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: P821150

Luminaire Tested: **TT-D3-830-24VDC-MQ-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821150
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-1)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D3-830-24VDC-MQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	3000K, 80 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5039 lumens
Efficiency:	N/A
Efficacy:	109.5 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U2 - G2

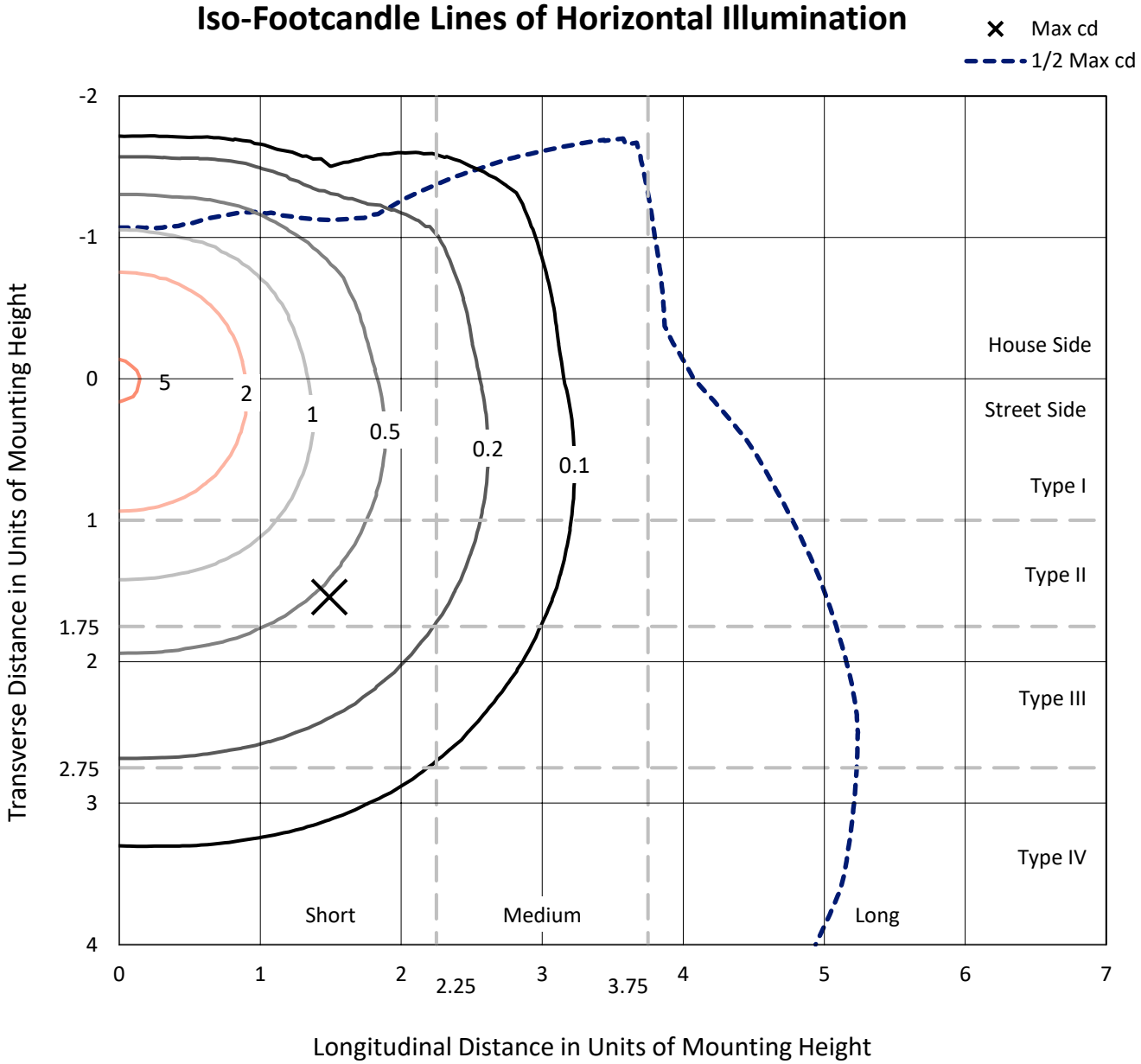
Input Watts (W):	46
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



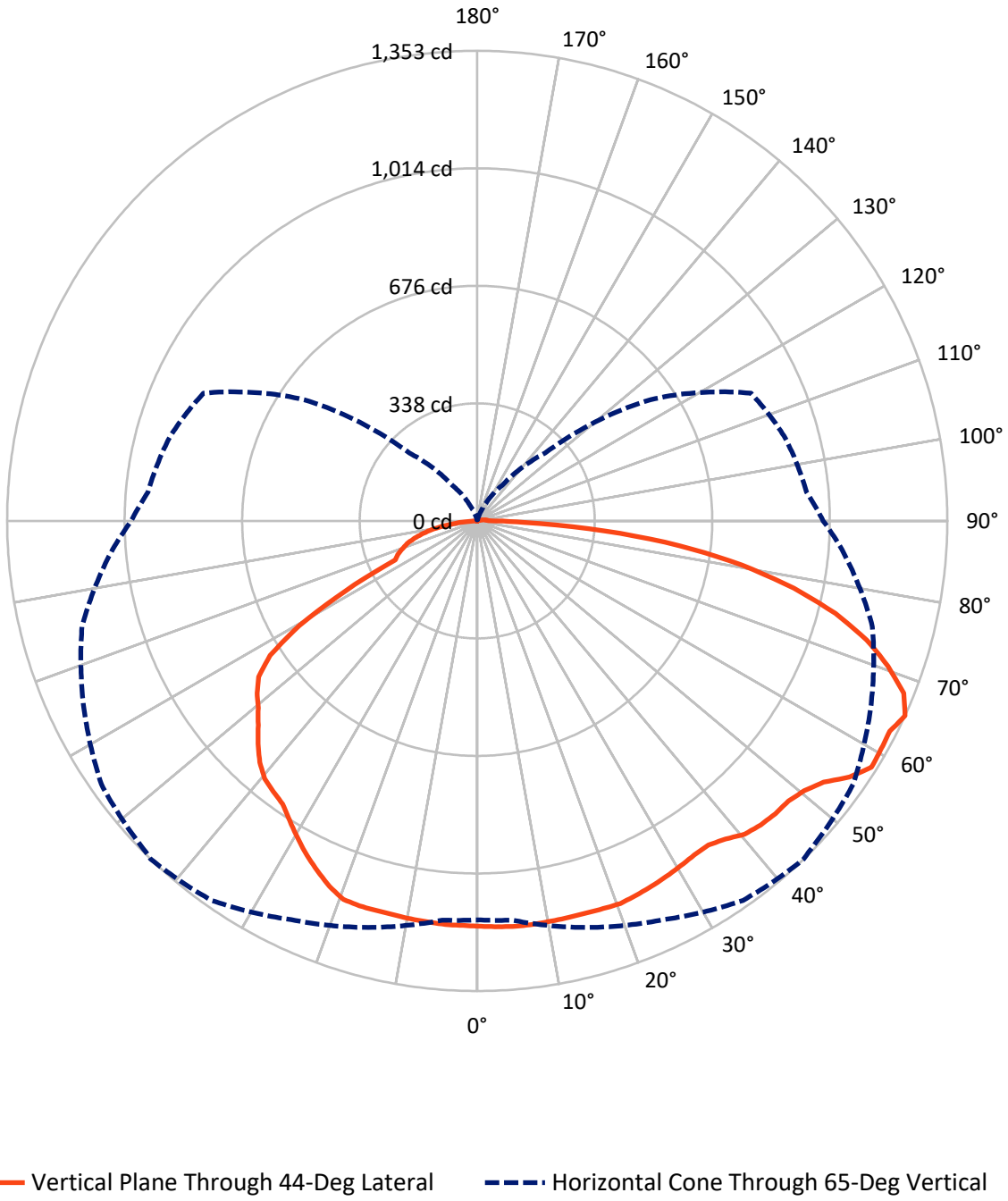
Based on 15 foot mounting height. Maximum calculated value = 5.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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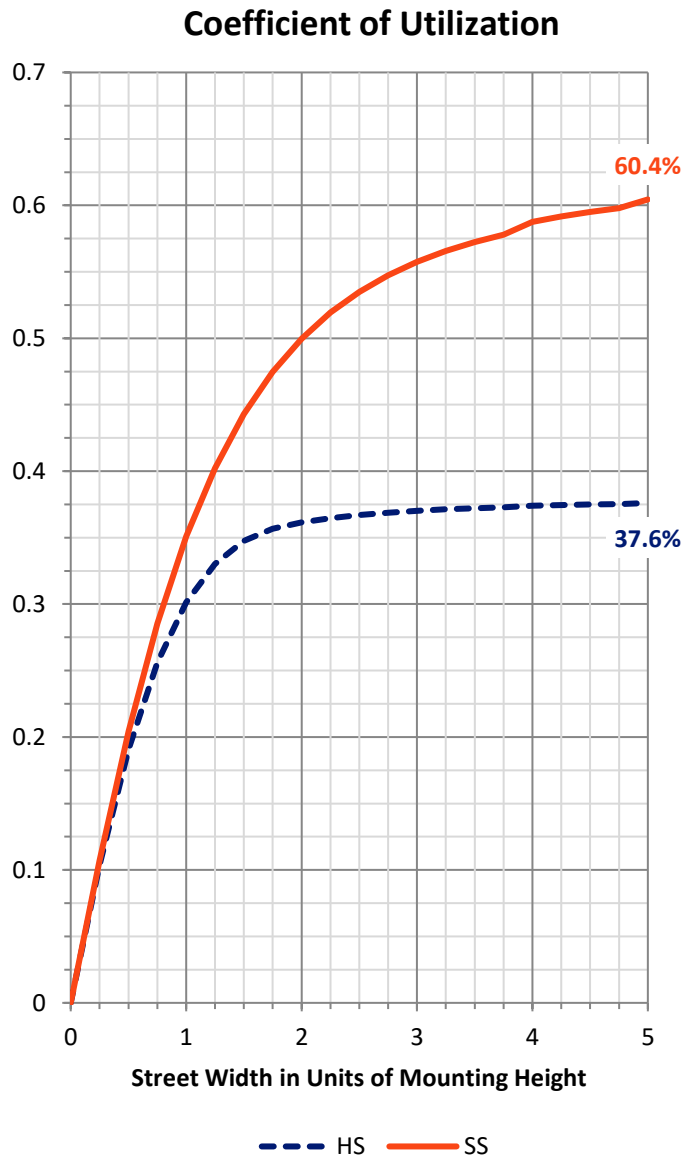
REPORT NUMBER: P821150
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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1908.0	1.3	1909.3
	% Fixture	37.9	0.0	37.9
Street Side	Lumens	3112.6	17.1	3129.7
	% Fixture	61.8	0.3	62.1
Total	Lumens	5020.6	18.5	5039.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.4	2.2
10°-20°	329.8	6.5
20°-30°	524.8	10.4
30°-40°	672.3	13.3
40°-50°	796.5	15.8
50°-60°	872.3	17.3
60°-70°	829.2	16.5
70°-80°	660.2	13.1
80°-90°	224.3	4.5
90°-100°	11.8	0.2
100°-110°	3.9	0.1
110°-120°	0.9	0.0
120°-130°	0.5	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	5020.6	99.6
0°-180°	5039.0	100.0



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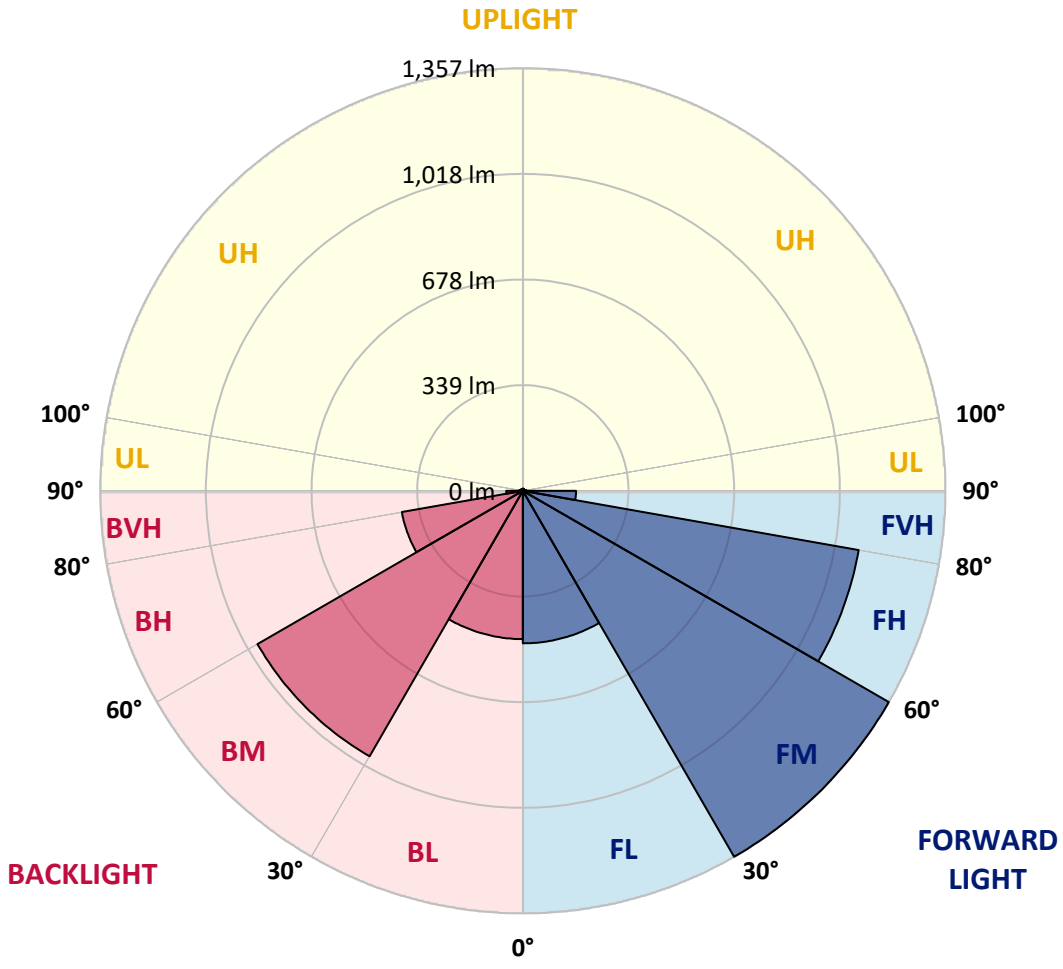
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	489.8	9.7			
FM	(30°-60°)	1357.0	26.9			
FH	(60°-80°)	1095.0	21.7			G1/1800
FVH	(80°-90°)	170.8	3.4			G2/225
BL	(0°-30°)	476.1	9.4	B1/500		
BM	(30°-60°)	984.2	19.5	B1/1000		
BH	(60°-80°)	394.3	7.8	B1/500		G1/500
BVH	(80°-90°)	53.4	1.1			G1/100
UL	(90°-100°)	11.8	0.2		U2/50	
UH	(100°-180°)	6.6	0.1		U1/10	

BUG Rating: B1-U2-G2
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1166.5	1166.5	1166.5	1166.5	1166.5	*1166.5*	1166.5	1166.5	1166.5	1166.5	1166.5
2.5°	1170.9	1170.1	1170.1	1170.1	1170.1	*1169.2*	1170.1	1168.3	1169.2	1166.5	1166.5
5°	1173.6	1171.8	1172.7	1172.7	1172.7	*1171.8*	1172.7	1170.1	1170.9	1167.4	1166.5
7.5°	1174.5	1173.6	1173.6	1173.6	1173.6	*1171.8*	1172.7	1170.9	1170.1	1167.4	1165.6
10°	1174.5	1173.6	1173.6	1173.6	1172.7	*1170.9*	1171.8	1169.2	1169.2	1165.6	1163.8
12.5°	1174.5	1173.6	1174.5	1172.7	1172.7	*1170.9*	1170.9	1168.3	1168.3	1163.8	1162.0
15°	1173.6	1172.7	1172.7	1173.6	1172.7	*1170.9*	1170.9	1168.3	1167.4	1162.0	1160.3
17.5°	1172.7	1171.8	1172.7	1173.6	1174.5	*1172.7*	1173.6	1169.2	1167.4	1162.0	1159.4
20°	1173.6	1172.7	1173.6	1175.4	1175.4	*1175.4*	1175.4	1170.9	1167.4	1162.0	1157.6
22.5°	1170.9	1170.9	1170.9	1170.9	1172.7	*1170.1*	1170.1	1167.4	1162.9	1158.5	1154.0
25°	1164.7	1164.7	1165.6	1166.5	1166.5	*1164.7*	1163.8	1161.2	1157.6	1152.2	1146.9
27.5°	1157.6	1157.6	1158.5	1158.5	1160.3	*1158.5*	1157.6	1154.0	1150.5	1144.2	1138.0
30°	1149.6	1149.6	1149.6	1151.4	1152.2	*1152.2*	1151.4	1146.9	1142.5	1135.3	1127.3
32.5°	1140.7	1140.7	1143.3	1145.1	1146.0	*1146.0*	1146.0	1140.7	1135.3	1126.4	1114.8
35°	1133.5	1133.5	1137.1	1143.3	1146.9	*1145.1*	1144.2	1140.7	1132.7	1122.9	1104.2
37.5°	1138.0	1138.0	1146.0	1154.9	1162.9	*1161.2*	1161.2	1154.9	1144.2	1128.2	1105.1
40°	1148.7	1149.6	1162.0	1173.6	1183.4	*1185.2*	1185.2	1178.1	1162.0	1141.6	1109.5
42.5°	1151.4	1153.1	1165.6	1182.5	1191.4	*1195.9*	1195.9	1186.1	1169.2	1145.1	1107.7
45°	1151.4	1152.2	1166.5	1184.3	1198.6	*1202.1*	1202.1	1191.4	1170.1	1146.9	1101.5
47.5°	1151.4	1150.5	1162.9	1187.9	1202.1	*1204.8*	1204.8	1193.2	1172.7	1143.3	1092.6
50°	1148.7	1153.1	1171.8	1191.4	1216.4	*1219.9*	1219.0	1206.6	1178.1	1147.8	1085.5
52.5°	1154.9	1154.0	1179.0	1218.1	1240.4	*1248.4*	1249.3	1233.3	1203.9	1160.3	1081.0
55°	1180.7	1181.6	1205.7	1251.1	1284.9	*1300.1*	1298.3	1277.8	1235.9	1185.2	1093.5
57.5°	1189.6	1198.6	1233.3	1272.5	1324.1	*1337.5*	1337.5	1312.5	1261.8	1204.8	1102.4
60°	1171.8	1175.4	1218.1	1284.9	1332.1	*1334.8*	1335.7	1317.9	1264.4	1194.1	1084.6
62.5°	1167.4	1174.5	1207.5	1282.3	1312.5	*1332.1*	1331.2	1307.2	1261.8	1186.1	1078.3
65°	*1147.8*	*1153.1*	*1211.0*	*1266.2*	*1333.0*	*1352.6*	*1348.1*	*1320.5*	*1250.2*	*1177.2*	*1058.7*
67.5°	1107.7	1113.1	1166.5	1244.0	1304.5	*1323.2*	1327.7	1295.6	1222.6	1135.3	1016.9
70°	1040.9	1049.0	1103.3	1179.0	1243.1	*1253.8*	1252.0	1232.4	1159.4	1065.9	955.5
72.5°	947.4	959.9	1028.5	1100.6	1155.8	*1171.8*	1164.7	1142.5	1082.8	982.2	871.8
75°	848.6	860.2	914.5	995.5	1053.4	*1064.1*	1058.7	1032.0	971.5	872.6	772.9
77.5°	740.9	750.7	797.0	879.8	922.5	*931.4*	934.1	898.5	841.5	752.4	663.4
80°	595.7	600.2	662.5	716.8	754.2	*772.0*	770.2	743.5	686.5	612.6	523.6
82.5°	439.9	443.4	491.5	537.8	571.7	*587.7*	578.8	552.1	506.7	443.4	375.8
85°	269.8	263.6	302.8	337.5	358.0	*368.6*	359.7	344.6	304.5	254.7	207.5
87.5°	97.1	91.7	109.5	114.9	138.0	*134.5*	142.5	114.9	92.6	65.9	46.3
90°	42.7	42.7	41.9	40.1	36.5	*32.9*	32.1	26.7	19.6	12.5	4.5
92.5°	39.2	39.2	38.3	36.5	32.9	*29.4*	29.4	24.0	17.8	11.6	4.5
95°	32.9	32.9	32.1	30.3	27.6	*24.9*	24.9	19.6	15.1	9.8	3.6
97.5°	25.8	25.8	24.9	24.0	21.4	*19.6*	19.6	16.0	11.6	7.1	2.7
100°	19.6	19.6	18.7	17.8	16.9	*15.1*	14.2	11.6	8.9	5.3	1.8
102.5°	14.2	14.2	14.2	13.4	11.6	*10.7*	10.7	8.9	6.2	4.5	1.8
105°	9.8	9.8	9.8	8.9	8.0	*7.1*	7.1	6.2	4.5	2.7	0.9
107.5°	6.2	6.2	6.2	6.2	5.3	*4.5*	4.5	3.6	2.7	1.8	0.9
110°	3.6	2.7	3.6	3.6	3.6	*2.7*	2.7	1.8	1.8	0.9	0.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	1.8	1.8	1.8	1.8	1.8	*1.8*	1.8	0.9	0.9	0.9	0.9
115°	0.9	0.9	0.9	1.8	1.8	*0.9*	0.9	0.9	0.9	0.9	0.9
117.5°	0.0	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
120°	0.0	0.0	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
122.5°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
125°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
127.5°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
130°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
132.5°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
135°	0.0	0.0	0.0	0.0	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
137.5°	0.0	0.0	0.0	0.0	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
140°	0.0	0.9	0.9	0.0	0.0	*0.9*	0.9	0.9	0.9	0.9	0.9
142.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
145°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
147.5°	0.9	0.9	0.0	0.0	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
150°	0.9	0.9	0.9	0.0	0.0	*0.9*	0.9	0.9	0.9	0.9	0.9
152.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
155°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
157.5°	0.9	0.9	0.9	0.0	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
160°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
162.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
165°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
167.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
170°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
172.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
175°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
177.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
180°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5	1166.5
2.5°	1166.5	1165.6	1164.7	1165.6	1164.7	1164.7	1163.8	1163.8	1162.9	1162.9	1162.0
5°	1166.5	1165.6	1164.7	1165.6	1163.8	1164.7	1164.7	1163.8	1162.9	1162.0	1161.2
7.5°	1165.6	1165.6	1163.8	1164.7	1162.9	1162.9	1162.0	1162.0	1161.2	1161.2	1160.3
10°	1163.8	1162.9	1162.9	1162.9	1161.2	1161.2	1160.3	1159.4	1159.4	1158.5	1157.6
12.5°	1162.0	1161.2	1160.3	1160.3	1159.4	1158.5	1157.6	1157.6	1156.7	1155.8	1154.9
15°	1159.4	1158.5	1158.5	1158.5	1157.6	1157.6	1156.7	1155.8	1154.0	1153.1	1152.2
17.5°	1158.5	1157.6	1158.5	1158.5	1157.6	1158.5	1156.7	1154.9	1153.1	1152.2	1151.4
20°	1157.6	1157.6	1157.6	1156.7	1155.8	1154.9	1154.0	1153.1	1152.2	1151.4	1150.5
22.5°	1153.1	1152.2	1150.5	1145.1	1138.9	1134.4	1133.5	1135.3	1135.3	1135.3	1132.7
25°	1145.1	1142.5	1135.3	1125.5	1114.8	1107.7	1103.3	1103.3	1102.4	1100.6	1099.7
27.5°	1135.3	1130.0	1117.5	1105.1	1089.9	1081.0	1070.3	1064.1	1061.4	1060.5	1058.7
30°	1122.0	1114.0	1097.9	1081.9	1063.2	1050.7	1033.8	1023.1	1016.9	1014.2	1012.4
32.5°	1105.9	1097.9	1079.2	1059.6	1037.4	1019.6	998.2	981.3	969.7	964.4	961.7
35°	1095.3	1083.7	1062.3	1039.2	1016.9	991.1	965.3	942.1	924.3	918.1	914.5
37.5°	1090.8	1080.1	1057.0	1033.8	1008.9	977.7	947.4	914.5	890.5	879.8	876.2
40°	1093.5	1080.1	1054.3	1029.4	1000.0	965.3	925.2	884.2	853.1	837.9	834.4
42.5°	1087.2	1072.1	1041.8	1015.1	978.6	939.4	890.5	843.3	801.4	788.9	783.6
45°	1076.6	1057.9	1024.9	991.1	952.8	904.7	853.9	793.4	743.5	728.4	723.9
47.5°	1065.9	1040.0	1000.9	969.7	923.4	867.3	807.6	740.0	677.6	662.5	659.8
50°	1049.8	1025.8	984.0	947.4	900.2	835.2	767.6	683.0	612.6	586.8	579.7
52.5°	1042.7	1011.6	971.5	943.0	886.0	812.1	726.6	635.8	534.3	502.2	495.1
55°	1049.8	1010.7	967.9	940.3	874.4	782.7	677.6	561.9	444.3	410.5	400.7
57.5°	1037.4	1003.5	960.8	929.6	844.1	722.2	606.4	457.7	335.7	292.1	288.5
60°	1021.3	973.3	933.2	904.7	780.9	608.2	471.9	325.9	202.1	164.7	157.6
62.5°	1015.1	965.3	918.9	884.2	696.3	447.0	287.6	164.7	83.7	58.8	53.4
65°	*995.5*	*951.0*	*918.1*	*869.1*	*608.2*	*276.0*	*123.8*	*49.0*	*3.6*	*2.7*	*2.7*
67.5°	958.1	912.7	890.5	862.0	599.3	263.6	112.2	44.5	1.8	0.0	0.0
70°	894.0	858.4	843.3	828.1	573.5	244.0	102.4	40.1	0.9	0.0	0.0
72.5°	809.4	785.4	782.7	780.9	536.1	225.3	91.7	35.6	0.9	0.0	0.0
75°	724.8	695.4	699.9	710.6	489.7	199.5	79.3	31.2	0.9	0.0	0.0
77.5°	618.0	596.6	607.3	625.1	429.2	169.2	65.0	24.9	0.9	0.0	0.0
80°	486.2	471.9	496.0	512.0	350.8	134.5	49.0	17.8	0.0	0.0	0.0
82.5°	345.5	337.5	359.7	380.2	260.9	95.3	33.8	11.6	0.0	0.0	0.0
85°	186.1	181.7	203.0	225.3	156.7	54.3	16.9	5.3	0.0	0.0	0.0
87.5°	46.3	42.7	43.6	52.5	38.3	11.6	2.7	0.9	0.0	0.0	0.0
90°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
110°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report

REPORT NUMBER: P821150
CATALOG NUMBER: TT-D3-830-24VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
115°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
117.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
122.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
125°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
127.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
130°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
135°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
147.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
172.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
175°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
177.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

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: SP1-2407-176-7

Test Date: 09/27/2024

Luminaire Tested: MEM2-HTN-VA-30-830-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-830-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

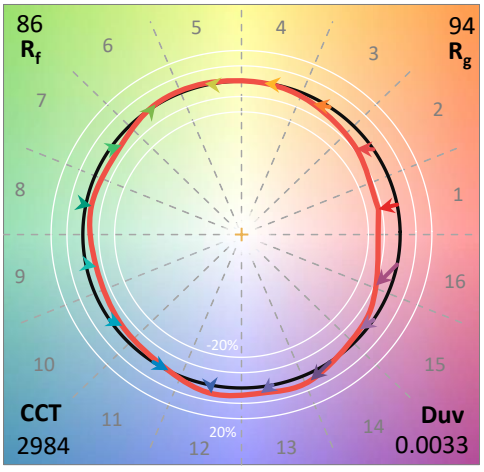
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-7
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-30-830-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	2984	CRI (Ra):	81.8		
CIE u':	0.2500	R1:	79.4	R9:	-1.1
CIE v':	0.5264	R2:	89.9	R10:	78.4
Duv:	0.0033	R3:	96.6	R11:	80.8
CIE x:	0.4431	R4:	80.6	R12:	72.8
CIE y:	0.4147	R5:	80.1	R13:	81.7
CIE z:	0.1422	R6:	88.9	R14:	98.5
Peak Wavelength (nm):	601	R7:	82.6	R15:	70.2
Dominant Wavelength (nm):	581	R8:	56.0		
Purity:	57.4798				

Rf:	85.8
Rg:	94.1



Test Conditions

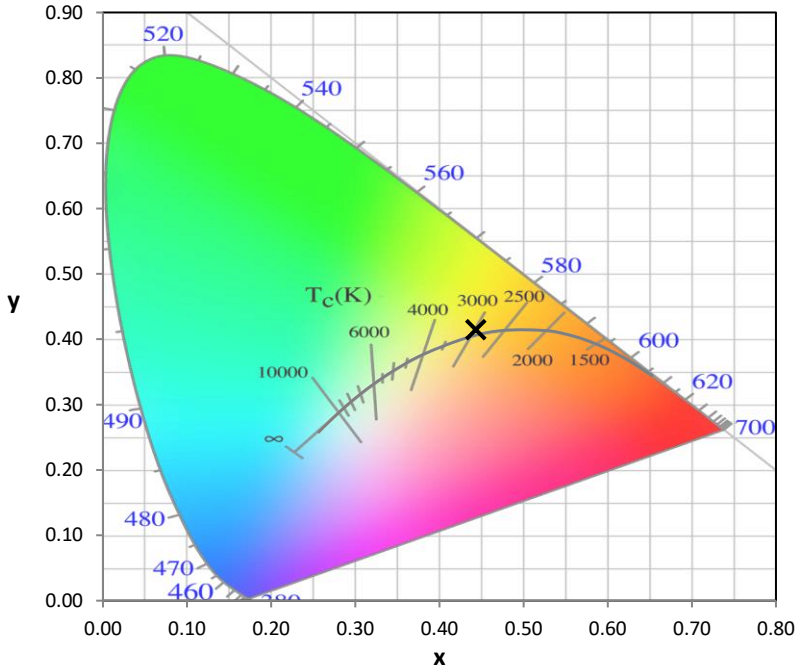
Stabilization Time:	29M
Operation Time:	1H 29M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-7

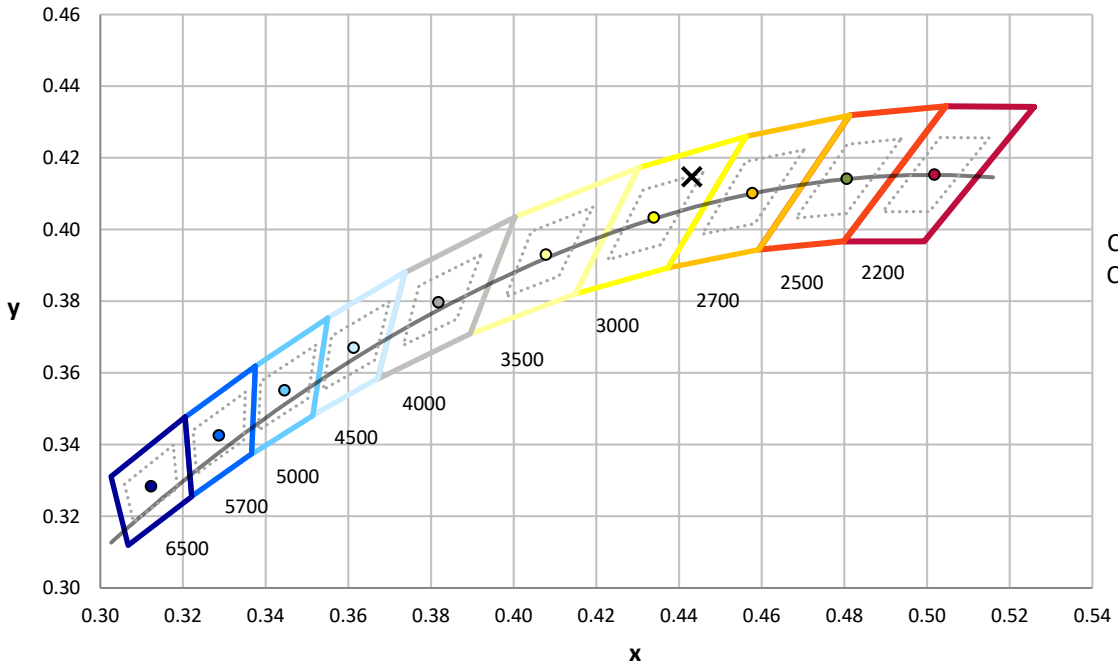
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2407-176-7

CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles

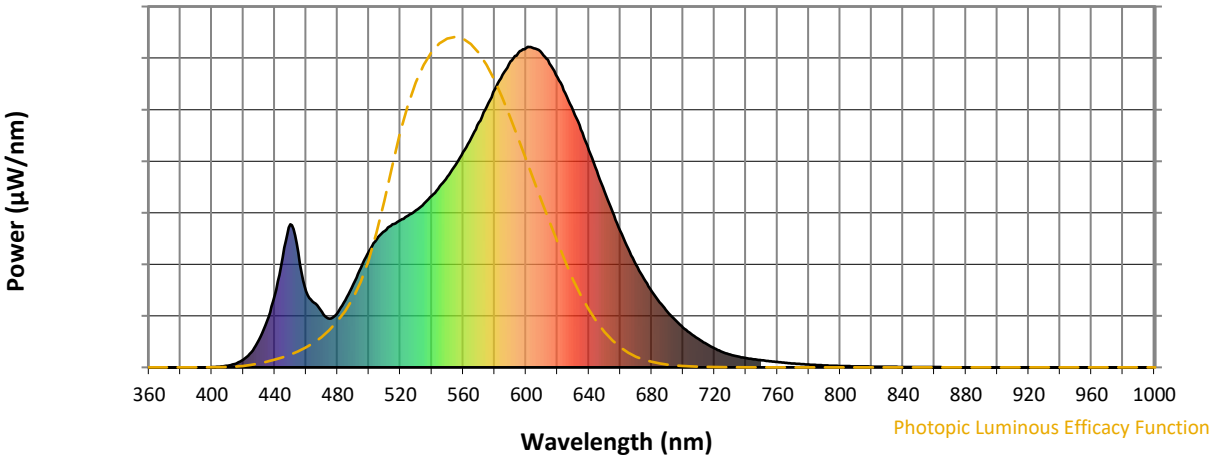


CCT = 2984K
CIE x = 0.4431
CIE y = 0.4147
Duv = 0.0033

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-7

Photopic Flux vs. Wavelength

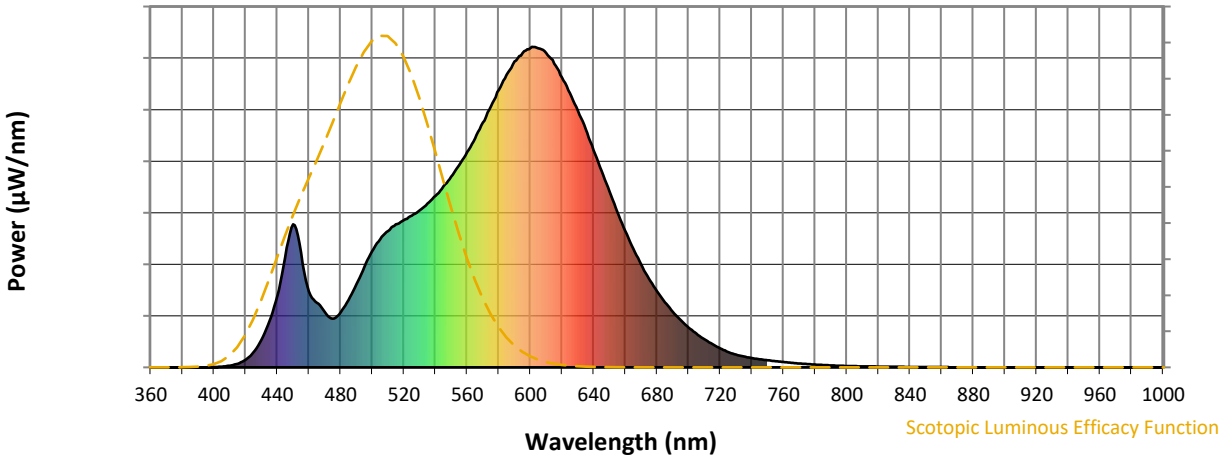


Photopic Lumens: NR

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	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-7

Scotopic Flux vs. Wavelength

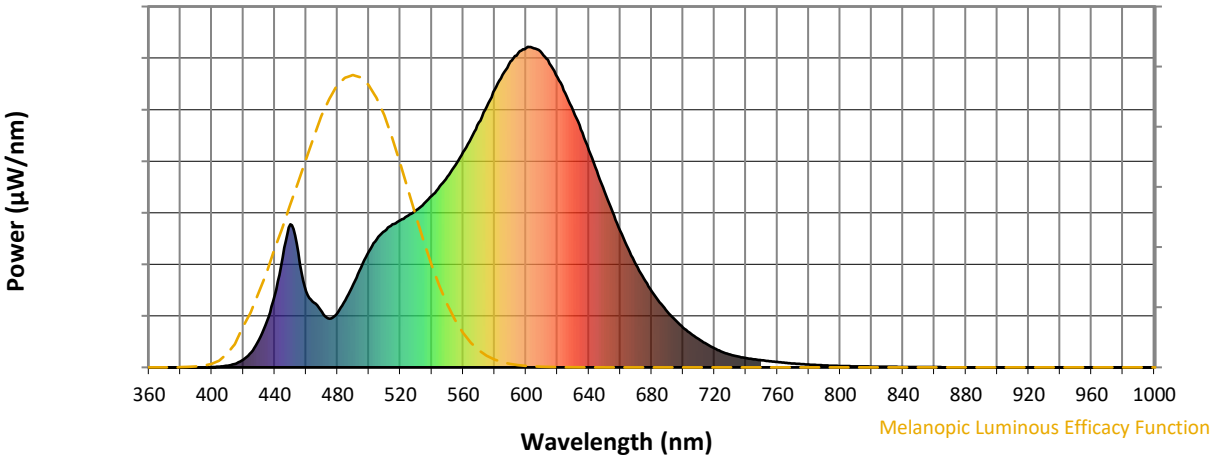


Scotopic Lumens: NR **S/P: 1.32**

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	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.51**

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	260	NR	620	905	NR	750	22	NR	880	0	NR
365	0	NR	495	312	NR	625	856	NR	755	19	NR	885	0	NR
370	0	NR	500	362	NR	630	801	NR	760	17	NR	890	0	NR
375	0	NR	505	399	NR	635	742	NR	765	14	NR	895	0	NR
380	0	NR	510	425	NR	640	677	NR	770	12	NR	900	0	NR
385	0	NR	515	446	NR	645	613	NR	775	10	NR	905	0	NR
390	0	NR	520	459	NR	650	549	NR	780	9	NR	910	0	NR
395	0	NR	525	473	NR	655	485	NR	785	7	NR	915	0	NR
400	1	NR	530	490	NR	660	425	NR	790	6	NR	920	0	NR
405	2	NR	535	511	NR	665	371	NR	795	5	NR	925	0	NR
410	5	NR	540	535	NR	670	321	NR	800	4	NR	930	0	NR
415	11	NR	545	565	NR	675	276	NR	805	4	NR	935	0	NR
420	24	NR	550	595	NR	680	238	NR	810	3	NR	940	0	NR
425	47	NR	555	631	NR	685	203	NR	815	3	NR	945	0	NR
430	86	NR	560	672	NR	690	174	NR	820	2	NR	950	0	NR
435	144	NR	565	715	NR	695	148	NR	825	2	NR	955	0	NR
440	224	NR	570	763	NR	700	124	NR	830	2	NR	960	0	NR
445	342	NR	575	814	NR	705	105	NR	835	2	NR	965	0	NR
450	446	NR	580	866	NR	710	88	NR	840	1	NR	970	0	NR
455	357	NR	585	912	NR	715	73	NR	845	1	NR	975	0	NR
460	237	NR	590	954	NR	720	59	NR	850	1	NR	980	0	NR
465	202	NR	595	981	NR	725	48	NR	855	1	NR	985	0	NR
470	172	NR	600	996	NR	730	40	NR	860	1	NR	990	0	NR
475	152	NR	605	996	NR	735	34	NR	865	1	NR	995	0	NR
480	171	NR	610	980	NR	740	29	NR	870	0	NR	1000	0	NR
485	210	NR	615	947	NR	745	25	NR	875	0	NR			

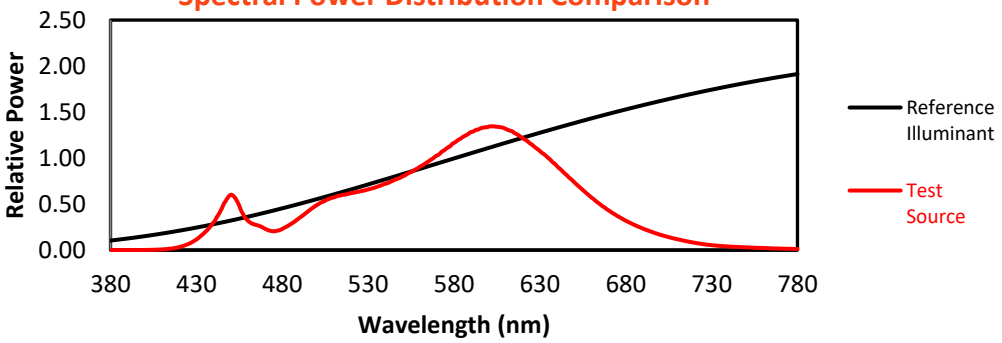
REPORT NUMBER: SP1-2407-176-7

TM-30-18

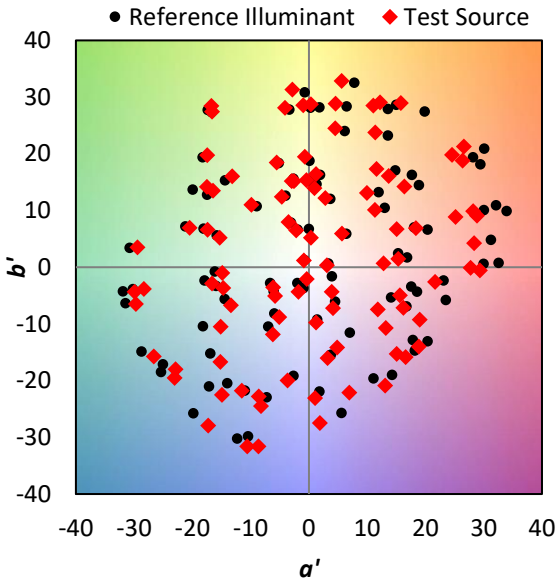
Summary

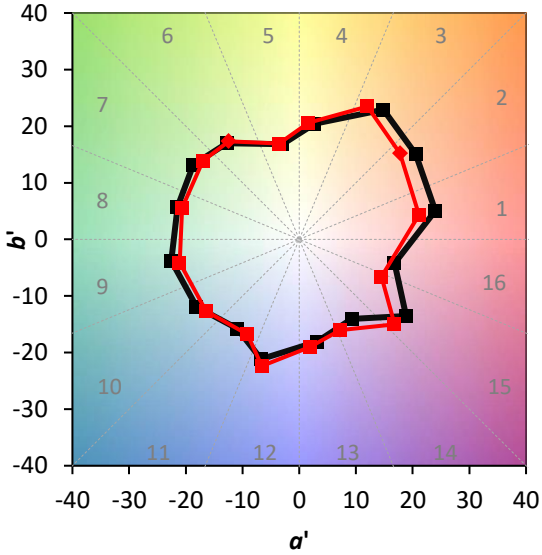
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R_g = 94.1
CIE R_a = 81.8
R_9 = -1.1

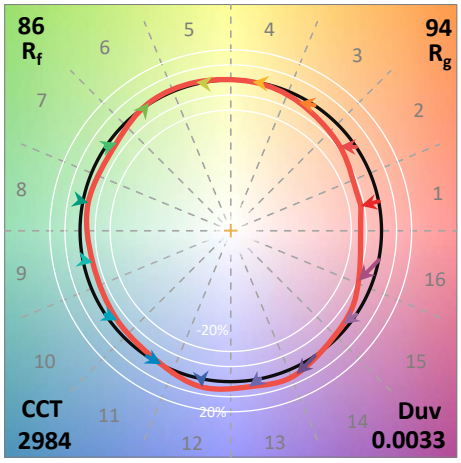
Spectral Power Distribution Comparison

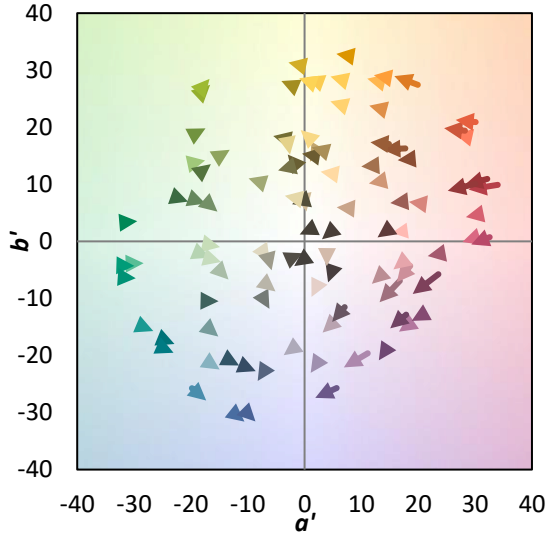


Color Vector Graphics







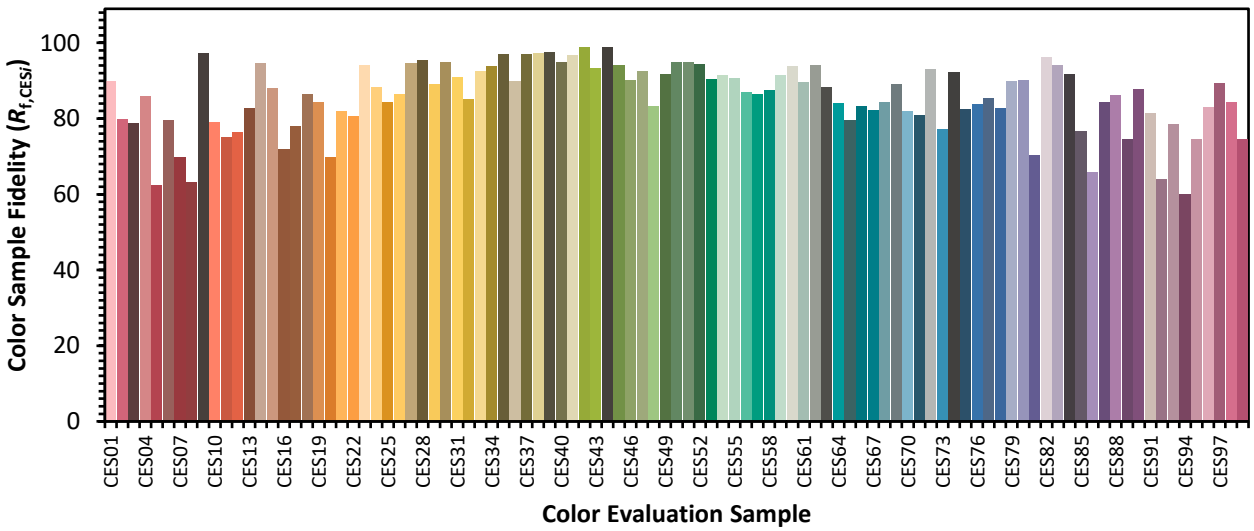


REPORT NUMBER: SP1-2407-176-7

TM-30-18

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

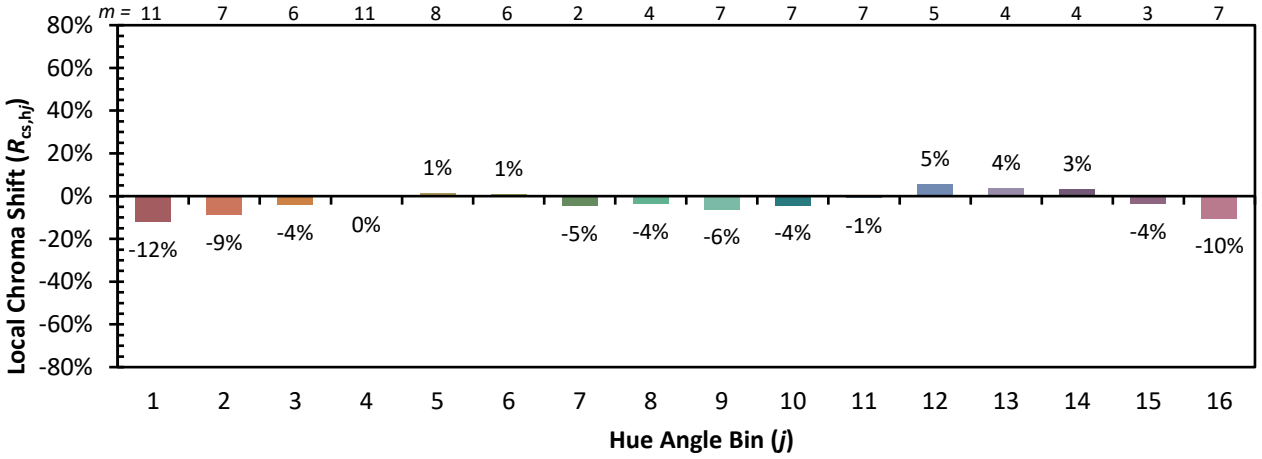
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CES02 = 63	CES27 = 95	CES52 = 94	CES77 = 86
CES03 = 31	CES28 = 95	CES53 = 90	CES78 = 83
CES04 = 70	CES29 = 89	CES54 = 91	CES79 = 90
CES05 = 50	CES30 = 95	CES55 = 91	CES80 = 90
CES06 = 51	CES31 = 91	CES56 = 87	CES81 = 70
CES07 = 42	CES32 = 85	CES57 = 86	CES82 = 96
CES08 = 41	CES33 = 93	CES58 = 87	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 97	CES60 = 94	CES85 = 77
CES11 = 59	CES36 = 90	CES61 = 90	CES86 = 66
CES12 = 65	CES37 = 97	CES62 = 94	CES87 = 84
CES13 = 43	CES38 = 97	CES63 = 88	CES88 = 86
CES14 = 74	CES39 = 98	CES64 = 84	CES89 = 75
CES15 = 72	CES40 = 95	CES65 = 80	CES90 = 88
CES16 = 47	CES41 = 97	CES66 = 83	CES91 = 81
CES17 = 50	CES42 = 99	CES67 = 82	CES92 = 64
CES18 = 56	CES43 = 93	CES68 = 84	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 60
CES20 = 67	CES45 = 94	CES70 = 82	CES95 = 74
CES21 = 87	CES46 = 90	CES71 = 81	CES96 = 83
CES22 = 79	CES47 = 93	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 83	CES73 = 77	CES98 = 84
CES24 = 91	CES49 = 92	CES74 = 92	CES99 = 75
CES25 = 72	CES50 = 95	CES75 = 83	

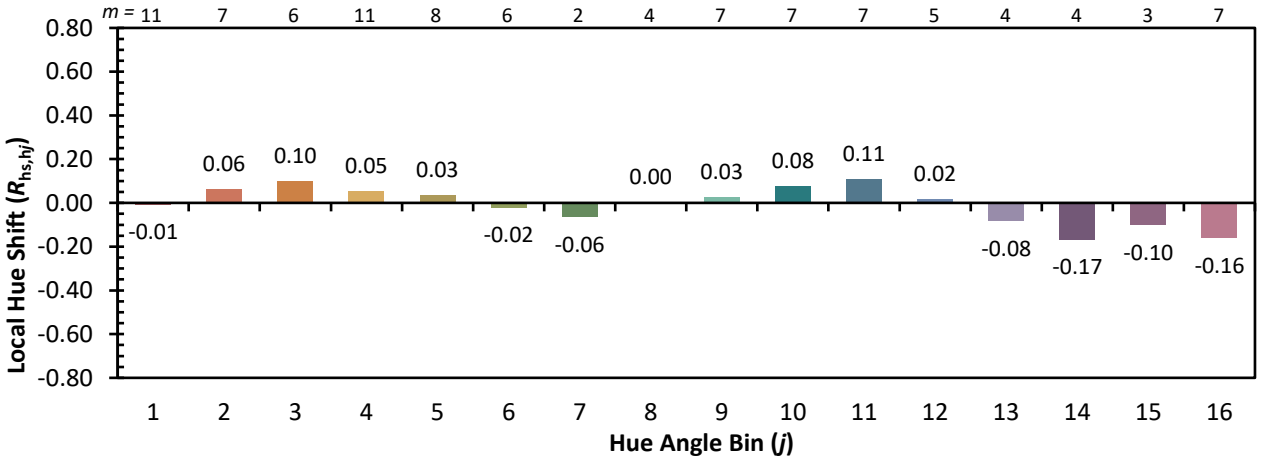


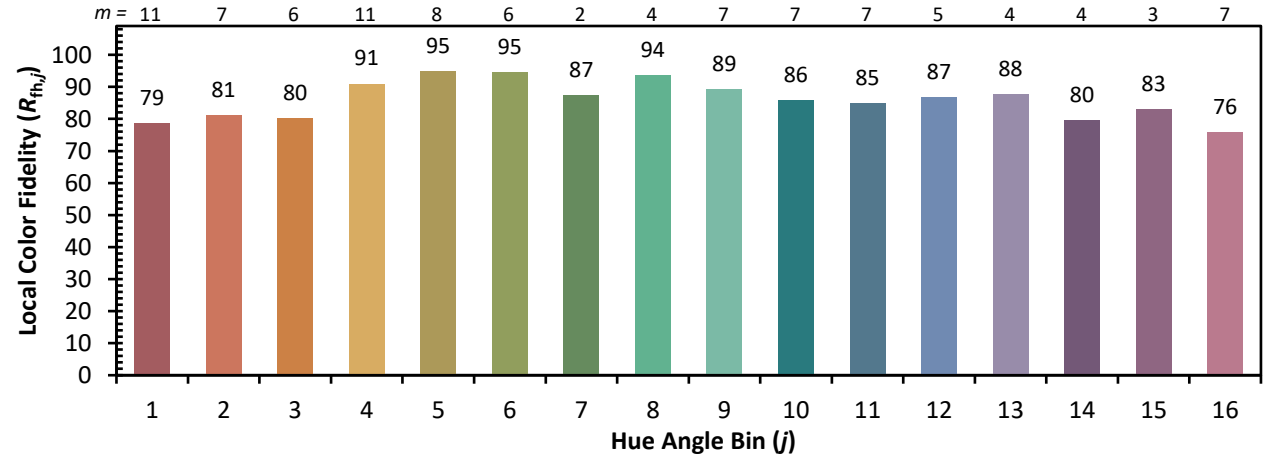
REPORT NUMBER: SP1-2407-176-7

TM-30-18

Color Rendition by Hue-Angle Bin



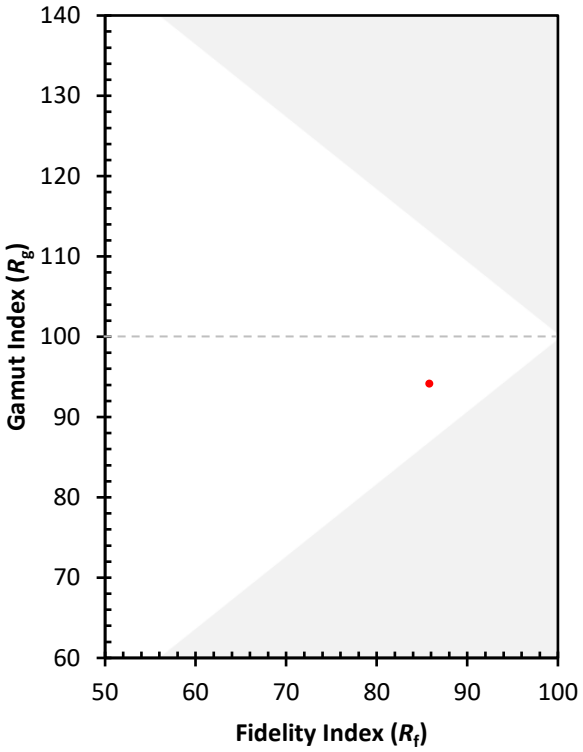


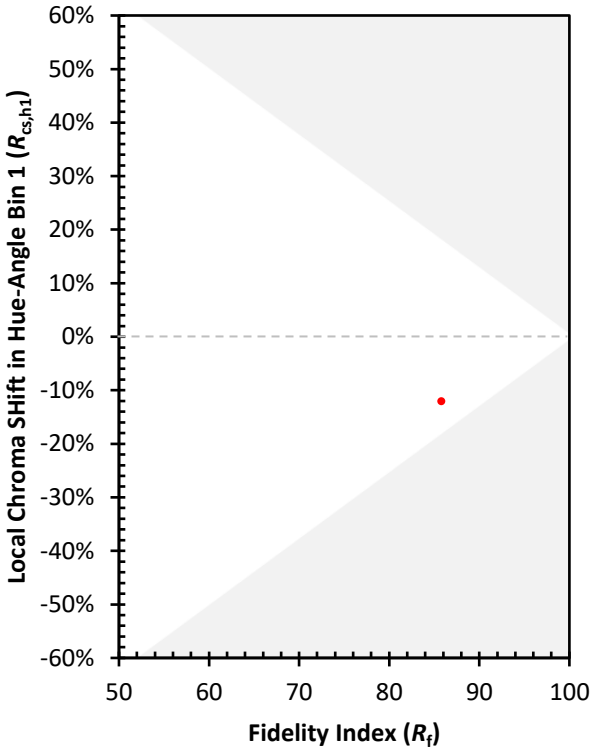


REPORT NUMBER: SP1-2407-176-7

TM-30-18

Measure Comparisons





(END OF REPORT)