

Signify Classified - Internal  
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: P833176

Luminaire Tested: **TTN-D1-735-U-RW-CG-UPL1**

Issue Date: 5/15/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P833176  
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-D1-735-U-RW-CG-UPL1  
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
3500K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH CLEAR GLASS  
Light Source: -  
Ballast/Driver: -

**Summary**

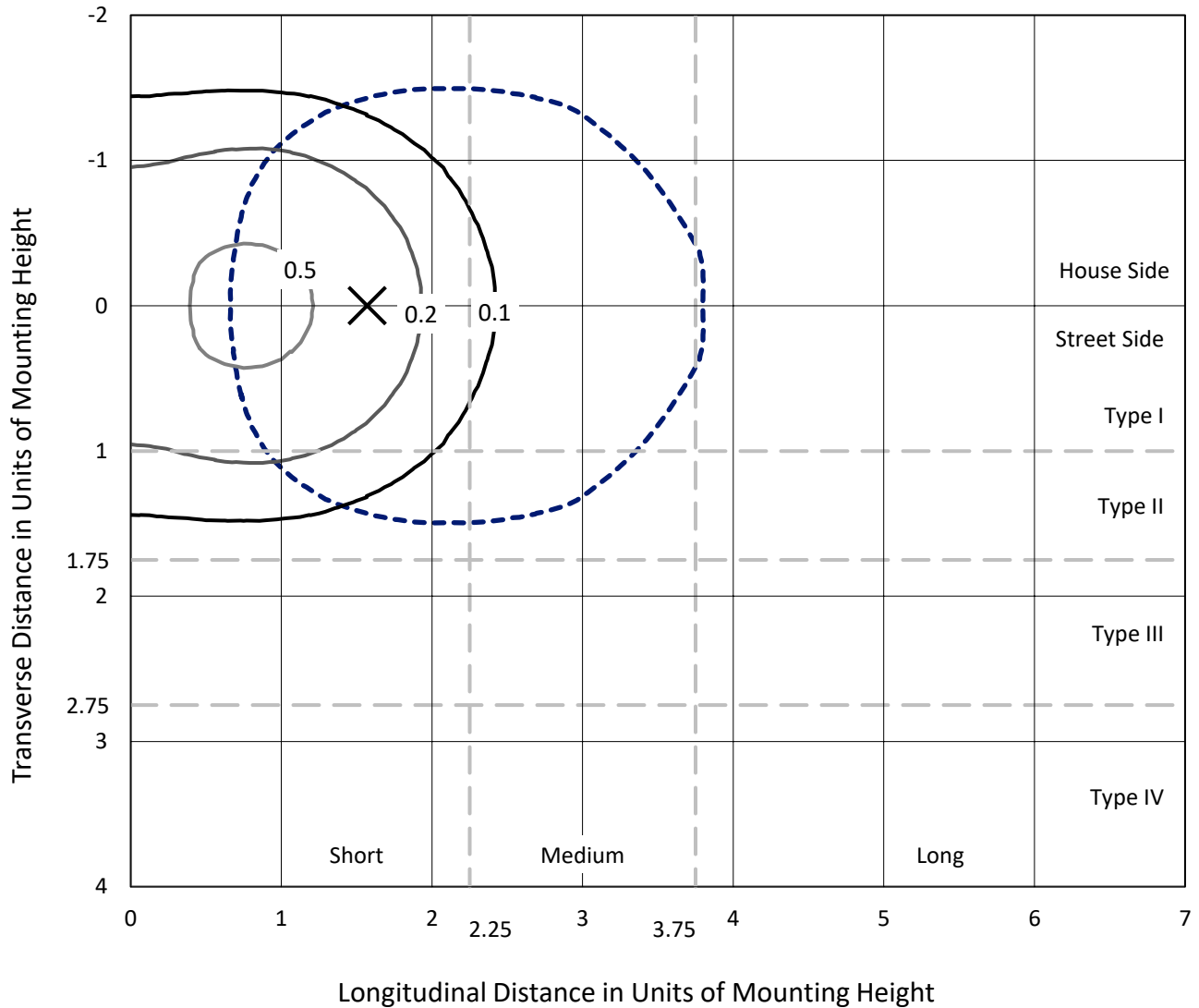
Lumens per Lamp: N/A  
Luminaire Lumens: 3213.9 lumens  
Efficiency: N/A  
Efficacy: 110.8 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')  
IES Classification: Type II - Short  
BUG Rating: B2 - U3 - G2  
  
Input Watts (W): 29  
Input Voltage (V): NR  
Input Current (Ain): 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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### Iso-Footcandle Lines of Horizontal Illumination

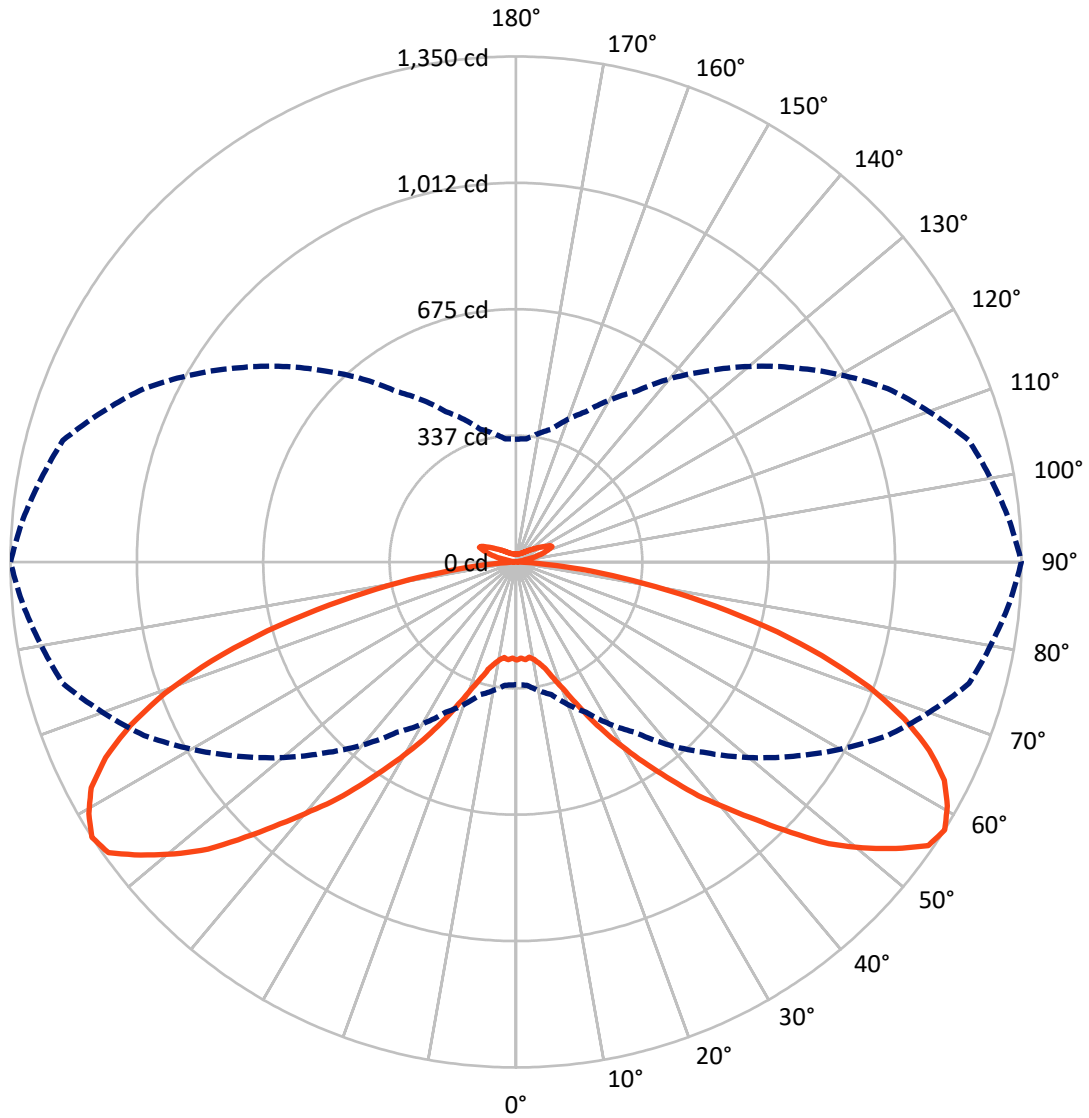
✕ Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P833176  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 57.5-Deg Vertical

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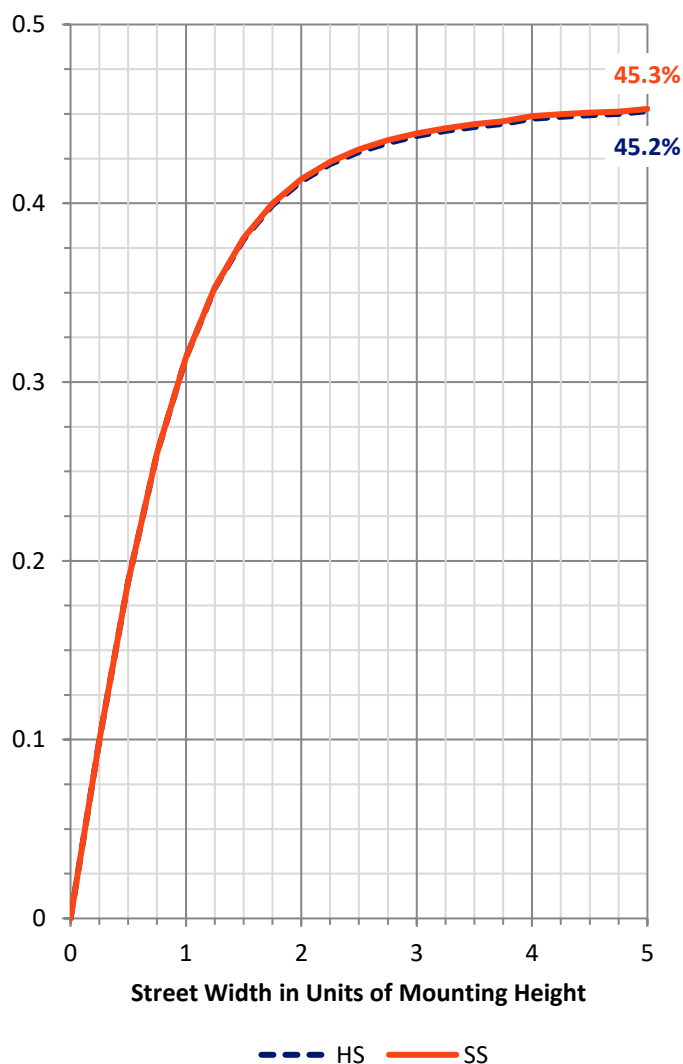
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1456.7	150.2	1606.9
	% Fixture	45.3	4.7	50.0
<b>Street Side</b>	Lumens	1456.7	150.2	1606.9
	% Fixture	45.3	4.7	50.0
<b>Total</b>	Lumens	2913.4	300.5	3213.9
	% Fixture	90.7	9.3	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.0	0.8
10°-20°	80.5	2.5
20°-30°	171.3	5.3
30°-40°	315.7	9.8
40°-50°	508.4	15.8
50°-60°	688.1	21.4
60°-70°	669.0	20.8
70°-80°	389.2	12.1
80°-90°	66.2	2.1
90°-100°	6.7	0.2
100°-110°	68.2	2.1
110°-120°	99.6	3.1
120°-130°	57.8	1.8
130°-140°	30.6	1.0
140°-150°	18.2	0.6
150°-160°	11.2	0.3
160°-170°	6.1	0.2
170°-180°	2.0	0.1
0°-90°	2913.4	90.7
0°-180°	3213.9	100.0

**Coefficient of Utilization**

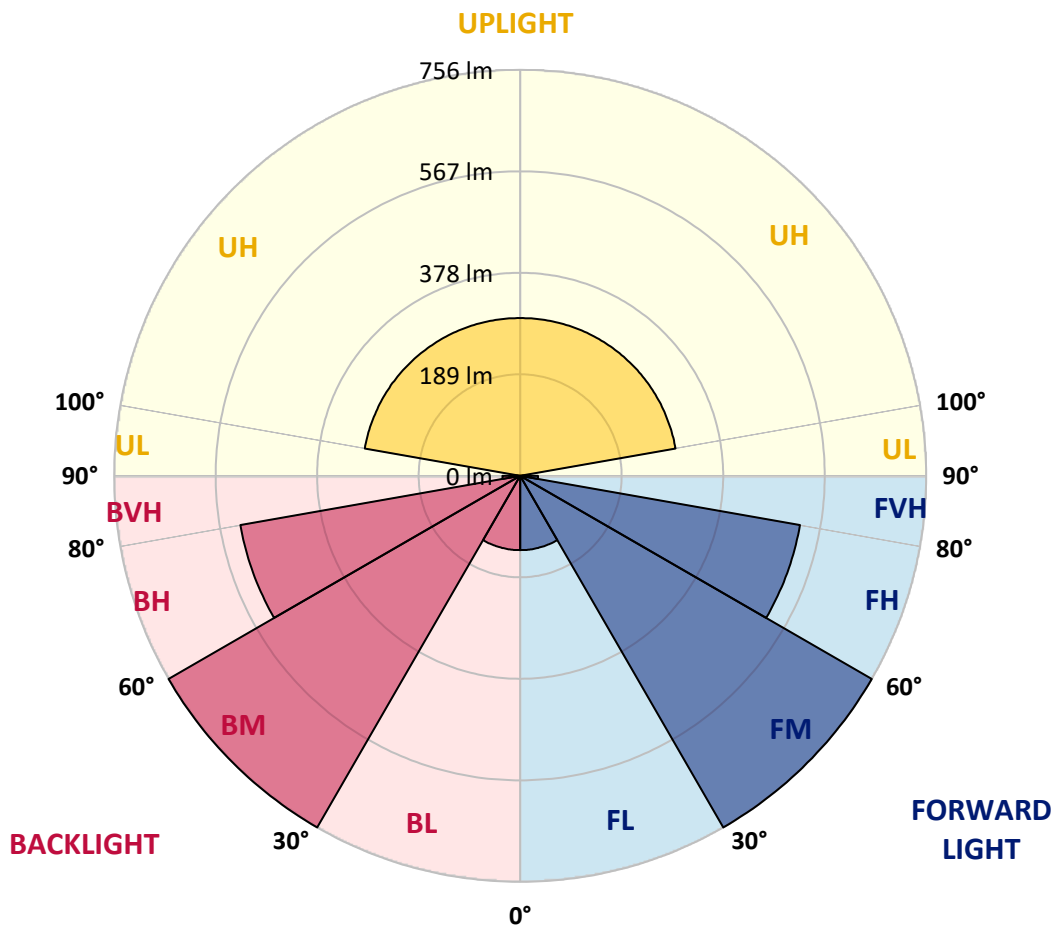


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	138.4	4.3			
FM (30°-60°)	756.1	23.5			
FH (60°-80°)	529.1	16.5			G0/660
FVH (80°-90°)	33.1	1.0			G1/100
BL (0°-30°)	138.4	4.3	B1/500		
BM (30°-60°)	756.1	23.5	B1/1000		
BH (60°-80°)	529.1	16.5	B2/1000		G2/1000
BVH (80°-90°)	33.1	1.0			G1/100
UL (90°-100°)	6.7	0.2		U1/10	
UH (100°-180°)	293.8	9.1		U3/500	

**BUG Rating: B2-U3-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1
2.5°	262.1	262.1	262.1	262.1	259.5	259.5	259.5	256.9	256.9	256.9	256.9
5°	262.1	262.1	262.1	264.7	264.7	264.7	262.1	262.1	262.1	262.1	262.1
7.5°	262.1	264.7	264.7	262.1	262.1	259.5	259.5	259.5	256.9	256.9	256.9
10°	262.1	262.1	262.1	262.1	259.5	259.5	262.1	262.1	264.7	264.7	264.7
12.5°	259.5	259.5	262.1	262.1	262.1	264.7	270.0	272.6	275.2	277.8	277.8
15°	262.1	262.1	264.7	267.3	270.0	275.2	283.1	290.9	296.2	298.8	296.2
17.5°	262.1	264.7	267.3	272.6	280.4	288.3	301.4	311.9	322.4	325.0	327.6
20°	267.3	267.3	270.0	280.4	293.5	306.7	325.0	343.3	356.4	361.7	361.7
22.5°	270.0	272.6	275.2	288.3	309.3	330.2	356.4	377.4	395.8	406.2	408.9
25°	277.8	277.8	283.1	301.4	327.6	359.1	393.1	424.6	448.2	461.3	463.9
27.5°	283.1	285.7	293.5	317.1	351.2	390.5	437.7	474.4	503.2	518.9	521.6
30°	288.3	290.9	306.7	332.9	374.8	422.0	477.0	524.2	560.9	579.2	581.9
32.5°	296.2	298.8	317.1	346.0	395.8	453.4	516.3	574.0	626.4	642.1	644.8
35°	304.0	306.7	327.6	361.7	419.4	484.9	558.3	626.4	689.3	710.3	715.5
37.5°	311.9	314.5	335.5	377.4	442.9	518.9	605.4	686.7	754.8	783.7	791.5
40°	319.8	322.4	346.0	393.1	466.5	555.6	655.2	744.4	823.0	857.1	862.3
42.5°	325.0	327.6	353.8	406.2	490.1	589.7	707.7	807.3	891.1	935.7	940.9
45°	332.9	335.5	364.3	424.6	511.1	629.0	757.5	878.0	975.0	1024.8	1030.0
47.5°	338.1	340.7	372.2	435.1	534.7	665.7	809.9	940.9	1056.2	1108.7	1124.4
50°	340.7	343.3	377.4	445.6	550.4	691.9	851.8	1003.8	1127.0	1192.5	1200.4
52.5°	340.7	346.0	380.0	453.4	560.9	715.5	885.9	1056.2	1195.2	1268.5	1271.2
55°	338.1	340.7	377.4	450.8	566.1	726.0	909.5	1087.7	1242.3	1313.1	1336.7
57.5°	327.6	330.2	366.9	442.9	555.6	720.8	904.2	1095.6	1252.8	1321.0	1349.8
60°	311.9	317.1	351.2	424.6	539.9	702.4	888.5	1079.8	1237.1	1321.0	1323.6
62.5°	293.5	296.2	330.2	401.0	516.3	673.6	859.7	1048.4	1200.4	1286.9	1284.3
65°	267.3	270.0	298.8	372.2	474.4	618.5	802.0	998.6	1129.6	1221.4	1213.5
67.5°	238.5	241.1	267.3	332.9	424.6	558.3	723.4	914.7	1030.0	1124.4	1119.1
70°	207.1	207.1	230.6	285.7	372.2	490.1	636.9	804.6	920.0	998.6	1001.2
72.5°	170.4	170.4	191.3	238.5	311.9	411.5	537.3	686.7	781.0	849.2	854.4
75°	133.7	131.0	149.4	188.7	246.4	327.6	424.6	553.0	626.4	691.9	689.3
77.5°	94.4	94.4	104.8	136.3	178.2	243.7	314.5	416.7	466.5	521.6	511.1
80°	60.3	60.3	65.5	89.1	117.9	162.5	207.1	283.1	317.1	359.1	346.0
82.5°	31.5	28.8	34.1	47.2	62.9	89.1	115.3	165.1	180.8	212.3	201.8
85°	10.5	10.5	10.5	15.7	23.6	34.1	44.6	70.8	73.4	94.4	86.5
87.5°	2.6	0.0	0.0	2.6	2.6	2.6	2.6	7.9	7.9	15.7	10.5
90°	2.6	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.6	2.6
92.5°	2.6	2.6	2.6	3.6	4.1	3.6	4.1	3.1	3.1	2.6	2.6
95°	3.1	3.1	3.6	4.6	5.7	6.2	6.2	3.6	3.6	3.1	3.1
97.5°	4.1	4.6	4.6	5.7	9.3	17.0	10.3	5.1	5.1	4.6	4.1
100°	6.7	7.2	7.2	12.9	27.2	36.5	26.2	13.4	9.8	7.2	7.2
102.5°	21.6	22.6	27.8	41.6	61.7	56.0	47.3	44.7	30.8	24.7	23.6
105°	55.0	54.5	58.6	69.4	86.4	84.8	78.1	70.9	61.2	56.5	56.5
107.5°	72.5	72.5	76.1	85.3	98.2	114.6	116.2	92.0	80.7	75.6	75.0
110°	81.7	81.7	84.8	92.5	109.5	132.6	131.6	113.6	99.7	93.0	92.0



REPORT NUMBER: P833176  
 CATALOG NUMBER: TTN-D1-735-U-RW-CG-UPL1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.8	84.3	88.4	100.2	118.7	129.0	124.4	117.2	111.0	105.9	104.9
115°	86.9	86.9	91.5	102.8	113.1	117.2	112.1	106.4	102.3	100.2	101.3
117.5°	85.8	87.4	88.4	94.6	101.3	104.4	101.8	94.1	91.0	90.0	88.4
120°	79.7	79.7	80.7	83.8	87.4	88.9	87.9	82.8	80.2	79.7	78.6
122.5°	70.9	71.5	70.9	72.5	75.0	76.6	75.6	71.5	70.4	70.4	69.4
125°	62.2	62.2	61.7	62.7	64.3	63.7	64.3	62.2	61.7	61.7	61.2
127.5°	56.0	55.5	54.5	55.0	55.5	55.5	56.0	54.0	54.5	55.0	54.5
130°	49.9	49.9	48.8	48.8	48.8	47.8	48.8	47.8	48.3	48.8	49.3
132.5°	44.2	44.2	42.7	42.2	42.2	42.2	42.7	42.2	43.2	44.2	44.2
135°	39.6	39.6	38.0	38.6	38.6	38.0	38.6	38.0	39.1	39.6	39.6
137.5°	36.0	36.0	35.0	35.0	35.0	34.4	35.0	35.0	35.5	36.5	37.0
140°	32.9	32.9	32.4	32.4	31.9	32.4	32.4	32.4	32.9	33.4	33.4
142.5°	31.4	30.8	30.3	29.8	30.3	30.3	30.3	29.8	30.3	31.4	31.4
145°	28.8	28.8	28.3	28.3	28.3	28.8	28.3	28.3	28.8	28.8	29.3
147.5°	27.2	27.2	26.7	27.2	27.2	27.2	27.2	26.7	27.2	27.2	27.8
150°	26.7	26.2	25.7	26.2	26.2	25.7	25.7	25.7	25.7	26.2	26.2
152.5°	25.2	25.2	24.7	25.2	24.7	24.7	24.7	24.7	24.7	25.2	25.7
155°	24.2	24.2	23.6	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2
157.5°	23.1	23.6	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.6	23.6
160°	22.6	22.6	22.6	22.6	22.1	22.1	22.1	22.6	22.6	22.6	23.1
162.5°	22.1	22.1	22.1	22.1	21.6	21.6	21.6	21.6	22.1	22.1	22.6
165°	22.1	21.6	21.6	21.6	21.1	21.1	21.1	21.1	21.6	22.1	21.6
167.5°	21.1	21.1	21.1	21.1	21.1	20.6	20.6	21.1	21.1	21.1	21.6
170°	21.1	21.1	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	21.1
172.5°	21.1	21.1	21.1	21.1	20.6	20.6	20.6	20.6	20.6	21.1	21.1
175°	21.1	21.1	21.1	21.1	20.6	20.6	20.6	21.1	21.1	21.1	20.6
177.5°	21.1	21.1	21.1	21.1	20.6	21.1	21.1	21.1	21.1	21.1	21.1
180°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1



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1121 Highway 74 South  
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: SP1-2411-284-1

Test Date: 11/15/2024

Luminaire Tested: TTN-D0-735-U-WQ

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

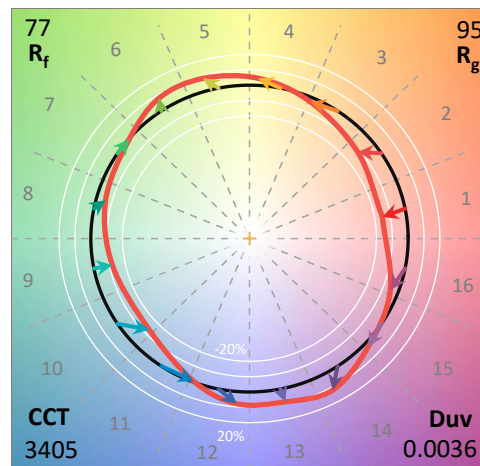
**Test Information**

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  
 CIE u': 0.2365  
 CIE v': 0.5180  
 Duv: 0.0036  
 CIE x: 0.4148  
 CIE y: 0.4038  
 CIE z: 0.1814  
 Peak Wavelength (nm): 596  
 Dominant Wavelength (nm): 579  
 Purity: 45.70672  
 Rf: 76.6  
 Rg: 95.4

CRI (Ra):	73.9		
R1:	71.3	R9:	-18.0
R2:	80.3	R10:	53.1
R3:	87.8	R11:	68.6
R4:	73.2	R12:	42.6
R5:	69.8	R13:	72.5
R6:	71.8	R14:	92.7
R7:	82.8	R15:	64.3
R8:	54.1		



**Test Conditions**

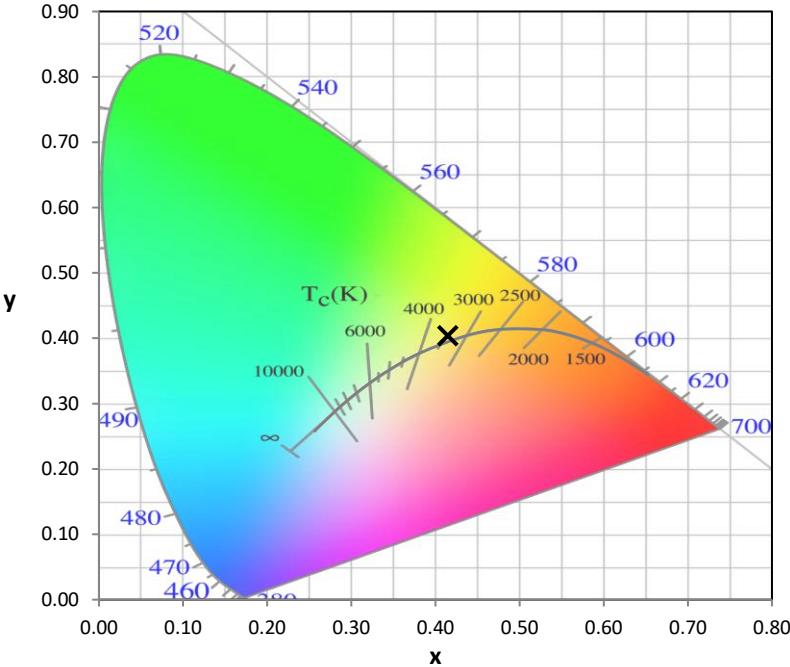
Stabilization Time: 38M  
 Operation Time: 1H 38M  
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-1

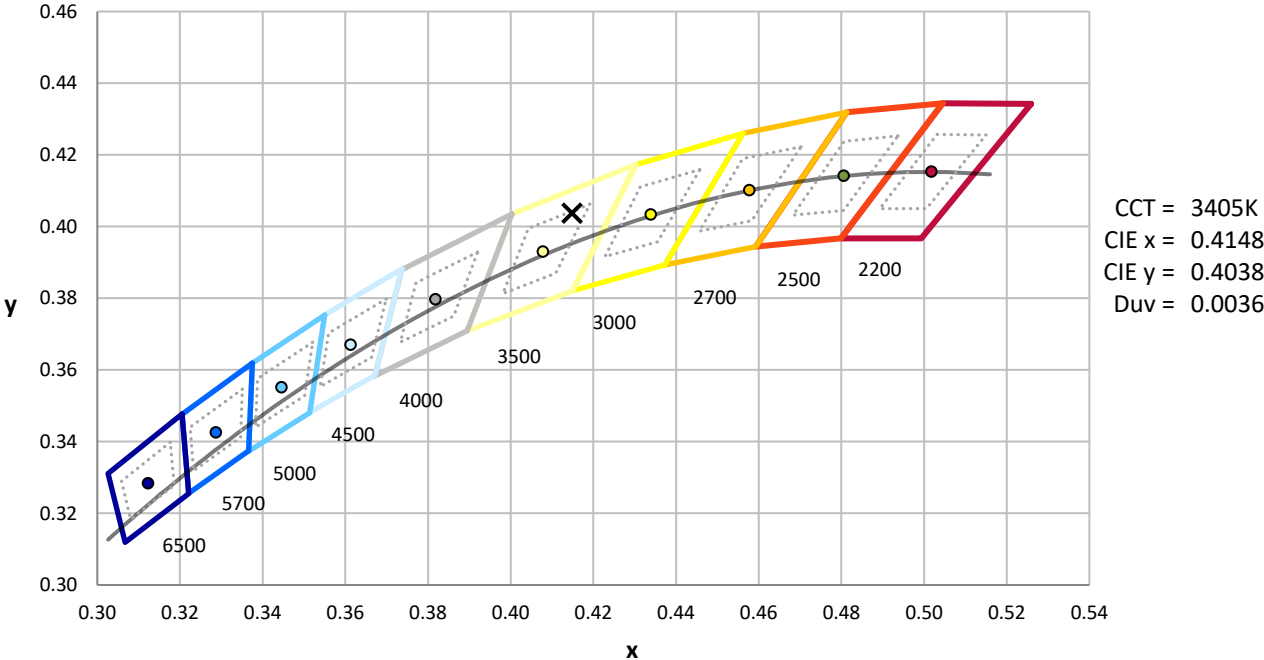
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-1

**CIE 1931 Chromaticity Diagram**



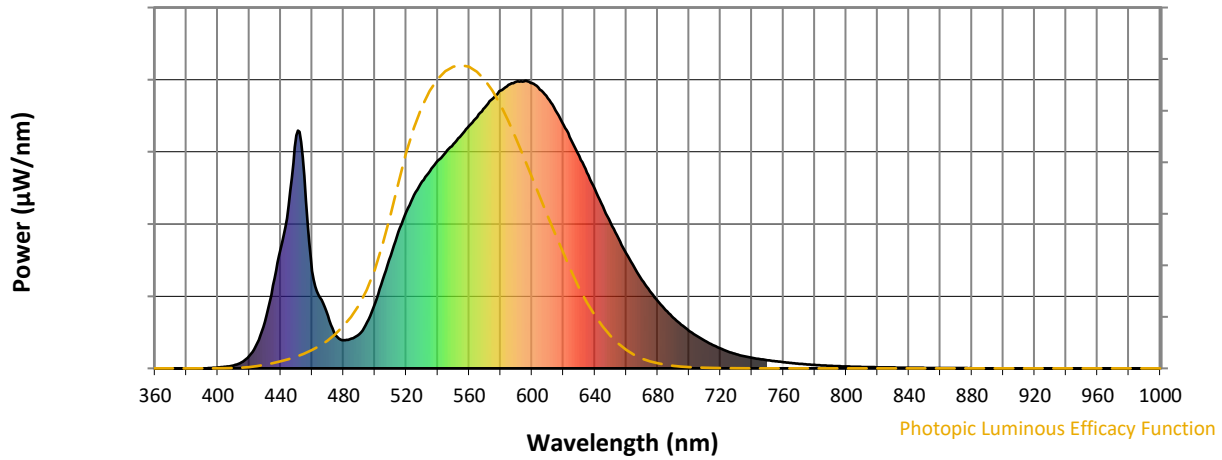
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2411-284-1

**Photopic Flux vs. Wavelength**

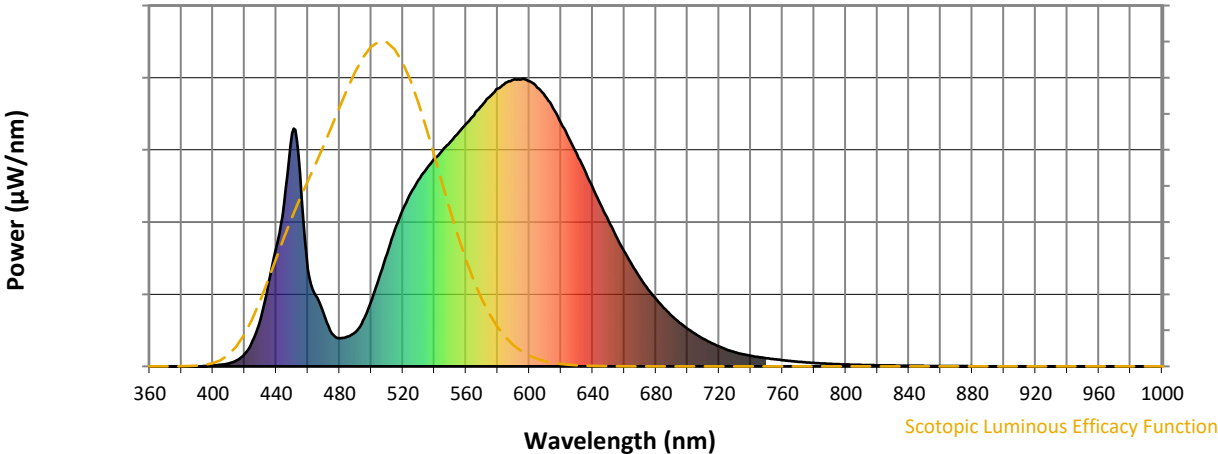


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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			

REPORT NUMBER: SP1-2411-284-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.47

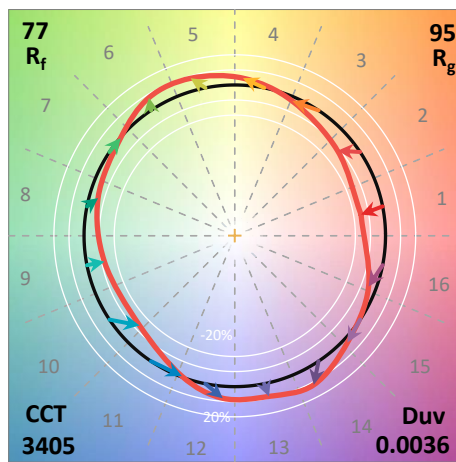
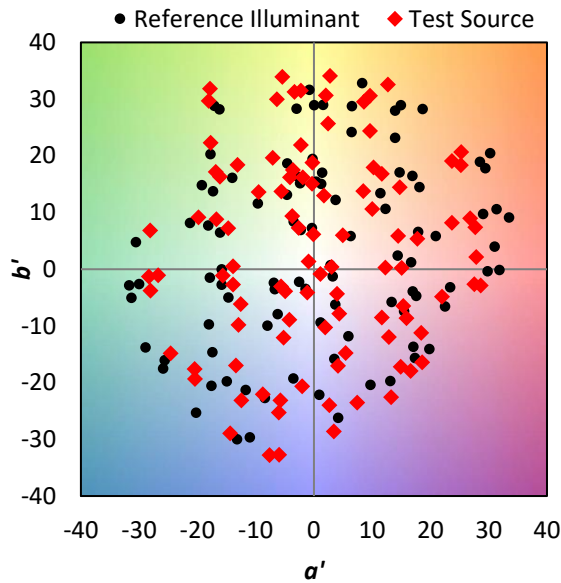
$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
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			

**Summary**

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



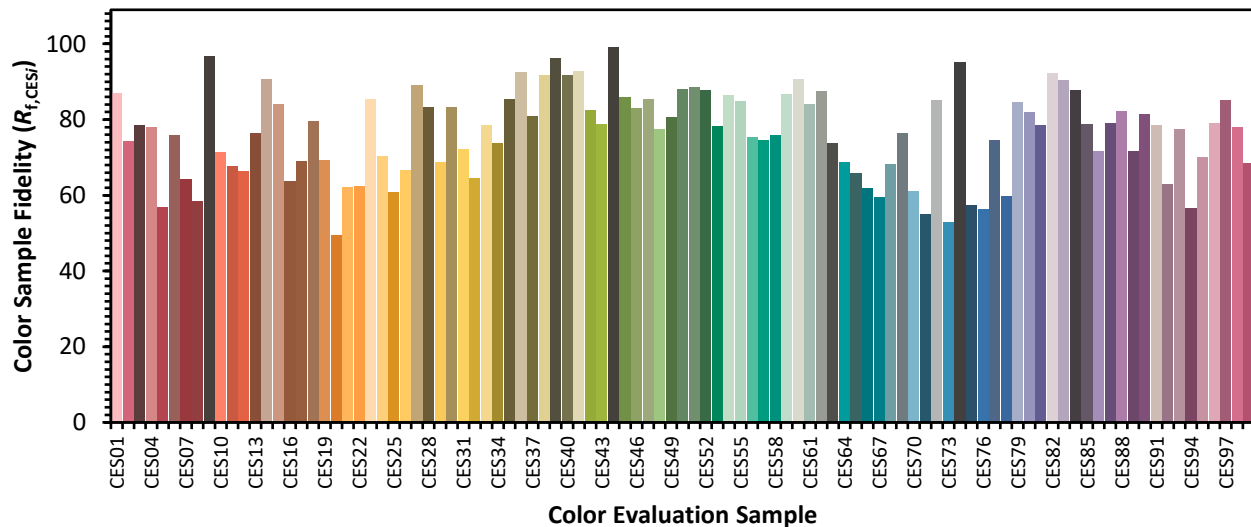
**Color Vector Graphics**



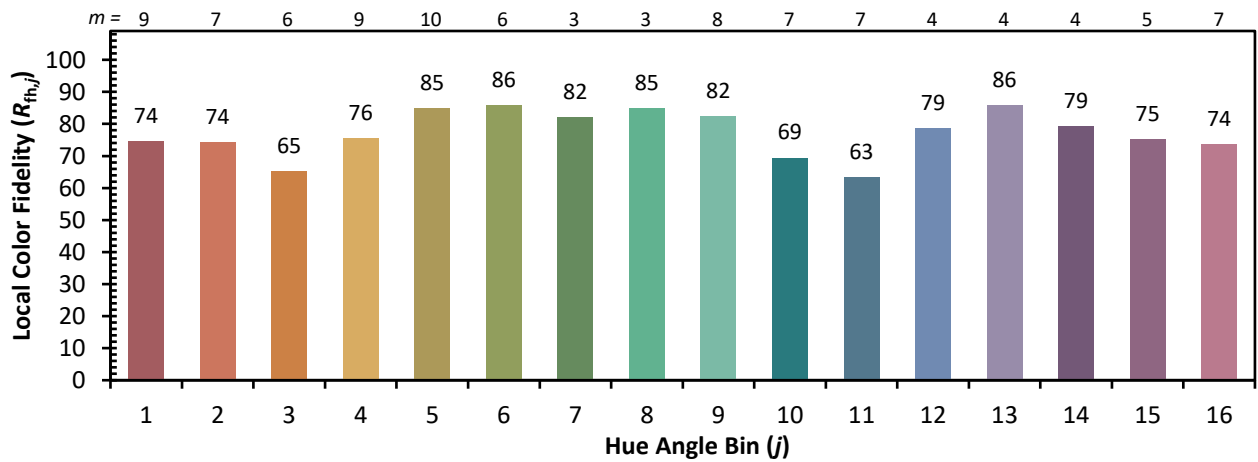
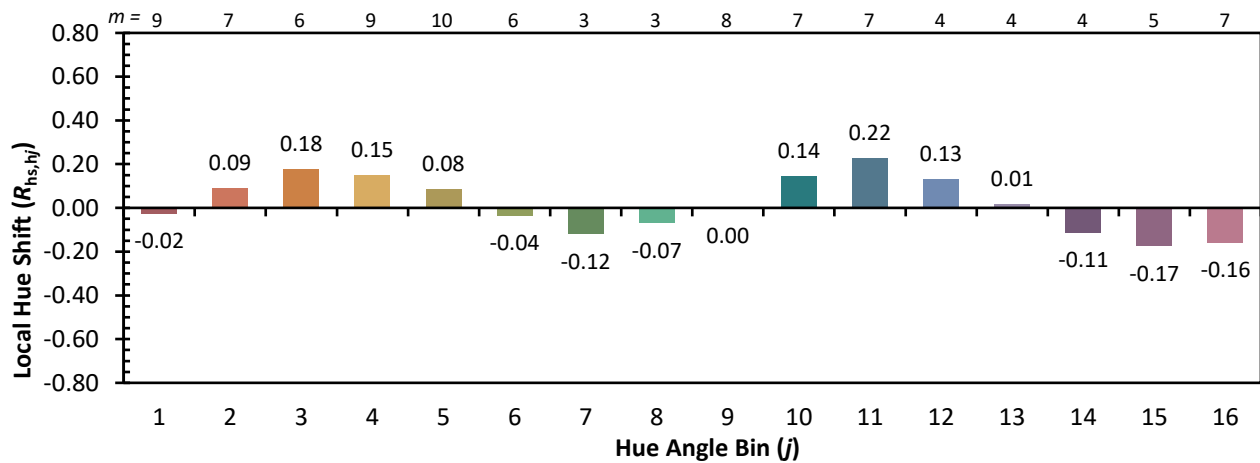
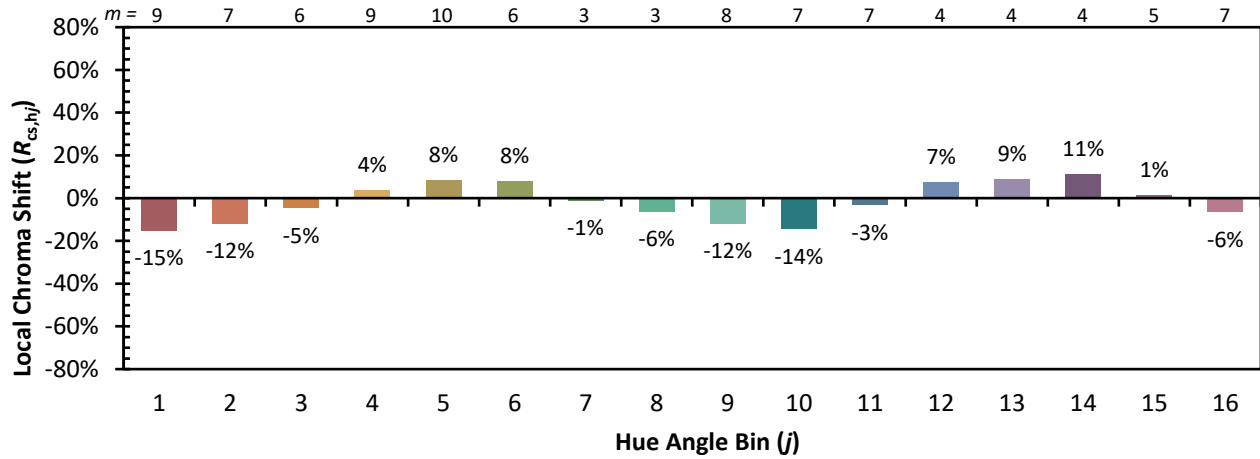


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

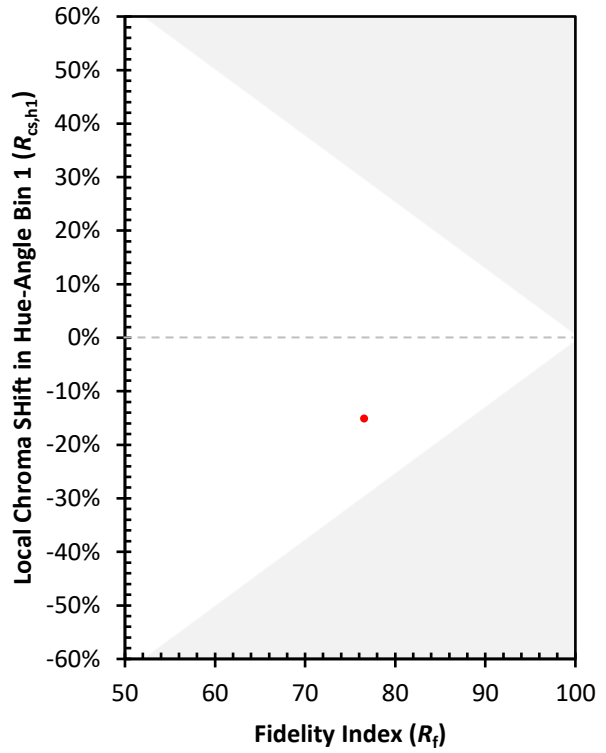
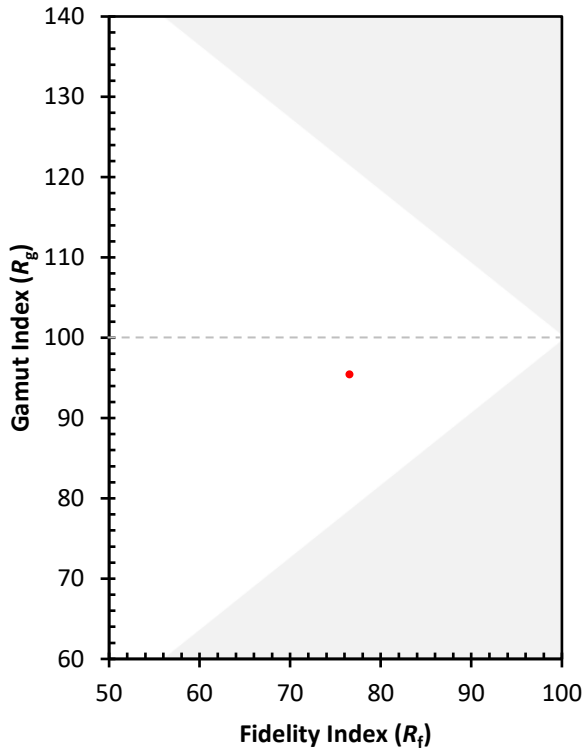
CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82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