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: P821319

Luminaire Tested: **TT-D4-740-24VDC-WQ-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821319
	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-D4-740-24VDC-WQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	4000K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6097 lumens
Efficiency:	N/A
Efficacy:	107.0 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G3

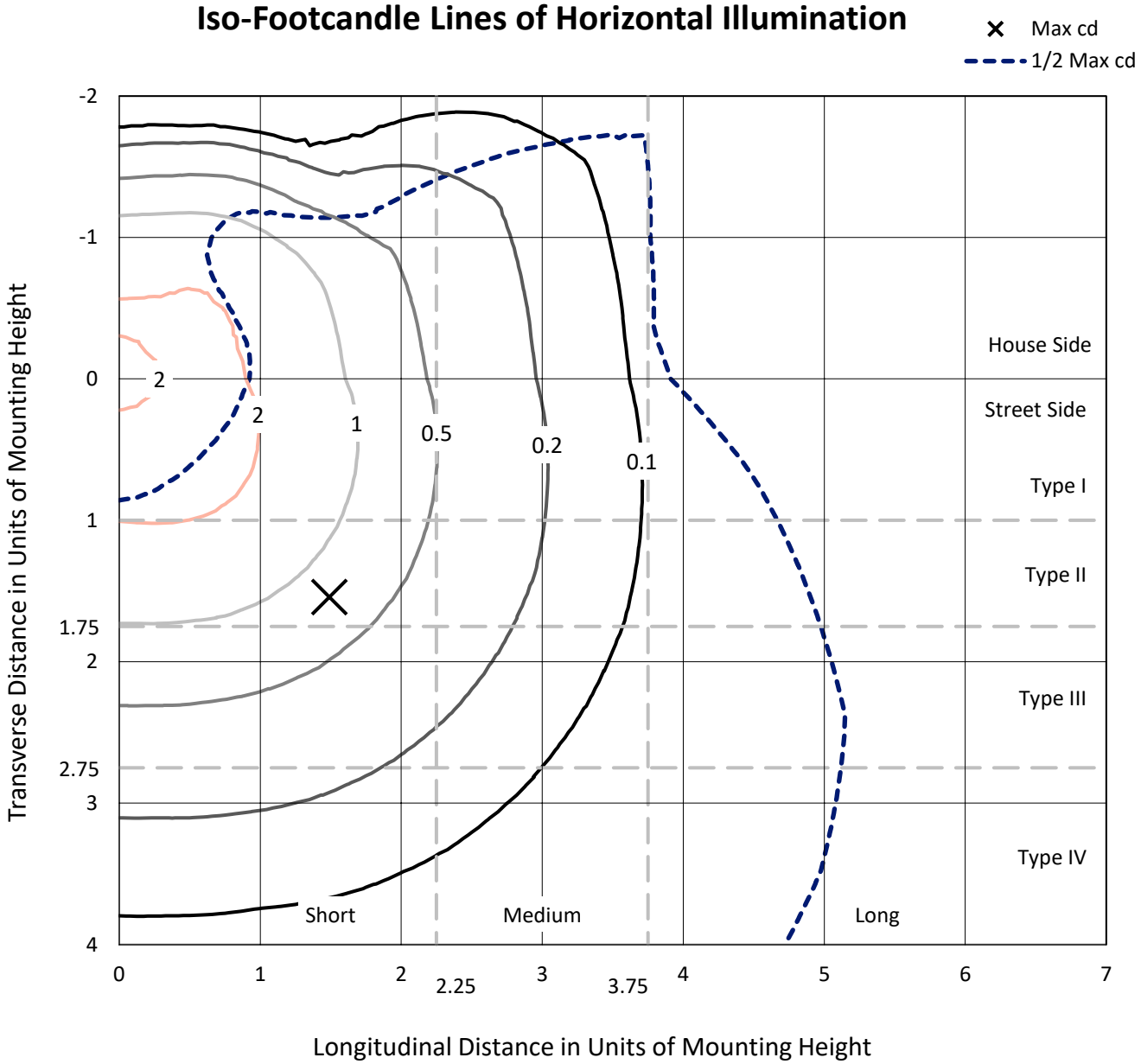
Input Watts (W):	57
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



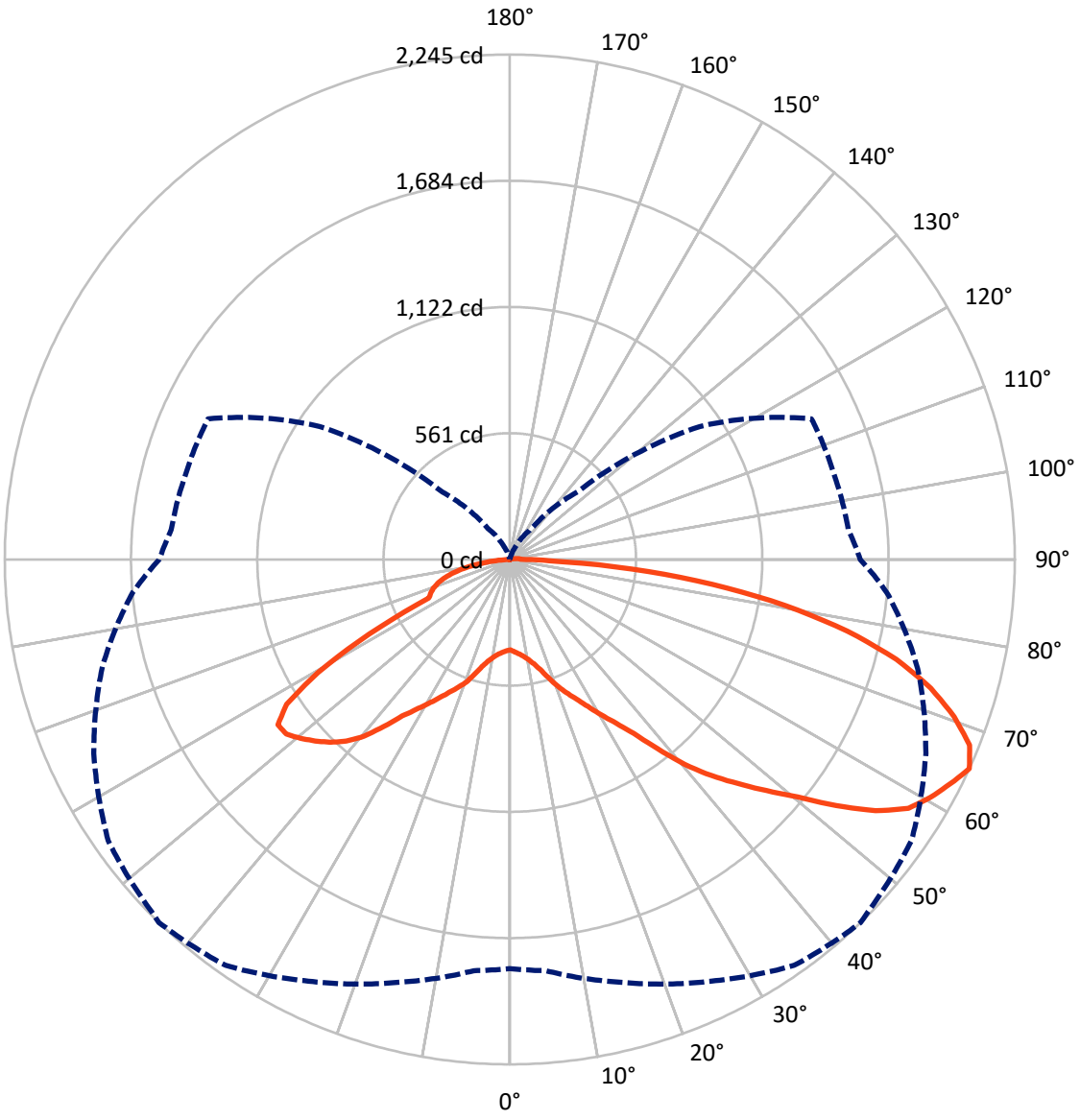
Based on 15 foot mounting height. Maximum calculated value = 2.4 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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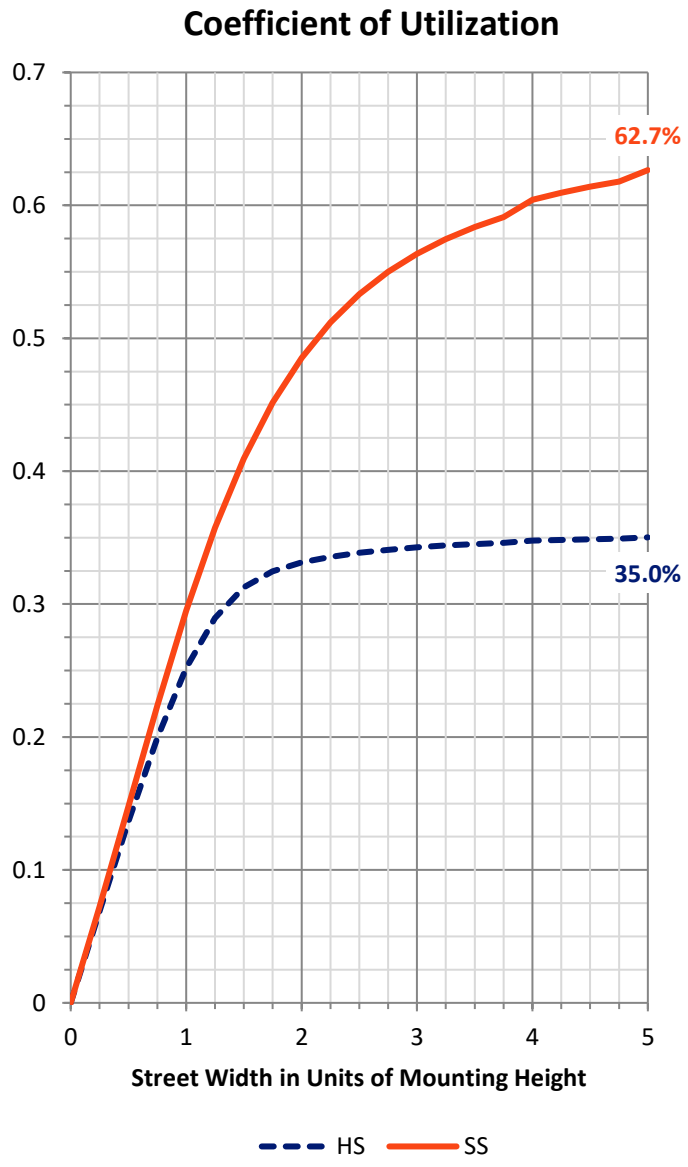
REPORT NUMBER: P821319
CATALOG NUMBER: TT-D4-740-24VDC-WQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2147.5	1.4	2148.9
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	3923.4	24.7	3948.1
	% Fixture	64.3	0.4	64.8
Total	Lumens	6070.9	26.1	6097.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.8	0.7
10°-20°	144.8	2.4
20°-30°	310.3	5.1
30°-40°	562.0	9.2
40°-50°	937.8	15.4
50°-60°	1299.0	21.3
60°-70°	1346.2	22.1
70°-80°	1083.4	17.8
80°-90°	346.5	5.7
90°-100°	17.5	0.3
100°-110°	5.6	0.1
110°-120°	1.1	0.0
120°-130°	0.7	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°	0.0	0.0
0°-90°	6070.9	99.6
0°-180°	6097.0	100.0



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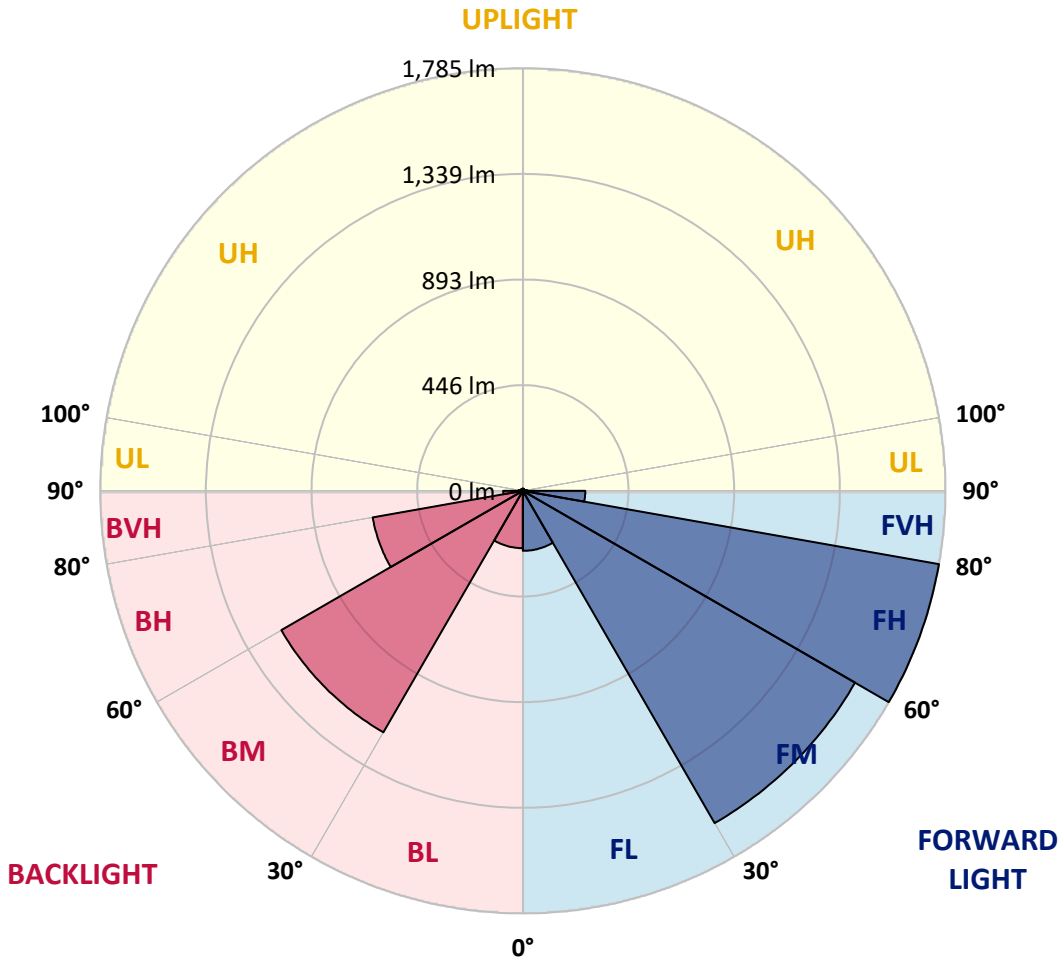
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	253.5	4.2			
FM	(30°-60°)	1620.9	26.6			
FH	(60°-80°)	1785.3	29.3			G1/1800
FVH	(80°-90°)	263.7	4.3			G3/500
BL	(0°-30°)	242.4	4.0	B1/500		
BM	(30°-60°)	1177.9	19.3	B2/2500		
BH	(60°-80°)	644.3	10.6	B2/1000		G2/1000
BVH	(80°-90°)	82.9	1.4			G1/100
UL	(90°-100°)	17.5	0.3		U2/50	
UH	(100°-180°)	8.6	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°	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3
2.5°	414.2	413.0	413.0	411.8	411.8	411.8	411.8	411.8	410.7	409.5	408.3
5°	424.9	424.9	423.7	423.7	422.6	421.4	422.6	421.4	420.2	419.0	417.8
7.5°	439.2	438.0	438.0	435.6	435.6	434.5	434.5	434.5	433.3	430.9	429.7
10°	459.5	457.1	457.1	454.7	453.5	452.3	452.3	449.9	449.9	448.7	447.6
12.5°	482.1	479.7	482.1	480.9	478.5	476.1	476.1	473.7	472.5	471.4	466.6
15°	511.8	508.3	510.6	510.6	509.4	508.3	508.3	503.5	501.1	498.7	494.0
17.5°	547.5	545.2	546.3	547.5	551.1	551.1	552.3	546.3	541.6	533.3	529.7
20°	592.8	591.6	595.1	595.1	598.7	598.7	599.9	594.0	585.6	579.7	572.5
22.5°	636.8	636.8	641.6	641.6	645.1	642.8	642.8	640.4	630.9	623.7	616.6
25°	682.0	680.8	685.6	689.2	693.9	688.0	690.4	686.8	677.3	667.8	658.2
27.5°	732.0	729.7	732.0	736.8	745.1	740.4	742.7	736.8	727.3	714.2	705.8
30°	786.8	783.2	786.8	793.9	799.9	802.3	801.1	792.7	784.4	765.4	759.4
32.5°	840.3	840.3	848.7	861.8	868.9	867.7	868.9	861.8	849.9	826.1	811.8
35°	905.8	910.6	921.3	940.3	955.8	949.9	949.9	947.5	927.2	898.7	879.6
37.5°	992.7	997.5	1018.9	1041.5	1070.1	1067.7	1068.9	1061.7	1022.5	992.7	965.3
40°	1093.9	1098.6	1130.8	1162.9	1190.3	1198.6	1199.8	1184.3	1141.5	1098.6	1055.8
42.5°	1186.7	1192.7	1226.0	1271.2	1301.0	1314.1	1316.5	1291.5	1246.2	1197.4	1143.9
45°	1279.6	1286.7	1324.8	1372.4	1415.3	1421.2	1422.4	1401.0	1351.0	1295.0	1226.0
47.5°	1374.8	1380.7	1420.0	1477.2	1523.6	1535.5	1536.7	1516.4	1455.7	1387.9	1306.9
50°	1461.7	1473.6	1527.1	1587.9	1649.7	1659.3	1660.5	1637.8	1566.4	1490.2	1383.1
52.5°	1564.0	1570.0	1627.1	1728.3	1780.7	1817.6	1818.8	1774.7	1698.6	1596.2	1458.1
55°	1683.1	1693.8	1752.1	1853.3	1947.3	1972.3	1979.5	1927.1	1825.9	1715.2	1553.3
57.5°	1752.1	1772.3	1858.0	1954.5	2072.3	2089.0	2092.5	2037.8	1925.9	1804.5	1624.8
60°	1789.0	1800.9	1891.4	2041.4	2133.0	2148.5	2147.3	2105.6	1993.7	1846.1	1658.1
62.5°	1830.7	1850.9	1927.1	2079.4	2159.2	2197.3	2191.3	2148.5	2034.2	1872.3	1690.2
65°	1818.8	1835.4	1947.3	2071.1	2203.2	2244.9	2236.6	2179.4	2040.2	1877.1	1681.9
67.5°	1771.2	1784.3	1894.9	2048.5	2174.7	2204.4	2218.7	2162.8	2006.8	1825.9	1629.5
70°	1673.6	1693.8	1800.9	1958.0	2073.5	2094.9	2097.3	2062.8	1922.3	1731.9	1542.6
72.5°	1539.1	1555.7	1672.4	1831.9	1931.8	1956.8	1959.2	1906.9	1800.9	1603.3	1417.6
75°	1378.4	1393.8	1484.3	1650.9	1749.7	1774.7	1772.3	1723.5	1611.7	1424.8	1252.2
77.5°	1179.6	1208.1	1287.9	1424.8	1521.2	1534.3	1536.7	1483.1	1392.6	1230.8	1062.9
80°	930.8	958.2	1048.6	1151.0	1232.0	1242.7	1246.2	1201.0	1118.9	976.0	833.2
82.5°	661.8	685.6	757.0	840.3	908.2	908.2	910.6	873.7	810.6	688.0	576.1
85°	377.3	395.2	442.8	502.3	551.1	545.2	546.3	513.0	471.4	376.1	304.7
87.5°	123.8	132.1	142.8	165.5	188.1	173.8	180.9	150.0	135.7	101.2	78.6
90°	65.5	65.5	63.1	60.7	55.9	48.8	48.8	39.3	29.8	19.0	7.1
92.5°	59.5	59.5	57.1	54.8	50.0	44.0	44.0	35.7	26.2	16.7	6.0
95°	48.8	48.8	47.6	45.2	41.7	36.9	35.7	29.8	22.6	13.1	4.8
97.5°	38.1	38.1	36.9	35.7	32.1	28.6	28.6	22.6	16.7	10.7	3.6
100°	28.6	28.6	28.6	26.2	25.0	21.4	21.4	17.9	13.1	8.3	2.4
102.5°	20.2	21.4	20.2	19.0	17.9	15.5	15.5	13.1	9.5	6.0	2.4
105°	14.3	14.3	13.1	13.1	11.9	10.7	10.7	8.3	6.0	3.6	1.2
107.5°	8.3	8.3	8.3	8.3	7.1	7.1	7.1	6.0	3.6	2.4	1.2
110°	4.8	4.8	4.8	4.8	3.6	3.6	3.6	2.4	2.4	1.2	1.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2.4	2.4	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	2.4	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	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	1.2	1.2	1.2	*1.2*	1.2	1.2	1.2	1.2	1.2
125°	0.0	0.0	1.2	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	1.2	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	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
140°	1.2	1.2	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
142.5°	1.2	1.2	1.2	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	*0.0*	0.0	1.2	1.2	1.2	1.2
147.5°	1.2	1.2	1.2	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2	1.2
150°	1.2	1.2	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
152.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2
155°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	1.2	1.2	1.2
157.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2
160°	1.2	0.0	0.0	0.0	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2
162.5°	1.2	1.2	0.0	0.0	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2
165°	1.2	0.0	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
167.5°	1.2	1.2	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
170°	1.2	0.0	0.0	0.0	0.0	*1.2*	0.0	1.2	1.2	1.2	1.2
172.5°	1.2	1.2	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
175°	1.2	1.2	1.2	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2	1.2
177.5°	0.0	1.2	0.0	0.0	0.0	*0.0*	0.0	1.2	1.2	1.2	1.2
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°	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3	402.3
2.5°	408.3	408.3	407.1	405.9	405.9	405.9	404.7	404.7	404.7	403.5	403.5
5°	417.8	416.6	416.6	415.4	415.4	414.2	414.2	413.0	411.8	411.8	410.7
7.5°	430.9	429.7	427.3	428.5	426.1	424.9	423.7	423.7	423.7	422.6	422.6
10°	446.4	446.4	444.0	444.0	441.6	440.4	439.2	439.2	440.4	440.4	439.2
12.5°	466.6	465.4	465.4	464.2	463.0	461.8	463.0	463.0	461.8	460.6	459.5
15°	491.6	491.6	491.6	492.8	491.6	491.6	491.6	490.4	488.0	485.6	485.6
17.5°	529.7	528.5	526.1	527.3	529.7	533.3	529.7	526.1	522.5	522.5	521.3
20°	569.0	570.2	570.2	571.3	574.9	578.5	573.7	571.3	569.0	566.6	564.2
22.5°	611.8	613.0	613.0	611.8	614.2	613.0	610.6	608.2	605.9	602.3	599.9
25°	653.5	654.7	653.5	652.3	653.5	649.9	646.3	642.8	636.8	630.9	630.9
27.5°	699.9	698.7	693.9	695.1	692.8	690.4	683.2	674.9	666.6	660.6	660.6
30°	748.7	748.7	739.2	743.9	739.2	738.0	722.5	711.8	699.9	691.6	690.4
32.5°	802.3	799.9	792.7	797.5	792.7	788.0	768.9	754.6	734.4	722.5	721.3
35°	866.5	860.6	854.6	859.4	859.4	846.3	827.3	801.1	772.5	758.2	757.0
37.5°	945.1	941.5	934.4	940.3	945.1	932.0	903.4	865.3	824.9	803.4	802.3
40°	1032.0	1027.2	1023.7	1032.0	1035.6	1022.5	984.4	930.8	876.1	845.1	840.3
42.5°	1114.1	1103.4	1097.5	1109.4	1105.8	1091.5	1039.1	977.2	902.2	866.5	860.6
45°	1187.9	1176.0	1167.7	1178.4	1173.6	1145.1	1086.7	1003.4	913.0	868.9	861.8
47.5°	1260.5	1242.7	1229.6	1243.9	1234.3	1190.3	1118.9	1016.5	901.1	848.7	836.8
50°	1322.4	1301.0	1292.7	1309.3	1295.0	1233.1	1141.5	1010.6	871.3	795.1	776.1
52.5°	1396.2	1364.1	1355.7	1387.9	1355.7	1273.6	1146.3	996.3	803.4	711.8	693.9
55°	1471.2	1435.5	1422.4	1452.2	1403.4	1281.9	1122.4	914.1	701.1	603.5	577.3
57.5°	1510.5	1477.2	1465.3	1486.7	1396.2	1201.0	1016.5	761.8	547.5	438.0	409.5
60°	1546.2	1487.9	1472.4	1501.0	1322.4	1012.9	786.8	546.3	330.9	248.8	227.3
62.5°	1571.2	1515.2	1483.1	1496.2	1186.7	736.8	452.3	263.1	125.0	86.9	85.7
65°	*1558.1*	*1510.5*	*1489.1*	*1479.5*	*1030.8*	*423.7*	*166.6*	*66.7*	*3.6*	*3.6*	*2.4*
67.5°	1517.6	1465.3	1459.3	1467.6	1020.1	407.1	154.7	60.7	0.0	0.0	0.0
70°	1428.4	1391.5	1391.5	1420.0	973.7	385.7	144.0	55.9	0.0	0.0	0.0
72.5°	1308.1	1279.6	1296.2	1339.1	904.6	355.9	129.7	50.0	0.0	0.0	0.0
75°	1164.1	1134.4	1155.8	1203.4	818.9	317.8	113.1	42.9	0.0	0.0	0.0
77.5°	980.8	960.6	993.9	1037.9	704.7	267.8	92.8	34.5	0.0	0.0	0.0
80°	764.2	753.5	797.5	836.8	569.0	210.7	70.2	25.0	0.0	0.0	0.0
82.5°	527.3	522.5	565.4	605.9	407.1	147.6	47.6	16.7	0.0	0.0	0.0
85°	276.1	276.1	309.5	346.4	227.3	79.7	23.8	7.1	0.0	0.0	0.0
87.5°	60.7	58.3	63.1	80.9	45.2	15.5	3.6	1.2	0.0	0.0	0.0
90°	1.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
105°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.2	1.2	1.2	1.2	1.2	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: P821319
CATALOG NUMBER: TT-D4-740-24VDC-WQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
117.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
122.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
125°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.2	1.2	1.2	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: SP1-2407-176-5

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-740-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-740-U-WQ

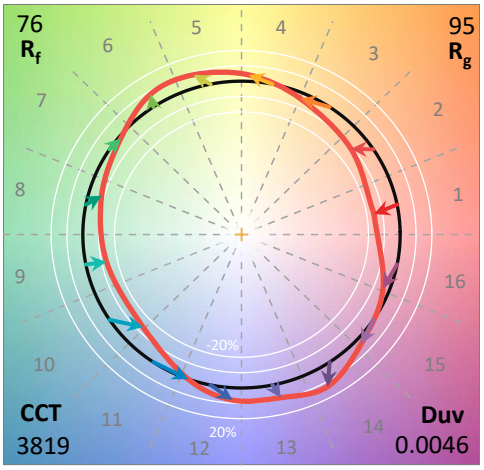
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Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-5
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-30-740-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	3819	CRI (Ra):	72.9		
CIE u':	0.2261	R1:	70.1	R9:	-21.5
CIE v':	0.5108	R2:	78.4	R10:	48.5
Duv:	0.0046	R3:	85.0	R11:	68.4
CIE x:	0.3926	R4:	72.9	R12:	39.0
CIE y:	0.3942	R5:	69.1	R13:	71.1
CIE z:	0.2132	R6:	69.2	R14:	91.3
Peak Wavelength (nm):	450	R7:	82.8	R15:	63.2
Dominant Wavelength (nm):	577	R8:	55.4		
Purity:	36.15483				
Rf:	75.6				
Rg:	94.8				



Test Conditions

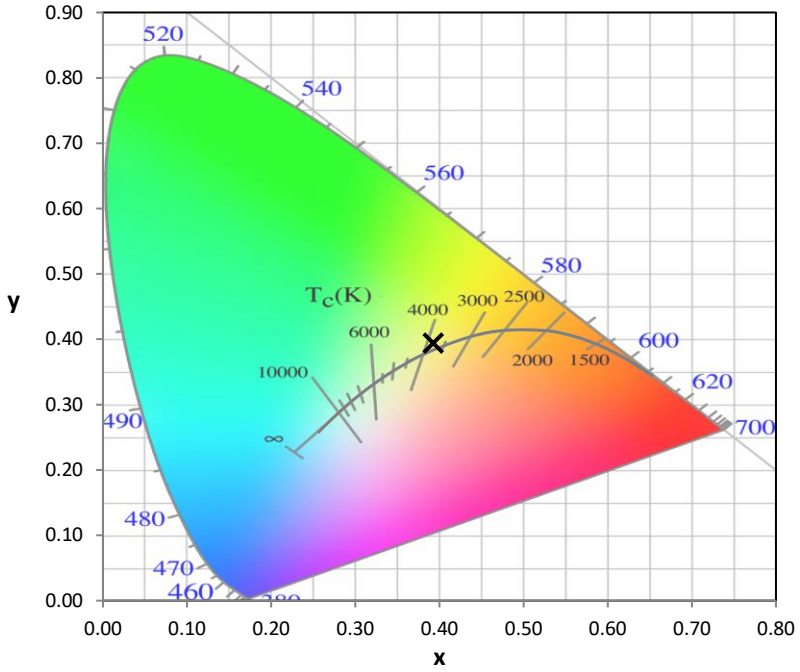
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-5

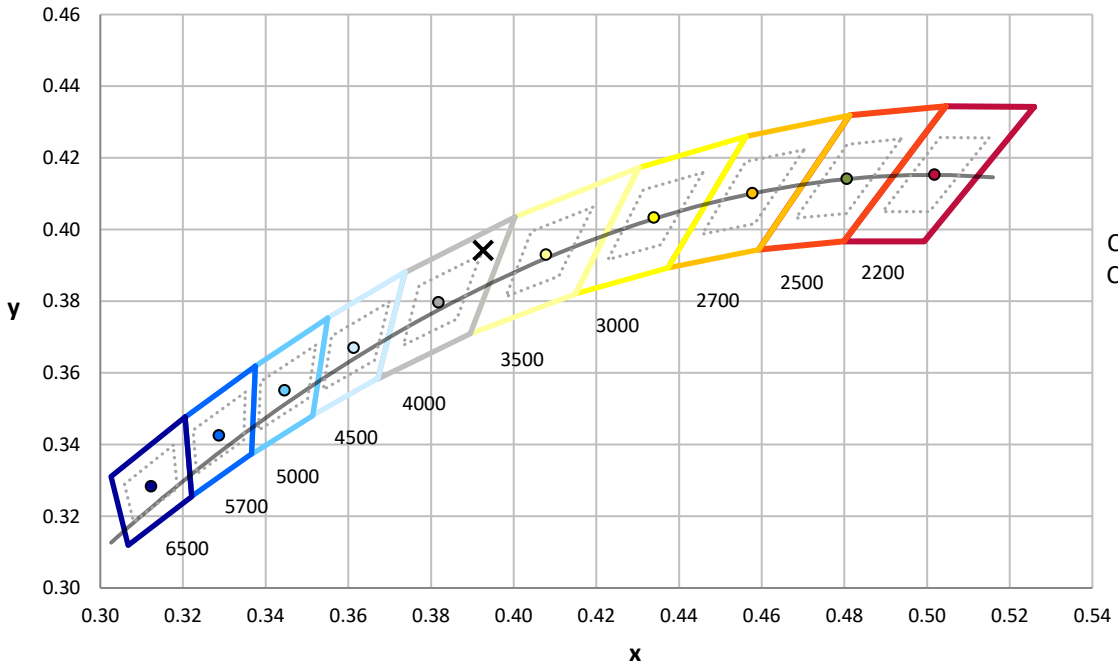
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-5

CIE 1931 Chromaticity Diagram



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

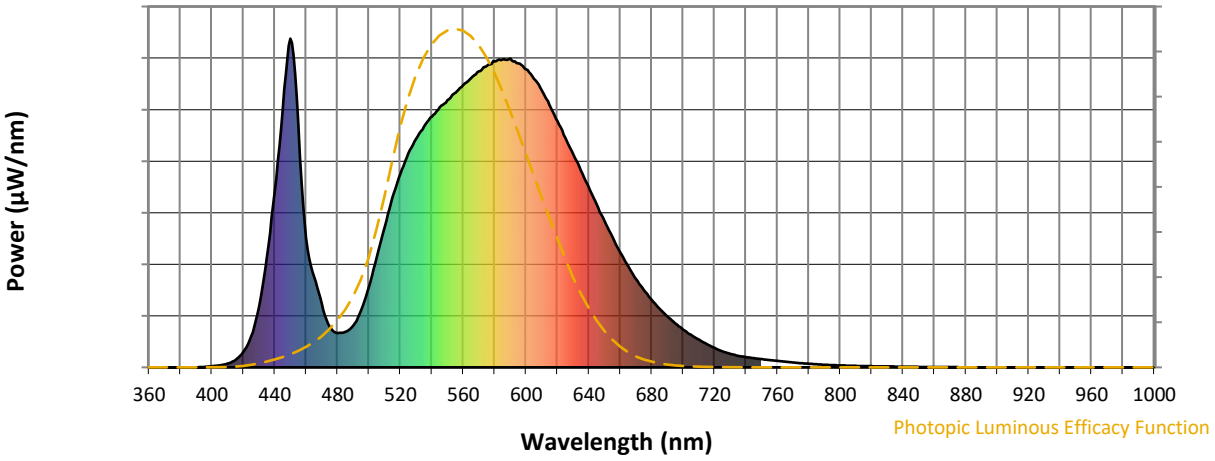


CCT = 3819K
CIE x = 0.3926
CIE y = 0.3942
Duv = 0.0046

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-5

Photopic Flux vs. Wavelength

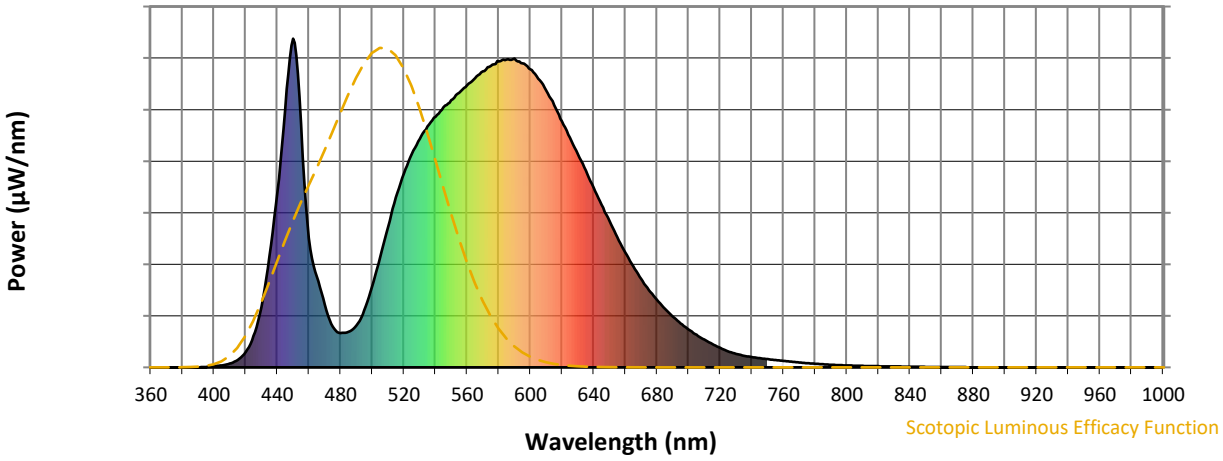


Photopic Lumens: NR

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-5

Scotopic Flux vs. Wavelength

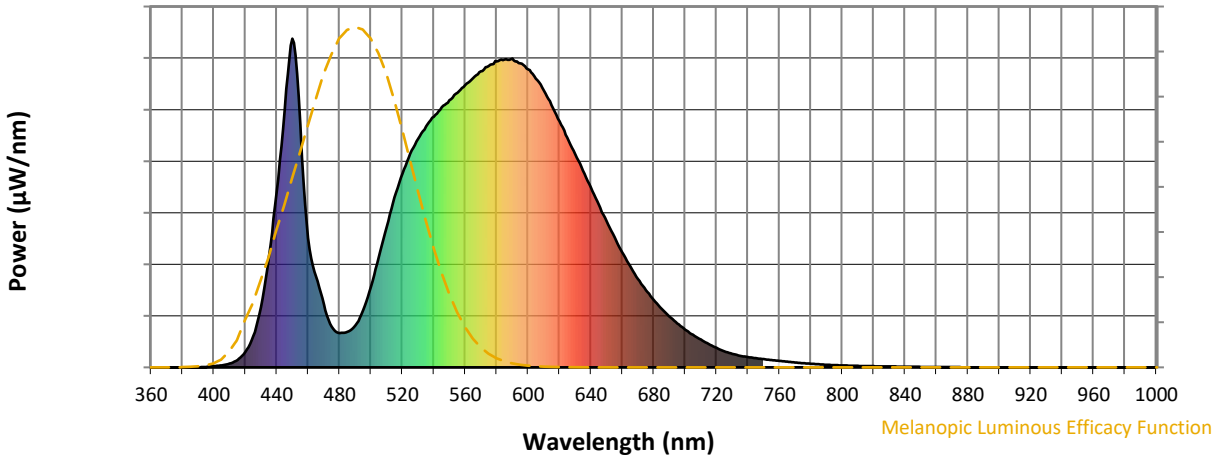


Scotopic Lumens: NR **S/P: 1.45**

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.76**

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

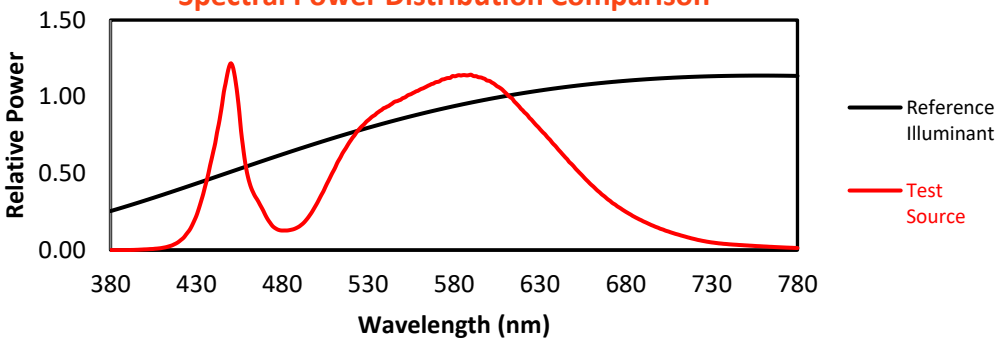
REPORT NUMBER: SP1-2407-176-5

TM-30-18

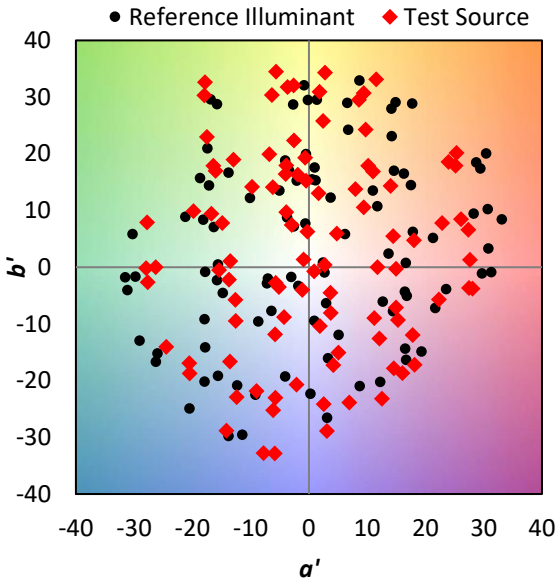
Summary

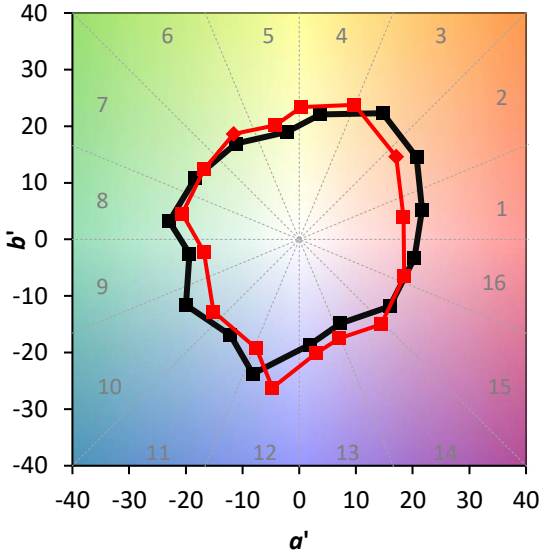
R_f = 75.6
R_g = 94.8
CIE R_a = 72.9
R_9 = -21.5

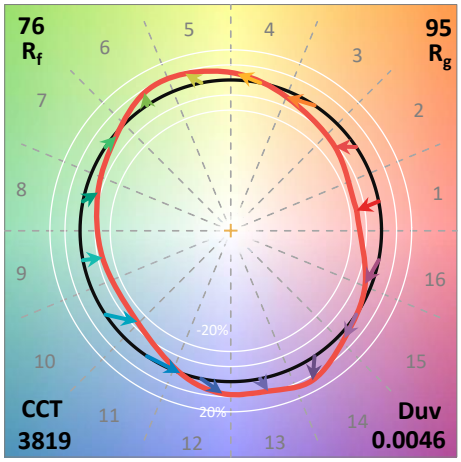
Spectral Power Distribution Comparison

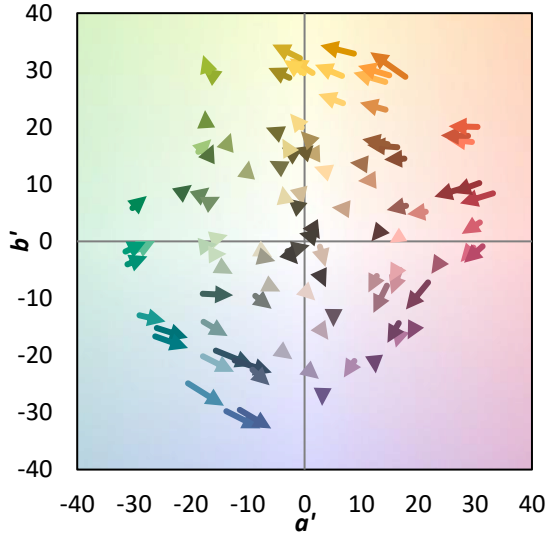


Color Vector Graphics







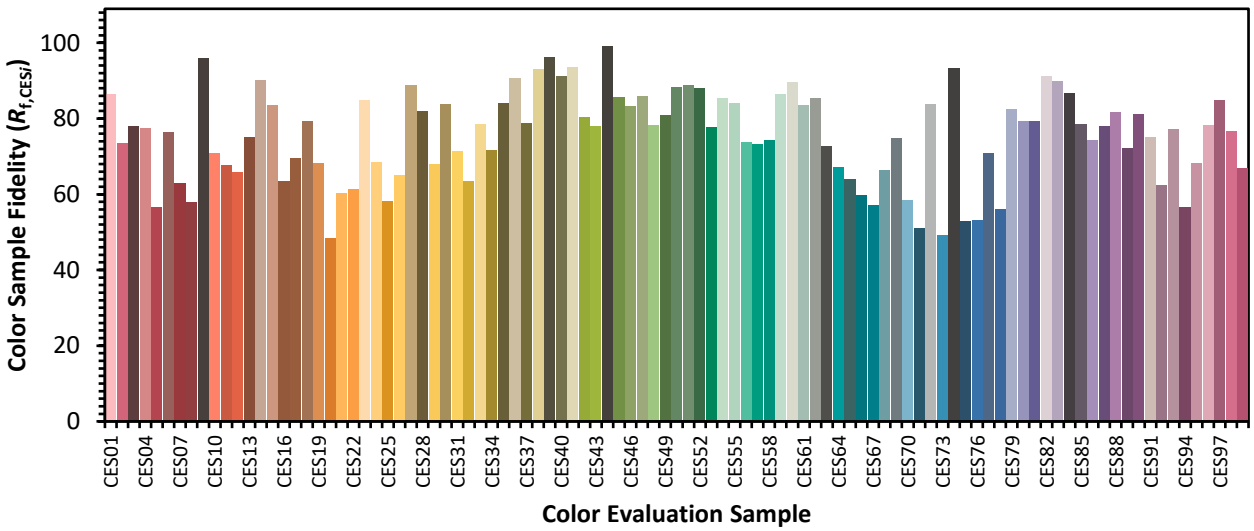


REPORT NUMBER: SP1-2407-176-5

TM-30-18

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

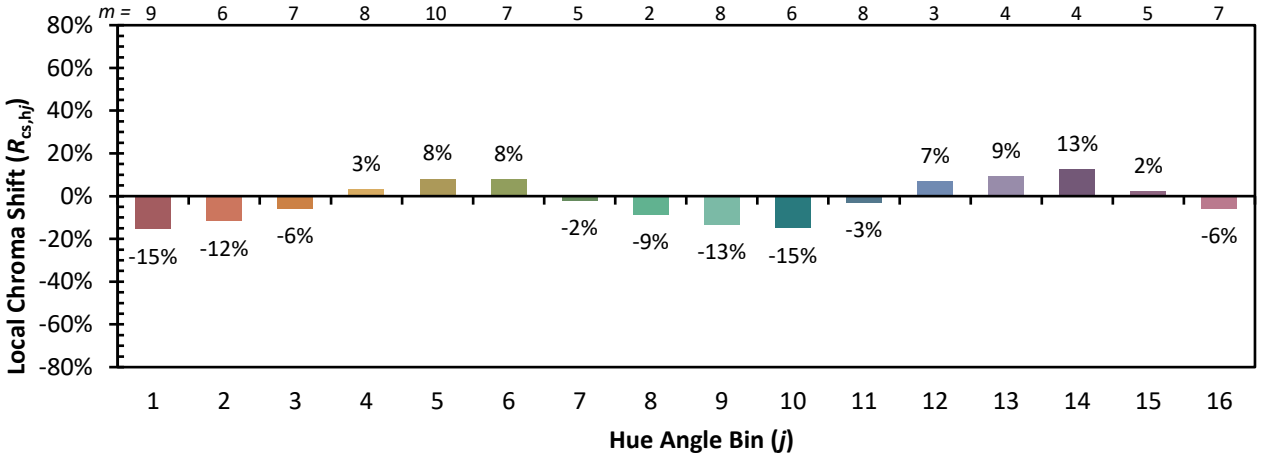
CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82 = 91
CES08 = 39	CES33 = 79	CES58 = 74	CES83 = 90
CES09 = 29	CES34 = 72	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 84	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 91	CES61 = 84	CES86 = 74
CES12 = 63	CES37 = 79	CES62 = 85	CES87 = 78
CES13 = 42	CES38 = 93	CES63 = 73	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 67	CES89 = 72
CES15 = 71	CES40 = 91	CES65 = 64	CES90 = 81
CES16 = 47	CES41 = 93	CES66 = 60	CES91 = 75
CES17 = 49	CES42 = 80	CES67 = 57	CES92 = 62
CES18 = 56	CES43 = 78	CES68 = 66	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 75	CES94 = 57
CES20 = 65	CES45 = 86	CES70 = 58	CES95 = 68
CES21 = 86	CES46 = 83	CES71 = 51	CES96 = 78
CES22 = 78	CES47 = 86	CES72 = 84	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 49	CES98 = 77
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 67
CES25 = 72	CES50 = 88	CES75 = 53	

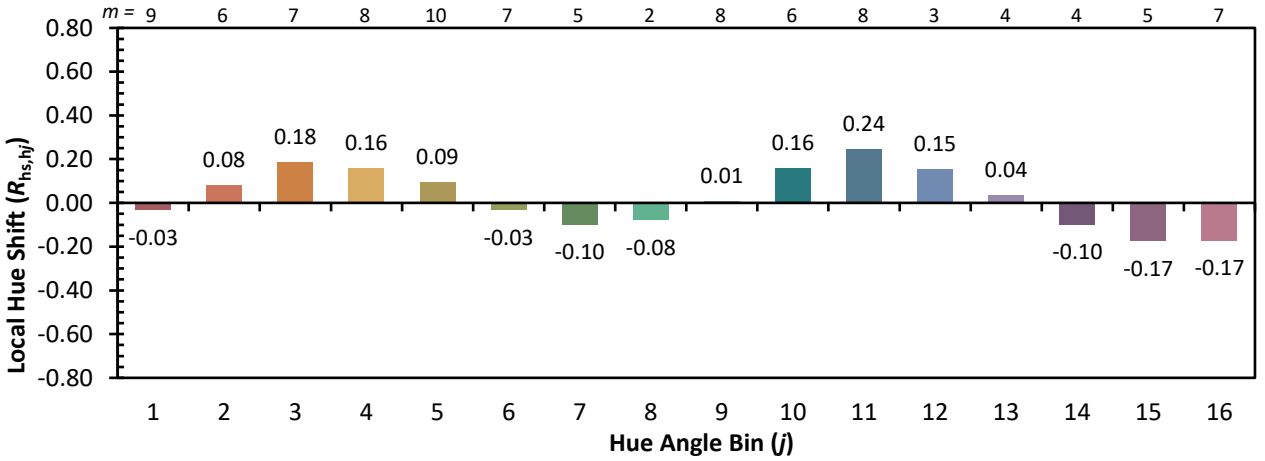


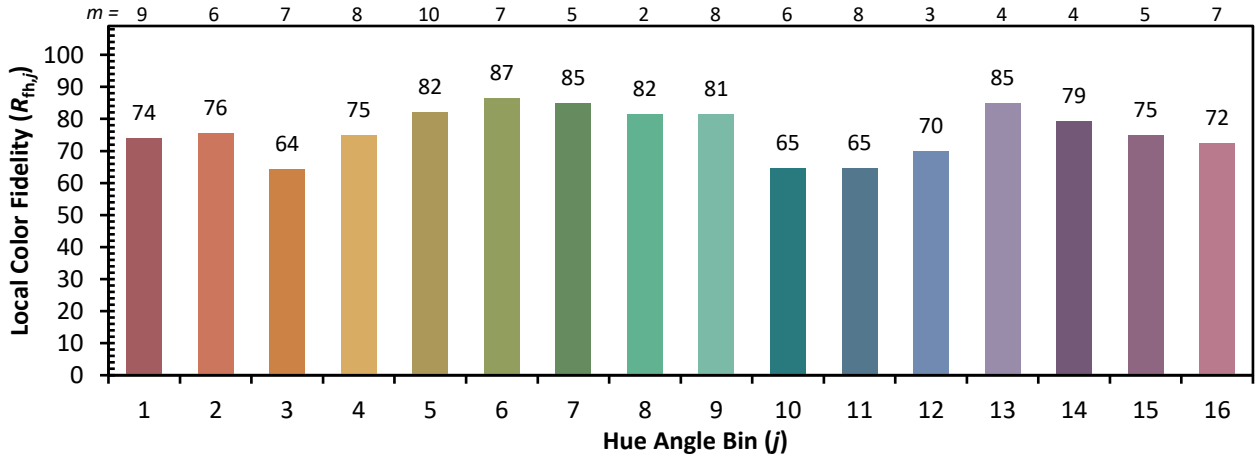
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Color Rendition by Hue-Angle Bin



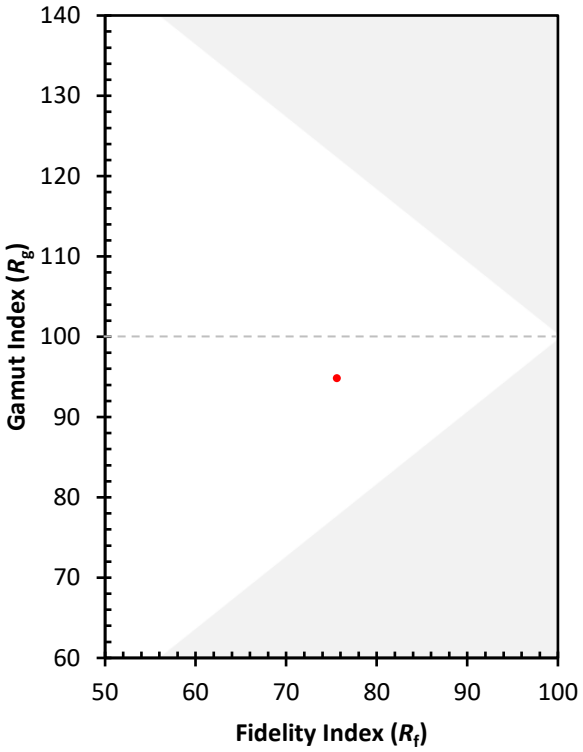


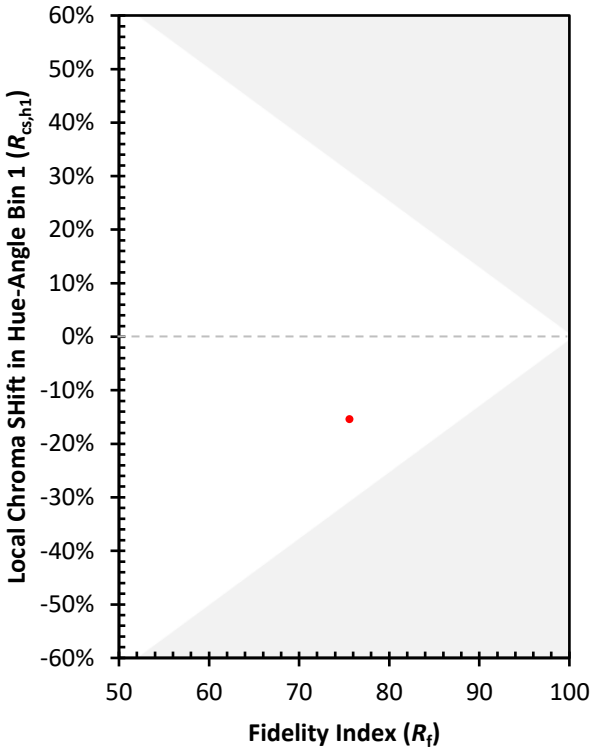


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Measure Comparisons





(END OF REPORT)