

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

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Peachtree City, GA 30269

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P1445177

Luminaire Tested: TPTN-VA0-735-U-CQ-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445177
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA0-735-U-CQ-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 9W 70CRI 3500K w/ TYP V CONCENTRATED DISTRIBUTION OPTIC
Light Source: 3500K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 829.2 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type V - Short
BUG Rating: B1 - U0 - G0

Input Watts (W): 8.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 29.6%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1445177

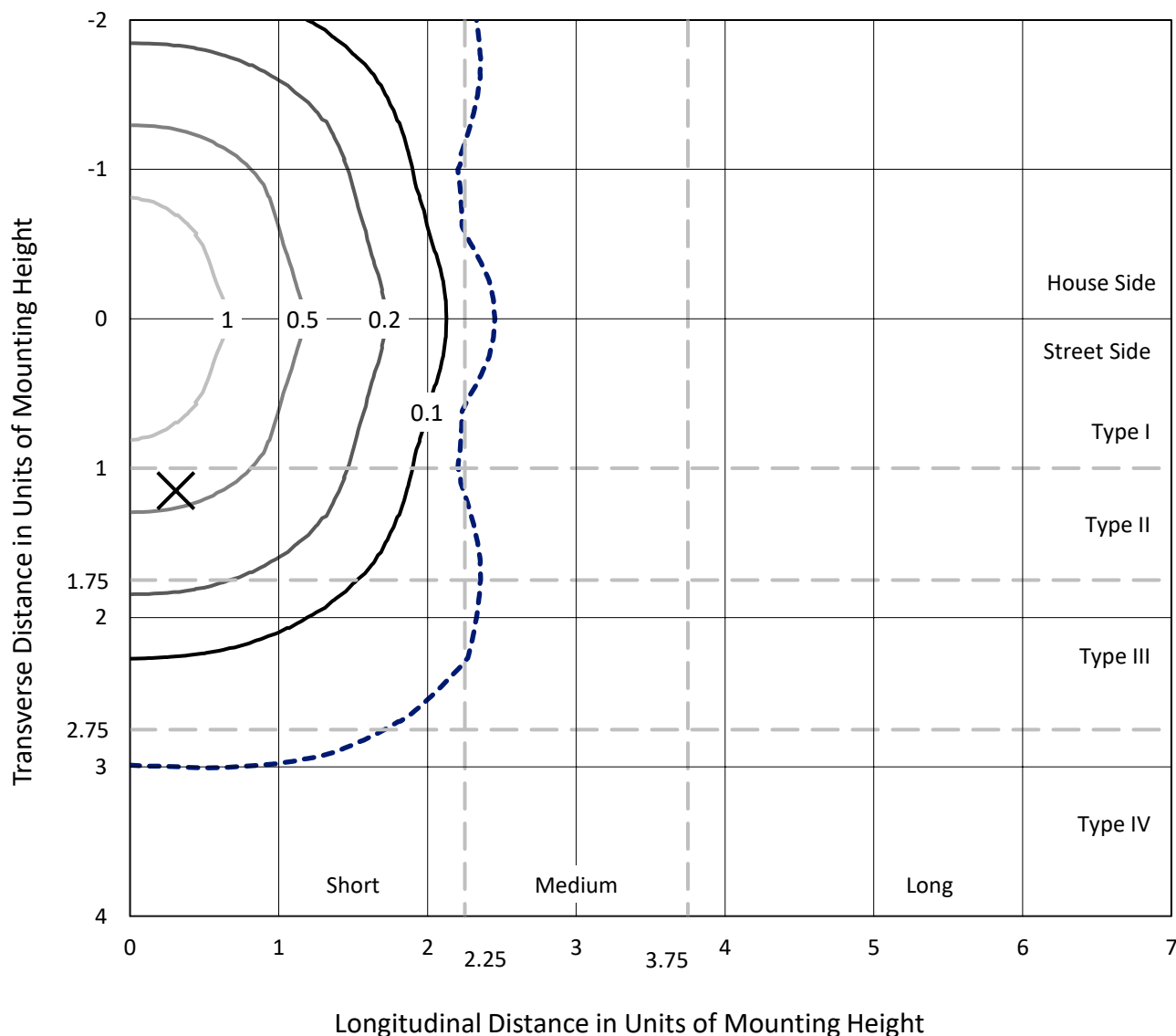
CATALOG NUMBER: TPTN-VA0-735-U-CQ-GM

Iso-Footcandle Lines of Horizontal Illumination

'E

× Max cd

--- 1/2 Max cd



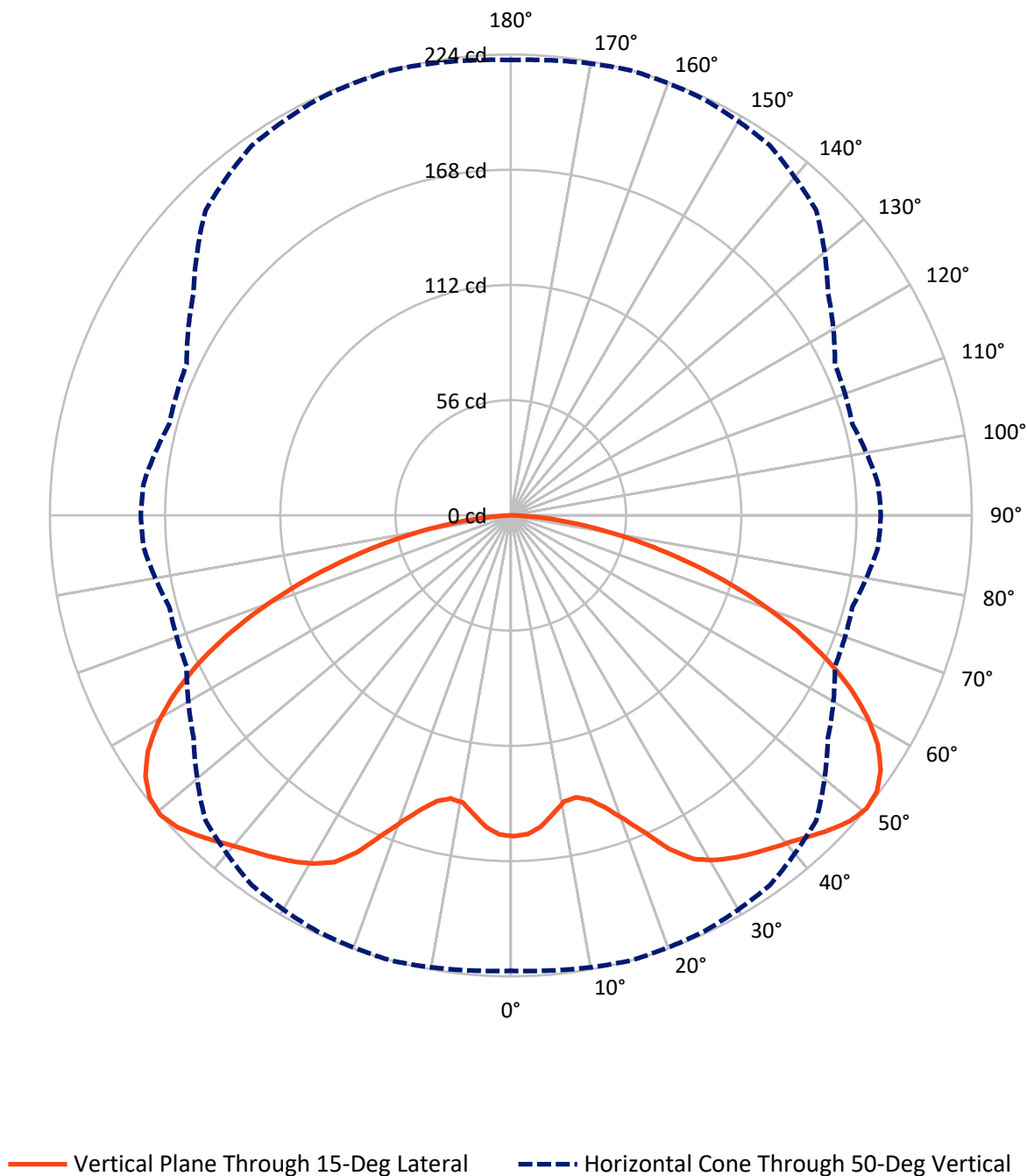
Based on 10 foot mounting height. Maximum calculated value = 1.6 fc

Type V - Short - N/A

REPORT NUMBER: P1445177

CATALOG NUMBER: TPTN-VA0-735-U-CQ-GM

Luminous Intensity Polar Plot



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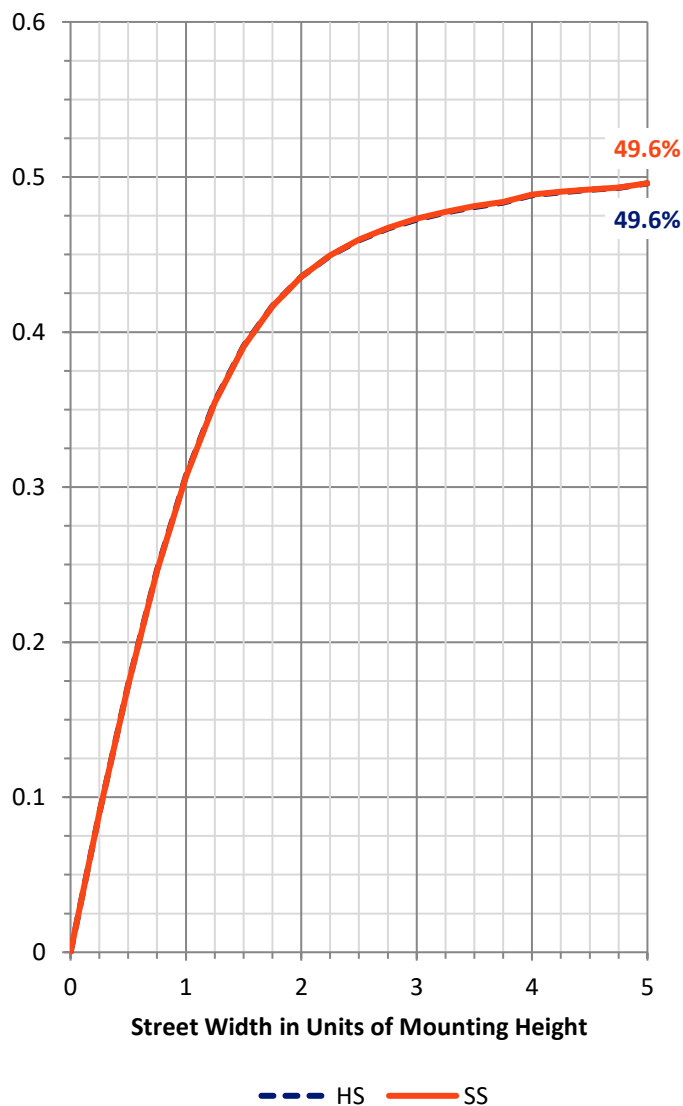
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	414.6	0.0	414.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	414.6	0.0	414.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	829.2	0.0	829.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.3	1.7
10°-20°	41.8	5.0
20°-30°	78.1	9.4
30°-40°	115.3	13.9
40°-50°	151.6	18.3
50°-60°	173.9	21.0
60°-70°	150.0	18.1
70°-80°	84.7	10.2
80°-90°	19.4	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°	829.2	100.0
0°-180°	829.2	100.0

Coefficient of Utilization



REPORT NUMBER: P1445177

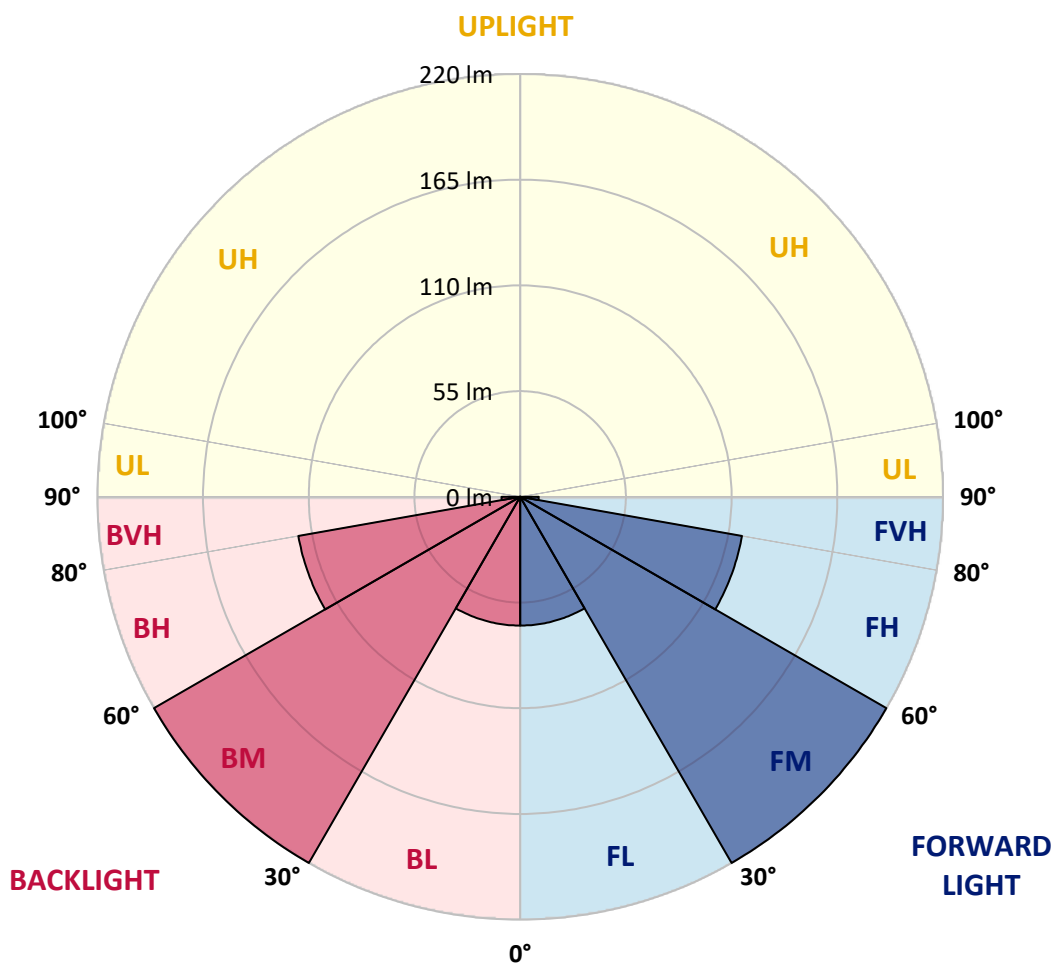
CATALOG NUMBER: TPTN-VA0-735-U-CQ-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	67.1	8.1			
FM	(30°-60°)	220.4	26.6			
FH	(60°-80°)	117.4	14.2			G0/660
FVH	(80°-90°)	9.7	1.2			G0/10
BL	(0°-30°)	67.1	8.1	B0/110		
BM	(30°-60°)	220.4	26.6	B1/1000		
BH	(60°-80°)	117.4	14.2	B1/500		G0/660
BVH	(80°-90°)	9.7	1.2			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G0

Type V Short



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CATALOG NUMBER: TPTN-VA0-735-U-CQ-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	155.9	155.9	155.9	155.9	155.9	155.9	155.9	155.9	155.9	155.9	155.9
2.5°	155.1	155.1	155.1	155.1	155.1	155.3	155.1	155.3	155.4	155.4	155.6
5°	152.0	151.9	152.0	152.0	152.3	152.6	152.9	153.2	153.7	153.8	153.8
7.5°	146.6	146.5	146.5	146.5	146.9	147.3	148.5	149.5	150.4	150.9	151.2
10°	141.8	141.8	141.5	141.2	141.3	142.1	143.4	145.1	146.6	147.6	147.8
12.5°	140.6	140.6	140.6	140.7	141.0	141.9	143.5	145.0	146.5	147.3	147.5
15°	142.8	143.1	143.4	144.4	144.8	145.0	145.9	147.0	148.2	149.3	149.4
17.5°	147.5	147.8	149.4	150.4	150.0	149.0	148.7	149.5	151.2	152.2	152.3
20°	156.9	156.6	157.6	157.9	156.3	153.7	152.0	152.5	154.4	156.0	156.2
22.5°	168.7	168.5	167.6	167.3	164.3	159.4	156.2	155.6	157.8	160.1	160.4
25°	181.6	181.3	179.8	177.0	172.3	165.7	160.9	159.0	160.9	163.8	164.3
27.5°	192.2	191.8	189.1	184.3	178.8	171.6	165.1	161.6	162.9	166.3	166.9
30°	199.5	199.1	194.4	188.1	182.9	175.0	167.6	163.4	164.7	168.2	168.8
32.5°	205.6	204.4	198.4	191.3	186.0	177.6	169.5	164.7	165.9	170.0	170.4
35°	209.5	207.9	201.9	194.8	188.8	180.4	171.3	166.0	166.9	171.2	171.9
37.5°	211.9	210.9	205.3	198.4	192.2	183.8	173.1	167.2	167.9	172.5	173.2
40°	214.0	213.5	208.8	202.8	196.3	187.8	175.6	168.5	169.1	174.0	174.7
42.5°	216.3	216.3	213.2	207.9	201.8	193.1	179.0	170.4	170.4	176.0	176.8
45°	219.0	219.3	217.8	213.7	208.2	199.1	182.6	172.5	171.9	178.1	178.8
47.5°	221.0	221.5	221.9	219.3	214.7	205.4	186.3	174.0	172.8	179.5	180.3
50°	221.3	222.0	224.0	222.9	219.4	209.8	188.2	173.8	171.8	179.1	179.8
52.5°	218.7	219.1	222.8	223.5	221.0	211.3	187.9	171.3	168.4	176.3	177.0
55°	212.9	213.5	218.1	220.3	218.8	209.4	184.8	166.3	162.6	170.9	171.6
57.5°	203.8	204.5	210.3	213.7	212.9	204.4	179.5	159.1	155.1	163.5	164.1
60°	192.5	193.4	199.1	204.0	204.1	196.5	171.6	150.3	145.1	153.7	154.4
62.5°	178.5	179.1	185.3	190.6	191.3	185.4	161.9	138.8	133.7	142.1	142.8
65°	162.2	162.6	168.8	174.7	176.2	171.3	148.8	126.3	120.6	128.4	128.8
67.5°	144.1	144.4	150.3	155.6	158.1	153.8	134.4	112.3	106.6	113.1	113.7
70°	123.7	125.1	129.7	134.8	137.1	134.1	117.9	96.9	91.5	97.2	97.8
72.5°	103.7	104.3	108.5	113.5	115.3	113.4	99.7	81.3	75.9	80.9	81.0
75°	83.5	83.5	86.8	91.2	93.7	92.5	81.0	65.1	61.0	64.3	64.4
77.5°	62.8	63.7	66.6	70.9	71.9	71.0	63.1	49.8	46.5	49.1	49.3
80°	45.0	45.0	47.5	50.1	51.9	51.0	45.6	36.0	32.9	34.7	34.1
82.5°	28.4	28.7	30.0	32.5	33.5	33.4	30.0	23.5	21.5	21.9	21.0
85°	14.9	14.9	16.0	17.5	18.4	18.5	17.1	13.5	11.9	11.3	10.0
87.5°	4.4	4.6	5.1	6.2	6.9	7.2	7.1	6.0	5.3	3.8	2.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-1

Test Date: 11/15/2024

Luminaire Tested: TTN-D0-735-U-WQ

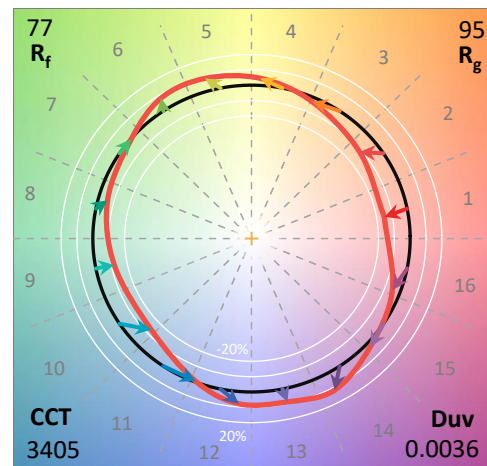
Data in this report applies to families of products including TTN-D0-735-U-WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-735-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3500K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	3405	CRI (Ra):	73.9		
CIE u':	0.2365	R1:	71.3	R9:	-18.0
CIE v':	0.5180	R2:	80.3	R10:	53.1
Duv:	0.0036	R3:	87.8	R11:	68.6
CIE x:	0.4148	R4:	73.2	R12:	42.6
CIE y:	0.4038	R5:	69.8	R13:	72.5
CIE z:	0.1814	R6:	71.8	R14:	92.7
Peak Wavelength (nm):	596	R7:	82.8	R15:	64.3
Dominant Wavelength (nm):	579	R8:	54.1		
Purity:	45.70672				
Rf:	76.6				
Rg:	95.4				



Test Conditions

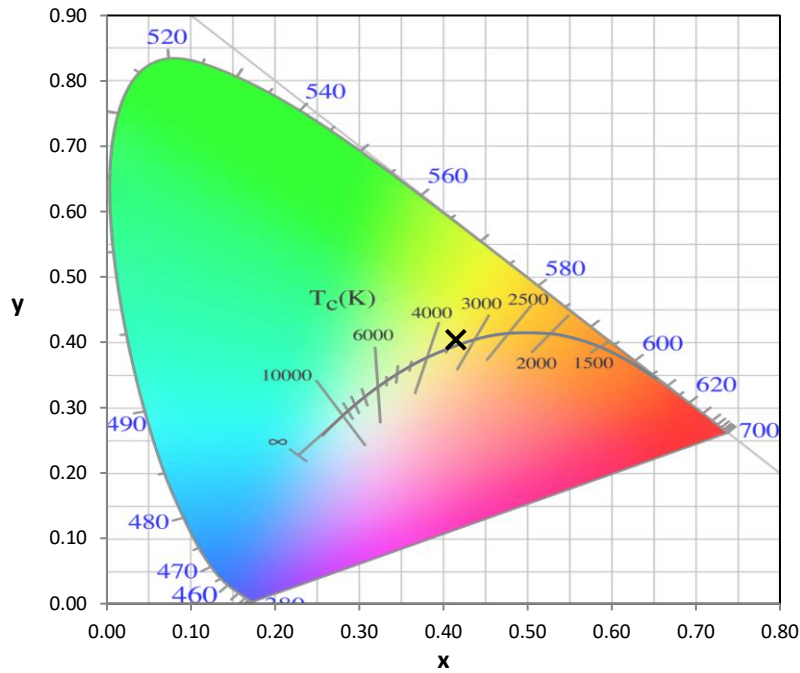
Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-1

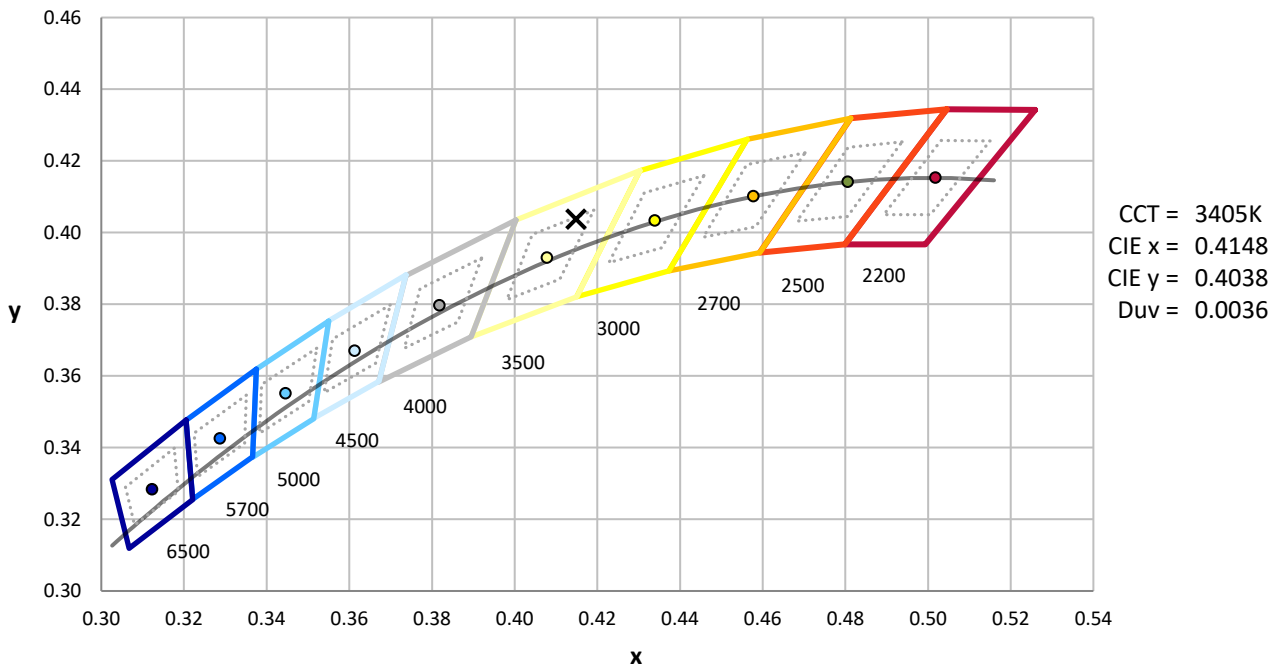
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



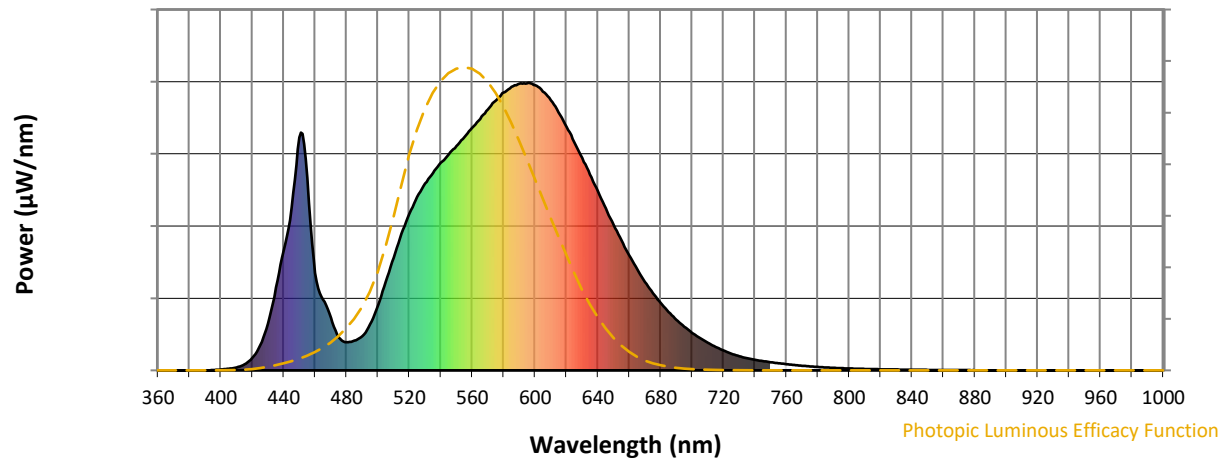
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength

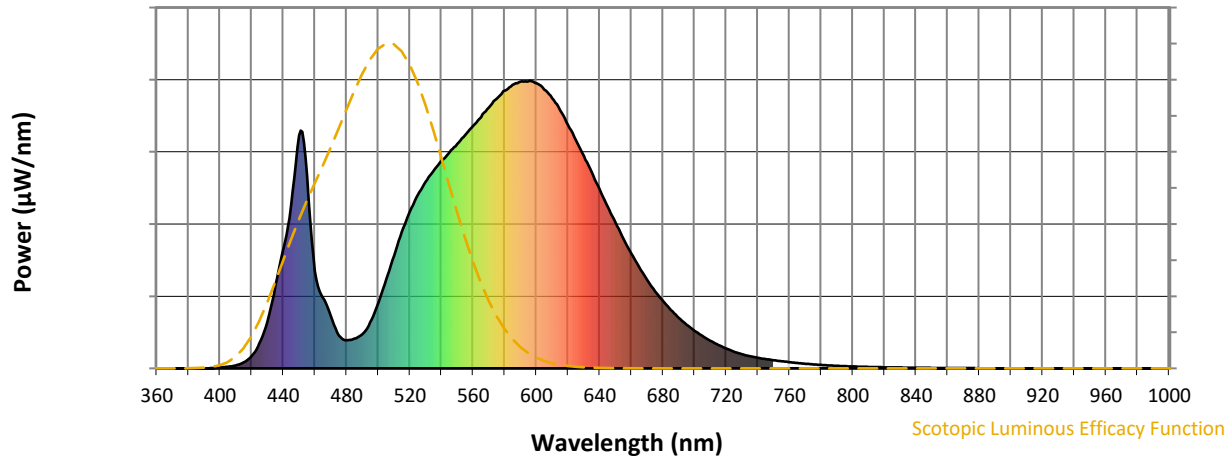


Photopic Lumens: NR

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	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



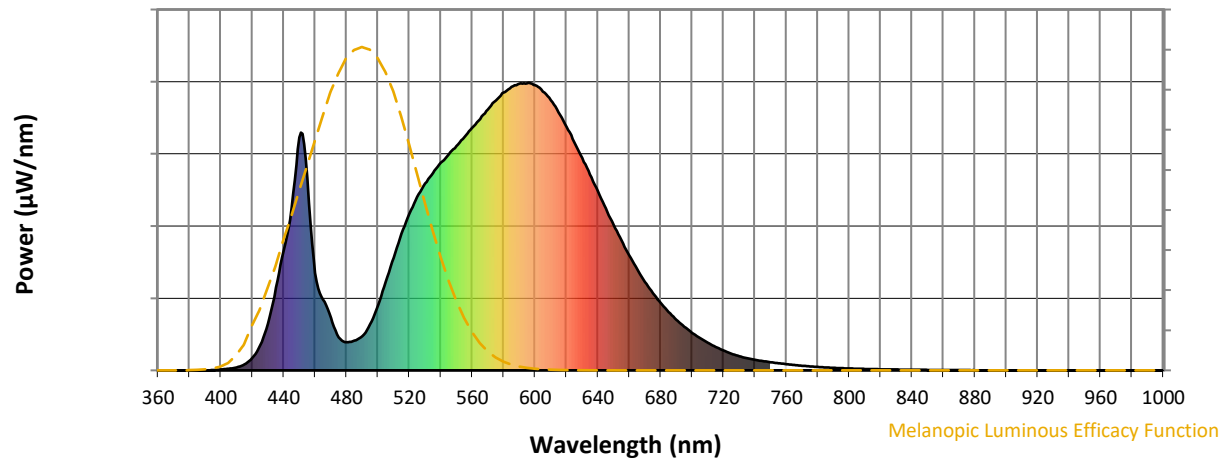
Scotopic Lumens: NR

S/P: 1.33

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.47

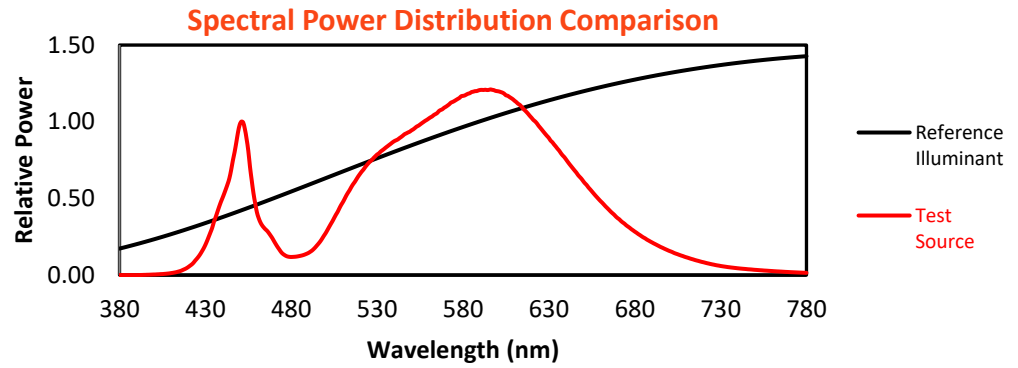
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

REPORT NUMBER: SP1-2411-284-1

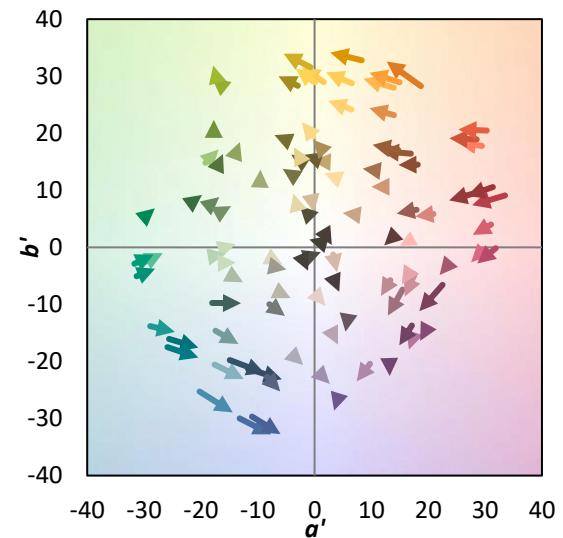
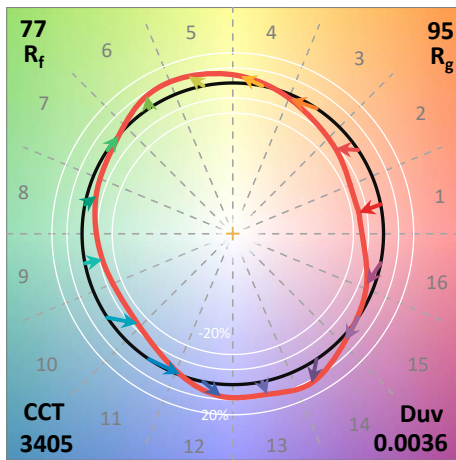
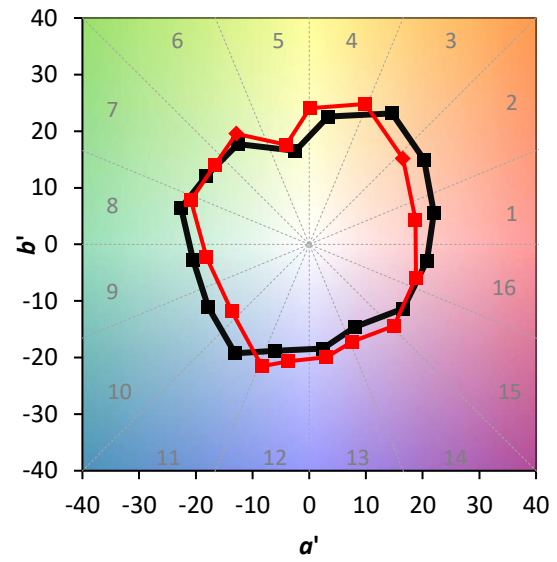
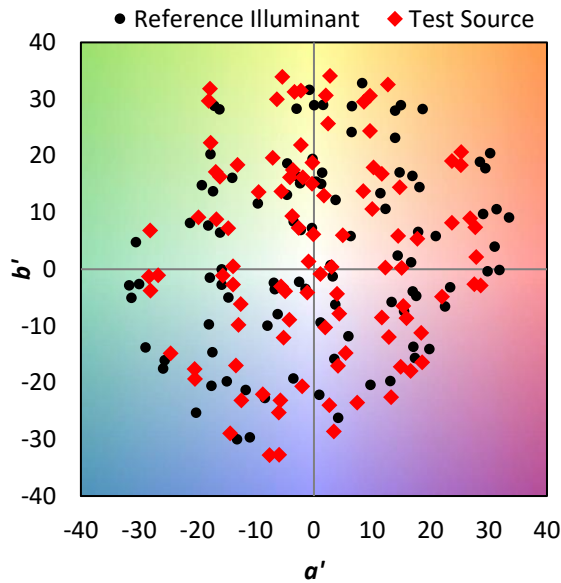
TM-30-18

Summary

$R_f = 76.6$
 $R_g = 95.4$
 $CIE R_a = 73.9$
 $R_g = -18.0$

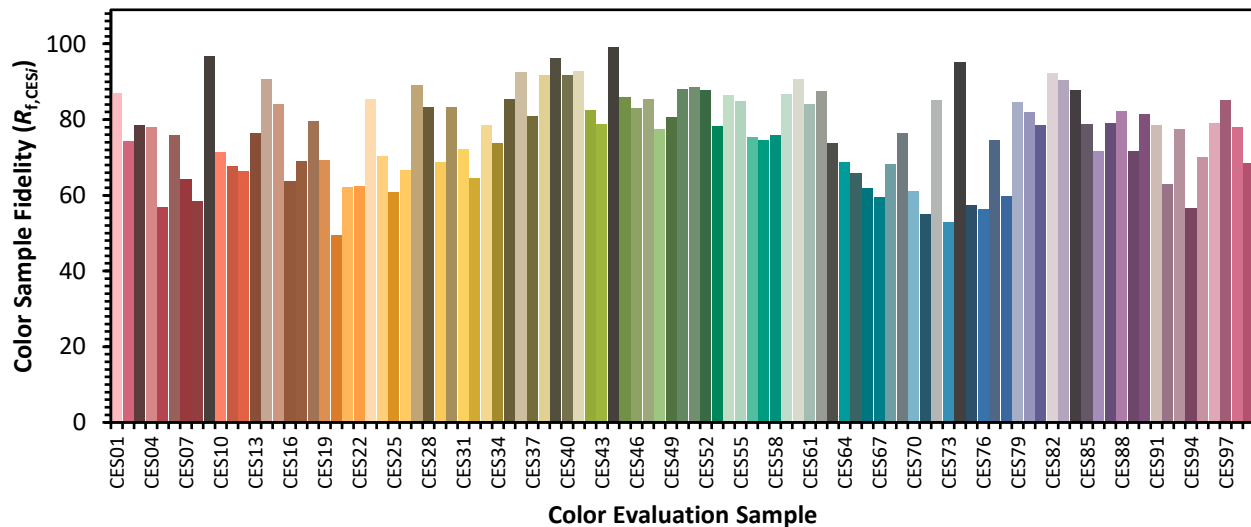


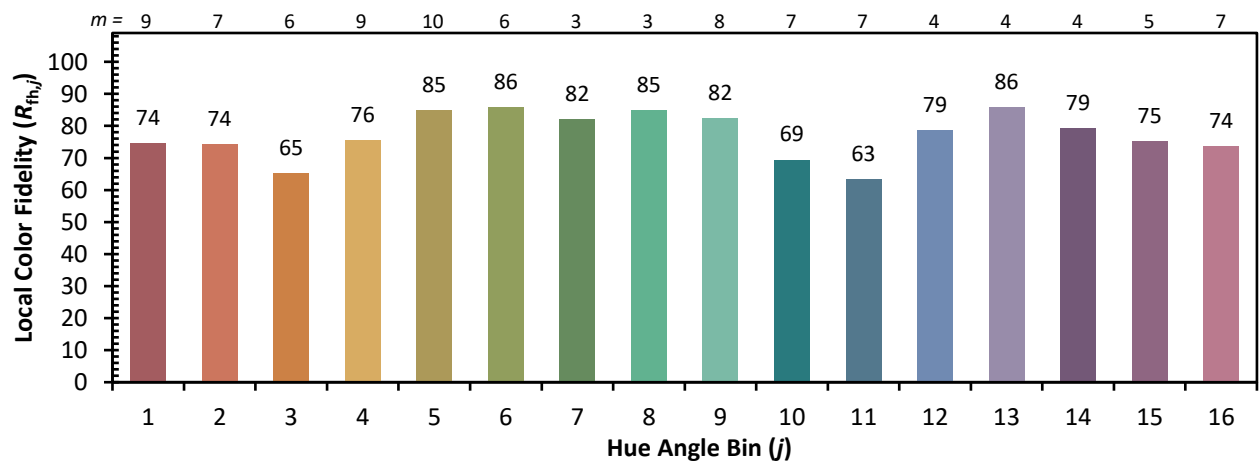
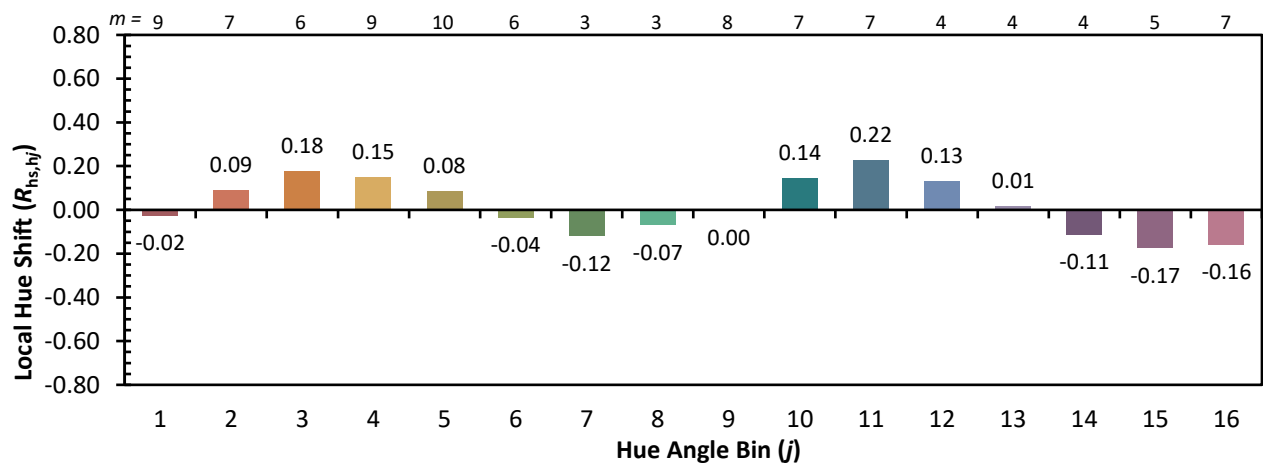
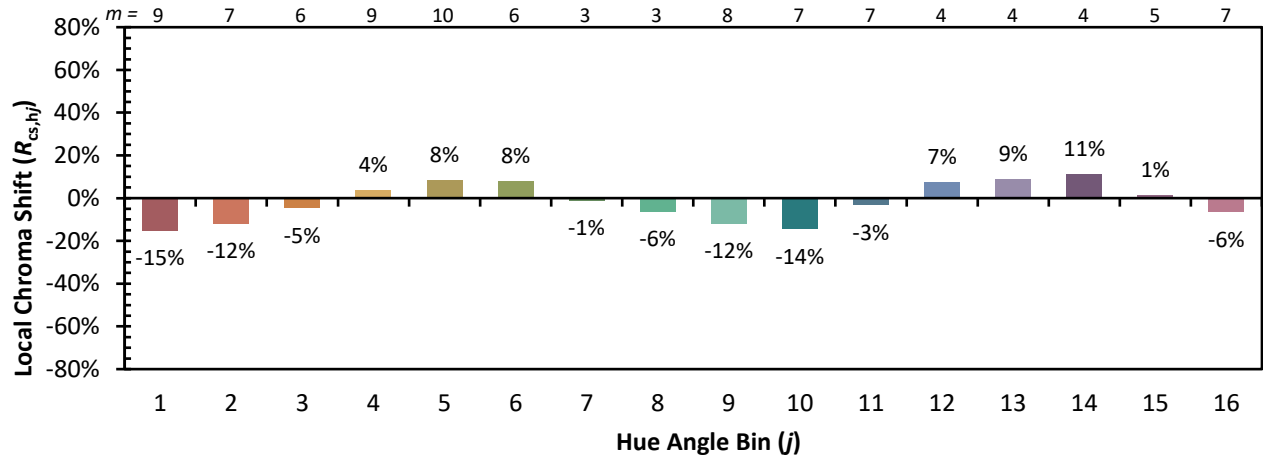
Color Vector Graphics



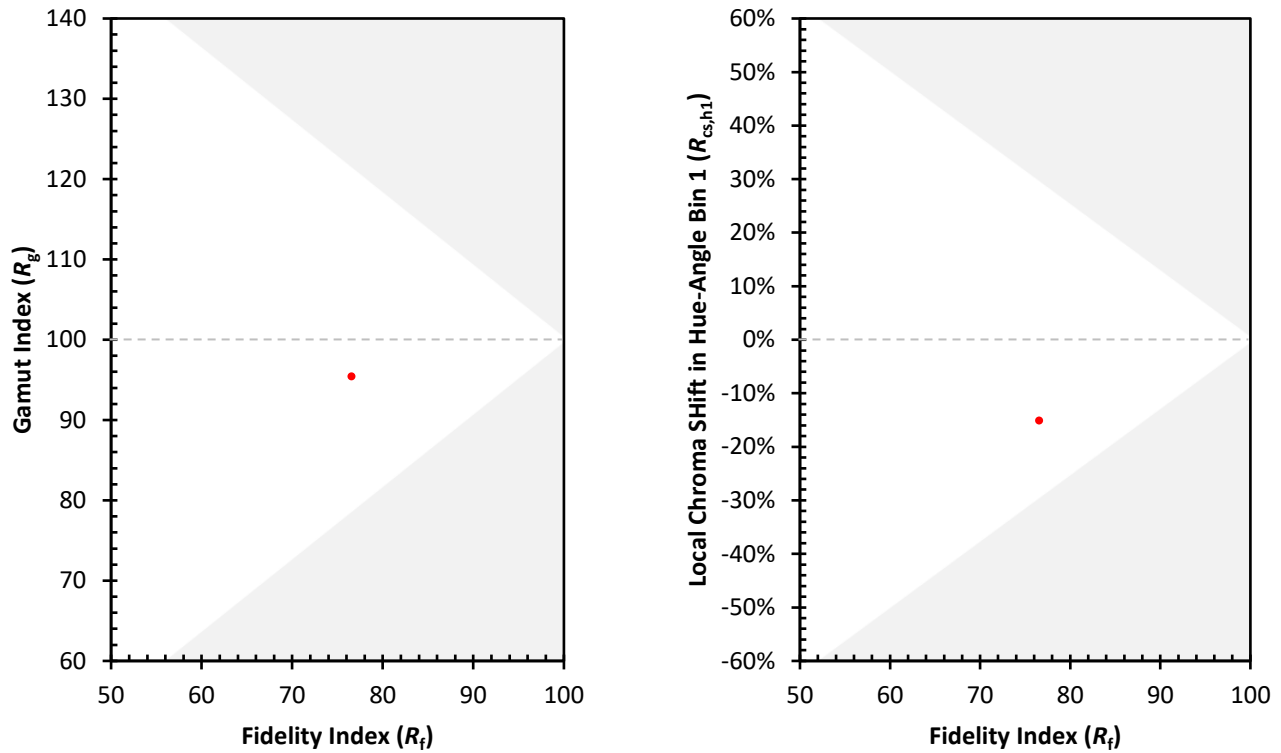
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82 = 92
CES08 = 40	CES33 = 78	CES58 = 76	CES83 = 90
CES09 = 29	CES34 = 74	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 86	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 93	CES61 = 84	CES86 = 72
CES12 = 64	CES37 = 81	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 92	CES63 = 74	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 72
CES15 = 71	CES40 = 92	CES65 = 66	CES90 = 82
CES16 = 47	CES41 = 93	CES66 = 62	CES91 = 79
CES17 = 50	CES42 = 83	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 79	CES68 = 68	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 86	CES70 = 61	CES95 = 70
CES21 = 86	CES46 = 83	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 85	CES72 = 85	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 53	CES98 = 78
CES24 = 91	CES49 = 81	CES74 = 95	CES99 = 68
CES25 = 72	CES50 = 88	CES75 = 57	



Color Rendition by Hue-Angle Bin


Measure Comparisons



(END OF REPORT)