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: P821385

Luminaire Tested: **TT-D4-750-24VDC-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:	P821385
	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-D4-750-24VDC-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:	7218.4 lumens
Efficiency:	N/A
Efficacy:	126.6 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U4 - G3

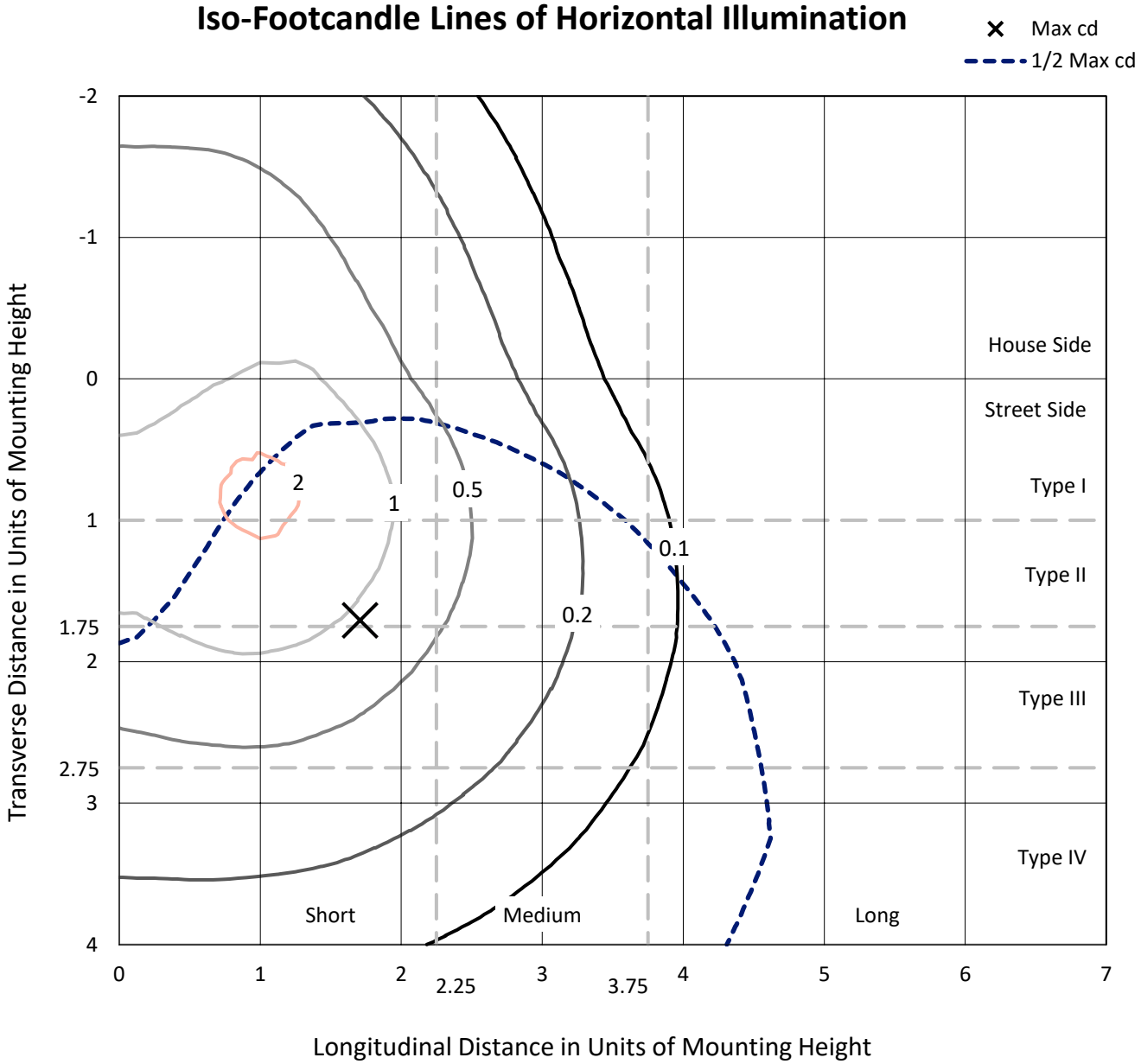
Input Watts (W):	57
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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

Scaled Data Report

REPORT NUMBER: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

Iso-Footcandle Lines of Horizontal Illumination



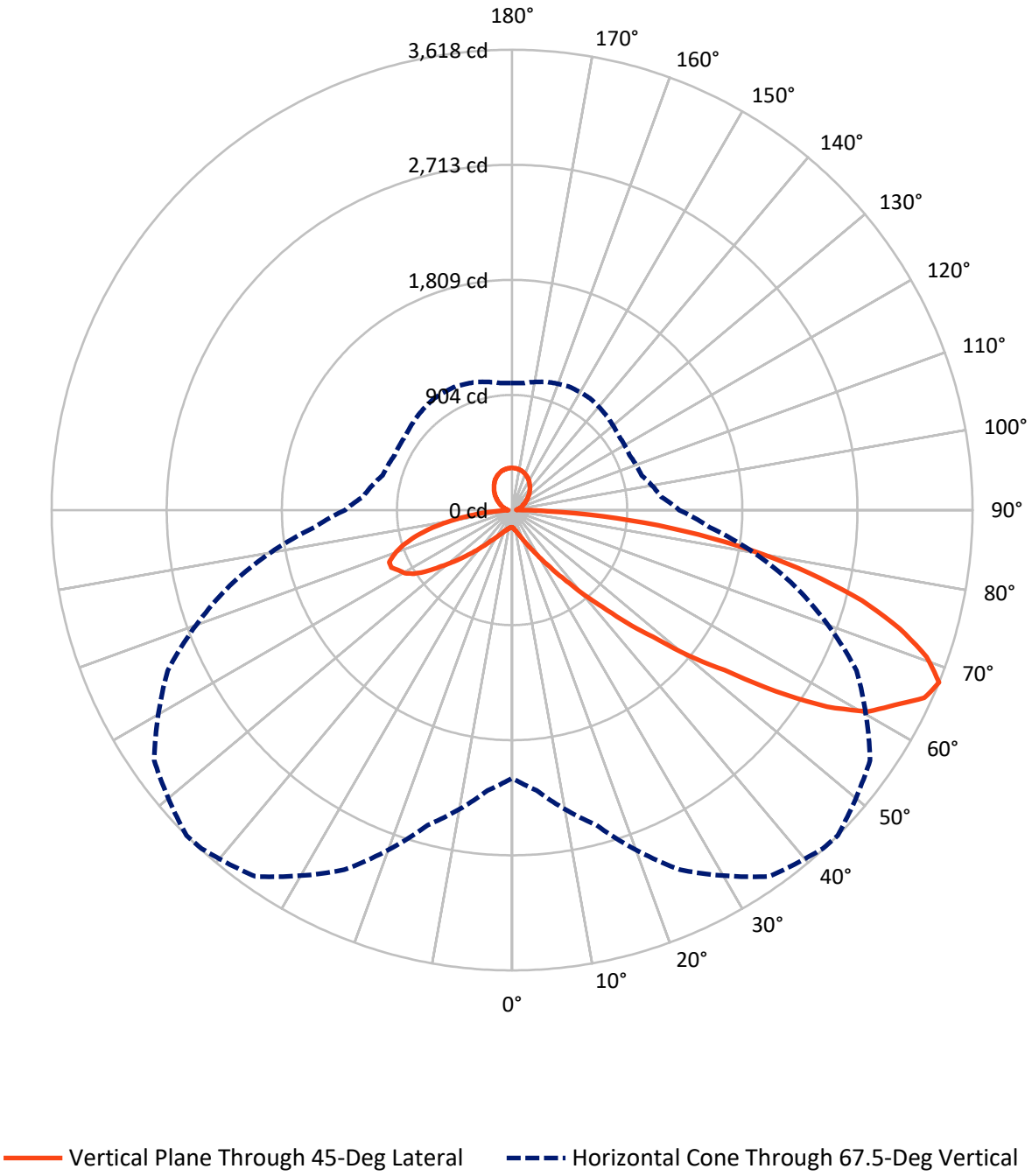
Based on 15 foot mounting height. Maximum calculated value = 2.1 fc
Type IV - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

Luminous Intensity Polar Plot



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

Scaled Data Report

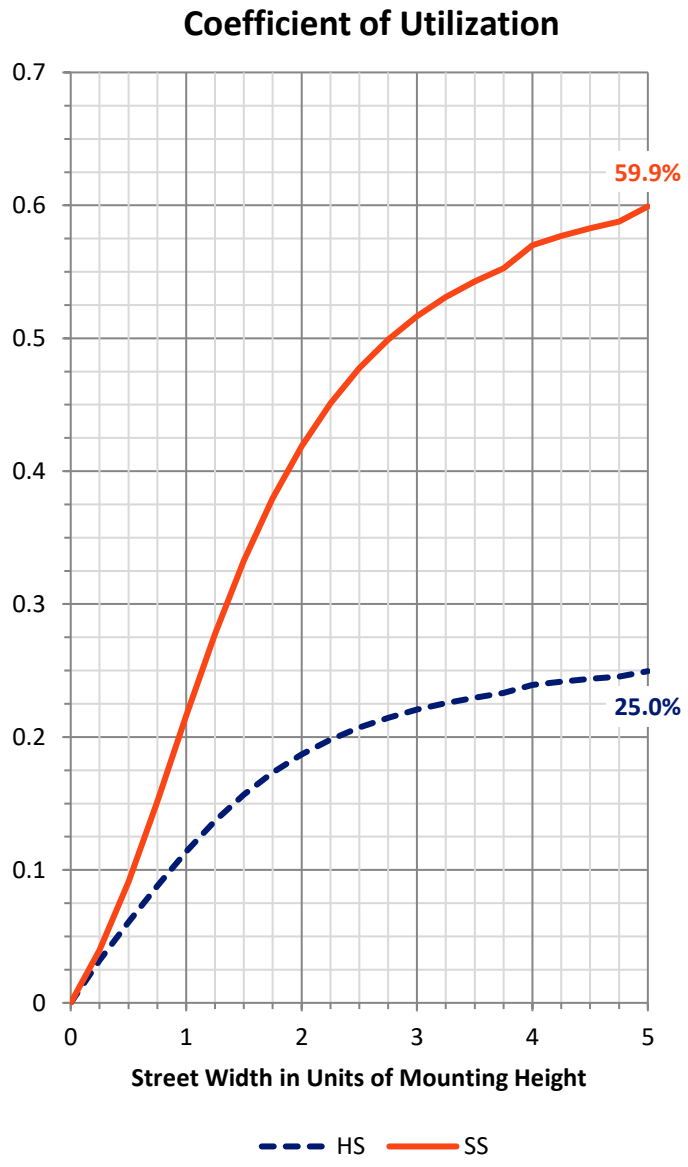
REPORT NUMBER: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1842.1	450.0	2292.1
	% Fixture	25.5	6.2	31.8
Street Side	Lumens	4476.3	450.0	4926.3
	% Fixture	62.0	6.2	68.2
Total	Lumens	6318.3	900.0	7218.4
	% Fixture	87.5	12.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.1	0.2
10°-20°	52.4	0.7
20°-30°	123.9	1.7
30°-40°	280.3	3.9
40°-50°	625.0	8.7
50°-60°	1256.4	17.4
60°-70°	1845.3	25.6
70°-80°	1622.7	22.5
80°-90°	498.3	6.9
90°-100°	46.1	0.6
100°-110°	71.4	1.0
110°-120°	99.4	1.4
120°-130°	128.8	1.8
130°-140°	150.0	2.1
140°-150°	152.1	2.1
150°-160°	131.9	1.8
160°-170°	89.0	1.2
170°-180°	31.3	0.4
0°-90°	6318.3	87.5
0°-180°	7218.4	100.0



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

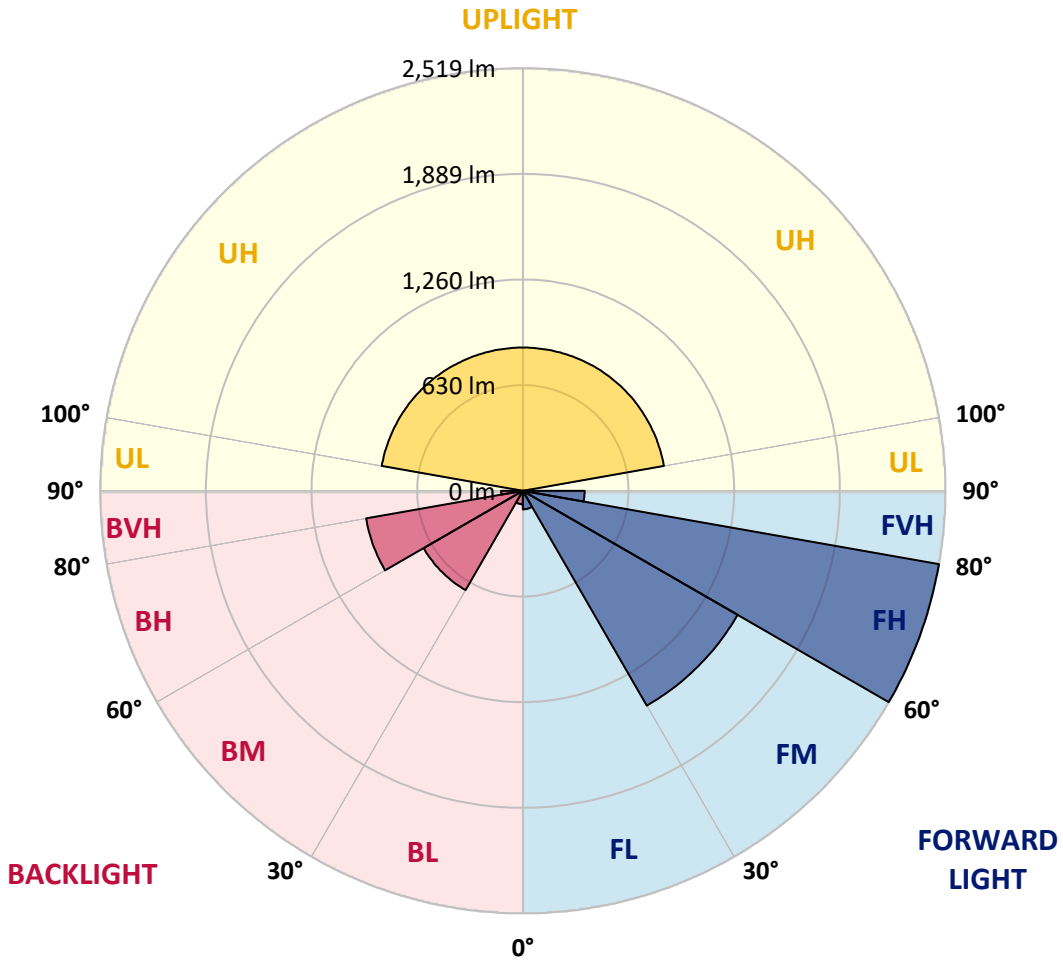
Scaled Data Report

REPORT NUMBER: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	110.3	1.5			
FM	(30°-60°)	1478.6	20.5			
FH	(60°-80°)	2519.2	34.9			G2/5000
FVH	(80°-90°)	368.2	5.1			G3/500
BL	(0°-30°)	80.1	1.1	B0/110		
BM	(30°-60°)	683.1	9.5	B1/1000		
BH	(60°-80°)	948.8	13.1	B2/1000		G2/1000
BVH	(80°-90°)	130.1	1.8			G2/225
UL	(90°-100°)	46.1	0.6		U2/50	
UH	(100°-180°)	853.9	11.8		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: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42.5°	45°	55°	65°	75°	85°
0°	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0
2.5°	142.9	141.7	141.7	141.7	140.5	140.5	140.5	140.5	139.3	139.3	139.3
5°	151.1	149.9	151.1	148.8	147.6	147.6	146.4	146.4	145.2	144.0	142.9
7.5°	162.9	161.8	161.8	159.4	158.2	157.0	157.0	154.7	153.5	151.1	148.8
10°	175.9	175.9	174.7	173.6	171.2	168.8	168.8	165.3	164.1	160.6	157.0
12.5°	191.3	191.3	191.3	188.9	186.5	185.4	183.0	180.6	177.1	171.2	167.7
15°	210.2	210.2	210.2	207.8	205.4	203.1	201.9	197.2	191.3	185.4	178.3
17.5°	233.8	231.4	231.4	229.0	226.7	225.5	223.1	218.4	210.2	203.1	193.6
20°	259.7	258.6	257.4	257.4	255.0	252.7	251.5	244.4	235.0	222.0	210.2
22.5°	289.3	288.1	288.1	290.4	289.3	285.7	285.7	275.1	262.1	246.8	229.0
25°	325.9	324.7	327.0	331.8	331.8	329.4	325.9	315.2	296.3	275.1	253.8
27.5°	366.0	364.8	369.5	377.8	380.2	376.6	374.3	362.5	341.2	312.9	282.2
30°	414.4	415.6	428.6	438.0	443.9	441.6	440.4	427.4	393.2	360.1	320.0
32.5°	473.4	469.9	486.4	501.8	512.4	518.3	514.8	499.4	469.9	418.0	367.2
35°	536.0	537.2	557.3	579.7	604.5	606.9	613.9	598.6	558.5	497.1	426.2
37.5°	617.5	608.0	634.0	676.5	706.0	732.0	727.3	717.8	670.6	589.1	492.3
40°	690.7	688.3	724.9	784.0	838.3	876.0	880.8	869.0	806.4	690.7	563.2
42.5°	774.5	781.6	832.4	913.8	996.5	1050.8	1037.8	1031.9	958.7	811.1	660.0
45°	859.5	883.1	948.1	1066.1	1162.9	1240.9	1263.3	1243.2	1153.5	1001.2	782.8
47.5°	962.2	994.1	1074.4	1233.8	1392.0	1482.9	1487.6	1547.8	1412.1	1184.2	910.3
50°	1098.0	1112.2	1224.3	1419.2	1636.4	1763.9	1800.5	1801.7	1665.9	1368.4	1054.3
52.5°	1231.4	1242.1	1389.6	1641.1	1936.3	2081.5	2089.8	2135.8	1950.4	1665.9	1260.9
55°	1392.0	1387.3	1590.3	1892.6	2240.9	2452.2	2513.6	2576.2	2340.1	1900.9	1379.0
57.5°	1547.8	1540.8	1785.2	2181.9	2657.7	2867.8	2918.6	2873.7	2523.1	1998.9	1436.9
60°	1691.9	1716.7	2014.2	2501.8	2980.0	3180.7	3214.9	3093.3	2641.1	2074.4	1473.5
62.5°	1841.8	1891.4	2251.5	2768.6	3226.7	3370.8	3373.1	3230.3	2838.3	2220.8	1592.7
65°	1982.3	2061.4	2435.7	2996.5	3399.1	3543.2	3559.7	3431.0	3031.9	2348.3	1612.8
67.5°	2106.3	2211.4	2563.2	3119.3	3516.0	3609.3	3617.5	3432.2	2985.9	2296.4	1557.3
70°	2206.7	2291.7	2642.3	3121.7	3434.5	3460.5	3454.6	3257.4	2858.4	2193.7	1464.0
72.5°	2245.6	2315.3	2604.5	2975.3	3194.9	3189.0	3184.2	3002.4	2648.2	2022.5	1329.4
75°	2190.1	2210.2	2397.9	2662.4	2801.7	2834.8	2839.5	2675.4	2323.5	1768.6	1140.5
77.5°	1961.1	1950.4	2094.5	2269.2	2374.3	2397.9	2393.2	2256.2	1948.1	1469.9	956.3
80°	1554.9	1577.4	1667.1	1782.8	1887.9	1913.8	1897.3	1793.4	1516.0	1146.4	734.4
82.5°	1087.4	1114.5	1190.1	1277.5	1356.6	1356.6	1371.9	1271.6	1074.4	822.9	513.6
85°	586.8	571.4	654.1	753.3	809.9	820.6	826.5	793.4	664.7	497.1	304.6
87.5°	96.8	103.9	128.7	197.2	224.3	259.7	276.3	216.1	131.1	83.8	61.4
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

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

Scaled Data Report

REPORT NUMBER: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

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

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

Scaled Data Report

REPORT NUMBER: P821385
CATALOG NUMBER: TT-D4-750-24VDC-DL-UPL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0	137.0
2.5°	139.3	138.1	137.0	135.8	135.8	134.6	134.6	134.6	135.8	135.8	135.8
5°	142.9	141.7	140.5	139.3	137.0	137.0	137.0	137.0	137.0	137.0	137.0
7.5°	148.8	146.4	145.2	142.9	140.5	140.5	139.3	139.3	139.3	140.5	139.3
10°	155.8	153.5	151.1	147.6	146.4	145.2	144.0	144.0	145.2	145.2	144.0
12.5°	164.1	162.9	158.2	154.7	152.3	151.1	149.9	151.1	149.9	151.1	151.1
15°	175.9	172.4	166.5	162.9	159.4	158.2	157.0	158.2	158.2	159.4	158.2
17.5°	188.9	184.2	178.3	172.4	167.7	166.5	166.5	166.5	167.7	168.8	167.7
20°	204.3	198.4	190.1	183.0	178.3	177.1	177.1	178.3	179.5	180.6	180.6
22.5°	219.6	214.9	203.1	193.6	191.3	190.1	188.9	191.3	193.6	194.8	196.0
25°	243.2	233.8	219.6	209.0	204.3	204.3	205.4	207.8	209.0	211.3	210.2
27.5°	268.0	257.4	239.7	225.5	222.0	220.8	223.1	225.5	230.2	230.2	229.0
30°	302.2	284.5	262.1	249.1	239.7	240.9	244.4	247.9	252.7	255.0	255.0
32.5°	341.2	322.3	291.6	271.6	266.8	268.0	269.2	275.1	279.8	284.5	281.0
35°	392.0	368.4	330.6	308.2	296.3	295.2	299.9	307.0	311.7	314.1	314.1
37.5°	447.5	416.8	369.5	350.7	336.5	335.3	336.5	342.4	348.3	350.7	355.4
40°	514.8	477.0	421.5	390.8	380.2	377.8	382.5	390.8	390.8	394.3	395.5
42.5°	597.4	549.0	487.6	447.5	434.5	434.5	433.3	440.4	440.4	440.4	438.0
45°	702.5	648.2	567.9	526.6	504.1	492.3	495.9	491.2	490.0	493.5	482.9
47.5°	804.0	735.6	641.1	596.2	573.8	566.7	553.7	550.2	544.3	544.3	528.9
50°	922.1	837.1	746.2	682.4	661.2	641.1	630.5	613.9	596.2	592.7	586.8
52.5°	1119.3	1013.0	870.1	801.7	747.4	727.3	702.5	681.2	660.0	643.5	652.9
55°	1199.5	1090.9	955.2	889.0	851.3	832.4	786.3	758.0	726.1	702.5	715.5
57.5°	1239.7	1121.6	995.3	945.7	935.1	917.4	883.1	834.7	798.1	768.6	771.0
60°	1262.1	1138.2	1016.5	971.7	965.8	977.6	959.9	926.8	870.1	840.6	837.1
62.5°	1348.3	1218.4	1076.8	1013.0	1000.0	1008.3	1013.0	992.9	945.7	906.7	896.1
65°	1366.0	1227.9	1088.6	1047.2	1048.4	1050.8	1054.3	1033.1	1009.5	961.1	951.6
67.5°	*1312.9*	*1177.1*	*1053.1*	*1018.9*	*1021.3*	*1048.4*	*1069.7*	*1068.5*	*1042.5*	*1001.2*	*997.7*
70°	1232.6	1100.4	985.9	955.2	961.1	985.9	1031.9	1055.5	1050.8	1023.6	1029.5
72.5°	1107.5	989.4	889.0	865.4	879.6	903.2	946.9	989.4	1014.2	1020.1	1033.1
75°	961.1	866.6	772.2	758.0	768.6	795.8	835.9	885.5	939.8	969.3	977.6
77.5°	793.4	707.2	637.6	628.1	643.5	668.3	708.4	747.4	808.8	860.7	872.5
80°	621.0	546.6	497.1	488.8	498.2	519.5	550.2	582.1	641.1	681.2	687.1
82.5°	430.9	386.1	354.2	349.5	355.4	363.6	388.4	418.0	451.0	482.9	486.4
85°	250.3	222.0	213.7	206.6	219.6	219.6	225.5	242.0	258.6	260.9	268.0
87.5°	46.0	43.7	44.9	33.1	41.3	29.5	29.5	37.8	28.3	33.1	27.2
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: P821385
CATALOG NUMBER: TT-D4-750-24VDC-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

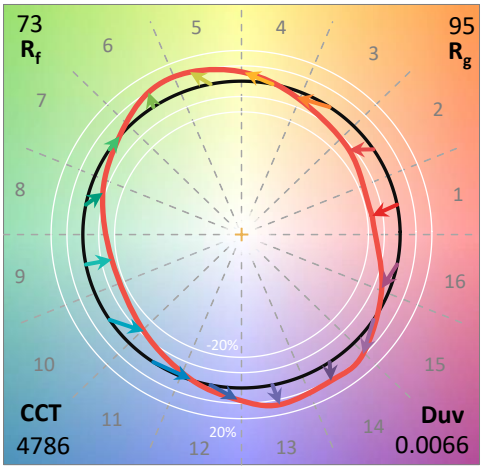
Test Information

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

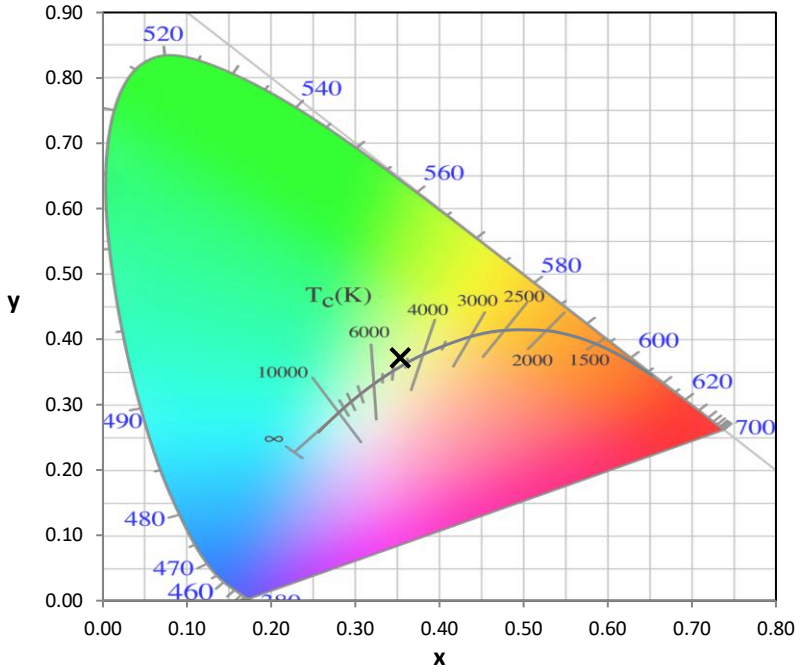
Stabilization Time:	45M
Operation Time:	1H 45M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-6

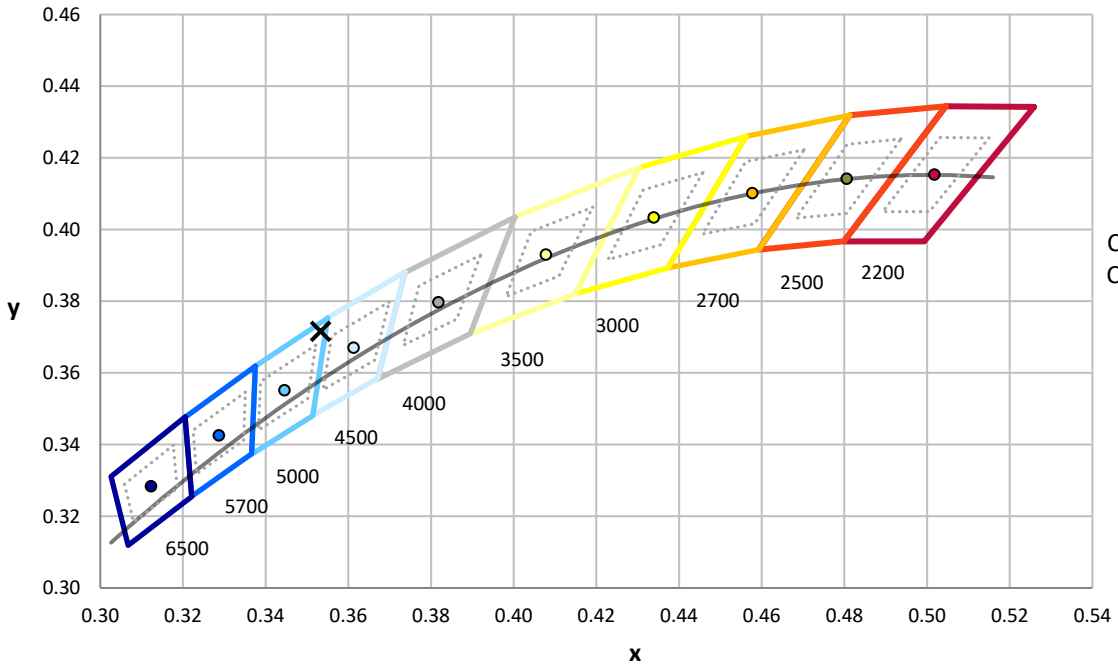
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

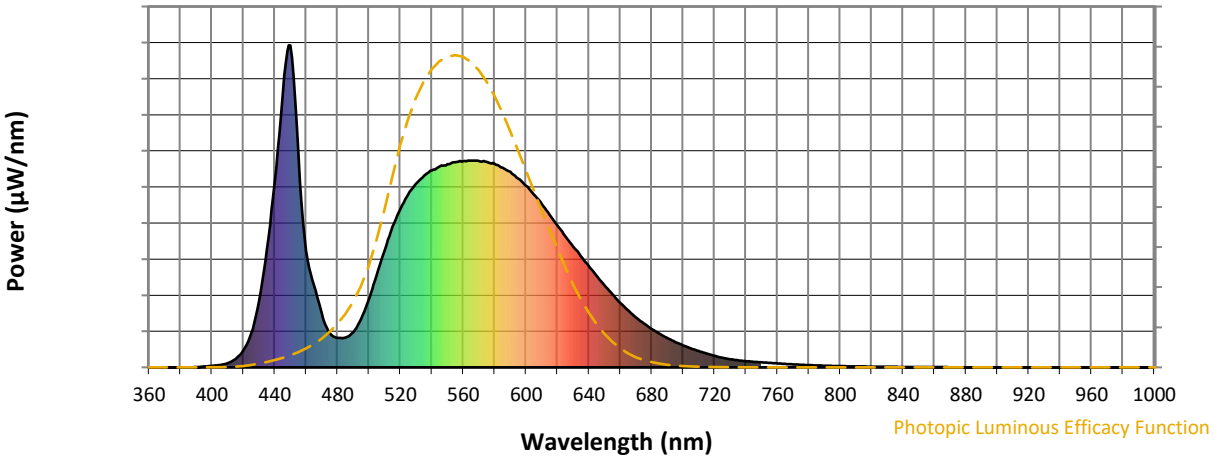


CCT = 4786K
CIE x = 0.3533
CIE y = 0.3716
Duv = 0.0066

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

Photopic Flux vs. Wavelength

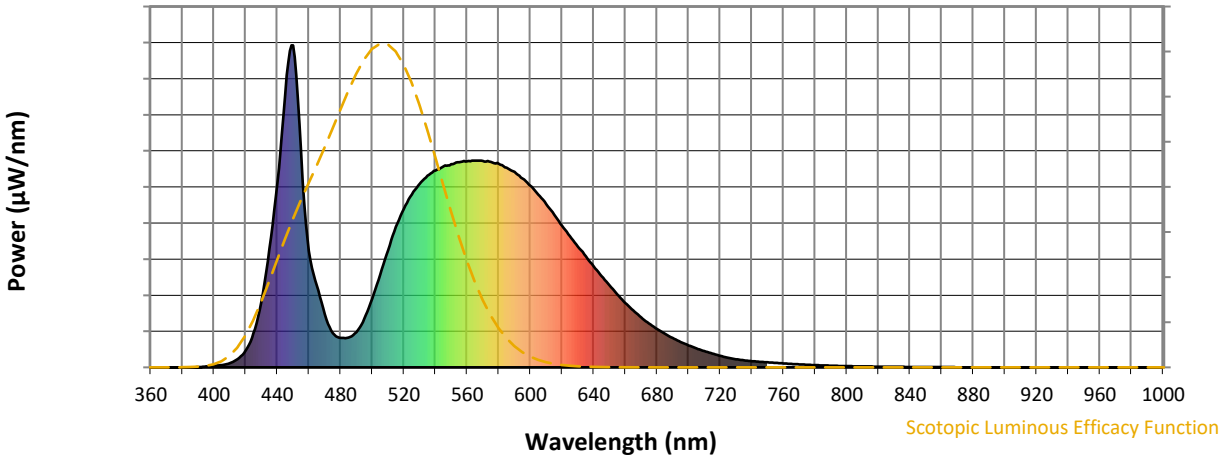


Photopic Lumens: NR

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

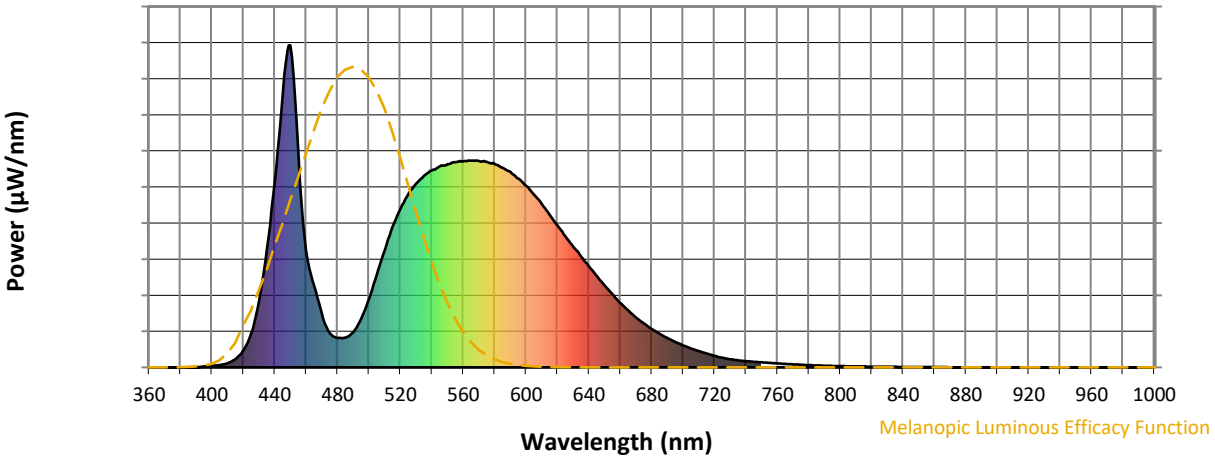


Scotopic Lumens: NR **S/P: 1.69**

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			

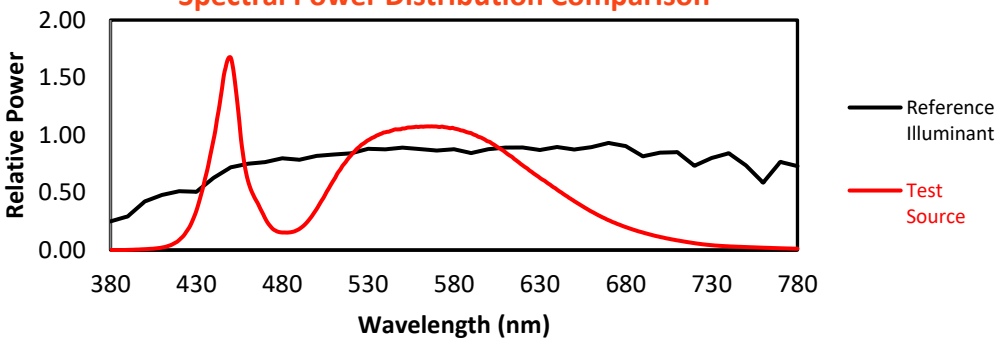
REPORT NUMBER: SP1-2407-176-6

TM-30-18

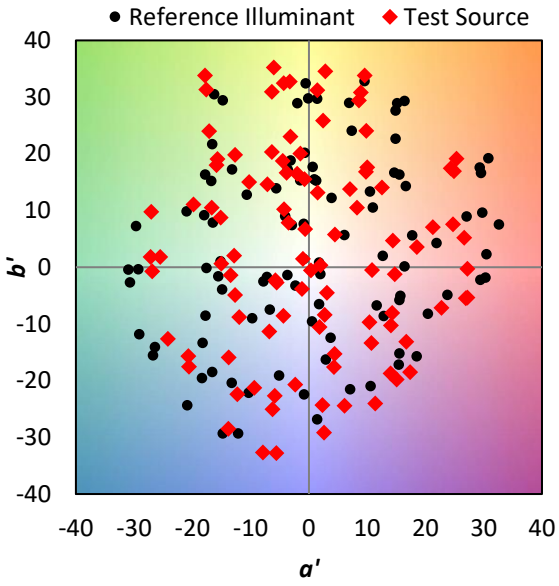
Summary

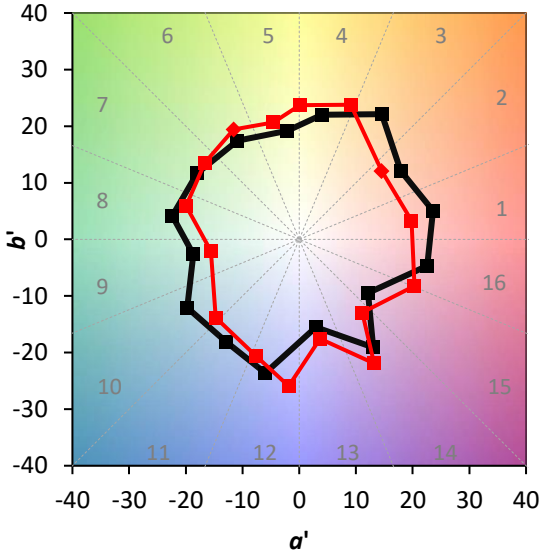
R_f = 73
R_g = 94.6
CIE R_a = 70.9
R_9 = -29.8

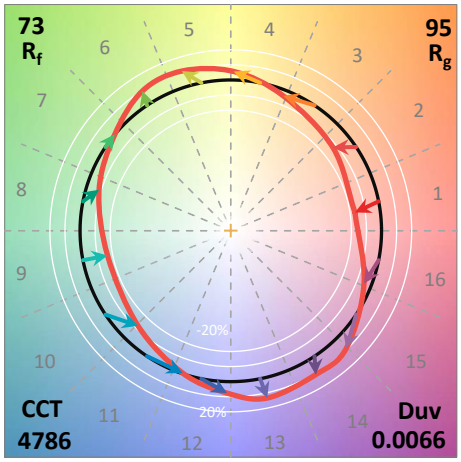
Spectral Power Distribution Comparison

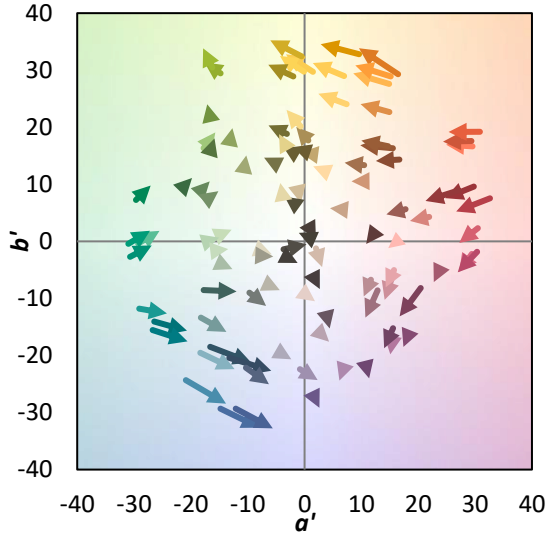


Color Vector Graphics







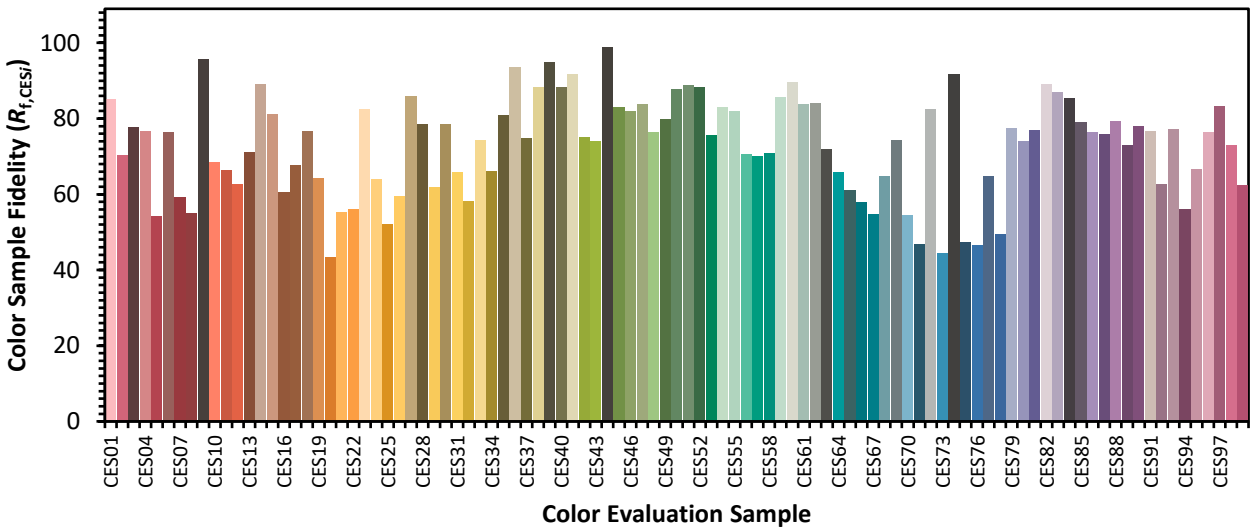


REPORT NUMBER: SP1-2407-176-6

TM-30-18

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

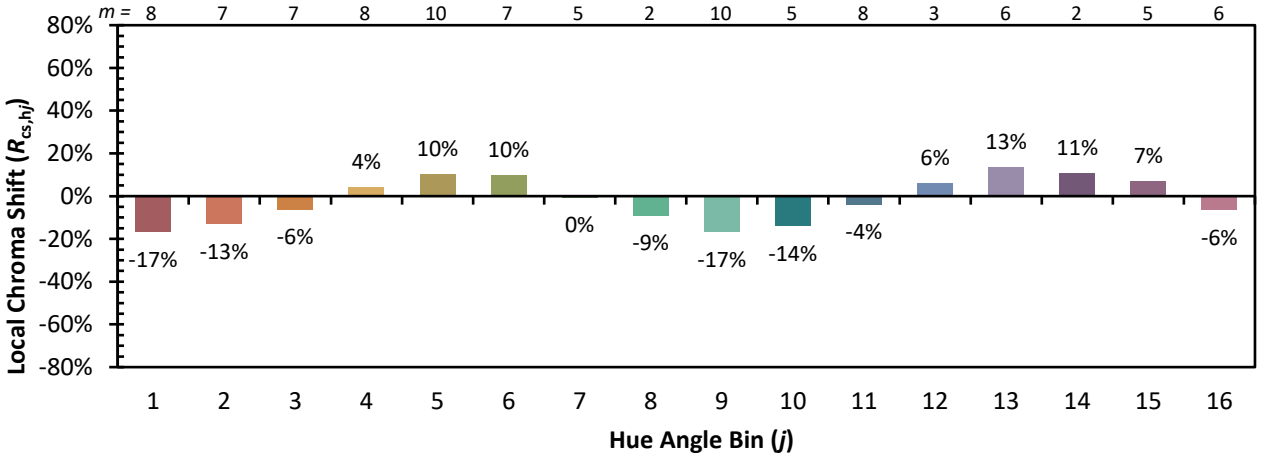
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 46
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 58	CES57 = 70	CES82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

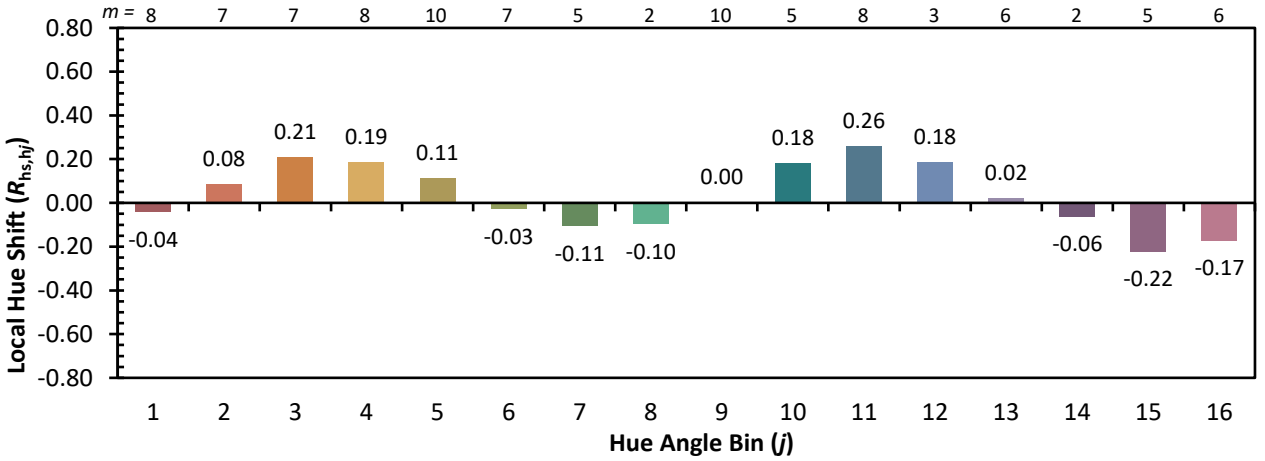


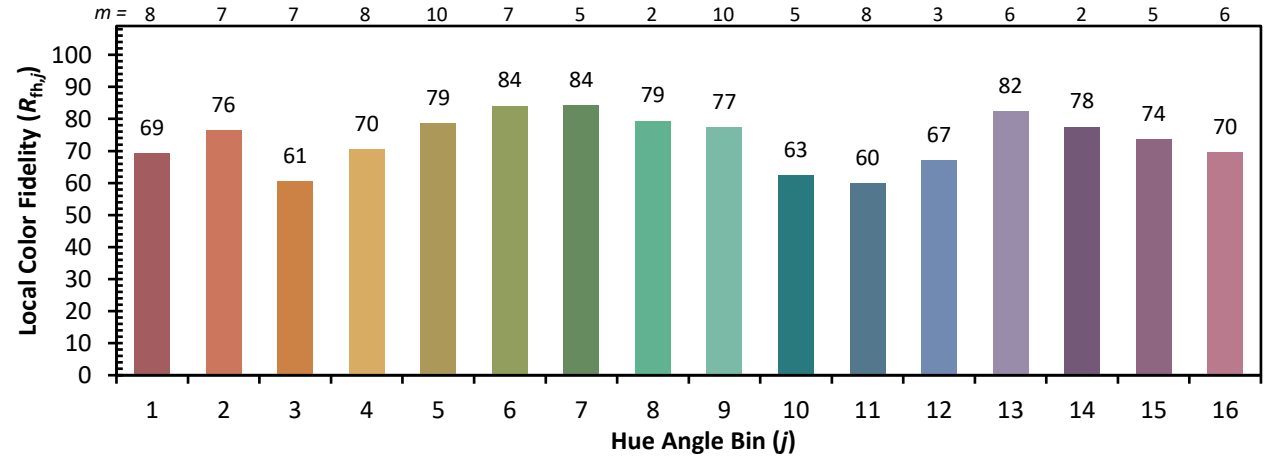
REPORT NUMBER: SP1-2407-176-6

TM-30-18

Color Rendition by Hue-Angle Bin



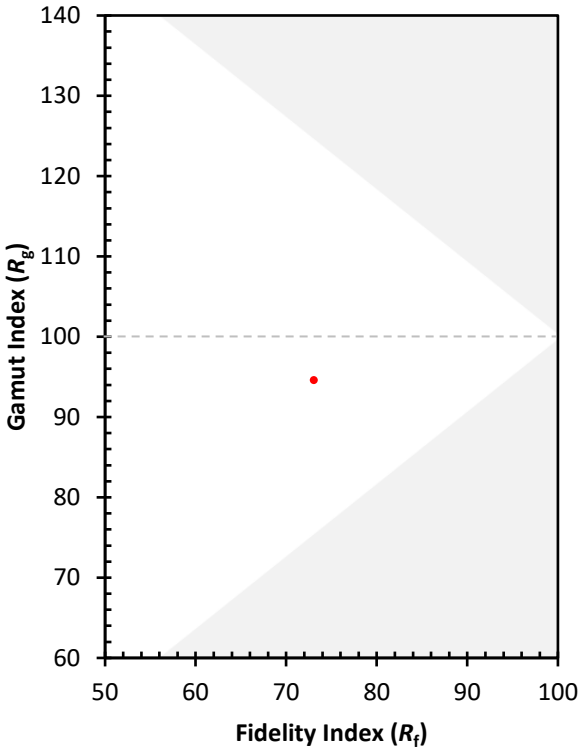


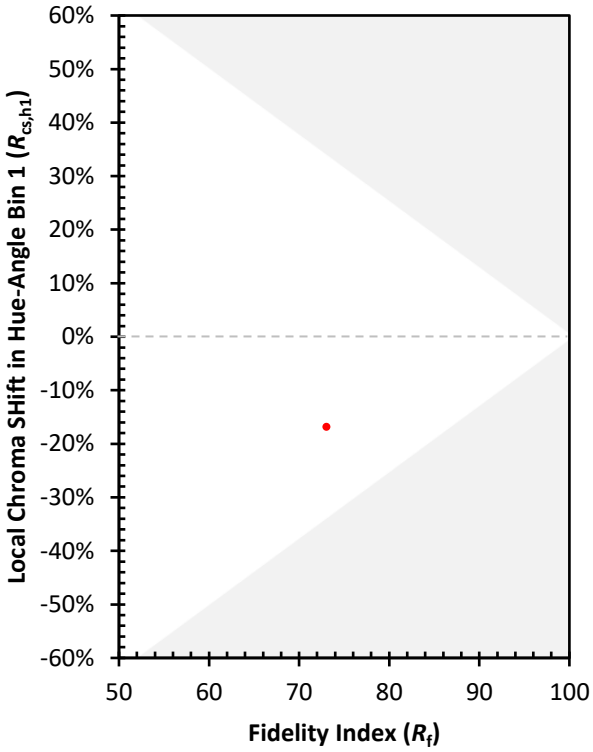


REPORT NUMBER: SP1-2407-176-6

TM-30-18

Measure Comparisons





(END OF REPORT)