

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: P1445226

Luminaire Tested: TPTN-VA1-735-U-DL-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445226
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA1-735-U-DL-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 27W 70CRI 3500K w/
DRIVE LANE TYPE IV DISTRIBUTION OPTIC
Light Source: 3500K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2239.6 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

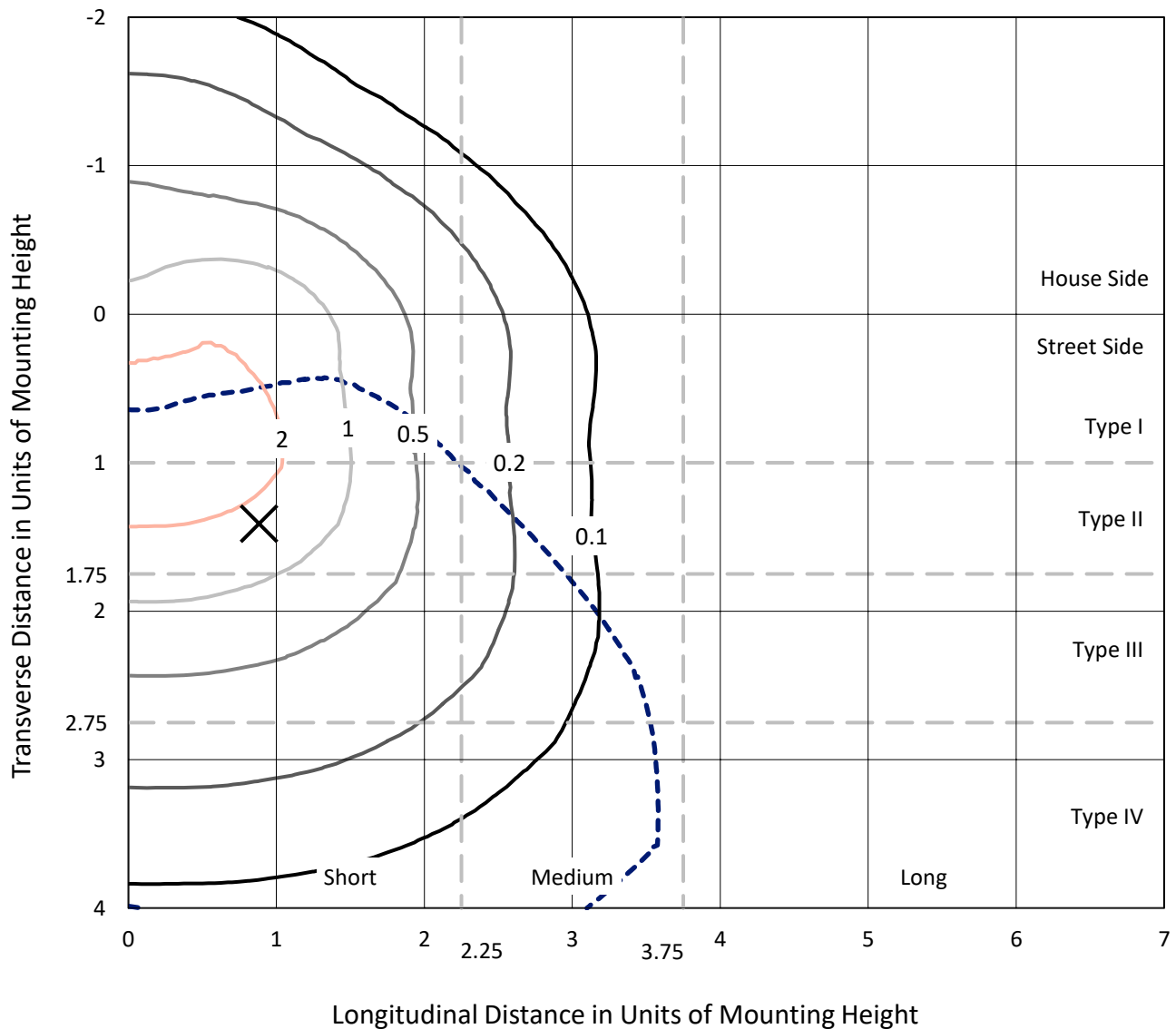
Input Watts (W): 26.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 11.9%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1445226

CATALOG NUMBER: TPTN-VA1-735-U-DL-GM

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

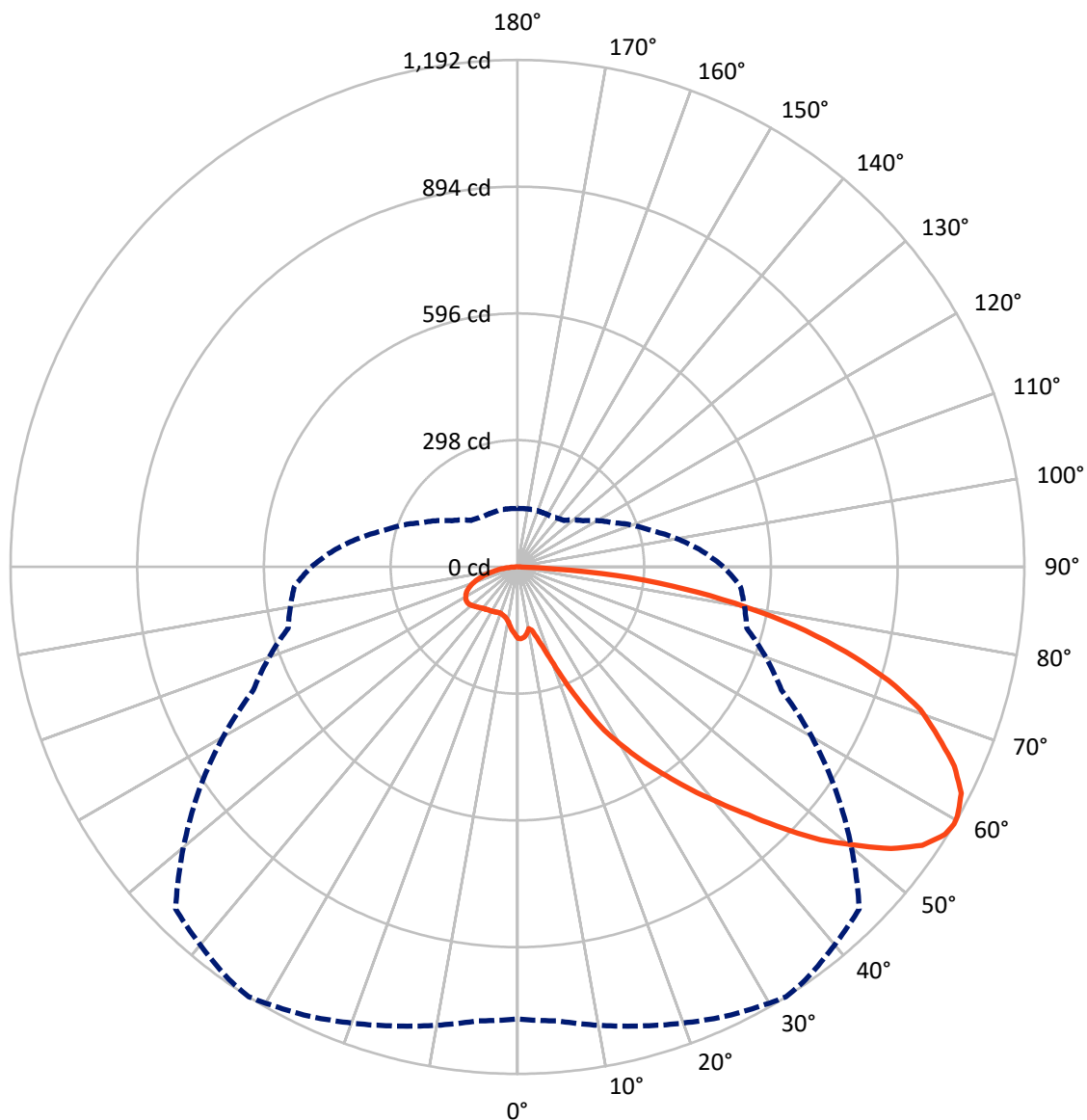


Based on 10 foot mounting height. Maximum calculated value = 3.6 fc
Type IV - Short - N/A

REPORT NUMBER: P1445226

CATALOG NUMBER: TPTN-VA1-735-U-DL-GM

Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral - - - Horizontal Cone Through 59-Deg Vertical

REPORT NUMBER: P1445226

CATALOG NUMBER: TPTN-VA1-735-U-DL-GM

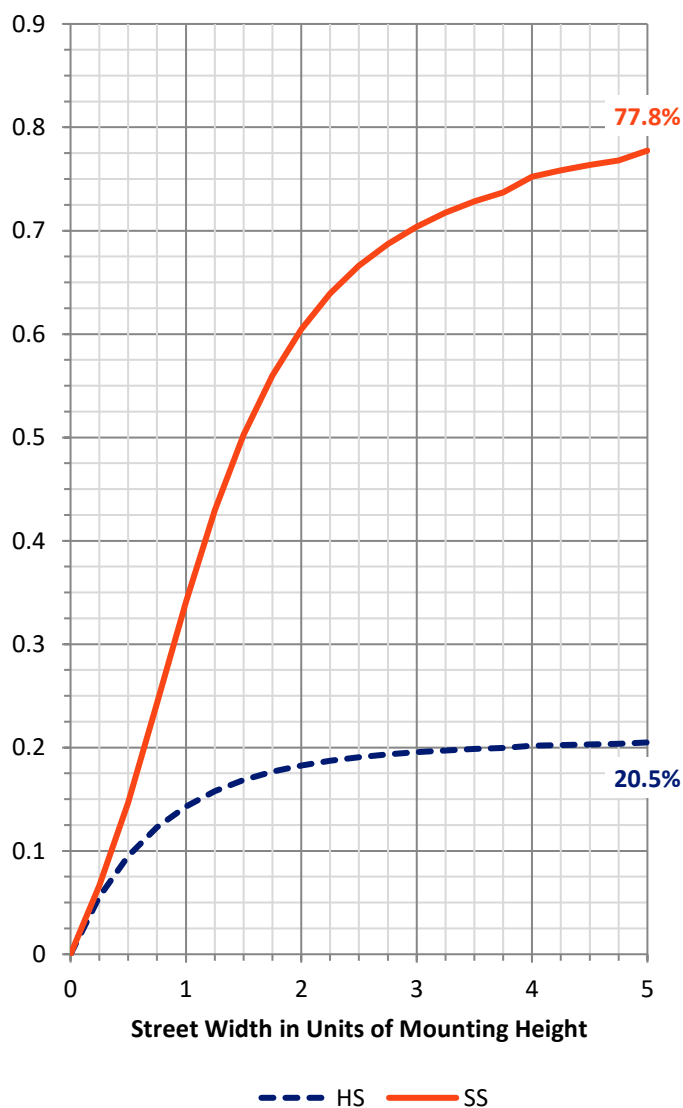
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	465.7	0.0	465.7
	% Fixture	20.8	0.0	20.8
Street Side	Lumens	1773.9	0.0	1773.9
	% Fixture	79.2	0.0	79.2
Total	Lumens	2239.6	0.0	2239.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.6	0.7
10°-20°	44.2	2.0
20°-30°	108.5	4.8
30°-40°	213.0	9.5
40°-50°	354.3	15.8
50°-60°	500.3	22.3
60°-70°	525.4	23.5
70°-80°	378.9	16.9
80°-90°	100.3	4.5
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°	2239.6	100.0
0°-180°	2239.6	100.0

Coefficient of Utilization



REPORT NUMBER: P1445226

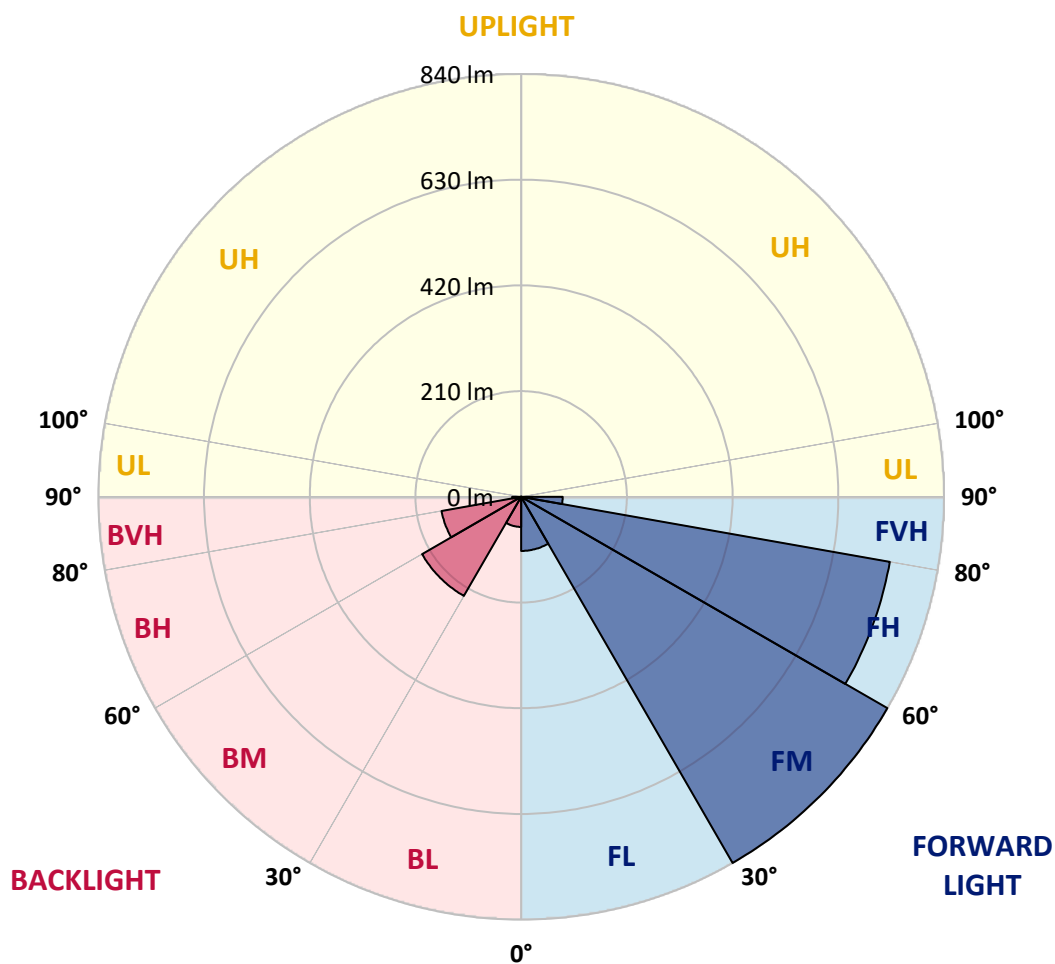
CATALOG NUMBER: TPTN-VA1-735-U-DL-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	107.5	4.8			
FM	(30°-60°)	840.2	37.5			
FH	(60°-80°)	743.8	33.2			G1/1800
FVH	(80°-90°)	82.5	3.7			G1/100
BL	(0°-30°)	59.8	2.7	B0/110		
BM	(30°-60°)	227.5	10.2	B1/1000		
BH	(60°-80°)	160.6	7.2	B1/500		G1/500
BVH	(80°-90°)	17.8	0.8			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 IV Short



REPORT NUMBER: P1445226

CATALOG NUMBER: TPTN-VA1-735-U-DL-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8
2.5°	170.4	170.0	170.0	169.6	169.1	169.1	168.7	167.8	166.5	165.2	164.4
5°	168.7	168.3	167.4	167.0	166.1	165.7	164.8	163.1	162.2	162.6	162.6
7.5°	161.4	161.8	160.9	159.6	158.3	157.9	155.7	155.3	154.9	153.6	154.4
10°	160.1	160.5	156.6	152.3	147.5	145.8	144.0	144.5	147.1	148.8	150.5
12.5°	170.9	169.1	165.7	159.6	153.6	151.8	147.1	147.1	149.2	151.0	152.7
15°	187.3	186.9	183.0	178.2	173.0	170.9	162.2	158.3	158.8	160.1	161.4
17.5°	211.5	212.8	214.1	208.1	202.0	197.7	185.1	176.5	173.0	173.5	173.5
20°	254.8	255.2	258.2	253.1	243.5	237.5	217.6	201.6	193.8	192.1	191.2
22.5°	316.6	314.9	314.9	313.6	301.1	293.7	262.1	233.6	219.7	215.0	214.6
25°	388.5	387.6	389.3	382.8	366.4	361.2	317.5	275.6	250.9	244.0	238.8
27.5°	458.5	459.4	460.3	448.6	434.7	425.7	375.0	325.3	285.5	273.0	263.4
30°	524.7	526.9	515.6	499.2	489.2	478.0	423.1	364.7	317.9	296.3	287.2
32.5°	590.0	587.9	567.5	555.0	546.8	535.5	471.5	406.6	350.8	320.5	308.4
35°	653.6	647.6	622.0	609.9	603.0	593.5	529.9	449.9	382.8	344.8	330.1
37.5°	712.9	709.4	680.0	674.0	664.9	657.5	593.1	495.3	417.4	373.3	355.1
40°	768.3	768.7	747.5	737.5	728.5	721.5	657.5	542.9	453.3	402.7	382.8
42.5°	825.8	825.4	813.2	806.8	797.2	792.1	725.0	595.7	491.0	433.9	410.5
45°	879.9	883.8	884.6	880.7	876.8	872.1	807.6	656.7	535.5	465.5	440.8
47.5°	943.5	948.2	955.1	956.4	958.6	950.8	888.1	714.2	578.8	496.6	469.3
50°	990.6	995.4	1017.4	1024.3	1028.2	1024.8	964.2	776.5	617.7	526.0	491.4
52.5°	1037.3	1039.9	1071.1	1095.3	1100.0	1094.4	1039.1	835.7	655.8	549.4	513.9
55°	1065.0	1068.9	1109.1	1145.0	1155.0	1152.8	1103.9	877.3	679.1	565.8	528.2
57.5°	1067.6	1074.5	1120.8	1164.1	1186.1	1180.5	1133.8	905.0	686.1	564.1	528.6
59°	1062.8	1071.1	1117.3	1164.9	1191.8	1183.5	1136.8	913.2	684.8	558.0	526.4
60°	1059.0	1067.2	1111.3	1161.9	1188.7	1181.8	1136.4	917.1	679.1	554.6	524.7
62.5°	1035.6	1049.9	1093.6	1138.5	1171.4	1175.3	1127.7	918.8	667.5	543.3	515.6
65°	980.7	994.5	1052.0	1107.0	1128.6	1142.0	1095.7	896.3	640.6	520.4	485.8
67.5°	911.9	923.6	979.8	1052.0	1067.2	1079.3	1051.2	851.7	606.5	475.8	449.0
70°	841.4	855.6	901.1	976.8	1005.3	1014.0	993.6	803.3	557.6	431.3	413.1
72.5°	746.6	758.3	812.4	882.5	912.3	923.1	906.7	738.8	495.7	386.3	369.4
75°	641.1	648.0	698.6	769.6	798.1	808.9	803.7	656.7	429.1	330.1	312.8
77.5°	513.5	529.0	571.0	627.7	668.3	670.5	670.1	556.7	353.0	260.0	253.9
80°	383.3	397.1	436.9	490.5	518.7	526.4	525.6	439.1	273.8	199.0	189.0
82.5°	242.7	251.3	292.9	336.1	365.5	372.4	380.2	317.1	190.8	131.9	120.7
85°	96.5	96.0	131.9	178.2	199.9	211.5	217.2	184.7	103.4	58.8	49.7
87.5°	6.9	7.4	9.1	11.2	11.7	12.5	14.3	18.2	14.3	12.5	6.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P1445226

CATALOG NUMBER: TPTN-VA1-735-U-DL-GM

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8	167.8
2.5°	163.9	163.5	161.8	160.9	159.6	159.2	158.8	157.9	157.5	157.0	157.5
5°	161.4	161.4	159.6	158.3	155.3	153.1	151.0	147.9	145.8	144.5	144.0
7.5°	155.3	155.7	155.3	152.7	150.1	146.6	141.5	136.3	132.4	130.2	129.3
10°	150.1	151.0	150.5	148.8	144.5	138.9	132.4	125.4	119.4	115.5	115.1
12.5°	152.7	152.7	151.4	147.9	142.3	135.0	126.7	117.7	110.7	106.4	105.5
15°	161.4	160.5	156.6	151.0	142.3	133.2	123.3	112.9	104.7	99.9	99.5
17.5°	173.9	172.2	165.2	154.9	143.6	132.4	121.6	109.9	99.9	93.9	93.0
20°	190.3	186.4	175.6	160.1	146.2	133.2	119.8	106.8	96.9	90.0	88.2
22.5°	210.7	204.2	187.3	166.5	149.7	135.0	120.3	106.0	95.2	88.7	88.2
25°	231.9	223.2	200.7	174.3	153.6	136.3	120.7	107.7	96.9	92.1	91.3
27.5°	253.5	243.1	215.0	183.4	157.9	138.4	122.4	110.3	102.1	98.2	97.8
30°	274.7	260.8	227.5	191.2	162.2	139.7	123.7	110.3	104.7	101.7	101.2
32.5°	294.2	277.3	239.2	199.4	166.5	142.3	125.0	111.6	106.4	105.5	105.1
35°	314.9	296.7	251.3	206.3	170.9	144.5	126.3	112.9	109.0	109.0	109.0
37.5°	337.4	316.2	264.3	214.1	175.2	148.4	128.0	115.9	112.5	113.3	113.3
40°	361.2	337.0	277.7	222.3	179.1	150.5	129.3	119.0	115.9	116.8	117.2
42.5°	385.9	357.3	291.6	229.7	184.3	153.1	131.9	122.9	120.7	121.6	121.6
45°	410.9	378.9	304.5	237.5	188.6	155.7	135.0	127.2	125.4	125.9	125.9
47.5°	435.6	398.4	316.2	244.4	192.5	157.9	138.0	131.5	130.2	130.6	130.2
50°	456.4	415.3	326.6	249.6	196.4	160.1	141.5	135.8	135.0	134.1	133.7
52.5°	474.5	430.4	334.8	253.5	198.1	160.9	144.5	140.2	139.3	137.6	137.1
55°	484.5	437.3	337.0	254.4	196.8	160.1	145.3	142.3	141.5	139.3	139.3
57.5°	486.7	437.3	332.2	250.5	192.5	157.0	144.9	141.5	140.6	138.4	138.4
59°	484.5	434.7	327.9	246.1	189.0	154.4	143.2	140.6	139.3	137.6	137.6
60°	482.3	433.0	324.9	241.8	186.9	152.7	141.5	139.3	138.0	136.7	136.7
62.5°	472.8	423.1	316.6	230.6	179.5	146.2	137.6	136.3	135.4	134.1	133.7
65°	446.4	399.3	299.3	218.0	168.3	138.4	131.1	130.6	130.2	128.0	127.2
67.5°	415.3	369.9	274.3	202.0	154.0	129.3	123.3	123.3	121.6	119.8	120.3
70°	383.3	341.7	248.3	182.1	137.6	117.7	112.9	113.3	111.6	111.2	111.6
72.5°	340.9	301.9	219.7	157.9	120.7	104.3	100.4	101.7	101.2	100.8	100.8
75°	287.2	256.1	185.1	133.2	102.1	89.5	87.4	87.8	88.2	87.8	87.8
77.5°	234.0	208.1	146.6	105.1	80.9	72.2	71.8	74.0	74.4	74.0	74.4
80°	173.5	153.1	106.8	77.0	60.1	55.4	56.2	59.3	60.1	60.1	61.0
82.5°	111.6	96.0	69.2	49.7	40.2	38.9	41.5	44.6	45.9	45.9	45.9
85°	44.1	39.8	32.0	24.7	22.9	24.7	27.7	29.4	31.6	31.6	31.1
87.5°	2.6	6.5	9.9	9.9	9.9	10.8	10.8	11.2	11.7	11.2	11.2
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

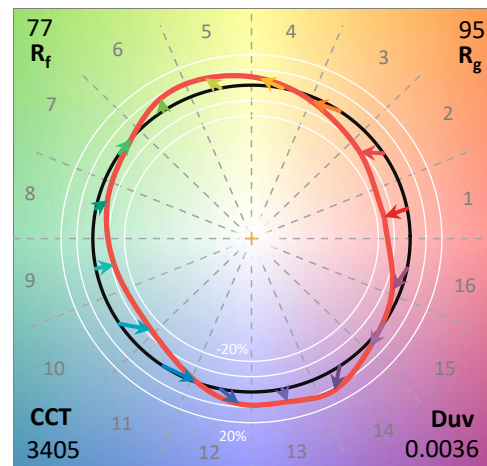
Data in this report applies to families of products including TTN-D0-735-U-WQ

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

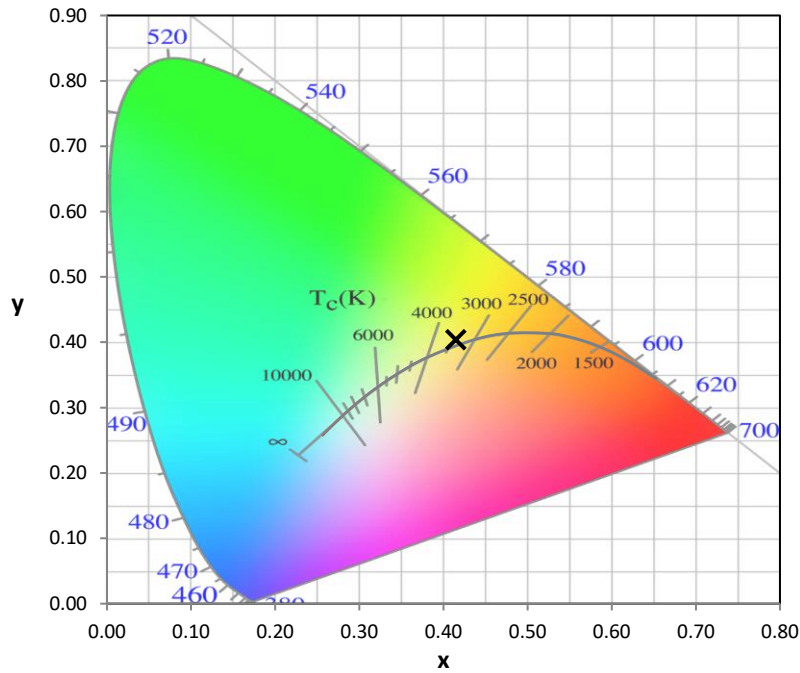
Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-1

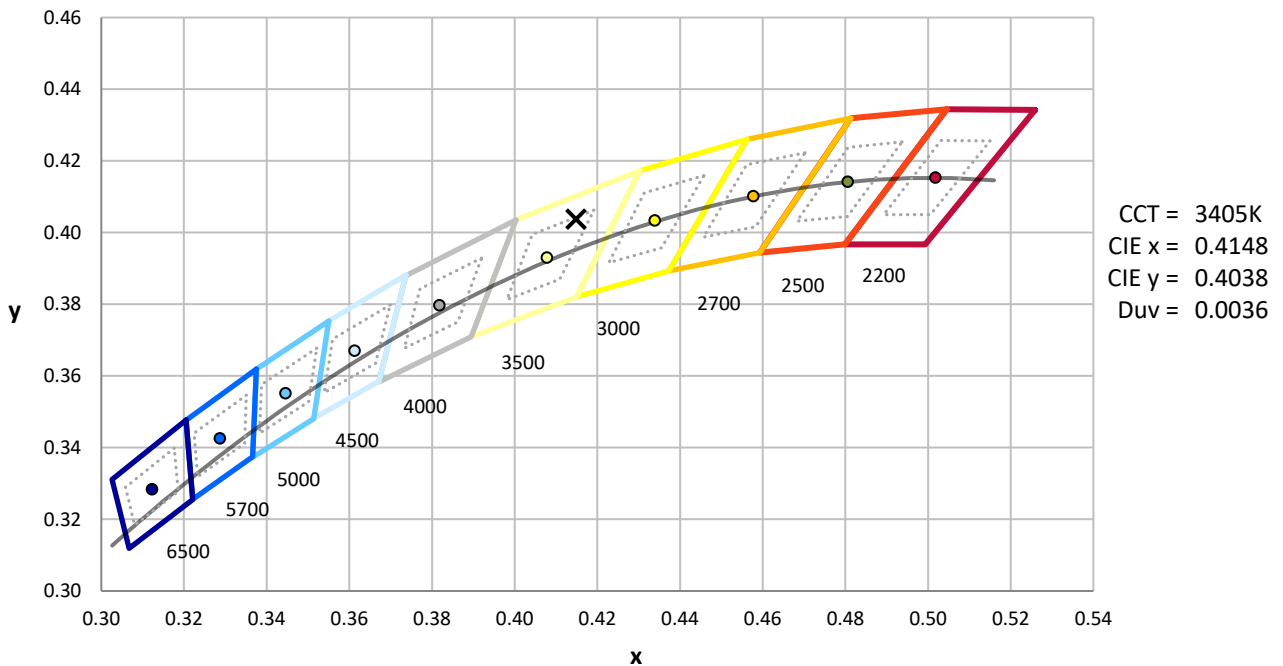
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-1

CIE 1931 Chromaticity Diagram



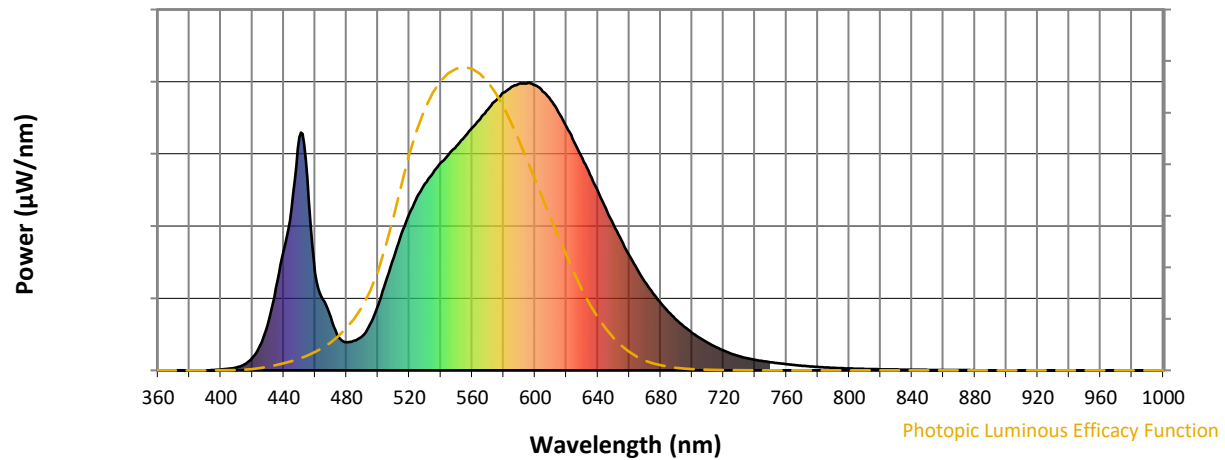
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2411-284-1

Photopic Flux vs. Wavelength

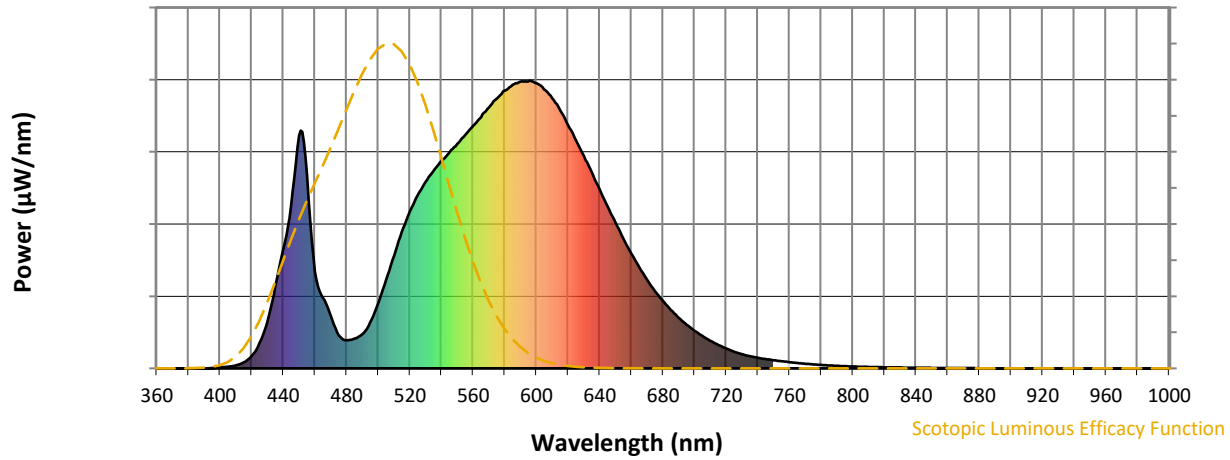


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2411-284-1

Scotopic Flux vs. Wavelength



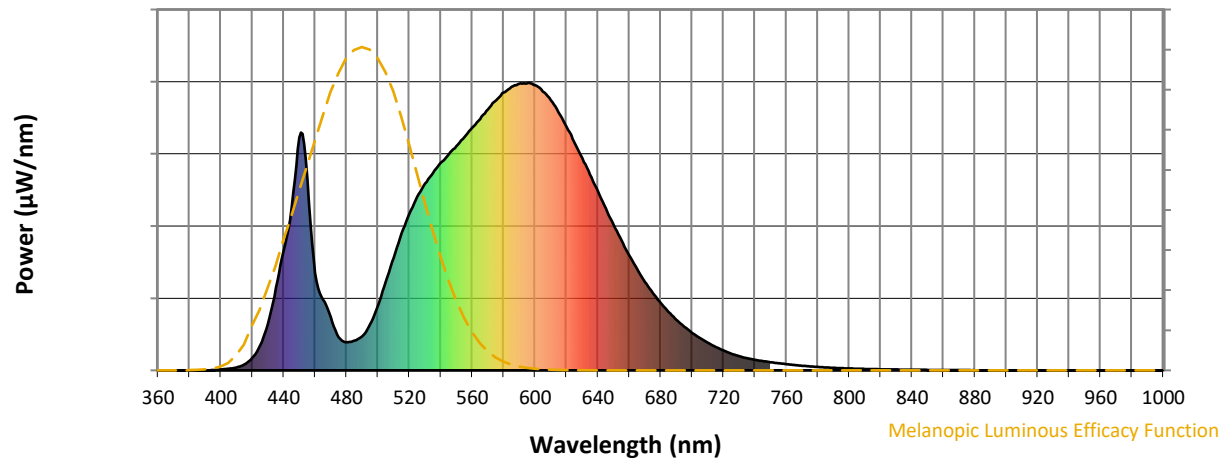
Scotopic Lumens: NR

S/P: 1.33

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

Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 2.47

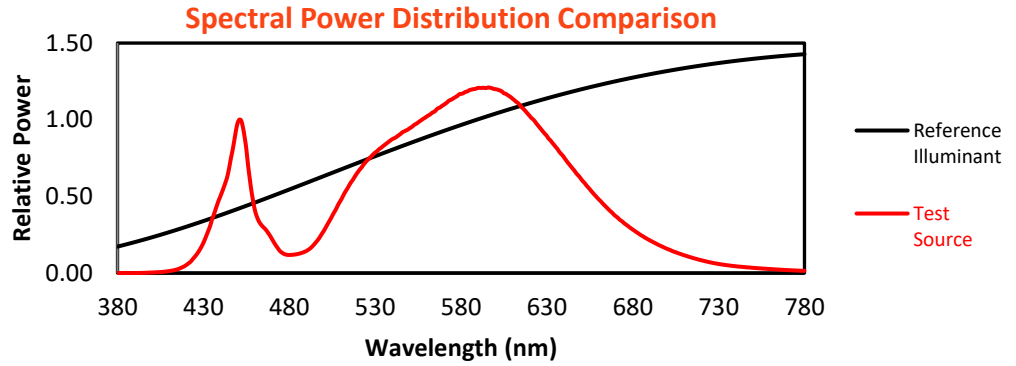
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	119	NR	620	846	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			

REPORT NUMBER: SP1-2411-284-1

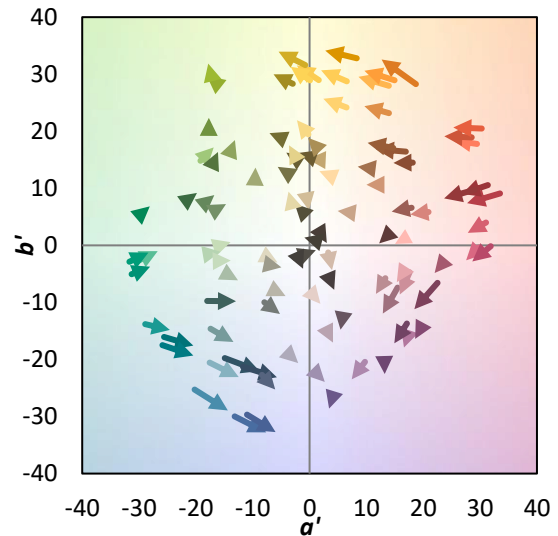
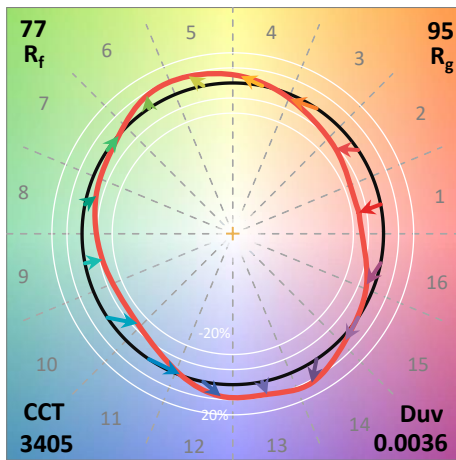
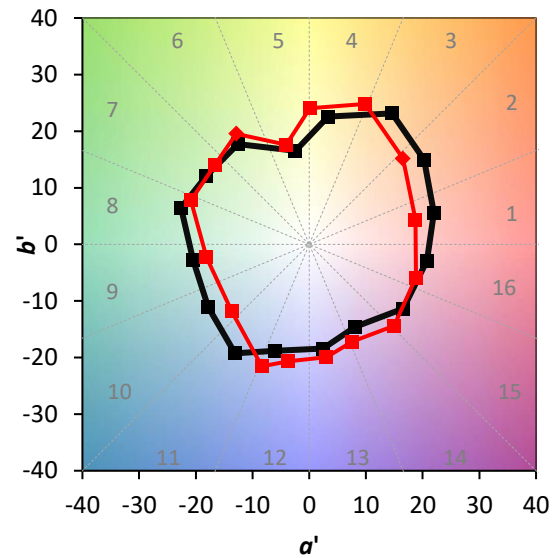
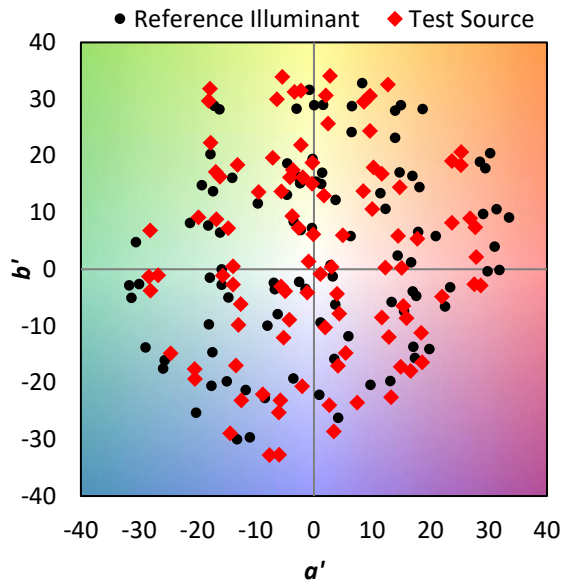
TM-30-18

Summary

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

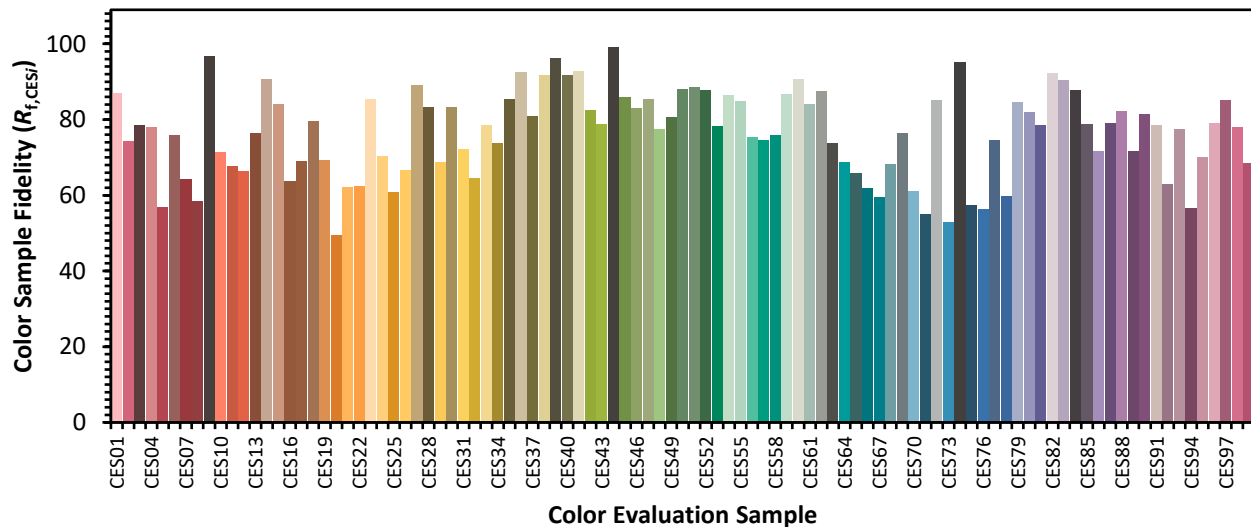


Color Vector Graphics

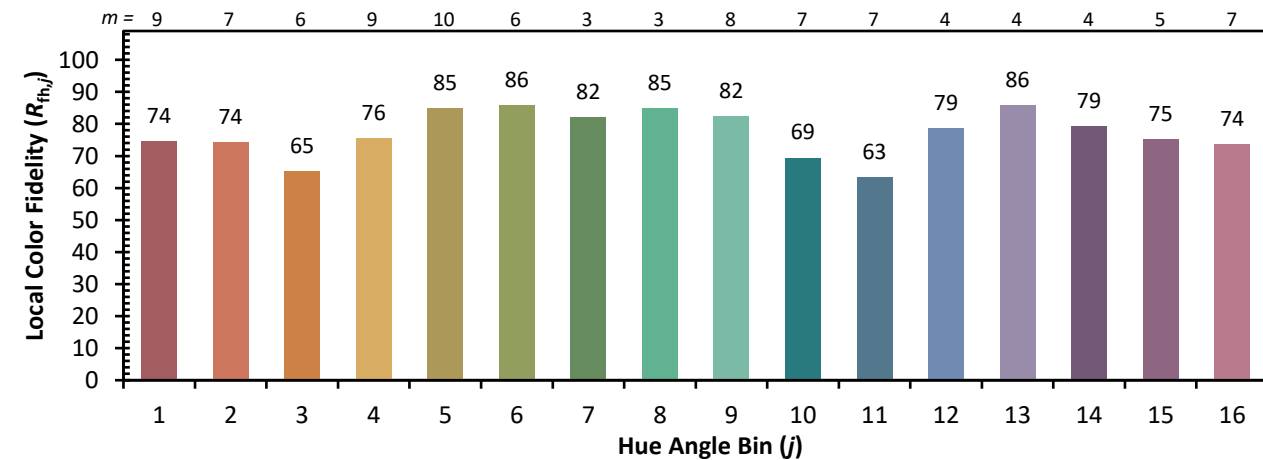
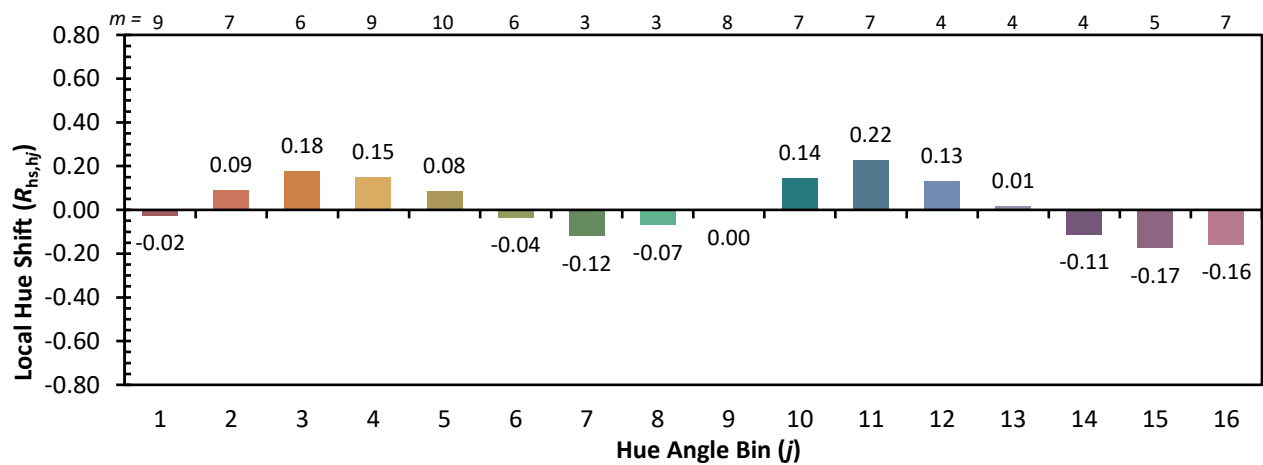
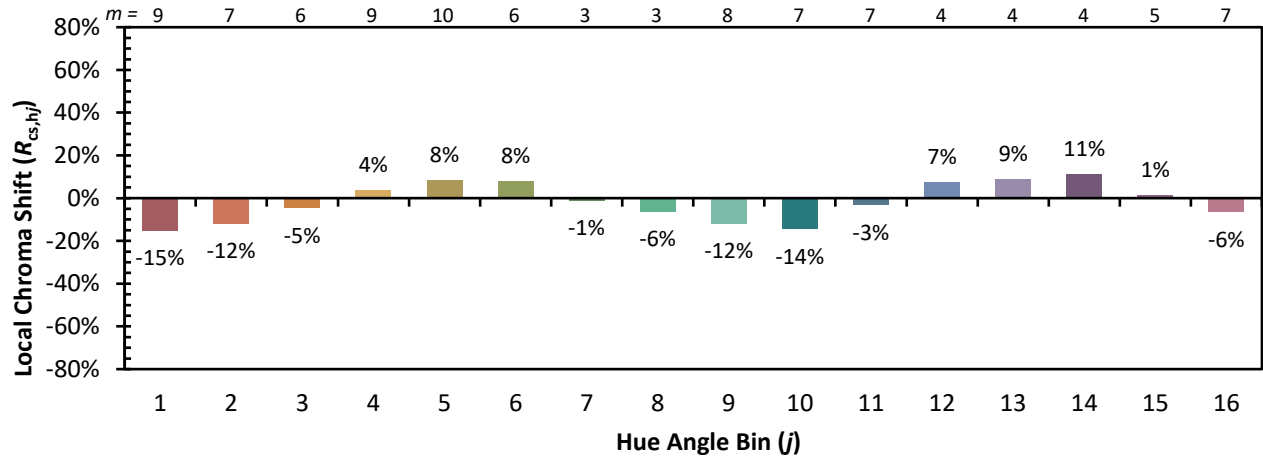


Individual Sample Fidelity Index ($R_{f,i}$)

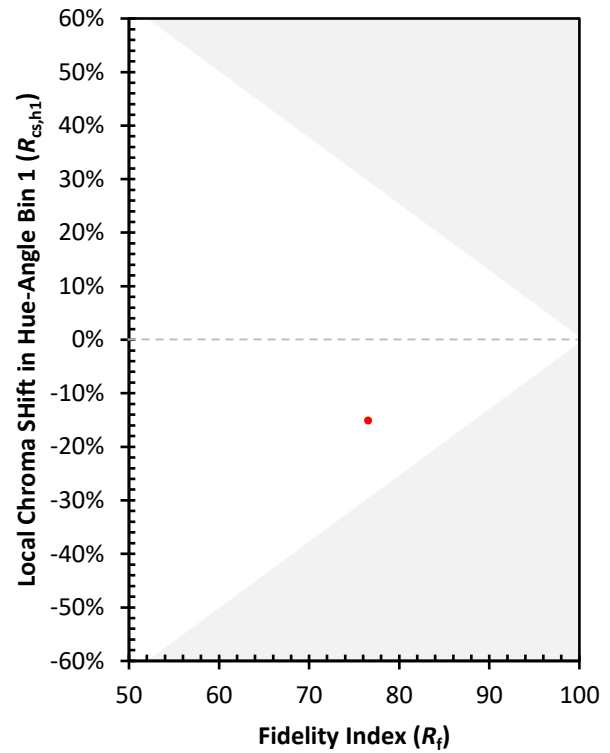
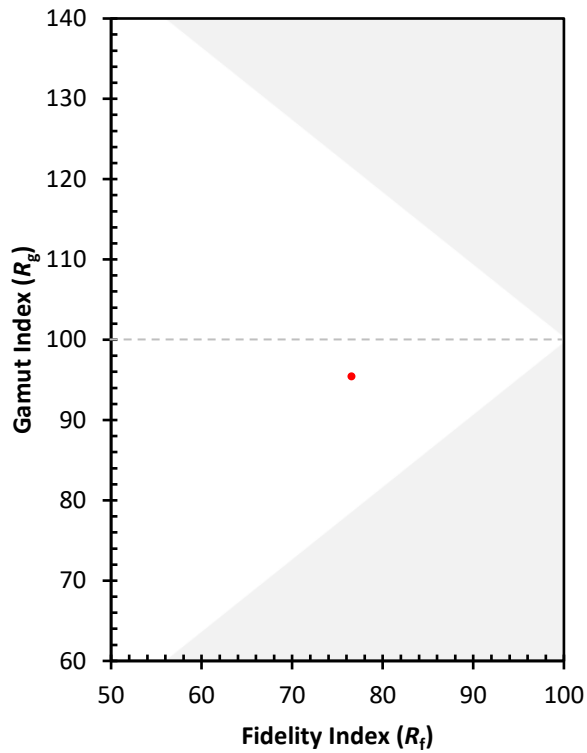
CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82 = 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)