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: P821185

Luminaire Tested: **TT-D5-830-24VDC-WQ-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821185
	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-D5-830-24VDC-WQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	3000K, 80 CRI LEDS AND WIDE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6832.9 lumens
Efficiency:	N/A
Efficacy:	93.6 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G3

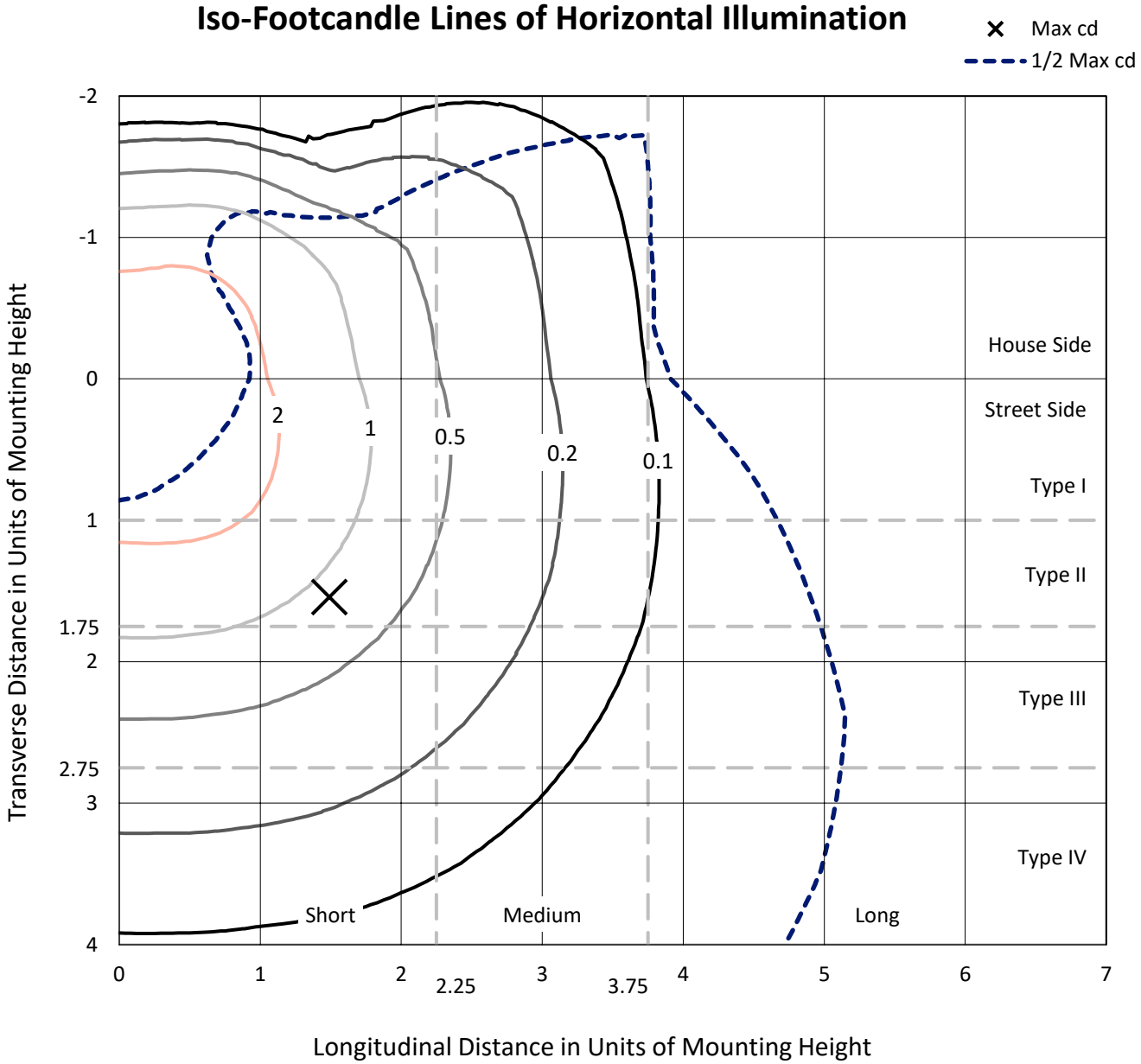
Input Watts (W):	73
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



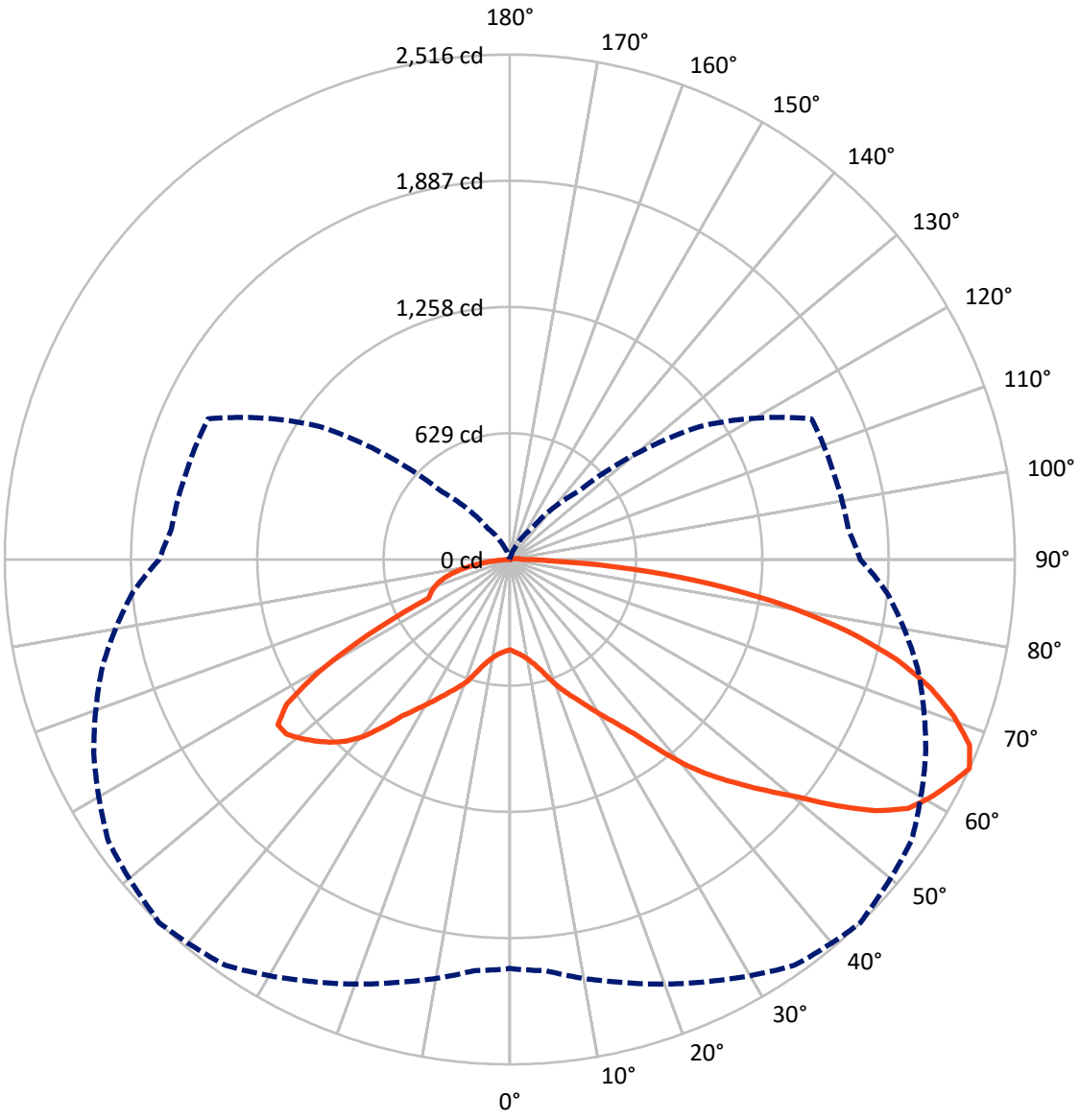
Based on 15 foot mounting height. Maximum calculated value = 2.7 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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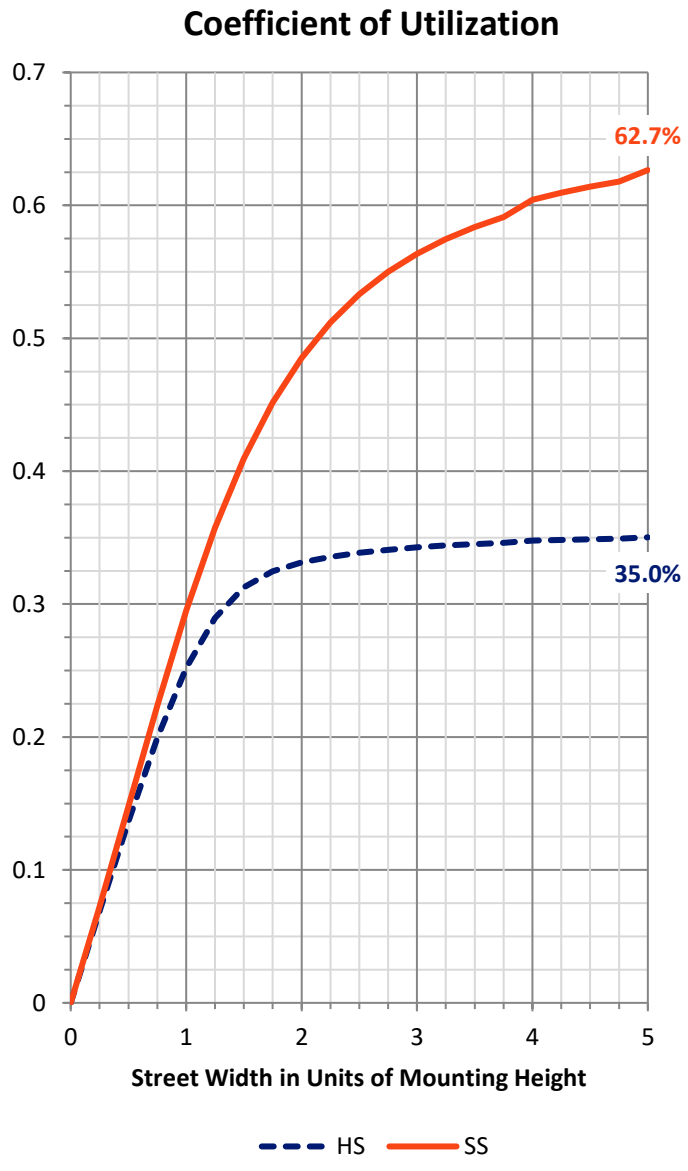
REPORT NUMBER: P821185
CATALOG NUMBER: TT-D5-830-24VDC-WQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2406.7	1.6	2408.3
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	4397.0	27.6	4424.6
	% Fixture	64.4	0.4	64.8
Total	Lumens	6803.7	29.2	6832.9
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.7	0.7
10°-20°	162.3	2.4
20°-30°	347.8	5.1
30°-40°	629.9	9.2
40°-50°	1051.0	15.4
50°-60°	1455.8	21.3
60°-70°	1508.7	22.1
70°-80°	1214.2	17.8
80°-90°	388.4	5.7
90°-100°	19.7	0.3
100°-110°	6.3	0.1
110°-120°	1.2	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°	0.1	0.0
170°-180°	0.1	0.0
0°-90°	6803.7	99.6
0°-180°	6832.9	100.0



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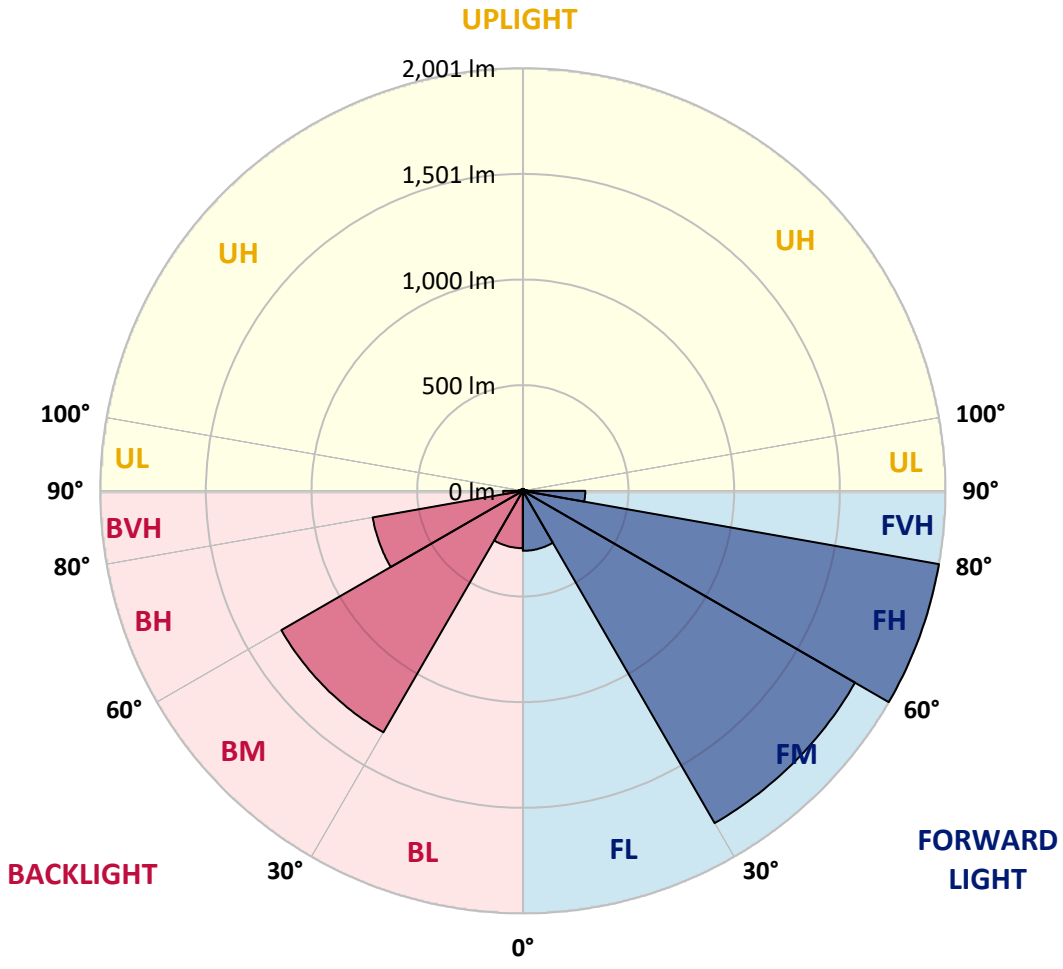
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	284.1	4.2			
FM	(30°-60°)	1816.6	26.6			
FH	(60°-80°)	2000.8	29.3			G2/5000
FVH	(80°-90°)	295.5	4.3			G3/500
BL	(0°-30°)	271.7	4.0	B1/500		
BM	(30°-60°)	1320.1	19.3	B2/2500		
BH	(60°-80°)	722.0	10.6	B2/1000		G2/1000
BVH	(80°-90°)	92.9	1.4			G1/100
UL	(90°-100°)	19.7	0.3		U2/50	
UH	(100°-180°)	9.5	0.1		U1/10	

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°	450.9	450.9	450.9	450.9	450.9	*450.9*	450.9	450.9	450.9	450.9	450.9
2.5°	464.2	462.9	462.9	461.6	461.6	*461.6*	461.6	461.6	460.2	458.9	457.6
5°	476.2	476.2	474.9	474.9	473.6	*472.2*	473.6	472.2	470.9	469.6	468.2
7.5°	492.2	490.9	490.9	488.2	488.2	*486.9*	486.9	486.9	485.6	482.9	481.6
10°	514.9	512.2	512.2	509.6	508.2	*506.9*	506.9	504.2	504.2	502.9	501.6
12.5°	540.3	537.6	540.3	538.9	536.3	*533.6*	533.6	530.9	529.6	528.3	522.9
15°	573.6	569.6	572.3	572.3	570.9	*569.6*	569.6	564.3	561.6	558.9	553.6
17.5°	613.6	611.0	612.3	613.6	617.6	*617.6*	619.0	612.3	607.0	597.6	593.6
20°	664.3	663.0	667.0	667.0	671.0	*671.0*	672.3	665.7	656.3	649.6	641.6
22.5°	713.7	713.7	719.0	719.0	723.0	*720.3*	720.3	717.7	707.0	699.0	691.0
25°	764.4	763.0	768.4	772.4	777.7	*771.0*	773.7	769.7	759.0	748.4	737.7
27.5°	820.4	817.7	820.4	825.7	835.1	*829.7*	832.4	825.7	815.1	800.4	791.1
30°	881.8	877.8	881.8	889.8	896.4	*899.1*	897.8	888.4	879.1	857.7	851.1
32.5°	941.8	941.8	951.1	965.8	973.8	*972.5*	973.8	965.8	952.5	925.8	909.8
35°	1015.2	1020.5	1032.5	1053.8	1071.2	*1064.5*	1064.5	1061.8	1039.2	1007.2	985.8
37.5°	1112.5	1117.9	1141.9	1167.2	1199.2	*1196.6*	1197.9	1189.9	1145.9	1112.5	1081.9
40°	1225.9	1231.3	1267.3	1303.3	1334.0	*1343.3*	1344.7	1327.3	1279.3	1231.3	1183.2
42.5°	1330.0	1336.6	1374.0	1424.7	1458.0	*1472.7*	1475.4	1447.4	1396.7	1342.0	1282.0
45°	1434.0	1442.0	1484.7	1538.1	1586.1	*1592.8*	1594.1	1570.1	1514.1	1451.4	1374.0
47.5°	1540.7	1547.4	1591.4	1655.5	1707.5	*1720.8*	1722.2	1699.5	1631.5	1555.4	1464.7
50°	1638.1	1651.5	1711.5	1779.5	1848.9	*1859.6*	1860.9	1835.6	1755.5	1670.1	1550.1
52.5°	1752.9	1759.5	1823.6	1936.9	1995.6	*2037.0*	2038.3	1989.0	1903.6	1788.9	1634.1
55°	1886.2	1898.3	1963.6	2077.0	2182.4	*2210.4*	2218.4	2159.7	2046.3	1922.3	1740.8
57.5°	1963.6	1986.3	2082.3	2190.4	2322.5	*2341.1*	2345.1	2283.8	2158.4	2022.3	1820.9
60°	2005.0	2018.3	2119.7	2287.8	2390.5	*2407.8*	2406.5	2359.8	2234.4	2069.0	1858.2
62.5°	2051.7	2074.3	2159.7	2330.5	2419.8	*2462.5*	2455.9	2407.8	2279.8	2098.4	1894.3
65°	*2038.3*	*2057.0*	*2182.4*	*2321.1*	*2469.2*	*2515.9*	*2506.6*	*2442.5*	*2286.4*	*2103.7*	*1884.9*
67.5°	1985.0	1999.6	2123.7	2295.8	2437.2	*2470.5*	2486.5	2423.8	2249.1	2046.3	1826.2
70°	1875.6	1898.3	2018.3	2194.4	2323.8	*2347.8*	2350.5	2311.8	2154.4	1940.9	1728.8
72.5°	1724.8	1743.5	1874.2	2053.0	2165.1	*2193.1*	2195.7	2137.0	2018.3	1796.9	1588.8
75°	1544.8	1562.1	1663.5	1850.2	1961.0	*1989.0*	1986.3	1931.6	1806.2	1596.8	1403.3
77.5°	1322.0	1354.0	1443.4	1596.8	1704.8	*1719.5*	1722.2	1662.1	1560.8	1379.3	1191.2
80°	1043.2	1073.9	1175.2	1290.0	1380.7	*1392.7*	1396.7	1346.0	1253.9	1093.9	933.8
82.5°	741.7	768.4	848.4	941.8	1017.8	*1017.8*	1020.5	979.1	908.4	771.0	645.6
85°	422.9	442.9	496.2	562.9	617.6	*611.0*	612.3	574.9	528.3	421.5	341.5
87.5°	138.7	148.1	160.1	185.4	210.8	*194.8*	202.8	168.1	152.1	113.4	88.0
90°	73.4	73.4	70.7	68.0	62.7	*54.7*	54.7	44.0	33.3	21.3	8.0
92.5°	66.7	66.7	64.0	61.4	56.0	*49.4*	49.4	40.0	29.3	18.7	6.7
95°	54.7	54.7	53.4	50.7	46.7	*41.4*	40.0	33.3	25.3	14.7	5.3
97.5°	42.7	42.7	41.4	40.0	36.0	*32.0*	32.0	25.3	18.7	12.0	4.0
100°	32.0	32.0	32.0	29.3	28.0	*24.0*	24.0	20.0	14.7	9.3	2.7
102.5°	22.7	24.0	22.7	21.3	20.0	*17.3*	17.3	14.7	10.7	6.7	2.7
105°	16.0	16.0	14.7	14.7	13.3	*12.0*	12.0	9.3	6.7	4.0	1.3
107.5°	9.3	9.3	9.3	9.3	8.0	*8.0*	8.0	6.7	4.0	2.7	1.3
110°	5.3	5.3	5.3	5.3	4.0	*4.0*	4.0	2.7	2.7	1.3	1.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2.7	2.7	2.7	2.7	2.7	*2.7*	2.7	1.3	1.3	1.3	1.3
115°	1.3	1.3	1.3	2.7	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
117.5°	1.3	1.3	1.3	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
120°	0.0	0.0	1.3	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
122.5°	0.0	0.0	1.3	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
125°	0.0	0.0	1.3	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
127.5°	0.0	0.0	0.0	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
130°	0.0	0.0	0.0	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
132.5°	0.0	0.0	0.0	1.3	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
135°	0.0	0.0	0.0	0.0	1.3	*1.3*	1.3	1.3	1.3	1.3	1.3
137.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
140°	1.3	1.3	0.0	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
142.5°	1.3	1.3	1.3	0.0	0.0	*1.3*	1.3	1.3	1.3	1.3	1.3
145°	1.3	1.3	0.0	0.0	0.0	*0.0*	0.0	1.3	1.3	1.3	1.3
147.5°	1.3	1.3	1.3	0.0	0.0	*1.3*	1.3	1.3	1.3	1.3	1.3
150°	1.3	1.3	0.0	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
152.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.3	1.3	1.3	1.3
155°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	1.3	1.3	1.3
157.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.3	1.3	1.3	1.3
160°	1.3	0.0	0.0	0.0	0.0	*0.0*	0.0	1.3	1.3	1.3	1.3
162.5°	1.3	1.3	0.0	0.0	0.0	*0.0*	0.0	1.3	1.3	1.3	1.3
165°	1.3	0.0	0.0	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
167.5°	1.3	1.3	0.0	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
170°	1.3	0.0	0.0	0.0	0.0	*1.3*	0.0	1.3	1.3	1.3	1.3
172.5°	1.3	1.3	0.0	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
175°	1.3	1.3	1.3	0.0	0.0	*0.0*	1.3	1.3	1.3	1.3	1.3
177.5°	0.0	1.3	0.0	0.0	0.0	*0.0*	0.0	1.3	1.3	1.3	1.3
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°	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9
2.5°	457.6	457.6	456.2	454.9	454.9	454.9	453.6	453.6	453.6	452.2	452.2
5°	468.2	466.9	466.9	465.6	465.6	464.2	464.2	462.9	461.6	461.6	460.2
7.5°	482.9	481.6	478.9	480.2	477.6	476.2	474.9	474.9	474.9	473.6	473.6
10°	500.2	500.2	497.6	497.6	494.9	493.6	492.2	492.2	493.6	493.6	492.2
12.5°	522.9	521.6	521.6	520.3	518.9	517.6	518.9	518.9	517.6	516.3	514.9
15°	550.9	550.9	550.9	552.3	550.9	550.9	550.9	549.6	546.9	544.3	544.3
17.5°	593.6	592.3	589.6	591.0	593.6	597.6	593.6	589.6	585.6	585.6	584.3
20°	637.6	639.0	639.0	640.3	644.3	648.3	643.0	640.3	637.6	635.0	632.3
22.5°	685.7	687.0	687.0	685.7	688.3	687.0	684.3	681.7	679.0	675.0	672.3
25°	732.4	733.7	732.4	731.0	732.4	728.4	724.4	720.3	713.7	707.0	707.0
27.5°	784.4	783.0	777.7	779.0	776.4	773.7	765.7	756.4	747.0	740.4	740.4
30°	839.1	839.1	828.4	833.7	828.4	827.1	809.7	797.7	784.4	775.0	773.7
32.5°	899.1	896.4	888.4	893.8	888.4	883.1	861.8	845.7	823.1	809.7	808.4
35°	971.1	964.5	957.8	963.1	963.1	948.5	927.1	897.8	865.8	849.7	848.4
37.5°	1059.2	1055.2	1047.2	1053.8	1059.2	1044.5	1012.5	969.8	924.4	900.4	899.1
40°	1156.6	1151.2	1147.2	1156.6	1160.6	1145.9	1103.2	1043.2	981.8	947.1	941.8
42.5°	1248.6	1236.6	1229.9	1243.3	1239.3	1223.3	1164.6	1095.2	1011.2	971.1	964.5
45°	1331.3	1318.0	1308.6	1320.6	1315.3	1283.3	1217.9	1124.5	1023.2	973.8	965.8
47.5°	1412.7	1392.7	1378.0	1394.0	1383.3	1334.0	1253.9	1139.2	1009.8	951.1	937.8
50°	1482.1	1458.0	1448.7	1467.4	1451.4	1382.0	1279.3	1132.5	976.5	891.1	869.8
52.5°	1564.8	1528.7	1519.4	1555.4	1519.4	1427.4	1284.6	1116.5	900.4	797.7	777.7
55°	1648.8	1608.8	1594.1	1627.5	1572.8	1436.7	1257.9	1024.5	785.7	676.3	647.0
57.5°	1692.8	1655.5	1642.1	1666.1	1564.8	1346.0	1139.2	853.7	613.6	490.9	458.9
60°	1732.8	1667.5	1650.1	1682.2	1482.1	1135.2	881.8	612.3	370.8	278.8	254.8
62.5°	1760.9	1698.2	1662.1	1676.8	1330.0	825.7	506.9	294.8	140.1	97.4	96.0
65°	*1746.2*	*1692.8*	*1668.8*	*1658.1*	*1155.2*	*474.9*	*186.8*	*74.7*	*4.0*	*4.0*	*2.7*
67.5°	1700.8	1642.1	1635.5	1644.8	1143.2	456.2	173.4	68.0	0.0	0.0	0.0
70°	1600.8	1559.4	1559.4	1591.4	1091.2	432.2	161.4	62.7	0.0	0.0	0.0
72.5°	1466.0	1434.0	1452.7	1500.7	1013.8	398.9	145.4	56.0	0.0	0.0	0.0
75°	1304.6	1271.3	1295.3	1348.7	917.8	356.2	126.7	48.0	0.0	0.0	0.0
77.5°	1099.2	1076.5	1113.9	1163.2	789.7	300.1	104.1	38.7	0.0	0.0	0.0
80°	856.4	844.4	893.8	937.8	637.6	236.1	78.7	28.0	0.0	0.0	0.0
82.5°	591.0	585.6	633.6	679.0	456.2	165.4	53.4	18.7	0.0	0.0	0.0
85°	309.5	309.5	346.8	388.2	254.8	89.4	26.7	8.0	0.0	0.0	0.0
87.5°	68.0	65.4	70.7	90.7	50.7	17.3	4.0	1.3	0.0	0.0	0.0
90°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0
105°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.3	1.3	1.3	1.3	1.3	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: P821185
CATALOG NUMBER: TT-D5-830-24VDC-WQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0
117.5°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0
122.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0
125°	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.3	1.3	1.3	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: SP1-2407-176-7

Test Date: 09/27/2024

Luminaire Tested: MEM2-HTN-VA-30-830-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-830-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

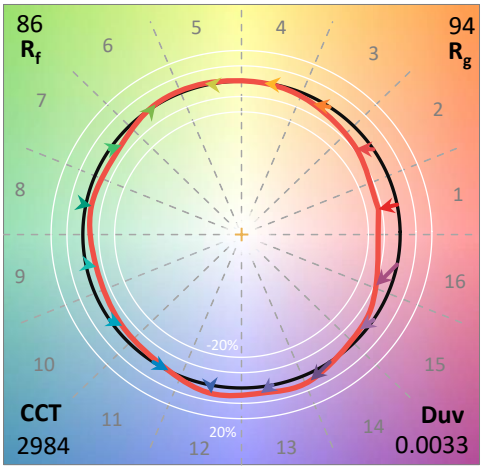
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-7
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-30-830-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	2984	CRI (Ra):	81.8		
CIE u':	0.2500	R1:	79.4	R9:	-1.1
CIE v':	0.5264	R2:	89.9	R10:	78.4
Duv:	0.0033	R3:	96.6	R11:	80.8
CIE x:	0.4431	R4:	80.6	R12:	72.8
CIE y:	0.4147	R5:	80.1	R13:	81.7
CIE z:	0.1422	R6:	88.9	R14:	98.5
Peak Wavelength (nm):	601	R7:	82.6	R15:	70.2
Dominant Wavelength (nm):	581	R8:	56.0		
Purity:	57.4798				

Rf:	85.8
Rg:	94.1



Test Conditions

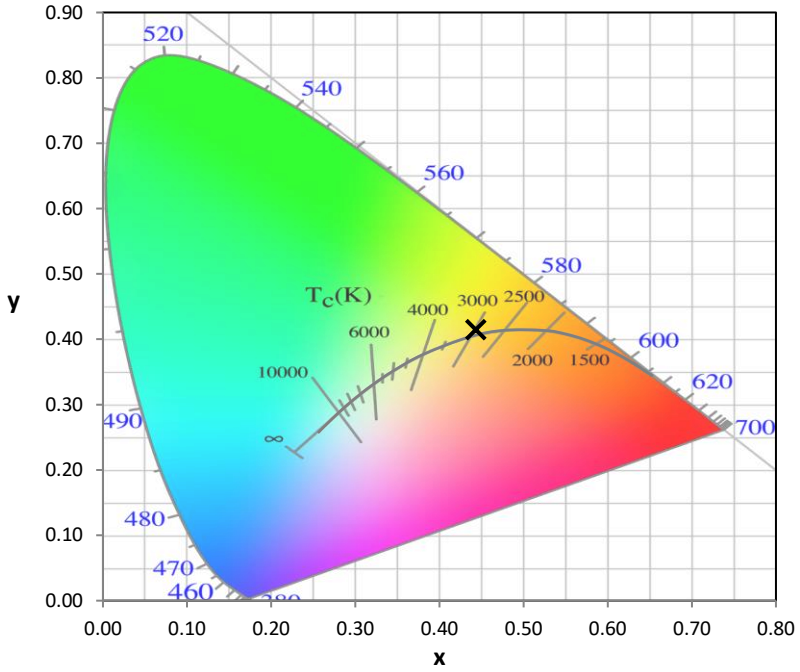
Stabilization Time:	29M
Operation Time:	1H 29M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-7

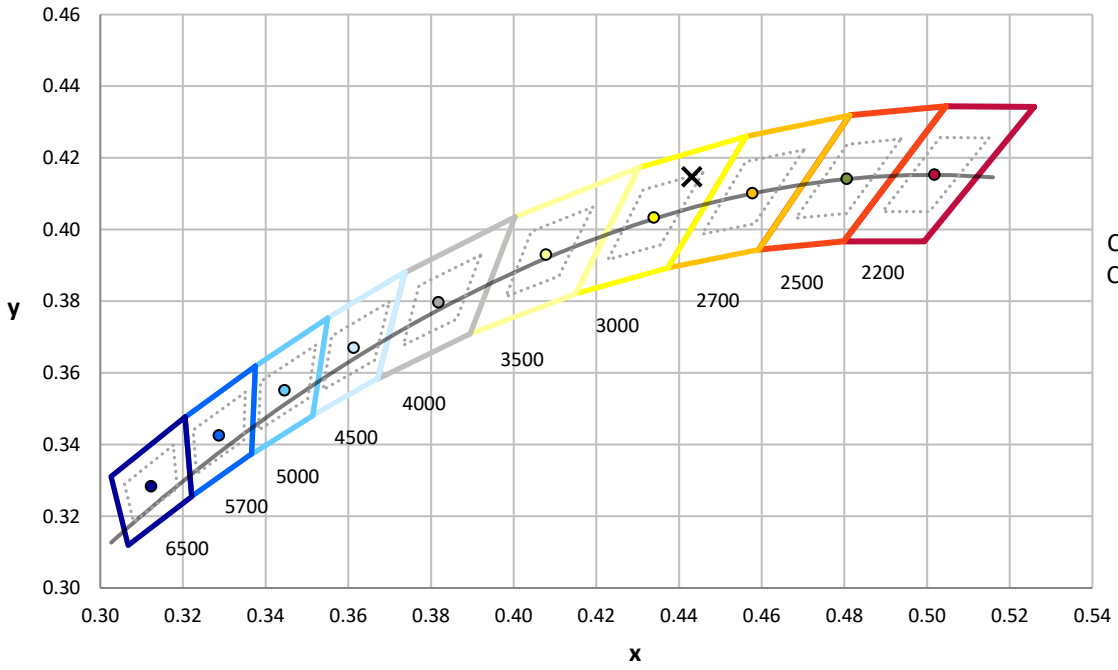
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-7

CIE 1931 Chromaticity Diagram



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

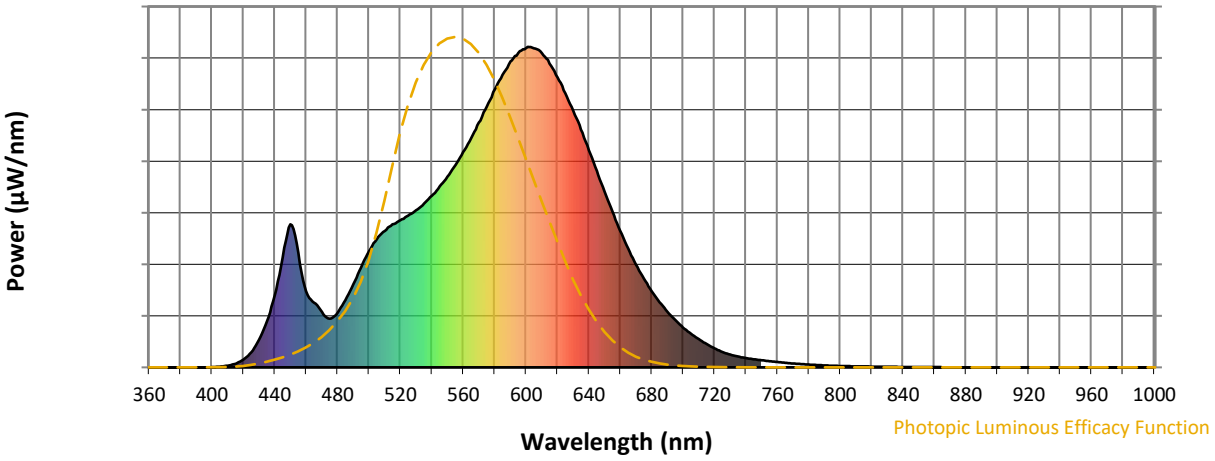


CCT = 2984K
CIE x = 0.4431
CIE y = 0.4147
Duv = 0.0033

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-7

Photopic Flux vs. Wavelength

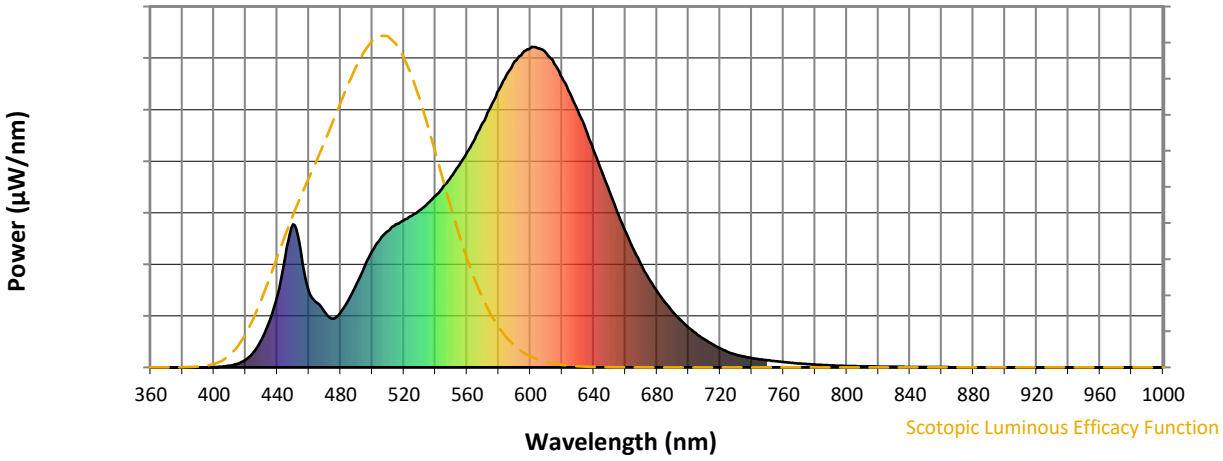


Photopic Lumens: NR

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	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-7

Scotopic Flux vs. Wavelength

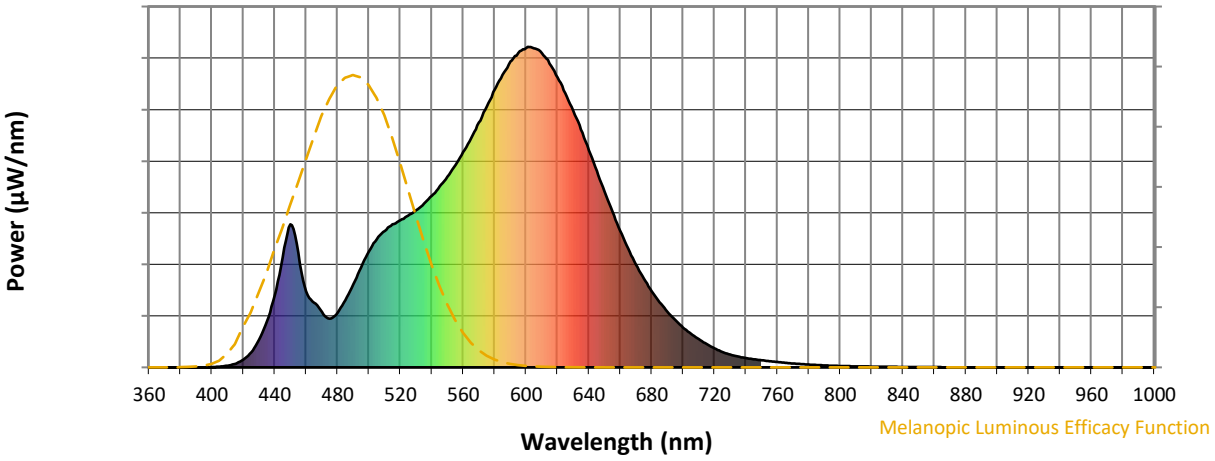


Scotopic Lumens: NR **S/P: 1.32**

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	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.51**

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	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

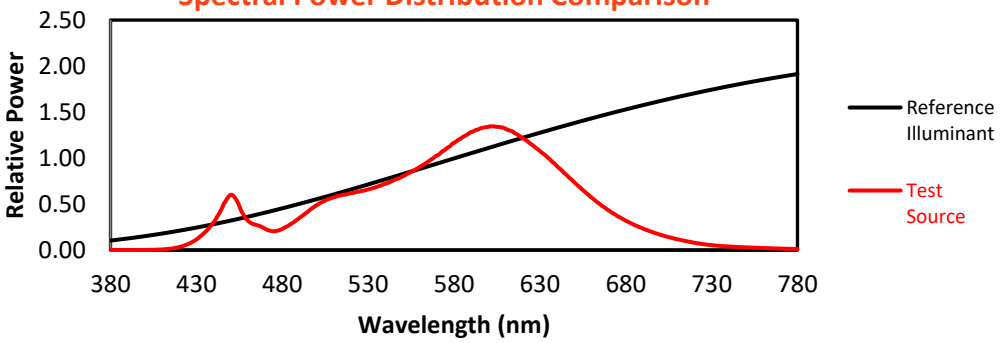
REPORT NUMBER: SP1-2407-176-7

TM-30-18

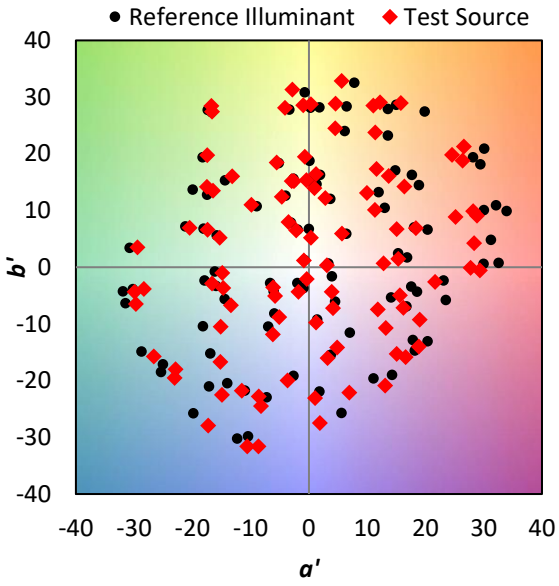
Summary

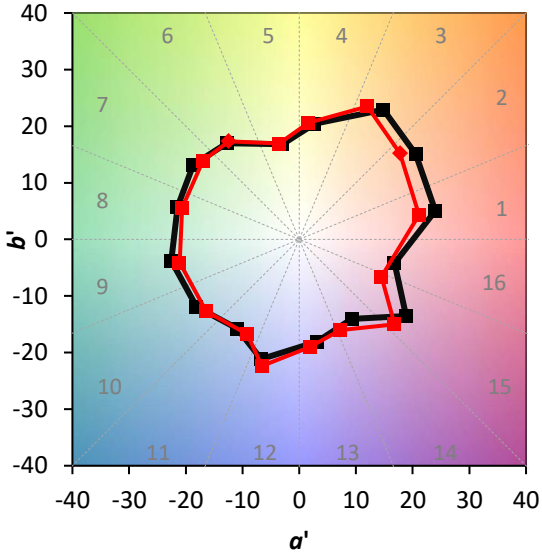
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R_g = 94.1
CIE R_a = 81.8
R_9 = -1.1

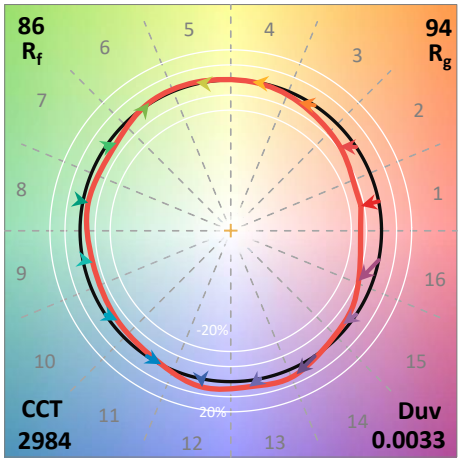
Spectral Power Distribution Comparison

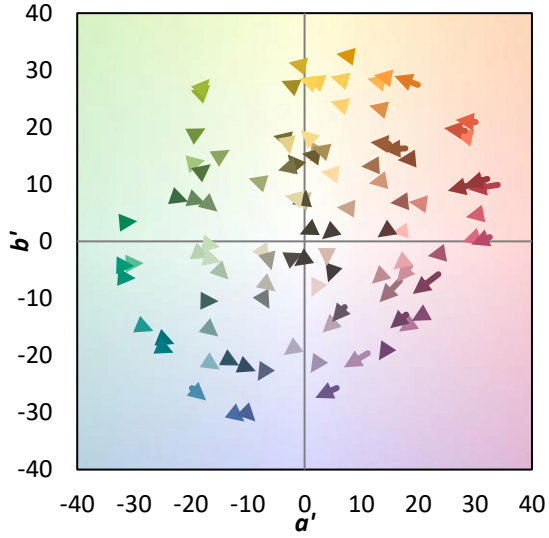


Color Vector Graphics







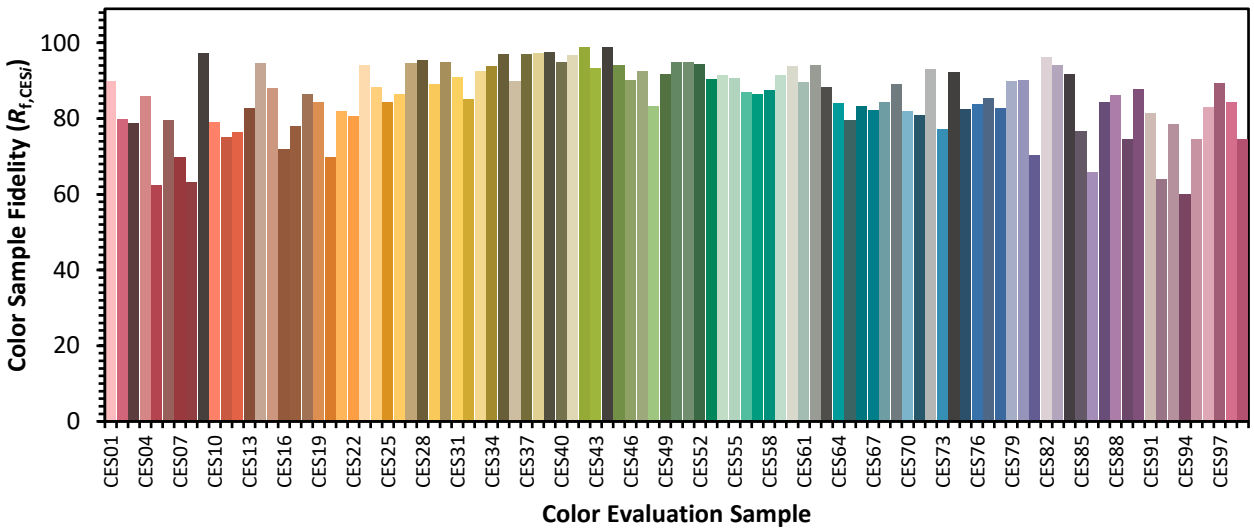


REPORT NUMBER: SP1-2407-176-7

TM-30-18

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

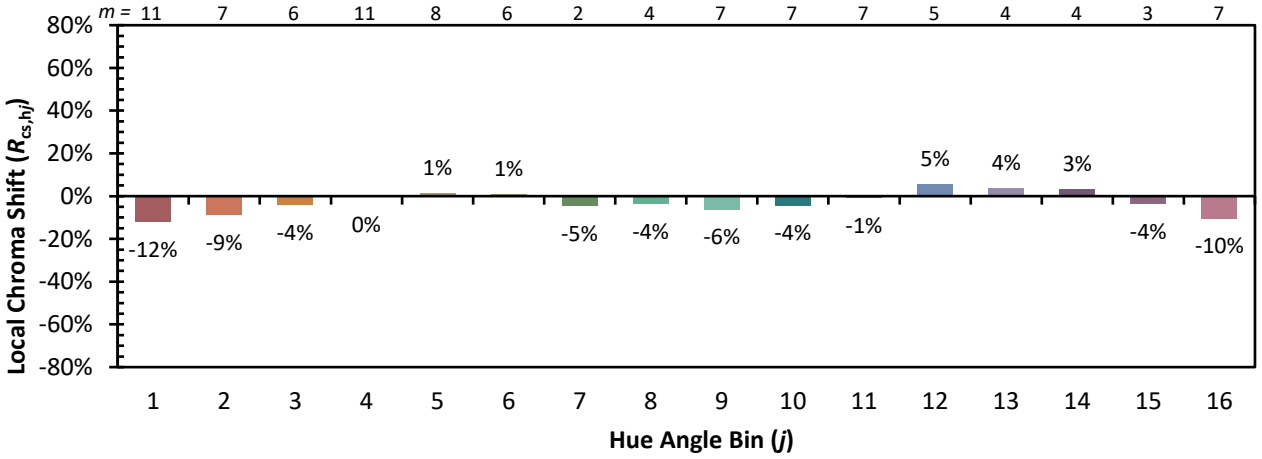
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CES02 = 63	CES27 = 95	CES52 = 94	CES77 = 86
CES03 = 31	CES28 = 95	CES53 = 90	CES78 = 83
CES04 = 70	CES29 = 89	CES54 = 91	CES79 = 90
CES05 = 50	CES30 = 95	CES55 = 91	CES80 = 90
CES06 = 51	CES31 = 91	CES56 = 87	CES81 = 70
CES07 = 42	CES32 = 85	CES57 = 86	CES82 = 96
CES08 = 41	CES33 = 93	CES58 = 87	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 97	CES60 = 94	CES85 = 77
CES11 = 59	CES36 = 90	CES61 = 90	CES86 = 66
CES12 = 65	CES37 = 97	CES62 = 94	CES87 = 84
CES13 = 43	CES38 = 97	CES63 = 88	CES88 = 86
CES14 = 74	CES39 = 98	CES64 = 84	CES89 = 75
CES15 = 72	CES40 = 95	CES65 = 80	CES90 = 88
CES16 = 47	CES41 = 97	CES66 = 83	CES91 = 81
CES17 = 50	CES42 = 99	CES67 = 82	CES92 = 64
CES18 = 56	CES43 = 93	CES68 = 84	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 60
CES20 = 67	CES45 = 94	CES70 = 82	CES95 = 74
CES21 = 87	CES46 = 90	CES71 = 81	CES96 = 83
CES22 = 79	CES47 = 93	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 83	CES73 = 77	CES98 = 84
CES24 = 91	CES49 = 92	CES74 = 92	CES99 = 75
CES25 = 72	CES50 = 95	CES75 = 83	

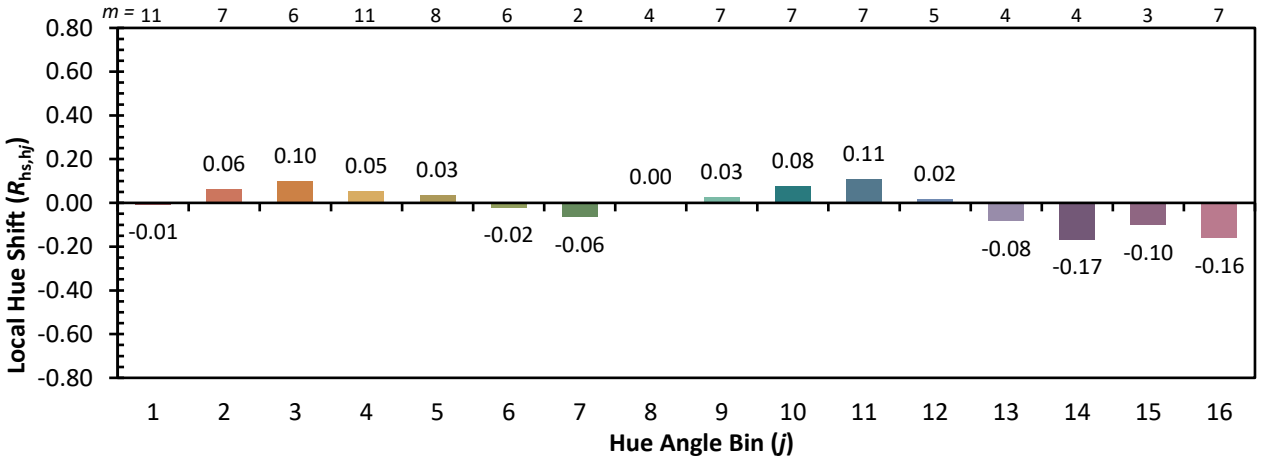


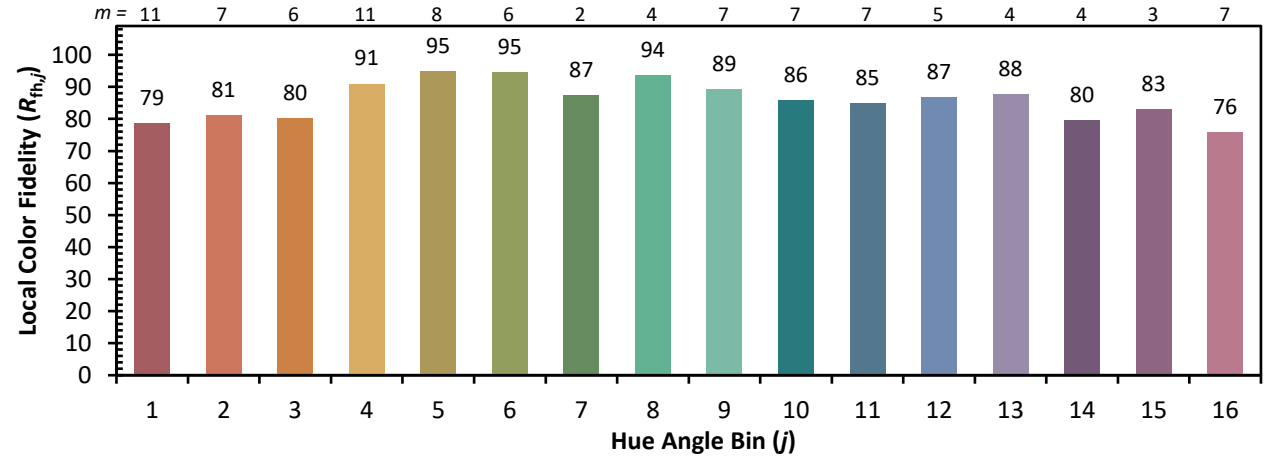
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Color Rendition by Hue-Angle Bin



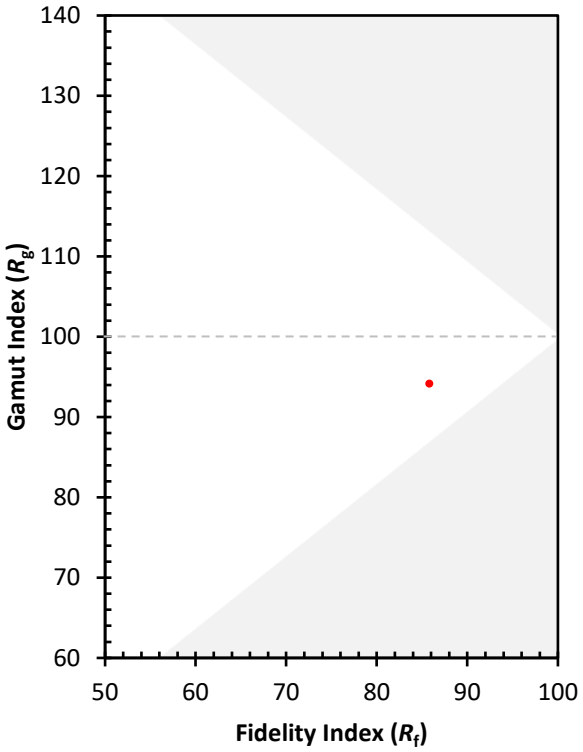


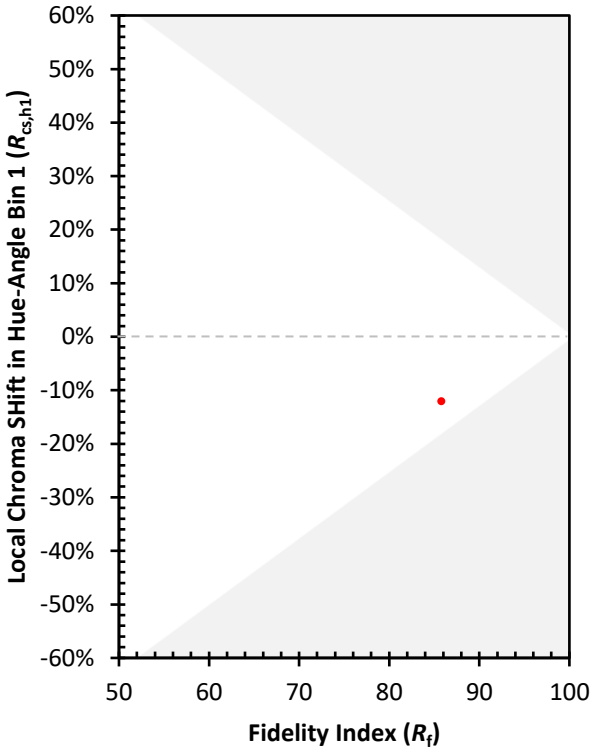


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Measure Comparisons





(END OF REPORT)