

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: P895838

Luminaire Tested: **GRZ-15L-940-10x60-X-UNV-STD-1F**

Issue Date: 11/20/2024



Test Information

Test Method: LM-79-08
Report Number: P895838
Test Lab: INNOVATION CENTER(G3)
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: GRZ-15L-940-10x60-X-UNV-STD-1F
Description: iO LED 90CRI 4000K GRAZER 1500 lumens per ft WITH 10 deg x 60 deg OPTIC
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

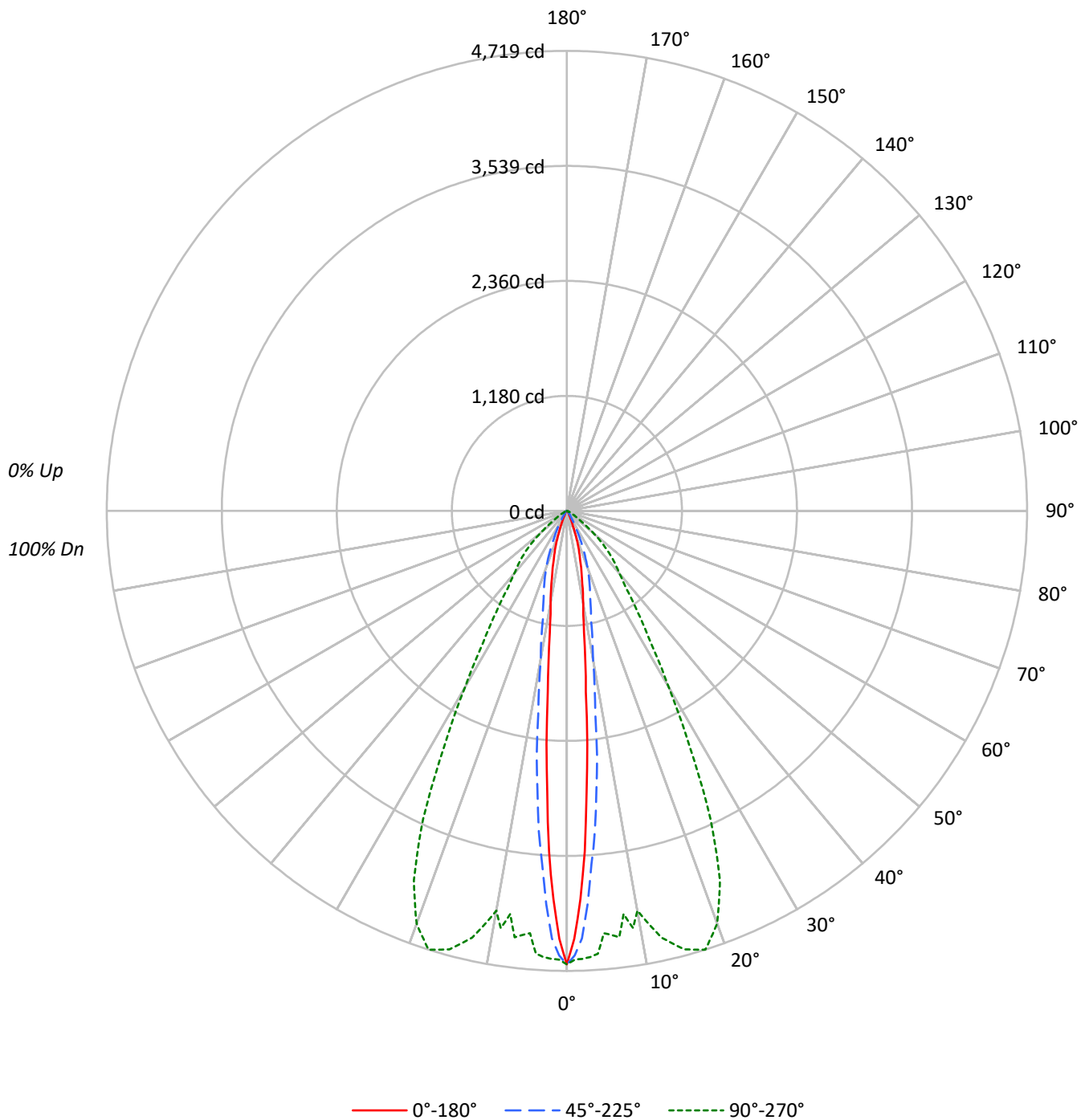
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1443.3 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 0.18 / 0.97 / 0.31
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

TEST NUMBER: P895838
CATALOG NUMBER: GRZ-15L-940-10x60-X-UNV-STD-1F

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	114	111	109	106	111	109	107	105	105	103	102		101	100	99		98	97	96		94
2	108	104	100	97	106	102	98	95	99	96	93		96	93	91		93	91	89		88
3	103	97	92	89	101	96	91	88	93	90	86		91	88	85		89	86	84		82
4	98	91	86	82	97	90	85	82	88	84	81		86	83	80		84	81	79		77
5	94	86	81	77	92	85	80	76	83	79	76		82	78	75		80	77	74		73
6	90	82	76	72	88	81	75	72	79	75	71		78	74	71		77	73	70		69
7	86	77	72	68	85	77	71	68	75	71	67		74	70	67		73	69	67		65
8	82	74	68	64	81	73	68	64	72	67	64		71	67	64		70	66	63		62
9	79	70	65	61	78	70	64	61	69	64	61		68	64	60		67	63	60		59
10	76	67	62	58	75	67	61	58	66	61	58		65	61	58		64	60	58		56

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	300356	300356	300356
5°	155568	213864	281799
10°	62937	100999	273059
15°	35216	61694	311320
20°	17199	42527	309607
25°	6177	23027	248405
30°	3281	10669	155778
35°	2278	4990	99526
40°	1972	3018	70492
45°	1762	2639	56260
50°	1657	2762	35782
55°	1396	2634	17348
60°	1421	1950	8885
65°	1467	1268	4416
70°	1567	1038	2605
75°	1372	1023	1721
80°	1041	1041	1041
85°	1037	1037	0

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Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



TEST NUMBER: P895838

CATALOG NUMBER: GRZ-15L-940-10x60-X-UNV-STD-1F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.2	19.3
10°-20°	443.4	30.7
20°-30°	373.2	25.9
30°-40°	188.6	13.1
40°-50°	95.7	6.6
50°-60°	43.3	3.0
60°-70°	14.4	1.0
70°-80°	5.5	0.4
80°-90°	1.0	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°	1094.9	75.9
0°-40°	1283.5	88.9
0°-60°	1422.4	98.6
0°-90°	1443.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1443.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4652	4652	4652	4652	4652	
5°	2400	2604	3300	4028	4348	180
15°	527	623	923	2208	4657	148
25°	87	118	323	1141	3487	48
35°	29	34	63	478	1263	19
45°	19	22	29	149	616	15
55°	12	16	23	57	154	12
65°	10	8	8	17	29	10
75°	6	6	4	6	7	6
85°	1	1	1	0	0	1
90°	0	0	0	0	0	

TEST NUMBER: P895838

CATALOG NUMBER: GRZ-15L-940-10x60-X-UNV-STD-1F

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4651.6	4651.6	4651.6	4651.6	4651.6	4651.6	4651.6	4651.6	4651.6	4651.6	4651.6
1°	4390.3	4562.1	4683.2	4505.7	4643.3	4559.4	4617.2	4523.6	4588.3	4640.6	4603.4
2°	3984.5	4203.2	4196.3	4175.6	4211.4	4388.9	4549.7	4534.6	4606.2	4575.9	4597.9
3°	3497.6	3614.6	3652.9	3712.1	3866.2	4040.8	4238.9	4413.5	4591.0	4626.8	4582.8
4°	2896.5	2939.1	3069.9	3086.4	3379.3	3628.3	3962.5	4160.5	4511.2	4569.0	4553.9
5°	2400.1	2387.7	2511.4	2635.2	3001.1	3299.5	3709.4	3915.7	4366.9	4523.6	4347.6
6°	1866.4	1966.8	2086.5	2201.9	2518.3	2895.1	3335.3	3805.7	4320.1	4460.3	4375.1
7°	1552.8	1573.5	1661.5	1752.2	2094.8	2541.6	2919.9	3515.5	4079.3	4366.9	4406.6
8°	1259.9	1259.9	1373.9	1456.5	1782.4	2102.9	2702.6	3244.6	3944.6	4364.1	4175.6
9°	1072.8	1097.5	1151.2	1281.9	1473.0	1819.6	2335.4	2996.9	3841.4	4284.3	4333.9
10°	959.9	993.0	1021.9	1071.4	1276.4	1540.4	2072.8	2756.3	3753.4	4288.5	4164.6
12.5°	712.4	730.3	764.7	822.5	977.8	1138.8	1559.7	2281.7	3327.0	4362.8	4482.3
15°	526.8	532.3	580.3	636.7	767.5	922.9	1204.9	1893.9	3149.7	4493.3	4657.1
17.5°	389.2	396.1	427.8	480.0	569.5	766.1	1037.0	1563.8	2943.3	4483.7	4719.0
20°	250.3	258.5	290.2	331.4	438.8	618.9	872.0	1290.2	2640.7	4161.9	4505.7
22.5°	148.6	156.9	167.9	207.6	308.1	463.5	717.9	1109.9	2102.9	3732.7	4101.3
25°	86.7	85.3	97.7	125.2	188.5	323.2	585.8	949.1	1717.9	3219.8	3486.6
27.5°	56.4	57.8	63.3	77.1	117.0	217.2	462.2	815.6	1349.2	2452.4	2723.3
30°	44.0	44.0	46.8	53.7	75.7	143.1	348.0	679.4	1112.7	1871.9	2089.3
32.5°	34.4	35.8	37.2	41.3	53.7	93.6	250.3	543.3	906.4	1412.5	1590.0
35°	28.9	30.3	31.6	34.4	42.7	63.3	170.6	398.9	716.6	1071.4	1262.6
37.5°	26.1	26.1	27.5	28.9	35.8	45.4	111.5	272.3	547.5	881.7	994.3
40°	23.4	23.4	24.8	26.1	31.6	35.8	68.8	178.9	426.4	727.6	836.3
42.5°	20.6	22.0	23.4	23.4	27.5	31.6	48.2	133.5	346.6	650.5	726.2
45°	19.3	19.3	20.6	22.0	26.1	28.9	37.2	103.2	286.0	547.5	616.1
47.5°	17.9	17.9	19.3	20.6	24.8	27.5	30.3	79.8	239.3	442.9	491.1
50°	16.5	16.5	17.9	20.6	23.4	27.5	24.8	60.5	191.1	331.4	356.2
52.5°	13.8	15.1	16.5	17.9	20.6	26.1	20.6	46.8	158.2	232.4	233.8
55°	12.4	12.4	13.8	16.5	17.9	23.4	16.5	34.4	123.8	159.6	154.1
57.5°	12.4	11.0	12.4	13.8	15.1	20.6	12.4	26.1	92.2	107.3	99.1
60°	11.0	11.0	11.0	11.0	12.4	15.1	9.6	20.6	67.4	71.5	68.8
62.5°	9.6	9.6	9.6	9.6	9.6	12.4	8.3	15.1	45.4	45.4	42.7
65°	9.6	9.6	8.3	8.3	8.3	8.3	6.9	12.4	28.9	28.9	28.9
67.5°	9.6	8.3	8.3	6.9	6.9	6.9	5.5	9.6	17.9	20.6	19.3
70°	8.3	8.3	6.9	6.9	5.5	5.5	5.5	8.3	12.4	13.8	13.8
72.5°	6.9	6.9	6.9	5.5	5.5	4.1	4.1	6.9	9.6	9.6	9.6
75°	5.5	5.5	5.5	5.5	4.1	4.1	2.8	5.5	5.5	6.9	6.9
77.5°	4.1	4.1	4.1	4.1	4.1	2.8	2.8	4.1	4.1	4.1	4.1
80°	2.8	2.8	2.8	2.8	2.8	2.8	1.4	2.8	2.8	2.8	2.8
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
85°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
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

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

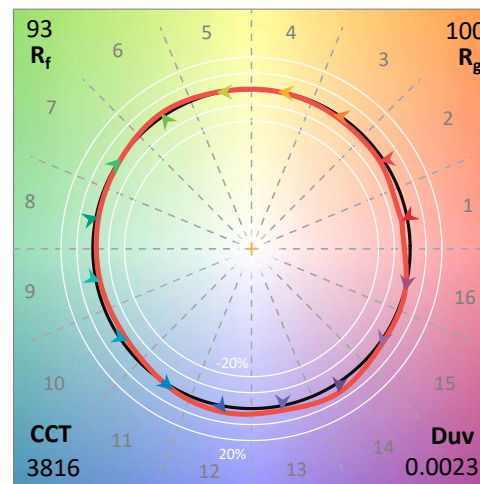
Test Date: 02/11/2021

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				

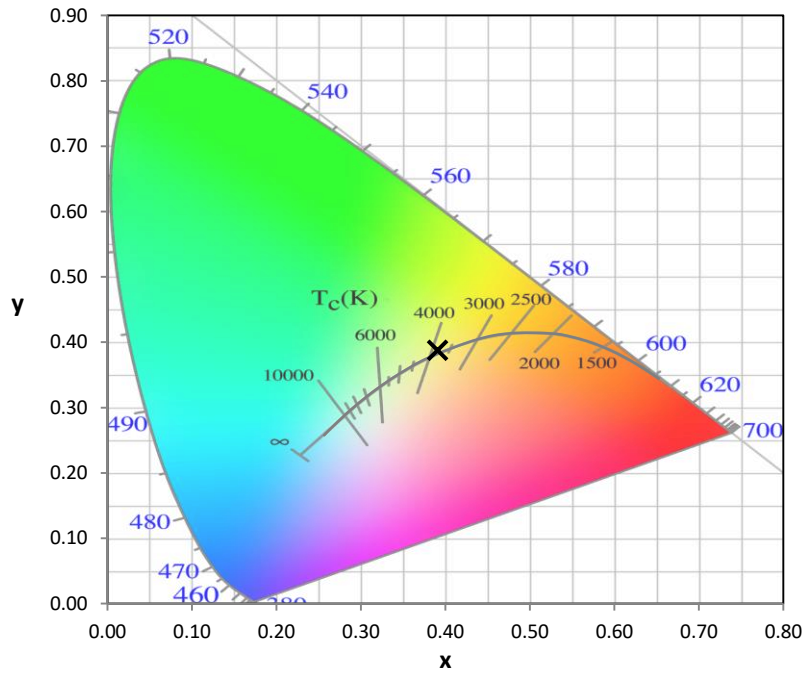


REPORT NUMBER: SP1-2101-124-4

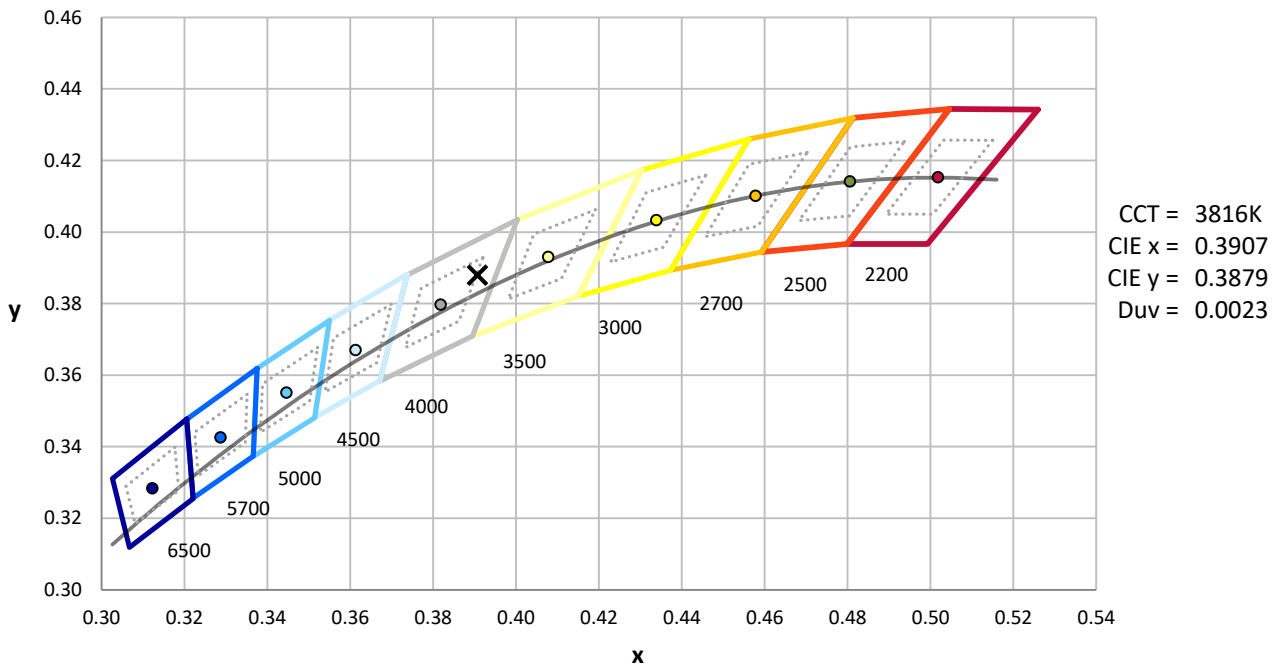
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	1/31/2021	7/31/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020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

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CIE 1931 Chromaticity Diagram



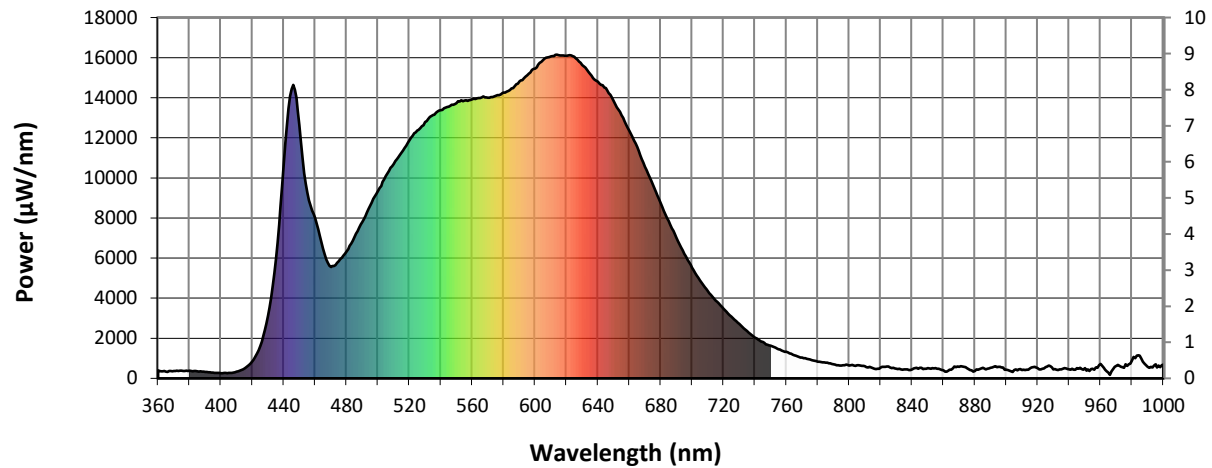
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

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Photopic Flux vs. Wavelength

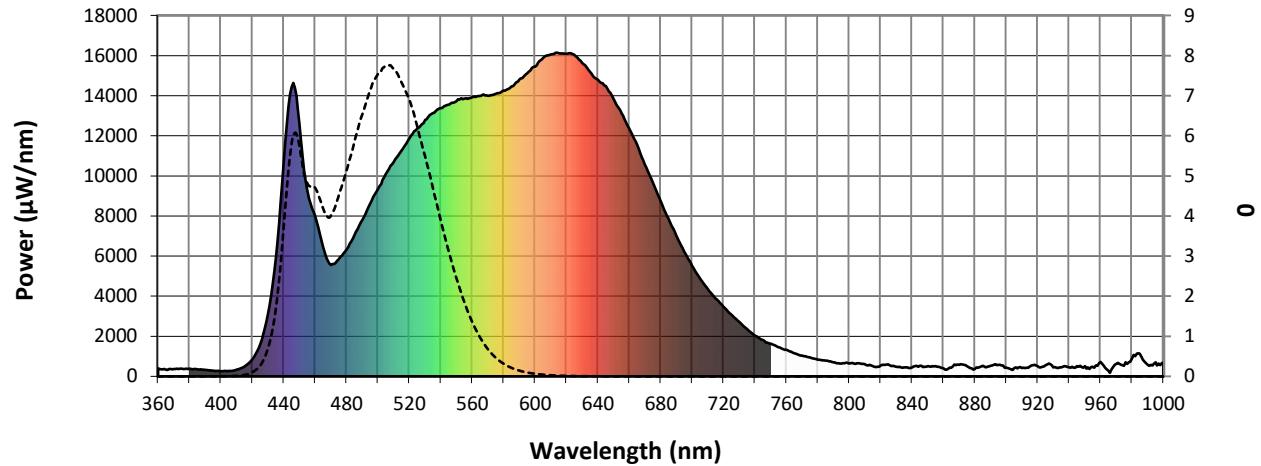


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	405	0.0	490	7814	1.1	620	16090	4.2	750	1625	0.0	880	367	0.0
365	335	0.0	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



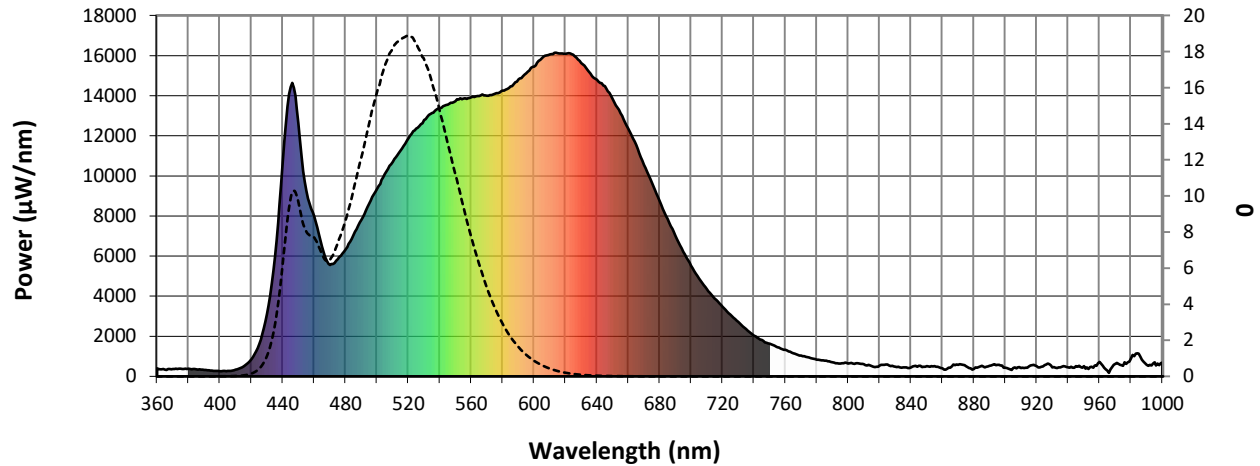
Scotopic Lumens: 1669.3

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

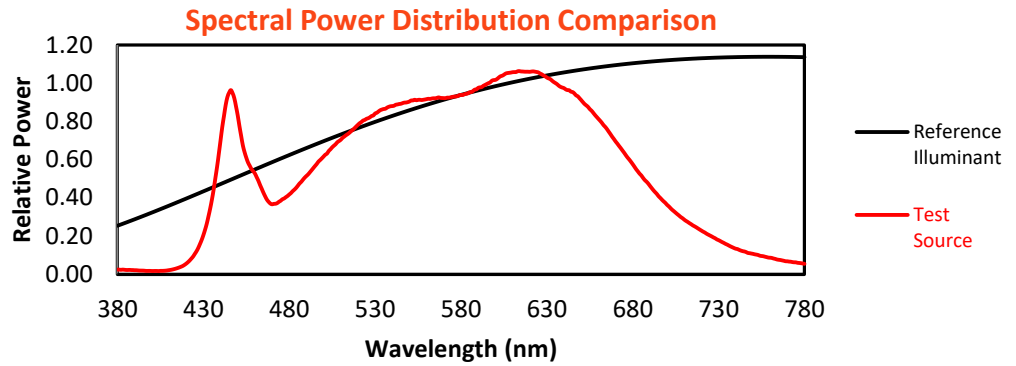
λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	405	0.0	490	7814	6.5	620	16090	0.0	750	1625	0.0	880	367	0.0
365	335	0.0	495	8606	7.1	625	16048	0.0	755	1453	0.0	885	533	0.0
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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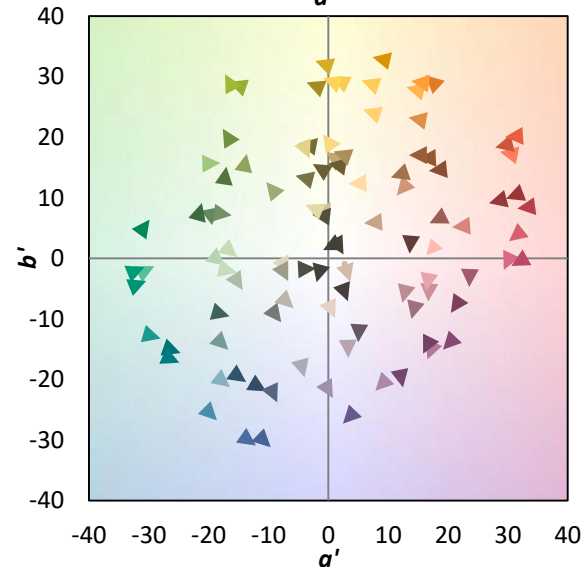
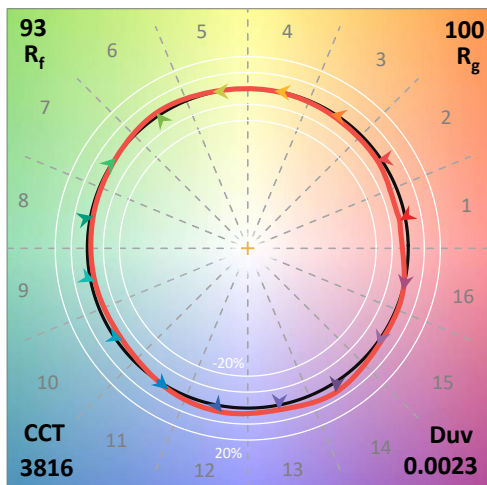
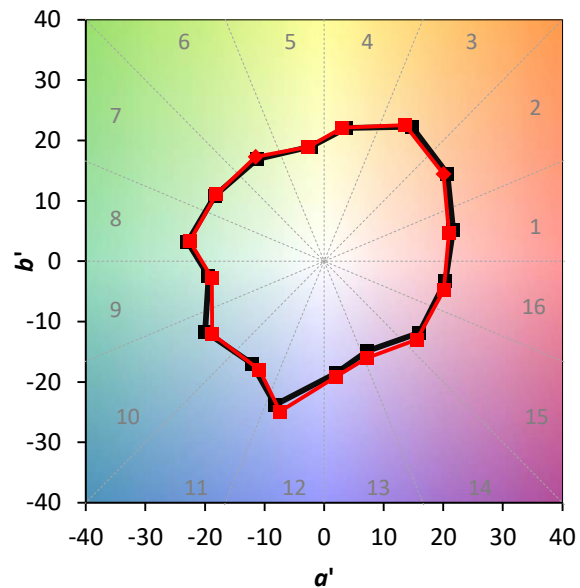
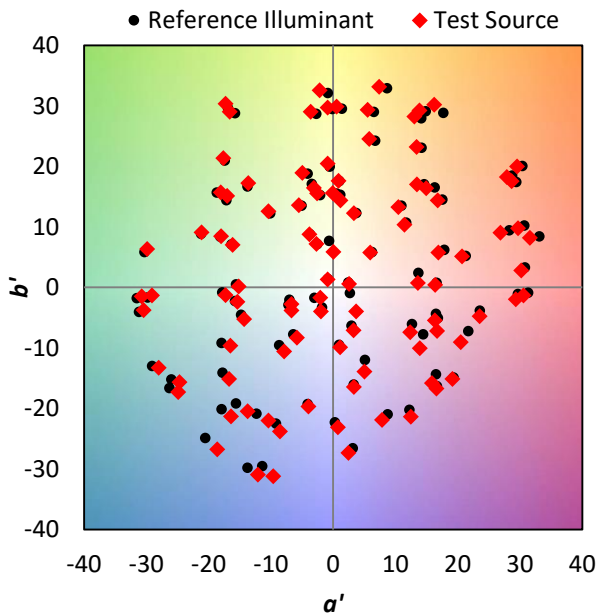
TM-30-18

Summary

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

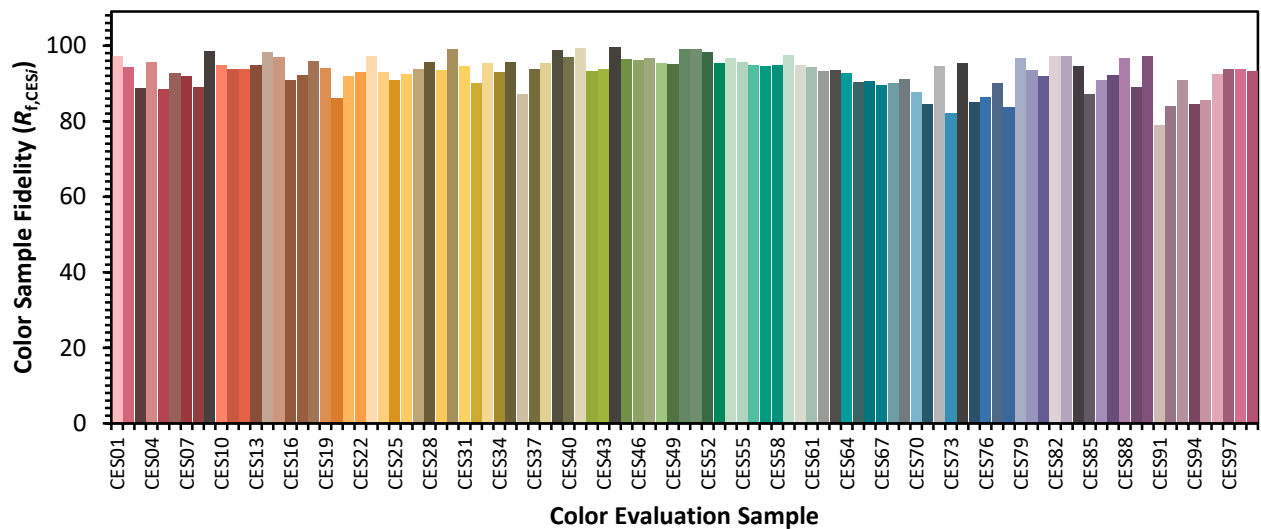


Color Vector Graphics

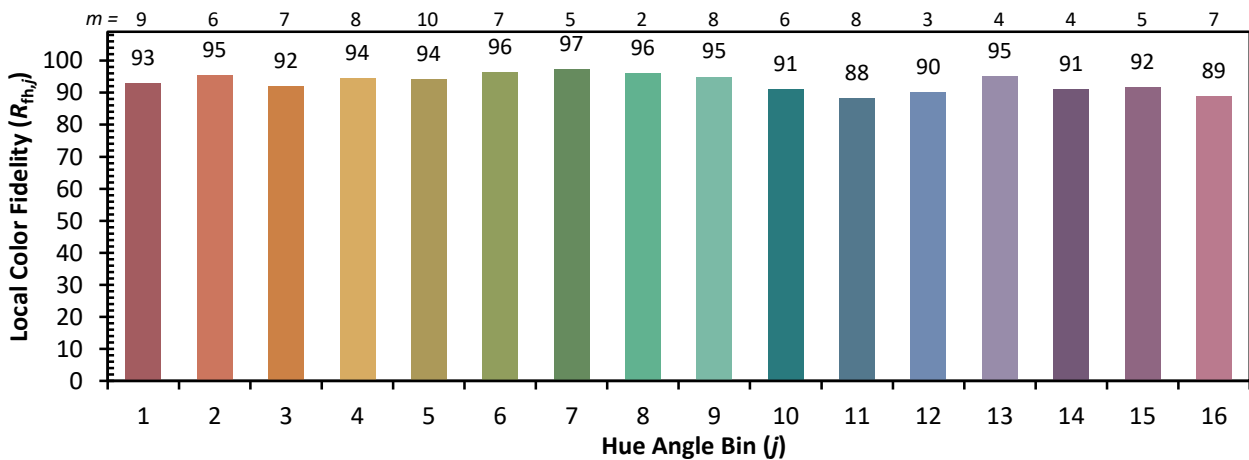
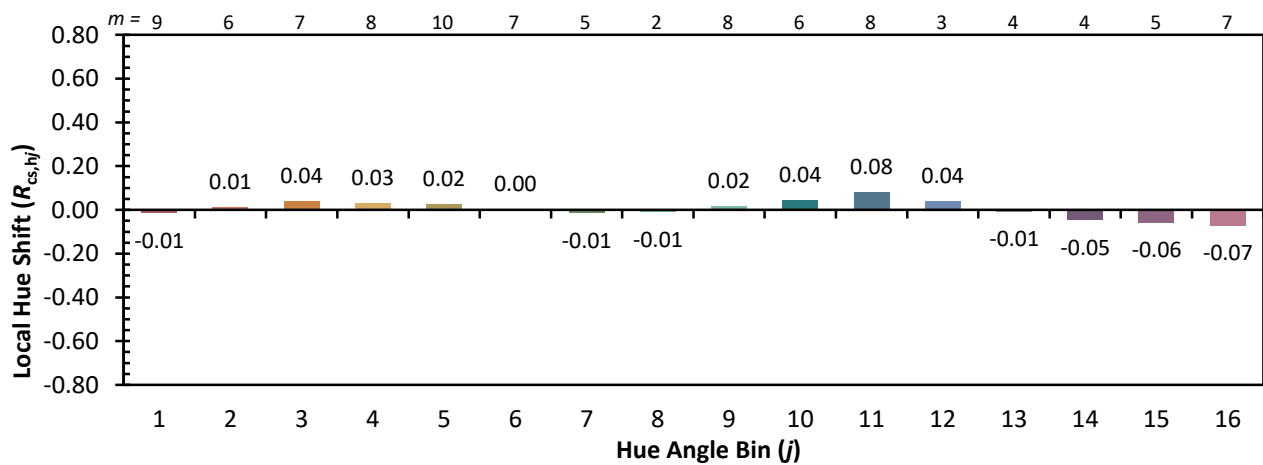
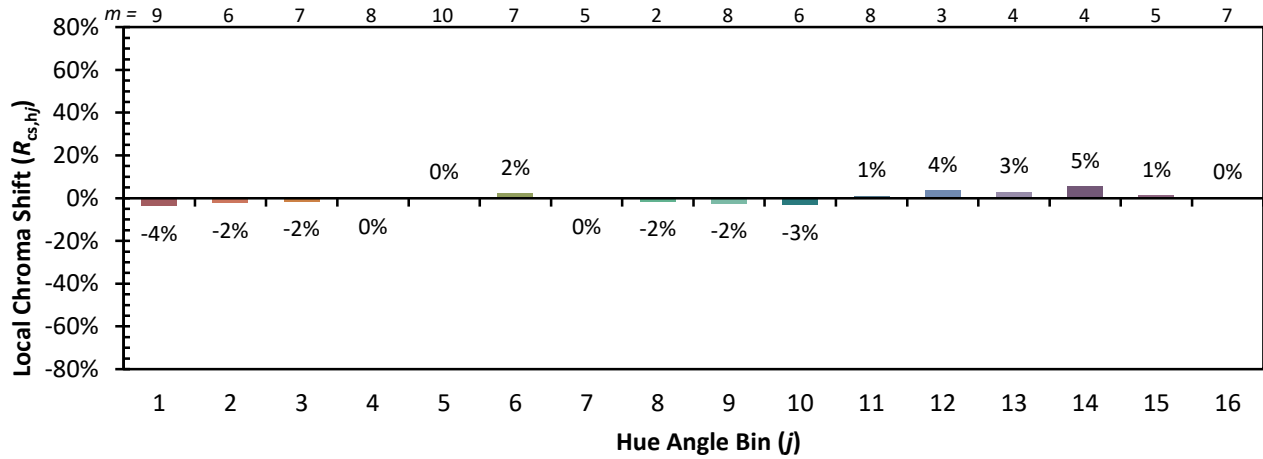


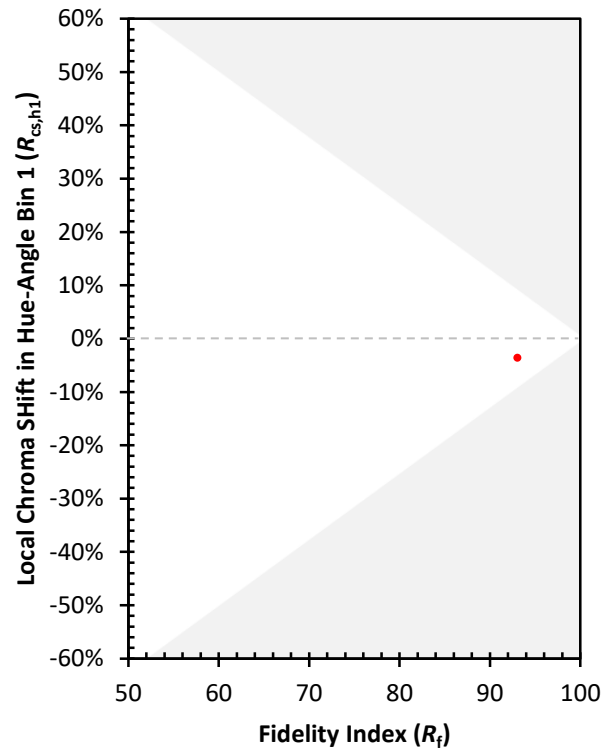
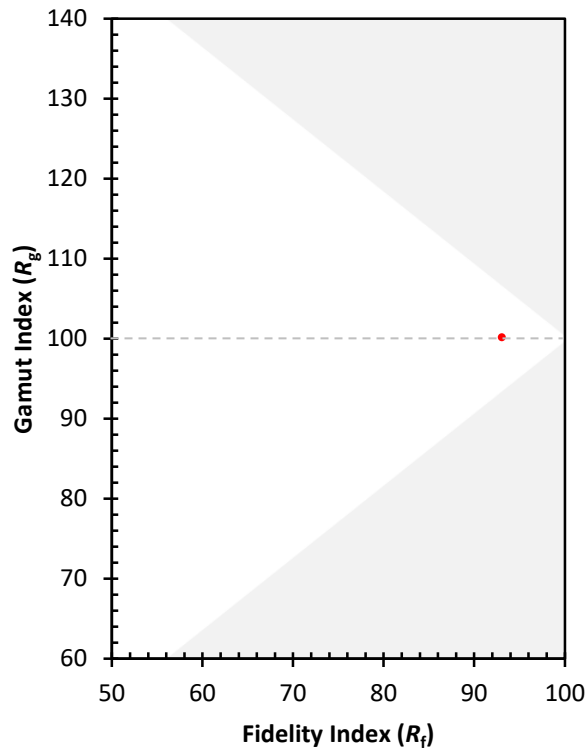
Individual Sample Fidelity Index ($R_{f,i}$)

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


Measure Comparisons


(END OF REPORT)