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: P821296

Luminaire Tested: **TT-D3-740-24VDC-DL-UPL**

Issue Date: 7/23/2020

Report Generated By 670245763

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821296
	REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-1) AND
Test Lab:	INNOVATION CENTER
Issue Date:	7/23/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D3-740-24VDC-DL-UPL
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
	4000K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6237.7 lumens
Efficiency:	N/A
Efficacy:	135.6 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U4 - G3

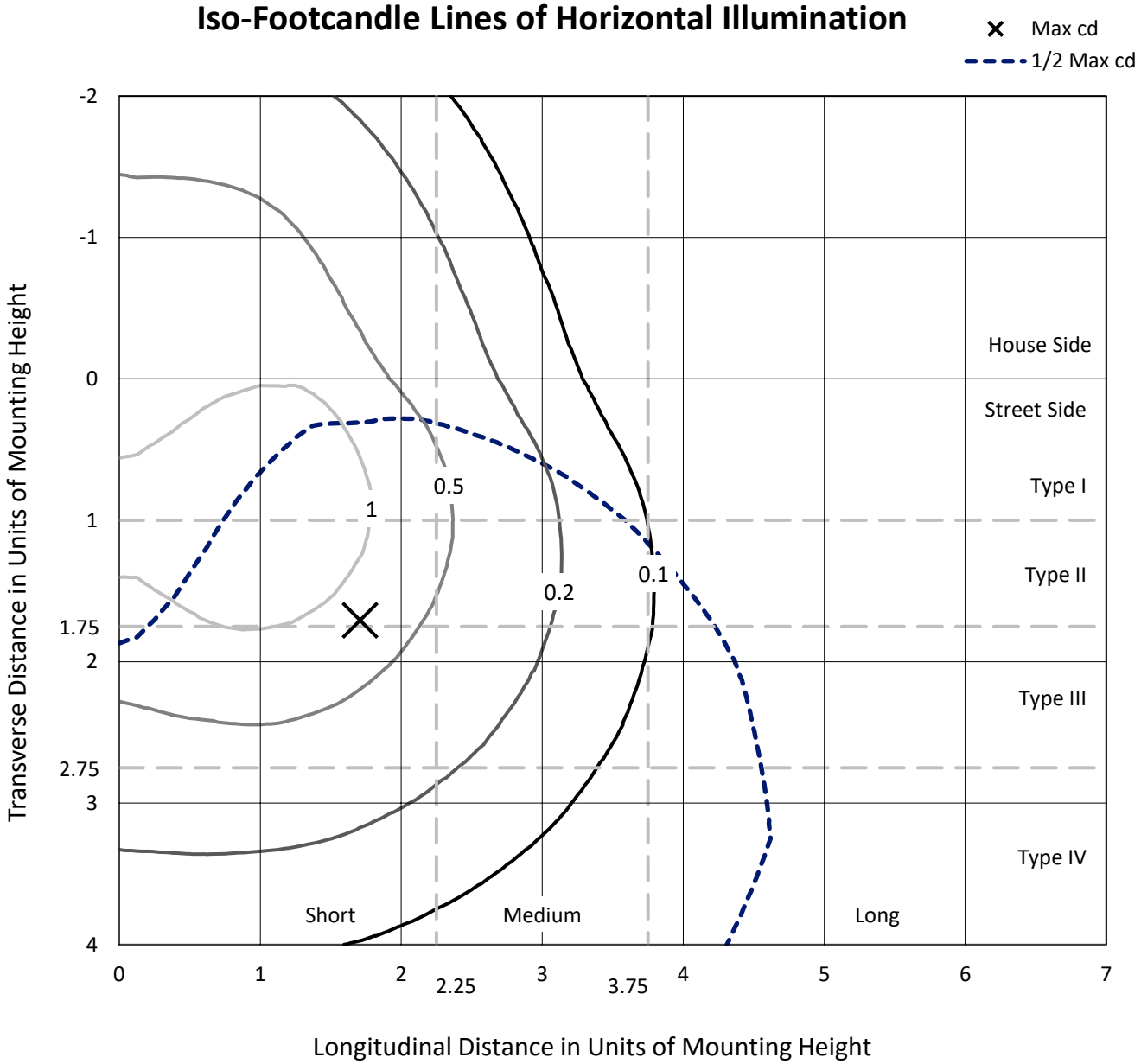
Input Watts (W):	46
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



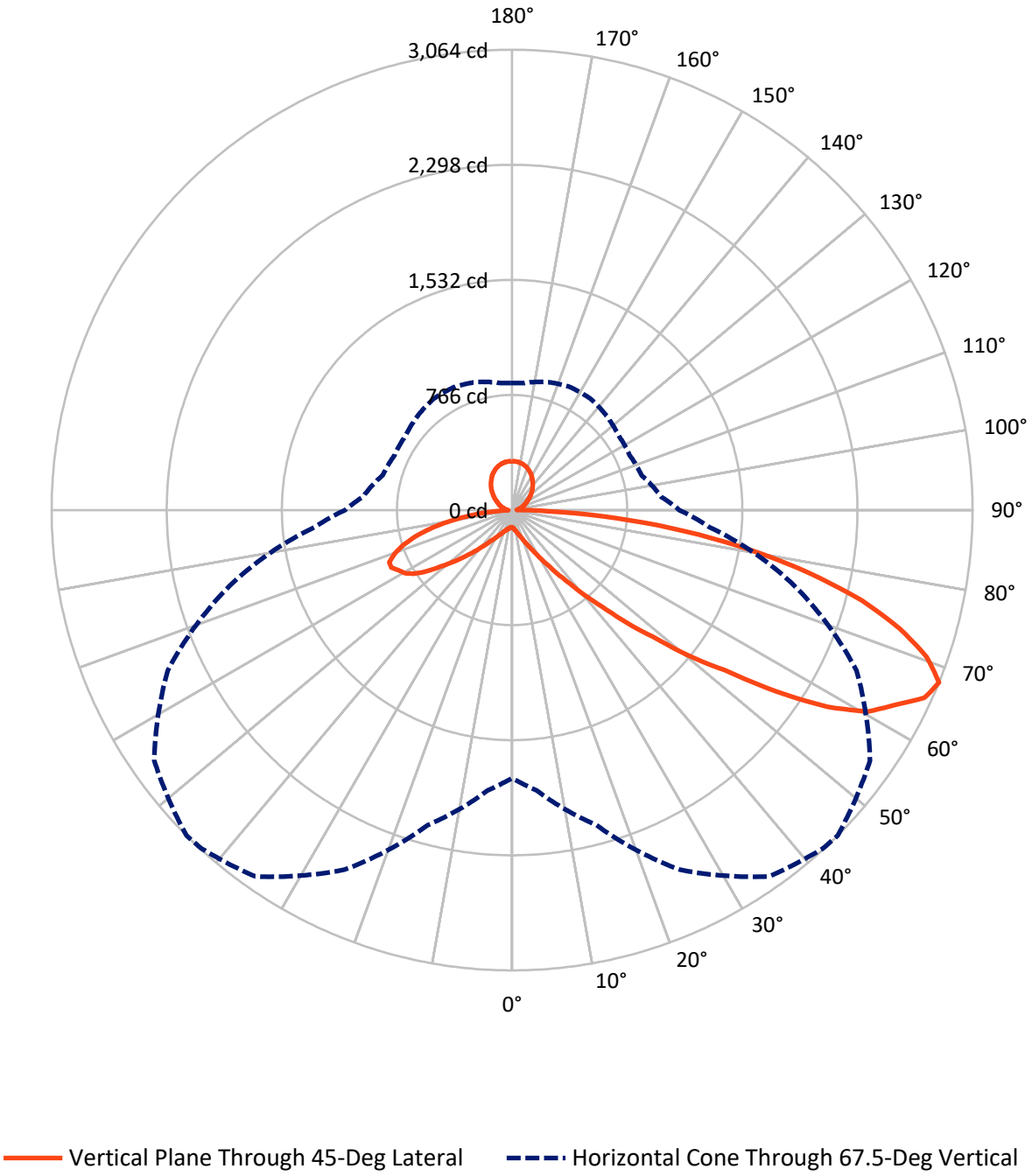
Based on 15 foot mounting height. Maximum calculated value = 1.8 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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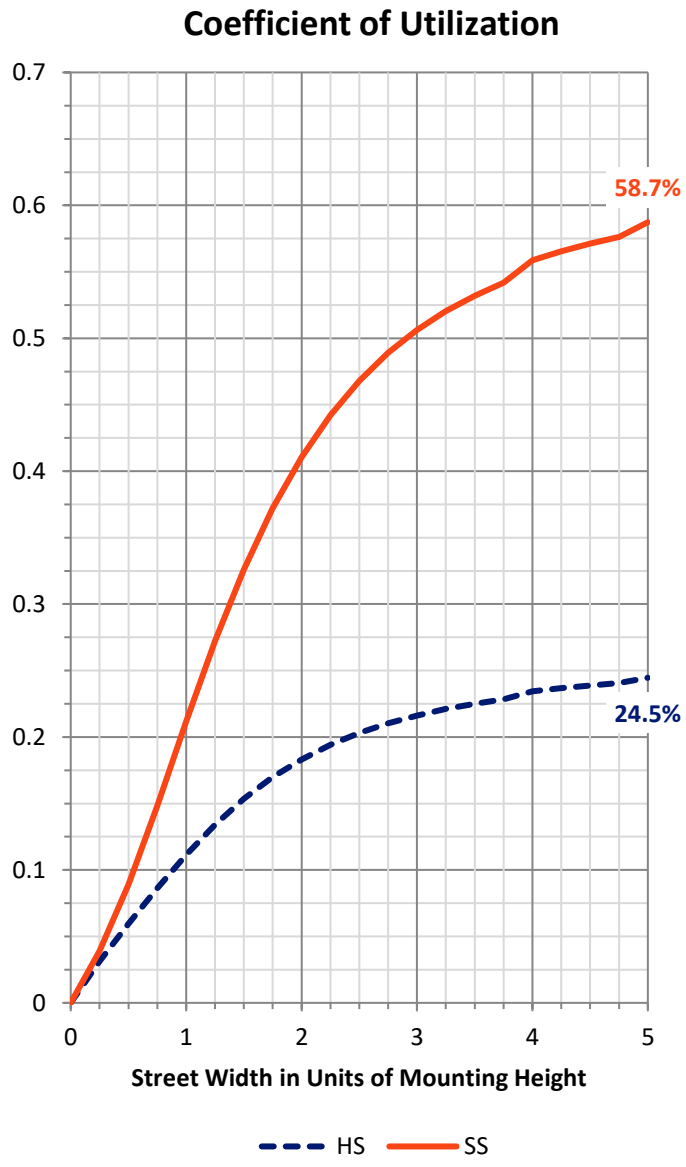
REPORT NUMBER: P821296
CATALOG NUMBER: TT-D3-740-24VDC-DL-UPL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1560.5	442.7	2003.2
	% Fixture	25.0	7.1	32.1
Street Side	Lumens	3791.7	442.7	4234.4
	% Fixture	60.8	7.1	67.9
Total	Lumens	5352.2	885.5	6237.7
	% Fixture	85.8	14.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.9	0.2
10°-20°	44.4	0.7
20°-30°	104.9	1.7
30°-40°	237.4	3.8
40°-50°	529.3	8.5
50°-60°	1064.2	17.1
60°-70°	1563.0	25.1
70°-80°	1374.4	22.0
80°-90°	422.7	6.8
90°-100°	45.4	0.7
100°-110°	70.3	1.1
110°-120°	97.7	1.6
120°-130°	126.6	2.0
130°-140°	147.6	2.4
140°-150°	149.5	2.4
150°-160°	129.8	2.1
160°-170°	87.7	1.4
170°-180°	30.8	0.5
0°-90°	5352.2	85.8
0°-180°	6237.7	100.0



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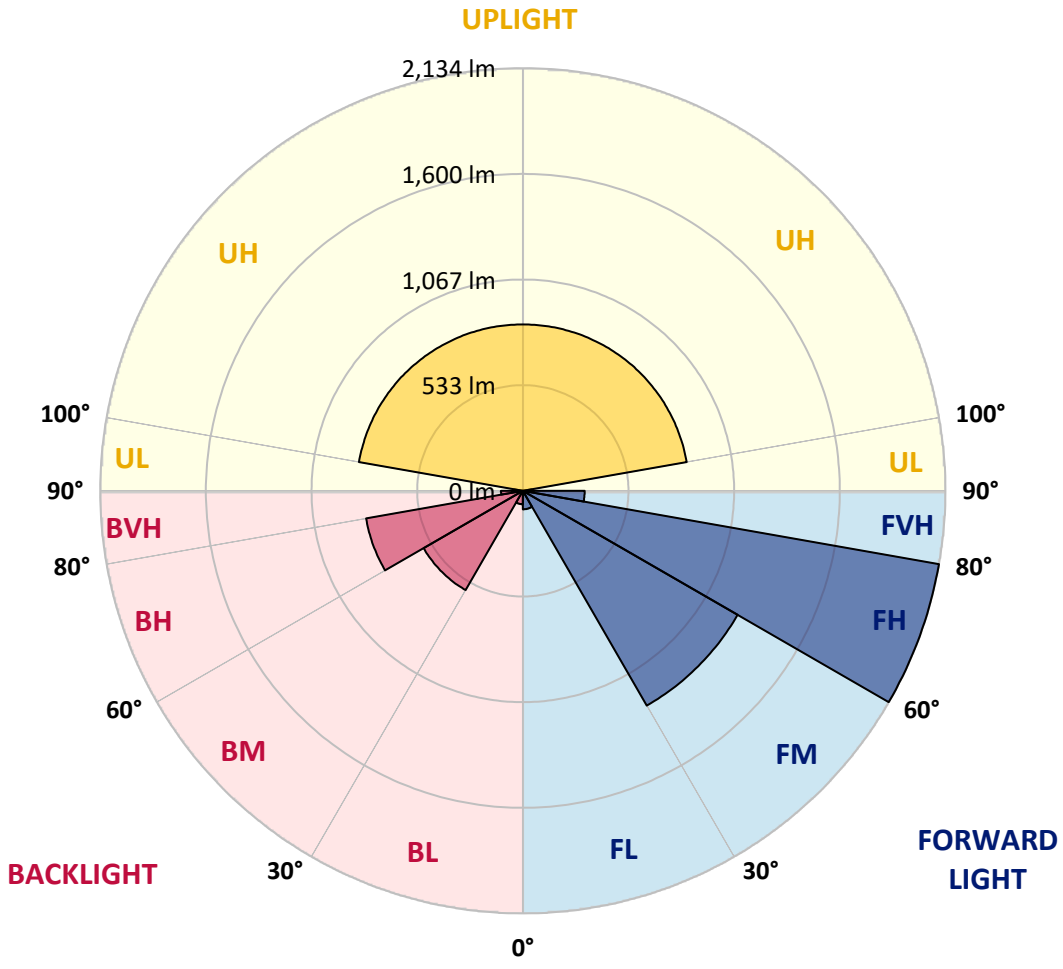
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	93.4	1.5			
FM	(30°-60°)	1252.4	20.1			
FH	(60°-80°)	2133.8	34.2			G2/5000
FVH	(80°-90°)	312.2	5.0			G3/500
BL	(0°-30°)	67.8	1.1	B0/110		
BM	(30°-60°)	578.5	9.3	B1/1000		
BH	(60°-80°)	803.6	12.9	B2/1000		G2/1000
BVH	(80°-90°)	110.5	1.8			G2/225
UL	(90°-100°)	45.4	0.7		U2/50	
UH	(100°-180°)	840.1	13.5		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°	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0
2.5°	121.0	120.0	120.0	120.0	119.0	119.0	119.0	119.0	118.0	118.0	118.0
5°	128.0	127.0	128.0	126.0	125.0	125.0	124.0	124.0	123.0	122.0	121.0
7.5°	138.0	137.0	137.0	135.0	134.0	133.0	133.0	131.0	130.0	128.0	126.0
10°	149.0	149.0	148.0	147.0	145.0	143.0	143.0	140.0	139.0	136.0	133.0
12.5°	162.0	162.0	162.0	160.0	158.0	157.0	155.0	153.0	150.0	145.0	142.0
15°	178.0	178.0	178.0	176.0	174.0	172.0	171.0	167.0	162.0	157.0	151.0
17.5°	198.0	196.0	196.0	194.0	192.0	191.0	189.0	185.0	178.0	172.0	164.0
20°	220.0	219.0	218.0	218.0	216.0	214.0	213.0	207.0	199.0	188.0	178.0
22.5°	245.0	244.0	244.0	246.0	245.0	242.0	242.0	233.0	222.0	209.0	194.0
25°	276.0	275.0	277.0	281.0	281.0	279.0	276.0	267.0	251.0	233.0	215.0
27.5°	310.0	309.0	313.0	320.0	322.0	319.0	317.0	307.0	289.0	265.0	239.0
30°	351.0	352.0	363.0	371.0	376.0	374.0	373.0	362.0	333.0	305.0	271.0
32.5°	401.0	398.0	412.0	425.0	434.0	439.0	436.0	423.0	398.0	354.0	311.0
35°	454.0	455.0	472.0	491.0	512.0	514.0	520.0	507.0	473.0	421.0	361.0
37.5°	523.0	515.0	537.0	573.0	598.0	620.0	616.0	608.0	568.0	499.0	417.0
40°	585.0	583.0	614.0	664.0	710.0	742.0	746.0	736.0	683.0	585.0	477.0
42.5°	656.0	662.0	705.0	774.0	844.0	890.0	879.0	874.0	812.0	687.0	559.0
45°	728.0	748.0	803.0	903.0	985.0	1051.0	1070.0	1053.0	977.0	848.0	663.0
47.5°	815.0	842.0	910.0	1045.0	1179.0	1256.0	1260.0	1311.0	1196.0	1003.0	771.0
50°	930.0	942.0	1037.0	1202.0	1386.0	1494.0	1525.0	1526.0	1411.0	1159.0	893.0
52.5°	1043.0	1052.0	1177.0	1390.0	1640.0	1763.0	1770.0	1809.0	1652.0	1411.0	1068.0
55°	1179.0	1175.0	1347.0	1603.0	1898.0	2077.1	2129.1	2182.1	1982.1	1610.0	1168.0
57.5°	1311.0	1305.0	1512.0	1848.0	2251.1	2429.1	2472.1	2434.1	2137.1	1693.0	1217.0
60°	1433.0	1454.0	1706.0	2119.1	2524.1	2694.1	2723.1	2620.1	2237.1	1757.0	1248.0
62.5°	1560.0	1602.0	1907.1	2345.1	2733.1	2855.1	2857.1	2736.1	2404.1	1881.0	1349.0
65°	1679.0	1746.0	2063.1	2538.1	2879.1	3001.1	3015.1	2906.1	2568.1	1989.1	1366.0
67.5°	1784.0	1873.0	2171.1	2642.1	2978.1	3057.1	3064.1	2907.1	2529.1	1945.1	1319.0
70°	1869.0	1941.1	2238.1	2644.1	2909.1	2931.1	2926.1	2759.1	2421.1	1858.0	1240.0
72.5°	1902.1	1961.1	2206.1	2520.1	2706.1	2701.1	2697.1	2543.1	2243.1	1713.0	1126.0
75°	1855.0	1872.0	2031.1	2255.1	2373.1	2401.1	2405.1	2266.1	1968.1	1498.0	966.0
77.5°	1661.0	1652.0	1774.0	1922.1	2011.1	2031.1	2027.1	1911.1	1650.0	1245.0	810.0
80°	1317.0	1336.0	1412.0	1510.0	1599.0	1621.0	1607.0	1519.0	1284.0	971.0	622.0
82.5°	921.0	944.0	1008.0	1082.0	1149.0	1149.0	1162.0	1077.0	910.0	697.0	435.0
85°	497.0	484.0	554.0	638.0	686.0	695.0	700.0	672.0	563.0	421.0	258.0
87.5°	82.0	88.0	109.0	167.0	190.0	220.0	234.0	183.0	111.0	71.0	52.0
90°	32.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
92.5°	37.0	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
95°	42.0	42.0	42.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
97.5°	48.0	48.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
100°	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
102.5°	60.0	59.0	60.0	60.0	59.0	59.0	59.0	59.0	60.0	60.0	60.0
105°	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	67.0	66.0	66.0
107.5°	73.0	73.0	73.0	74.0	74.0	74.0	74.0	74.0	74.0	73.0	74.0
110°	80.0	80.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	42.5°	45°	55°	65°	75°	85°
112.5°	89.0	89.0	89.0	89.0	89.0	89.8	*90.0*	90.0	90.0	90.0	90.0
115°	97.0	97.0	98.0	98.0	98.0	98.0	*98.0*	99.0	99.0	98.0	98.0
117.5°	107.0	107.0	107.0	107.0	107.0	107.8	*108.0*	108.0	108.0	108.0	108.0
120°	117.0	117.0	117.0	118.0	118.0	118.0	*118.0*	119.0	119.0	118.0	118.0
122.5°	129.0	128.0	129.0	129.0	129.0	129.0	*129.0*	130.0	130.0	130.0	130.0
125°	140.0	140.0	141.0	141.0	141.0	141.0	*141.0*	142.0	142.0	142.0	142.0
127.5°	153.0	153.0	153.0	153.0	153.0	153.8	*154.0*	154.0	154.0	154.0	154.0
130°	165.0	165.0	166.0	166.0	166.0	166.0	*166.0*	167.0	167.0	167.0	167.0
132.5°	179.0	178.0	179.0	178.0	178.0	178.8	*179.0*	179.0	180.0	179.0	180.0
135°	191.0	191.0	191.0	191.0	191.0	191.8	*192.0*	192.0	192.0	192.0	192.0
137.5°	204.0	203.0	204.0	203.0	203.0	203.8	*204.0*	204.0	204.0	204.0	204.0
140°	216.0	215.0	216.0	215.0	216.0	216.0	*216.0*	216.0	216.0	216.0	216.0
142.5°	228.0	227.0	228.0	227.0	227.0	227.8	*228.0*	228.0	228.0	228.0	228.0
145°	239.0	239.0	239.0	238.0	239.0	239.0	*239.0*	239.0	239.0	239.0	239.0
147.5°	250.0	249.0	250.0	249.0	249.0	249.8	*250.0*	250.0	250.0	250.0	250.0
150°	263.0	262.0	263.0	262.0	263.0	263.0	*263.0*	263.0	263.0	263.0	263.0
152.5°	273.0	273.0	273.0	273.0	273.0	273.0	*273.0*	273.0	273.0	273.0	273.0
155°	282.0	282.0	283.0	282.0	282.0	282.0	*282.0*	283.0	282.0	282.0	282.0
157.5°	290.0	290.0	290.0	290.0	290.0	290.0	*290.0*	291.0	291.0	290.0	291.0
160°	298.0	298.0	299.0	298.0	298.0	298.0	*298.0*	299.0	298.0	298.0	298.0
162.5°	306.0	305.0	306.0	305.0	306.0	306.0	*306.0*	306.0	306.0	306.0	306.0
165°	311.0	311.0	312.0	311.0	311.0	311.0	*311.0*	312.0	311.0	311.0	311.0
167.5°	316.0	315.0	316.0	316.0	316.0	316.0	*316.0*	316.0	316.0	316.0	316.0
170°	319.0	319.0	320.0	319.0	319.0	319.0	*319.0*	320.0	319.0	319.0	319.0
172.5°	323.0	323.0	323.0	323.0	323.0	323.0	*323.0*	323.0	323.0	323.0	323.0
175°	324.0	324.0	325.0	324.0	325.0	324.2	*324.0*	325.0	324.0	324.0	324.0
177.5°	325.0	325.0	326.0	325.0	325.0	325.0	*325.0*	325.0	325.0	325.0	325.0
180°	326.0	326.0	326.0	326.0	326.0	326.0	*326.0*	326.0	326.0	326.0	326.0

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0
2.5°	118.0	117.0	116.0	115.0	115.0	114.0	114.0	114.0	115.0	115.0	115.0
5°	121.0	120.0	119.0	118.0	116.0	116.0	116.0	116.0	116.0	116.0	116.0
7.5°	126.0	124.0	123.0	121.0	119.0	119.0	118.0	118.0	118.0	119.0	118.0
10°	132.0	130.0	128.0	125.0	124.0	123.0	122.0	122.0	123.0	123.0	122.0
12.5°	139.0	138.0	134.0	131.0	129.0	128.0	127.0	128.0	127.0	128.0	128.0
15°	149.0	146.0	141.0	138.0	135.0	134.0	133.0	134.0	134.0	135.0	134.0
17.5°	160.0	156.0	151.0	146.0	142.0	141.0	141.0	141.0	142.0	143.0	142.0
20°	173.0	168.0	161.0	155.0	151.0	150.0	150.0	151.0	152.0	153.0	153.0
22.5°	186.0	182.0	172.0	164.0	162.0	161.0	160.0	162.0	164.0	165.0	166.0
25°	206.0	198.0	186.0	177.0	173.0	173.0	174.0	176.0	177.0	179.0	178.0
27.5°	227.0	218.0	203.0	191.0	188.0	187.0	189.0	191.0	195.0	195.0	194.0
30°	256.0	241.0	222.0	211.0	203.0	204.0	207.0	210.0	214.0	216.0	216.0
32.5°	289.0	273.0	247.0	230.0	226.0	227.0	228.0	233.0	237.0	241.0	238.0
35°	332.0	312.0	280.0	261.0	251.0	250.0	254.0	260.0	264.0	266.0	266.0
37.5°	379.0	353.0	313.0	297.0	285.0	284.0	285.0	290.0	295.0	297.0	301.0
40°	436.0	404.0	357.0	331.0	322.0	320.0	324.0	331.0	331.0	334.0	335.0
42.5°	506.0	465.0	413.0	379.0	368.0	368.0	367.0	373.0	373.0	373.0	371.0
45°	595.0	549.0	481.0	446.0	427.0	417.0	420.0	416.0	415.0	418.0	409.0
47.5°	681.0	623.0	543.0	505.0	486.0	480.0	469.0	466.0	461.0	461.0	448.0
50°	781.0	709.0	632.0	578.0	560.0	543.0	534.0	520.0	505.0	502.0	497.0
52.5°	948.0	858.0	737.0	679.0	633.0	616.0	595.0	577.0	559.0	545.0	553.0
55°	1016.0	924.0	809.0	753.0	721.0	705.0	666.0	642.0	615.0	595.0	606.0
57.5°	1050.0	950.0	843.0	801.0	792.0	777.0	748.0	707.0	676.0	651.0	653.0
60°	1069.0	964.0	861.0	823.0	818.0	828.0	813.0	785.0	737.0	712.0	709.0
62.5°	1142.0	1032.0	912.0	858.0	847.0	854.0	858.0	841.0	801.0	768.0	759.0
65°	1157.0	1040.0	922.0	887.0	888.0	890.0	893.0	875.0	855.0	814.0	806.0
67.5°	*1112.0*	*997.0*	*892.0*	*863.0*	*865.0*	*888.0*	*906.0*	*905.0*	*883.0*	*848.0*	*845.0*
70°	1044.0	932.0	835.0	809.0	814.0	835.0	874.0	894.0	890.0	867.0	872.0
72.5°	938.0	838.0	753.0	733.0	745.0	765.0	802.0	838.0	859.0	864.0	875.0
75°	814.0	734.0	654.0	642.0	651.0	674.0	708.0	750.0	796.0	821.0	828.0
77.5°	672.0	599.0	540.0	532.0	545.0	566.0	600.0	633.0	685.0	729.0	739.0
80°	526.0	463.0	421.0	414.0	422.0	440.0	466.0	493.0	543.0	577.0	582.0
82.5°	365.0	327.0	300.0	296.0	301.0	308.0	329.0	354.0	382.0	409.0	412.0
85°	212.0	188.0	181.0	175.0	186.0	186.0	191.0	205.0	219.0	221.0	227.0
87.5°	39.0	37.0	38.0	28.0	35.0	25.0	25.0	32.0	24.0	28.0	23.0
90°	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	32.0
92.5°	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	37.0	37.0
95°	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	42.0	42.0	42.0
97.5°	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	48.0	48.0
100°	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
102.5°	59.0	60.0	60.0	60.0	59.0	59.0	59.0	60.0	60.0	59.0	60.0
105°	66.0	66.0	66.0	67.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0
107.5°	73.0	74.0	73.0	74.0	74.0	74.0	74.0	74.0	73.0	73.0	73.0
110°	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	80.0	80.0

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

Scaled Data Report

REPORT NUMBER: P821296
CATALOG NUMBER: TT-D3-740-24VDC-DL-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	89.0	90.0	90.0	90.0	90.0	90.0	89.0	89.0	89.0	89.0	89.0
115°	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0	98.0	97.0	97.0
117.5°	107.0	108.0	108.0	108.0	108.0	108.0	107.0	107.0	107.0	107.0	107.0
120°	118.0	118.0	118.0	119.0	119.0	118.0	118.0	118.0	117.0	117.0	117.0
122.5°	129.0	130.0	130.0	130.0	130.0	129.0	129.0	129.0	129.0	128.0	129.0
125°	141.0	142.0	142.0	142.0	142.0	141.0	141.0	141.0	141.0	140.0	140.0
127.5°	154.0	154.0	154.0	154.0	154.0	154.0	153.0	153.0	153.0	153.0	153.0
130°	166.0	167.0	167.0	167.0	167.0	166.0	166.0	166.0	166.0	165.0	165.0
132.5°	179.0	180.0	179.0	180.0	179.0	179.0	178.0	178.0	179.0	178.0	179.0
135°	192.0	192.0	192.0	192.0	192.0	192.0	191.0	191.0	191.0	191.0	191.0
137.5°	204.0	204.0	204.0	204.0	204.0	204.0	203.0	203.0	204.0	203.0	204.0
140°	216.0	216.0	216.0	216.0	216.0	216.0	216.0	215.0	216.0	215.0	216.0
142.5°	228.0	228.0	228.0	228.0	228.0	228.0	227.0	227.0	228.0	227.0	228.0
145°	239.0	239.0	239.0	239.0	239.0	239.0	239.0	238.0	239.0	239.0	239.0
147.5°	250.0	250.0	250.0	250.0	250.0	250.0	249.0	249.0	250.0	249.0	250.0
150°	263.0	263.0	263.0	263.0	263.0	263.0	263.0	262.0	263.0	262.0	263.0
152.5°	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0
155°	282.0	282.0	282.0	282.0	283.0	282.0	282.0	282.0	283.0	282.0	282.0
157.5°	290.0	291.0	290.0	291.0	291.0	290.0	290.0	290.0	290.0	290.0	290.0
160°	298.0	298.0	298.0	298.0	299.0	298.0	298.0	298.0	299.0	298.0	298.0
162.5°	306.0	306.0	306.0	306.0	306.0	306.0	306.0	305.0	306.0	305.0	306.0
165°	311.0	311.0	311.0	311.0	312.0	311.0	311.0	311.0	312.0	311.0	311.0
167.5°	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	315.0	316.0
170°	319.0	319.0	319.0	319.0	320.0	319.0	319.0	319.0	320.0	319.0	319.0
172.5°	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0
175°	324.0	324.0	324.0	324.0	325.0	324.0	325.0	324.0	325.0	324.0	324.0
177.5°	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	326.0	325.0	325.0
180°	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0

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

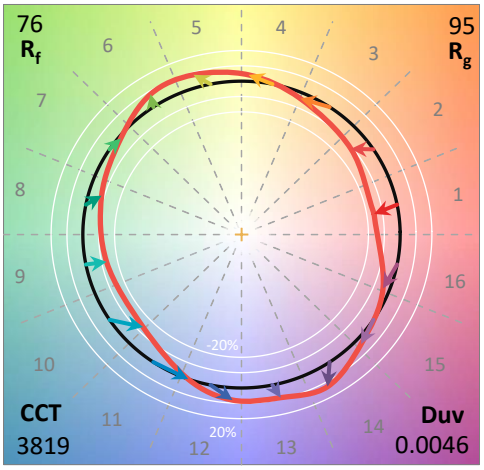
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

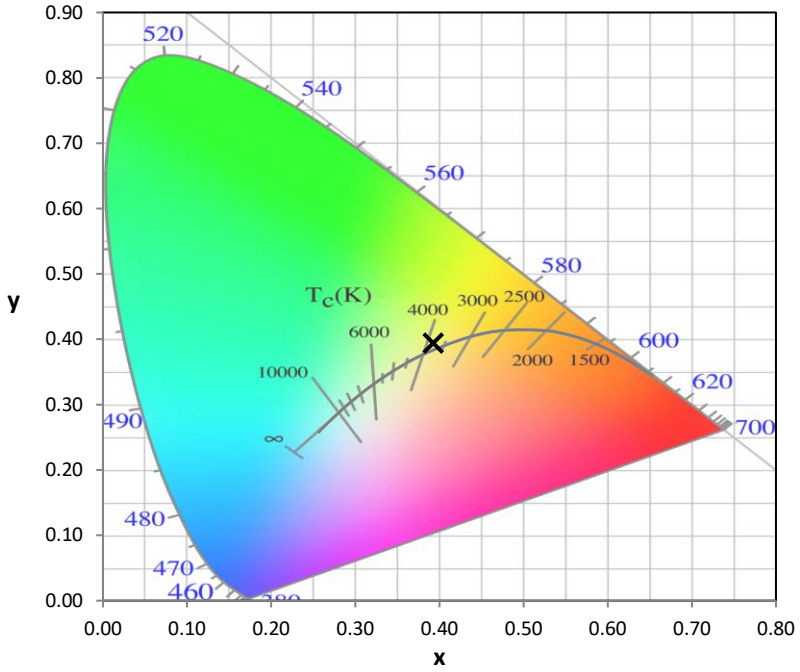
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-5

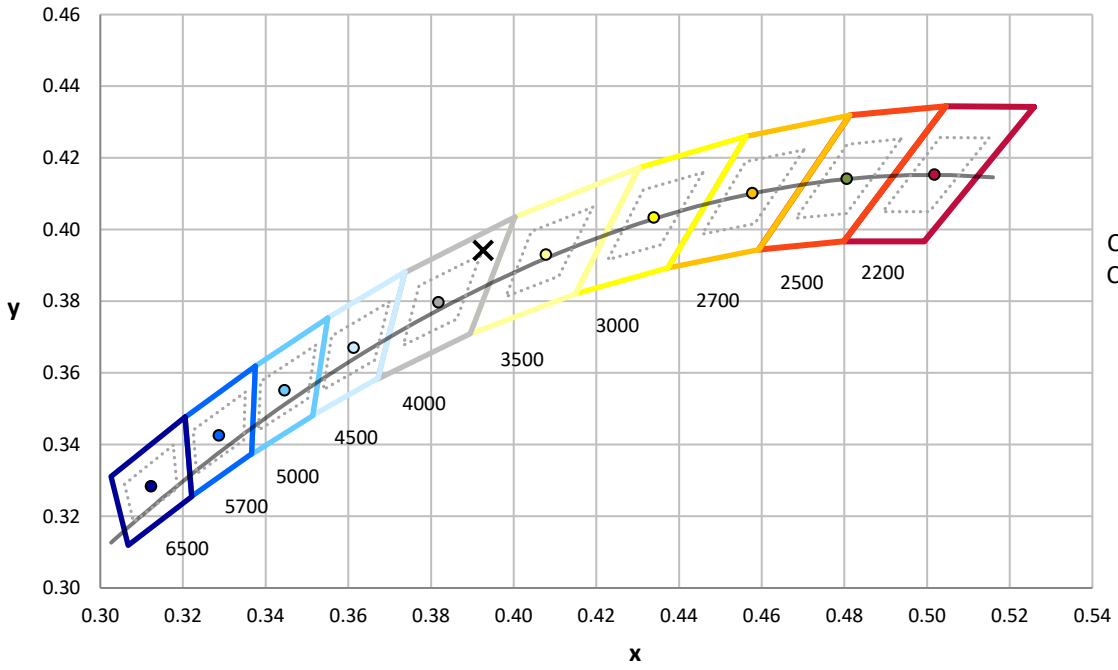
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

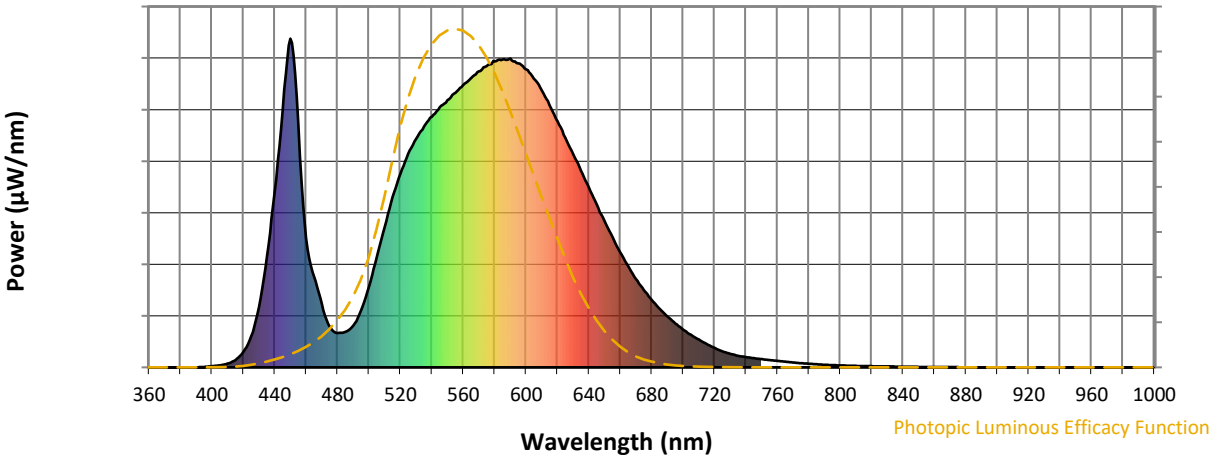


CCT = 3819K
CIE x = 0.3926
CIE y = 0.3942
Duv = 0.0046

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-5

Photopic Flux vs. Wavelength

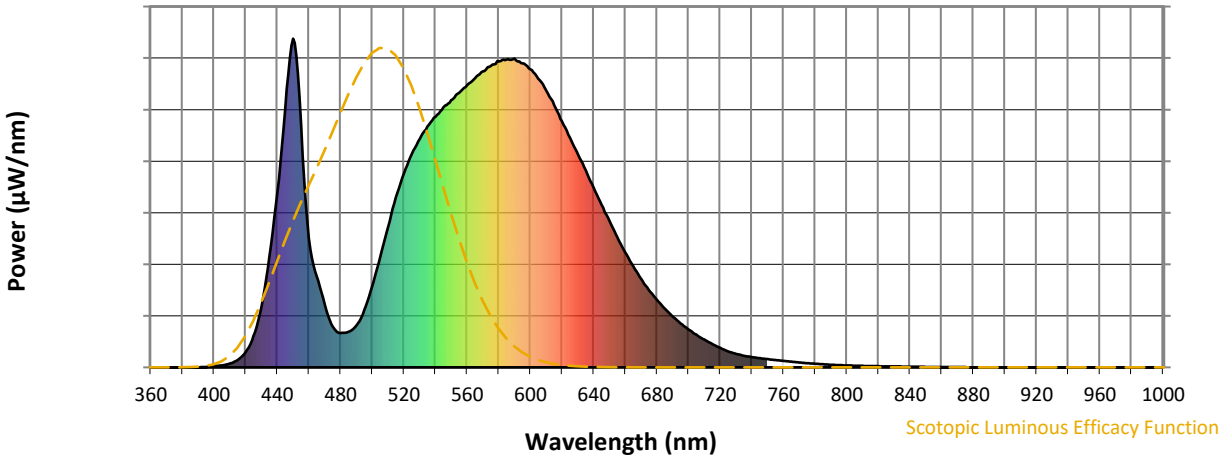


Photopic Lumens: NR

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

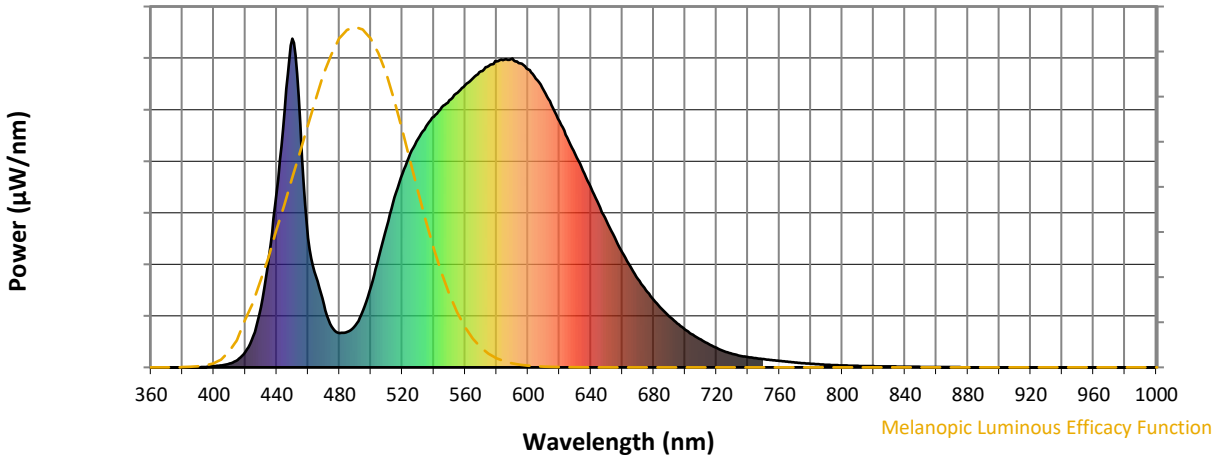


Scotopic Lumens: NR **S/P: 1.45**

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			

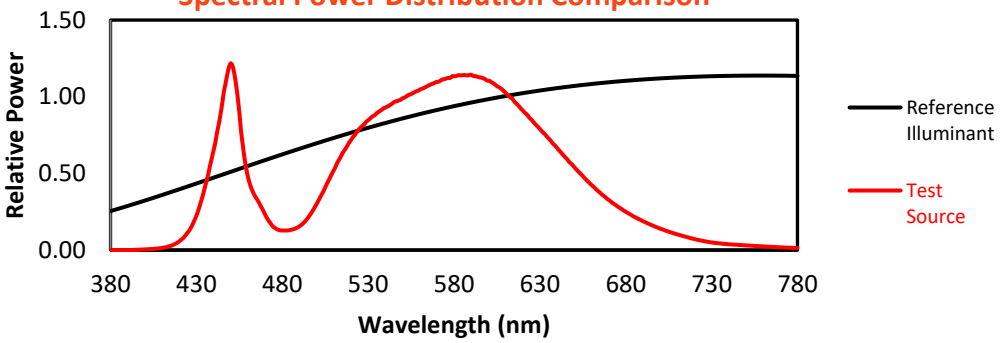
REPORT NUMBER: SP1-2407-176-5

TM-30-18

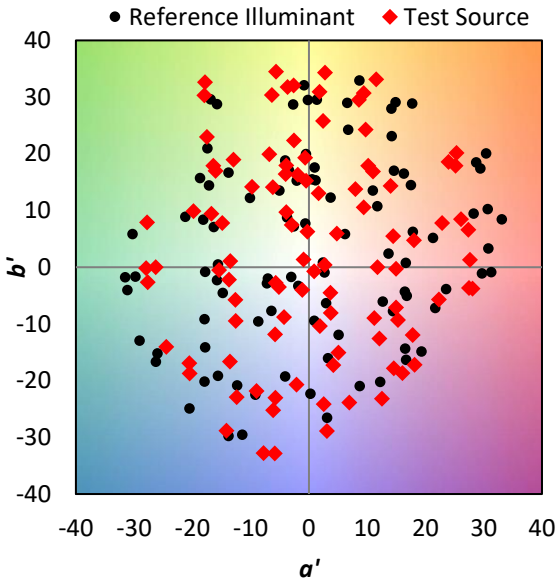
Summary

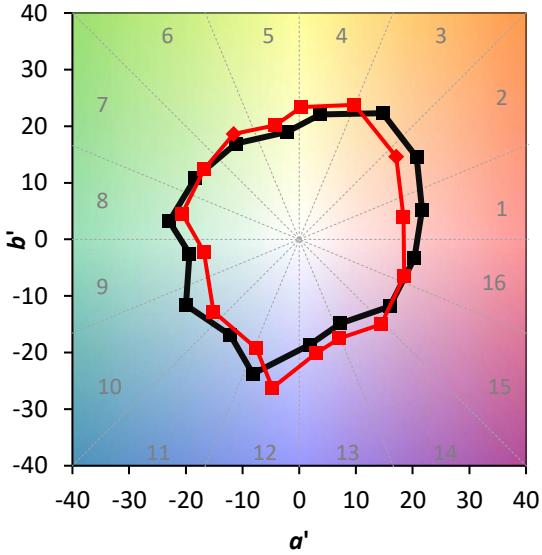
R_f = 75.6
R_g = 94.8
CIE R_a = 72.9
R_9 = -21.5

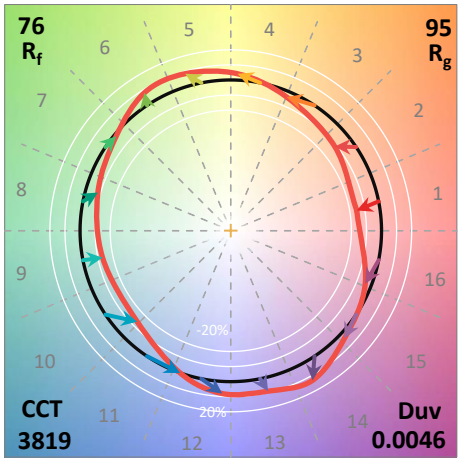
Spectral Power Distribution Comparison

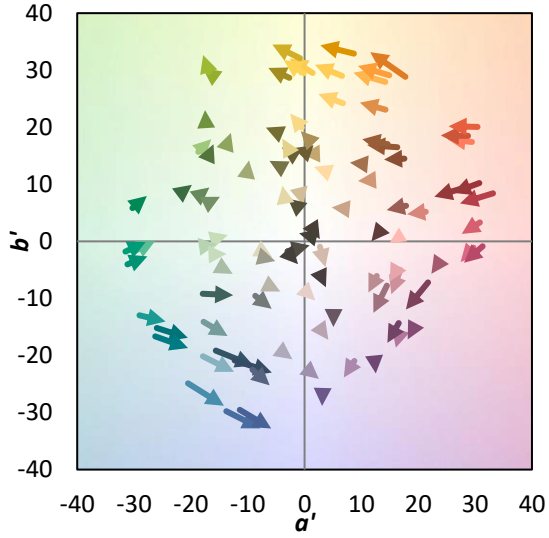


Color Vector Graphics







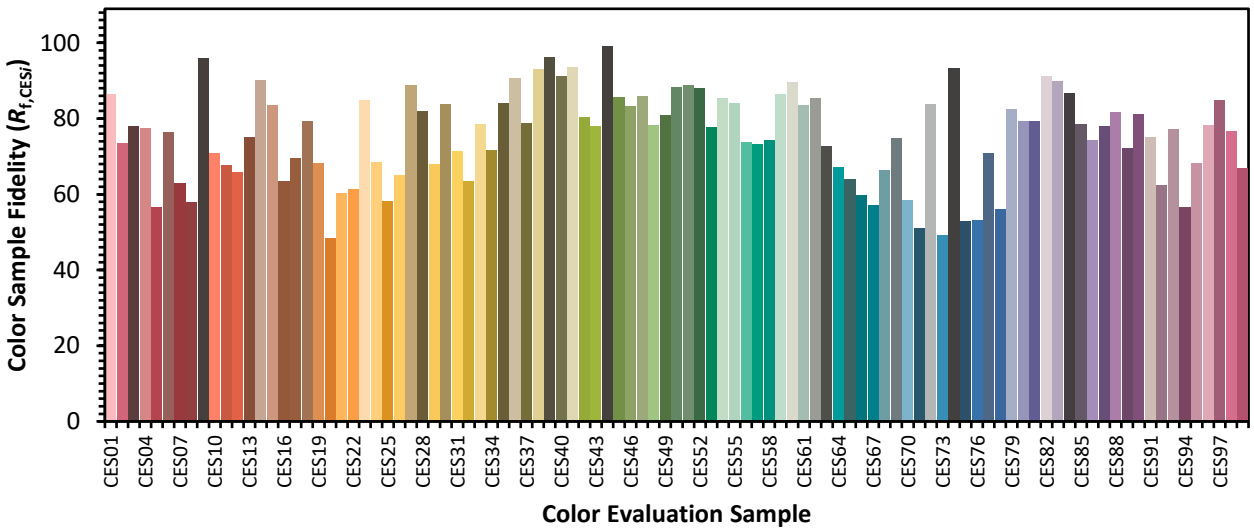


REPORT NUMBER: SP1-2407-176-5

TM-30-18

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

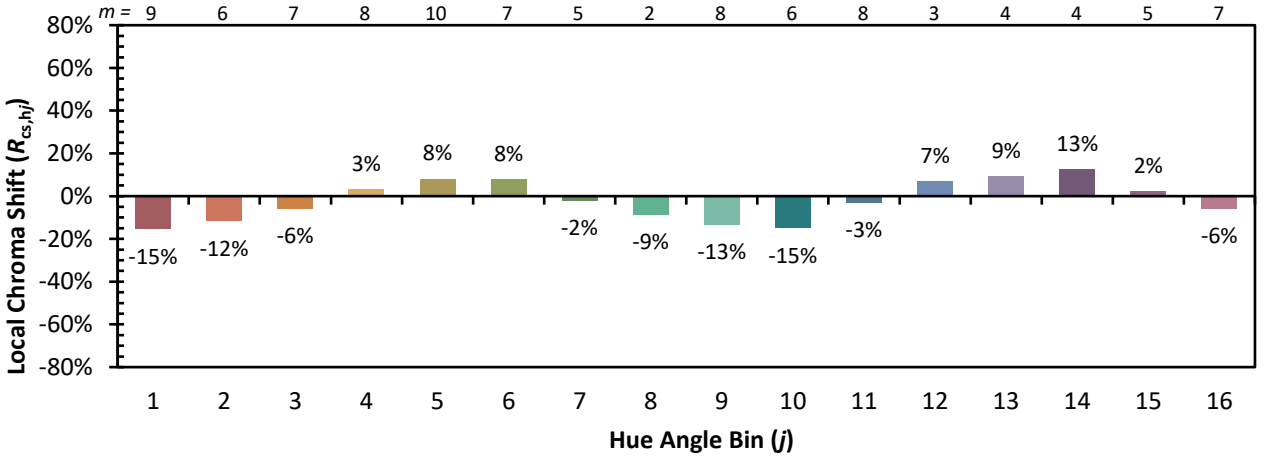
CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82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

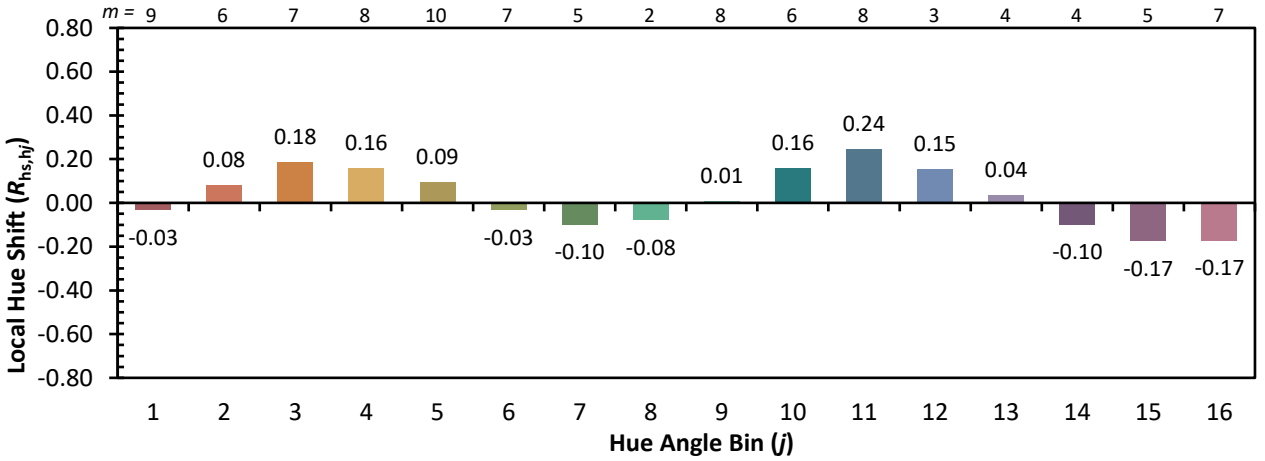


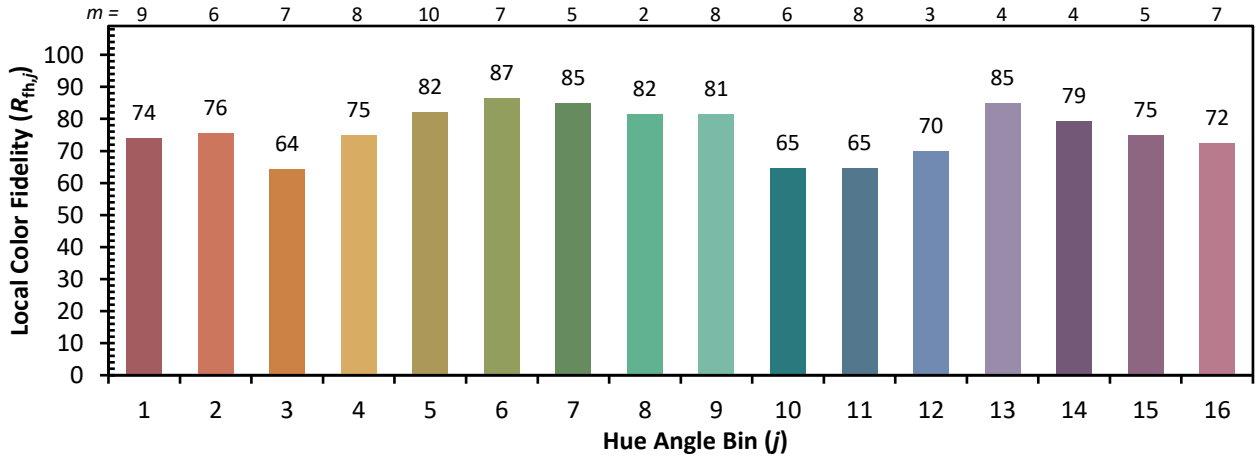
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Color Rendition by Hue-Angle Bin



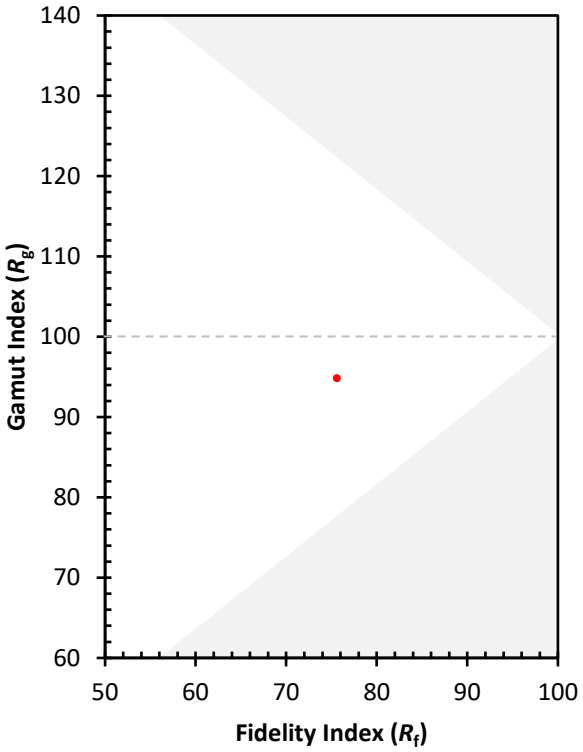


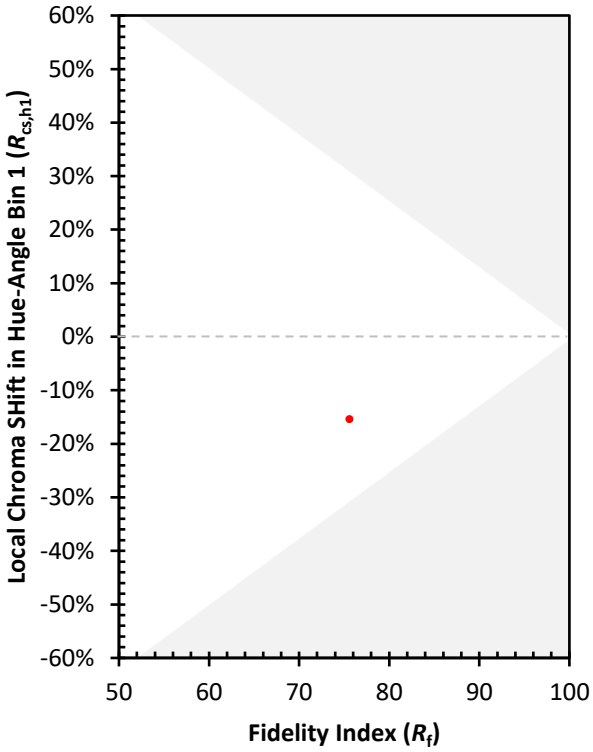


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Measure Comparisons





(END OF REPORT)