

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: P1445228

Luminaire Tested: TPTN-VA3-735-U-DL-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445228
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA3-735-U-DL-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 60W 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: 4907.6 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 60
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 5.3%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

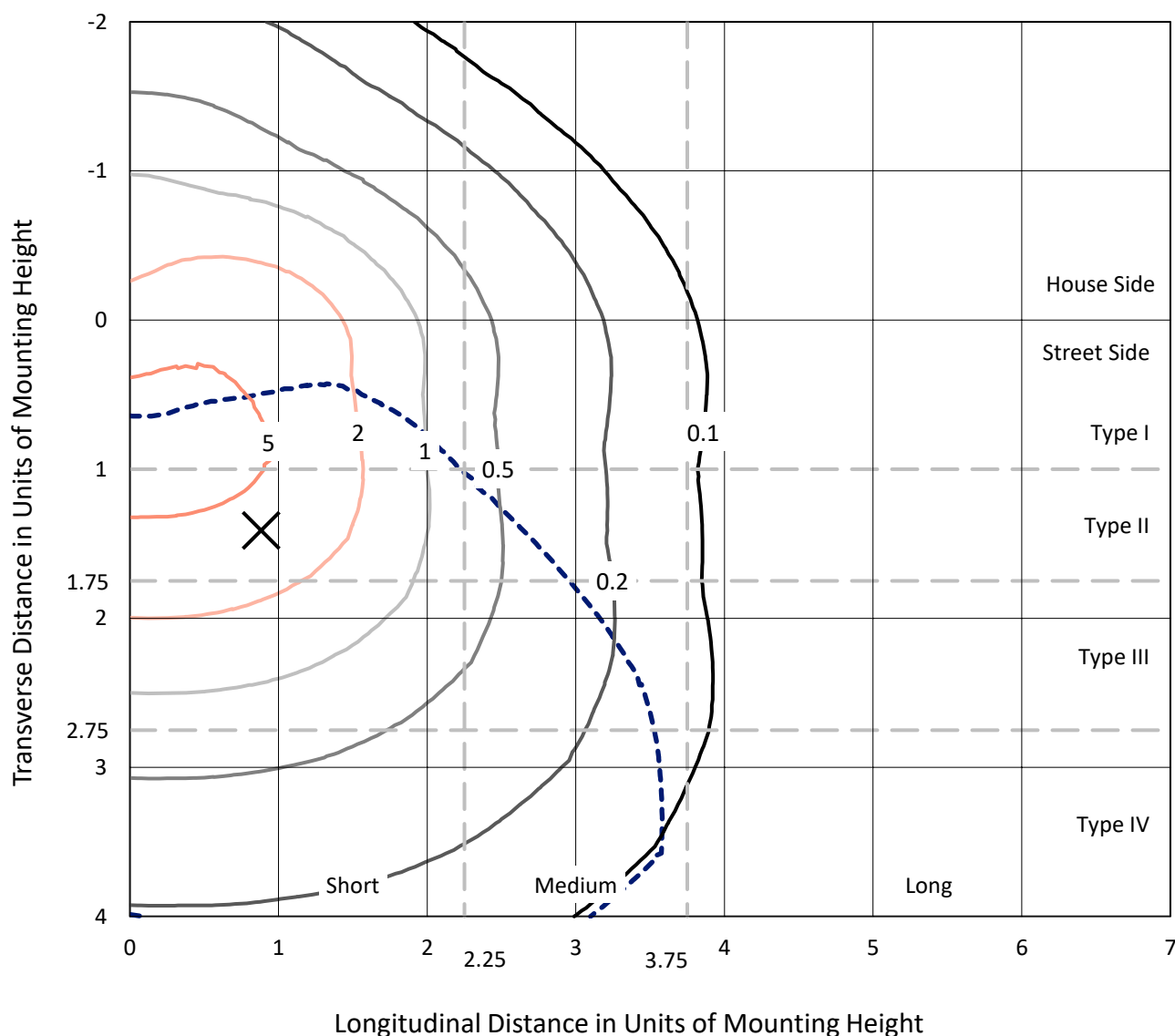
REPORT NUMBER: P1445228

CATALOG NUMBER: TPTN-VA3-735-U-DL-GM

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd



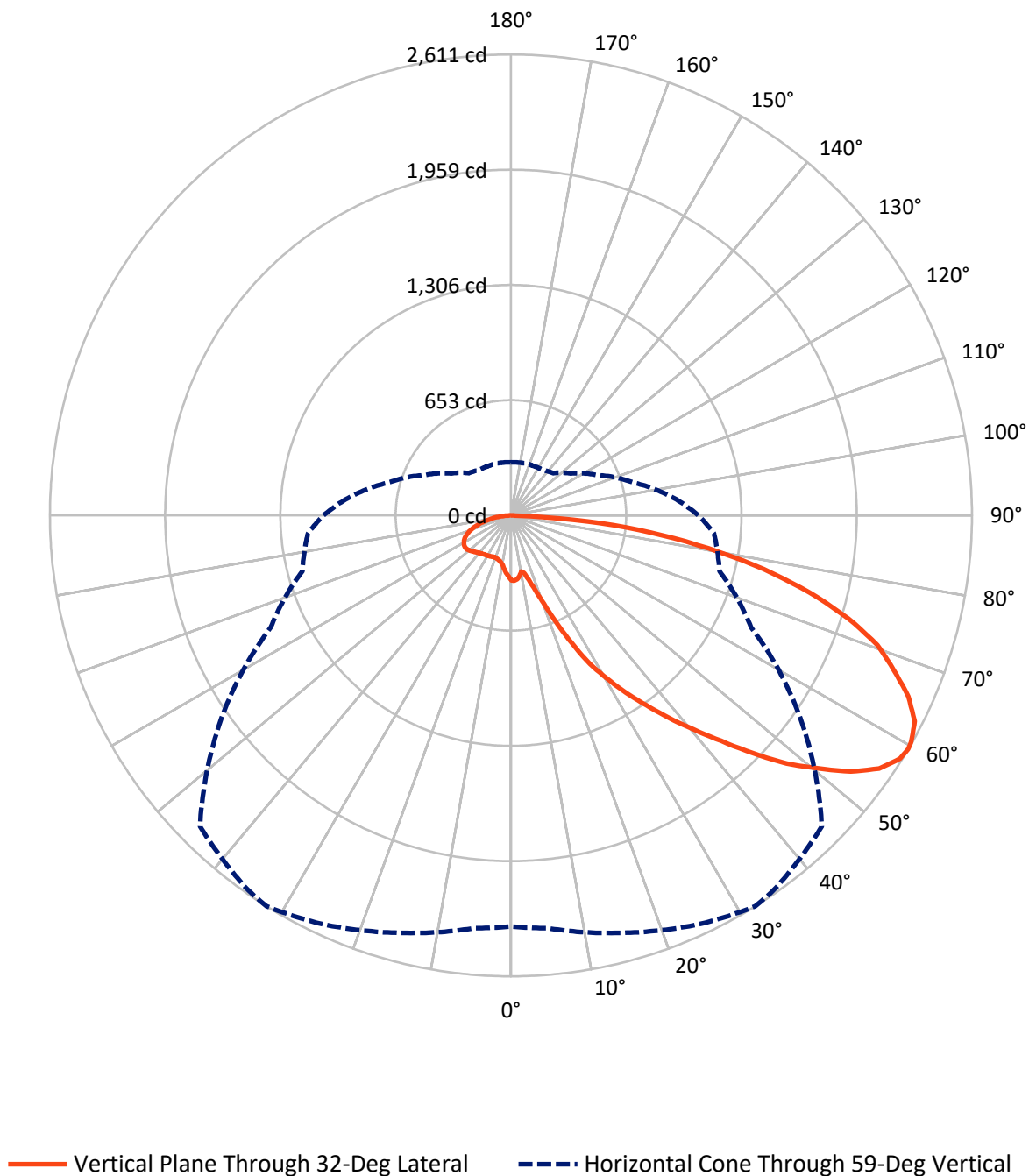
Based on 10 foot mounting height. Maximum calculated value = 7.8 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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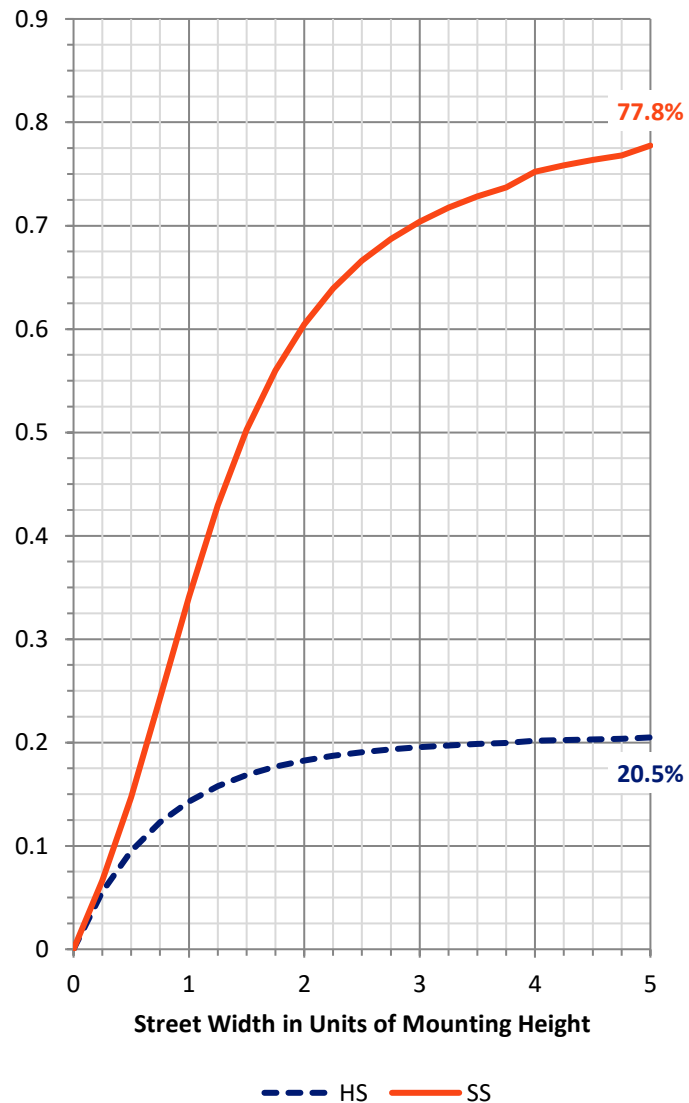
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1020.5	0.0	1020.5
	% Fixture	20.8	0.0	20.8
Street Side	Lumens	3887.1	0.0	3887.1
	% Fixture	79.2	0.0	79.2
Total	Lumens	4907.6	0.0	4907.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	0.7
10°-20°	96.8	2.0
20°-30°	237.9	4.8
30°-40°	466.8	9.5
40°-50°	776.4	15.8
50°-60°	1096.2	22.3
60°-70°	1151.3	23.5
70°-80°	830.4	16.9
80°-90°	219.7	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°	4907.6	100.0
0°-180°	4907.6	100.0

Coefficient of Utilization



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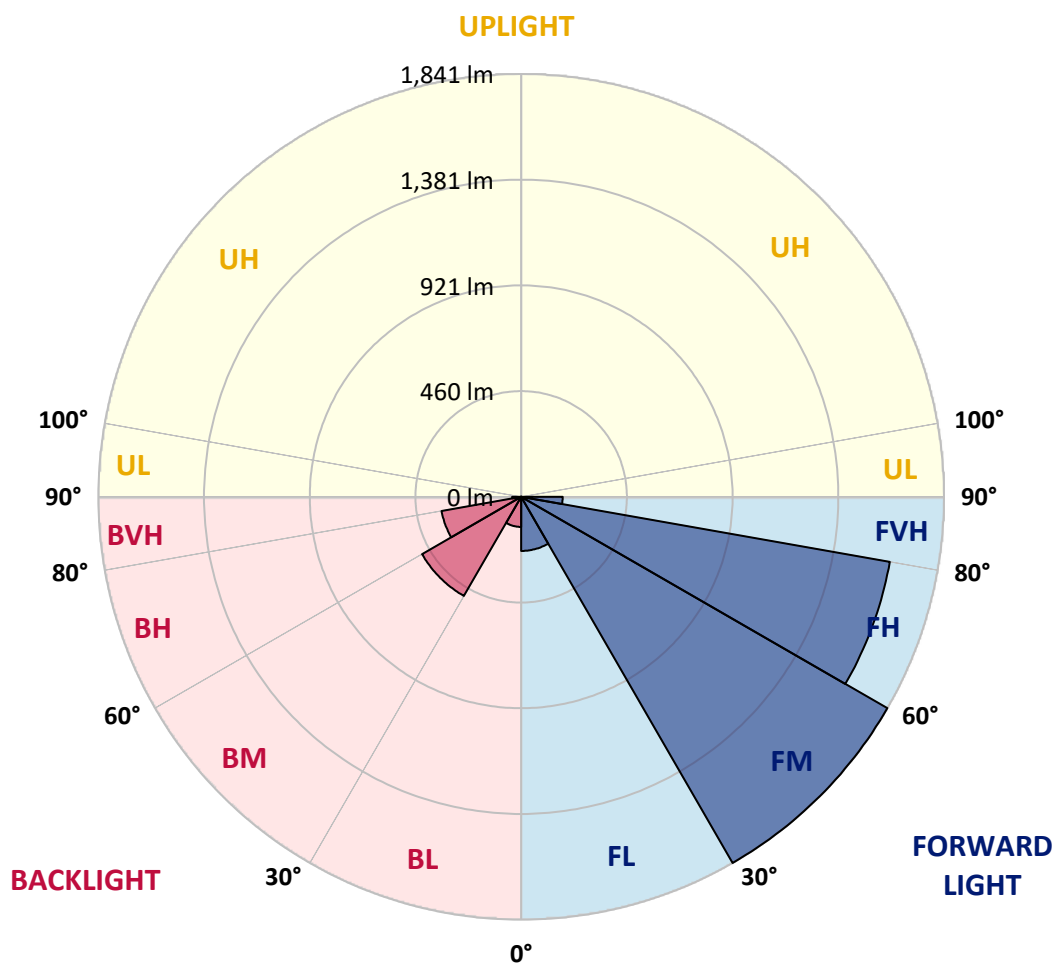
CATALOG NUMBER: TPTN-VA3-735-U-DL-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	235.6	4.8			
FM	(30°-60°)	1841.0	37.5			
FH	(60°-80°)	1629.8	33.2			G1/1800
FVH	(80°-90°)	180.7	3.7			G2/225
BL	(0°-30°)	131.1	2.7	B1/500		
BM	(30°-60°)	498.4	10.2	B1/1000		
BH	(60°-80°)	351.9	7.2	B1/500		G1/500
BVH	(80°-90°)	39.0	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-G2

Type IV Short



REPORT NUMBER: P1445228

CATALOG NUMBER: TPTN-VA3-735-U-DL-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	32°	35°	45°	55°	65°	75°	85°
0°	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8
2.5°	373.5	372.5	372.5	371.6	370.6	370.6	369.7	367.8	364.9	362.1	360.2
5°	369.7	368.7	366.8	365.9	364.0	363.0	361.1	357.3	355.5	356.4	356.4
7.5°	353.6	354.5	352.6	349.8	346.9	346.0	341.2	340.3	339.3	336.5	338.4
10°	350.7	351.7	343.1	333.7	323.2	319.4	315.6	316.6	322.3	326.1	329.9
12.5°	374.4	370.6	363.0	349.8	336.5	332.7	322.3	322.3	327.0	330.8	334.6
15°	410.4	409.5	401.0	390.5	379.1	374.4	355.5	346.9	347.9	350.7	353.6
17.5°	463.5	466.4	469.2	455.9	442.7	433.2	405.7	386.7	379.1	380.1	380.1
20°	558.3	559.2	565.9	554.5	533.7	520.4	476.8	441.7	424.6	420.9	419.0
22.5°	693.8	690.1	690.1	687.2	659.7	643.6	574.4	511.9	481.5	471.1	470.1
25°	851.2	849.3	853.1	838.9	802.8	791.5	695.7	603.8	549.8	534.6	523.2
27.5°	1004.7	1006.6	1008.5	982.9	952.6	932.7	821.8	712.8	625.6	598.1	577.3
30°	1149.8	1154.5	1129.9	1093.8	1072.0	1047.4	927.0	799.1	696.7	649.3	629.4
32.5°	1292.9	1288.2	1243.6	1216.1	1198.1	1173.5	1033.2	891.0	768.7	702.4	675.8
35°	1432.2	1419.0	1363.0	1336.5	1321.3	1300.5	1161.1	985.8	838.9	755.5	723.2
37.5°	1562.1	1554.5	1490.1	1476.8	1456.9	1440.8	1299.5	1085.3	914.7	818.0	778.2
40°	1683.4	1684.4	1637.9	1616.1	1596.2	1581.1	1440.8	1189.6	993.4	882.5	838.9
42.5°	1809.5	1808.5	1782.0	1767.8	1746.9	1735.6	1588.6	1305.2	1075.8	950.7	899.5
45°	1928.0	1936.5	1938.4	1929.9	1921.3	1910.9	1769.7	1438.9	1173.5	1019.9	965.9
47.5°	2067.3	2077.7	2092.9	2095.7	2100.5	2083.4	1946.0	1564.9	1268.3	1088.2	1028.4
50°	2170.6	2181.1	2229.4	2244.6	2253.1	2245.5	2112.8	1701.4	1353.6	1152.6	1076.8
52.5°	2273.0	2278.7	2346.9	2400.0	2410.4	2398.1	2276.8	1831.3	1437.0	1203.8	1126.1
55°	2333.7	2342.2	2430.3	2509.0	2530.8	2526.1	2419.0	1922.3	1488.2	1239.8	1157.4
57.5°	2339.4	2354.5	2455.9	2550.7	2599.1	2586.7	2484.4	1983.0	1503.3	1236.0	1158.3
59°	2328.9	2346.9	2448.4	2552.6	2611.4	2593.4	2491.0	2001.0	1500.5	1222.8	1153.6
60°	2320.4	2338.4	2435.1	2546.0	2604.8	2589.6	2490.1	2009.5	1488.2	1215.2	1149.8
62.5°	2269.2	2300.5	2396.2	2494.8	2566.8	2575.4	2471.1	2013.3	1462.6	1190.5	1129.9
65°	2148.8	2179.2	2305.2	2425.6	2473.0	2502.4	2401.0	1964.0	1403.8	1140.3	1064.5
67.5°	1998.1	2023.7	2146.9	2305.2	2338.4	2364.9	2303.3	1866.4	1328.9	1042.7	983.9
70°	1843.6	1874.9	1974.4	2140.3	2202.9	2221.8	2177.3	1760.2	1221.8	945.0	905.2
72.5°	1636.0	1661.6	1780.1	1933.7	1999.1	2022.8	1986.7	1619.0	1086.3	846.5	809.5
75°	1404.7	1419.9	1530.8	1686.3	1748.8	1772.5	1761.1	1438.9	940.3	723.2	685.3
77.5°	1125.1	1159.2	1251.2	1375.4	1464.5	1469.2	1468.3	1219.9	773.5	569.7	556.4
80°	839.8	870.1	957.4	1074.9	1136.5	1153.6	1151.7	962.1	600.0	436.0	414.2
82.5°	531.8	550.7	641.7	736.5	801.0	816.1	833.2	694.8	418.0	289.1	264.5
85°	211.4	210.4	289.1	390.5	437.9	463.5	475.8	404.7	226.5	128.9	109.0
87.5°	15.2	16.1	19.9	24.6	25.6	27.5	31.3	39.8	31.3	27.5	14.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CATALOG NUMBER: TPTN-VA3-735-U-DL-GM

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8	367.8
2.5°	359.2	358.3	354.5	352.6	349.8	348.8	347.9	346.0	345.0	344.1	345.0
5°	353.6	353.6	349.8	346.9	340.3	335.5	330.8	324.2	319.4	316.6	315.6
7.5°	340.3	341.2	340.3	334.6	328.9	321.3	310.0	298.6	290.0	285.3	283.4
10°	328.9	330.8	329.9	326.1	316.6	304.3	290.0	274.9	261.6	253.1	252.1
12.5°	334.6	334.6	331.8	324.2	311.9	295.7	277.7	257.8	242.7	233.2	231.3
15°	353.6	351.7	343.1	330.8	311.9	291.9	270.1	247.4	229.4	219.0	218.0
17.5°	381.0	377.3	362.1	339.3	314.7	290.0	266.4	240.8	219.0	205.7	203.8
20°	417.1	408.5	384.8	350.7	320.4	291.9	262.6	234.1	212.3	197.2	193.4
22.5°	461.6	447.4	410.4	364.9	328.0	295.7	263.5	232.2	208.5	194.3	193.4
25°	508.1	489.1	439.8	382.0	336.5	298.6	264.5	236.0	212.3	201.9	200.0
27.5°	555.5	532.7	471.1	401.9	346.0	303.3	268.2	241.7	223.7	215.2	214.2
30°	601.9	571.6	498.6	419.0	355.5	306.2	271.1	241.7	229.4	222.8	221.8
32.5°	644.6	607.6	524.2	437.0	364.9	311.9	273.9	244.6	233.2	231.3	230.3
35°	690.1	650.2	550.7	452.1	374.4	316.6	276.8	247.4	238.9	238.9	238.9
37.5°	739.3	692.9	579.2	469.2	383.9	325.1	280.6	254.0	246.4	248.3	248.3
40°	791.5	738.4	608.5	487.2	392.4	329.9	283.4	260.7	254.0	255.9	256.9
42.5°	845.5	782.9	638.9	503.3	403.8	335.5	289.1	269.2	264.5	266.4	266.4
45°	900.5	830.3	667.3	520.4	413.3	341.2	295.7	278.7	274.9	275.8	275.8
47.5°	954.5	873.0	692.9	535.5	421.8	346.0	302.4	288.2	285.3	286.3	285.3
50°	1000.0	910.0	715.6	546.9	430.3	350.7	310.0	297.6	295.7	293.8	292.9
52.5°	1039.8	943.1	733.7	555.5	434.1	352.6	316.6	307.1	305.2	301.4	300.5
55°	1061.6	958.3	738.4	557.3	431.3	350.7	318.5	311.9	310.0	305.2	305.2
57.5°	1066.4	958.3	728.0	548.8	421.8	344.1	317.5	310.0	308.1	303.3	303.3
59°	1061.6	952.6	718.5	539.3	414.2	338.4	313.7	308.1	305.2	301.4	301.4
60°	1056.9	948.8	711.9	529.9	409.5	334.6	310.0	305.2	302.4	299.5	299.5
62.5°	1036.0	927.0	693.8	505.2	393.4	320.4	301.4	298.6	296.7	293.8	292.9
65°	978.2	874.9	655.9	477.7	368.7	303.3	287.2	286.3	285.3	280.6	278.7
67.5°	910.0	810.4	601.0	442.7	337.4	283.4	270.1	270.1	266.4	262.6	263.5
70°	839.8	748.8	544.1	399.1	301.4	257.8	247.4	248.3	244.6	243.6	244.6
72.5°	746.9	661.6	481.5	346.0	264.5	228.4	219.9	222.8	221.8	220.9	220.9
75°	629.4	561.1	405.7	291.9	223.7	196.2	191.5	192.4	193.4	192.4	192.4
77.5°	512.8	455.9	321.3	230.3	177.3	158.3	157.3	162.1	163.0	162.1	163.0
80°	380.1	335.5	234.1	168.7	131.8	121.3	123.2	129.9	131.8	131.8	133.7
82.5°	244.6	210.4	151.7	109.0	88.2	85.3	91.0	97.6	100.5	100.5	100.5
85°	96.7	87.2	70.1	54.0	50.2	54.0	60.7	64.5	69.2	69.2	68.2
87.5°	5.7	14.2	21.8	21.8	21.8	23.7	23.7	24.6	25.6	24.6	24.6
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

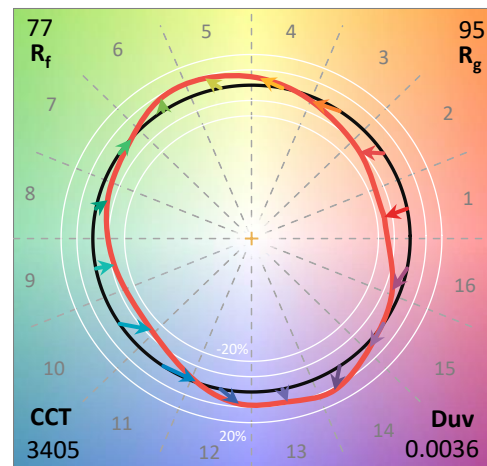
Data in this report applies to families of products including TTN-D0-735-U-WQ

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

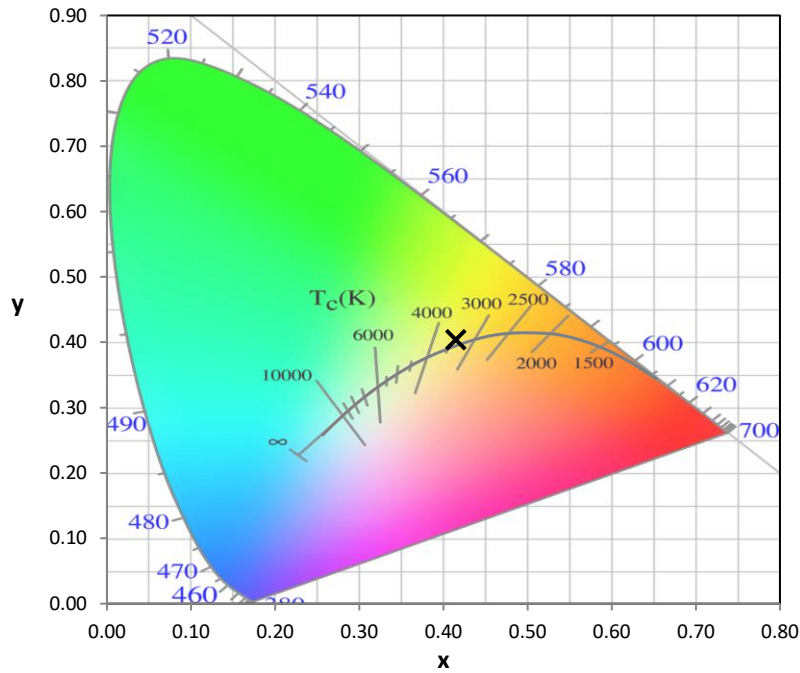
Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.9

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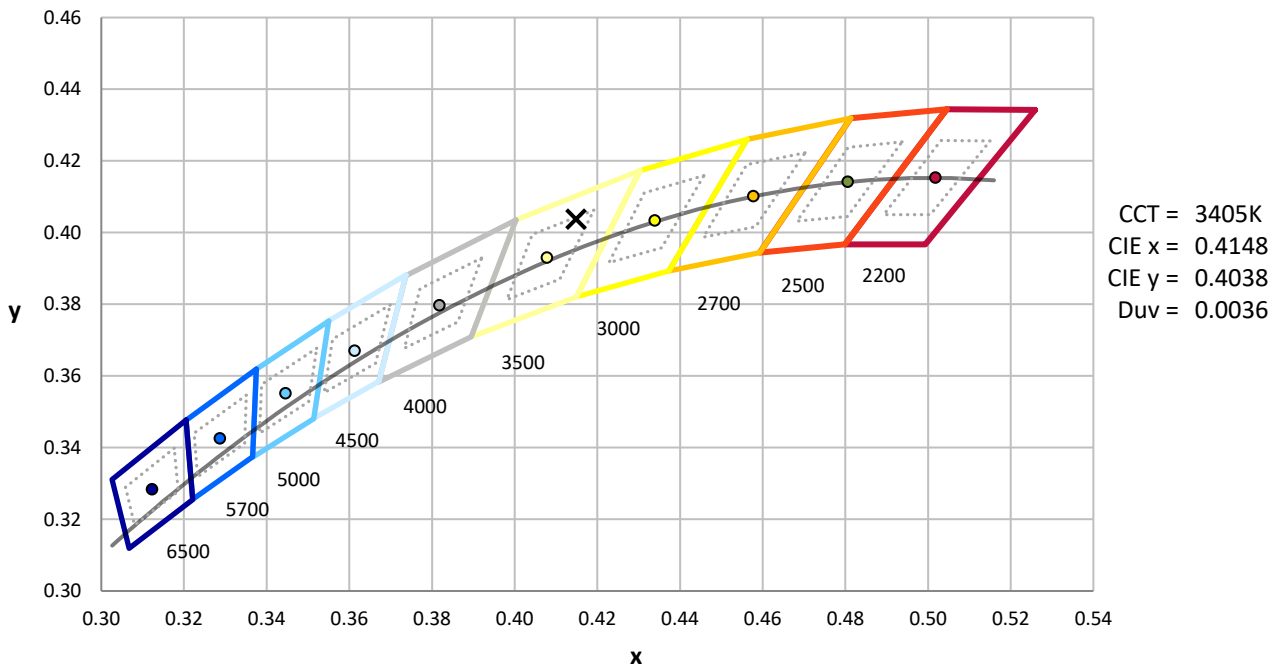
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



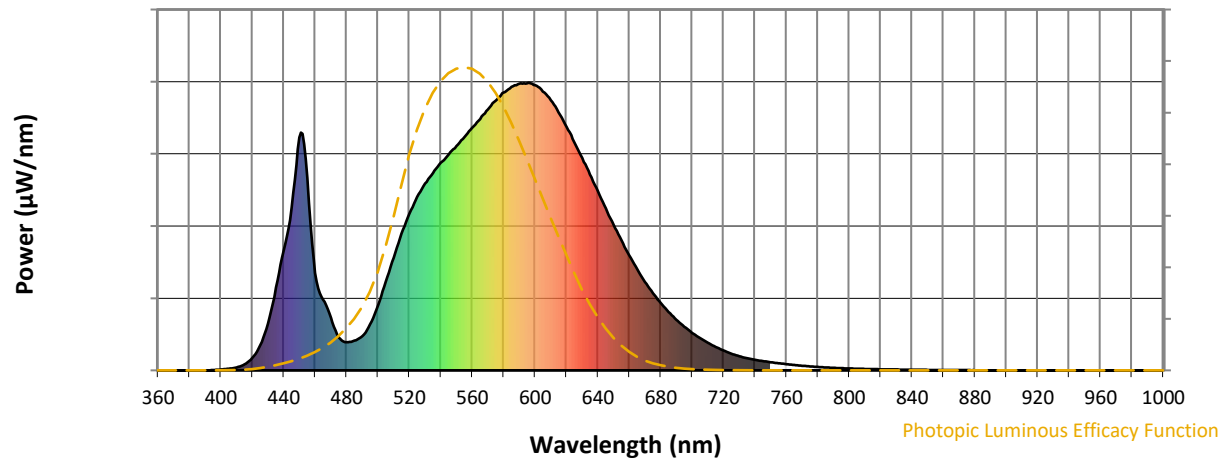
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength

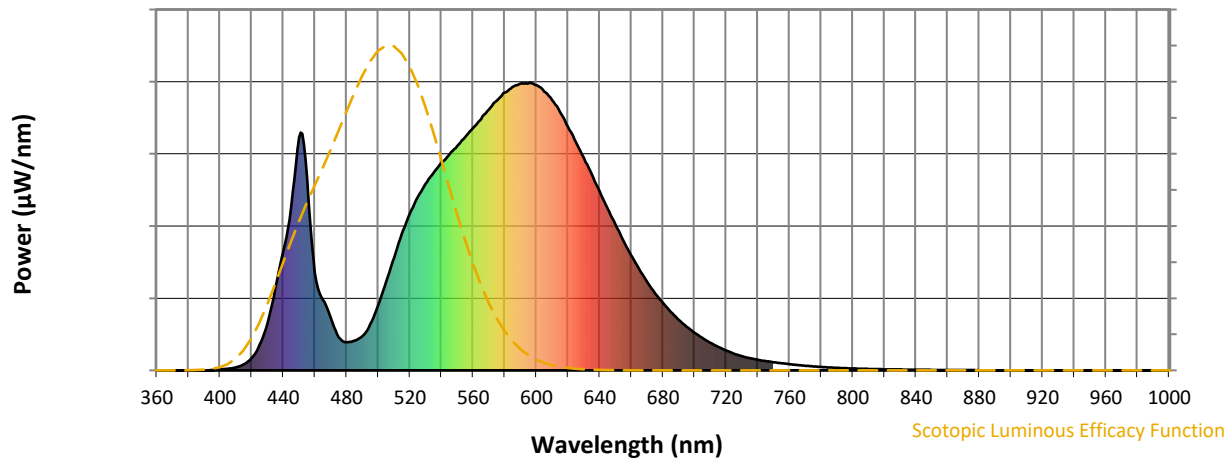


Photopic Lumens: NR

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	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



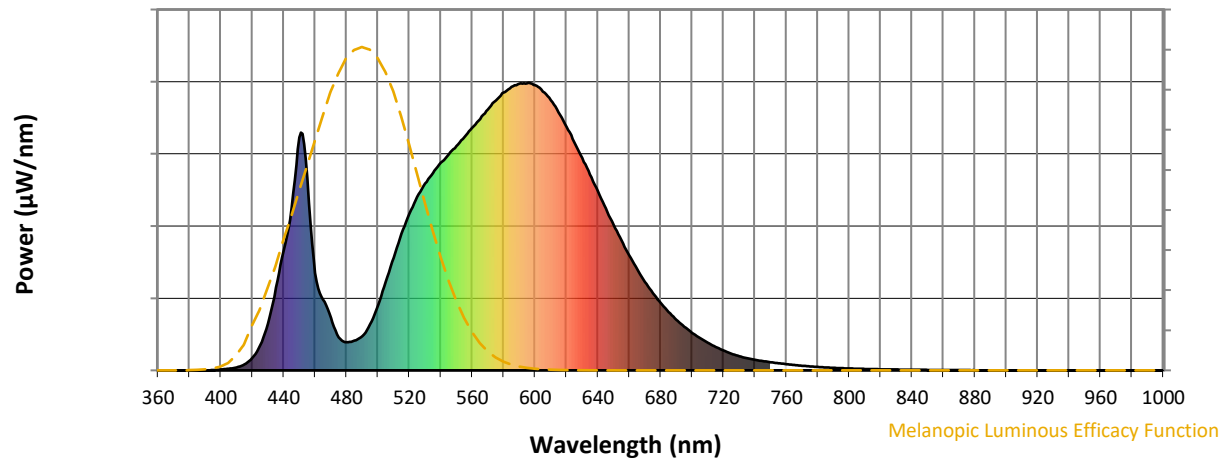
Scotopic Lumens: NR

S/P: 1.33

λ (nm)	Power 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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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.47

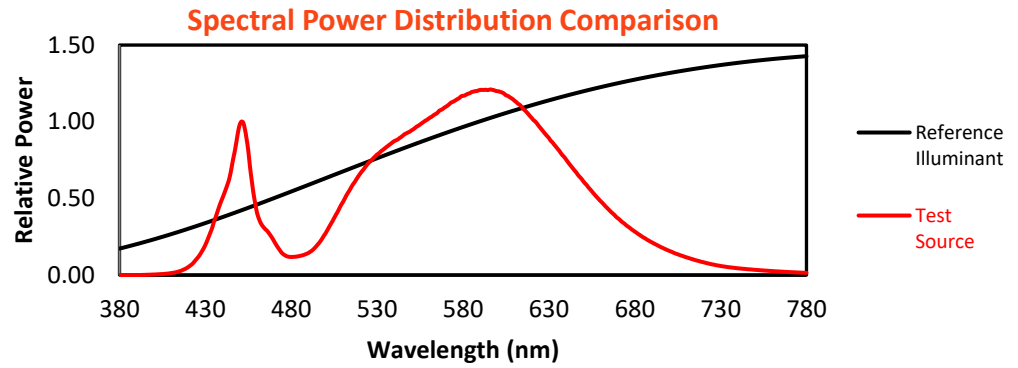
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	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			

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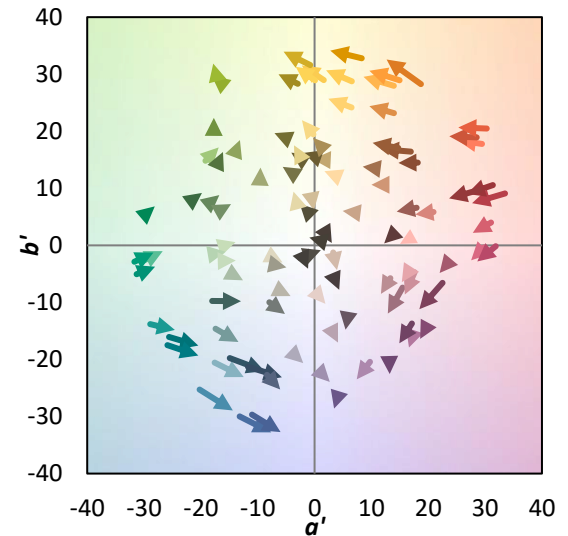
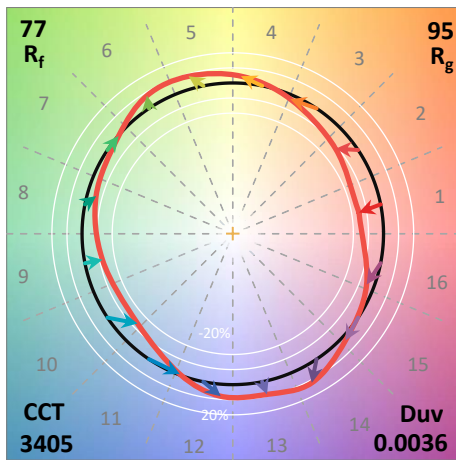
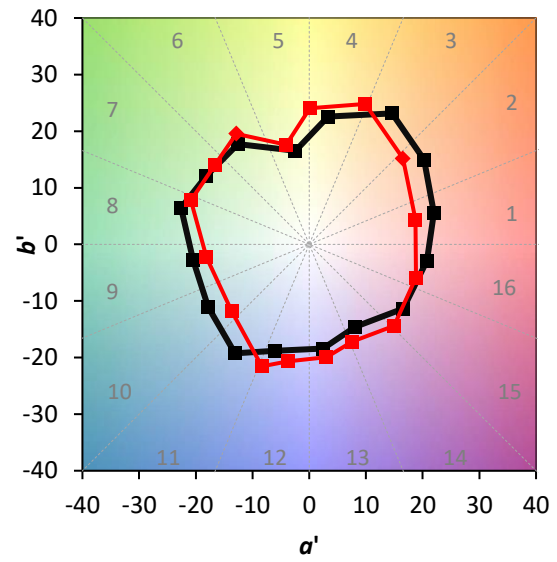
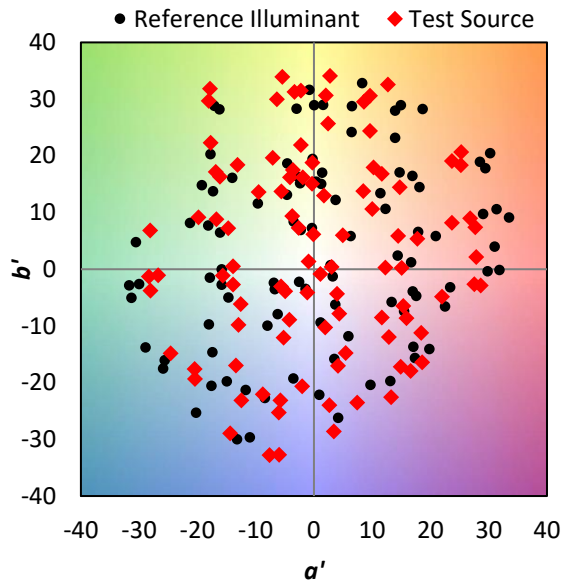
TM-30-18

Summary

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

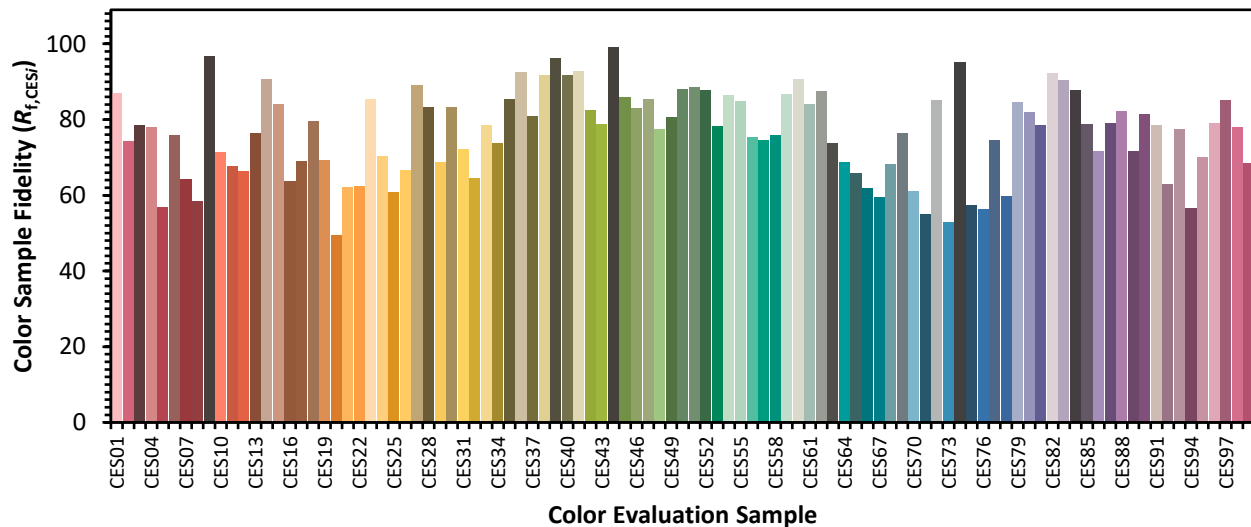


Color Vector Graphics

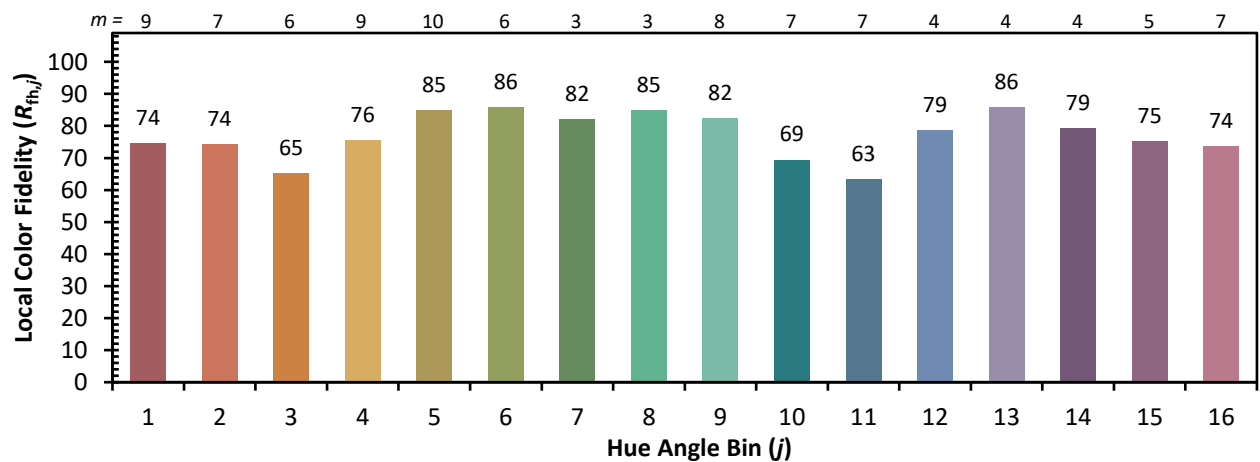
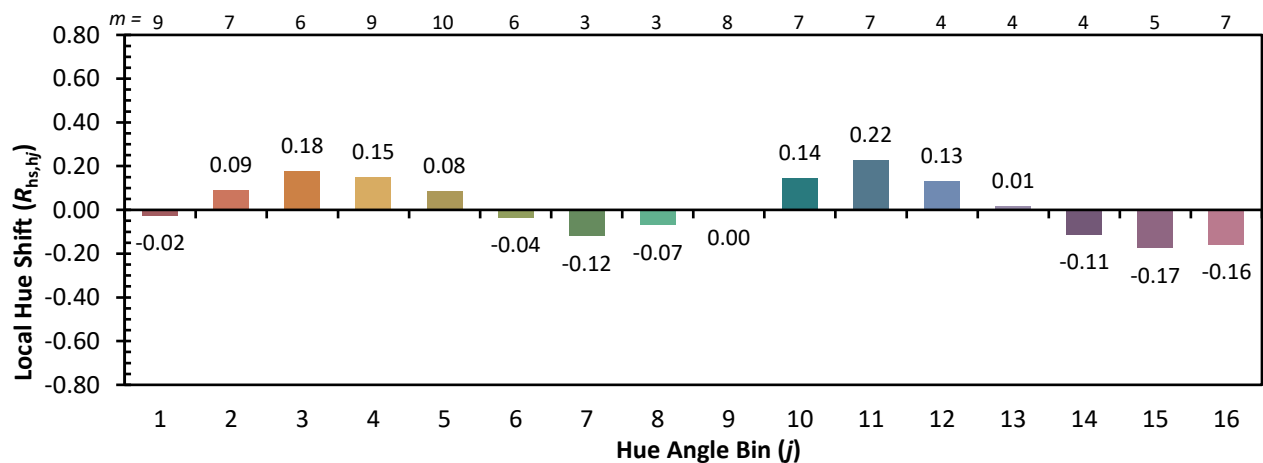
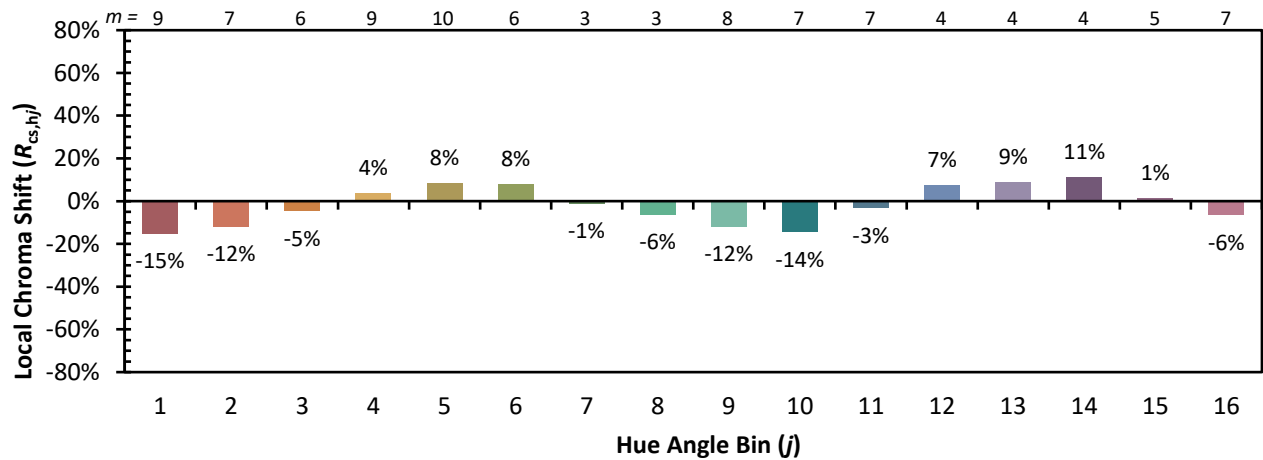


Individual Sample Fidelity Index ($R_{f,i}$)

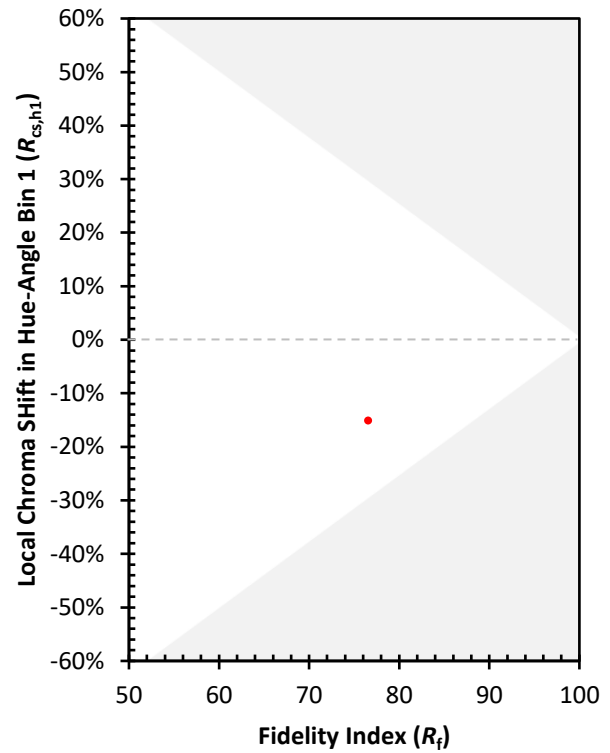
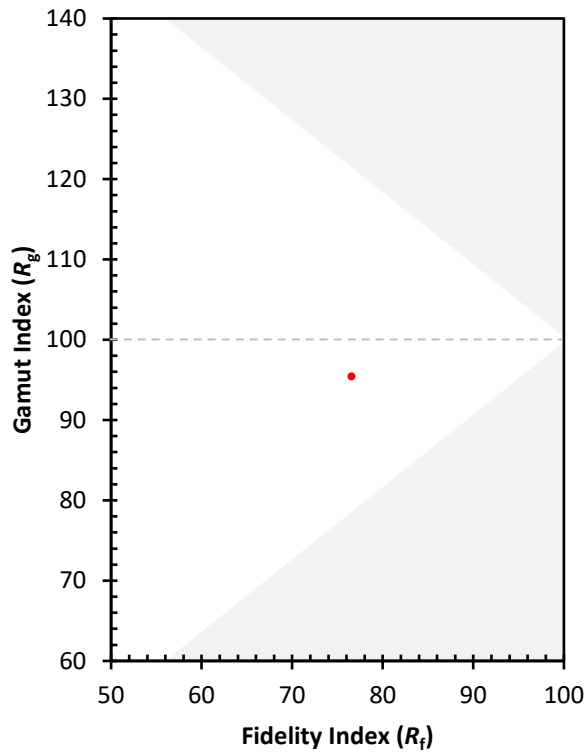
CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82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