

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: P833204

Luminaire Tested: **TTN-D1-740-U-MQ-UPL2**

Issue Date: 5/15/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P833204  
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-MQ-UPL2  
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
4000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

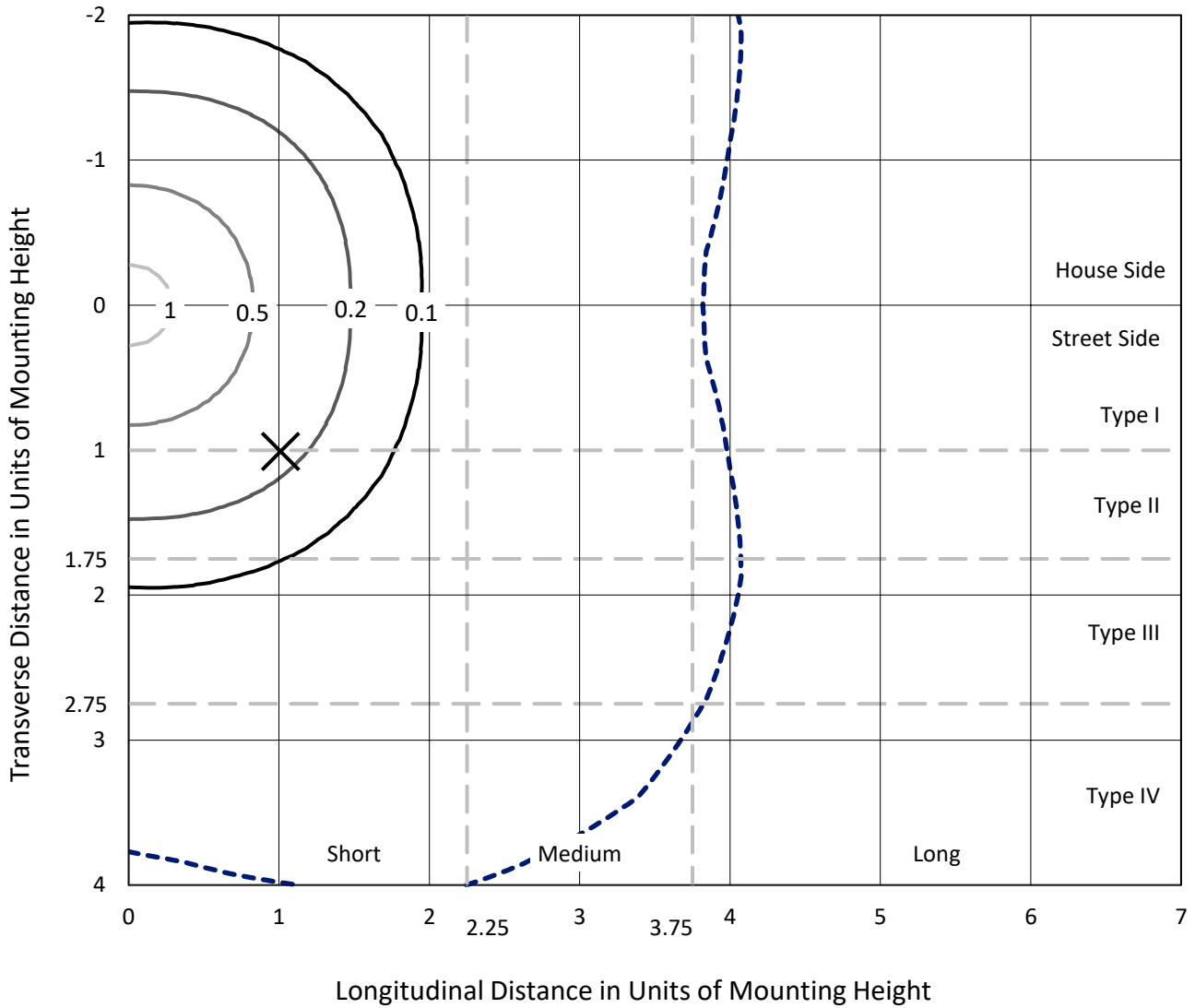
Lumens per Lamp: N/A  
Luminaire Lumens: 4109.7 lumens  
Efficiency: N/A  
Efficacy: 133.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')  
IES Classification: Type V - Short  
BUG Rating: B2 - U4 - G1  
  
Input Watts (W): 30.9  
Input Voltage (V): NR  
Input Current (Ain): 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



REPORT NUMBER: P833204  
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### Iso-Footcandle Lines of Horizontal Illumination

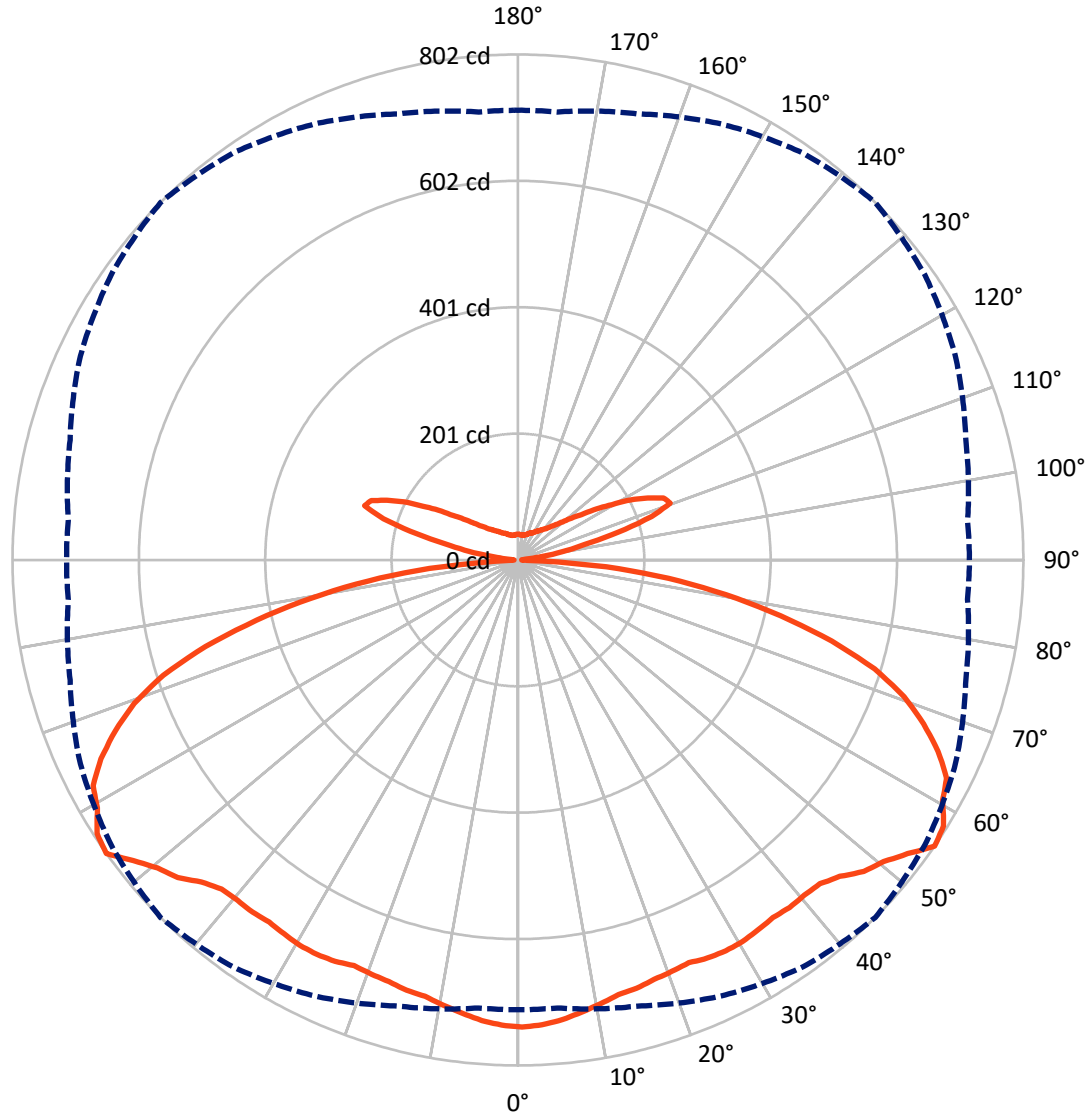
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 55-Deg Vertical

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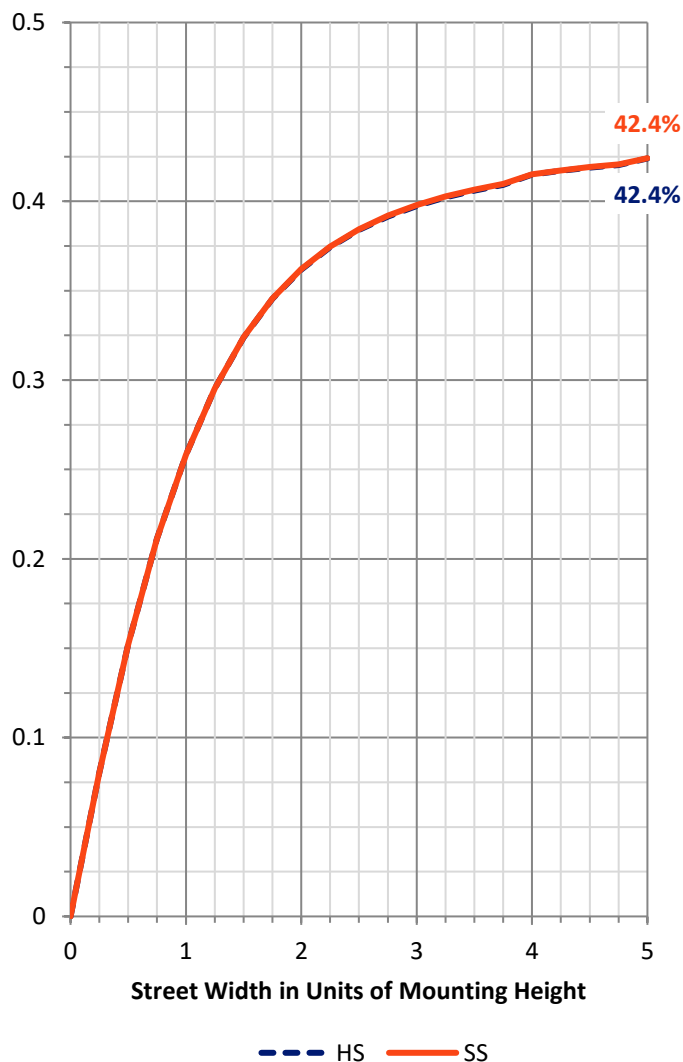
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1762.4	292.5	2054.9
	% Fixture	42.9	7.1	50.0
<b>Street Side</b>	Lumens	1762.4	292.5	2054.9
	% Fixture	42.9	7.1	50.0
<b>Total</b>	Lumens	3524.8	584.9	4109.7
	% Fixture	85.8	14.2	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.4	1.7
10°-20°	199.2	4.8
20°-30°	322.0	7.8
30°-40°	435.7	10.6
40°-50°	545.7	13.3
50°-60°	668.8	16.3
60°-70°	670.4	16.3
70°-80°	483.8	11.8
80°-90°	129.8	3.2
90°-100°	13.1	0.3
100°-110°	132.7	3.2
110°-120°	194.0	4.7
120°-130°	112.6	2.7
130°-140°	59.7	1.5
140°-150°	35.4	0.9
150°-160°	21.8	0.5
160°-170°	11.9	0.3
170°-180°	3.9	0.1
0°-90°	3524.8	85.8
0°-180°	4109.7	100.0

**Coefficient of Utilization**



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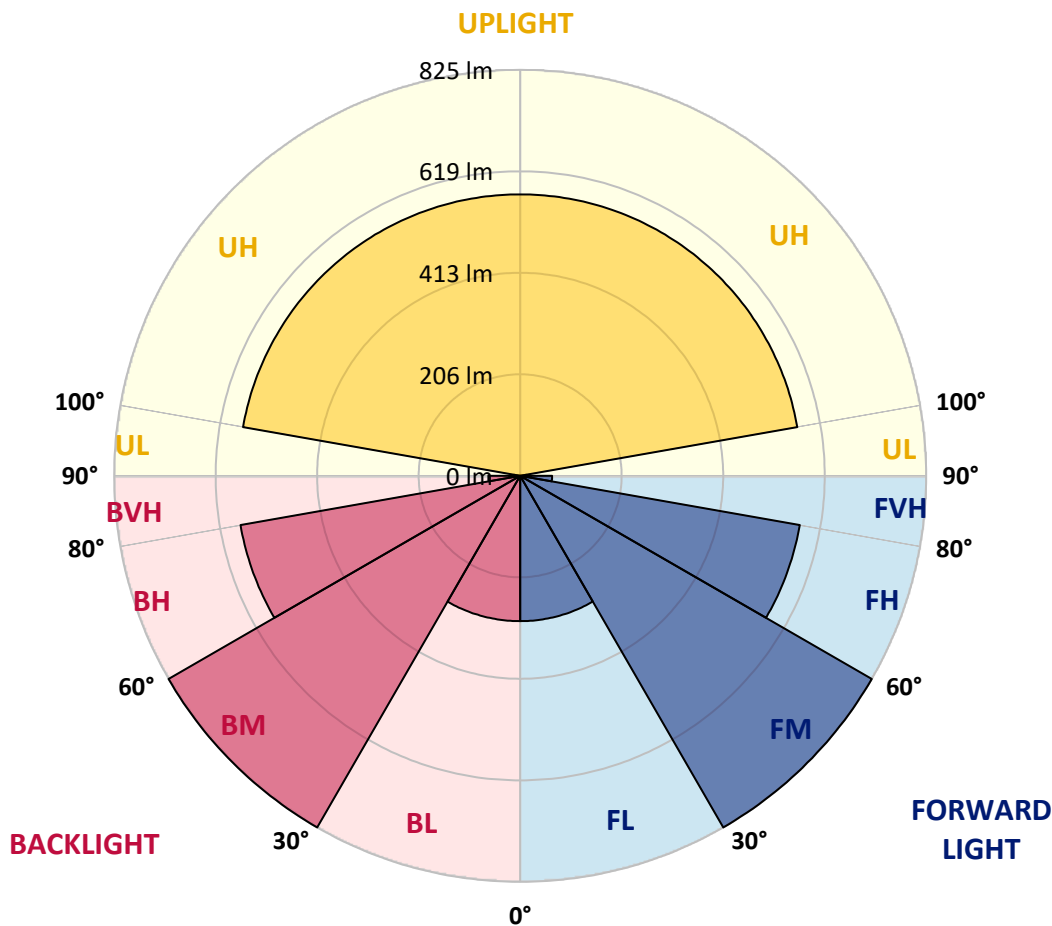
CATALOG NUMBER: TTN-D1-740-U-MQ-UPL2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	295.3	7.2			
FM (30°-60°)	825.1	20.1			
FH (60°-80°)	577.1	14.0			G0/660
FVH (80°-90°)	64.9	1.6			G1/100
BL (0°-30°)	295.3	7.2	B1/500		
BM (30°-60°)	825.1	20.1	B1/1000		
BH (60°-80°)	577.1	14.0	B2/1000		G0/660
BVH (80°-90°)	64.9	1.6			G1/100
UL (90°-100°)	13.1	0.3		U2/50	
UH (100°-180°)	571.8	13.9		U4/1000	

**BUG Rating: B2-U4-G1**

Type V Short





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CATALOG NUMBER: TTN-D1-740-U-MQ-UPL2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	741.4	741.4	741.4	741.4	741.4	741.4	741.4	741.4	741.4	741.4	741.4
2.5°	738.7	738.7	738.7	735.9	738.7	738.7	738.7	738.7	738.7	738.7	738.7
5°	733.1	733.1	733.1	733.1	733.1	733.1	733.1	733.1	733.1	733.1	733.1
7.5°	724.8	724.8	724.8	724.8	724.8	724.8	724.8	724.8	724.8	724.8	724.8
10°	713.8	713.8	713.8	713.8	716.5	716.5	716.5	716.5	713.8	713.8	713.8
12.5°	705.5	705.5	705.5	708.2	708.2	708.2	708.2	708.2	708.2	708.2	705.5
15°	702.7	702.7	702.7	702.7	705.5	705.5	705.5	705.5	702.7	702.7	702.7
17.5°	697.2	697.2	697.2	699.9	699.9	699.9	699.9	699.9	697.2	697.2	697.2
20°	691.6	691.6	694.4	694.4	697.2	697.2	697.2	694.4	694.4	691.6	694.4
22.5°	691.6	691.6	691.6	694.4	694.4	694.4	694.4	691.6	691.6	691.6	691.6
25°	691.6	691.6	694.4	697.2	697.2	699.9	697.2	694.4	691.6	691.6	691.6
27.5°	694.4	694.4	697.2	699.9	699.9	702.7	699.9	697.2	694.4	694.4	694.4
30°	694.4	694.4	697.2	699.9	699.9	702.7	699.9	697.2	694.4	694.4	694.4
32.5°	688.9	691.6	694.4	697.2	699.9	699.9	699.9	697.2	694.4	691.6	691.6
35°	686.1	688.9	691.6	694.4	697.2	697.2	697.2	694.4	691.6	688.9	688.9
37.5°	683.3	683.3	688.9	691.6	694.4	699.9	697.2	691.6	688.9	686.1	686.1
40°	680.6	683.3	686.1	691.6	694.4	699.9	697.2	691.6	686.1	683.3	683.3
42.5°	680.6	680.6	686.1	691.6	697.2	702.7	699.9	694.4	686.1	683.3	680.6
45°	683.3	686.1	694.4	705.5	711.0	716.5	713.8	705.5	691.6	686.1	683.3
47.5°	694.4	697.2	705.5	716.5	730.4	738.7	730.4	716.5	705.5	697.2	694.4
50°	699.9	702.7	716.5	730.4	749.7	752.5	749.7	730.4	716.5	702.7	702.7
52.5°	711.0	711.0	727.6	752.5	769.1	774.6	769.1	755.3	727.6	713.8	711.0
55°	713.8	713.8	733.1	763.6	788.5	802.3	788.5	766.3	735.9	716.5	716.5
57.5°	697.2	702.7	727.6	758.0	788.5	796.8	788.5	760.8	730.4	705.5	702.7
60°	677.8	686.1	708.2	744.2	766.3	774.6	769.1	744.2	711.0	686.1	683.3
62.5°	658.4	669.5	694.4	722.1	755.3	763.6	755.3	722.1	694.4	669.5	658.4
65°	616.9	628.0	664.0	697.2	727.6	733.1	730.4	697.2	664.0	628.0	622.5
67.5°	575.4	583.7	608.6	661.2	686.1	694.4	688.9	658.4	611.4	583.7	581.0
70°	531.2	539.5	561.6	611.4	636.3	650.1	639.1	611.4	561.6	539.5	536.7
72.5°	473.1	484.1	509.0	553.3	578.2	592.0	581.0	553.3	509.0	481.4	475.8
75°	403.9	412.2	442.6	478.6	503.5	514.6	506.3	481.4	442.6	412.2	409.4
77.5°	329.2	337.5	365.2	401.1	415.0	426.0	417.7	398.4	365.2	337.5	334.7
80°	249.0	257.3	282.2	309.8	323.7	334.7	326.4	307.1	282.2	257.3	254.5
82.5°	163.2	171.5	193.7	215.8	229.6	240.7	232.4	213.0	196.4	171.5	168.8
85°	69.2	77.5	96.8	119.0	130.0	141.1	132.8	116.2	96.8	80.2	77.5
87.5°	5.5	8.3	8.3	11.1	8.3	13.8	8.3	8.3	8.3	8.3	8.3
90°	5.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	5.0
92.5°	5.0	5.0	5.0	7.0	8.0	7.0	8.0	6.0	6.0	5.0	5.0
95°	6.0	6.0	7.0	9.0	11.0	12.0	12.0	7.0	7.0	6.0	6.0
97.5°	8.0	9.0	9.0	11.0	18.0	33.0	20.0	10.0	10.0	9.0	8.0
100°	13.0	14.0	14.0	25.0	53.0	71.1	51.0	26.0	19.0	14.0	14.0
102.5°	42.0	44.0	54.0	81.1	120.1	109.1	92.1	87.1	60.0	48.0	46.0
105°	107.1	106.1	114.1	135.1	168.1	165.1	152.1	138.1	119.1	110.1	110.1
107.5°	141.1	141.1	148.1	166.1	191.1	223.2	226.2	179.1	157.1	147.1	146.1
110°	159.1	159.1	165.1	180.1	213.2	258.2	256.2	221.2	194.1	181.1	179.1



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 CATALOG NUMBER: TTN-D1-740-U-MQ-UPL2

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	163.1	164.1	172.1	195.1	231.2	251.2	242.2	228.2	216.2	206.2	204.2
115°	169.1	169.1	178.1	200.2	220.2	228.2	218.2	207.2	199.2	195.1	197.1
117.5°	167.1	170.1	172.1	184.1	197.1	203.2	198.1	183.1	177.1	175.1	172.1
120°	155.1	155.1	157.1	163.1	170.1	173.1	171.1	161.1	156.1	155.1	153.1
122.5°	138.1	139.1	138.1	141.1	146.1	149.1	147.1	139.1	137.1	137.1	135.1
125°	121.1	121.1	120.1	122.1	125.1	124.1	125.1	121.1	120.1	120.1	119.1
127.5°	109.1	108.1	106.1	107.1	108.1	108.1	109.1	105.1	106.1	107.1	106.1
130°	97.1	97.1	95.1	95.1	95.1	93.1	95.1	93.1	94.1	95.1	96.1
132.5°	86.1	86.1	83.1	82.1	82.1	82.1	83.1	82.1	84.1	86.1	86.1
135°	77.1	77.1	74.1	75.1	75.1	74.1	75.1	74.1	76.1	77.1	77.1
137.5°	70.1	70.1	68.1	68.1	68.1	67.1	68.1	68.1	69.1	71.1	72.1
140°	64.0	64.0	63.0	63.0	62.0	63.0	63.0	63.0	64.0	65.0	65.0
142.5°	61.0	60.0	59.0	58.0	59.0	59.0	59.0	58.0	59.0	61.0	61.0
145°	56.0	56.0	55.0	55.0	55.0	56.0	55.0	55.0	56.0	56.0	57.0
147.5°	53.0	53.0	52.0	53.0	53.0	53.0	53.0	52.0	53.0	53.0	54.0
150°	52.0	51.0	50.0	51.0	51.0	50.0	50.0	50.0	50.0	51.0	51.0
152.5°	49.0	49.0	48.0	49.0	48.0	48.0	48.0	48.0	48.0	49.0	50.0
155°	47.0	47.0	46.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
157.5°	45.0	46.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.0	46.0
160°	44.0	44.0	44.0	44.0	43.0	43.0	43.0	44.0	44.0	44.0	45.0
162.5°	43.0	43.0	43.0	43.0	42.0	42.0	42.0	42.0	43.0	43.0	44.0
165°	43.0	42.0	42.0	42.0	41.0	41.0	41.0	41.0	42.0	43.0	42.0
167.5°	41.0	41.0	41.0	41.0	41.0	40.0	40.0	41.0	41.0	41.0	42.0
170°	41.0	41.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.0
172.5°	41.0	41.0	41.0	41.0	40.0	40.0	40.0	40.0	40.0	41.0	41.0
175°	41.0	41.0	41.0	41.0	40.0	40.0	40.0	41.0	41.0	41.0	40.0
177.5°	41.0	41.0	41.0	41.0	40.0	41.0	41.0	41.0	41.0	41.0	41.0
180°	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0



Cooper Lighting Solutions Photometric Lab  
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: SP1-2411-284-2

Test Date: 11/20/2024

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

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

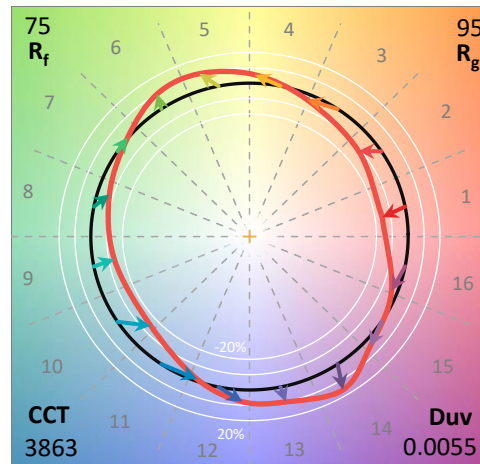
**Test Information**

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	R9:	-23.5
R2:	76.9	R10:	45.4
R3:	83.3	R11:	68.7
R4:	72.7	R12:	38.7
R5:	68.4	R13:	70.0
R6:	67.5	R14:	90.3
R7:	82.0	R15:	62.1
R8:	55.3		



**Test Conditions**

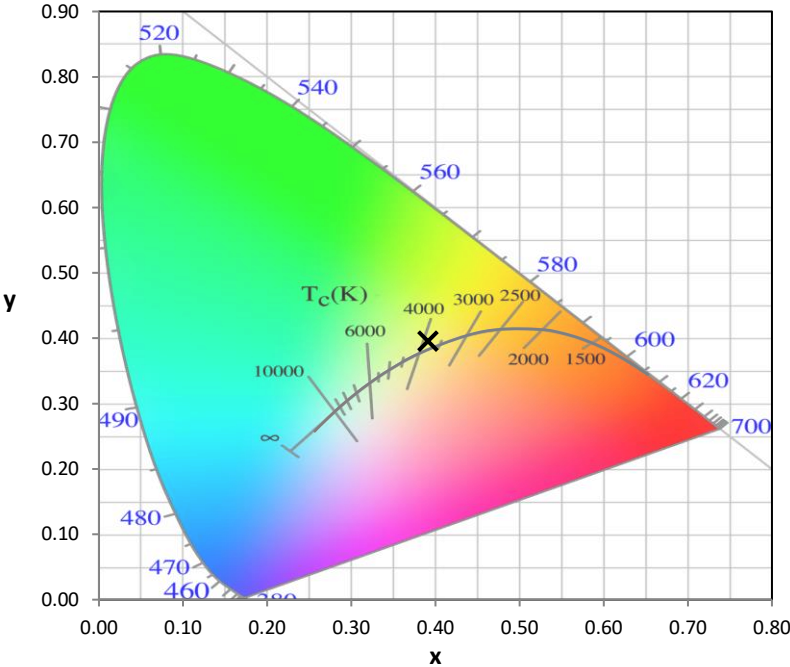
Stabilization Time: 37M  
 Operation Time: 1H 37M  
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2411-284-2

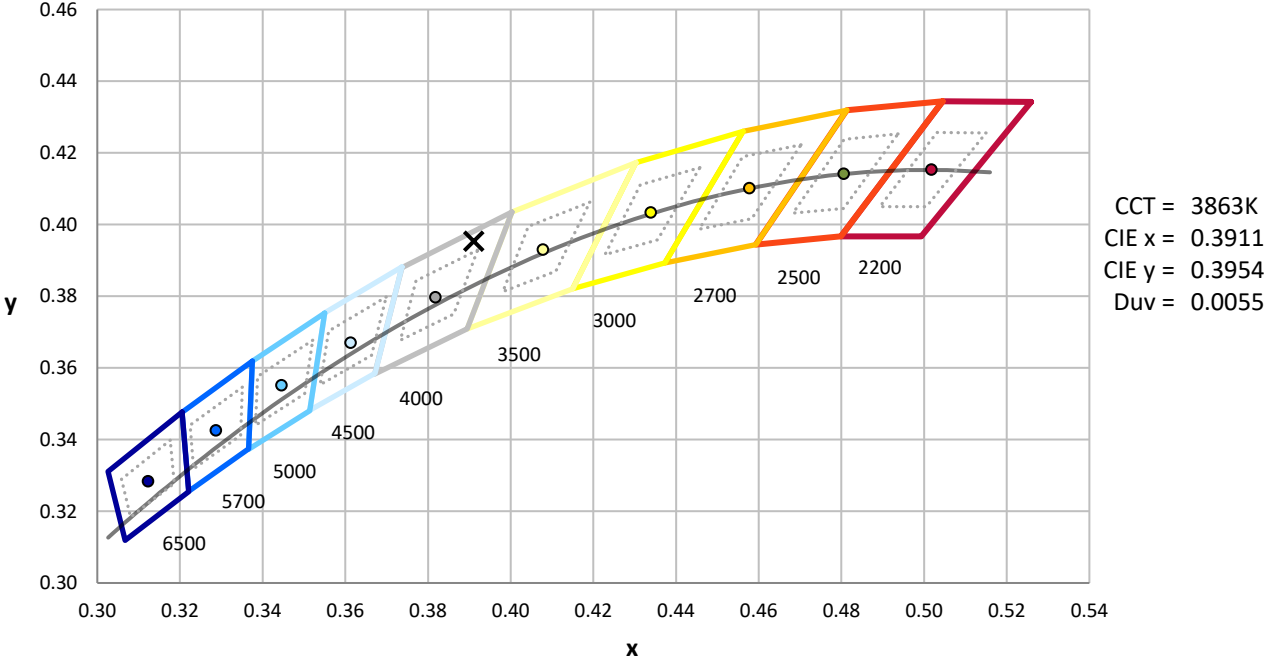
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

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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 4000K 7-step quadrangle

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**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	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			

REPORT NUMBER: SP1-2411-284-2

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.45**

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	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**

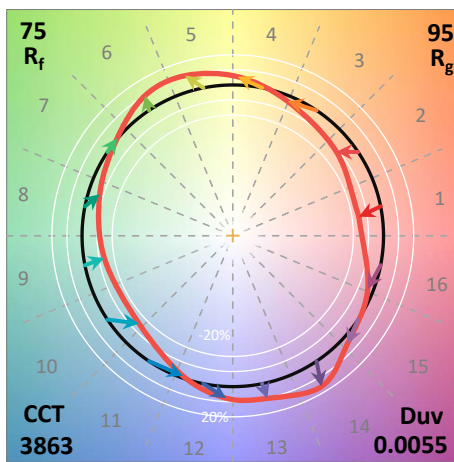
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	118	NR	620	730	NR	750	25	NR	880	1	NR
365	0	NR	495	170	NR	625	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			

**Summary**

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



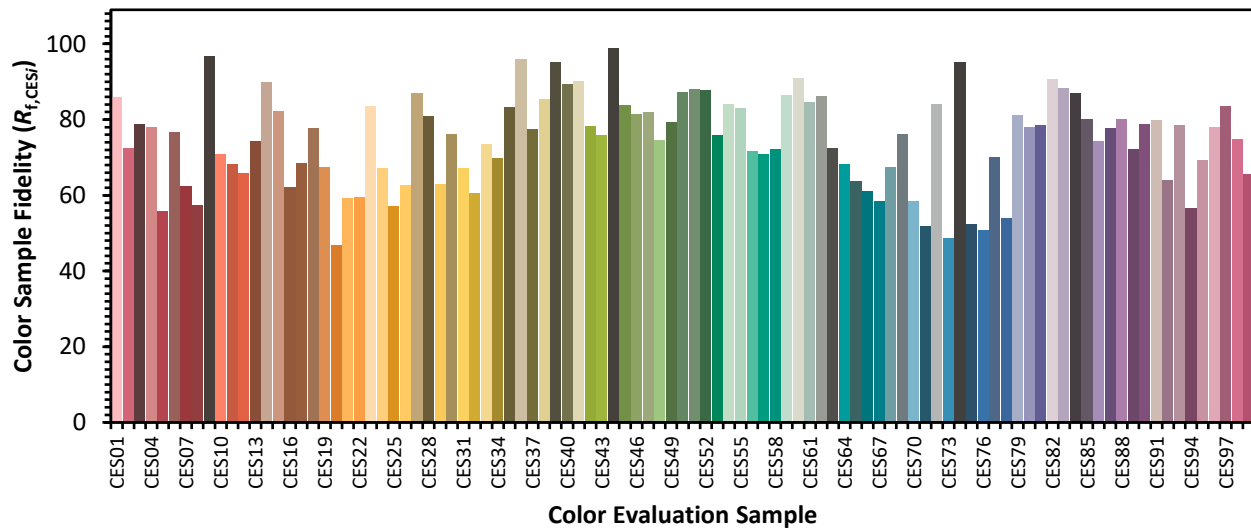
**Color Vector Graphics**



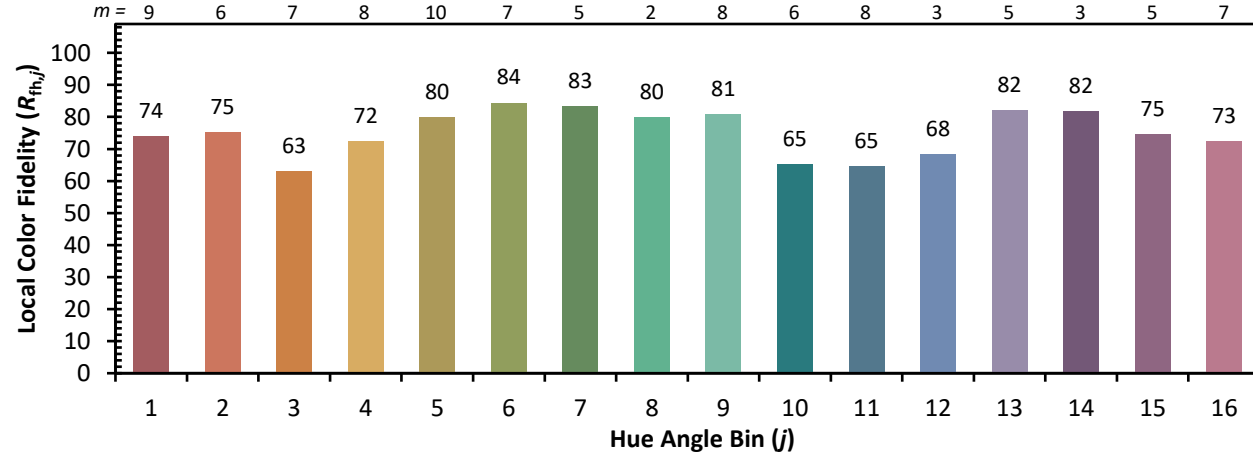


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

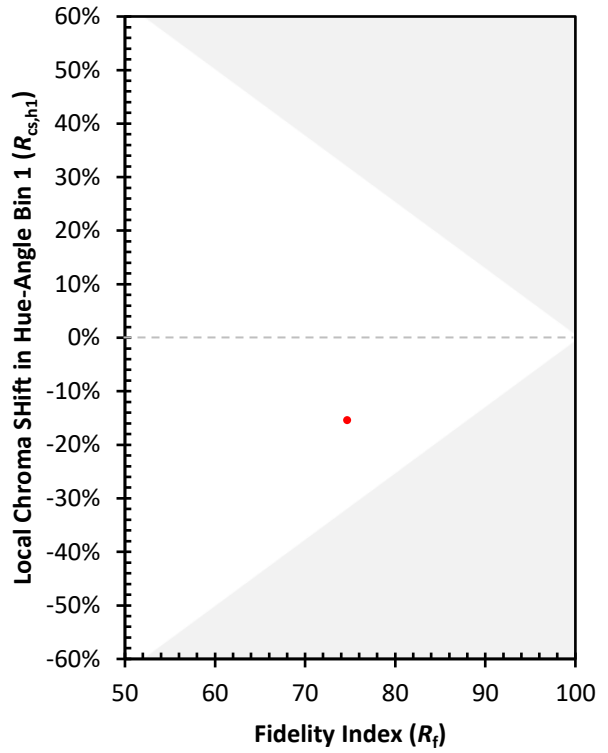
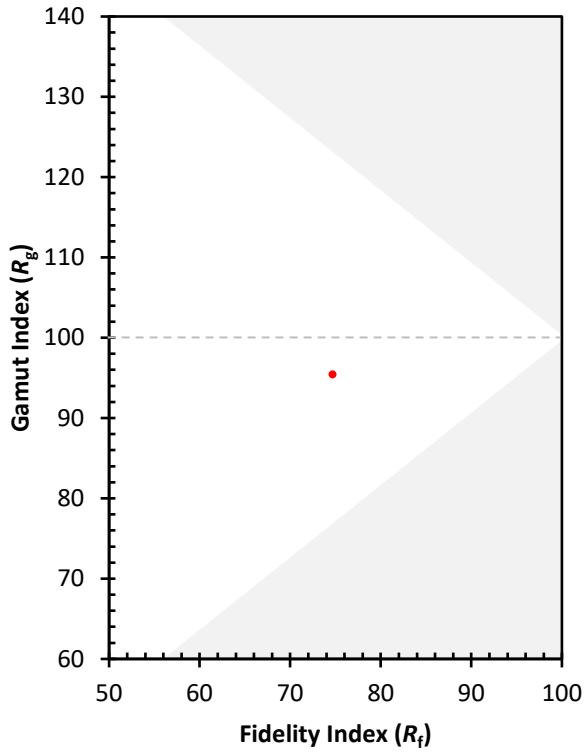
CES01 = 85	CES26 = 63	CES51 = 88	CES76 = 51
CES02 = 61	CES27 = 87	CES52 = 88	CES77 = 70
CES03 = 30	CES28 = 81	CES53 = 76	CES78 = 54
CES04 = 70	CES29 = 63	CES54 = 84	CES79 = 81
CES05 = 47	CES30 = 76	CES55 = 83	CES80 = 78
CES06 = 50	CES31 = 67	CES56 = 72	CES81 = 79
CES07 = 40	CES32 = 61	CES57 = 71	CES82 = 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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)