

Signify Classified - Internal
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: McGRAW-EDISON

Report Number: P543176

Luminaire Tested: **TT-D8-750-U-RW**

Issue Date: 6/22/2021

Test Information

Test Method: LM-79-08
Report Number: P543176
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2106-277-3)
Test Lab: INNOVATION CENTER
Issue Date: 6/22/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-D8-750-U-RW
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
5000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16536.9 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type II - Short
BUG Rating: B4 - U0 - G4

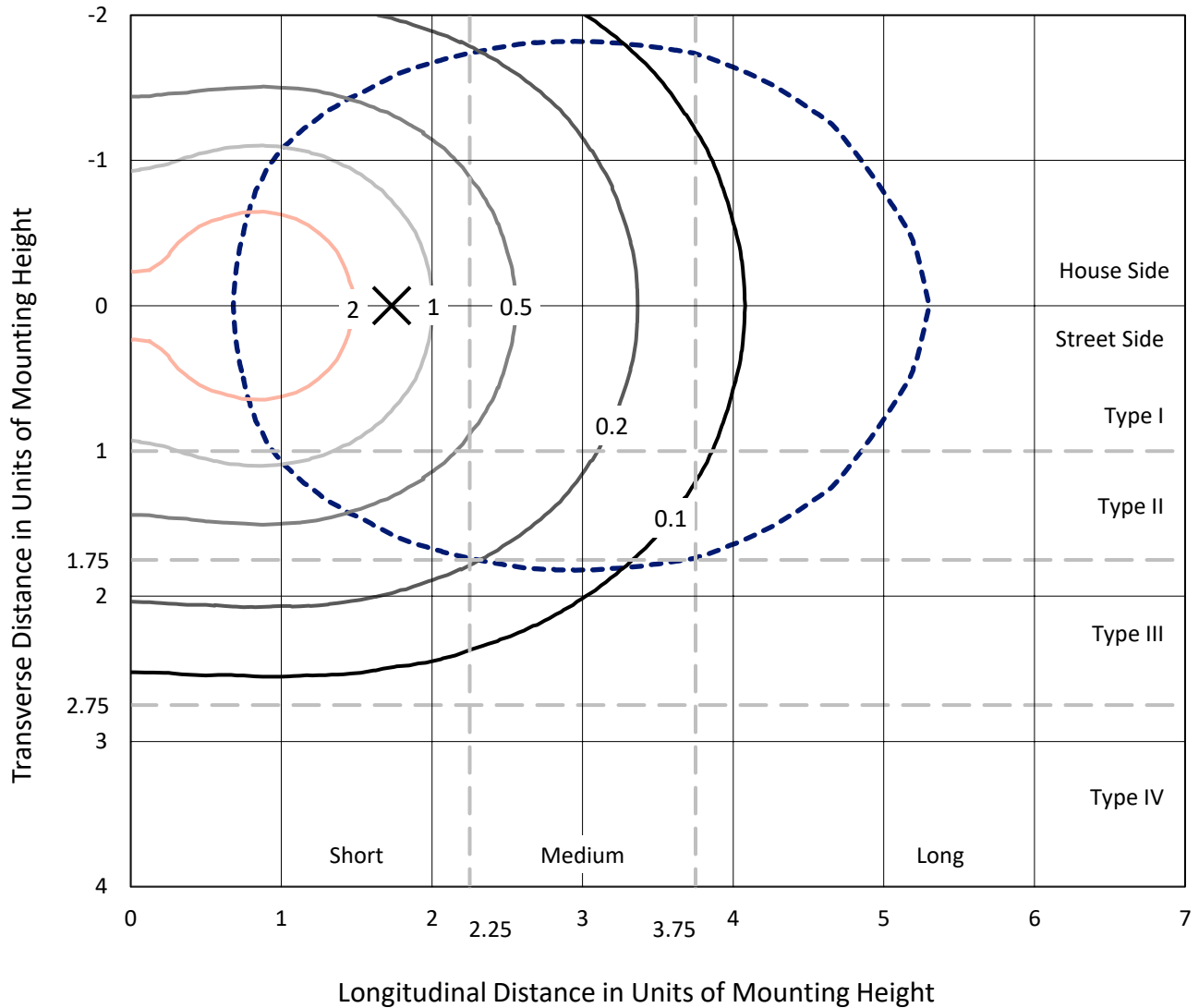
Input Watts (W): 152.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P543176
 CATALOG NUMBER: TT-D8-750-U-RW

Iso-Footcandle Lines of Horizontal Illumination

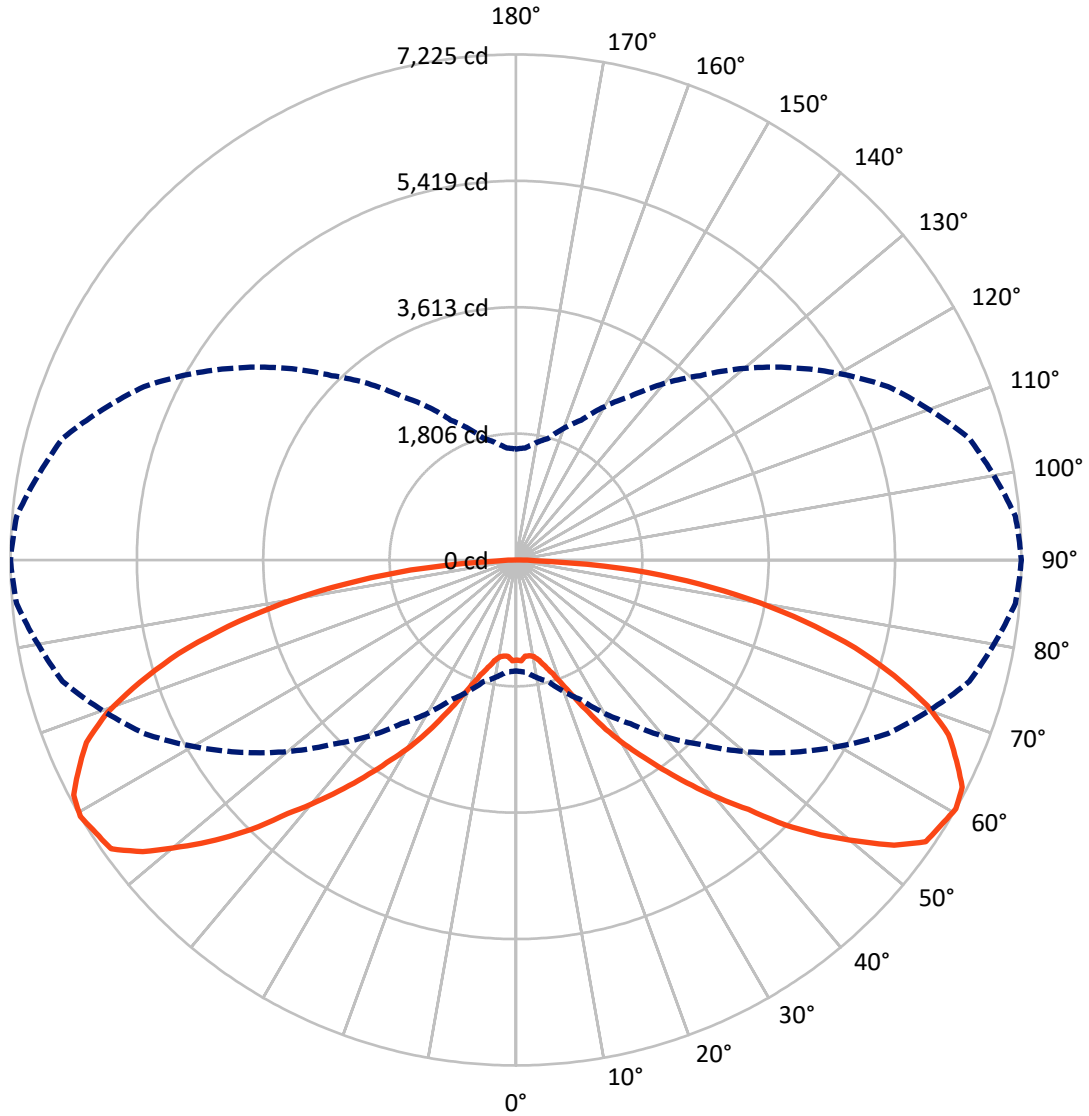
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type II - Short - N/A

REPORT NUMBER: P543176
CATALOG NUMBER: TT-D8-750-U-RW

Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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 CATALOG NUMBER: TT-D8-750-U-RW

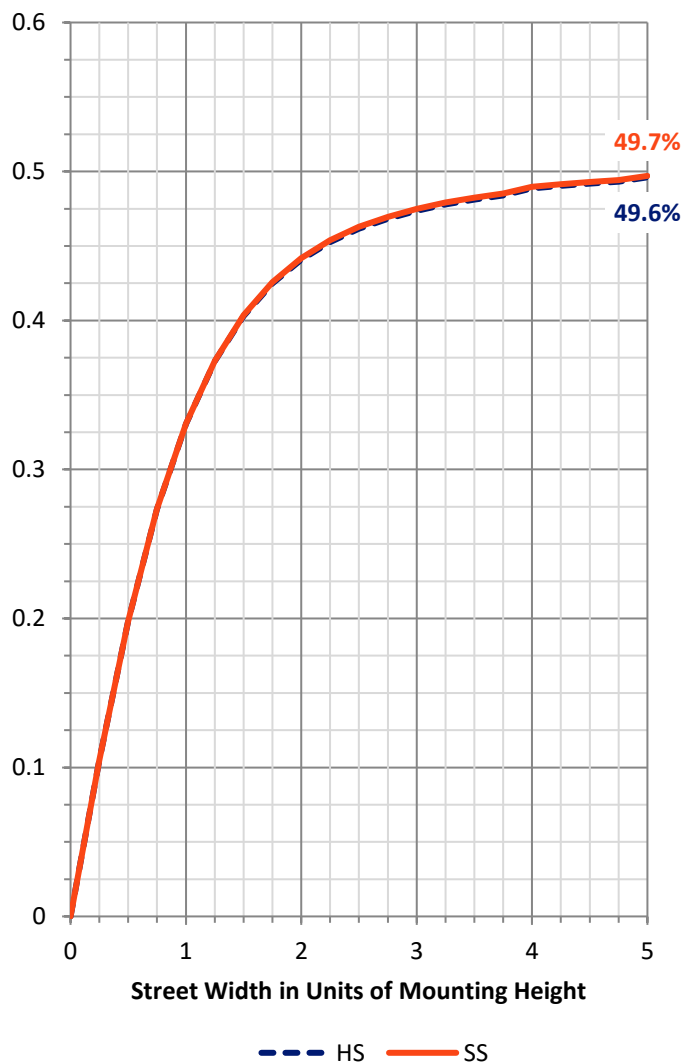
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8268.5	0.0	8268.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8268.5	0.0	8268.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	16536.9	0.0	16536.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	0.8
10°-20°	420.2	2.5
20°-30°	876.1	5.3
30°-40°	1601.8	9.7
40°-50°	2603.6	15.7
50°-60°	3616.4	21.9
60°-70°	3770.1	22.8
70°-80°	2738.2	16.6
80°-90°	777.3	4.7
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°-90°	16536.9	100.0
0°-180°	16536.9	100.0

Coefficient of Utilization

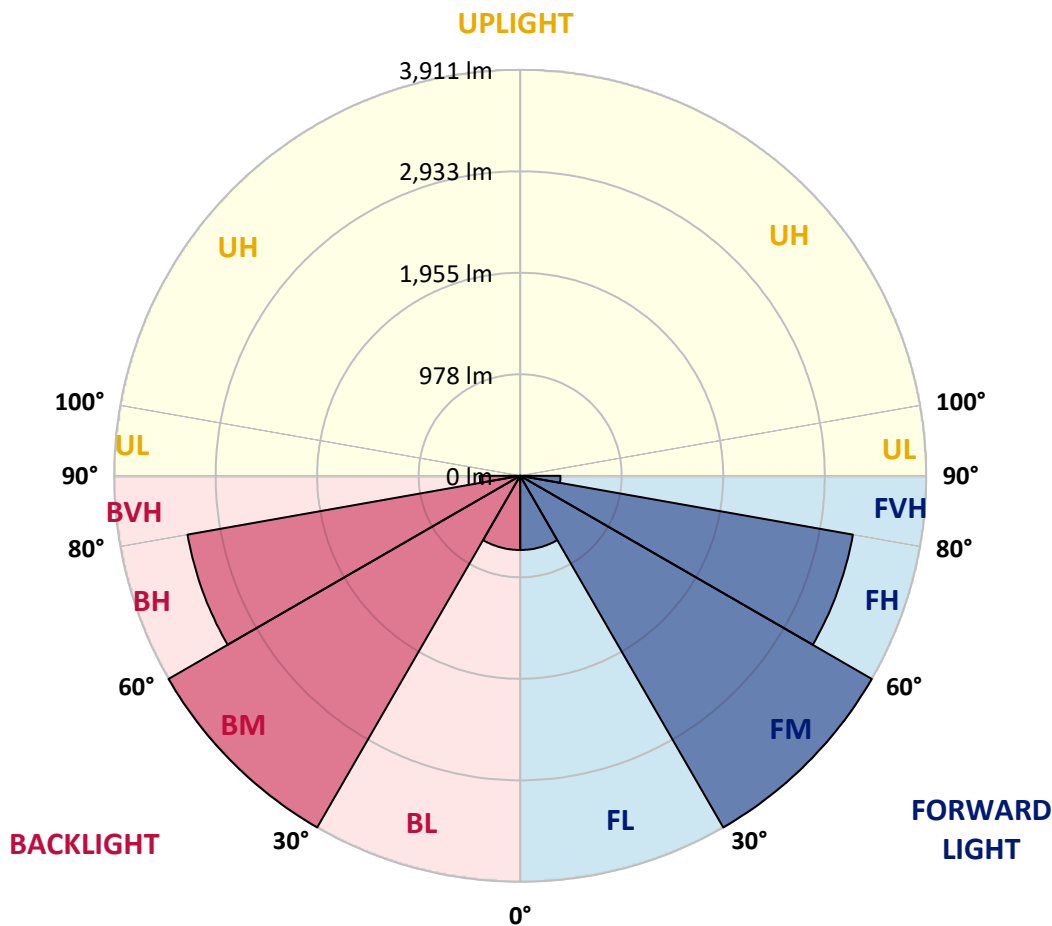


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 CATALOG NUMBER: TT-D8-750-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	714.7	4.3			
FM (30°-60°)	3910.9	23.6			
FH (60°-80°)	3254.2	19.7			G2/5000
FVH (80°-90°)	388.7	2.4			G3/500
BL (0°-30°)	714.7	4.3	B2/1000		
BM (30°-60°)	3910.9	23.6	B3/5000		
BH (60°-80°)	3254.2	19.7	B4/5000		G4/5000
BVH (80°-90°)	388.7	2.4			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type II Short





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 CATALOG NUMBER: TT-D8-750-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430	1430
2.5°	1431	1431	1431	1431	1433	1435	1439	1440	1442	1442	1442
5°	1415	1415	1412	1407	1402	1399	1397	1392	1387	1383	1382
7.5°	1393	1393	1388	1383	1378	1376	1376	1379	1381	1382	1382
10°	1376	1376	1373	1372	1375	1376	1380	1388	1397	1401	1402
12.5°	1363	1363	1367	1372	1386	1402	1423	1441	1463	1472	1471
15°	1353	1353	1363	1384	1414	1447	1489	1528	1560	1575	1584
17.5°	1347	1349	1367	1404	1455	1512	1571	1635	1688	1712	1711
20°	1343	1347	1376	1433	1508	1595	1690	1785	1852	1889	1895
22.5°	1356	1360	1398	1472	1577	1710	1846	1963	2072	2126	2130
25°	1369	1376	1428	1526	1662	1833	2014	2189	2319	2402	2409
27.5°	1393	1400	1459	1582	1764	1985	2227	2441	2616	2727	2740
30°	1417	1424	1496	1642	1867	2132	2427	2696	2912	3026	3059
32.5°	1441	1451	1536	1714	1983	2300	2652	2962	3218	3361	3367
35°	1473	1486	1584	1791	2094	2470	2867	3245	3528	3709	3716
37.5°	1502	1513	1632	1865	2219	2642	3104	3522	3890	4047	4089
40°	1536	1557	1680	1943	2331	2808	3341	3834	4218	4449	4478
42.5°	1576	1590	1729	2019	2453	2988	3593	4158	4610	4850	4875
45°	1620	1635	1792	2104	2589	3208	3888	4543	5078	5365	5403
47.5°	1656	1674	1835	2189	2715	3381	4162	4949	5520	5848	5873
50°	1670	1704	1875	2243	2804	3548	4410	5254	5923	6293	6316
52.5°	1695	1710	1902	2286	2907	3694	4663	5576	6313	6712	6771
55°	1684	1699	1886	2302	2930	3770	4784	5810	6573	7001	7109
57.5°	1640	1671	1858	2262	2923	3782	4845	5871	6687	7174	7160
60°	1585	1609	1801	2205	2857	3727	4793	5867	6709	7166	7225
62.5°	1508	1534	1721	2099	2784	3643	4755	5755	6650	7074	7159
65°	1409	1435	1615	2010	2596	3452	4521	5660	6485	6896	6921
67.5°	1295	1307	1485	1836	2457	3276	4323	5316	6105	6572	6671
70°	1157	1185	1335	1673	2218	2974	3970	4952	5773	6159	6241
72.5°	1003	1032	1167	1467	1965	2674	3578	4535	5255	5646	5653
75°	839	859	977	1236	1663	2303	3108	3934	4596	4968	5005
77.5°	668	686	774	994	1352	1897	2573	3335	3864	4171	4221
80°	484	500	570	735	1030	1464	2030	2604	3052	3318	3378
82.5°	312	315	367	483	677	984	1422	1876	2205	2419	2465
85°	151	151	178	237	334	536	810	1131	1340	1486	1513
87.5°	38	39	41	42	49	59	93	189	287	316	276
90°	0	0	0	0	0	0	0	0	0	0	0

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

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

McGRAW-EDISON

Report Number: SP1-2006-844-1

Luminaire Tested: TT-D4-750-U-WQ

Test Date: 11/06/2020

Data applicable to product families TT-x-750 and TTN-x-750

Test Information

Test Method: LM-79-08
 Report Number: SP1-2006-844-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 11/06/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: MCGRAW-EDISON
 Catalog Number: **TT-D4-750-U-WQ**
 Description: MCGRAW EDISON

DISTRIBUTION

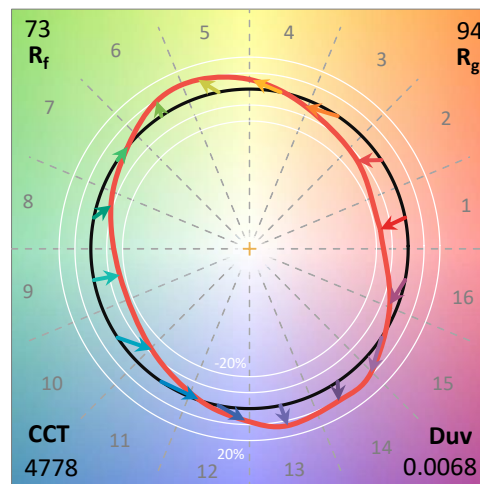
Spectral Parameters

CCT (K): 4778
 CIE u': 0.2092
 CIE v': 0.4955
 Duv: 0.0068
 CIE x: 0.3535
 CIE y: 0.3721
 CIE z: 0.2744
 Peak Wavelength (nm): 449
 Dominant Wavelength (nm): 570
 Purity: 17.8
 Rf: 73.3
 Rg: 94.5

CRI (Ra):	71.0		
R1:	67.7	R9:	-28.7
R2:	75.2	R10:	41.2
R3:	80.8	R11:	67.2
R4:	71.5	R12:	35.9
R5:	67.8	R13:	68.5
R6:	65.6	R14:	89.2
R7:	82.2		
R8:	57.2		

Test Conditions

Stabilization Time: 62M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.6/45%
 Sphere Temperature (°C): 24.7

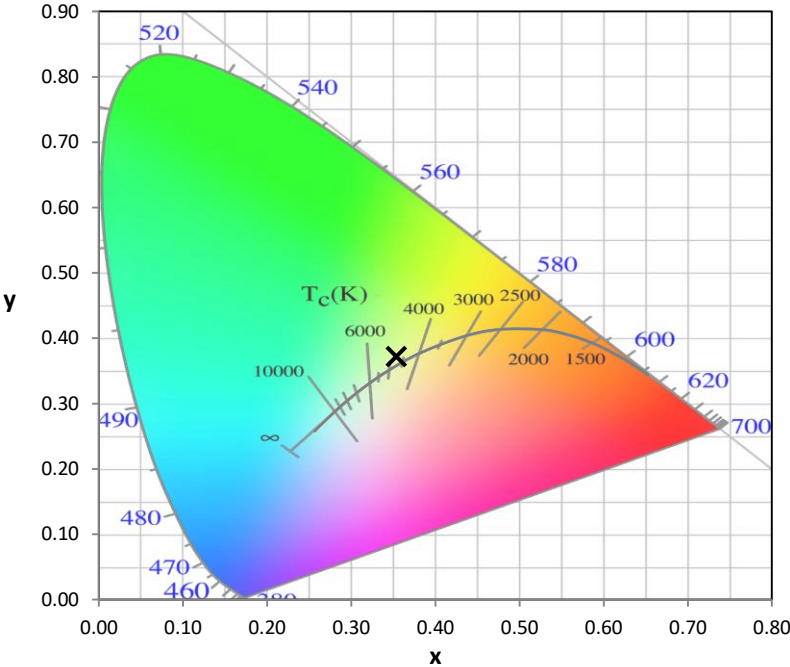


REPORT NUMBER: SP1-2006-844-1

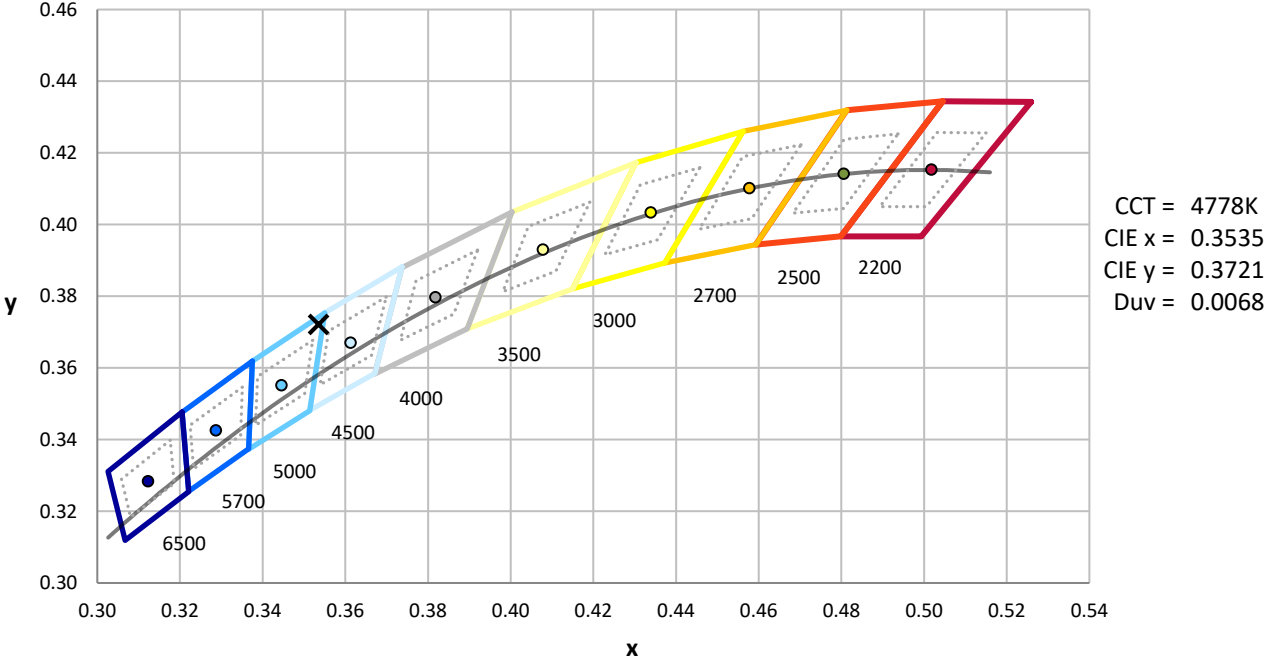
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/3/2019	12/3/2020
AC Power Source	IN0063	12/3/2019	12/3/2020
DC Power Source	IN0208	12/3/2019	12/3/2020
Sphere Thermometer	IN0085	12/3/2019	12/3/2020
Room Thermometer	IN0046	12/3/2019	12/3/2020

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CIE 1931 Chromaticity Diagram



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

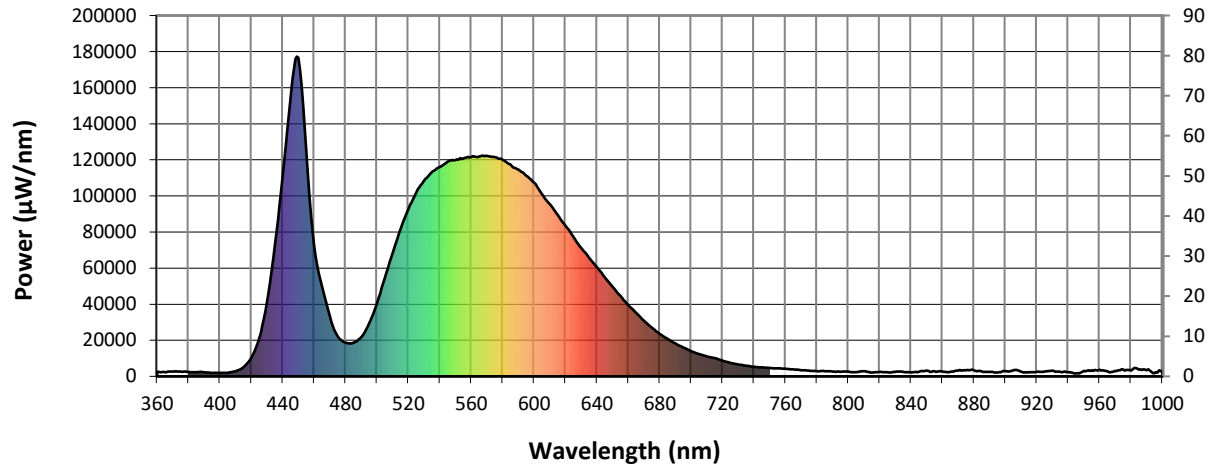


CCT = 4778K
 CIE x = 0.3535
 CIE y = 0.3721
 Duv = 0.0068

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2006-844-1

Photopic Flux vs. Wavelength

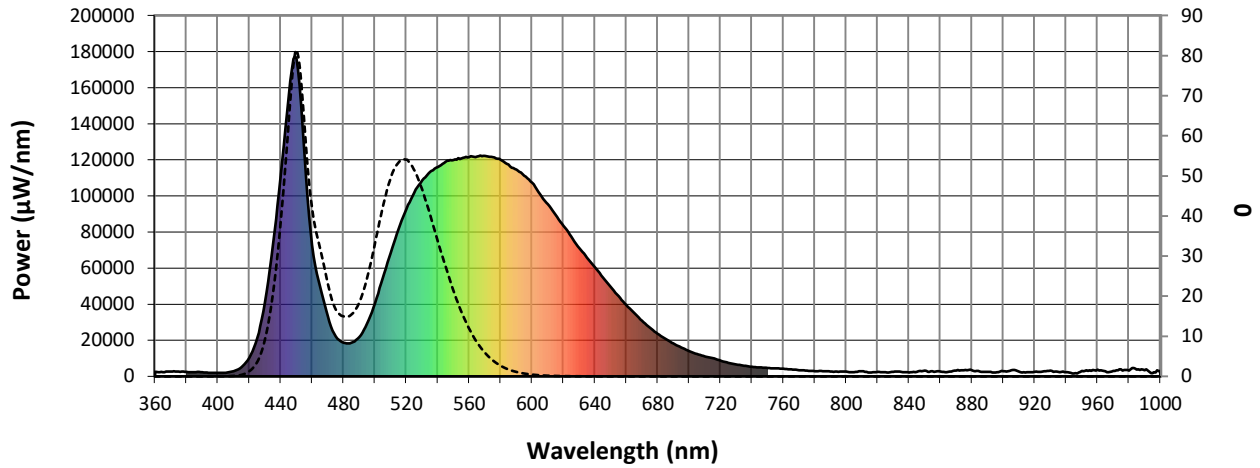


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λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	2529	0.0	490	21819	3.1	620	83437	21.7	750	4608	0.0	880	3335	0.0
365	2361	0.0	495	29270	5.3	625	77569	17.1	755	4412	0.0	885	2653	0.0
370	2648	0.0	500	40589	9.0	630	71183	12.9	760	4227	0.0	890	2411	0.0
375	2655	0.0	505	54498	15.2	635	65734	9.9	765	3922	0.0	895	2118	0.0
380	2428	0.0	510	68399	23.5	640	60418	7.2	770	3461	0.0	900	2873	0.0
385	2334	0.0	515	81428	33.7	645	54736	5.3	775	3226	0.0	905	3367	0.0
390	2269	0.0	520	92826	45.0	650	49620	3.6	780	2883	0.0	910	2749	0.0
395	2020	0.0	525	101684	54.6	655	44517	2.6	785	2864	0.0	915	2283	0.0
400	1873	0.0	530	108580	63.9	660	39493	1.6	790	2715	0.0	920	2425	0.0
405	2015	0.0	535	113290	70.3	665	35066	1.1	795	2547	0.0	925	2705	0.0
410	2831	0.0	540	116042	75.6	670	30825	0.7	800	2585	0.0	930	3144	0.0
415	5121	0.0	545	118948	79.2	675	27031	0.5	805	2308	0.0	935	2539	0.0
420	10348	0.0	550	119916	81.5	680	23555	0.3	810	2796	0.0	940	2288	0.0
425	21288	0.1	555	120734	82.5	685	20841	0.2	815	2196	0.0	945	1604	0.0
430	41173	0.3	560	121523	82.6	690	18232	0.1	820	2415	0.0	950	3031	0.0
435	73003	0.9	565	121859	81.0	695	16035	0.1	825	2281	0.0	955	3356	0.0
440	111013	1.7	570	122246	79.5	700	14010	0.0	830	2524	0.0	960	3704	0.0
445	154787	3.2	575	121449	75.6	705	12408	0.0	835	2461	0.0	965	2847	0.0
450	176733	4.6	580	120111	71.4	710	11063	0.0	840	2195	0.0	970	2985	0.0
455	124334	4.2	585	117354	65.2	715	10136	0.0	845	2487	0.0	975	3963	0.0
460	72664	3.0	590	114565	59.2	720	8693	0.0	850	3144	0.0	980	3221	0.0
465	49806	2.6	595	111127	52.7	725	7522	0.0	855	2809	0.0	985	3794	0.0
470	32995	2.1	600	107253	46.2	730	6612	0.0	860	2621	0.0	990	3296	0.0
475	22184	1.7	605	101156	39.2	735	5947	0.0	865	2410	0.0	995	1779	0.0
480	18691	1.8	610	95370	32.8	740	5253	0.0	870	3143	0.0	1000	2977	0.0
485	18593	2.2	615	89556	27.0	745	5032	0.0	875	3421	0.0			

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Scotopic Flux vs. Wavelength



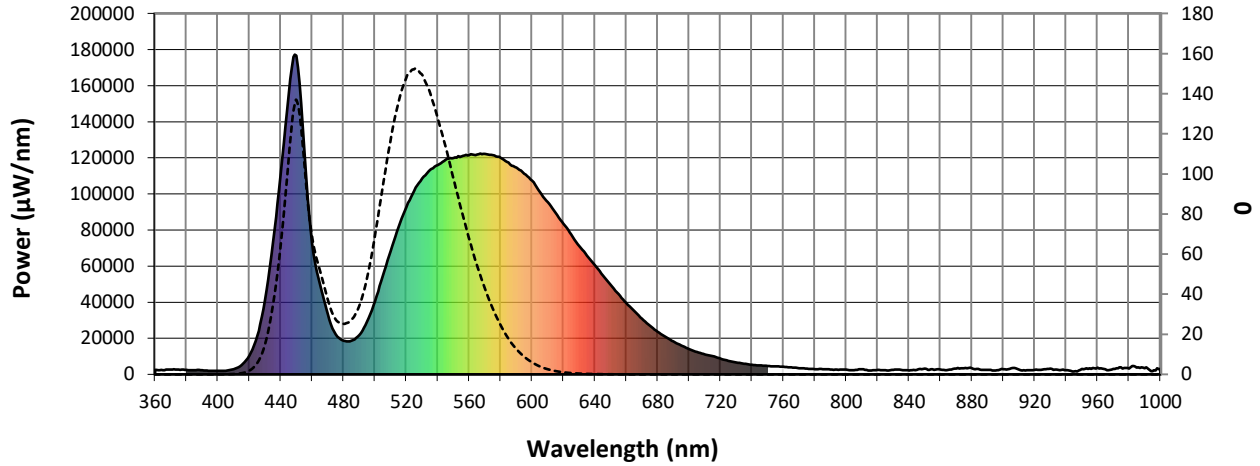
Scotopic Lumens: 4867.6

S/P: 0.66

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	2529	0.0	490	21819	33.6	620	83437	1.0	750	4608	0.0	880	3335	0.0
365	2361	0.0	495	29270	47.3	625	77569	0.7	755	4412	0.0	885	2653	0.0
370	2648	0.0	500	40589	67.9	630	71183	0.4	760	4227	0.0	890	2411	0.0
375	2655	0.0	505	54498	92.6	635	65734	0.2	765	3922	0.0	895	2118	0.0
380	2428	0.0	510	68399	115.9	640	60418	0.2	770	3461	0.0	900	2873	0.0
385	2334	0.0	515	81428	135.0	645	54736	0.1	775	3226	0.0	905	3367	0.0
390	2269	0.0	520	92826	147.5	650	49620	0.1	780	2883	0.0	910	2749	0.0
395	2020	0.0	525	101684	152.1	655	44517	0.0	785	2864	0.0	915	2283	0.0
400	1873	0.0	530	108580	149.7	660	39493	0.0	790	2715	0.0	920	2425	0.0
405	2015	0.1	535	113290	141.2	665	35066	0.0	795	2547	0.0	925	2705	0.0
410	2831	0.2	540	116042	128.2	670	30825	0.0	800	2585	0.0	930	3144	0.0
415	5121	0.5	545	118948	114.0	675	27031	0.0	805	2308	0.0	935	2539	0.0
420	10348	1.7	550	119916	98.1	680	23555	0.0	810	2796	0.0	940	2288	0.0
425	21288	5.2	555	120734	82.5	685	20841	0.0	815	2196	0.0	945	1604	0.0
430	41173	14.0	560	121523	67.9	690	18232	0.0	820	2415	0.0	950	3031	0.0
435	73003	32.6	565	121859	54.7	695	16035	0.0	825	2281	0.0	955	3356	0.0
440	111013	62.0	570	122246	43.1	700	14010	0.0	830	2524	0.0	960	3704	0.0
445	154787	103.6	575	121449	33.1	705	12408	0.0	835	2461	0.0	965	2847	0.0
450	176733	137.0	580	120111	24.7	710	11063	0.0	840	2195	0.0	970	2985	0.0
455	124334	108.6	585	117354	17.9	715	10136	0.0	845	2487	0.0	975	3963	0.0
460	72664	70.2	590	114565	12.8	720	8693	0.0	850	3144	0.0	980	3221	0.0
465	49806	52.6	595	111127	8.9	725	7522	0.0	855	2809	0.0	985	3794	0.0
470	32995	38.0	600	107253	6.0	730	6612	0.0	860	2621	0.0	990	3296	0.0
475	22184	27.7	605	101156	4.0	735	5947	0.0	865	2410	0.0	995	1779	0.0
480	18691	25.2	610	95370	2.6	740	5253	0.0	870	3143	0.0	1000	2977	0.0
485	18593	27.0	615	89556	1.7	745	5032	0.0	875	3421	0.0			

REPORT NUMBER: SP1-2006-844-1

Melanopic Flux vs. Wavelength

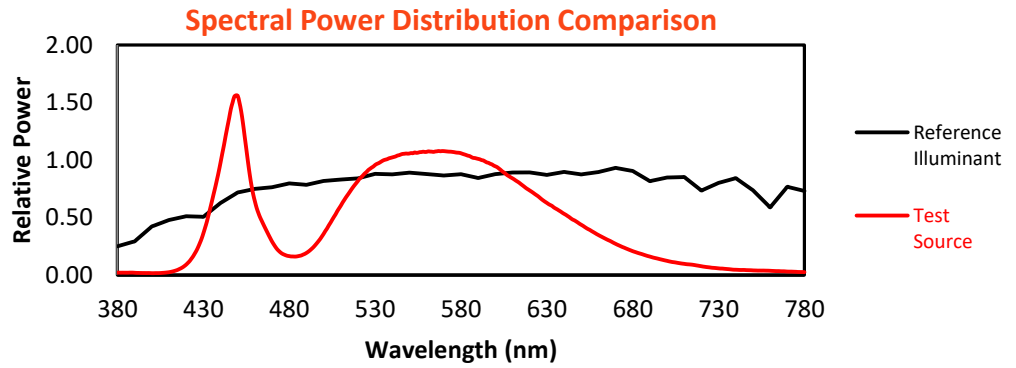


Melanopic Lumens: 12457.9 S/P: 1.7

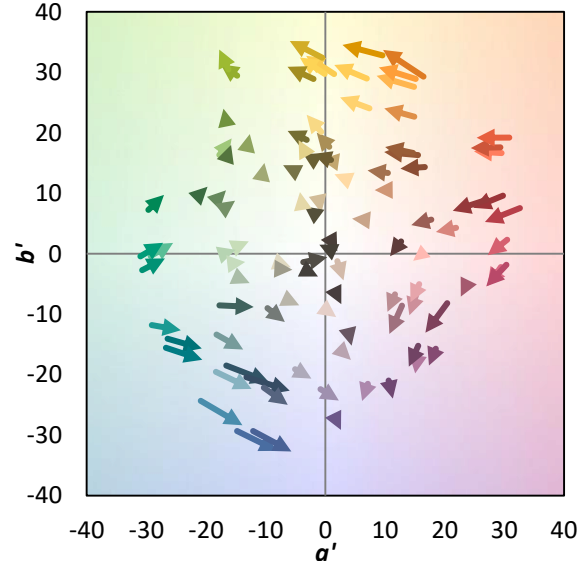
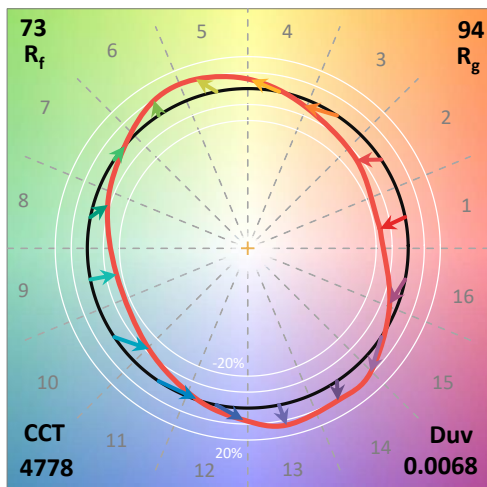
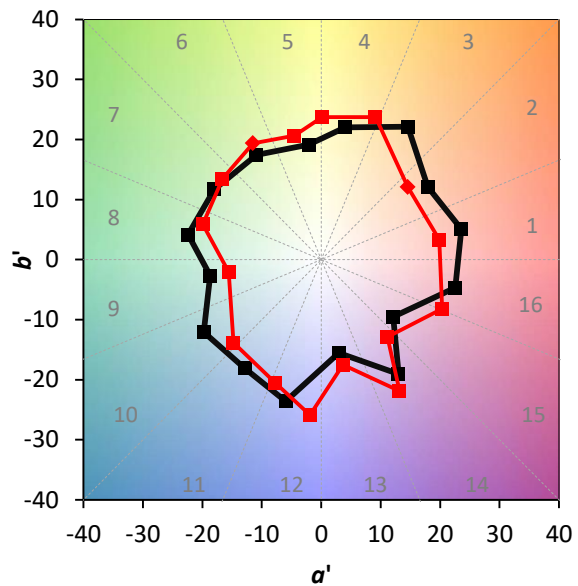
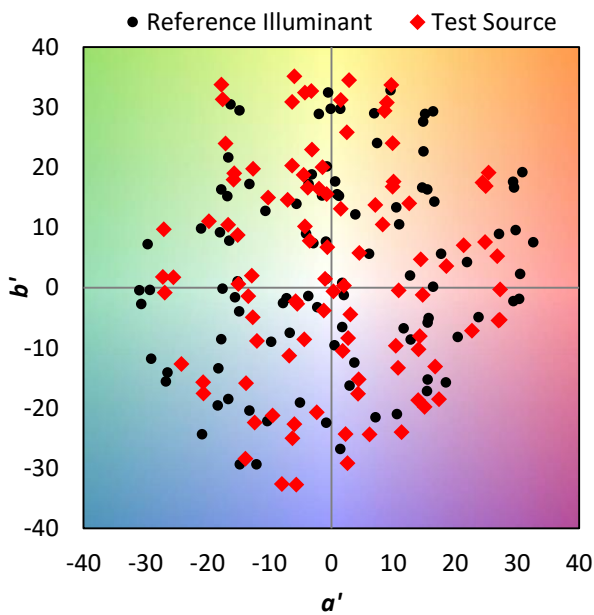
λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	2529	0.0	490	21819	18.2	620	83437	0.1	750	4608	0.0	880	3335	0.0
365	2361	0.0	495	29270	24.2	625	77569	0.0	755	4412	0.0	885	2653	0.0
370	2648	0.0	500	40589	32.6	630	71183	0.0	760	4227	0.0	890	2411	0.0
375	2655	0.0	505	54498	41.8	635	65734	0.0	765	3922	0.0	895	2118	0.0
380	2428	0.0	510	68399	49.1	640	60418	0.0	770	3461	0.0	900	2873	0.0
385	2334	0.0	515	81428	53.2	645	54736	0.0	775	3226	0.0	905	3367	0.0
390	2269	0.0	520	92826	54.0	650	49620	0.0	780	2883	0.0	910	2749	0.0
395	2020	0.0	525	101684	51.6	655	44517	0.0	785	2864	0.0	915	2283	0.0
400	1873	0.0	530	108580	46.9	660	39493	0.0	790	2715	0.0	920	2425	0.0
405	2015	0.0	535	113290	40.8	665	35066	0.0	795	2547	0.0	925	2705	0.0
410	2831	0.1	540	116042	34.0	670	30825	0.0	800	2585	0.0	930	3144	0.0
415	5121	0.3	545	118948	27.6	675	27031	0.0	805	2308	0.0	935	2539	0.0
420	10348	1.2	550	119916	21.5	680	23555	0.0	810	2796	0.0	940	2288	0.0
425	21288	3.3	555	120734	16.3	685	20841	0.0	815	2196	0.0	945	1604	0.0
430	41173	8.7	560	121523	12.0	690	18232	0.0	820	2415	0.0	950	3031	0.0
435	73003	19.5	565	121859	8.6	695	16035	0.0	825	2281	0.0	955	3356	0.0
440	111013	37.1	570	122246	6.0	700	14010	0.0	830	2524	0.0	960	3704	0.0
445	154787	61.1	575	121449	4.0	705	12408	0.0	835	2461	0.0	965	2847	0.0
450	176733	81.4	580	120111	2.7	710	11063	0.0	840	2195	0.0	970	2985	0.0
455	124334	65.1	585	117354	1.7	715	10136	0.0	845	2487	0.0	975	3963	0.0
460	72664	42.8	590	114565	1.1	720	8693	0.0	850	3144	0.0	980	3221	0.0
465	49806	32.5	595	111127	0.7	725	7522	0.0	855	2809	0.0	985	3794	0.0
470	32995	23.6	600	107253	0.5	730	6612	0.0	860	2621	0.0	990	3296	0.0
475	22184	16.9	605	101156	0.3	735	5947	0.0	865	2410	0.0	995	1779	0.0
480	18691	15.0	610	95370	0.2	740	5253	0.0	870	3143	0.0	1000	2977	0.0
485	18593	15.3	615	89556	0.1	745	5032	0.0	875	3421	0.0			

Summary

$R_f = 73.3$
 $R_g = 94.5$
 CIE $R_a = 71.0$
 $R_g = -28.7$

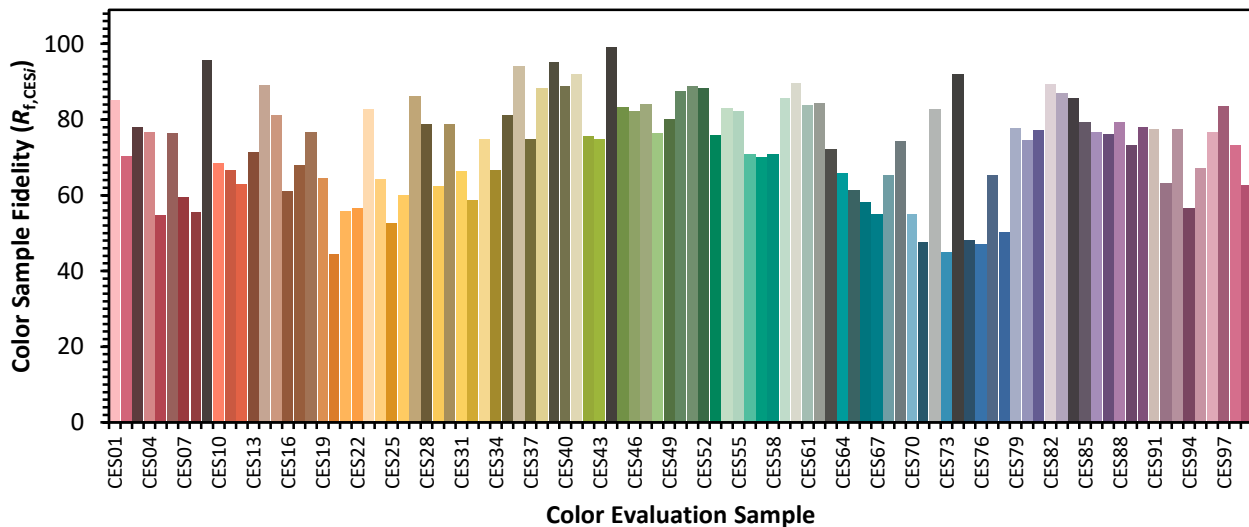


Color Vector Graphics

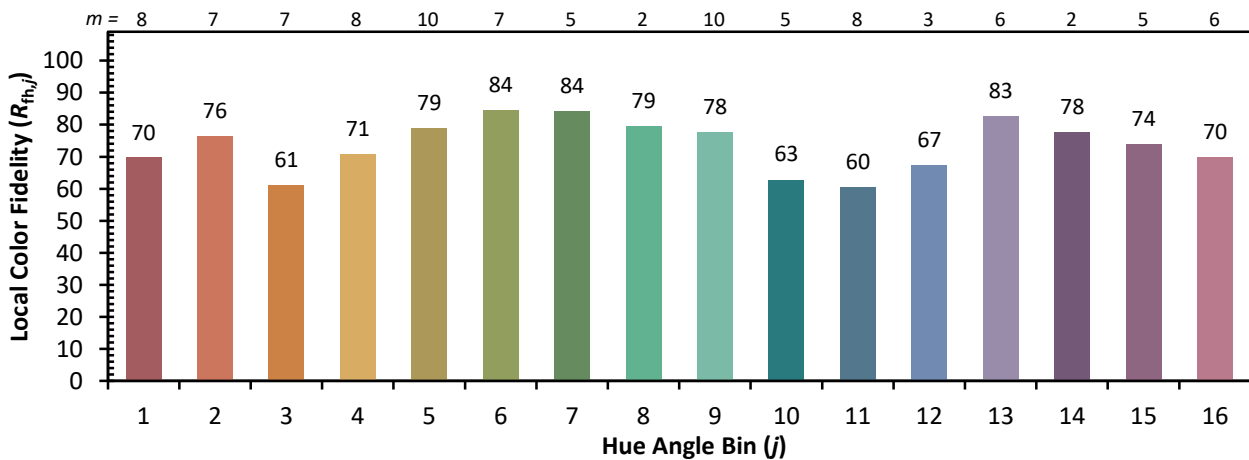
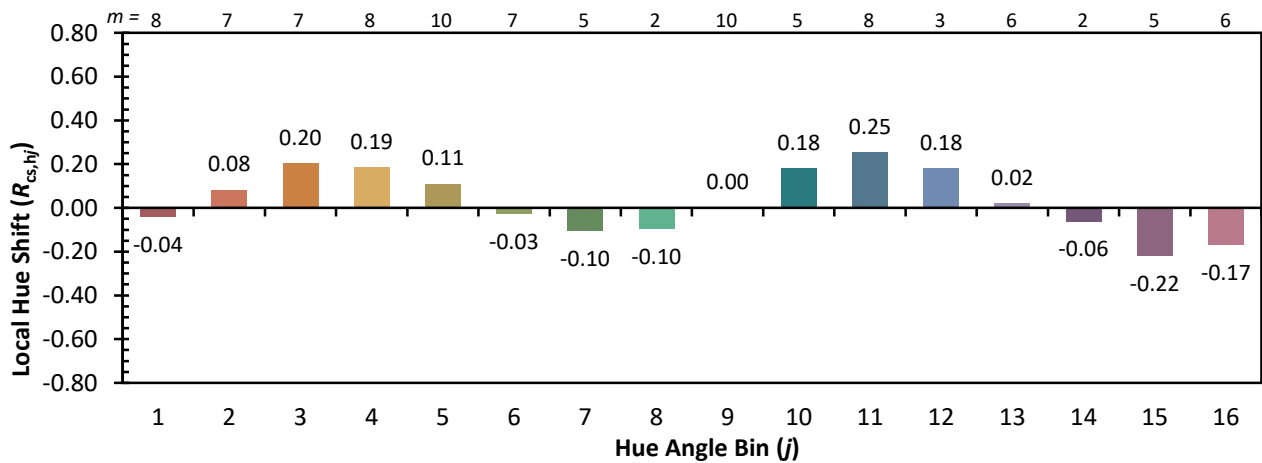
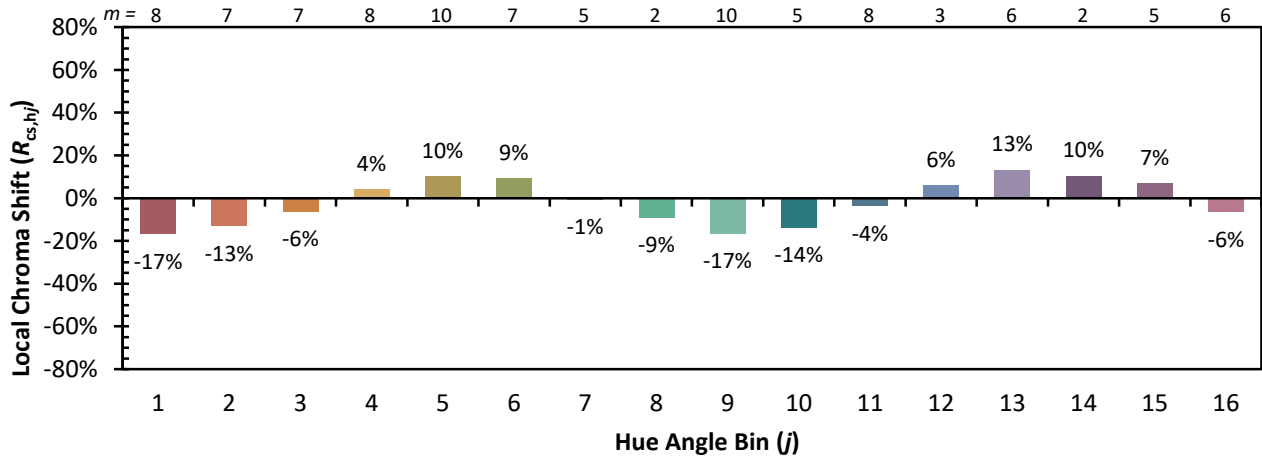


Individual Sample Fidelity Index ($R_{f,i}$)

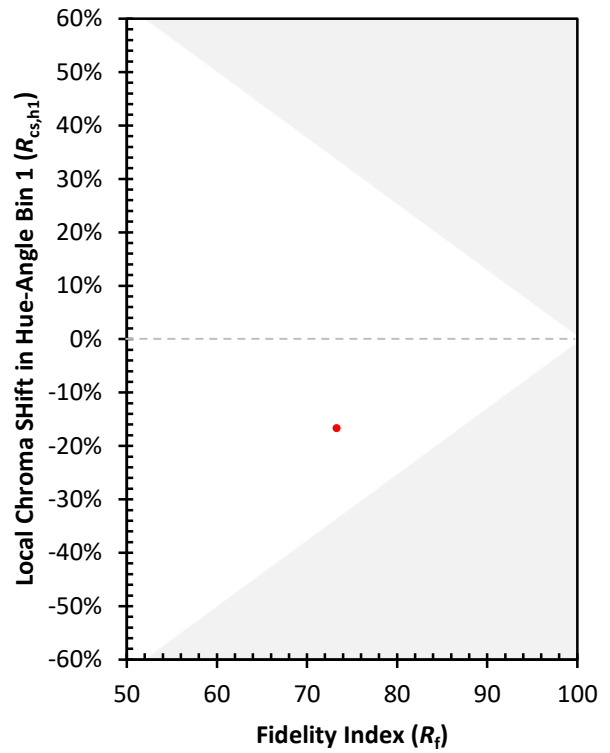
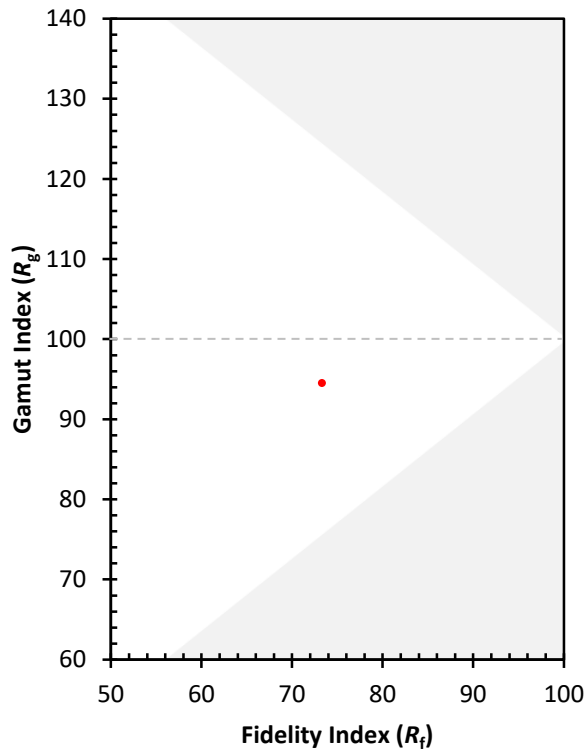
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 47
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 79	CES53 = 76	CES78 = 50
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 59	CES57 = 70	CES82 = 89
CES08 = 38	CES33 = 75	CES58 = 71	CES83 = 87
CES09 = 29	CES34 = 67	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 81	CES60 = 90	CES85 = 79
CES11 = 56	CES36 = 94	CES61 = 84	CES86 = 77
CES12 = 61	CES37 = 75	CES62 = 84	CES87 = 76
CES13 = 41	CES38 = 88	CES63 = 72	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 66	CES89 = 73
CES15 = 70	CES40 = 89	CES65 = 61	CES90 = 78
CES16 = 46	CES41 = 92	CES66 = 58	CES91 = 77
CES17 = 49	CES42 = 75	CES67 = 55	CES92 = 63
CES18 = 55	CES43 = 75	CES68 = 65	CES93 = 78
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 57
CES20 = 64	CES45 = 83	CES70 = 55	CES95 = 67
CES21 = 85	CES46 = 82	CES71 = 48	CES96 = 77
CES22 = 77	CES47 = 84	CES72 = 83	CES97 = 84
CES23 = 91	CES48 = 76	CES73 = 45	CES98 = 73
CES24 = 90	CES49 = 80	CES74 = 92	CES99 = 63
CES25 = 71	CES50 = 88	CES75 = 48	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)