

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: METALUX

Report Number: P830684

Luminaire Tested: **OHBL-60SE-MCL-UNV-L835-CD**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P830684
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2103-200-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-60SE-MCL-UNV-L835-CD
Description: 60000 LUMEN OHBL SE LED LUMINAIRE WITH 80CRI, 3500K LEDS AND MEDIUM CLEAR LENS
Light Source: -
Ballast/Driver: -

Summary

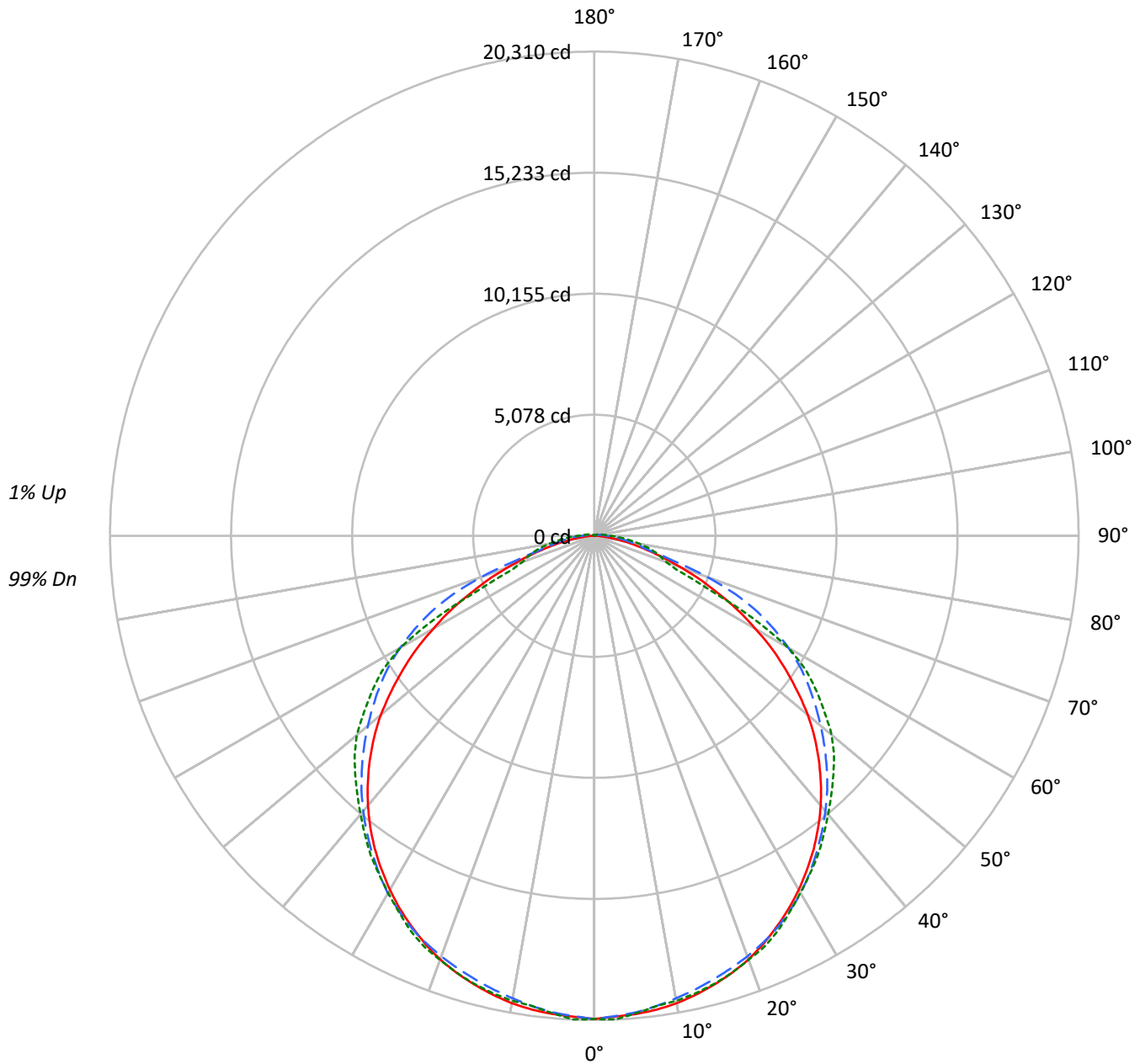
Lumens per Lamp: N/A
Luminaire Lumens: 57287.9 lumens
Efficiency: N/A
Efficacy: 158.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1.67' x L: 3.78' x H: 0.17')
CIE Type: Direct

Input Watts (W): 362
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: 25 FT

TEST NUMBER: P830684

CATALOG NUMBER: OHBL-60SE-MCL-UNV-L835-CD

Luminous Intensity Polar Plot





TEST NUMBER: P830684

CATALOG NUMBER: OHBL-60SE-MCL-UNV-L835-CD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101			99
1	109	104	100	96	106	102	98	95	97	94	91	93	91	88	90	87	86			83
2	99	91	84	79	96	89	83	78	85	80	76	82	78	74	79	75	72			70
3	91	80	72	66	88	79	71	65	75	69	64	72	67	63	70	65	61			59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	62	57	53			51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	46	56	50	46			44
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	45	40			38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36			34
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	42	36	32			30
9	57	43	35	30	55	43	35	29	41	34	29	40	34	29	39	33	29			27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	36	30	26			24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34618	34618	34618
5°	34392	34100	34165
10°	34266	33568	33764
15°	34049	33167	33516
20°	33831	32908	33197
25°	33423	32647	32880
30°	32979	32245	32234
35°	32448	31616	31866
40°	31758	30965	31372
45°	30802	30214	31134
50°	29505	29359	30851
55°	27446	28515	29659
60°	24750	27289	27374
65°	21231	25039	17310
70°	17101	19507	12514
75°	12821	11546	12646
80°	8925	9554	11992
85°	5079	8675	11094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1911.1	3.3
10°-20°	5480.2	9.6
20°-30°	8370.0	14.6
30°-40°	10155.7	17.7
40°-50°	10644.2	18.6
50°-60°	9645.2	16.8
60°-70°	6466.7	11.3
70°-80°	2903.9	5.1
80°-90°	1053.8	1.8
90°-100°	317.2	0.6
100°-110°	149.7	0.3
110°-120°	75.0	0.1
120°-130°	41.4	0.1
130°-140°	28.4	0.0
140°-150°	19.1	0.0
150°-160°	14.2	0.0
160°-170°	9.1	0.0
170°-180°	2.9	0.0
0°-30°	15761.4	27.5
0°-40°	25917.1	45.2
0°-60°	46206.5	80.7
0°-90°	56630.9	98.9
90°-120°	541.9	0.9
90°-150°	630.8	1.1
90°-180°	657.0	1.1
0°-180°	57287.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	20268	20268	20268	20268	20268	
5°	20137	20207	20066	20128	20102	###
15°	19483	19407	19269	19439	19463	5501
25°	18100	18021	18147	18314	18261	8343
35°	16042	16081	16245	16418	16353	10027
45°	13314	13531	13783	14135	14179	10256
55°	9797	10269	10970	11409	11383	8745
65°	5750	6650	7549	6371	5202	5729
75°	2262	3282	2415	2471	2632	2473
85°	390	747	958	1158	1213	476
90°	3	249	495	621	651	23
95°	3	155	340	413	425	4
105°	12	67	167	202	211	14
115°	23	35	85	108	114	22
125°	20	23	53	62	64	20
135°	26	29	32	47	50	21
145°	26	29	29	32	35	17
155°	29	32	32	32	29	14
165°	32	32	32	32	32	9
175°	32	32	29	26	26	3
180°	29	29	29	29	29	



TEST NUMBER: P830684

CATALOG NUMBER: OHBL-60SE-MCL-UNV-L835-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	20268.5	20268.5	20268.5	20268.5	20268.5
2.5°	20186.5	20271.5	20166.0	20280.3	20309.6
5°	20136.7	20207.0	20066.3	20127.9	20101.5
7.5°	20045.8	20069.3	19902.2	19952.0	19899.3
10°	19911.0	19899.3	19702.9	19799.6	19811.4
12.5°	19711.7	19676.5	19500.7	19647.2	19650.2
15°	19483.1	19406.9	19269.2	19439.2	19462.6
17.5°	19219.4	19119.7	19028.9	19248.7	19213.5
20°	18911.6	18794.4	18776.8	19017.1	18929.2
22.5°	18530.7	18439.8	18480.8	18709.4	18653.7
25°	18099.8	18020.7	18146.7	18313.8	18261.0
27.5°	17645.6	17598.7	17742.3	17871.3	17768.7
30°	17147.4	17121.0	17311.5	17417.0	17288.0
32.5°	16605.2	16614.0	16795.7	16939.3	16819.1
35°	16042.5	16080.6	16244.7	16417.6	16353.2
37.5°	15424.1	15509.1	15673.2	15869.6	15802.2
40°	14770.6	14893.7	15075.4	15312.8	15251.2
42.5°	14064.3	14219.6	14454.1	14717.8	14712.0
45°	13314.1	13530.9	13783.0	14134.6	14178.6
47.5°	12534.5	12777.7	13097.2	13566.1	13633.5
50°	11687.5	11992.3	12390.9	12953.6	12994.6
52.5°	10743.9	11160.0	11687.5	12226.8	12177.0
55°	9797.2	10269.1	10969.5	11409.1	11382.7
57.5°	8853.6	9384.0	10233.9	10547.5	10544.6
60°	7798.5	8469.6	9398.7	9636.1	9401.6
62.5°	6822.6	7543.6	8507.7	8334.8	7531.8
65°	5750.0	6649.7	7549.4	6371.3	5201.9
67.5°	4797.5	5735.3	6412.3	4363.8	3736.6
70°	3839.2	4873.7	4999.7	3238.4	3194.4
72.5°	2989.3	4091.2	3449.4	2772.4	2913.1
75°	2262.5	3282.4	2414.9	2470.6	2631.7
77.5°	1650.0	2520.4	1878.6	2165.8	2297.6
80°	1134.2	1784.8	1532.7	1819.9	1910.8
82.5°	712.2	1178.1	1228.0	1465.3	1559.1
85°	389.8	747.3	958.3	1157.6	1213.3
87.5°	161.2	451.3	732.7	893.9	940.7
90°	2.9	249.1	495.3	621.3	650.6
92.5°	2.9	190.5	404.4	501.1	521.7
95°	2.9	155.3	340.0	413.2	424.9
97.5°	5.9	123.1	284.3	342.9	354.6
100°	8.8	102.6	237.4	287.2	296.0
102.5°	11.7	82.1	199.3	240.3	249.1
105°	11.7	67.4	167.0	202.2	211.0



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CATALOG NUMBER: OHBL-60SE-MCL-UNV-L835-CD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	20.5	41.0	99.6	126.0	131.9
115°	23.4	35.2	85.0	108.4	114.3
117.5°	23.4	29.3	73.3	90.9	96.7
120°	23.4	26.4	64.5	79.1	82.1
122.5°	23.4	23.4	55.7	70.3	73.3
125°	20.5	23.4	52.8	61.5	64.5
127.5°	23.4	23.4	46.9	55.7	58.6
130°	23.4	26.4	41.0	52.8	52.8
132.5°	26.4	29.3	38.1	49.8	49.8
135°	26.4	29.3	32.2	46.9	49.8
137.5°	29.3	29.3	29.3	44.0	46.9
140°	29.3	29.3	26.4	38.1	41.0
142.5°	26.4	29.3	26.4	35.2	38.1
145°	26.4	29.3	29.3	32.2	35.2
147.5°	29.3	29.3	29.3	29.3	32.2
150°	29.3	29.3	29.3	29.3	29.3
152.5°	29.3	29.3	29.3	29.3	29.3
155°	29.3	32.2	32.2	32.2	29.3
157.5°	29.3	32.2	32.2	32.2	32.2
160°	29.3	32.2	32.2	32.2	32.2
162.5°	32.2	32.2	32.2	32.2	32.2
165°	32.2	32.2	32.2	32.2	32.2
167.5°	32.2	35.2	32.2	32.2	32.2
170°	32.2	32.2	32.2	29.3	29.3
172.5°	32.2	32.2	32.2	29.3	29.3
175°	32.2	32.2	29.3	26.4	26.4
177.5°	35.2	32.2	29.3	26.4	23.4
180°	29.3	29.3	29.3	29.3	29.3



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	14.7	55.7	143.6	172.9	178.8
110°	17.6	46.9	120.2	146.5	152.4



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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-5

Test Date: 08/01/2023

Luminaire Tested: OHB-15SE-N-UNV-L835-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L835-CD.

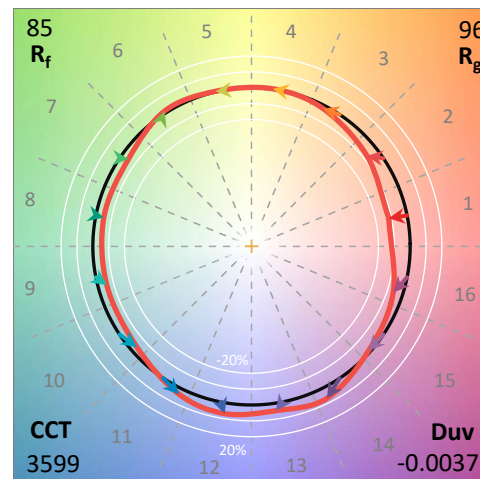
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2307-100-5
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/04/2023
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: **OHB-15SE-N-UNV-L835-CD**
 Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 80CRI, 3500K LEDS AND NARROW LENS

LENS

Spectral Parameters

CCT (K):	3599	CRI (Ra):	84.0		
CIE u':	0.2351	R1:	83.2	R9:	12.7
CIE v':	0.5044	R2:	92.7	R10:	82.6
Duv:	-0.0037	R3:	95.2	R11:	80.5
CIE x:	0.3962	R4:	81.4	R12:	70.1
CIE y:	0.3778	R5:	83.6	R13:	85.9
CIE z:	0.2260	R6:	89.5	R14:	98.2
Peak Wavelength (nm):	600	R7:	83.4		
Dominant Wavelength (nm):	582	R8:	62.9		
Purity:	32.5				
Rf:	84.6				
Rg:	95.6				



Test Conditions

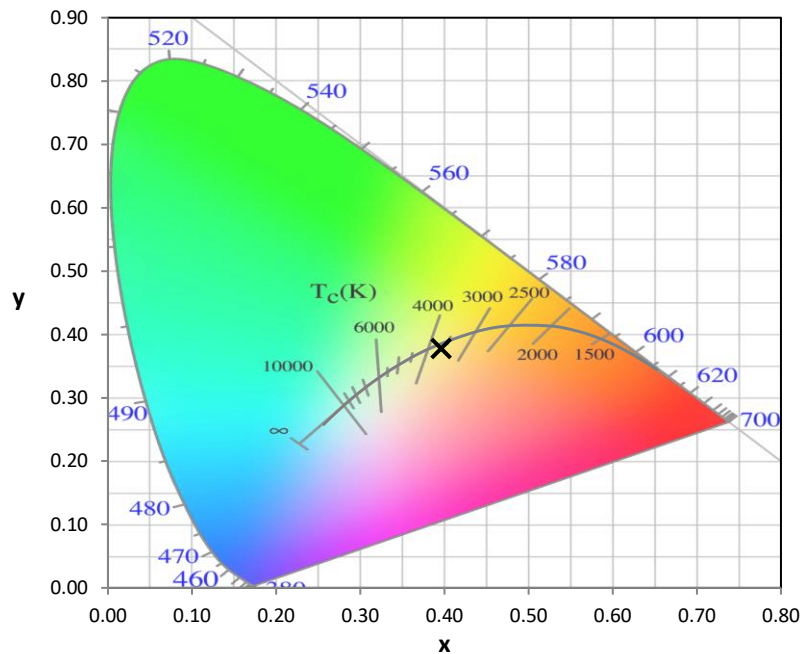
Stabilization Time: 24M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.7/57%
 Sphere Temperature (°C): 25.2

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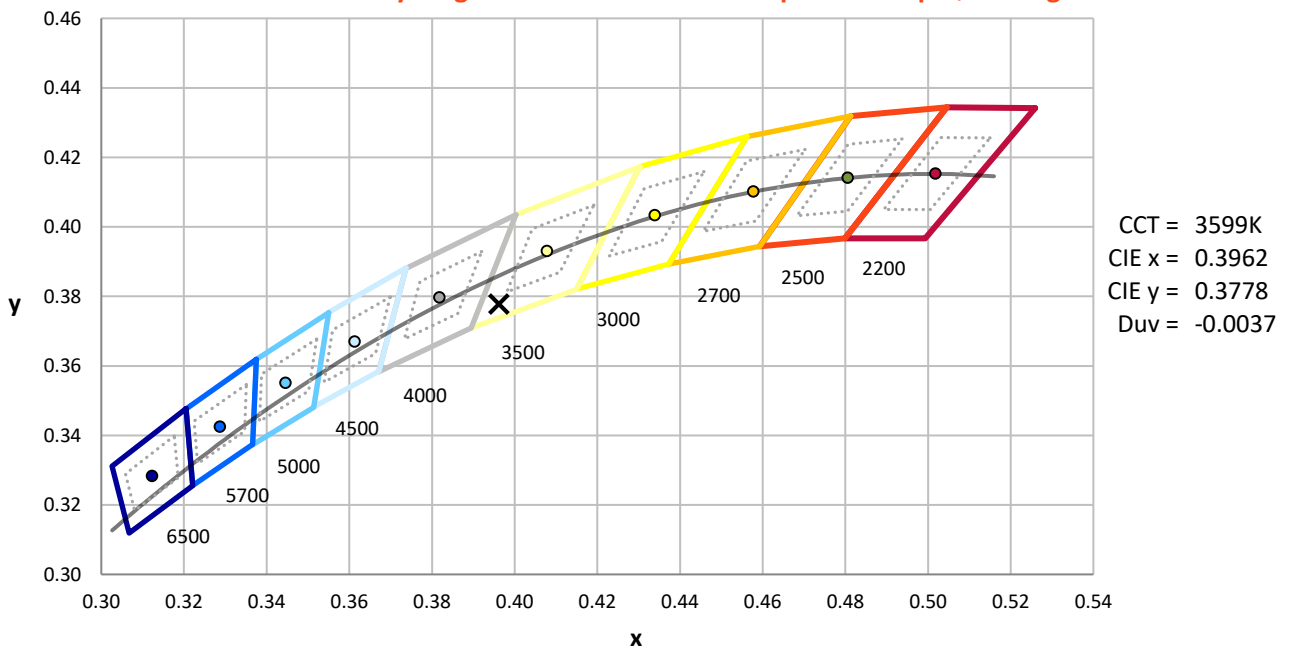
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/9/2023	8/9/2023
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208	11/28/2022	11/28/2023
Sphere Thermometer	ONSET IN0085	11/28/2022	11/28/2023
Room Thermometer	ONSET IN0046	11/28/2022	11/28/2023

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CIE 1931 Chromaticity Diagram



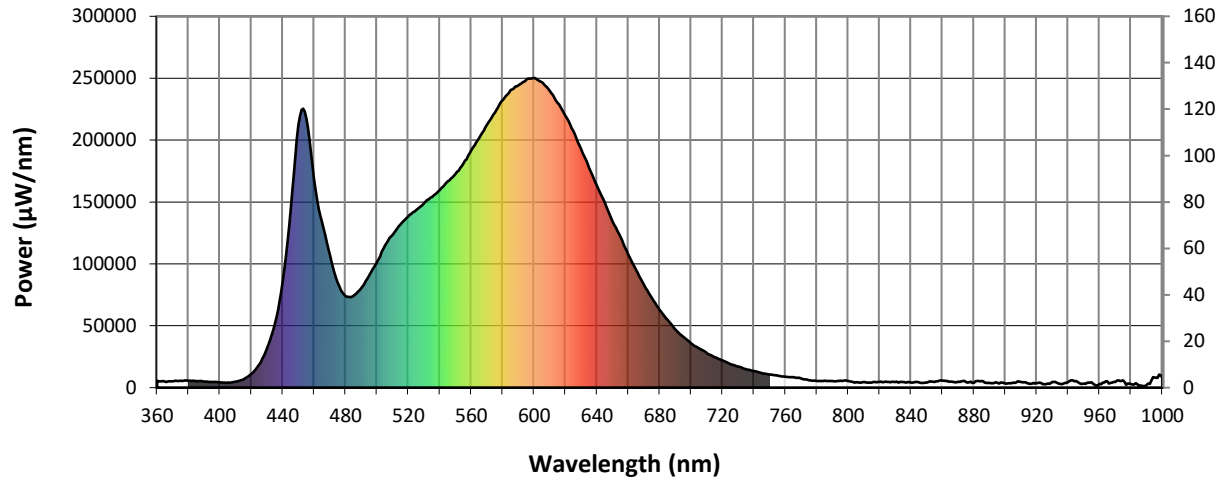
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 7-step quadrangle

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Photopic Flux vs. Wavelength

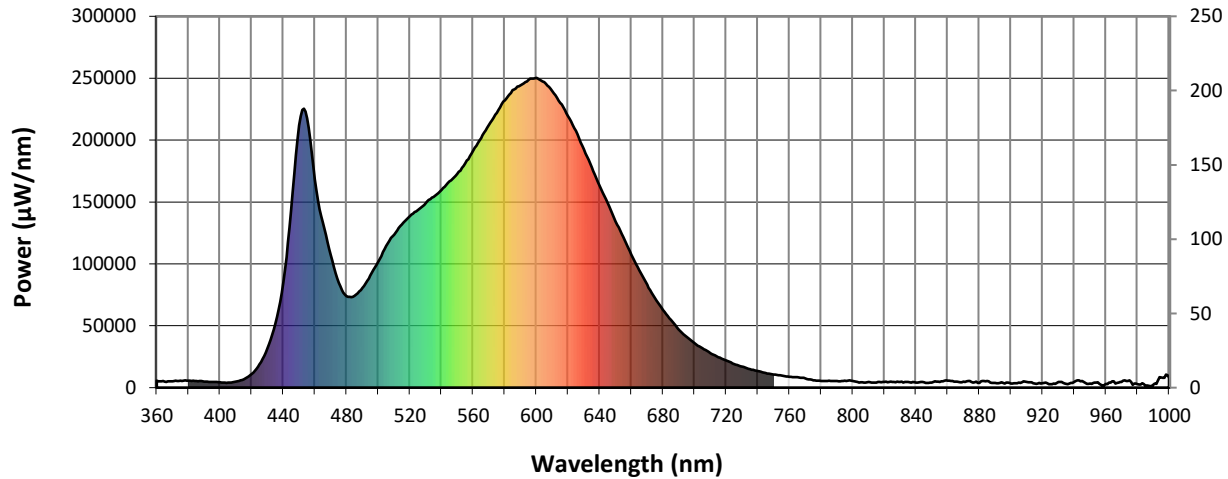


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λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	5689	NR	490	80602	NR	620	219378	NR	750	10550	NR	880	3904	NR
365	4945	NR	495	90559	NR	625	207438	NR	755	9754	NR	885	5303	NR
370	5058	NR	500	101536	NR	630	192648	NR	760	8782	NR	890	3742	NR
375	5547	NR	505	114437	NR	635	177922	NR	765	8511	NR	895	3742	NR
380	5754	NR	510	123519	NR	640	162983	NR	770	7407	NR	900	3417	NR
385	5303	NR	515	131857	NR	645	149259	NR	775	5982	NR	905	4099	NR
390	4902	NR	520	138423	NR	650	134206	NR	780	5500	NR	910	4553	NR
395	4577	NR	525	143514	NR	655	121625	NR	785	5605	NR	915	3226	NR
400	4236	NR	530	149228	NR	660	107545	NR	790	5276	NR	920	3441	NR
405	4029	NR	535	153920	NR	665	94899	NR	795	5553	NR	925	2872	NR
410	4790	NR	540	159839	NR	670	83078	NR	800	5352	NR	930	4586	NR
415	6714	NR	545	166582	NR	675	72258	NR	805	4410	NR	935	3012	NR
420	10946	NR	550	172661	NR	680	62840	NR	810	4496	NR	940	4550	NR
425	18816	NR	555	181216	NR	685	54770	NR	815	4124	NR	945	5413	NR
430	31629	NR	560	191583	NR	690	47065	NR	820	4683	NR	950	3264	NR
435	51925	NR	565	201637	NR	695	41041	NR	825	4477	NR	955	4446	NR
440	85392	NR	570	212190	NR	700	35898	NR	830	4677	NR	960	3177	NR
445	143452	NR	575	222097	NR	705	31818	NR	835	4590	NR	965	5088	NR
450	211890	NR	580	232192	NR	710	27900	NR	840	4206	NR	970	4660	NR
455	217588	NR	585	240359	NR	715	24493	NR	845	4339	NR	975	5979	NR
460	168370	NR	590	244370	NR	720	21898	NR	850	4152	NR	980	2893	NR
465	133710	NR	595	248669	NR	725	19106	NR	855	4697	NR	985	1574	NR
470	107097	NR	600	250268	NR	730	16886	NR	860	5661	NR	990	2218	NR
475	84824	NR	605	246759	NR	735	14933	NR	865	4883	NR	995	8203	NR
480	73990	NR	610	239510	NR	740	13423	NR	870	4777	NR	1000	7943	NR
485	74137	NR	615	230040	NR	745	11765	NR	875	4721	NR			

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Scotopic Flux vs. Wavelength



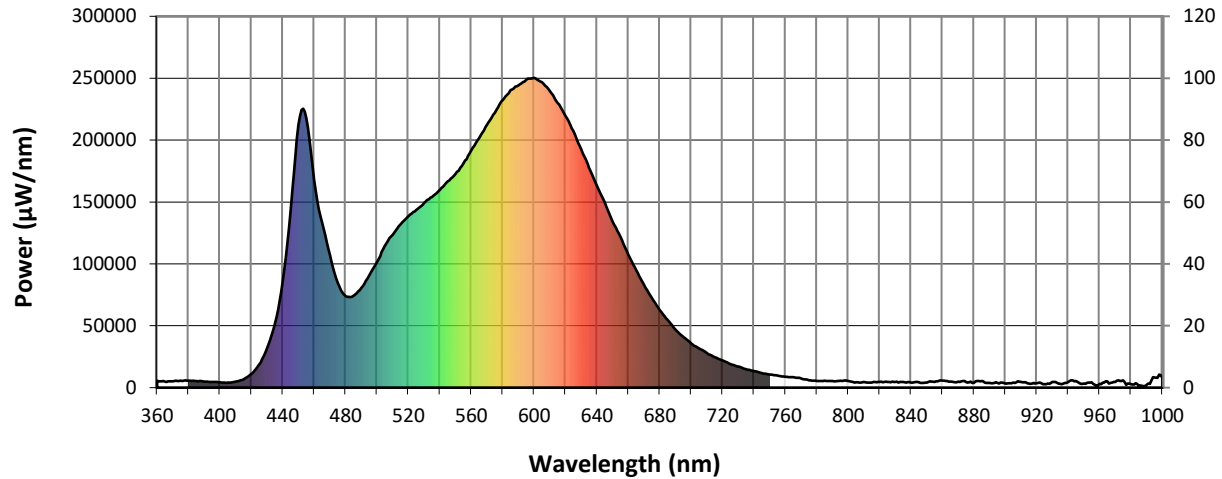
Scotopic Lumens: 21413.1

S/P: 1.61

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	5689	NR	490	80602	NR	620	219378	NR	750	10550	NR	880	3904	NR
365	4945	NR	495	90559	NR	625	207438	NR	755	9754	NR	885	5303	NR
370	5058	NR	500	101536	NR	630	192648	NR	760	8782	NR	890	3742	NR
375	5547	NR	505	114437	NR	635	177922	NR	765	8511	NR	895	3742	NR
380	5754	NR	510	123519	NR	640	162983	NR	770	7407	NR	900	3417	NR
385	5303	NR	515	131857	NR	645	149259	NR	775	5982	NR	905	4099	NR
390	4902	NR	520	138423	NR	650	134206	NR	780	5500	NR	910	4553	NR
395	4577	NR	525	143514	NR	655	121625	NR	785	5605	NR	915	3226	NR
400	4236	NR	530	149228	NR	660	107545	NR	790	5276	NR	920	3441	NR
405	4029	NR	535	153920	NR	665	94899	NR	795	5553	NR	925	2872	NR
410	4790	NR	540	159839	NR	670	83078	NR	800	5352	NR	930	4586	NR
415	6714	NR	545	166582	NR	675	72258	NR	805	4410	NR	935	3012	NR
420	10946	NR	550	172661	NR	680	62840	NR	810	4496	NR	940	4550	NR
425	18816	NR	555	181216	NR	685	54770	NR	815	4124	NR	945	5413	NR
430	31629	NR	560	191583	NR	690	47065	NR	820	4683	NR	950	3264	NR
435	51925	NR	565	201637	NR	695	41041	NR	825	4477	NR	955	4446	NR
440	85392	NR	570	212190	NR	700	35898	NR	830	4677	NR	960	3177	NR
445	143452	NR	575	222097	NR	705	31818	NR	835	4590	NR	965	5088	NR
450	211890	NR	580	232192	NR	710	27900	NR	840	4206	NR	970	4660	NR
455	217588	NR	585	240359	NR	715	24493	NR	845	4339	NR	975	5979	NR
460	168370	NR	590	244370	NR	720	21898	NR	850	4152	NR	980	2893	NR
465	133710	NR	595	248669	NR	725	19106	NR	855	4697	NR	985	1574	NR
470	107097	NR	600	250268	NR	730	16886	NR	860	5661	NR	990	2218	NR
475	84824	NR	605	246759	NR	735	14933	NR	865	4883	NR	995	8203	NR
480	73990	NR	610	239510	NR	740	13423	NR	870	4777	NR	1000	7943	NR
485	74137	NR	615	230040	NR	745	11765	NR	875	4721	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 8686

M/P: 0.65

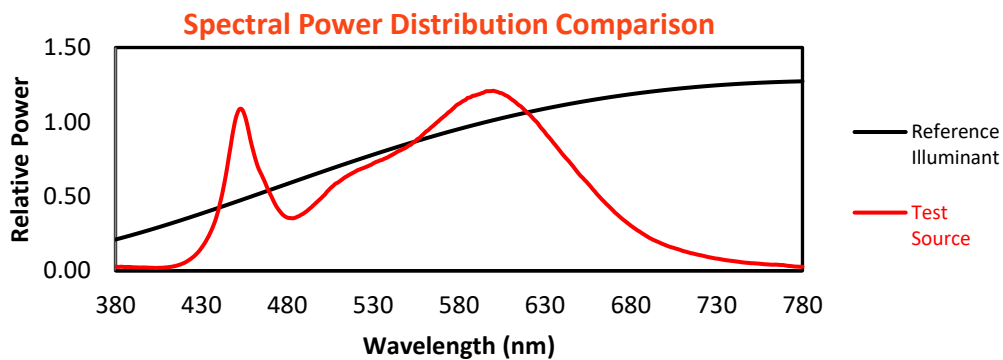
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	5689	NR	490	80602	NR	620	219378	NR	750	10550	NR	880	3904	NR
365	4945	NR	495	90559	NR	625	207438	NR	755	9754	NR	885	5303	NR
370	5058	NR	500	101536	NR	630	192648	NR	760	8782	NR	890	3742	NR
375	5547	NR	505	114437	NR	635	177922	NR	765	8511	NR	895	3742	NR
380	5754	NR	510	123519	NR	640	162983	NR	770	7407	NR	900	3417	NR
385	5303	NR	515	131857	NR	645	149259	NR	775	5982	NR	905	4099	NR
390	4902	NR	520	138423	NR	650	134206	NR	780	5500	NR	910	4553	NR
395	4577	NR	525	143514	NR	655	121625	NR	785	5605	NR	915	3226	NR
400	4236	NR	530	149228	NR	660	107545	NR	790	5276	NR	920	3441	NR
405	4029	NR	535	153920	NR	665	94899	NR	795	5553	NR	925	2872	NR
410	4790	NR	540	159839	NR	670	83078	NR	800	5352	NR	930	4586	NR
415	6714	NR	545	166582	NR	675	72258	NR	805	4410	NR	935	3012	NR
420	10946	NR	550	172661	NR	680	62840	NR	810	4496	NR	940	4550	NR
425	18816	NR	555	181216	NR	685	54770	NR	815	4124	NR	945	5413	NR
430	31629	NR	560	191583	NR	690	47065	NR	820	4683	NR	950	3264	NR
435	51925	NR	565	201637	NR	695	41041	NR	825	4477	NR	955	4446	NR
440	85392	NR	570	212190	NR	700	35898	NR	830	4677	NR	960	3177	NR
445	143452	NR	575	222097	NR	705	31818	NR	835	4590	NR	965	5088	NR
450	211890	NR	580	232192	NR	710	27900	NR	840	4206	NR	970	4660	NR
455	217588	NR	585	240359	NR	715	24493	NR	845	4339	NR	975	5979	NR
460	168370	NR	590	244370	NR	720	21898	NR	850	4152	NR	980	2893	NR
465	133710	NR	595	248669	NR	725	19106	NR	855	4697	NR	985	1574	NR
470	107097	NR	600	250268	NR	730	16886	NR	860	5661	NR	990	2218	NR
475	84824	NR	605	246759	NR	735	14933	NR	865	4883	NR	995	8203	NR
480	73990	NR	610	239510	NR	740	13423	NR	870	4777	NR	1000	7943	NR
485	74137	NR	615	230040	NR	745	11765	NR	875	4721	NR			

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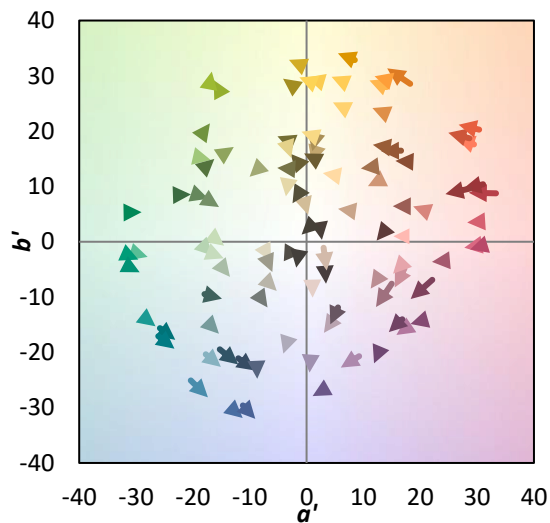
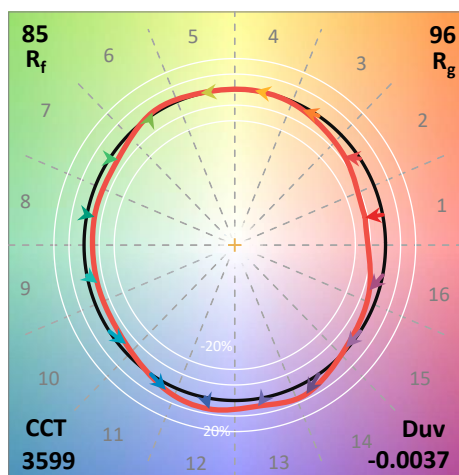
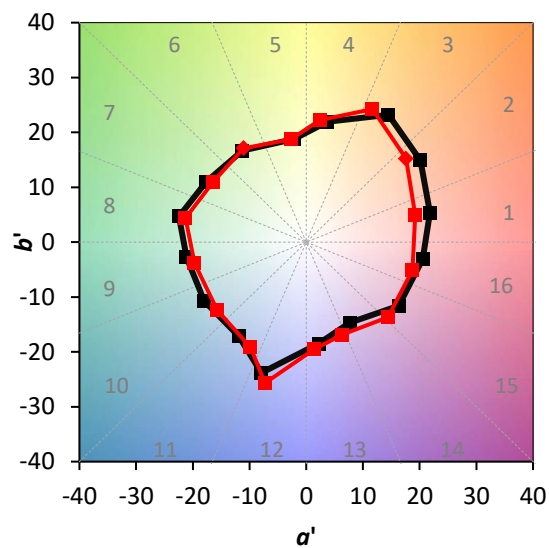
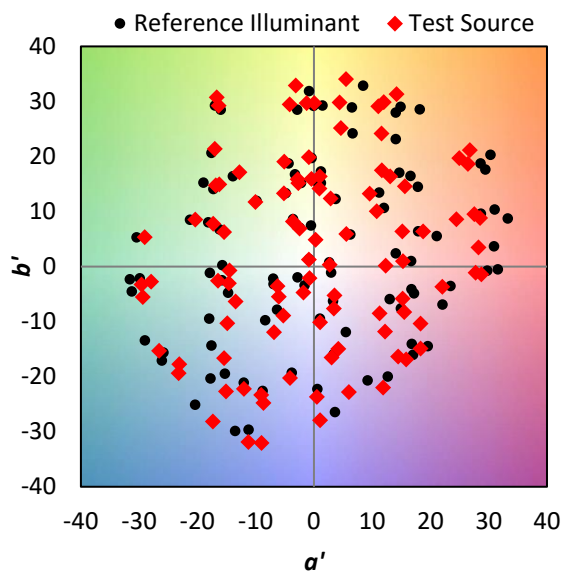
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Summary

$R_f = 84.6$
 $R_g = 95.6$
 $CIE R_a = 84.0$
 $R_9 = 12.7$



Color Vector Graphics

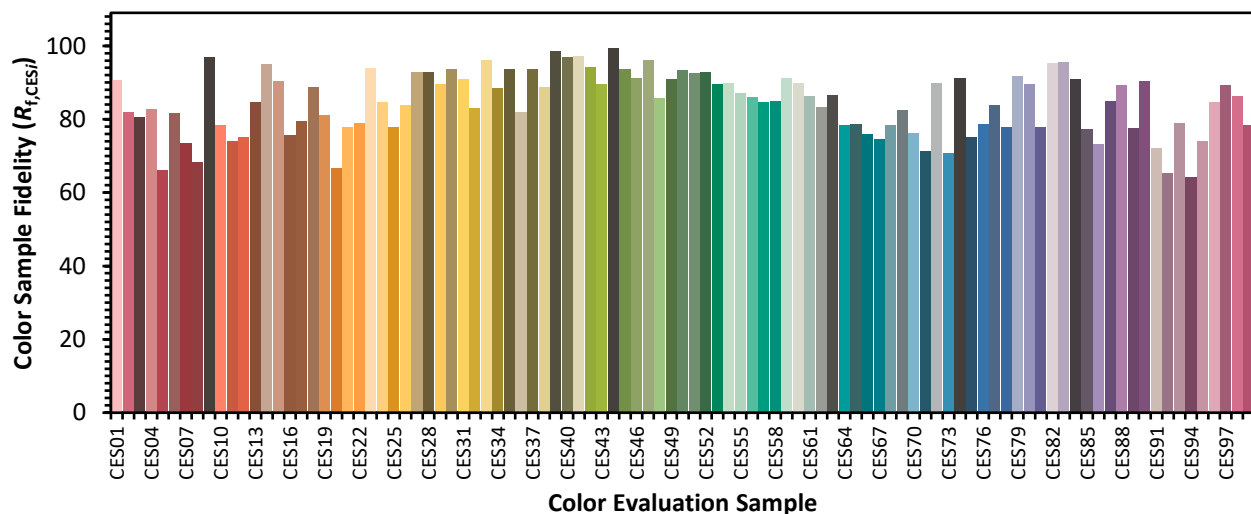


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Individual Sample Fidelity Index ($R_{f,i}$)

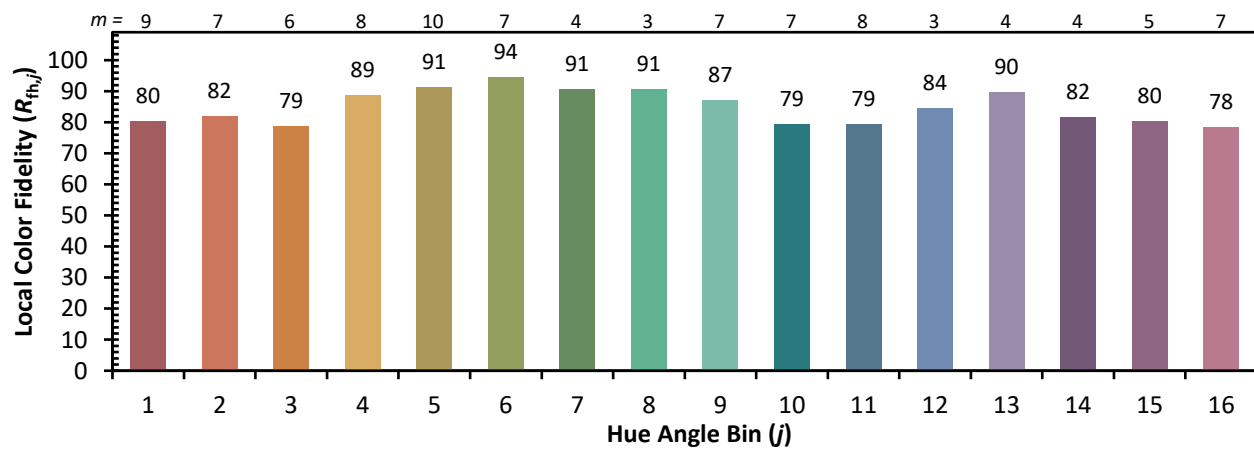
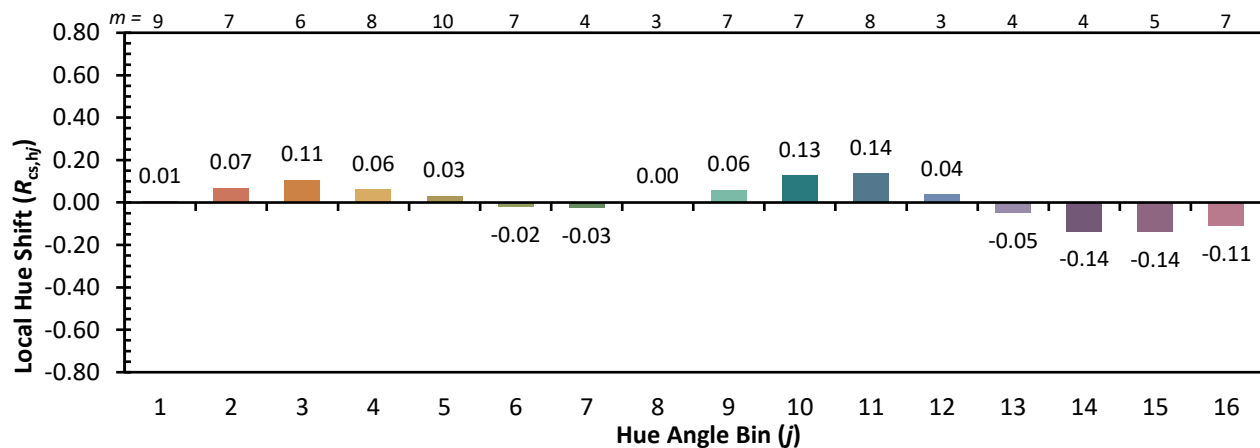
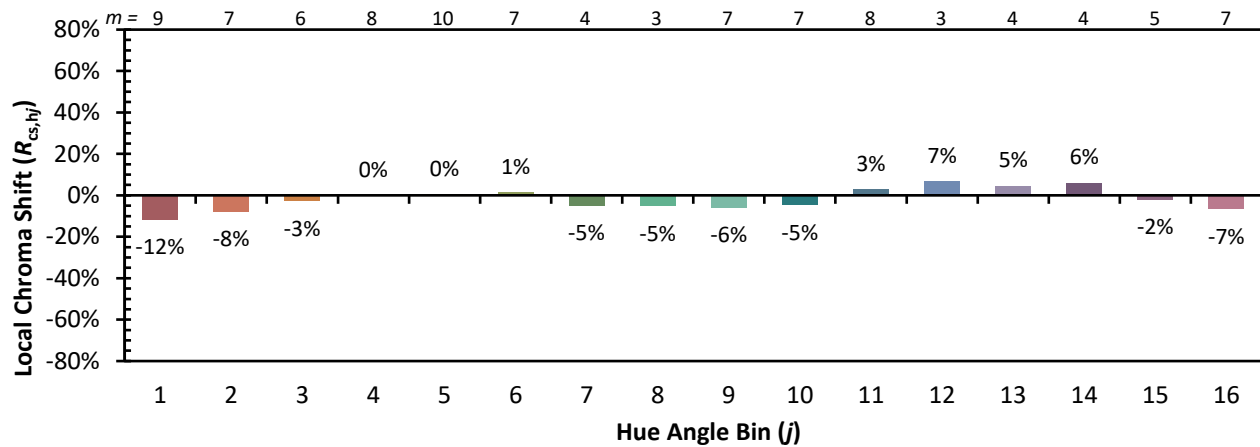
CES01 = 86	CES26 = 84	CES51 = 93	CES76 = 79
CES02 = 62	CES27 = 93	CES52 = 93	CES77 = 84
CES03 = 31	CES28 = 93	CES53 = 89	CES78 = 78
CES04 = 70	CES29 = 90	CES54 = 90	CES79 = 92
CES05 = 49	CES30 = 94	CES55 = 87	CES80 = 90
CES06 = 51	CES31 = 91	CES56 = 86	CES81 = 78
CES07 = 41	CES32 = 83	CES57 = 85	CES82 = 95
CES08 = 40	CES33 = 96	CES58 = 85	CES83 = 96
CES09 = 29	CES34 = 88	CES59 = 91	CES84 = 91
CES10 = 75	CES35 = 94	CES60 = 90	CES85 = 77
CES11 = 58	CES36 = 82	CES61 = 86	CES86 = 73
CES12 = 64	CES37 = 94	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 89	CES63 = 86	CES88 = 89
CES14 = 74	CES39 = 99	CES64 = 78	CES89 = 77
CES15 = 71	CES40 = 97	CES65 = 79	CES90 = 90
CES16 = 47	CES41 = 97	CES66 = 76	CES91 = 72
CES17 = 50	CES42 = 94	CES67 = 75	CES92 = 65
CES18 = 56	CES43 = 90	CES68 = 78	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 82	CES94 = 64
CES20 = 66	CES45 = 94	CES70 = 76	CES95 = 74
CES21 = 86	CES46 = 91	CES71 = 71	CES96 = 85
CES22 = 78	CES47 = 96	CES72 = 90	CES97 = 89
CES23 = 92	CES48 = 86	CES73 = 71	CES98 = 86
CES24 = 90	CES49 = 91	CES74 = 91	CES99 = 78
CES25 = 72	CES50 = 93	CES75 = 75	



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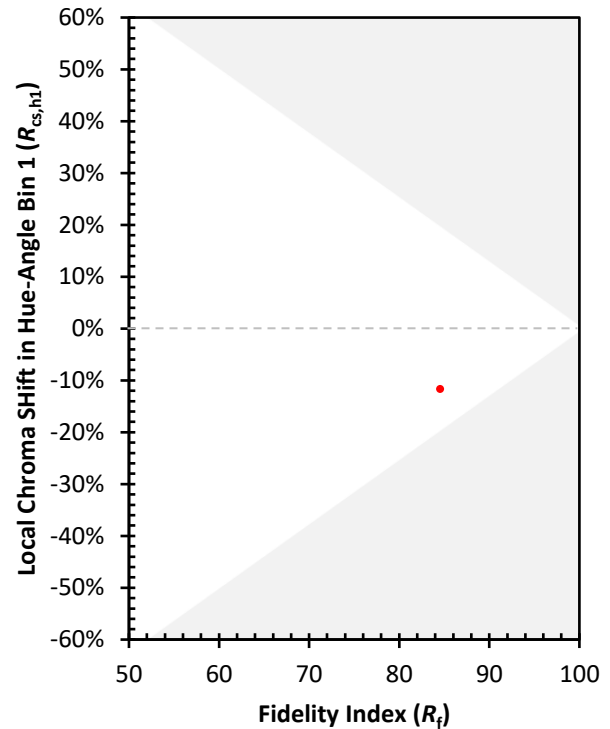
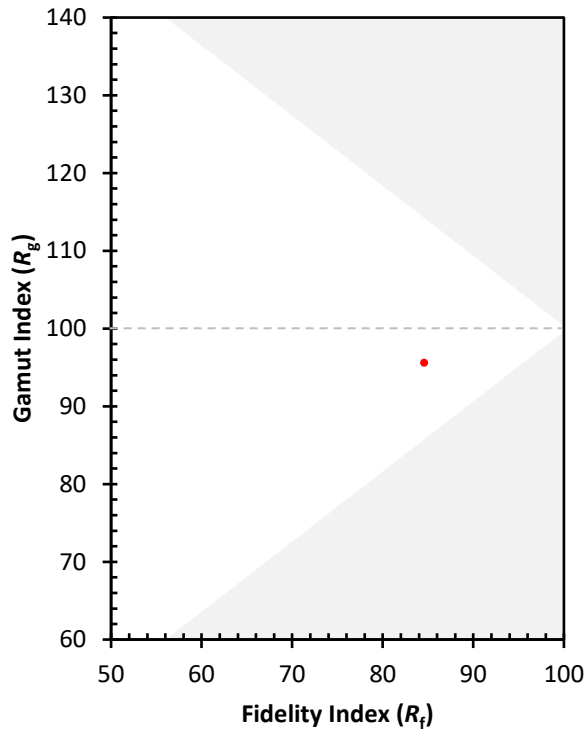
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)