

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: P830464

Luminaire Tested: **OHBL-48HE-MCL-UNV-L735-CD**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P830464
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-48HE-MCL-UNV-L735-CD
Description: 48000 LUMEN OHBL HE LED LUMINAIRE WITH 70CRI, 3500K LEDS AND MEDIUM CLEAR LENS
Light Source: -
Ballast/Driver: -

Summary

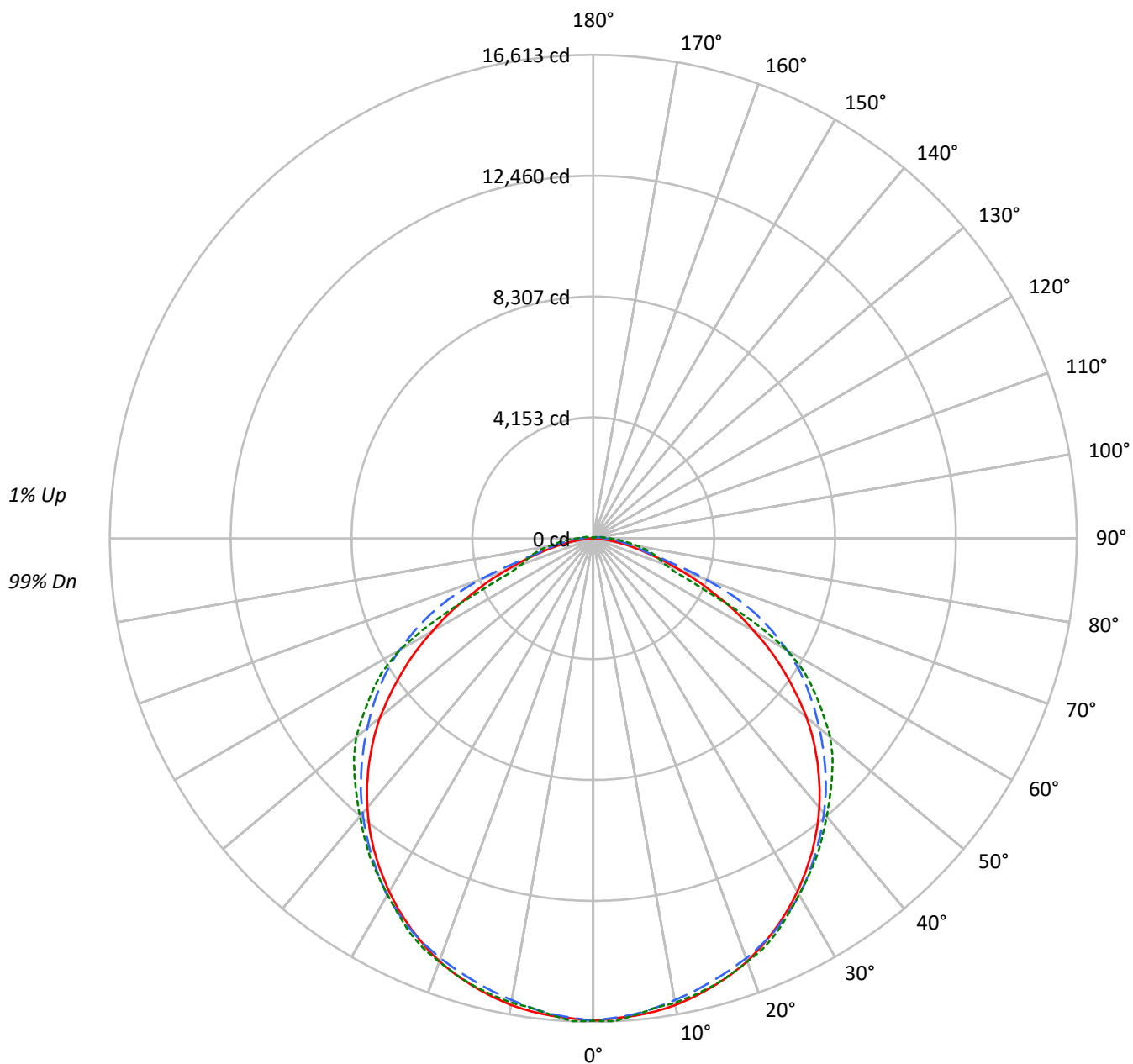
Lumens per Lamp: N/A
Luminaire Lumens: 46861.1 lumens
Efficiency: N/A
Efficacy: 176.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1.8' x L: 3.78' x H: 0.17')
CIE Type: Direct

Input Watts (W): 266
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: P830464

CATALOG NUMBER: OHBL-48HE-MCL-UNV-L735-CD

Luminous Intensity Polar Plot





TEST NUMBER: P830464

CATALOG NUMBER: OHBL-48HE-MCL-UNV-L735-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°	26220	26220	26220
5°	26048	25839	25893
10°	25953	25448	25606
15°	25788	25155	25434
20°	25624	24971	25209
25°	25315	24785	24986
30°	24978	24492	24513
35°	24576	24028	24253
40°	24054	23548	23898
45°	23329	22993	23741
50°	22347	22361	23553
55°	20788	21740	22674
60°	18745	20830	20962
65°	16080	19141	13285
70°	12952	14942	9632
75°	9711	8870	9775
80°	6759	7376	9333
85°	3846	6758	8749



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1563.3	3.3
10°-20°	4482.8	9.6
20°-30°	6846.6	14.6
30°-40°	8307.3	17.7
40°-50°	8706.8	18.6
50°-60°	7889.7	16.8
60°-70°	5289.7	11.3
70°-80°	2375.3	5.1
80°-90°	862.0	1.8
90°-100°	259.5	0.6
100°-110°	122.4	0.3
110°-120°	61.4	0.1
120°-130°	33.9	0.1
130°-140°	23.3	0.0
140°-150°	15.7	0.0
150°-160°	11.6	0.0
160°-170°	7.5	0.0
170°-180°	2.4	0.0
0°-30°	12892.7	27.5
0°-40°	21200.0	45.2
0°-60°	37796.5	80.7
0°-90°	46323.5	98.9
90°-120°	443.2	0.9
90°-150°	516.0	1.1
90°-180°	538.0	1.1
0°-180°	46861.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16580	16580	16580	16580	16580	
5°	16472	16529	16414	16464	16443	###
15°	15937	15875	15762	15901	15920	4500
25°	14806	14741	14844	14980	14937	6825
35°	13123	13154	13288	13430	13377	8202
45°	10891	11068	11274	11562	11598	8390
55°	8014	8400	8973	9332	9311	7154
65°	4703	5439	6175	5212	4255	4686
75°	1851	2685	1975	2021	2153	2023
85°	319	611	784	947	992	389
90°	2	204	405	508	532	19
95°	2	127	278	338	348	3
105°	10	55	137	165	173	11
115°	19	29	70	89	94	18
125°	17	19	43	50	53	17
135°	22	24	26	38	41	17
145°	22	24	24	26	29	14
155°	24	26	26	26	24	11
165°	26	26	26	26	26	7
175°	26	26	24	22	22	3
180°	24	24	24	24	24	



TEST NUMBER: P830464

CATALOG NUMBER: OHBL-48HE-MCL-UNV-L735-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16579.5	16579.5	16579.5	16579.5	16579.5
2.5°	16512.3	16581.9	16495.6	16589.1	16613.0
5°	16471.6	16529.1	16414.1	16464.4	16442.8
7.5°	16397.3	16416.4	16279.8	16320.6	16277.4
10°	16287.0	16277.4	16116.8	16195.9	16205.5
12.5°	16124.0	16095.2	15951.4	16071.2	16073.6
15°	15937.0	15874.7	15762.0	15901.0	15920.2
17.5°	15721.2	15639.7	15565.4	15745.2	15716.4
20°	15469.5	15373.6	15359.3	15555.8	15483.9
22.5°	15157.9	15083.6	15117.1	15304.1	15258.6
25°	14805.5	14740.8	14843.8	14980.5	14937.3
27.5°	14433.9	14395.6	14513.0	14618.5	14534.6
30°	14026.4	14004.8	14160.6	14246.9	14141.4
32.5°	13582.9	13590.1	13738.7	13856.2	13757.9
35°	13122.6	13153.8	13288.0	13429.5	13376.7
37.5°	12616.8	12686.3	12820.6	12981.2	12926.0
40°	12082.2	12182.9	12331.5	12525.7	12475.3
42.5°	11504.5	11631.5	11823.3	12039.0	12034.3
45°	10890.8	11068.2	11274.3	11562.0	11598.0
47.5°	10253.1	10452.1	10713.4	11096.9	11152.1
50°	9560.3	9809.6	10135.6	10595.9	10629.5
52.5°	8788.4	9128.8	9560.3	10001.4	9960.6
55°	8014.0	8400.0	8973.0	9332.5	9311.0
57.5°	7242.1	7676.0	8371.2	8627.7	8625.3
60°	6379.1	6928.1	7688.0	7882.2	7690.4
62.5°	5580.8	6170.6	6959.3	6817.8	6161.0
65°	4703.4	5439.4	6175.3	5211.6	4255.1
67.5°	3924.3	4691.4	5245.2	3569.5	3056.5
70°	3140.4	3986.6	4089.7	2649.0	2613.0
72.5°	2445.2	3346.6	2821.6	2267.8	2382.9
75°	1850.7	2684.9	1975.3	2020.9	2152.7
77.5°	1349.7	2061.6	1536.6	1771.6	1879.5
80°	927.7	1459.9	1253.8	1488.7	1563.0
82.5°	582.5	963.7	1004.5	1198.6	1275.3
85°	318.8	611.3	783.9	946.9	992.5
87.5°	131.8	369.2	599.3	731.2	769.5
90°	2.4	203.8	405.1	508.2	532.2
92.5°	2.4	155.8	330.8	409.9	426.7
95°	2.4	127.1	278.1	338.0	347.6
97.5°	4.8	100.7	232.5	280.5	290.1
100°	7.2	83.9	194.2	234.9	242.1
102.5°	9.6	67.1	163.0	196.6	203.8
105°	9.6	55.1	136.6	165.4	172.6



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CATALOG NUMBER: OHBL-48HE-MCL-UNV-L735-CD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	16.8	33.6	81.5	103.1	107.9
115°	19.2	28.8	69.5	88.7	93.5
117.5°	19.2	24.0	59.9	74.3	79.1
120°	19.2	21.6	52.7	64.7	67.1
122.5°	19.2	19.2	45.5	57.5	59.9
125°	16.8	19.2	43.2	50.3	52.7
127.5°	19.2	19.2	38.4	45.5	47.9
130°	19.2	21.6	33.6	43.2	43.2
132.5°	21.6	24.0	31.2	40.8	40.8
135°	21.6	24.0	26.4	38.4	40.8
137.5°	24.0	24.0	24.0	36.0	38.4
140°	24.0	24.0	21.6	31.2	33.6
142.5°	21.6	24.0	21.6	28.8	31.2
145°	21.6	24.0	24.0	26.4	28.8
147.5°	24.0	24.0	24.0	24.0	26.4
150°	24.0	24.0	24.0	24.0	24.0
152.5°	24.0	24.0	24.0	24.0	24.0
155°	24.0	26.4	26.4	26.4	24.0
157.5°	24.0	26.4	26.4	26.4	26.4
160°	24.0	26.4	26.4	26.4	26.4
162.5°	26.4	26.4	26.4	26.4	26.4
165°	26.4	26.4	26.4	26.4	26.4
167.5°	26.4	28.8	26.4	26.4	26.4
170°	26.4	26.4	26.4	24.0	24.0
172.5°	26.4	26.4	26.4	24.0	24.0
175°	26.4	26.4	24.0	21.6	21.6
177.5°	28.8	26.4	24.0	21.6	19.2
180°	24.0	24.0	24.0	24.0	24.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	12.0	45.5	117.5	141.4	146.2
110°	14.4	38.4	98.3	119.9	124.7



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

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-2

Test Date: 08/03/2023

Luminaire Tested: OHB-15SE-N-UNV-L735-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L735-CD.

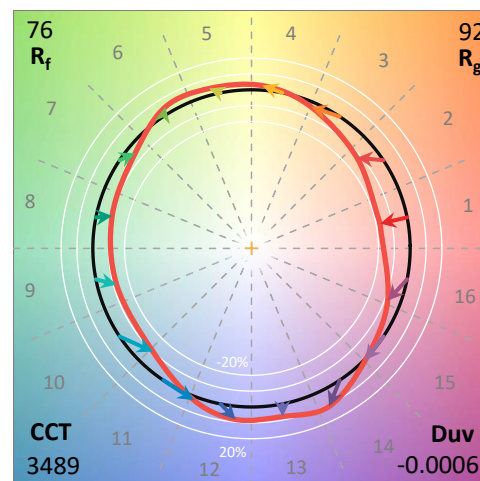
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2307-100-2
 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-L735-CD**
 Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 70CRI, 3500K LEDS AND NARROW LENS

LENS

Spectral Parameters

CCT (K):	3489	CRI (Ra):	73.0		
CIE u':	0.2362	R1:	69.4	R9:	-30.0
CIE v':	0.5107	R2:	82.9	R10:	59.3
Duv:	-0.0006	R3:	92.6	R11:	62.7
CIE x:	0.4052	R4:	68.4	R12:	47.6
CIE y:	0.3895	R5:	68.8	R13:	72.2
CIE z:	0.2053	R6:	75.3	R14:	95.9
Peak Wavelength (nm):	588	R7:	79.3		
Dominant Wavelength (nm):	581	R8:	47.6		
Purity:	38.7				
Rf:	75.9				
Rg:	92.2				



Test Conditions

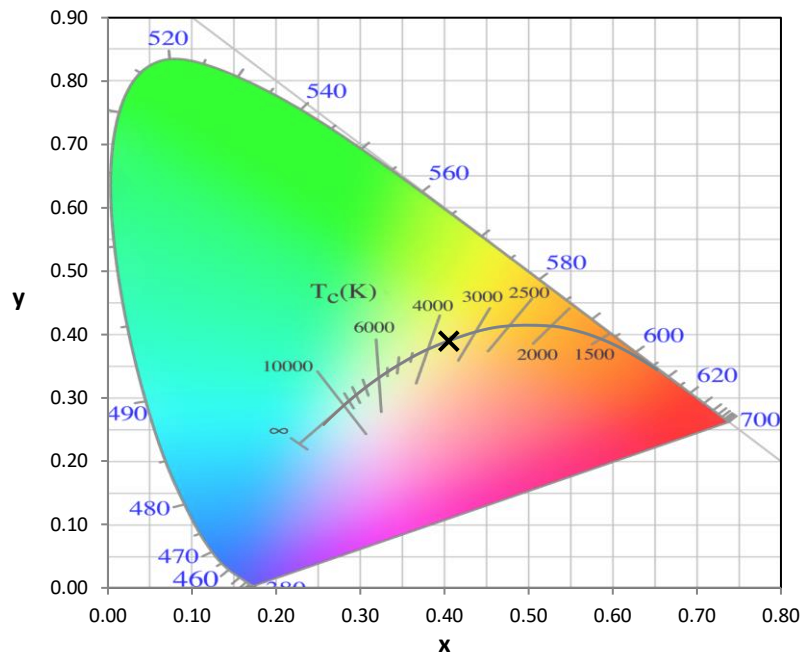
Stabilization Time: 28M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.7/58%
 Sphere Temperature (°C): 25.2

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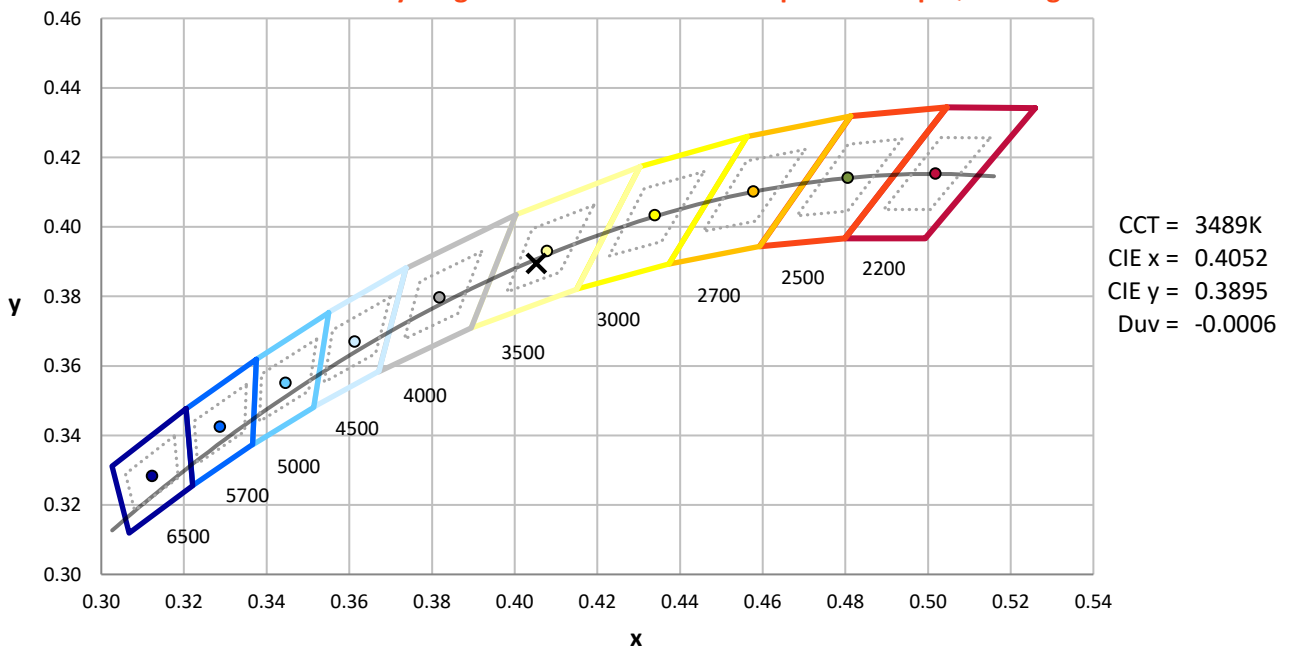
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/9/2023	8/9/2023
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208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



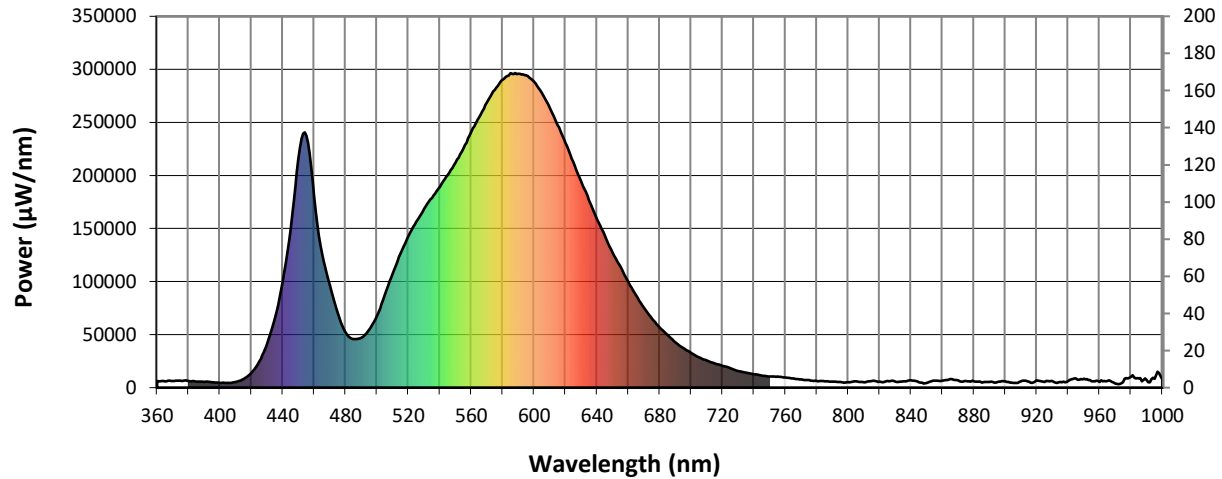
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength

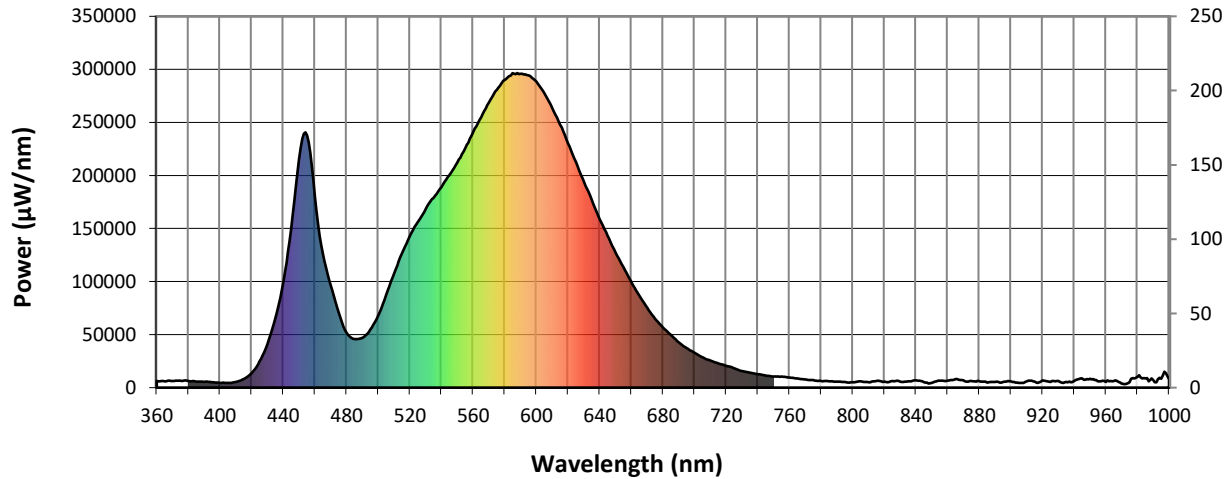


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λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6366	NR	490	47130	NR	620	230435	NR	750	10555	NR	880	5822	NR
365	5925	NR	495	54424	NR	625	212935	NR	755	10386	NR	885	4770	NR
370	6268	NR	500	67766	NR	630	194319	NR	760	9571	NR	890	5279	NR
375	6497	NR	505	87548	NR	635	176714	NR	765	8796	NR	895	5445	NR
380	6318	NR	510	107612	NR	640	159022	NR	770	7688	NR	900	5934	NR
385	5716	NR	515	126336	NR	645	143212	NR	775	7039	NR	905	4594	NR
390	5462	NR	520	142943	NR	650	127214	NR	780	6282	NR	910	5910	NR
395	5187	NR	525	156046	NR	655	113910	NR	785	5849	NR	915	5732	NR
400	4568	NR	530	168399	NR	660	99647	NR	790	5698	NR	920	6817	NR
405	4481	NR	535	178779	NR	665	86667	NR	795	5315	NR	925	5494	NR
410	5393	NR	540	189196	NR	670	75195	NR	800	5004	NR	930	6404	NR
415	8052	NR	545	200610	NR	675	65133	NR	805	5848	NR	935	5273	NR
420	13696	NR	550	212065	NR	680	56714	NR	810	5027	NR	940	6245	NR
425	24563	NR	555	225598	NR	685	49746	NR	815	6212	NR	945	8810	NR
430	41084	NR	560	241077	NR	690	42689	NR	820	5650	NR	950	8264	NR
435	65723	NR	565	254881	NR	695	37295	NR	825	6411	NR	955	5892	NR
440	99807	NR	570	268758	NR	700	32779	NR	830	5679	NR	960	5507	NR
445	149359	NR	575	280646	NR	705	28556	NR	835	5857	NR	965	6242	NR
450	215870	NR	580	290065	NR	710	25496	NR	840	6910	NR	970	3723	NR
455	237735	NR	585	296284	NR	715	22794	NR	845	5135	NR	975	4991	NR
460	180903	NR	590	295851	NR	720	20477	NR	850	4417	NR	980	10241	NR
465	126687	NR	595	294360	NR	725	18231	NR	855	6494	NR	985	8801	NR
470	96291	NR	600	288175	NR	730	15637	NR	860	6521	NR	990	7127	NR
475	70550	NR	605	277740	NR	735	14130	NR	865	8026	NR	995	8514	NR
480	51790	NR	610	263525	NR	740	12715	NR	870	6772	NR	1000	7777	NR
485	45800	NR	615	247580	NR	745	11403	NR	875	6383	NR			

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Scotopic Flux vs. Wavelength



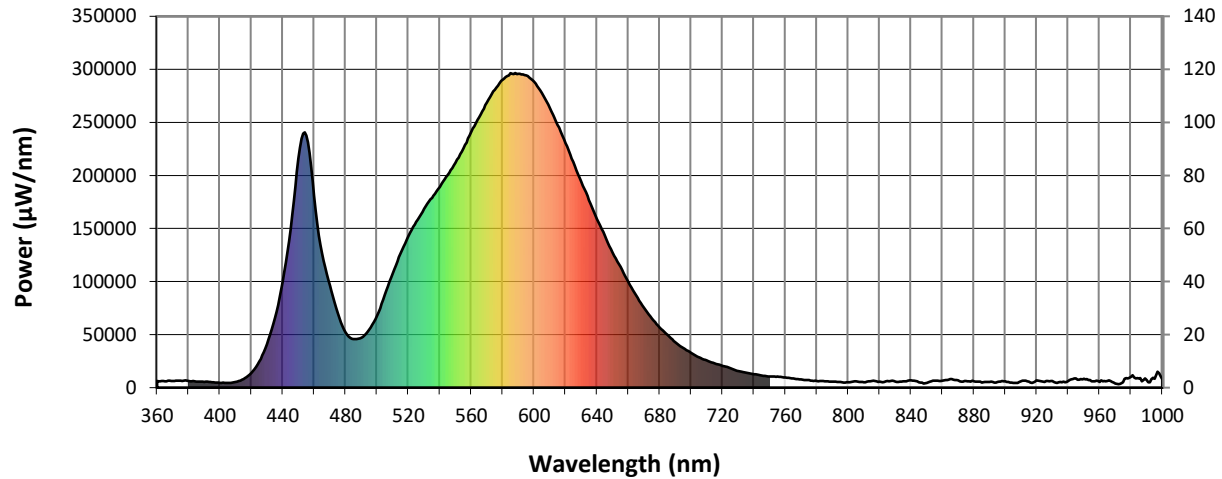
Scotopic Lumens: 21575.7

S/P: 1.41

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	6366	NR	490	47130	NR	620	230435	NR	750	10555	NR	880	5822	NR
365	5925	NR	495	54424	NR	625	212935	NR	755	10386	NR	885	4770	NR
370	6268	NR	500	67766	NR	630	194319	NR	760	9571	NR	890	5279	NR
375	6497	NR	505	87548	NR	635	176714	NR	765	8796	NR	895	5445	NR
380	6318	NR	510	107612	NR	640	159022	NR	770	7688	NR	900	5934	NR
385	5716	NR	515	126336	NR	645	143212	NR	775	7039	NR	905	4594	NR
390	5462	NR	520	142943	NR	650	127214	NR	780	6282	NR	910	5910	NR
395	5187	NR	525	156046	NR	655	113910	NR	785	5849	NR	915	5732	NR
400	4568	NR	530	168399	NR	660	99647	NR	790	5698	NR	920	6817	NR
405	4481	NR	535	178779	NR	665	86667	NR	795	5315	NR	925	5494	NR
410	5393	NR	540	189196	NR	670	75195	NR	800	5004	NR	930	6404	NR
415	8052	NR	545	200610	NR	675	65133	NR	805	5848	NR	935	5273	NR
420	13696	NR	550	212065	NR	680	56714	NR	810	5027	NR	940	6245	NR
425	24563	NR	555	225598	NR	685	49746	NR	815	6212	NR	945	8810	NR
430	41084	NR	560	241077	NR	690	42689	NR	820	5650	NR	950	8264	NR
435	65723	NR	565	254881	NR	695	37295	NR	825	6411	NR	955	5892	NR
440	99807	NR	570	268758	NR	700	32779	NR	830	5679	NR	960	5507	NR
445	149359	NR	575	280646	NR	705	28556	NR	835	5857	NR	965	6242	NR
450	215870	NR	580	290065	NR	710	25496	NR	840	6910	NR	970	3723	NR
455	237735	NR	585	296284	NR	715	22794	NR	845	5135	NR	975	4991	NR
460	180903	NR	590	295851	NR	720	20477	NR	850	4417	NR	980	10241	NR
465	126687	NR	595	294360	NR	725	18231	NR	855	6494	NR	985	8801	NR
470	96291	NR	600	288175	NR	730	15637	NR	860	6521	NR	990	7127	NR
475	70550	NR	605	277740	NR	735	14130	NR	865	8026	NR	995	8514	NR
480	51790	NR	610	263525	NR	740	12715	NR	870	6772	NR	1000	7777	NR
485	45800	NR	615	247580	NR	745	11403	NR	875	6383	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 8294.3 M/P: 0.54

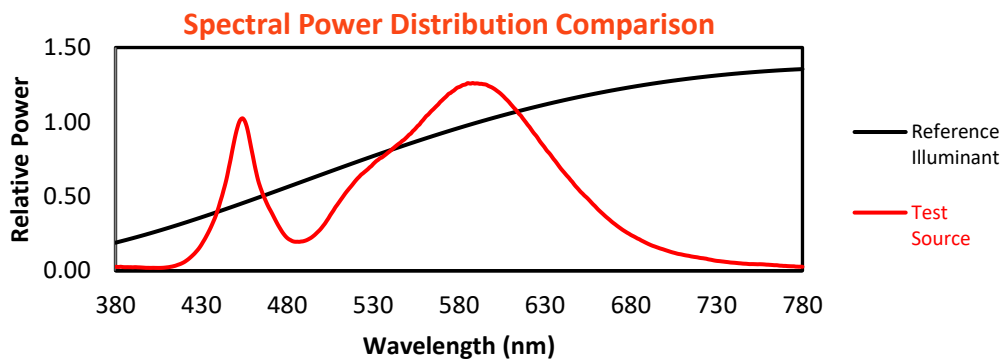
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	6366	NR	490	47130	NR	620	230435	NR	750	10555	NR	880	5822	NR
365	5925	NR	495	54424	NR	625	212935	NR	755	10386	NR	885	4770	NR
370	6268	NR	500	67766	NR	630	194319	NR	760	9571	NR	890	5279	NR
375	6497	NR	505	87548	NR	635	176714	NR	765	8796	NR	895	5445	NR
380	6318	NR	510	107612	NR	640	159022	NR	770	7688	NR	900	5934	NR
385	5716	NR	515	126336	NR	645	143212	NR	775	7039	NR	905	4594	NR
390	5462	NR	520	142943	NR	650	127214	NR	780	6282	NR	910	5910	NR
395	5187	NR	525	156046	NR	655	113910	NR	785	5849	NR	915	5732	NR
400	4568	NR	530	168399	NR	660	99647	NR	790	5698	NR	920	6817	NR
405	4481	NR	535	178779	NR	665	86667	NR	795	5315	NR	925	5494	NR
410	5393	NR	540	189196	NR	670	75195	NR	800	5004	NR	930	6404	NR
415	8052	NR	545	200610	NR	675	65133	NR	805	5848	NR	935	5273	NR
420	13696	NR	550	212065	NR	680	56714	NR	810	5027	NR	940	6245	NR
425	24563	NR	555	225598	NR	685	49746	NR	815	6212	NR	945	8810	NR
430	41084	NR	560	241077	NR	690	42689	NR	820	5650	NR	950	8264	NR
435	65723	NR	565	254881	NR	695	37295	NR	825	6411	NR	955	5892	NR
440	99807	NR	570	268758	NR	700	32779	NR	830	5679	NR	960	5507	NR
445	149359	NR	575	280646	NR	705	28556	NR	835	5857	NR	965	6242	NR
450	215870	NR	580	290065	NR	710	25496	NR	840	6910	NR	970	3723	NR
455	237735	NR	585	296284	NR	715	22794	NR	845	5135	NR	975	4991	NR
460	180903	NR	590	295851	NR	720	20477	NR	850	4417	NR	980	10241	NR
465	126687	NR	595	294360	NR	725	18231	NR	855	6494	NR	985	8801	NR
470	96291	NR	600	288175	NR	730	15637	NR	860	6521	NR	990	7127	NR
475	70550	NR	605	277740	NR	735	14130	NR	865	8026	NR	995	8514	NR
480	51790	NR	610	263525	NR	740	12715	NR	870	6772	NR	1000	7777	NR
485	45800	NR	615	247580	NR	745	11403	NR	875	6383	NR			

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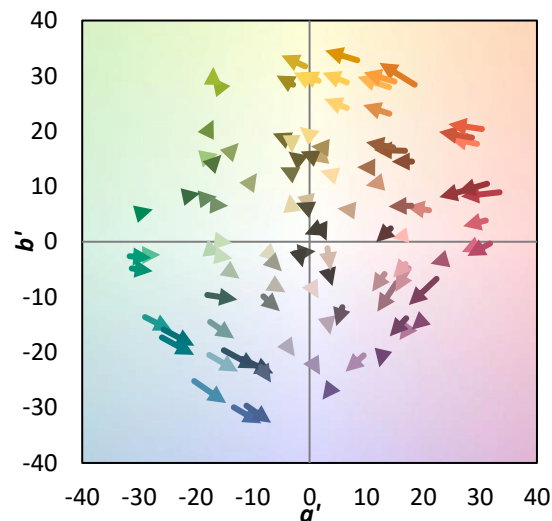
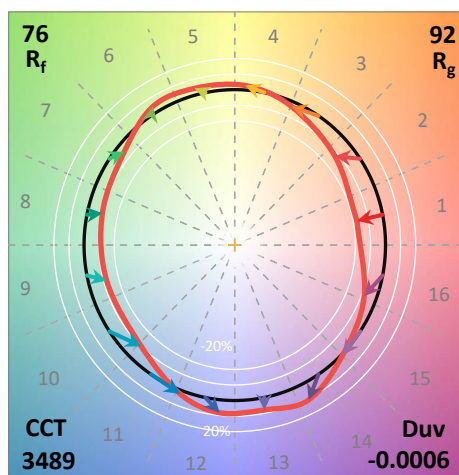
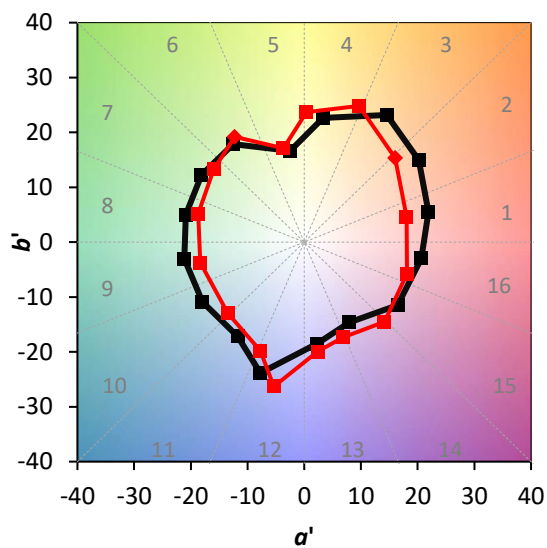
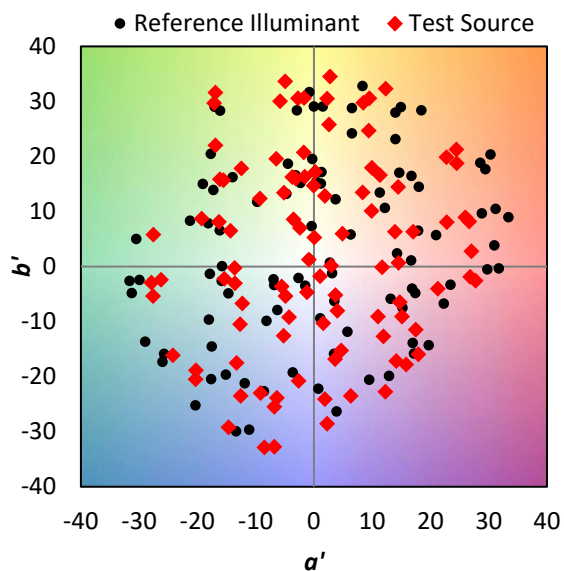
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Summary

$R_f = 75.9$
 $R_g = 92.2$
 CIE $R_a = 73.0$
 $R_g = -30.0$



Color Vector Graphics

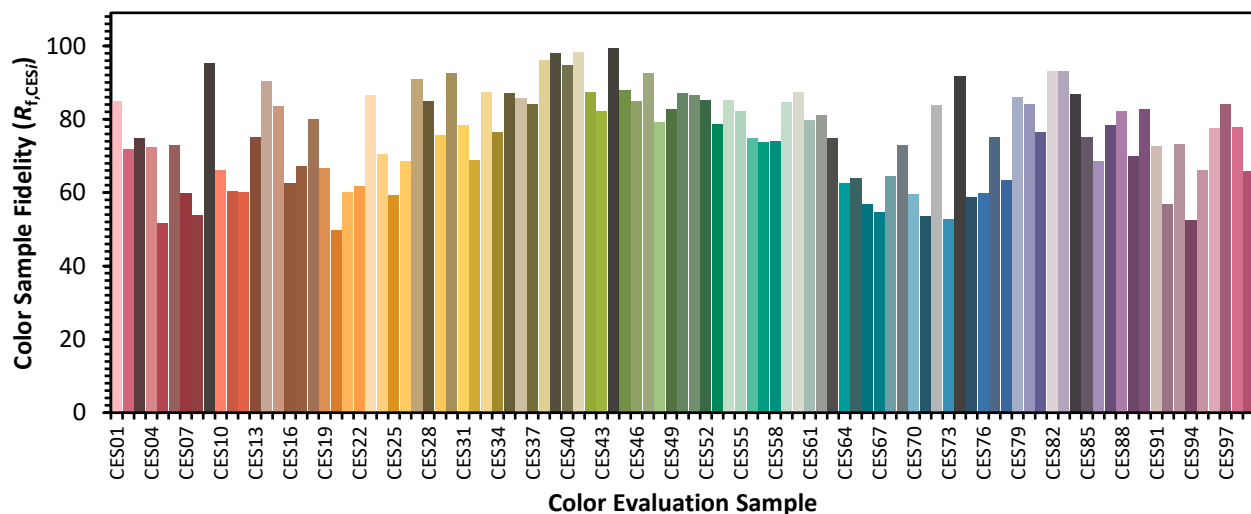


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Individual Sample Fidelity Index ($R_{f,i}$)

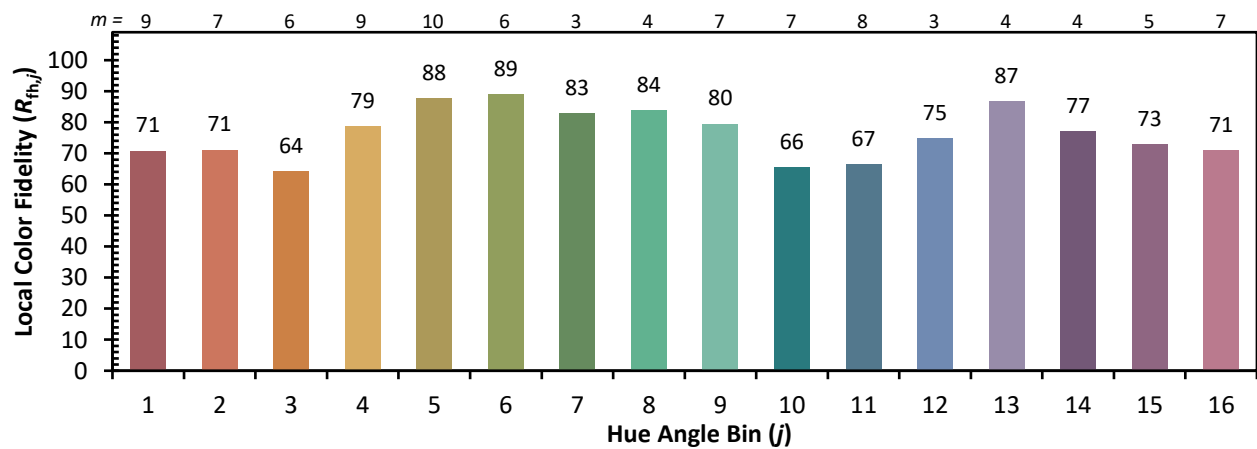
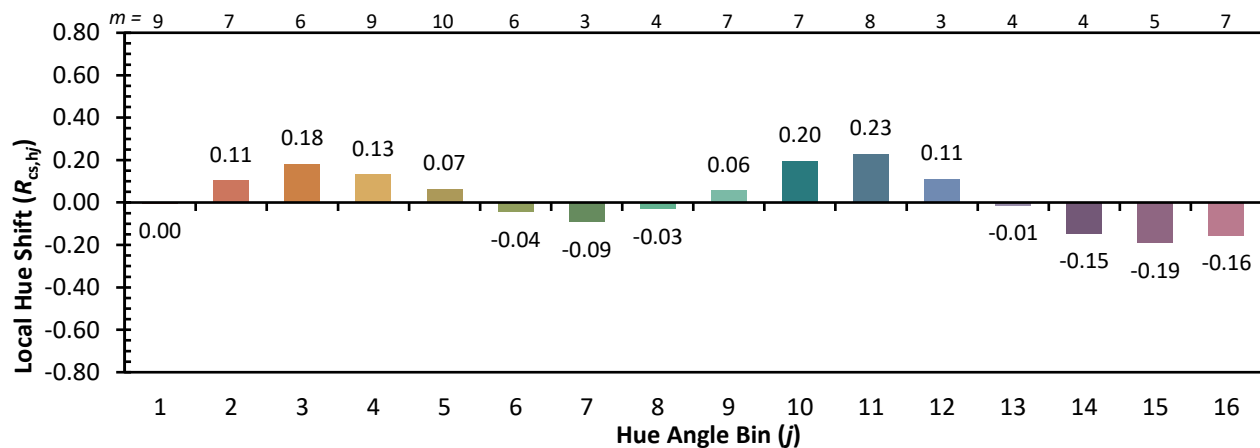
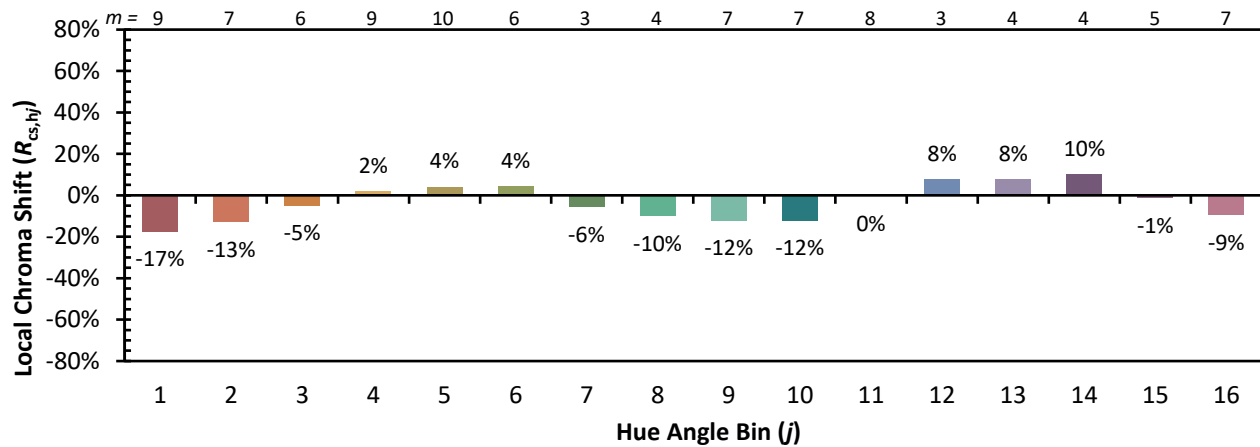
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CES02 = 62	CES27 = 91	CES52 = 85	CES77 = 75
CES03 = 31	CES28 = 85	CES53 = 79	CES78 = 63
CES04 = 70	CES29 = 76	CES54 = 85	CES79 = 86
CES05 = 48	CES30 = 93	CES55 = 82	CES80 = 84
CES06 = 51	CES31 = 78	CES56 = 75	CES81 = 77
CES07 = 40	CES32 = 69	CES57 = 74	CES82 = 93
CES08 = 39	CES33 = 87	CES58 = 74	CES83 = 93
CES09 = 29	CES34 = 77	CES59 = 85	CES84 = 87
CES10 = 75	CES35 = 87	CES60 = 87	CES85 = 75
CES11 = 58	CES36 = 86	CES61 = 80	CES86 = 68
CES12 = 64	CES37 = 84	CES62 = 81	CES87 = 78
CES13 = 42	CES38 = 96	CES63 = 75	CES88 = 82
CES14 = 74	CES39 = 98	CES64 = 63	CES89 = 70
CES15 = 71	CES40 = 95	CES65 = 64	CES90 = 83
CES16 = 47	CES41 = 98	CES66 = 57	CES91 = 73
CES17 = 50	CES42 = 87	CES67 = 55	CES92 = 57
CES18 = 56	CES43 = 82	CES68 = 64	CES93 = 73
CES19 = 72	CES44 = 99	CES69 = 73	CES94 = 52
CES20 = 65	CES45 = 88	CES70 = 60	CES95 = 66
CES21 = 87	CES46 = 85	CES71 = 54	CES96 = 78
CES22 = 79	CES47 = 92	CES72 = 84	CES97 = 84
CES23 = 92	CES48 = 79	CES73 = 53	CES98 = 78
CES24 = 91	CES49 = 83	CES74 = 92	CES99 = 66
CES25 = 72	CES50 = 87	CES75 = 59	



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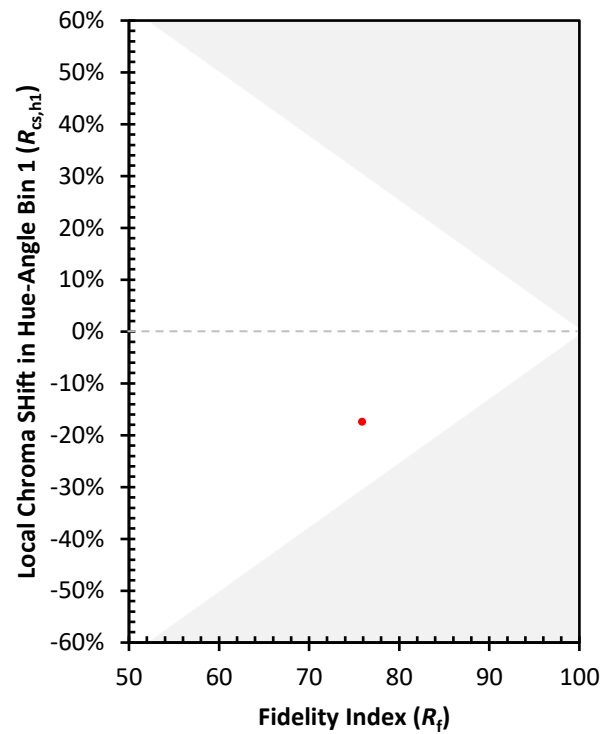
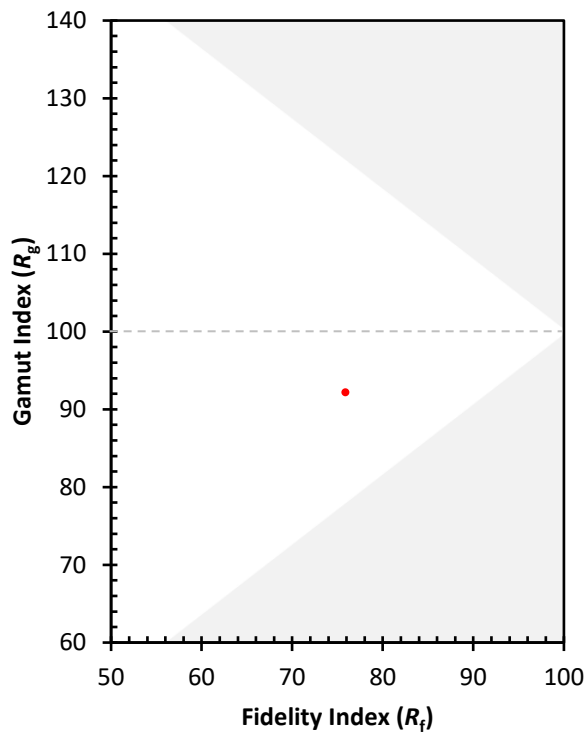
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)