

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: P1445119

Luminaire Tested: TPTN-VA2-740-U-WQ-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445119
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA2-740-U-WQ-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 42W 70CRI 4000K w/
TYPE V WIDE DISTRIBUTION OPTIC
Light Source: 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4420.1 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

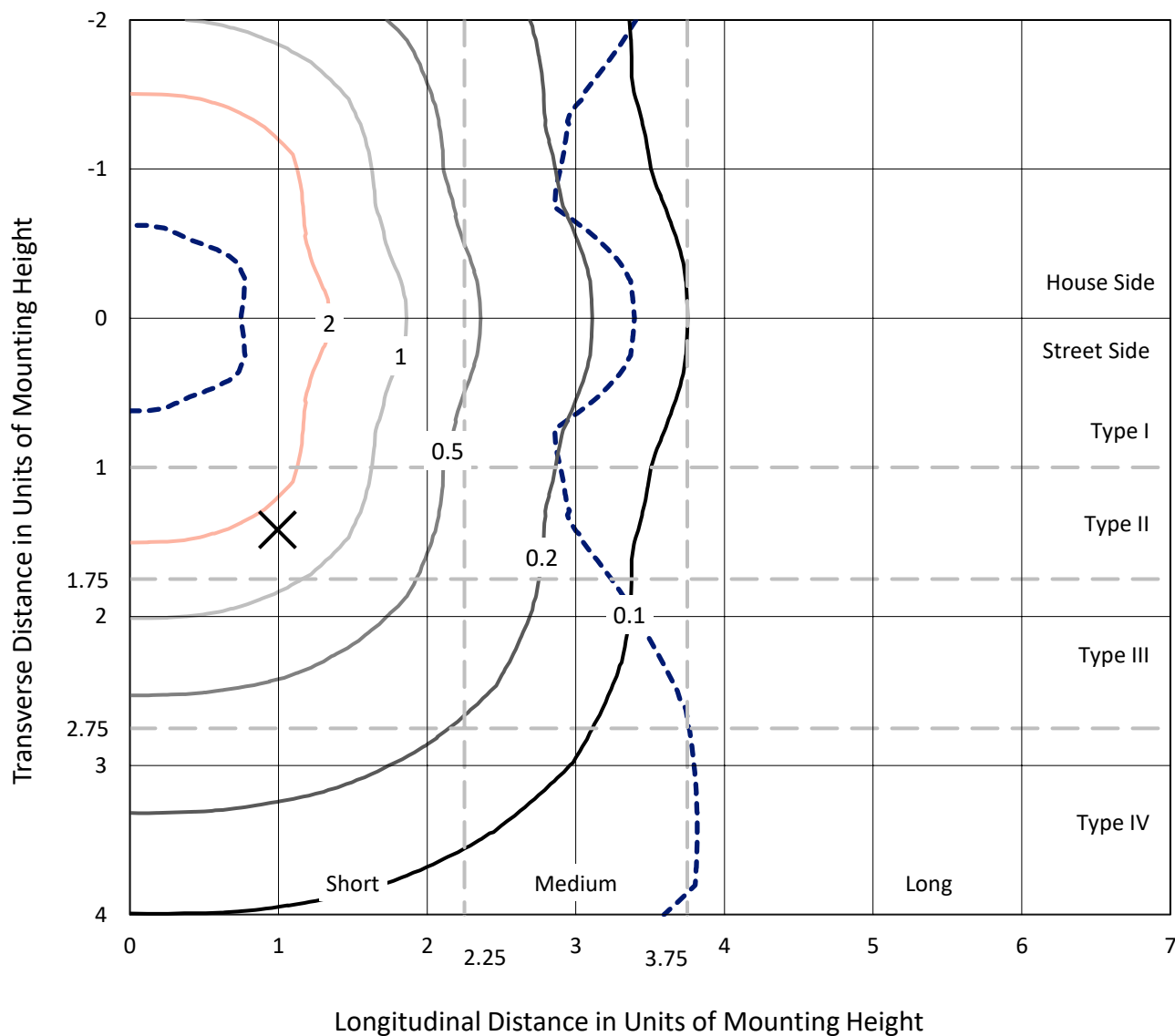
Input Watts (W): 42.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 7.5%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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CATALOG NUMBER: TPTN-VA2-740-U-WQ-GM

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

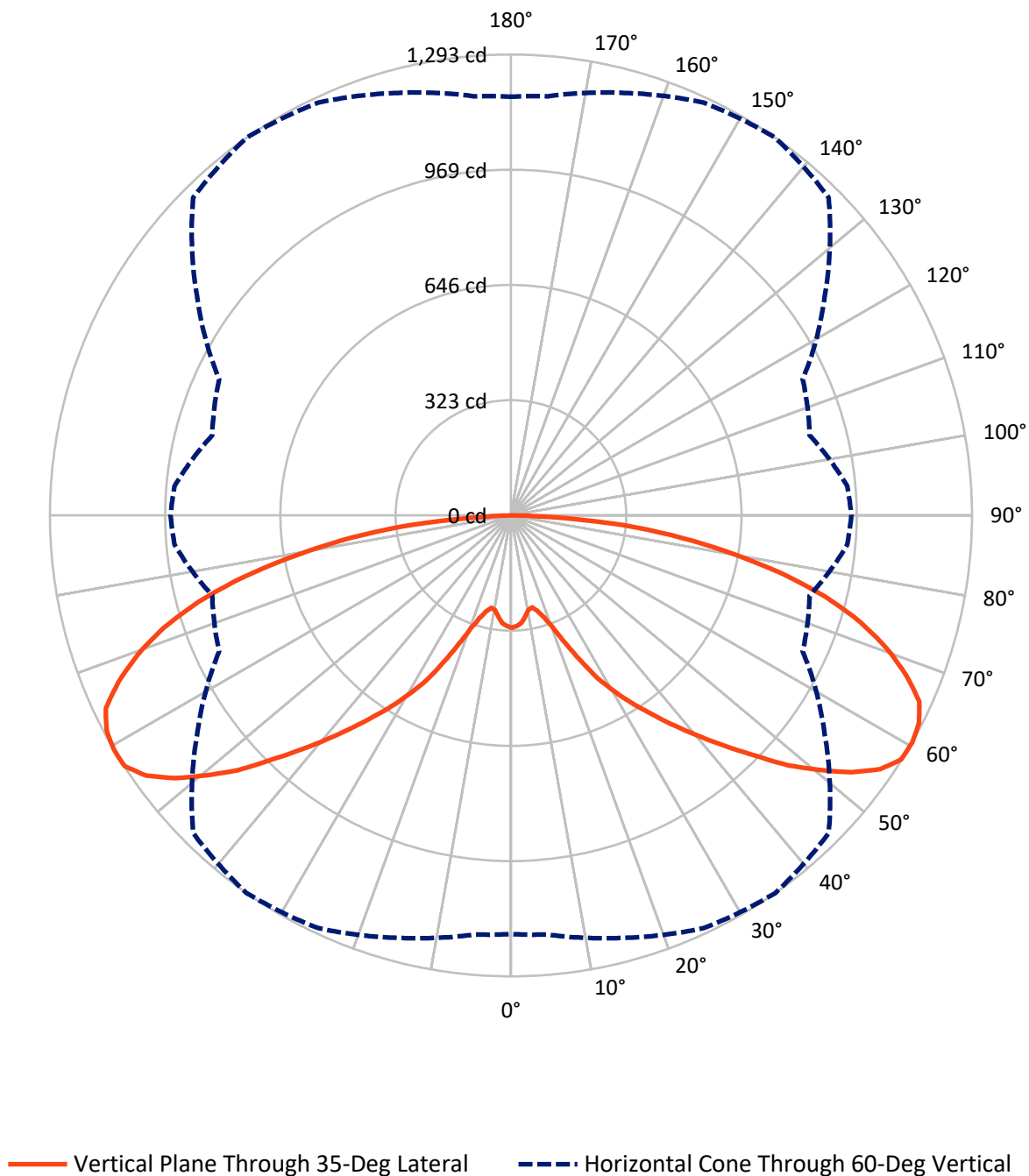


Based on 10 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - N/A

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CATALOG NUMBER: TPTN-VA2-740-U-WQ-GM

Luminous Intensity Polar Plot



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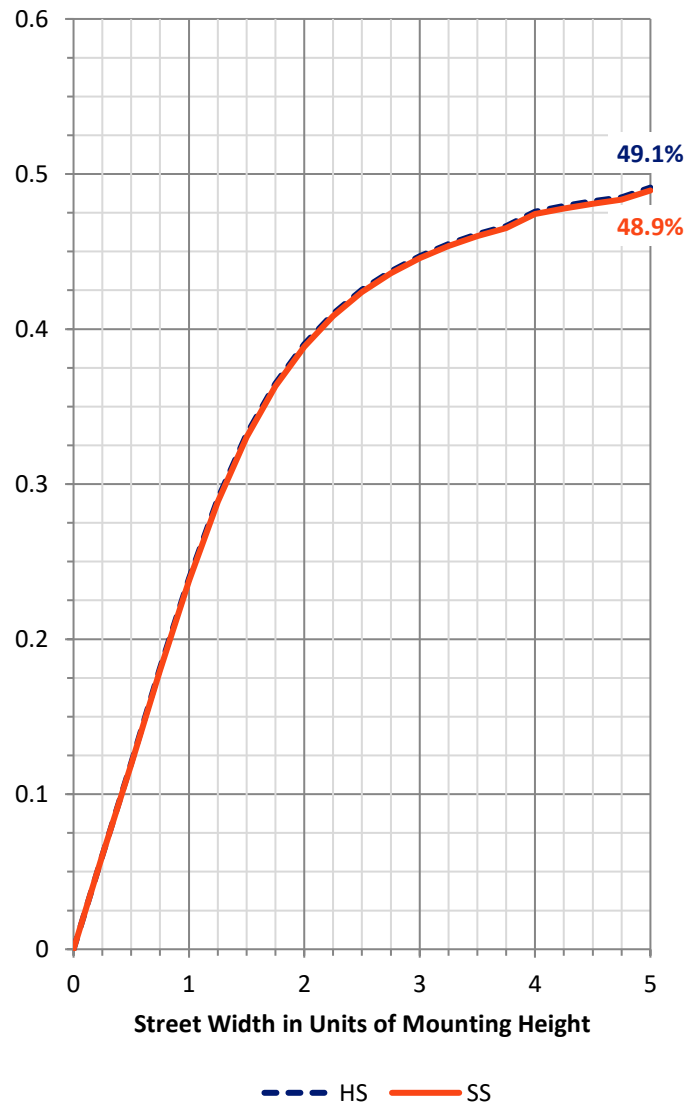
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2210.0	0.0	2210.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2210.0	0.0	2210.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	4420.1	0.0	4420.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	0.6
10°-20°	83.8	1.9
20°-30°	204.7	4.6
30°-40°	407.9	9.2
40°-50°	682.5	15.4
50°-60°	973.3	22.0
60°-70°	1037.5	23.5
70°-80°	771.8	17.5
80°-90°	230.5	5.2
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°	4420.1	100.0
0°-180°	4420.1	100.0

Coefficient of Utilization



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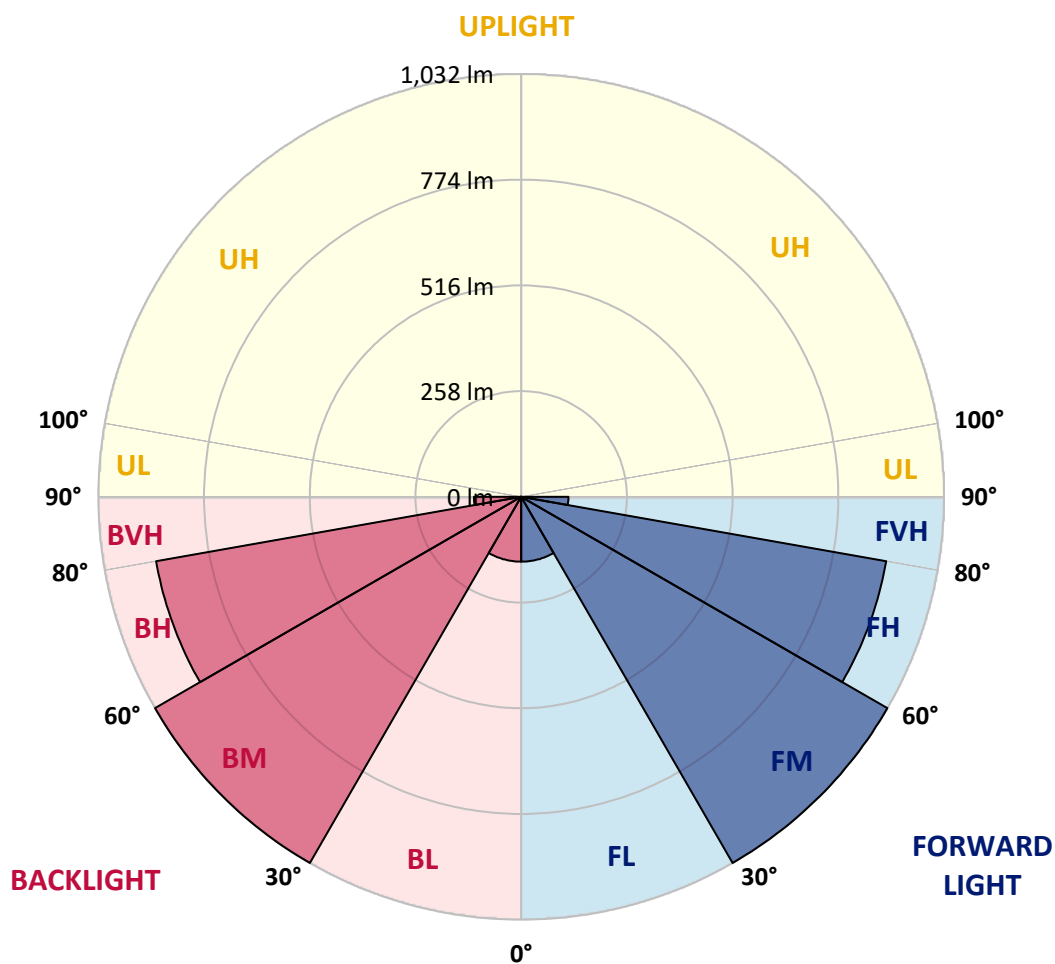
CATALOG NUMBER: TPTN-VA2-740-U-WQ-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	158.3	3.6			
FM	(30°-60°)	1031.9	23.3			
FH	(60°-80°)	904.7	20.5			G1/1800
FVH	(80°-90°)	115.3	2.6			G2/225
BL	(0°-30°)	158.3	3.6	B1/500		
BM	(30°-60°)	1031.9	23.3	B2/2500		
BH	(60°-80°)	904.7	20.5	B2/1000		G2/1000
BVH	(80°-90°)	115.3	2.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type IV Short



REPORT NUMBER: P1445119

CATALOG NUMBER: TPTN-VA2-740-U-WQ-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9
2.5°	312.0	312.0	311.3	311.3	310.6	310.6	310.6	310.6	311.3	311.3	311.3
5°	302.6	301.8	302.6	302.6	303.3	303.3	305.5	307.7	308.4	309.1	309.1
7.5°	282.2	281.5	282.9	284.4	286.6	289.5	291.7	293.8	295.3	296.8	297.5
10°	266.2	266.2	266.2	267.7	269.1	272.8	278.6	282.9	286.6	288.8	289.5
12.5°	262.6	262.6	262.6	263.3	264.8	267.7	275.7	283.7	288.8	290.9	291.7
15°	272.0	272.0	272.8	274.9	277.8	279.3	285.8	295.3	301.8	306.9	306.9
17.5°	287.3	287.3	293.1	298.2	301.1	299.7	304.0	312.0	322.2	329.5	330.2
20°	317.1	319.3	329.5	335.3	334.6	328.8	328.8	336.0	349.1	359.3	362.2
22.5°	371.7	373.1	383.3	387.7	386.9	372.4	362.2	367.3	384.8	397.9	400.8
25°	438.6	442.2	450.2	459.0	448.0	424.8	405.1	403.7	422.6	440.8	445.1
27.5°	520.8	520.8	525.9	528.1	516.4	484.4	456.8	447.3	465.5	487.3	491.0
30°	589.9	591.3	584.8	578.2	573.1	533.1	499.7	488.0	505.5	528.8	531.7
32.5°	661.9	659.0	642.2	633.5	630.6	586.2	545.5	528.8	541.9	569.5	571.7
35°	725.2	720.8	698.2	688.1	686.6	643.0	590.6	567.3	579.0	609.5	614.6
37.5°	789.9	784.1	758.6	750.6	749.2	707.7	639.3	607.3	620.4	654.6	657.5
40°	850.3	847.4	823.4	817.5	814.6	774.6	689.5	653.2	660.4	701.2	704.8
42.5°	908.4	909.2	894.6	886.6	885.2	841.5	745.5	696.8	705.5	749.9	755.0
45°	971.0	971.0	966.6	962.3	960.8	921.5	806.6	744.8	750.6	799.3	805.9
47.5°	1035.7	1040.1	1041.6	1044.5	1047.4	1006.6	872.8	797.2	793.5	849.5	855.4
50°	1091.0	1094.6	1115.0	1117.9	1121.6	1081.6	931.0	839.4	832.8	891.7	895.4
52.5°	1137.6	1141.9	1172.5	1189.2	1196.5	1151.4	992.8	877.2	861.9	925.9	931.7
55°	1175.4	1179.7	1216.8	1248.1	1256.1	1222.7	1041.6	907.7	882.3	951.4	961.5
57.5°	1181.9	1187.0	1235.0	1272.8	1291.0	1261.9	1071.4	912.8	883.7	955.0	964.5
60°	1173.9	1179.7	1226.3	1277.2	1292.5	1259.8	1074.3	902.6	867.0	946.3	954.3
62.5°	1154.3	1164.5	1206.7	1256.8	1283.8	1247.4	1066.3	877.2	844.4	930.3	936.1
65°	1104.1	1112.1	1174.7	1216.8	1258.3	1216.1	1044.5	840.8	813.2	886.6	890.3
67.5°	1029.2	1038.6	1097.6	1168.1	1195.0	1161.6	995.0	798.6	747.7	820.4	828.4
70°	960.8	963.0	1010.3	1091.0	1117.9	1100.5	936.1	735.3	679.3	757.9	767.3
72.5°	865.5	871.4	919.4	990.6	1025.6	1018.3	863.4	659.0	605.9	683.0	686.6
75°	745.5	753.5	805.2	869.9	910.6	903.4	768.8	570.2	524.4	586.2	589.1
77.5°	616.1	627.0	669.9	732.4	771.0	764.4	651.7	476.4	426.9	480.0	483.0
80°	476.4	485.1	526.6	584.1	610.2	611.7	523.7	368.8	325.8	368.0	367.3
82.5°	326.6	338.2	376.8	418.9	452.4	456.0	386.2	263.3	224.0	248.0	248.0
85°	169.5	176.7	209.5	251.7	283.7	292.4	243.7	155.7	119.3	123.6	117.1
87.5°	31.3	32.0	37.8	50.2	67.6	70.6	61.1	45.1	31.3	21.8	14.5
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: SP1-2411-284-2

Test Date: 11/20/2024

Luminaire Tested: TTN-D0-740-U-WQ

Data in this report applies to families of products including TTN-D0-740-U-WQ

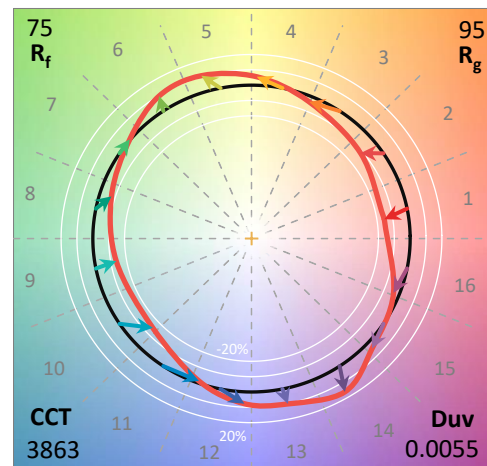
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/20/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-740-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 4000K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K): 3863
 CIE u' : 0.2247
 CIE v' : 0.5111
 Duv: 0.0055
 CIE x: 0.3911
 CIE y: 0.3954
 CIE z: 0.2136
 Peak Wavelength (nm): 448
 Dominant Wavelength (nm): 577
 Purity: 36.03443
 R_f: 74.7
 R_g: 95.4

CRI (Ra): 71.9
 R1: 69.4
 R2: 76.9
 R3: 83.3
 R4: 72.7
 R5: 68.4
 R6: 67.5
 R7: 82.0
 R8: 55.3
 R9: -23.5
 R10: 45.4
 R11: 68.7
 R12: 38.7
 R13: 70.0
 R14: 90.3
 R15: 62.1



Test Conditions

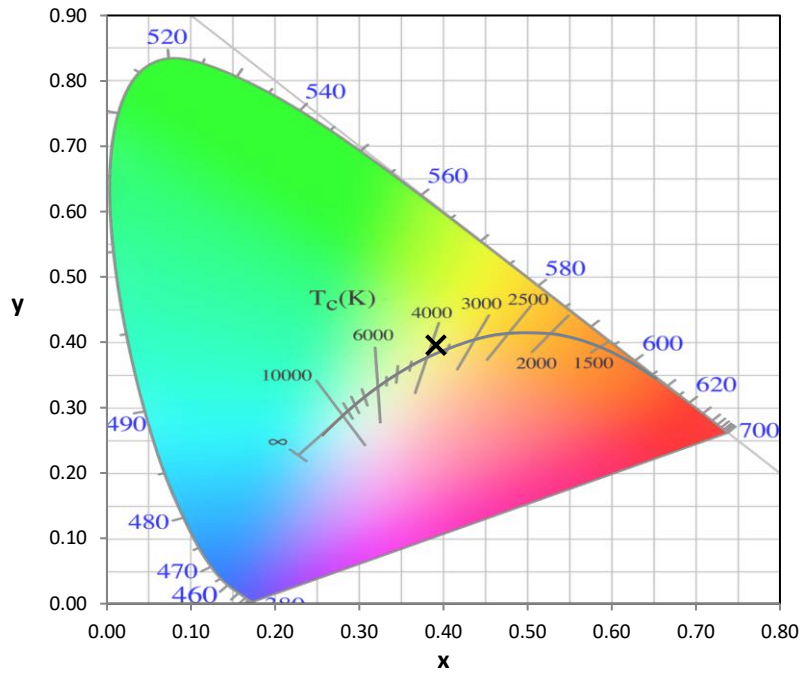
Stabilization Time: 37M
 Operation Time: 1H 37M
 Sphere Temperature (°C): 25.0

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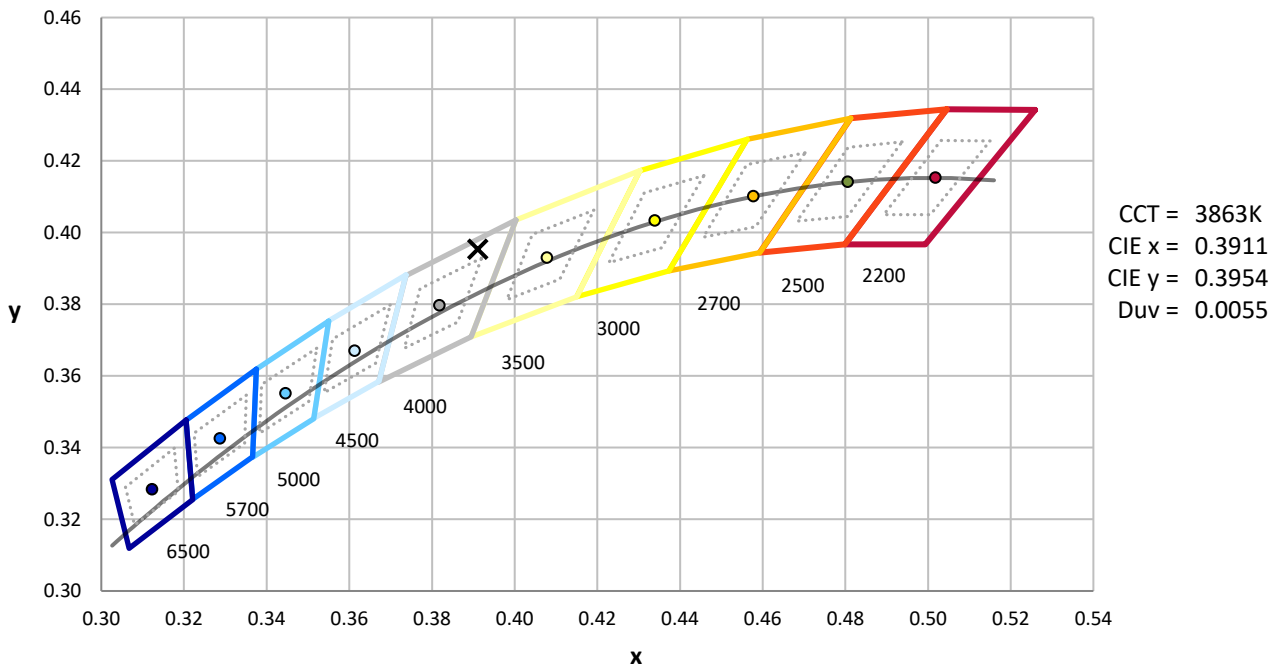
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



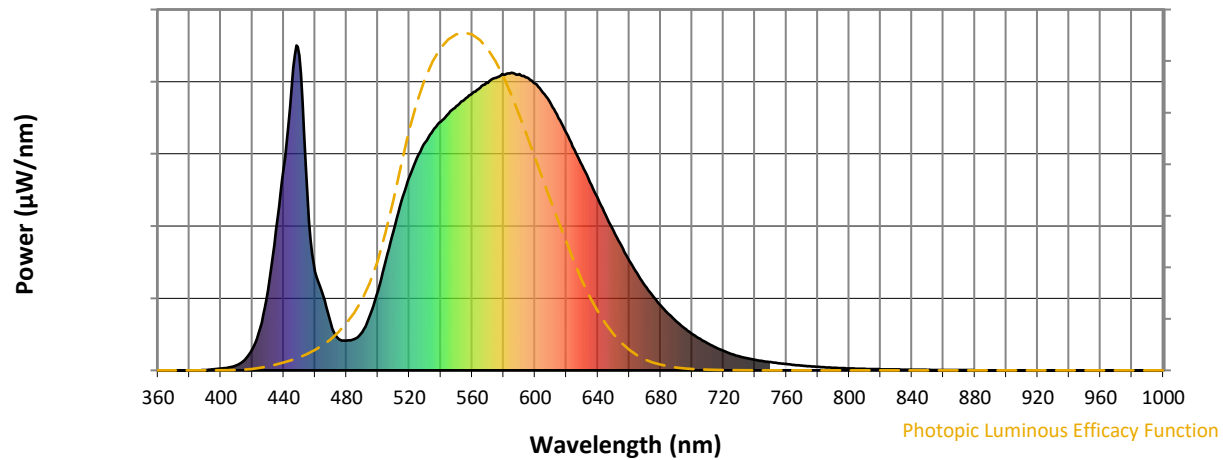
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

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Photopic Flux vs. Wavelength

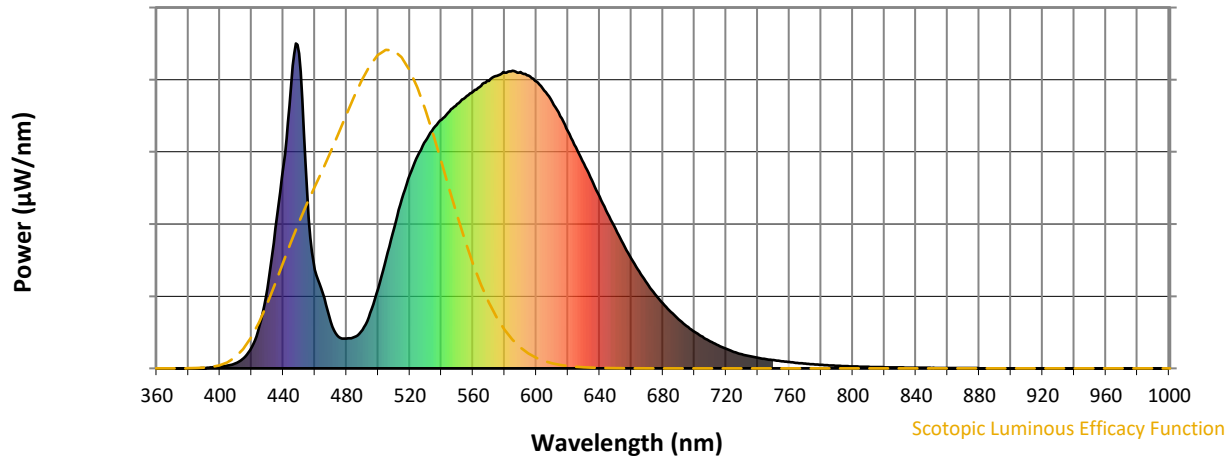


Photopic Lumens: NR

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	118	NR	620	730	NR	750	25	NR	880	1	NR
365	0	NR	495	170	NR	625	680	NR	755	22	NR	885	0	NR
370	0	NR	500	245	NR	630	630	NR	760	19	NR	890	0	NR
375	0	NR	505	338	NR	635	579	NR	765	17	NR	895	0	NR
380	0	NR	510	431	NR	640	529	NR	770	14	NR	900	0	NR
385	0	NR	515	521	NR	645	477	NR	775	13	NR	905	0	NR
390	1	NR	520	596	NR	650	429	NR	780	11	NR	910	0	NR
395	3	NR	525	655	NR	655	383	NR	785	9	NR	915	0	NR
400	6	NR	530	701	NR	660	338	NR	790	8	NR	920	0	NR
405	9	NR	535	739	NR	665	298	NR	795	7	NR	925	0	NR
410	16	NR	540	766	NR	670	261	NR	800	6	NR	930	0	NR
415	32	NR	545	791	NR	675	228	NR	805	5	NR	935	0	NR
420	65	NR	550	813	NR	680	200	NR	810	5	NR	940	0	NR
425	131	NR	555	833	NR	685	173	NR	815	4	NR	945	0	NR
430	245	NR	560	852	NR	690	151	NR	820	3	NR	950	0	NR
435	432	NR	565	870	NR	695	130	NR	825	3	NR	955	0	NR
440	622	NR	570	885	NR	700	112	NR	830	3	NR	960	0	NR
445	870	NR	575	900	NR	705	97	NR	835	2	NR	965	0	NR
450	969	NR	580	911	NR	710	83	NR	840	2	NR	970	0	NR
455	544	NR	585	916	NR	715	71	NR	845	2	NR	975	0	NR
460	304	NR	590	912	NR	720	60	NR	850	1	NR	980	0	NR
465	231	NR	595	901	NR	725	51	NR	855	1	NR	985	0	NR
470	142	NR	600	882	NR	730	43	NR	860	1	NR	990	0	NR
475	96	NR	605	855	NR	735	37	NR	865	1	NR	995	0	NR
480	92	NR	610	820	NR	740	32	NR	870	1	NR	1000	0	NR
485	96	NR	615	776	NR	745	29	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



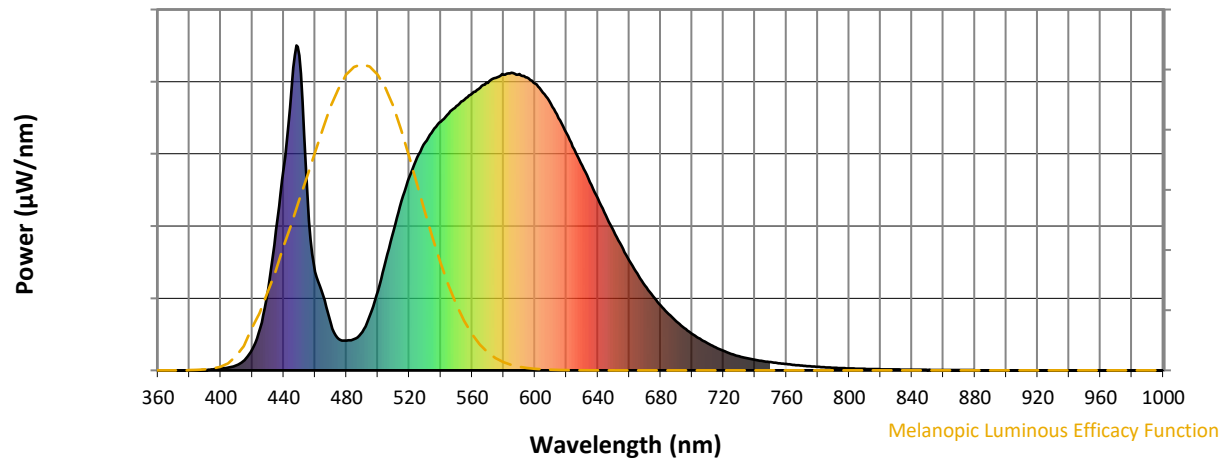
Scotopic Lumens: NR

S/P: 1.45

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	118	NR	620	730	NR	750	25	NR	880	1	NR
365	0	NR	495	170	NR	625	680	NR	755	22	NR	885	0	NR
370	0	NR	500	245	NR	630	630	NR	760	19	NR	890	0	NR
375	0	NR	505	338	NR	635	579	NR	765	17	NR	895	0	NR
380	0	NR	510	431	NR	640	529	NR	770	14	NR	900	0	NR
385	0	NR	515	521	NR	645	477	NR	775	13	NR	905	0	NR
390	1	NR	520	596	NR	650	429	NR	780	11	NR	910	0	NR
395	3	NR	525	655	NR	655	383	NR	785	9	NR	915	0	NR
400	6	NR	530	701	NR	660	338	NR	790	8	NR	920	0	NR
405	9	NR	535	739	NR	665	298	NR	795	7	NR	925	0	NR
410	16	NR	540	766	NR	670	261	NR	800	6	NR	930	0	NR
415	32	NR	545	791	NR	675	228	NR	805	5	NR	935	0	NR
420	65	NR	550	813	NR	680	200	NR	810	5	NR	940	0	NR
425	131	NR	555	833	NR	685	173	NR	815	4	NR	945	0	NR
430	245	NR	560	852	NR	690	151	NR	820	3	NR	950	0	NR
435	432	NR	565	870	NR	695	130	NR	825	3	NR	955	0	NR
440	622	NR	570	885	NR	700	112	NR	830	3	NR	960	0	NR
445	870	NR	575	900	NR	705	97	NR	835	2	NR	965	0	NR
450	969	NR	580	911	NR	710	83	NR	840	2	NR	970	0	NR
455	544	NR	585	916	NR	715	71	NR	845	2	NR	975	0	NR
460	304	NR	590	912	NR	720	60	NR	850	1	NR	980	0	NR
465	231	NR	595	901	NR	725	51	NR	855	1	NR	985	0	NR
470	142	NR	600	882	NR	730	43	NR	860	1	NR	990	0	NR
475	96	NR	605	855	NR	735	37	NR	865	1	NR	995	0	NR
480	92	NR	610	820	NR	740	32	NR	870	1	NR	1000	0	NR
485	96	NR	615	776	NR	745	29	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.72

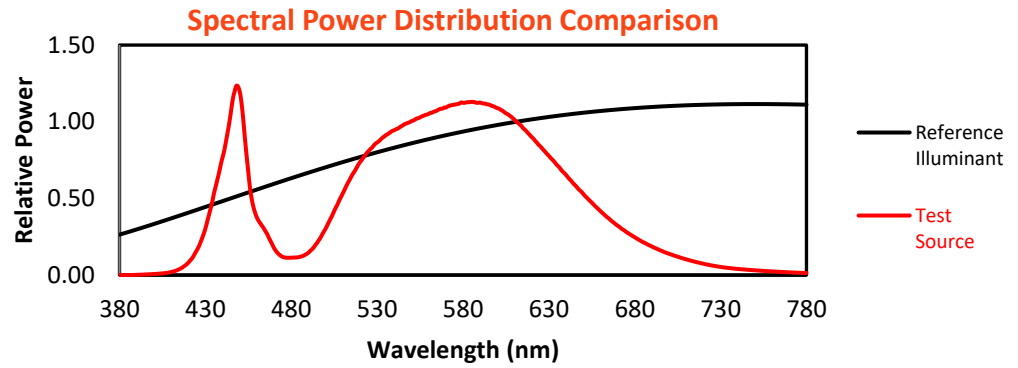
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	118	NR	620	730	NR	750	25	NR	880	1	NR
365	0	NR	495	170	NR	625	680	NR	755	22	NR	885	0	NR
370	0	NR	500	245	NR	630	630	NR	760	19	NR	890	0	NR
375	0	NR	505	338	NR	635	579	NR	765	17	NR	895	0	NR
380	0	NR	510	431	NR	640	529	NR	770	14	NR	900	0	NR
385	0	NR	515	521	NR	645	477	NR	775	13	NR	905	0	NR
390	1	NR	520	596	NR	650	429	NR	780	11	NR	910	0	NR
395	3	NR	525	655	NR	655	383	NR	785	9	NR	915	0	NR
400	6	NR	530	701	NR	660	338	NR	790	8	NR	920	0	NR
405	9	NR	535	739	NR	665	298	NR	795	7	NR	925	0	NR
410	16	NR	540	766	NR	670	261	NR	800	6	NR	930	0	NR
415	32	NR	545	791	NR	675	228	NR	805	5	NR	935	0	NR
420	65	NR	550	813	NR	680	200	NR	810	5	NR	940	0	NR
425	131	NR	555	833	NR	685	173	NR	815	4	NR	945	0	NR
430	245	NR	560	852	NR	690	151	NR	820	3	NR	950	0	NR
435	432	NR	565	870	NR	695	130	NR	825	3	NR	955	0	NR
440	622	NR	570	885	NR	700	112	NR	830	3	NR	960	0	NR
445	870	NR	575	900	NR	705	97	NR	835	2	NR	965	0	NR
450	969	NR	580	911	NR	710	83	NR	840	2	NR	970	0	NR
455	544	NR	585	916	NR	715	71	NR	845	2	NR	975	0	NR
460	304	NR	590	912	NR	720	60	NR	850	1	NR	980	0	NR
465	231	NR	595	901	NR	725	51	NR	855	1	NR	985	0	NR
470	142	NR	600	882	NR	730	43	NR	860	1	NR	990	0	NR
475	96	NR	605	855	NR	735	37	NR	865	1	NR	995	0	NR
480	92	NR	610	820	NR	740	32	NR	870	1	NR	1000	0	NR
485	96	NR	615	776	NR	745	29	NR	875	1	NR			

REPORT NUMBER: SP1-2411-284-2

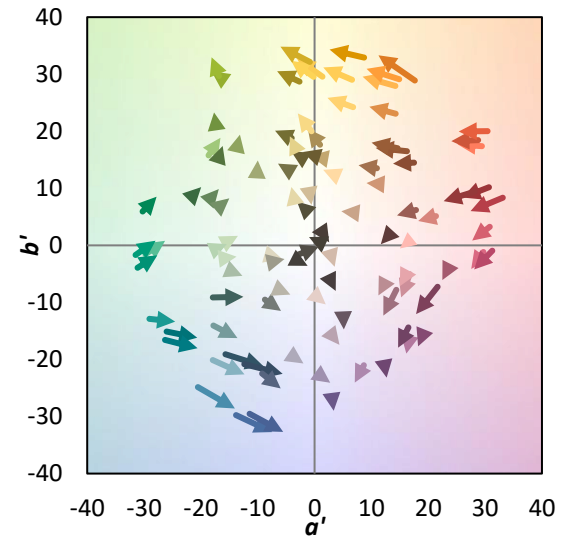
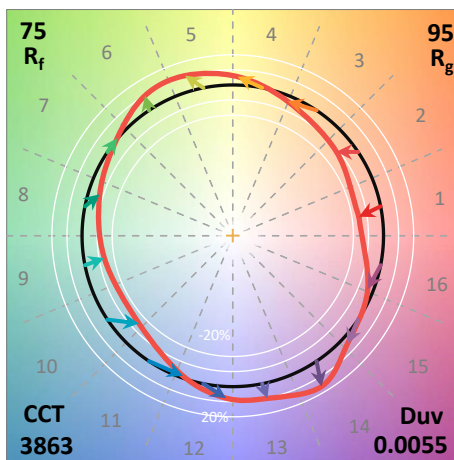
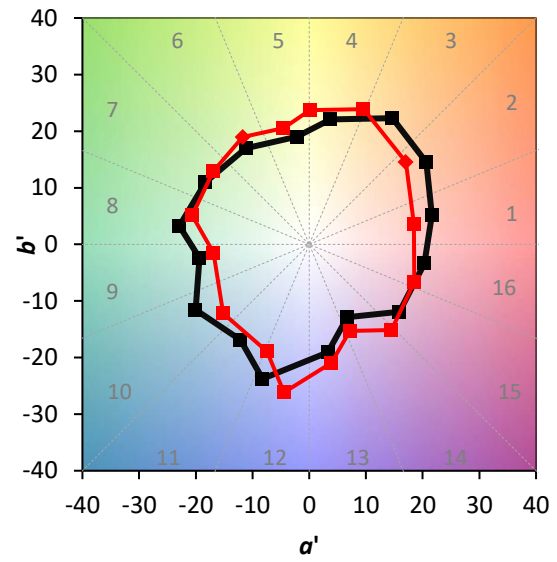
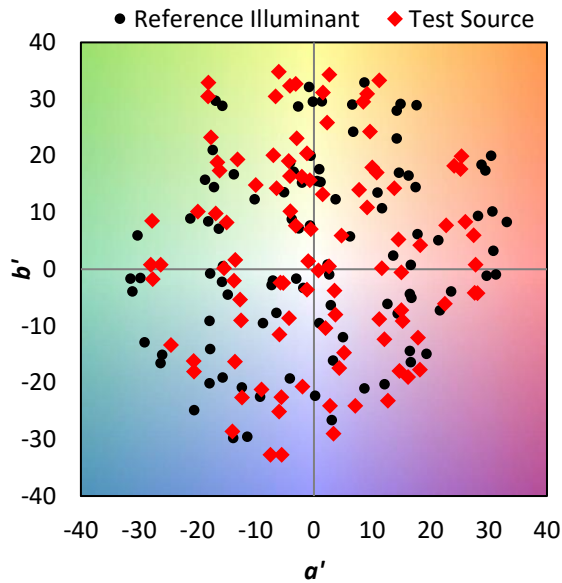
TM-30-18

Summary

$R_f = 74.7$
 $R_g = 95.4$
 $CIE R_a = 71.9$
 $R_g = -23.5$

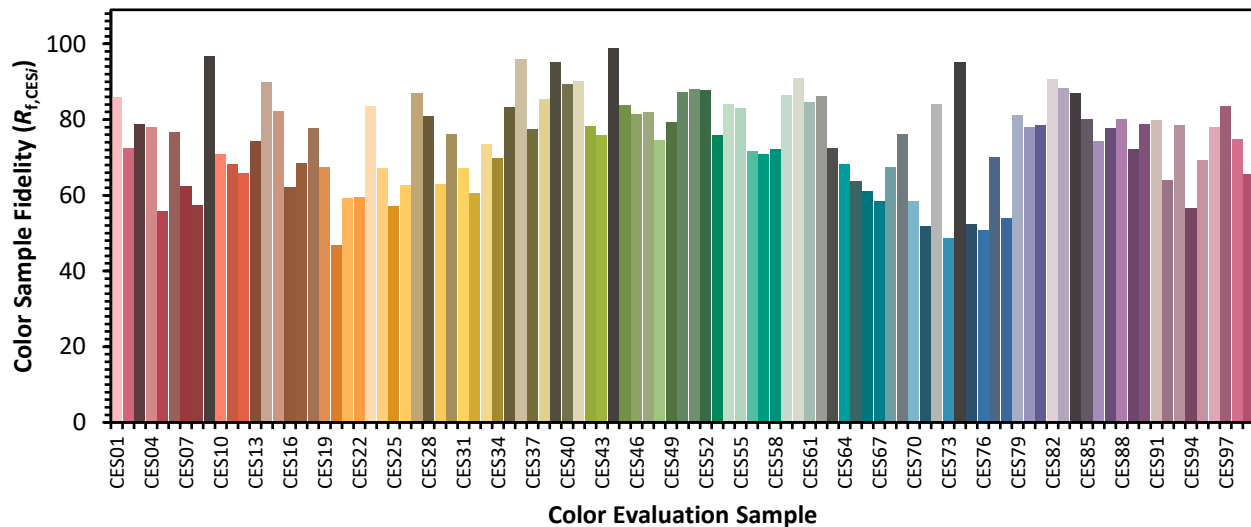


Color Vector Graphics

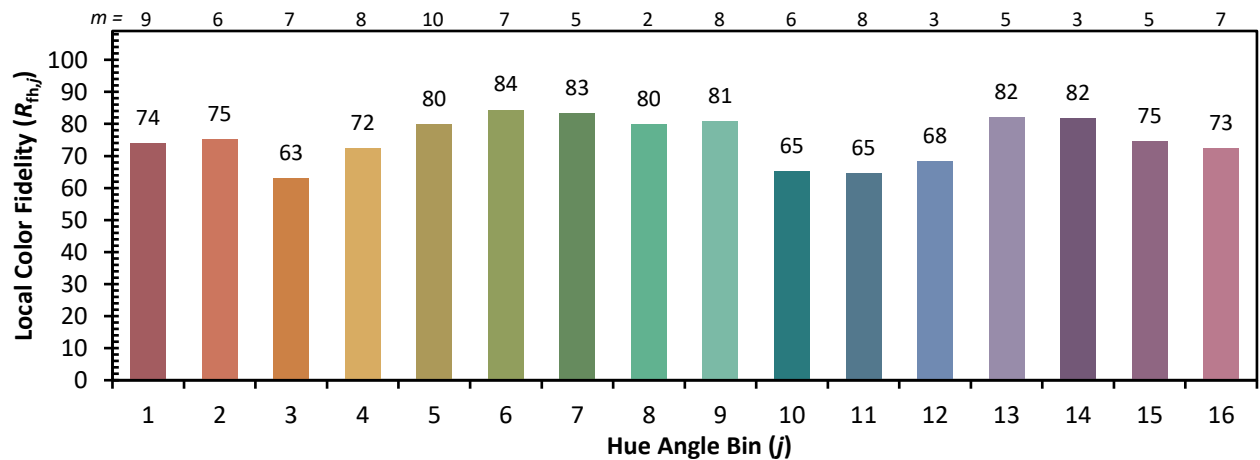
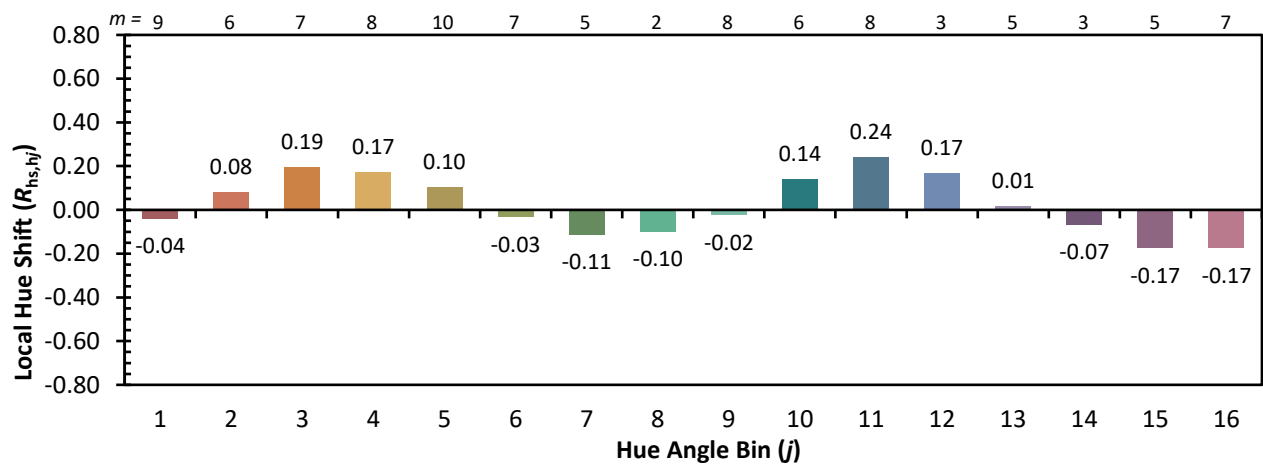
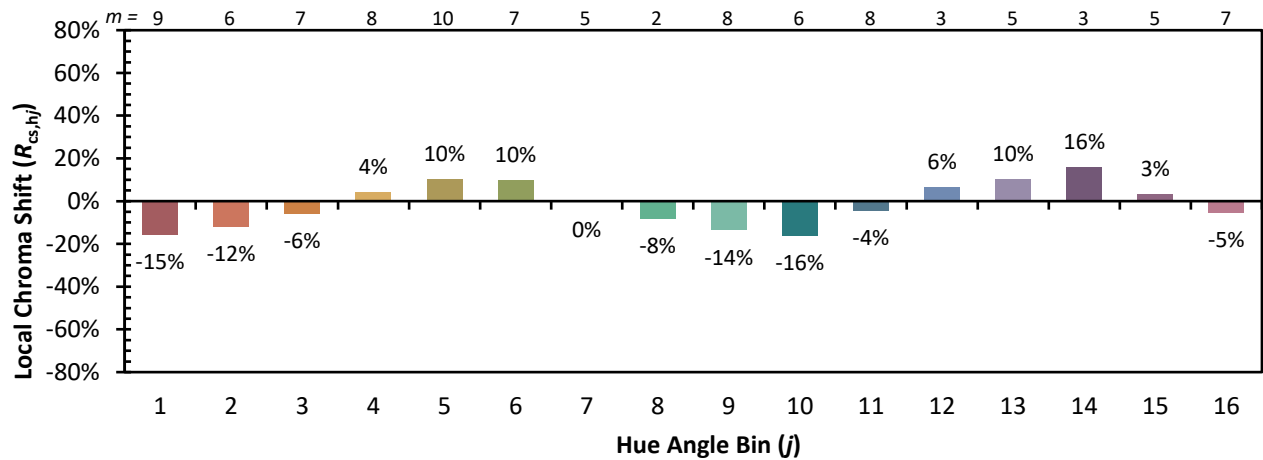


Individual Sample Fidelity Index ($R_{f,i}$)

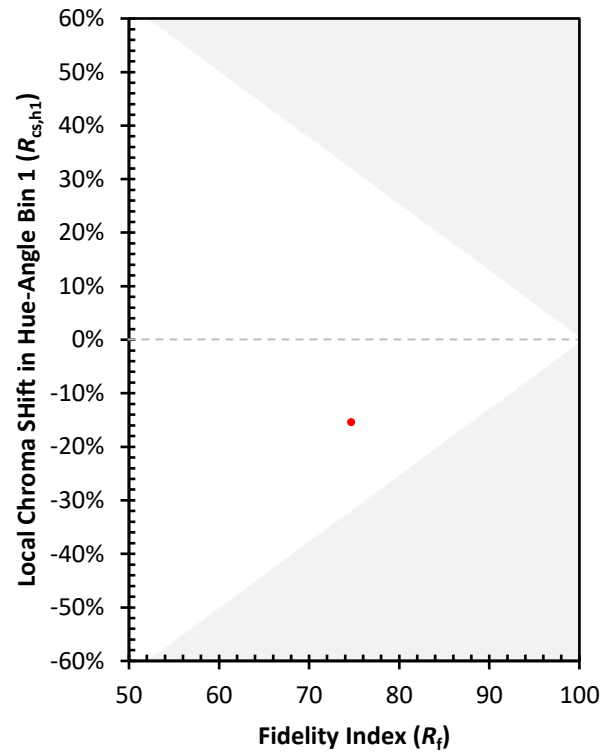
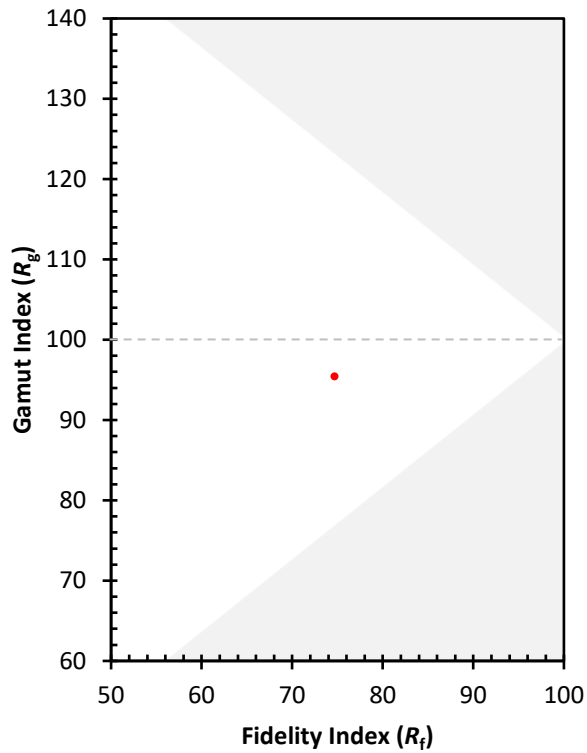
CES01 = 85	CES26 = 63	CES51 = 88	CES76 = 51
CES02 = 61	CES27 = 87	CES52 = 88	CES77 = 70
CES03 = 30	CES28 = 81	CES53 = 76	CES78 = 54
CES04 = 70	CES29 = 63	CES54 = 84	CES79 = 81
CES05 = 47	CES30 = 76	CES55 = 83	CES80 = 78
CES06 = 50	CES31 = 67	CES56 = 72	CES81 = 79
CES07 = 40	CES32 = 61	CES57 = 71	CES82 = 91
CES08 = 39	CES33 = 73	CES58 = 72	CES83 = 88
CES09 = 29	CES34 = 70	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 83	CES60 = 91	CES85 = 80
CES11 = 57	CES36 = 96	CES61 = 85	CES86 = 74
CES12 = 63	CES37 = 77	CES62 = 86	CES87 = 78
CES13 = 42	CES38 = 85	CES63 = 72	CES88 = 80
CES14 = 74	CES39 = 95	CES64 = 68	CES89 = 72
CES15 = 71	CES40 = 89	CES65 = 64	CES90 = 79
CES16 = 46	CES41 = 90	CES66 = 61	CES91 = 80
CES17 = 49	CES42 = 78	CES67 = 58	CES92 = 64
CES18 = 56	CES43 = 76	CES68 = 67	CES93 = 78
CES19 = 71	CES44 = 99	CES69 = 76	CES94 = 57
CES20 = 65	CES45 = 84	CES70 = 58	CES95 = 69
CES21 = 86	CES46 = 81	CES71 = 52	CES96 = 78
CES22 = 78	CES47 = 82	CES72 = 84	CES97 = 84
CES23 = 92	CES48 = 75	CES73 = 49	CES98 = 75
CES24 = 91	CES49 = 79	CES74 = 95	CES99 = 66
CES25 = 72	CES50 = 87	CES75 = 52	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)