

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: P1445255

Luminaire Tested: TPTN-VA2-830-U-DL-CG-GM

Issue Date: 05/21/2026

Test Information

Test Method: LM-79-2024
Report Number: P1445255
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: MCGRAW-EDISON
Catalog Number: TPTN-VA2-830-U-DL-CG-GM
Description: TOPTIER NANO SPIDER MOUNT VISUAL COMFORT LED LUMINAIRE 42W 80CRI 3000K w/
DRIVE LANE TYPE IV DISTRIBUTION OPTIC AND GLASS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3277.4 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Luminous Opening: Circular (Dia: 0.71' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

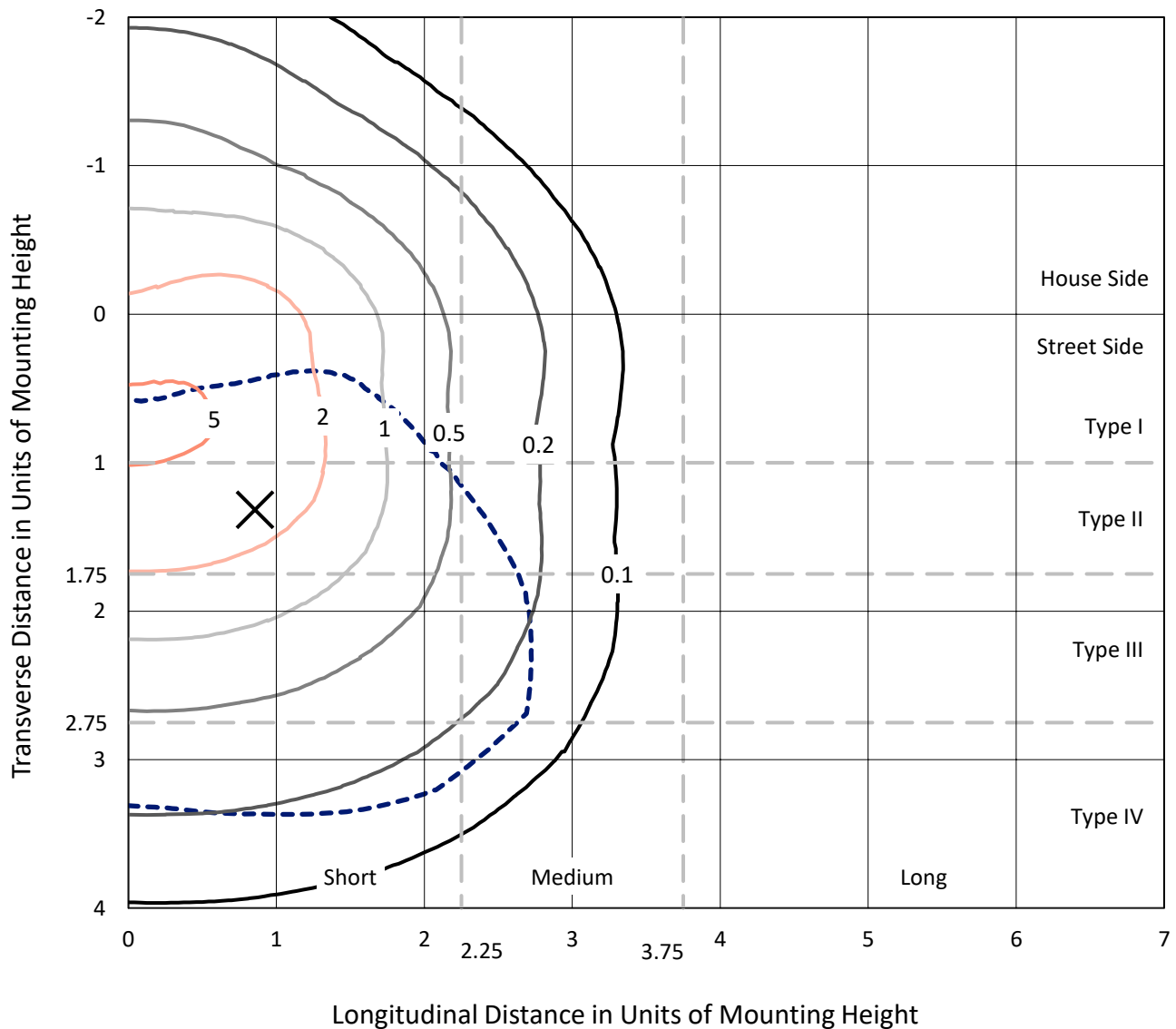
Input Watts (W): 42.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.98
Total Harmonic Distortion (THDi): 7.5%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

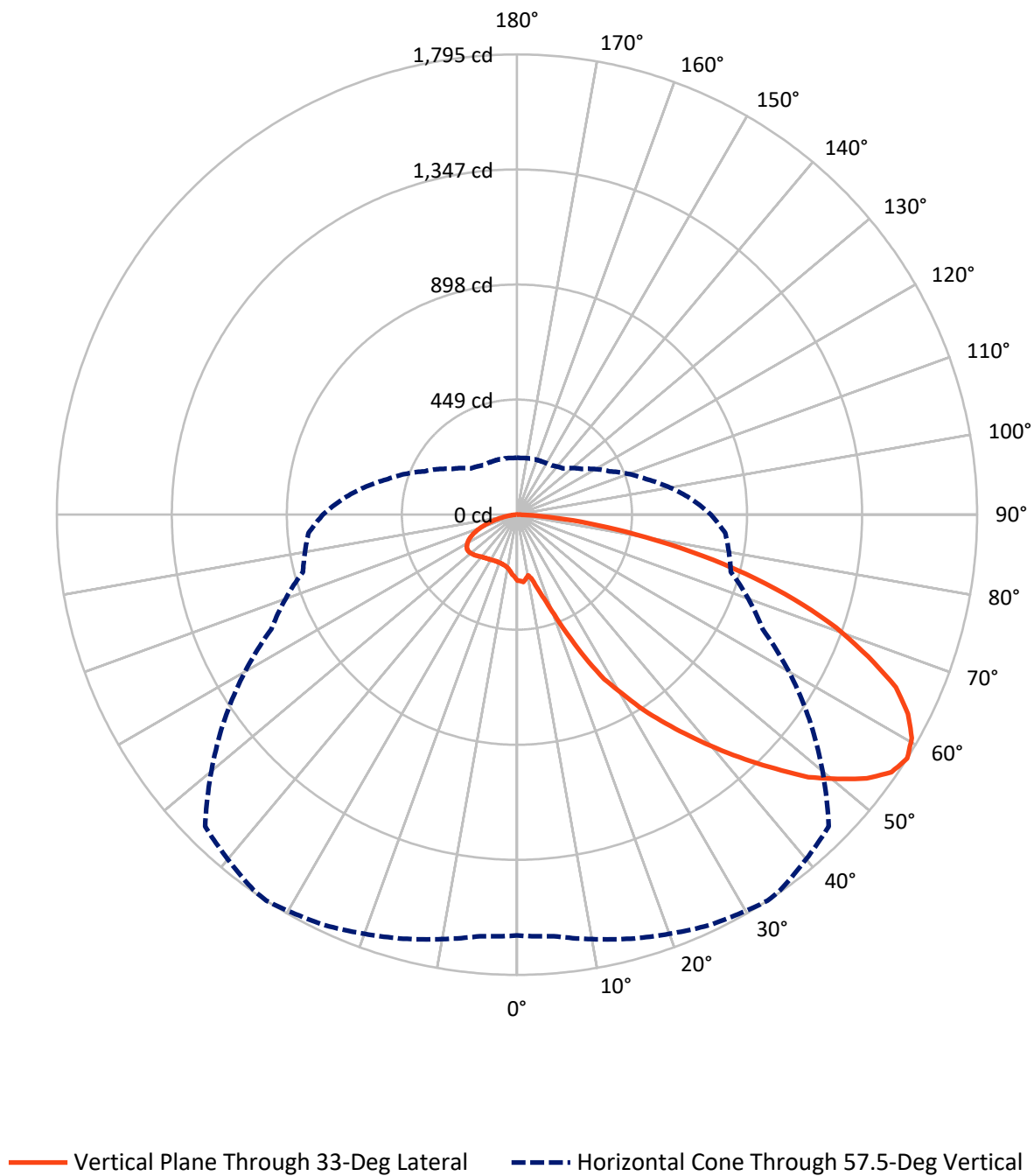


Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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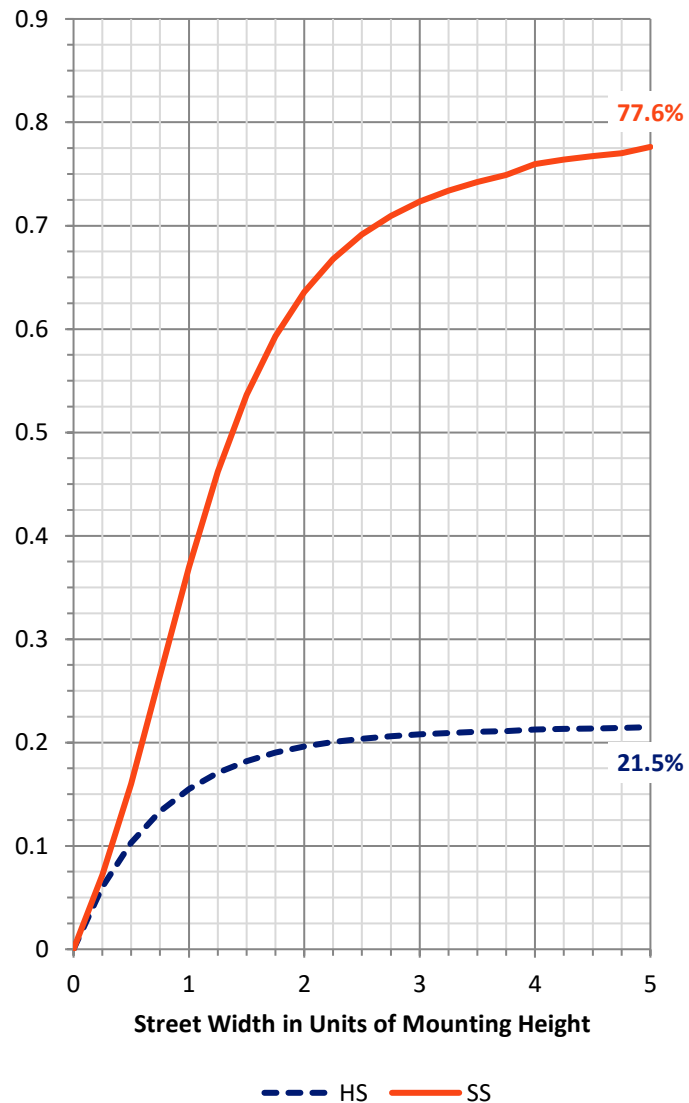
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	709.7	0.0	709.7
	% Fixture	21.7	0.0	21.7
Street Side	Lumens	2567.7	0.0	2567.7
	% Fixture	78.3	0.0	78.3
Total	Lumens	3277.4	0.0	3277.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.2	0.7
10°-20°	74.0	2.3
20°-30°	182.7	5.6
30°-40°	354.5	10.8
40°-50°	576.2	17.6
50°-60°	779.1	23.8
60°-70°	758.5	23.1
70°-80°	447.0	13.6
80°-90°	82.3	2.5
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°	3277.4	100.0
0°-180°	3277.4	100.0

Coefficient of Utilization



REPORT NUMBER: P1445255

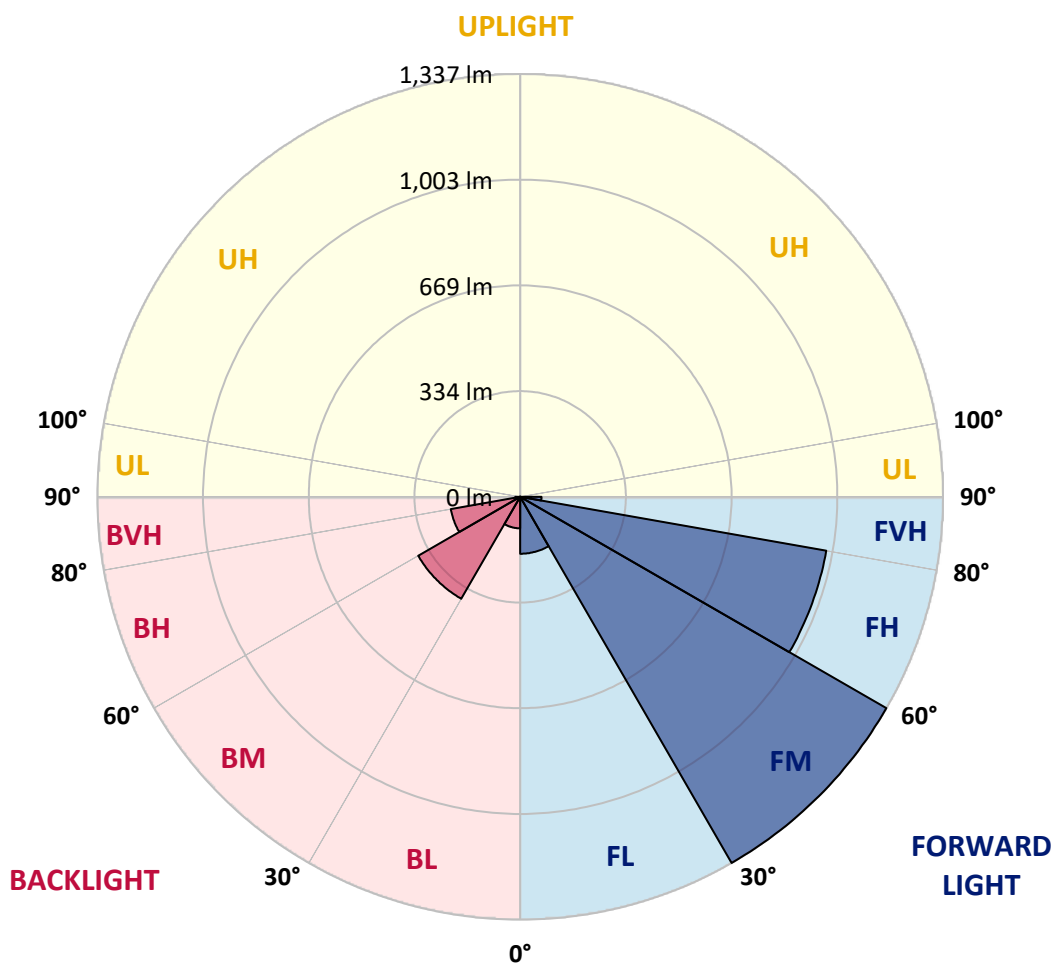
CATALOG NUMBER: TPTN-VA2-830-U-DL-CG-GM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	180.2	5.5			
FM	(30°-60°)	1337.4	40.8			
FH	(60°-80°)	982.9	30.0			G1/1800
FVH	(80°-90°)	67.3	2.1			G1/100
BL	(0°-30°)	99.7	3.0	B0/110		
BM	(30°-60°)	372.3	11.4	B1/1000		
BH	(60°-80°)	222.6	6.8	B1/500		G1/500
BVH	(80°-90°)	15.0	0.5			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



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CATALOG NUMBER: TPTN-VA2-830-U-DL-CG-GM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4
2.5°	260.7	260.0	260.0	259.4	258.7	258.7	258.1	257.4	256.1	254.8	253.5
5°	273.1	271.7	269.1	266.5	263.9	263.9	262.6	262.0	260.7	260.0	258.7
7.5°	260.7	260.7	259.4	256.1	252.2	251.5	245.7	243.7	245.7	245.0	245.7
10°	266.5	265.9	258.7	250.2	240.5	238.5	233.3	231.3	235.3	239.2	242.4
12.5°	286.7	286.7	278.9	267.8	257.4	254.8	243.7	239.8	240.5	245.0	248.9
15°	320.0	320.0	314.1	305.0	295.2	290.0	273.1	262.0	258.7	260.7	264.6
17.5°	370.8	368.2	371.5	358.4	345.4	340.8	314.1	293.9	285.4	286.1	287.4
20°	449.0	447.7	447.7	439.2	416.4	407.3	371.5	335.6	320.6	318.7	317.4
22.5°	548.7	545.5	546.8	536.3	508.3	500.5	445.1	394.9	364.3	355.2	354.5
25°	663.4	664.1	665.4	651.0	617.8	610.6	537.0	464.0	415.8	398.2	393.6
27.5°	779.4	779.4	771.6	750.7	726.6	714.2	634.1	540.2	473.1	447.1	434.7
30°	883.7	883.0	866.1	835.4	810.7	802.2	713.6	611.9	527.9	488.8	473.1
32.5°	984.7	982.7	952.8	926.0	908.4	895.4	799.6	681.0	580.6	528.5	509.0
35°	1087.6	1075.9	1041.4	1019.2	1000.3	985.3	890.2	751.4	632.8	570.9	546.1
37.5°	1178.2	1175.0	1134.6	1117.6	1096.1	1088.3	987.3	823.7	688.2	613.2	586.5
40°	1266.9	1265.6	1233.6	1216.7	1197.8	1186.7	1090.3	902.6	748.8	659.5	629.5
42.5°	1346.4	1349.0	1332.0	1320.9	1304.7	1296.2	1195.2	985.3	807.4	703.2	671.2
45°	1435.6	1436.3	1433.0	1428.5	1413.5	1414.1	1307.9	1073.3	873.2	750.7	714.9
47.5°	1517.8	1523.0	1530.8	1531.4	1530.1	1523.6	1427.8	1157.4	935.2	793.7	755.9
50°	1576.4	1584.9	1613.6	1622.7	1620.1	1618.1	1523.6	1242.7	984.7	831.5	784.6
52.5°	1632.5	1639.0	1680.7	1710.0	1709.3	1704.8	1614.2	1317.0	1032.9	858.3	811.3
55°	1659.8	1663.7	1717.8	1764.7	1773.2	1773.9	1696.3	1371.1	1060.3	875.2	825.0
57.5°	1641.6	1650.7	1712.6	1768.0	1795.4	1789.5	1720.4	1392.6	1057.7	864.1	815.9
60°	1599.2	1612.2	1671.6	1734.8	1770.0	1761.5	1697.0	1384.2	1034.2	836.1	795.7
62.5°	1534.7	1551.0	1609.0	1670.2	1712.0	1714.6	1654.0	1358.7	990.5	801.6	763.8
65°	1410.9	1432.4	1518.4	1585.5	1625.3	1635.1	1569.2	1298.1	933.9	749.4	704.5
67.5°	1275.3	1289.7	1358.7	1457.1	1478.0	1491.7	1453.2	1197.8	860.2	667.3	632.1
70°	1120.9	1143.0	1197.8	1294.2	1321.6	1331.4	1308.6	1074.0	754.6	576.7	557.2
72.5°	948.2	957.3	1019.2	1091.6	1133.3	1145.6	1121.5	931.2	638.6	480.9	465.9
75°	743.6	757.9	805.5	877.2	922.8	919.5	915.6	762.5	505.7	383.2	368.2
77.5°	552.0	559.8	606.1	658.2	695.3	698.6	697.3	581.3	379.3	278.9	268.5
80°	360.4	370.2	404.0	445.1	469.9	480.9	477.0	405.3	260.0	187.7	179.9
82.5°	204.0	206.6	232.0	254.2	284.8	282.8	290.6	247.0	158.4	110.1	100.4
85°	72.3	76.9	89.9	113.4	125.8	134.2	135.5	116.0	71.0	49.5	37.1
87.5°	7.2	7.2	12.4	18.2	23.5	24.8	25.4	26.1	20.9	16.3	5.2
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: P1445255

CATALOG NUMBER: TPTN-VA2-830-U-DL-CG-GM

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4	257.4
2.5°	253.5	252.2	249.6	247.0	246.3	243.7	243.1	242.4	241.1	241.1	240.5
5°	256.1	254.8	250.9	246.3	241.8	237.9	234.6	231.3	228.7	226.8	226.8
7.5°	247.0	247.6	247.6	244.4	237.9	230.7	222.2	215.7	209.8	207.2	205.9
10°	243.1	245.0	244.4	241.1	234.6	224.8	213.8	203.3	194.9	189.6	189.0
12.5°	250.2	250.2	248.3	243.1	234.0	221.6	208.5	194.9	185.1	179.2	178.6
15°	265.9	265.2	258.1	248.3	235.3	220.9	205.9	190.9	178.6	172.0	171.4
17.5°	288.0	284.8	273.1	256.1	238.5	220.9	204.0	187.7	174.6	166.8	165.5
20°	315.4	308.9	290.6	265.9	242.4	222.2	202.7	185.1	172.0	163.6	162.9
22.5°	349.3	338.9	310.2	277.0	248.9	224.8	202.7	183.8	171.4	164.9	164.9
25°	383.2	368.8	332.4	289.3	255.5	226.8	202.7	185.1	174.6	170.1	169.4
27.5°	420.3	400.1	353.9	303.7	262.0	229.4	204.0	185.7	177.9	174.6	174.6
30°	454.2	431.4	376.0	317.4	269.1	232.6	206.6	187.7	179.9	178.6	177.3
32.5°	486.2	459.4	396.9	330.4	277.6	235.9	208.5	189.6	182.5	181.2	180.5
35°	521.3	492.0	415.8	342.8	284.1	241.1	211.1	192.9	185.7	184.4	184.4
37.5°	559.1	522.6	437.9	355.8	290.6	246.3	213.8	197.5	190.3	189.0	188.3
40°	595.6	555.2	460.1	368.8	298.5	250.2	217.0	201.4	195.5	194.2	193.5
42.5°	634.7	588.5	481.6	380.6	306.3	254.2	221.6	207.2	202.0	199.4	198.8
45°	670.6	620.4	501.1	393.0	313.5	258.7	226.8	214.4	209.2	206.6	205.9
47.5°	705.1	647.8	519.4	402.1	319.3	262.0	232.0	220.3	216.4	213.8	212.4
50°	733.1	669.9	532.4	407.9	323.2	263.9	235.9	225.5	222.2	218.3	217.7
52.5°	753.3	687.5	541.5	412.5	323.9	263.9	238.5	231.3	227.4	223.5	222.2
55°	763.1	694.0	540.9	410.6	320.0	262.0	238.5	232.6	229.4	224.8	224.2
57.5°	756.6	684.9	528.5	399.5	310.8	254.8	234.6	228.7	225.5	221.6	221.6
60°	736.4	666.0	509.0	382.5	296.5	243.1	226.1	221.6	218.3	215.1	215.1
62.5°	704.5	638.6	484.2	357.1	278.9	229.4	215.1	211.1	209.2	205.9	205.3
65°	649.1	585.2	449.0	330.4	255.5	211.8	199.4	198.1	195.5	190.9	190.3
67.5°	585.2	526.6	397.5	297.2	228.1	189.6	180.5	179.2	176.6	172.7	173.3
70°	513.5	461.4	344.1	256.1	194.9	165.5	157.7	155.8	153.8	153.1	152.5
72.5°	432.7	388.4	288.0	209.2	162.9	139.5	132.9	131.6	130.3	129.7	129.0
75°	336.3	306.3	230.0	164.9	129.0	112.1	106.2	105.6	105.6	104.3	103.0
77.5°	247.6	222.9	167.5	119.9	93.2	81.5	79.5	79.5	80.2	79.5	77.5
80°	164.2	148.6	109.5	79.5	61.9	54.1	54.1	54.7	55.4	54.7	55.4
82.5°	87.3	82.1	61.9	46.3	36.5	31.9	32.6	33.2	34.5	33.2	34.5
85°	31.9	32.6	27.4	20.9	17.6	16.3	16.9	17.6	18.2	17.6	17.6
87.5°	2.0	6.5	11.1	9.8	8.5	8.5	8.5	8.5	8.5	7.8	7.2
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: SP1-2411-284-4

Test Date: 11/22/2024

Luminaire Tested: TTN-D0-830-U-WQ

Data in this report applies to families of products including TTN-D0-830-U-WQ

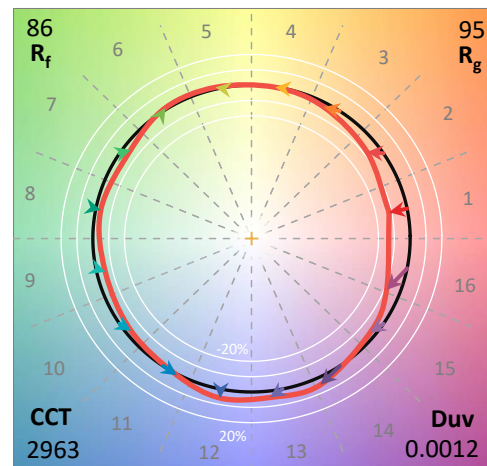
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/22/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-830-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3000K, 80 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K): 2963
 CIE u' : 0.2515
 CIE v' : 0.5238
 Duv: 0.0012
 CIE x: 0.4414
 CIE y: 0.4086
 CIE z: 0.1501
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 582
 Purity: 55.12798
 R_f: 86.1
 R_g: 94.9

CRI (Ra): 82.9
 R1: 81.4
 R2: 91.9
 R3: 95.2
 R4: 81.6
 R5: 82.3
 R6: 91.4
 R7: 82.0
 R8: 57.2
 R9: 3.9
 R10: 82.5
 R11: 82.3
 R12: 76.5
 R13: 83.9
 R14: 97.8
 R15: 72.6



Test Conditions

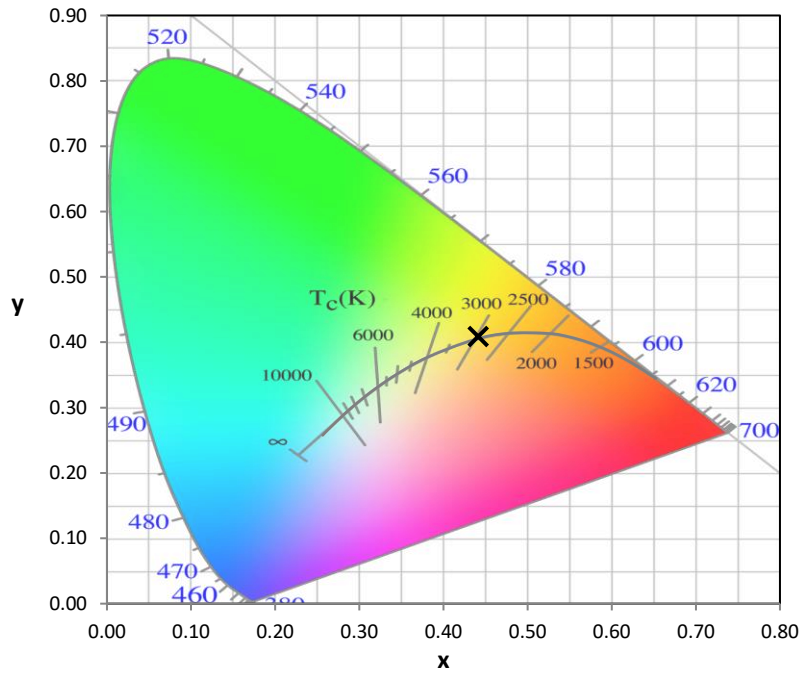
Stabilization Time: 37M
 Operation Time: 1H 37M
 Sphere Temperature (°C): 25.0

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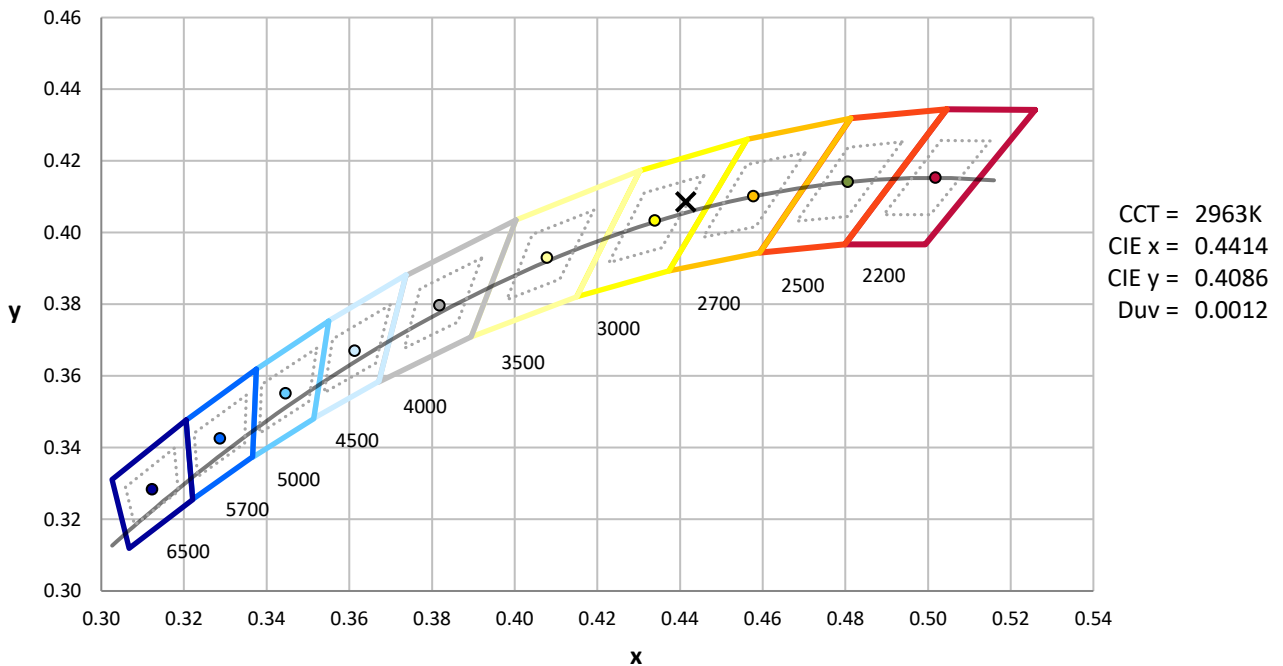
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



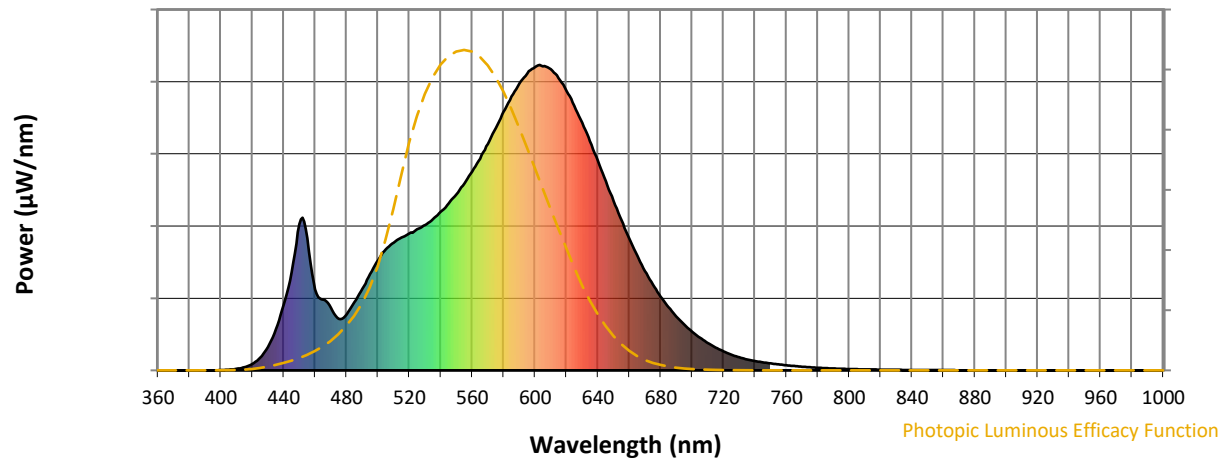
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

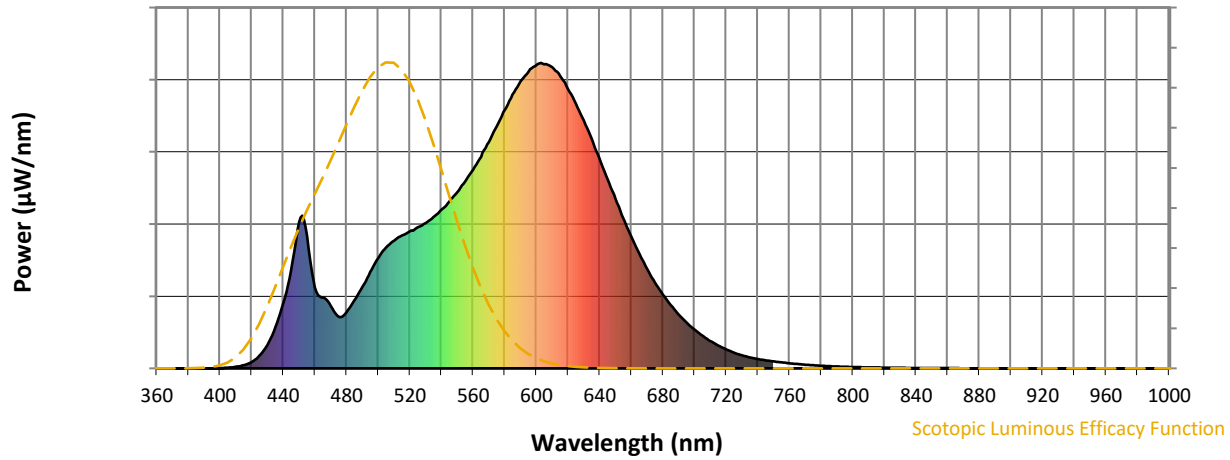


Photopic Lumens: NR

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	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-4

Scotopic Flux vs. Wavelength



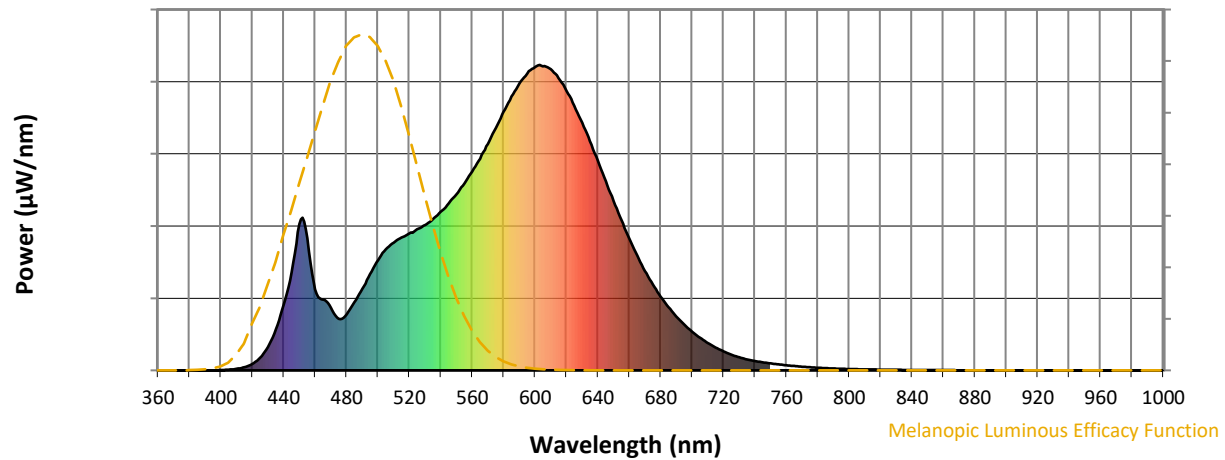
Scotopic Lumens: NR

S/P: 1.34

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	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.58

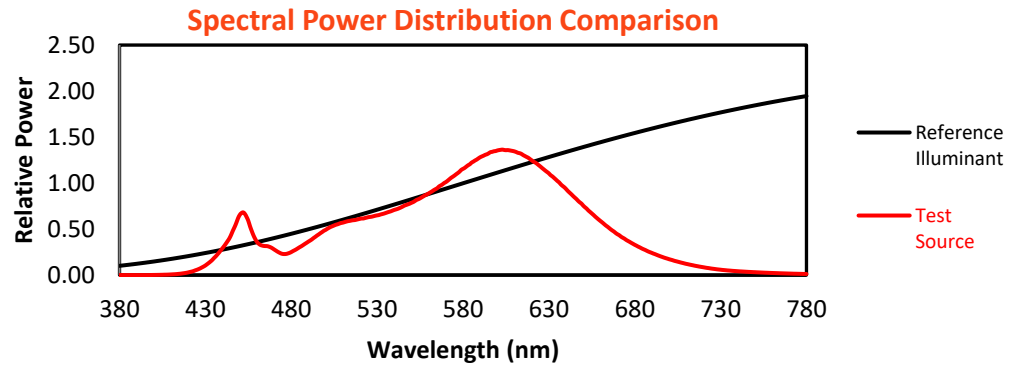
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

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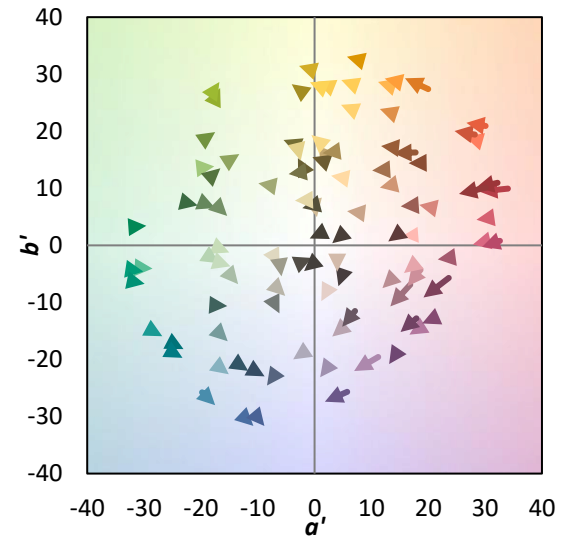
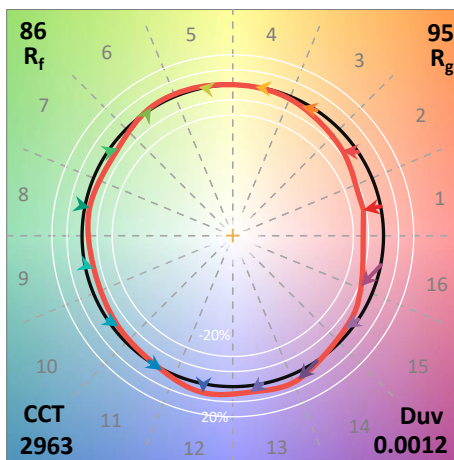
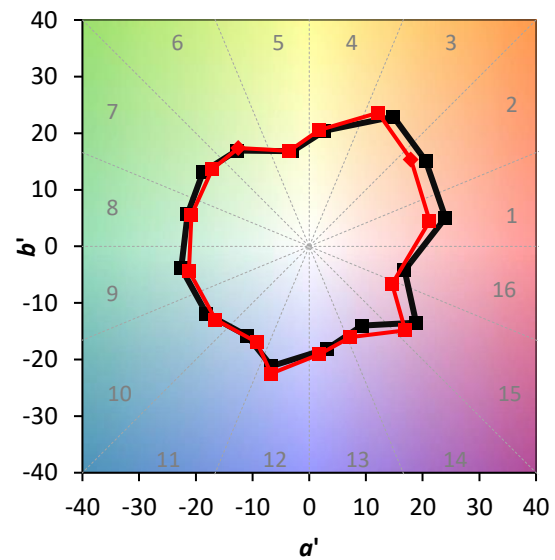
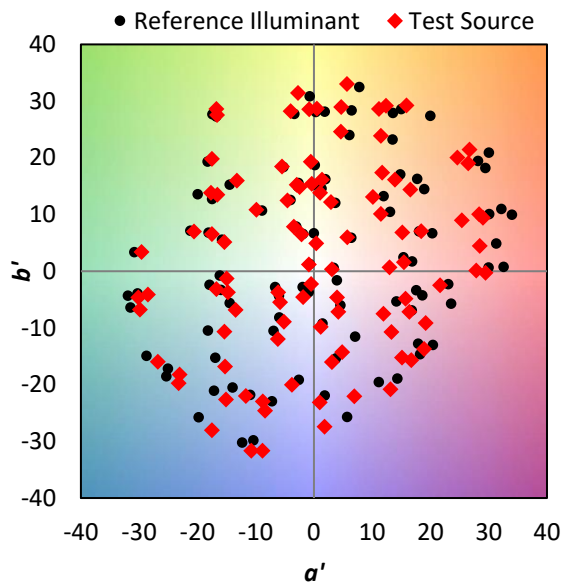
TM-30-18

Summary

$R_f = 86.1$
 $R_g = 94.9$
 $CIE R_a = 82.9$
 $R_9 = 3.9$

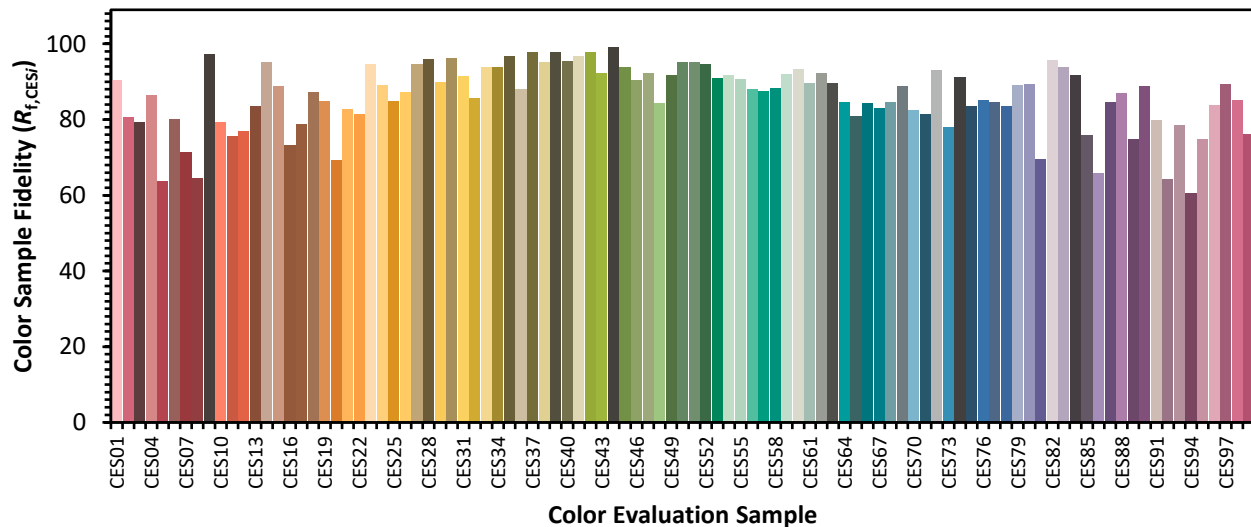


Color Vector Graphics

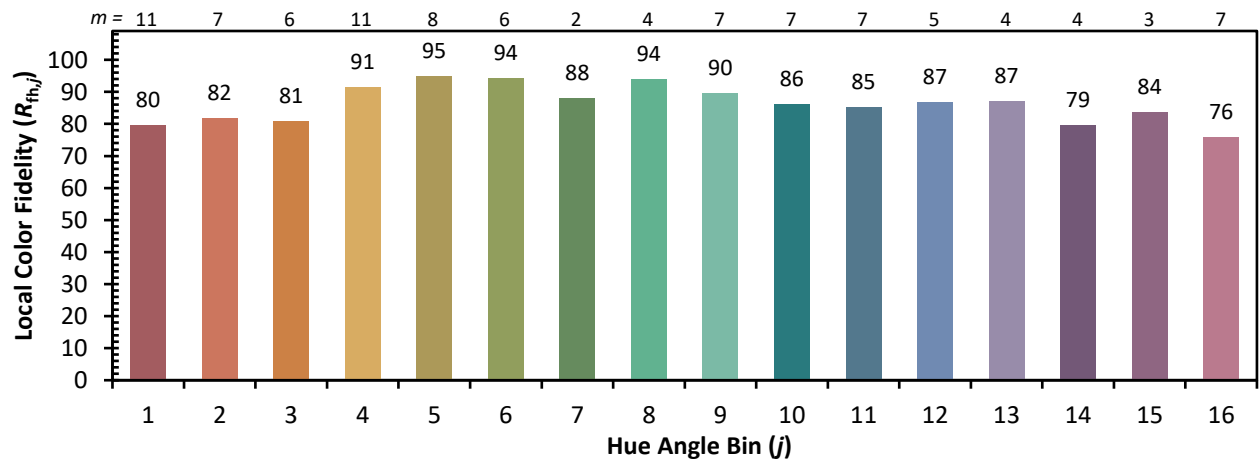
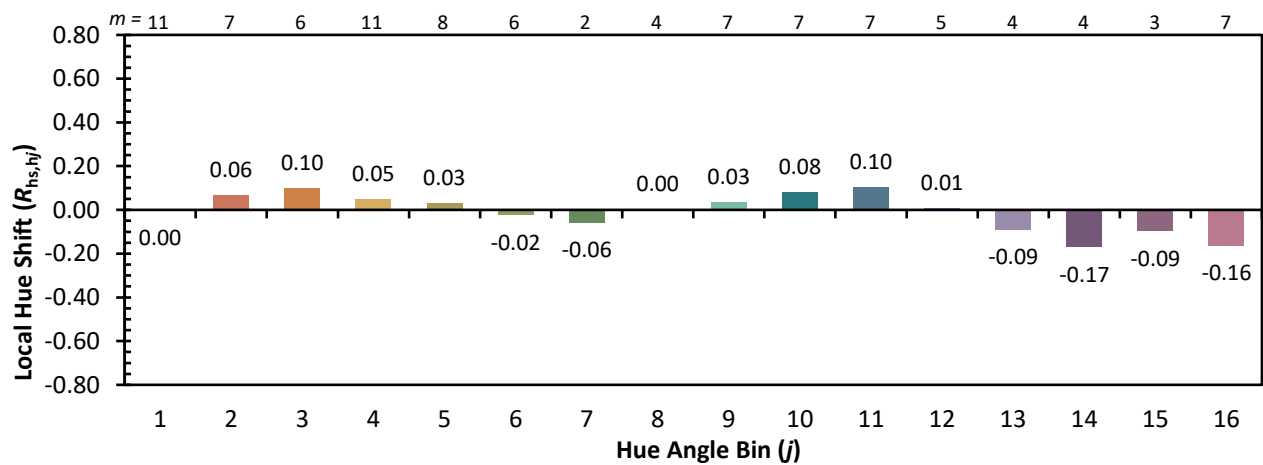
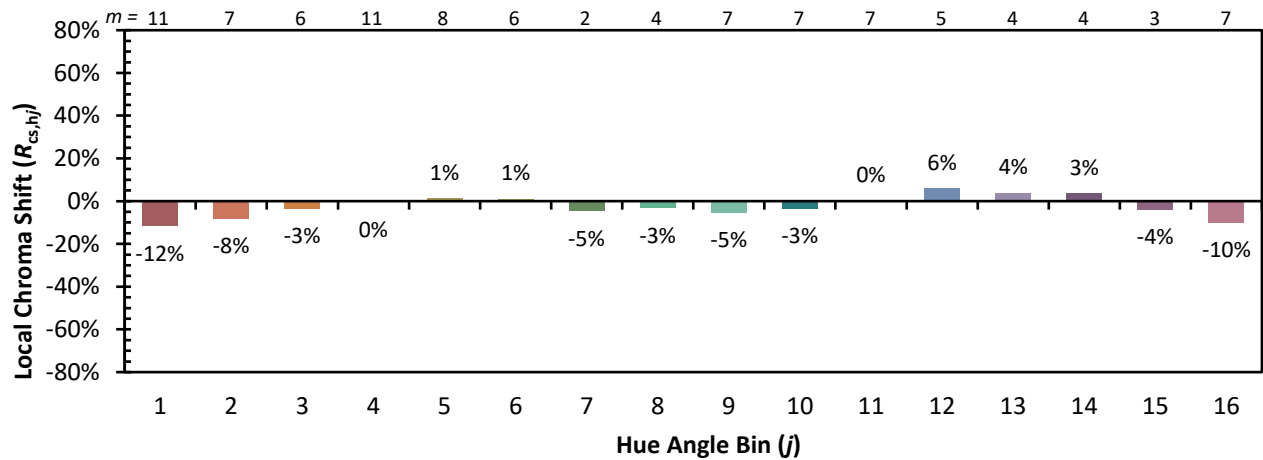


Individual Sample Fidelity Index ($R_{f,i}$)

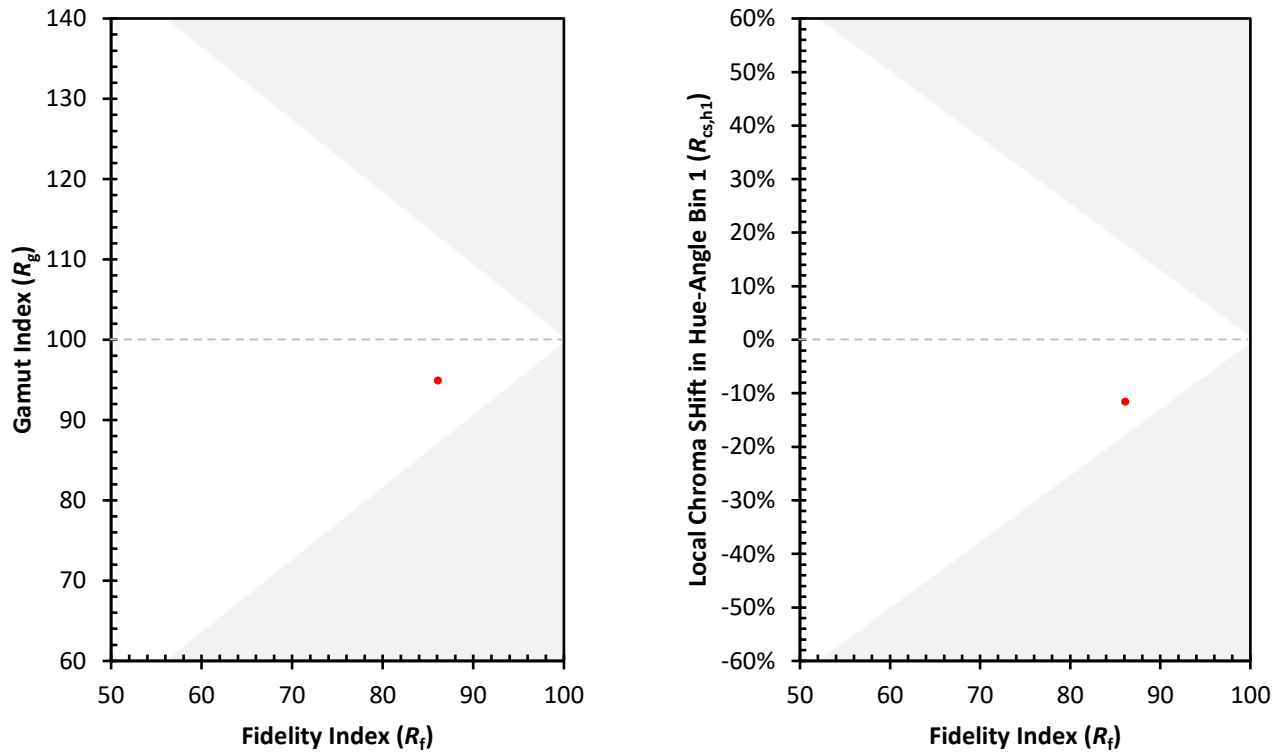
CES01 = 86	CES26 = 87	CES51 = 95	CES76 = 85
CES02 = 63	CES27 = 95	CES52 = 95	CES77 = 85
CES03 = 31	CES28 = 96	CES53 = 91	CES78 = 83
CES04 = 70	CES29 = 90	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 96	CES55 = 91	CES80 = 89
CES06 = 51	CES31 = 92	CES56 = 88	CES81 = 70
CES07 = 42	CES32 = 86	CES57 = 87	CES82 = 96
CES08 = 41	CES33 = 94	CES58 = 88	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 97	CES60 = 93	CES85 = 76
CES11 = 59	CES36 = 88	CES61 = 90	CES86 = 66
CES12 = 65	CES37 = 98	CES62 = 92	CES87 = 85
CES13 = 44	CES38 = 95	CES63 = 90	CES88 = 87
CES14 = 74	CES39 = 98	CES64 = 85	CES89 = 75
CES15 = 72	CES40 = 96	CES65 = 81	CES90 = 89
CES16 = 48	CES41 = 97	CES66 = 84	CES91 = 80
CES17 = 50	CES42 = 98	CES67 = 83	CES92 = 64
CES18 = 57	CES43 = 92	CES68 = 85	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 61
CES20 = 67	CES45 = 94	CES70 = 83	CES95 = 75
CES21 = 87	CES46 = 91	CES71 = 81	CES96 = 84
CES22 = 79	CES47 = 92	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 84	CES73 = 78	CES98 = 85
CES24 = 91	CES49 = 92	CES74 = 91	CES99 = 76
CES25 = 72	CES50 = 95	CES75 = 84	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)