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: P821370

Luminaire Tested: **TT-D3-750-24VDC-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:	P821370
	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-D3-750-24VDC-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:	6252.3 lumens
Efficiency:	N/A
Efficacy:	135.9 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U4 - G3

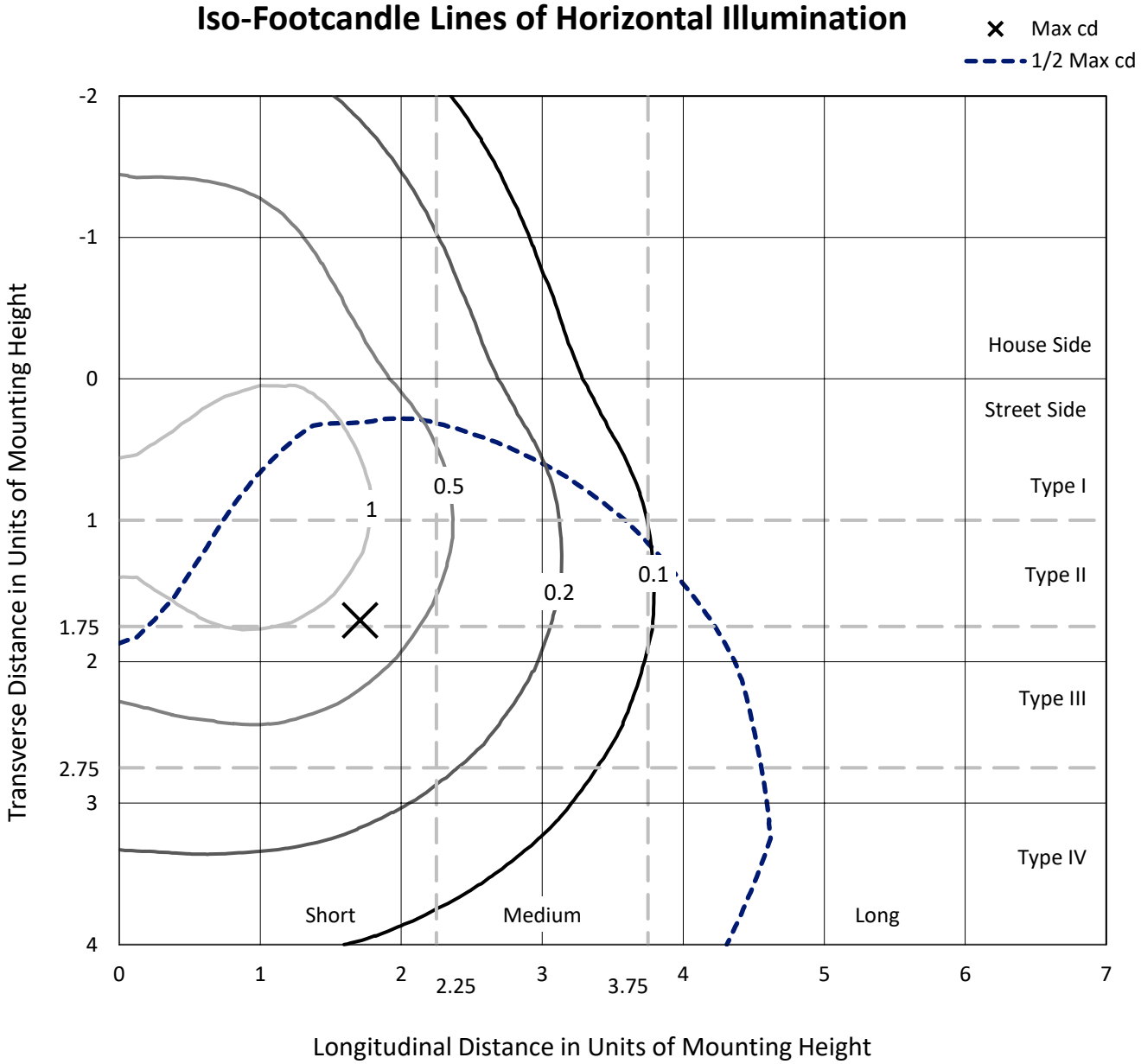
Input Watts (W):	46
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



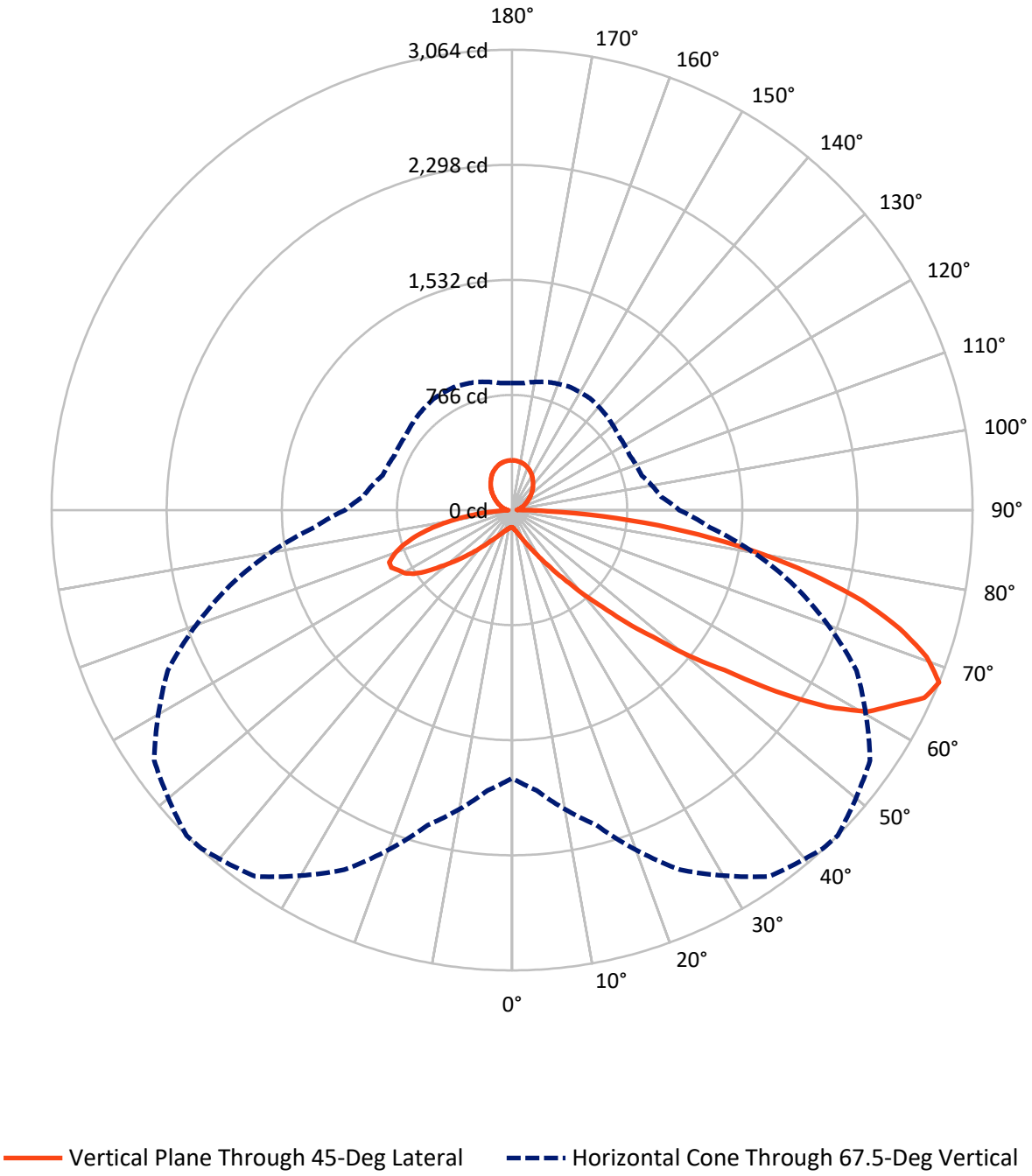
Based on 15 foot mounting height. Maximum calculated value = 1.8 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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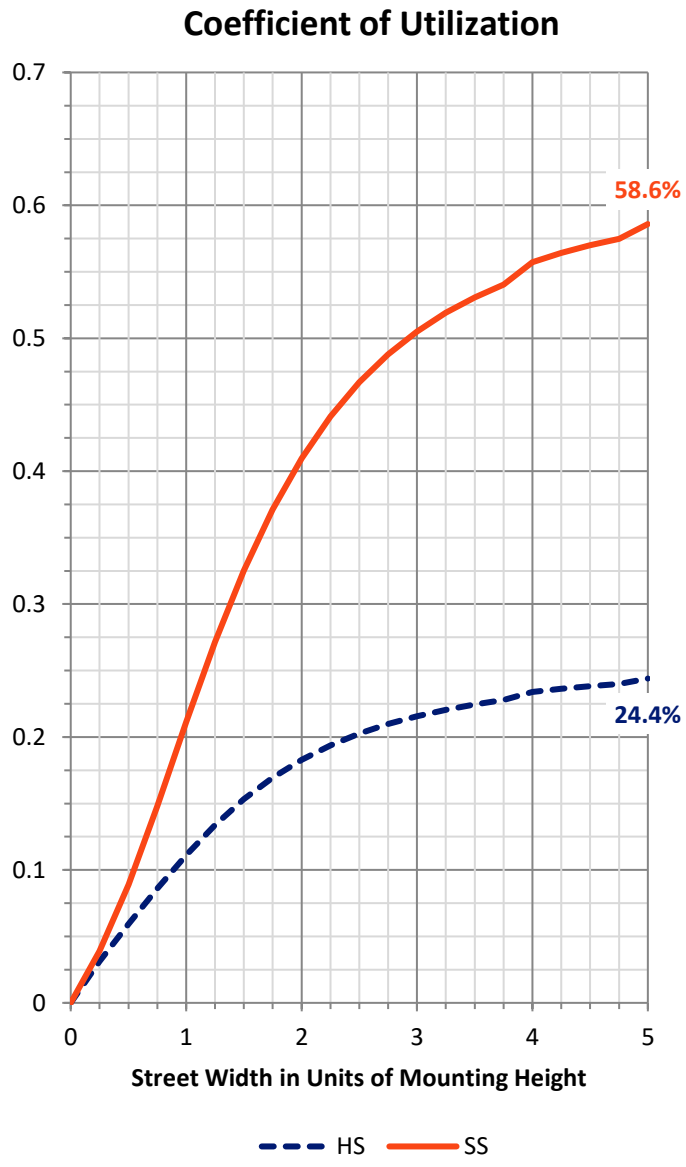
REPORT NUMBER: P821370
CATALOG NUMBER: TT-D3-750-24VDC-DL-UPL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1560.5	450.0	2010.5
	% Fixture	25.0	7.2	32.2
Street Side	Lumens	3791.7	450.0	4241.7
	% Fixture	60.6	7.2	67.8
Total	Lumens	5352.3	900.0	6252.3
	% Fixture	85.6	14.4	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	17.0
60°-70°	1563.0	25.0
70°-80°	1374.4	22.0
80°-90°	422.7	6.8
90°-100°	46.1	0.7
100°-110°	71.4	1.1
110°-120°	99.4	1.6
120°-130°	128.8	2.1
130°-140°	150.0	2.4
140°-150°	152.1	2.4
150°-160°	131.9	2.1
160°-170°	89.0	1.4
170°-180°	31.3	0.5
0°-90°	5352.3	85.6
0°-180°	6252.3	100.0



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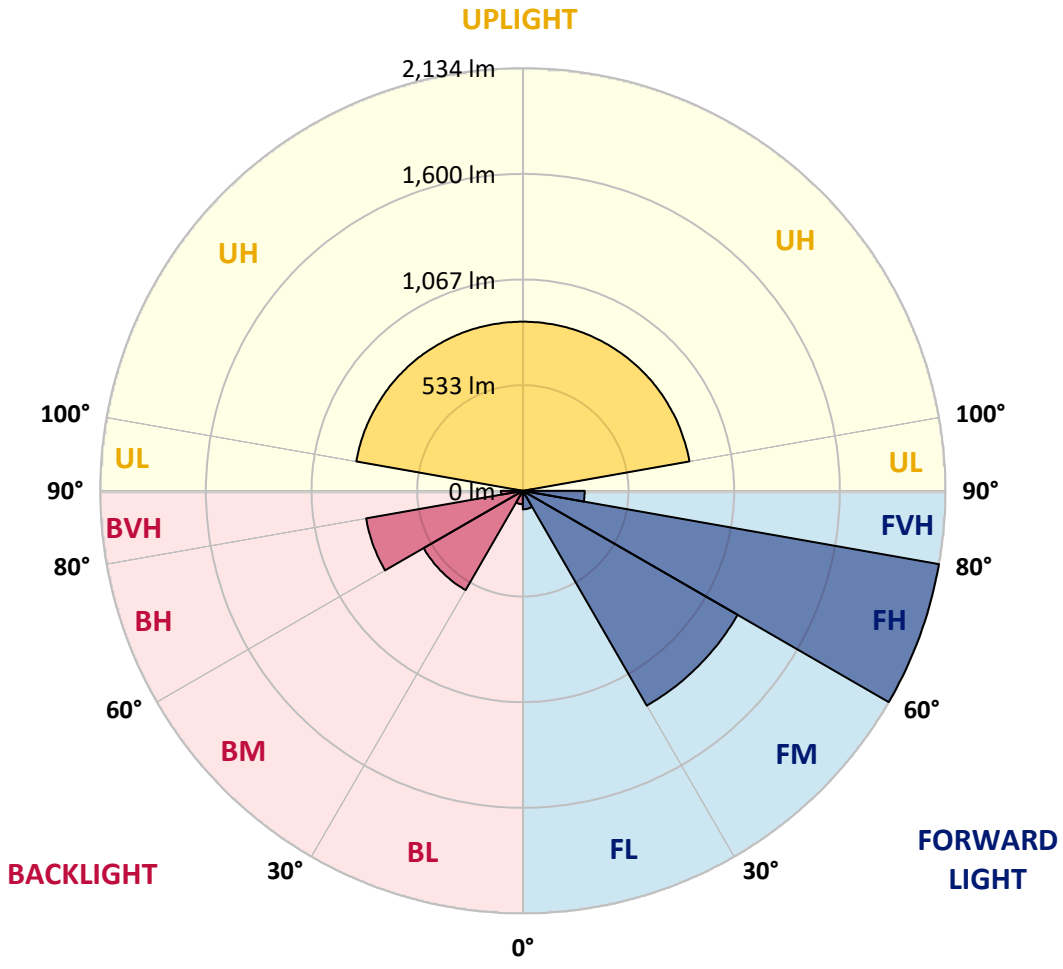
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	93.4	1.5			
FM	(30°-60°)	1252.4	20.0			
FH	(60°-80°)	2133.8	34.1			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°)	46.1	0.7		U2/50	
UH	(100°-180°)	853.9	13.7		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°	32.5	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°	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°	31.5	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: P821370
CATALOG NUMBER: TT-D3-750-24VDC-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

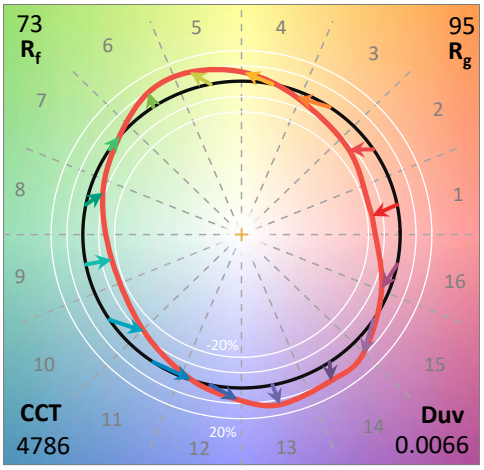
Test Information

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

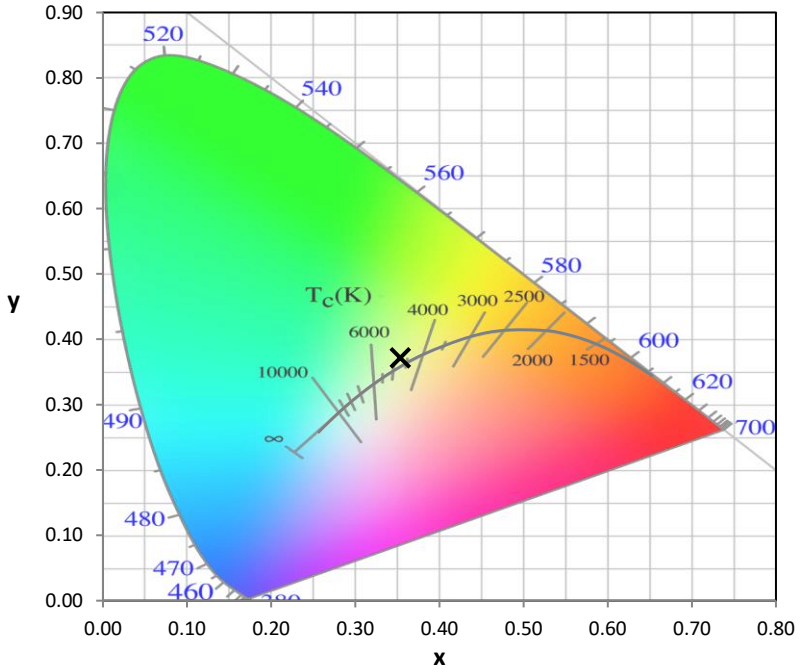
Stabilization Time:	45M
Operation Time:	1H 45M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-6

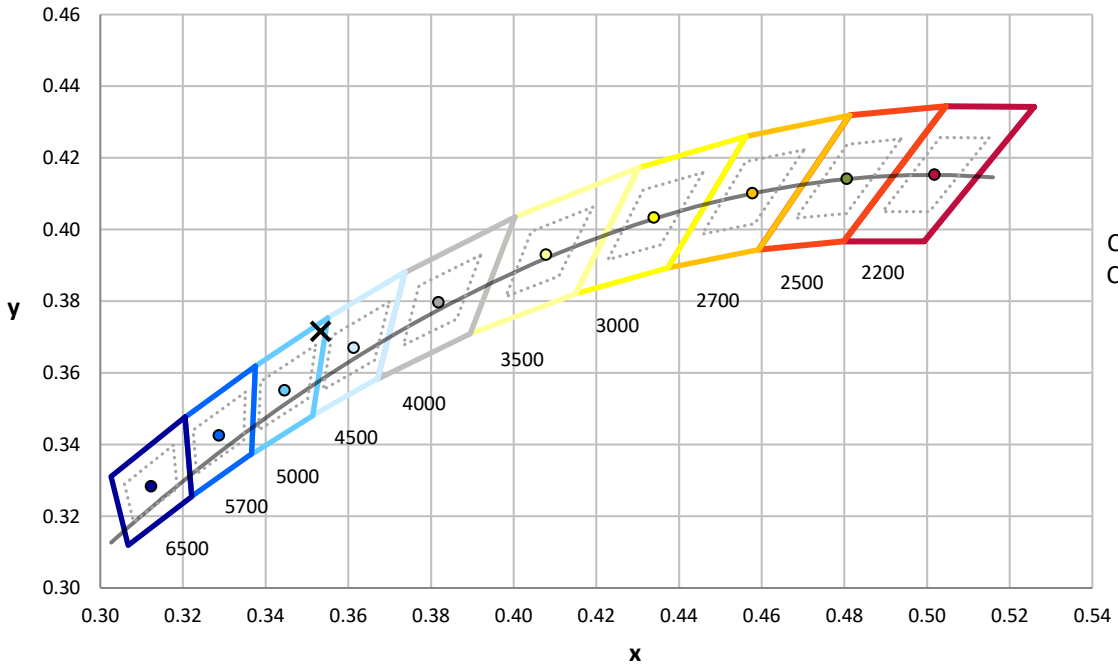
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

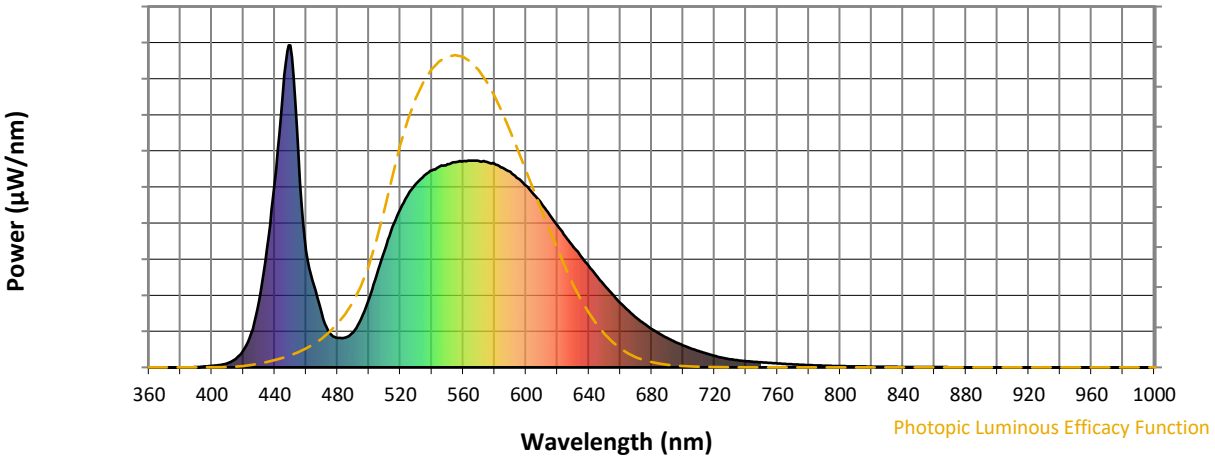


CCT = 4786K
CIE x = 0.3533
CIE y = 0.3716
Duv = 0.0066

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

Photopic Flux vs. Wavelength

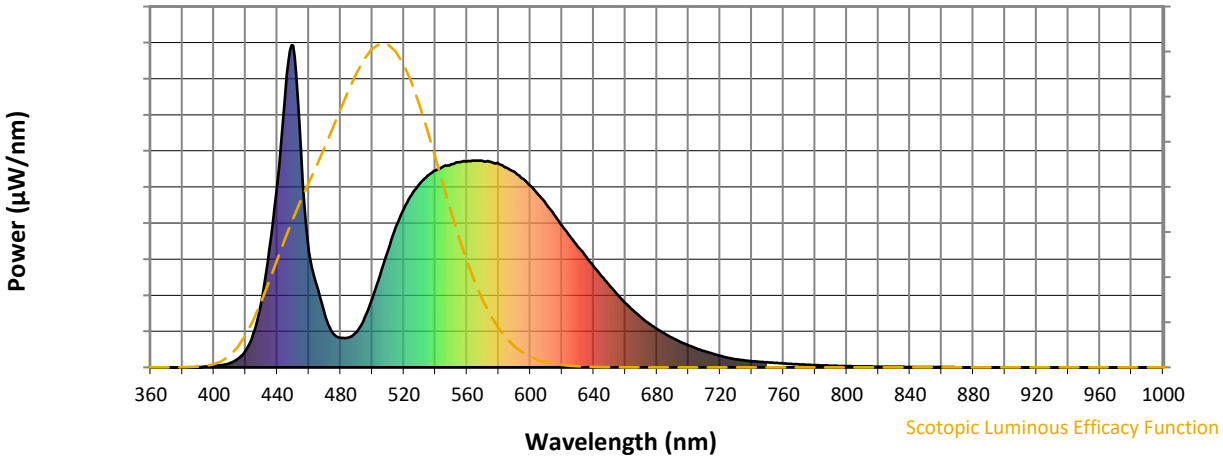


Photopic Lumens: NR

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

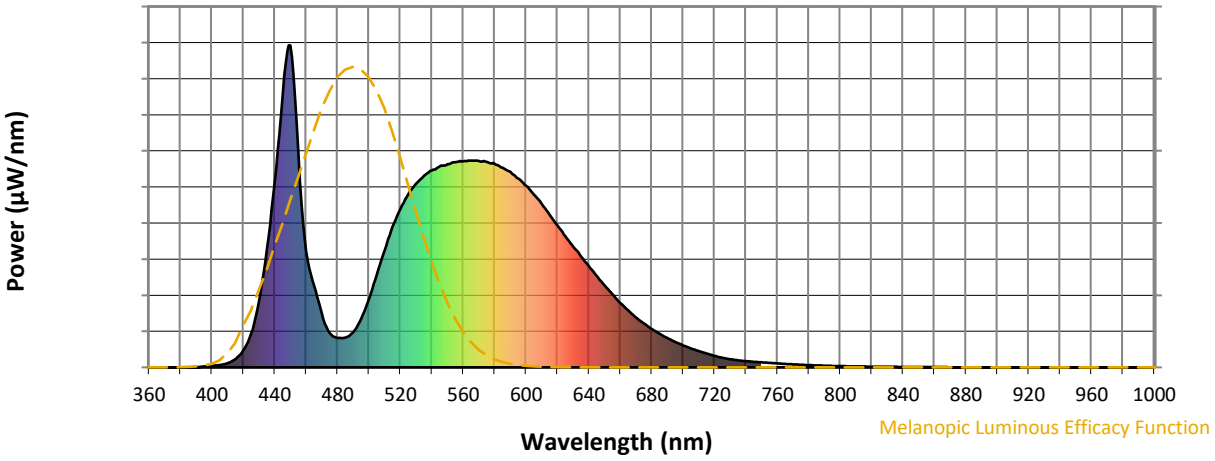


Scotopic Lumens: NR **S/P: 1.69**

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			

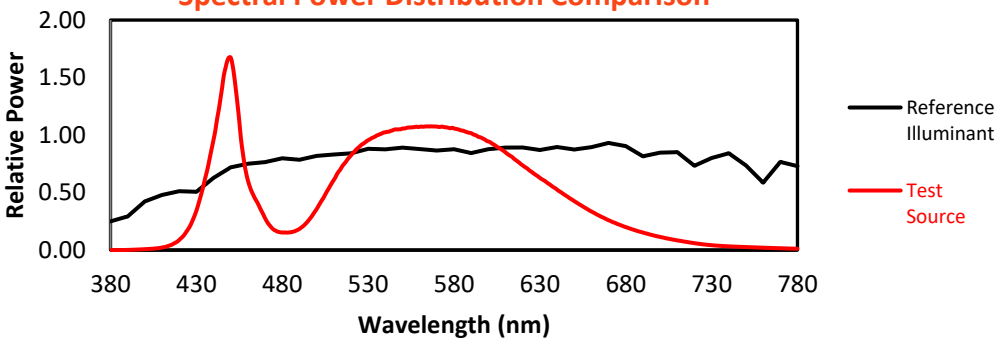
REPORT NUMBER: SP1-2407-176-6

TM-30-18

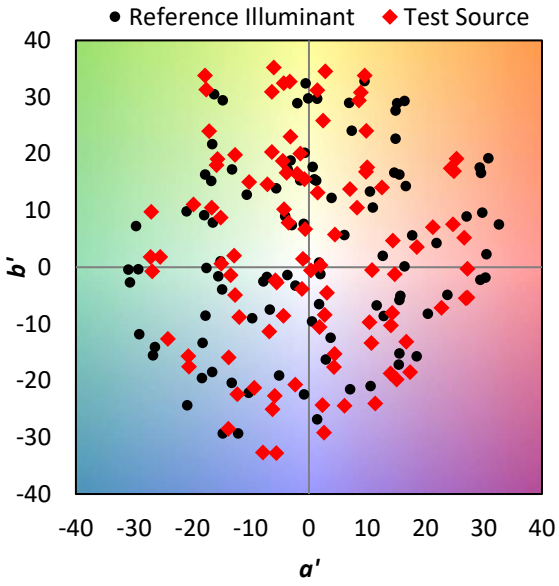
Summary

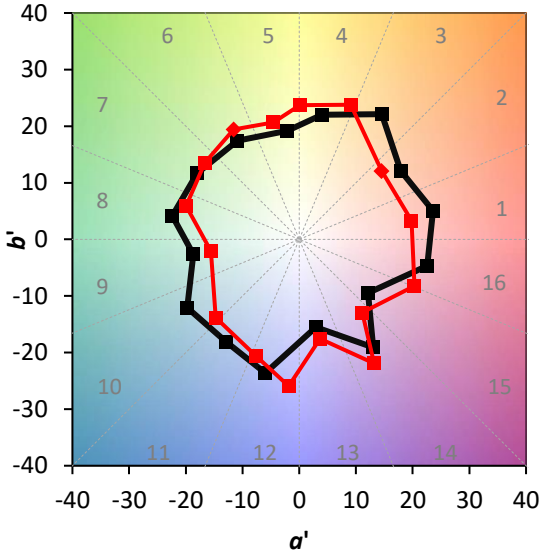
R_f = 73
R_g = 94.6
CIE R_a = 70.9
R_9 = -29.8

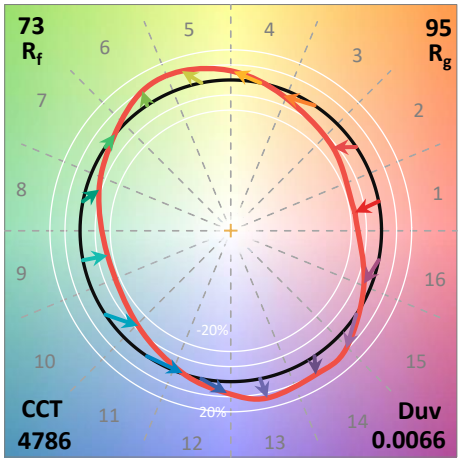
Spectral Power Distribution Comparison

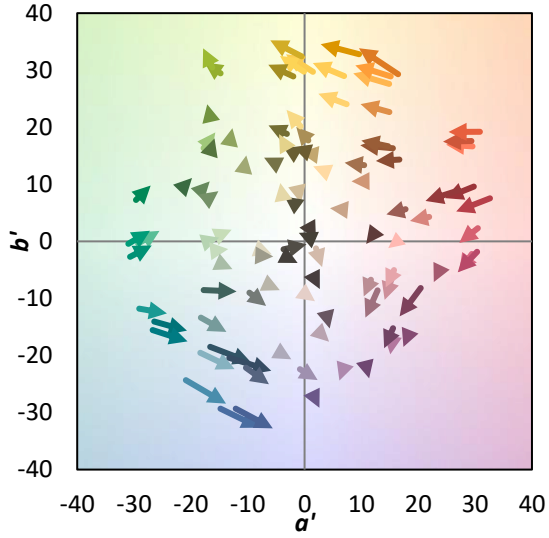


Color Vector Graphics







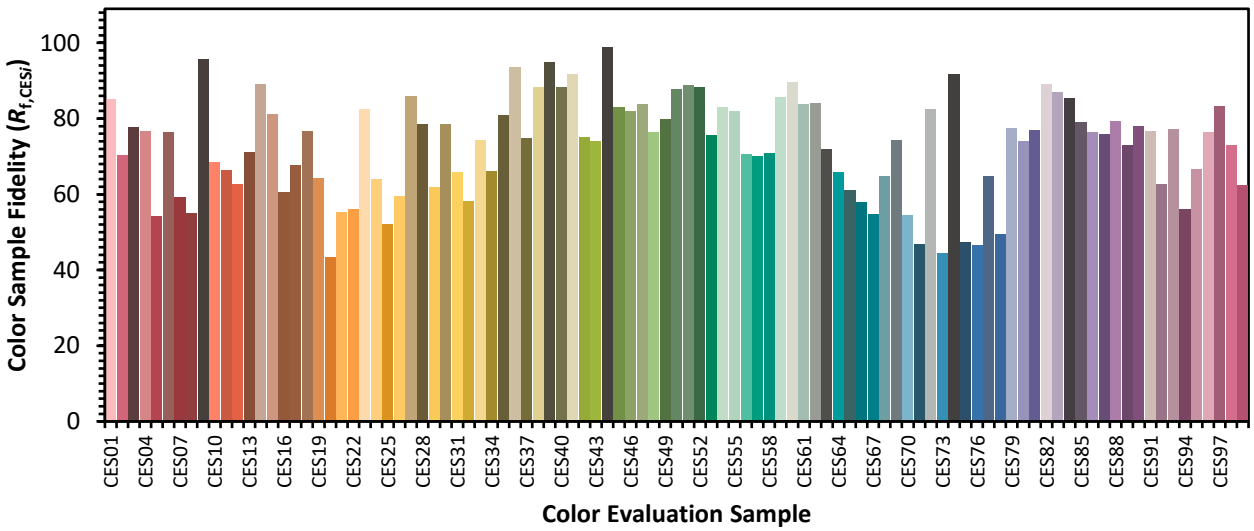


REPORT NUMBER: SP1-2407-176-6

TM-30-18

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

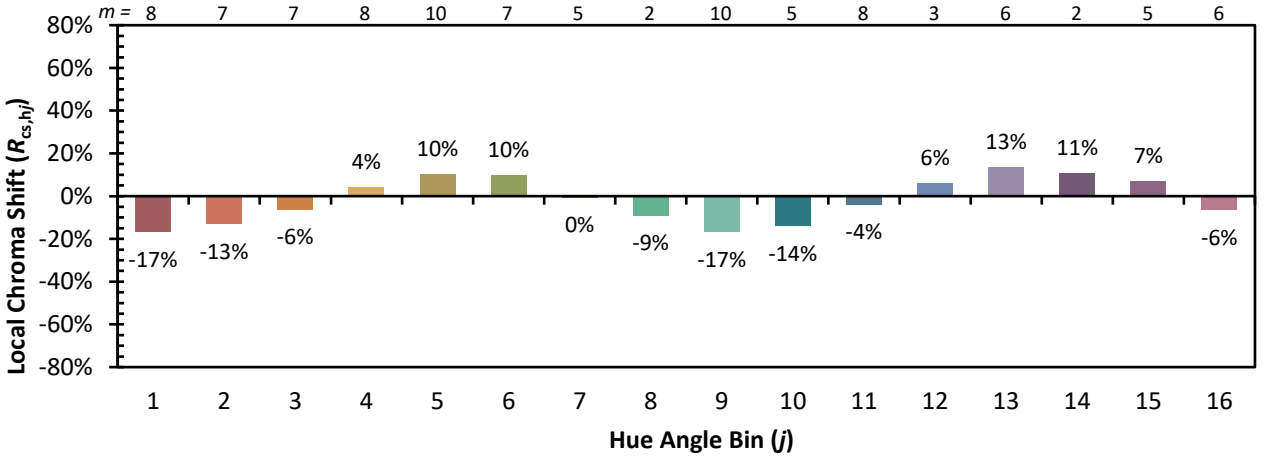
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 46
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 58	CES57 = 70	CES82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

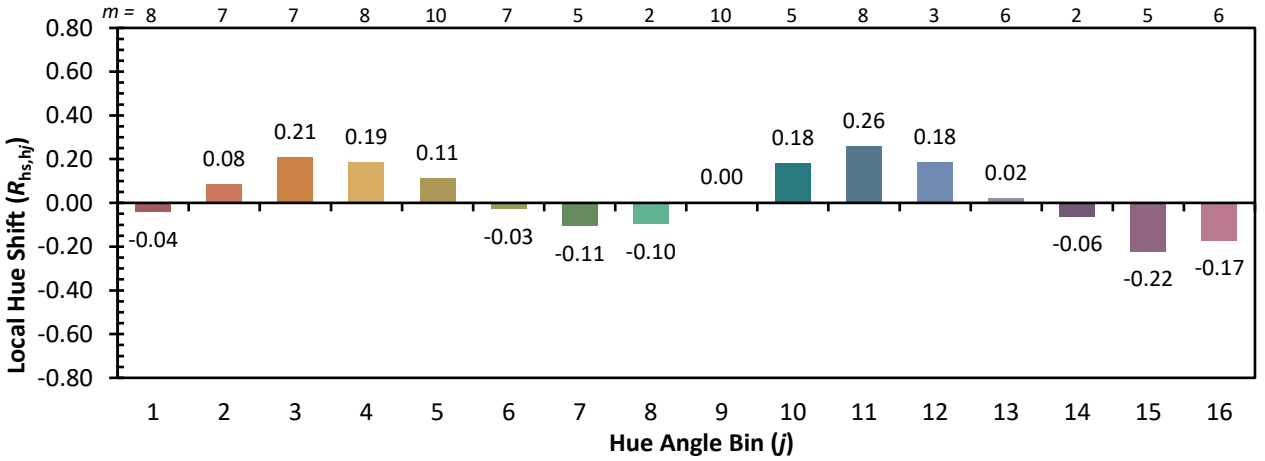


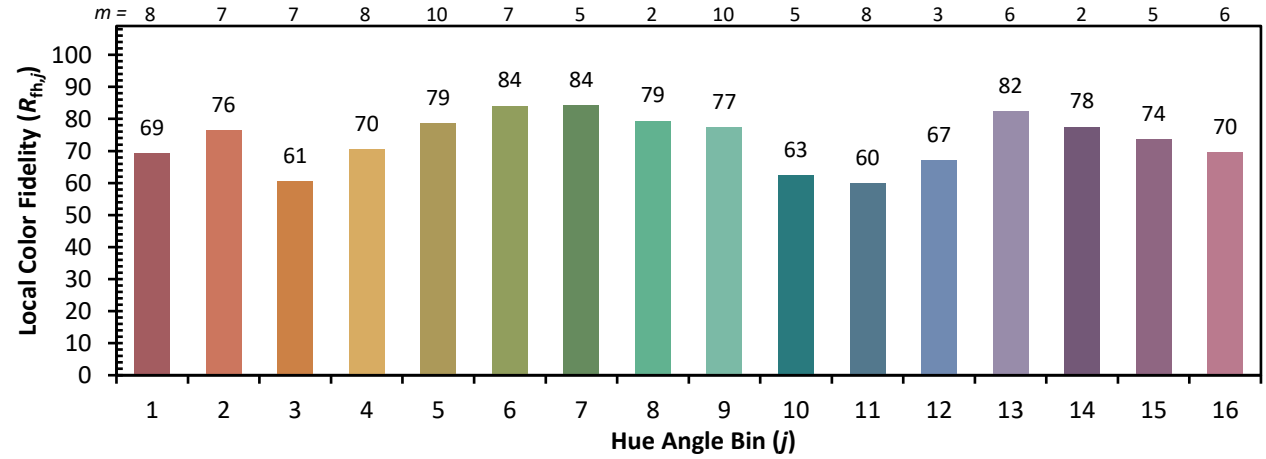
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Color Rendition by Hue-Angle Bin



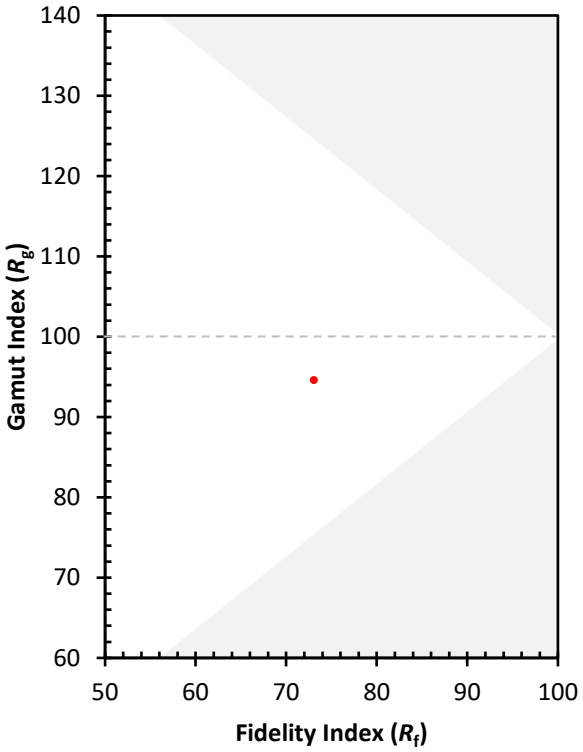


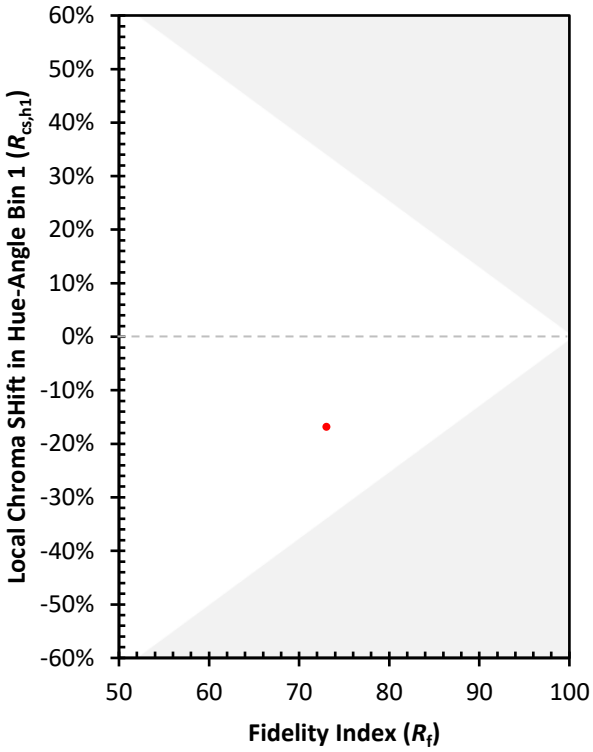


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Measure Comparisons





(END OF REPORT)