

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

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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: P1445229

Luminaire Tested: TPTN-VA0-740-U-DL-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445229
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA0-740-U-DL-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 9W 70CRI 4000K w/
DRIVE LANE TYPE IV DISTRIBUTION OPTIC
Light Source: 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 803.3 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

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

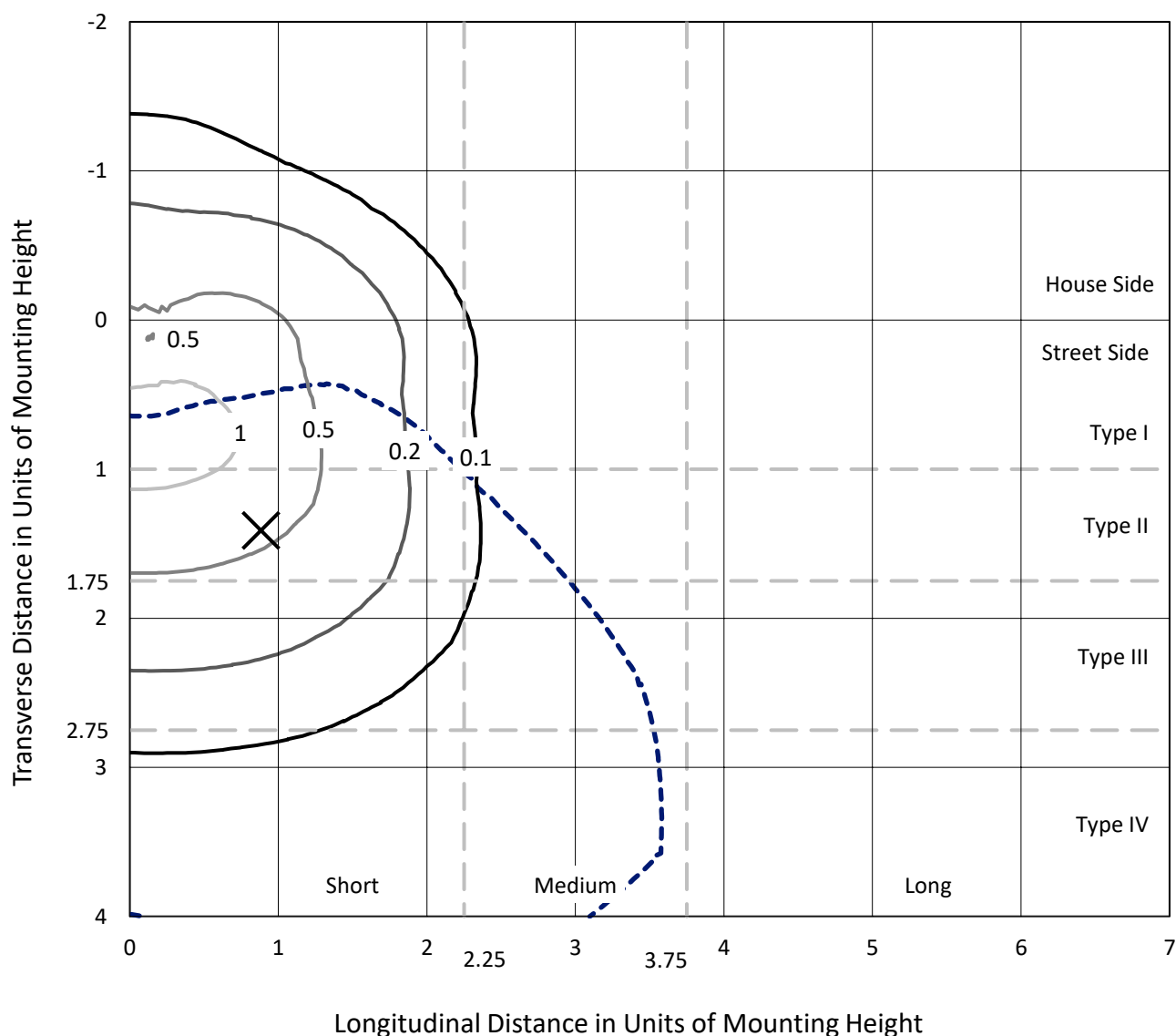
REPORT NUMBER: P1445229

CATALOG NUMBER: TPTN-VA0-740-U-DL-GM

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd



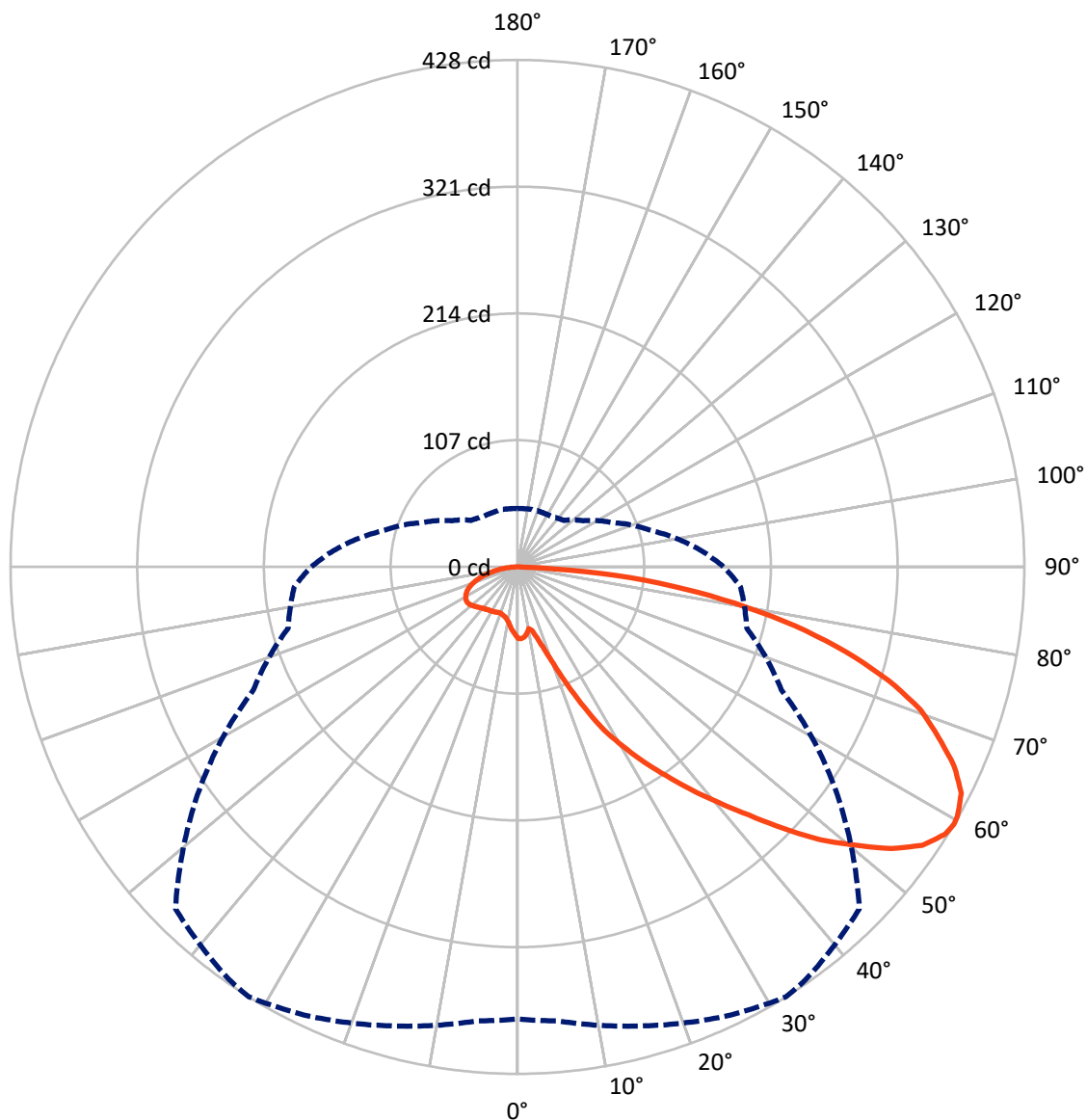
Based on 10 foot mounting height. Maximum calculated value = 1.3 fc

Type IV - Short - N/A

REPORT NUMBER: P1445229

CATALOG NUMBER: TPTN-VA0-740-U-DL-GM

Luminous Intensity Polar Plot



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

REPORT NUMBER: P1445229

CATALOG NUMBER: TPTN-VA0-740-U-DL-GM

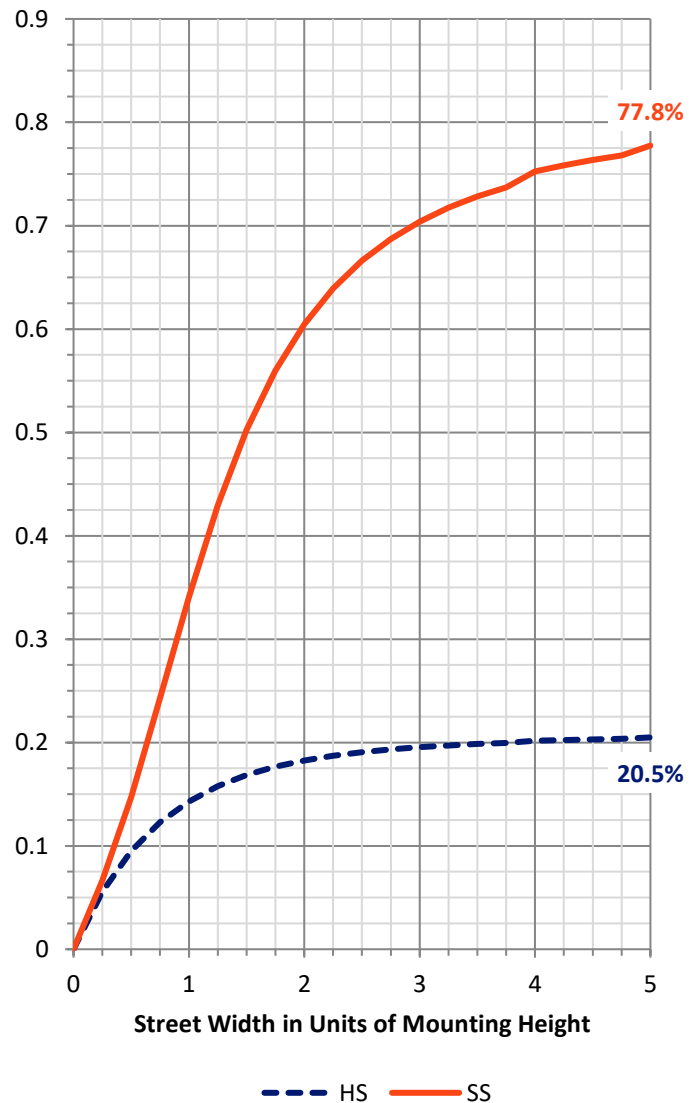
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	167.0	0.0	167.0
	% Fixture	20.8	0.0	20.8
Street Side	Lumens	636.3	0.0	636.3
	% Fixture	79.2	0.0	79.2
Total	Lumens	803.3	0.0	803.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.2	0.7
10°-20°	15.8	2.0
20°-30°	38.9	4.8
30°-40°	76.4	9.5
40°-50°	127.1	15.8
50°-60°	179.4	22.3
60°-70°	188.5	23.5
70°-80°	135.9	16.9
80°-90°	36.0	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°	803.3	100.0
0°-180°	803.3	100.0

Coefficient of Utilization



REPORT NUMBER: P1445229

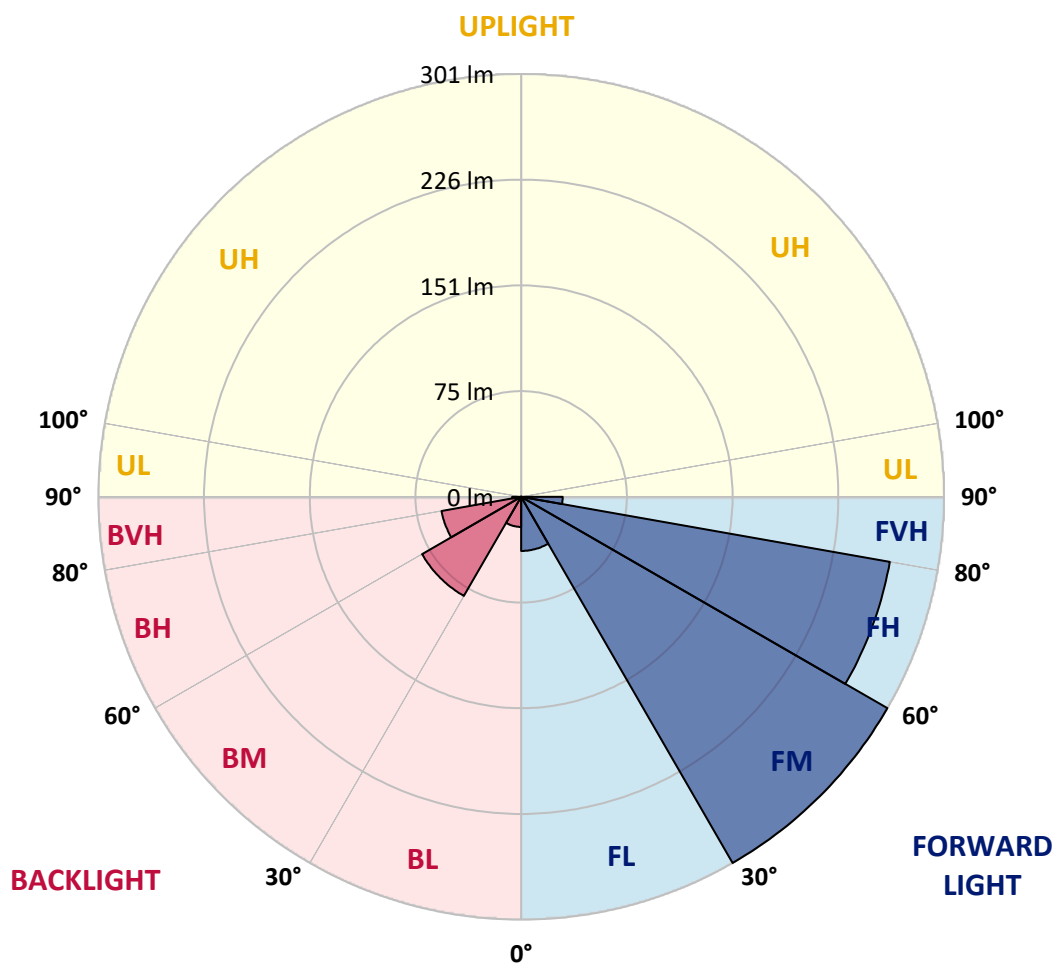
CATALOG NUMBER: TPTN-VA0-740-U-DL-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	38.6	4.8			
FM	(30°-60°)	301.4	37.5			
FH	(60°-80°)	266.8	33.2			G0/660
FVH	(80°-90°)	29.6	3.7			G1/100
BL	(0°-30°)	21.5	2.7	B0/110		
BM	(30°-60°)	81.6	10.2	B0/220		
BH	(60°-80°)	57.6	7.2	B0/110		G0/110
BVH	(80°-90°)	6.4	0.8			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short



REPORT NUMBER: P1445229

CATALOG NUMBER: TPTN-VA0-740-U-DL-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2
2.5°	61.1	61.0	61.0	60.8	60.7	60.7	60.5	60.2	59.7	59.3	59.0
5°	60.5	60.4	60.0	59.9	59.6	59.4	59.1	58.5	58.2	58.3	58.3
7.5°	57.9	58.0	57.7	57.3	56.8	56.6	55.9	55.7	55.5	55.1	55.4
10°	57.4	57.6	56.2	54.6	52.9	52.3	51.7	51.8	52.8	53.4	54.0
12.5°	61.3	60.7	59.4	57.3	55.1	54.5	52.8	52.8	53.5	54.1	54.8
15°	67.2	67.0	65.6	63.9	62.1	61.3	58.2	56.8	56.9	57.4	57.9
17.5°	75.9	76.3	76.8	74.6	72.5	70.9	66.4	63.3	62.1	62.2	62.2
20°	91.4	91.5	92.6	90.8	87.4	85.2	78.0	72.3	69.5	68.9	68.6
22.5°	113.6	113.0	113.0	112.5	108.0	105.4	94.0	83.8	78.8	77.1	77.0
25°	139.3	139.0	139.6	137.3	131.4	129.6	113.9	98.8	90.0	87.5	85.6
27.5°	164.5	164.8	165.1	160.9	155.9	152.7	134.5	116.7	102.4	97.9	94.5
30°	188.2	189.0	184.9	179.1	175.5	171.4	151.7	130.8	114.0	106.3	103.0
32.5°	211.6	210.9	203.6	199.1	196.1	192.1	169.1	145.8	125.8	115.0	110.6
35°	234.4	232.3	223.1	218.8	216.3	212.9	190.1	161.4	137.3	123.7	118.4
37.5°	255.7	254.5	243.9	241.7	238.5	235.8	212.7	177.7	149.7	133.9	127.4
40°	275.6	275.7	268.1	264.5	261.3	258.8	235.8	194.7	162.6	144.5	137.3
42.5°	296.2	296.0	291.7	289.4	286.0	284.1	260.0	213.7	176.1	155.6	147.2
45°	315.6	317.0	317.3	315.9	314.5	312.8	289.7	235.5	192.1	166.9	158.1
47.5°	338.4	340.1	342.6	343.1	343.8	341.0	318.5	256.2	207.6	178.1	168.3
50°	355.3	357.0	364.9	367.4	368.8	367.6	345.8	278.5	221.6	188.7	176.3
52.5°	372.1	373.0	384.2	392.9	394.6	392.5	372.7	299.8	235.2	197.1	184.3
55°	382.0	383.4	397.8	410.7	414.3	413.5	396.0	314.7	243.6	202.9	189.4
57.5°	382.9	385.4	402.0	417.5	425.4	423.4	406.7	324.6	246.1	202.3	189.6
59°	381.2	384.2	400.8	417.8	427.5	424.5	407.8	327.5	245.6	200.2	188.8
60°	379.8	382.8	398.6	416.8	426.4	423.9	407.6	328.9	243.6	198.9	188.2
62.5°	371.4	376.6	392.2	408.4	420.2	421.6	404.5	329.6	239.4	194.9	184.9
65°	351.7	356.7	377.3	397.0	404.8	409.6	393.0	321.5	229.8	186.7	174.2
67.5°	327.1	331.3	351.4	377.3	382.8	387.1	377.0	305.5	217.5	170.7	161.1
70°	301.8	306.9	323.2	350.3	360.6	363.7	356.4	288.1	200.0	154.7	148.2
72.5°	267.8	272.0	291.4	316.5	327.2	331.1	325.2	265.0	177.8	138.6	132.5
75°	229.9	232.4	250.6	276.0	286.3	290.1	288.3	235.5	153.9	118.4	112.2
77.5°	184.2	189.8	204.8	225.1	239.7	240.5	240.3	199.7	126.6	93.2	91.1
80°	137.5	142.4	156.7	175.9	186.0	188.8	188.5	157.5	98.2	71.4	67.8
82.5°	87.0	90.1	105.0	120.6	131.1	133.6	136.4	113.7	68.4	47.3	43.3
85°	34.6	34.4	47.3	63.9	71.7	75.9	77.9	66.3	37.1	21.1	17.8
87.5°	2.5	2.6	3.3	4.0	4.2	4.5	5.1	6.5	5.1	4.5	2.3
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: P1445229

CATALOG NUMBER: TPTN-VA0-740-U-DL-GM

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2	60.2
2.5°	58.8	58.6	58.0	57.7	57.3	57.1	56.9	56.6	56.5	56.3	56.5
5°	57.9	57.9	57.3	56.8	55.7	54.9	54.1	53.1	52.3	51.8	51.7
7.5°	55.7	55.9	55.7	54.8	53.8	52.6	50.7	48.9	47.5	46.7	46.4
10°	53.8	54.1	54.0	53.4	51.8	49.8	47.5	45.0	42.8	41.4	41.3
12.5°	54.8	54.8	54.3	53.1	51.0	48.4	45.5	42.2	39.7	38.2	37.9
15°	57.9	57.6	56.2	54.1	51.0	47.8	44.2	40.5	37.5	35.8	35.7
17.5°	62.4	61.8	59.3	55.5	51.5	47.5	43.6	39.4	35.8	33.7	33.4
20°	68.3	66.9	63.0	57.4	52.4	47.8	43.0	38.3	34.8	32.3	31.7
22.5°	75.6	73.2	67.2	59.7	53.7	48.4	43.1	38.0	34.1	31.8	31.7
25°	83.2	80.1	72.0	62.5	55.1	48.9	43.3	38.6	34.8	33.0	32.7
27.5°	90.9	87.2	77.1	65.8	56.6	49.7	43.9	39.6	36.6	35.2	35.1
30°	98.5	93.6	81.6	68.6	58.2	50.1	44.4	39.6	37.5	36.5	36.3
32.5°	105.5	99.5	85.8	71.5	59.7	51.0	44.8	40.0	38.2	37.9	37.7
35°	113.0	106.4	90.1	74.0	61.3	51.8	45.3	40.5	39.1	39.1	39.1
37.5°	121.0	113.4	94.8	76.8	62.8	53.2	45.9	41.6	40.3	40.7	40.7
40°	129.6	120.9	99.6	79.8	64.2	54.0	46.4	42.7	41.6	41.9	42.0
42.5°	138.4	128.2	104.6	82.4	66.1	54.9	47.3	44.1	43.3	43.6	43.6
45°	147.4	135.9	109.2	85.2	67.6	55.9	48.4	45.6	45.0	45.2	45.2
47.5°	156.2	142.9	113.4	87.7	69.0	56.6	49.5	47.2	46.7	46.9	46.7
50°	163.7	149.0	117.1	89.5	70.4	57.4	50.7	48.7	48.4	48.1	47.9
52.5°	170.2	154.4	120.1	90.9	71.1	57.7	51.8	50.3	50.0	49.3	49.2
55°	173.8	156.9	120.9	91.2	70.6	57.4	52.1	51.0	50.7	50.0	50.0
57.5°	174.6	156.9	119.2	89.8	69.0	56.3	52.0	50.7	50.4	49.7	49.7
59°	173.8	155.9	117.6	88.3	67.8	55.4	51.4	50.4	50.0	49.3	49.3
60°	173.0	155.3	116.5	86.7	67.0	54.8	50.7	50.0	49.5	49.0	49.0
62.5°	169.6	151.7	113.6	82.7	64.4	52.4	49.3	48.9	48.6	48.1	47.9
65°	160.1	143.2	107.4	78.2	60.4	49.7	47.0	46.9	46.7	45.9	45.6
67.5°	149.0	132.7	98.4	72.5	55.2	46.4	44.2	44.2	43.6	43.0	43.1
70°	137.5	122.6	89.1	65.3	49.3	42.2	40.5	40.7	40.0	39.9	40.0
72.5°	122.3	108.3	78.8	56.6	43.3	37.4	36.0	36.5	36.3	36.2	36.2
75°	103.0	91.9	66.4	47.8	36.6	32.1	31.3	31.5	31.7	31.5	31.5
77.5°	83.9	74.6	52.6	37.7	29.0	25.9	25.8	26.5	26.7	26.5	26.7
80°	62.2	54.9	38.3	27.6	21.6	19.9	20.2	21.3	21.6	21.6	21.9
82.5°	40.0	34.4	24.8	17.8	14.4	14.0	14.9	16.0	16.4	16.4	16.4
85°	15.8	14.3	11.5	8.8	8.2	8.8	9.9	10.6	11.3	11.3	11.2
87.5°	0.9	2.3	3.6	3.6	3.6	3.9	3.9	4.0	4.2	4.0	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

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

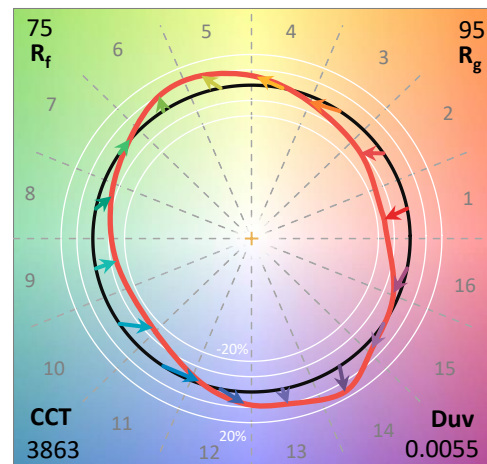
Test Information

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

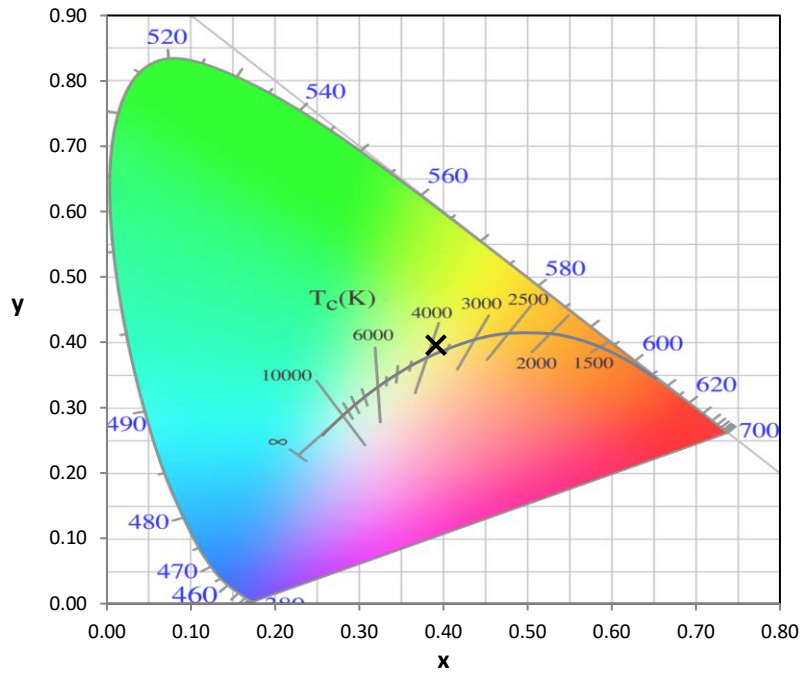
Stabilization Time: 37M
 Operation Time: 1H 37M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2411-284-2

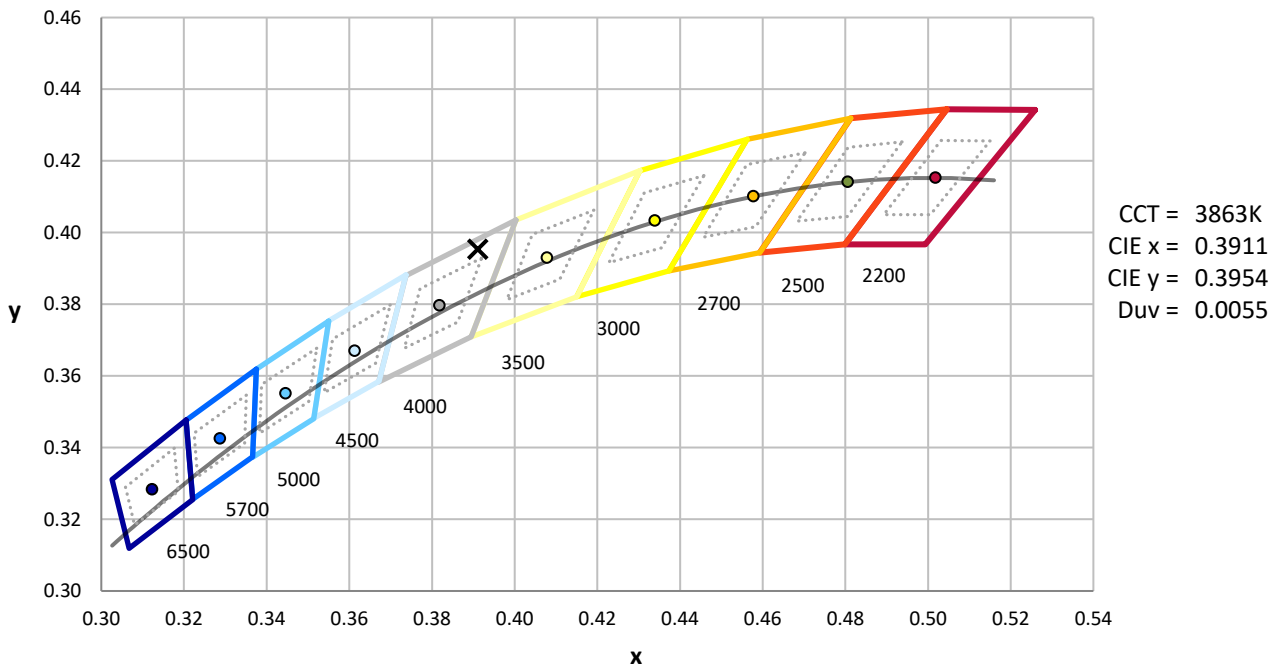
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-2

CIE 1931 Chromaticity Diagram



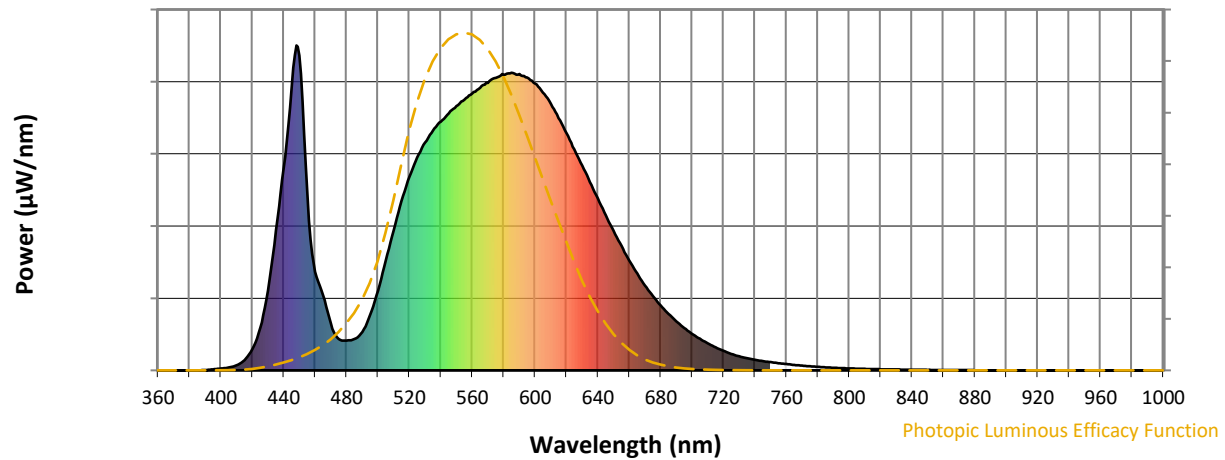
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2411-284-2

Photopic Flux vs. Wavelength

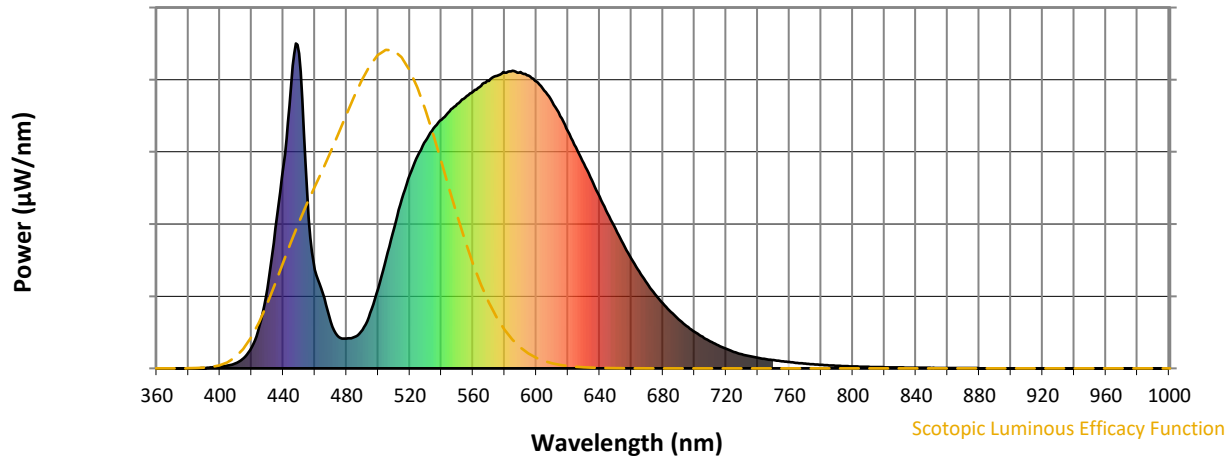


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2411-284-2

Scotopic Flux vs. Wavelength



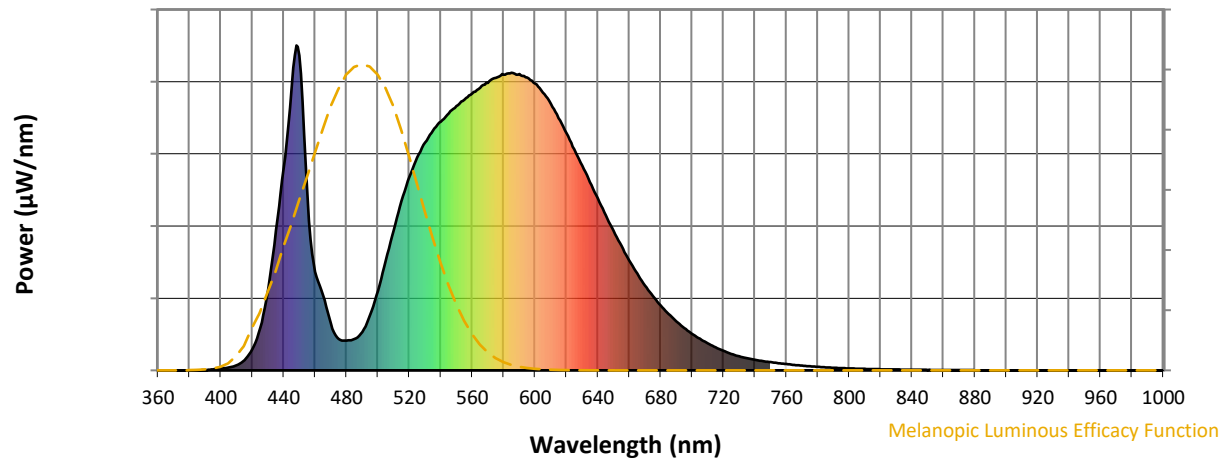
Scotopic Lumens: NR

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			

REPORT NUMBER: SP1-2411-284-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.72

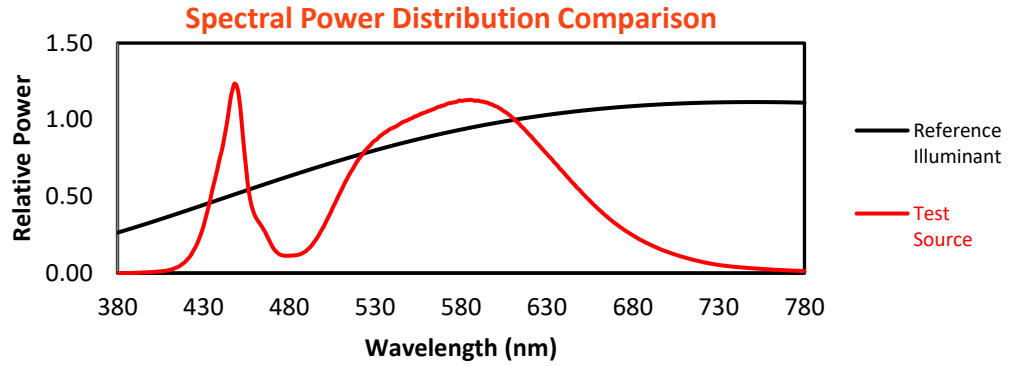
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	118	NR	620	730	NR	750	25	NR	880	1	NR
365	0	NR	495	170	NR	625	680	NR	755	22	NR	885	0	NR
370	0	NR	500	245	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			

REPORT NUMBER: SP1-2411-284-2

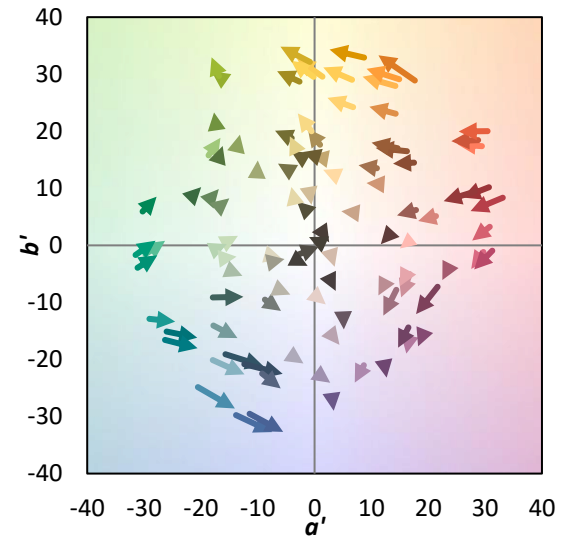
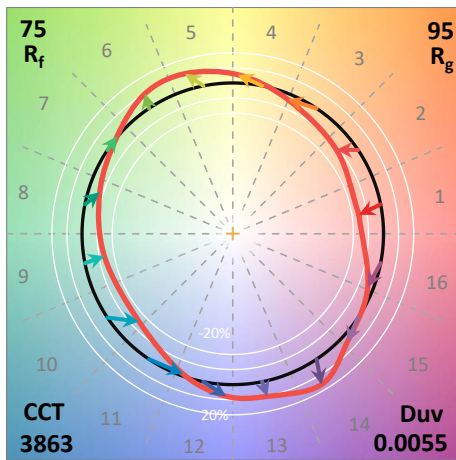
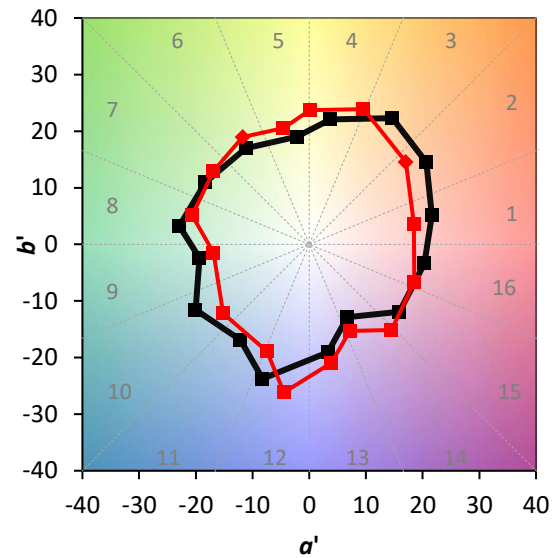
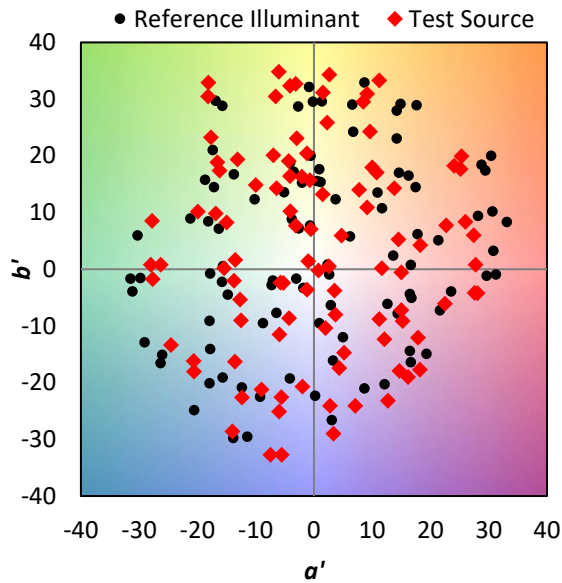
TM-30-18

Summary

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

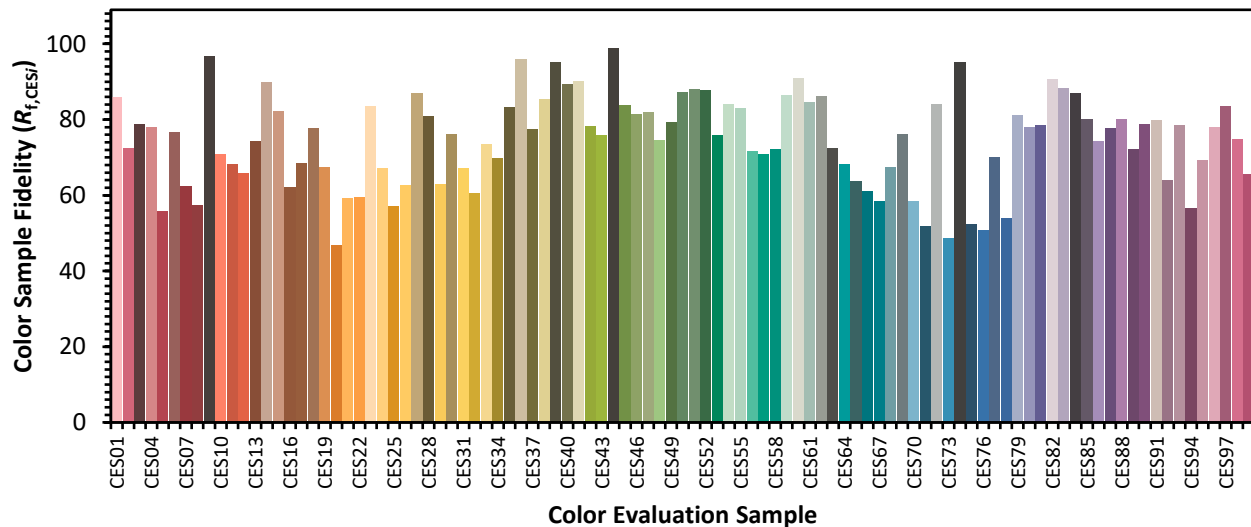


Color Vector Graphics

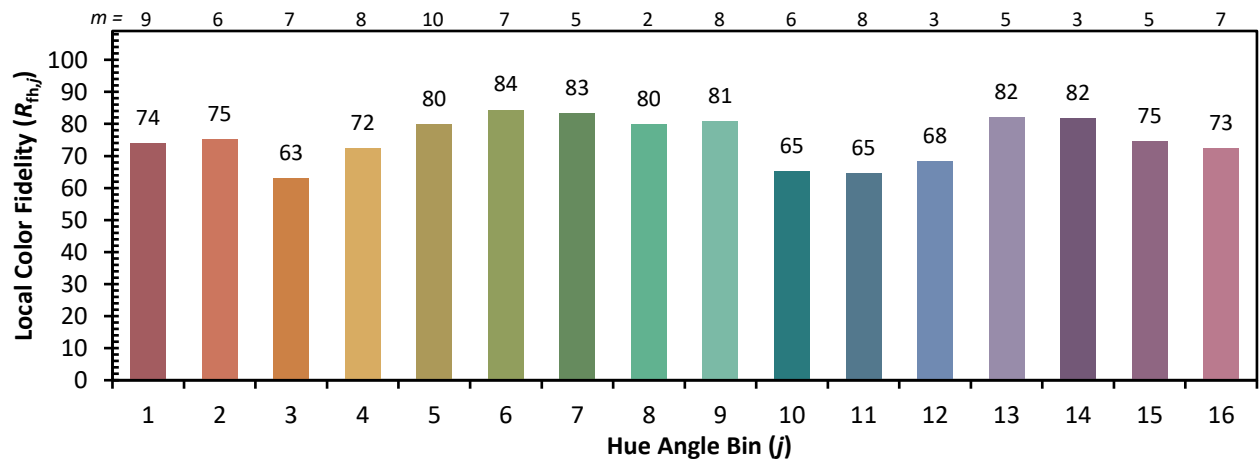
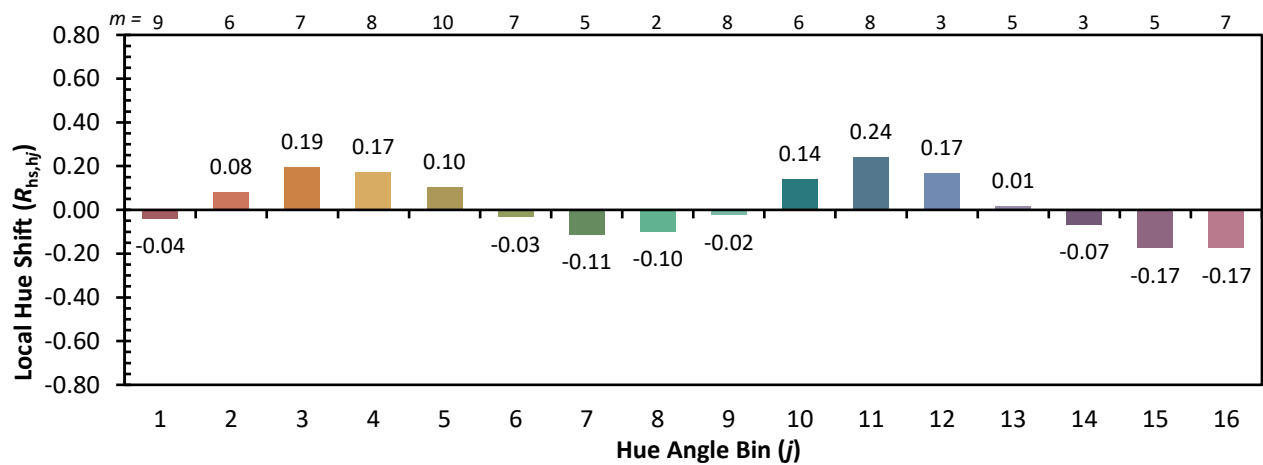
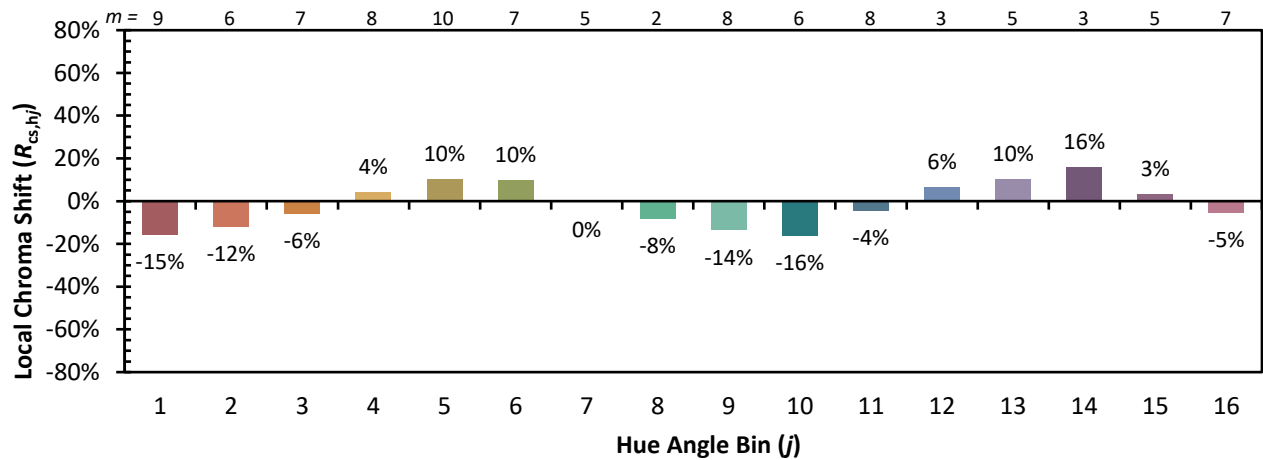


Individual Sample Fidelity Index ($R_{f,i}$)

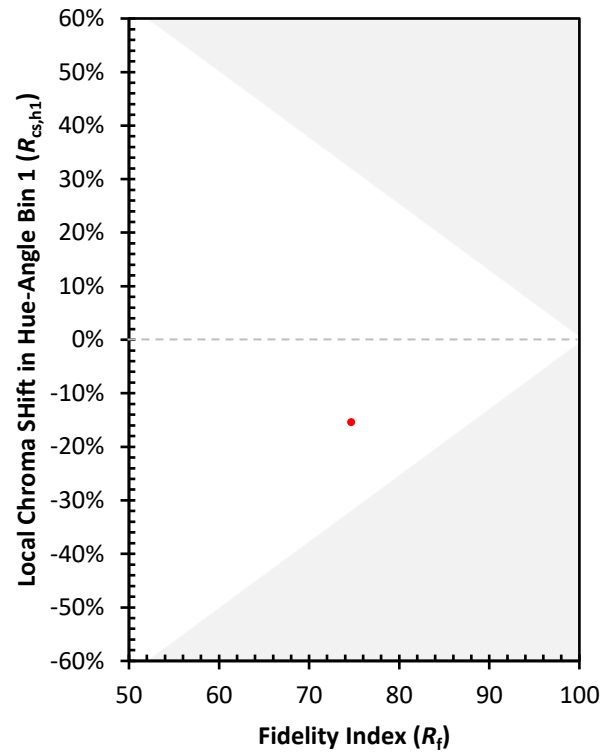
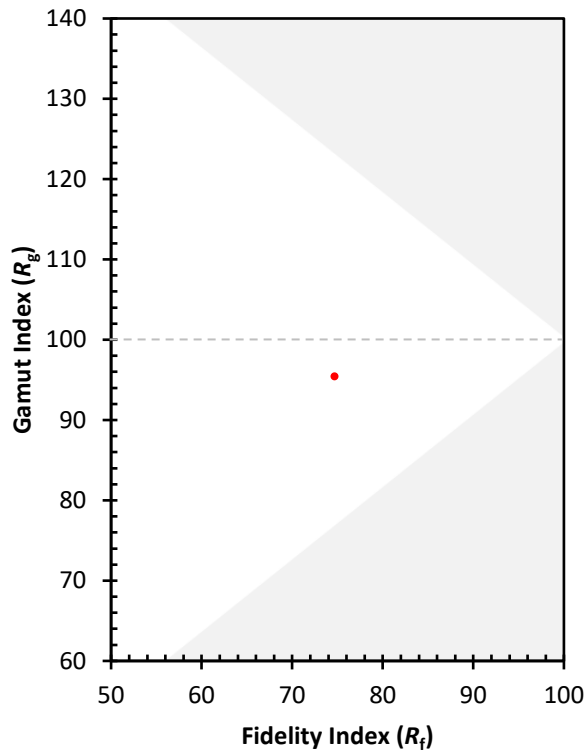
CES01 = 85	CES26 = 63	CES51 = 88	CES76 = 51
CES02 = 61	CES27 = 87	CES52 = 88	CES77 = 70
CES03 = 30	CES28 = 81	CES53 = 76	CES78 = 54
CES04 = 70	CES29 = 63	CES54 = 84	CES79 = 81
CES05 = 47	CES30 = 76	CES55 = 83	CES80 = 78
CES06 = 50	CES31 = 67	CES56 = 72	CES81 = 79
CES07 = 40	CES32 = 61	CES57 = 71	CES82 = 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)