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: P821577

Luminaire Tested: **TT-D2-750-12VDC-DL-UPL**

Issue Date: 7/23/2020

Report Generated By 670245763

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821577
	REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-3) AND
Test Lab:	INNOVATION CENTER
Issue Date:	7/23/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D2-750-12VDC-DL-UPL
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT WITH UPLIGHT
	5000K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5379.3 lumens
Efficiency:	N/A
Efficacy:	141.6 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U4 - G3

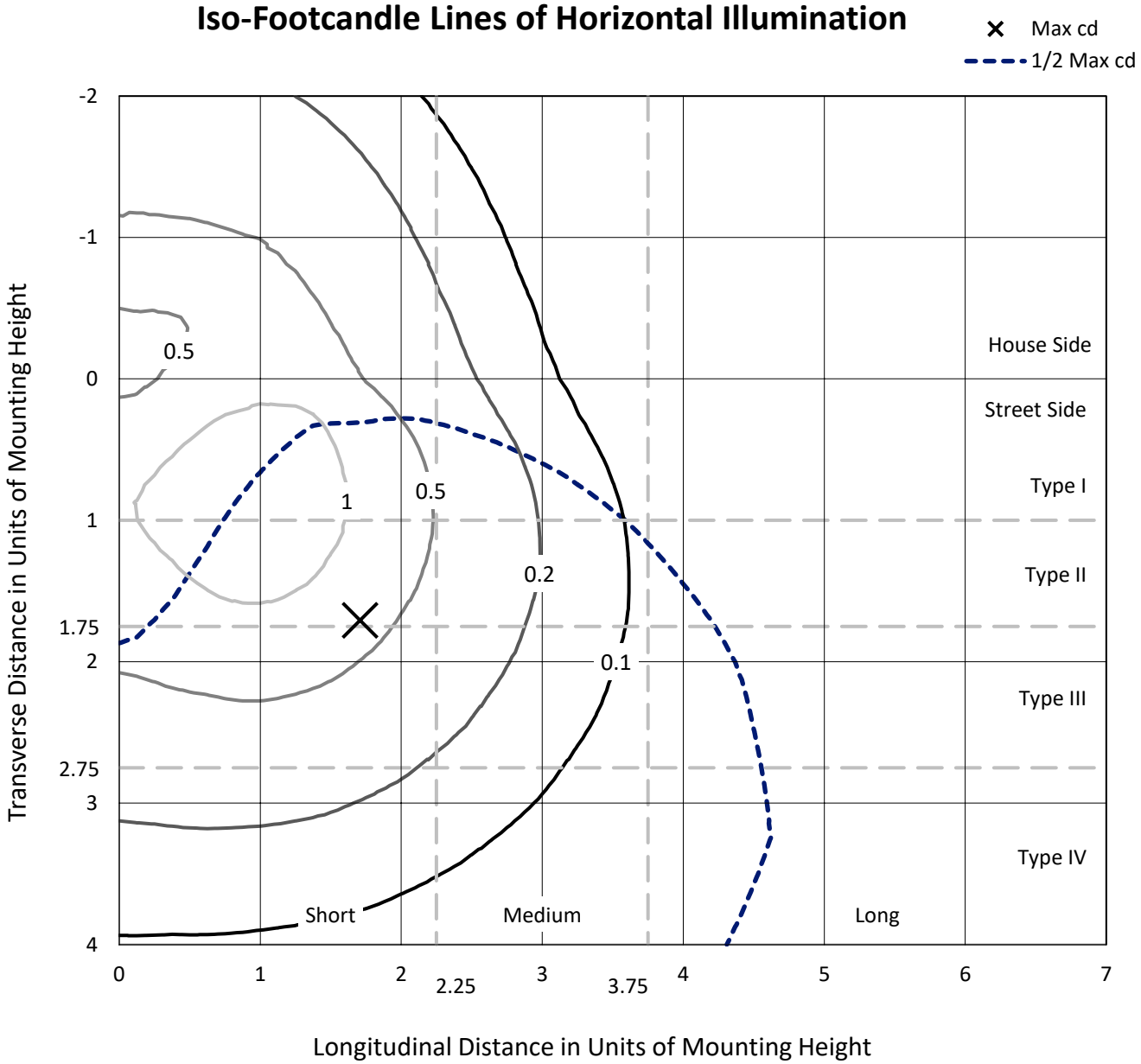
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



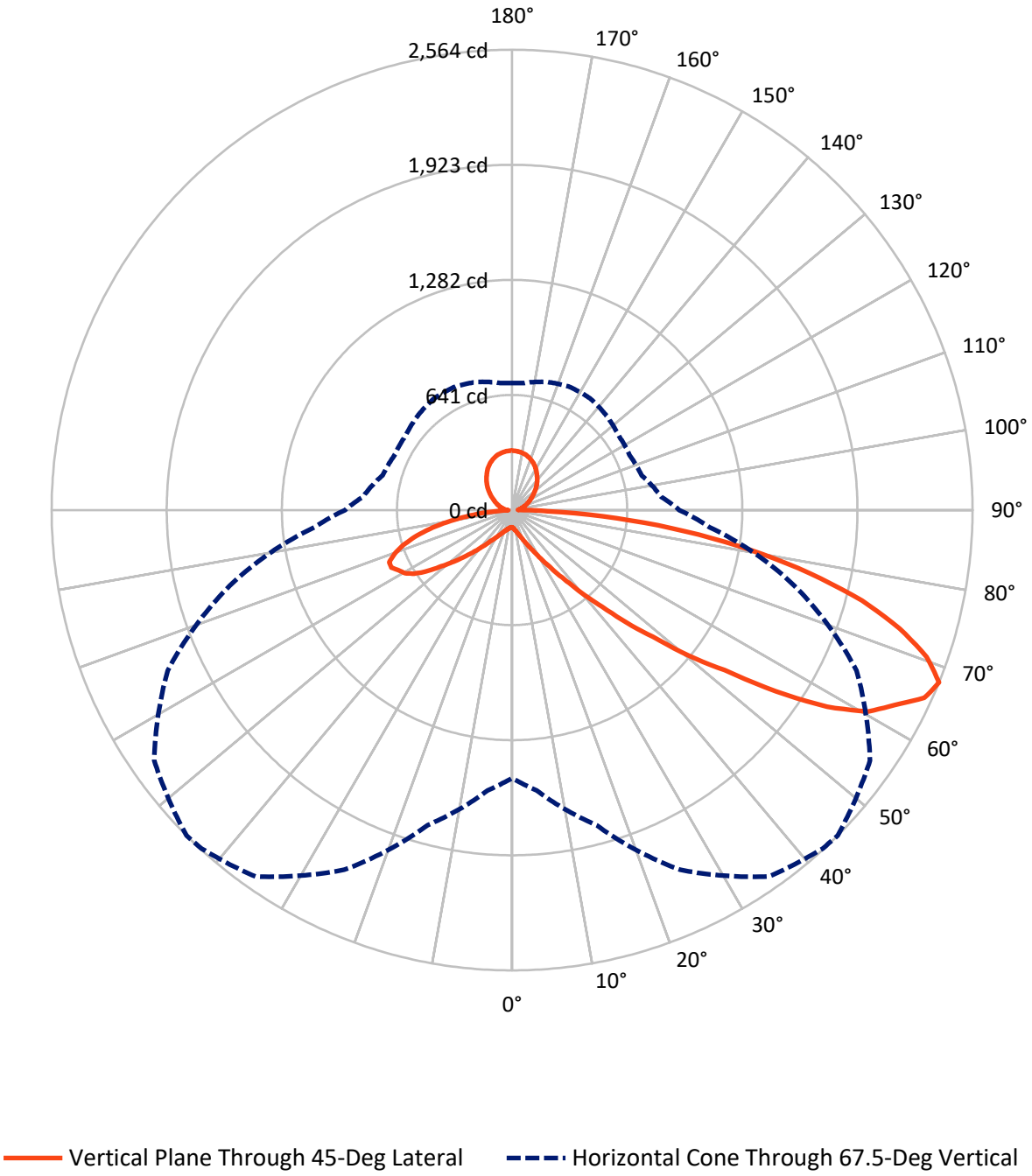
Based on 15 foot mounting height. Maximum calculated value = 1.5 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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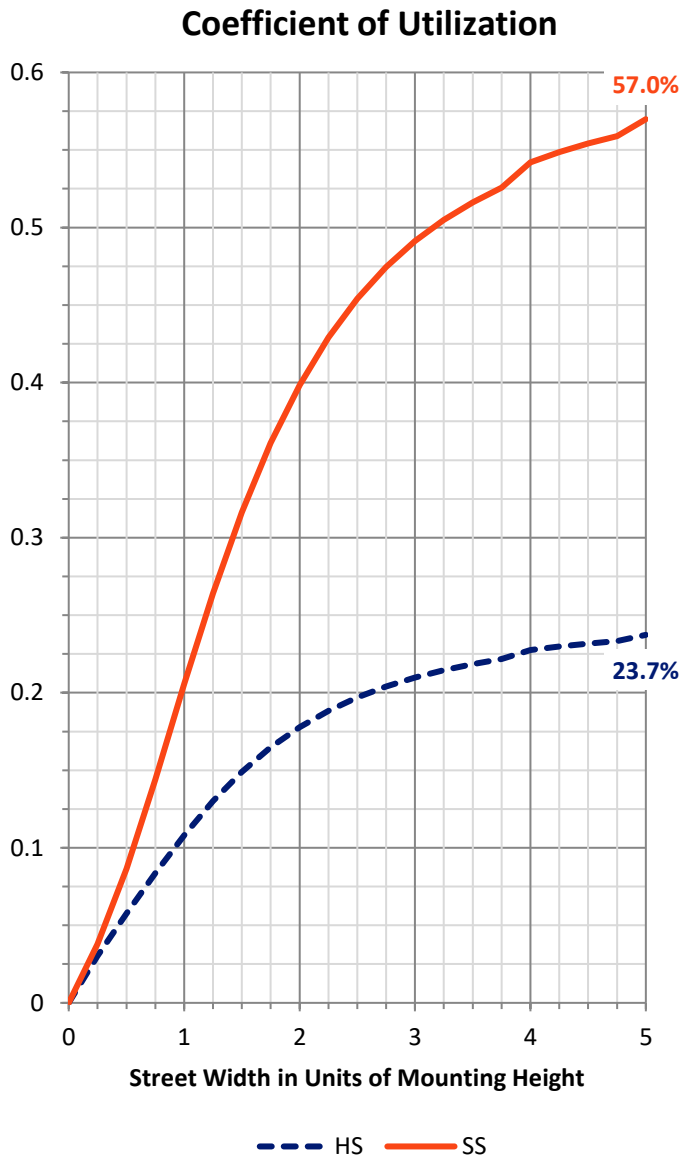
REPORT NUMBER: P821577
CATALOG NUMBER: TT-D2-750-12VDC-DL-UPL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1306.2	450.0	1756.2
	% Fixture	24.3	8.4	32.6
Street Side	Lumens	3173.1	450.0	3623.1
	% Fixture	59.0	8.4	67.4
Total	Lumens	4479.3	900.0	5379.3
	% Fixture	83.3	16.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.0	0.2
10°-20°	37.1	0.7
20°-30°	87.8	1.6
30°-40°	198.7	3.7
40°-50°	442.9	8.2
50°-60°	890.5	16.6
60°-70°	1307.9	24.3
70°-80°	1150.0	21.4
80°-90°	354.4	6.6
90°-100°	46.1	0.9
100°-110°	71.4	1.3
110°-120°	99.4	1.8
120°-130°	128.8	2.4
130°-140°	150.0	2.8
140°-150°	152.1	2.8
150°-160°	131.9	2.5
160°-170°	89.0	1.7
170°-180°	31.3	0.6
0°-90°	4479.3	83.3
0°-180°	5379.3	100.0



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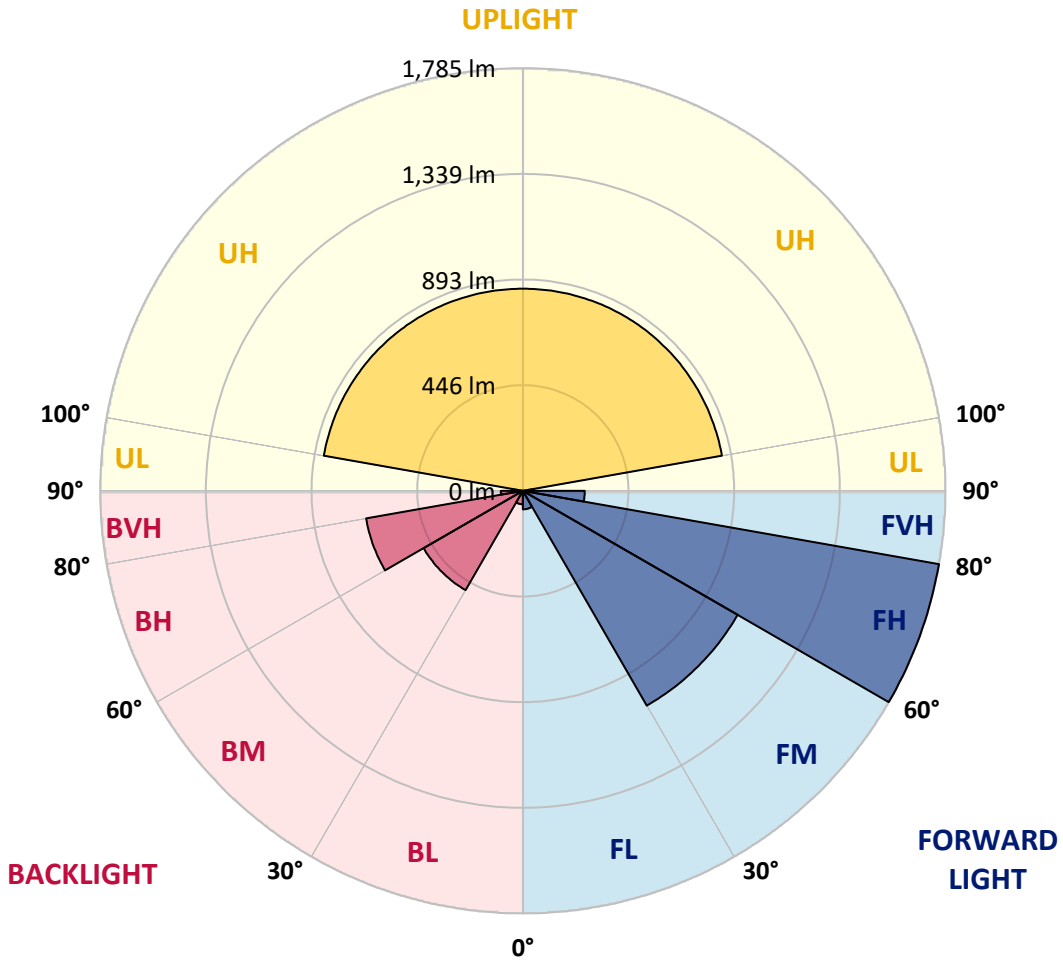
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	78.1	1.5			
FM	(30°-60°)	1047.9	19.5			
FH	(60°-80°)	1785.4	33.2			G1/1800
FVH	(80°-90°)	261.6	4.9			G3/500
BL	(0°-30°)	56.8	1.1	B0/110		
BM	(30°-60°)	484.1	9.0	B1/1000		
BH	(60°-80°)	672.5	12.5	B2/1000		G2/1000
BVH	(80°-90°)	92.8	1.7			G1/100
UL	(90°-100°)	46.1	0.9		U2/50	
UH	(100°-180°)	853.9	15.9		U4/1000	

BUG Rating: B2-U4-G3
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42.5°	45°	55°	65°	75°	85°
0°	97.1	97.1	97.1	97.1	97.1	97.1	*97.1*	97.1	97.1	97.1	97.1
2.5°	101.3	100.4	100.4	100.4	99.6	99.6	*99.6*	99.6	98.7	98.7	98.7
5°	107.1	106.3	107.1	105.4	104.6	104.6	*103.8*	103.8	102.9	102.1	101.3
7.5°	115.5	114.6	114.6	113.0	112.1	111.3	*111.3*	109.6	108.8	107.1	105.4
10°	124.7	124.7	123.8	123.0	121.3	119.7	*119.7*	117.1	116.3	113.8	111.3
12.5°	135.6	135.6	135.6	133.9	132.2	131.4	*129.7*	128.0	125.5	121.3	118.8
15°	148.9	148.9	148.9	147.3	145.6	143.9	*143.1*	139.7	135.6	131.4	126.4
17.5°	165.7	164.0	164.0	162.3	160.7	159.8	*158.2*	154.8	148.9	143.9	137.2
20°	184.1	183.3	182.4	182.4	180.7	179.1	*178.2*	173.2	166.5	157.3	148.9
22.5°	205.0	204.2	204.2	205.8	205.0	202.5	*202.5*	195.0	185.8	174.9	162.3
25°	231.0	230.1	231.8	235.1	235.1	233.5	*231.0*	223.4	210.0	195.0	179.9
27.5°	259.4	258.6	261.9	267.8	269.4	266.9	*265.3*	256.9	241.8	221.7	200.0
30°	293.7	294.5	303.8	310.4	314.6	313.0	*312.1*	302.9	278.6	255.2	226.8
32.5°	335.6	333.0	344.8	355.6	363.2	367.3	*364.8*	354.0	333.0	296.2	260.2
35°	379.9	380.7	395.0	410.9	428.4	430.1	*435.1*	424.2	395.8	352.3	302.1
37.5°	437.6	430.9	449.4	479.5	500.4	518.8	*515.5*	508.8	475.3	417.6	348.9
40°	489.5	487.8	513.8	555.6	594.1	620.9	*624.2*	615.9	571.5	489.5	399.1
42.5°	548.9	554.0	589.9	647.7	706.2	744.7	*735.5*	731.3	679.5	574.9	467.8
45°	609.2	625.9	671.9	755.6	824.2	879.5	*895.4*	881.1	817.5	709.6	554.8
47.5°	682.0	704.6	761.5	874.4	986.6	1051.0	*1054.3*	1097.0	1000.8	839.3	645.2
50°	778.2	788.2	867.7	1005.8	1159.8	1250.2	*1276.1*	1276.9	1180.7	969.8	747.2
52.5°	872.8	880.3	984.9	1163.1	1372.3	1475.2	*1481.1*	1513.7	1382.4	1180.7	893.7
55°	986.6	983.2	1127.1	1341.4	1588.2	1738.0	*1781.5*	1825.9	1658.5	1347.2	977.4
57.5°	1097.0	1092.0	1265.2	1546.4	1883.6	2032.5	*2068.5*	2036.7	1788.2	1416.7	1018.4
60°	1199.1	1216.7	1427.6	1773.1	2112.0	2254.3	*2278.6*	2192.4	1871.9	1470.2	1044.3
62.5°	1305.4	1340.5	1595.7	1962.3	2286.9	2389.0	*2390.7*	2289.4	2011.6	1574.0	1128.8
65°	1405.0	1461.0	1726.3	2123.8	2409.1	2511.2	*2522.9*	2431.7	2148.9	1664.4	1143.0
67.5°	*1492.8*	*1567.3*	*1816.7*	*2210.8*	*2491.9*	*2558.0*	*2563.9*	*2432.5*	*2116.2*	*1627.5*	*1103.7*
70°	1563.9	1624.2	1872.7	2212.5	2434.2	2452.6	*2448.4*	2308.7	2025.9	1554.7	1037.6
72.5°	1591.6	1640.9	1845.9	2108.7	2264.3	2260.2	*2256.8*	2127.9	1876.9	1433.4	942.2
75°	1552.2	1566.5	1699.5	1886.9	1985.7	2009.1	*2012.5*	1896.2	1646.8	1253.5	808.3
77.5°	1389.9	1382.4	1484.5	1608.3	1682.8	1699.5	*1696.2*	1599.1	1380.7	1041.8	677.8
80°	1102.0	1117.9	1181.5	1263.5	1338.0	1356.4	*1344.7*	1271.1	1074.4	812.5	520.5
82.5°	770.7	789.9	843.5	905.4	961.5	961.5	*972.3*	901.2	761.5	583.2	364.0
85°	415.9	405.0	463.6	533.9	574.0	581.6	*585.7*	562.3	471.1	352.3	215.9
87.5°	68.6	73.6	91.2	139.7	159.0	184.1	*195.8*	153.1	92.9	59.4	43.5
90°	32.5	31.5	31.5	31.5	31.5	31.5	*31.5*	31.5	31.5	31.5	31.5
92.5°	37.6	37.1	37.1	36.6	36.6	36.6	*36.6*	36.6	36.6	36.6	36.6
95°	42.7	42.7	42.7	41.7	41.7	41.7	*41.7*	41.7	41.7	41.7	41.7
97.5°	48.3	48.3	48.3	47.8	47.8	47.8	*47.8*	47.8	47.8	47.8	47.8
100°	53.9	53.9	53.9	53.9	53.9	53.9	*53.9*	53.9	53.9	53.9	53.9
102.5°	60.5	60.5	60.5	60.5	60.5	60.5	*60.5*	60.5	61.0	60.5	60.5
105°	67.1	67.1	67.1	67.1	67.1	67.1	*67.1*	67.1	68.1	67.1	67.1
107.5°	74.2	74.2	74.7	74.7	74.7	74.7	*74.7*	74.7	75.2	74.7	74.7
110°	81.3	81.3	82.3	82.3	82.3	82.3	*82.3*	82.3	82.3	82.3	82.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	42.5°	45°	55°	65°	75°	85°
112.5°	89.9	89.9	90.9	90.9	90.9	90.9	*90.9*	91.4	91.4	90.9	90.9
115°	98.6	98.6	99.6	99.6	99.6	99.6	*99.6*	100.6	100.6	99.6	99.6
117.5°	108.8	108.8	109.2	109.8	109.8	109.8	*109.8*	110.8	110.8	109.8	109.8
120°	118.9	118.9	118.9	119.9	119.9	119.9	*119.9*	121.0	121.0	119.9	119.9
122.5°	130.6	130.6	131.1	131.6	131.6	131.6	*131.6*	132.6	132.6	132.1	132.1
125°	142.3	142.3	143.3	143.3	143.3	143.3	*143.3*	144.3	144.3	144.3	144.3
127.5°	155.0	155.0	156.0	156.0	156.0	156.0	*156.0*	157.0	157.0	157.0	157.0
130°	167.7	167.7	168.7	168.7	168.7	168.7	*168.7*	169.7	169.7	169.7	169.7
132.5°	180.9	180.9	181.4	181.4	181.4	181.8	*181.9*	182.4	182.4	182.4	182.4
135°	194.1	194.1	194.1	194.1	194.1	194.8	*195.1*	195.1	195.1	195.1	195.1
137.5°	206.8	206.3	206.8	206.3	206.8	207.2	*207.3*	207.3	207.3	207.3	207.3
140°	219.5	218.5	219.5	218.5	219.5	219.5	*219.5*	219.5	219.5	219.5	219.5
142.5°	231.2	230.7	231.2	230.2	231.2	231.2	*231.2*	231.2	231.2	231.2	231.2
145°	242.9	242.9	242.9	241.9	242.9	242.9	*242.9*	242.9	242.9	242.9	242.9
147.5°	255.1	254.6	255.1	254.1	255.1	255.1	*255.1*	255.1	255.1	255.1	255.1
150°	267.3	266.3	267.3	266.3	267.3	267.3	*267.3*	267.3	267.3	267.3	267.3
152.5°	277.0	276.5	277.5	276.5	277.0	277.0	*277.0*	277.5	277.0	277.0	277.0
155°	286.6	286.6	287.6	286.6	286.6	286.6	*286.6*	287.6	286.6	286.6	286.6
157.5°	294.8	294.8	295.8	294.8	294.8	294.8	*294.8*	295.8	294.8	294.8	294.8
160°	302.9	302.9	303.9	302.9	302.9	302.9	*302.9*	303.9	302.9	302.9	302.9
162.5°	309.5	309.5	310.5	309.5	309.5	309.5	*309.5*	310.5	309.5	309.5	309.5
165°	316.1	316.1	317.1	316.1	316.1	316.1	*316.1*	317.1	316.1	316.1	316.1
167.5°	320.2	320.2	321.2	320.2	320.2	320.2	*320.2*	321.2	320.2	320.2	320.2
170°	324.2	324.2	325.2	324.2	324.2	324.2	*324.2*	325.2	324.2	324.2	324.2
172.5°	326.8	326.8	327.8	326.8	327.2	326.9	*326.8*	327.8	326.8	326.8	326.8
175°	329.3	329.3	330.3	329.3	330.3	329.6	*329.3*	330.3	329.3	329.3	329.3
177.5°	330.3	330.3	330.8	330.3	330.8	330.4	*330.3*	330.8	330.3	330.3	330.3
180°	331.3	331.3	331.3	331.3	331.3	331.3	*331.3*	331.3	331.3	331.3	331.3

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1
2.5°	98.7	97.9	97.1	96.2	96.2	95.4	95.4	95.4	96.2	96.2	96.2
5°	101.3	100.4	99.6	98.7	97.1	97.1	97.1	97.1	97.1	97.1	97.1
7.5°	105.4	103.8	102.9	101.3	99.6	99.6	98.7	98.7	98.7	99.6	98.7
10°	110.5	108.8	107.1	104.6	103.8	102.9	102.1	102.1	102.9	102.9	102.1
12.5°	116.3	115.5	112.1	109.6	107.9	107.1	106.3	107.1	106.3	107.1	107.1
15°	124.7	122.2	118.0	115.5	113.0	112.1	111.3	112.1	112.1	113.0	112.1
17.5°	133.9	130.5	126.4	122.2	118.8	118.0	118.0	118.0	118.8	119.7	118.8
20°	144.8	140.6	134.7	129.7	126.4	125.5	125.5	126.4	127.2	128.0	128.0
22.5°	155.6	152.3	143.9	137.2	135.6	134.7	133.9	135.6	137.2	138.1	138.9
25°	172.4	165.7	155.6	148.1	144.8	144.8	145.6	147.3	148.1	149.8	148.9
27.5°	189.9	182.4	169.9	159.8	157.3	156.5	158.2	159.8	163.2	163.2	162.3
30°	214.2	201.7	185.8	176.6	169.9	170.7	173.2	175.7	179.1	180.7	180.7
32.5°	241.8	228.4	206.7	192.5	189.1	189.9	190.8	195.0	198.3	201.7	199.2
35°	277.8	261.1	234.3	218.4	210.0	209.2	212.5	217.6	220.9	222.6	222.6
37.5°	317.1	295.4	261.9	248.5	238.5	237.6	238.5	242.7	246.9	248.5	251.9
40°	364.8	338.1	298.7	277.0	269.4	267.8	271.1	277.0	277.0	279.5	280.3
42.5°	423.4	389.1	345.6	317.1	307.9	307.9	307.1	312.1	312.1	312.1	310.4
45°	497.9	459.4	402.5	373.2	357.3	348.9	351.4	348.1	347.3	349.8	342.2
47.5°	569.8	521.3	454.4	422.6	406.7	401.7	392.5	389.9	385.8	385.8	374.9
50°	653.5	593.3	528.8	483.7	468.6	454.4	446.8	435.1	422.6	420.1	415.9
52.5°	793.3	718.0	616.7	568.2	529.7	515.5	497.9	482.8	467.8	456.0	462.7
55°	850.2	773.2	677.0	630.1	603.3	589.9	557.3	537.2	514.6	497.9	507.1
57.5°	878.6	794.9	705.4	670.3	662.7	650.2	625.9	591.6	565.7	544.7	546.4
60°	894.5	806.7	720.5	688.7	684.5	692.9	680.3	656.9	616.7	595.8	593.3
62.5°	955.6	863.6	763.1	718.0	708.8	714.6	718.0	703.7	670.3	642.6	635.1
65°	968.2	870.3	771.5	742.2	743.1	744.7	747.2	732.2	715.4	681.1	674.4
67.5°	*930.5*	*834.3*	*746.4*	*722.1*	*723.8*	*743.1*	*758.1*	*757.3*	*738.9*	*709.6*	*707.1*
70°	873.6	779.9	698.7	677.0	681.1	698.7	731.3	748.1	744.7	725.5	729.7
72.5°	784.9	701.2	630.1	613.4	623.4	640.1	671.1	701.2	718.8	723.0	732.2
75°	681.1	614.2	547.3	537.2	544.7	564.0	592.4	627.6	666.1	687.0	692.9
77.5°	562.3	501.2	451.9	445.2	456.0	473.6	502.1	529.7	573.2	610.0	618.4
80°	440.1	387.4	352.3	346.4	353.1	368.2	389.9	412.5	454.4	482.8	487.0
82.5°	305.4	273.6	251.0	247.7	251.9	257.7	275.3	296.2	319.7	342.2	344.8
85°	177.4	157.3	151.5	146.4	155.6	155.6	159.8	171.5	183.3	184.9	189.9
87.5°	32.6	31.0	31.8	23.4	29.3	20.9	20.9	26.8	20.1	23.4	19.2
90°	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	32.5
92.5°	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	37.1	37.1	37.6
95°	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	42.7	42.7	42.7
97.5°	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	48.3	48.3	48.3
100°	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
102.5°	60.5	60.5	60.5	61.0	60.5	60.5	60.5	60.5	60.5	60.5	60.5
105°	67.1	67.1	67.1	68.1	67.1	67.1	67.1	67.1	67.1	67.1	67.1
107.5°	74.7	74.7	74.7	75.2	74.7	74.7	74.7	74.7	74.7	74.2	74.2
110°	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	81.3	81.3

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

Scaled Data Report

REPORT NUMBER: P821577
CATALOG NUMBER: TT-D2-750-12VDC-DL-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	90.9	90.9	90.9	91.4	91.4	90.9	90.9	90.9	90.9	89.9	89.9
115°	99.6	99.6	99.6	100.6	100.6	99.6	99.6	99.6	99.6	98.6	98.6
117.5°	109.8	109.8	109.8	110.8	110.8	109.8	109.8	109.8	109.2	108.8	108.8
120°	119.9	119.9	119.9	121.0	121.0	119.9	119.9	119.9	118.9	118.9	118.9
122.5°	131.6	132.1	132.1	132.6	132.6	131.6	131.6	131.6	131.1	130.6	130.6
125°	143.3	144.3	144.3	144.3	144.3	143.3	143.3	143.3	143.3	142.3	142.3
127.5°	156.0	157.0	157.0	157.0	157.0	156.0	156.0	156.0	156.0	155.0	155.0
130°	168.7	169.7	169.7	169.7	169.7	168.7	168.7	168.7	168.7	167.7	167.7
132.5°	181.9	182.4	182.4	182.4	182.4	181.9	181.4	181.4	181.4	180.9	180.9
135°	195.1	195.1	195.1	195.1	195.1	195.1	194.1	194.1	194.1	194.1	194.1
137.5°	207.3	207.3	207.3	207.3	207.3	207.3	206.8	206.3	206.8	206.3	206.8
140°	219.5	219.5	219.5	219.5	219.5	219.5	219.5	218.5	219.5	218.5	219.5
142.5°	231.2	231.2	231.2	231.2	231.2	231.2	231.2	230.2	231.2	230.7	231.2
145°	242.9	242.9	242.9	242.9	242.9	242.9	242.9	241.9	242.9	242.9	242.9
147.5°	255.1	255.1	255.1	255.1	255.1	255.1	255.1	254.1	255.1	254.6	255.1
150°	267.3	267.3	267.3	267.3	267.3	267.3	267.3	266.3	267.3	266.3	267.3
152.5°	277.0	277.0	277.0	277.0	277.5	277.0	277.0	276.5	277.5	276.5	277.0
155°	286.6	286.6	286.6	286.6	287.6	286.6	286.6	286.6	287.6	286.6	286.6
157.5°	294.8	294.8	294.8	294.8	295.8	294.8	294.8	294.8	295.8	294.8	294.8
160°	302.9	302.9	302.9	302.9	303.9	302.9	302.9	302.9	303.9	302.9	302.9
162.5°	309.5	309.5	309.5	309.5	310.5	309.5	309.5	309.5	310.5	309.5	309.5
165°	316.1	316.1	316.1	316.1	317.1	316.1	316.1	316.1	317.1	316.1	316.1
167.5°	320.2	320.2	320.2	320.2	321.2	320.2	320.2	320.2	321.2	320.2	320.2
170°	324.2	324.2	324.2	324.2	325.2	324.2	324.2	324.2	325.2	324.2	324.2
172.5°	326.8	326.8	326.8	326.8	327.8	326.8	327.2	326.8	327.8	326.8	326.8
175°	329.3	329.3	329.3	329.3	330.3	329.3	330.3	329.3	330.3	329.3	329.3
177.5°	330.3	330.3	330.3	330.3	330.8	330.3	330.8	330.3	330.8	330.3	330.3
180°	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3

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

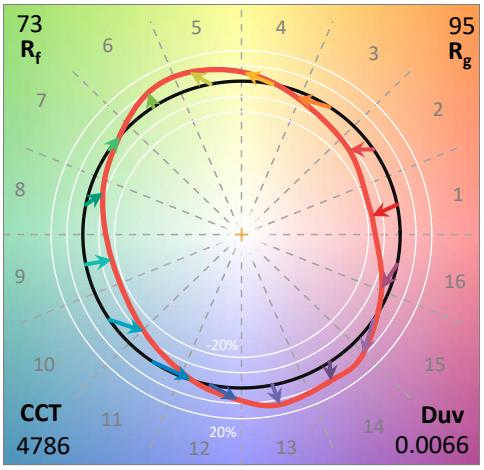
Test Information

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

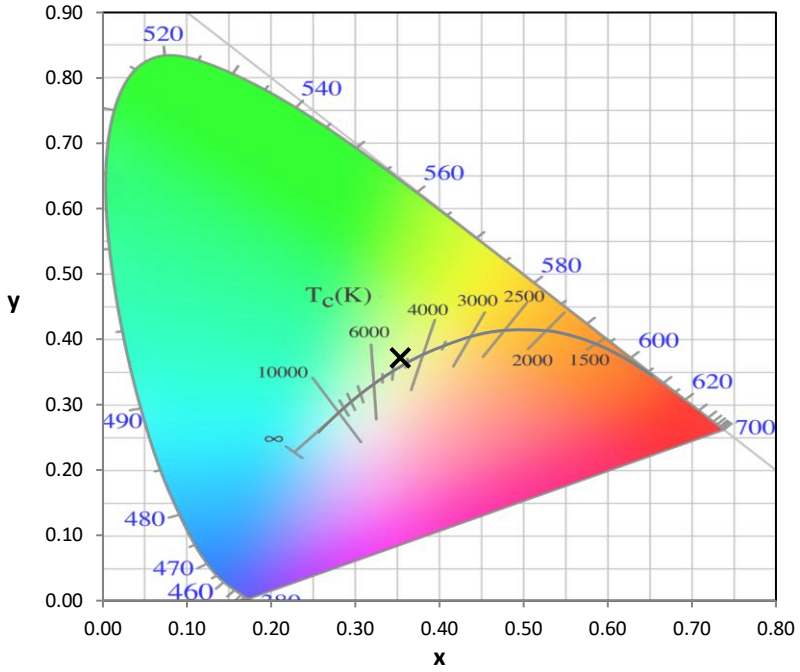
Stabilization Time:	45M
Operation Time:	1H 45M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-6

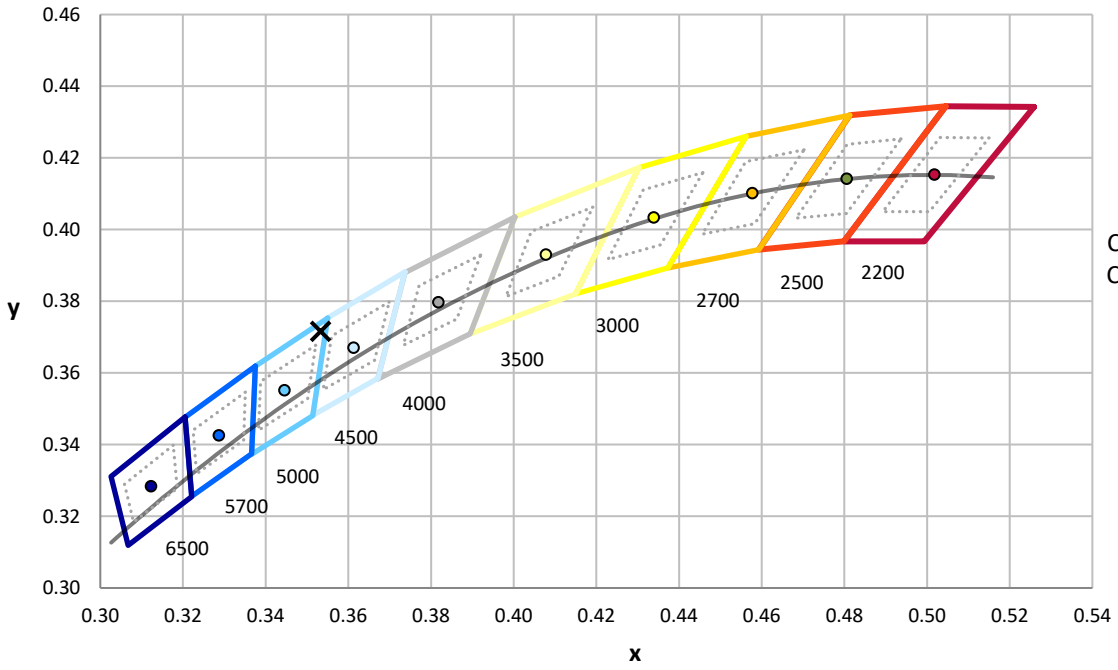
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

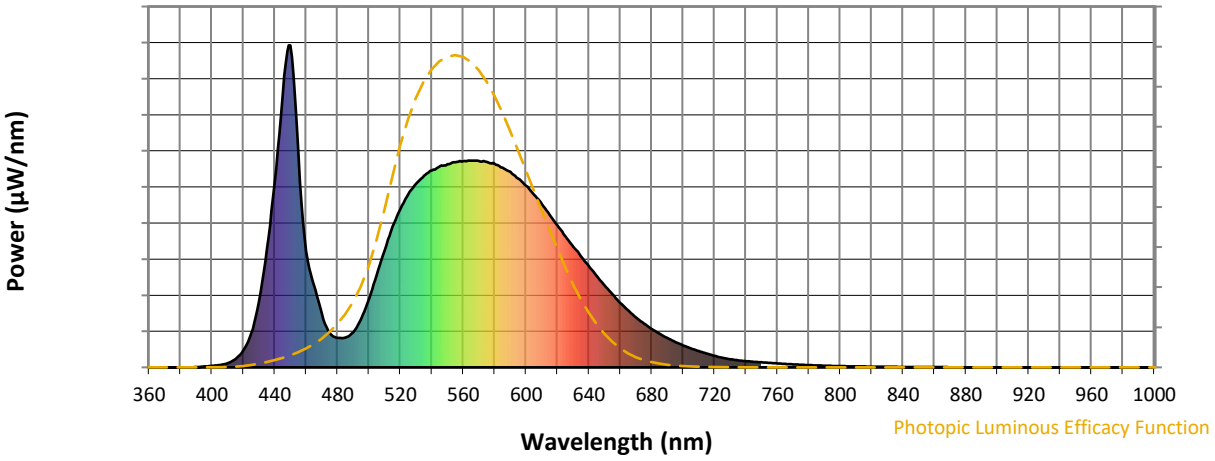


CCT = 4786K
CIE x = 0.3533
CIE y = 0.3716
Duv = 0.0066

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

Photopic Flux vs. Wavelength

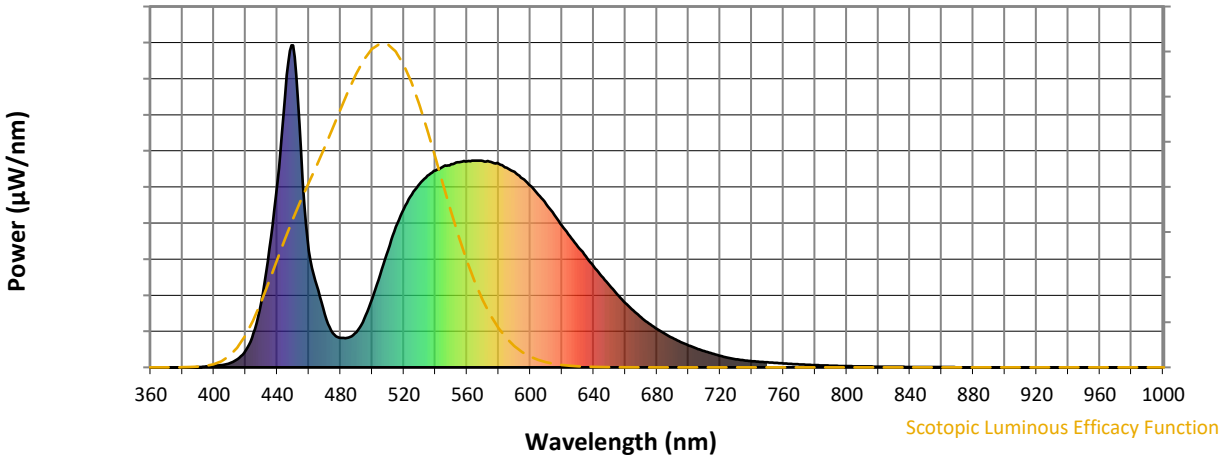


Photopic Lumens: NR

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

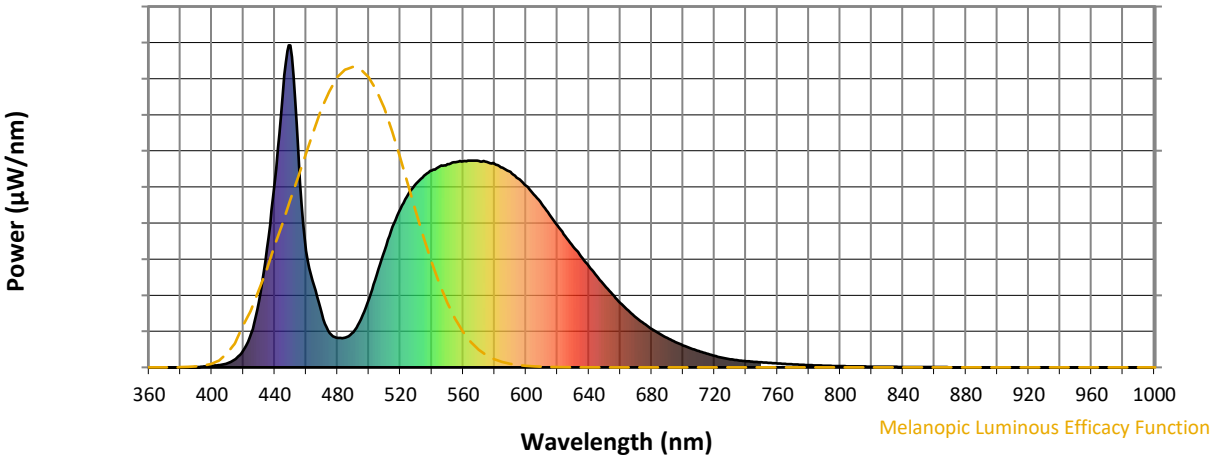


Scotopic Lumens: NR **S/P: 1.69**

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			

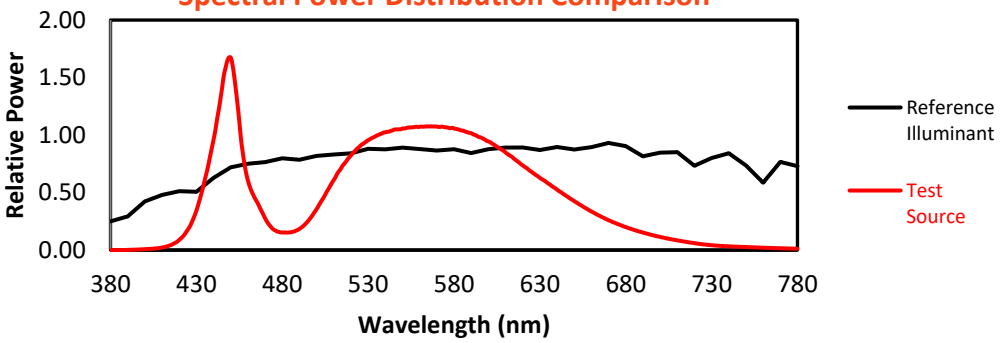
REPORT NUMBER: SP1-2407-176-6

TM-30-18

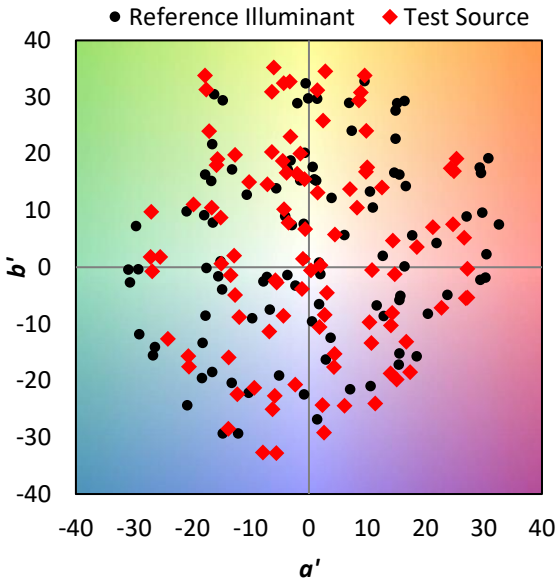
Summary

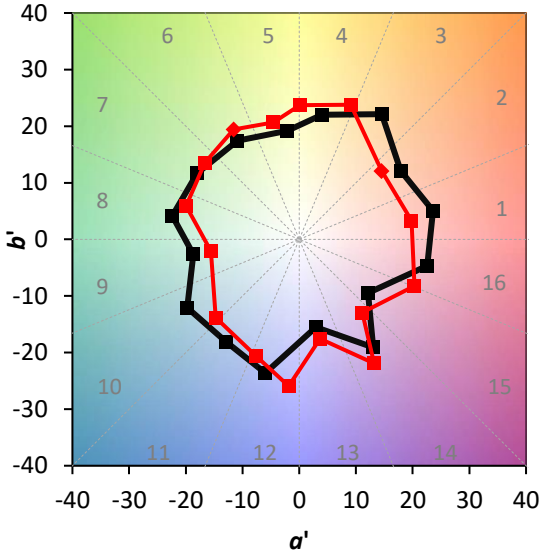
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R_g = 94.6
CIE R_a = 70.9
R_9 = -29.8

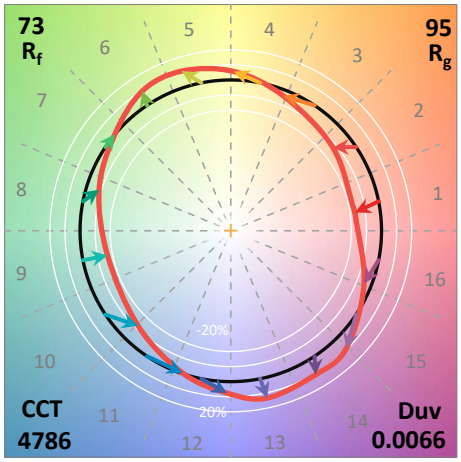
Spectral Power Distribution Comparison

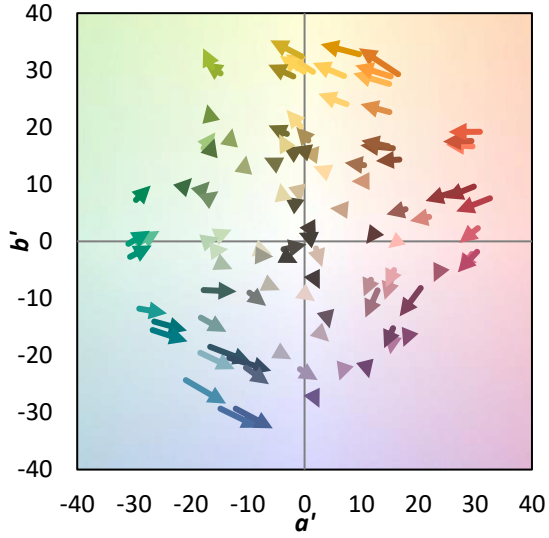


Color Vector Graphics







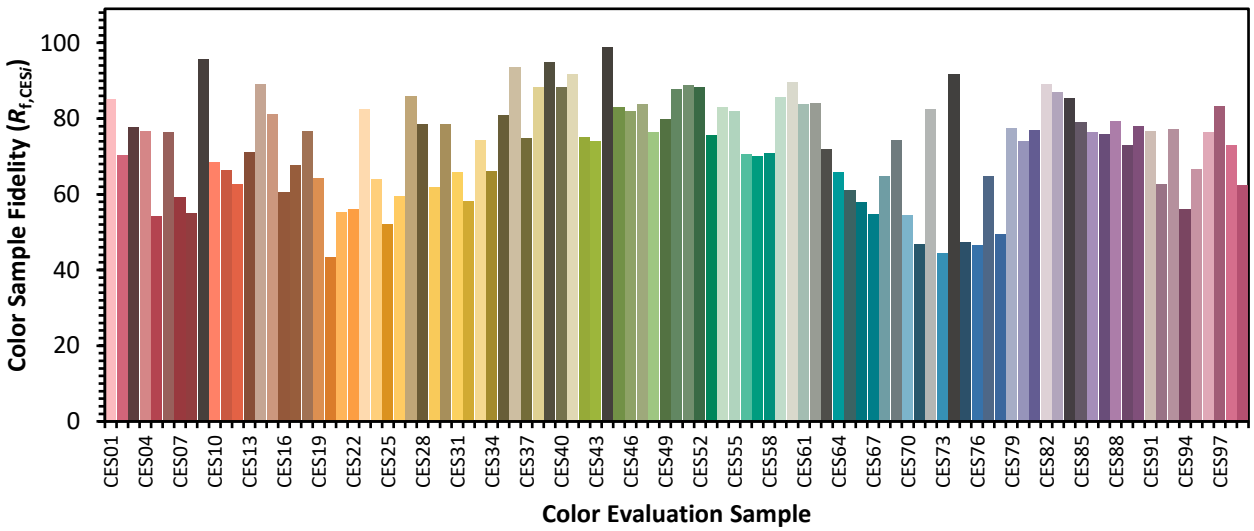


REPORT NUMBER: SP1-2407-176-6

TM-30-18

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

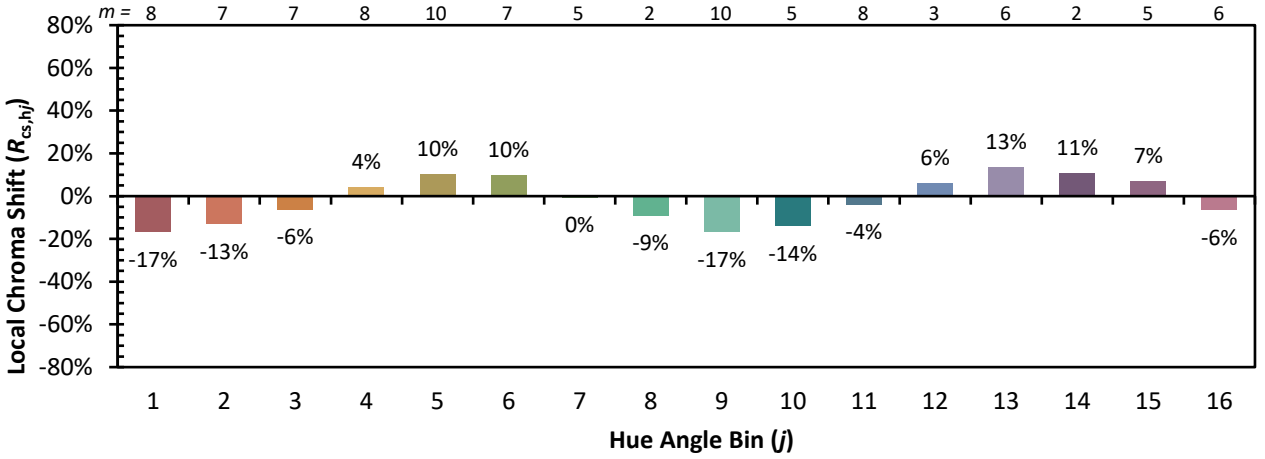
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 46
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 58	CES57 = 70	CES82 = 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	

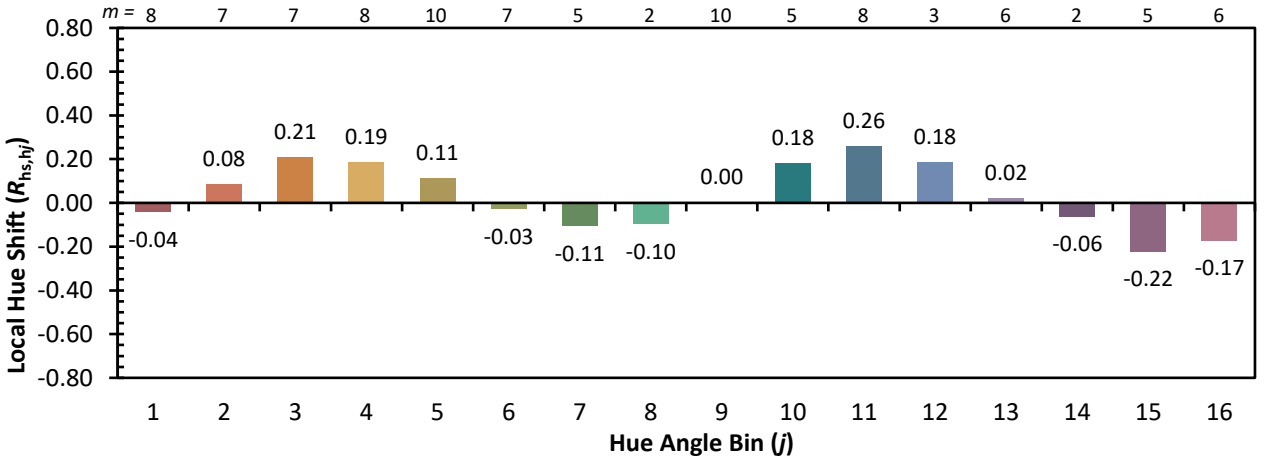


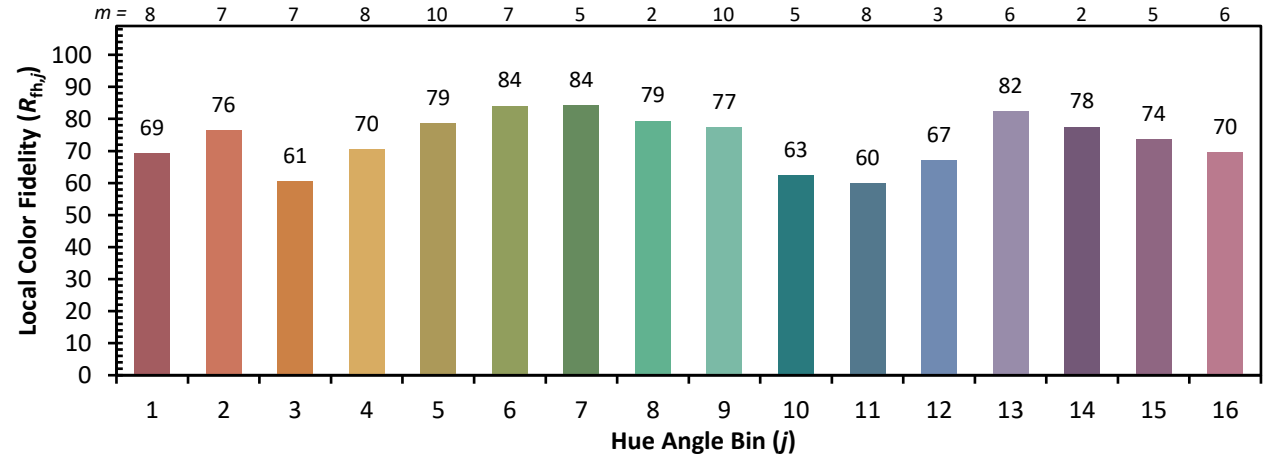
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Color Rendition by Hue-Angle Bin



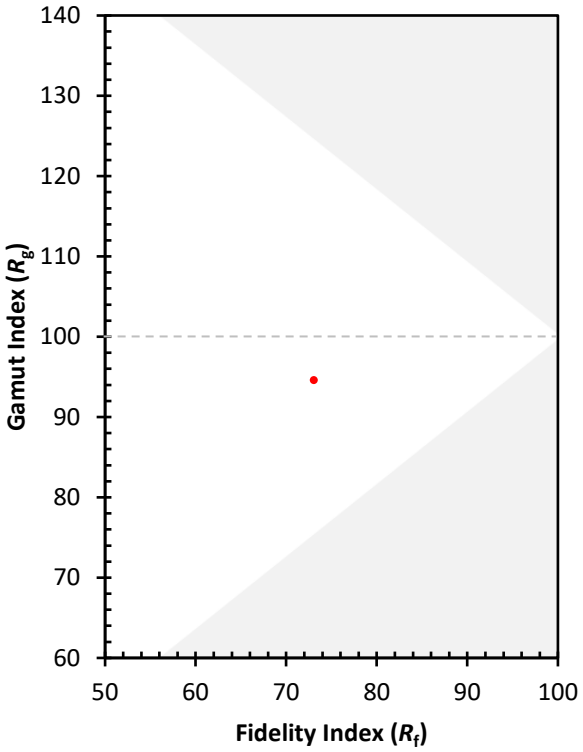


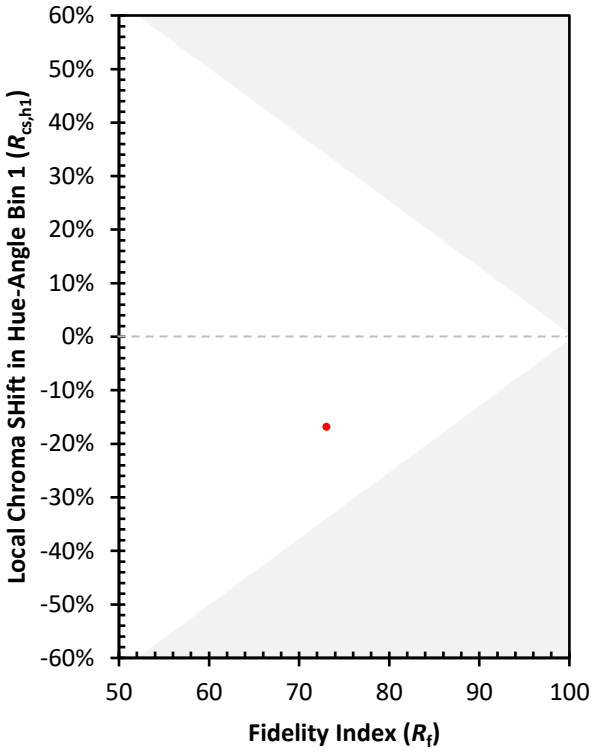


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Measure Comparisons





(END OF REPORT)