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: P821381

Luminaire Tested: **TT-D4-750-24VDC-CQ-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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:	P821381
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-3)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D4-750-24VDC-CQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6330.1 lumens
Efficiency:	N/A
Efficacy:	111.1 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G1

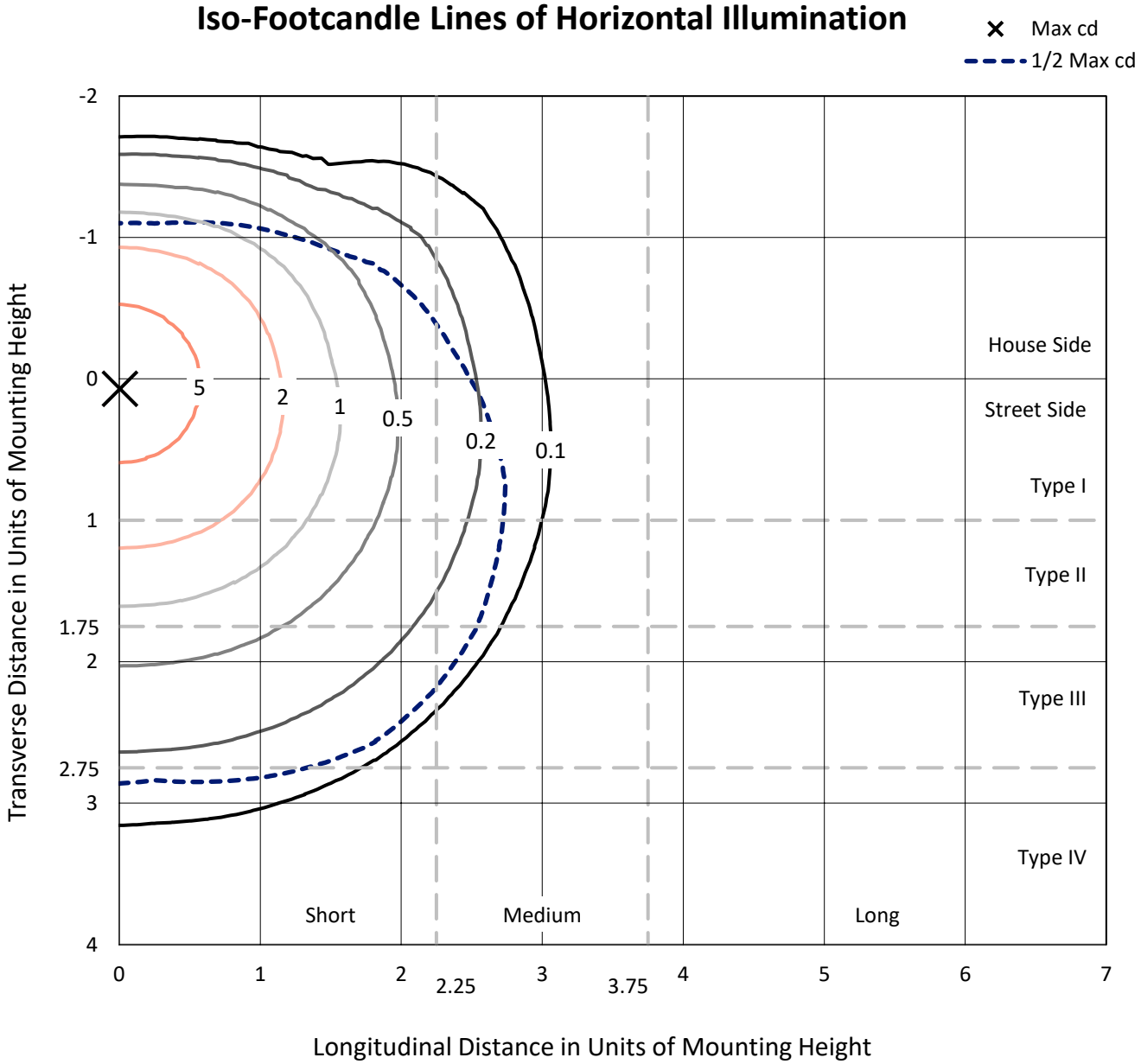
Input Watts (W):	57
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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

Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

Iso-Footcandle Lines of Horizontal Illumination



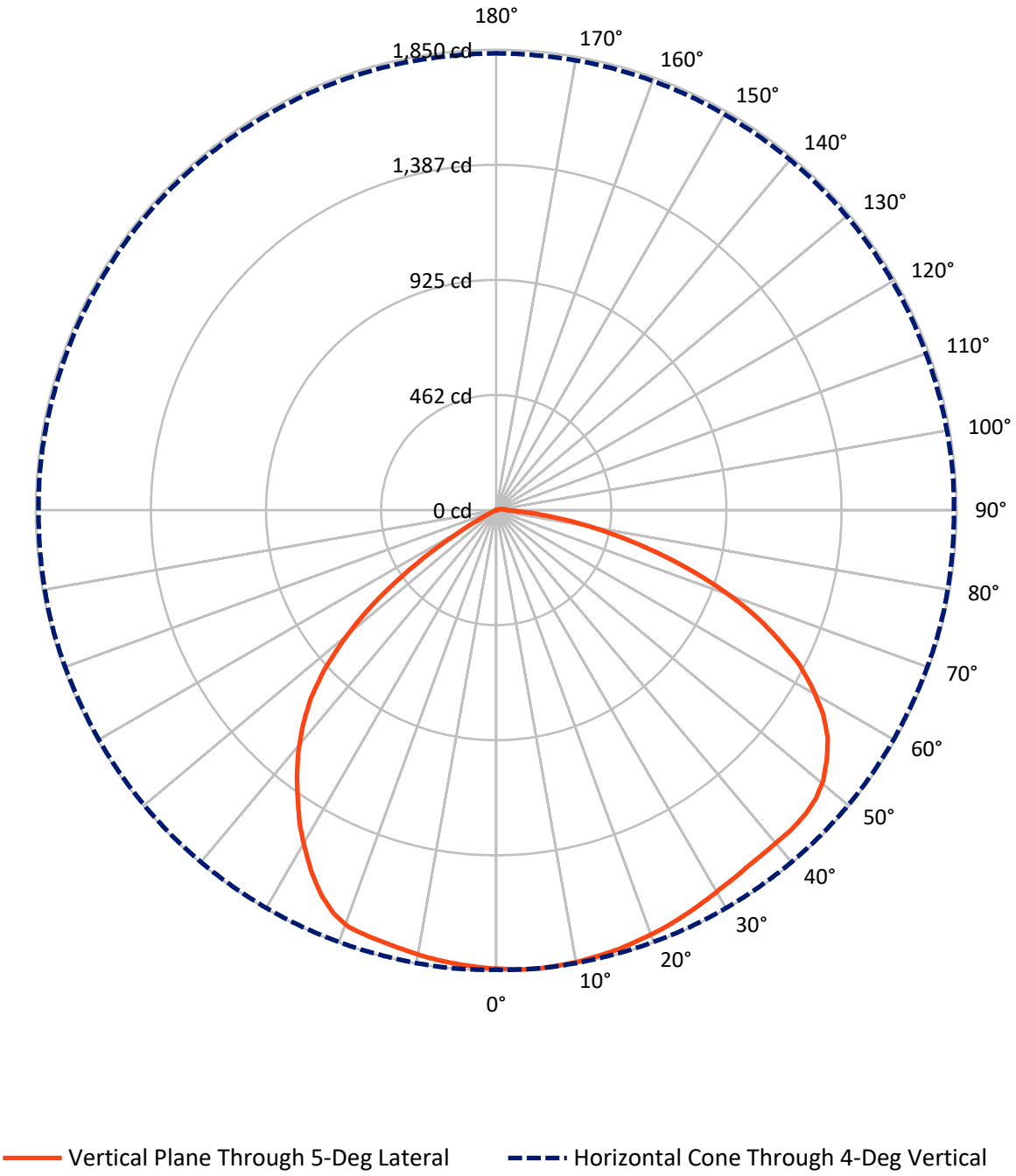
Based on 15 foot mounting height. Maximum calculated value = 8.2 fc
Type IV - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

Luminous Intensity Polar Plot



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

Scaled Data Report

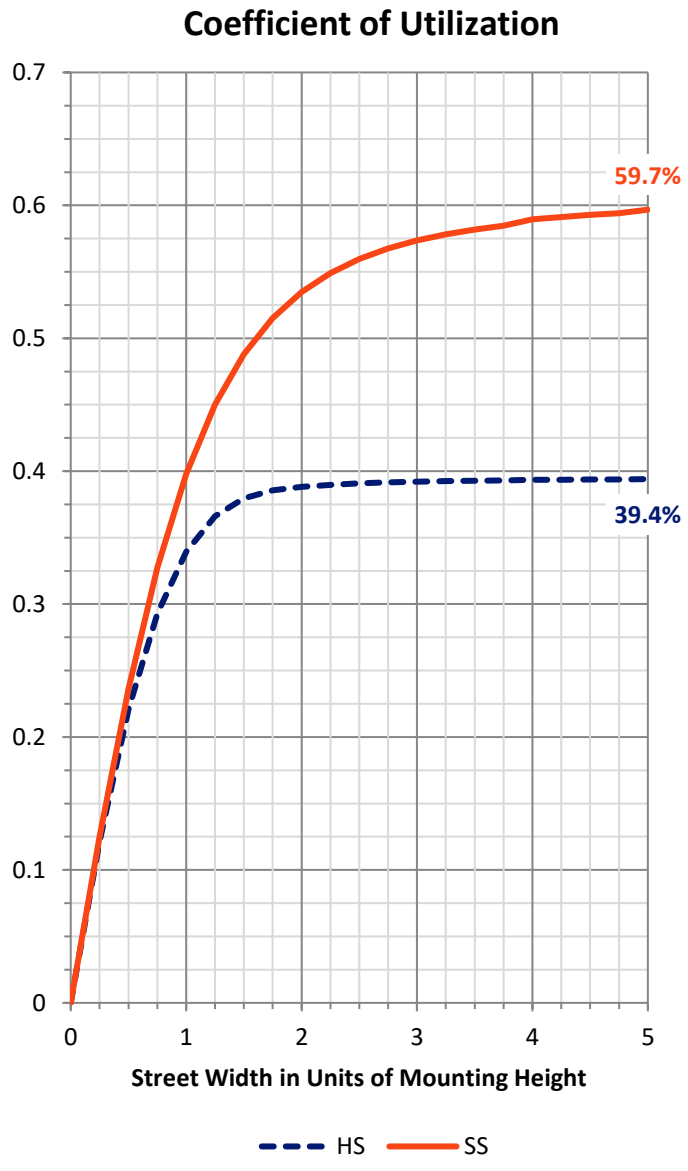
REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2508.5	3.3	2511.8
	% Fixture	39.6	0.1	39.7
Street Side	Lumens	3800.6	17.7	3818.3
	% Fixture	60.0	0.3	60.3
Total	Lumens	6309.1	20.9	6330.1
	% Fixture	99.7	0.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.2	2.8
10°-20°	513.1	8.1
20°-30°	808.5	12.8
30°-40°	1029.0	16.3
40°-50°	1188.4	18.8
50°-60°	1163.7	18.4
60°-70°	866.7	13.7
70°-80°	469.4	7.4
80°-90°	95.2	1.5
90°-100°	12.1	0.2
100°-110°	4.7	0.1
110°-120°	1.4	0.0
120°-130°	1.0	0.0
130°-140°	0.8	0.0
140°-150°	0.5	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	6309.1	99.7
0°-180°	6330.1	100.0



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

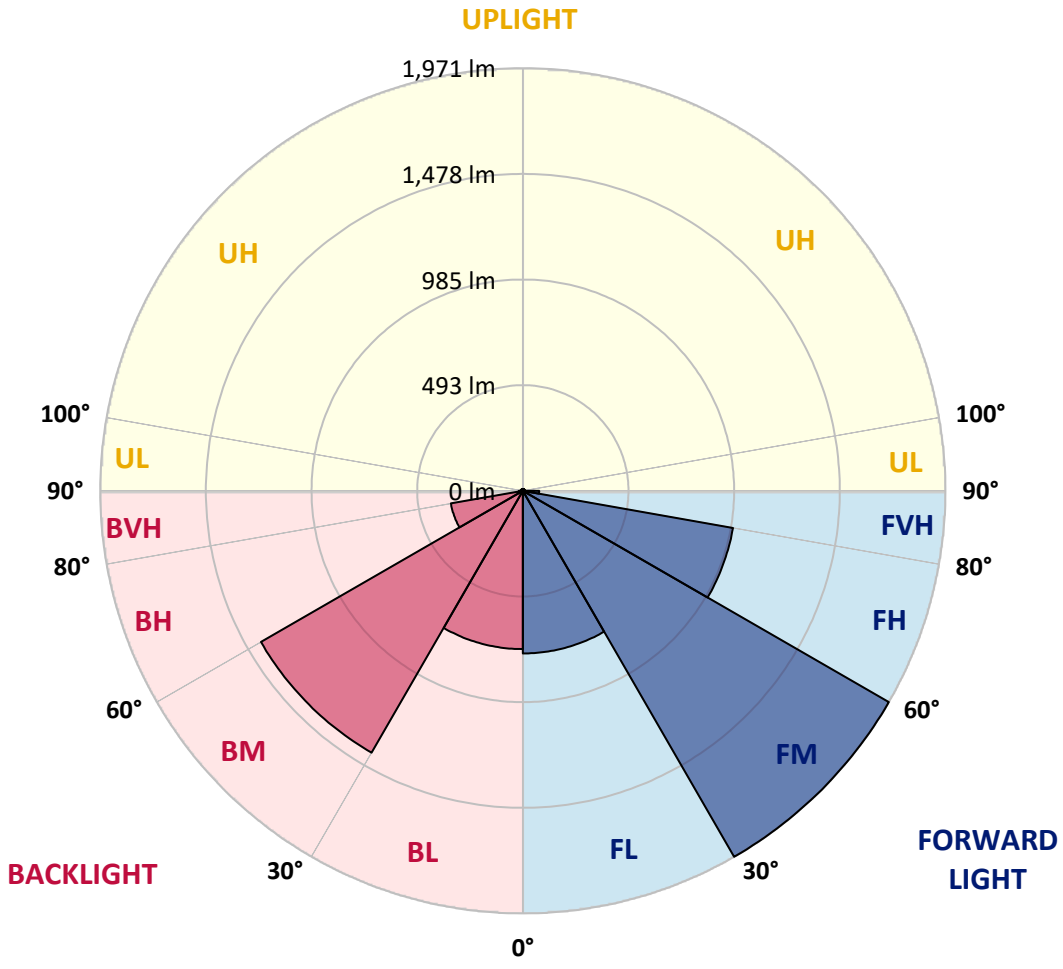
Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	758.5	12.0			
FM	(30°-60°)	1970.9	31.1			
FH	(60°-80°)	995.2	15.7			G1/1800
FVH	(80°-90°)	76.0	1.2			G1/100
BL	(0°-30°)	738.3	11.7	B2/1000		
BM	(30°-60°)	1410.2	22.3	B2/2500		
BH	(60°-80°)	340.9	5.4	B1/500		G1/500
BVH	(80°-90°)	19.2	0.3			G1/100
UL	(90°-100°)	12.1	0.2		U2/50	
UH	(100°-180°)	8.9	0.1		U1/10	

BUG Rating: B2-U2-G1
Type IV Short



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

Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1843.7	*1843.7*	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7
2.5°	1846.0	*1848.4*	1847.2	1847.2	1844.8	1846.0	1844.8	1844.8	1843.7	1842.5	1842.5
4°	*1847.2*	*1849.6*	*1847.2*	*1847.2*	*1846.0*	*1846.0*	*1844.8*	*1842.5*	*1843.7*	*1840.1*	*1838.9*
5°	1848.4	*1849.6*	1848.4	1848.4	1846.0	1844.8	1842.5	1842.5	1841.3	1838.9	1838.9
7.5°	1846.0	*1847.2*	1847.2	1846.0	1843.7	1841.3	1840.1	1838.9	1837.7	1834.1	1834.1
10°	1841.3	*1843.7*	1841.3	1841.3	1840.1	1837.7	1834.1	1832.9	1829.4	1827.0	1825.8
12.5°	1836.5	*1837.7*	1836.5	1836.5	1834.1	1830.6	1829.4	1827.0	1822.2	1818.7	1818.7
15°	1829.4	*1831.8*	1830.6	1829.4	1828.2	1824.6	1821.0	1817.5	1813.9	1810.3	1810.3
17.5°	1821.0	*1822.2*	1823.4	1822.2	1819.9	1817.5	1813.9	1809.1	1805.6	1802.0	1800.8
20°	1811.5	*1813.9*	1813.9	1813.9	1811.5	1809.1	1804.4	1799.6	1797.2	1792.5	1791.3
22.5°	1802.0	*1804.4*	1803.2	1804.4	1803.2	1799.6	1794.9	1790.1	1785.3	1781.8	1779.4
25°	1792.5	*1792.5*	1792.5	1792.5	1792.5	1787.7	1783.0	1777.0	1772.2	1766.3	1766.3
27.5°	1780.6	*1780.6*	1781.8	1781.8	1780.6	1777.0	1771.1	1763.9	1756.8	1750.8	1748.4
30°	1769.9	*1768.7*	1771.1	1773.4	1772.2	1768.7	1761.5	1753.2	1742.5	1734.2	1727.0
32.5°	1756.8	*1760.3*	1762.7	1767.5	1768.7	1763.9	1755.6	1744.9	1734.2	1718.7	1705.6
35°	1752.0	*1752.0*	1758.0	1765.1	1767.5	1765.1	1753.2	1741.3	1725.8	1703.2	1687.7
37.5°	1747.2	*1748.4*	1758.0	1768.7	1772.2	1772.2	1759.2	1743.7	1722.3	1690.1	1671.1
40°	1744.9	*1747.2*	1759.2	1774.6	1784.1	1783.0	1767.5	1748.4	1722.3	1680.6	1656.8
42.5°	1742.5	*1747.2*	1760.3	1781.8	1796.0	1794.9	1778.2	1753.2	1719.9	1668.7	1641.3
45°	1738.9	*1742.5*	1760.3	1787.7	1806.8	1810.3	1791.3	1759.2	1719.9	1658.0	1622.3
47.5°	1728.2	*1729.4*	1753.2	1785.3	1813.9	1818.7	1799.6	1761.5	1715.1	1640.1	1598.5
50°	1699.6	*1703.2*	1730.6	1773.4	1806.8	1813.9	1797.2	1755.6	1703.2	1610.4	1560.4
52.5°	1662.7	*1662.7*	1696.1	1743.7	1784.1	1796.0	1780.6	1734.2	1673.5	1566.3	1509.2
55°	1608.0	*1616.3*	1650.8	1700.8	1744.9	1761.5	1740.1	1694.9	1624.7	1510.4	1447.3
57.5°	1546.1	*1548.5*	1584.2	1643.7	1688.9	1699.6	1681.8	1628.2	1560.4	1443.7	1368.8
60°	1456.8	*1461.6*	1506.8	1559.2	1608.0	1622.3	1599.7	1546.1	1474.7	1358.0	1281.9
62.5°	1358.0	*1365.2*	1405.7	1459.2	1505.6	1528.2	1500.9	1444.9	1374.7	1255.7	1189.0
65°	1239.0	*1241.4*	1285.4	1346.1	1392.6	1400.9	1377.1	1322.3	1252.1	1137.9	1078.3
67.5°	1102.1	*1114.0*	1156.9	1202.1	1242.6	1252.1	1235.5	1172.4	1116.4	1015.3	956.9
70°	970.0	*964.1*	999.8	1045.0	1081.9	1090.2	1071.2	1012.9	960.5	865.3	820.1
72.5°	810.5	*805.8*	843.9	878.4	914.1	909.3	890.3	843.9	798.6	717.7	676.0
75°	649.9	*645.1*	674.9	704.6	722.5	724.8	711.8	677.2	628.4	565.4	533.2
77.5°	492.8	*497.5*	510.6	535.6	552.3	559.4	536.8	502.3	471.3	422.5	398.7
80°	351.1	*352.3*	357.1	374.9	386.8	386.8	376.1	348.7	314.2	279.7	267.8
82.5°	221.4	*226.1*	226.1	244.0	244.0	234.5	229.7	211.9	194.0	166.6	150.0
85°	121.4	*119.0*	126.2	127.4	126.2	119.0	111.9	101.2	89.3	70.2	63.1
87.5°	53.6	*52.4*	52.4	52.4	51.2	46.4	39.3	30.9	21.4	13.1	9.5
90°	41.7	*41.7*	40.5	38.1	34.5	30.9	25.0	19.0	11.9	4.8	2.4
92.5°	38.1	*38.1*	36.9	35.7	32.1	28.6	22.6	16.7	10.7	4.8	2.4
95°	33.3	*32.1*	32.1	29.8	27.4	23.8	20.2	14.3	9.5	3.6	2.4
97.5°	27.4	*26.2*	26.2	25.0	22.6	19.0	16.7	11.9	8.3	3.6	2.4
100°	20.2	*21.4*	20.2	19.0	17.9	15.5	13.1	9.5	6.0	2.4	2.4
102.5°	15.5	*15.5*	14.3	14.3	13.1	11.9	9.5	7.1	4.8	2.4	1.2
105°	10.7	*10.7*	10.7	9.5	9.5	8.3	7.1	4.8	3.6	2.4	1.2
107.5°	6.0	*6.0*	6.0	6.0	6.0	6.0	4.8	3.6	2.4	1.2	1.2

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

Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	3.6	*3.6*	3.6	3.6	3.6	3.6	2.4	2.4	1.2	1.2	1.2
112.5°	1.2	*1.2*	2.4	2.4	2.4	2.4	2.4	1.2	1.2	1.2	1.2
115°	1.2	*1.2*	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
117.5°	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
120°	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
122.5°	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
125°	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
127.5°	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
130°	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
132.5°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
135°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
137.5°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
140°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
142.5°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
145°	1.2	*1.2*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
147.5°	1.2	*1.2*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
150°	1.2	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
152.5°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
155°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
157.5°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
160°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
167.5°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
170°	0.0	*0.0*	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
172.5°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
175°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
177.5°	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
180°	1.2	*1.2*	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

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

Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7
2.5°	1841.3	1837.7	1840.1	1838.9	1840.1	1837.7	1837.7	1837.7	1838.9	1836.5
4°	*1840.1*	*1837.7*	*1837.7*	*1837.7*	*1837.7*	*1835.3*	*1835.3*	*1835.3*	*1834.1*	*1835.3*
5°	1837.7	1836.5	1835.3	1834.1	1835.3	1832.9	1831.8	1831.8	1831.8	1832.9
7.5°	1832.9	1829.4	1829.4	1825.8	1827.0	1825.8	1824.6	1825.8	1824.6	1824.6
10°	1824.6	1822.2	1821.0	1818.7	1818.7	1816.3	1815.1	1815.1	1815.1	1813.9
12.5°	1816.3	1813.9	1812.7	1810.3	1809.1	1806.8	1805.6	1806.8	1804.4	1804.4
15°	1806.8	1804.4	1803.2	1803.2	1800.8	1798.4	1797.2	1794.9	1794.9	1794.9
17.5°	1798.4	1796.0	1797.2	1794.9	1793.7	1791.3	1791.3	1786.5	1786.5	1785.3
20°	1790.1	1787.7	1787.7	1786.5	1786.5	1784.1	1780.6	1778.2	1777.0	1777.0
22.5°	1779.4	1775.8	1769.9	1761.5	1756.8	1753.2	1752.0	1748.4	1747.2	1744.9
25°	1762.7	1753.2	1740.1	1725.8	1711.5	1704.4	1702.0	1697.3	1697.3	1697.3
27.5°	1742.5	1724.6	1706.8	1685.4	1663.9	1649.7	1640.1	1635.4	1633.0	1633.0
30°	1716.3	1693.7	1668.7	1641.3	1617.5	1591.3	1574.7	1565.1	1560.4	1561.6
32.5°	1692.5	1663.9	1635.4	1600.9	1568.7	1537.8	1509.2	1494.9	1489.0	1486.6
35°	1668.7	1636.6	1602.0	1565.1	1523.5	1478.3	1440.2	1418.7	1406.8	1408.0
37.5°	1650.8	1612.8	1574.7	1529.4	1481.8	1427.1	1378.3	1343.8	1329.5	1331.9
40°	1631.8	1588.9	1547.3	1494.9	1439.0	1373.5	1310.4	1264.0	1247.4	1243.8
42.5°	1613.9	1564.0	1516.3	1460.4	1390.2	1316.4	1239.0	1184.3	1159.3	1155.7
45°	1591.3	1535.4	1484.2	1419.9	1342.6	1250.9	1160.5	1089.1	1062.9	1052.2
47.5°	1561.6	1499.7	1442.6	1368.8	1284.3	1180.7	1067.6	979.6	946.2	937.9
50°	1517.5	1446.1	1387.8	1304.5	1202.1	1087.9	961.7	853.4	809.4	803.4
52.5°	1459.2	1386.6	1321.1	1225.9	1101.0	966.5	823.6	711.8	660.6	657.0
55°	1389.0	1310.4	1239.0	1131.9	985.5	829.6	680.8	539.2	489.2	483.2
57.5°	1306.9	1225.9	1148.6	1016.5	847.4	673.7	501.1	365.4	317.8	305.9
60°	1216.4	1133.1	1046.2	885.5	661.8	477.3	303.5	194.0	158.3	146.4
62.5°	1128.3	1037.9	946.2	729.6	453.5	272.6	138.1	55.9	35.7	34.5
65°	1024.8	939.1	845.1	588.0	286.8	122.6	40.5	1.2	0.0	0.0
67.5°	904.6	832.0	748.7	526.1	253.5	107.1	34.5	1.2	0.0	0.0
70°	776.0	718.9	645.1	452.3	217.8	90.5	29.8	0.0	0.0	0.0
72.5°	640.3	591.5	536.8	376.1	180.9	75.0	23.8	0.0	0.0	0.0
75°	502.3	471.3	422.5	297.6	140.4	57.1	17.9	0.0	0.0	0.0
77.5°	372.5	347.5	311.8	219.0	105.9	41.7	13.1	0.0	0.0	0.0
80°	251.1	232.1	211.9	148.8	71.4	27.4	8.3	0.0	0.0	0.0
82.5°	146.4	132.1	119.0	84.5	39.3	15.5	3.6	0.0	0.0	0.0
85°	59.5	54.8	52.4	35.7	15.5	4.8	1.2	0.0	0.0	0.0
87.5°	7.1	6.0	6.0	3.6	1.2	0.0	0.0	0.0	0.0	0.0
90°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
95°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0
97.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0
100°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
102.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
105°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
107.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

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

Scaled Data Report

REPORT NUMBER: P821381
CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
112.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
115°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
117.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
120°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
122.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
125°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
127.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
130°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
132.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
135°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
137.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0
140°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0
142.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0
145°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0
147.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	1.2
150°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
152.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
155°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
157.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
160°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
162.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
165°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
167.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
170°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
172.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
175°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
177.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

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: SP1-2407-176-6

Test Date: 09/26/2024

Luminaire Tested: MEM2-HTN-VA-30-750-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-750-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

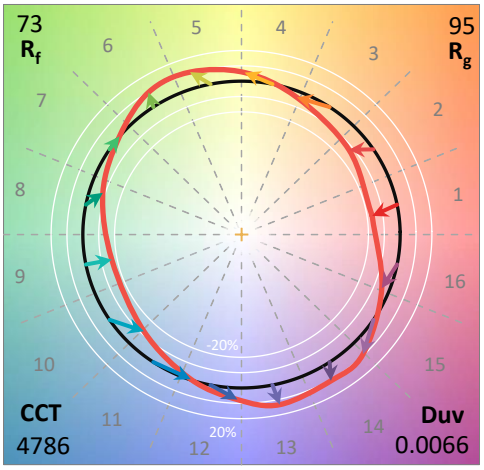
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-6
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-30-750-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	4786
CIE u':	0.2093
CIE v':	0.4953
Duv:	0.0066
CIE x:	0.3533
CIE y:	0.3716
CIE z:	0.2751
Peak Wavelength (nm):	449
Dominant Wavelength (nm):	570
Purity:	17.53512
Rf:	73
Rg:	94.6

CRI (Ra):	70.9				
R1:	67.8	R9:	-29.8		
R2:	75.1	R10:	40.9		
R3:	80.6	R11:	67.4		
R4:	71.6	R12:	35.3		
R5:	67.8	R13:	68.5		
R6:	65.4	R14:	89.0		
R7:	82.0	R15:	60.9		
R8:	57.0				



Test Conditions

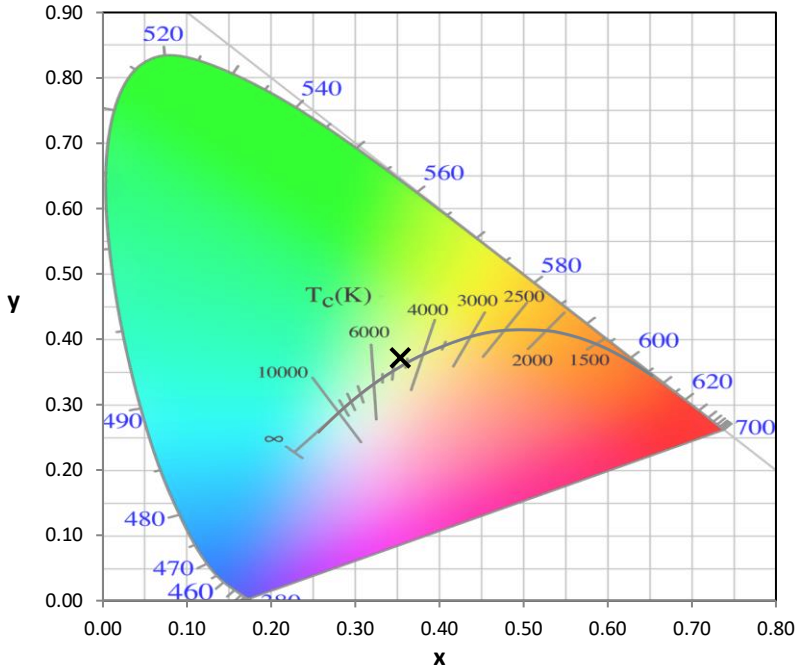
Stabilization Time:	45M
Operation Time:	1H 45M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-6

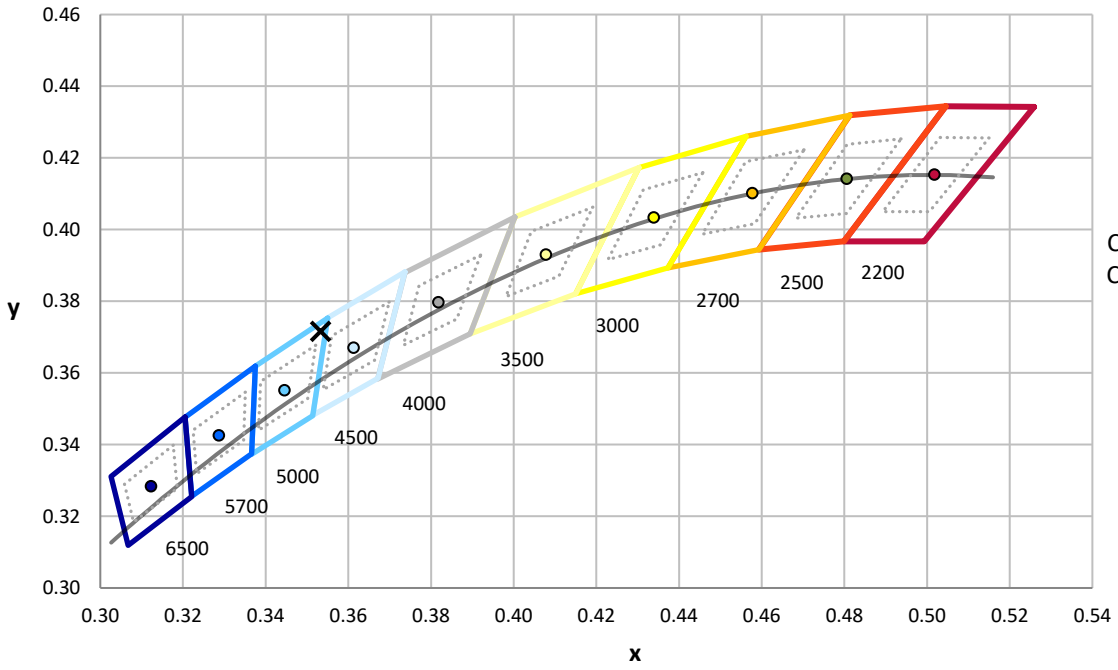
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-6

CIE 1931 Chromaticity Diagram



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

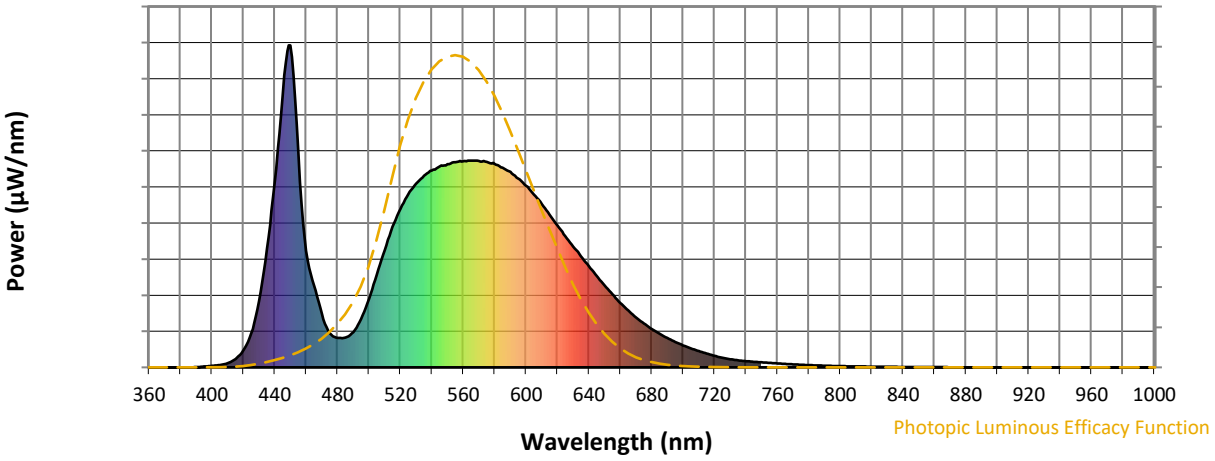


CCT = 4786K
CIE x = 0.3533
CIE y = 0.3716
Duv = 0.0066

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

Photopic Flux vs. Wavelength

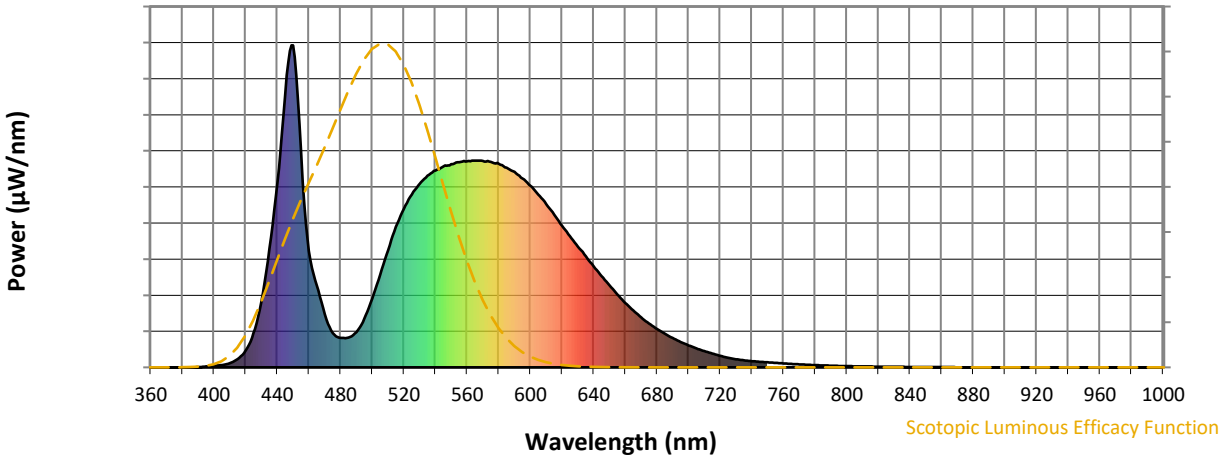


Photopic Lumens: NR

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	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-6

Scotopic Flux vs. Wavelength

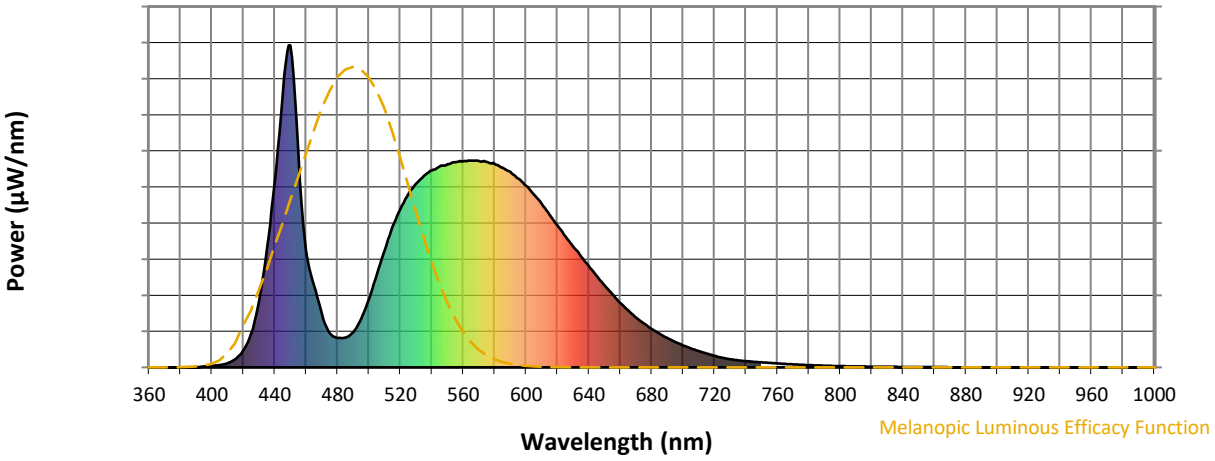


Scotopic Lumens: NR **S/P: 1.69**

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	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.36**

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	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

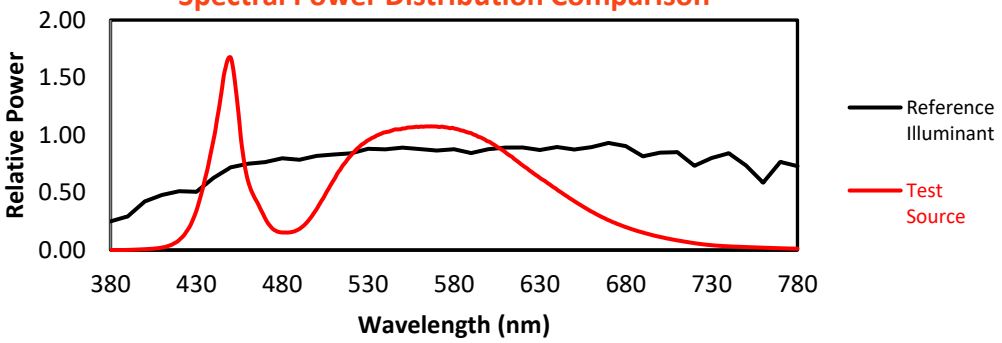
REPORT NUMBER: SP1-2407-176-6

TM-30-18

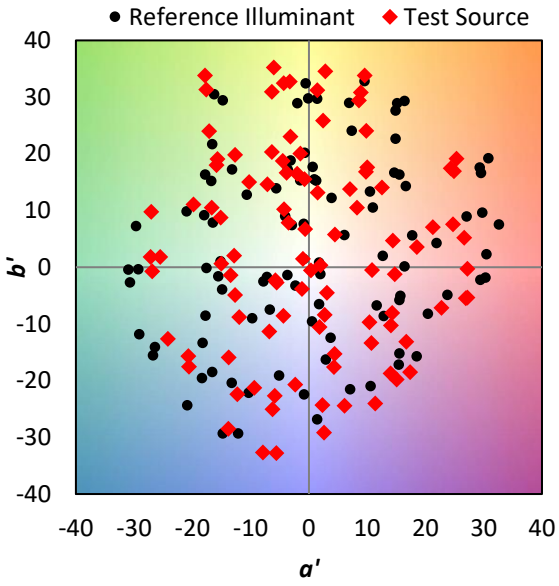
Summary

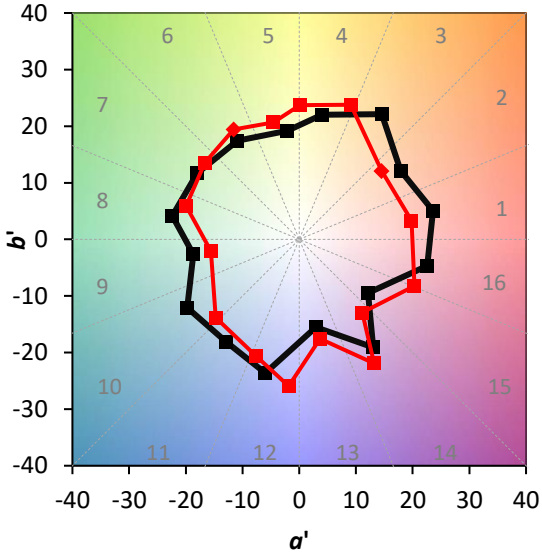
R_f = 73
R_g = 94.6
CIE R_a = 70.9
R_9 = -29.8

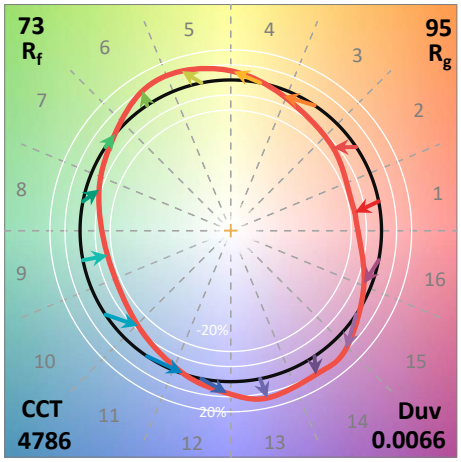
Spectral Power Distribution Comparison

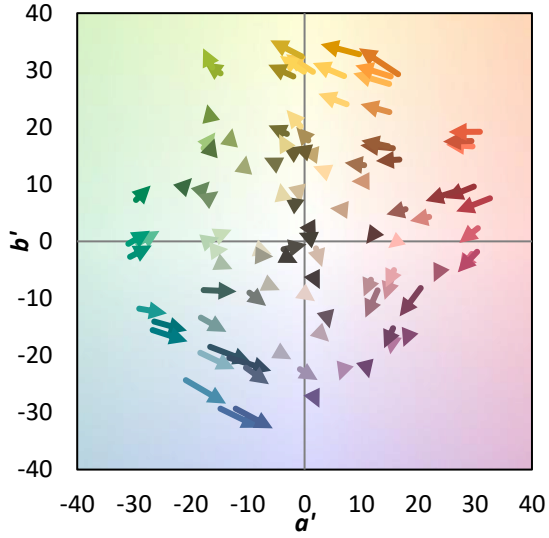


Color Vector Graphics







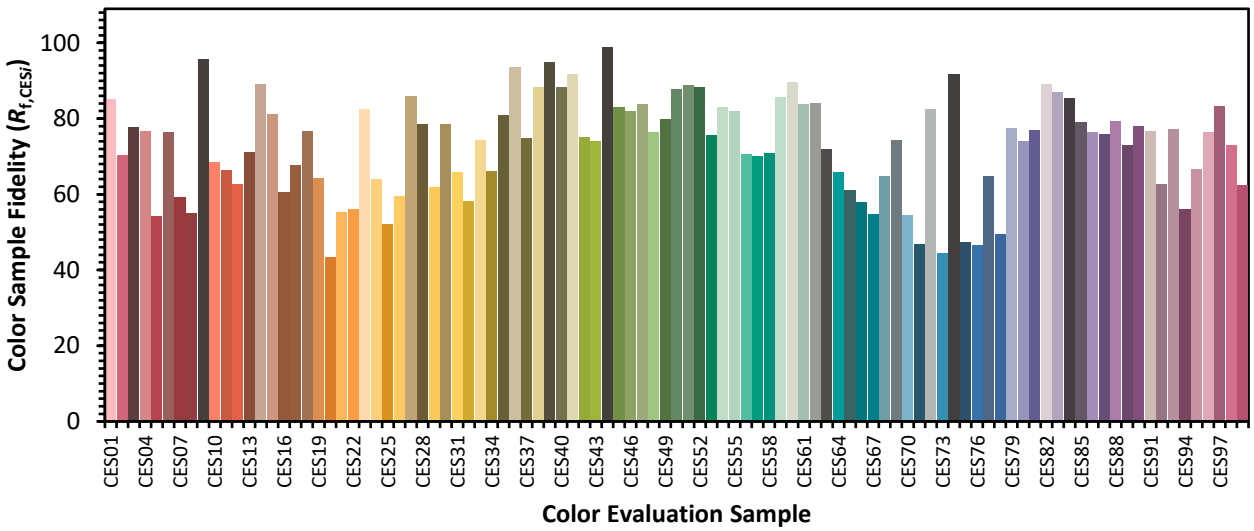


REPORT NUMBER: SP1-2407-176-6

TM-30-18

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

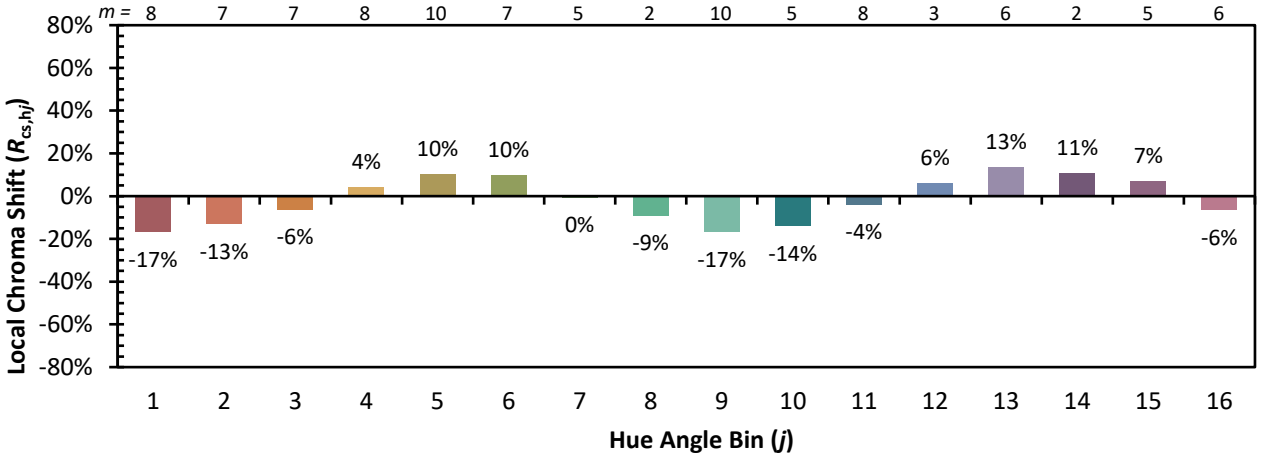
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 46
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 58	CES57 = 70	CES82 = 89
CES08 = 38	CES33 = 74	CES58 = 71	CES83 = 87
CES09 = 29	CES34 = 66	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 81	CES60 = 90	CES85 = 79
CES11 = 56	CES36 = 94	CES61 = 84	CES86 = 76
CES12 = 61	CES37 = 75	CES62 = 84	CES87 = 76
CES13 = 41	CES38 = 88	CES63 = 72	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 66	CES89 = 73
CES15 = 70	CES40 = 88	CES65 = 61	CES90 = 78
CES16 = 46	CES41 = 92	CES66 = 58	CES91 = 77
CES17 = 49	CES42 = 75	CES67 = 55	CES92 = 63
CES18 = 55	CES43 = 74	CES68 = 65	CES93 = 77
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 56
CES20 = 64	CES45 = 83	CES70 = 55	CES95 = 67
CES21 = 85	CES46 = 82	CES71 = 47	CES96 = 76
CES22 = 77	CES47 = 84	CES72 = 82	CES97 = 83
CES23 = 91	CES48 = 76	CES73 = 44	CES98 = 73
CES24 = 90	CES49 = 80	CES74 = 92	CES99 = 62
CES25 = 71	CES50 = 88	CES75 = 47	

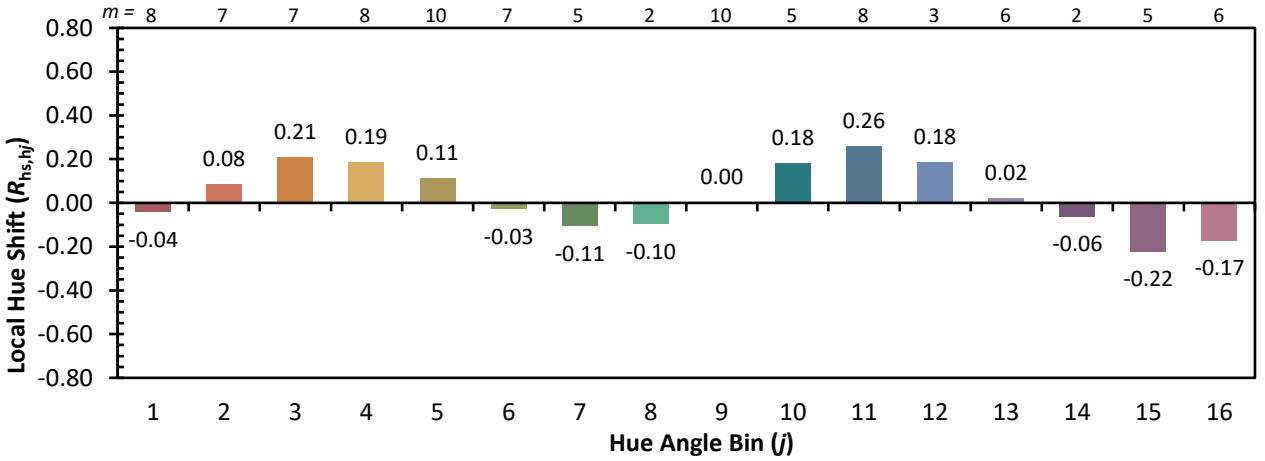


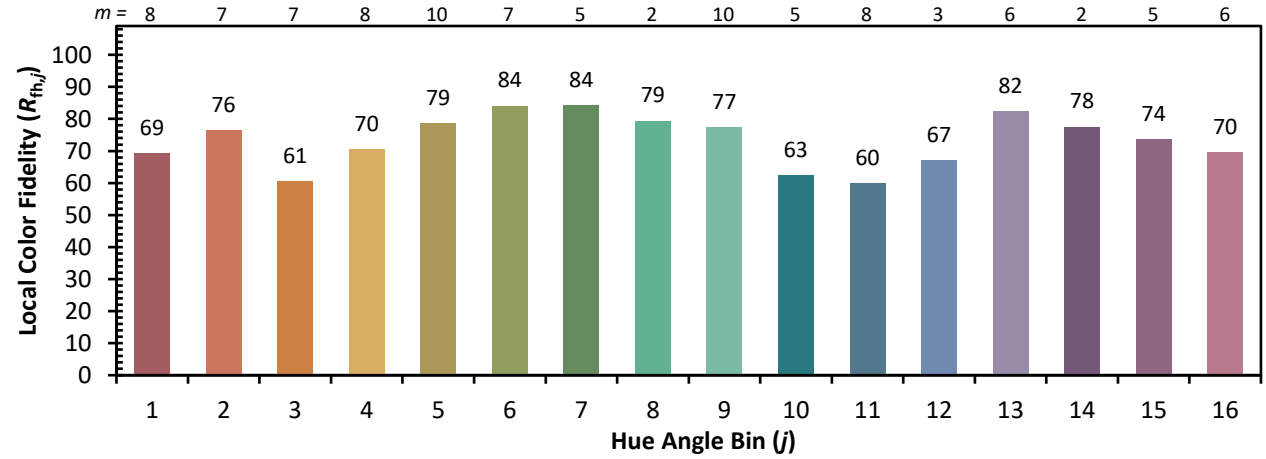
REPORT NUMBER: SP1-2407-176-6

TM-30-18

Color Rendition by Hue-Angle Bin



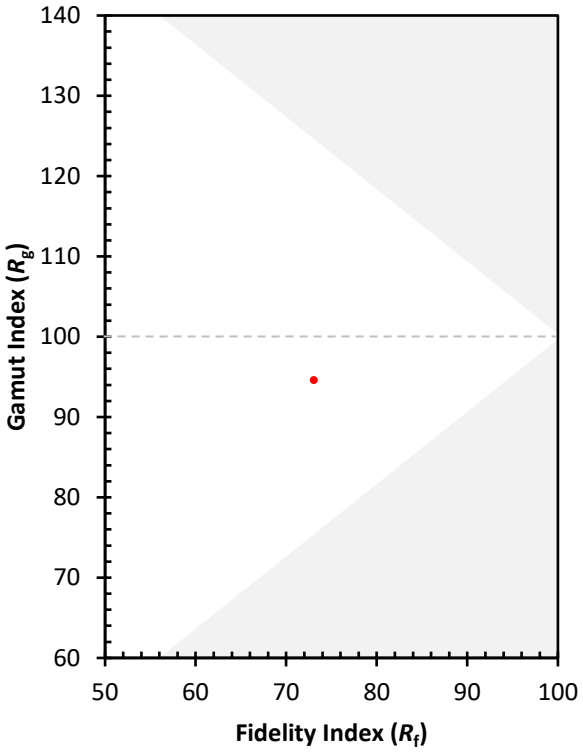


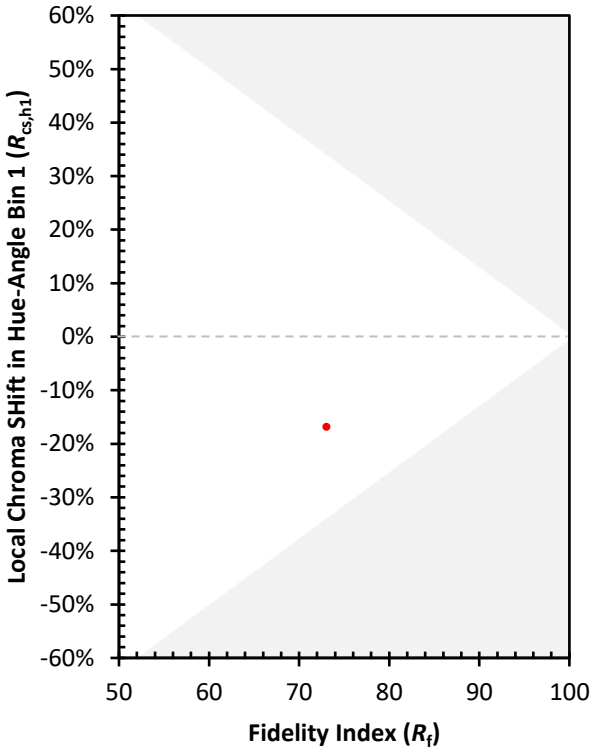


REPORT NUMBER: SP1-2407-176-6

TM-30-18

Measure Comparisons





(END OF REPORT)