

Signify Classified - Internal
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: P832513

Luminaire Tested: **TTN-D0-750-U-RW-CG**

Issue Date: 5/14/2024

Test Information

Test Method: LM-79-08
Report Number: P832513
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2312-254-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TTN-D0-750-U-RW-CG
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE
5000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH CLEAR GLASS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1111 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

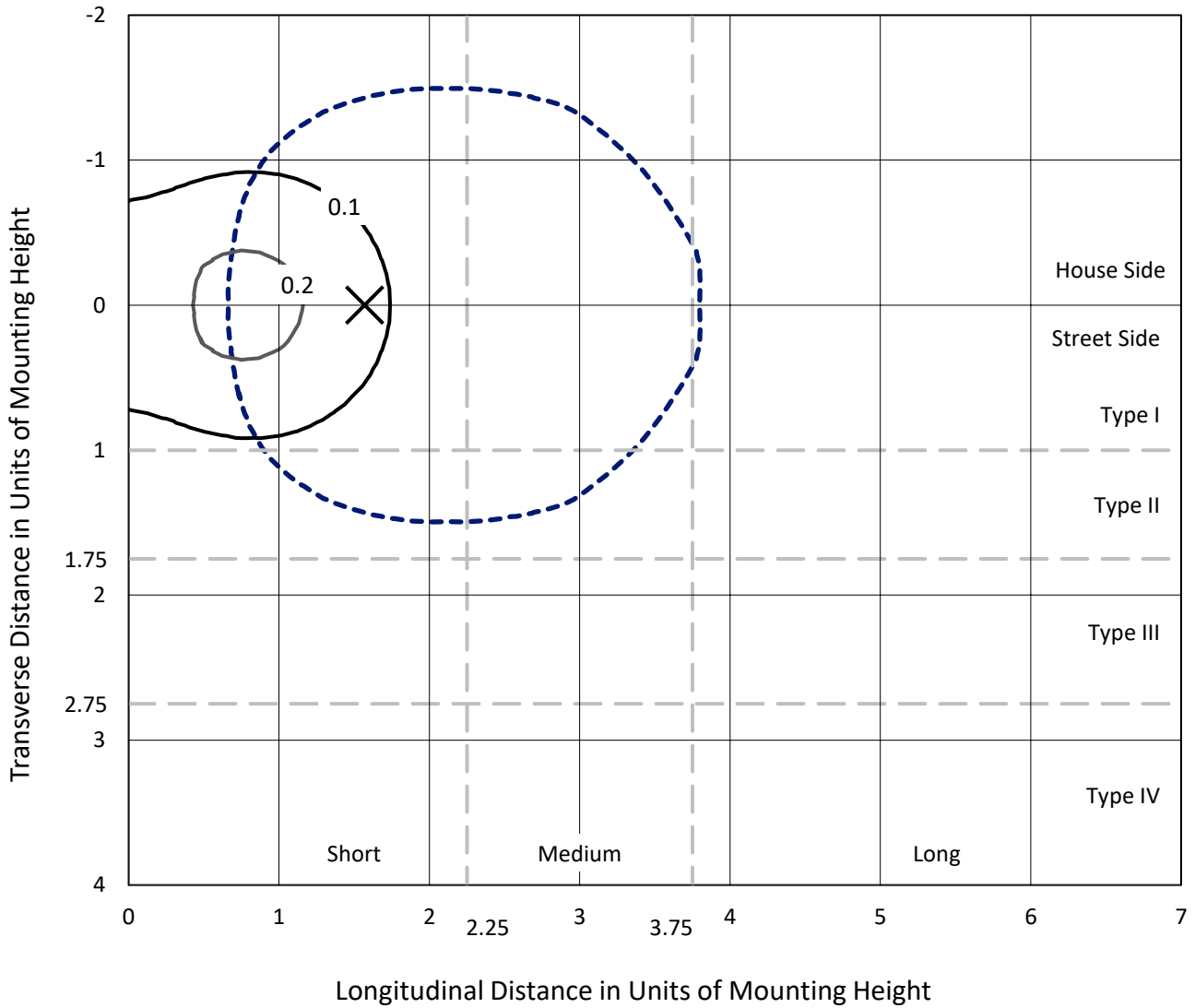
Input Watts (W): 10.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P832513
 CATALOG NUMBER: TTN-D0-750-U-RW-CG

Iso-Footcandle Lines of Horizontal Illumination

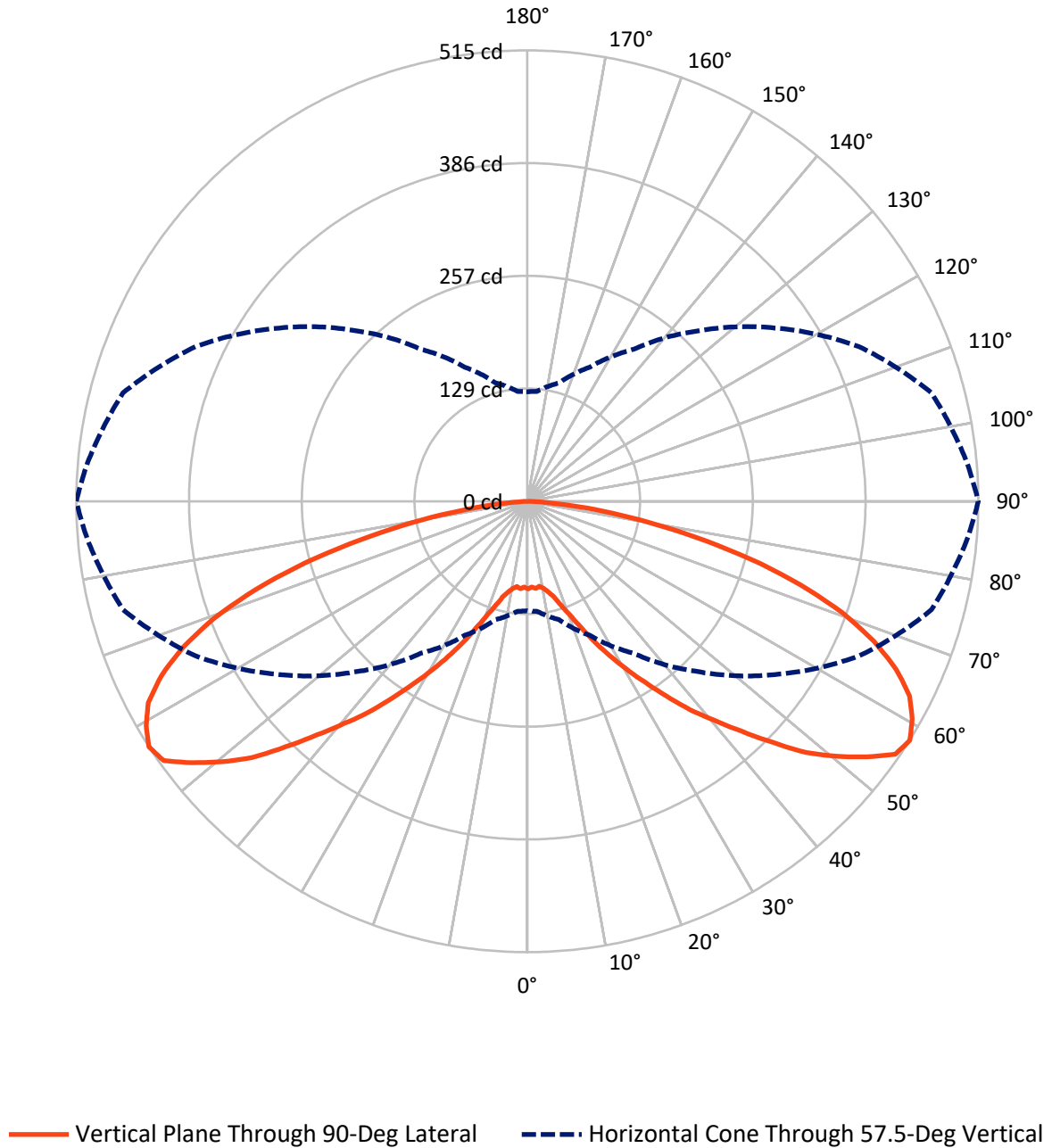
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.2 fc
 Type II - Short - N/A

REPORT NUMBER: P832513
CATALOG NUMBER: TTN-D0-750-U-RW-CG

Luminous Intensity Polar Plot



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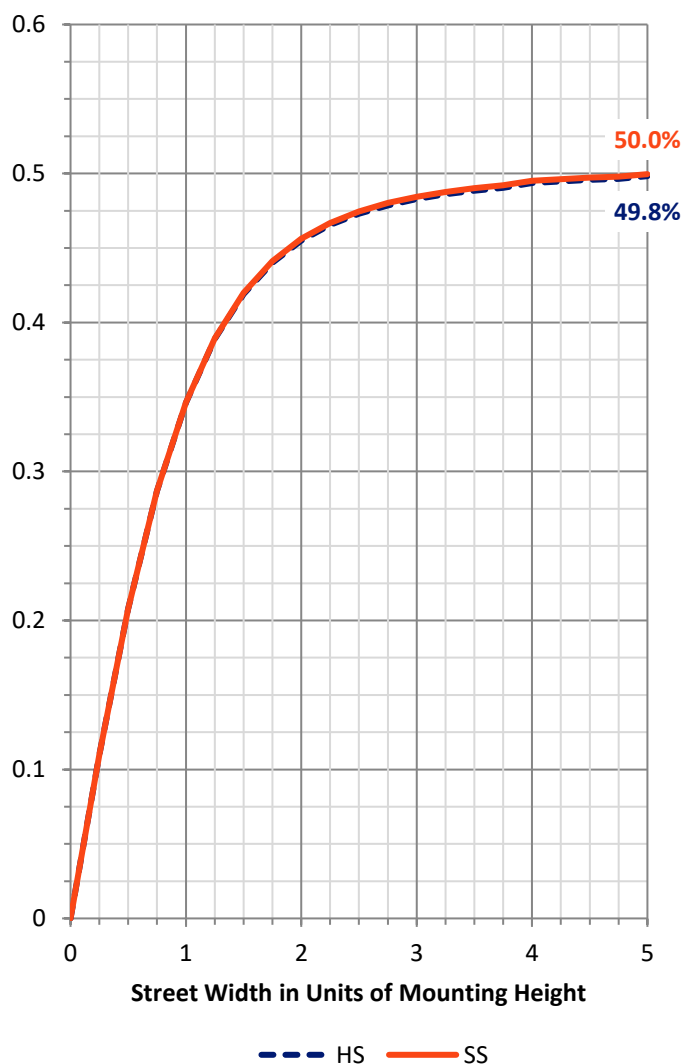
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	555.5	0.0	555.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	555.5	0.0	555.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	1111.0	0.0	1111.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.5	0.9
10°-20°	30.7	2.8
20°-30°	65.3	5.9
30°-40°	120.4	10.8
40°-50°	193.9	17.5
50°-60°	262.4	23.6
60°-70°	255.2	23.0
70°-80°	148.5	13.4
80°-90°	25.1	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	1111.0	100.0
0°-180°	1111.0	100.0

Coefficient of Utilization



REPORT NUMBER: P832513

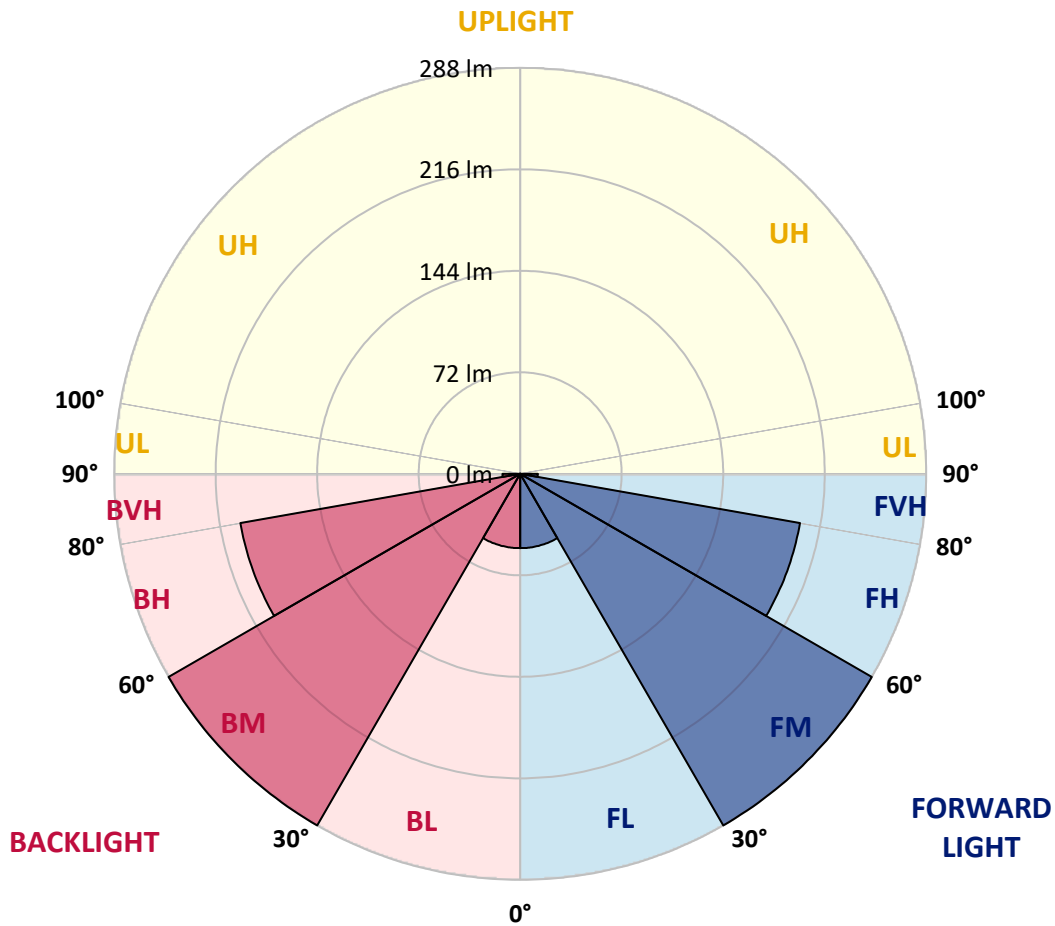
CATALOG NUMBER: TTN-D0-750-U-RW-CG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	52.8	4.8			
FM (30°-60°)	288.4	26.0			
FH (60°-80°)	201.8	18.2			G0/660
FVH (80°-90°)	12.6	1.1			G1/100
BL (0°-30°)	52.8	4.8	B0/110		
BM (30°-60°)	288.4	26.0	B1/1000		
BH (60°-80°)	201.8	18.2	B1/500		G1/500
BVH (80°-90°)	12.6	1.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2.5°	100.0	100.0	100.0	100.0	99.0	99.0	99.0	98.0	98.0	98.0	98.0
5°	100.0	100.0	100.0	101.0	101.0	101.0	100.0	100.0	100.0	100.0	100.0
7.5°	100.0	101.0	101.0	100.0	100.0	99.0	99.0	99.0	98.0	98.0	98.0
10°	100.0	100.0	100.0	100.0	99.0	99.0	100.0	100.0	101.0	101.0	101.0
12.5°	99.0	99.0	100.0	100.0	100.0	101.0	103.0	104.0	105.0	106.0	106.0
15°	100.0	100.0	101.0	102.0	103.0	105.0	108.0	111.0	113.0	114.0	113.0
17.5°	100.0	101.0	102.0	104.0	107.0	110.0	115.0	119.0	123.0	124.0	125.0
20°	102.0	102.0	103.0	107.0	112.0	117.0	124.0	130.9	135.9	137.9	137.9
22.5°	103.0	104.0	105.0	110.0	118.0	126.0	135.9	143.9	150.9	154.9	155.9
25°	106.0	106.0	108.0	115.0	125.0	136.9	149.9	161.9	170.9	175.9	176.9
27.5°	108.0	109.0	112.0	121.0	133.9	148.9	166.9	180.9	191.9	197.9	198.9
30°	110.0	111.0	117.0	127.0	142.9	160.9	181.9	199.9	213.9	220.9	221.9
32.5°	113.0	114.0	121.0	131.9	150.9	172.9	196.9	218.9	238.9	244.9	245.9
35°	116.0	117.0	125.0	137.9	159.9	184.9	212.9	238.9	262.9	270.9	272.9
37.5°	119.0	120.0	128.0	143.9	168.9	197.9	230.9	261.9	287.9	298.9	301.9
40°	122.0	123.0	131.9	149.9	177.9	211.9	249.9	283.9	313.9	326.9	328.9
42.5°	124.0	125.0	134.9	154.9	186.9	224.9	269.9	307.9	339.9	356.9	358.9
45°	127.0	128.0	138.9	161.9	194.9	239.9	288.9	334.9	371.9	390.8	392.8
47.5°	129.0	129.9	141.9	165.9	203.9	253.9	308.9	358.9	402.8	422.8	428.8
50°	129.9	130.9	143.9	169.9	209.9	263.9	324.9	382.9	429.8	454.8	457.8
52.5°	129.9	131.9	144.9	172.9	213.9	272.9	337.9	402.8	455.8	483.8	484.8
55°	129.0	129.9	143.9	171.9	215.9	276.9	346.9	414.8	473.8	500.8	509.8
57.5°	125.0	126.0	139.9	168.9	211.9	274.9	344.9	417.8	477.8	503.8	514.8
60°	119.0	121.0	133.9	161.9	205.9	267.9	338.9	411.8	471.8	503.8	504.8
62.5°	112.0	113.0	126.0	152.9	196.9	256.9	327.9	399.8	457.8	490.8	489.8
65°	102.0	103.0	114.0	141.9	180.9	235.9	305.9	380.9	430.8	465.8	462.8
67.5°	91.0	92.0	102.0	127.0	161.9	212.9	275.9	348.9	392.8	428.8	426.8
70°	79.0	79.0	88.0	109.0	141.9	186.9	242.9	306.9	350.9	380.9	381.9
72.5°	65.0	65.0	73.0	91.0	119.0	156.9	204.9	261.9	297.9	323.9	325.9
75°	51.0	50.0	57.0	72.0	94.0	125.0	161.9	210.9	238.9	263.9	262.9
77.5°	36.0	36.0	40.0	52.0	68.0	93.0	120.0	158.9	177.9	198.9	194.9
80°	23.0	23.0	25.0	34.0	45.0	62.0	79.0	108.0	121.0	136.9	131.9
82.5°	12.0	11.0	13.0	18.0	24.0	34.0	44.0	63.0	69.0	81.0	77.0
85°	4.0	4.0	4.0	6.0	9.0	13.0	17.0	27.0	28.0	36.0	33.0
87.5°	1.0	0.0	0.0	1.0	1.0	1.0	1.0	3.0	3.0	6.0	4.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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



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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-3

Test Date: 11/21/2024

Luminaire Tested: TTN-D0-750-U-WQ

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

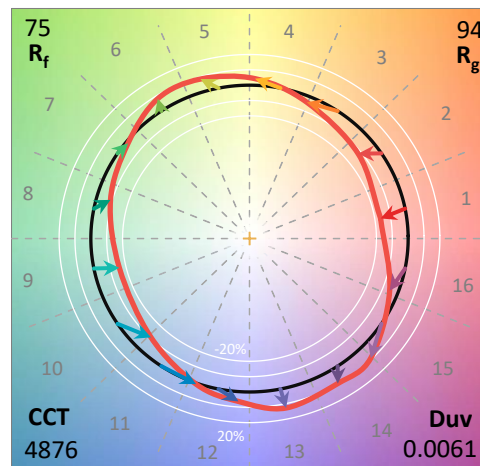
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-3
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/21/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-750-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 5000K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K): 4876
 CIE u': 0.2086
 CIE v': 0.4932
 Duv: 0.0061
 CIE x: 0.3502
 CIE y: 0.3680
 CIE z: 0.2818
 Peak Wavelength (nm): 451
 Dominant Wavelength (nm): 569
 Purity: 15.51324
 Rf: 74.6
 Rg: 94.4

CRI (Ra):	72.6		
R1:	69.5	R9:	-24.6
R2:	77.0	R10:	44.8
R3:	82.2	R11:	68.2
R4:	72.6	R12:	36.1
R5:	69.3	R13:	70.5
R6:	67.6	R14:	89.9
R7:	83.7	R15:	63.1
R8:	58.6		



Test Conditions

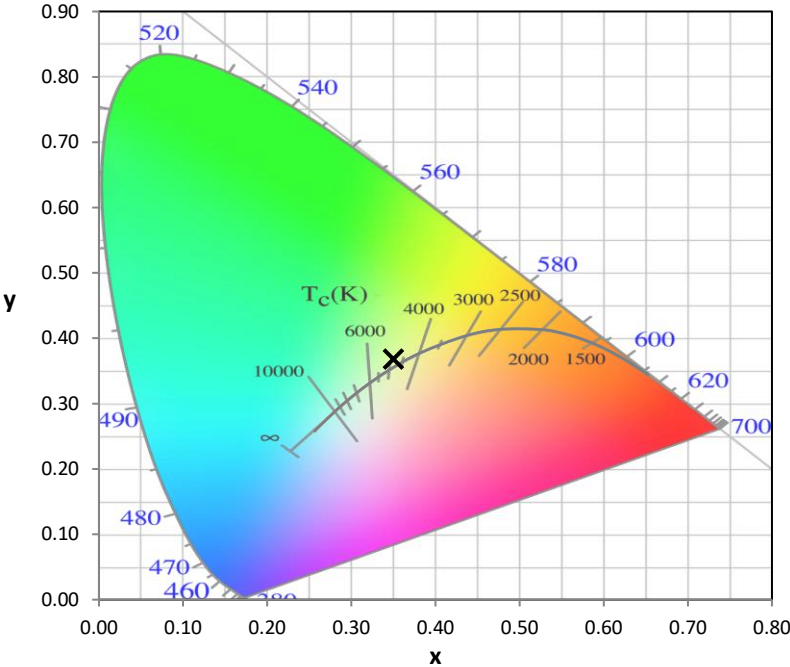
Stabilization Time: 51M
 Operation Time: 1H 51M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-3

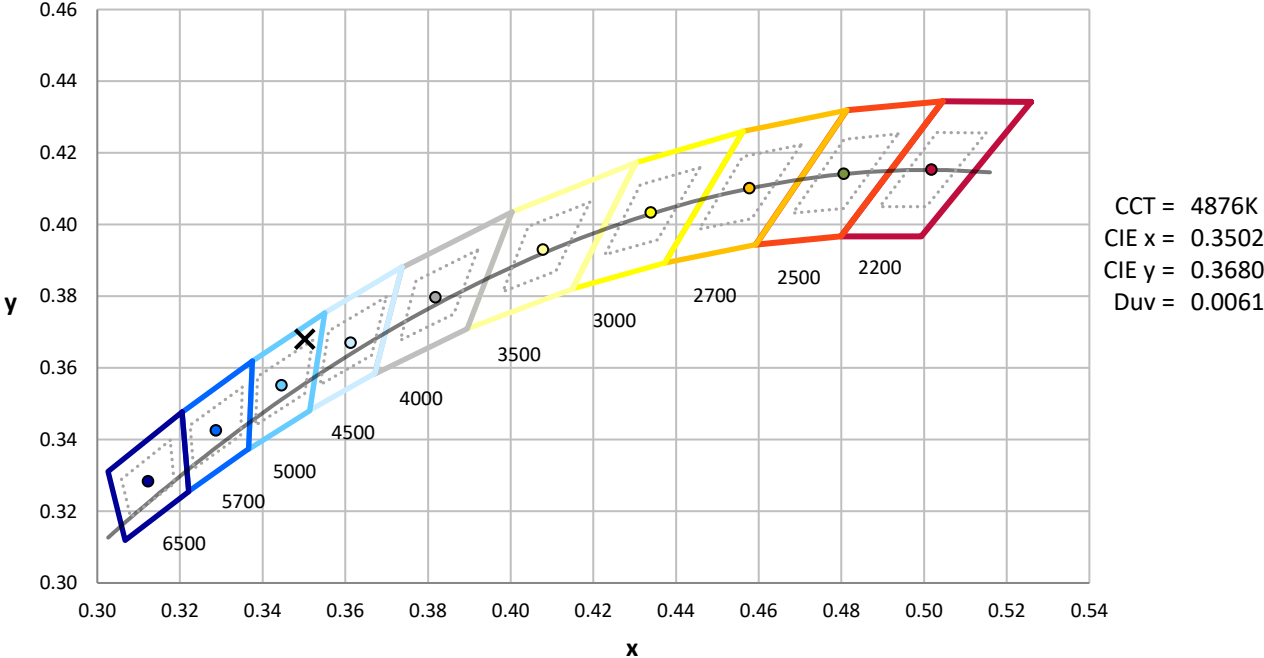
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-3

CIE 1931 Chromaticity Diagram



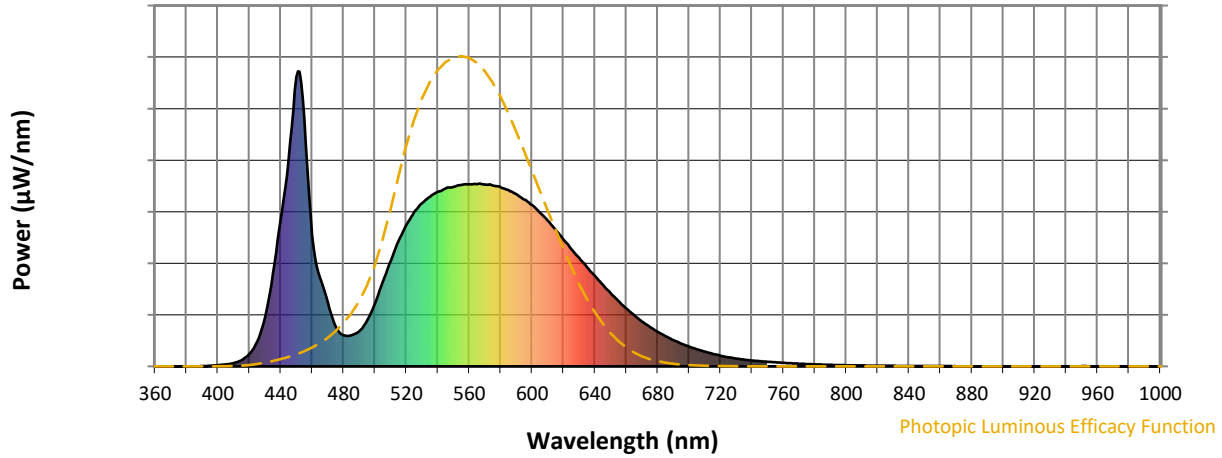
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2411-284-3

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	119	NR	620	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	398	NR	755	14	NR	885	0	NR
370	0	NR	500	214	NR	630	368	NR	760	12	NR	890	0	NR
375	0	NR	505	286	NR	635	336	NR	765	11	NR	895	0	NR
380	0	NR	510	357	NR	640	306	NR	770	9	NR	900	0	NR
385	0	NR	515	425	NR	645	276	NR	775	8	NR	905	0	NR
390	1	NR	520	480	NR	650	248	NR	780	7	NR	910	0	NR
395	2	NR	525	523	NR	655	221	NR	785	6	NR	915	0	NR
400	4	NR	530	554	NR	660	196	NR	790	5	NR	920	0	NR
405	7	NR	535	575	NR	665	173	NR	795	4	NR	925	0	NR
410	11	NR	540	592	NR	670	152	NR	800	4	NR	930	0	NR
415	21	NR	545	603	NR	675	133	NR	805	3	NR	935	0	NR
420	42	NR	550	609	NR	680	117	NR	810	3	NR	940	0	NR
425	85	NR	555	615	NR	685	102	NR	815	3	NR	945	0	NR
430	165	NR	560	617	NR	690	89	NR	820	2	NR	950	1	NR
435	316	NR	565	617	NR	695	77	NR	825	2	NR	955	0	NR
440	497	NR	570	616	NR	700	67	NR	830	2	NR	960	0	NR
445	702	NR	575	613	NR	705	58	NR	835	2	NR	965	0	NR
450	981	NR	580	607	NR	710	50	NR	840	1	NR	970	0	NR
455	840	NR	585	598	NR	715	43	NR	845	1	NR	975	0	NR
460	446	NR	590	583	NR	720	36	NR	850	1	NR	980	0	NR
465	300	NR	595	566	NR	725	31	NR	855	1	NR	985	0	NR
470	215	NR	600	546	NR	730	26	NR	860	1	NR	990	0	NR
475	135	NR	605	521	NR	735	23	NR	865	1	NR	995	0	NR
480	105	NR	610	494	NR	740	20	NR	870	1	NR	1000	0	NR
485	106	NR	615	463	NR	745	18	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-3

Scotopic Flux vs. Wavelength



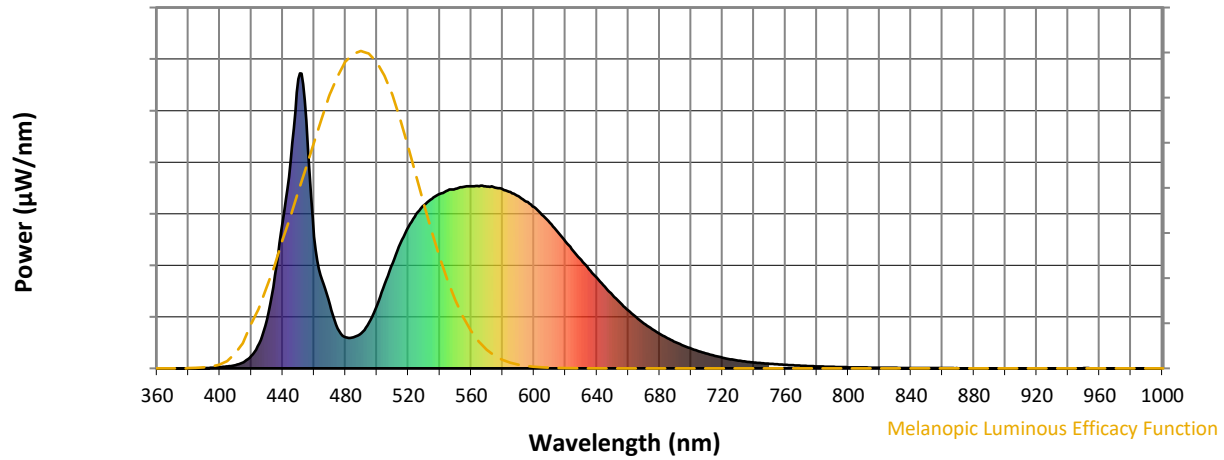
Scotopic Lumens: NR

S/P: 1.74

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	119	NR	620	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	398	NR	755	14	NR	885	0	NR
370	0	NR	500	214	NR	630	368	NR	760	12	NR	890	0	NR
375	0	NR	505	286	NR	635	336	NR	765	11	NR	895	0	NR
380	0	NR	510	357	NR	640	306	NR	770	9	NR	900	0	NR
385	0	NR	515	425	NR	645	276	NR	775	8	NR	905	0	NR
390	1	NR	520	480	NR	650	248	NR	780	7	NR	910	0	NR
395	2	NR	525	523	NR	655	221	NR	785	6	NR	915	0	NR
400	4	NR	530	554	NR	660	196	NR	790	5	NR	920	0	NR
405	7	NR	535	575	NR	665	173	NR	795	4	NR	925	0	NR
410	11	NR	540	592	NR	670	152	NR	800	4	NR	930	0	NR
415	21	NR	545	603	NR	675	133	NR	805	3	NR	935	0	NR
420	42	NR	550	609	NR	680	117	NR	810	3	NR	940	0	NR
425	85	NR	555	615	NR	685	102	NR	815	3	NR	945	0	NR
430	165	NR	560	617	NR	690	89	NR	820	2	NR	950	1	NR
435	316	NR	565	617	NR	695	77	NR	825	2	NR	955	0	NR
440	497	NR	570	616	NR	700	67	NR	830	2	NR	960	0	NR
445	702	NR	575	613	NR	705	58	NR	835	2	NR	965	0	NR
450	981	NR	580	607	NR	710	50	NR	840	1	NR	970	0	NR
455	840	NR	585	598	NR	715	43	NR	845	1	NR	975	0	NR
460	446	NR	590	583	NR	720	36	NR	850	1	NR	980	0	NR
465	300	NR	595	566	NR	725	31	NR	855	1	NR	985	0	NR
470	215	NR	600	546	NR	730	26	NR	860	1	NR	990	0	NR
475	135	NR	605	521	NR	735	23	NR	865	1	NR	995	0	NR
480	105	NR	610	494	NR	740	20	NR	870	1	NR	1000	0	NR
485	106	NR	615	463	NR	745	18	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-3

Melanopic Flux vs. Wavelength



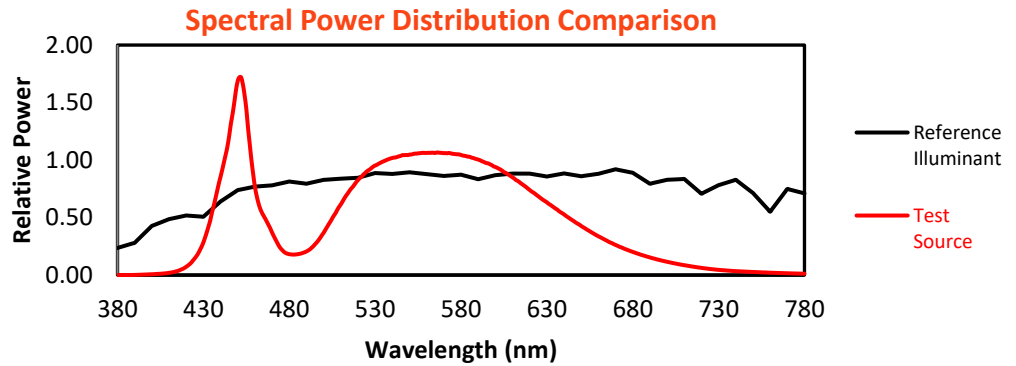
Melanopic Lumens: NR

M/P: 3.51

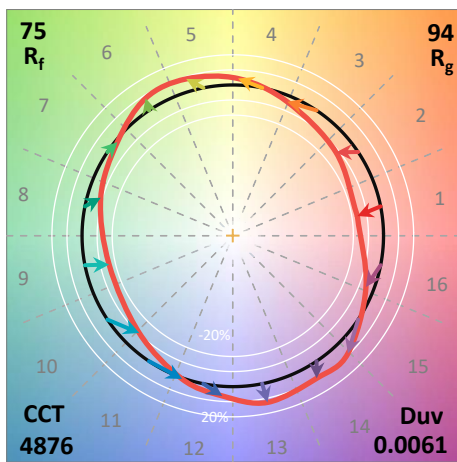
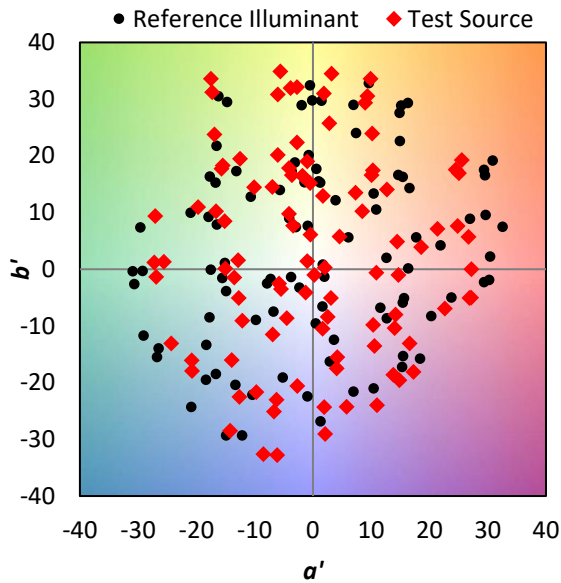
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	398	NR	755	14	NR	885	0	NR
370	0	NR	500	214	NR	630	368	NR	760	12	NR	890	0	NR
375	0	NR	505	286	NR	635	336	NR	765	11	NR	895	0	NR
380	0	NR	510	357	NR	640	306	NR	770	9	NR	900	0	NR
385	0	NR	515	425	NR	645	276	NR	775	8	NR	905	0	NR
390	1	NR	520	480	NR	650	248	NR	780	7	NR	910	0	NR
395	2	NR	525	523	NR	655	221	NR	785	6	NR	915	0	NR
400	4	NR	530	554	NR	660	196	NR	790	5	NR	920	0	NR
405	7	NR	535	575	NR	665	173	NR	795	4	NR	925	0	NR
410	11	NR	540	592	NR	670	152	NR	800	4	NR	930	0	NR
415	21	NR	545	603	NR	675	133	NR	805	3	NR	935	0	NR
420	42	NR	550	609	NR	680	117	NR	810	3	NR	940	0	NR
425	85	NR	555	615	NR	685	102	NR	815	3	NR	945	0	NR
430	165	NR	560	617	NR	690	89	NR	820	2	NR	950	1	NR
435	316	NR	565	617	NR	695	77	NR	825	2	NR	955	0	NR
440	497	NR	570	616	NR	700	67	NR	830	2	NR	960	0	NR
445	702	NR	575	613	NR	705	58	NR	835	2	NR	965	0	NR
450	981	NR	580	607	NR	710	50	NR	840	1	NR	970	0	NR
455	840	NR	585	598	NR	715	43	NR	845	1	NR	975	0	NR
460	446	NR	590	583	NR	720	36	NR	850	1	NR	980	0	NR
465	300	NR	595	566	NR	725	31	NR	855	1	NR	985	0	NR
470	215	NR	600	546	NR	730	26	NR	860	1	NR	990	0	NR
475	135	NR	605	521	NR	735	23	NR	865	1	NR	995	0	NR
480	105	NR	610	494	NR	740	20	NR	870	1	NR	1000	0	NR
485	106	NR	615	463	NR	745	18	NR	875	0	NR			

Summary

$R_f = 74.6$
 $R_g = 94.4$
 $CIE R_a = 72.6$
 $R_g = -24.6$

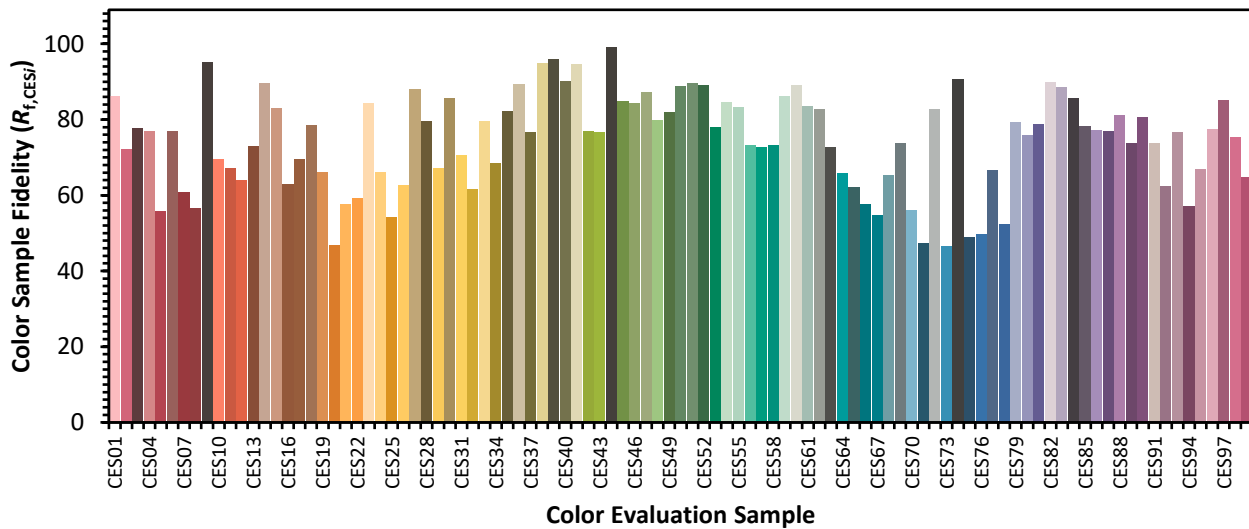


Color Vector Graphics

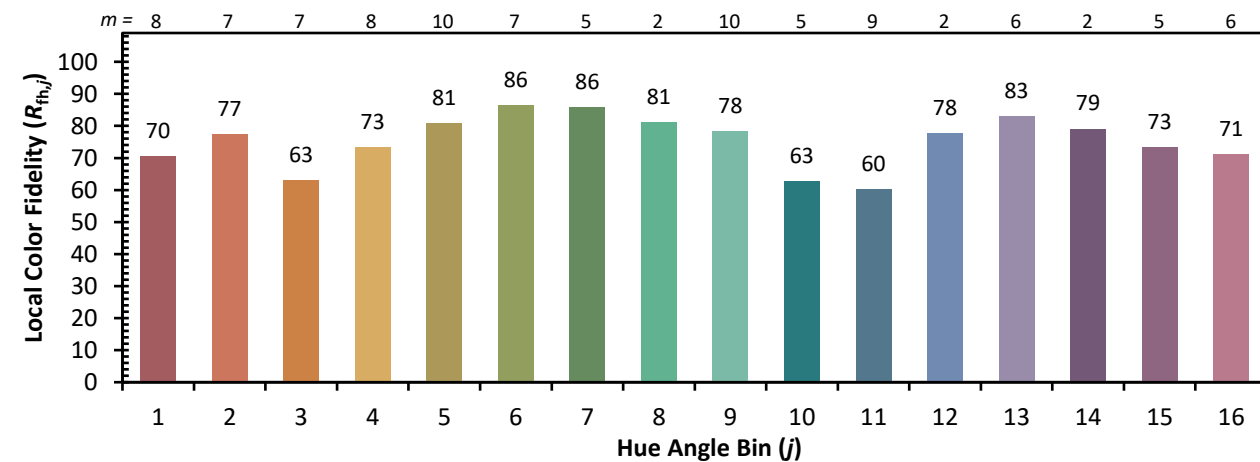
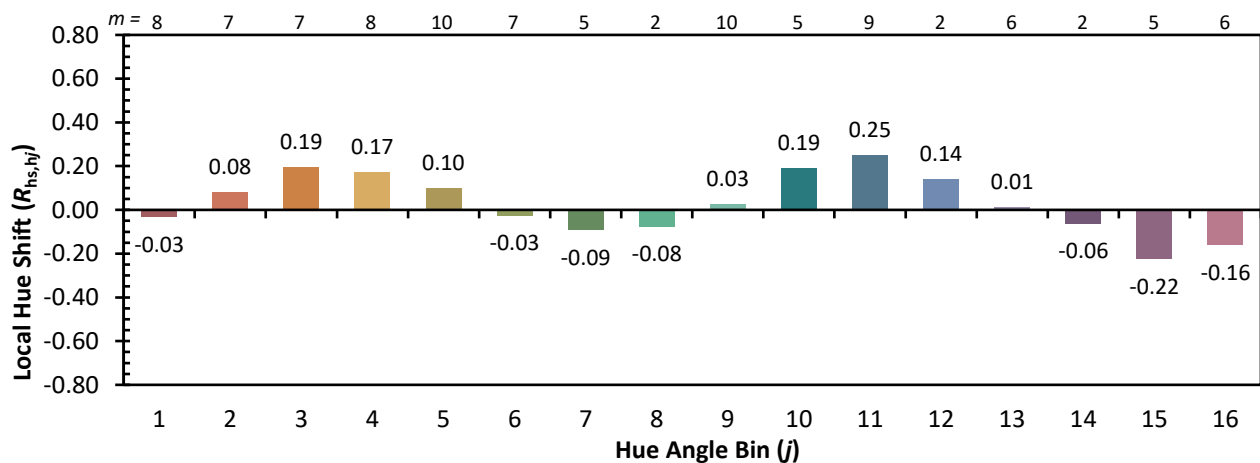
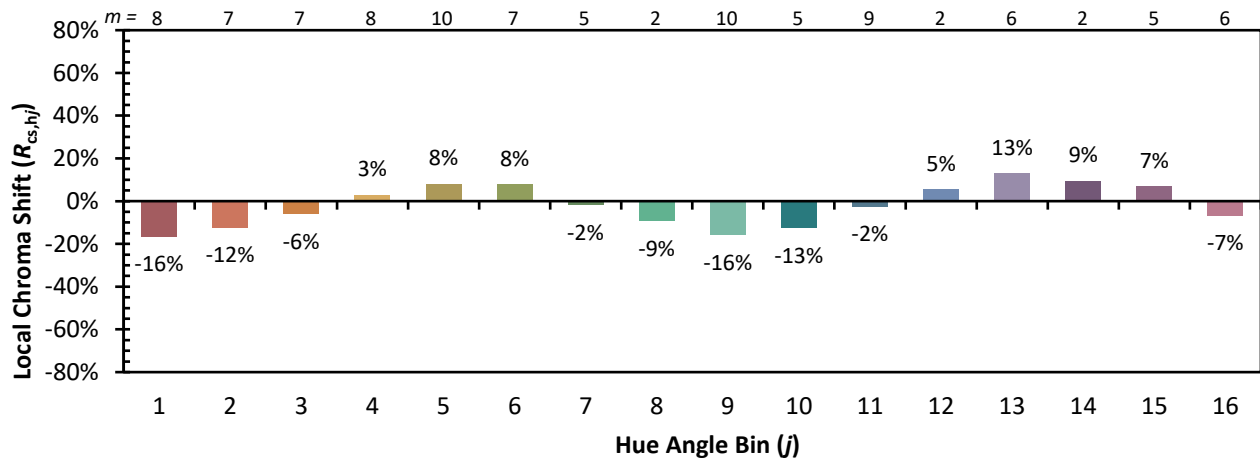


Individual Sample Fidelity Index ($R_{f,i}$)

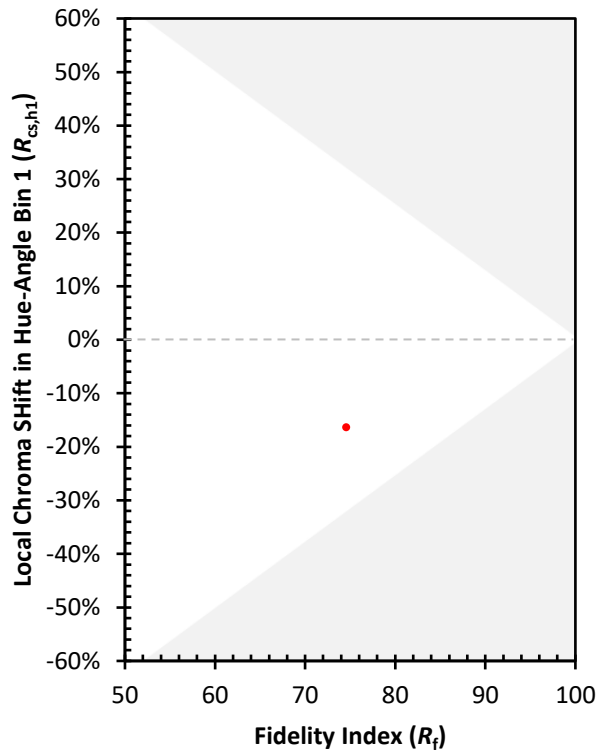
CES01 = 85	CES26 = 63	CES51 = 90	CES76 = 50
CES02 = 59	CES27 = 88	CES52 = 89	CES77 = 67
CES03 = 30	CES28 = 80	CES53 = 78	CES78 = 52
CES04 = 69	CES29 = 67	CES54 = 85	CES79 = 79
CES05 = 46	CES30 = 86	CES55 = 83	CES80 = 76
CES06 = 50	CES31 = 70	CES56 = 73	CES81 = 79
CES07 = 39	CES32 = 62	CES57 = 73	CES82 = 90
CES08 = 38	CES33 = 80	CES58 = 73	CES83 = 89
CES09 = 29	CES34 = 69	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 82	CES60 = 89	CES85 = 78
CES11 = 55	CES36 = 89	CES61 = 83	CES86 = 77
CES12 = 61	CES37 = 77	CES62 = 83	CES87 = 77
CES13 = 41	CES38 = 95	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 96	CES64 = 66	CES89 = 74
CES15 = 70	CES40 = 90	CES65 = 62	CES90 = 81
CES16 = 46	CES41 = 95	CES66 = 58	CES91 = 74
CES17 = 49	CES42 = 77	CES67 = 55	CES92 = 62
CES18 = 55	CES43 = 77	CES68 = 65	CES93 = 77
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 57
CES20 = 64	CES45 = 85	CES70 = 56	CES95 = 67
CES21 = 85	CES46 = 84	CES71 = 47	CES96 = 77
CES22 = 77	CES47 = 87	CES72 = 83	CES97 = 85
CES23 = 91	CES48 = 80	CES73 = 46	CES98 = 75
CES24 = 90	CES49 = 82	CES74 = 91	CES99 = 65
CES25 = 71	CES50 = 89	CES75 = 49	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)