

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: P829969

Luminaire Tested: **OHBL-18SE-MCL-UNV-L940-CD**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P829969
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-18SE-MCL-UNV-L940-CD
Description: 18000 LUMEN OHBL SE LED LUMINAIRE WITH 90CRI, 4000K LEDS AND MEDIUM CLEAR LENS
Light Source: -
Ballast/Driver: -

Summary

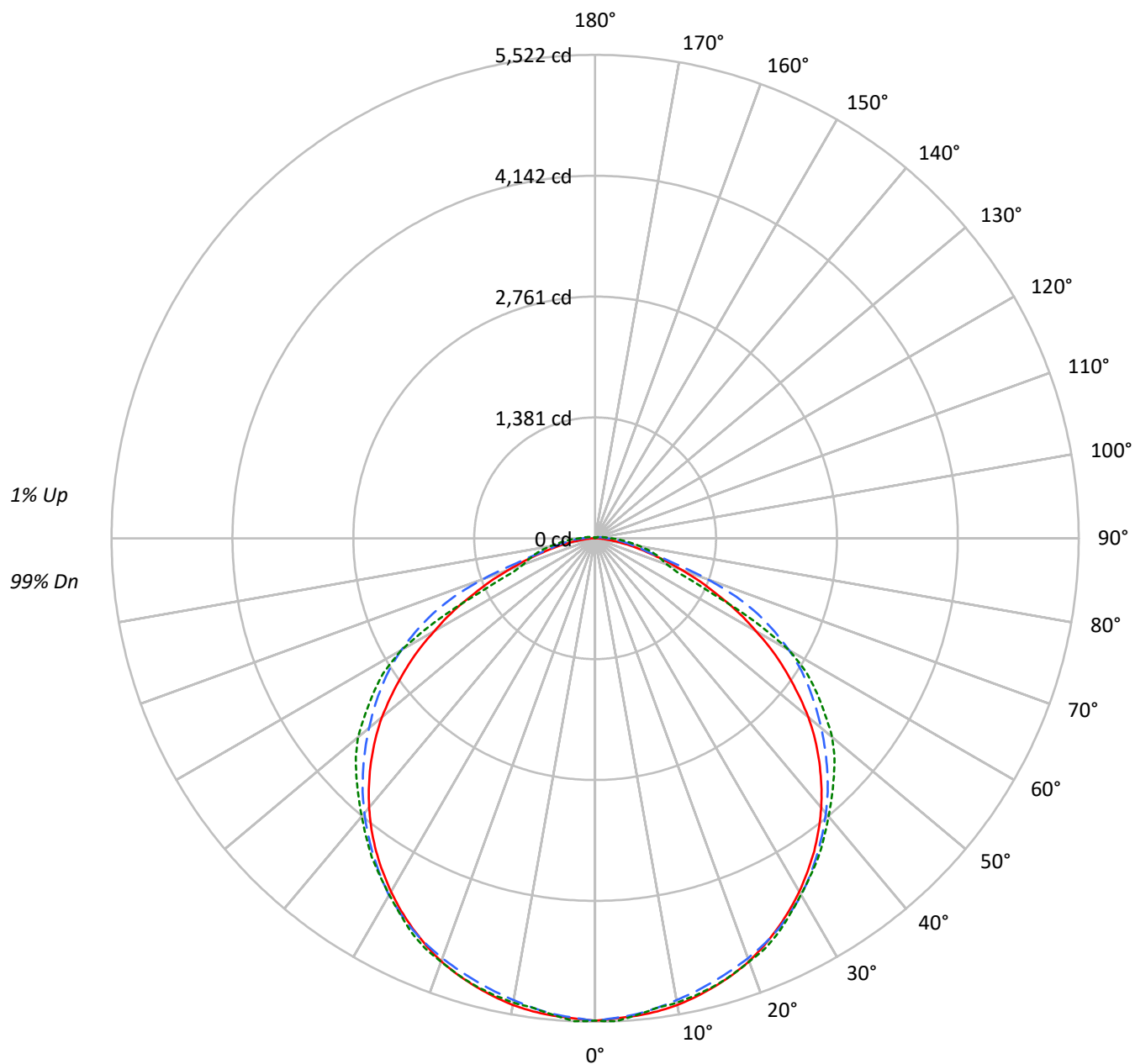
Lumens per Lamp: N/A
Luminaire Lumens: 15576.0 lumens
Efficiency: N/A
Efficacy: 148.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1.67' x L: 3.78' x H: 0.17')
CIE Type: Direct

Input Watts (W): 105
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: P829969

CATALOG NUMBER: OHBL-18SE-MCL-UNV-L940-CD

Luminous Intensity Polar Plot





TEST NUMBER: P829969

CATALOG NUMBER: OHBL-18SE-MCL-UNV-L940-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
RCR																	
0	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101
1	109	104	100	96	106	102	98	95	97	94	91	93	91	88	90	87	86
2	99	91	84	79	96	89	83	78	85	80	76	82	78	74	79	75	72
3	91	80	72	66	88	79	71	65	75	69	64	72	67	63	70	65	61
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	62	57	53
5	76	64	55	48	74	62	54	48	60	53	47	58	52	46	56	50	46
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	45	40
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	42	36	32
9	57	43	35	30	55	43	35	29	41	34	29	40	34	29	39	33	29
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9412	9412	9412
5°	9351	9271	9289
10°	9317	9127	9180
15°	9258	9018	9113
20°	9198	8947	9026
25°	9087	8876	8940
30°	8967	8767	8764
35°	8822	8596	8664
40°	8635	8419	8529
45°	8375	8215	8465
50°	8022	7983	8388
55°	7462	7753	8064
60°	6729	7420	7443
65°	5773	6808	4707
70°	4649	5304	3402
75°	3486	3139	3438
80°	2427	2598	3260
85°	1381	2359	3016



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.6	3.3
10°-20°	1490.0	9.6
20°-30°	2275.7	14.6
30°-40°	2761.2	17.7
40°-50°	2894.0	18.6
50°-60°	2622.4	16.8
60°-70°	1758.2	11.3
70°-80°	789.5	5.1
80°-90°	286.5	1.8
90°-100°	86.2	0.6
100°-110°	40.7	0.3
110°-120°	20.4	0.1
120°-130°	11.2	0.1
130°-140°	7.7	0.0
140°-150°	5.2	0.0
150°-160°	3.9	0.0
160°-170°	2.5	0.0
170°-180°	0.8	0.0
0°-30°	4285.4	27.5
0°-40°	7046.6	45.2
0°-60°	12563.1	80.7
0°-90°	15397.3	98.9
90°-120°	147.3	0.9
90°-150°	171.5	1.1
90°-180°	179.0	1.1
0°-180°	15576.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5511	5511	5511	5511	5511	
5°	5475	5494	5456	5473	5465	521
15°	5297	5276	5239	5285	5292	1496
25°	4921	4900	4934	4979	4965	2268
35°	4362	4372	4417	4464	4446	2726
45°	3620	3679	3747	3843	3855	2789
55°	2664	2792	2982	3102	3095	2378
65°	1563	1808	2053	1732	1414	1558
75°	615	892	657	672	716	672
85°	106	203	261	315	330	129
90°	1	68	135	169	177	6
95°	1	42	92	112	116	1
105°	3	18	45	55	57	4
115°	6	10	23	30	31	6
125°	6	6	14	17	18	6
135°	7	8	9	13	14	6
145°	7	8	8	9	10	5
155°	8	9	9	9	8	4
165°	9	9	9	9	9	2
175°	9	9	8	7	7	1
180°	8	8	8	8	8	



TEST NUMBER: P829969

CATALOG NUMBER: OHBL-18SE-MCL-UNV-L940-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5510.8	5510.8	5510.8	5510.8	5510.8
2.5°	5488.5	5511.6	5482.9	5514.0	5522.0
5°	5474.9	5494.1	5455.8	5472.6	5465.4
7.5°	5450.2	5456.6	5411.2	5424.7	5410.4
10°	5413.6	5410.4	5357.0	5383.3	5386.5
12.5°	5359.4	5349.8	5302.0	5341.9	5342.7
15°	5297.3	5276.5	5239.1	5285.3	5291.7
17.5°	5225.5	5198.4	5173.7	5233.5	5223.9
20°	5141.9	5110.0	5105.2	5170.6	5146.7
22.5°	5038.3	5013.6	5024.7	5086.9	5071.8
25°	4921.2	4899.6	4933.9	4979.3	4965.0
27.5°	4797.6	4784.9	4823.9	4859.0	4831.1
30°	4662.2	4655.0	4706.8	4735.5	4700.4
32.5°	4514.8	4517.2	4566.6	4605.6	4572.9
35°	4361.8	4372.1	4416.8	4463.8	4446.3
37.5°	4193.7	4216.8	4261.4	4314.8	4296.4
40°	4016.0	4049.4	4098.8	4163.4	4146.6
42.5°	3823.9	3866.2	3929.9	4001.6	4000.0
45°	3619.9	3678.9	3747.4	3843.1	3855.0
47.5°	3408.0	3474.1	3561.0	3688.5	3706.8
50°	3177.7	3260.6	3369.0	3521.9	3533.1
52.5°	2921.1	3034.3	3177.7	3324.3	3310.8
55°	2663.8	2792.1	2982.5	3102.0	3094.8
57.5°	2407.2	2551.4	2782.5	2867.8	2867.0
60°	2120.3	2302.8	2555.4	2619.9	2556.2
62.5°	1855.0	2051.0	2313.2	2266.2	2047.8
65°	1563.4	1808.0	2052.6	1732.3	1414.4
67.5°	1304.4	1559.4	1743.4	1186.5	1015.9
70°	1043.8	1325.1	1359.4	880.5	868.5
72.5°	812.8	1112.4	937.9	753.8	792.0
75°	615.1	892.4	656.6	671.7	715.5
77.5°	448.6	685.3	510.8	588.8	624.7
80°	308.4	485.3	416.7	494.8	519.5
82.5°	193.6	320.3	333.9	398.4	423.9
85°	106.0	203.2	260.6	314.7	329.9
87.5°	43.8	122.7	199.2	243.0	255.8
90°	0.8	67.7	134.7	168.9	176.9
92.5°	0.8	51.8	110.0	136.3	141.8
95°	0.8	42.2	92.4	112.4	115.5
97.5°	1.6	33.5	77.3	93.2	96.4
100°	2.4	27.9	64.5	78.1	80.5
102.5°	3.2	22.3	54.2	65.3	67.7
105°	3.2	18.3	45.4	55.0	57.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.6	11.2	27.1	34.3	35.9
115°	6.4	9.6	23.1	29.5	31.1
117.5°	6.4	8.0	19.9	24.7	26.3
120°	6.4	7.2	17.5	21.5	22.3
122.5°	6.4	6.4	15.1	19.1	19.9
125°	5.6	6.4	14.3	16.7	17.5
127.5°	6.4	6.4	12.7	15.1	15.9
130°	6.4	7.2	11.2	14.3	14.3
132.5°	7.2	8.0	10.4	13.5	13.5
135°	7.2	8.0	8.8	12.7	13.5
137.5°	8.0	8.0	8.0	12.0	12.7
140°	8.0	8.0	7.2	10.4	11.2
142.5°	7.2	8.0	7.2	9.6	10.4
145°	7.2	8.0	8.0	8.8	9.6
147.5°	8.0	8.0	8.0	8.0	8.8
150°	8.0	8.0	8.0	8.0	8.0
152.5°	8.0	8.0	8.0	8.0	8.0
155°	8.0	8.8	8.8	8.8	8.0
157.5°	8.0	8.8	8.8	8.8	8.8
160°	8.0	8.8	8.8	8.8	8.8
162.5°	8.8	8.8	8.8	8.8	8.8
165°	8.8	8.8	8.8	8.8	8.8
167.5°	8.8	9.6	8.8	8.8	8.8
170°	8.8	8.8	8.8	8.0	8.0
172.5°	8.8	8.8	8.8	8.0	8.0
175°	8.8	8.8	8.0	7.2	7.2
177.5°	9.6	8.8	8.0	7.2	6.4
180°	8.0	8.0	8.0	8.0	8.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	4.0	15.1	39.0	47.0	48.6
110°	4.8	12.7	32.7	39.8	41.4



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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-8

Test Date: 08/01/2023

Luminaire Tested: OHB-15SE-N-UNV-L940-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L940-CD.

Test Information

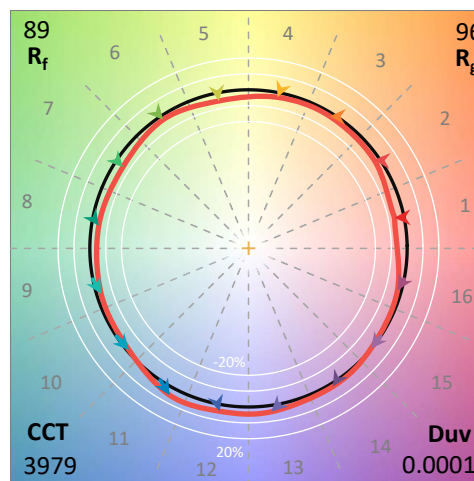
Test Method: LM-79-2019
 Report Number: SP1-2307-100-8
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/04/2023
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: METALUX
 Catalog Number: **OHB-15SE-N-UNV-L940-CD**
 Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 90CRI, 4000K LEDS AND NARROW LENS

LENS

Spectral Parameters

CCT (K): 3979
 CIE u': 0.2254
 CIE v': 0.5020
 Duv: 0.0001
 CIE x: 0.3813
 CIE y: 0.3773
 CIE z: 0.2414
 Peak Wavelength (nm): 455
 Dominant Wavelength (nm): 579
 Purity: 27.8
 Rf: 88.6
 Rg: 96.2

CRI (Ra): 91.5
 R1: 91.7
 R2: 96.4
 R3: 97.6
 R4: 89.2
 R5: 90.3
 R6: 93.0
 R7: 91.6
 R8: 81.9
 R9: 57.0
 R10: 89.6
 R11: 89.1
 R12: 69.6
 R13: 93.4
 R14: 98.9



Test Conditions

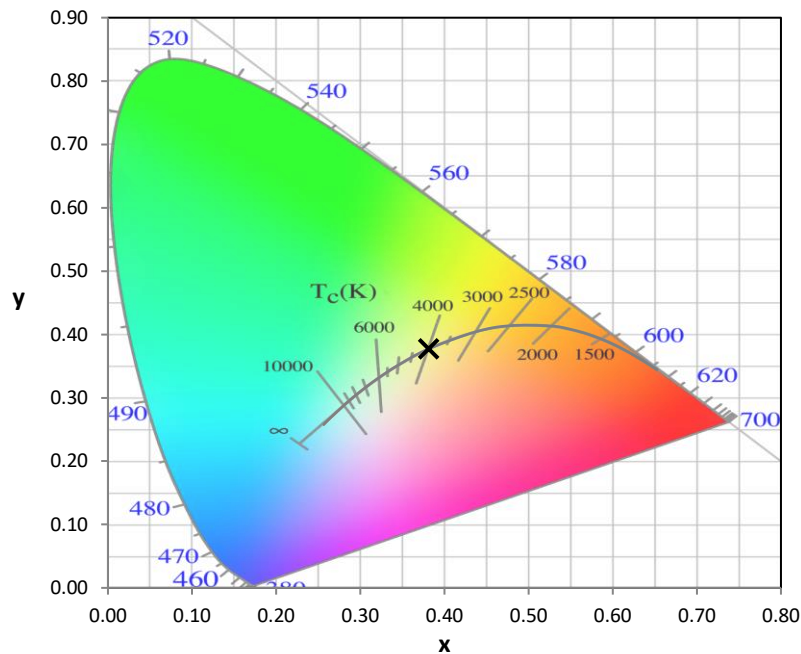
Stabilization Time: 23M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.7/57%
 Sphere Temperature (°C): 25.2

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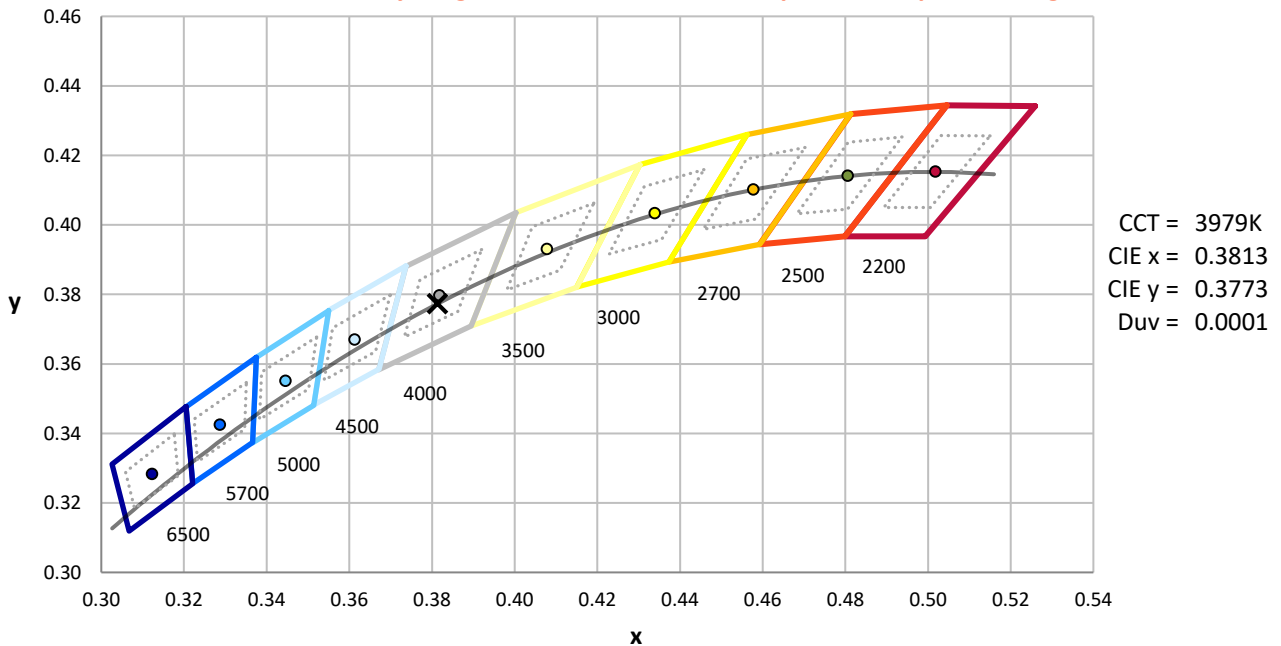
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/9/2023	8/9/2023
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208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



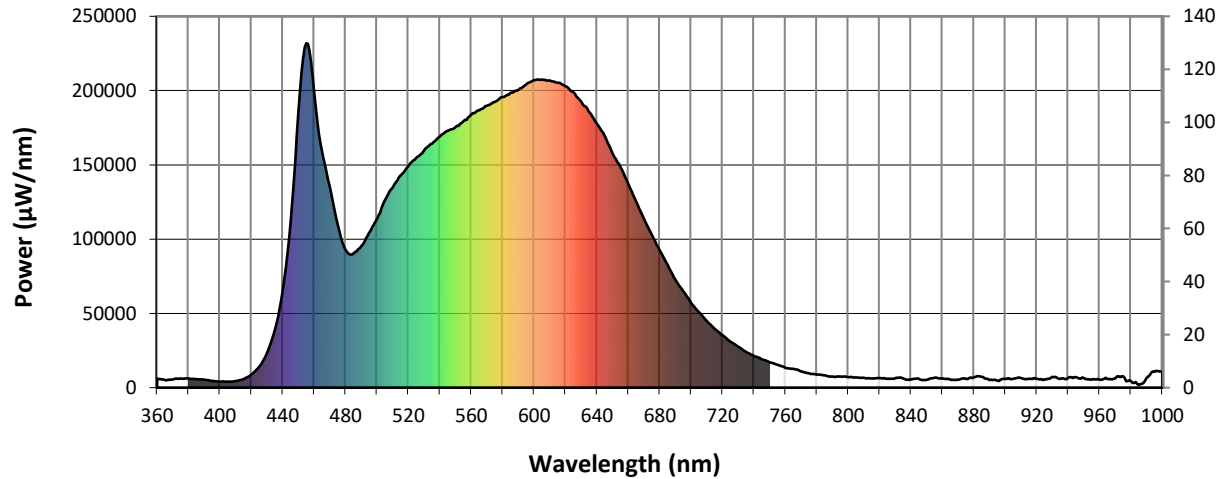
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength

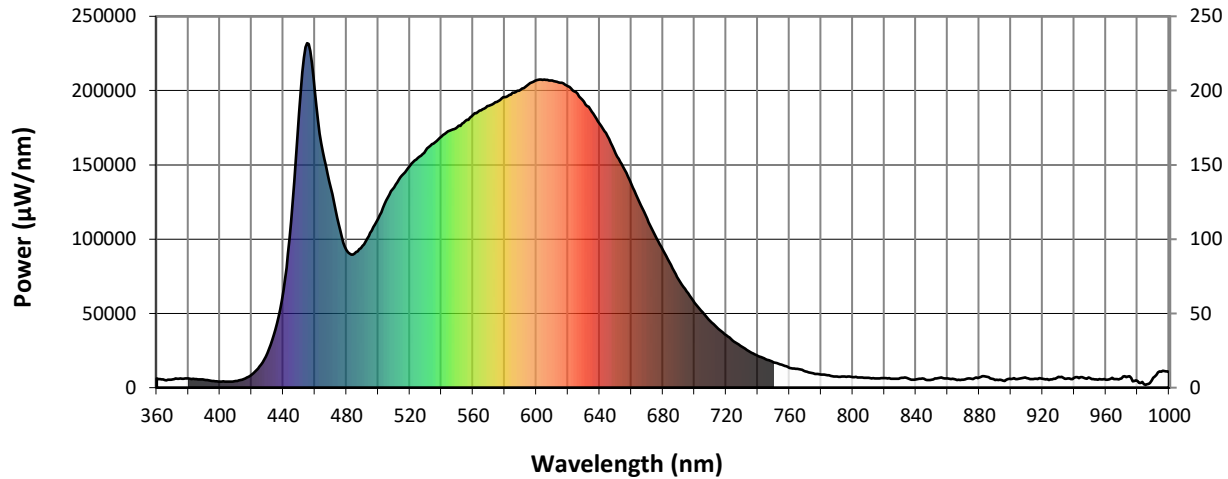


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λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6299	NR	490	95290	NR	620	202945	NR	750	17048	NR	880	6802	NR
365	5178	NR	495	104168	NR	625	198934	NR	755	15396	NR	885	7389	NR
370	5490	NR	500	113725	NR	630	192455	NR	760	13359	NR	890	5235	NR
375	6104	NR	505	126034	NR	635	185651	NR	765	12573	NR	895	4778	NR
380	6149	NR	510	134848	NR	640	177659	NR	770	10940	NR	900	5847	NR
385	5688	NR	515	142720	NR	645	169230	NR	775	9589	NR	905	5969	NR
390	5262	NR	520	149276	NR	650	157607	NR	780	8802	NR	910	6399	NR
395	4581	NR	525	154675	NR	655	148474	NR	785	8257	NR	915	5912	NR
400	4118	NR	530	159852	NR	660	137175	NR	790	7397	NR	920	6048	NR
405	4084	NR	535	164319	NR	665	125124	NR	795	7591	NR	925	5552	NR
410	4438	NR	540	169099	NR	670	113759	NR	800	7116	NR	930	7244	NR
415	5782	NR	545	173030	NR	675	102656	NR	805	6905	NR	935	6076	NR
420	8737	NR	550	175415	NR	680	92651	NR	810	6711	NR	940	6581	NR
425	14203	NR	555	179385	NR	685	82728	NR	815	6202	NR	945	7094	NR
430	23287	NR	560	183651	NR	690	72755	NR	820	6421	NR	950	6374	NR
435	39198	NR	565	186704	NR	695	64864	NR	825	6067	NR	955	5408	NR
440	65090	NR	570	189735	NR	700	57132	NR	830	6507	NR	960	5406	NR
445	111800	NR	575	192391	NR	705	50899	NR	835	6304	NR	965	5676	NR
450	185327	NR	580	195587	NR	710	44715	NR	840	5605	NR	970	6132	NR
455	231910	NR	585	198690	NR	715	39661	NR	845	5975	NR	975	7732	NR
460	199850	NR	590	200528	NR	720	35220	NR	850	5252	NR	980	4497	NR
465	159032	NR	595	204245	NR	725	31033	NR	855	6570	NR	985	1796	NR
470	134681	NR	600	206961	NR	730	27573	NR	860	6167	NR	990	6719	NR
475	109873	NR	605	207509	NR	735	24077	NR	865	5558	NR	995	10730	NR
480	92595	NR	610	206751	NR	740	21375	NR	870	5280	NR	1000	10317	NR
485	90323	NR	615	205233	NR	745	19152	NR	875	5889	NR			

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Scotopic Flux vs. Wavelength



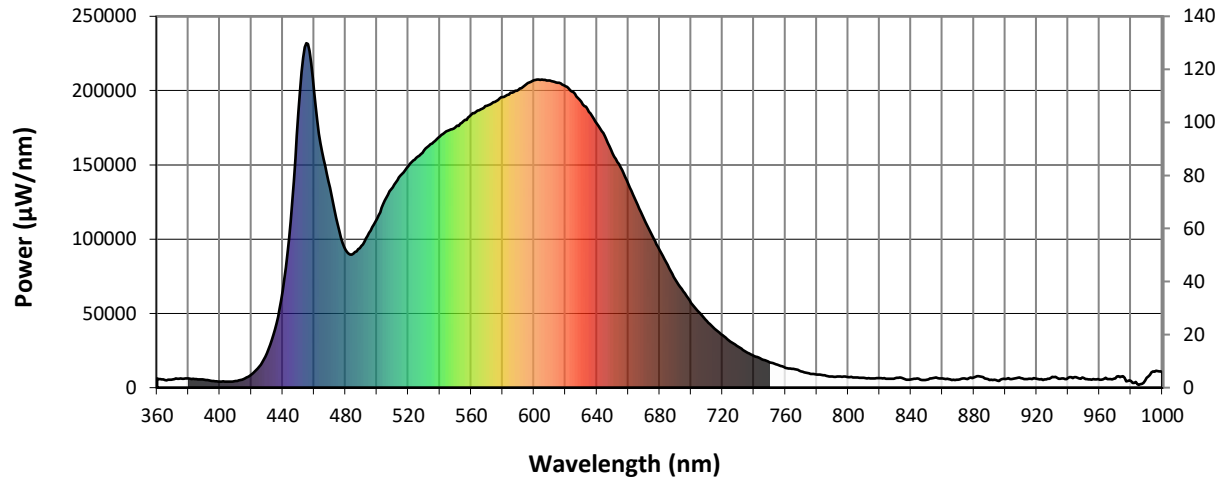
Scotopic Lumens: 22729.8

S/P: 1.79

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	6299	NR	490	95290	NR	620	202945	NR	750	17048	NR	880	6802	NR
365	5178	NR	495	104168	NR	625	198934	NR	755	15396	NR	885	7389	NR
370	5490	NR	500	113725	NR	630	192455	NR	760	13359	NR	890	5235	NR
375	6104	NR	505	126034	NR	635	185651	NR	765	12573	NR	895	4778	NR
380	6149	NR	510	134848	NR	640	177659	NR	770	10940	NR	900	5847	NR
385	5688	NR	515	142720	NR	645	169230	NR	775	9589	NR	905	5969	NR
390	5262	NR	520	149276	NR	650	157607	NR	780	8802	NR	910	6399	NR
395	4581	NR	525	154675	NR	655	148474	NR	785	8257	NR	915	5912	NR
400	4118	NR	530	159852	NR	660	137175	NR	790	7397	NR	920	6048	NR
405	4084	NR	535	164319	NR	665	125124	NR	795	7591	NR	925	5552	NR
410	4438	NR	540	169099	NR	670	113759	NR	800	7116	NR	930	7244	NR
415	5782	NR	545	173030	NR	675	102656	NR	805	6905	NR	935	6076	NR
420	8737	NR	550	175415	NR	680	92651	NR	810	6711	NR	940	6581	NR
425	14203	NR	555	179385	NR	685	82728	NR	815	6202	NR	945	7094	NR
430	23287	NR	560	183651	NR	690	72755	NR	820	6421	NR	950	6374	NR
435	39198	NR	565	186704	NR	695	64864	NR	825	6067	NR	955	5408	NR
440	65090	NR	570	189735	NR	700	57132	NR	830	6507	NR	960	5406	NR
445	111800	NR	575	192391	NR	705	50899	NR	835	6304	NR	965	5676	NR
450	185327	NR	580	195587	NR	710	44715	NR	840	5605	NR	970	6132	NR
455	231910	NR	585	198690	NR	715	39661	NR	845	5975	NR	975	7732	NR
460	199850	NR	590	200528	NR	720	35220	NR	850	5252	NR	980	4497	NR
465	159032	NR	595	204245	NR	725	31033	NR	855	6570	NR	985	1796	NR
470	134681	NR	600	206961	NR	730	27573	NR	860	6167	NR	990	6719	NR
475	109873	NR	605	207509	NR	735	24077	NR	865	5558	NR	995	10730	NR
480	92595	NR	610	206751	NR	740	21375	NR	870	5280	NR	1000	10317	NR
485	90323	NR	615	205233	NR	745	19152	NR	875	5889	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 9423.4 M/P: 0.74

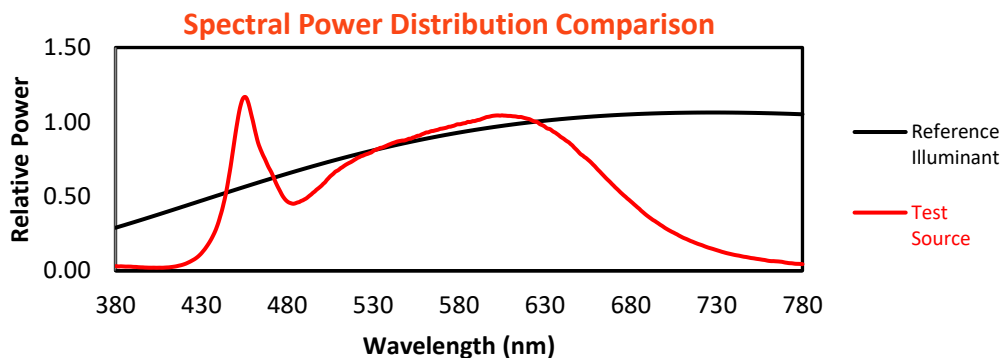
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6299	NR	490	95290	NR	620	202945	NR	750	17048	NR	880	6802	NR
365	5178	NR	495	104168	NR	625	198934	NR	755	15396	NR	885	7389	NR
370	5490	NR	500	113725	NR	630	192455	NR	760	13359	NR	890	5235	NR
375	6104	NR	505	126034	NR	635	185651	NR	765	12573	NR	895	4778	NR
380	6149	NR	510	134848	NR	640	177659	NR	770	10940	NR	900	5847	NR
385	5688	NR	515	142720	NR	645	169230	NR	775	9589	NR	905	5969	NR
390	5262	NR	520	149276	NR	650	157607	NR	780	8802	NR	910	6399	NR
395	4581	NR	525	154675	NR	655	148474	NR	785	8257	NR	915	5912	NR
400	4118	NR	530	159852	NR	660	137175	NR	790	7397	NR	920	6048	NR
405	4084	NR	535	164319	NR	665	125124	NR	795	7591	NR	925	5552	NR
410	4438	NR	540	169099	NR	670	113759	NR	800	7116	NR	930	7244	NR
415	5782	NR	545	173030	NR	675	102656	NR	805	6905	NR	935	6076	NR
420	8737	NR	550	175415	NR	680	92651	NR	810	6711	NR	940	6581	NR
425	14203	NR	555	179385	NR	685	82728	NR	815	6202	NR	945	7094	NR
430	23287	NR	560	183651	NR	690	72755	NR	820	6421	NR	950	6374	NR
435	39198	NR	565	186704	NR	695	64864	NR	825	6067	NR	955	5408	NR
440	65090	NR	570	189735	NR	700	57132	NR	830	6507	NR	960	5406	NR
445	111800	NR	575	192391	NR	705	50899	NR	835	6304	NR	965	5676	NR
450	185327	NR	580	195587	NR	710	44715	NR	840	5605	NR	970	6132	NR
455	231910	NR	585	198690	NR	715	39661	NR	845	5975	NR	975	7732	NR
460	199850	NR	590	200528	NR	720	35220	NR	850	5252	NR	980	4497	NR
465	159032	NR	595	204245	NR	725	31033	NR	855	6570	NR	985	1796	NR
470	134681	NR	600	206961	NR	730	27573	NR	860	6167	NR	990	6719	NR
475	109873	NR	605	207509	NR	735	24077	NR	865	5558	NR	995	10730	NR
480	92595	NR	610	206751	NR	740	21375	NR	870	5280	NR	1000	10317	NR
485	90323	NR	615	205233	NR	745	19152	NR	875	5889	NR			

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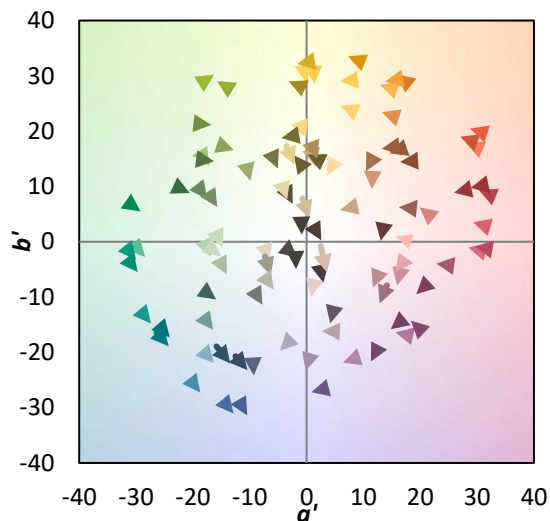
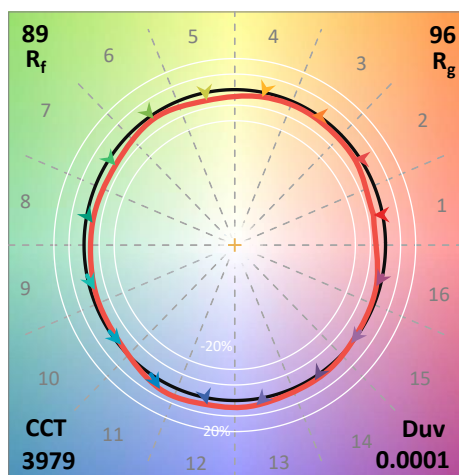
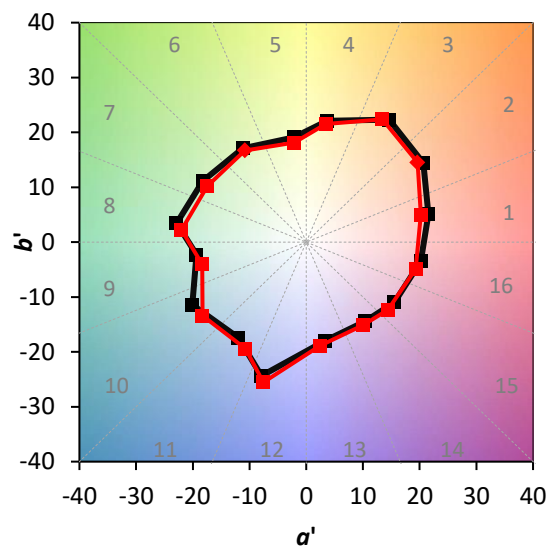
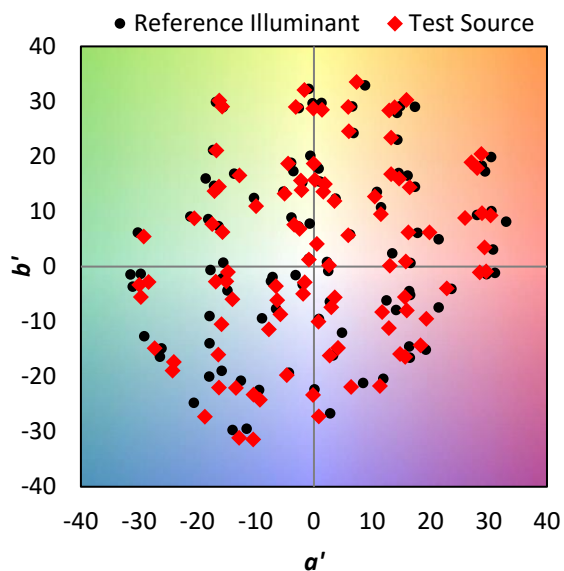
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Summary

$R_f = 88.6$
 $R_g = 96.2$
 CIE $R_a = 91.5$
 $R_9 = 57.0$



Color Vector Graphics

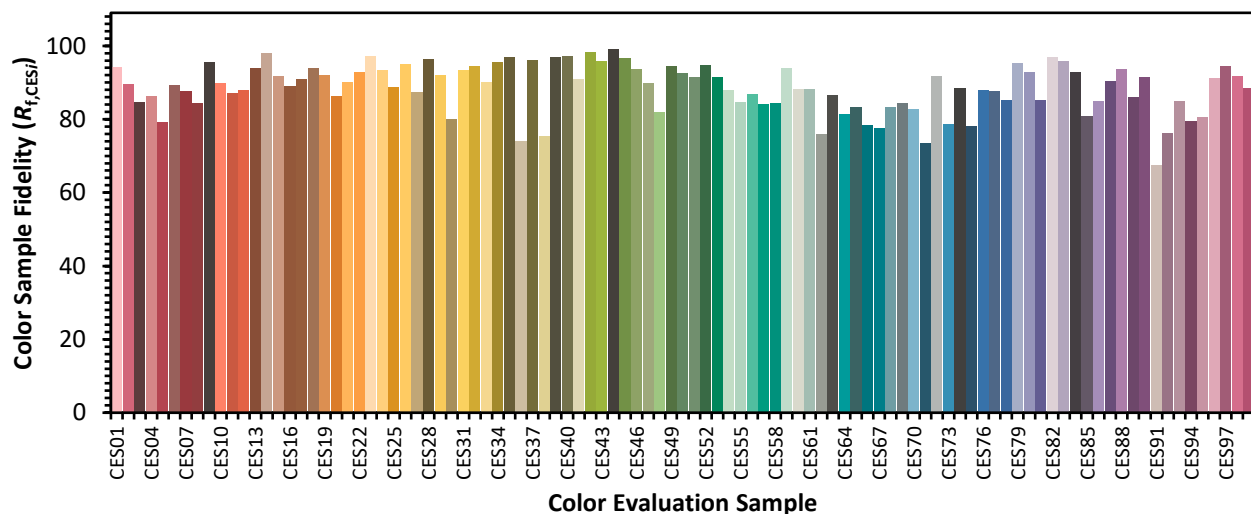


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Individual Sample Fidelity Index ($R_{f,i}$)

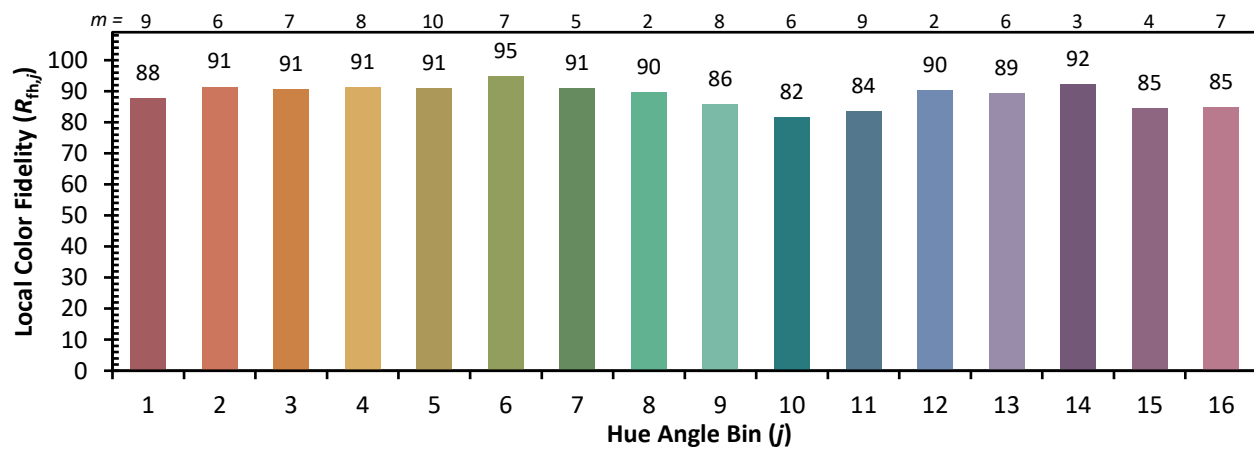
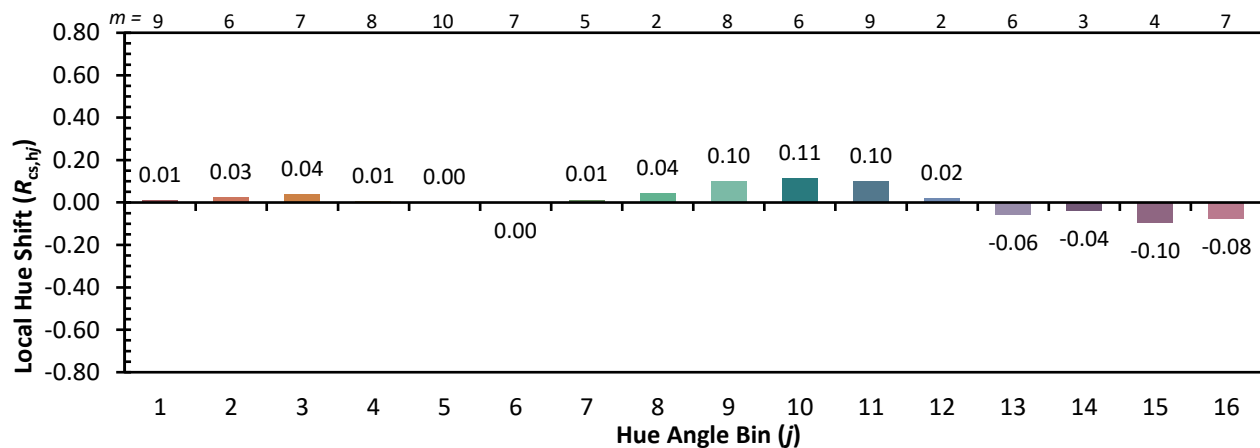
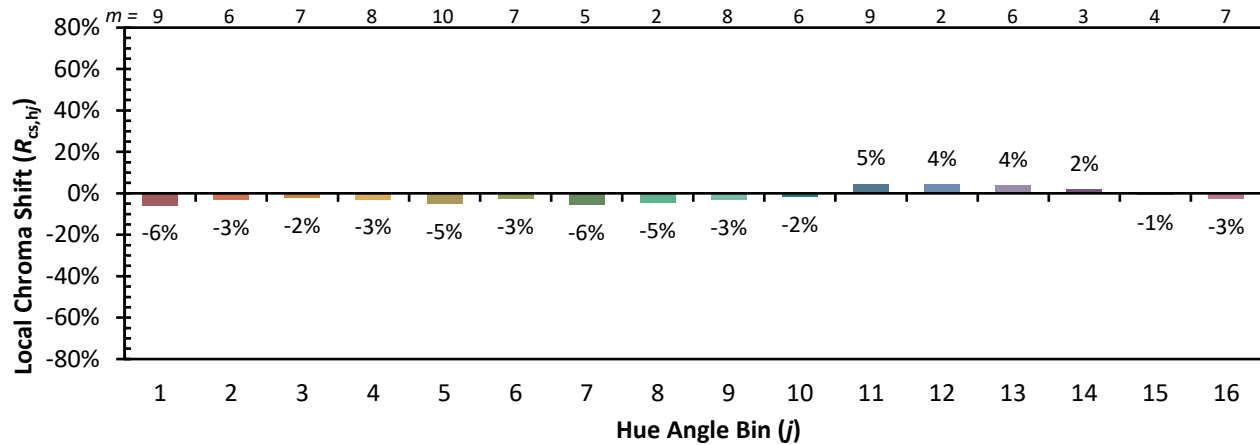
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CES02 = 62	CES27 = 87	CES52 = 95	CES77 = 88
CES03 = 31	CES28 = 96	CES53 = 92	CES78 = 85
CES04 = 69	CES29 = 92	CES54 = 88	CES79 = 95
CES05 = 49	CES30 = 80	CES55 = 85	CES80 = 93
CES06 = 50	CES31 = 93	CES56 = 87	CES81 = 85
CES07 = 42	CES32 = 94	CES57 = 84	CES82 = 97
CES08 = 41	CES33 = 90	CES58 = 84	CES83 = 96
CES09 = 29	CES34 = 96	CES59 = 94	CES84 = 93
CES10 = 74	CES35 = 97	CES60 = 88	CES85 = 81
CES11 = 57	CES36 = 74	CES61 = 88	CES86 = 85
CES12 = 63	CES37 = 96	CES62 = 76	CES87 = 90
CES13 = 43	CES38 = 75	CES63 = 86	CES88 = 94
CES14 = 74	CES39 = 97	CES64 = 81	CES89 = 86
CES15 = 71	CES40 = 97	CES65 = 83	CES90 = 91
CES16 = 47	CES41 = 91	CES66 = 78	CES91 = 67
CES17 = 49	CES42 = 98	CES67 = 78	CES92 = 76
CES18 = 56	CES43 = 96	CES68 = 83	CES93 = 85
CES19 = 71	CES44 = 99	CES69 = 84	CES94 = 79
CES20 = 66	CES45 = 97	CES70 = 83	CES95 = 81
CES21 = 85	CES46 = 94	CES71 = 74	CES96 = 91
CES22 = 78	CES47 = 90	CES72 = 92	CES97 = 94
CES23 = 91	CES48 = 82	CES73 = 79	CES98 = 92
CES24 = 90	CES49 = 94	CES74 = 89	CES99 = 89
CES25 = 71	CES50 = 93	CES75 = 78	



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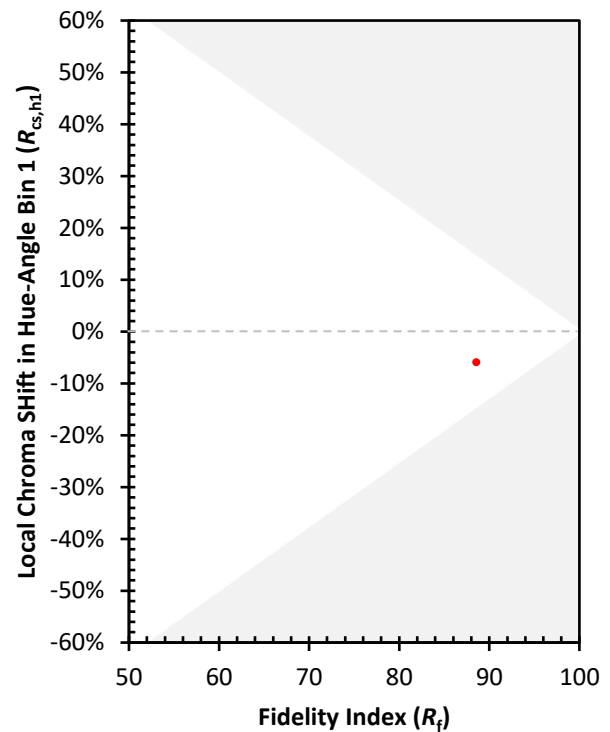
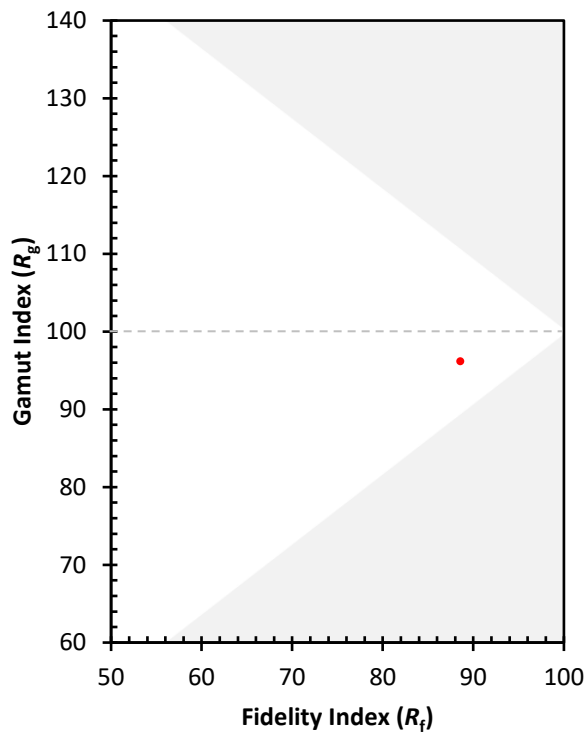
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)