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: P821310

Luminaire Tested: **TT-D4-740-24VDC-DL-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:	P821310
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-4)
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-DL-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	4000K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5567.1 lumens
Efficiency:	N/A
Efficacy:	97.7 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U1 - G3

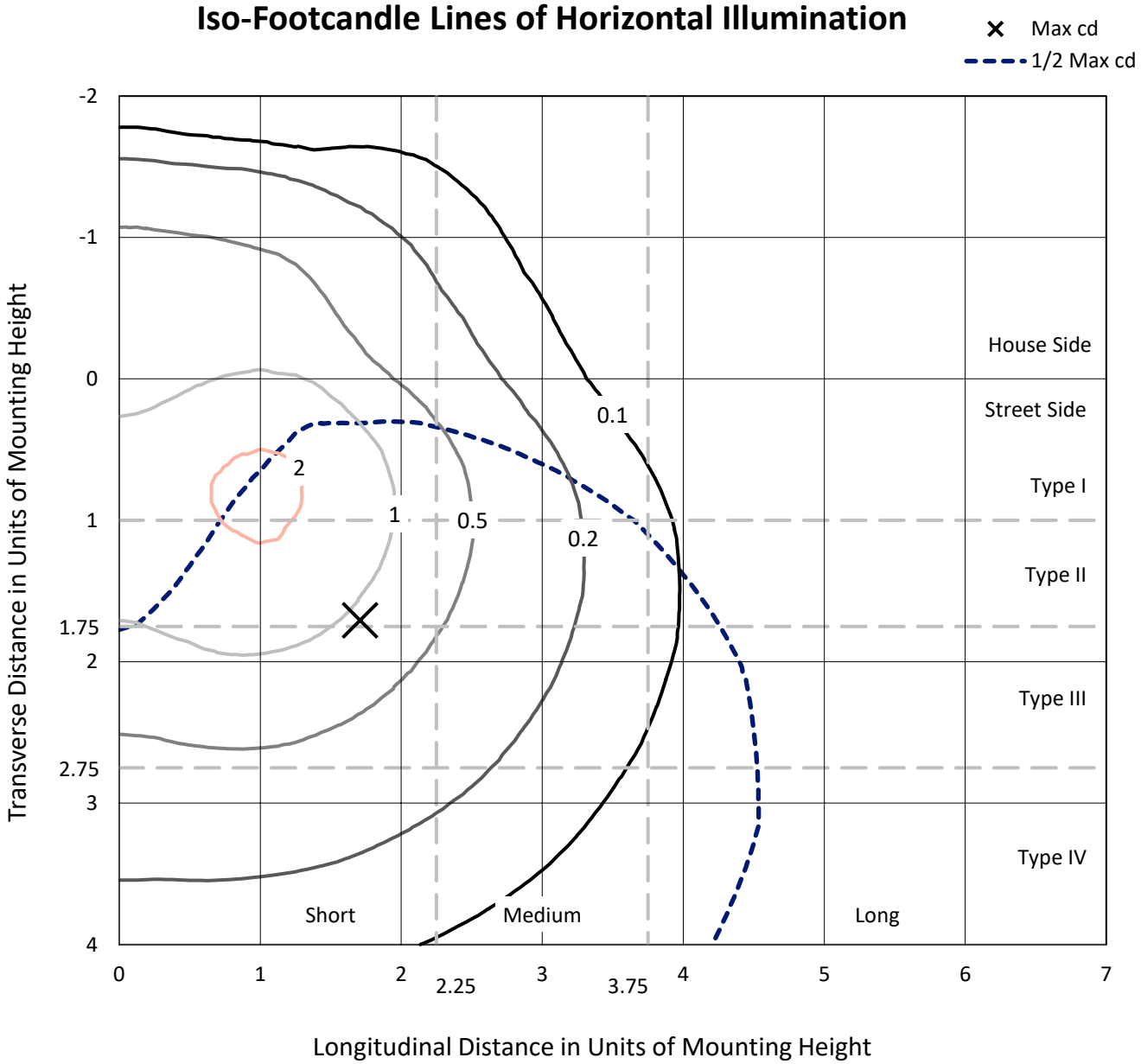
Input Watts (W):	57
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



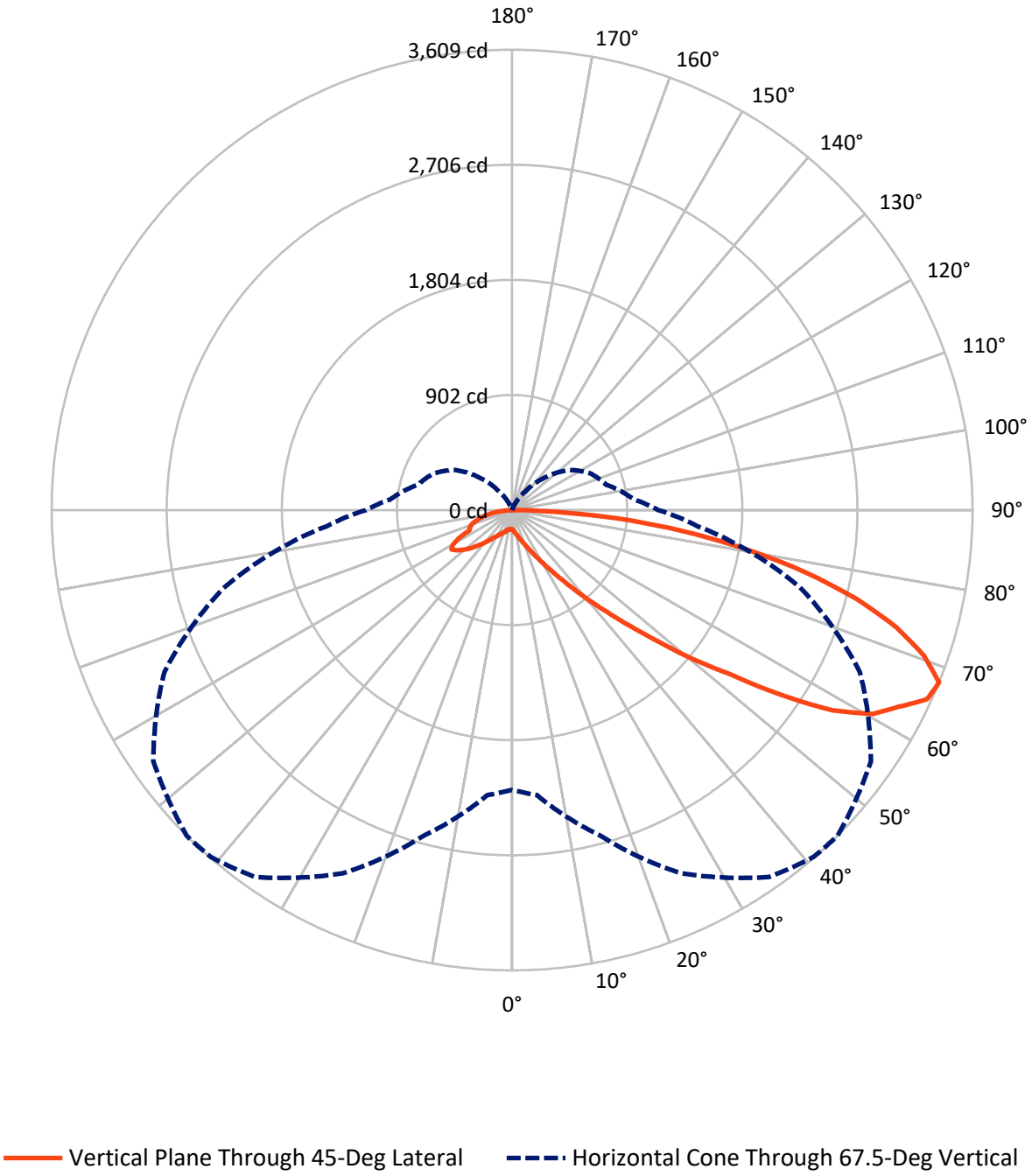
Based on 15 foot mounting height. Maximum calculated value = 2.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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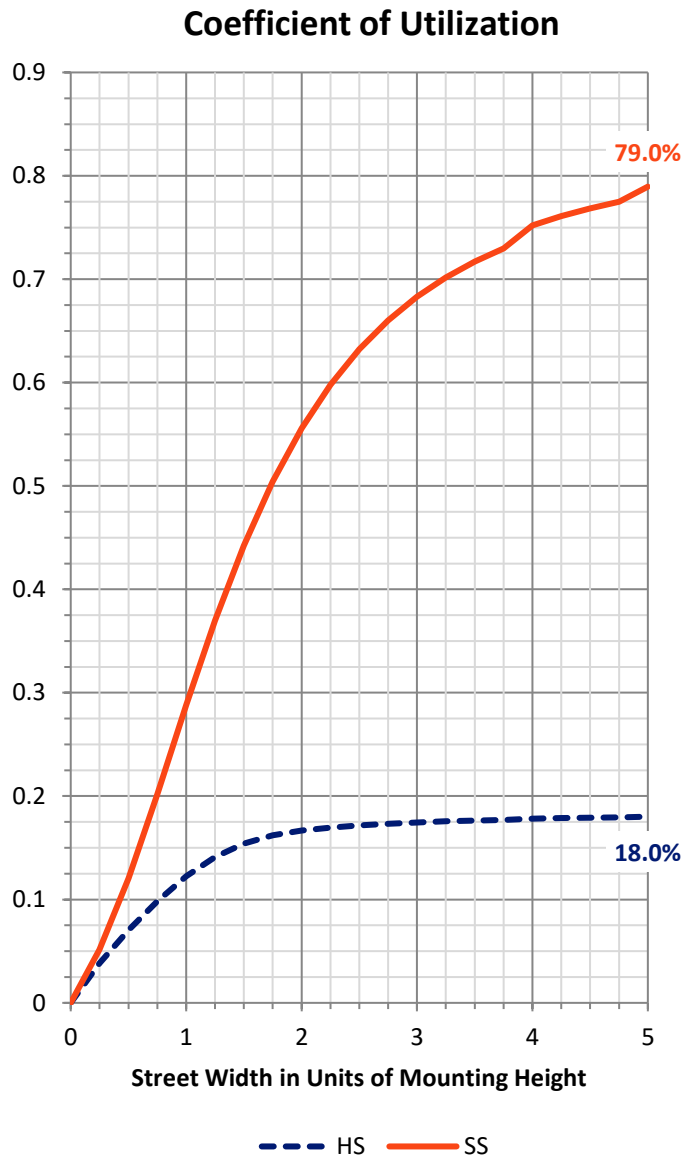
REPORT NUMBER: P821310
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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1011.5	1.2	1012.6
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	4542.0	12.4	4554.4
	% Fixture	81.6	0.2	81.8
Total	Lumens	5553.4	13.6	5567.1
	% Fixture	99.8	0.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.7	0.3
10°-20°	58.6	1.1
20°-30°	135.1	2.4
30°-40°	288.0	5.2
40°-50°	602.9	10.8
50°-60°	1143.6	20.5
60°-70°	1556.4	28.0
70°-80°	1338.2	24.0
80°-90°	414.9	7.5
90°-100°	8.8	0.2
100°-110°	2.5	0.0
110°-120°	0.7	0.0
120°-130°	0.5	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°	5553.4	99.8
0°-180°	5567.1	100.0



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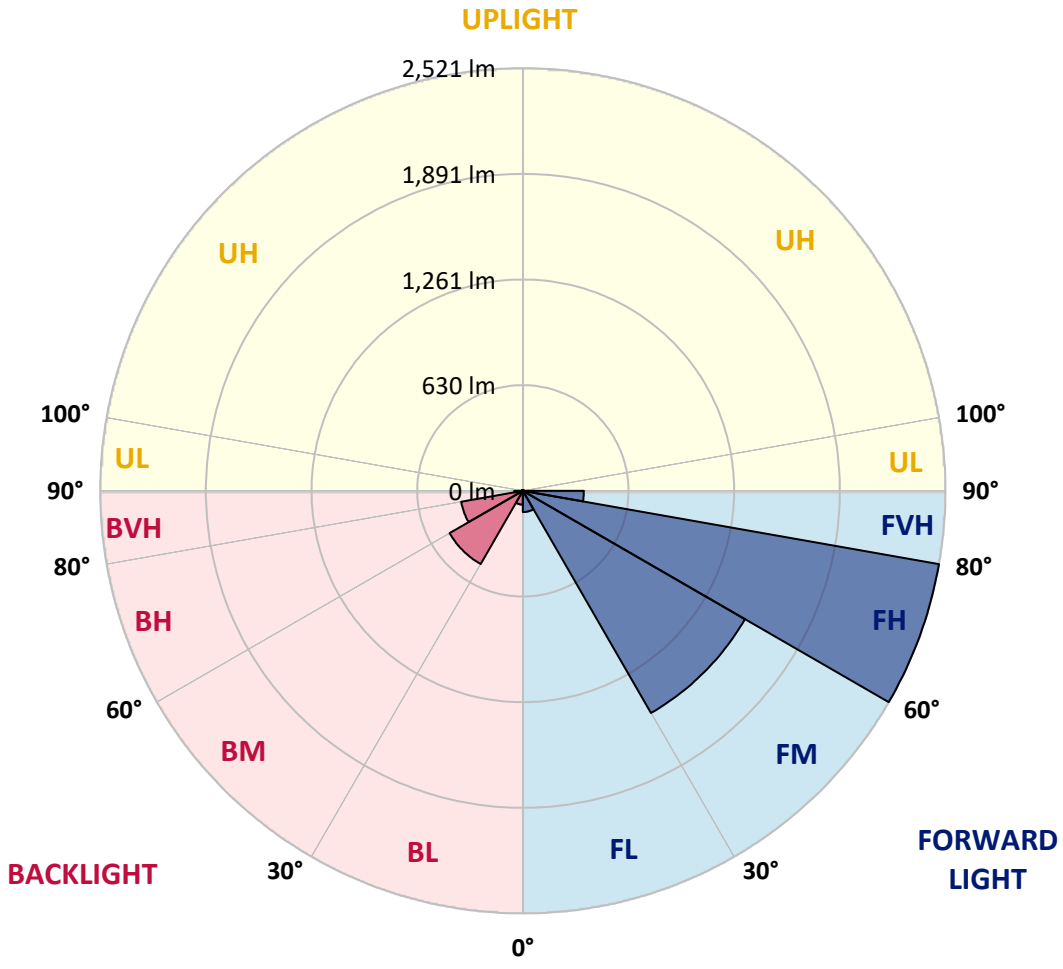
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	126.9	2.3			
FM	(30°-60°)	1530.0	27.5			
FH	(60°-80°)	2521.0	45.3			G2/5000
FVH	(80°-90°)	364.1	6.5			G3/500
BL	(0°-30°)	82.5	1.5	B0/110		
BM	(30°-60°)	504.5	9.1	B1/1000		
BH	(60°-80°)	373.6	6.7	B1/500		G1/500
BVH	(80°-90°)	50.8	0.9			G1/100
UL	(90°-100°)	8.8	0.2		U1/10	
UH	(100°-180°)	4.8	0.1		U1/10	

BUG Rating: B1-U1-G3
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	41°	45°	55°	65°	75°	85°
0°	152.3	152.3	152.3	152.3	152.3	152.3	*152.3*	152.3	152.3	152.3	152.3
2.5°	165.3	164.1	164.1	163.0	163.0	160.6	*160.6*	159.4	158.2	157.0	154.7
5°	177.1	175.9	175.9	174.8	173.6	171.2	*170.0*	167.7	165.3	163.0	160.6
7.5°	191.3	190.1	190.1	188.9	186.6	183.0	*181.8*	178.3	174.8	171.2	167.7
10°	209.0	207.8	207.8	205.5	203.1	199.6	*197.2*	192.5	188.9	183.0	177.1
12.5°	227.9	226.7	226.7	224.4	219.6	217.3	*214.9*	209.0	203.1	196.0	188.9
15°	249.2	249.2	249.2	248.0	243.2	238.5	*236.2*	229.1	222.0	211.4	201.9
17.5°	276.3	275.1	275.1	272.8	266.9	264.5	*261.0*	252.7	242.1	230.3	218.5
20°	309.4	308.2	305.8	304.7	298.7	296.4	*291.7*	282.2	268.0	252.7	236.2
22.5°	342.4	342.4	341.3	342.4	337.7	335.4	*329.4*	316.5	299.9	277.5	257.4
25°	380.2	381.4	383.8	387.3	381.4	379.0	*374.3*	357.8	337.7	309.4	281.0
27.5°	427.5	427.5	433.4	439.3	434.5	433.4	*426.3*	408.6	380.2	346.0	312.9
30°	478.2	479.4	488.9	499.5	497.1	497.1	*491.2*	471.1	436.9	396.8	350.7
32.5°	537.3	542.0	551.4	563.2	571.5	571.5	*569.2*	547.9	507.8	453.4	396.8
35°	615.2	606.9	624.7	642.4	660.1	663.6	*664.8*	644.7	598.7	530.2	453.4
37.5°	682.5	681.3	708.5	739.2	768.7	780.5	*784.1*	765.2	706.1	616.4	514.8
40°	760.4	767.5	804.1	850.2	899.8	919.9	*929.3*	908.0	834.8	719.1	585.7
42.5°	841.9	863.2	909.2	978.9	1054.5	1084.0	*1094.6*	1074.5	988.3	847.8	675.4
45°	937.6	967.1	1028.5	1127.7	1226.9	1270.6	*1294.2*	1287.1	1198.5	1023.8	791.1
47.5°	1055.6	1076.9	1160.7	1294.2	1434.7	1506.7	*1539.8*	1559.9	1433.5	1205.6	892.7
50°	1189.1	1192.6	1308.3	1477.2	1682.7	1778.3	*1836.2*	1826.7	1676.8	1414.6	1021.4
52.5°	1323.7	1320.2	1471.3	1700.4	1969.6	2094.8	*2133.7*	2172.7	2025.1	1733.4	1228.0
55°	1477.2	1470.1	1660.2	1950.7	2284.9	2450.2	*2560.0*	2614.3	2381.7	1943.6	1317.8
57.5°	1604.7	1627.2	1865.7	2215.2	2681.6	2889.5	*2961.5*	2932.0	2577.7	2049.9	1361.5
60°	1766.5	1799.6	2071.2	2561.2	3025.3	3179.9	*3246.1*	3111.5	2702.9	2130.2	1392.2
62.5°	1918.8	1961.3	2296.7	2842.2	3240.2	3381.9	*3398.4*	3252.0	2878.8	2288.4	1481.9
65°	2061.7	2110.1	2521.0	3008.7	3427.9	3546.0	*3574.3*	3458.6	3065.4	2381.7	1517.3
67.5°	*2192.8*	*2243.6*	*2636.8*	*3142.2*	*3511.7*	*3602.7*	*3608.6*	*3432.6*	*3007.5*	*2333.3*	*1460.7*
70°	2293.1	2315.6	2692.3	3138.6	3412.6	3448.0	*3424.4*	3247.2	2871.7	2234.1	1379.2
72.5°	2313.2	2329.8	2615.5	2963.8	3137.4	3170.5	*3151.6*	2995.7	2658.0	2057.0	1246.9
75°	2211.7	2215.2	2408.9	2649.8	2776.1	2816.2	*2791.4*	2647.4	2336.8	1806.6	1073.4
77.5°	1946.0	1953.1	2070.0	2231.7	2338.0	2372.3	*2353.4*	2221.1	1957.8	1517.3	888.0
80°	1542.1	1556.3	1640.2	1752.3	1849.2	1884.6	*1862.1*	1755.9	1541.0	1192.6	693.1
82.5°	1050.9	1068.6	1145.4	1238.7	1323.7	1357.9	*1339.0*	1271.7	1111.1	859.6	494.8
85°	531.4	550.3	629.4	716.8	791.1	827.8	*821.8*	793.5	683.7	530.2	298.7
87.5°	83.8	92.1	125.2	166.5	212.5	246.8	*225.5*	223.2	177.1	141.7	72.0
90°	34.2	34.2	33.1	31.9	28.3	26.0	*24.8*	20.1	15.4	9.4	3.5
92.5°	30.7	30.7	29.5	27.2	24.8	23.6	*21.3*	17.7	13.0	8.3	3.5
95°	24.8	24.8	23.6	22.4	20.1	18.9	*16.5*	14.2	10.6	7.1	3.5
97.5°	18.9	18.9	17.7	16.5	15.4	13.0	*13.0*	10.6	7.1	4.7	2.4
100°	14.2	14.2	13.0	11.8	10.6	9.4	*9.4*	7.1	4.7	3.5	2.4
102.5°	9.4	9.4	9.4	8.3	7.1	7.1	*5.9*	4.7	3.5	2.4	2.4
105°	5.9	5.9	5.9	5.9	4.7	3.5	*3.5*	2.4	2.4	2.4	2.4
107.5°	3.5	3.5	3.5	3.5	2.4	2.4	*2.4*	2.4	2.4	2.4	2.4
110°	2.4	2.4	2.4	1.2	1.2	1.2	*1.2*	1.2	1.2	2.4	1.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	41°	45°	55°	65°	75°	85°
112.5°	1.2	1.2	1.2	1.2	1.2	1.2	*1.2*	1.2	1.2	1.2	1.2
115°	0.0	0.0	1.2	1.2	1.2	1.2	*1.2*	1.2	1.2	1.2	1.2
117.5°	0.0	0.0	0.0	0.0	0.0	1.2	*1.2*	1.2	1.2	1.2	1.2
120°	0.0	0.0	0.0	0.0	0.0	1.2	*1.2*	1.2	1.2	1.2	1.2
122.5°	0.0	0.0	0.0	0.0	0.0	1.2	*1.2*	1.2	1.2	1.2	1.2
125°	0.0	0.0	0.0	1.2	0.0	1.2	*1.2*	1.2	1.2	1.2	1.2
127.5°	0.0	0.0	0.0	1.2	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
130°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
135°	0.0	0.0	0.0	0.0	0.0	0.0	*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°	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2
142.5°	1.2	1.2	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
145°	1.2	1.2	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
147.5°	1.2	1.2	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
150°	0.0	0.0	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	*1.2*	1.2	1.2	1.2	1.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
160°	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	1.2	1.2	1.2	1.2
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
165°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
170°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	1.2	1.2	1.2	1.2
175°	0.0	0.0	0.0	0.0	0.0	1.2	*1.2*	1.2	1.2	1.2	1.2
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	*1.2*	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°	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3	152.3
2.5°	154.7	153.5	151.1	150.0	147.6	147.6	146.4	145.2	145.2	145.2	145.2
5°	158.2	157.0	154.7	152.3	150.0	147.6	146.4	145.2	145.2	145.2	144.1
7.5°	165.3	163.0	159.4	155.9	152.3	150.0	148.8	147.6	146.4	146.4	146.4
10°	173.6	171.2	165.3	161.8	157.0	153.5	152.3	151.1	150.0	150.0	150.0
12.5°	184.2	180.7	173.6	167.7	163.0	159.4	157.0	155.9	155.9	154.7	155.9
15°	197.2	192.5	183.0	175.9	170.0	166.5	164.1	163.0	163.0	163.0	161.8
17.5°	211.4	205.5	193.7	185.4	178.3	174.8	172.4	171.2	171.2	171.2	171.2
20°	227.9	219.6	206.6	196.0	188.9	184.2	181.8	181.8	180.7	181.8	181.8
22.5°	245.6	236.2	219.6	207.8	198.4	193.7	191.3	191.3	191.3	192.5	193.7
25°	266.9	255.1	235.0	219.6	209.0	204.3	201.9	203.1	203.1	204.3	204.3
27.5°	295.2	277.5	252.7	233.8	222.0	216.1	213.7	214.9	216.1	216.1	216.1
30°	327.1	305.8	271.6	251.5	237.3	230.3	227.9	229.1	230.3	232.6	231.4
32.5°	366.1	340.1	299.9	271.6	256.2	248.0	245.6	244.4	246.8	249.2	249.2
35°	413.3	380.2	333.0	299.9	277.5	266.9	264.5	263.3	264.5	266.9	269.2
37.5°	464.1	423.9	366.1	331.8	307.0	295.2	289.3	284.6	285.8	286.9	290.5
40°	521.9	472.3	403.8	362.5	340.1	325.9	317.6	310.6	312.9	312.9	314.1
42.5°	595.1	532.5	451.1	399.1	375.5	360.1	347.2	338.9	334.2	335.4	330.6
45°	690.8	612.8	510.1	451.1	418.0	394.4	379.0	362.5	350.7	353.1	346.0
47.5°	769.9	676.6	565.6	500.7	465.2	435.7	403.8	380.2	363.7	361.3	356.6
50°	866.7	754.5	629.4	555.0	517.2	472.3	434.5	394.4	367.2	360.1	361.3
52.5°	1029.7	891.5	720.3	628.2	562.1	508.9	451.1	395.6	359.0	348.3	351.9
55°	1088.7	937.6	767.5	688.4	623.5	540.8	458.2	382.6	335.4	325.9	327.1
57.5°	1101.7	937.6	771.1	707.3	653.0	566.8	454.6	353.1	290.5	282.2	281.0
60°	1108.8	931.7	758.1	693.1	634.1	542.0	408.6	284.6	223.2	217.3	213.7
62.5°	1174.9	981.3	771.1	682.5	598.7	475.9	310.6	181.8	124.0	122.8	120.4
65°	1195.0	999.0	787.6	689.6	559.7	369.6	184.2	61.4	13.0	14.2	11.8
67.5°	*1145.4*	*958.8*	*764.0*	*679.0*	*547.9*	*360.1*	*177.1*	*52.0*	*0.0*	*0.0*	*0.0*
70°	1076.9	901.0	722.7	642.4	523.1	346.0	173.6	52.0	0.0	0.0	0.0
72.5°	968.3	818.3	656.5	592.8	480.6	317.6	161.8	49.6	0.0	0.0	0.0
75°	840.7	712.0	575.1	525.5	426.3	278.7	145.2	44.9	0.0	0.0	0.0
77.5°	703.8	594.0	480.6	442.8	360.1	237.3	122.8	37.8	0.0	0.0	0.0
80°	552.6	470.0	379.0	353.1	284.6	188.9	98.0	29.5	0.0	0.0	0.0
82.5°	397.9	341.3	279.9	258.6	209.0	137.0	70.8	20.1	0.0	0.0	0.0
85°	245.6	213.7	180.7	167.7	132.3	85.0	42.5	10.6	0.0	0.0	0.0
87.5°	73.2	70.8	63.8	62.6	44.9	26.0	9.4	1.2	0.0	0.0	0.0
90°	1.2	1.2	1.2	1.2	1.2	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	0.0
95°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.2	1.2	1.2	1.2	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

Scaled Data Report

REPORT NUMBER: P821310
CATALOG NUMBER: TT-D4-740-24VDC-DL-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	1.2	1.2	1.2	1.2	0.0	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	0.0	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	0.0	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	0.0	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

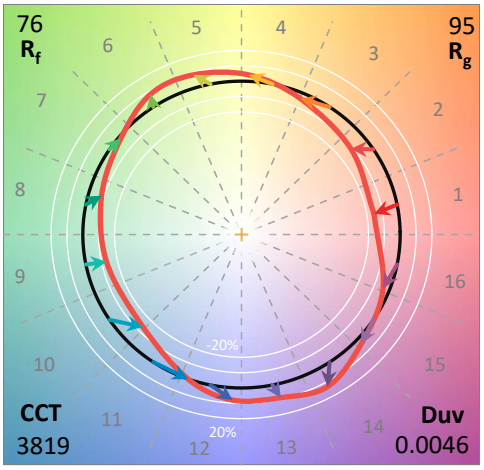
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

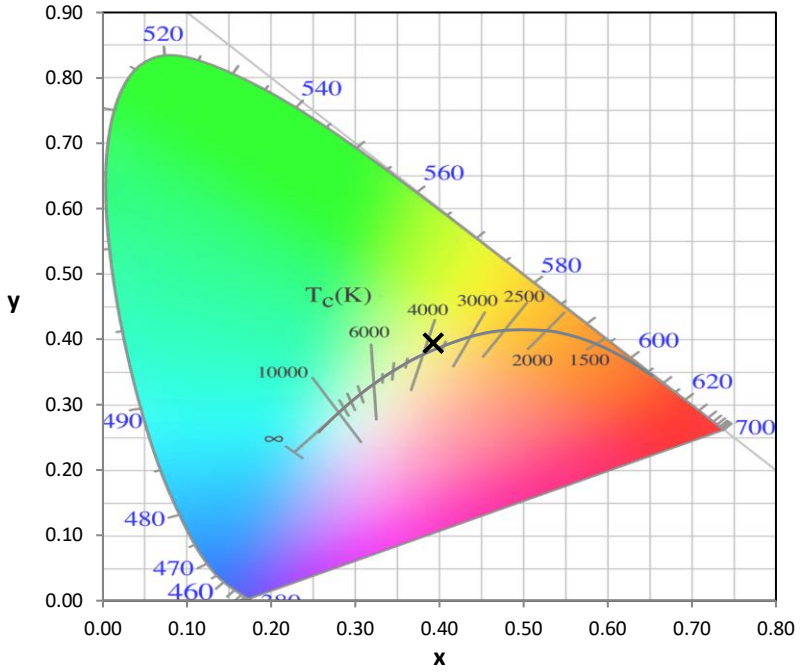
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-5

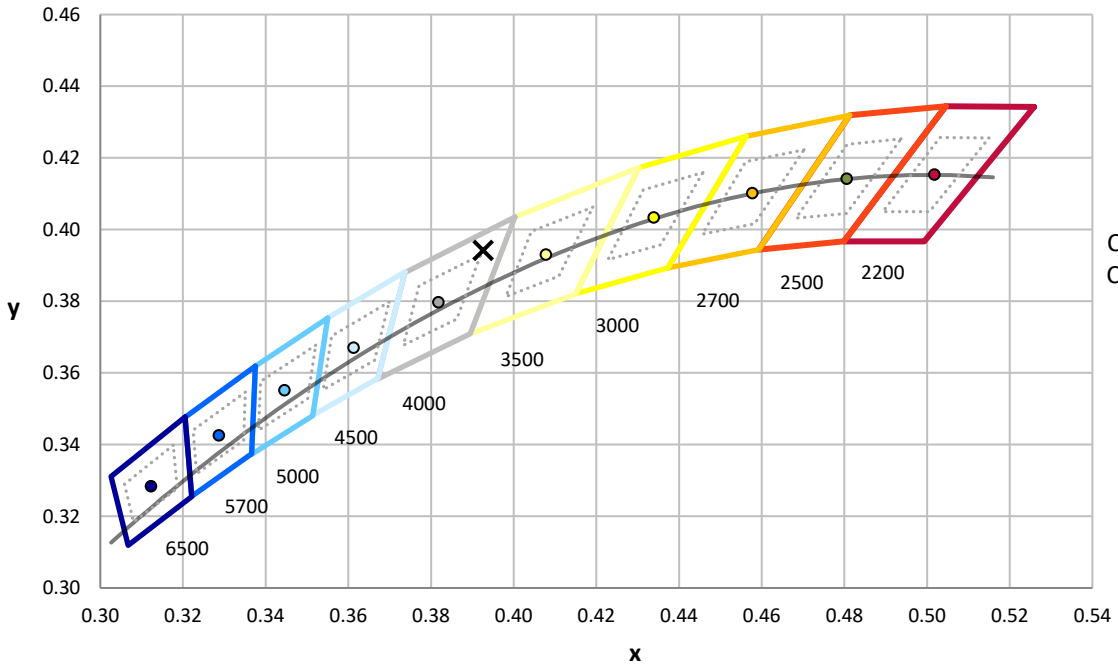
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

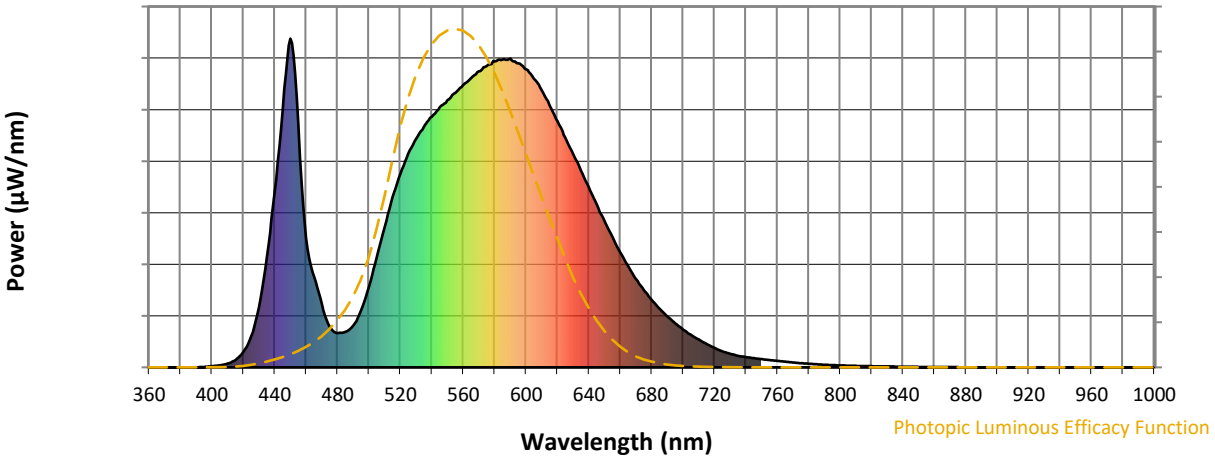


CCT = 3819K
CIE x = 0.3926
CIE y = 0.3942
Duv = 0.0046

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-5

Photopic Flux vs. Wavelength

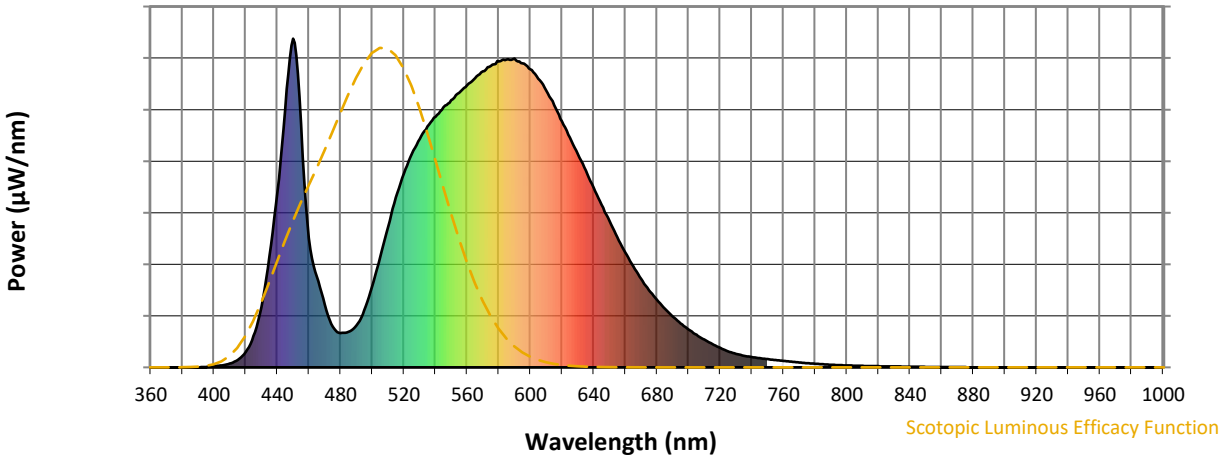


Photopic Lumens: NR

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

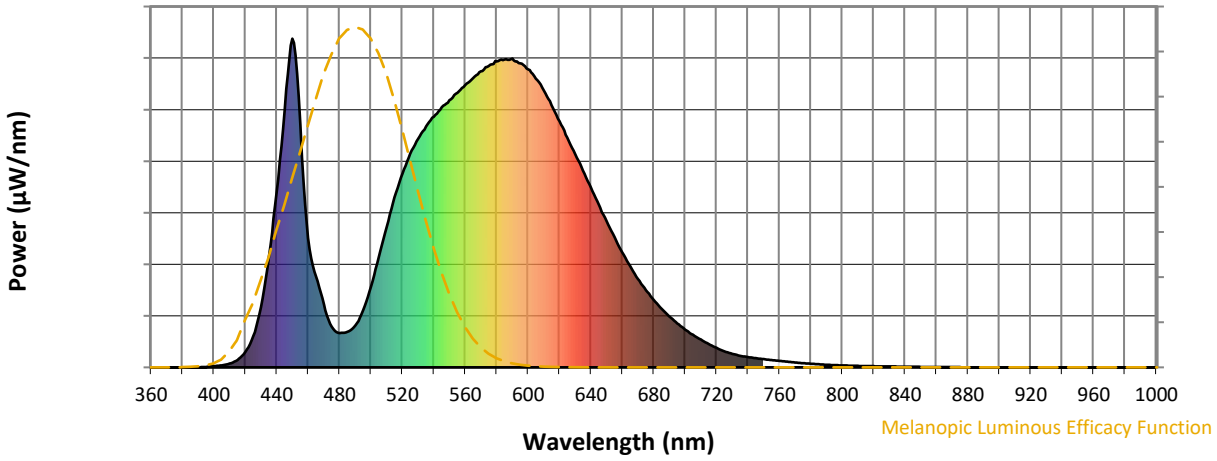


Scotopic Lumens: NR **S/P: 1.45**

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			

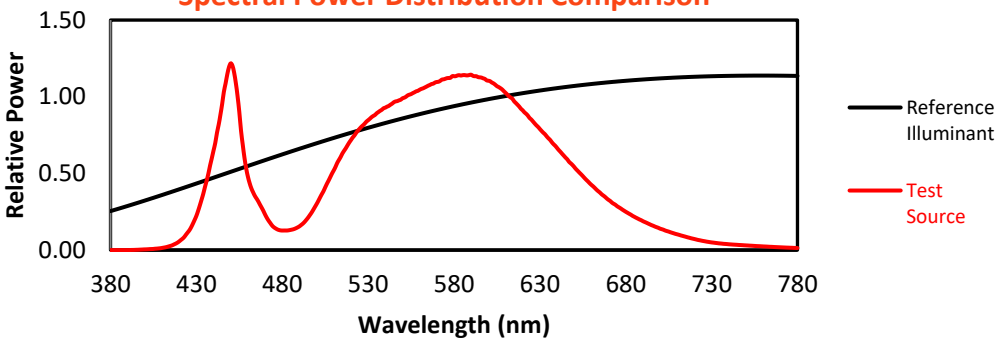
REPORT NUMBER: SP1-2407-176-5

TM-30-18

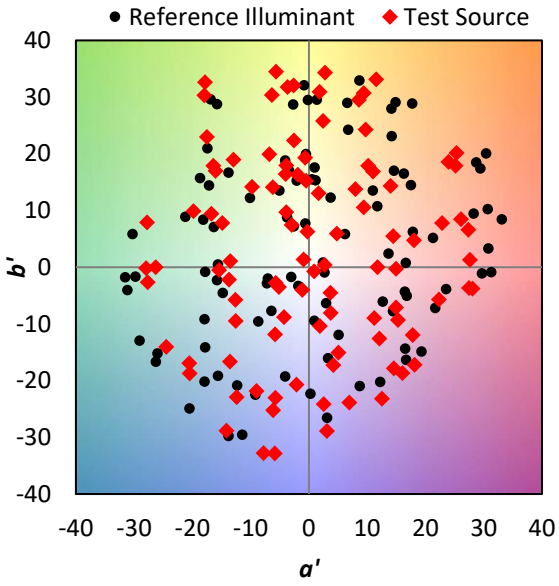
Summary

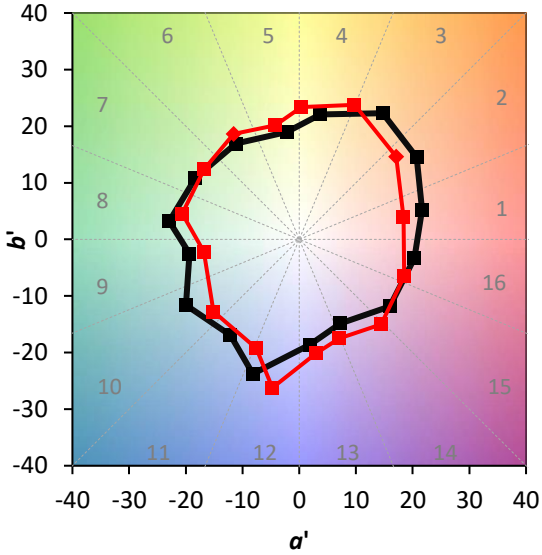
R_f = 75.6
R_g = 94.8
CIE R_a = 72.9
R_9 = -21.5

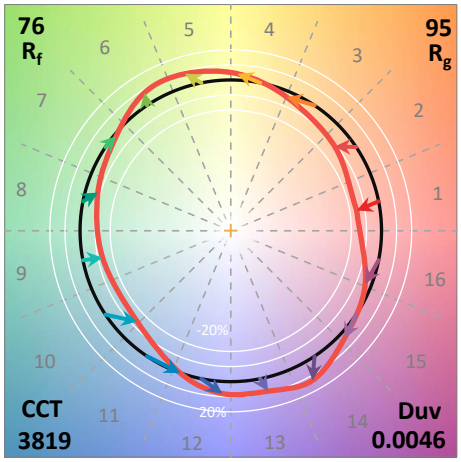
Spectral Power Distribution Comparison

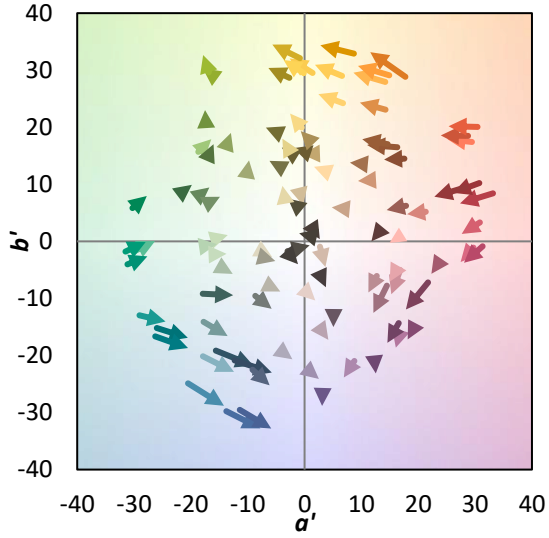


Color Vector Graphics







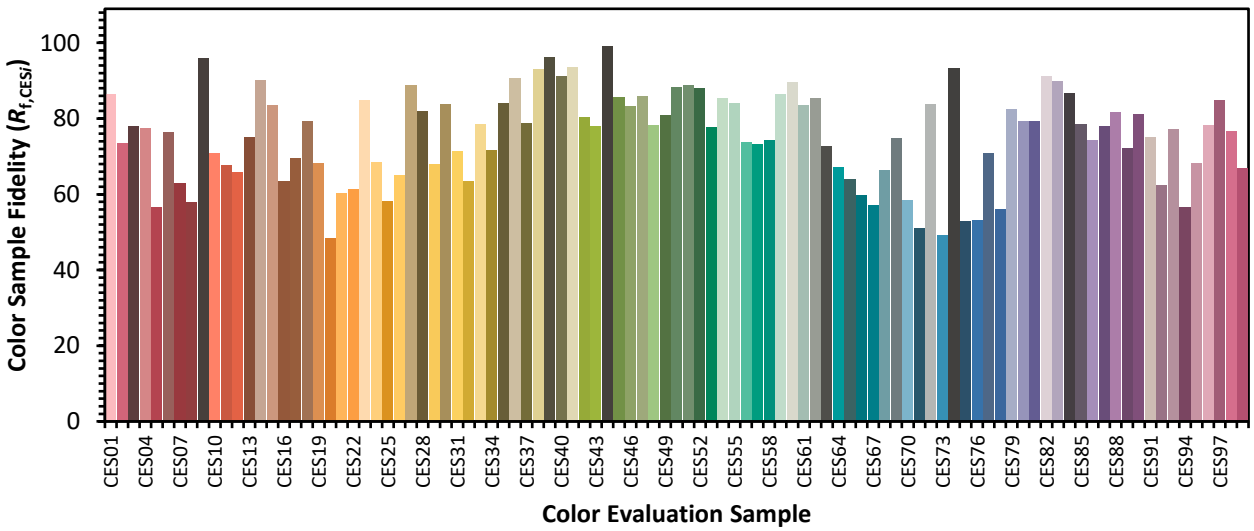


REPORT NUMBER: SP1-2407-176-5

TM-30-18

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

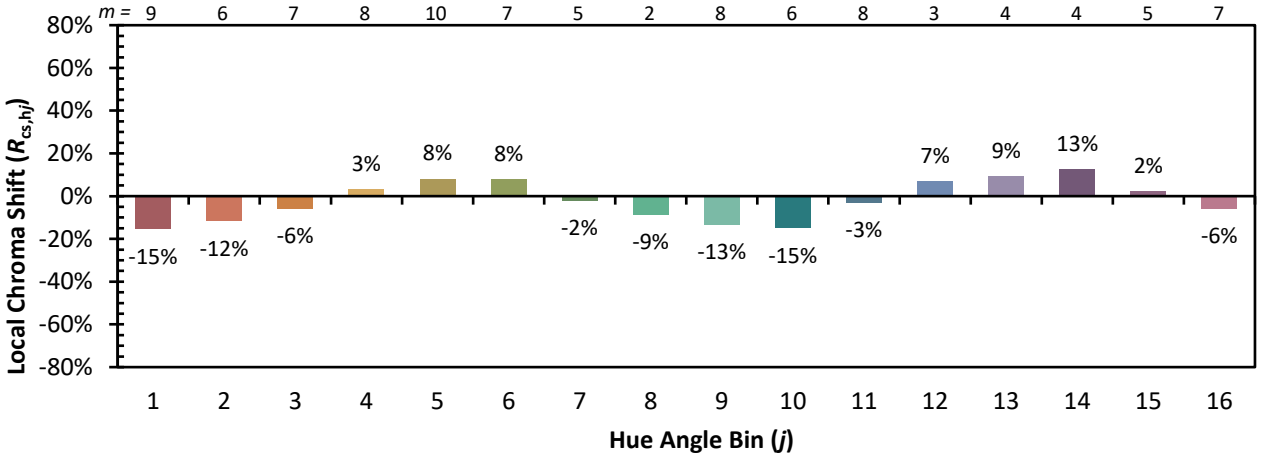
CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82 = 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	

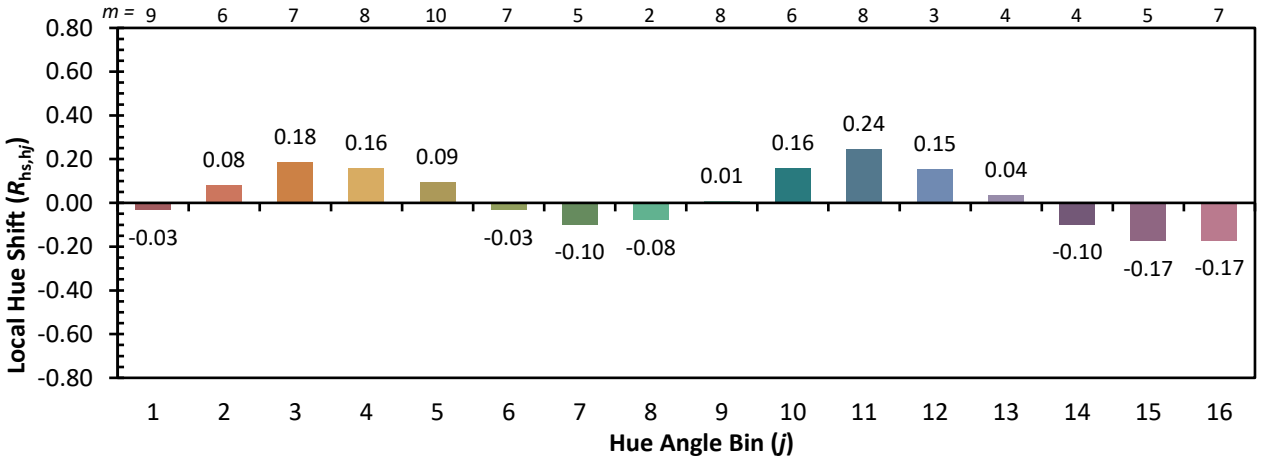


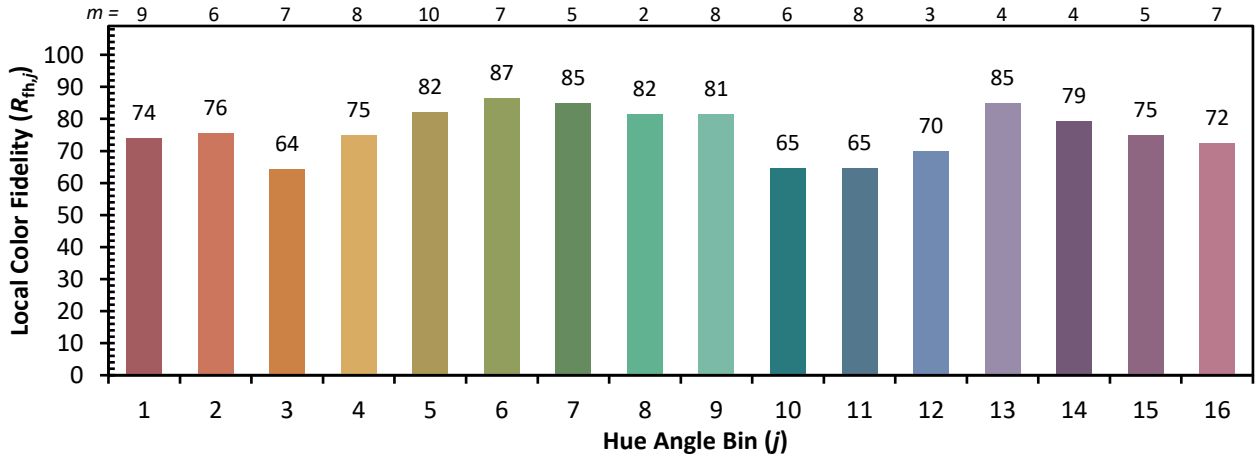
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Color Rendition by Hue-Angle Bin



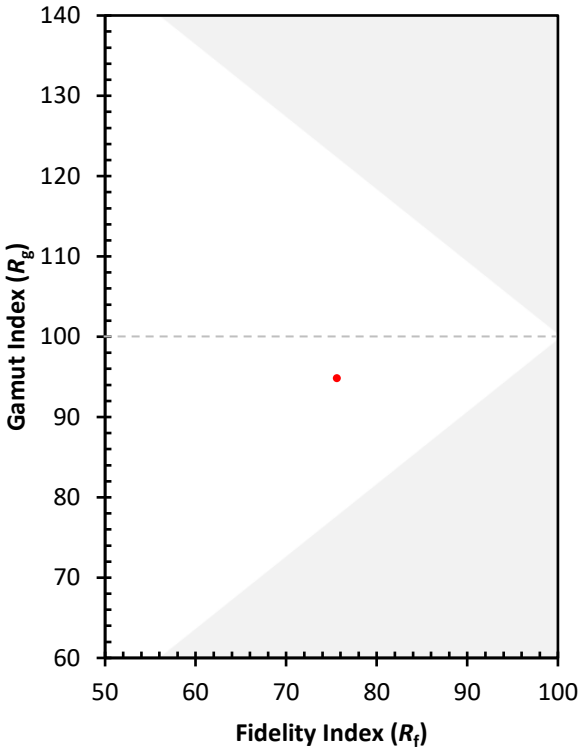


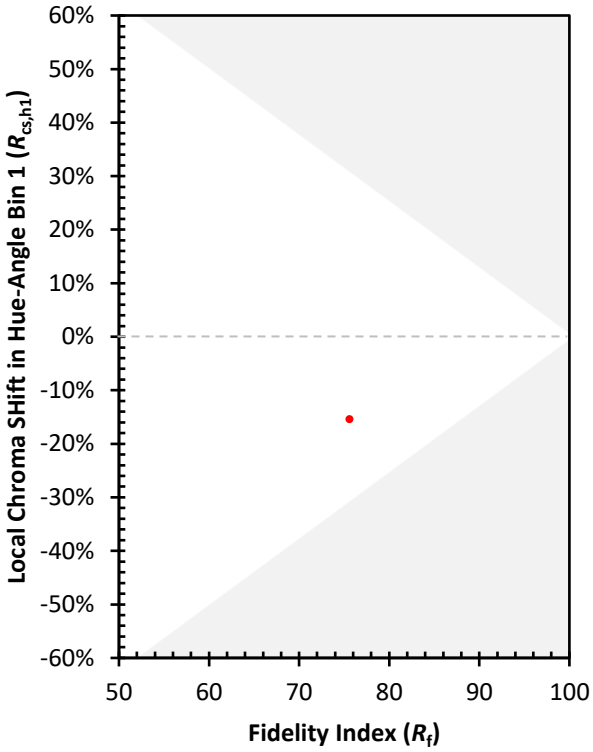


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Measure Comparisons





(END OF REPORT)