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

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P832575

Luminaire Tested: **TTN-D1-750-U-WQ-SG**

Issue Date: 5/14/2024

Report Generated By 670246001

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

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P832575
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2312-254-16)
Test Lab:	INNOVATION CENTER
Issue Date:	5/14/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TTN-D1-750-U-WQ-SG
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE
	5000K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH SOLITE GLASS
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3129 lumens
Efficiency:	N/A
Efficacy:	118.5 lumens/watt
Luminous Opening:	Circular (Dia: 0.71' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B1 - U0 - G1

Input Watts (W):	26.4
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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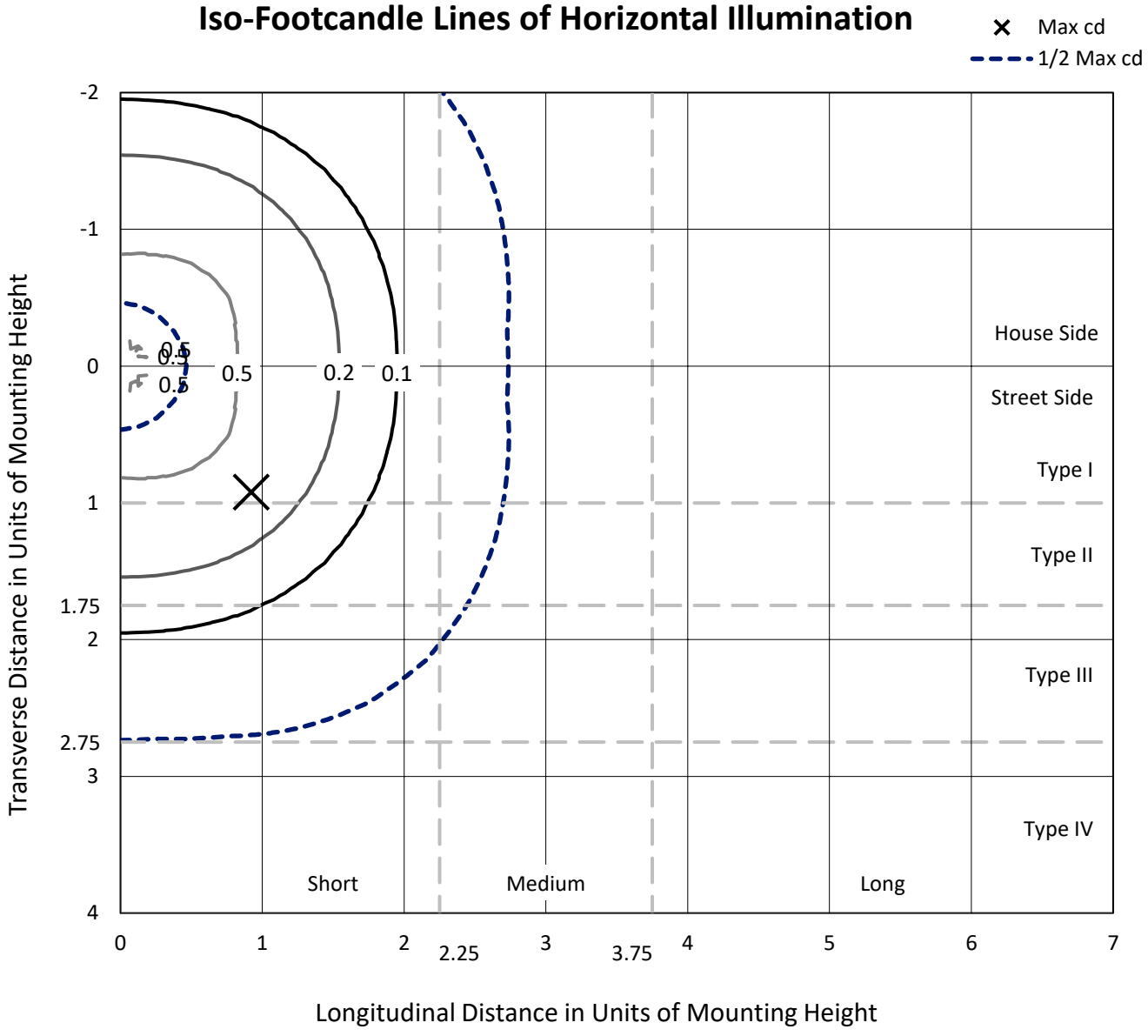
Scaled Data Report

REPORT NUMBER: P832575
CATALOG NUMBER: TTN-D1-750-U-WQ-SG

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc
Type V - Short - N/A

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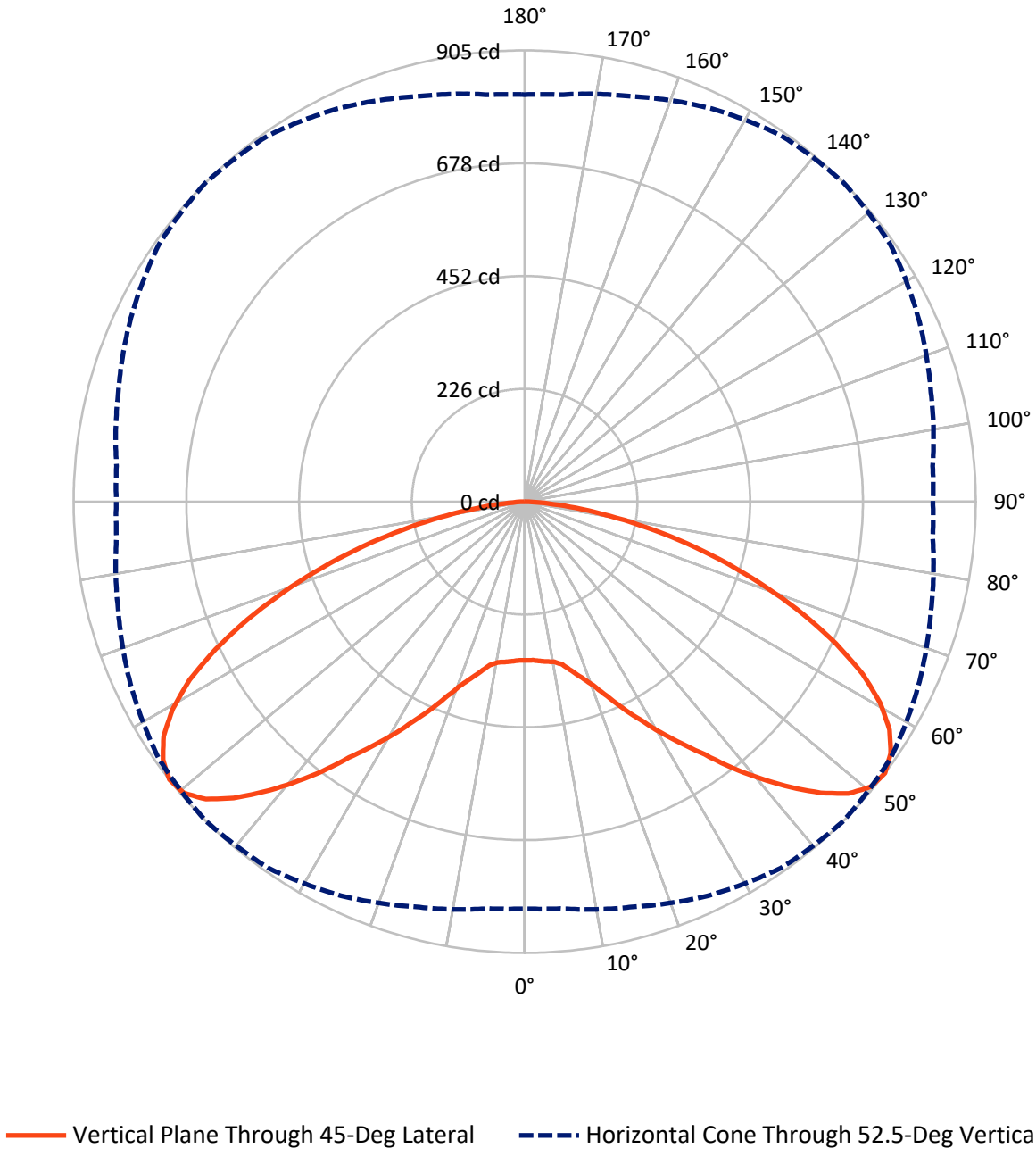
Luminous Intensity Polar Plot



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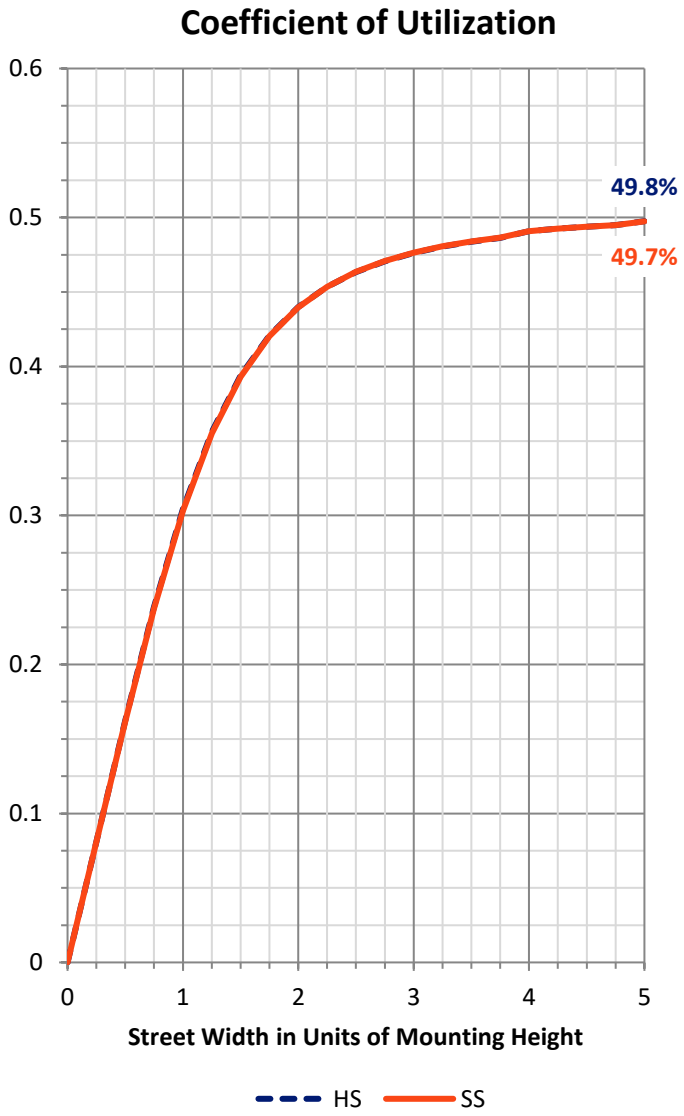
REPORT NUMBER: P832575
CATALOG NUMBER: TTN-D1-750-U-WQ-SG

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1564.5	0.0	1564.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	1564.5	0.0	1564.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	3129.0	0.0	3129.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.7	1.0
10°-20°	101.0	3.2
20°-30°	213.1	6.8
30°-40°	389.3	12.4
40°-50°	619.7	19.8
50°-60°	749.3	23.9
60°-70°	630.1	20.1
70°-80°	334.0	10.7
80°-90°	61.8	2.0
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°	3129.0	100.0
0°-180°	3129.0	100.0



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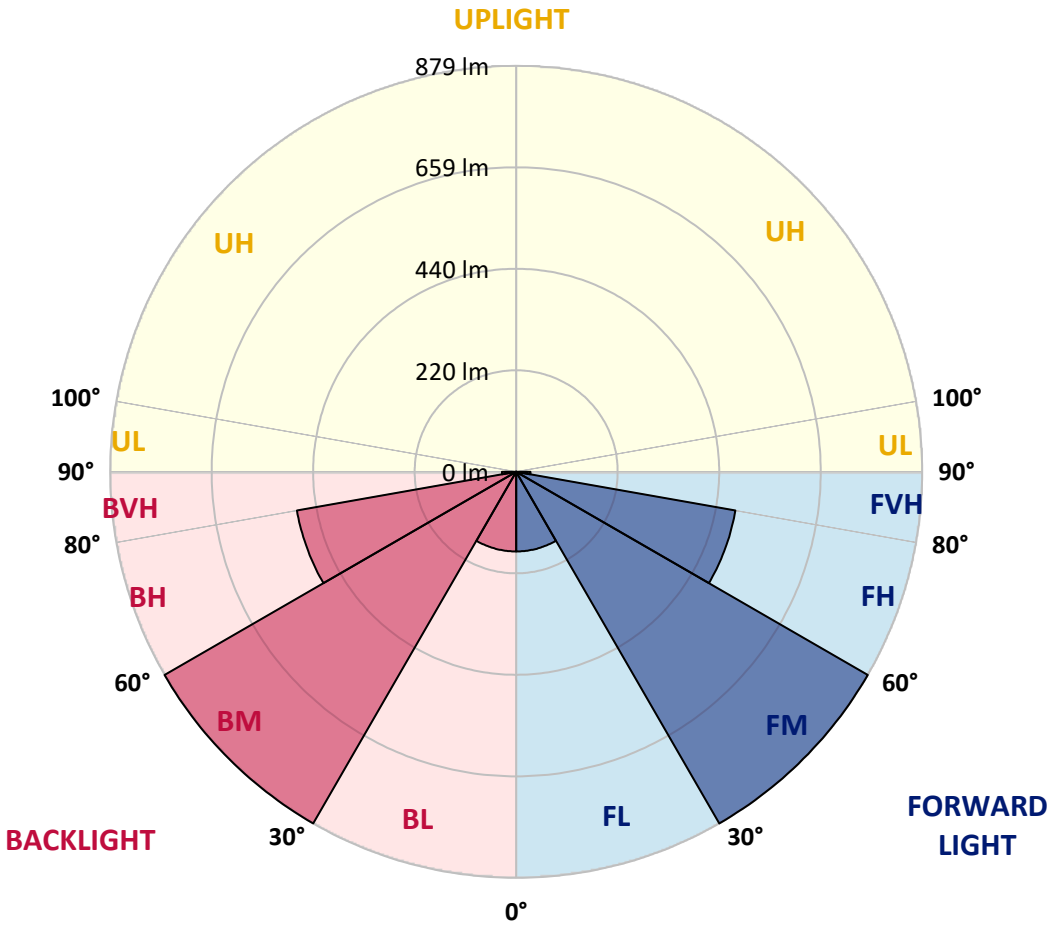
Scaled Data Report

REPORT NUMBER: P832575
CATALOG NUMBER: TTN-D1-750-U-WQ-SG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	172.4	5.5			
FM	(30°-60°)	879.2	28.1			
FH	(60°-80°)	482.0	15.4			G0/660
FVH	(80°-90°)	30.9	1.0			G1/100
BL	(0°-30°)	172.4	5.5	B1/500		
BM	(30°-60°)	879.2	28.1	B1/1000		
BH	(60°-80°)	482.0	15.4	B1/500		G0/660
BVH	(80°-90°)	30.9	1.0			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 V Short



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Scaled Data Report

REPORT NUMBER: P832575
CATALOG NUMBER: TTN-D1-750-U-WQ-SG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1
2.5°	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1
5°	320.9	320.9	318.1	320.9	320.9	320.9	320.9	320.9	320.9	320.9	320.9
7.5°	320.9	320.9	320.9	323.6	323.6	323.6	323.6	320.9	320.9	320.9	320.9
10°	326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4	326.4
12.5°	334.7	334.7	334.7	334.7	334.7	334.7	334.7	334.7	334.7	334.7	334.7
15°	348.5	348.5	348.5	348.5	351.3	351.3	351.3	348.5	348.5	348.5	348.5
17.5°	365.1	365.1	367.9	367.9	370.7	370.7	370.7	367.9	365.1	367.9	365.1
20°	390.0	390.0	390.0	392.8	395.6	392.8	395.6	390.0	390.0	390.0	390.0
22.5°	417.7	417.7	417.7	420.5	423.2	423.2	423.2	417.7	417.7	417.7	417.7
25°	450.9	450.9	450.9	453.7	456.4	459.2	459.2	453.7	450.9	450.9	448.1
27.5°	484.1	484.1	489.6	492.4	495.2	495.2	495.2	489.6	486.9	486.9	486.9
30°	522.8	522.8	528.4	531.1	536.6	536.6	536.6	528.4	525.6	522.8	522.8
32.5°	558.8	561.5	567.1	572.6	578.1	578.1	580.9	569.8	564.3	561.5	561.5
35°	597.5	600.3	605.8	614.1	619.6	622.4	625.2	614.1	605.8	603.0	603.0
37.5°	641.8	644.5	652.8	661.1	672.2	677.7	680.5	663.9	650.1	644.5	644.5
40°	691.6	694.3	702.6	713.7	724.8	730.3	733.1	716.5	702.6	697.1	694.3
42.5°	733.1	738.6	746.9	763.5	774.5	782.8	782.8	763.5	746.9	738.6	738.6
45°	771.8	777.3	791.1	807.7	824.3	832.6	829.9	810.5	791.1	780.1	777.3
47.5°	802.2	807.7	824.3	843.7	865.8	874.1	871.4	849.2	824.3	810.5	807.7
50°	818.8	821.6	840.9	868.6	890.7	899.0	893.5	871.4	843.7	824.3	821.6
52.5°	816.0	818.8	840.9	871.4	896.3	904.6	896.3	871.4	843.7	821.6	818.8
55°	799.4	802.2	824.3	857.5	882.4	890.7	882.4	857.5	827.1	805.0	802.2
57.5°	769.0	771.8	793.9	827.1	854.8	863.1	852.0	824.3	793.9	771.8	771.8
60°	724.8	727.5	749.7	785.6	810.5	818.8	805.0	782.8	752.4	727.5	724.8
62.5°	666.7	666.7	691.6	727.5	749.7	760.7	746.9	722.0	694.3	666.7	669.4
65°	597.5	594.7	619.6	652.8	677.7	686.0	672.2	650.1	622.4	597.5	597.5
67.5°	525.6	525.6	544.9	572.6	594.7	603.0	589.2	569.8	547.7	525.6	525.6
70°	448.1	448.1	462.0	489.6	509.0	514.5	506.2	486.9	467.5	448.1	448.1
72.5°	370.7	367.9	381.7	403.9	420.5	426.0	417.7	406.6	384.5	370.7	370.7
75°	293.2	290.5	298.8	318.1	331.9	337.5	329.2	320.9	304.3	293.2	293.2
77.5°	218.5	215.8	224.1	240.7	249.0	251.7	246.2	240.7	226.8	218.5	218.5
80°	149.4	146.6	152.1	163.2	171.5	171.5	168.7	166.0	154.9	149.4	152.1
82.5°	88.5	85.8	91.3	99.6	105.1	102.4	102.4	99.6	91.3	88.5	88.5
85°	38.7	36.0	38.7	44.3	49.8	47.0	47.0	47.0	41.5	38.7	38.7
87.5°	5.5	5.5	5.5	8.3	11.1	8.3	8.3	8.3	5.5	5.5	5.5
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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Peachtree City, GA 30269

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-3

Test Date: 11/21/2024

Luminaire Tested: TTN-D0-750-U-WQ

Data in this report applies to TT and TTN families of products

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

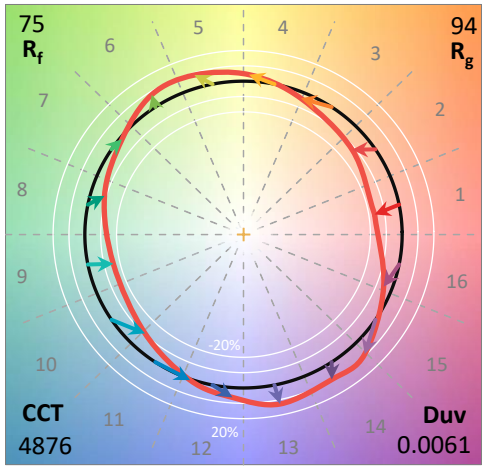
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2411-284-3
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	11/21/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	MCGRAW EDISON
Catalog Number:	**TTN-D0-750-U-WQ**
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 5000K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	4876
CIE u':	0.2086
CIE v':	0.4932
Duv:	0.0061
CIE x:	0.3502
CIE y:	0.3680
CIE z:	0.2818
Peak Wavelength (nm):	451
Dominant Wavelength (nm):	569
Purity:	15.51324
Rf:	74.6
Rg:	94.4

CRI (Ra):	72.6
R1:	69.5
R2:	77.0
R3:	82.2
R4:	72.6
R5:	69.3
R6:	67.6
R7:	83.7
R8:	58.6
R9:	-24.6
R10:	44.8
R11:	68.2
R12:	36.1
R13:	70.5
R14:	89.9
R15:	63.1



Test Conditions

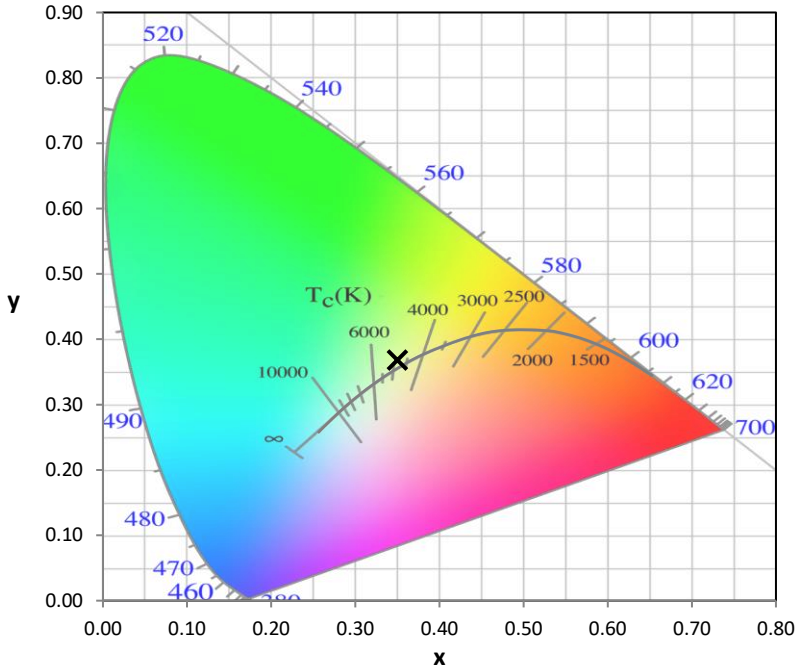
Stabilization Time:	51M
Operation Time:	1H 51M
Sphere Temperature (°C):	24.9

REPORT NUMBER: SP1-2411-284-3

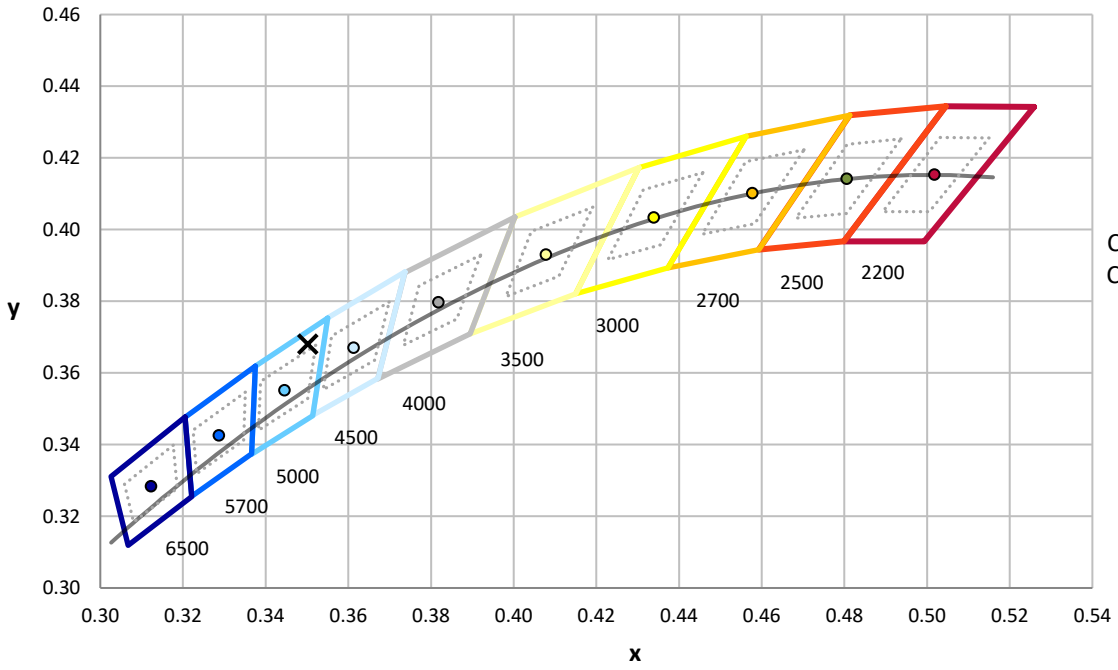
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-3

CIE 1931 Chromaticity Diagram



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

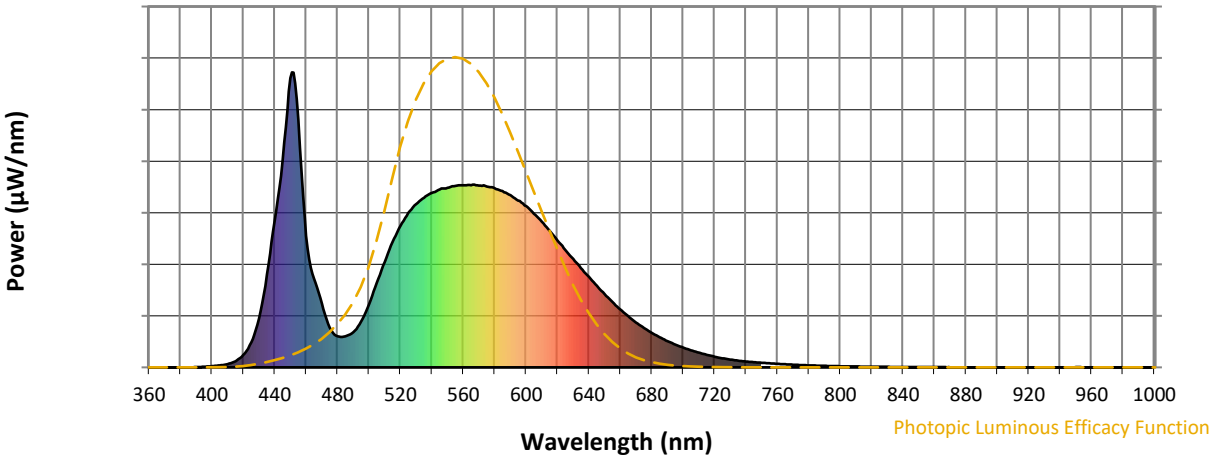


CCT = 4876K
CIE x = 0.3502
CIE y = 0.3680
Duv = 0.0061

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2411-284-3

Photopic Flux vs. Wavelength

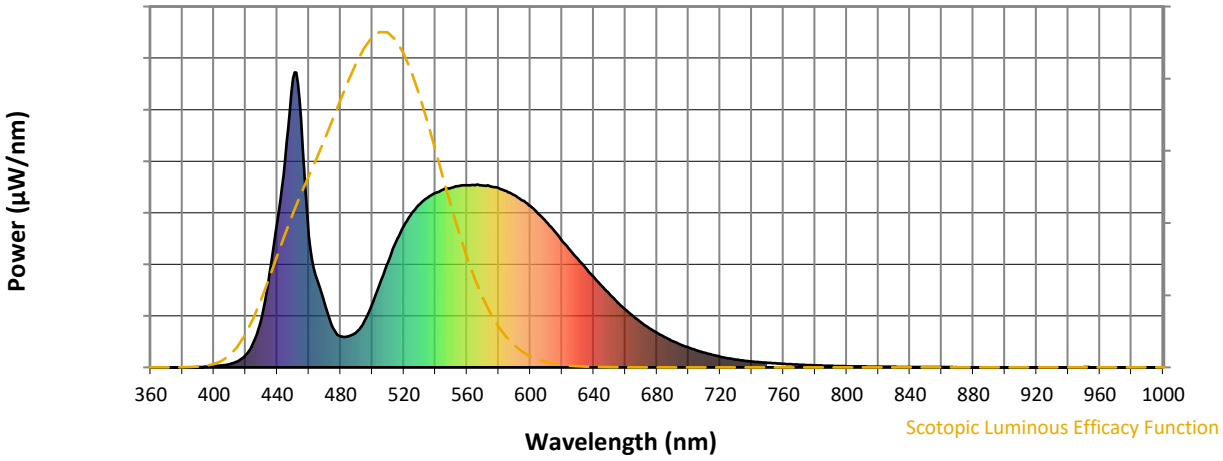


Photopic Lumens: NR

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	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	398	NR	755	14	NR	885	0	NR
370	0	NR	500	214	NR	630	368	NR	760	12	NR	890	0	NR
375	0	NR	505	286	NR	635	336	NR	765	11	NR	895	0	NR
380	0	NR	510	357	NR	640	306	NR	770	9	NR	900	0	NR
385	0	NR	515	425	NR	645	276	NR	775	8	NR	905	0	NR
390	1	NR	520	480	NR	650	248	NR	780	7	NR	910	0	NR
395	2	NR	525	523	NR	655	221	NR	785	6	NR	915	0	NR
400	4	NR	530	554	NR	660	196	NR	790	5	NR	920	0	NR
405	7	NR	535	575	NR	665	173	NR	795	4	NR	925	0	NR
410	11	NR	540	592	NR	670	152	NR	800	4	NR	930	0	NR
415	21	NR	545	603	NR	675	133	NR	805	3	NR	935	0	NR
420	42	NR	550	609	NR	680	117	NR	810	3	NR	940	0	NR
425	85	NR	555	615	NR	685	102	NR	815	3	NR	945	0	NR
430	165	NR	560	617	NR	690	89	NR	820	2	NR	950	1	NR
435	316	NR	565	617	NR	695	77	NR	825	2	NR	955	0	NR
440	497	NR	570	616	NR	700	67	NR	830	2	NR	960	0	NR
445	702	NR	575	613	NR	705	58	NR	835	2	NR	965	0	NR
450	981	NR	580	607	NR	710	50	NR	840	1	NR	970	0	NR
455	840	NR	585	598	NR	715	43	NR	845	1	NR	975	0	NR
460	446	NR	590	583	NR	720	36	NR	850	1	NR	980	0	NR
465	300	NR	595	566	NR	725	31	NR	855	1	NR	985	0	NR
470	215	NR	600	546	NR	730	26	NR	860	1	NR	990	0	NR
475	135	NR	605	521	NR	735	23	NR	865	1	NR	995	0	NR
480	105	NR	610	494	NR	740	20	NR	870	1	NR	1000	0	NR
485	106	NR	615	463	NR	745	18	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-3

Scotopic Flux vs. Wavelength

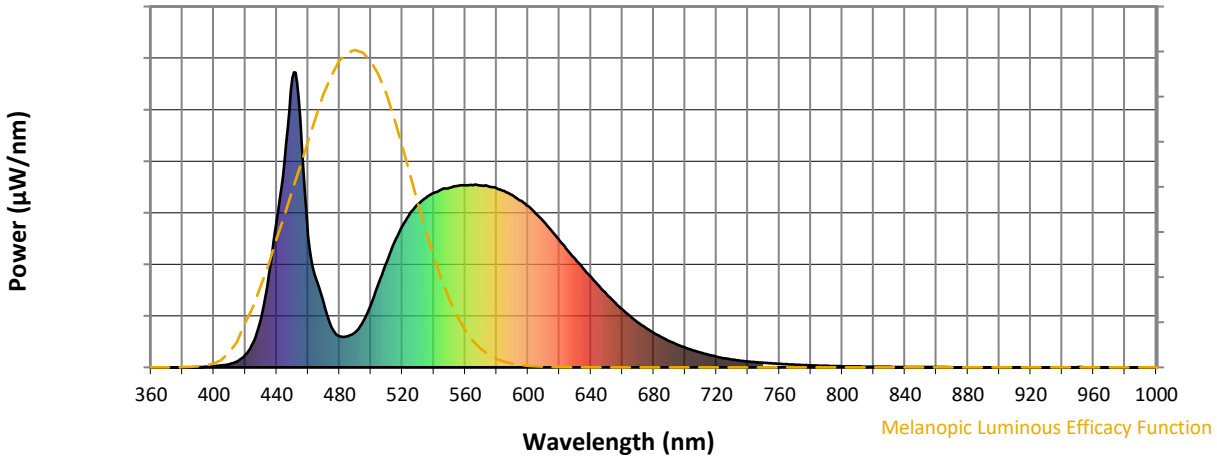


Scotopic Lumens: NR **S/P: 1.74**

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	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	398	NR	755	14	NR	885	0	NR
370	0	NR	500	214	NR	630	368	NR	760	12	NR	890	0	NR
375	0	NR	505	286	NR	635	336	NR	765	11	NR	895	0	NR
380	0	NR	510	357	NR	640	306	NR	770	9	NR	900	0	NR
385	0	NR	515	425	NR	645	276	NR	775	8	NR	905	0	NR
390	1	NR	520	480	NR	650	248	NR	780	7	NR	910	0	NR
395	2	NR	525	523	NR	655	221	NR	785	6	NR	915	0	NR
400	4	NR	530	554	NR	660	196	NR	790	5	NR	920	0	NR
405	7	NR	535	575	NR	665	173	NR	795	4	NR	925	0	NR
410	11	NR	540	592	NR	670	152	NR	800	4	NR	930	0	NR
415	21	NR	545	603	NR	675	133	NR	805	3	NR	935	0	NR
420	42	NR	550	609	NR	680	117	NR	810	3	NR	940	0	NR
425	85	NR	555	615	NR	685	102	NR	815	3	NR	945	0	NR
430	165	NR	560	617	NR	690	89	NR	820	2	NR	950	1	NR
435	316	NR	565	617	NR	695	77	NR	825	2	NR	955	0	NR
440	497	NR	570	616	NR	700	67	NR	830	2	NR	960	0	NR
445	702	NR	575	613	NR	705	58	NR	835	2	NR	965	0	NR
450	981	NR	580	607	NR	710	50	NR	840	1	NR	970	0	NR
455	840	NR	585	598	NR	715	43	NR	845	1	NR	975	0	NR
460	446	NR	590	583	NR	720	36	NR	850	1	NR	980	0	NR
465	300	NR	595	566	NR	725	31	NR	855	1	NR	985	0	NR
470	215	NR	600	546	NR	730	26	NR	860	1	NR	990	0	NR
475	135	NR	605	521	NR	735	23	NR	865	1	NR	995	0	NR
480	105	NR	610	494	NR	740	20	NR	870	1	NR	1000	0	NR
485	106	NR	615	463	NR	745	18	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.51**

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	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	398	NR	755	14	NR	885	0	NR
370	0	NR	500	214	NR	630	368	NR	760	12	NR	890	0	NR
375	0	NR	505	286	NR	635	336	NR	765	11	NR	895	0	NR
380	0	NR	510	357	NR	640	306	NR	770	9	NR	900	0	NR
385	0	NR	515	425	NR	645	276	NR	775	8	NR	905	0	NR
390	1	NR	520	480	NR	650	248	NR	780	7	NR	910	0	NR
395	2	NR	525	523	NR	655	221	NR	785	6	NR	915	0	NR
400	4	NR	530	554	NR	660	196	NR	790	5	NR	920	0	NR
405	7	NR	535	575	NR	665	173	NR	795	4	NR	925	0	NR
410	11	NR	540	592	NR	670	152	NR	800	4	NR	930	0	NR
415	21	NR	545	603	NR	675	133	NR	805	3	NR	935	0	NR
420	42	NR	550	609	NR	680	117	NR	810	3	NR	940	0	NR
425	85	NR	555	615	NR	685	102	NR	815	3	NR	945	0	NR
430	165	NR	560	617	NR	690	89	NR	820	2	NR	950	1	NR
435	316	NR	565	617	NR	695	77	NR	825	2	NR	955	0	NR
440	497	NR	570	616	NR	700	67	NR	830	2	NR	960	0	NR
445	702	NR	575	613	NR	705	58	NR	835	2	NR	965	0	NR
450	981	NR	580	607	NR	710	50	NR	840	1	NR	970	0	NR
455	840	NR	585	598	NR	715	43	NR	845	1	NR	975	0	NR
460	446	NR	590	583	NR	720	36	NR	850	1	NR	980	0	NR
465	300	NR	595	566	NR	725	31	NR	855	1	NR	985	0	NR
470	215	NR	600	546	NR	730	26	NR	860	1	NR	990	0	NR
475	135	NR	605	521	NR	735	23	NR	865	1	NR	995	0	NR
480	105	NR	610	494	NR	740	20	NR	870	1	NR	1000	0	NR
485	106	NR	615	463	NR	745	18	NR	875	0	NR			

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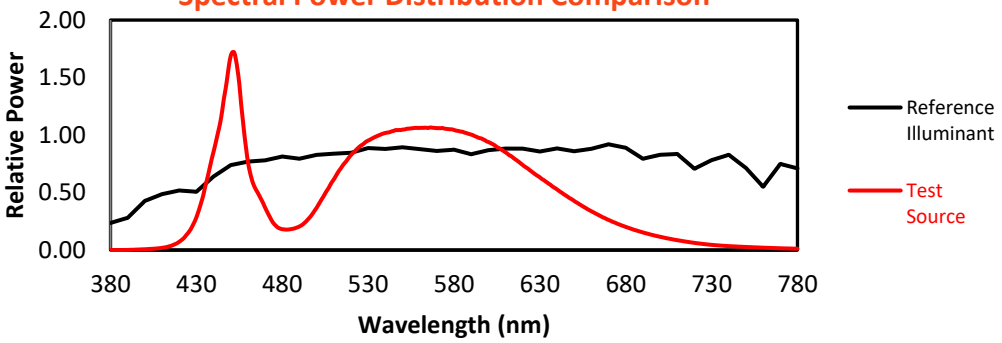
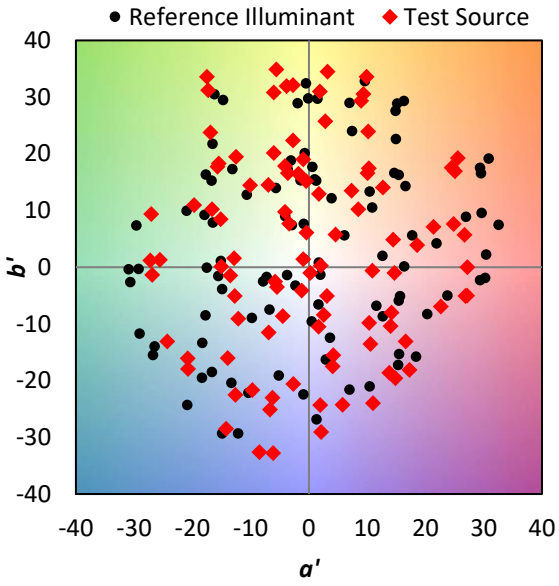
Summary

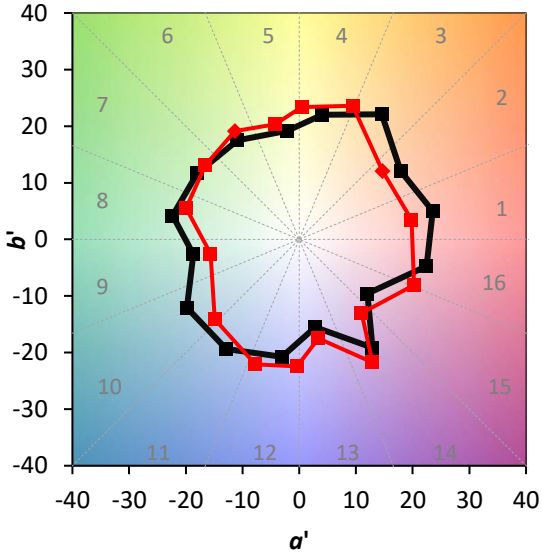
R_f = 74.6
R_g = 94.4
CIE R_a = 72.6
R_9 = -24.6

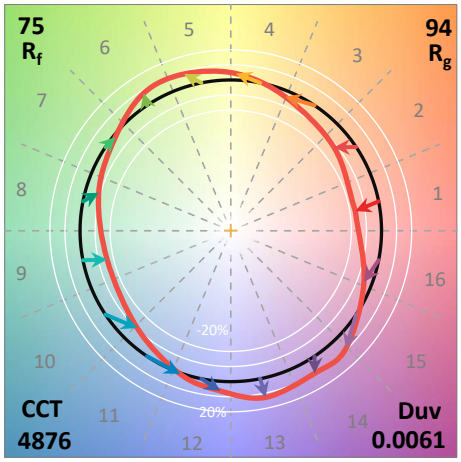
Spectral Power Distribution Comparison

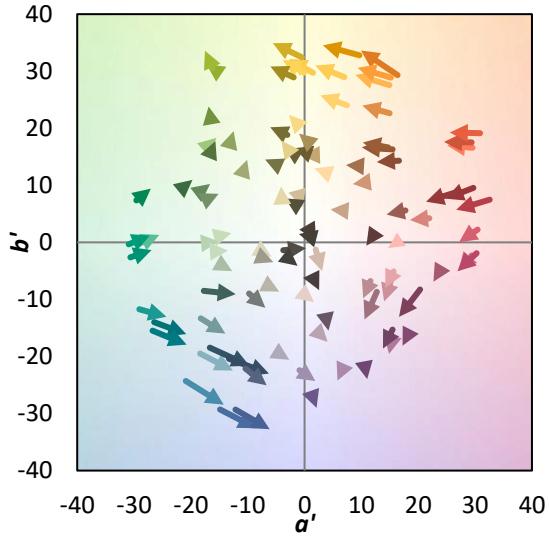


Color Vector Graphics









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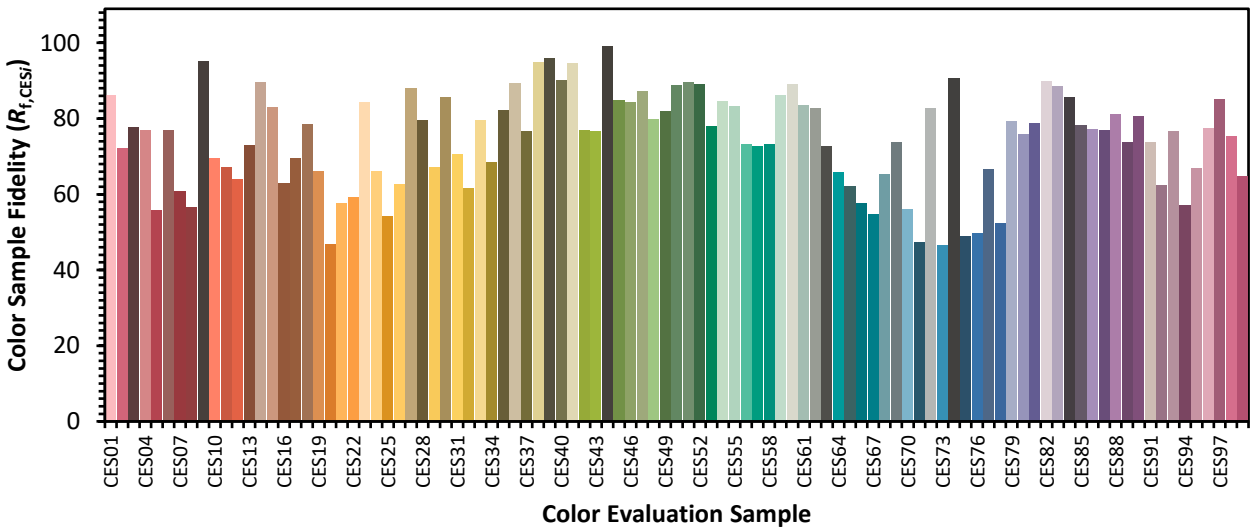
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 63	CES51 = 90	CES76 = 50
CES02 = 59	CES27 = 88	CES52 = 89	CES77 = 67
CES03 = 30	CES28 = 80	CES53 = 78	CES78 = 52
CES04 = 69	CES29 = 67	CES54 = 85	CES79 = 79
CES05 = 46	CES30 = 86	CES55 = 83	CES80 = 76
CES06 = 50	CES31 = 70	CES56 = 73	CES81 = 79
CES07 = 39	CES32 = 62	CES57 = 73	CES82 = 90
CES08 = 38	CES33 = 80	CES58 = 73	CES83 = 89
CES09 = 29	CES34 = 69	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 82	CES60 = 89	CES85 = 78
CES11 = 55	CES36 = 89	CES61 = 83	CES86 = 77
CES12 = 61	CES37 = 77	CES62 = 83	CES87 = 77
CES13 = 41	CES38 = 95	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 96	CES64 = 66	CES89 = 74
CES15 = 70	CES40 = 90	CES65 = 62	CES90 = 81
CES16 = 46	CES41 = 95	CES66 = 58	CES91 = 74
CES17 = 49	CES42 = 77	CES67 = 55	CES92 = 62
CES18 = 55	CES43 = 77	CES68 = 65	CES93 = 77
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 57
CES20 = 64	CES45 = 85	CES70 = 56	CES95 = 67
CES21 = 85	CES46 = 84	CES71 = 47	CES96 = 77
CES22 = 77	CES47 = 87	CES72 = 83	CES97 = 85
CES23 = 91	CES48 = 80	CES73 = 46	CES98 = 75
CES24 = 90	CES49 = 82	CES74 = 91	CES99 = 65
CES25 = 71	CES50 = 89	CES75 = 49	



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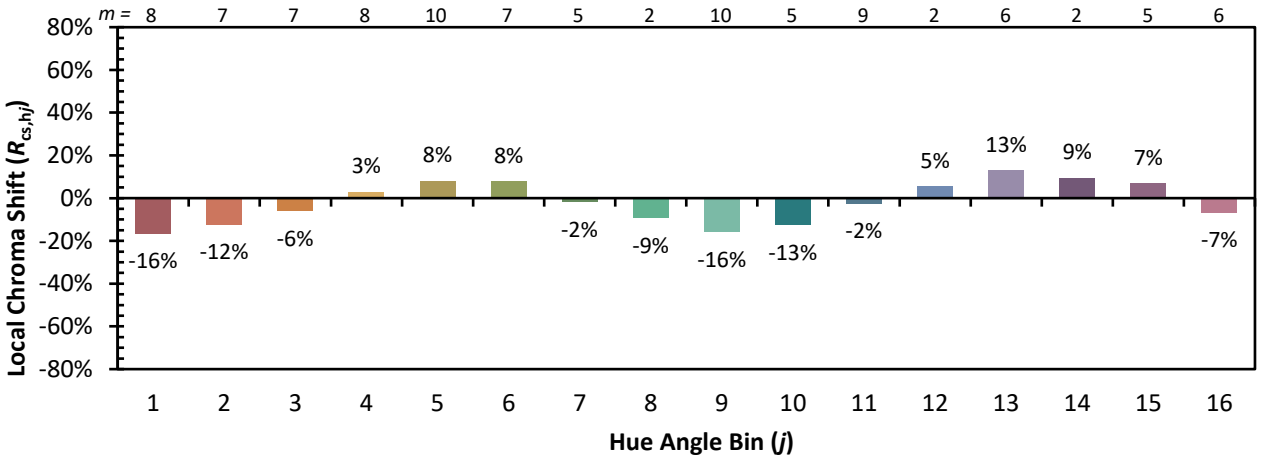
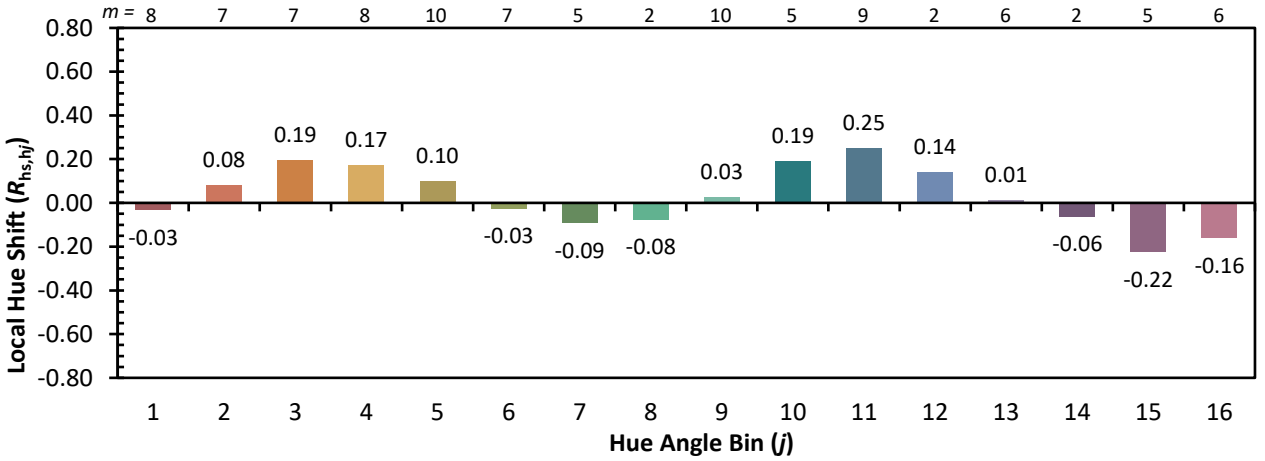
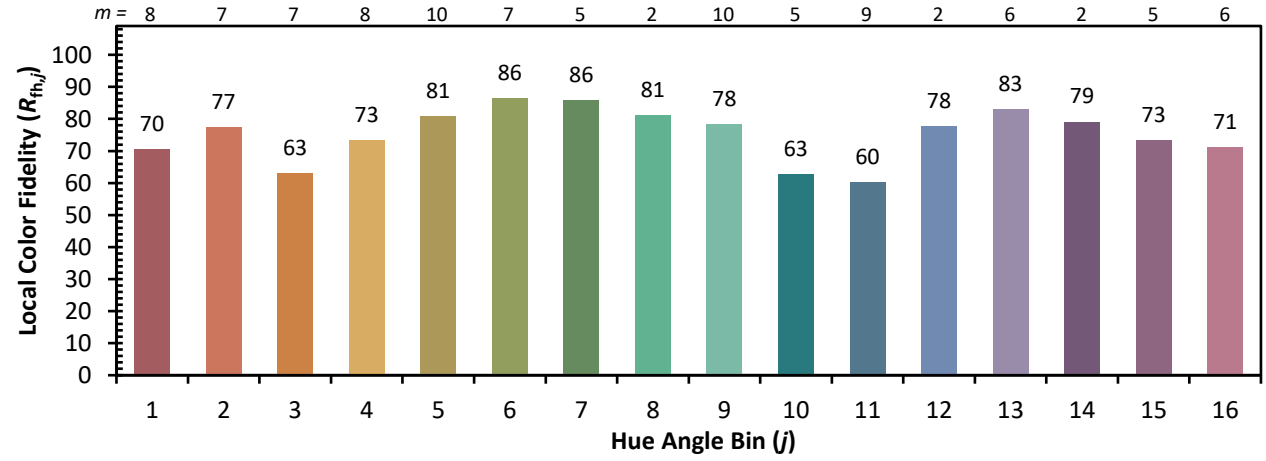
Color Rendition by Hue-Angle Bin







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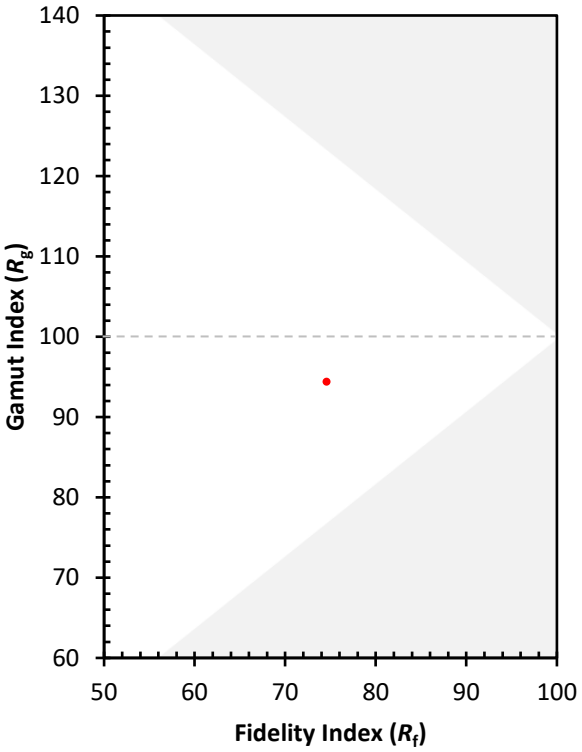
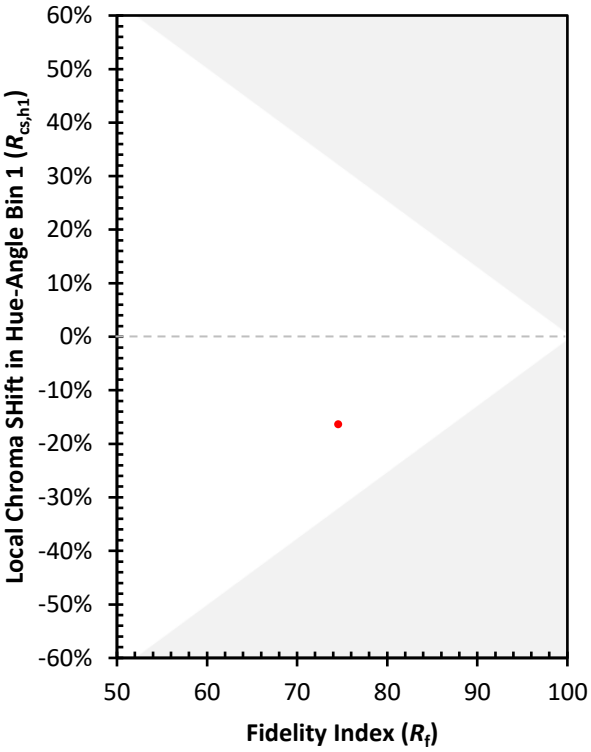
Measure Comparisons





(END OF REPORT)