

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: P832693

Luminaire Tested: **TTN-D3-750-U-RW-CG**

Issue Date: 5/14/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P832693  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2312-254-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/14/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TTN-D3-750-U-RW-CG  
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE  
5000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH CLEAR GLASS  
Light Source: -  
Ballast/Driver: -

**Summary**

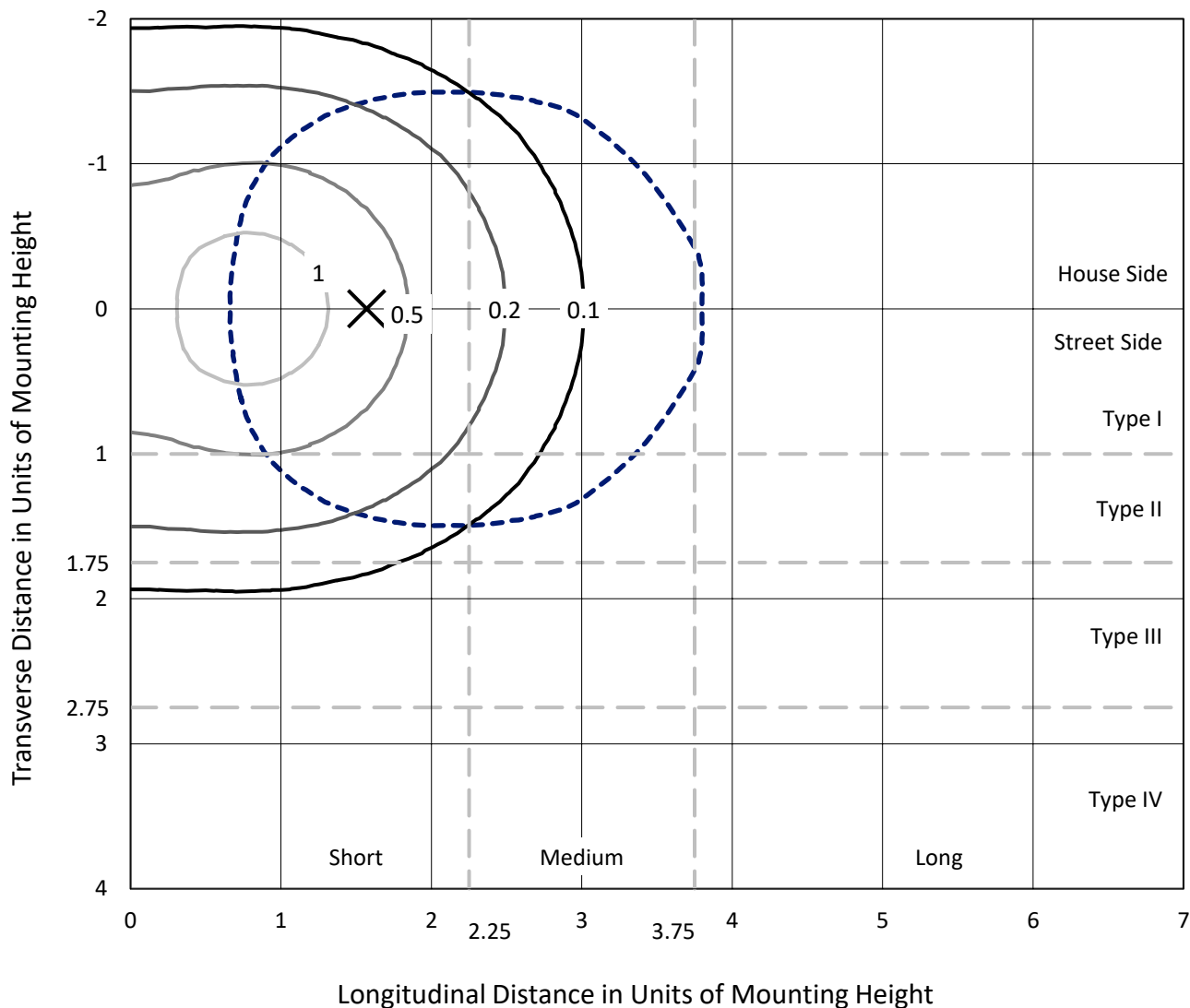
Lumens per Lamp: N/A  
Luminaire Lumens: 6433 lumens  
Efficiency: N/A  
Efficacy: 108.7 lumens/watt  
Luminous Opening: Circular (Dia: 0.71' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 59.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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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 CATALOG NUMBER: TTN-D3-750-U-RW-CG

### Iso-Footcandle Lines of Horizontal Illumination

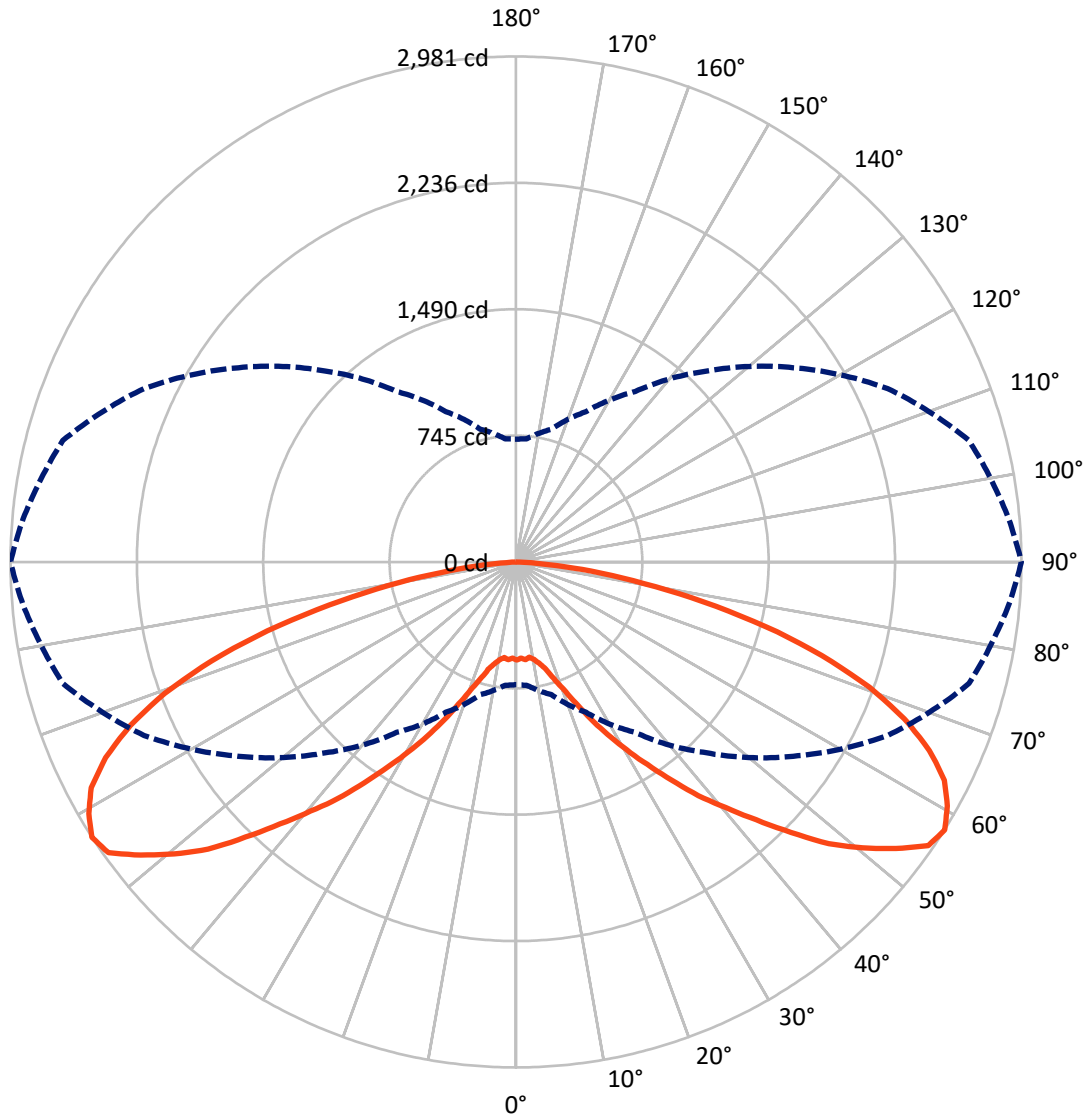
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type II - Short - N/A

REPORT NUMBER: P832693  
CATALOG NUMBER: TTN-D3-750-U-RW-CG

### Luminous Intensity Polar Plot



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

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CATALOG NUMBER: TTN-D3-750-U-RW-CG

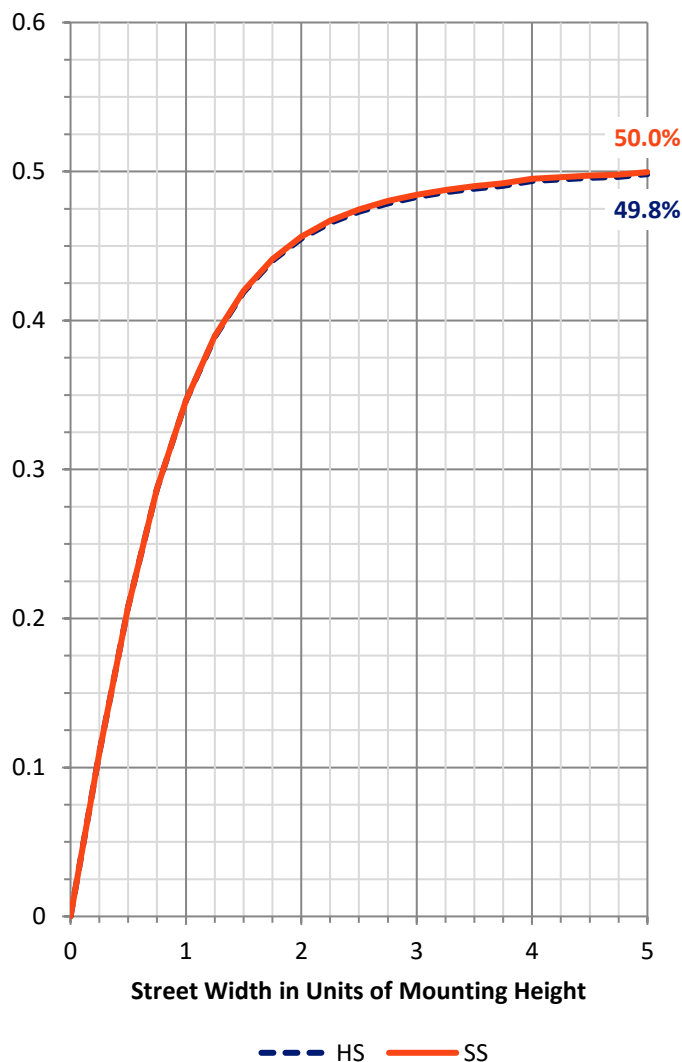
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3216.5	0.0	3216.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3216.5	0.0	3216.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	6433.0	0.0	6433.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.1	0.9
10°-20°	177.7	2.8
20°-30°	378.3	5.9
30°-40°	697.3	10.8
40°-50°	1122.7	17.5
50°-60°	1519.5	23.6
60°-70°	1477.4	23.0
70°-80°	859.6	13.4
80°-90°	145.3	2.3
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°	6433.0	100.0
0°-180°	6433.0	100.0

**Coefficient of Utilization**



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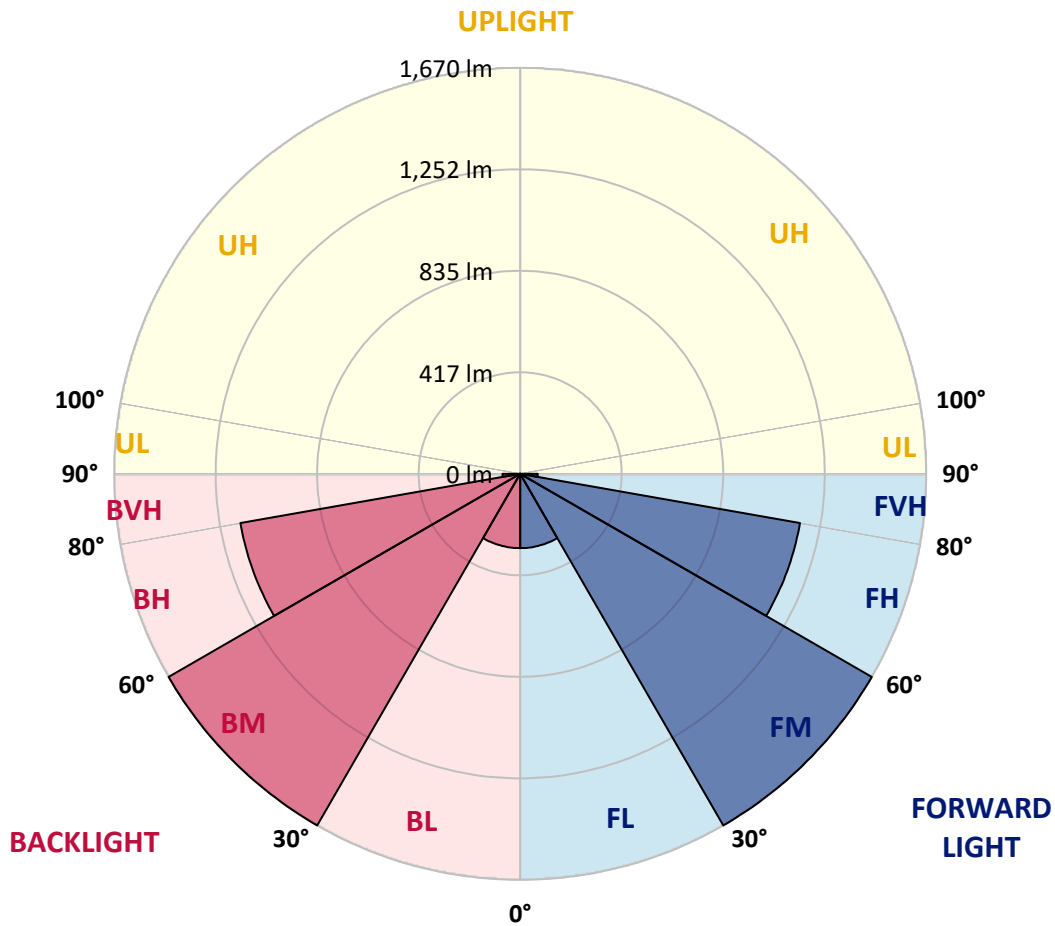
CATALOG NUMBER: TTN-D3-750-U-RW-CG

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	305.6	4.8			
FM (30°-60°)	1669.7	26.0			
FH (60°-80°)	1168.5	18.2			G1/1800
FVH (80°-90°)	72.7	1.1			G1/100
BL (0°-30°)	305.6	4.8	B1/500		
BM (30°-60°)	1669.7	26.0	B2/2500		
BH (60°-80°)	1168.5	18.2	B3/2500		G3/2500
BVH (80°-90°)	72.7	1.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Short





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 CATALOG NUMBER: TTN-D3-750-U-RW-CG

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	578.8	578.8	578.8	578.8	578.8	578.8	578.8	578.8	578.8	578.8	578.8
2.5°	578.8	578.8	578.8	578.8	573.0	573.0	573.0	567.2	567.2	567.2	567.2
5°	578.8	578.8	578.8	584.6	584.6	584.6	578.8	578.8	578.8	578.8	578.8
7.5°	578.8	584.6	584.6	578.8	578.8	573.0	573.0	573.0	567.2	567.2	567.2
10°	578.8	578.8	578.8	578.8	573.0	573.0	578.8	578.8	584.6	584.6	584.6
12.5°	573.0	573.0	578.8	578.8	578.8	584.6	596.2	602.0	607.7	613.5	613.5
15°	578.8	578.8	584.6	590.4	596.2	607.7	625.1	642.5	654.0	659.8	654.0
17.5°	578.8	584.6	590.4	602.0	619.3	636.7	665.6	688.8	711.9	717.7	723.5
20°	590.4	590.4	596.2	619.3	648.3	677.2	717.7	758.2	787.2	798.8	798.8
22.5°	596.2	602.0	607.7	636.7	683.0	729.3	787.2	833.5	874.0	897.1	902.9
25°	613.5	613.5	625.1	665.6	723.5	793.0	868.2	937.7	989.8	1018.7	1024.5
27.5°	625.1	630.9	648.3	700.4	775.6	862.4	966.6	1047.6	1111.3	1146.0	1151.8
30°	636.7	642.5	677.2	735.1	827.7	931.9	1053.4	1157.6	1238.6	1279.2	1284.9
32.5°	654.0	659.8	700.4	764.0	874.0	1001.3	1140.2	1267.6	1383.3	1418.1	1423.9
35°	671.4	677.2	723.5	798.8	926.1	1070.8	1232.9	1383.3	1522.3	1568.6	1580.1
37.5°	688.8	694.6	740.9	833.5	978.2	1146.0	1337.0	1516.5	1667.0	1730.6	1748.0
40°	706.1	711.9	764.0	868.2	1030.3	1227.1	1447.0	1643.8	1817.4	1892.7	1904.3
42.5°	717.7	723.5	781.4	897.1	1082.4	1302.3	1562.8	1782.7	1967.9	2066.3	2077.9
45°	735.1	740.9	804.5	937.7	1128.7	1389.1	1672.7	1939.0	2153.2	2263.1	2274.7
47.5°	746.7	752.4	821.9	960.8	1180.8	1470.2	1788.5	2077.9	2332.6	2448.3	2483.1
50°	752.4	758.2	833.5	984.0	1215.5	1528.0	1881.1	2216.8	2488.9	2633.6	2650.9
52.5°	752.4	764.0	839.3	1001.3	1238.6	1580.1	1956.4	2332.6	2639.4	2801.4	2807.2
55°	746.7	752.4	833.5	995.5	1250.2	1603.3	2008.5	2402.0	2743.5	2899.8	2951.9
57.5°	723.5	729.3	810.3	978.2	1227.1	1591.7	1996.9	2419.4	2766.7	2917.2	2980.8
60°	688.8	700.4	775.6	937.7	1192.3	1551.2	1962.1	2384.7	2732.0	2917.2	2923.0
62.5°	648.3	654.0	729.3	885.6	1140.2	1487.5	1898.5	2315.2	2650.9	2841.9	2836.1
65°	590.4	596.2	659.8	821.9	1047.6	1366.0	1771.1	2205.2	2494.6	2697.2	2679.9
67.5°	526.7	532.5	590.4	735.1	937.7	1232.9	1597.5	2020.0	2274.7	2483.1	2471.5
70°	457.3	457.3	509.3	630.9	821.9	1082.4	1406.5	1776.9	2031.6	2205.2	2211.0
72.5°	376.2	376.2	422.5	526.7	688.8	908.7	1186.6	1516.5	1724.8	1875.3	1886.9
75°	295.2	289.4	329.9	416.7	544.1	723.5	937.7	1221.3	1383.3	1528.0	1522.3
77.5°	208.4	208.4	231.5	301.0	393.6	538.3	694.6	920.3	1030.3	1151.8	1128.7
80°	133.1	133.1	144.7	196.8	260.5	358.9	457.3	625.1	700.4	793.0	764.0
82.5°	69.5	63.7	75.2	104.2	138.9	196.8	254.7	364.6	399.4	468.8	445.7
85°	23.2	23.2	23.2	34.7	52.1	75.2	98.4	156.3	162.1	208.4	191.0
87.5°	5.8	0.0	0.0	5.8	5.8	5.8	5.8	17.4	17.4	34.7	23.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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: SP1-2411-284-3

Test Date: 11/21/2024

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

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



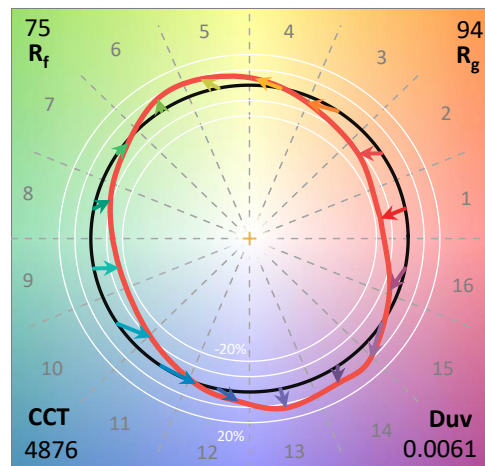
**Test Information**

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



**Test Conditions**

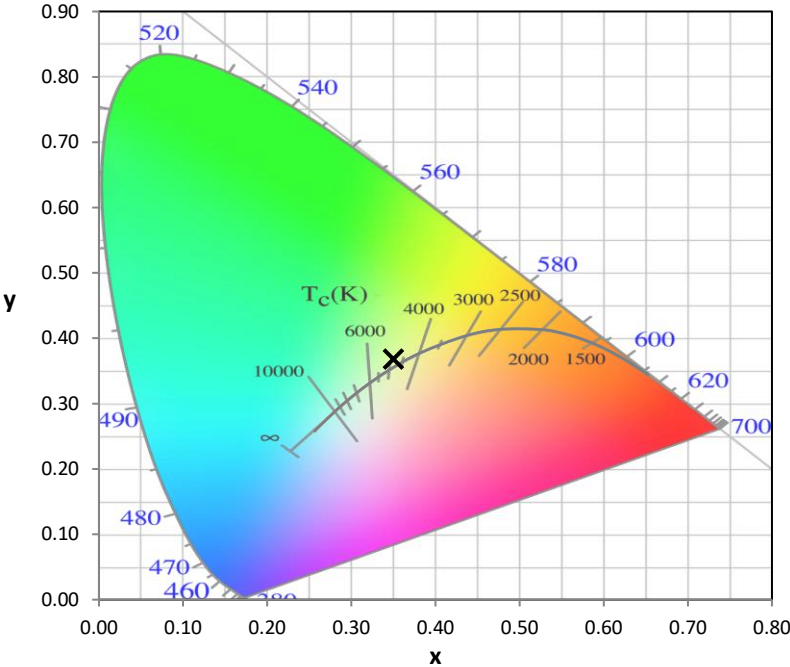
Stabilization Time: 51M  
 Operation Time: 1H 51M  
 Sphere Temperature (°C): 24.9

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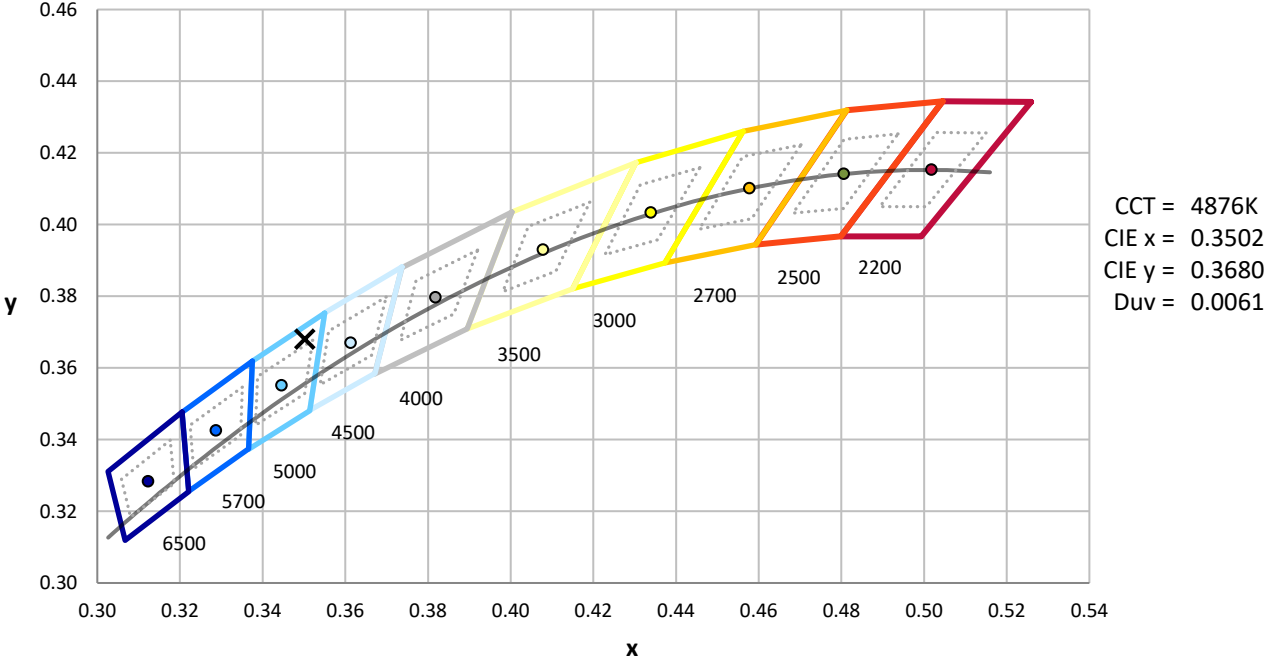
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085	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 5000K 7-step quadrangle

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**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

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	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**



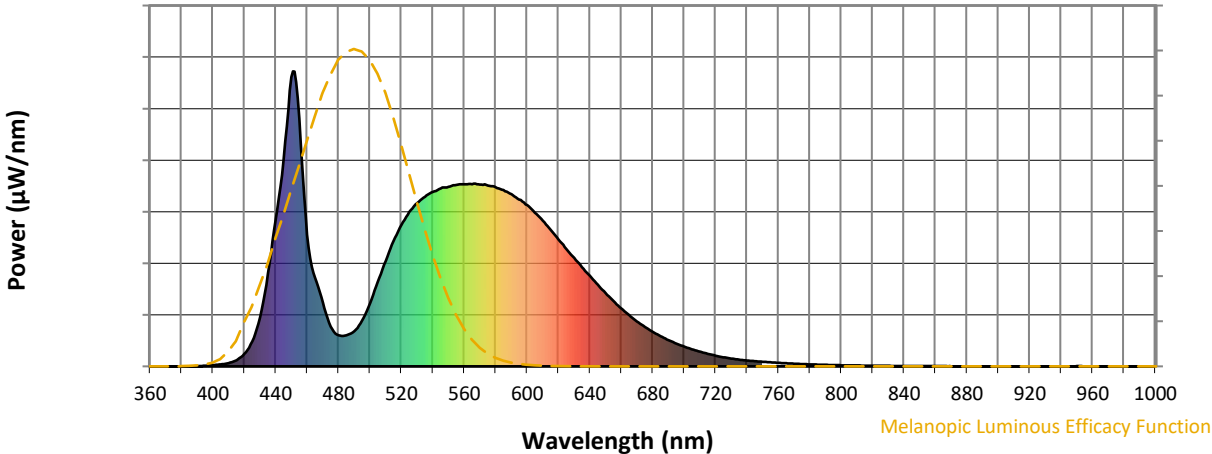
**Scotopic Lumens: NR**

**S/P: 1.74**

λ (nm)	Power W <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	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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Melanopic Flux vs. Wavelength

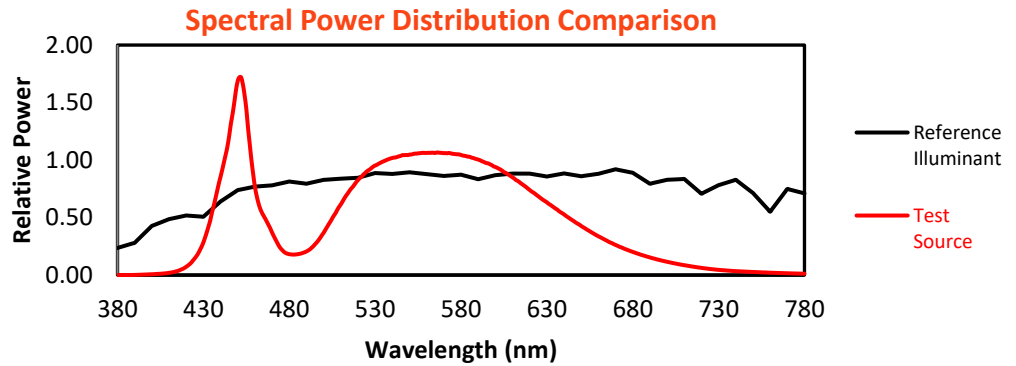


Melanopic Lumens: NR M/P: 3.51

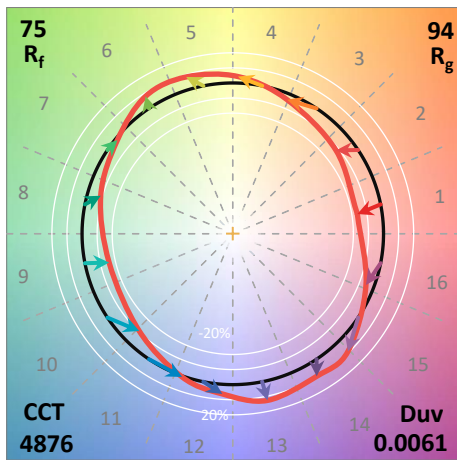
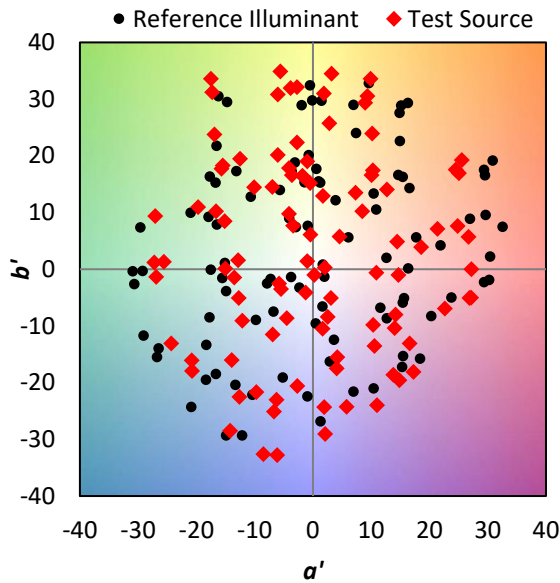
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625	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			

**Summary**

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

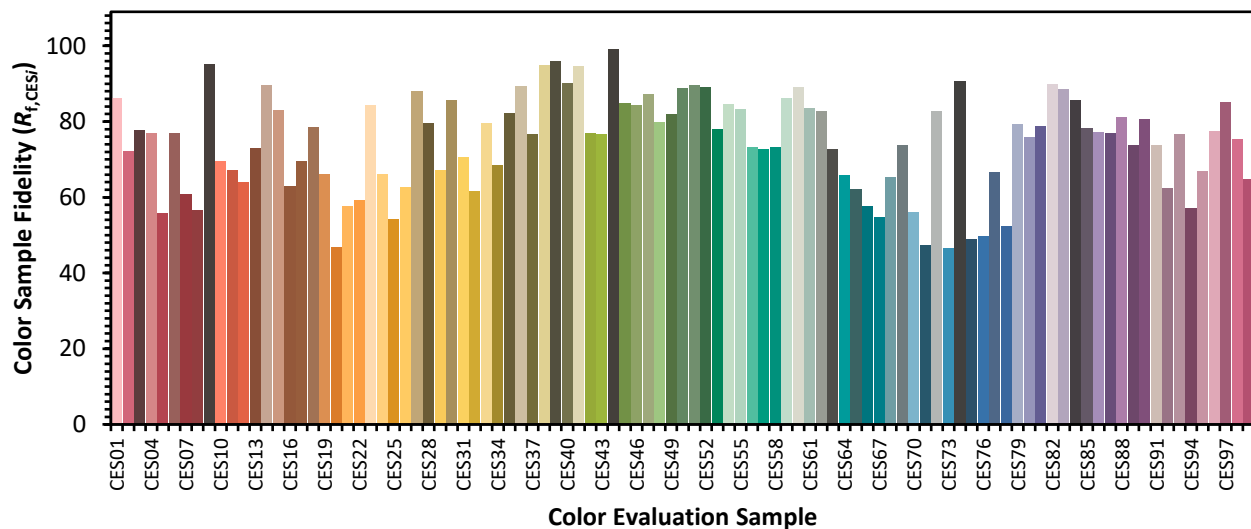


**Color Vector Graphics**



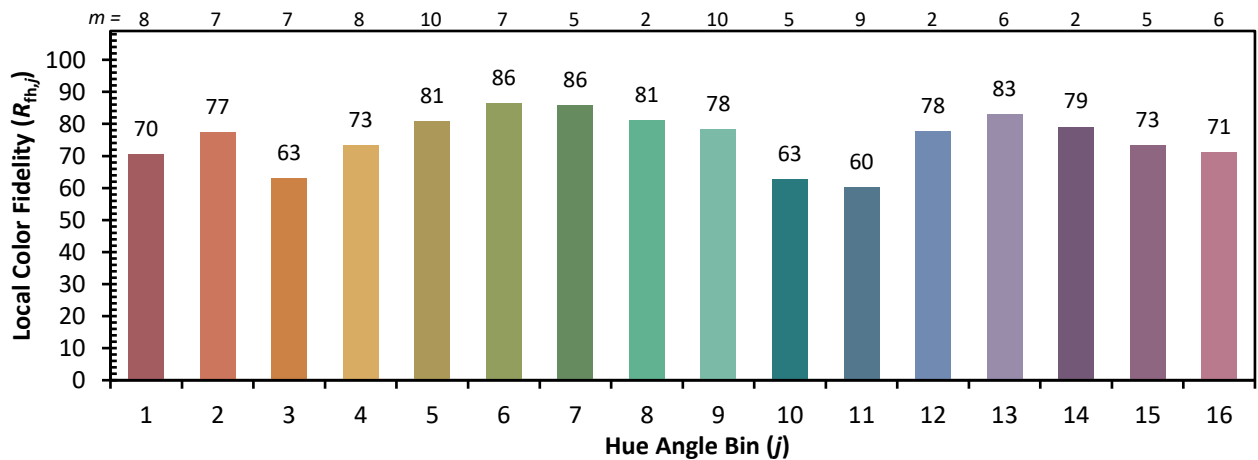
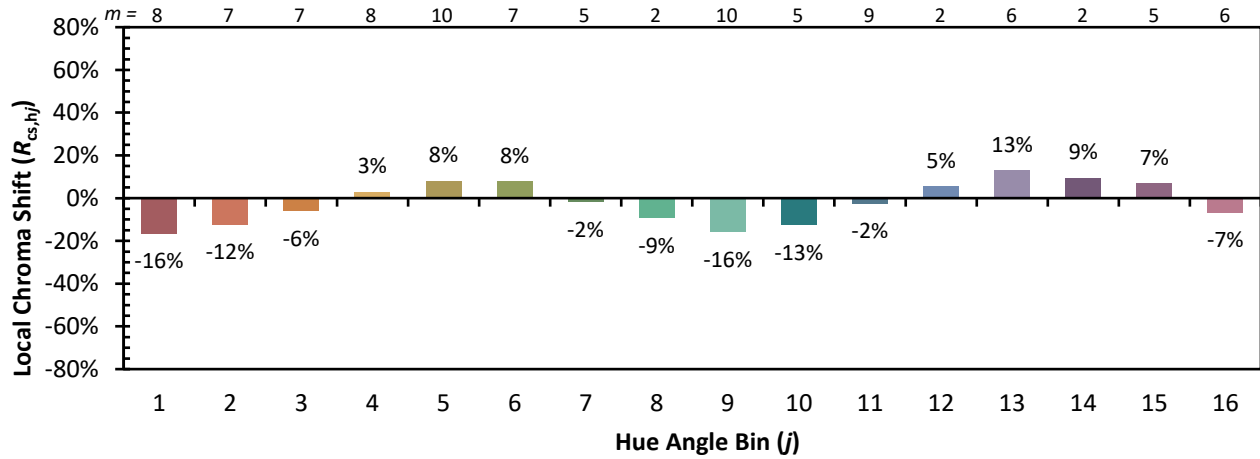
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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	





Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)