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: P543171

Luminaire Tested: **TT-D8-740-U-RW**

Issue Date: 6/22/2021

Report Generated By 670246001

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P543171
	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-D8-740-U-RW
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	4000K, 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

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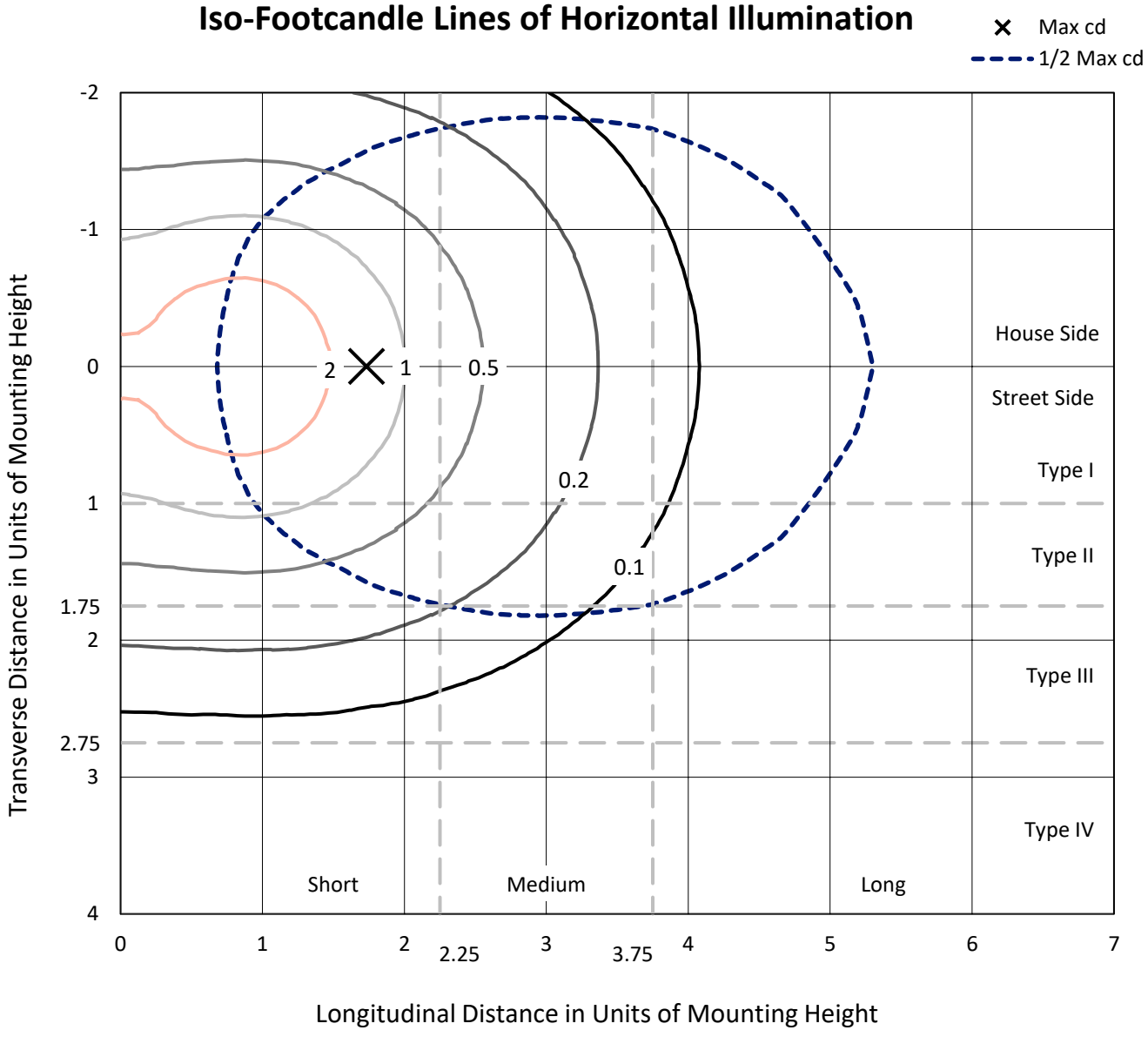
Scaled Data Report

REPORT NUMBER: P543171
CATALOG NUMBER: TT-D8-740-U-RW

Iso-Footcandle Lines of Horizontal Illumination



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

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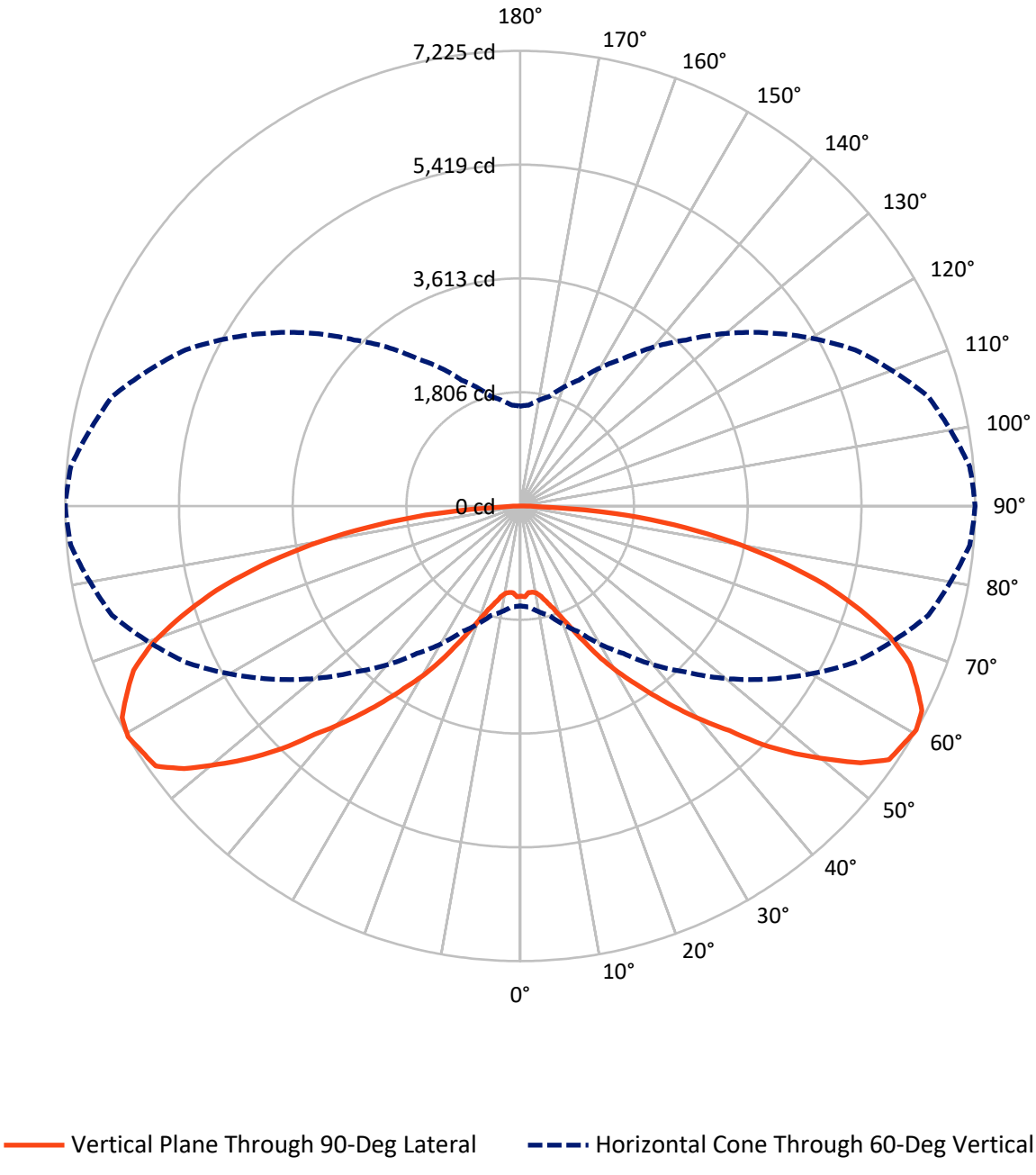
CATALOG NUMBER: TT-D8-740-U-RW

Luminous Intensity Polar Plot



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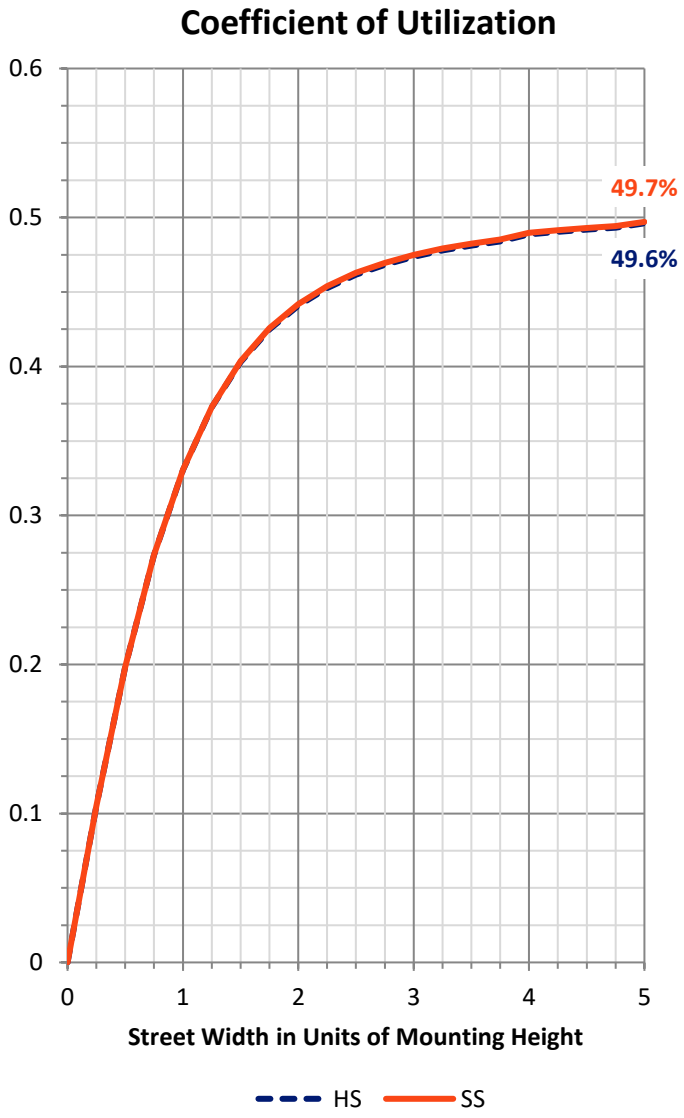
REPORT NUMBER: P543171
CATALOG NUMBER: TT-D8-740-U-RW

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



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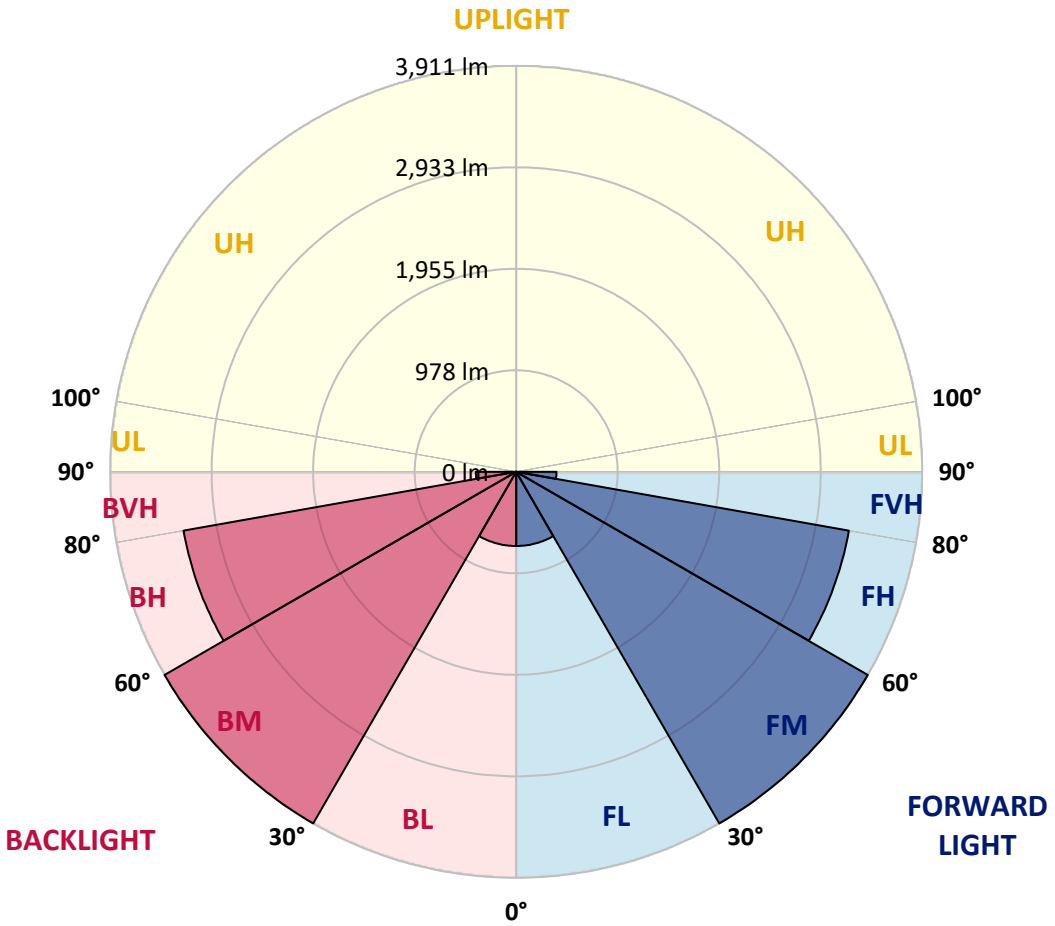
Scaled Data Report

REPORT NUMBER: P543171
CATALOG NUMBER: TT-D8-740-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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REPORT NUMBER: P543171
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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*

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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: SP1-2006-844-6

Luminaire Tested: TT-D2-740-U-RW

Test Date: 06/30/2020

Data applicable to product families TT-x-740 and TTN-x-740

Report Generated By controller / USPTCWHP6086842

Test Information

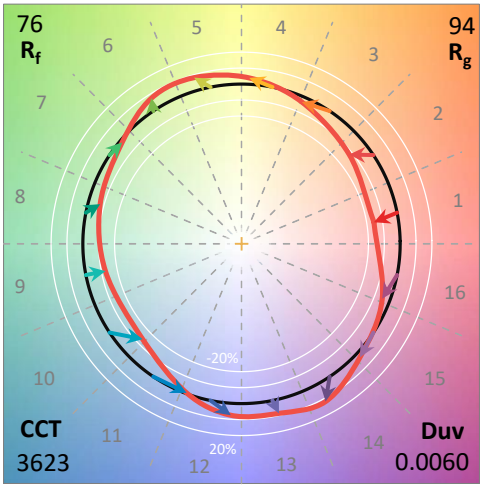
Test Method:	LM-79-08
Report Number:	SP1-2006-844-6
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1
Measurement Geometry:	4π
Issue Date:	06/30/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	**TT-D2-740-U-RW**
Description:	MCGRAW EDISON

RECTANGULAR DISTRIBUTION

Spectral Parameters

CCT (K):	3623	CRI (Ra):	72.6		
CIE u':	0.2297	R1:	69.4	R9:	-22.4
CIE v':	0.5166	R2:	78.4	R10:	49.0
Duv:	0.0060	R3:	86.1	R11:	67.4
CIE x:	0.4044	R4:	72.3	R12:	39.3
CIE y:	0.4042	R5:	68.2	R13:	70.5
CIE z:	0.1914	R6:	69.2	R14:	91.9
Peak Wavelength (nm):	588	R7:	83.0		
Dominant Wavelength (nm):	578	R8:	54.2		
Purity:	42.8				

Rf:	76.2
Rg:	94.3



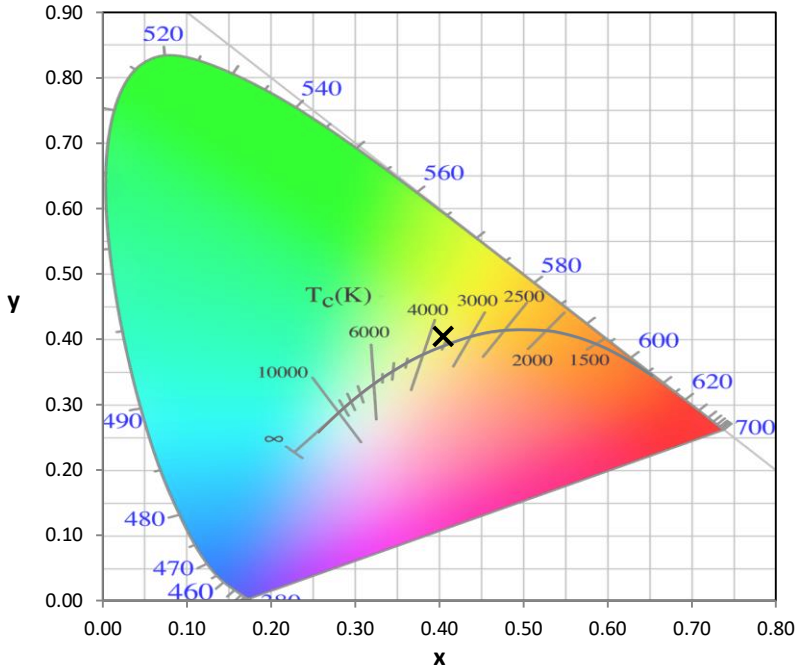
Test Conditions

Stabilization Time:	207M
Operation Time:	12H
Room Temperature (°C) / RH%:	25.9/42%
Sphere Temperature (°C):	25.8

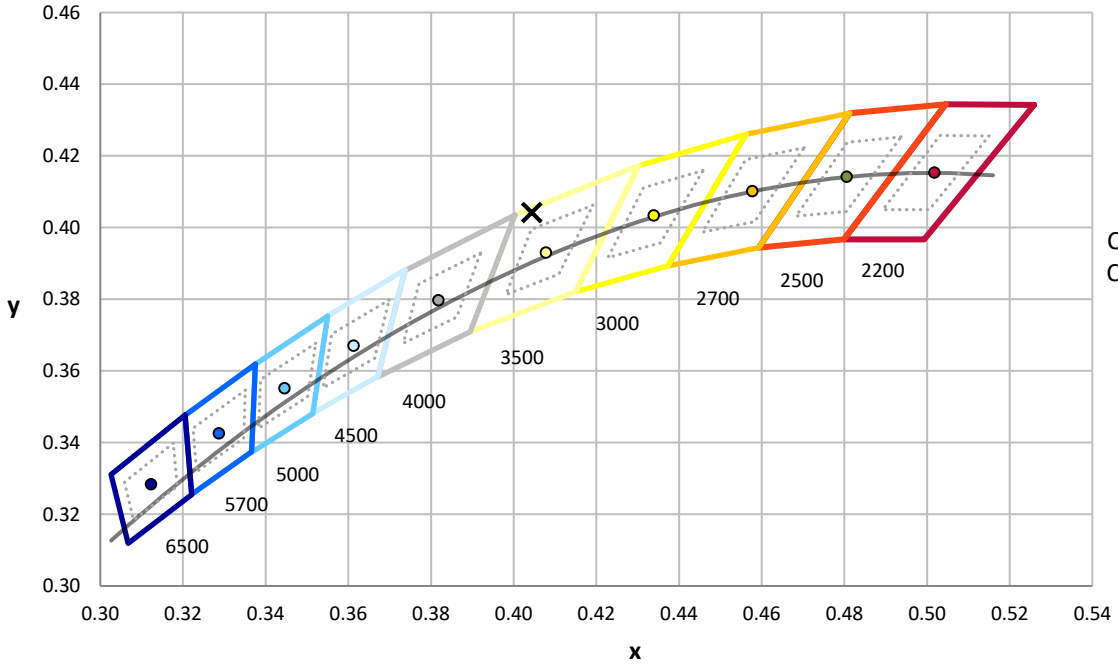
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/3/2019	12/3/2020
AC Power Source	IN0063	12/3/2019	12/3/2020
DC Power Source	IN0208	12/3/2019	12/3/2020
Sphere Thermometer	IN0085	12/3/2019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

REPORT NUMBER: SP1-2006-844-6

CIE 1931 Chromaticity Diagram



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

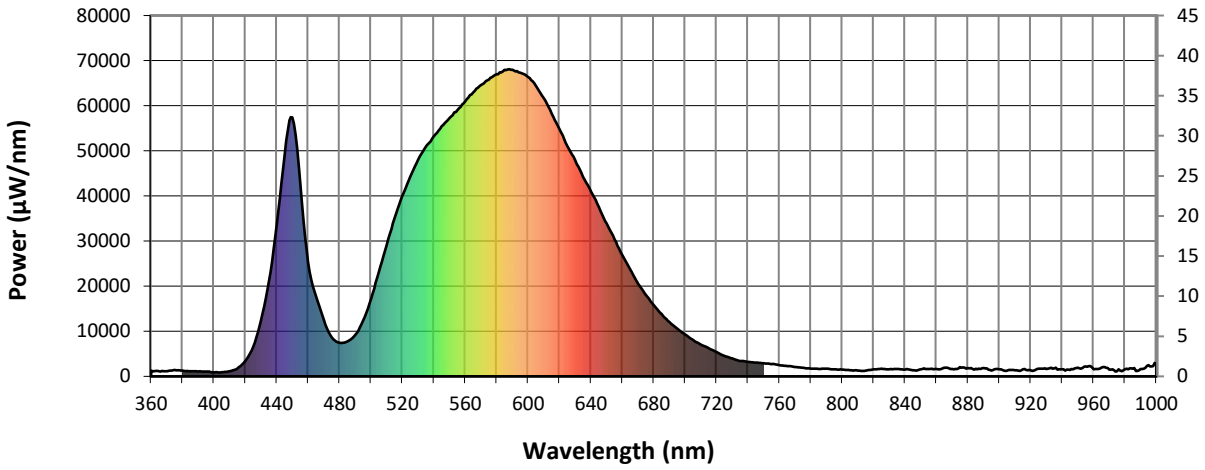


CCT = 3623K
CIE x = 0.4044
CIE y = 0.4042
Duv = 0.0060

Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2006-844-6

Photopic Flux vs. Wavelength



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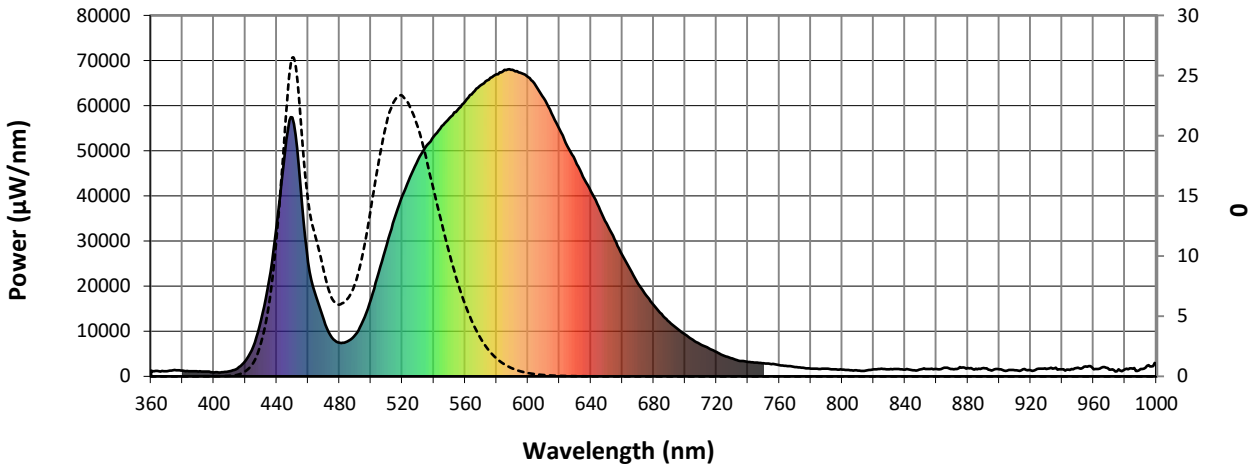
λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	1254	0.0	490	9219	1.3	620	54761	14.3	750	2901	0.0	880	1835	0.0
365	1158	0.0	495	12322	2.2	625	51064	11.3	755	2733	0.0	885	1690	0.0
370	1131	0.0	500	17160	3.8	630	47879	8.7	760	2503	0.0	890	1819	0.0
375	1414	0.0	505	23071	6.5	635	44248	6.6	765	2289	0.0	895	1314	0.0
380	1275	0.0	510	29162	10.0	640	41034	4.9	770	2078	0.0	900	1547	0.0
385	1122	0.0	515	34992	14.5	645	37515	3.6	775	1927	0.0	905	1281	0.0
390	1074	0.0	520	40102	19.4	650	33900	2.5	780	1724	0.0	910	1345	0.0
395	1058	0.0	525	44194	23.7	655	30384	1.7	785	1617	0.0	915	1561	0.0
400	885	0.0	530	48014	28.3	660	26883	1.1	790	1709	0.0	920	1368	0.0
405	912	0.0	535	51019	31.6	665	23703	0.8	795	1561	0.0	925	1730	0.0
410	1108	0.0	540	53190	34.7	670	20603	0.5	800	1525	0.0	930	1629	0.0
415	1763	0.0	545	55452	36.9	675	18039	0.3	805	1332	0.0	935	1796	0.0
420	3421	0.0	550	57280	38.9	680	15849	0.2	810	1269	0.0	940	1595	0.0
425	6610	0.0	555	59041	40.3	685	13806	0.1	815	1261	0.0	945	1410	0.0
430	12444	0.1	560	60976	41.4	690	12093	0.1	820	1551	0.0	950	1937	0.0
435	21116	0.2	565	62904	41.8	695	10566	0.0	825	1708	0.0	955	2186	0.0
440	33463	0.5	570	64555	42.0	700	9300	0.0	830	1592	0.0	960	1583	0.0
445	49089	1.0	575	65785	40.9	705	8110	0.0	835	1642	0.0	965	1953	0.0
450	57374	1.5	580	66948	39.8	710	7052	0.0	840	1514	0.0	970	1519	0.0
455	42663	1.4	585	67963	37.8	715	6233	0.0	845	1376	0.0	975	1168	0.0
460	25334	1.0	590	68001	35.2	720	5362	0.0	850	1592	0.0	980	1593	0.0
465	17751	0.9	595	67308	31.9	725	4563	0.0	855	1667	0.0	985	1722	0.0
470	12447	0.8	600	66343	28.6	730	3976	0.0	860	1662	0.0	990	1648	0.0
475	8641	0.7	605	64393	24.9	735	3424	0.0	865	1916	0.0	995	2495	0.0
480	7423	0.7	610	61634	21.2	740	3222	0.0	870	1655	0.0	1000	2643	0.0
485	7759	0.9	615	58349	17.6	745	3060	0.0	875	2036	0.0			

REPORT NUMBER: SP1-2006-844-6

Scotopic Flux vs. Wavelength

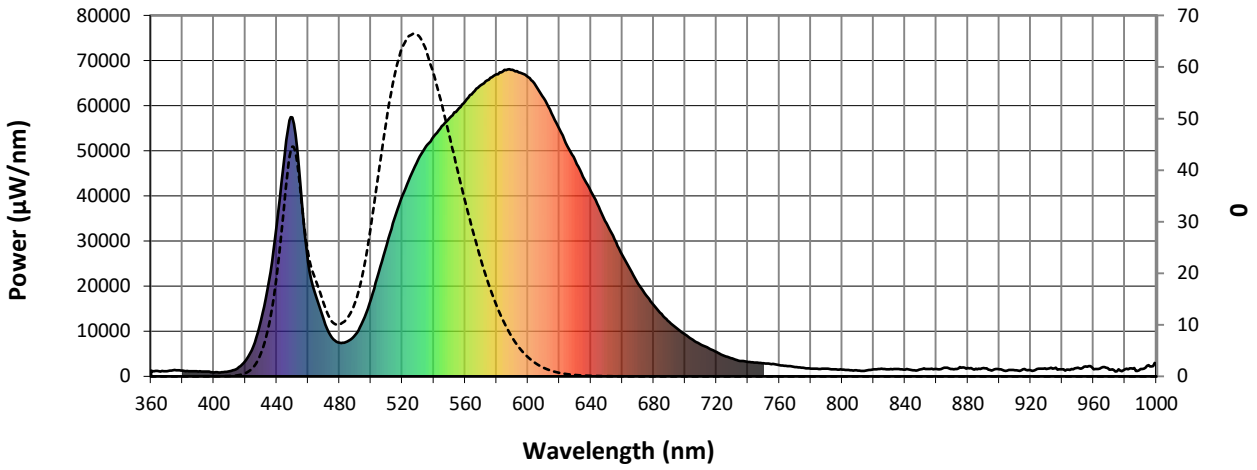


Scotopic Lumens: 1941.7 **S/P: 0.51**

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	1254	0.0	490	9219	14.2	620	54761	0.7	750	2901	0.0	880	1835	0.0
365	1158	0.0	495	12322	19.9	625	51064	0.4	755	2733	0.0	885	1690	0.0
370	1131	0.0	500	17160	28.7	630	47879	0.3	760	2503	0.0	890	1819	0.0
375	1414	0.0	505	23071	39.2	635	44248	0.2	765	2289	0.0	895	1314	0.0
380	1275	0.0	510	29162	49.4	640	41034	0.1	770	2078	0.0	900	1547	0.0
385	1122	0.0	515	34992	58.0	645	37515	0.1	775	1927	0.0	905	1281	0.0
390	1074	0.0	520	40102	63.7	650	33900	0.0	780	1724	0.0	910	1345	0.0
395	1058	0.0	525	44194	66.1	655	30384	0.0	785	1617	0.0	915	1561	0.0
400	885	0.0	530	48014	66.2	660	26883	0.0	790	1709	0.0	920	1368	0.0
405	912	0.0	535	51019	63.6	665	23703	0.0	795	1561	0.0	925	1730	0.0
410	1108	0.1	540	53190	58.8	670	20603	0.0	800	1525	0.0	930	1629	0.0
415	1763	0.2	545	55452	53.2	675	18039	0.0	805	1332	0.0	935	1796	0.0
420	3421	0.6	550	57280	46.8	680	15849	0.0	810	1269	0.0	940	1595	0.0
425	6610	1.6	555	59041	40.3	685	13806	0.0	815	1261	0.0	945	1410	0.0
430	12444	4.2	560	60976	34.1	690	12093	0.0	820	1551	0.0	950	1937	0.0
435	21116	9.4	565	62904	28.2	695	10566	0.0	825	1708	0.0	955	2186	0.0
440	33463	18.7	570	64555	22.8	700	9300	0.0	830	1592	0.0	960	1583	0.0
445	49089	32.9	575	65785	17.9	705	8110	0.0	835	1642	0.0	965	1953	0.0
450	57374	44.5	580	66948	13.8	710	7052	0.0	840	1514	0.0	970	1519	0.0
455	42663	37.3	585	67963	10.4	715	6233	0.0	845	1376	0.0	975	1168	0.0
460	25334	24.5	590	68001	7.6	720	5362	0.0	850	1592	0.0	980	1593	0.0
465	17751	18.7	595	67308	5.4	725	4563	0.0	855	1667	0.0	985	1722	0.0
470	12447	14.3	600	66343	3.7	730	3976	0.0	860	1662	0.0	990	1648	0.0
475	8641	10.8	605	64393	2.5	735	3424	0.0	865	1916	0.0	995	2495	0.0
480	7423	10.0	610	61634	1.7	740	3222	0.0	870	1655	0.0	1000	2643	0.0
485	7759	11.2	615	58349	1.1	745	3060	0.0	875	2036	0.0			

REPORT NUMBER: SP1-2006-844-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5289.9 **S/P: 1.39**

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	1254	0.0	490	9219	7.7	620	54761	0.0	750	2901	0.0	880	1835	0.0
365	1158	0.0	495	12322	10.2	625	51064	0.0	755	2733	0.0	885	1690	0.0
370	1131	0.0	500	17160	13.8	630	47879	0.0	760	2503	0.0	890	1819	0.0
375	1414	0.0	505	23071	17.7	635	44248	0.0	765	2289	0.0	895	1314	0.0
380	1275	0.0	510	29162	20.9	640	41034	0.0	770	2078	0.0	900	1547	0.0
385	1122	0.0	515	34992	22.9	645	37515	0.0	775	1927	0.0	905	1281	0.0
390	1074	0.0	520	40102	23.3	650	33900	0.0	780	1724	0.0	910	1345	0.0
395	1058	0.0	525	44194	22.4	655	30384	0.0	785	1617	0.0	915	1561	0.0
400	885	0.0	530	48014	20.7	660	26883	0.0	790	1709	0.0	920	1368	0.0
405	912	0.0	535	51019	18.4	665	23703	0.0	795	1561	0.0	925	1730	0.0
410	1108	0.0	540	53190	15.6	670	20603	0.0	800	1525	0.0	930	1629	0.0
415	1763	0.1	545	55452	12.9	675	18039	0.0	805	1332	0.0	935	1796	0.0
420	3421	0.4	550	57280	10.3	680	15849	0.0	810	1269	0.0	940	1595	0.0
425	6610	1.0	555	59041	8.0	685	13806	0.0	815	1261	0.0	945	1410	0.0
430	12444	2.6	560	60976	6.0	690	12093	0.0	820	1551	0.0	950	1937	0.0
435	21116	5.6	565	62904	4.4	695	10566	0.0	825	1708	0.0	955	2186	0.0
440	33463	11.2	570	64555	3.2	700	9300	0.0	830	1592	0.0	960	1583	0.0
445	49089	19.4	575	65785	2.2	705	8110	0.0	835	1642	0.0	965	1953	0.0
450	57374	26.4	580	66948	1.5	710	7052	0.0	840	1514	0.0	970	1519	0.0
455	42663	22.4	585	67963	1.0	715	6233	0.0	845	1376	0.0	975	1168	0.0
460	25334	14.9	590	68001	0.7	720	5362	0.0	850	1592	0.0	980	1593	0.0
465	17751	11.6	595	67308	0.4	725	4563	0.0	855	1667	0.0	985	1722	0.0
470	12447	8.9	600	66343	0.3	730	3976	0.0	860	1662	0.0	990	1648	0.0
475	8641	6.6	605	64393	0.2	735	3424	0.0	865	1916	0.0	995	2495	0.0
480	7423	6.0	610	61634	0.1	740	3222	0.0	870	1655	0.0	1000	2643	0.0
485	7759	6.4	615	58349	0.1	745	3060	0.0	875	2036	0.0			

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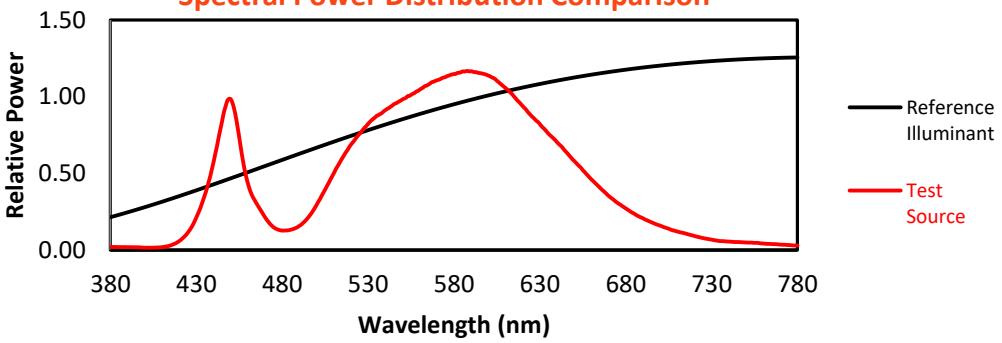
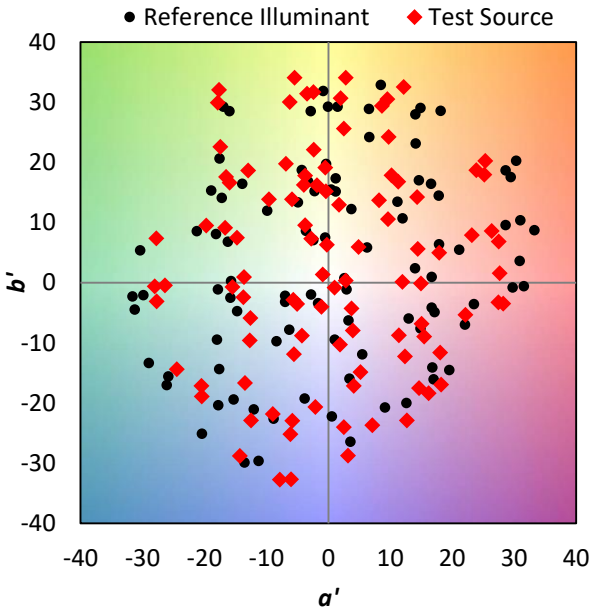
Summary

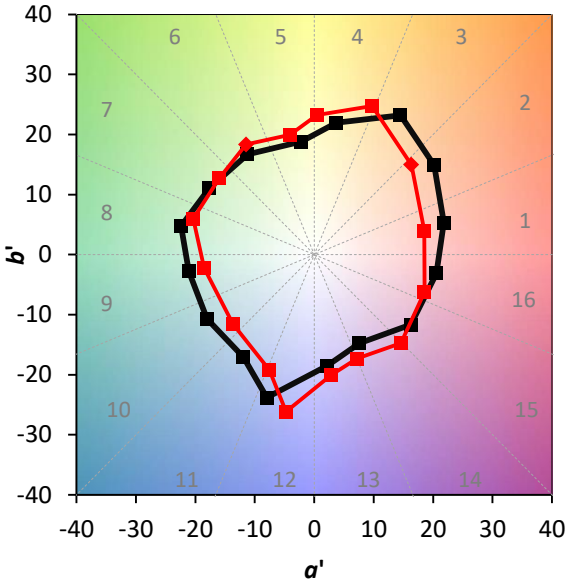
R_f = 76.2
R_g = 94.3
CIE R_a = 72.6
R_9 = -22.4

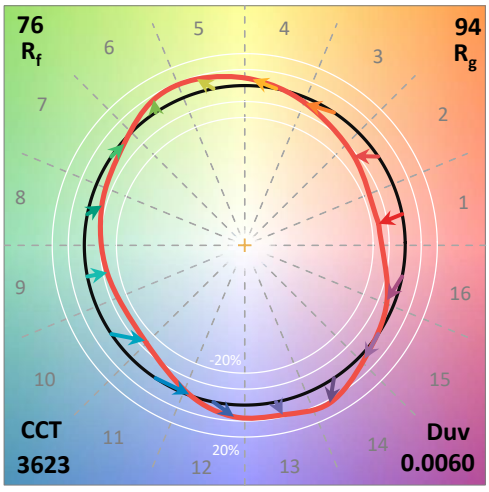
Spectral Power Distribution Comparison

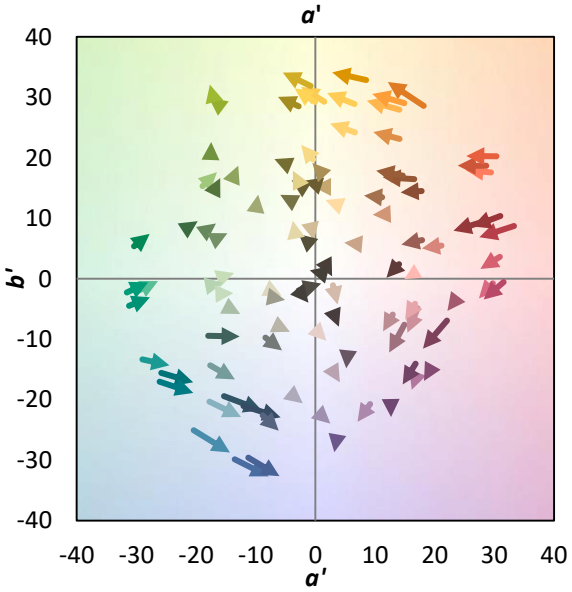


Color Vector Graphics









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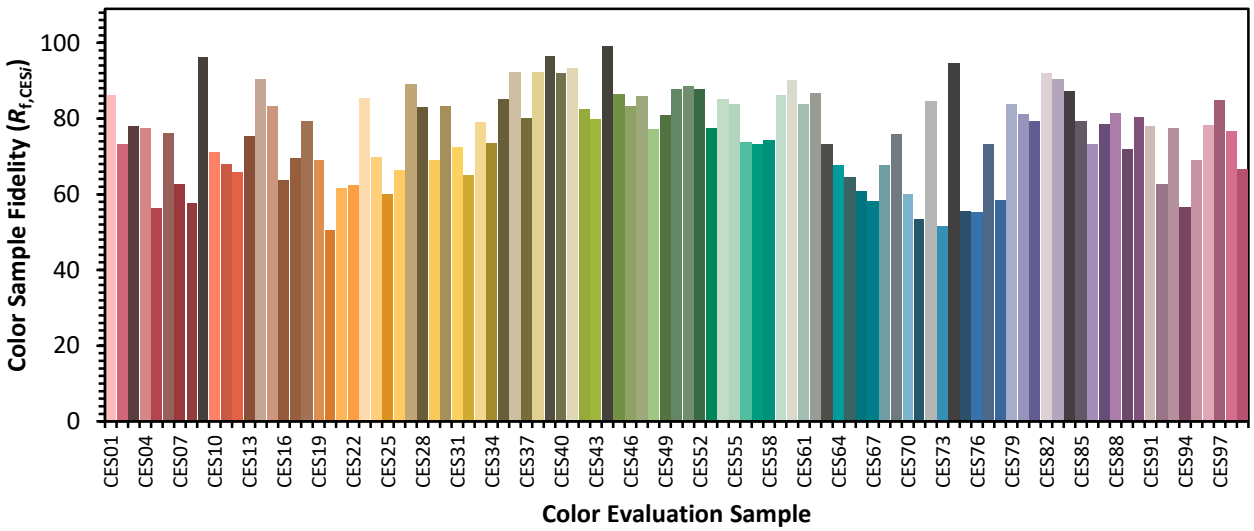
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 66	CES51 = 88	CES76 = 55
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 73
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 59
CES04 = 70	CES29 = 69	CES54 = 85	CES79 = 84
CES05 = 48	CES30 = 83	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 73	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 65	CES57 = 73	CES82 = 92
CES08 = 39	CES33 = 79	CES58 = 74	CES83 = 90
CES09 = 29	CES34 = 74	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 85	CES60 = 90	CES85 = 79
CES11 = 57	CES36 = 92	CES61 = 84	CES86 = 73
CES12 = 63	CES37 = 80	CES62 = 87	CES87 = 78
CES13 = 42	CES38 = 92	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 97	CES64 = 68	CES89 = 72
CES15 = 71	CES40 = 92	CES65 = 65	CES90 = 80
CES16 = 47	CES41 = 93	CES66 = 61	CES91 = 78
CES17 = 49	CES42 = 82	CES67 = 58	CES92 = 63
CES18 = 56	CES43 = 80	CES68 = 68	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 57
CES20 = 65	CES45 = 86	CES70 = 60	CES95 = 69
CES21 = 86	CES46 = 83	CES71 = 54	CES96 = 78
CES22 = 78	CES47 = 86	CES72 = 85	CES97 = 85
CES23 = 92	CES48 = 77	CES73 = 52	CES98 = 77
CES24 = 91	CES49 = 81	CES74 = 95	CES99 = 67
CES25 = 72	CES50 = 88	CES75 = 56	



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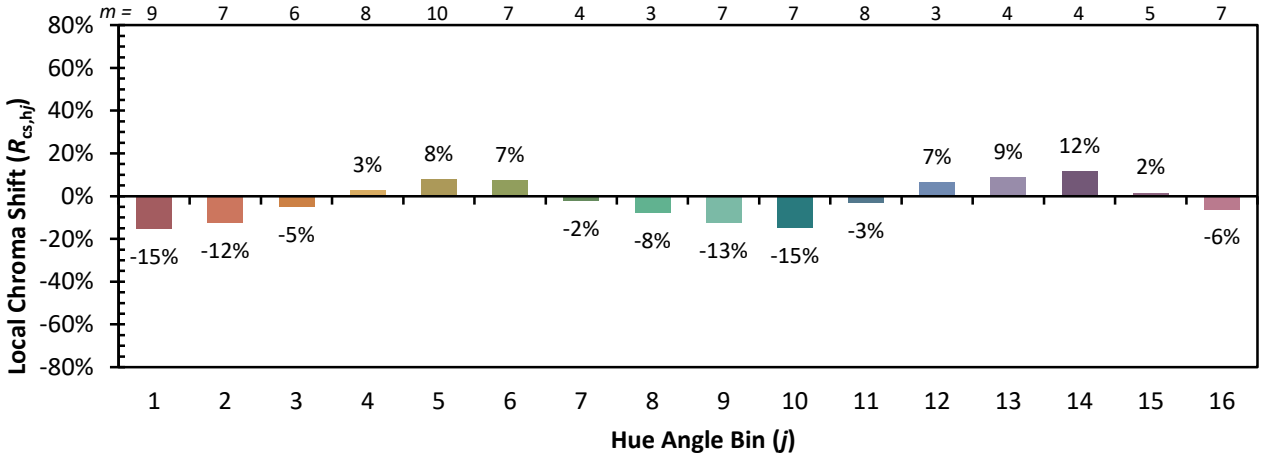
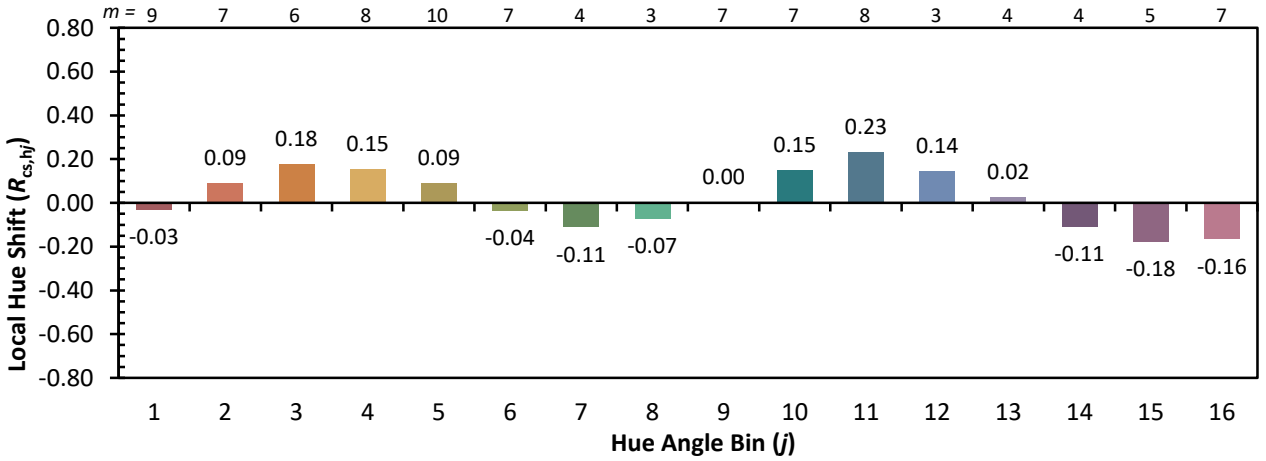
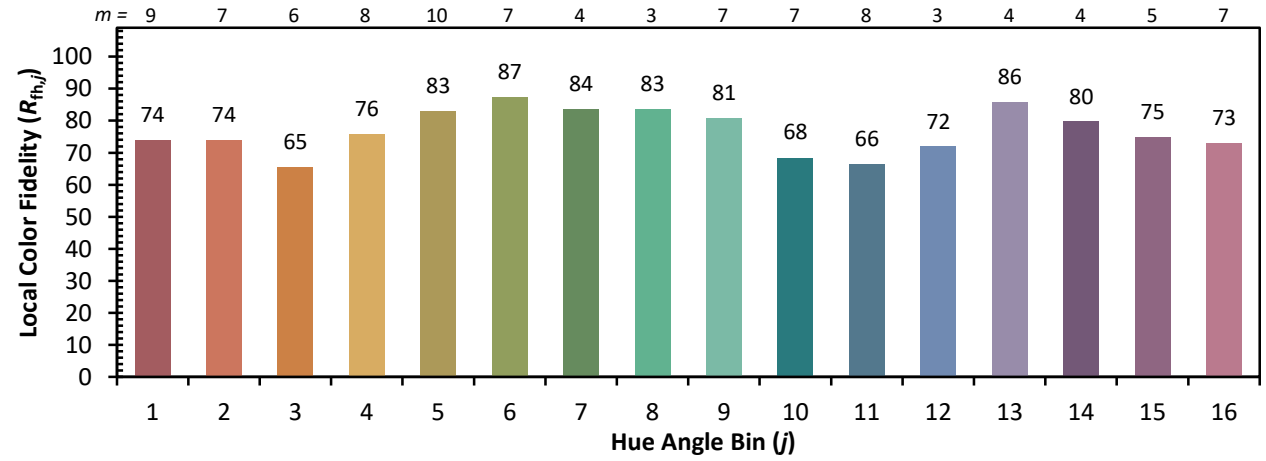
Color Rendition by Hue-Angle Bin







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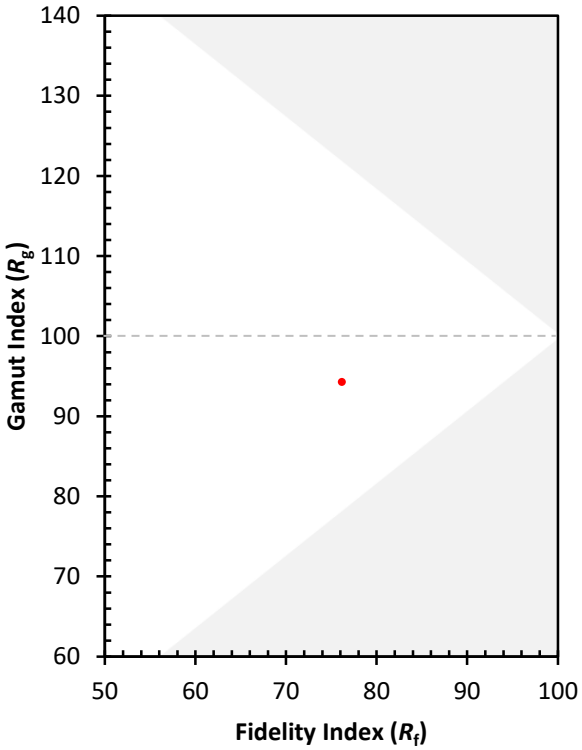
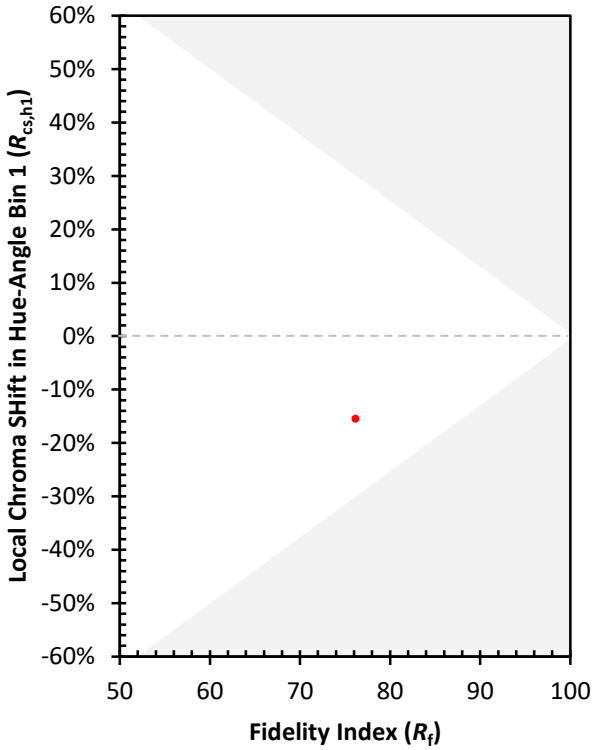
Measure Comparisons





(END OF REPORT)