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: P436871

Luminaire Tested: **TT-D5-735-U-WQ-HSS**

Issue Date: 12/2/2020

Report Generated By 670347003

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P436871
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-2)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D5-735-U-WQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	3500K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	7253 lumens
Efficiency:	N/A
Efficacy:	97.1 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G3

Input Watts (W):	74.7
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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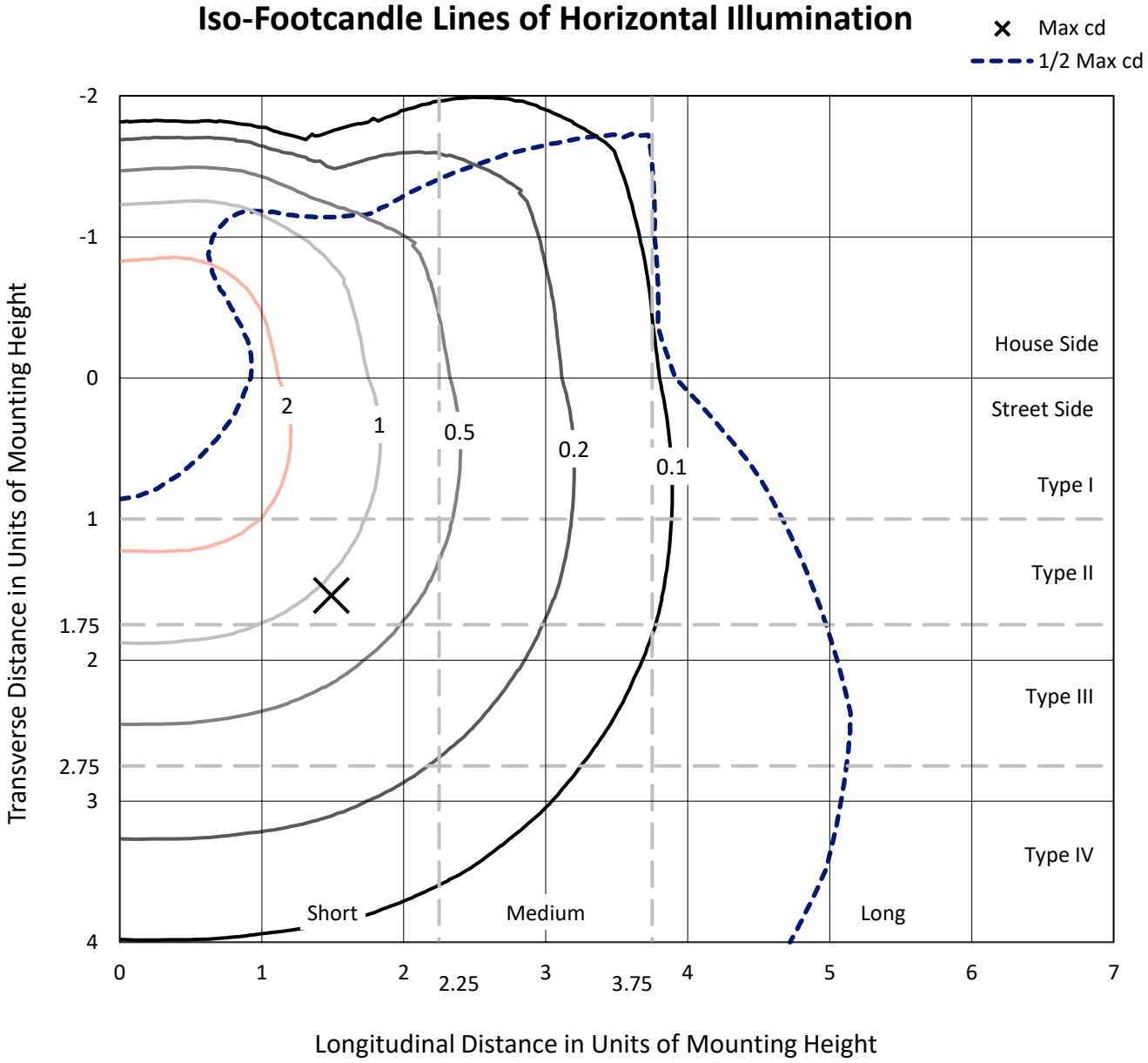
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 2.8 fc
Type IV - Short - N/A

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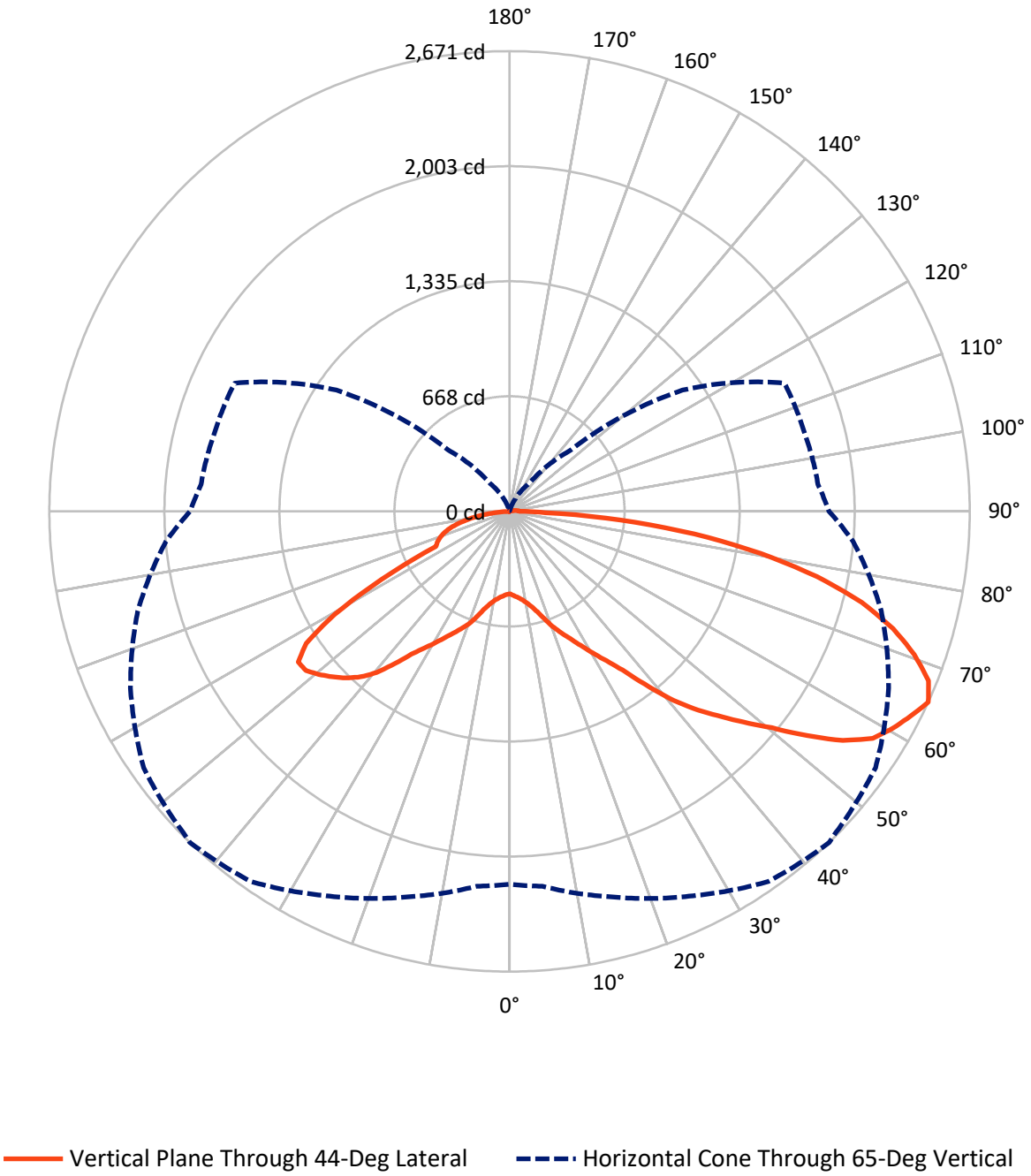
Luminous Intensity Polar Plot



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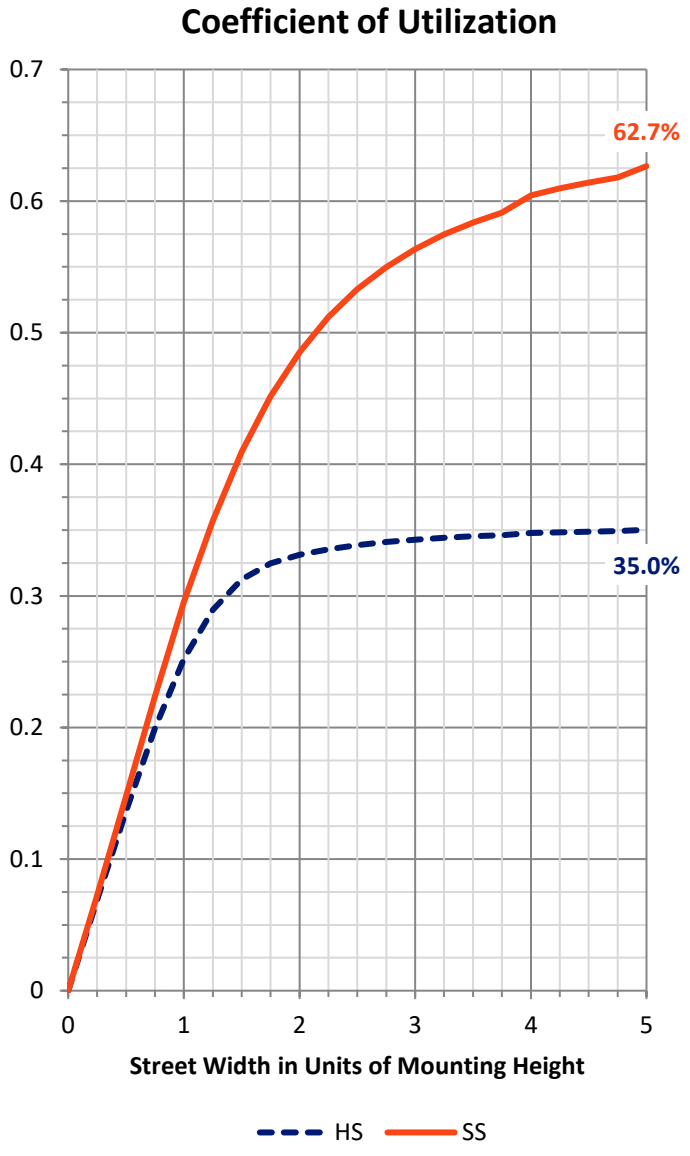
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2554.7	1.7	2556.3
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	4667.3	29.3	4696.6
	% Fixture	64.4	0.4	64.8
Total	Lumens	7222.0	31.0	7253.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	0.7
10°-20°	172.3	2.4
20°-30°	369.2	5.1
30°-40°	668.6	9.2
40°-50°	1115.6	15.4
50°-60°	1545.3	21.3
60°-70°	1601.4	22.1
70°-80°	1288.8	17.8
80°-90°	412.2	5.7
90°-100°	20.9	0.3
100°-110°	6.7	0.1
110°-120°	1.3	0.0
120°-130°	0.8	0.0
130°-140°	0.5	0.0
140°-150°	0.4	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	7222.0	99.6
0°-180°	7253.0	100.0



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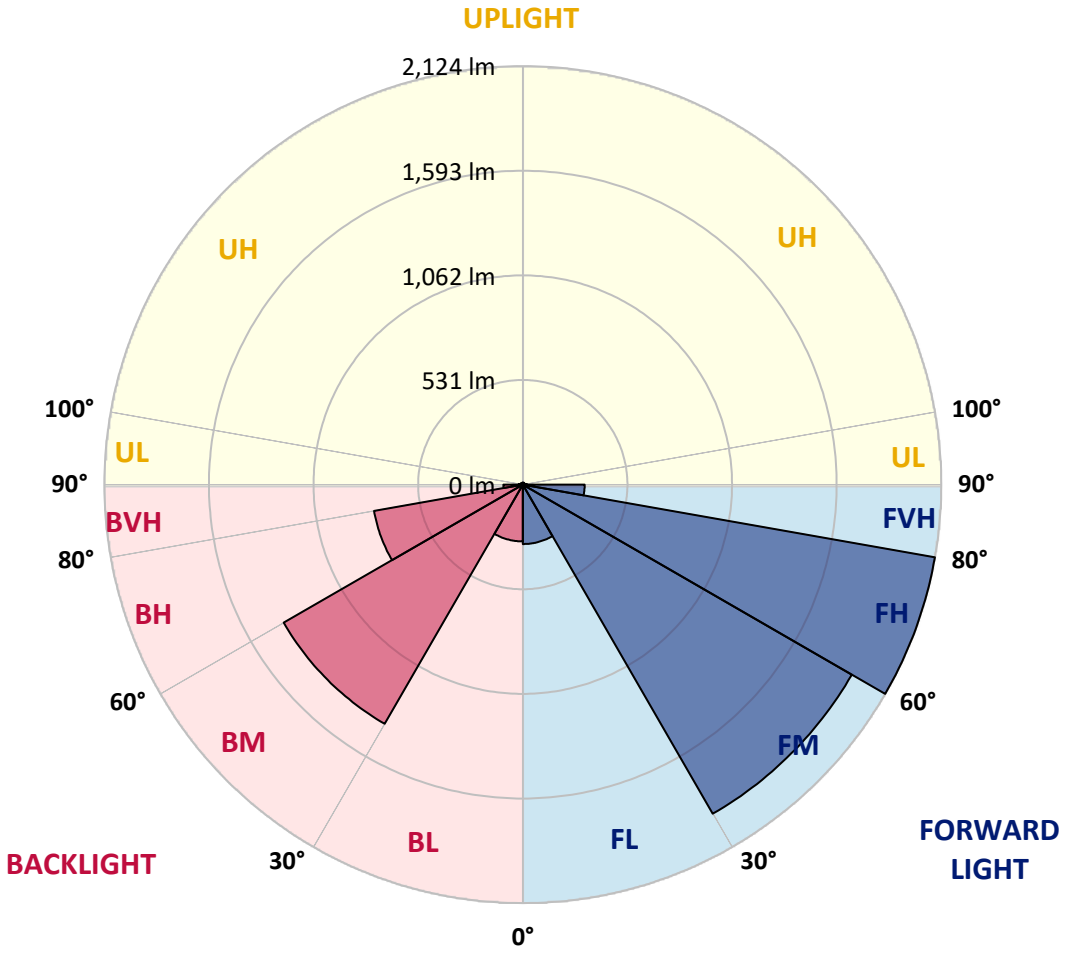
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	301.6	4.2			
FM	(30°-60°)	1928.2	26.6			
FH	(60°-80°)	2123.8	29.3			G2/5000
FVH	(80°-90°)	313.7	4.3			G3/500
BL	(0°-30°)	288.4	4.0	B1/500		
BM	(30°-60°)	1401.3	19.3	B2/2500		
BH	(60°-80°)	766.4	10.6	B2/1000		G2/1000
BVH	(80°-90°)	98.6	1.4			G1/100
UL	(90°-100°)	20.9	0.3		U2/50	
UH	(100°-180°)	10.1	0.1		U2/50	

BUG Rating: B2-U2-G3
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	478.6	478.6	478.6	478.6	478.6	*478.6*	478.6	478.6	478.6	478.6	478.6
2.5°	492.8	491.3	491.3	489.9	489.9	*489.9*	489.9	489.9	488.5	487.1	485.7
5°	505.5	505.5	504.1	504.1	502.7	*501.3*	502.7	501.3	499.8	498.4	497.0
7.5°	522.5	521.1	521.1	518.2	518.2	*516.8*	516.8	516.8	515.4	512.6	511.2
10°	546.6	543.7	543.7	540.9	539.5	*538.1*	538.1	535.2	535.2	533.8	532.4
12.5°	573.5	570.6	573.5	572.1	569.2	*566.4*	566.4	563.6	562.1	560.7	555.1
15°	608.9	604.6	607.5	607.5	606.0	*604.6*	604.6	599.0	596.1	593.3	587.6
17.5°	651.3	648.5	649.9	651.3	655.6	*655.6*	657.0	649.9	644.3	634.4	630.1
20°	705.2	703.7	708.0	708.0	712.2	*712.2*	713.7	706.6	696.7	689.6	681.1
22.5°	757.5	757.5	763.2	763.2	767.5	*764.6*	764.6	761.8	750.5	742.0	733.5
25°	811.4	809.9	815.6	819.9	825.5	*818.4*	821.3	817.0	805.7	794.4	783.0
27.5°	870.8	868.0	870.8	876.5	886.4	*880.7*	883.6	876.5	865.2	849.6	839.7
30°	936.0	931.7	936.0	944.5	951.5	*954.4*	953.0	943.0	933.1	910.5	903.4
32.5°	999.7	999.7	1009.6	1025.2	1033.7	*1032.2*	1033.7	1025.2	1011.0	982.7	965.7
35°	1077.6	1083.2	1096.0	1118.6	1137.0	*1129.9*	1129.9	1127.1	1103.0	1069.1	1046.4
37.5°	1180.9	1186.6	1212.1	1239.0	1273.0	*1270.1*	1271.5	1263.1	1216.3	1180.9	1148.4
40°	1301.3	1306.9	1345.2	1383.4	1416.0	*1425.9*	1427.3	1408.9	1357.9	1306.9	1256.0
42.5°	1411.7	1418.8	1458.5	1512.3	1547.7	*1563.2*	1566.1	1536.3	1482.5	1424.5	1360.8
45°	1522.2	1530.7	1576.0	1632.6	1683.6	*1690.7*	1692.1	1666.6	1607.1	1540.6	1458.5
47.5°	1635.5	1642.5	1689.3	1757.2	1812.4	*1826.6*	1828.0	1804.0	1731.7	1651.0	1554.7
50°	1738.8	1753.0	1816.7	1888.9	1962.5	*1973.9*	1975.3	1948.4	1863.4	1772.8	1645.4
52.5°	1860.6	1867.7	1935.6	2056.0	2118.3	*2162.2*	2163.6	2111.2	2020.6	1898.8	1734.6
55°	2002.2	2014.9	2084.3	2204.7	2316.5	*2346.3*	2354.8	2292.5	2172.1	2040.4	1847.8
57.5°	2084.3	2108.4	2210.3	2325.0	2465.2	*2485.0*	2489.3	2424.2	2291.0	2146.6	1932.8
60°	2128.2	2142.4	2250.0	2428.4	2537.4	*2555.8*	2554.4	2504.9	2371.8	2196.2	1972.5
62.5°	2177.8	2201.8	2292.5	2473.7	2568.6	*2613.9*	2606.8	2555.8	2419.9	2227.3	2010.7
65°	*2163.6*	*2183.4*	*2316.5*	*2463.8*	*2621.0*	*2670.5*	*2660.6*	*2592.7*	*2427.0*	*2233.0*	*2000.8*
67.5°	2107.0	2122.5	2254.2	2436.9	2587.0	*2622.4*	2639.4	2572.8	2387.3	2172.1	1938.5
70°	1990.9	2014.9	2142.4	2329.3	2466.6	*2492.1*	2494.9	2453.9	2286.8	2060.2	1835.1
72.5°	1830.9	1850.7	1989.4	2179.2	2298.1	*2327.9*	2330.7	2268.4	2142.4	1907.3	1686.4
75°	1639.7	1658.1	1765.7	1964.0	2081.5	*2111.2*	2108.4	2050.3	1917.2	1694.9	1489.6
77.5°	1403.2	1437.2	1532.1	1694.9	1809.6	*1825.2*	1828.0	1764.3	1656.7	1464.1	1264.5
80°	1107.3	1139.9	1247.5	1369.2	1465.5	*1478.3*	1482.5	1428.7	1331.0	1161.1	991.2
82.5°	787.3	815.6	900.6	999.7	1080.4	*1080.4*	1083.2	1039.3	964.3	818.4	685.3
85°	448.9	470.1	526.7	597.5	655.6	*648.5*	649.9	610.3	560.7	447.4	362.5
87.5°	147.3	157.2	169.9	196.8	223.7	*206.7*	215.2	178.4	161.4	120.4	93.5
90°	77.9	77.9	75.0	72.2	66.6	*58.1*	58.1	46.7	35.4	22.7	8.5
92.5°	70.8	70.8	68.0	65.1	59.5	*52.4*	52.4	42.5	31.2	19.8	7.1
95°	58.1	58.1	56.6	53.8	49.6	*43.9*	42.5	35.4	26.9	15.6	5.7
97.5°	45.3	45.3	43.9	42.5	38.2	*34.0*	34.0	26.9	19.8	12.7	4.2
100°	34.0	34.0	34.0	31.2	29.7	*25.5*	25.5	21.2	15.6	9.9	2.8
102.5°	24.1	25.5	24.1	22.7	21.2	*18.4*	18.4	15.6	11.3	7.1	2.8
105°	17.0	17.0	15.6	15.6	14.2	*12.7*	12.7	9.9	7.1	4.2	1.4
107.5°	9.9	9.9	9.9	9.9	8.5	*8.5*	8.5	7.1	4.2	2.8	1.4
110°	5.7	5.7	5.7	5.7	4.2	*4.2*	4.2	2.8	2.8	1.4	1.4

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.4	1.4	1.4	1.4
115°	1.4	1.4	1.4	2.8	1.4	1.4	1.4	1.4	1.4	1.4	1.4
117.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
120°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
122.5°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
125°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
127.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
130°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
132.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
135°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
140°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
142.5°	1.4	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
145°	1.4	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
147.5°	1.4	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
150°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
160°	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
162.5°	1.4	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
165°	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
167.5°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
170°	1.4	0.0	0.0	0.0	0.0	1.4	0.0	1.4	1.4	1.4	1.4
172.5°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
175°	1.4	1.4	1.4	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
177.5°	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
180°	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°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	485.7	485.7	484.3	482.8	482.8	482.8	481.4	481.4	481.4	480.0	480.0
5°	497.0	495.6	495.6	494.2	494.2	492.8	492.8	491.3	489.9	489.9	488.5
7.5°	512.6	511.2	508.3	509.8	506.9	505.5	504.1	504.1	504.1	502.7	502.7
10°	531.0	531.0	528.2	528.2	525.3	523.9	522.5	522.5	523.9	523.9	522.5
12.5°	555.1	553.6	553.6	552.2	550.8	549.4	550.8	550.8	549.4	548.0	546.6
15°	584.8	584.8	584.8	586.2	584.8	584.8	584.8	583.4	580.6	577.7	577.7
17.5°	630.1	628.7	625.9	627.3	630.1	634.4	630.1	625.9	621.6	621.6	620.2
20°	676.8	678.3	678.3	679.7	683.9	688.2	682.5	679.7	676.8	674.0	671.2
22.5°	727.8	729.2	729.2	727.8	730.6	729.2	726.4	723.6	720.7	716.5	713.7
25°	777.4	778.8	777.4	776.0	777.4	773.1	768.9	764.6	757.5	750.5	750.5
27.5°	832.6	831.2	825.5	826.9	824.1	821.3	812.8	802.9	792.9	785.9	785.9
30°	890.6	890.6	879.3	885.0	879.3	877.9	859.5	846.8	832.6	822.7	821.3
32.5°	954.4	951.5	943.0	948.7	943.0	937.4	914.7	897.7	873.7	859.5	858.1
35°	1030.8	1023.8	1016.7	1022.3	1022.3	1006.8	984.1	953.0	919.0	902.0	900.6
37.5°	1124.3	1120.0	1111.5	1118.6	1124.3	1108.7	1074.7	1029.4	981.3	955.8	954.4
40°	1227.7	1222.0	1217.7	1227.7	1231.9	1216.3	1171.0	1107.3	1042.2	1005.3	999.7
42.5°	1325.4	1312.6	1305.5	1319.7	1315.4	1298.5	1236.1	1162.5	1073.3	1030.8	1023.8
45°	1413.1	1399.0	1389.1	1401.8	1396.2	1362.2	1292.8	1193.7	1086.1	1033.7	1025.2
47.5°	1499.5	1478.3	1462.7	1479.7	1468.4	1416.0	1331.0	1209.2	1071.9	1009.6	995.4
50°	1573.1	1547.7	1537.8	1557.6	1540.6	1467.0	1357.9	1202.2	1036.5	945.9	923.2
52.5°	1660.9	1622.7	1612.8	1651.0	1612.8	1515.1	1363.6	1185.2	955.8	846.8	825.5
55°	1750.1	1707.7	1692.1	1727.5	1669.4	1525.0	1335.3	1087.5	834.0	717.9	686.7
57.5°	1796.9	1757.2	1743.1	1768.6	1660.9	1428.7	1209.2	906.2	651.3	521.1	487.1
60°	1839.4	1770.0	1751.6	1785.5	1573.1	1205.0	936.0	649.9	393.6	295.9	270.5
62.5°	1869.1	1802.5	1764.3	1779.9	1411.7	876.5	538.1	312.9	148.7	103.4	102.0
65°	*1853.5*	*1796.9*	*1771.4*	*1760.1*	*1226.2*	*504.1*	*198.2*	*79.3*	*4.2*	*4.2*	*2.8*
67.5°	1805.4	1743.1	1736.0	1745.9	1213.5	484.3	184.1	72.2	0.0	0.0	0.0
70°	1699.2	1655.3	1655.3	1689.3	1158.3	458.8	171.3	66.6	0.0	0.0	0.0
72.5°	1556.2	1522.2	1542.0	1593.0	1076.1	423.4	154.3	59.5	0.0	0.0	0.0
75°	1384.8	1349.4	1374.9	1431.6	974.2	378.1	134.5	51.0	0.0	0.0	0.0
77.5°	1166.8	1142.7	1182.3	1234.7	838.3	318.6	110.4	41.1	0.0	0.0	0.0
80°	909.1	896.3	948.7	995.4	676.8	250.6	83.5	29.7	0.0	0.0	0.0
82.5°	627.3	621.6	672.6	720.7	484.3	175.6	56.6	19.8	0.0	0.0	0.0
85°	328.5	328.5	368.2	412.0	270.5	94.9	28.3	8.5	0.0	0.0	0.0
87.5°	72.2	69.4	75.0	96.3	53.8	18.4	4.2	1.4	0.0	0.0	0.0
90°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
105°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.4	1.4	1.4	1.4	1.4	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

Scaled Data Report

REPORT NUMBER: P436871
CATALOG NUMBER: TT-D5-735-U-WQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
117.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
122.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
125°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-4

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-735-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-735-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

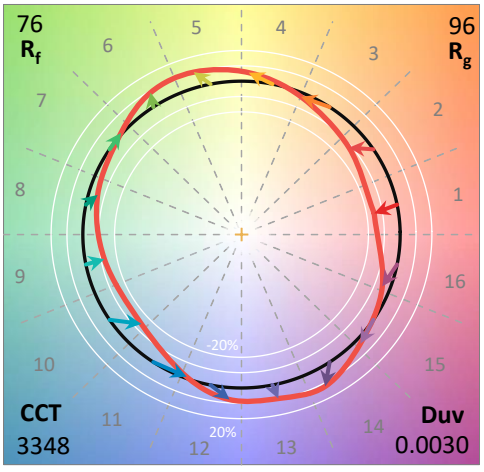
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-4
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	09/27/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Streetworks
Catalog Number:	**MEM2-HTN-VA-30-735-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	3348	CRI (Ra):	73.4		
CIE u':	0.2384	R1:	70.8	R9:	-19.2
CIE v':	0.5184	R2:	79.9	R10:	52.5
Duv:	0.0030	R3:	87.6	R11:	68.0
CIE x:	0.4177	R4:	72.6	R12:	42.6
CIE y:	0.4036	R5:	69.3	R13:	72.0
CIE z:	0.1787	R6:	71.3	R14:	92.6
Peak Wavelength (nm):	593	R7:	82.1	R15:	63.8
Dominant Wavelength (nm):	580	R8:	53.3		
Purity:	46.5223				

Rf:	75.8
Rg:	95.8



Test Conditions

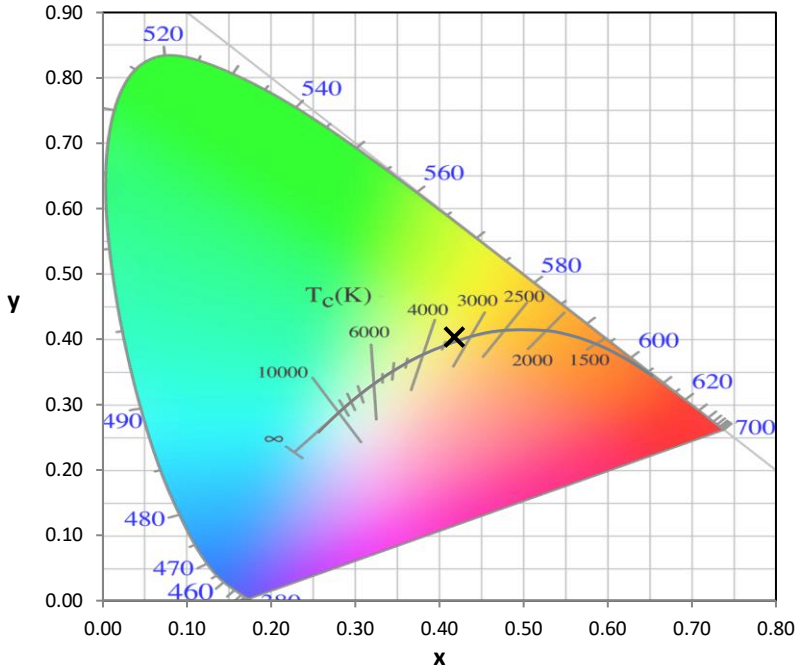
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-4

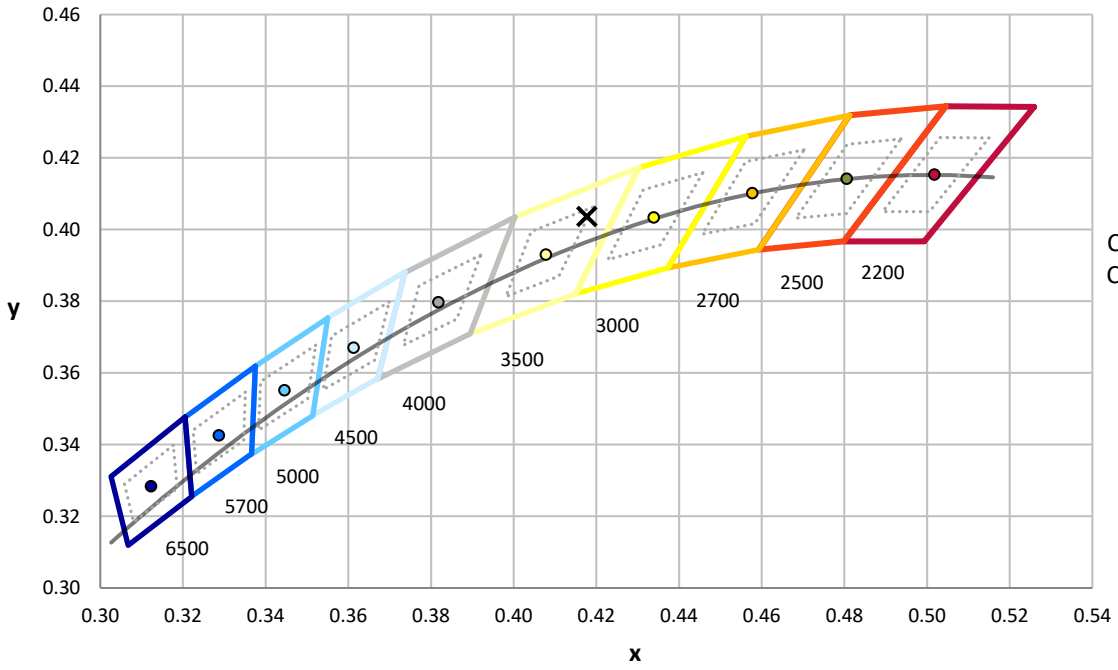
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2407-176-4

CIE 1931 Chromaticity Diagram



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

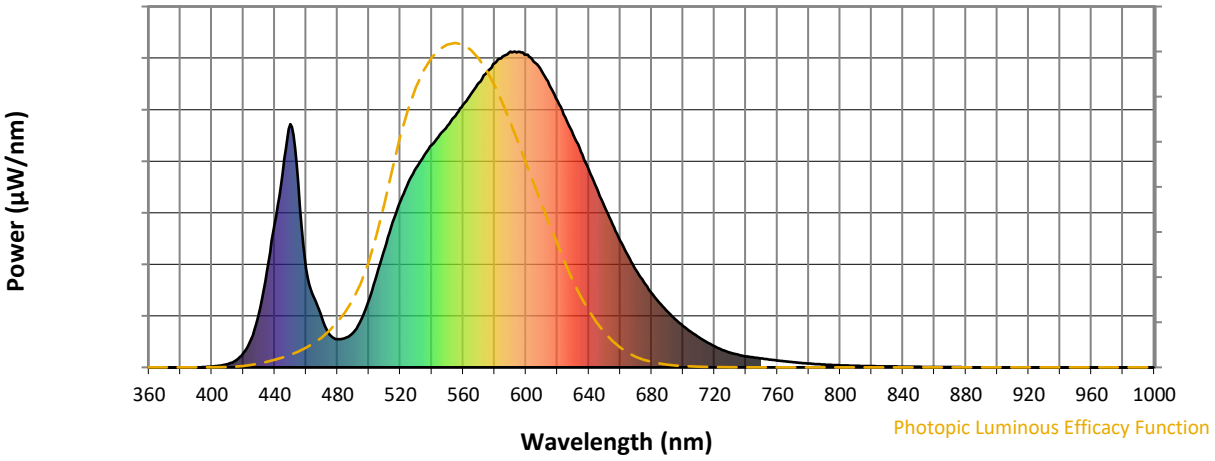


CCT = 3348K
CIE x = 0.4177
CIE y = 0.4036
Duv = 0.0030

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-4

Photopic Flux vs. Wavelength

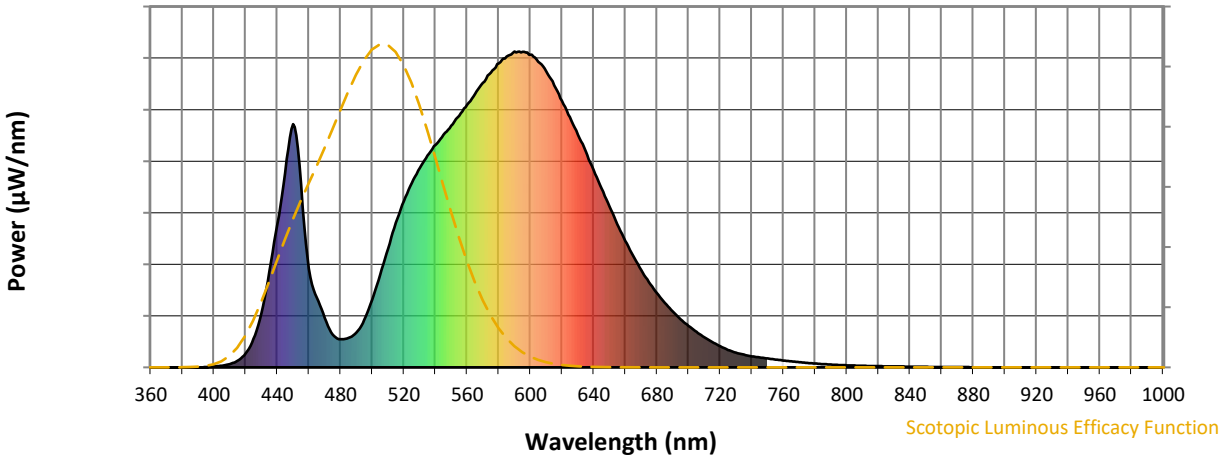


Photopic Lumens: NR

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	110	NR	620	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-4

Scotopic Flux vs. Wavelength

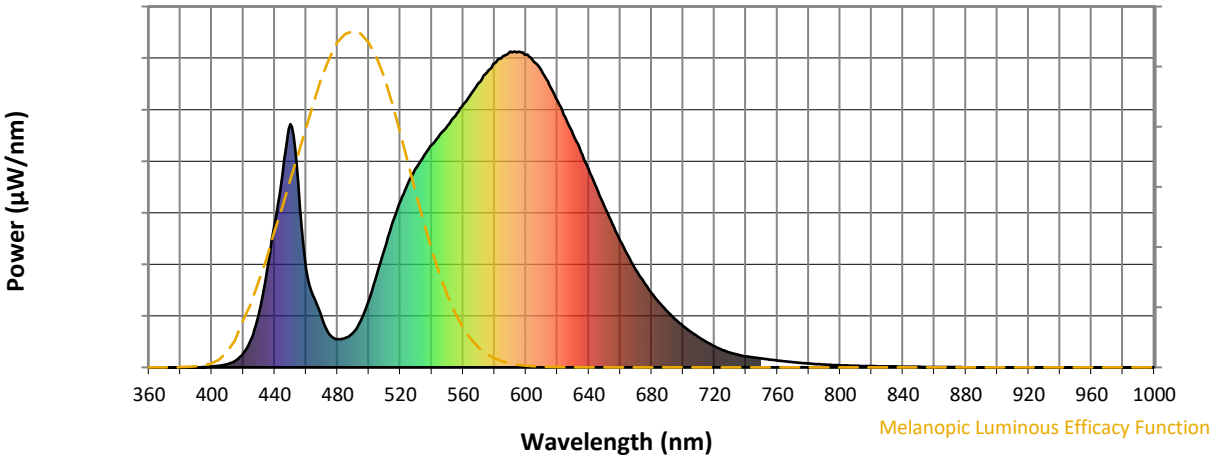


Scotopic Lumens: NR **S/P: 1.31**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	110	NR	620	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.4**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	110	NR	620	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

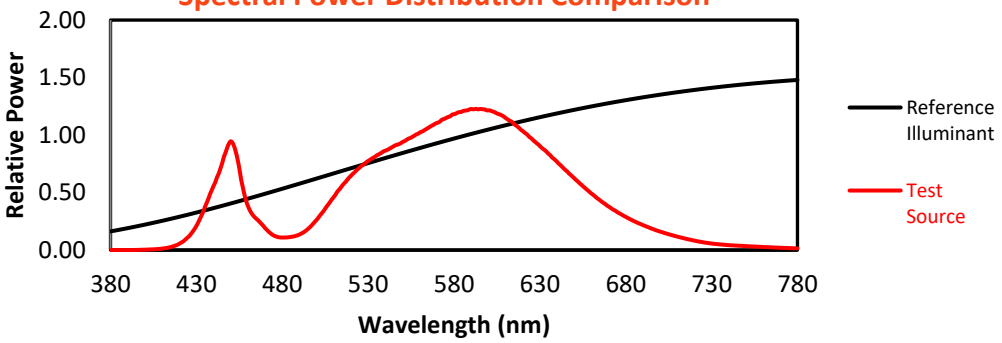
REPORT NUMBER: SP1-2407-176-4

TM-30-18

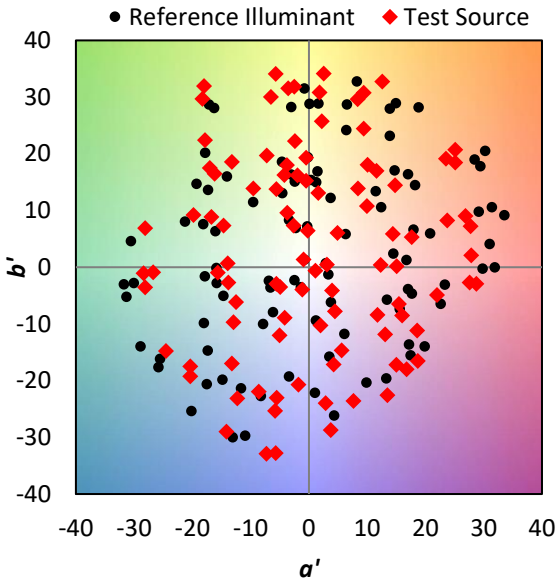
Summary

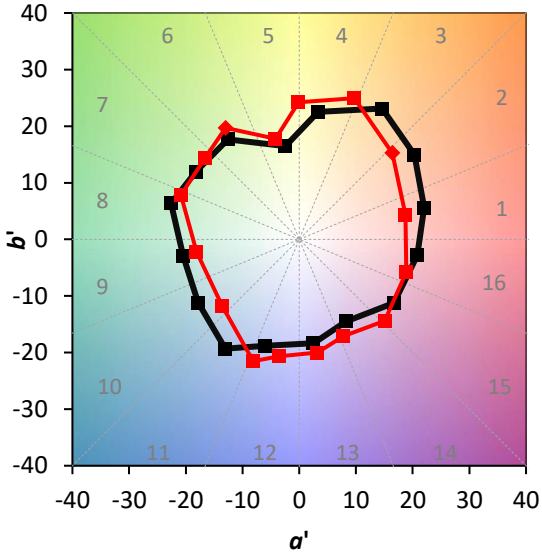
R_f = 75.8
R_g = 95.8
CIE R_a = 73.4
R_9 = -19.2

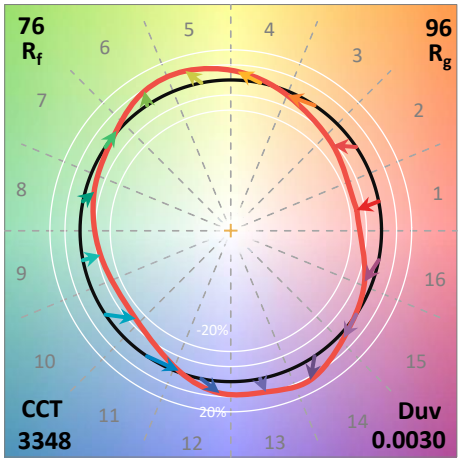
Spectral Power Distribution Comparison

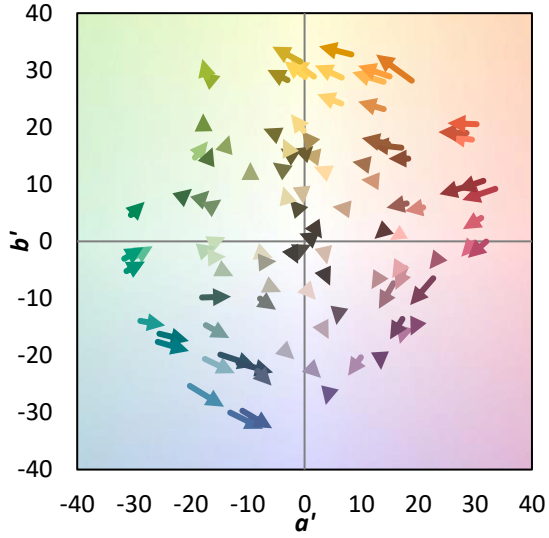


Color Vector Graphics







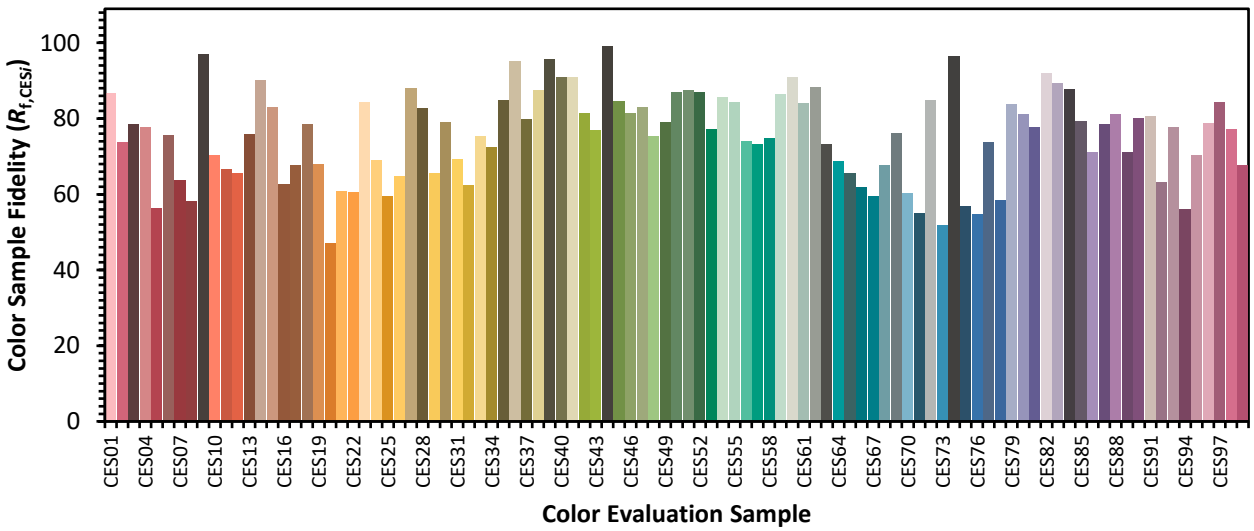


REPORT NUMBER: SP1-2407-176-4

TM-30-18

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

CES01 = 86	CES26 = 65	CES51 = 88	CES76 = 55
CES02 = 62	CES27 = 88	CES52 = 87	CES77 = 74
CES03 = 31	CES28 = 83	CES53 = 77	CES78 = 58
CES04 = 70	CES29 = 66	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 79	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 69	CES56 = 74	CES81 = 78
CES07 = 41	CES32 = 62	CES57 = 73	CES82 = 92
CES08 = 40	CES33 = 75	CES58 = 75	CES83 = 89
CES09 = 29	CES34 = 73	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 85	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 95	CES61 = 84	CES86 = 71
CES12 = 64	CES37 = 80	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 88	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 71
CES15 = 71	CES40 = 91	CES65 = 66	CES90 = 80
CES16 = 47	CES41 = 91	CES66 = 62	CES91 = 81
CES17 = 50	CES42 = 81	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 77	CES68 = 68	CES93 = 78
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 85	CES70 = 60	CES95 = 70
CES21 = 87	CES46 = 82	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 83	CES72 = 85	CES97 = 84
CES23 = 92	CES48 = 75	CES73 = 52	CES98 = 77
CES24 = 91	CES49 = 79	CES74 = 96	CES99 = 68
CES25 = 72	CES50 = 87	CES75 = 57	



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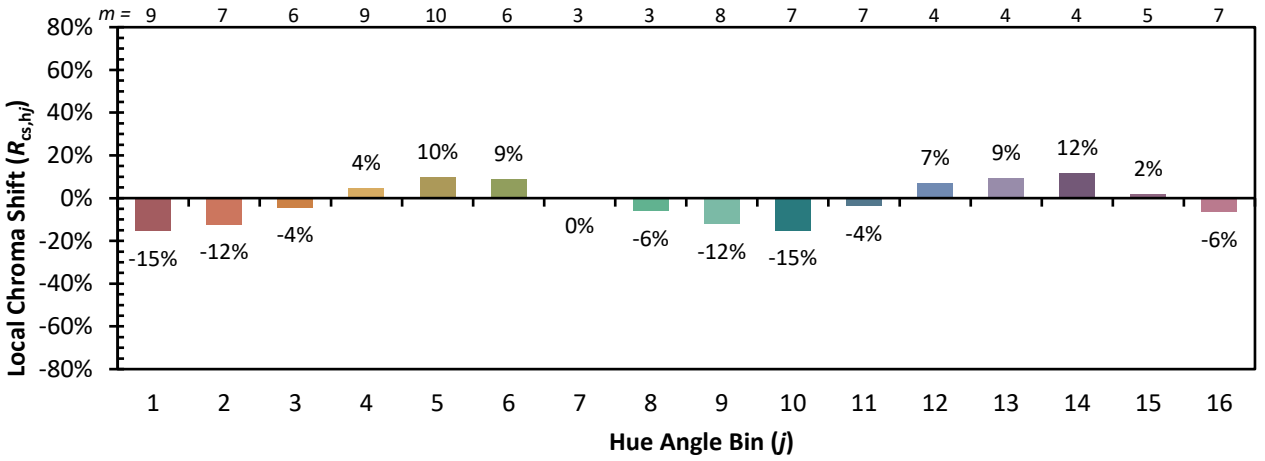
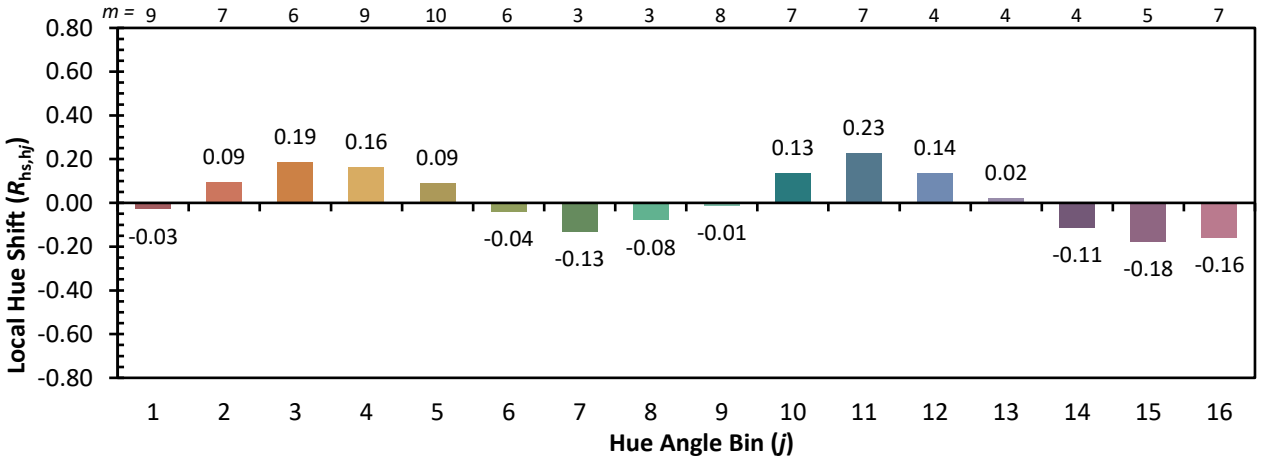
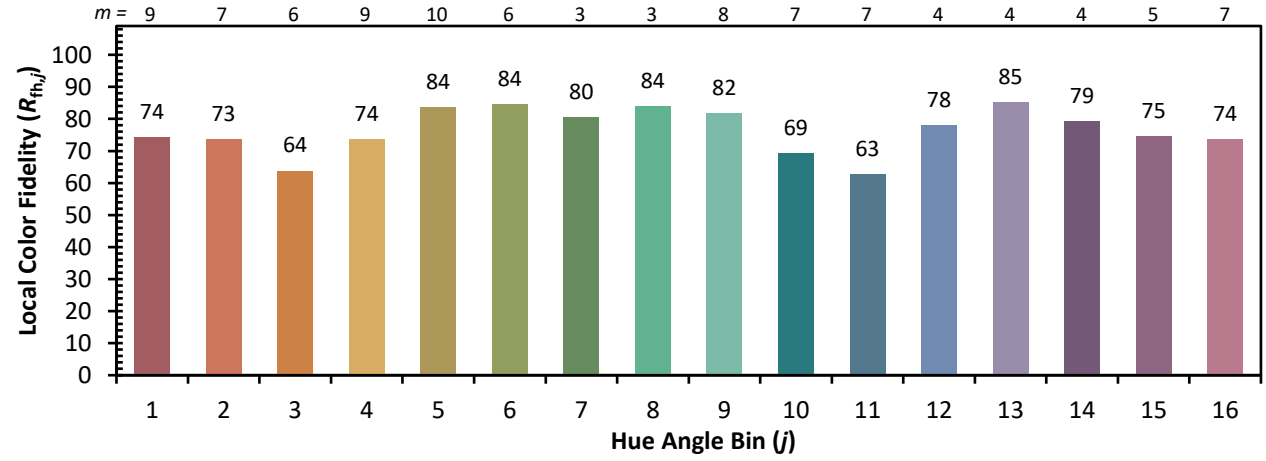
Color Rendition by Hue-Angle Bin







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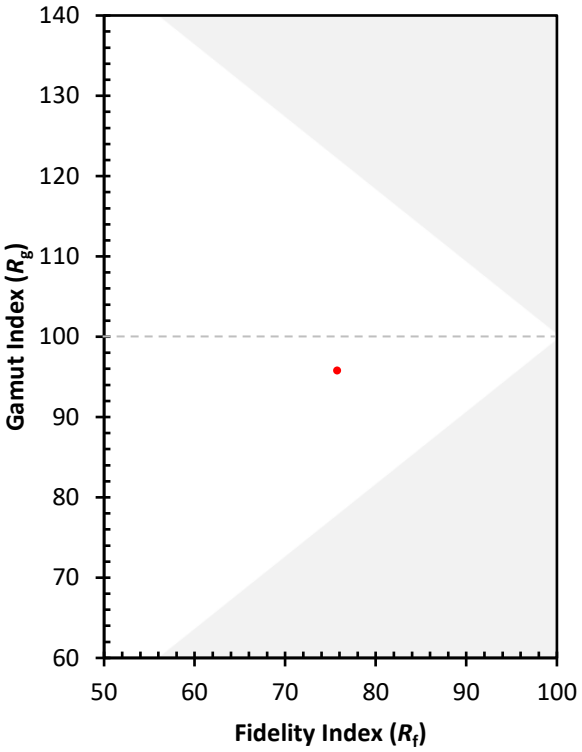
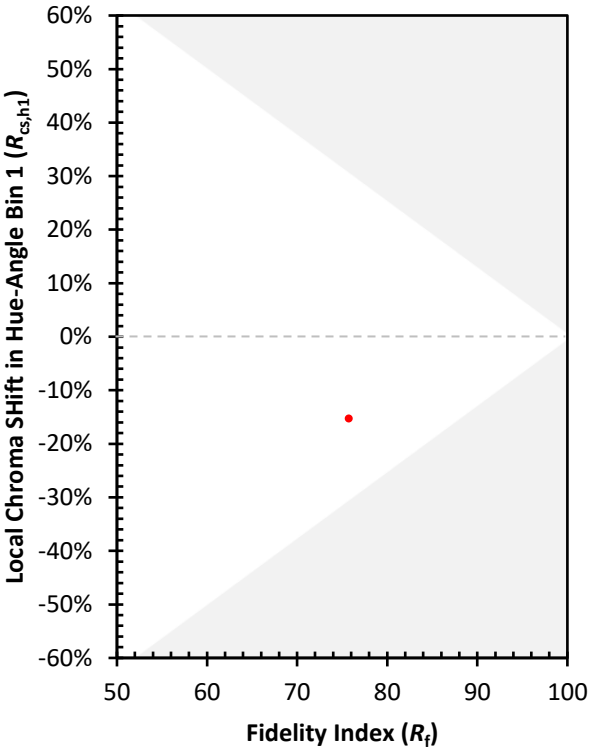
Measure Comparisons





(END OF REPORT)