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: P833208

Luminaire Tested: **TTN-D1-740-U-RW-CG-UPL3**

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:	P833208
	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-D1-740-U-RW-CG-UPL3
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
	4000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH CLEAR GLASS
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3885.6 lumens
Efficiency:	N/A
Efficacy:	116.3 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification:	Type II - Short
BUG Rating:	B2 - U4 - G2

Input Watts (W):	33.4
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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REPORT NUMBER: P833208
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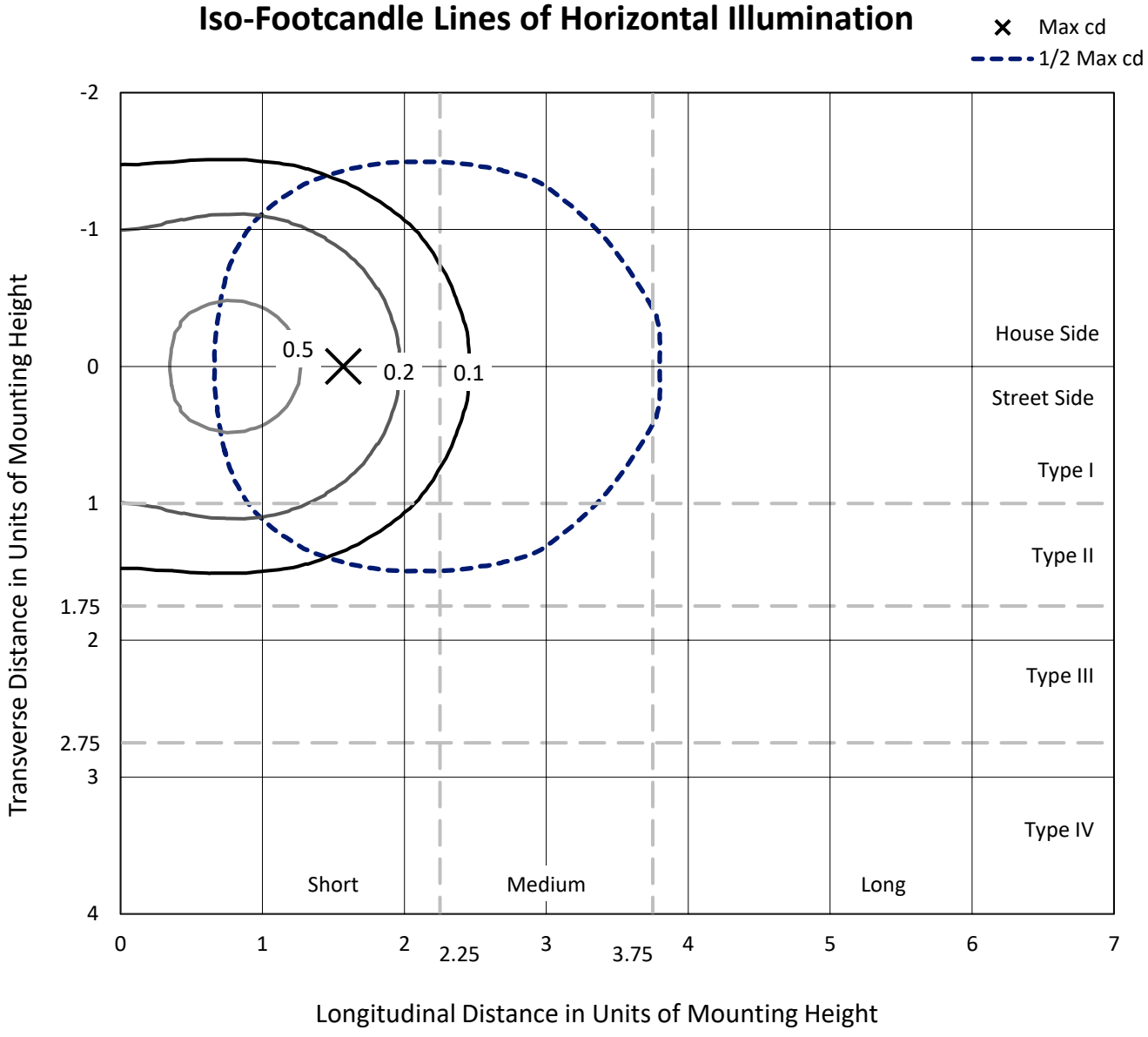
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
Type II - Short - N/A

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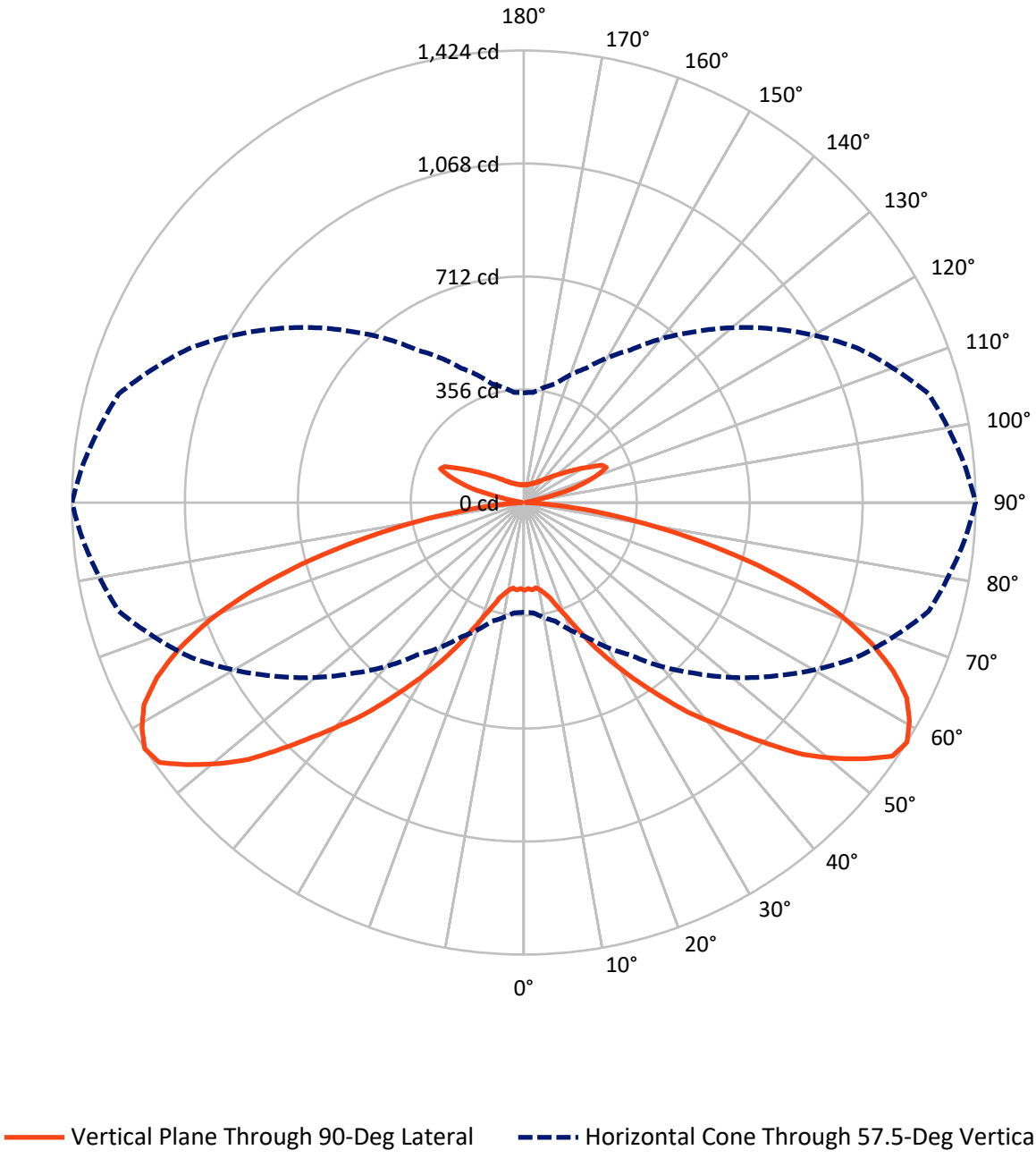
Luminous Intensity Polar Plot



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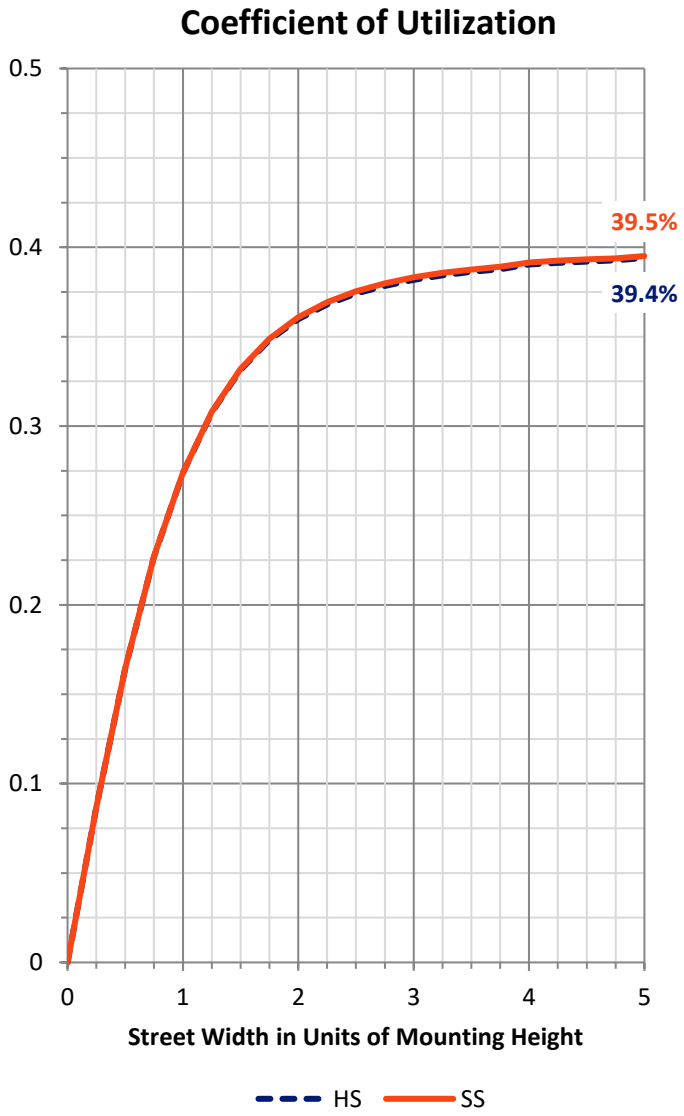
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1537.0	405.8	1942.8
	% Fixture	39.6	10.4	50.0
Street Side	Lumens	1537.0	405.8	1942.8
	% Fixture	39.6	10.4	50.0
Total	Lumens	3074.1	811.5	3885.6
	% Fixture	79.1	20.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.3	0.7
10°-20°	84.9	2.2
20°-30°	180.7	4.7
30°-40°	333.1	8.6
40°-50°	536.3	13.8
50°-60°	725.9	18.7
60°-70°	705.7	18.2
70°-80°	410.6	10.6
80°-90°	70.5	1.8
90°-100°	18.1	0.5
100°-110°	184.1	4.7
110°-120°	269.1	6.9
120°-130°	156.2	4.0
130°-140°	82.7	2.1
140°-150°	49.1	1.3
150°-160°	30.3	0.8
160°-170°	16.5	0.4
170°-180°	5.4	0.1
0°-90°	3074.1	79.1
0°-180°	3885.6	100.0



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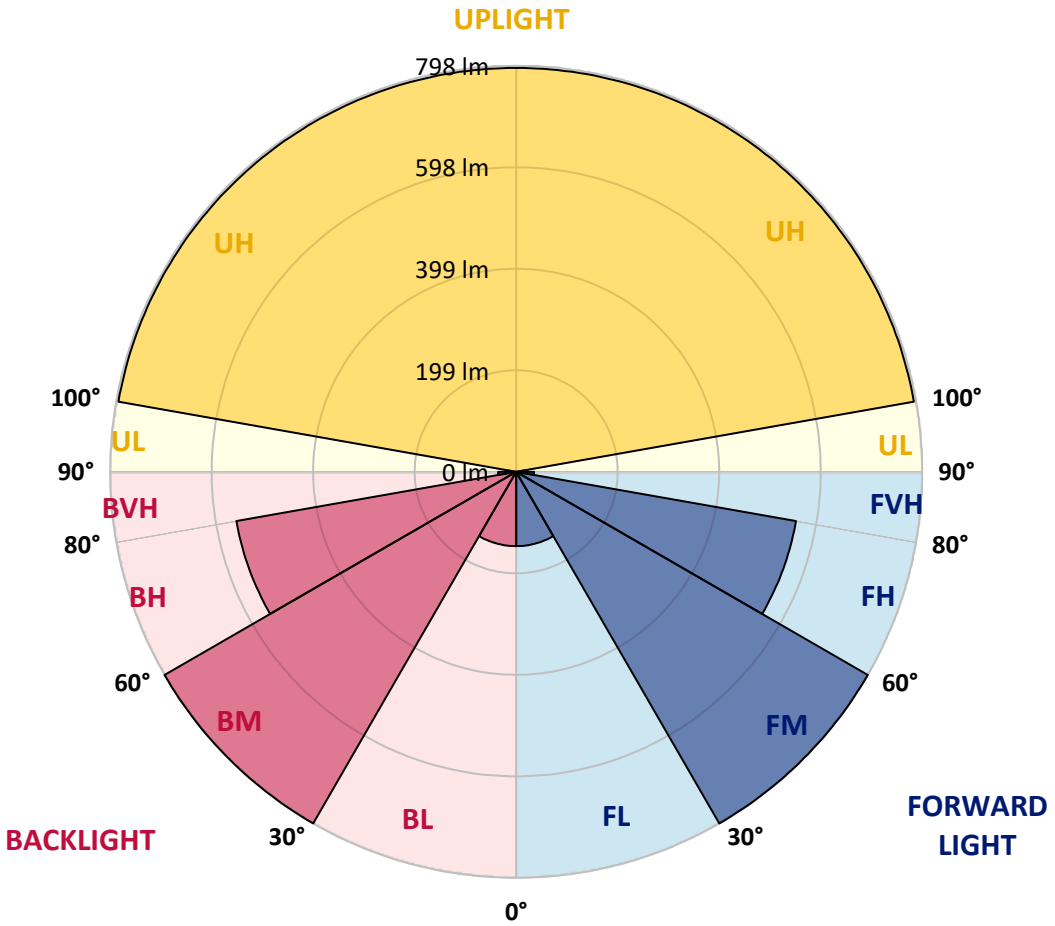
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	146.0	3.8			
FM	(30°-60°)	797.6	20.5			
FH	(60°-80°)	558.2	14.4			G0/660
FVH	(80°-90°)	35.3	0.9			G1/100
BL	(0°-30°)	146.0	3.8	B1/500		
BM	(30°-60°)	797.6	20.5	B1/1000		
BH	(60°-80°)	558.2	14.4	B2/1000		G2/1000
BVH	(80°-90°)	35.3	0.9			G1/100
UL	(90°-100°)	18.1	0.5		U2/50	
UH	(100°-180°)	793.4	20.4		U4/1000	

BUG Rating: B2-U4-G2
Type II Short



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REPORT NUMBER: P833208
CATALOG NUMBER: TTN-D1-740-U-RW-CG-UPL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5	276.5
2.5°	276.5	276.5	276.5	276.5	273.7	273.7	273.7	271.0	271.0	271.0	271.0
5°	276.5	276.5	276.5	279.3	279.3	279.3	276.5	276.5	276.5	276.5	276.5
7.5°	276.5	279.3	279.3	276.5	276.5	273.7	273.7	273.7	271.0	271.0	271.0
10°	276.5	276.5	276.5	276.5	273.7	273.7	276.5	276.5	279.3	279.3	279.3
12.5°	273.7	273.7	276.5	276.5	276.5	279.3	284.8	287.6	290.3	293.1	293.1
15°	276.5	276.5	279.3	282.0	284.8	290.3	298.6	306.9	312.4	315.2	312.4
17.5°	276.5	279.3	282.0	287.6	295.8	304.1	318.0	329.0	340.1	342.8	345.6
20°	282.0	282.0	284.8	295.8	309.7	323.5	342.8	362.2	376.0	381.6	381.6
22.5°	284.8	287.6	290.3	304.1	326.3	348.4	376.0	398.1	417.5	428.6	431.3
25°	293.1	293.1	298.6	318.0	345.6	378.8	414.7	447.9	472.8	486.6	489.4
27.5°	298.6	301.4	309.7	334.6	370.5	412.0	461.7	500.4	530.9	547.5	550.2
30°	304.1	306.9	323.5	351.1	395.4	445.2	503.2	553.0	591.7	611.0	613.8
32.5°	312.4	315.2	334.6	365.0	417.5	478.3	544.7	605.5	660.8	677.4	680.2
35°	320.7	323.5	345.6	381.6	442.4	511.5	588.9	660.8	727.2	749.3	754.8
37.5°	329.0	331.8	353.9	398.1	467.3	547.5	638.7	724.4	796.3	826.7	835.0
40°	337.3	340.1	365.0	414.7	492.2	586.2	691.2	785.2	868.2	904.1	909.7
42.5°	342.8	345.6	373.3	428.6	517.0	622.1	746.5	851.6	940.1	987.1	992.6
45°	351.1	353.9	384.3	447.9	539.2	663.6	799.1	926.2	1028.5	1081.1	1086.6
47.5°	356.7	359.4	392.6	459.0	564.0	702.3	854.4	992.6	1114.3	1169.6	1186.1
50°	359.4	362.2	398.1	470.0	580.6	729.9	898.6	1059.0	1188.9	1258.0	1266.3
52.5°	359.4	365.0	400.9	478.3	591.7	754.8	934.5	1114.3	1260.8	1338.2	1341.0
55°	356.7	359.4	398.1	475.6	597.2	765.9	959.4	1147.4	1310.6	1385.2	1410.1
57.5°	345.6	348.4	387.1	467.3	586.2	760.4	953.9	1155.7	1321.6	1393.5	1423.9
60°	329.0	334.6	370.5	447.9	569.6	741.0	937.3	1139.1	1305.0	1393.5	1396.3
62.5°	309.7	312.4	348.4	423.0	544.7	710.6	906.9	1106.0	1266.3	1357.6	1354.8
65°	282.0	284.8	315.2	392.6	500.4	652.5	846.1	1053.4	1191.7	1288.4	1280.2
67.5°	251.6	254.4	282.0	351.1	447.9	588.9	763.1	965.0	1086.6	1186.1	1180.6
70°	218.4	218.4	243.3	301.4	392.6	517.0	671.9	848.8	970.5	1053.4	1056.2
72.5°	179.7	179.7	201.8	251.6	329.0	434.1	566.8	724.4	823.9	895.8	901.4
75°	141.0	138.2	157.6	199.1	259.9	345.6	447.9	583.4	660.8	729.9	727.2
77.5°	99.5	99.5	110.6	143.8	188.0	257.1	331.8	439.6	492.2	550.2	539.2
80°	63.6	63.6	69.1	94.0	124.4	171.4	218.4	298.6	334.6	378.8	365.0
82.5°	33.2	30.4	35.9	49.8	66.4	94.0	121.7	174.2	190.8	224.0	212.9
85°	11.1	11.1	11.1	16.6	24.9	35.9	47.0	74.7	77.4	99.5	91.2
87.5°	2.8	0.0	0.0	2.8	2.8	2.8	2.8	8.3	8.3	16.6	11.1
90°	6.9	6.9	8.3	8.3	8.3	8.3	8.3	8.3	8.3	6.9	6.9
92.5°	6.9	6.9	6.9	9.7	11.1	9.7	11.1	8.3	8.3	6.9	6.9
95°	8.3	8.3	9.7	12.5	15.3	16.7	16.7	9.7	9.7	8.3	8.3
97.5°	11.1	12.5	12.5	15.3	25.0	45.8	27.8	13.9	13.9	12.5	11.1
100°	18.0	19.4	19.4	34.7	73.6	98.6	70.8	36.1	26.4	19.4	19.4
102.5°	58.3	61.1	75.0	112.5	166.6	151.3	127.7	120.8	83.3	66.6	63.9
105°	148.6	147.2	158.3	187.4	233.3	229.1	211.0	191.6	165.2	152.7	152.7
107.5°	195.8	195.8	205.5	230.5	265.2	309.6	313.8	248.5	218.0	204.1	202.7
110°	220.8	220.8	229.1	249.9	295.7	358.2	355.4	306.8	269.4	251.3	248.5

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REPORT NUMBER: P833208
CATALOG NUMBER: TTN-D1-740-U-RW-CG-UPL3

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	226.3	227.7	238.8	270.7	320.7	348.5	336.0	316.6	299.9	286.0	*283.2*
115°	234.6	234.6	247.1	277.7	305.5	316.6	302.7	287.4	276.3	270.7	*273.5*
117.5°	231.9	236.0	238.8	255.5	273.5	281.8	274.9	254.1	245.8	243.0	*238.8*
120°	215.2	215.2	218.0	226.3	236.0	240.2	237.4	223.5	216.6	215.2	*212.4*
122.5°	191.6	193.0	191.6	195.8	202.7	206.9	204.1	193.0	190.2	190.2	*187.4*
125°	168.0	168.0	166.6	169.4	173.6	172.2	173.6	168.0	166.6	166.6	*165.2*
127.5°	151.3	149.9	147.2	148.6	149.9	149.9	151.3	145.8	147.2	148.6	*147.2*
130°	134.7	134.7	131.9	131.9	131.9	129.1	131.9	129.1	130.5	131.9	*133.3*
132.5°	119.4	119.4	115.2	113.9	113.9	113.9	115.2	113.9	116.6	119.4	*119.4*
135°	106.9	106.9	102.7	104.1	104.1	102.7	104.1	102.7	105.5	106.9	*106.9*
137.5°	97.2	97.2	94.4	94.4	94.4	93.0	94.4	94.4	95.8	98.6	*100.0*
140°	88.9	88.9	87.5	87.5	86.1	87.5	87.5	87.5	88.9	90.2	*90.2*
142.5°	84.7	83.3	81.9	80.5	81.9	81.9	81.9	80.5	81.9	84.7	*84.7*
145°	77.8	77.8	76.4	76.4	76.4	77.8	76.4	76.4	77.8	77.8	*79.1*
147.5°	73.6	73.6	72.2	73.6	73.6	73.6	73.6	72.2	73.6	73.6	*75.0*
150°	72.2	70.8	69.4	70.8	70.8	69.4	69.4	69.4	69.4	70.8	*70.8*
152.5°	68.0	68.0	66.6	68.0	66.6	66.6	66.6	66.6	66.6	68.0	*69.4*
155°	65.3	65.3	63.9	65.3	65.3	65.3	65.3	65.3	65.3	65.3	*65.3*
157.5°	62.5	63.9	62.5	62.5	62.5	62.5	62.5	62.5	62.5	63.9	*63.9*
160°	61.1	61.1	61.1	61.1	59.7	59.7	59.7	61.1	61.1	61.1	*62.5*
162.5°	59.7	59.7	59.7	59.7	58.3	58.3	58.3	58.3	59.7	59.7	*61.1*
165°	59.7	58.3	58.3	58.3	56.9	56.9	56.9	56.9	58.3	59.7	*58.3*
167.5°	56.9	56.9	56.9	56.9	56.9	55.5	55.5	56.9	56.9	56.9	*58.3*
170°	56.9	56.9	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	*56.9*
172.5°	56.9	56.9	56.9	56.9	55.5	55.5	55.5	55.5	55.5	56.9	*56.9*
175°	56.9	56.9	56.9	56.9	55.5	55.5	55.5	56.9	56.9	56.9	*55.5*
177.5°	56.9	56.9	56.9	56.9	55.5	56.9	56.9	56.9	56.9	56.9	*56.9*
180°	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	*56.9*

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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: SP1-2411-284-2

Test Date: 11/20/2024

Luminaire Tested: TTN-D0-740-U-WQ

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

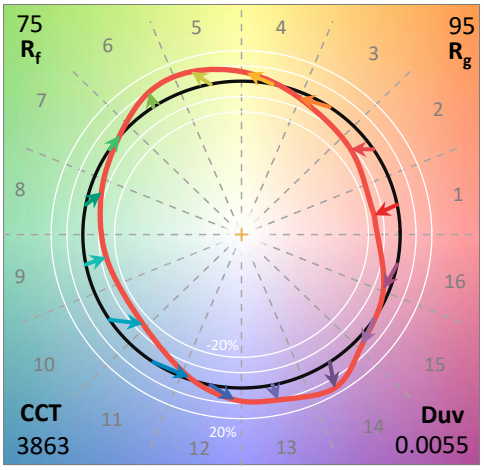
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2411-284-2
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
Rf:	74.7
Rg:	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

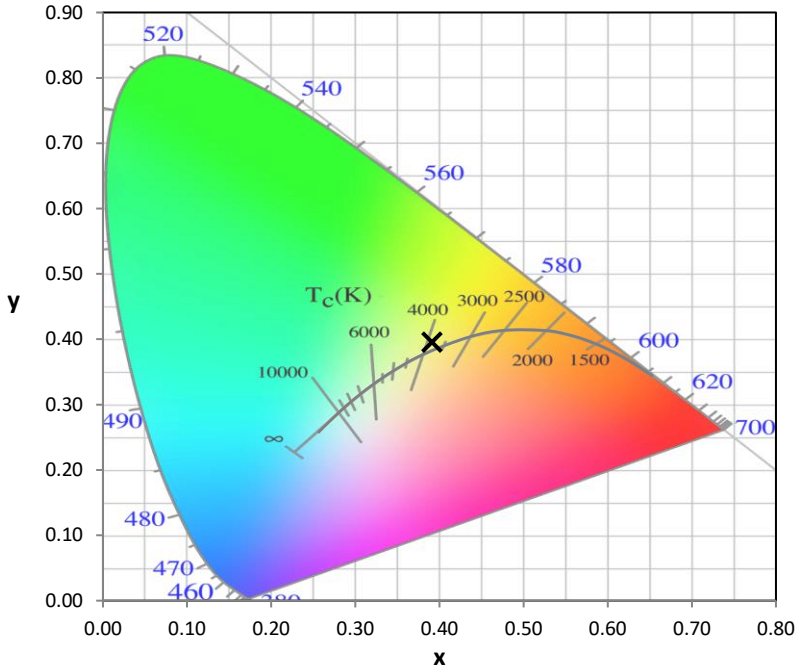
Stabilization Time:	37M
Operation Time:	1H 37M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2411-284-2

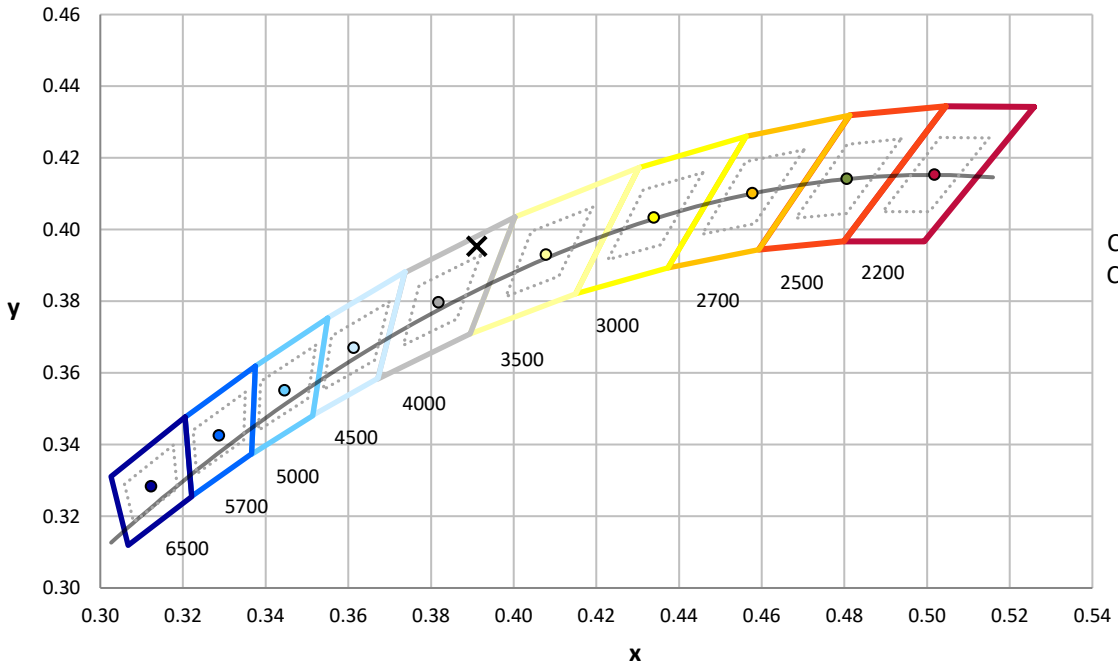
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

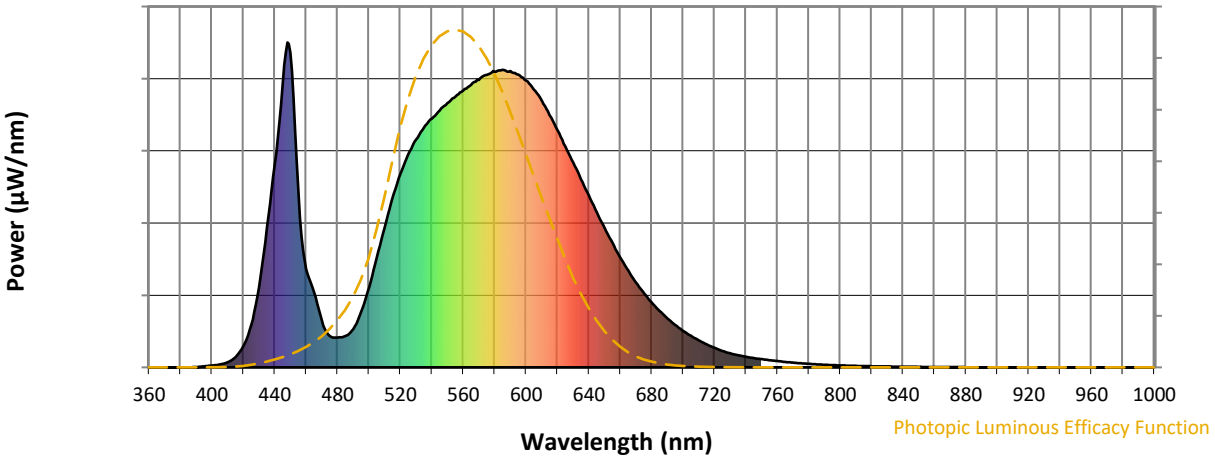


CCT = 3863K
CIE x = 0.3911
CIE y = 0.3954
Duv = 0.0055

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 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			

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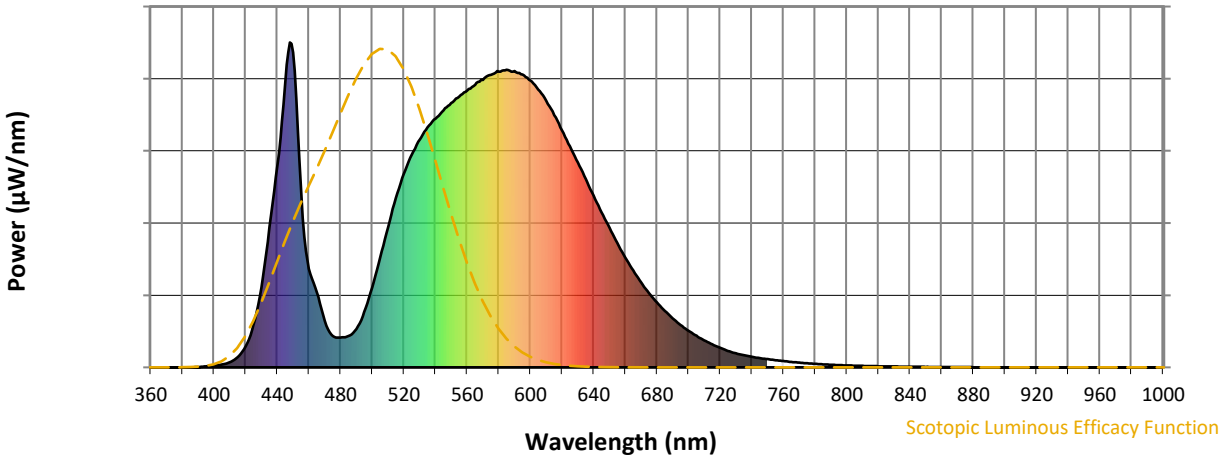
Scotopic Flux vs. Wavelength



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			

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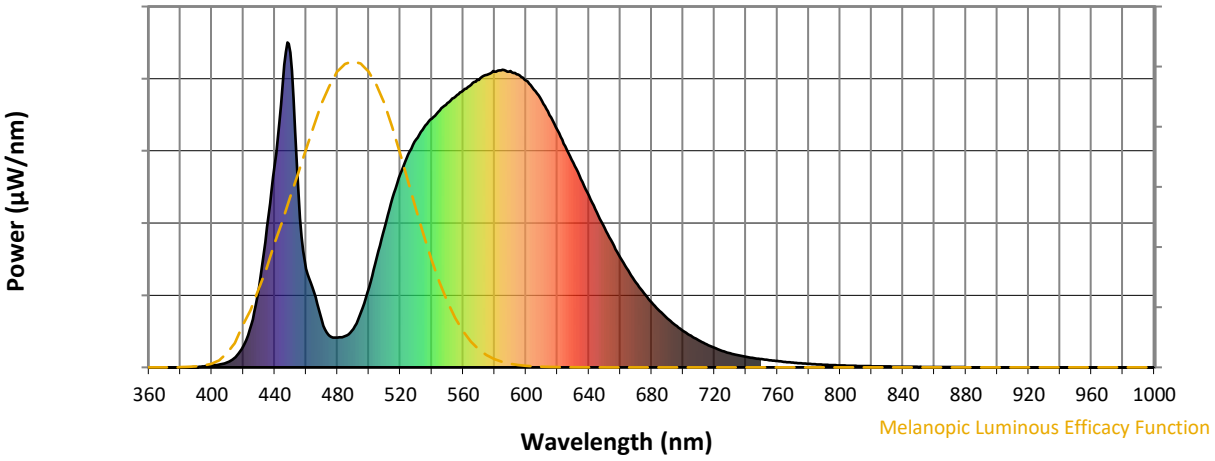
Melanopic Flux vs. Wavelength



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			

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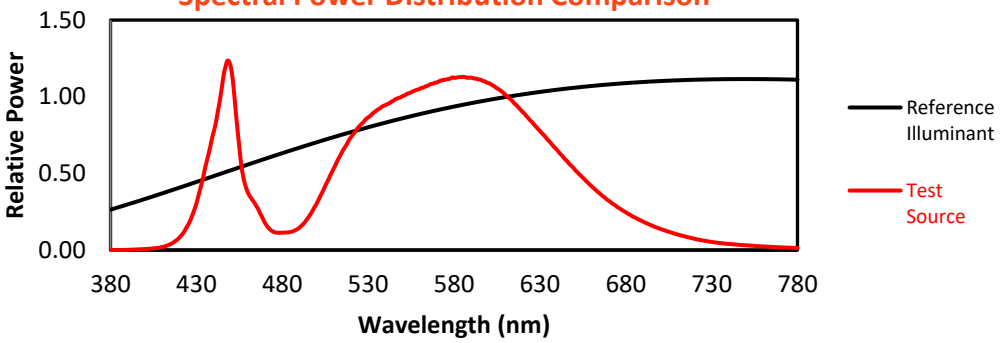
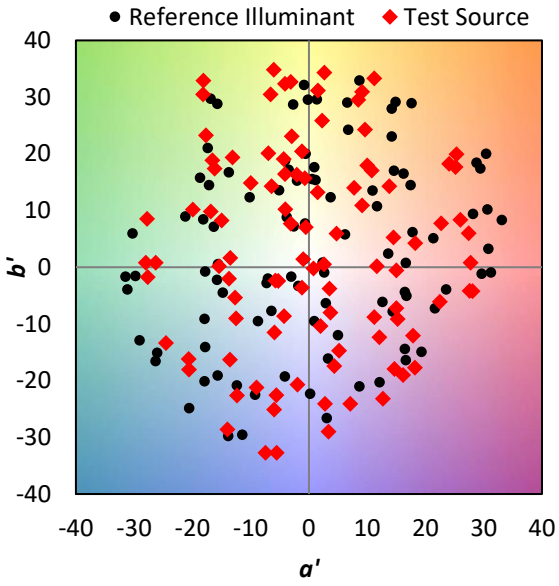
Summary

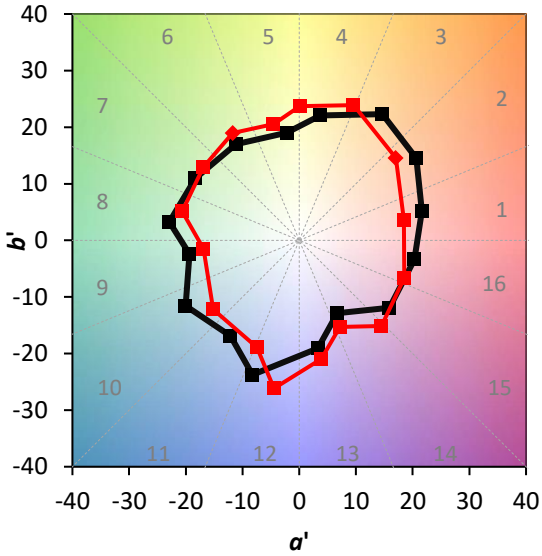
R_f = 74.7
R_g = 95.4
CIE R_a = 71.9
R_9 = -23.5

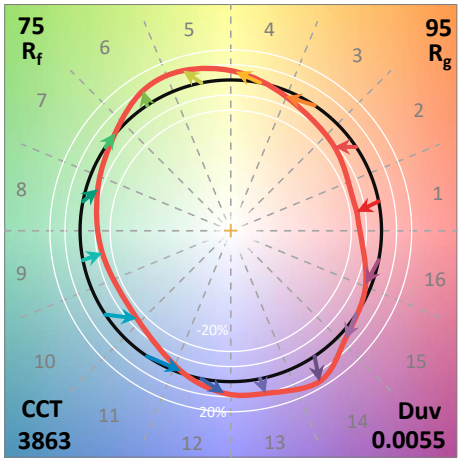
Spectral Power Distribution Comparison

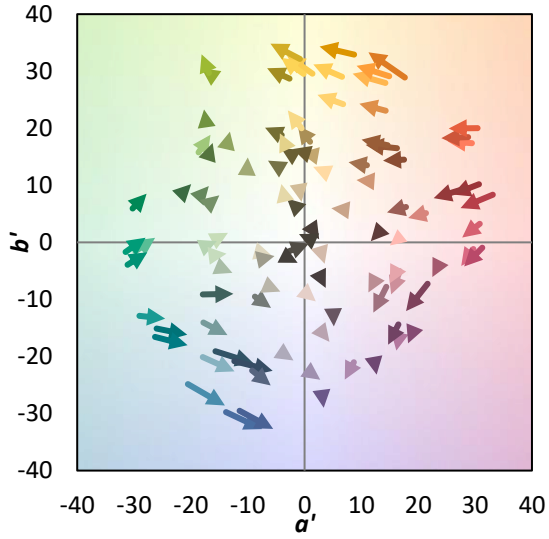


Color Vector Graphics









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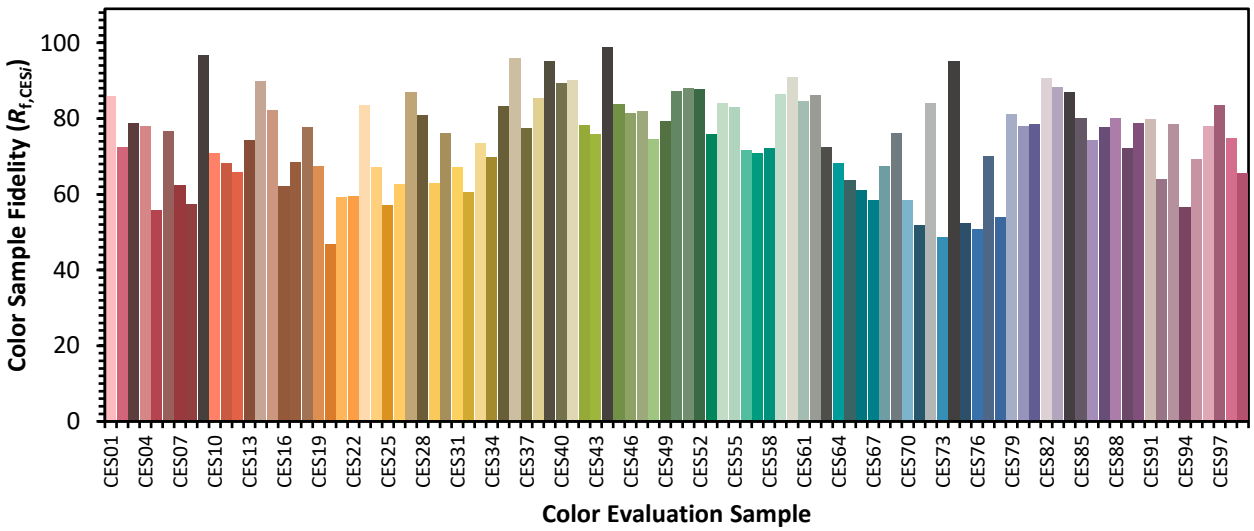
Individual Sample Fidelity Index ($R_{f,i}$)

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	



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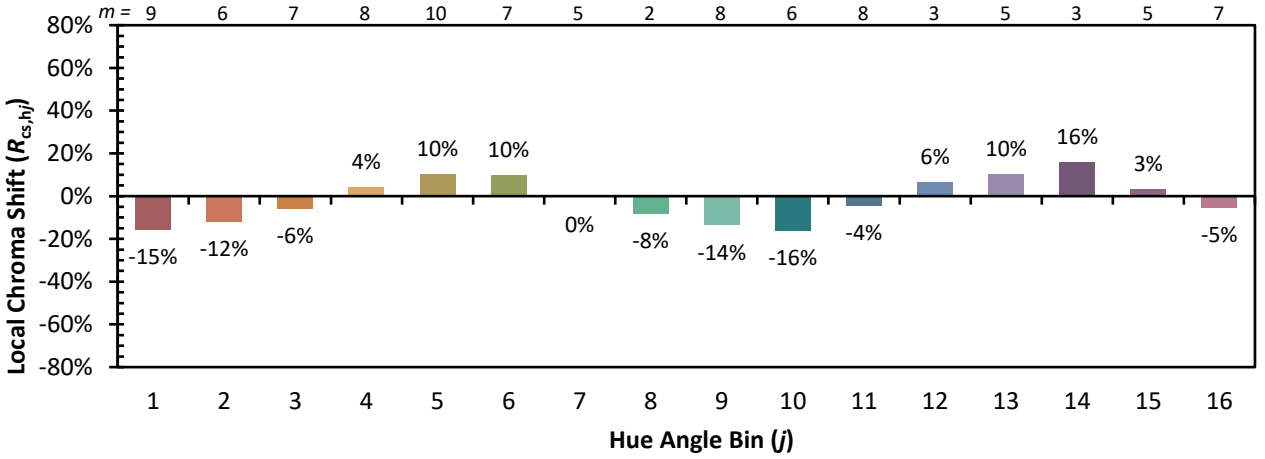
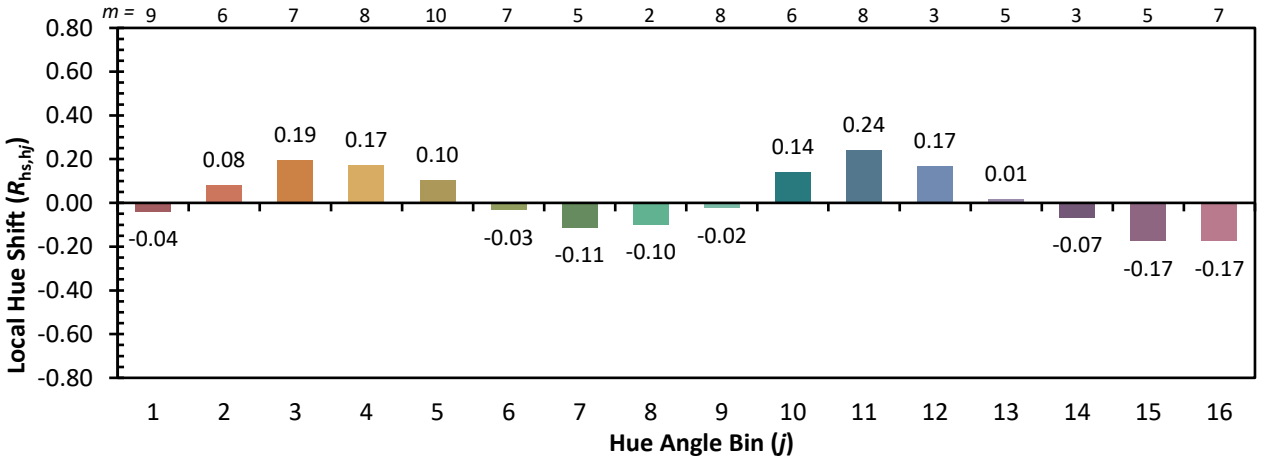
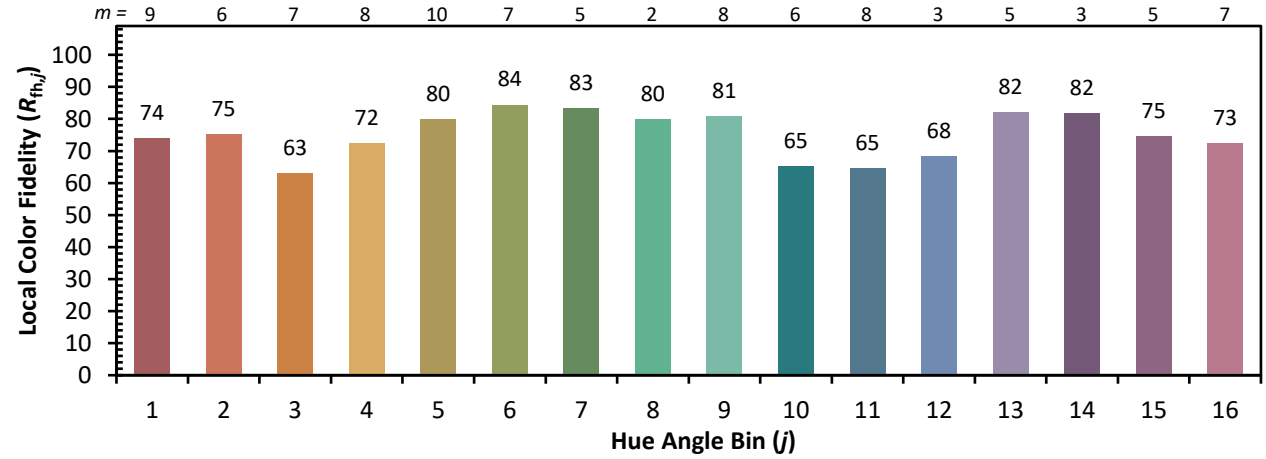
Color Rendition by Hue-Angle Bin







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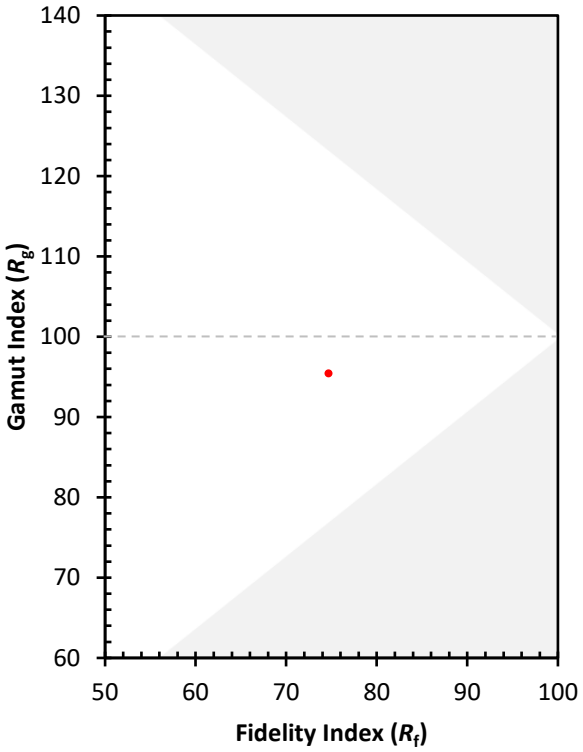
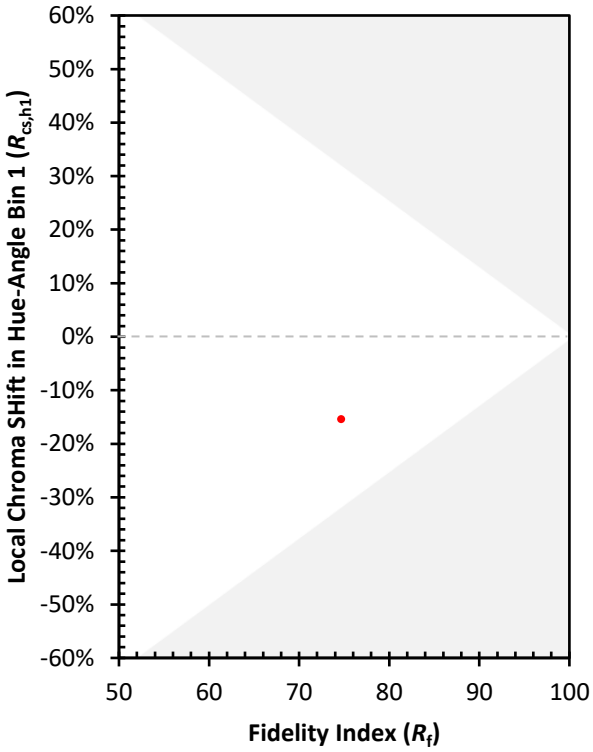
Measure Comparisons





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