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: P832960

Luminaire Tested: **TTN-D0-830-U-MQ-CG-UPL1**

Issue Date: 5/15/2024

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:	P832960
	REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G3-2308-121-4) AND
Test Lab:	INNOVATION CENTER
Issue Date:	5/15/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TTN-D0-830-U-MQ-CG-UPL1
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
	3000K, 80 CRI LEDS AND MEDIUM DISTRIBUTION WITH CLEAR GLASS
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1399.9 lumens
Efficiency:	N/A
Efficacy:	105.3 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification:	Type V - Short
BUG Rating:	B1 - U3 - G1

Input Watts (W):	13.3
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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REPORT NUMBER: P832960
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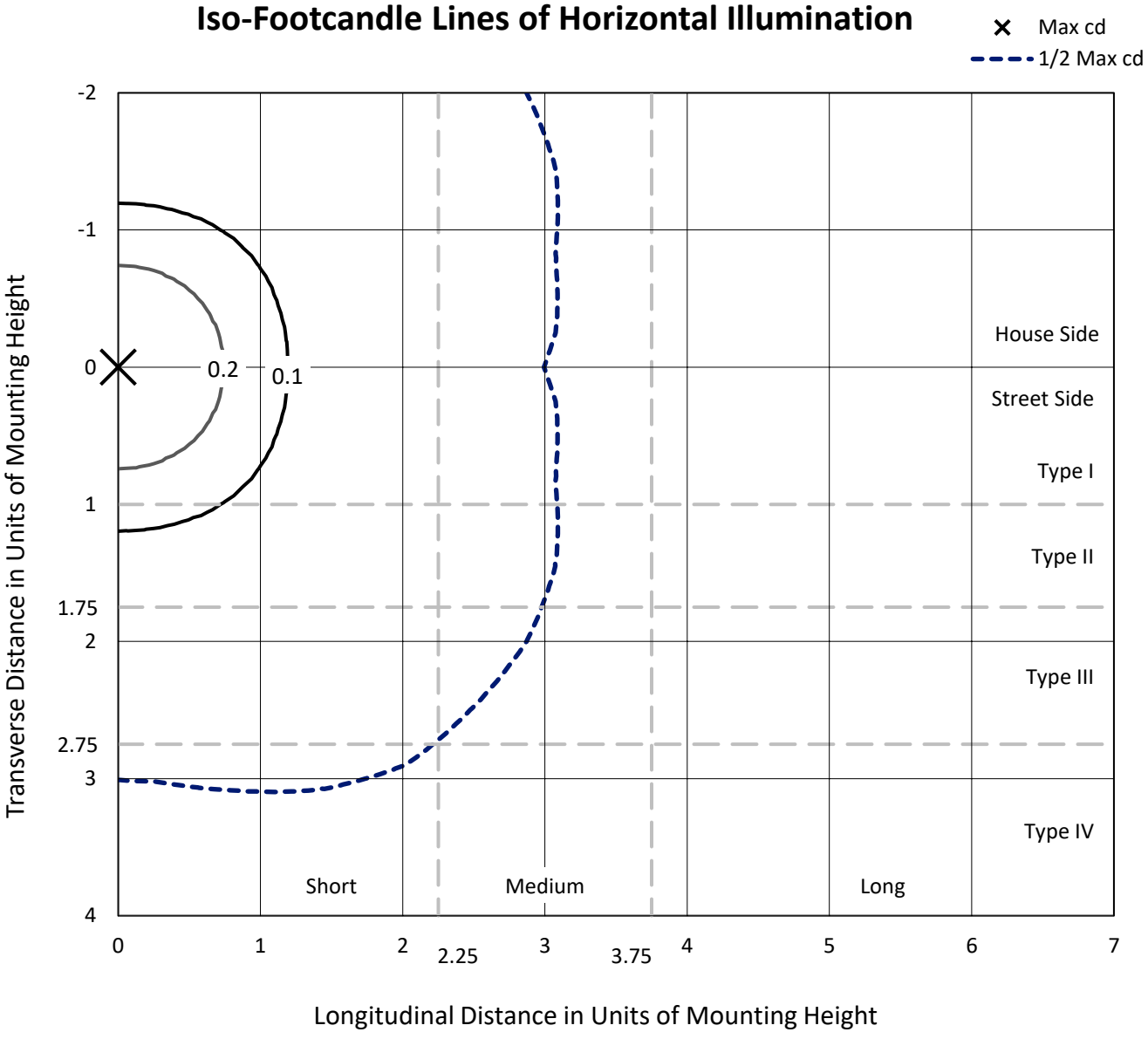
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 0.4 fc
Type V - Short - N/A

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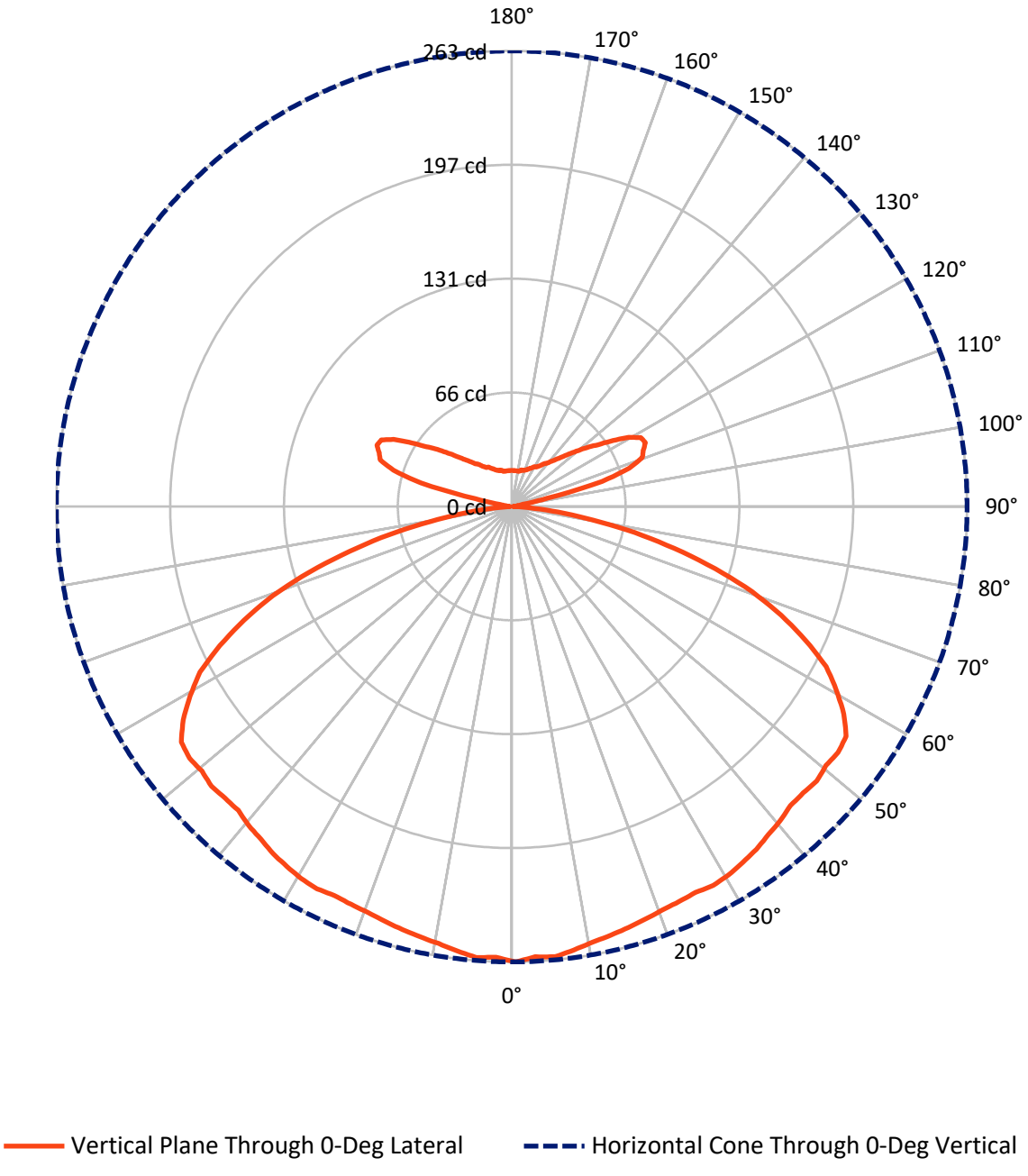
Luminous Intensity Polar Plot



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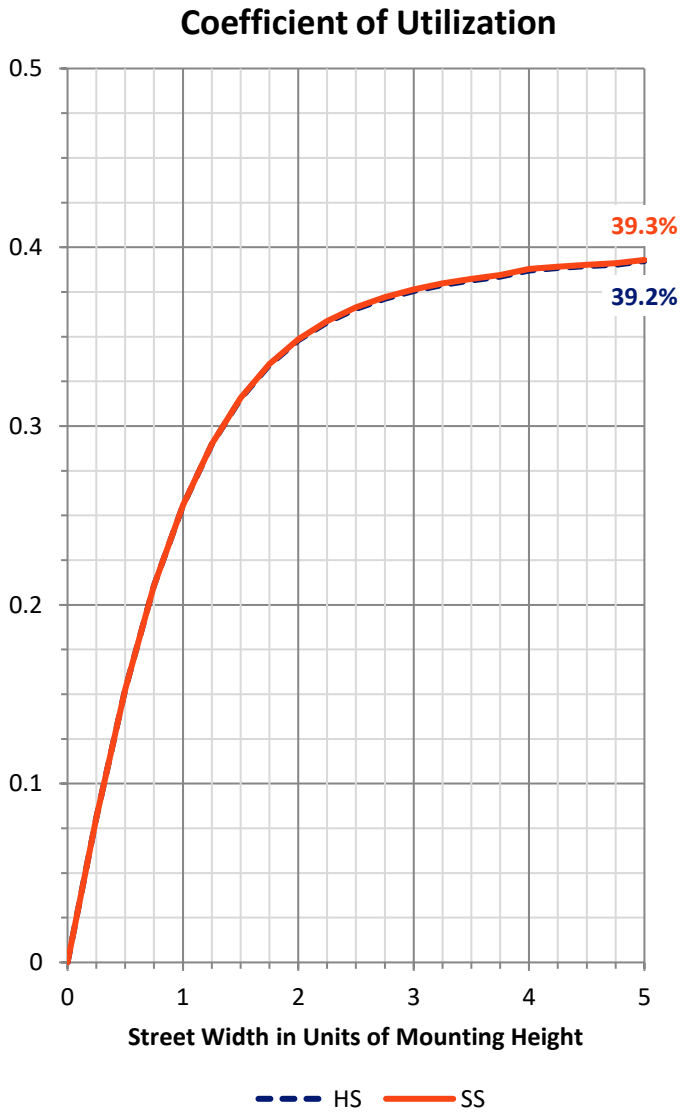
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	552.2	147.7	699.9
	% Fixture	39.4	10.6	50.0
Street Side	Lumens	552.2	147.7	699.9
	% Fixture	39.4	10.6	50.0
Total	Lumens	1104.4	295.5	1399.9
	% Fixture	78.9	21.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.7	1.8
10°-20°	71.4	5.1
20°-30°	114.8	8.2
30°-40°	153.3	11.0
40°-50°	186.3	13.3
50°-60°	216.5	15.5
60°-70°	199.7	14.3
70°-80°	116.9	8.4
80°-90°	20.9	1.5
90°-100°	6.6	0.5
100°-110°	67.0	4.8
110°-120°	98.0	7.0
120°-130°	56.9	4.1
130°-140°	30.1	2.2
140°-150°	17.9	1.3
150°-160°	11.0	0.8
160°-170°	6.0	0.4
170°-180°	2.0	0.1
0°-90°	1104.4	78.9
0°-180°	1399.9	100.0



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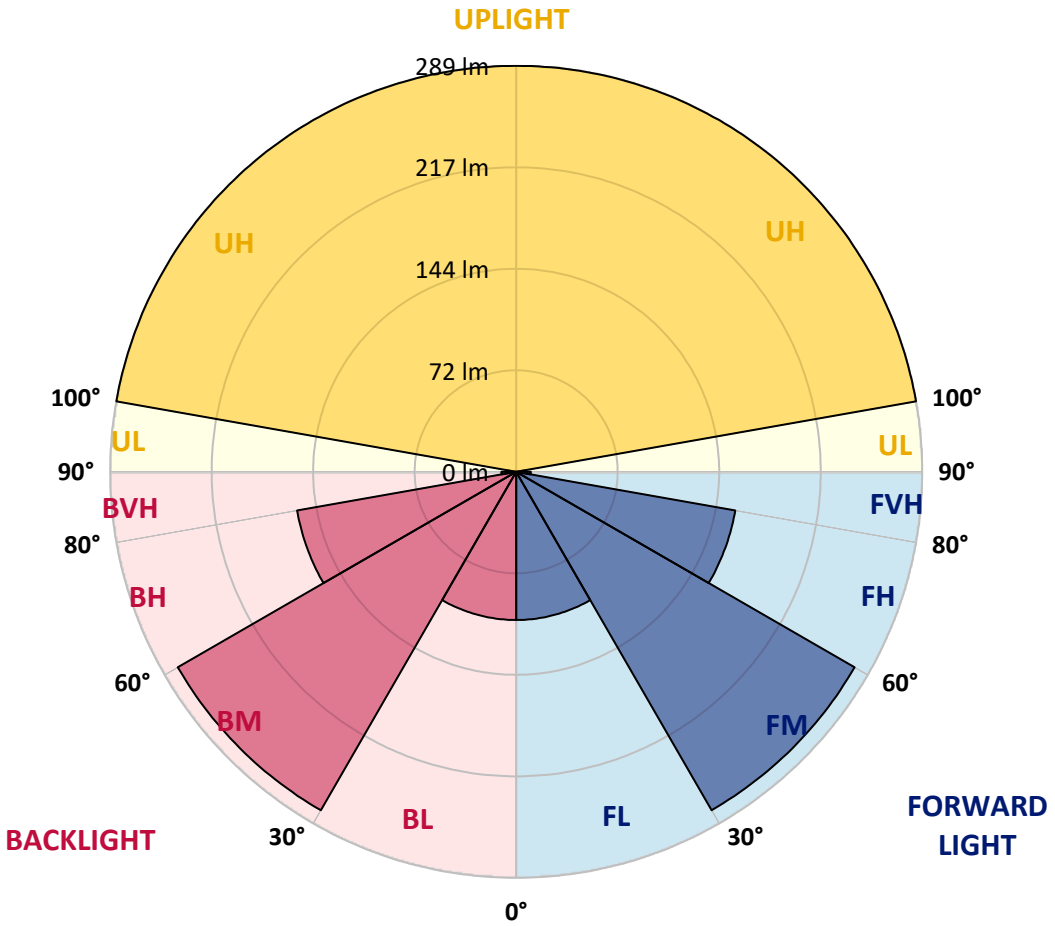
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	105.4	7.5			
FM	(30°-60°)	278.0	19.9			
FH	(60°-80°)	158.3	11.3			G0/660
FVH	(80°-90°)	10.4	0.7			G1/100
BL	(0°-30°)	105.4	7.5	B0/110		
BM	(30°-60°)	278.0	19.9	B1/1000		
BH	(60°-80°)	158.3	11.3	B1/500		G0/660
BVH	(80°-90°)	10.4	0.7			G1/100
UL	(90°-100°)	6.6	0.5		U1/10	
UH	(100°-180°)	288.9	20.6		U3/500	

BUG Rating: B1-U3-G1
Type V Short



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REPORT NUMBER: P832960
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	262.6	262.6	262.6	262.6	262.6	262.6	262.6	262.6	262.6	262.6	262.6
2.5°	260.0	260.8	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.8
5°	260.8	260.8	260.8	260.8	260.0	260.0	260.0	260.0	260.0	260.8	260.8
7.5°	258.2	258.2	258.2	258.2	258.2	257.3	258.2	258.2	258.2	258.2	258.2
10°	255.5	255.5	255.5	255.5	255.5	255.5	255.5	255.5	255.5	255.5	255.5
12.5°	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	252.8	252.8
15°	251.9	251.9	251.9	251.9	252.8	252.8	251.9	251.9	251.9	251.9	251.9
17.5°	250.1	250.1	250.1	250.1	251.0	251.0	251.0	250.1	250.1	250.1	250.1
20°	248.3	248.3	248.3	248.3	249.2	249.2	249.2	249.2	249.2	248.3	248.3
22.5°	247.4	247.4	247.4	247.4	248.3	248.3	248.3	248.3	247.4	247.4	247.4
25°	246.5	247.4	247.4	247.4	248.3	249.2	249.2	248.3	247.4	246.5	246.5
27.5°	247.4	247.4	247.4	248.3	248.3	249.2	249.2	248.3	247.4	247.4	247.4
30°	246.5	246.5	246.5	247.4	248.3	249.2	248.3	248.3	247.4	246.5	246.5
32.5°	244.7	244.7	245.6	246.5	247.4	247.4	247.4	246.5	245.6	244.7	244.7
35°	242.9	242.9	242.9	243.8	245.6	245.6	245.6	244.7	243.8	242.9	242.0
37.5°	240.2	241.1	241.1	242.9	243.8	244.7	243.8	242.9	241.1	240.2	240.2
40°	238.4	238.4	239.3	241.1	242.9	242.9	242.0	241.1	239.3	238.4	238.4
42.5°	235.7	235.7	237.5	239.3	242.0	242.0	241.1	239.3	237.5	235.7	235.7
45°	235.7	235.7	237.5	241.1	242.9	244.7	242.9	241.1	237.5	235.7	234.9
47.5°	236.6	236.6	238.4	242.9	246.5	248.3	245.6	242.0	238.4	236.6	235.7
50°	234.9	235.7	239.3	243.8	248.3	249.2	248.3	242.9	239.3	234.9	234.9
52.5°	235.7	235.7	240.2	247.4	251.9	253.7	251.9	247.4	239.3	234.9	234.9
55°	234.0	233.1	239.3	247.4	254.6	258.2	254.6	247.4	238.4	233.1	232.2
57.5°	225.9	225.9	234.0	242.0	251.0	252.8	250.1	242.0	233.1	225.9	224.1
60°	215.1	216.0	224.1	233.1	241.1	242.0	240.2	233.1	224.1	216.0	213.3
62.5°	203.5	205.3	213.3	222.3	232.2	234.0	231.3	222.3	211.5	206.2	201.7
65°	186.4	189.1	198.1	208.0	218.7	217.8	217.8	207.1	199.0	190.0	185.6
67.5°	167.6	170.3	176.6	190.0	199.0	198.1	197.2	190.0	176.6	170.3	167.6
70°	147.0	148.8	155.1	168.5	176.6	177.5	174.8	167.6	155.1	150.6	146.1
72.5°	122.8	123.7	132.7	143.4	151.5	150.6	149.7	143.4	131.8	127.3	121.9
75°	96.8	97.7	105.8	115.6	121.9	121.0	120.1	115.6	105.8	100.4	95.9
77.5°	72.6	71.7	79.8	86.9	90.5	91.4	89.6	86.1	78.9	74.4	71.7
80°	47.5	46.6	53.8	59.2	61.9	61.9	61.0	58.3	52.9	49.3	47.5
82.5°	26.9	26.0	30.5	34.1	36.8	35.9	35.0	33.2	30.5	27.8	26.0
85°	9.9	9.9	12.5	14.3	16.1	16.1	15.2	14.3	11.7	10.8	9.9
87.5°	0.9	0.9	1.8	2.7	2.7	2.7	1.8	1.8	0.9	0.9	0.9
90°	2.5	2.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5	2.5
92.5°	2.5	2.5	2.5	3.5	4.0	3.5	4.0	3.0	3.0	2.5	2.5
95°	3.0	3.0	3.5	4.5	5.6	6.1	6.1	3.5	3.5	3.0	3.0
97.5°	4.0	4.5	4.5	5.6	9.1	16.7	10.1	5.1	5.1	4.5	4.0
100°	6.6	7.1	7.1	12.6	26.8	35.9	25.8	13.1	9.6	7.1	7.1
102.5°	21.2	22.2	27.3	40.9	60.7	55.1	46.5	44.0	30.3	24.3	23.3
105°	54.1	53.6	57.6	68.2	84.9	83.4	76.8	69.8	60.2	55.6	55.6
107.5°	71.3	71.3	74.8	83.9	96.6	112.7	114.2	90.5	79.4	74.3	73.8
110°	80.4	80.4	83.4	91.0	107.7	130.4	129.4	111.7	98.1	91.5	90.5

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REPORT NUMBER: P832960
CATALOG NUMBER: TTN-D0-830-U-MQ-CG-UPL1

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	*82.4*	82.9	86.9	98.6	116.8	126.9	122.3	115.3	109.2	104.1	103.1
115°	*85.4*	85.4	90.0	101.1	111.2	115.3	110.2	104.6	100.6	98.6	99.6
117.5°	*84.4*	85.9	86.9	93.0	99.6	102.6	100.1	92.5	89.5	88.5	86.9
120°	*78.4*	78.4	79.4	82.4	85.9	87.5	86.4	81.4	78.9	78.4	77.3
122.5°	*69.8*	70.3	69.8	71.3	73.8	75.3	74.3	70.3	69.3	69.3	68.2
125°	*61.2*	61.2	60.7	61.7	63.2	62.7	63.2	61.2	60.7	60.7	60.2
127.5°	*55.1*	54.6	53.6	54.1	54.6	54.6	55.1	53.1	53.6	54.1	53.6
130°	*49.0*	49.0	48.0	48.0	48.0	47.0	48.0	47.0	47.5	48.0	48.5
132.5°	*43.5*	43.5	42.0	41.5	41.5	41.5	42.0	41.5	42.5	43.5	43.5
135°	*38.9*	38.9	37.4	37.9	37.9	37.4	37.9	37.4	38.4	38.9	38.9
137.5°	*35.4*	35.4	34.4	34.4	34.4	33.9	34.4	34.4	34.9	35.9	36.4
140°	*32.4*	32.4	31.8	31.8	31.3	31.8	31.8	31.8	32.4	32.9	32.9
142.5°	*30.8*	30.3	29.8	29.3	29.8	29.8	29.8	29.3	29.8	30.8	30.8
145°	*28.3*	28.3	27.8	27.8	27.8	28.3	27.8	27.8	28.3	28.3	28.8
147.5°	*26.8*	26.8	26.3	26.8	26.8	26.8	26.8	26.3	26.8	26.8	27.3
150°	*26.3*	25.8	25.3	25.8	25.8	25.3	25.3	25.3	25.3	25.8	25.8
152.5°	*24.8*	24.8	24.3	24.8	24.3	24.3	24.3	24.3	24.3	24.8	25.3
155°	*23.8*	23.8	23.3	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
157.5°	*22.7*	23.3	22.7	22.7	22.7	22.7	22.7	22.7	22.7	23.3	23.3
160°	*22.2*	22.2	22.2	22.2	21.7	21.7	21.7	22.2	22.2	22.2	22.7
162.5°	*21.7*	21.7	21.7	21.7	21.2	21.2	21.2	21.2	21.7	21.7	22.2
165°	*21.7*	21.2	21.2	21.2	20.7	20.7	20.7	20.7	21.2	21.7	21.2
167.5°	*20.7*	20.7	20.7	20.7	20.7	20.2	20.2	20.7	20.7	20.7	21.2
170°	*20.7*	20.7	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.7
172.5°	*20.7*	20.7	20.7	20.7	20.2	20.2	20.2	20.2	20.2	20.7	20.7
175°	*20.7*	20.7	20.7	20.7	20.2	20.2	20.2	20.7	20.7	20.7	20.2
177.5°	*20.7*	20.7	20.7	20.7	20.2	20.7	20.7	20.7	20.7	20.7	20.7
180°	*20.7*	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7

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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 TT and TTN families of products

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

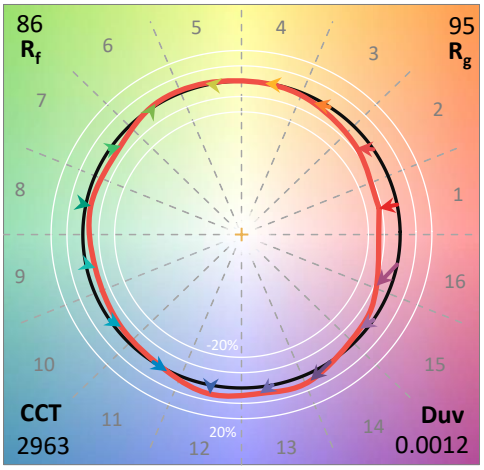
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2411-284-4
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
Rf:	86.1
Rg:	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



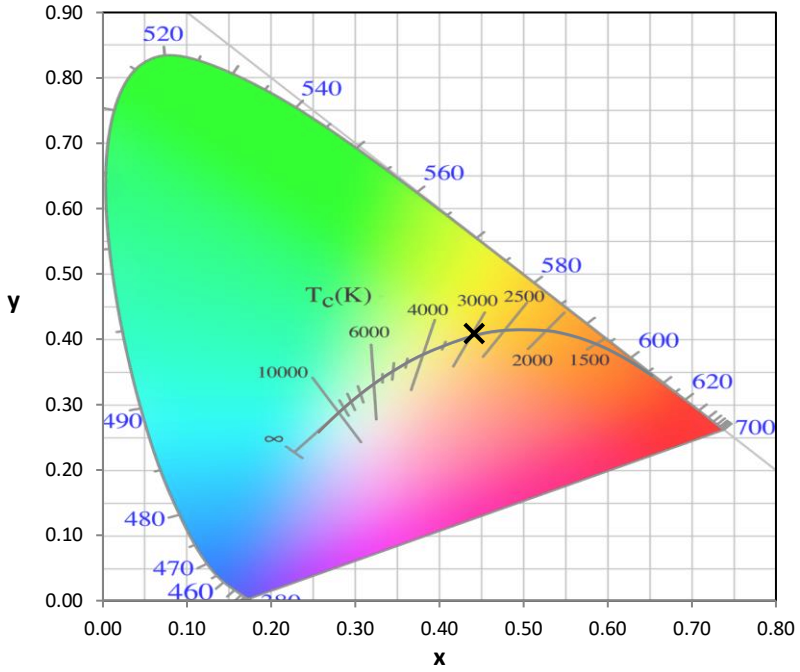
Test Conditions

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

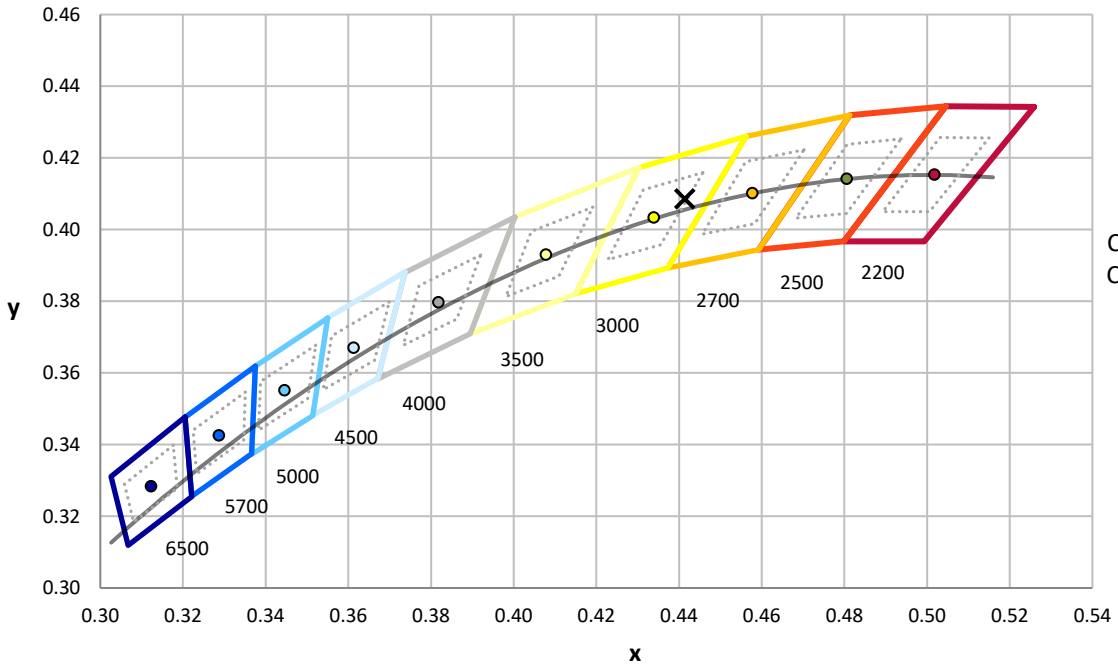
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-4

CIE 1931 Chromaticity Diagram



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

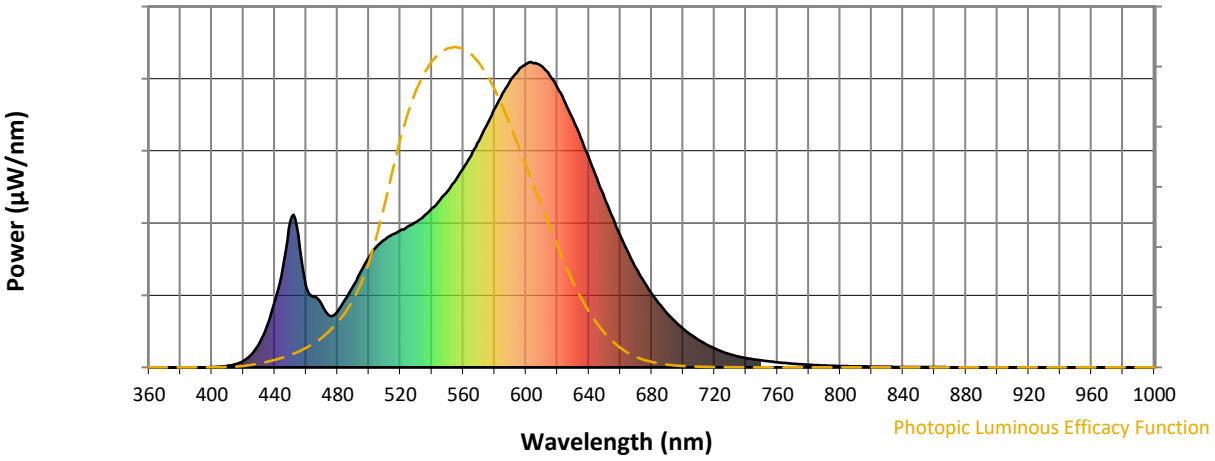


CCT = 2963K
CIE x = 0.4414
CIE y = 0.4086
Duv = 0.0012

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2411-284-4

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	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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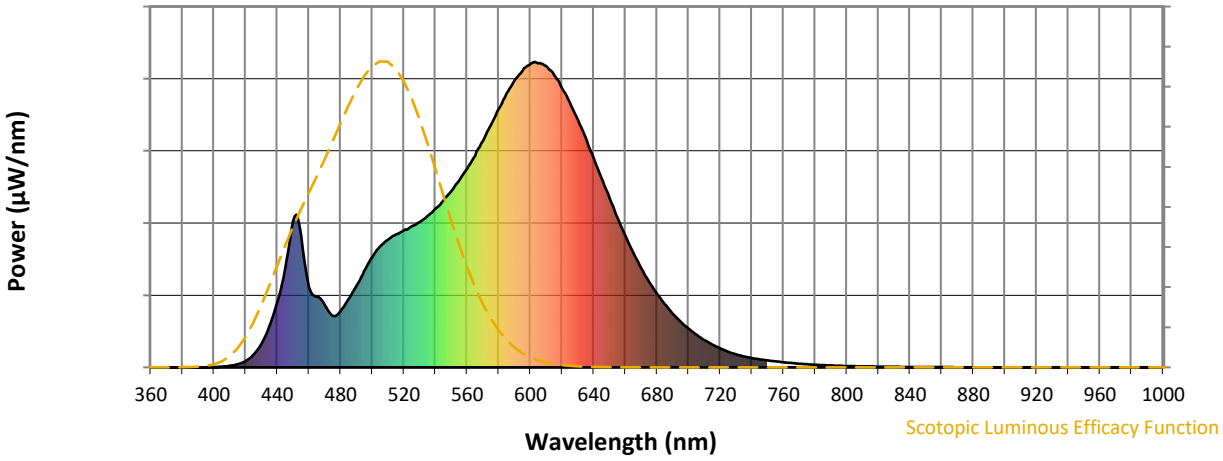
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.34**

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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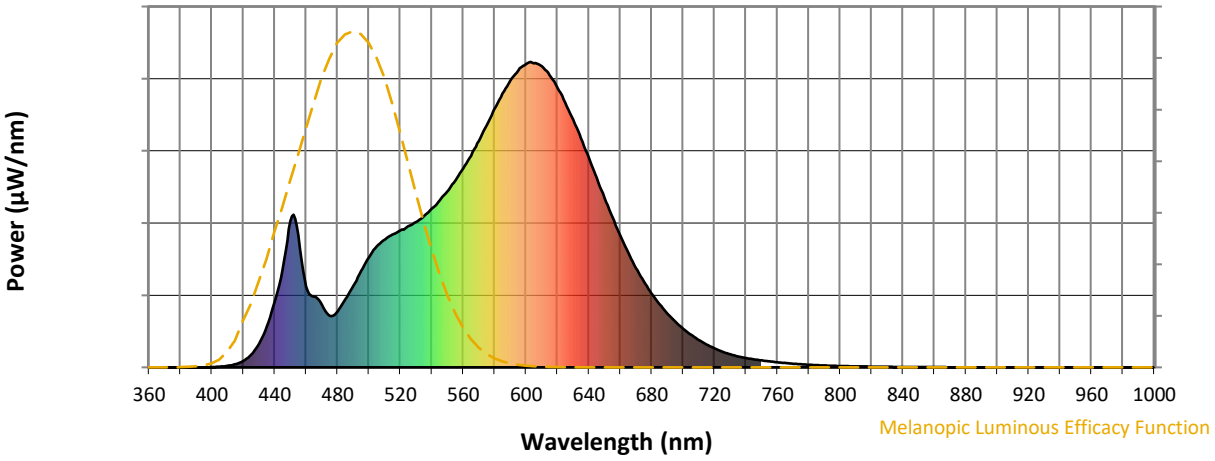
Melanopic Flux vs. Wavelength



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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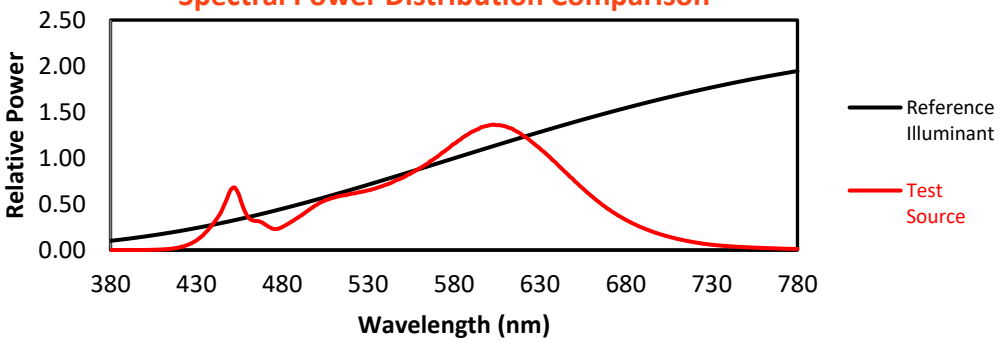
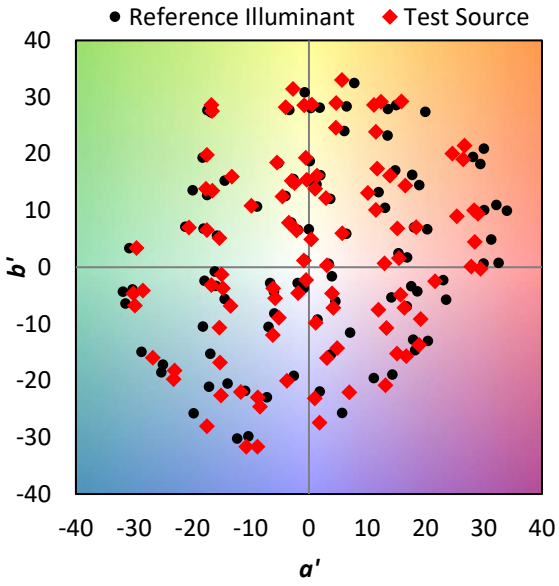
Summary

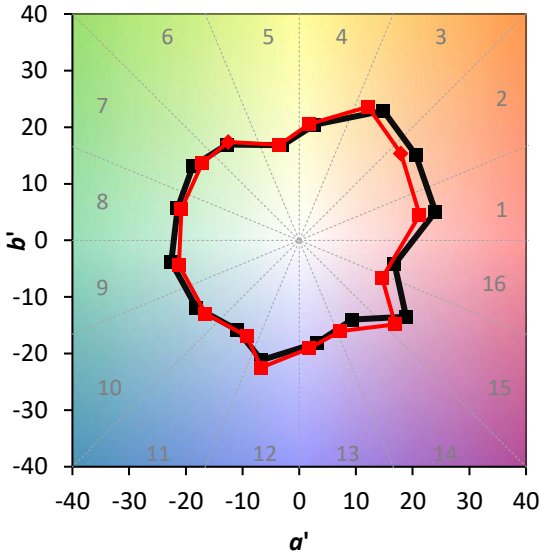
R_f = 86.1
R_g = 94.9
CIE R_a = 82.9
R_9 = 3.9

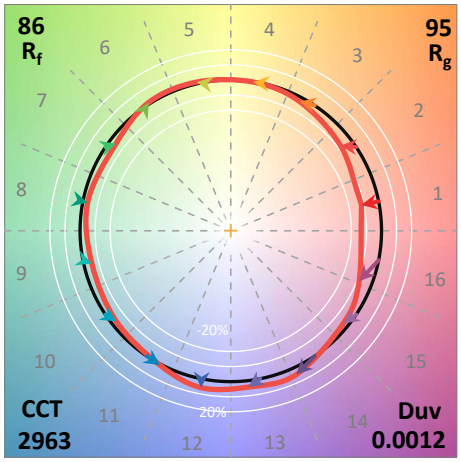
Spectral Power Distribution Comparison

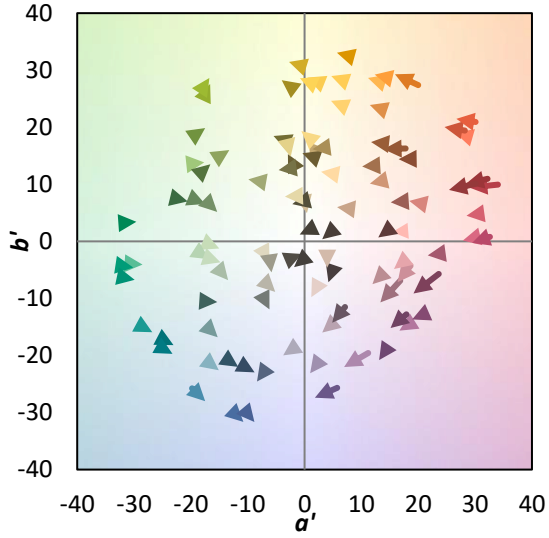


Color Vector Graphics









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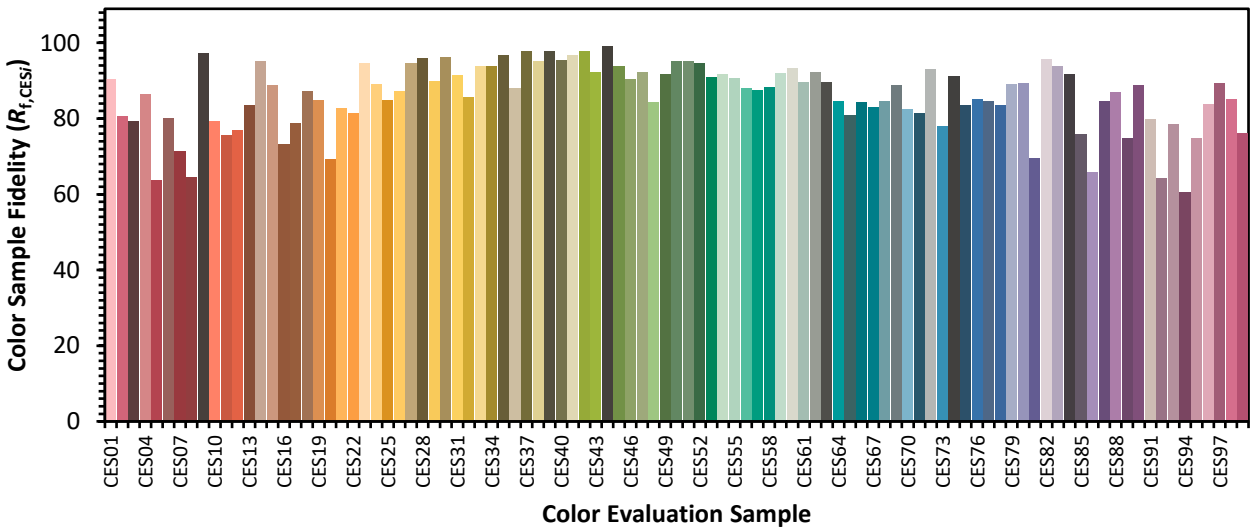
Individual Sample Fidelity Index ($R_{f,i}$)

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	



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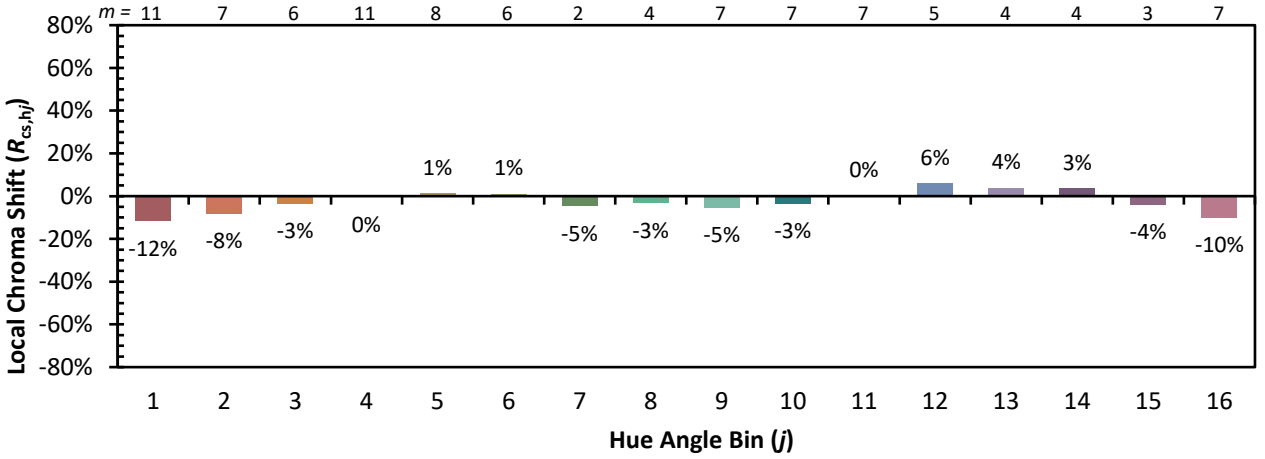
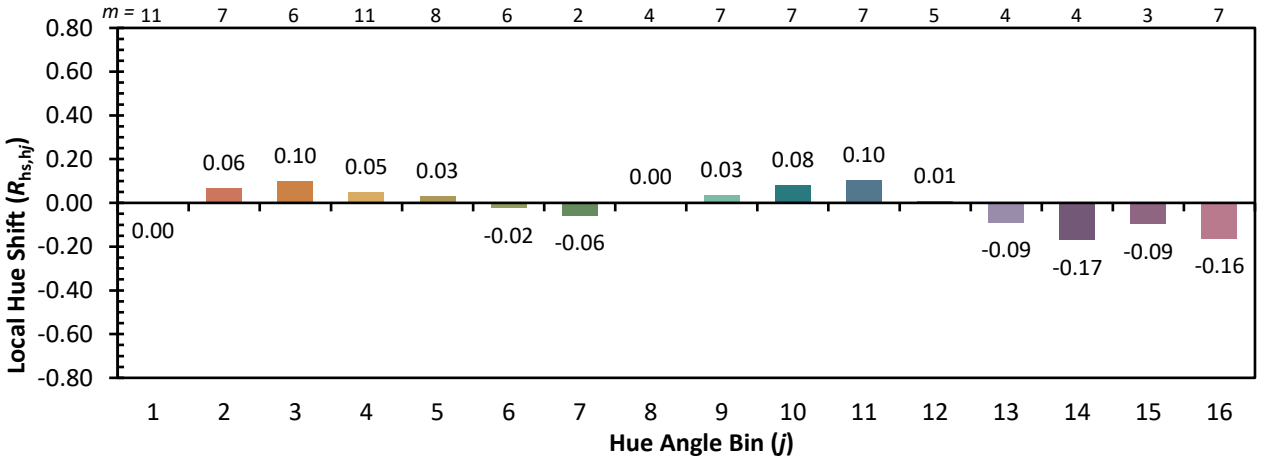
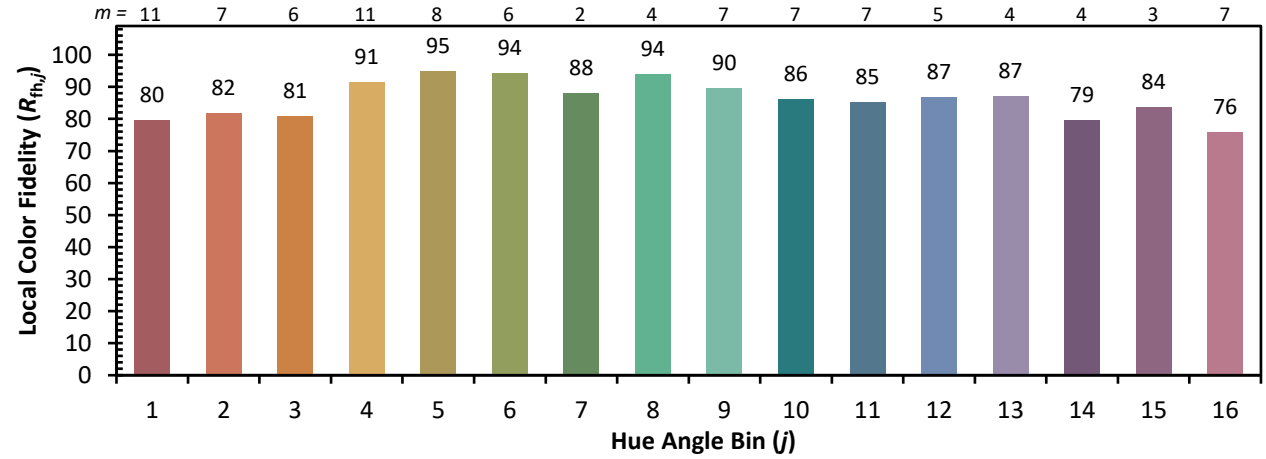
Color Rendition by Hue-Angle Bin







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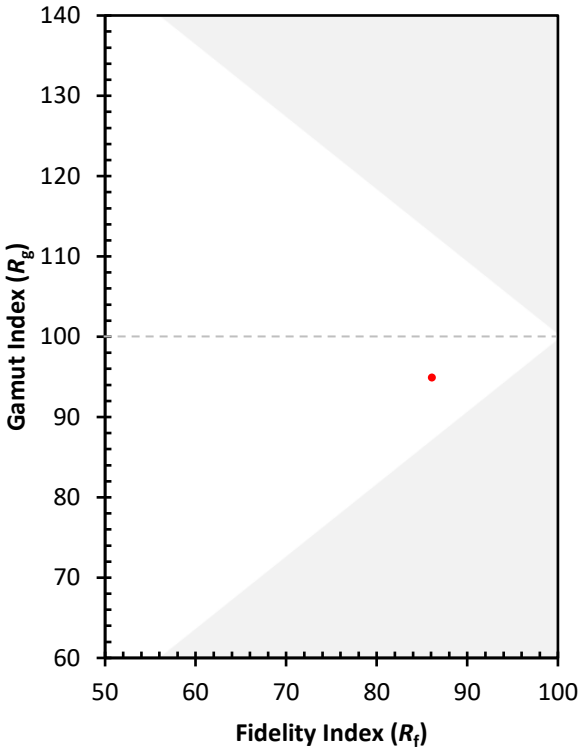
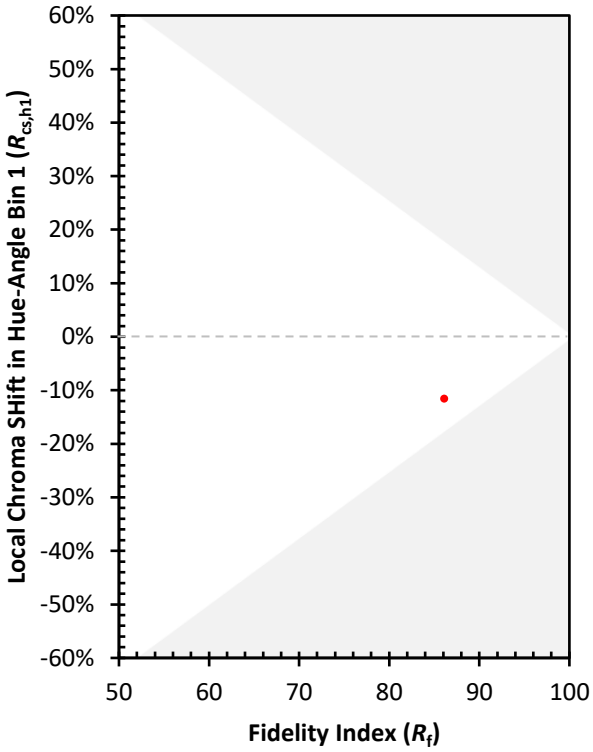
Measure Comparisons





(END OF REPORT)