

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



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P437510

Luminaire Tested: ISC-SA1D-735-U-T4FT

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-2019  
Report Number: P437510  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: MCGRAW-EDISON  
Catalog Number: ISC-SA1D-735-U-T4FT  
Description: IMPACT ELITE LED CYLINDER LUMINAIRE  
(1) 70 CRI, 3500K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD THROW OPTIC  
Light Source: -  
Ballast/Driver: -

**Summary**

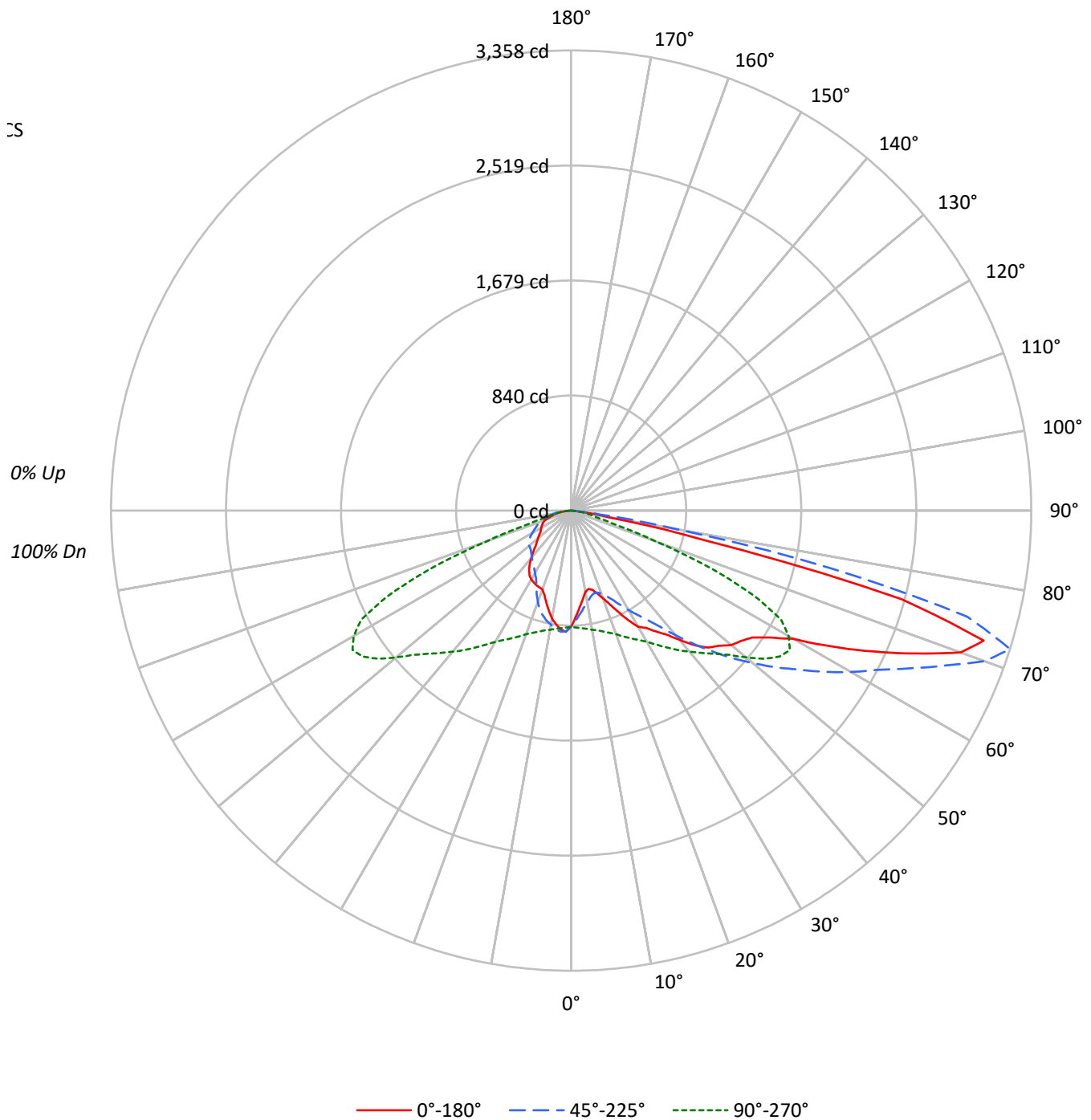
Lumens per Lamp: N/A  
Luminaire Lumens: 5329.0 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.47 / 2.48 / 2.1  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): 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: 24 FT



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CATALOG NUMBER: ISC-SA1D-735-U-T4FT

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	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	100	100	100	100	100		
	1	105	99	93	88	102	96	91	86	92	88	84	88	84	81	84	81	78	76	76	76	76	76	76		
	2	92	81	72	65	89	79	71	64	75	68	62	72	66	61	69	64	59	57	57	57	57	57	57		
	3	81	68	57	49	79	66	56	49	63	55	48	60	53	47	57	51	46	43	43	43	43	43	43		
	4	73	58	47	39	70	57	46	38	54	45	38	51	43	37	49	42	36	34	34	34	34	34	34		
	5	66	50	39	31	64	49	39	31	47	38	31	45	37	30	43	36	30	27	27	27	27	27	27		
	6	60	44	34	26	58	43	33	26	41	32	26	39	31	25	38	31	25	23	23	23	23	23	23		
	7	55	39	29	22	53	39	29	22	37	28	22	35	27	21	34	27	21	19	19	19	19	19	19		
	8	51	36	26	19	49	35	25	19	33	25	19	32	24	19	31	24	18	16	16	16	16	16	16		
	9	48	32	23	17	46	32	23	17	30	22	16	29	22	16	28	21	16	14	14	14	14	14	14		
	10	44	30	21	15	43	29	20	15	28	20	15	27	20	14	26	19	14	12	12	12	12	12	12		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	36524	36524	36524	36524	36524
5°	30639	32648	37251	38341	37584
10°	26332	29638	38613	37004	34972
15°	26678	27970	40750	35397	31082
20°	31239	29462	44018	32481	28041
25°	38827	34138	48856	28433	28523
30°	48628	41692	54981	26191	28885
35°	56603	51410	64135	25350	28099
40°	69234	66839	75545	25146	25472
45°	86092	88333	89983	25239	22407
50°	102229	115853	111573	26726	21146
55°	121110	151639	139426	27917	20500
60°	161114	202809	157773	28184	21683
65°	247829	277435	150749	28607	23483
70°	380844	404246	83878	30477	25354
75°	415304	497799	32539	29960	23522
80°	68682	191143	24968	31217	24497
85°	6719	17241	13388	26775	14376

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 32°  
 Vertical Angle: 75°  
 Luminance: 721728 cd/sqm



TEST NUMBER: P437510

CATALOG NUMBER: ISC-SA1D-735-U-T4FT

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.0	1.4
10°-20°	210.6	4.0
20°-30°	348.5	6.5
30°-40°	519.4	9.7
40°-50°	739.5	13.9
50°-60°	1017.4	19.1
60°-70°	1282.2	24.1
70°-80°	1036.5	19.5
80°-90°	97.9	1.8
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°	636.0	11.9
0°-40°	1155.4	21.7
0°-60°	2912.4	54.7
0°-90°	5329.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5329.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	848	848	848	848	848	
5°	709	755	862	887	870	65
15°	598	628	914	794	697	175
25°	817	719	1028	598	600	385
35°	1077	978	1220	482	535	684
45°	1414	1451	1478	414	368	1084
55°	1613	2020	1857	372	273	1483
65°	2433	2723	1480	281	230	2428
75°	2496	2992	196	180	141	2178
85°	14	35	27	54	29	68
90°	0	0	0	0	0	



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CATALOG NUMBER: ISC-SA1D-735-U-T4FT

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3
2.5°	774.7	780.5	782.5	786.3	794.1	790.2	799.9	811.5	827.0	834.8	850.3
5°	708.9	708.9	714.7	724.4	737.9	737.9	755.4	776.7	803.8	825.1	852.2
7.5°	650.8	650.8	656.6	668.2	681.8	691.4	712.7	745.7	782.5	823.1	858.0
10°	602.3	604.3	608.2	619.8	637.2	646.9	677.9	714.7	763.1	815.4	863.8
12.5°	584.9	583.0	581.0	590.7	604.3	612.0	646.9	693.4	749.5	813.5	875.4
15°	598.5	594.6	588.8	588.8	594.6	598.5	627.5	675.9	737.9	811.5	889.0
17.5°	633.3	629.5	615.9	602.3	606.2	608.2	627.5	666.3	732.1	819.3	908.4
20°	681.8	675.9	652.7	635.3	631.4	631.4	643.0	672.1	736.0	834.8	933.5
22.5°	739.9	734.1	706.9	675.9	672.1	670.1	675.9	695.3	747.6	852.2	972.3
25°	817.3	811.5	778.6	739.9	726.3	724.4	718.6	730.2	767.0	875.4	999.4
27.5°	900.6	902.6	863.8	811.5	798.0	792.2	776.7	774.7	790.2	894.8	1045.9
30°	978.1	974.2	933.5	890.9	871.6	863.8	838.6	827.0	817.3	923.9	1100.1
32.5°	1014.9	1020.7	1001.3	960.7	945.2	931.6	902.6	883.2	869.6	968.4	1166.0
35°	1076.9	1078.8	1071.1	1045.9	1014.9	1005.2	978.1	964.5	935.5	1022.6	1245.4
37.5°	1138.8	1144.7	1142.7	1127.2	1100.1	1090.4	1067.2	1061.4	1003.3	1090.4	1344.1
40°	1231.8	1222.1	1208.6	1214.4	1204.7	1198.9	1189.2	1169.8	1098.2	1164.0	1441.0
42.5°	1332.5	1315.1	1266.7	1282.2	1295.7	1301.5	1315.1	1293.8	1196.9	1274.4	1520.4
45°	1413.9	1400.3	1336.4	1340.3	1367.4	1386.8	1450.7	1439.0	1324.8	1394.5	1626.9
47.5°	1460.4	1448.7	1404.2	1423.6	1441.0	1468.1	1592.1	1582.4	1444.9	1524.3	1754.7
50°	1526.2	1506.8	1464.2	1499.1	1530.1	1551.4	1729.6	1725.7	1547.5	1657.9	1900.0
52.5°	1563.0	1543.6	1539.8	1588.2	1625.0	1654.0	1876.8	1865.1	1648.2	1791.5	2037.5
55°	1613.4	1617.2	1642.4	1679.2	1731.5	1779.9	2020.1	1962.0	1741.2	1923.3	2173.1
57.5°	1723.8	1719.9	1768.3	1785.7	1853.5	1915.5	2190.5	2064.6	1818.7	2018.2	2237.0
60°	1871.0	1878.7	1896.1	1940.7	2014.3	2109.2	2355.2	2171.2	1869.0	2085.9	2225.4
62.5°	2149.9	2105.3	2097.6	2109.2	2254.4	2364.8	2515.9	2266.1	1890.3	2087.9	2103.4
65°	2432.6	2415.2	2355.2	2384.2	2595.3	2696.0	2723.2	2328.0	1847.7	1967.8	1832.2
67.5°	2725.1	2723.2	2659.2	2742.5	2996.2	3114.4	2953.6	2316.4	1708.3	1687.0	1408.1
70°	3025.3	3038.9	3038.9	3275.1	3621.8	3652.8	3211.2	2206.0	1431.3	1195.0	823.1
72.5°	3157.0	3164.7	3234.5	3759.3	4313.3	4323.0	3358.4	1872.9	976.2	637.2	414.5
75°	2496.5	2554.7	2742.5	3619.9	4338.5	4299.7	2992.4	1198.9	476.5	317.6	230.5
77.5°	980.0	1001.3	1382.9	2304.8	3160.9	3199.6	1936.8	478.4	242.1	201.4	166.6
80°	277.0	290.5	490.0	916.1	1561.1	1725.7	770.9	207.2	162.7	147.2	120.1
82.5°	98.8	112.3	182.1	350.6	666.3	703.1	209.2	102.7	104.6	94.9	73.6
85°	13.6	11.6	25.2	63.9	147.2	124.0	34.9	27.1	42.6	44.5	31.0
87.5°	0.0	0.0	0.0	1.9	1.9	1.9	0.0	0.0	0.0	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3	848.3
2.5°	854.1	858.0	865.8	869.6	873.5	881.2	879.3	883.2	883.2	881.2	885.1
5°	861.9	871.6	881.2	885.1	887.1	887.1	877.4	871.6	869.6	867.7	869.6
7.5°	869.6	883.2	892.9	890.9	883.2	869.6	858.0	848.3	838.6	834.8	838.6
10°	883.2	896.7	902.6	889.0	867.7	846.4	829.0	815.4	799.9	798.0	799.9
12.5°	894.8	912.2	912.2	881.2	852.2	823.1	796.0	774.7	755.4	749.5	749.5
15°	914.2	927.7	914.2	871.6	830.9	794.1	755.4	728.2	705.0	695.3	697.3
17.5°	935.5	945.2	910.3	856.1	807.6	759.2	708.9	672.1	654.6	645.0	646.9
20°	960.7	962.6	910.3	836.7	772.8	708.9	654.6	627.5	615.9	610.1	612.0
22.5°	993.6	985.8	904.5	811.5	728.2	658.5	608.2	600.4	600.4	600.4	606.2
25°	1028.4	1007.1	894.8	778.6	670.1	598.5	579.1	588.8	596.5	596.5	600.4
27.5°	1063.3	1028.4	875.4	730.2	602.3	555.9	563.6	579.1	586.9	586.9	590.7
30°	1105.9	1053.6	852.2	664.3	538.4	526.8	546.2	565.5	577.2	577.2	581.0
32.5°	1160.1	1074.9	817.3	596.5	495.8	501.6	522.9	544.2	557.8	561.7	563.6
35°	1220.2	1104.0	768.9	521.0	466.8	482.3	499.7	519.1	530.7	534.6	534.6
37.5°	1282.2	1133.0	705.0	457.1	441.6	462.9	480.3	490.0	497.8	497.8	497.8
40°	1344.1	1148.5	621.7	406.7	416.4	447.4	462.9	459.0	457.1	451.3	453.2
42.5°	1408.1	1160.1	532.6	369.9	391.2	430.0	441.6	431.9	416.4	406.7	408.7
45°	1477.8	1177.6	459.0	342.8	366.1	414.5	426.1	406.7	387.4	371.9	368.0
47.5°	1557.2	1206.6	393.2	317.6	350.6	404.8	416.4	389.3	364.1	342.8	338.9
50°	1665.7	1251.2	342.8	300.2	340.9	399.0	408.7	373.8	344.8	317.6	315.7
52.5°	1776.1	1284.1	308.0	284.7	329.3	387.4	399.0	362.2	327.3	298.3	294.4
55°	1857.4	1280.2	277.0	269.2	313.8	371.9	389.3	348.6	304.1	277.0	273.1
57.5°	1892.3	1200.8	251.8	255.7	296.3	352.5	373.8	327.3	286.6	263.4	261.5
60°	1832.2	1073.0	234.4	240.2	277.0	327.3	344.8	311.8	275.0	253.7	251.8
62.5°	1727.6	929.7	220.8	228.5	257.6	304.1	327.3	292.5	259.5	244.0	242.1
65°	1479.7	772.8	207.2	215.0	240.2	280.8	311.8	280.8	247.9	232.4	230.5
67.5°	1117.5	555.9	193.7	201.4	224.7	263.4	298.3	265.3	230.5	218.9	218.9
70°	666.3	340.9	176.2	187.9	205.3	242.1	277.0	244.0	209.2	205.3	201.4
72.5°	325.4	216.9	160.8	170.4	184.0	215.0	246.0	216.9	182.1	172.4	170.4
75°	195.6	156.9	139.5	151.1	160.8	180.1	207.2	185.9	158.8	143.3	141.4
77.5°	141.4	118.1	118.1	129.8	129.8	149.1	178.2	158.8	133.6	124.0	122.0
80°	100.7	89.1	96.8	104.6	100.7	125.9	151.1	133.6	108.5	100.7	98.8
82.5°	65.9	62.0	73.6	71.7	71.7	96.8	124.0	100.7	79.4	65.9	62.0
85°	27.1	31.0	42.6	40.7	40.7	54.2	63.9	52.3	36.8	29.1	29.1
87.5°	0.0	1.9	5.8	3.9	3.9	5.8	1.9	1.9	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

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





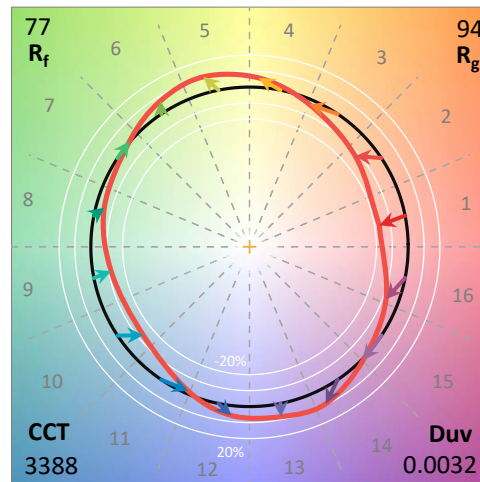
**Test Information**

Test Method: LM-79-08  
 Report Number: SP1-2101-121-7  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry: 4π  
 Issue Date: 03/04/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **IFLD-S-SA2A-735-U-T2**  
 Description: STREETWORKS INF FLOOD

PROGRAMMED @ 615mA.

**Spectral Parameters**

CCT (K):	3388	CRI (Ra):	73.1	R9:	-34.6
CIE u':	0.2371	R1:	68.9	R10:	57.8
CIE v':	0.5177	R2:	81.1	R11:	68.6
Duv:	0.0032	R3:	93.1	R12:	53.9
CIE x:	0.4153	R4:	71.6	R13:	70.9
CIE y:	0.4030	R5:	69.4	R14:	96.2
CIE z:	0.1817	R6:	75.0		
Peak Wavelength (nm):	590	R7:	79.5		
Dominant Wavelength (nm):	580	R8:	46.4		
Purity:	45.7				
Rf:	76.9				
Rg:	94.4				



**Test Conditions**

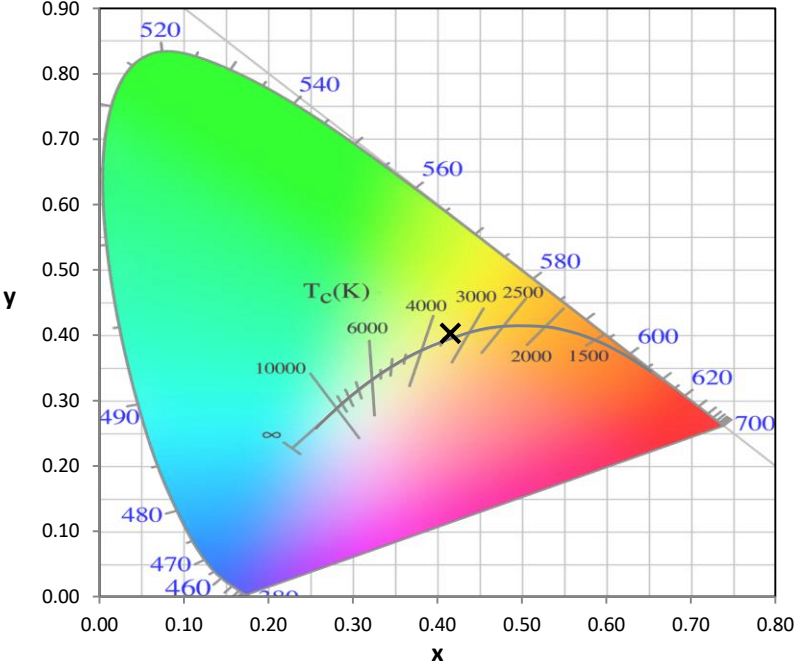
Stabilization Time: 81M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.0/30%  
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-7

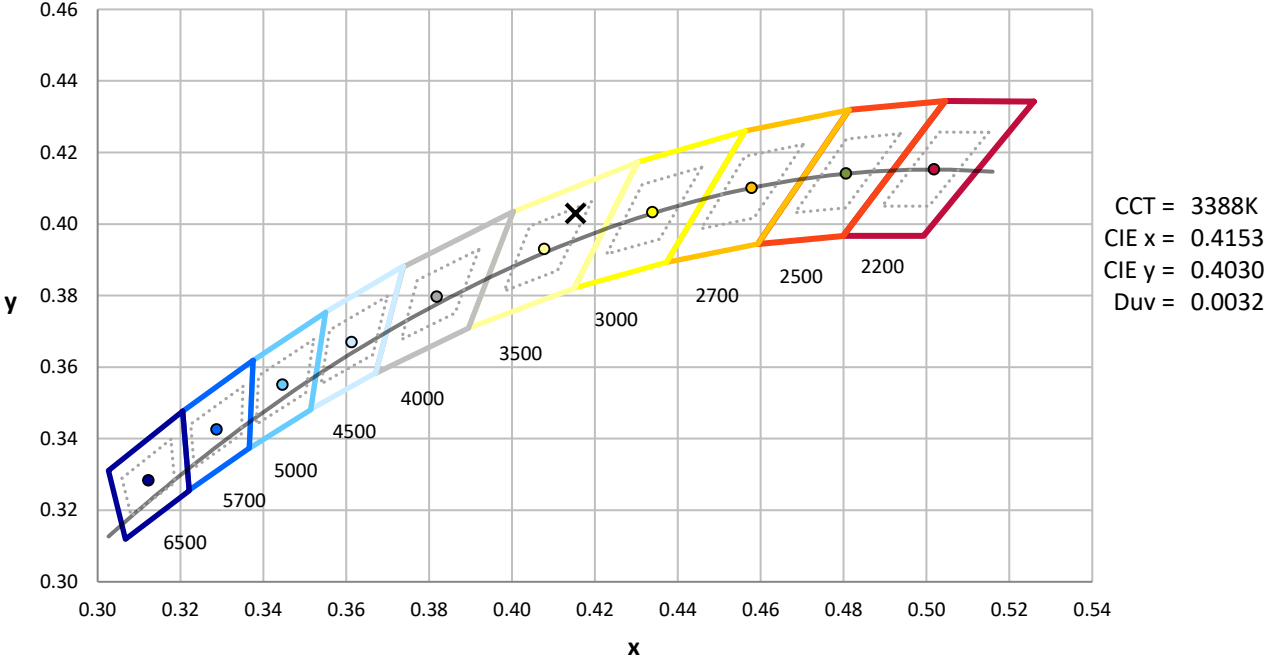
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	1/31/2021	7/31/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020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

REPORT NUMBER: SP1-2101-121-7

CIE 1931 Chromaticity Diagram



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

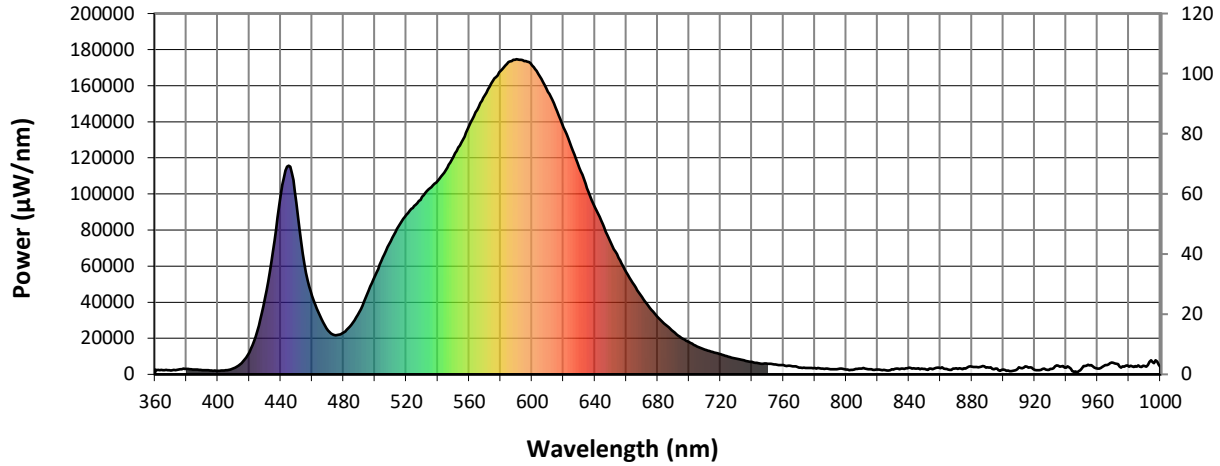


CCT = 3388K  
 CIE x = 0.4153  
 CIE y = 0.4030  
 Duv = 0.0032

Point lies inside the ANSI 3500K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

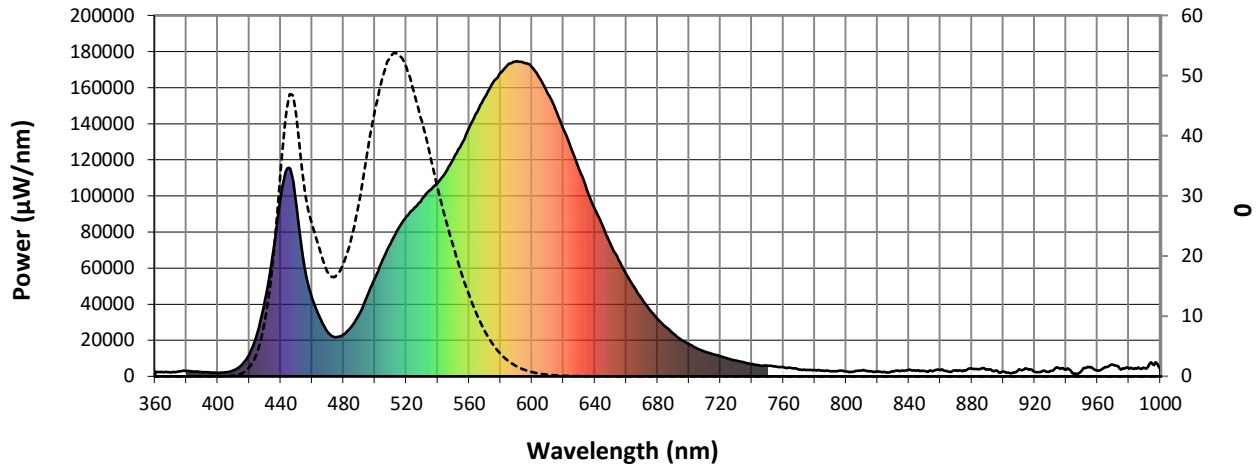


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λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	2672	0.0	490	34553	4.9	620	136720	35.6	750	5870	0.0	880	4216	0.0
365	2252	0.0	495	44336	8.0	625	126308	27.9	755	5421	0.0	885	4132	0.0
370	2217	0.0	500	54643	12.1	630	114625	20.7	760	5097	0.0	890	3992	0.0
375	2697	0.0	505	64676	18.1	635	103216	15.5	765	4626	0.0	895	3214	0.0
380	3039	0.0	510	73825	25.4	640	92605	11.1	770	3782	0.0	900	2580	0.0
385	2655	0.0	515	81872	33.9	645	83234	8.0	775	3506	0.0	905	1776	0.0
390	2357	0.0	520	88574	43.0	650	73263	5.4	780	3507	0.0	910	3995	0.0
395	2186	0.0	525	93289	50.1	655	64627	3.7	785	3267	0.0	915	4288	0.0
400	2015	0.0	530	98393	57.9	660	56614	2.4	790	2849	0.0	920	2446	0.0
405	2234	0.0	535	103269	64.0	665	49537	1.6	795	3037	0.0	925	3009	0.0
410	3412	0.0	540	107316	69.9	670	42866	0.9	800	2716	0.0	930	3026	0.0
415	6135	0.0	545	113101	75.3	675	36708	0.6	805	2648	0.0	935	4734	0.0
420	12146	0.0	550	120690	82.0	680	31814	0.4	810	3187	0.0	940	3719	0.0
425	23983	0.1	555	128583	87.8	685	27485	0.2	815	2931	0.0	945	1480	0.0
430	42142	0.3	560	137796	93.6	690	23698	0.1	820	2717	0.0	950	3450	0.0
435	68228	0.8	565	146577	97.5	695	20309	0.1	825	2236	0.0	955	5051	0.0
440	99323	1.6	570	154581	100.5	700	17890	0.1	830	2628	0.0	960	3176	0.0
445	115584	2.4	575	162633	101.2	705	15500	0.0	835	3140	0.0	965	5178	0.0
450	94997	2.5	580	168101	99.9	710	13699	0.0	840	3675	0.0	970	6385	0.0
455	61433	2.1	585	173145	96.2	715	12398	0.0	845	3283	0.0	975	3810	0.0
460	43373	1.8	590	174675	90.3	720	11147	0.0	850	3055	0.0	980	4322	0.0
465	32472	1.7	595	173724	82.3	725	9761	0.0	855	2932	0.0	985	4200	0.0
470	24257	1.5	600	171241	73.8	730	8651	0.0	860	3382	0.0	990	4661	0.0
475	21690	1.7	605	165134	64.0	735	7730	0.0	865	2605	0.0	995	6746	0.0
480	23173	2.2	610	156652	53.8	740	6847	0.0	870	3325	0.0	1000	4150	0.0
485	27564	3.3	615	147879	44.6	745	6124	0.0	875	3325	0.0			

REPORT NUMBER: SP1-2101-121-7

**Scotopic Flux vs. Wavelength**



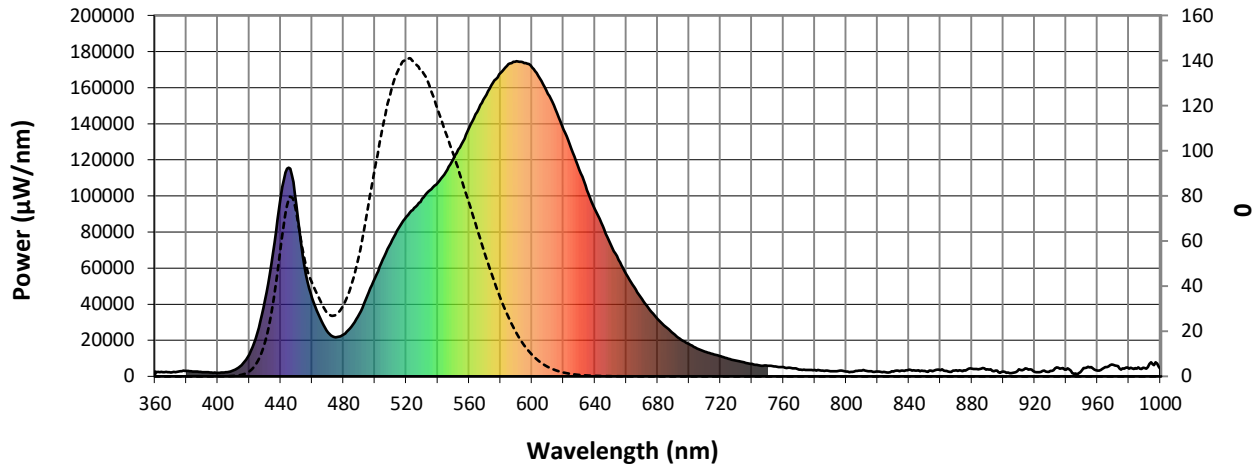
**Scotopic Lumens: 12126**

**S/P: 1.36**

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	2672	0.0	490	34553	53.2	620	136720	1.7	750	5870	0.0	880	4216	0.0
365	2252	0.0	495	44336	71.7	625	126308	1.1	755	5421	0.0	885	4132	0.0
370	2217	0.0	500	54643	91.4	630	114625	0.6	760	5097	0.0	890	3992	0.0
375	2697	0.0	505	64676	110.0	635	103216	0.4	765	4626	0.0	895	3214	0.0
380	3039	0.0	510	73825	125.1	640	92605	0.2	770	3782	0.0	900	2580	0.0
385	2655	0.0	515	81872	135.7	645	83234	0.1	775	3506	0.0	905	1776	0.0
390	2357	0.0	520	88574	140.8	650	73263	0.1	780	3507	0.0	910	3995	0.0
395	2186	0.0	525	93289	139.6	655	64627	0.1	785	3267	0.0	915	4288	0.0
400	2015	0.0	530	98393	135.7	660	56614	0.0	790	2849	0.0	920	2446	0.0
405	2234	0.1	535	103269	128.7	665	49537	0.0	795	3037	0.0	925	3009	0.0
410	3412	0.2	540	107316	118.6	670	42866	0.0	800	2716	0.0	930	3026	0.0
415	6135	0.6	545	113101	108.4	675	36708	0.0	805	2648	0.0	935	4734	0.0
420	12146	2.0	550	120690	98.7	680	31814	0.0	810	3187	0.0	940	3719	0.0
425	23983	5.9	555	128583	87.9	685	27485	0.0	815	2931	0.0	945	1480	0.0
430	42142	14.3	560	137796	77.0	690	23698	0.0	820	2717	0.0	950	3450	0.0
435	68228	30.5	565	146577	65.8	695	20309	0.0	825	2236	0.0	955	5051	0.0
440	99323	55.5	570	154581	54.6	700	17890	0.0	830	2628	0.0	960	3176	0.0
445	115584	77.4	575	162633	44.3	705	15500	0.0	835	3140	0.0	965	5178	0.0
450	94997	73.6	580	168101	34.6	710	13699	0.0	840	3675	0.0	970	6385	0.0
455	61433	53.7	585	173145	26.5	715	12398	0.0	845	3283	0.0	975	3810	0.0
460	43373	41.9	590	174675	19.5	720	11147	0.0	850	3055	0.0	980	4322	0.0
465	32472	34.3	595	173724	13.9	725	9761	0.0	855	2932	0.0	985	4200	0.0
470	24257	27.9	600	171241	9.7	730	8651	0.0	860	3382	0.0	990	4661	0.0
475	21690	27.1	605	165134	6.5	735	7730	0.0	865	2605	0.0	995	6746	0.0
480	23173	31.3	610	156652	4.2	740	6847	0.0	870	3325	0.0	1000	4150	0.0
485	27564	40.0	615	147879	2.7	745	6124	0.0	875	3325	0.0			

REPORT NUMBER: SP1-2101-121-7

**Melanopic Flux vs. Wavelength**

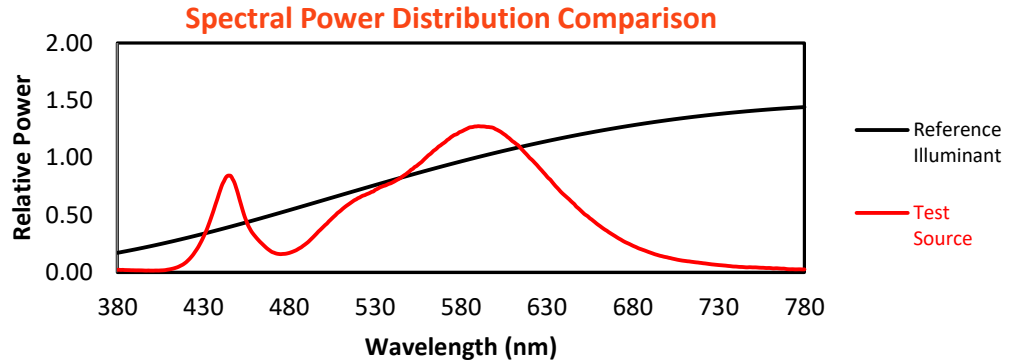


**Melanopic Lumens: 4490.7 M/P: 0.5**

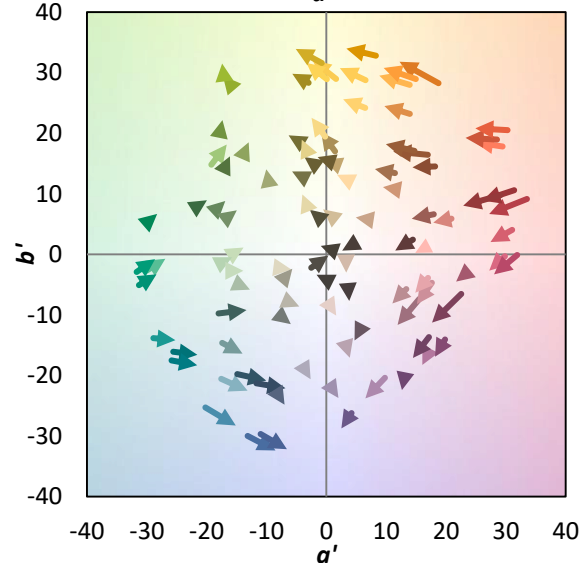
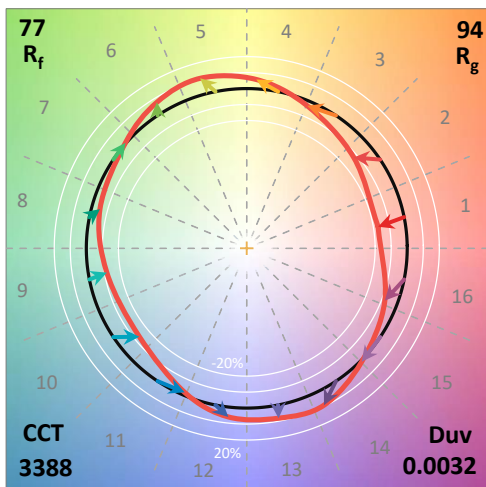
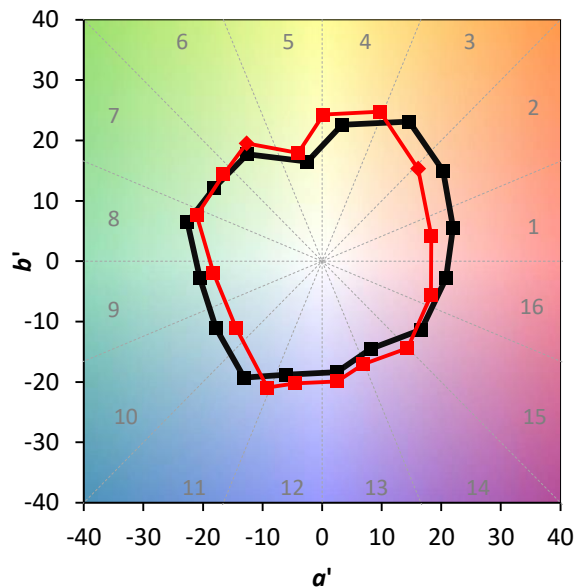
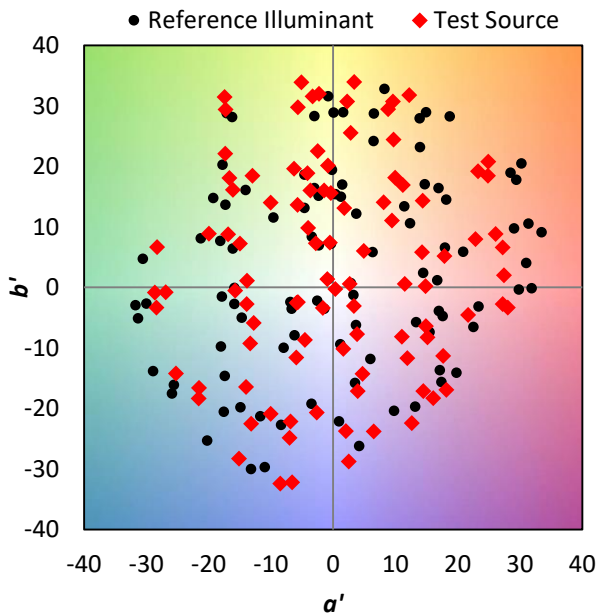
λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	2672	0.0	490	34553	28.8	620	136720	0.1	750	5870	0.0	880	4216	0.0
365	2252	0.0	495	44336	36.6	625	126308	0.1	755	5421	0.0	885	4132	0.0
370	2217	0.0	500	54643	43.9	630	114625	0.0	760	5097	0.0	890	3992	0.0
375	2697	0.0	505	64676	49.6	635	103216	0.0	765	4626	0.0	895	3214	0.0
380	3039	0.0	510	73825	53.0	640	92605	0.0	770	3782	0.0	900	2580	0.0
385	2655	0.0	515	81872	53.5	645	83234	0.0	775	3506	0.0	905	1776	0.0
390	2357	0.0	520	88574	51.6	650	73263	0.0	780	3507	0.0	910	3995	0.0
395	2186	0.0	525	93289	47.3	655	64627	0.0	785	3267	0.0	915	4288	0.0
400	2015	0.0	530	98393	42.5	660	56614	0.0	790	2849	0.0	920	2446	0.0
405	2234	0.0	535	103269	37.2	665	49537	0.0	795	3037	0.0	925	3009	0.0
410	3412	0.1	540	107316	31.4	670	42866	0.0	800	2716	0.0	930	3026	0.0
415	6135	0.4	545	113101	26.3	675	36708	0.0	805	2648	0.0	935	4734	0.0
420	12146	1.4	550	120690	21.7	680	31814	0.0	810	3187	0.0	940	3719	0.0
425	23983	3.7	555	128583	17.3	685	27485	0.0	815	2931	0.0	945	1480	0.0
430	42142	8.9	560	137796	13.6	690	23698	0.0	820	2717	0.0	950	3450	0.0
435	68228	18.2	565	146577	10.3	695	20309	0.0	825	2236	0.0	955	5051	0.0
440	99323	33.2	570	154581	7.6	700	17890	0.0	830	2628	0.0	960	3176	0.0
445	115584	45.6	575	162633	5.4	705	15500	0.0	835	3140	0.0	965	5178	0.0
450	94997	43.8	580	168101	3.8	710	13699	0.0	840	3675	0.0	970	6385	0.0
455	61433	32.2	585	173145	2.6	715	12398	0.0	845	3283	0.0	975	3810	0.0
460	43373	25.6	590	174675	1.7	720	11147	0.0	850	3055	0.0	980	4322	0.0
465	32472	21.2	595	173724	1.1	725	9761	0.0	855	2932	0.0	985	4200	0.0
470	24257	17.4	600	171241	0.7	730	8651	0.0	860	3382	0.0	990	4661	0.0
475	21690	16.6	605	165134	0.5	735	7730	0.0	865	2605	0.0	995	6746	0.0
480	23173	18.6	610	156652	0.3	740	6847	0.0	870	3325	0.0	1000	4150	0.0
485	27564	22.7	615	147879	0.2	745	6124	0.0	875	3325	0.0			

**Summary**

$R_f = 76.9$   
 $R_g = 94.4$   
 CIE  $R_a = 73.1$   
 $R_g = -34.6$

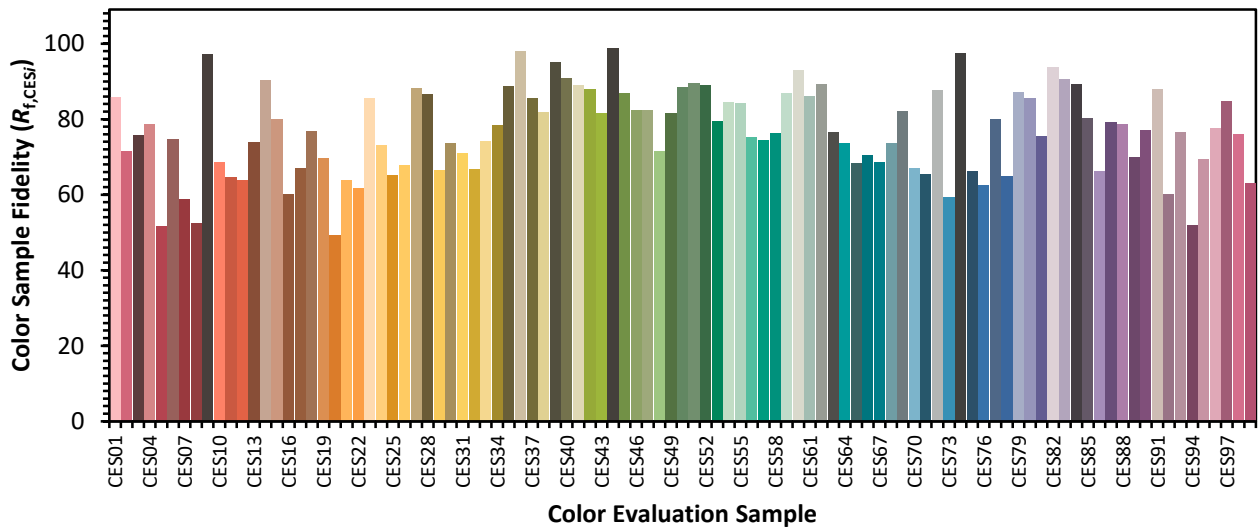


**Color Vector Graphics**



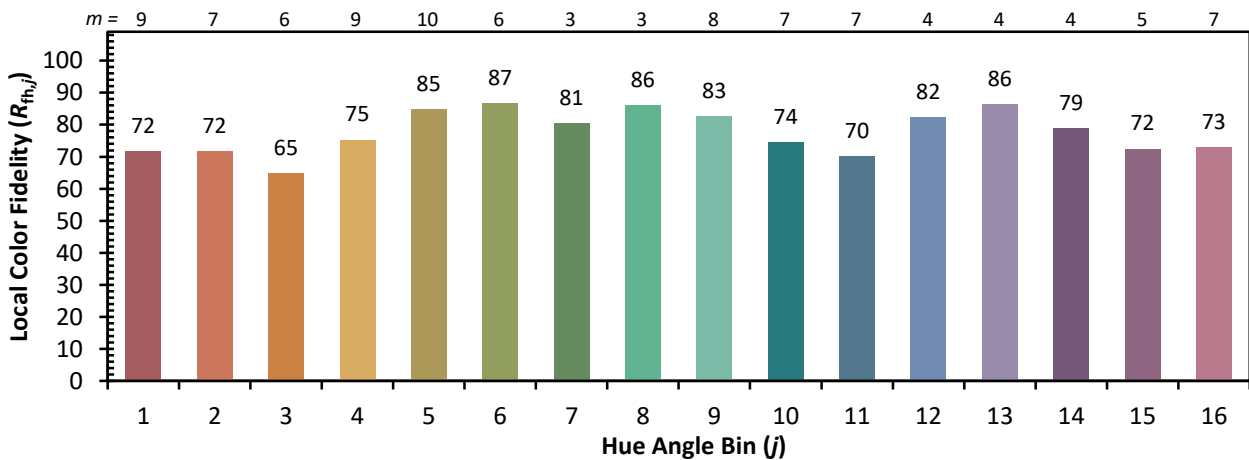
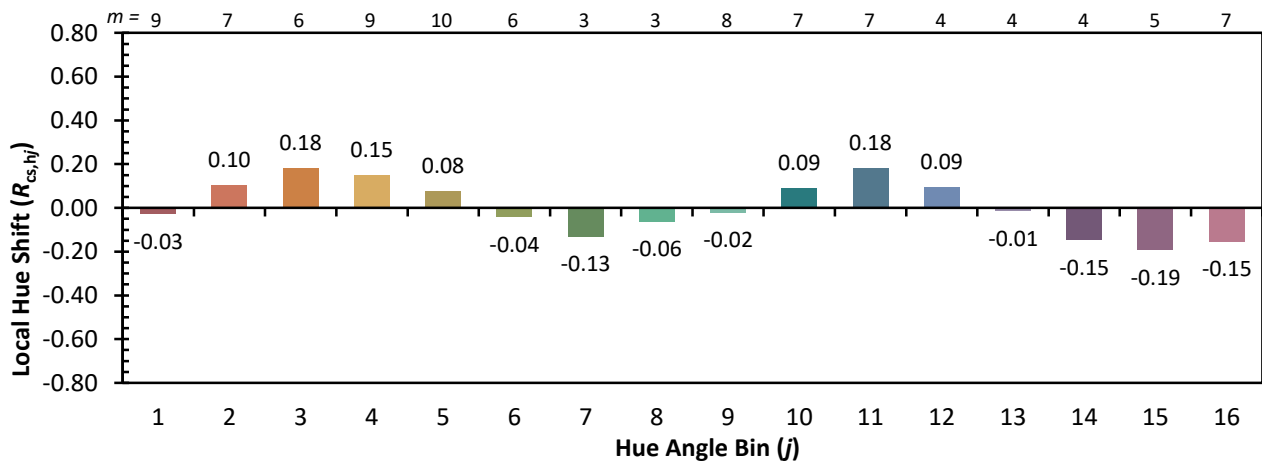
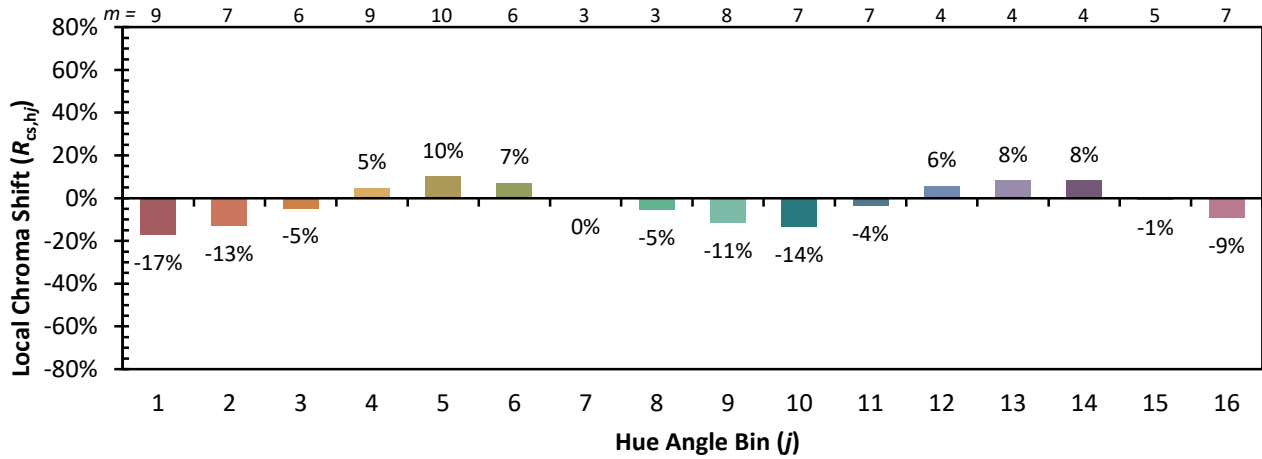
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

CES01 = 86	CES26 = 68	CES51 = 90	CES76 = 63
CES02 = 62	CES27 = 88	CES52 = 89	CES77 = 80
CES03 = 31	CES28 = 87	CES53 = 80	CES78 = 65
CES04 = 70	CES29 = 67	CES54 = 84	CES79 = 87
CES05 = 48	CES30 = 74	CES55 = 84	CES80 = 86
CES06 = 51	CES31 = 71	CES56 = 75	CES81 = 75
CES07 = 40	CES32 = 67	CES57 = 74	CES82 = 94
CES08 = 39	CES33 = 74	CES58 = 76	CES83 = 91
CES09 = 29	CES34 = 78	CES59 = 87	CES84 = 89
CES10 = 75	CES35 = 89	CES60 = 93	CES85 = 80
CES11 = 58	CES36 = 98	CES61 = 86	CES86 = 66
CES12 = 64	CES37 = 86	CES62 = 89	CES87 = 79
CES13 = 43	CES38 = 82	CES63 = 77	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 74	CES89 = 70
CES15 = 71	CES40 = 91	CES65 = 68	CES90 = 77
CES16 = 47	CES41 = 89	CES66 = 71	CES91 = 88
CES17 = 50	CES42 = 88	CES67 = 69	CES92 = 60
CES18 = 56	CES43 = 82	CES68 = 74	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 82	CES94 = 52
CES20 = 65	CES45 = 87	CES70 = 67	CES95 = 69
CES21 = 86	CES46 = 82	CES71 = 66	CES96 = 78
CES22 = 79	CES47 = 82	CES72 = 88	CES97 = 85
CES23 = 92	CES48 = 72	CES73 = 59	CES98 = 76
CES24 = 91	CES49 = 82	CES74 = 97	CES99 = 63
CES25 = 72	CES50 = 88	CES75 = 66	

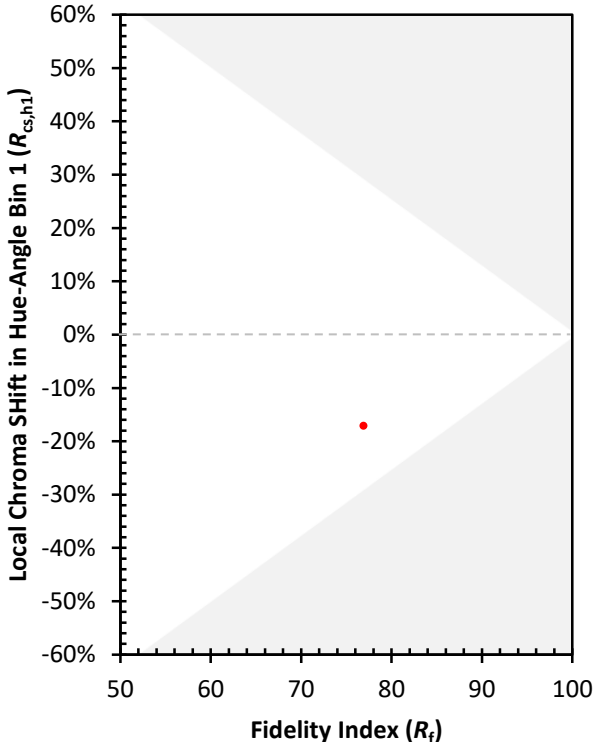
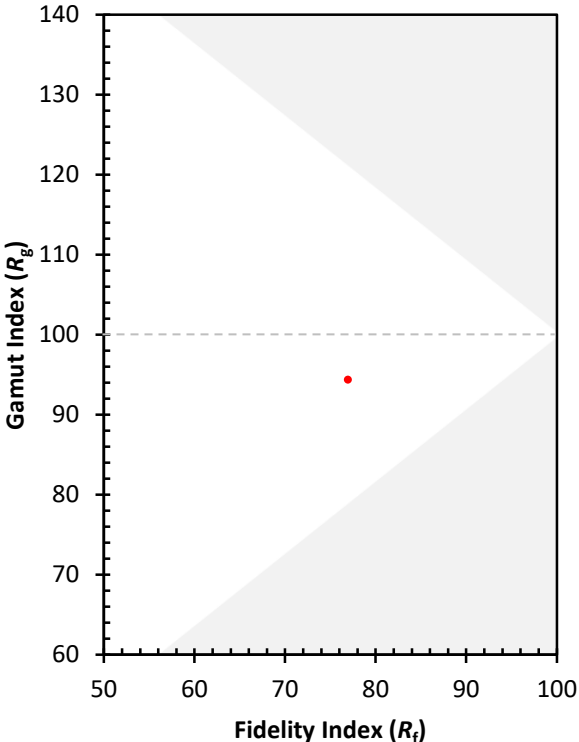




Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)