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: P821245

Luminaire Tested: **TT-D4-735-24VDC-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:	P821245
	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-D4-735-24VDC-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:	5762.9 lumens
Efficiency:	N/A
Efficacy:	101.1 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G3

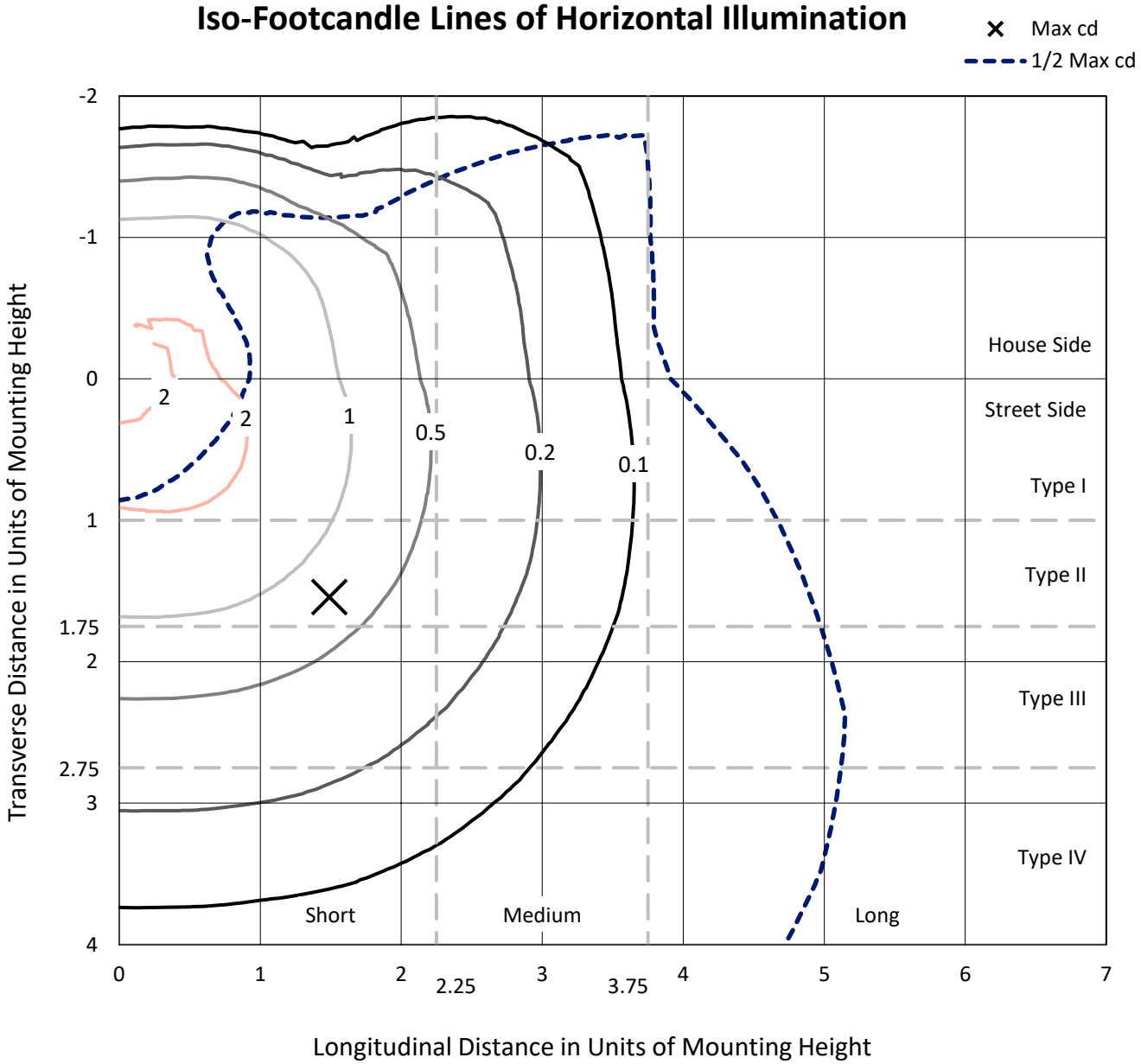
Input Watts (W):	57
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



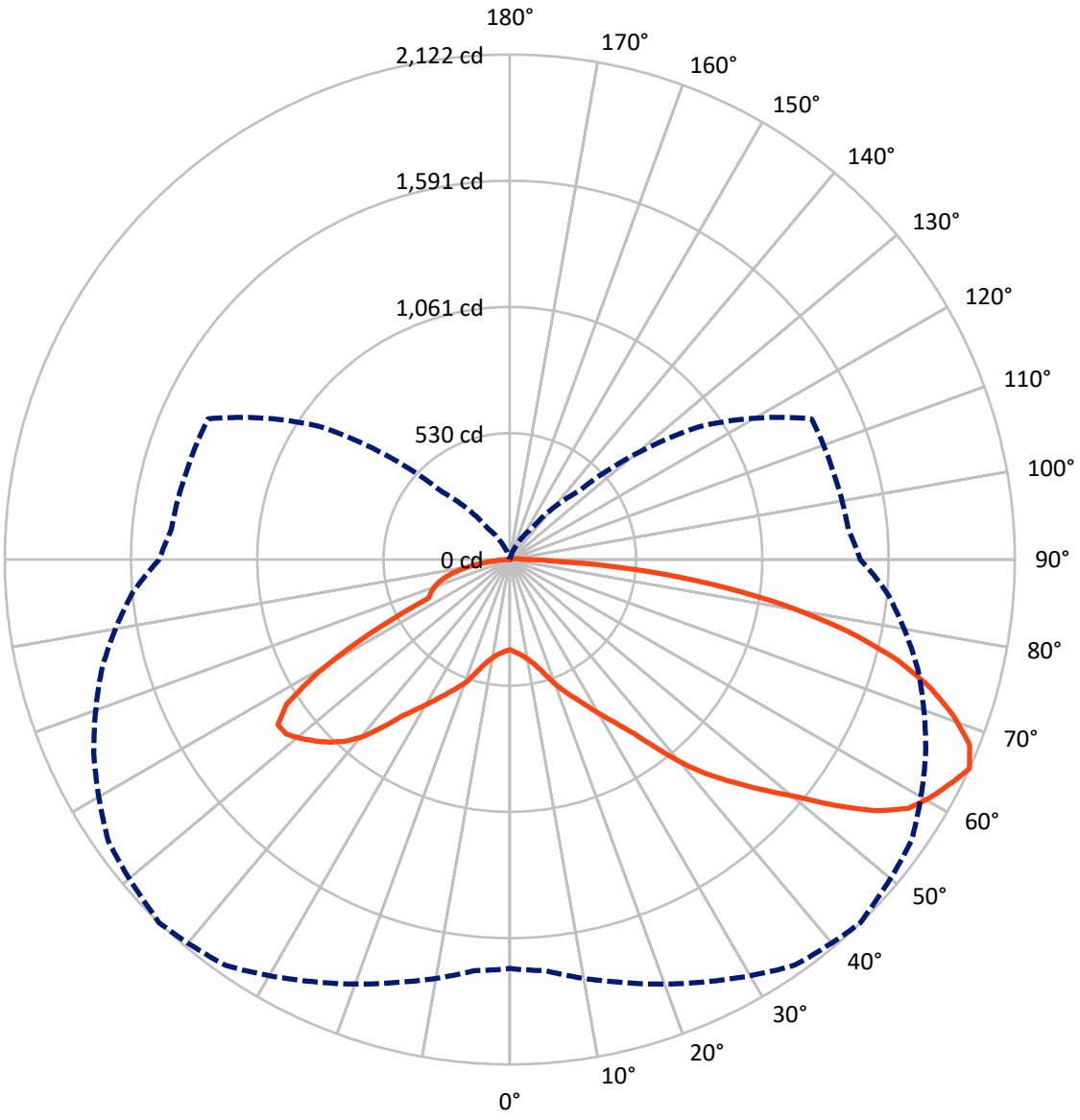
Based on 15 foot mounting height. Maximum calculated value = 2.3 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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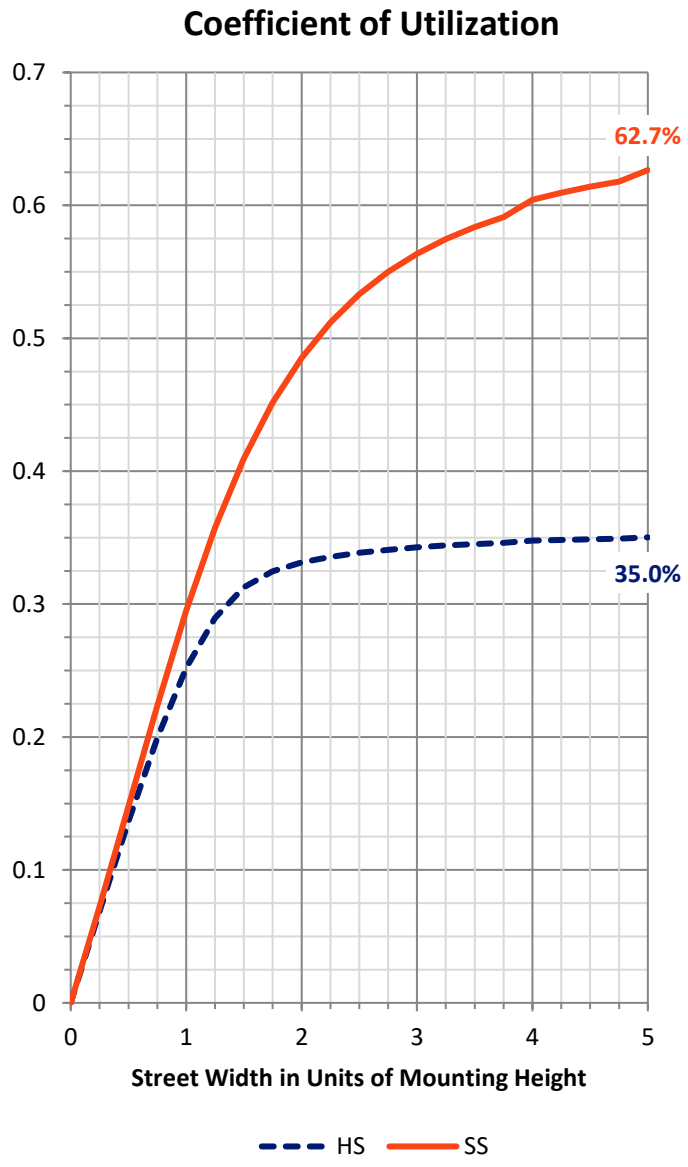
REPORT NUMBER: P821245
CATALOG NUMBER: TT-D4-735-24VDC-WQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2029.8	1.3	2031.2
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	3708.5	23.3	3731.8
	% Fixture	64.4	0.4	64.8
Total	Lumens	5738.3	24.6	5762.9
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.5	0.7
10°-20°	136.9	2.4
20°-30°	293.3	5.1
30°-40°	531.2	9.2
40°-50°	886.4	15.4
50°-60°	1227.8	21.3
60°-70°	1272.4	22.1
70°-80°	1024.1	17.8
80°-90°	327.6	5.7
90°-100°	16.6	0.3
100°-110°	5.3	0.1
110°-120°	1.0	0.0
120°-130°	0.6	0.0
130°-140°	0.4	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	5738.3	99.6
0°-180°	5762.9	100.0



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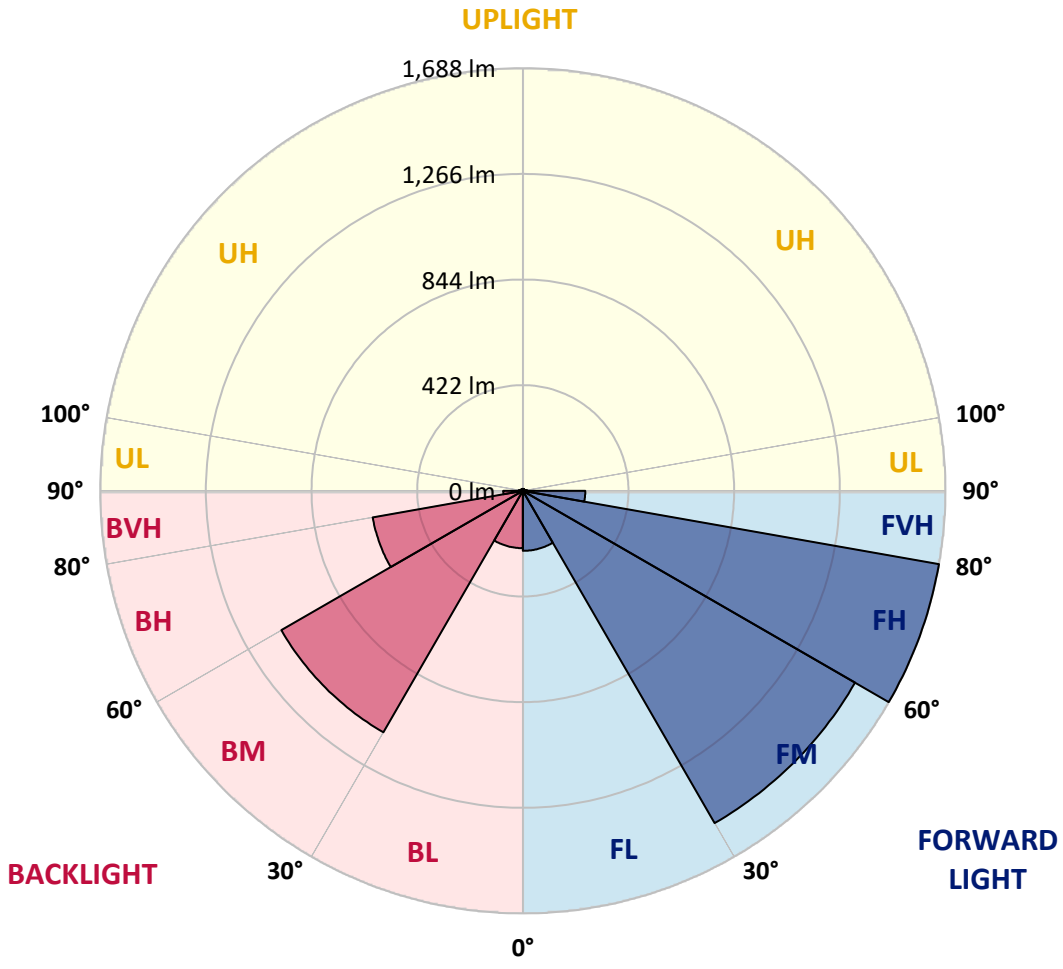
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	239.6	4.2			
FM	(30°-60°)	1532.1	26.6			
FH	(60°-80°)	1687.5	29.3			G1/1800
FVH	(80°-90°)	249.2	4.3			G3/500
BL	(0°-30°)	229.1	4.0	B1/500		
BM	(30°-60°)	1113.4	19.3	B2/2500		
BH	(60°-80°)	609.0	10.6	B2/1000		G2/1000
BVH	(80°-90°)	78.3	1.4			G1/100
UL	(90°-100°)	16.6	0.3		U2/50	
UH	(100°-180°)	8.0	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°	380.3	380.3	380.3	380.3	380.3	*380.3*	380.3	380.3	380.3	380.3	380.3
2.5°	391.5	390.4	390.4	389.3	389.3	*389.3*	389.3	389.3	388.2	387.0	385.9
5°	401.7	401.7	400.5	400.5	399.4	*398.3*	399.4	398.3	397.2	396.0	394.9
7.5°	415.2	414.0	414.0	411.8	411.8	*410.7*	410.7	410.7	409.5	407.3	406.2
10°	434.3	432.0	432.0	429.8	428.7	*427.5*	427.5	425.3	425.3	424.2	423.0
12.5°	455.7	453.4	455.7	454.5	452.3	*450.0*	450.0	447.8	446.7	445.5	441.0
15°	483.8	480.4	482.7	482.7	481.5	*480.4*	480.4	475.9	473.7	471.4	466.9
17.5°	517.5	515.3	516.4	517.5	520.9	*520.9*	522.0	516.4	511.9	504.0	500.7
20°	560.3	559.2	562.5	562.5	565.9	*565.9*	567.0	561.4	553.5	547.9	541.2
22.5°	601.9	601.9	606.4	606.4	609.8	*607.5*	607.5	605.3	596.3	589.5	582.8
25°	644.7	643.6	648.1	651.4	655.9	*650.3*	652.6	649.2	640.2	631.2	622.2
27.5°	691.9	689.7	691.9	696.4	704.3	*699.8*	702.1	696.4	687.4	675.1	667.2
30°	743.7	740.3	743.7	750.4	756.1	*758.3*	757.2	749.3	741.4	723.4	717.8
32.5°	794.3	794.3	802.2	814.6	821.3	*820.2*	821.3	814.6	803.3	780.8	767.3
35°	856.2	860.7	870.8	888.8	903.4	*897.8*	897.8	895.6	876.4	849.4	831.4
37.5°	938.3	942.8	963.1	984.5	1011.5	*1009.2*	1010.3	1003.6	966.5	938.3	912.4
40°	1034.0	1038.5	1068.8	1099.2	1125.1	*1133.0*	1134.1	1119.5	1079.0	1038.5	998.0
42.5°	1121.7	1127.3	1158.8	1201.6	1229.7	*1242.1*	1244.3	1220.7	1178.0	1131.8	1081.2
45°	1209.5	1216.2	1252.2	1297.2	1337.7	*1343.4*	1344.5	1324.2	1277.0	1224.1	1158.8
47.5°	1299.5	1305.1	1342.2	1396.2	1440.1	*1451.4*	1452.5	1433.4	1376.0	1311.9	1235.3
50°	1381.6	1392.9	1443.5	1500.9	1559.4	*1568.4*	1569.5	1548.1	1480.6	1408.6	1307.4
52.5°	1478.4	1484.0	1538.0	1633.6	1683.1	*1718.0*	1719.1	1677.5	1605.5	1508.7	1378.2
55°	1590.9	1601.0	1656.1	1751.8	1840.6	*1864.3*	1871.0	1821.5	1725.9	1621.3	1468.2
57.5°	1656.1	1675.3	1756.3	1847.4	1958.8	*1974.5*	1977.9	1926.2	1820.4	1705.6	1535.7
60°	1691.0	1702.3	1787.8	1929.5	2016.2	*2030.8*	2029.7	1990.3	1884.5	1745.0	1567.2
62.5°	1730.4	1749.5	1821.5	1965.5	2040.9	*2076.9*	2071.3	2030.8	1922.8	1769.8	1597.6
65°	*1719.1*	*1734.9*	*1840.6*	*1957.7*	*2082.5*	*2121.9*	*2114.0*	*2060.0*	*1928.4*	*1774.3*	*1589.8*
67.5°	1674.1	1686.5	1791.1	1936.3	2055.5	*2083.7*	2097.2	2044.3	1896.9	1725.9	1540.2
70°	1581.9	1601.0	1702.3	1850.8	1959.9	*1980.2*	1982.4	1949.8	1817.0	1637.0	1458.1
72.5°	1454.7	1470.5	1580.7	1731.5	1826.0	*1849.6*	1851.9	1802.4	1702.3	1515.5	1340.0
75°	1302.9	1317.5	1403.0	1560.5	1653.9	*1677.5*	1675.3	1629.1	1523.4	1346.7	1183.6
77.5°	1115.0	1142.0	1217.3	1346.7	1437.9	*1450.2*	1452.5	1401.9	1316.4	1163.3	1004.7
80°	879.8	905.7	991.2	1088.0	1164.5	*1174.6*	1178.0	1135.2	1057.6	922.6	787.6
82.5°	625.5	648.1	715.6	794.3	858.4	*858.4*	860.7	825.8	766.2	650.3	544.5
85°	356.7	373.5	418.5	474.8	520.9	*515.3*	516.4	484.9	445.5	355.5	288.0
87.5°	117.0	124.9	135.0	156.4	177.8	*164.3*	171.0	141.8	128.3	95.6	74.3
90°	61.9	61.9	59.6	57.4	52.9	*46.1*	46.1	37.1	28.1	18.0	6.8
92.5°	56.3	56.3	54.0	51.8	47.3	*41.6*	41.6	33.8	24.8	15.8	5.6
95°	46.1	46.1	45.0	42.8	39.4	*34.9*	33.8	28.1	21.4	12.4	4.5
97.5°	36.0	36.0	34.9	33.8	30.4	*27.0*	27.0	21.4	15.8	10.1	3.4
100°	27.0	27.0	27.0	24.8	23.6	*20.3*	20.3	16.9	12.4	7.9	2.3
102.5°	19.1	20.3	19.1	18.0	16.9	*14.6*	14.6	12.4	9.0	5.6	2.3
105°	13.5	13.5	12.4	12.4	11.3	*10.1*	10.1	7.9	5.6	3.4	1.1
107.5°	7.9	7.9	7.9	7.9	6.8	*6.8*	6.8	5.6	3.4	2.3	1.1
110°	4.5	4.5	4.5	4.5	3.4	*3.4*	3.4	2.3	2.3	1.1	1.1

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2.3	2.3	2.3	2.3	2.3	*2.3*	2.3	1.1	1.1	1.1	1.1
115°	1.1	1.1	1.1	2.3	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
117.5°	1.1	1.1	1.1	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
120°	0.0	0.0	1.1	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
122.5°	0.0	0.0	1.1	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
125°	0.0	0.0	1.1	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
127.5°	0.0	0.0	0.0	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
130°	0.0	0.0	0.0	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
132.5°	0.0	0.0	0.0	1.1	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
135°	0.0	0.0	0.0	0.0	1.1	*1.1*	1.1	1.1	1.1	1.1	1.1
137.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
140°	1.1	1.1	0.0	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
142.5°	1.1	1.1	1.1	0.0	0.0	*1.1*	1.1	1.1	1.1	1.1	1.1
145°	1.1	1.1	0.0	0.0	0.0	*0.0*	0.0	1.1	1.1	1.1	1.1
147.5°	1.1	1.1	1.1	0.0	0.0	*1.1*	1.1	1.1	1.1	1.1	1.1
150°	1.1	1.1	0.0	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
152.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.1	1.1	1.1	1.1
155°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	1.1	1.1	1.1
157.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.1	1.1	1.1	1.1
160°	1.1	0.0	0.0	0.0	0.0	*0.0*	0.0	1.1	1.1	1.1	1.1
162.5°	1.1	1.1	0.0	0.0	0.0	*0.0*	0.0	1.1	1.1	1.1	1.1
165°	1.1	0.0	0.0	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
167.5°	1.1	1.1	0.0	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
170°	1.1	0.0	0.0	0.0	0.0	*1.1*	0.0	1.1	1.1	1.1	1.1
172.5°	1.1	1.1	0.0	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
175°	1.1	1.1	1.1	0.0	0.0	*0.0*	1.1	1.1	1.1	1.1	1.1
177.5°	0.0	1.1	0.0	0.0	0.0	*0.0*	0.0	1.1	1.1	1.1	1.1
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°	380.3	380.3	380.3	380.3	380.3	380.3	380.3	380.3	380.3	380.3	380.3
2.5°	385.9	385.9	384.8	383.7	383.7	383.7	382.5	382.5	382.5	381.4	381.4
5°	394.9	393.8	393.8	392.7	392.7	391.5	391.5	390.4	389.3	389.3	388.2
7.5°	407.3	406.2	403.9	405.0	402.8	401.7	400.5	400.5	400.5	399.4	399.4
10°	421.9	421.9	419.7	419.7	417.4	416.3	415.2	415.2	416.3	416.3	415.2
12.5°	441.0	439.9	439.9	438.8	437.7	436.5	437.7	437.7	436.5	435.4	434.3
15°	464.7	464.7	464.7	465.8	464.7	464.7	464.7	463.5	461.3	459.0	459.0
17.5°	500.7	499.5	497.3	498.4	500.7	504.0	500.7	497.3	493.9	493.9	492.8
20°	537.8	538.9	538.9	540.0	543.4	546.8	542.3	540.0	537.8	535.5	533.3
22.5°	578.3	579.4	579.4	578.3	580.5	579.4	577.2	574.9	572.7	569.3	567.0
25°	617.7	618.8	617.7	616.5	617.7	614.3	610.9	607.5	601.9	596.3	596.3
27.5°	661.6	660.4	655.9	657.1	654.8	652.6	645.8	637.9	630.0	624.4	624.4
30°	707.7	707.7	698.7	703.2	698.7	697.6	682.9	672.8	661.6	653.7	652.6
32.5°	758.3	756.1	749.3	753.8	749.3	744.8	726.8	713.3	694.2	682.9	681.8
35°	819.1	813.4	807.8	812.3	812.3	799.9	781.9	757.2	730.2	716.7	715.6
37.5°	893.3	889.9	883.2	888.8	893.3	880.9	853.9	817.9	779.7	759.4	758.3
40°	975.5	971.0	967.6	975.5	978.8	966.5	930.4	879.8	828.1	798.8	794.3
42.5°	1053.1	1043.0	1037.3	1048.6	1045.2	1031.7	982.2	923.7	852.8	819.1	813.4
45°	1122.8	1111.6	1103.7	1113.8	1109.3	1082.3	1027.2	948.4	862.9	821.3	814.6
47.5°	1191.5	1174.6	1162.2	1175.7	1166.7	1125.1	1057.6	960.8	851.7	802.2	790.9
50°	1250.0	1229.7	1221.8	1237.6	1224.1	1165.6	1079.0	955.2	823.6	751.6	733.6
52.5°	1319.7	1289.4	1281.5	1311.9	1281.5	1203.8	1083.5	941.7	759.4	672.8	655.9
55°	1390.6	1356.9	1344.5	1372.6	1326.5	1211.7	1061.0	864.1	662.7	570.4	545.7
57.5°	1427.7	1396.2	1385.0	1405.2	1319.7	1135.2	960.8	720.1	517.5	414.0	387.0
60°	1461.5	1406.4	1391.7	1418.7	1250.0	957.5	743.7	516.4	312.8	235.1	214.9
62.5°	1485.1	1432.2	1401.9	1414.2	1121.7	696.4	427.5	248.6	118.1	82.1	81.0
65°	*1472.7*	*1427.7*	*1407.5*	*1398.5*	*974.3*	*400.5*	*157.5*	*63.0*	*3.4*	*3.4*	*2.3*
67.5°	1434.5	1385.0	1379.4	1387.2	964.2	384.8	146.3	57.4	0.0	0.0	0.0
70°	1350.1	1315.2	1315.2	1342.2	920.3	364.5	136.1	52.9	0.0	0.0	0.0
72.5°	1236.5	1209.5	1225.2	1265.7	855.1	336.4	122.6	47.3	0.0	0.0	0.0
75°	1100.3	1072.2	1092.5	1137.5	774.1	300.4	106.9	40.5	0.0	0.0	0.0
77.5°	927.1	907.9	939.4	981.1	666.1	253.1	87.8	32.6	0.0	0.0	0.0
80°	722.3	712.2	753.8	790.9	537.8	199.1	66.4	23.6	0.0	0.0	0.0
82.5°	498.4	493.9	534.4	572.7	384.8	139.5	45.0	15.8	0.0	0.0	0.0
85°	261.0	261.0	292.5	327.4	214.9	75.4	22.5	6.8	0.0	0.0	0.0
87.5°	57.4	55.1	59.6	76.5	42.8	14.6	3.4	1.1	0.0	0.0	0.0
90°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
105°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.1	1.1	1.1	1.1	1.1	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: P821245
CATALOG NUMBER: TT-D4-735-24VDC-WQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
117.5°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
122.5°	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
125°	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.1	1.1	1.1	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

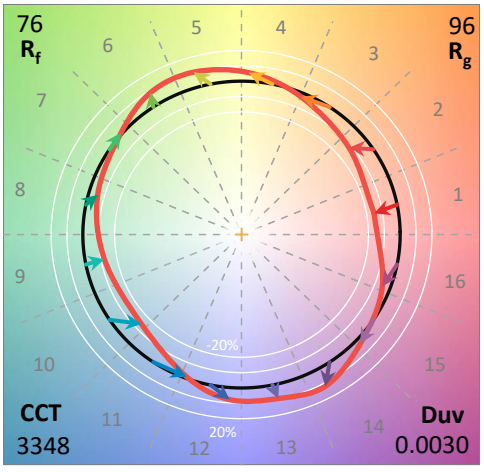
Test Information

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

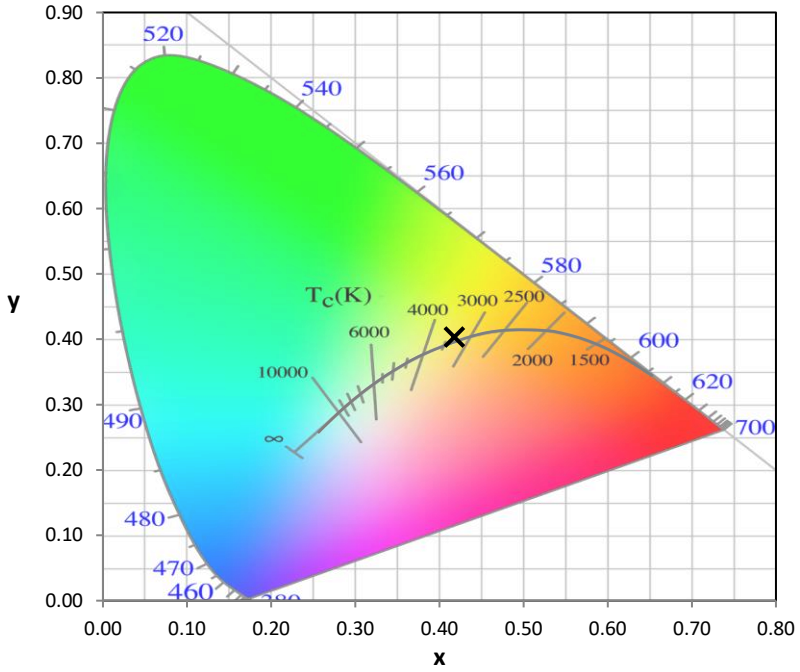
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-4

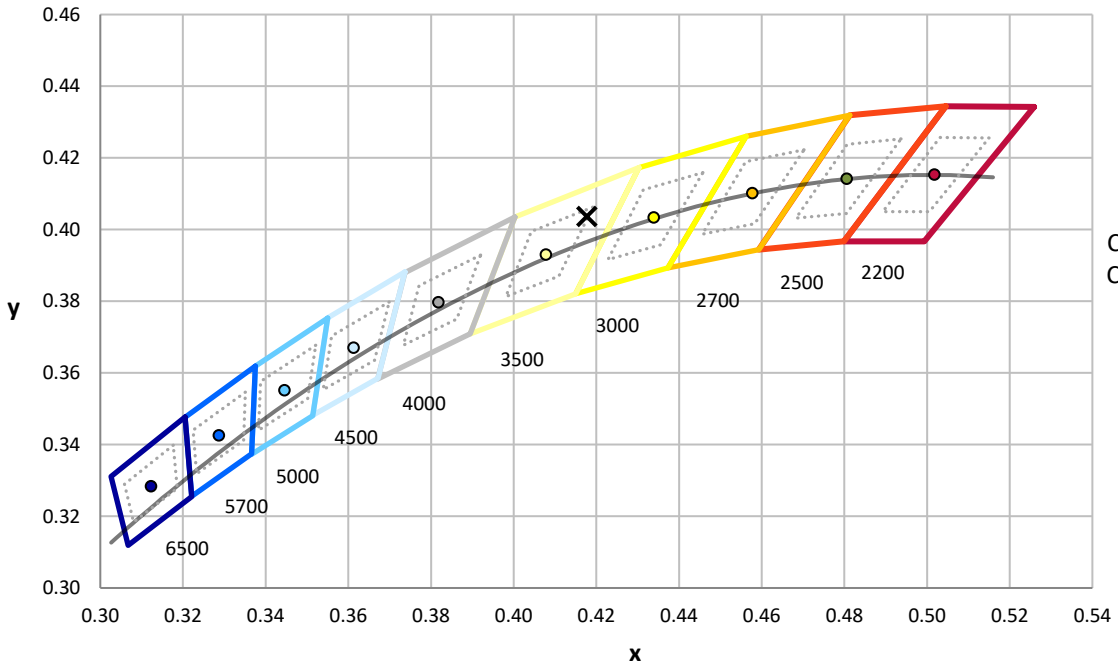
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

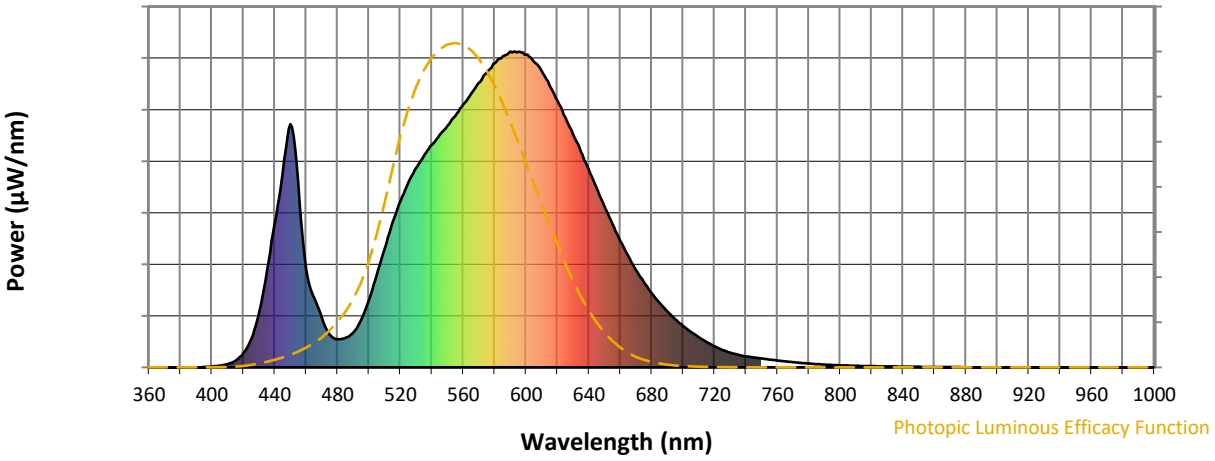


CCT = 3348K
CIE x = 0.4177
CIE y = 0.4036
Duv = 0.0030

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-4

Photopic Flux vs. Wavelength

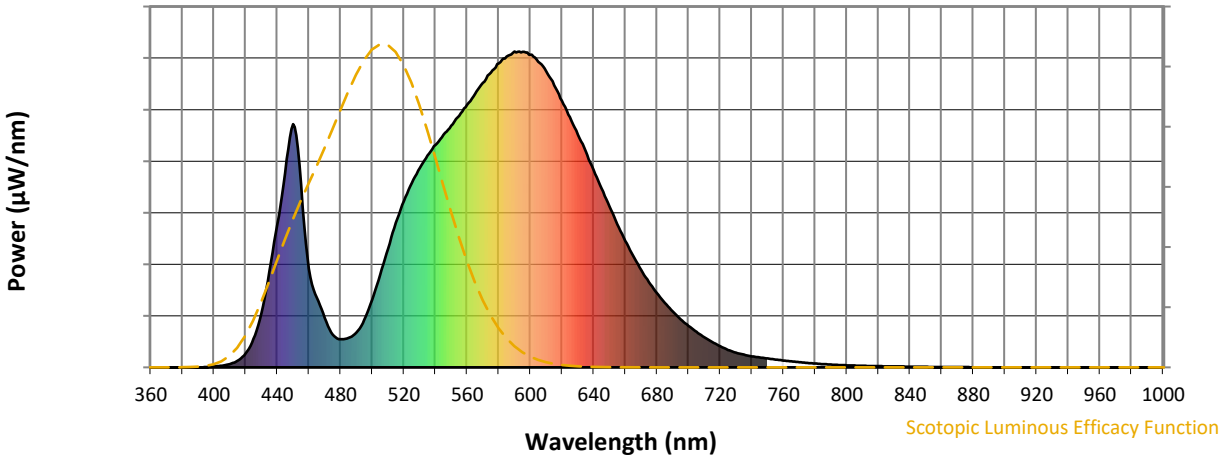


Photopic Lumens: NR

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

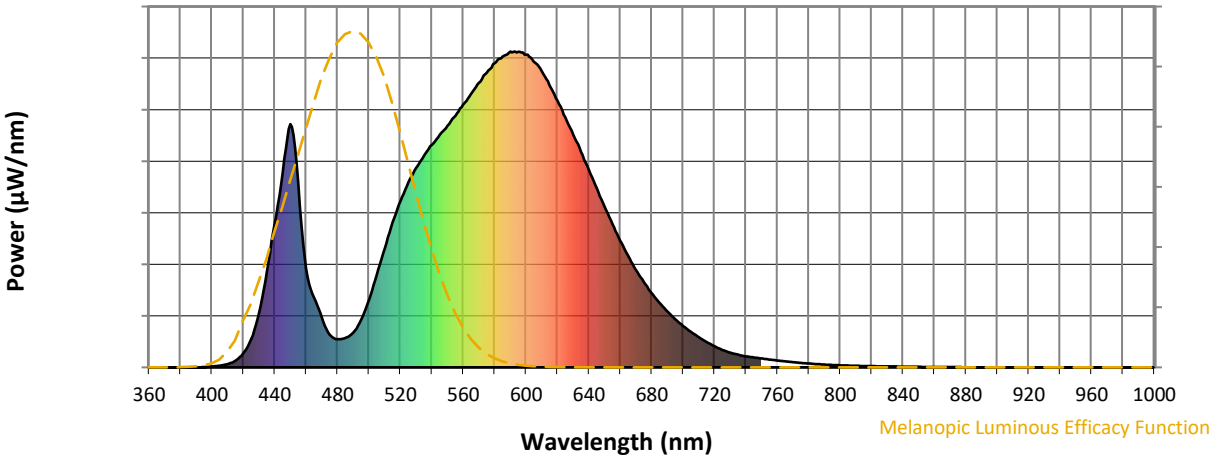


Scotopic Lumens: NR **S/P: 1.31**

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			

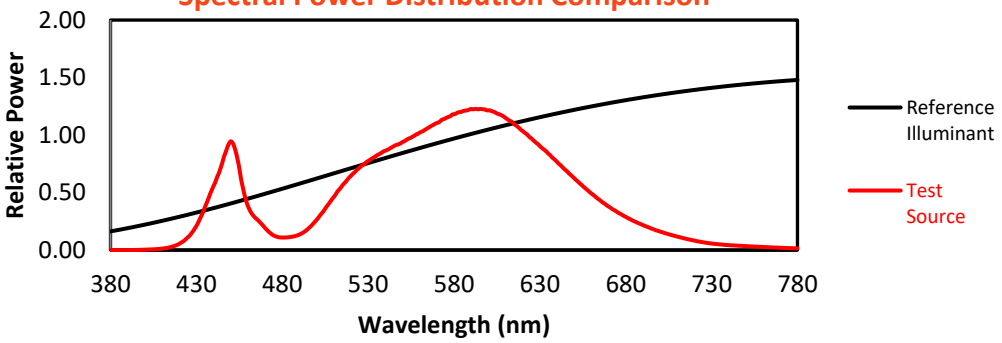
REPORT NUMBER: SP1-2407-176-4

TM-30-18

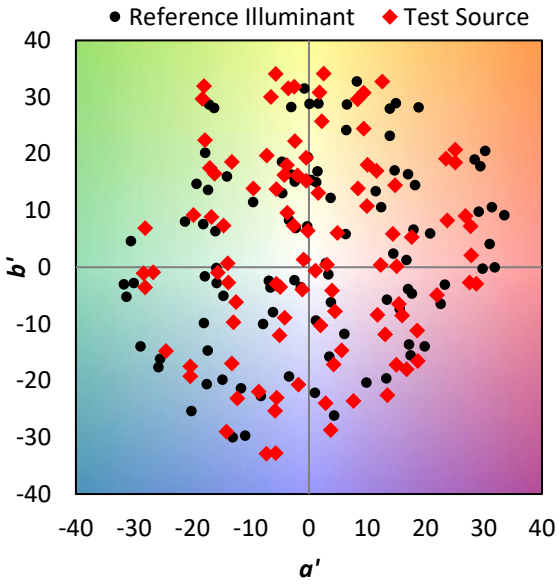
Summary

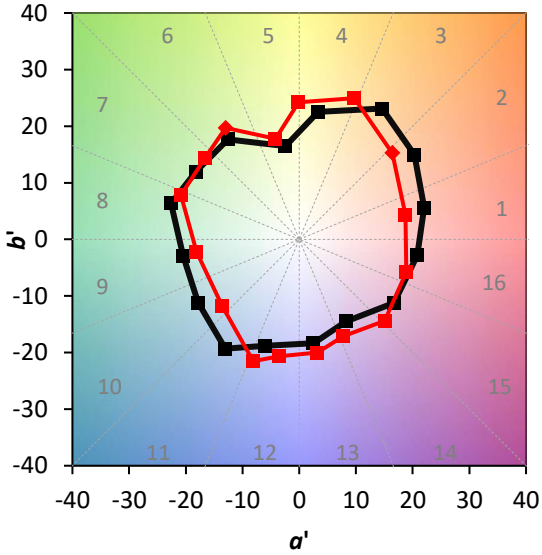
R_f = 75.8
R_g = 95.8
CIE R_a = 73.4
R_9 = -19.2

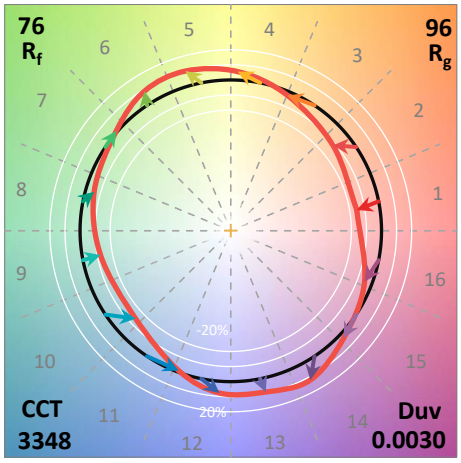
Spectral Power Distribution Comparison

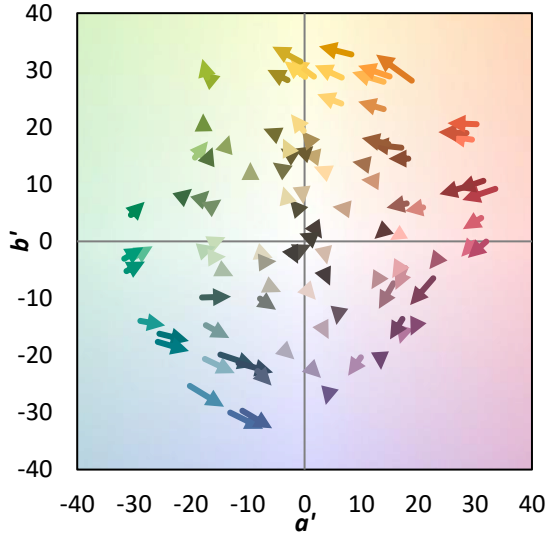


Color Vector Graphics







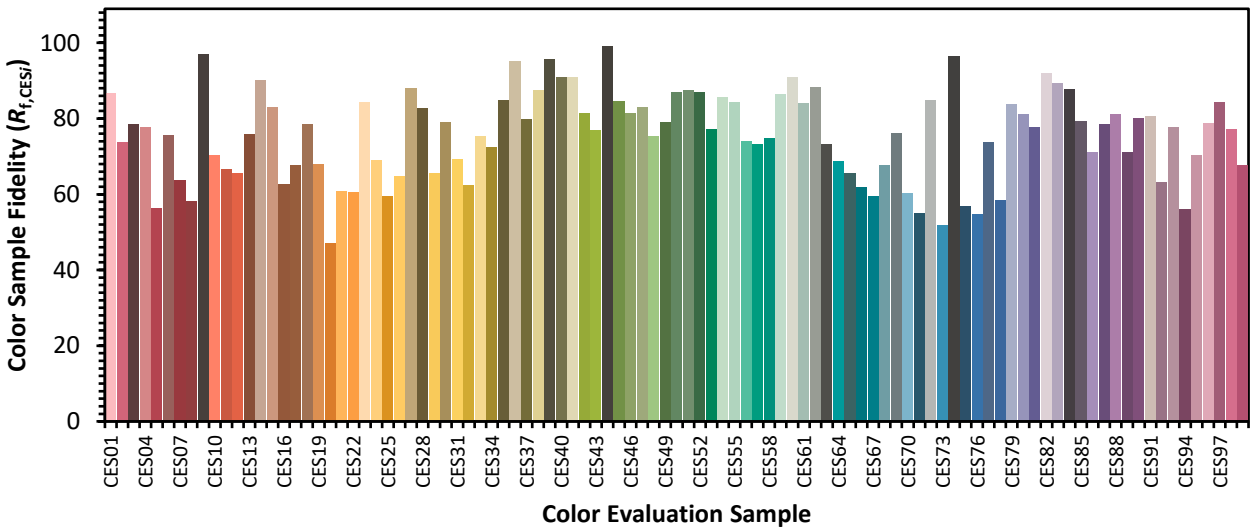


REPORT NUMBER: SP1-2407-176-4

TM-30-18

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

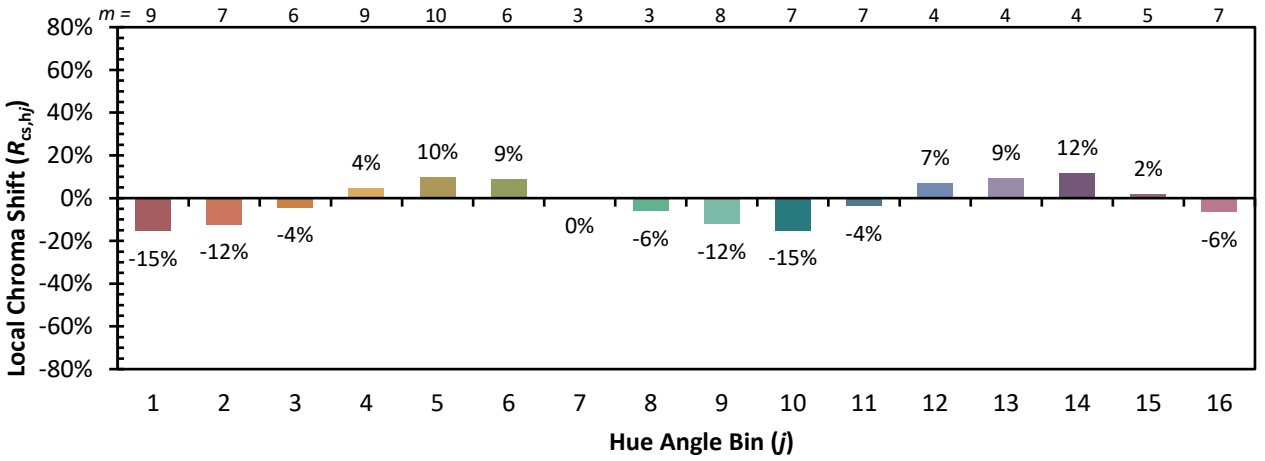
CES01 = 86	CES26 = 65	CES51 = 88	CES76 = 55
CES02 = 62	CES27 = 88	CES52 = 87	CES77 = 74
CES03 = 31	CES28 = 83	CES53 = 77	CES78 = 58
CES04 = 70	CES29 = 66	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 79	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 69	CES56 = 74	CES81 = 78
CES07 = 41	CES32 = 62	CES57 = 73	CES82 = 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	

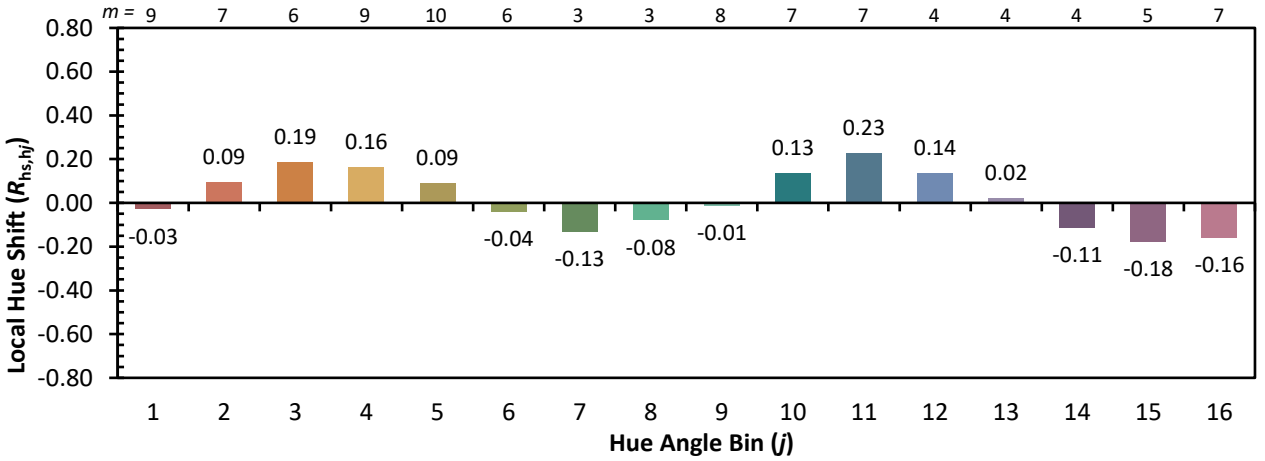


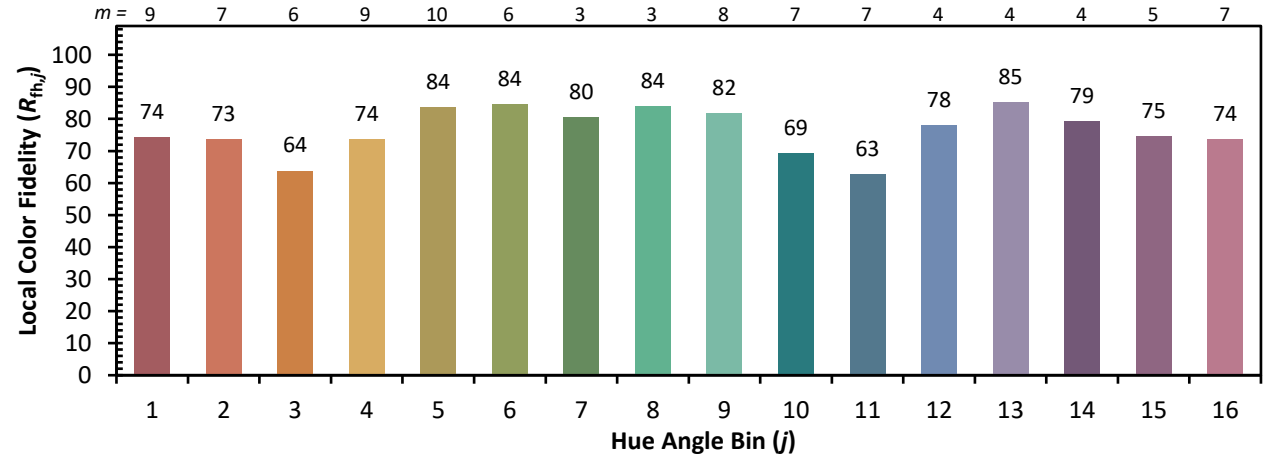
REPORT NUMBER: SP1-2407-176-4

TM-30-18

Color Rendition by Hue-Angle Bin



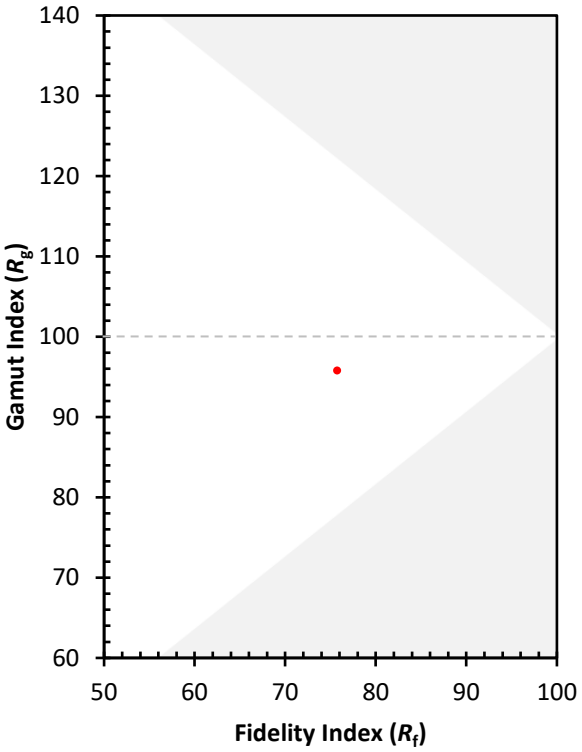


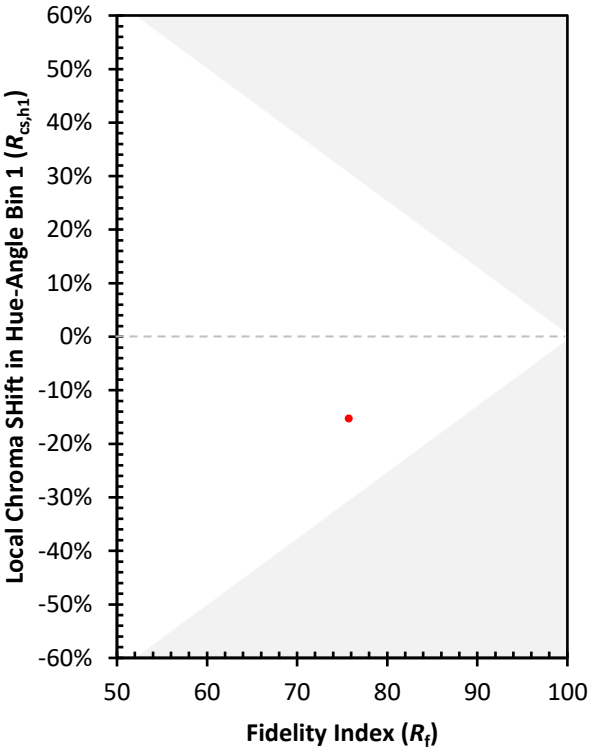


REPORT NUMBER: SP1-2407-176-4

TM-30-18

Measure Comparisons





(END OF REPORT)