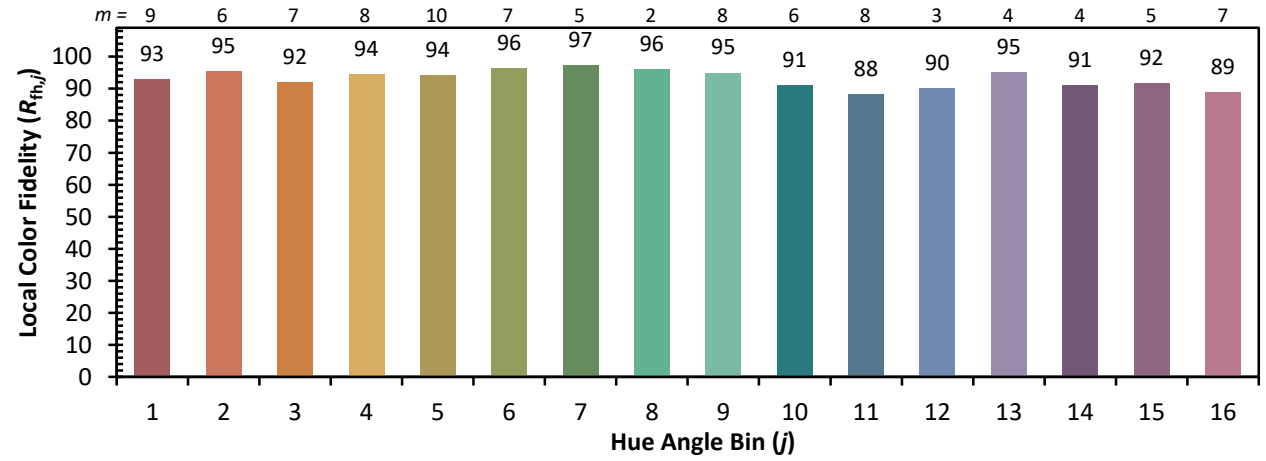
Color Rendition by Hue-Angle Bin







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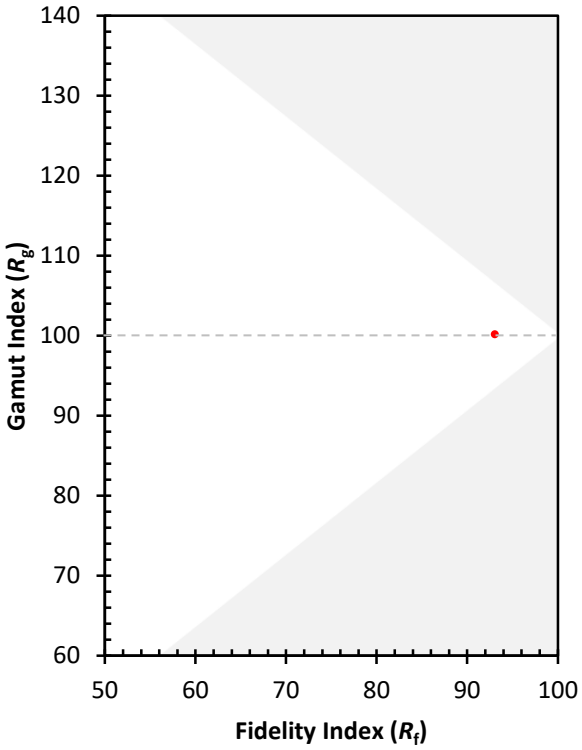
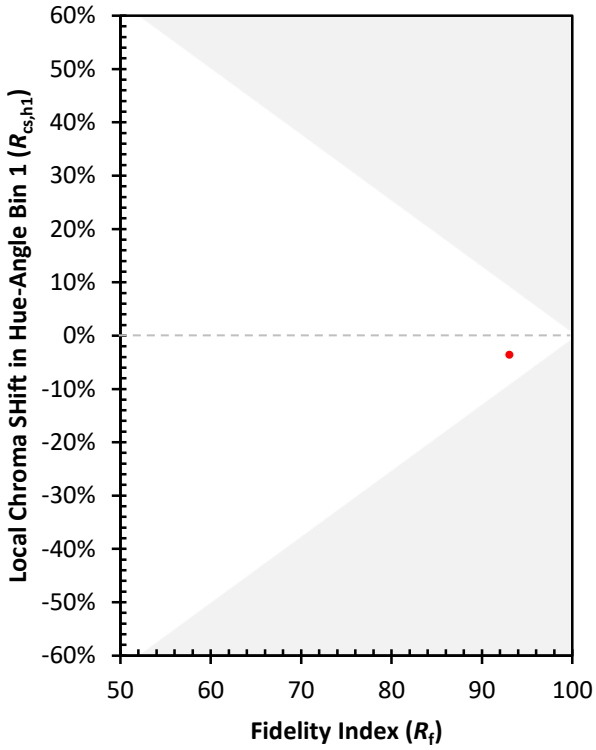
Measure Comparisons





(END OF REPORT)