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: P821533

Luminaire Tested: **TT-D2-740-12VDC-DL-UPL**

Issue Date: 7/23/2020

Report Generated By 670245763

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

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821533
	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-D2-740-12VDC-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:	5364.7 lumens
Efficiency:	N/A
Efficacy:	141.2 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U4 - G3

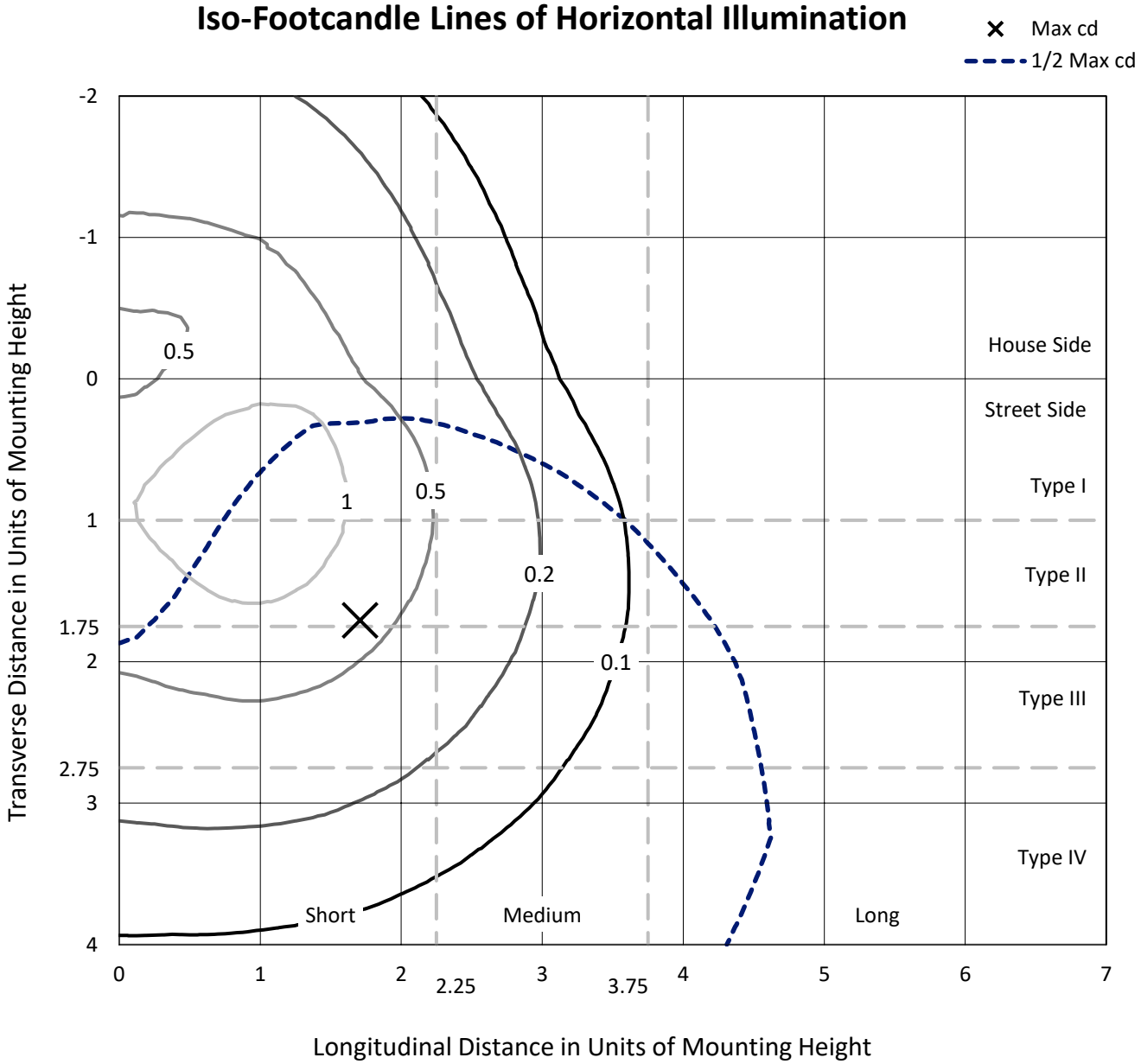
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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

Scaled Data Report

REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

Iso-Footcandle Lines of Horizontal Illumination



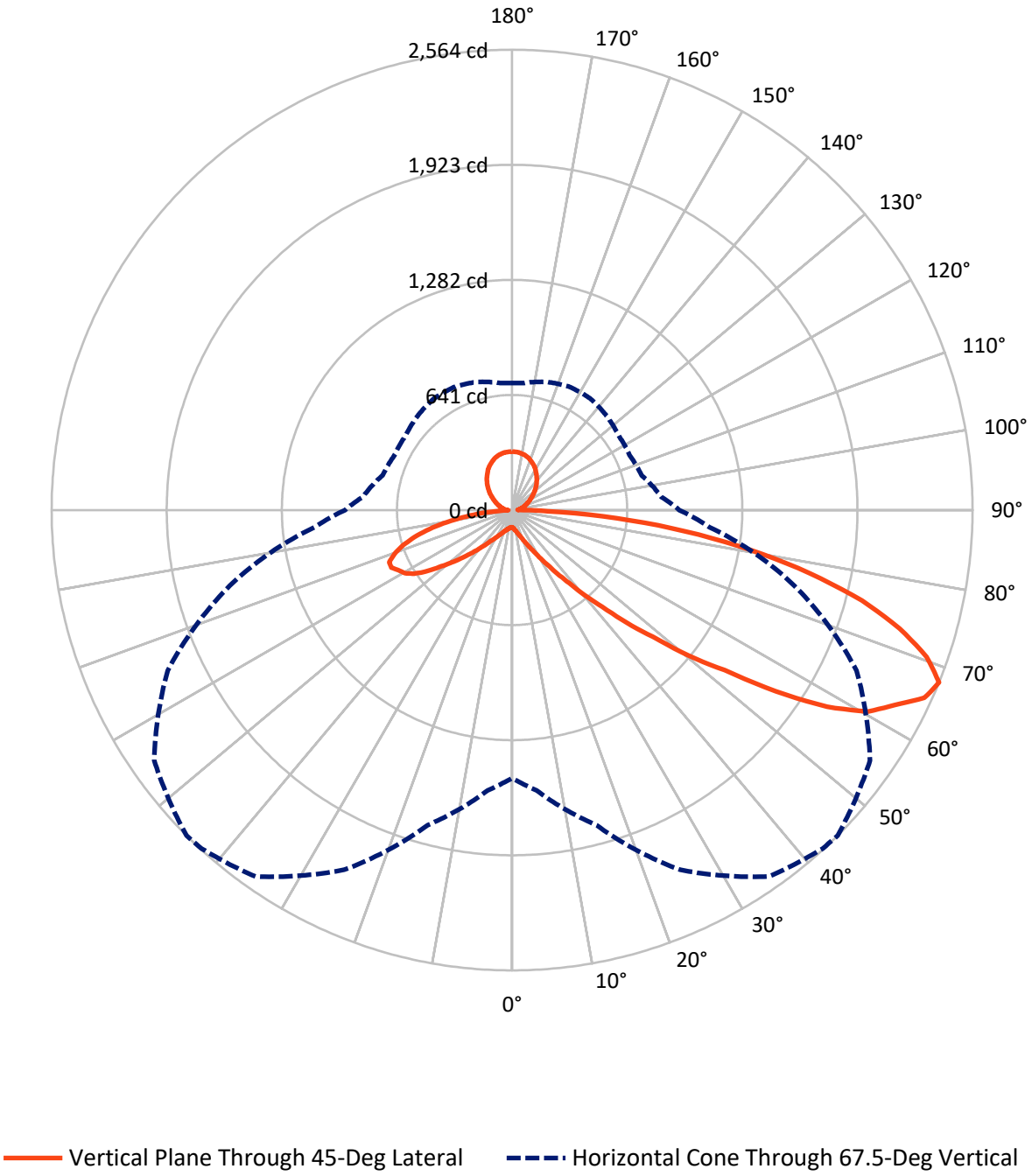
Based on 15 foot mounting height. Maximum calculated value = 1.5 fc
Type IV - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

Luminous Intensity Polar Plot



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

Scaled Data Report

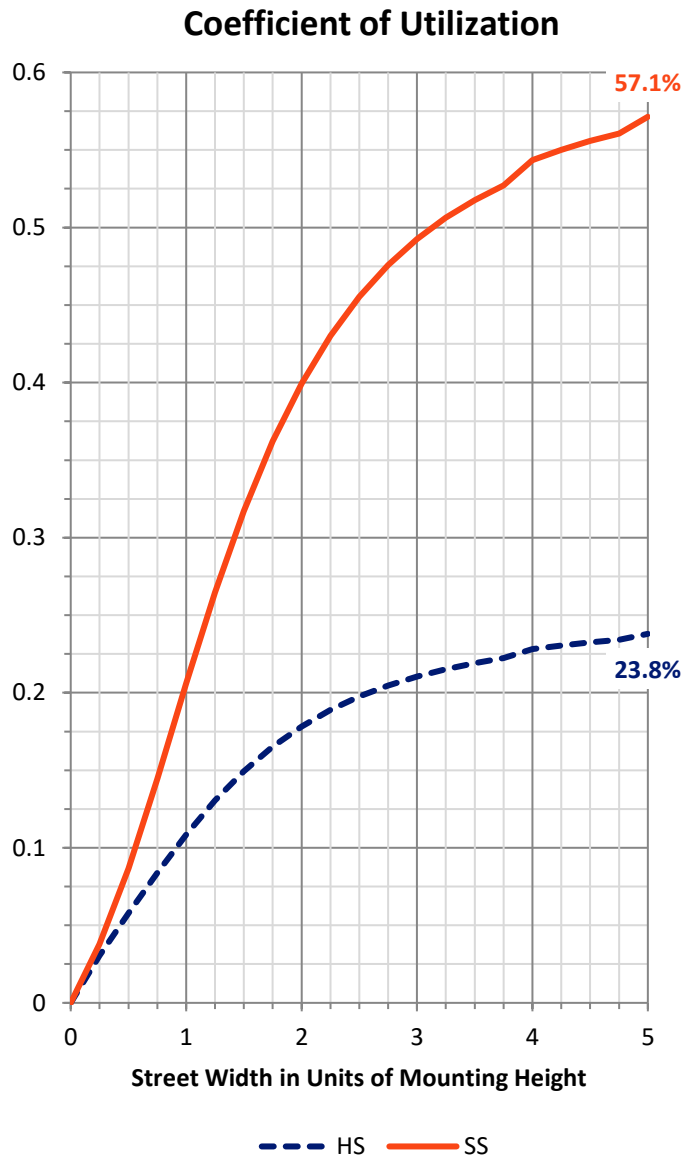
REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1306.1	442.7	1748.9
	% Fixture	24.3	8.3	32.6
Street Side	Lumens	3173.1	442.7	3615.8
	% Fixture	59.1	8.3	67.4
Total	Lumens	4479.2	885.5	5364.7
	% Fixture	83.5	16.5	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	8.3
50°-60°	890.5	16.6
60°-70°	1307.9	24.4
70°-80°	1150.0	21.4
80°-90°	354.4	6.6
90°-100°	45.4	0.8
100°-110°	70.3	1.3
110°-120°	97.7	1.8
120°-130°	126.6	2.4
130°-140°	147.6	2.8
140°-150°	149.5	2.8
150°-160°	129.8	2.4
160°-170°	87.7	1.6
170°-180°	30.8	0.6
0°-90°	4479.2	83.5
0°-180°	5364.7	100.0



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

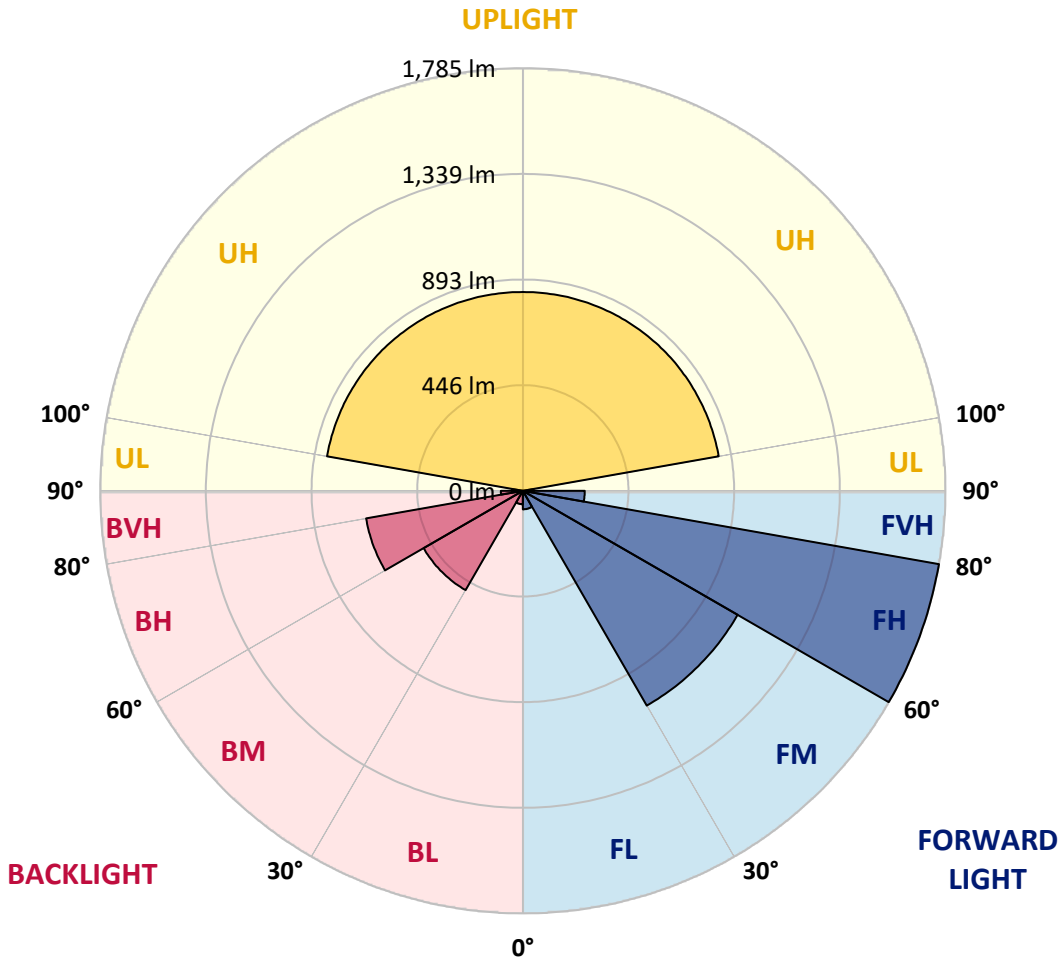
Scaled Data Report

REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

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	33.3			G1/1800
FVH	(80°-90°)	261.5	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°)	45.4	0.8		U2/50	
UH	(100°-180°)	840.1	15.7		U4/1000	

BUG Rating: B2-U4-G3
Type IV Short



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

Scaled Data Report

REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

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°	32.0	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

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

Scaled Data Report

REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

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

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

Scaled Data Report

REPORT NUMBER: P821533
CATALOG NUMBER: TT-D2-740-12VDC-DL-UPL

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°	31.0	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: P821533
CATALOG NUMBER: TT-D2-740-12VDC-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

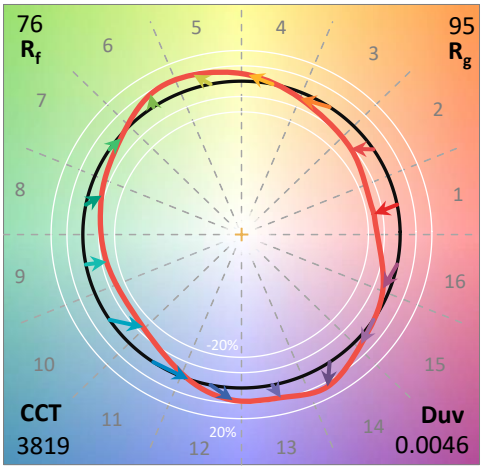
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

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

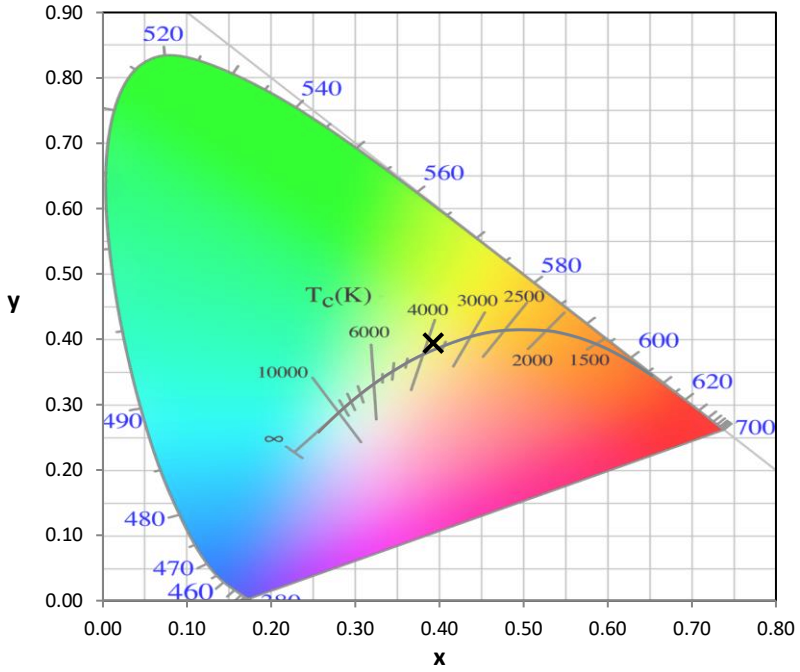
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-5

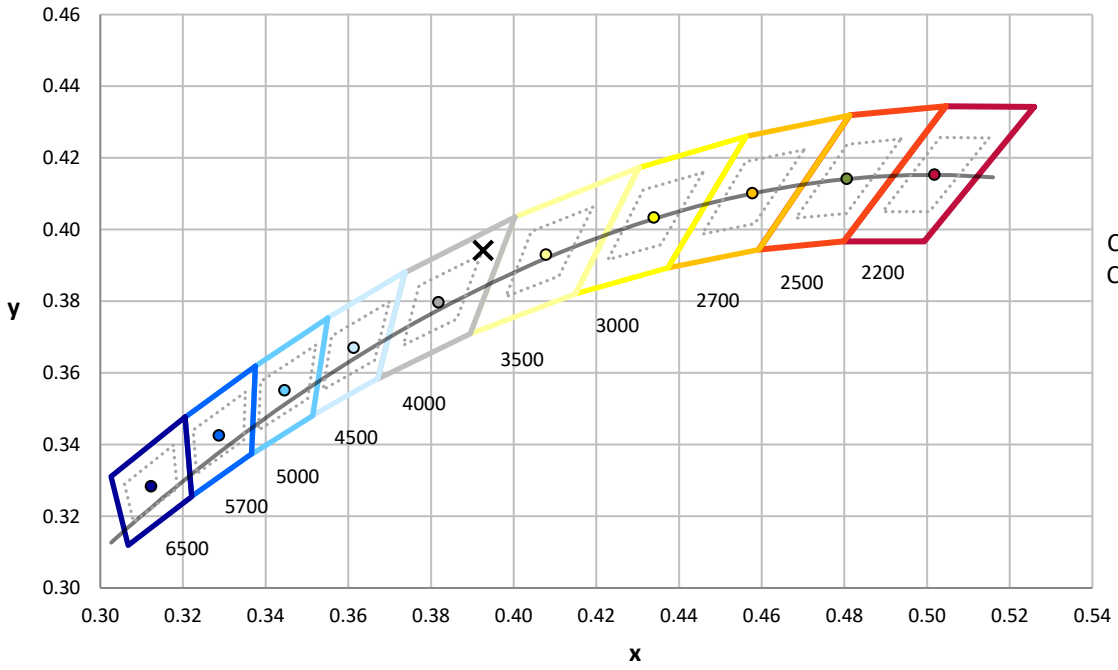
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

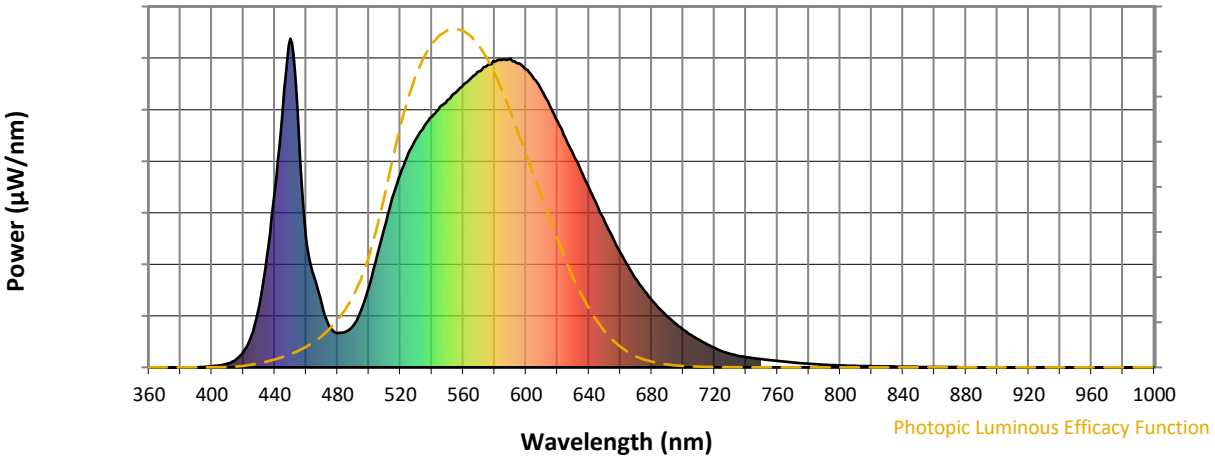


CCT = 3819K
CIE x = 0.3926
CIE y = 0.3942
Duv = 0.0046

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-5

Photopic Flux vs. Wavelength

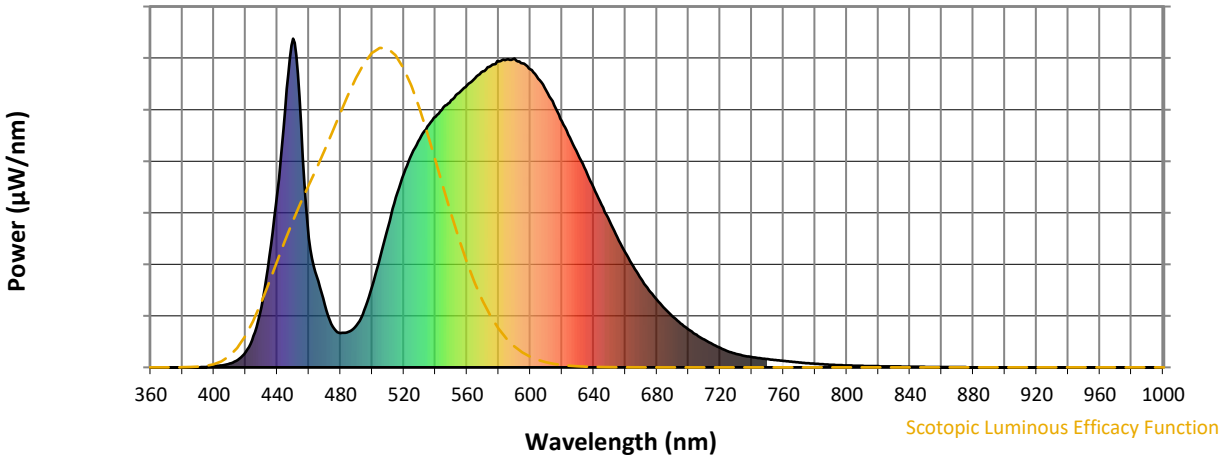


Photopic Lumens: NR

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

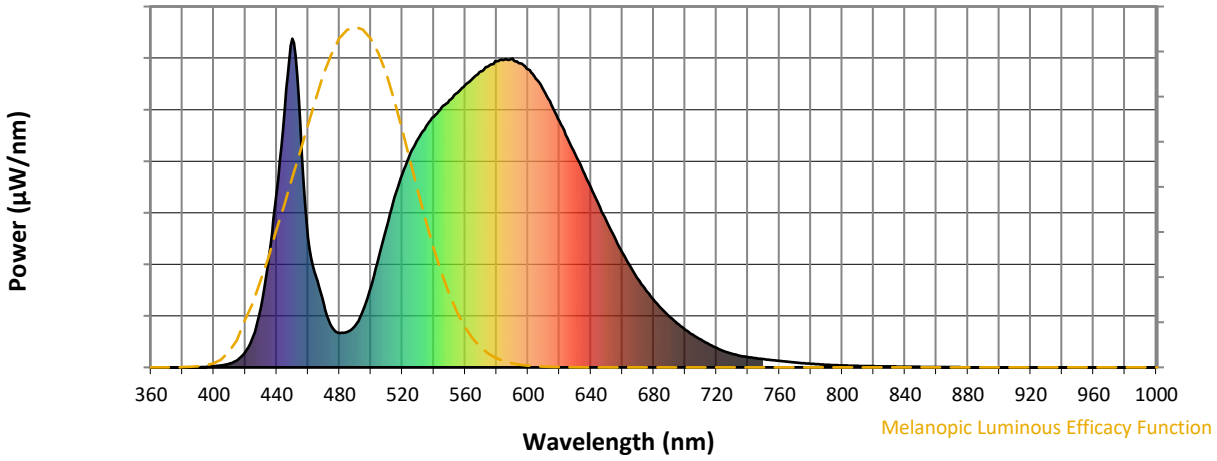


Scotopic Lumens: NR **S/P: 1.45**

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			

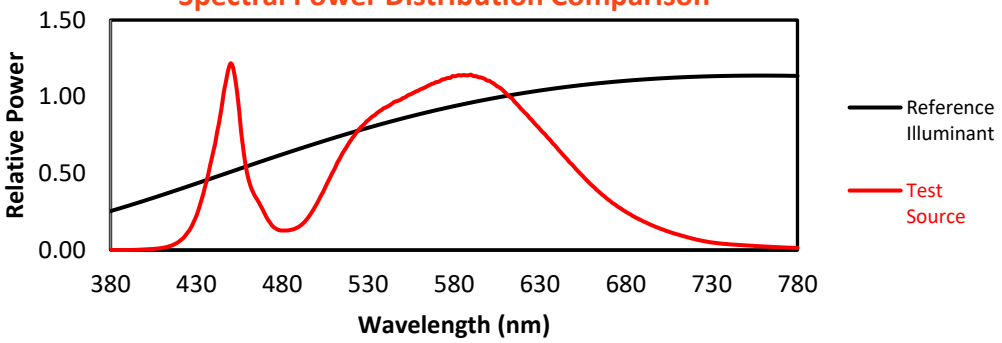
REPORT NUMBER: SP1-2407-176-5

TM-30-18

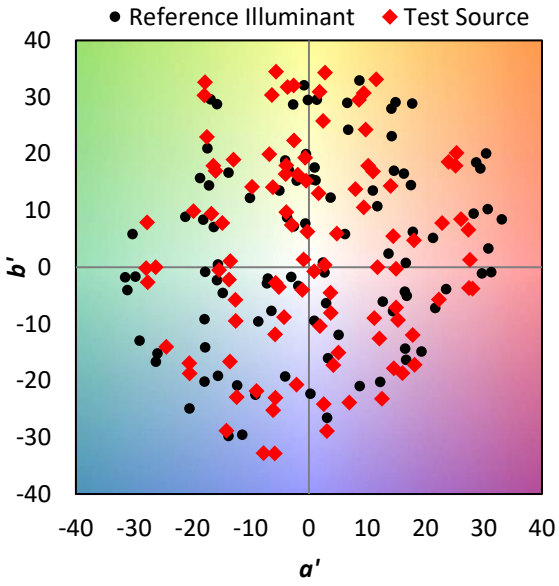
Summary

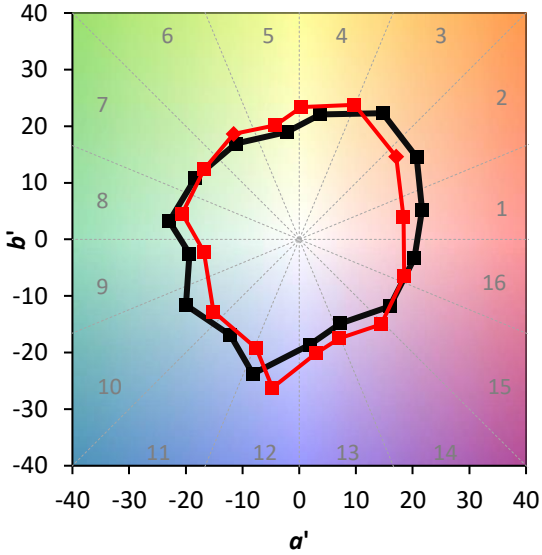
R_f = 75.6
R_g = 94.8
CIE R_a = 72.9
R_9 = -21.5

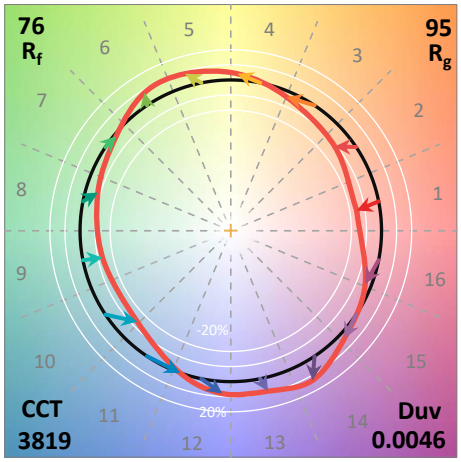
Spectral Power Distribution Comparison

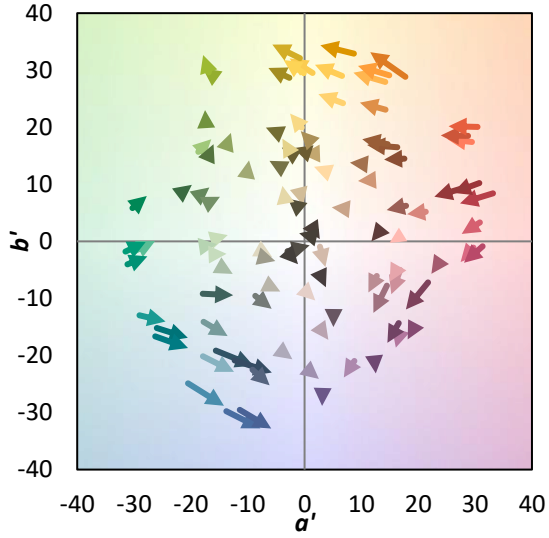


Color Vector Graphics







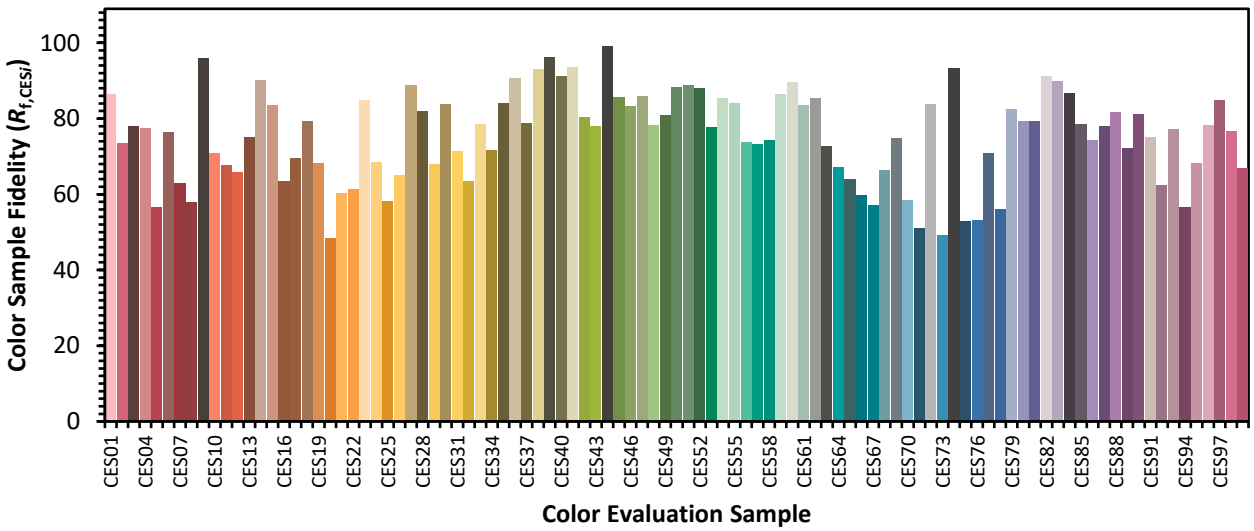


REPORT NUMBER: SP1-2407-176-5

TM-30-18

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

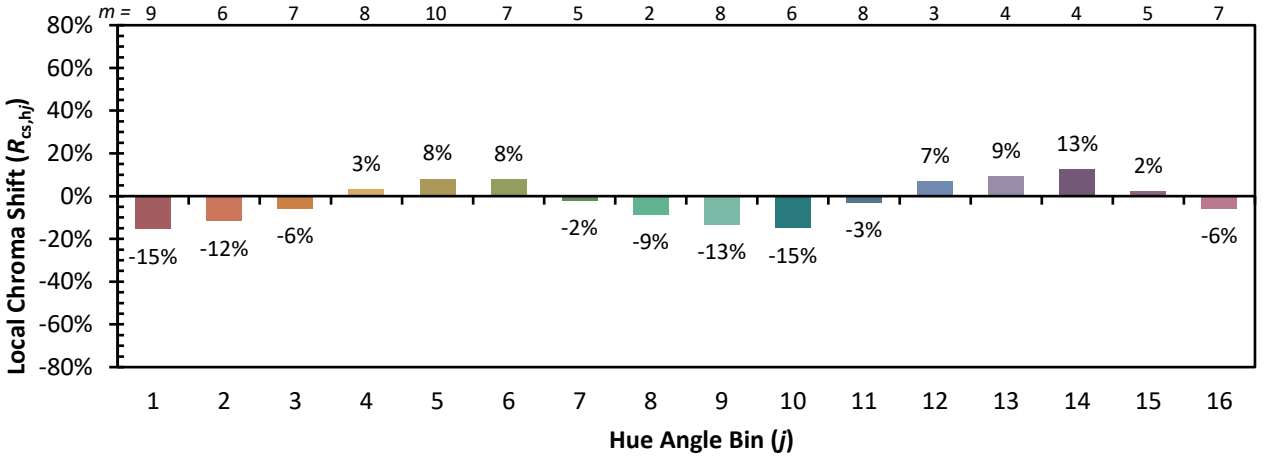
CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82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

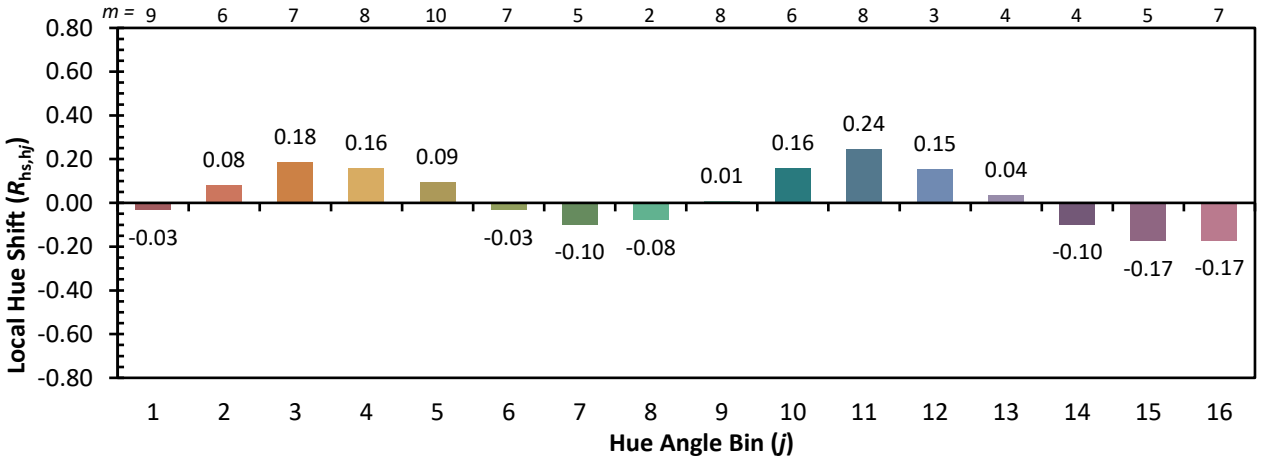


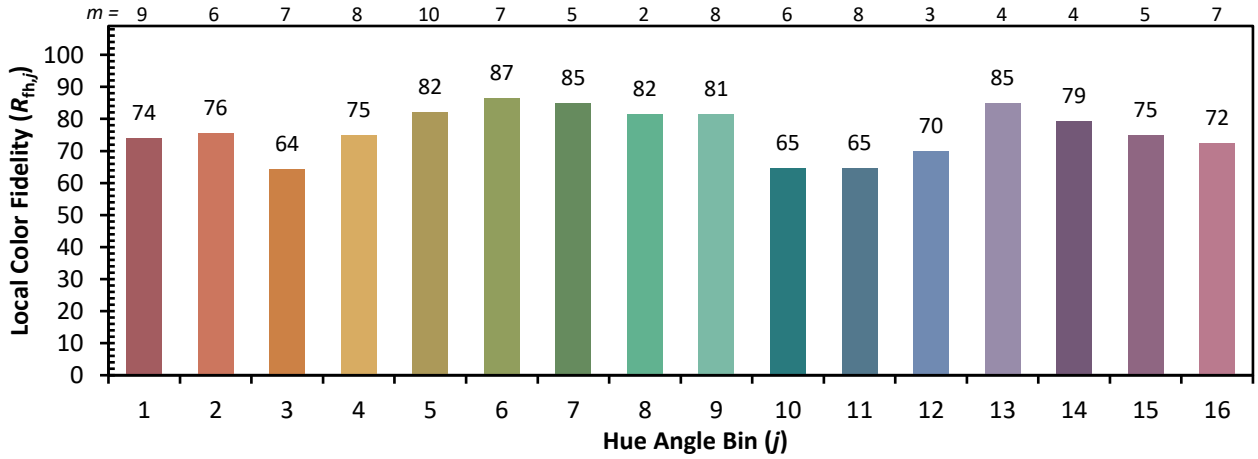
REPORT NUMBER: SP1-2407-176-5

TM-30-18

Color Rendition by Hue-Angle Bin



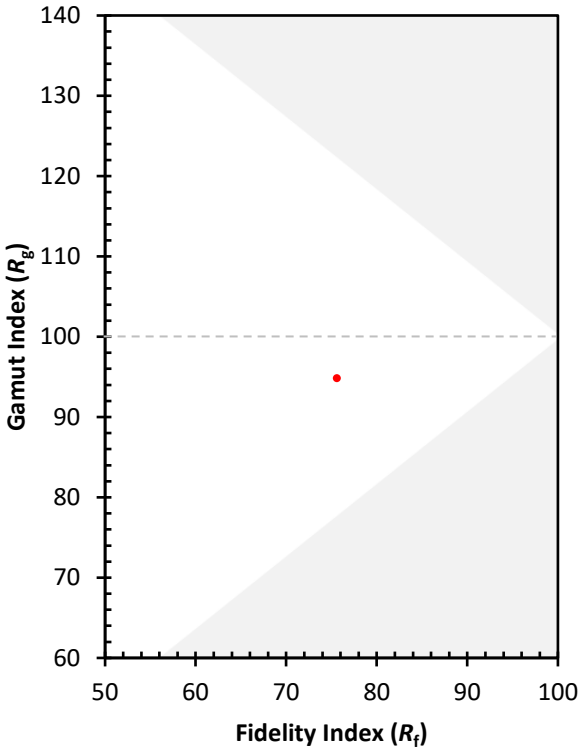


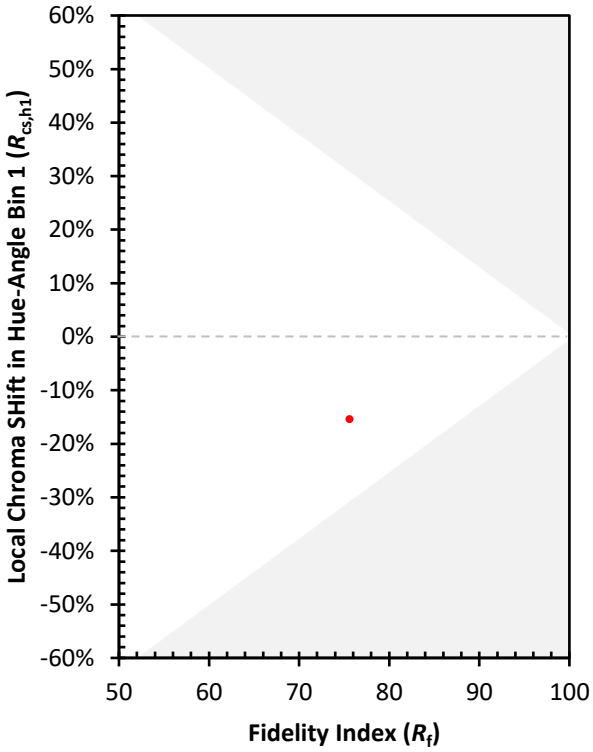


REPORT NUMBER: SP1-2407-176-5

TM-30-18

Measure Comparisons





(END OF REPORT)