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: P821491

Luminaire Tested: **TT-D2-735-12VDC-MQ-HSS**

Issue Date: 12/2/2020

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:	P821491
	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-D2-735-12VDC-MQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	4435 lumens
Efficiency:	N/A
Efficacy:	116.7 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U2 - G2

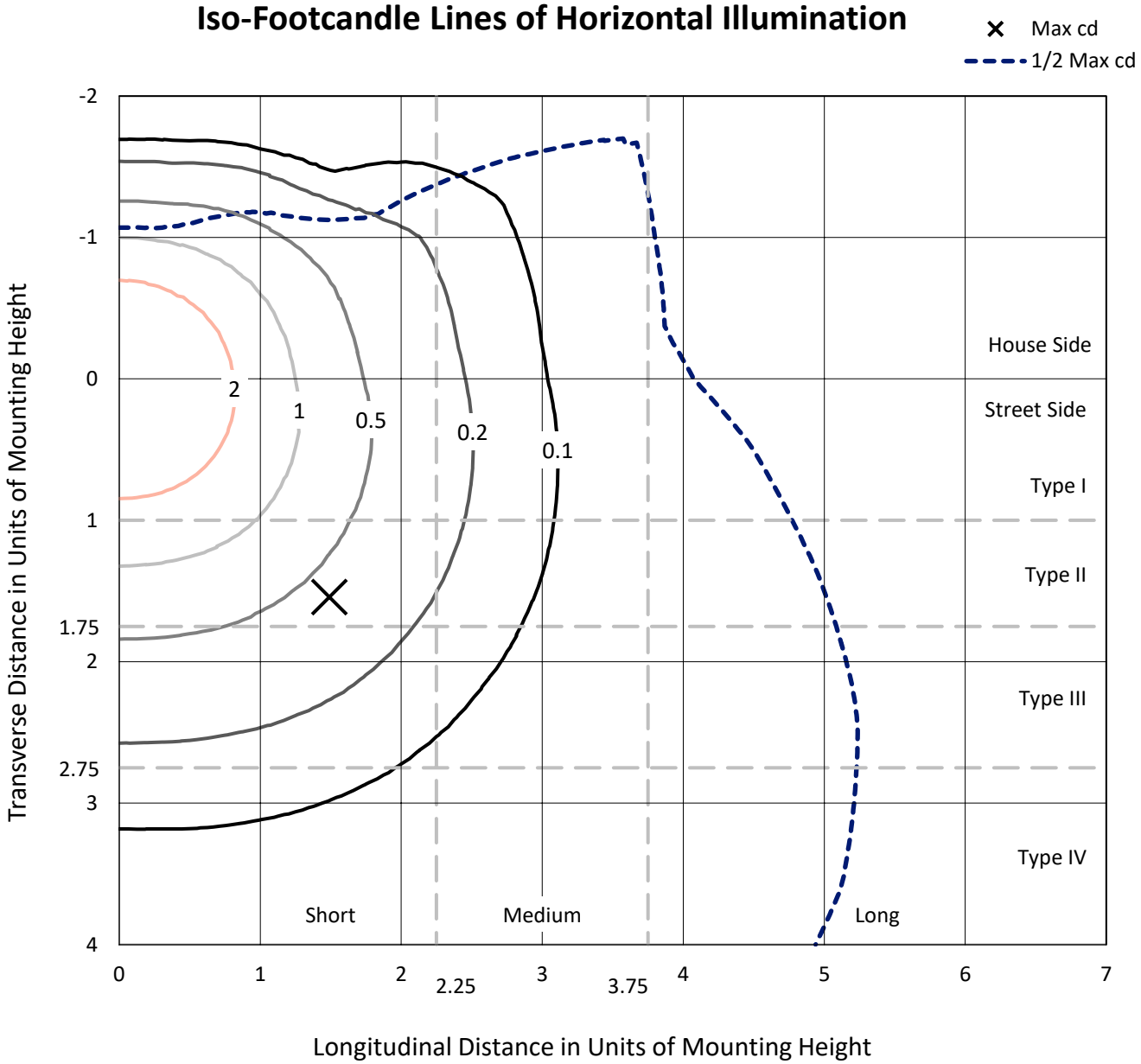
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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

Scaled Data Report

REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

Iso-Footcandle Lines of Horizontal Illumination



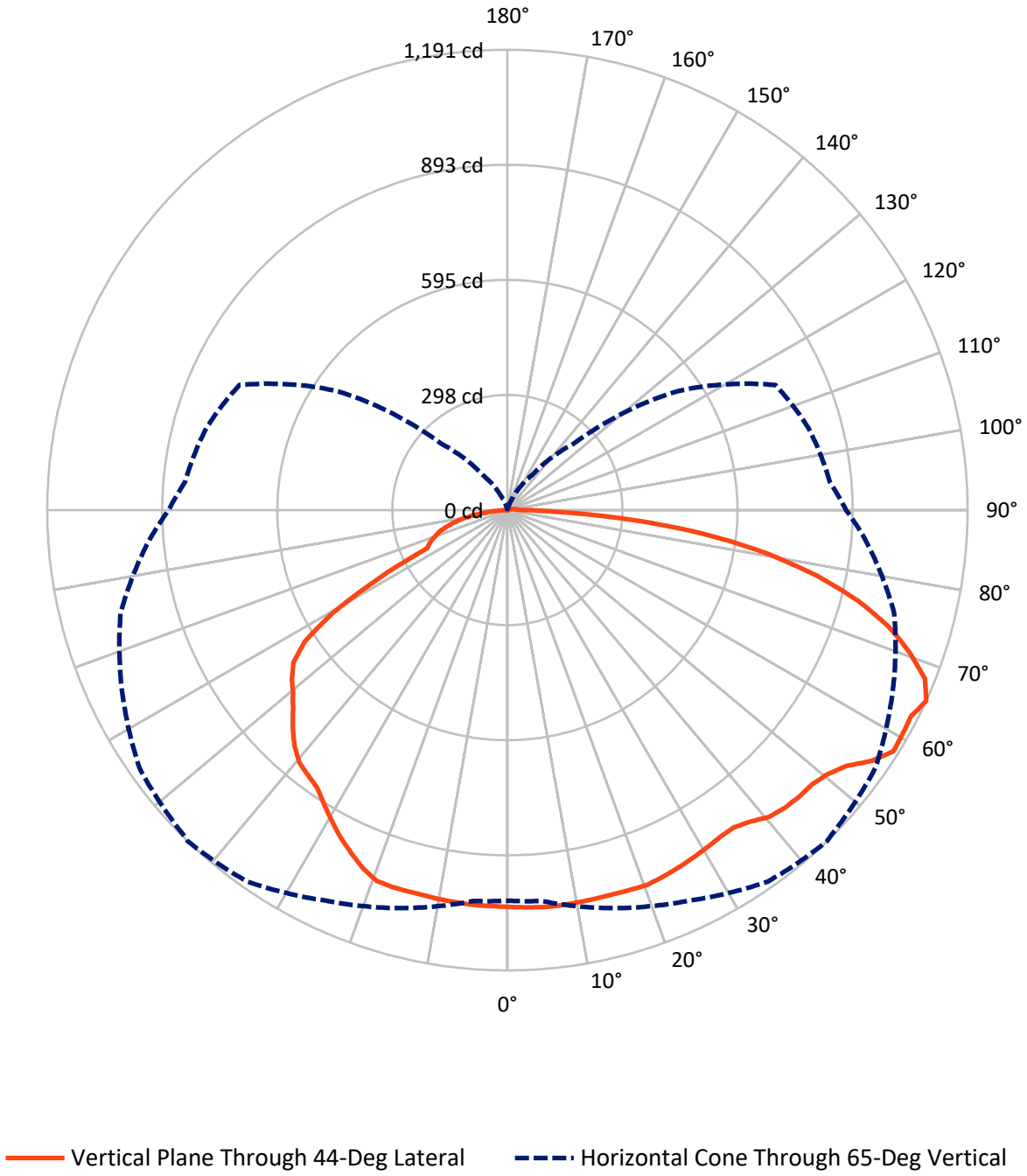
Based on 15 foot mounting height. Maximum calculated value = 4.6 fc
Type IV - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

Luminous Intensity Polar Plot



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

Scaled Data Report

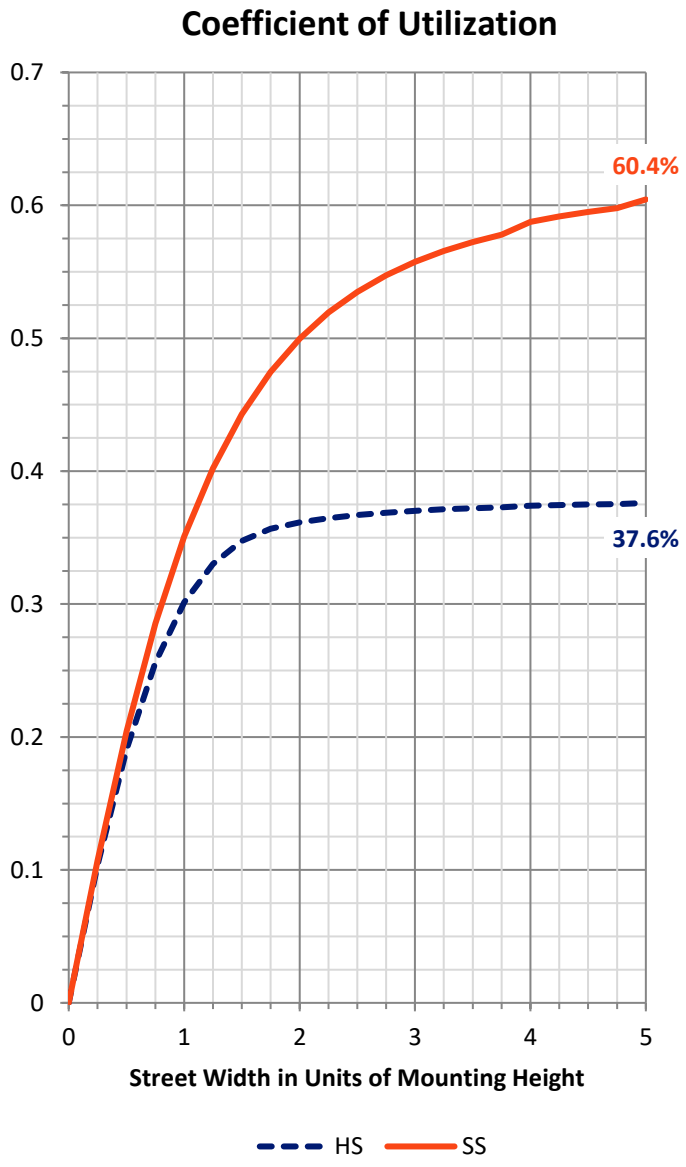
REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1679.3	1.2	1680.5
	% Fixture	37.9	0.0	37.9
Street Side	Lumens	2739.5	15.1	2754.6
	% Fixture	61.8	0.3	62.1
Total	Lumens	4418.8	16.3	4435.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.0	2.2
10°-20°	290.2	6.5
20°-30°	461.9	10.4
30°-40°	591.7	13.3
40°-50°	701.0	15.8
50°-60°	767.7	17.3
60°-70°	729.8	16.5
70°-80°	581.0	13.1
80°-90°	197.4	4.5
90°-100°	10.4	0.2
100°-110°	3.4	0.1
110°-120°	0.8	0.0
120°-130°	0.5	0.0
130°-140°	0.4	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	4418.8	99.6
0°-180°	4435.0	100.0



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

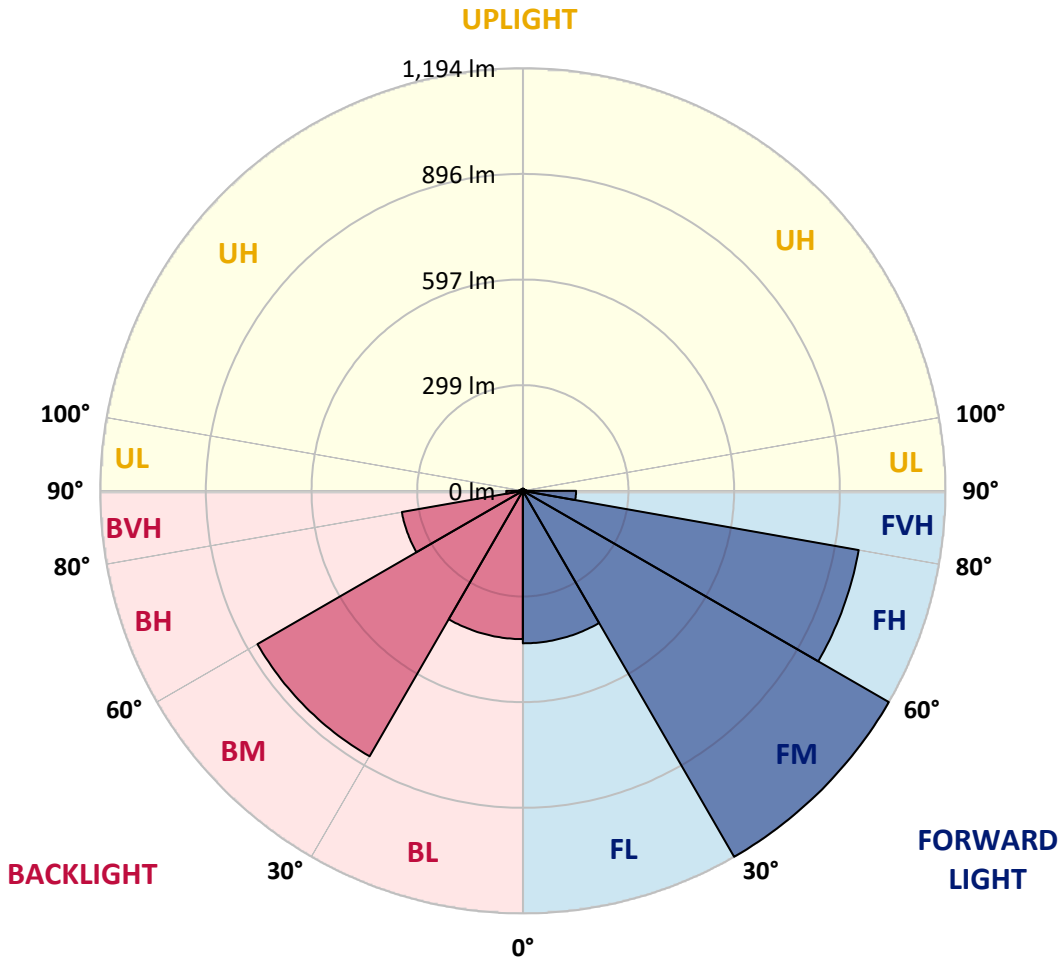
Scaled Data Report

REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	431.1	9.7			
FM	(30°-60°)	1194.3	26.9			
FH	(60°-80°)	963.8	21.7			G1/1800
FVH	(80°-90°)	150.3	3.4			G2/225
BL	(0°-30°)	419.0	9.4	B1/500		
BM	(30°-60°)	866.2	19.5	B1/1000		
BH	(60°-80°)	347.0	7.8	B1/500		G1/500
BVH	(80°-90°)	47.0	1.1			G1/100
UL	(90°-100°)	10.4	0.2		U2/50	
UH	(100°-180°)	5.9	0.1		U1/10	

BUG Rating: B1-U2-G2
Type IV Short



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

Scaled Data Report

REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1026.7	1026.7	1026.7	1026.7	1026.7	*1026.7*	1026.7	1026.7	1026.7	1026.7	1026.7
2.5°	1030.6	1029.8	1029.8	1029.8	1029.8	*1029.0*	1029.8	1028.2	1029.0	1026.7	1026.7
5°	1032.9	1031.4	1032.2	1032.2	1032.2	*1031.4*	1032.2	1029.8	1030.6	1027.5	1026.7
7.5°	1033.7	1032.9	1032.9	1032.9	1032.9	*1031.4*	1032.2	1030.6	1029.8	1027.5	1025.9
10°	1033.7	1032.9	1032.9	1032.9	1032.2	*1030.6*	1031.4	1029.0	1029.0	1025.9	1024.3
12.5°	1033.7	1032.9	1033.7	1032.2	1032.2	*1030.6*	1030.6	1028.2	1028.2	1024.3	1022.8
15°	1032.9	1032.2	1032.2	1032.9	1032.2	*1030.6*	1030.6	1028.2	1027.5	1022.8	1021.2
17.5°	1032.2	1031.4	1032.2	1032.9	1033.7	*1032.2*	1032.9	1029.0	1027.5	1022.8	1020.4
20°	1032.9	1032.2	1032.9	1034.5	1034.5	*1034.5*	1034.5	1030.6	1027.5	1022.8	1018.8
22.5°	1030.6	1030.6	1030.6	1030.6	1032.2	*1029.8*	1029.8	1027.5	1023.5	1019.6	1015.7
25°	1025.1	1025.1	1025.9	1026.7	1026.7	*1025.1*	1024.3	1022.0	1018.8	1014.1	1009.4
27.5°	1018.8	1018.8	1019.6	1019.6	1021.2	*1019.6*	1018.8	1015.7	1012.6	1007.1	1001.6
30°	1011.8	1011.8	1011.8	1013.3	1014.1	*1014.1*	1013.3	1009.4	1005.5	999.2	992.2
32.5°	1003.9	1003.9	1006.3	1007.9	1008.6	*1008.6*	1008.6	1003.9	999.2	991.4	981.2
35°	997.7	997.7	1000.8	1006.3	1009.4	*1007.9*	1007.1	1003.9	996.9	988.3	971.8
37.5°	1001.6	1001.6	1008.6	1016.5	1023.5	*1022.0*	1022.0	1016.5	1007.1	993.0	972.6
40°	1011.0	1011.8	1022.8	1032.9	1041.6	*1043.1*	1043.1	1036.9	1022.8	1004.7	976.5
42.5°	1013.3	1014.9	1025.9	1040.8	1048.6	*1052.5*	1052.5	1043.9	1029.0	1007.9	974.9
45°	1013.3	1014.1	1026.7	1042.3	1054.9	*1058.0*	1058.0	1048.6	1029.8	1009.4	969.5
47.5°	1013.3	1012.6	1023.5	1045.5	1058.0	*1060.4*	1060.4	1050.2	1032.2	1006.3	961.6
50°	1011.0	1014.9	1031.4	1048.6	1070.6	*1073.7*	1072.9	1061.9	1036.9	1010.2	955.4
52.5°	1016.5	1015.7	1037.6	1072.1	1091.7	*1098.8*	1099.6	1085.5	1059.6	1021.2	951.4
55°	1039.2	1040.0	1061.2	1101.1	1130.9	*1144.2*	1142.7	1124.6	1087.8	1043.1	962.4
57.5°	1047.0	1054.9	1085.5	1119.9	1165.4	*1177.1*	1177.1	1155.2	1110.5	1060.4	970.2
60°	1031.4	1034.5	1072.1	1130.9	1172.4	*1174.8*	1175.6	1159.9	1112.9	1051.0	954.6
62.5°	1027.5	1033.7	1062.7	1128.6	1155.2	*1172.4*	1171.7	1150.5	1110.5	1043.9	949.1
65°	*1010.2*	*1014.9*	*1065.9*	*1114.4*	*1173.2*	*1190.5*	*1186.6*	*1162.3*	*1100.3*	*1036.1*	*931.8*
67.5°	974.9	979.6	1026.7	1094.9	1148.1	*1164.6*	1168.5	1140.3	1076.0	999.2	895.0
70°	916.2	923.2	971.0	1037.6	1094.1	*1103.5*	1101.9	1084.7	1020.4	938.1	840.9
72.5°	833.9	844.8	905.2	968.7	1017.3	*1031.4*	1025.1	1005.5	953.0	864.4	767.3
75°	746.9	757.1	804.9	876.2	927.1	*936.5*	931.8	908.3	855.0	768.0	680.3
77.5°	652.1	660.7	701.4	774.3	811.9	*819.8*	822.1	790.8	740.6	662.2	583.9
80°	524.3	528.2	583.1	630.9	663.8	*679.5*	677.9	654.4	604.2	539.2	460.8
82.5°	387.2	390.3	432.6	473.4	503.1	*517.3*	509.4	485.9	445.9	390.3	330.7
85°	237.5	232.0	266.5	297.0	315.1	*324.5*	316.6	303.3	268.0	224.1	182.6
87.5°	85.4	80.7	96.4	101.1	121.5	*118.3*	125.4	101.1	81.5	58.0	40.8
90°	37.6	37.6	36.8	35.3	32.1	*29.0*	28.2	23.5	17.2	11.0	3.9
92.5°	34.5	34.5	33.7	32.1	29.0	*25.9*	25.9	21.2	15.7	10.2	3.9
95°	29.0	29.0	28.2	26.6	24.3	*21.9*	21.9	17.2	13.3	8.6	3.1
97.5°	22.7	22.7	21.9	21.2	18.8	*17.2*	17.2	14.1	10.2	6.3	2.4
100°	17.2	17.2	16.5	15.7	14.9	*13.3*	12.5	10.2	7.8	4.7	1.6
102.5°	12.5	12.5	12.5	11.8	10.2	*9.4*	9.4	7.8	5.5	3.9	1.6
105°	8.6	8.6	8.6	7.8	7.1	*6.3*	6.3	5.5	3.9	2.4	0.8
107.5°	5.5	5.5	5.5	5.5	4.7	*3.9*	3.9	3.1	2.4	1.6	0.8
110°	3.1	2.4	3.1	3.1	3.1	*2.4*	2.4	1.6	1.6	0.8	0.8

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

Scaled Data Report

REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	1.6	1.6	1.6	1.6	1.6	*1.6*	1.6	0.8	0.8	0.8	0.8
115°	0.8	0.8	0.8	1.6	1.6	*0.8*	0.8	0.8	0.8	0.8	0.8
117.5°	0.0	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
120°	0.0	0.0	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
122.5°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
125°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
127.5°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
130°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
132.5°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
135°	0.0	0.0	0.0	0.0	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
137.5°	0.0	0.0	0.0	0.0	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
140°	0.0	0.8	0.8	0.0	0.0	*0.8*	0.8	0.8	0.8	0.8	0.8
142.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
145°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
147.5°	0.8	0.8	0.0	0.0	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
150°	0.8	0.8	0.8	0.0	0.0	*0.8*	0.8	0.8	0.8	0.8	0.8
152.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
155°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
157.5°	0.8	0.8	0.8	0.0	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
160°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
162.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
165°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
167.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
170°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
172.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
175°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
177.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
180°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8

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

Scaled Data Report

REPORT NUMBER: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1026.7	1026.7	1026.7	1026.7	1026.7	1026.7	1026.7	1026.7	1026.7	1026.7	1026.7
2.5°	1026.7	1025.9	1025.1	1025.9	1025.1	1025.1	1024.3	1024.3	1023.5	1023.5	1022.8
5°	1026.7	1025.9	1025.1	1025.9	1024.3	1025.1	1025.1	1024.3	1023.5	1022.8	1022.0
7.5°	1025.9	1025.9	1024.3	1025.1	1023.5	1023.5	1022.8	1022.8	1022.0	1022.0	1021.2
10°	1024.3	1023.5	1023.5	1023.5	1022.0	1022.0	1021.2	1020.4	1020.4	1019.6	1018.8
12.5°	1022.8	1022.0	1021.2	1021.2	1020.4	1019.6	1018.8	1018.8	1018.1	1017.3	1016.5
15°	1020.4	1019.6	1019.6	1019.6	1018.8	1018.8	1018.1	1017.3	1015.7	1014.9	1014.1
17.5°	1019.6	1018.8	1019.6	1019.6	1018.8	1019.6	1018.1	1016.5	1014.9	1014.1	1013.3
20°	1018.8	1018.8	1018.8	1018.1	1017.3	1016.5	1015.7	1014.9	1014.1	1013.3	1012.6
22.5°	1014.9	1014.1	1012.6	1007.9	1002.4	998.5	997.7	999.2	999.2	999.2	996.9
25°	1007.9	1005.5	999.2	990.6	981.2	974.9	971.0	971.0	970.2	968.7	967.9
27.5°	999.2	994.5	983.6	972.6	959.3	951.4	942.0	936.5	934.2	933.4	931.8
30°	987.5	980.4	966.3	952.2	935.8	924.8	909.9	900.5	895.0	892.7	891.1
32.5°	973.4	966.3	949.9	932.6	913.0	897.4	878.5	863.7	853.5	848.8	846.4
35°	964.0	953.8	935.0	914.6	895.0	872.3	849.6	829.2	813.5	808.0	804.9
37.5°	960.1	950.7	930.3	909.9	888.0	860.5	833.9	804.9	783.7	774.3	771.2
40°	962.4	950.7	927.9	906.0	880.1	849.6	814.3	778.2	750.8	737.5	734.3
42.5°	956.9	943.6	917.0	893.4	861.3	826.8	783.7	742.2	705.3	694.4	689.7
45°	947.5	931.1	902.1	872.3	838.6	796.3	751.6	698.3	654.4	641.1	637.2
47.5°	938.1	915.4	880.9	853.5	812.7	763.3	710.8	651.3	596.4	583.1	580.7
50°	924.0	902.8	866.0	833.9	792.3	735.1	675.6	601.1	539.2	516.5	510.2
52.5°	917.7	890.3	855.0	830.0	779.8	714.8	639.5	559.6	470.2	442.0	435.7
55°	924.0	889.5	851.9	827.6	769.6	688.9	596.4	494.5	391.1	361.3	352.7
57.5°	913.0	883.3	845.6	818.2	743.0	635.6	533.7	402.8	295.5	257.1	253.9
60°	898.9	856.6	821.3	796.3	687.3	535.3	415.4	286.8	177.9	145.0	138.7
62.5°	893.4	849.6	808.8	778.2	612.9	393.4	253.1	145.0	73.7	51.7	47.0
65°	*876.2*	*837.0*	*808.0*	*764.9*	*535.3*	*243.0*	*108.9*	*43.1*	*3.1*	*2.4*	*2.4*
67.5°	843.3	803.3	783.7	758.6	527.4	232.0	98.7	39.2	1.6	0.0	0.0
70°	786.9	755.5	742.2	728.9	504.7	214.7	90.1	35.3	0.8	0.0	0.0
72.5°	712.4	691.2	688.9	687.3	471.8	198.3	80.7	31.3	0.8	0.0	0.0
75°	637.9	612.1	616.0	625.4	431.0	175.6	69.8	27.4	0.8	0.0	0.0
77.5°	543.9	525.1	534.5	550.2	377.8	148.9	57.2	21.9	0.8	0.0	0.0
80°	427.9	415.4	436.5	450.6	308.8	118.3	43.1	15.7	0.0	0.0	0.0
82.5°	304.1	297.0	316.6	334.6	229.6	83.9	29.8	10.2	0.0	0.0	0.0
85°	163.8	159.9	178.7	198.3	137.9	47.8	14.9	4.7	0.0	0.0	0.0
87.5°	40.8	37.6	38.4	46.2	33.7	10.2	2.4	0.8	0.0	0.0	0.0
90°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
102.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
110°	0.8	0.8	0.8	0.8	0.8	0.8	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: P821491
CATALOG NUMBER: TT-D2-735-12VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
115°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
117.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
122.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
125°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
127.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
130°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
135°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
147.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
162.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
165°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
167.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
170°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
172.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
175°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
177.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

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: SP1-2407-176-4

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-735-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-735-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

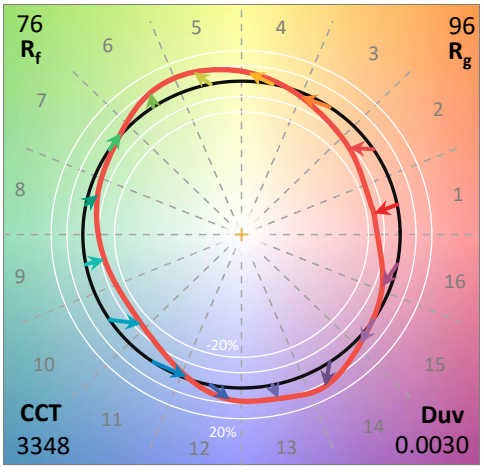
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-4
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-30-735-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	3348	CRI (Ra):	73.4		
CIE u':	0.2384	R1:	70.8	R9:	-19.2
CIE v':	0.5184	R2:	79.9	R10:	52.5
Duv:	0.0030	R3:	87.6	R11:	68.0
CIE x:	0.4177	R4:	72.6	R12:	42.6
CIE y:	0.4036	R5:	69.3	R13:	72.0
CIE z:	0.1787	R6:	71.3	R14:	92.6
Peak Wavelength (nm):	593	R7:	82.1	R15:	63.8
Dominant Wavelength (nm):	580	R8:	53.3		
Purity:	46.5223				

Rf:	75.8
Rg:	95.8



Test Conditions

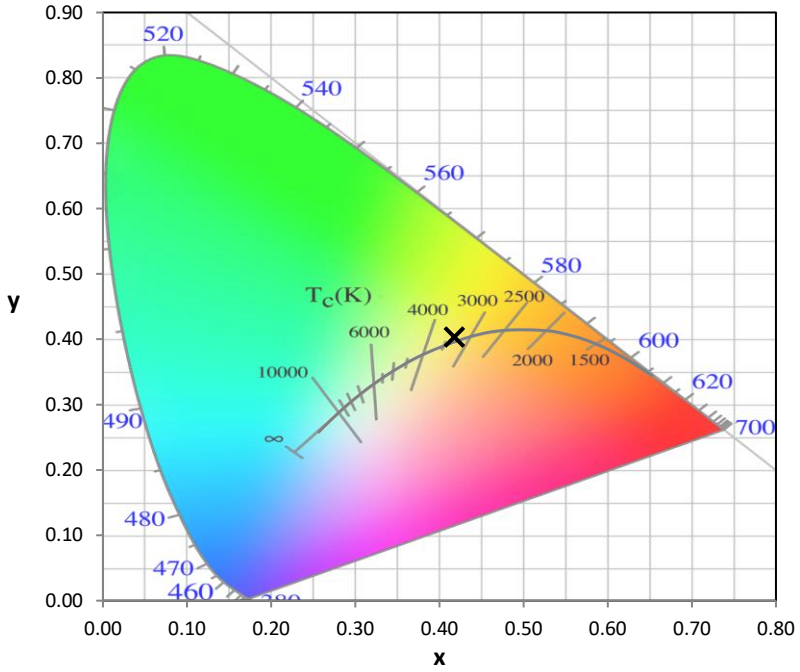
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-4

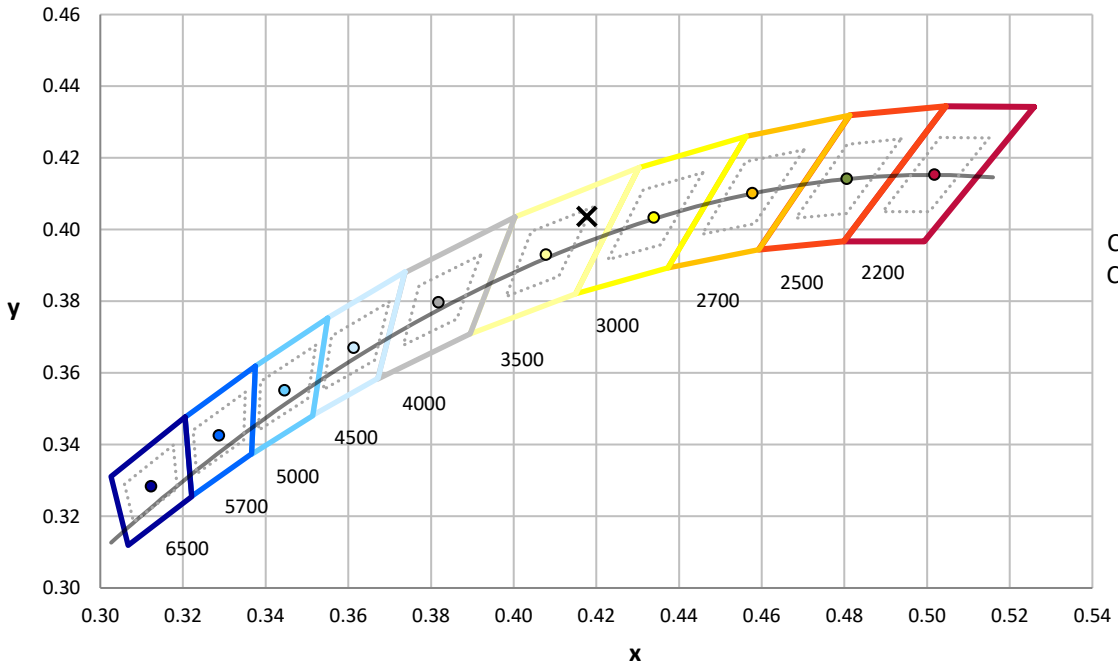
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-4

CIE 1931 Chromaticity Diagram



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

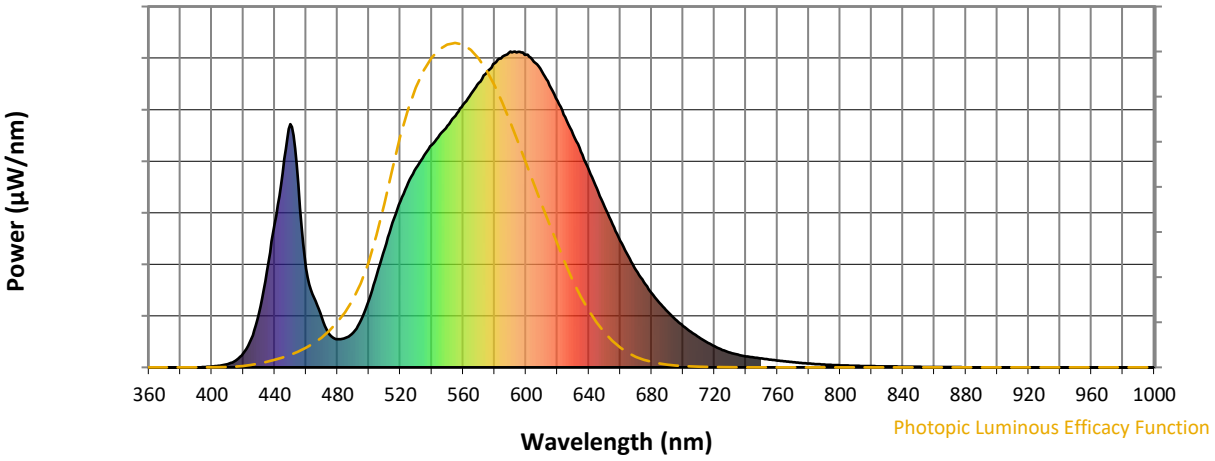


CCT = 3348K
CIE x = 0.4177
CIE y = 0.4036
Duv = 0.0030

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-4

Photopic Flux vs. Wavelength

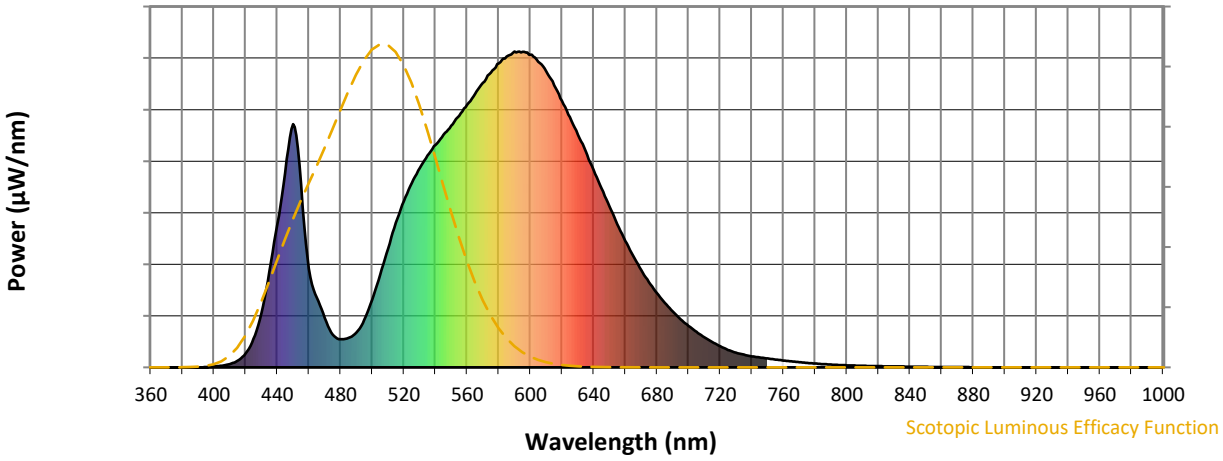


Photopic Lumens: NR

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	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-4

Scotopic Flux vs. Wavelength

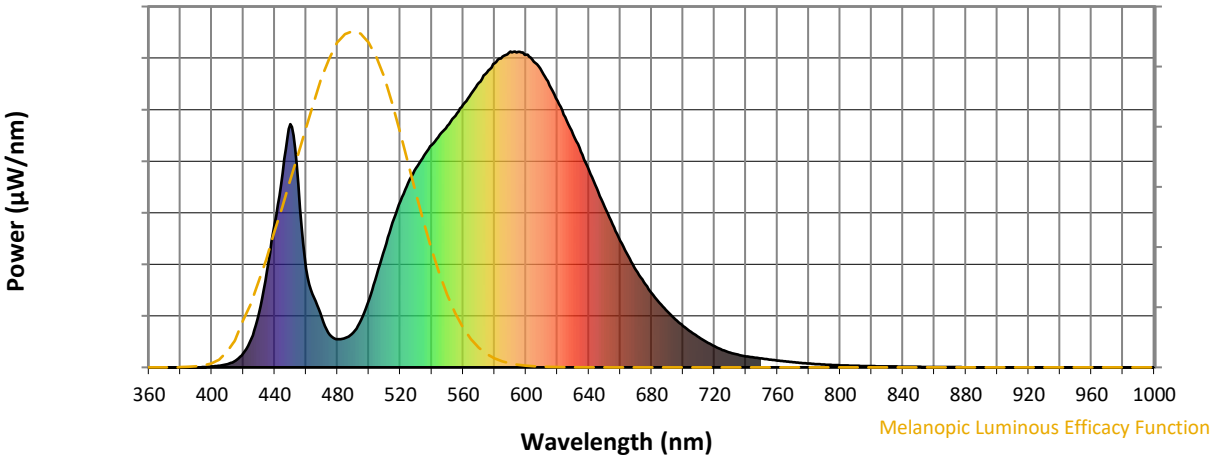


Scotopic Lumens: NR **S/P: 1.31**

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	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.4**

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	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

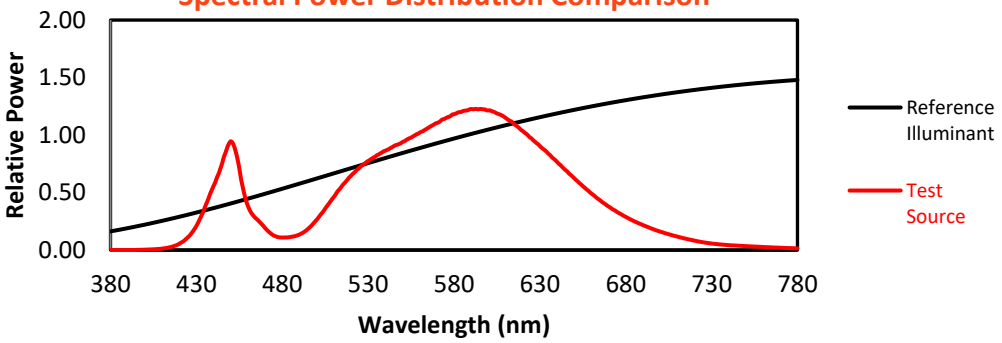
REPORT NUMBER: SP1-2407-176-4

TM-30-18

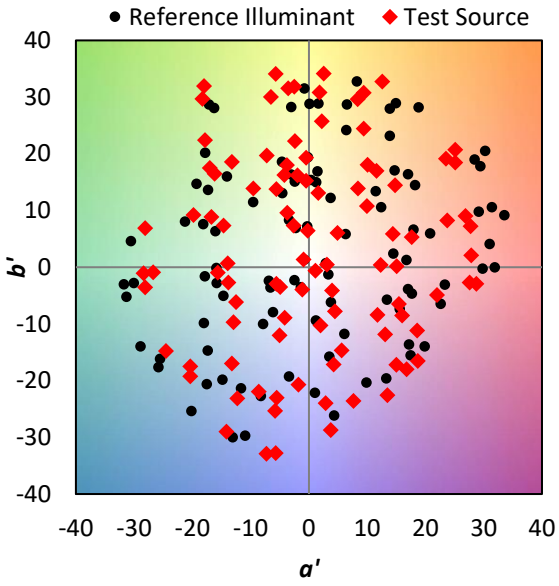
Summary

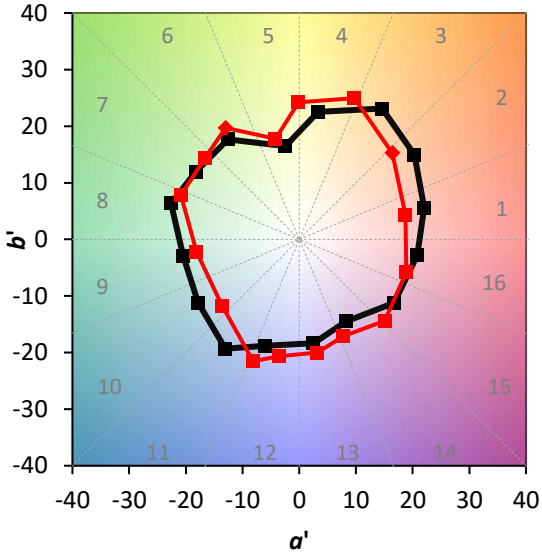
R_f = 75.8
R_g = 95.8
CIE R_a = 73.4
R_9 = -19.2

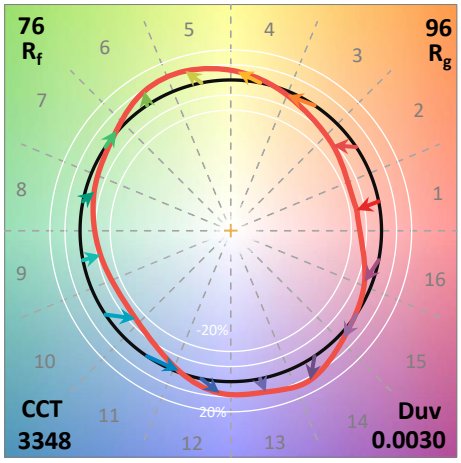
Spectral Power Distribution Comparison

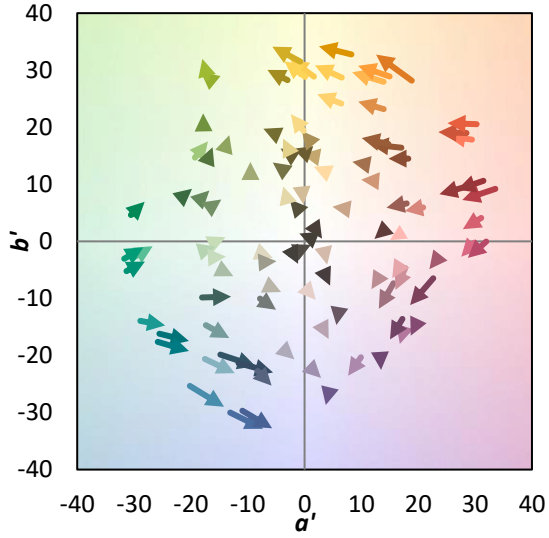


Color Vector Graphics







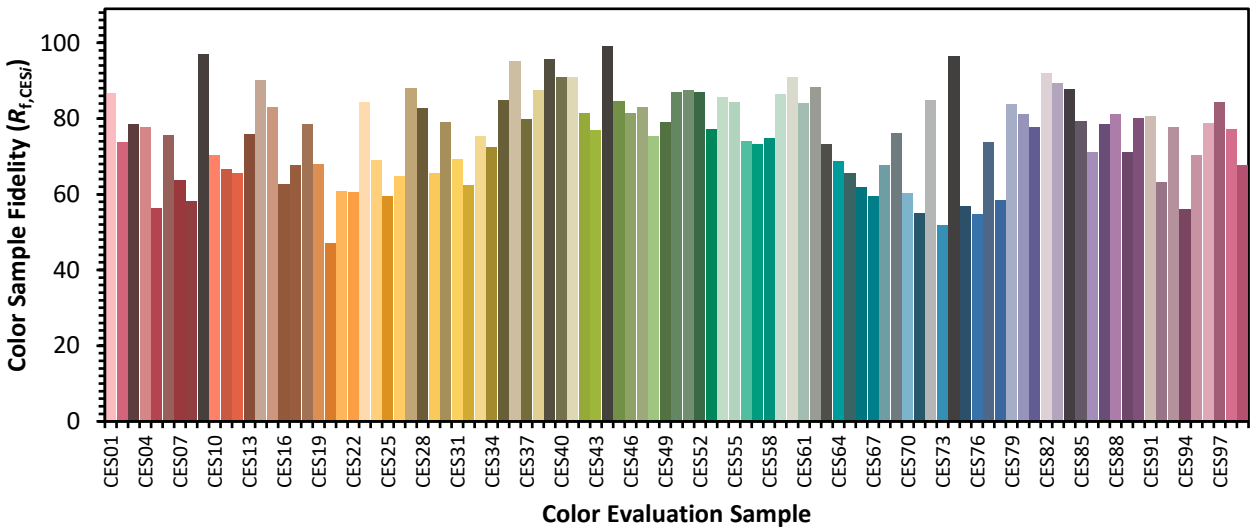


REPORT NUMBER: SP1-2407-176-4

TM-30-18

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

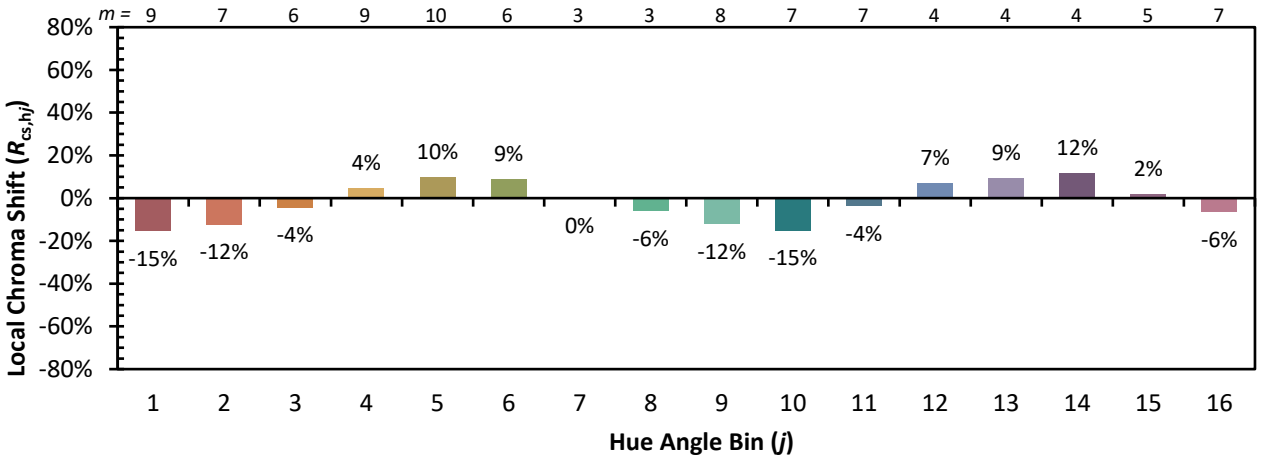
CES01 = 86	CES26 = 65	CES51 = 88	CES76 = 55
CES02 = 62	CES27 = 88	CES52 = 87	CES77 = 74
CES03 = 31	CES28 = 83	CES53 = 77	CES78 = 58
CES04 = 70	CES29 = 66	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 79	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 69	CES56 = 74	CES81 = 78
CES07 = 41	CES32 = 62	CES57 = 73	CES82 = 92
CES08 = 40	CES33 = 75	CES58 = 75	CES83 = 89
CES09 = 29	CES34 = 73	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 85	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 95	CES61 = 84	CES86 = 71
CES12 = 64	CES37 = 80	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 88	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 71
CES15 = 71	CES40 = 91	CES65 = 66	CES90 = 80
CES16 = 47	CES41 = 91	CES66 = 62	CES91 = 81
CES17 = 50	CES42 = 81	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 77	CES68 = 68	CES93 = 78
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 85	CES70 = 60	CES95 = 70
CES21 = 87	CES46 = 82	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 83	CES72 = 85	CES97 = 84
CES23 = 92	CES48 = 75	CES73 = 52	CES98 = 77
CES24 = 91	CES49 = 79	CES74 = 96	CES99 = 68
CES25 = 72	CES50 = 87	CES75 = 57	

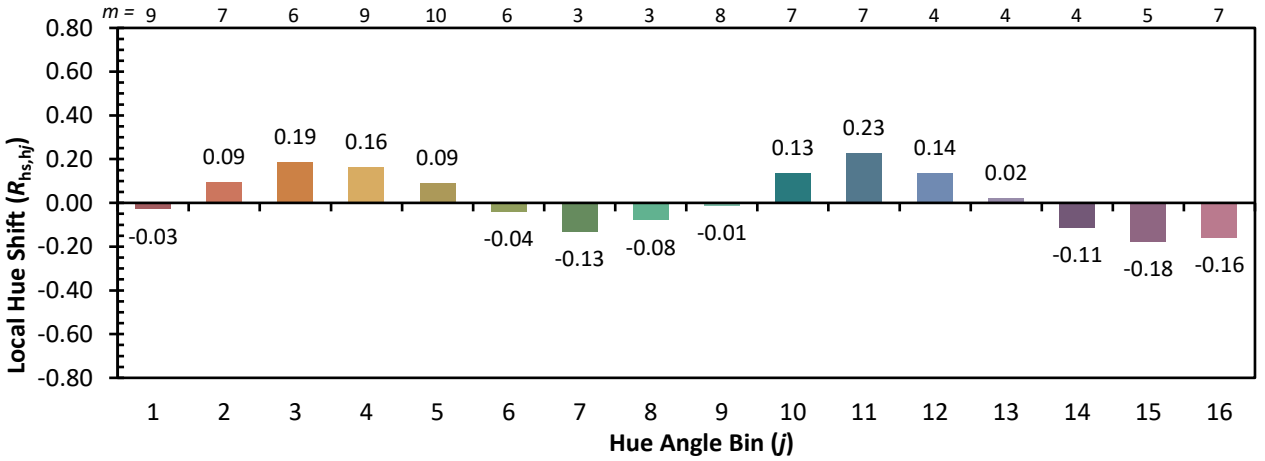


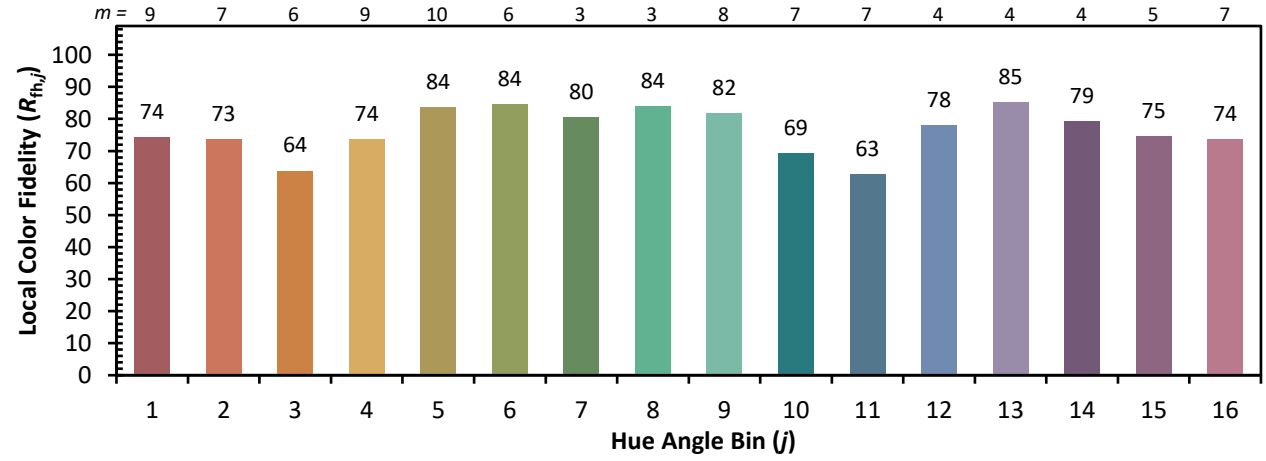
REPORT NUMBER: SP1-2407-176-4

TM-30-18

Color Rendition by Hue-Angle Bin



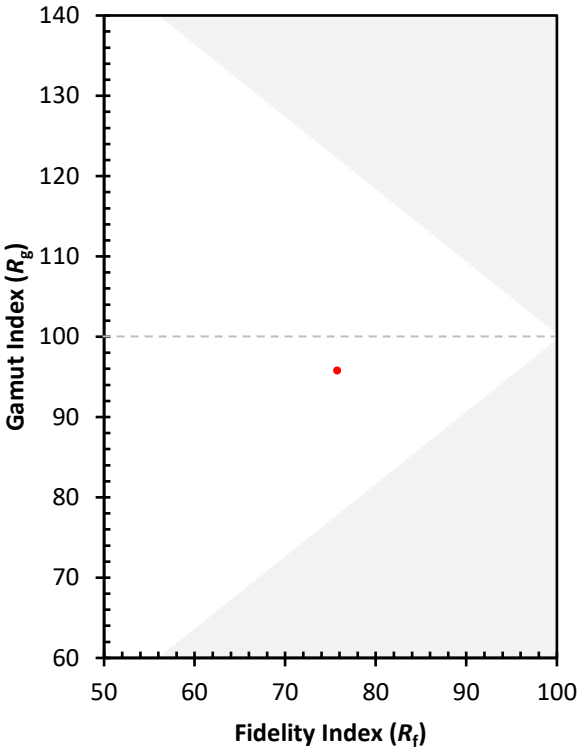


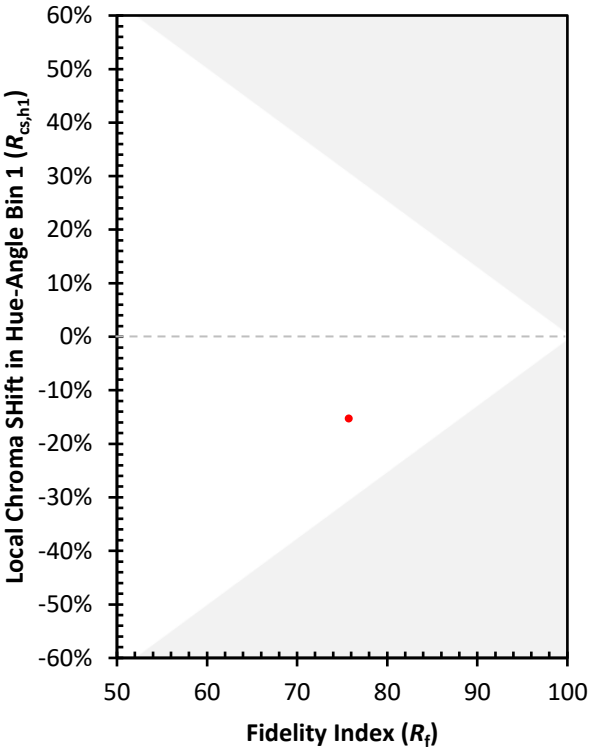


REPORT NUMBER: SP1-2407-176-4

TM-30-18

Measure Comparisons





(END OF REPORT)