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: P834060

Luminaire Tested: **TTN-D3-830-U-WQ-UPL3**

Issue Date: 5/15/2024

Report Generated By 670246001

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:	P834060
	REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G3-2308-121-4) AND
Test Lab:	INNOVATION CENTER
Issue Date:	5/15/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TTN-D3-830-U-WQ-UPL3
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
	3000K, 80 CRI LEDS AND WIDE DISTRIBUTION
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	7044.7 lumens
Efficiency:	N/A
Efficacy:	106.4 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification:	Type V - Short
BUG Rating:	B3 - U4 - G2

Input Watts (W):	66.2
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:	24 FT

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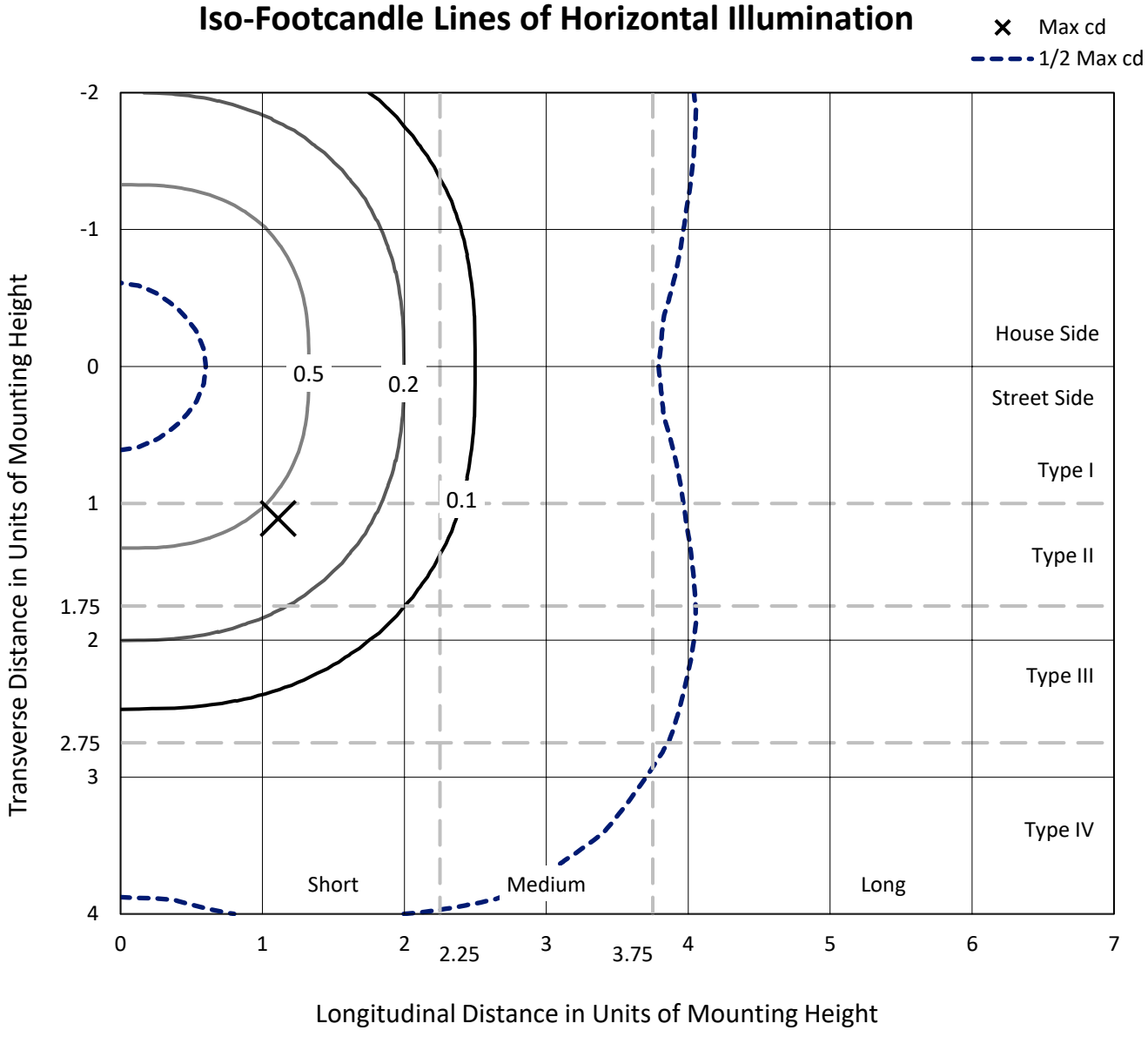
Scaled Data Report

REPORT NUMBER: P834060
CATALOG NUMBER: TTN-D3-830-U-WQ-UPL3

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
Type V - Short - N/A

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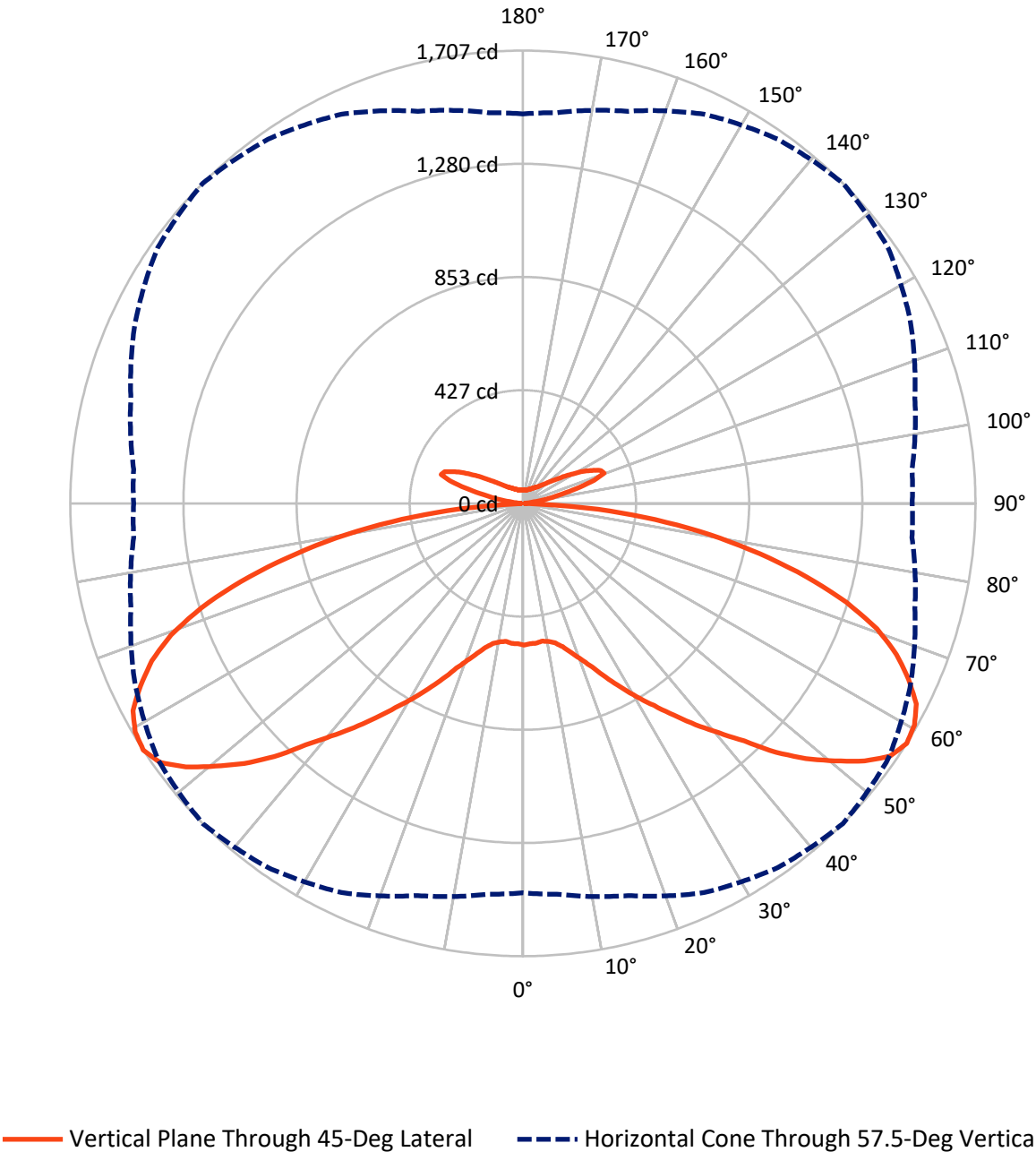
Luminous Intensity Polar Plot



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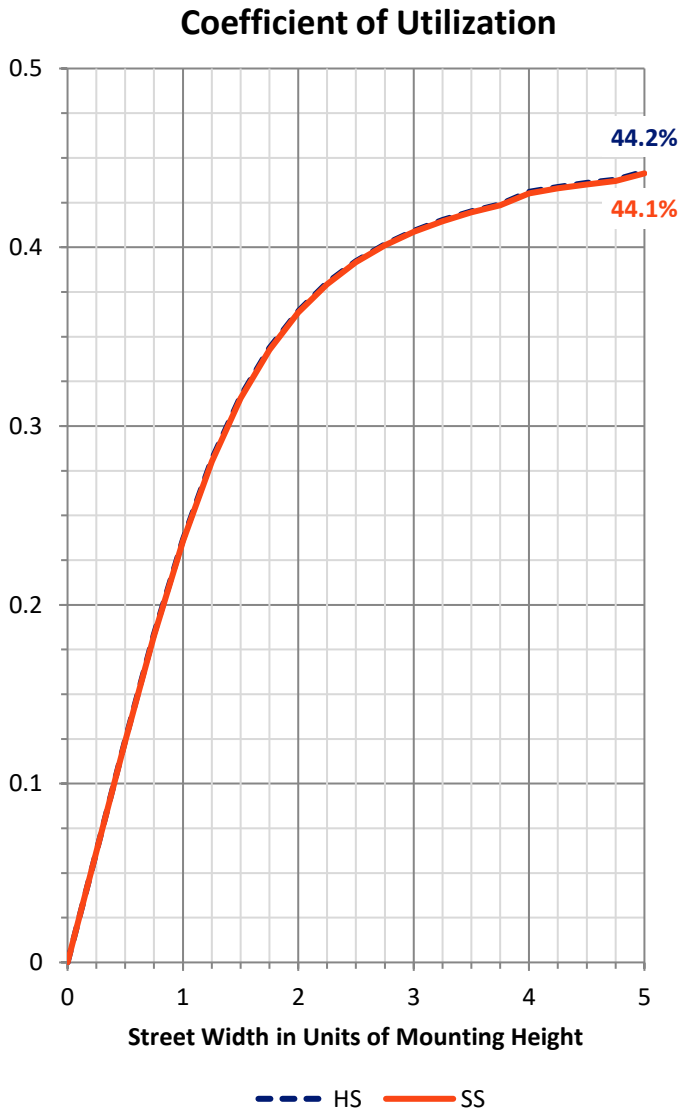
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3152.0	370.3	3522.3
	% Fixture	44.7	5.3	50.0
Street Side	Lumens	3152.0	370.3	3522.3
	% Fixture	44.7	5.3	50.0
Total	Lumens	6304.0	740.7	7044.7
	% Fixture	89.5	10.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.2	0.7
10°-20°	160.3	2.3
20°-30°	336.2	4.8
30°-40°	610.0	8.7
40°-50°	994.4	14.1
50°-60°	1391.9	19.8
60°-70°	1453.1	20.6
70°-80°	1038.2	14.7
80°-90°	269.6	3.8
90°-100°	16.5	0.2
100°-110°	168.0	2.4
110°-120°	245.6	3.5
120°-130°	142.5	2.0
130°-140°	75.5	1.1
140°-150°	44.9	0.6
150°-160°	27.6	0.4
160°-170°	15.1	0.2
170°-180°	4.9	0.1
0°-90°	6304.0	89.5
0°-180°	7044.7	100.0



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REPORT NUMBER: P834060
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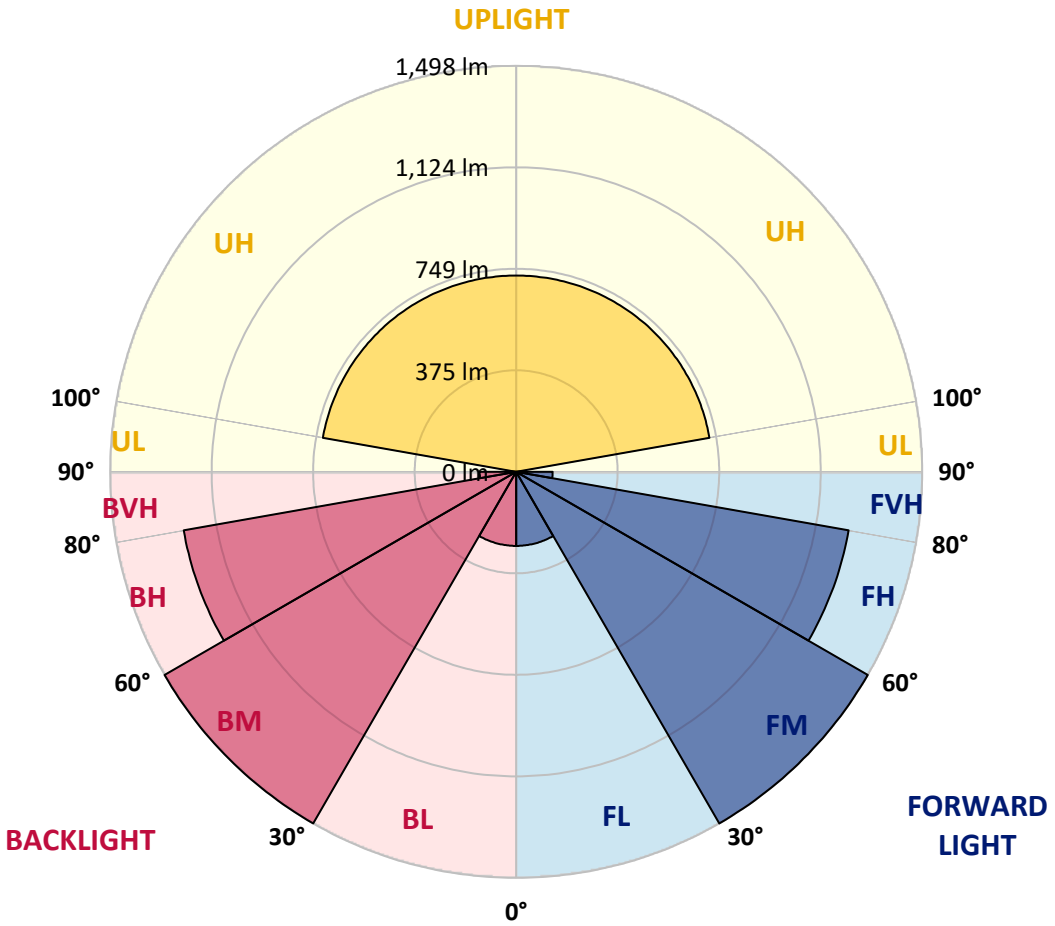
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	273.4	3.9			
FM	(30°-60°)	1498.2	21.3			
FH	(60°-80°)	1245.7	17.7			G1/1800
FVH	(80°-90°)	134.8	1.9			G2/225
BL	(0°-30°)	273.4	3.9	B1/500		
BM	(30°-60°)	1498.2	21.3	B2/2500		
BH	(60°-80°)	1245.7	17.7	B3/2500		G1/1800
BVH	(80°-90°)	134.8	1.9			G2/225
UL	(90°-100°)	16.5	0.2		U2/50	
UH	(100°-180°)	724.2	10.3		U4/1000	

BUG Rating: B3-U4-G2
Type V Short



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REPORT NUMBER: P834060
CATALOG NUMBER: TTN-D3-830-U-WQ-UPL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3	534.3
2.5°	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1
5°	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1	529.1
7.5°	518.7	518.7	523.9	523.9	523.9	523.9	523.9	523.9	523.9	523.9	523.9
10°	518.7	518.7	523.9	523.9	529.1	529.1	529.1	523.9	523.9	518.7	518.7
12.5°	529.1	529.1	529.1	534.3	539.5	539.5	539.5	534.3	534.3	529.1	529.1
15°	544.6	549.8	549.8	555.0	560.2	560.2	560.2	555.0	555.0	549.8	549.8
17.5°	575.8	575.8	575.8	580.9	586.1	591.3	591.3	580.9	580.9	575.8	580.9
20°	606.9	612.1	612.1	617.3	622.4	627.6	622.4	617.3	612.1	612.1	612.1
22.5°	653.6	653.6	658.8	658.8	669.1	669.1	669.1	658.8	658.8	658.8	658.8
25°	705.4	705.4	710.6	715.8	726.2	726.2	721.0	710.6	710.6	710.6	715.8
27.5°	767.7	767.7	772.9	772.9	783.2	783.2	778.1	772.9	772.9	772.9	778.1
30°	824.7	824.7	835.1	840.3	845.5	845.5	845.5	835.1	835.1	829.9	829.9
32.5°	876.6	881.8	887.0	902.5	912.9	907.7	912.9	902.5	892.2	887.0	887.0
35°	933.7	938.9	949.2	964.8	980.4	980.4	980.4	964.8	954.4	944.0	949.2
37.5°	1001.1	1001.1	1016.7	1032.2	1053.0	1058.2	1053.0	1037.4	1021.8	1011.5	1011.5
40°	1073.7	1073.7	1089.3	1104.8	1130.8	1136.0	1130.8	1110.0	1089.3	1084.1	1084.1
42.5°	1146.3	1146.3	1167.1	1182.6	1213.8	1224.1	1213.8	1187.8	1167.1	1151.5	1156.7
45°	1224.1	1229.3	1255.3	1286.4	1322.7	1338.3	1322.7	1291.6	1260.5	1229.3	1229.3
47.5°	1312.3	1312.3	1343.4	1379.8	1421.2	1436.8	1416.1	1384.9	1343.4	1317.5	1317.5
50°	1369.4	1374.6	1416.1	1462.7	1514.6	1525.0	1509.4	1462.7	1416.1	1379.8	1374.6
52.5°	1426.4	1431.6	1478.3	1545.7	1597.6	1613.2	1592.4	1545.7	1478.3	1431.6	1431.6
55°	1462.7	1473.1	1525.0	1597.6	1654.7	1680.6	1649.5	1597.6	1519.8	1467.9	1462.7
57.5°	1467.9	1478.3	1530.2	1618.4	1675.4	1706.5	1680.6	1613.2	1530.2	1473.1	1467.9
60°	1457.6	1462.7	1514.6	1608.0	1675.4	1696.2	1675.4	1602.8	1509.4	1462.7	1452.4
62.5°	1431.6	1442.0	1493.9	1571.7	1649.5	1665.0	1644.3	1566.5	1488.7	1431.6	1421.2
65°	1348.6	1359.0	1436.8	1514.6	1582.0	1597.6	1582.0	1514.6	1431.6	1348.6	1338.3
67.5°	1255.3	1260.5	1338.3	1431.6	1493.9	1519.8	1493.9	1436.8	1333.1	1255.3	1244.9
70°	1156.7	1161.9	1224.1	1322.7	1384.9	1416.1	1390.1	1327.9	1219.0	1151.5	1146.3
72.5°	1042.6	1042.6	1104.8	1182.6	1244.9	1276.0	1255.3	1177.5	1094.5	1027.0	1016.7
75°	887.0	892.2	959.6	1016.7	1084.1	1104.8	1084.1	1021.8	944.0	876.6	866.2
77.5°	726.2	731.4	788.4	835.1	897.4	912.9	897.4	845.5	772.9	715.8	710.6
80°	549.8	555.0	601.7	643.2	695.1	715.8	700.3	648.4	591.3	539.5	523.9
82.5°	357.9	363.1	409.8	440.9	487.6	503.1	492.8	446.1	399.4	347.5	342.3
85°	160.8	166.0	207.5	233.4	269.7	285.3	274.9	233.4	197.1	150.4	140.1
87.5°	15.6	15.6	15.6	15.6	15.6	20.7	20.7	15.6	15.6	15.6	15.6
90°	6.3	6.3	7.6	7.6	7.6	7.6	7.6	7.6	7.6	6.3	6.3
92.5°	6.3	6.3	6.3	8.9	10.1	8.9	10.1	7.6	7.6	6.3	6.3
95°	7.6	7.6	8.9	11.4	13.9	15.2	15.2	8.9	8.9	7.6	7.6
97.5°	10.1	11.4	11.4	13.9	22.8	41.8	25.3	12.7	12.7	11.4	10.1
100°	16.5	17.7	17.7	31.7	67.2	90.0	64.6	32.9	24.1	17.7	17.7
102.5°	53.2	55.8	68.4	102.6	152.1	138.1	116.6	110.2	76.0	60.8	58.3
105°	135.6	134.3	144.5	171.1	212.9	209.1	192.6	174.9	150.8	139.4	139.4
107.5°	178.7	178.7	187.5	210.4	242.0	282.6	286.4	226.8	198.9	186.3	185.0
110°	201.5	201.5	209.1	228.1	269.9	326.9	324.4	280.0	245.8	229.4	226.8

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Scaled Data Report

REPORT NUMBER: P834060
CATALOG NUMBER: TTN-D3-830-U-WQ-UPL3

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	206.5	207.8	218.0	247.1	292.7	*318.1*	306.7	288.9	273.7	261.0	258.5
115°	214.2	214.2	225.6	253.4	278.8	*288.9*	276.2	262.3	252.2	247.1	249.6
117.5°	211.6	215.4	218.0	233.2	249.6	*257.2*	250.9	231.9	224.3	221.8	218.0
120°	196.4	196.4	198.9	206.5	215.4	*219.2*	216.7	204.0	197.7	196.4	193.9
122.5°	174.9	176.1	174.9	178.7	185.0	*188.8*	186.3	176.1	173.6	173.6	171.1
125°	153.3	153.3	152.1	154.6	158.4	*157.1*	158.4	153.3	152.1	152.1	150.8
127.5°	138.1	136.9	134.3	135.6	136.9	*136.9*	138.1	133.1	134.3	135.6	134.3
130°	122.9	122.9	120.4	120.4	120.4	*117.8*	120.4	117.8	119.1	120.4	121.6
132.5°	109.0	109.0	105.2	103.9	103.9	*103.9*	105.2	103.9	106.4	109.0	109.0
135°	97.6	97.6	93.8	95.0	95.0	*93.8*	95.0	93.8	96.3	97.6	97.6
137.5°	88.7	88.7	86.2	86.2	86.2	*84.9*	86.2	86.2	87.4	90.0	91.2
140°	81.1	81.1	79.8	79.8	78.6	*79.8*	79.8	79.8	81.1	82.4	82.4
142.5°	77.3	76.0	74.8	73.5	74.8	*74.8*	74.8	73.5	74.8	77.3	77.3
145°	71.0	71.0	69.7	69.7	69.7	*71.0*	69.7	69.7	71.0	71.0	72.2
147.5°	67.2	67.2	65.9	67.2	67.2	*67.2*	67.2	65.9	67.2	67.2	68.4
150°	65.9	64.6	63.4	64.6	64.6	*63.4*	63.4	63.4	63.4	64.6	64.6
152.5°	62.1	62.1	60.8	62.1	60.8	*60.8*	60.8	60.8	60.8	62.1	63.4
155°	59.6	59.6	58.3	59.6	59.6	*59.6*	59.6	59.6	59.6	59.6	59.6
157.5°	57.0	58.3	57.0	57.0	57.0	*57.0*	57.0	57.0	57.0	58.3	58.3
160°	55.8	55.8	55.8	55.8	54.5	*54.5*	54.5	55.8	55.8	55.8	57.0
162.5°	54.5	54.5	54.5	54.5	53.2	*53.2*	53.2	53.2	54.5	54.5	55.8
165°	54.5	53.2	53.2	53.2	52.0	*52.0*	52.0	52.0	53.2	54.5	53.2
167.5°	52.0	52.0	52.0	52.0	52.0	*50.7*	50.7	52.0	52.0	52.0	53.2
170°	52.0	52.0	50.7	50.7	50.7	*50.7*	50.7	50.7	50.7	50.7	52.0
172.5°	52.0	52.0	52.0	52.0	50.7	*50.7*	50.7	50.7	50.7	52.0	52.0
175°	52.0	52.0	52.0	52.0	50.7	*50.7*	50.7	52.0	52.0	52.0	50.7
177.5°	52.0	52.0	52.0	52.0	50.7	*52.0*	52.0	52.0	52.0	52.0	52.0
180°	52.0	52.0	52.0	52.0	52.0	*52.0*	52.0	52.0	52.0	52.0	52.0

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Peachtree City, GA 30269

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-4

Test Date: 11/22/2024

Luminaire Tested: TTN-D0-830-U-WQ

Data in this report applies to TT and TTN families of products

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

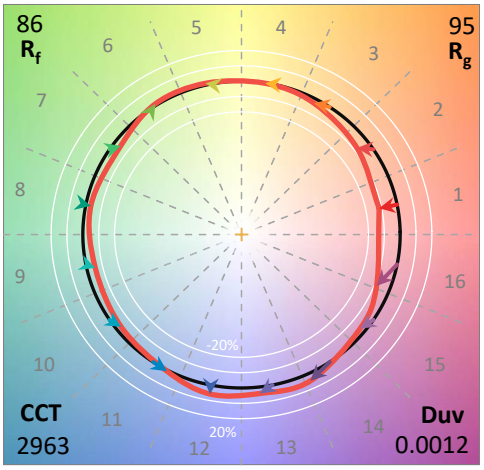
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2411-284-4
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	11/22/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	MCGRAW EDISON
Catalog Number:	**TTN-D0-830-U-WQ**
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3000K, 80 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	2963
CIE u':	0.2515
CIE v':	0.5238
Duv:	0.0012
CIE x:	0.4414
CIE y:	0.4086
CIE z:	0.1501
Peak Wavelength (nm):	603
Dominant Wavelength (nm):	582
Purity:	55.12798
Rf:	86.1
Rg:	94.9

CRI (Ra):	82.9
R1:	81.4
R2:	91.9
R3:	95.2
R4:	81.6
R5:	82.3
R6:	91.4
R7:	82.0
R8:	57.2
R9:	3.9
R10:	82.5
R11:	82.3
R12:	76.5
R13:	83.9
R14:	97.8
R15:	72.6



Test Conditions

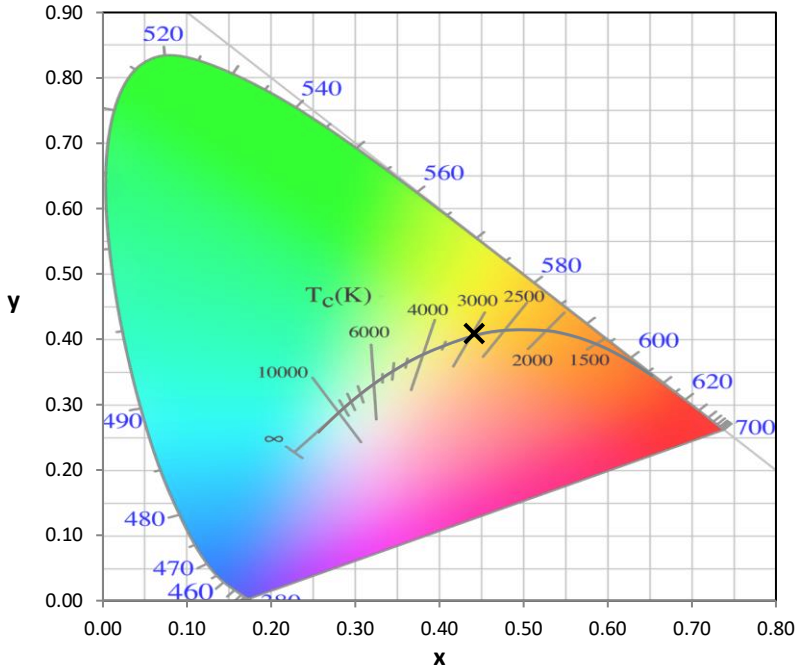
Stabilization Time:	37M
Operation Time:	1H 37M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2411-284-4

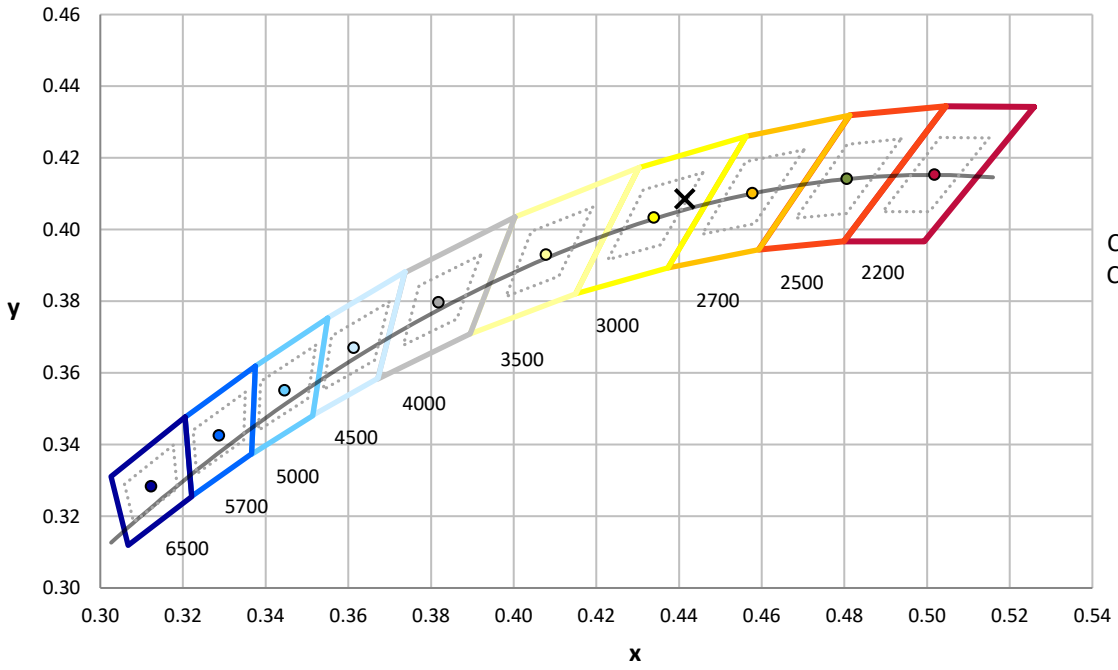
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085	10/22/2024	10/22/2025
Room Thermometer	IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2411-284-4

CIE 1931 Chromaticity Diagram



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

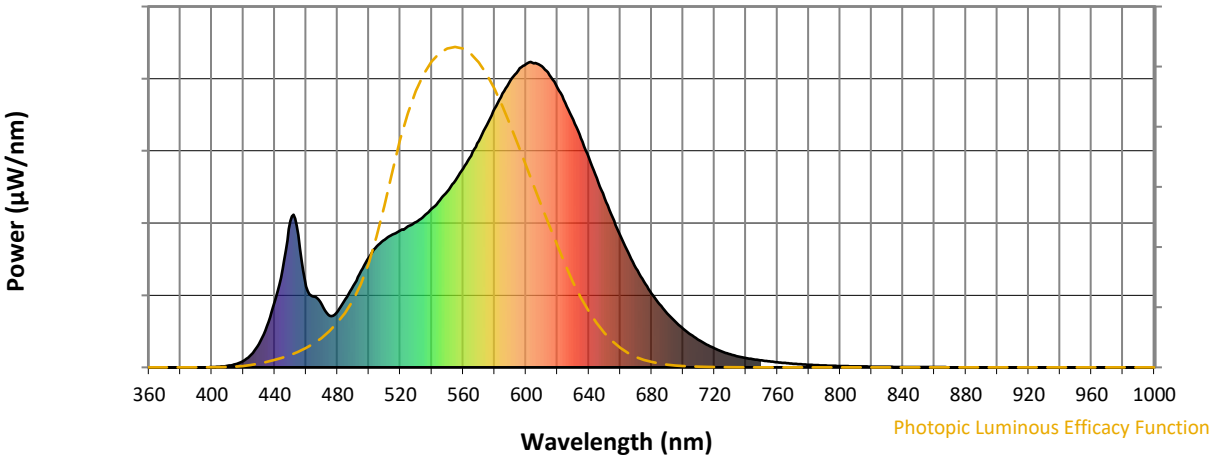


CCT = 2963K
CIE x = 0.4414
CIE y = 0.4086
Duv = 0.0012

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2411-284-4

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	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

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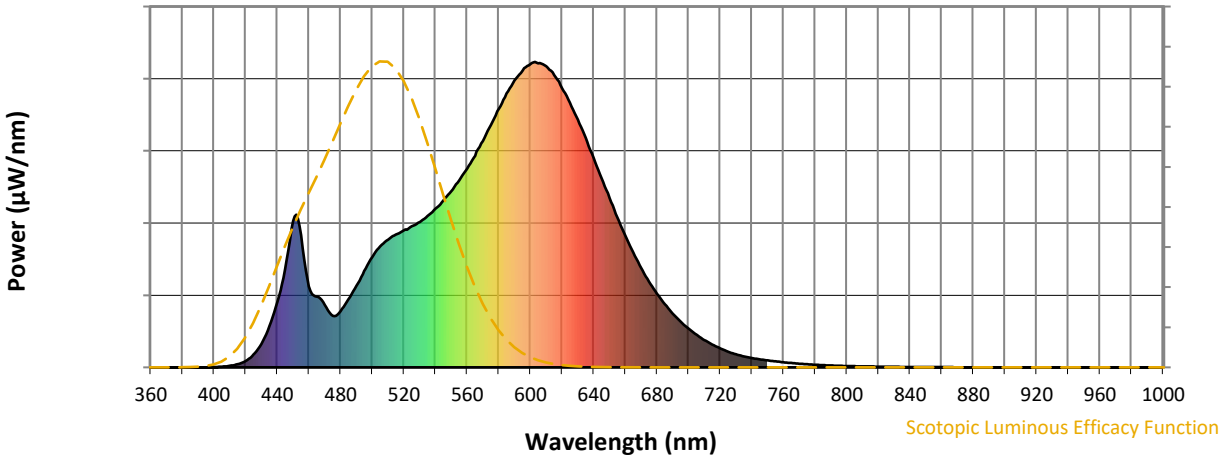
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.34**

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	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

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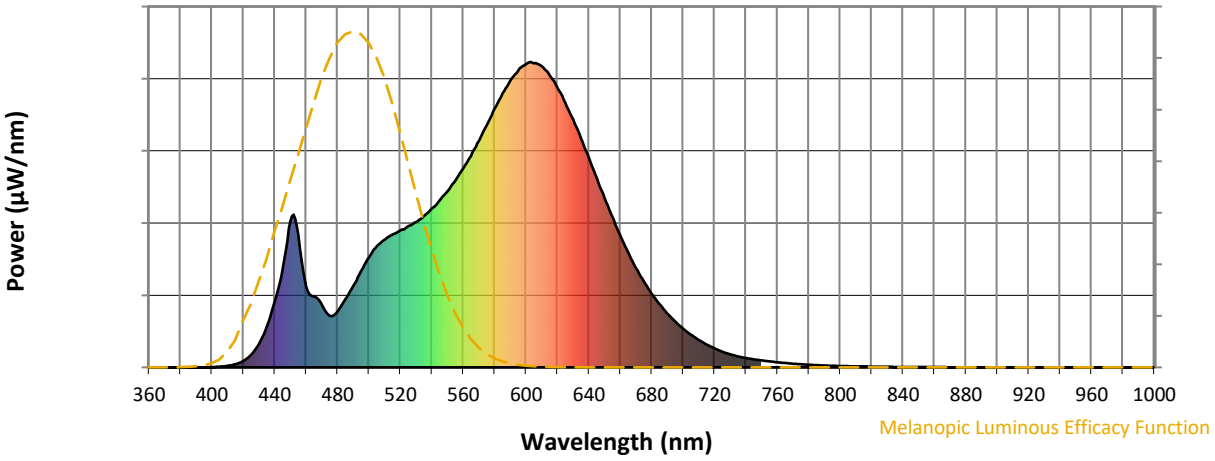
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.58**

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	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

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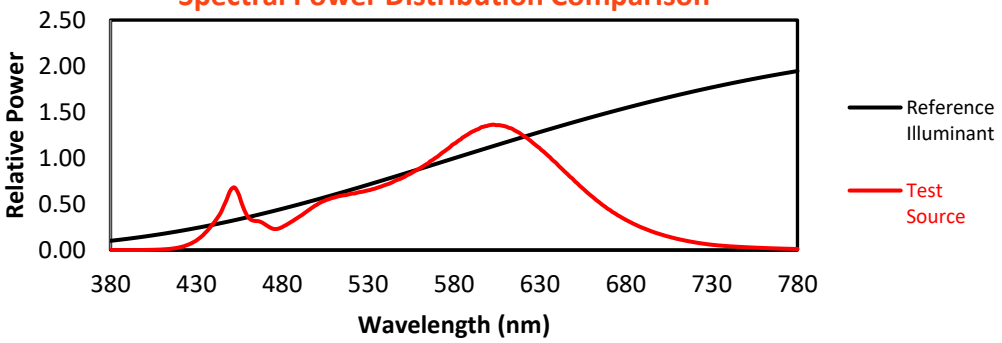
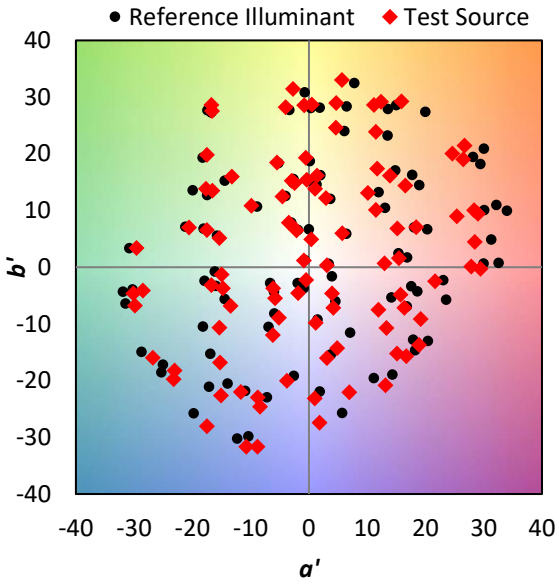
Summary

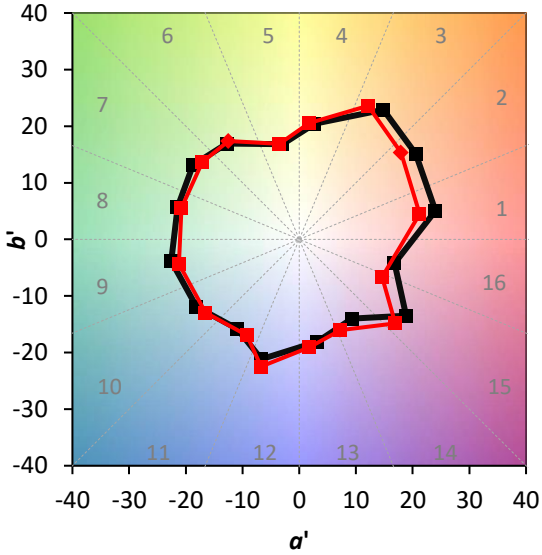
R_f = 86.1
R_g = 94.9
CIE R_a = 82.9
R_9 = 3.9

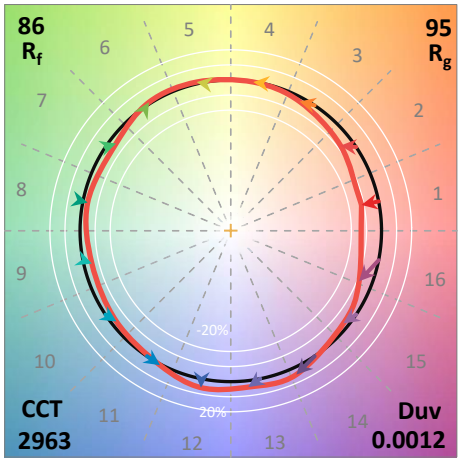
Spectral Power Distribution Comparison

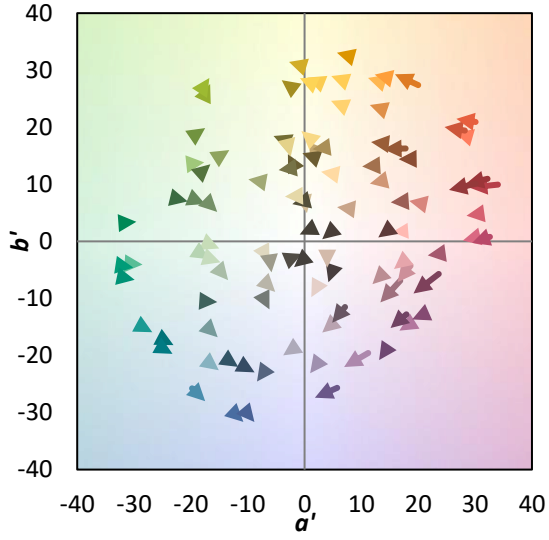


Color Vector Graphics









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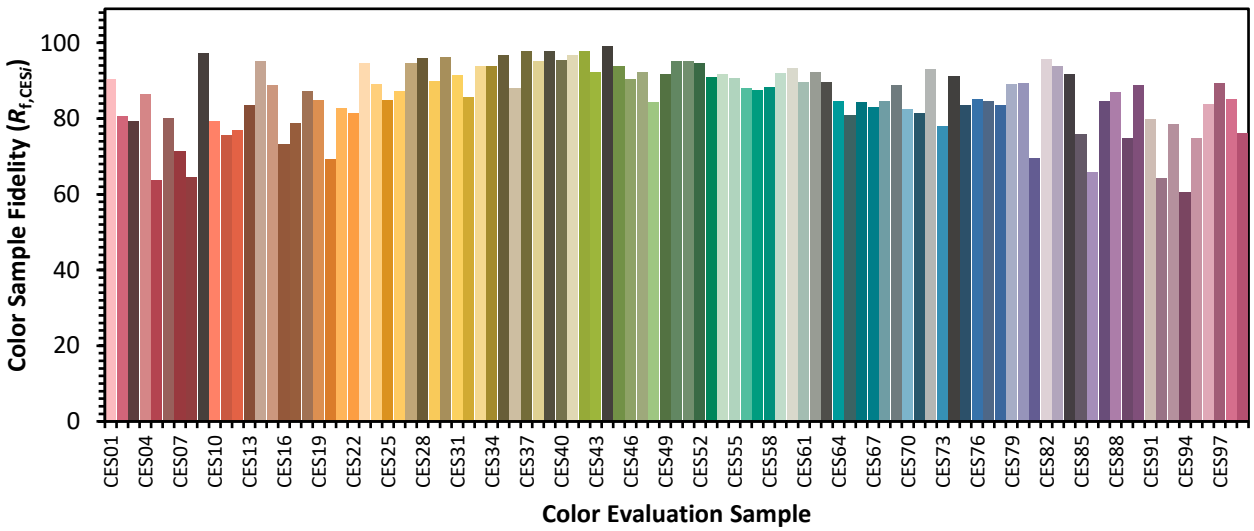
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 87	CES51 = 95	CES76 = 85
CES02 = 63	CES27 = 95	CES52 = 95	CES77 = 85
CES03 = 31	CES28 = 96	CES53 = 91	CES78 = 83
CES04 = 70	CES29 = 90	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 96	CES55 = 91	CES80 = 89
CES06 = 51	CES31 = 92	CES56 = 88	CES81 = 70
CES07 = 42	CES32 = 86	CES57 = 87	CES82 = 96
CES08 = 41	CES33 = 94	CES58 = 88	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 97	CES60 = 93	CES85 = 76
CES11 = 59	CES36 = 88	CES61 = 90	CES86 = 66
CES12 = 65	CES37 = 98	CES62 = 92	CES87 = 85
CES13 = 44	CES38 = 95	CES63 = 90	CES88 = 87
CES14 = 74	CES39 = 98	CES64 = 85	CES89 = 75
CES15 = 72	CES40 = 96	CES65 = 81	CES90 = 89
CES16 = 48	CES41 = 97	CES66 = 84	CES91 = 80
CES17 = 50	CES42 = 98	CES67 = 83	CES92 = 64
CES18 = 57	CES43 = 92	CES68 = 85	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 61
CES20 = 67	CES45 = 94	CES70 = 83	CES95 = 75
CES21 = 87	CES46 = 91	CES71 = 81	CES96 = 84
CES22 = 79	CES47 = 92	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 84	CES73 = 78	CES98 = 85
CES24 = 91	CES49 = 92	CES74 = 91	CES99 = 76
CES25 = 72	CES50 = 95	CES75 = 84	



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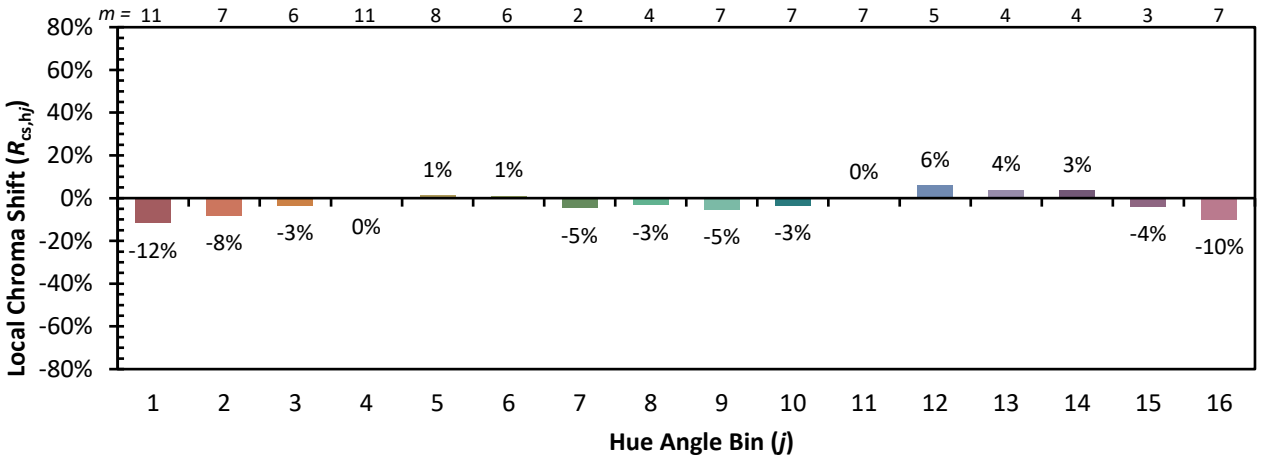
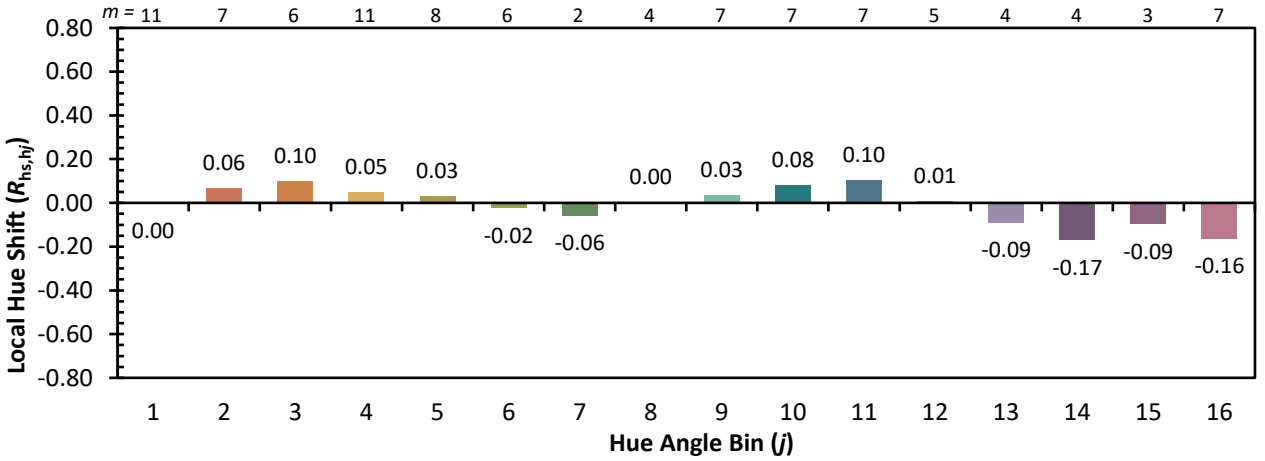
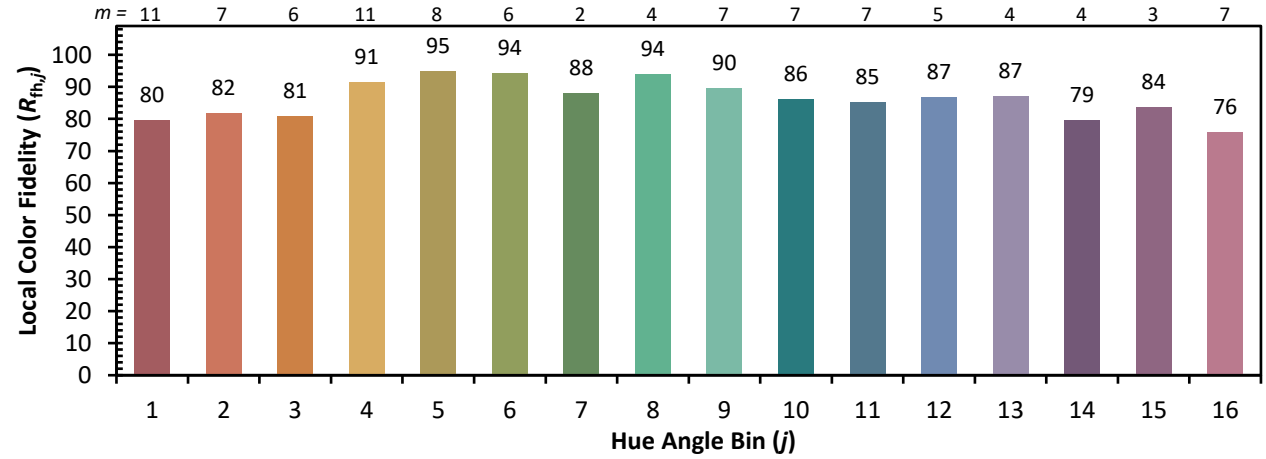
Color Rendition by Hue-Angle Bin







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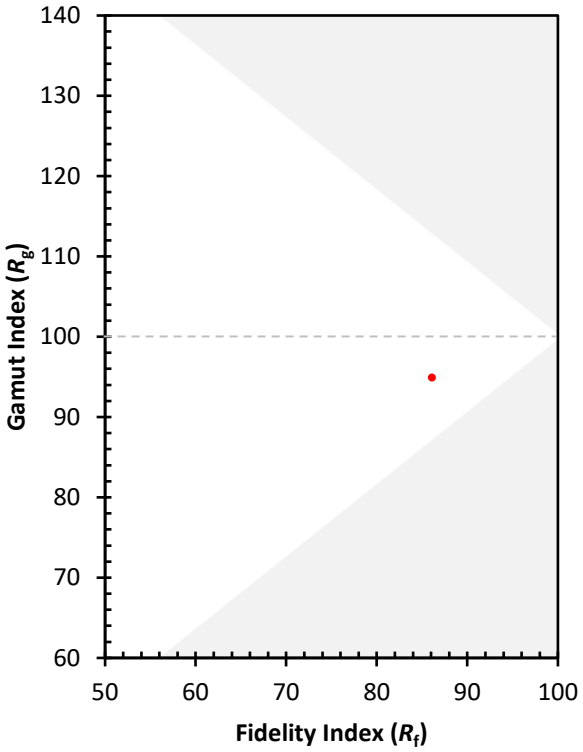
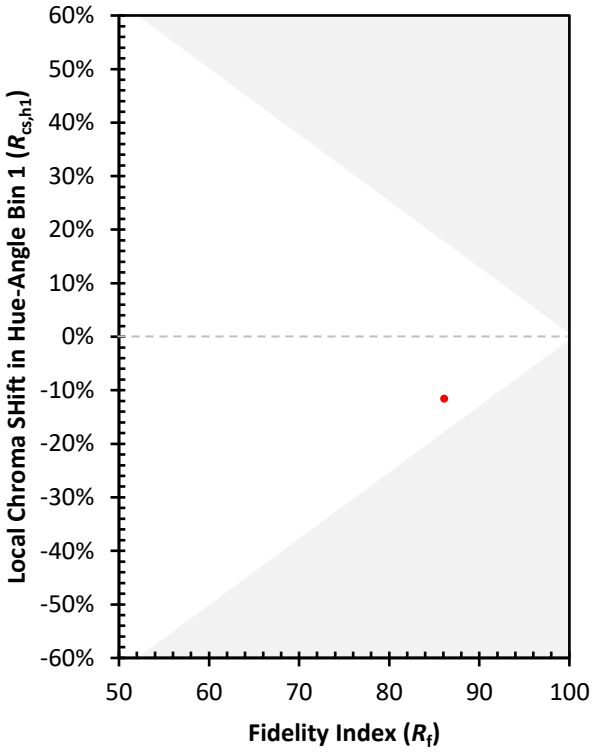
Measure Comparisons





(END OF REPORT)