

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: P833969

Luminaire Tested: **TTN-D3-750-U-WQ-UPL2**

Issue Date: 5/15/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P833969  
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-D3-750-U-WQ-UPL2  
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
5000K, 70 CRI LEDS AND WIDE DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

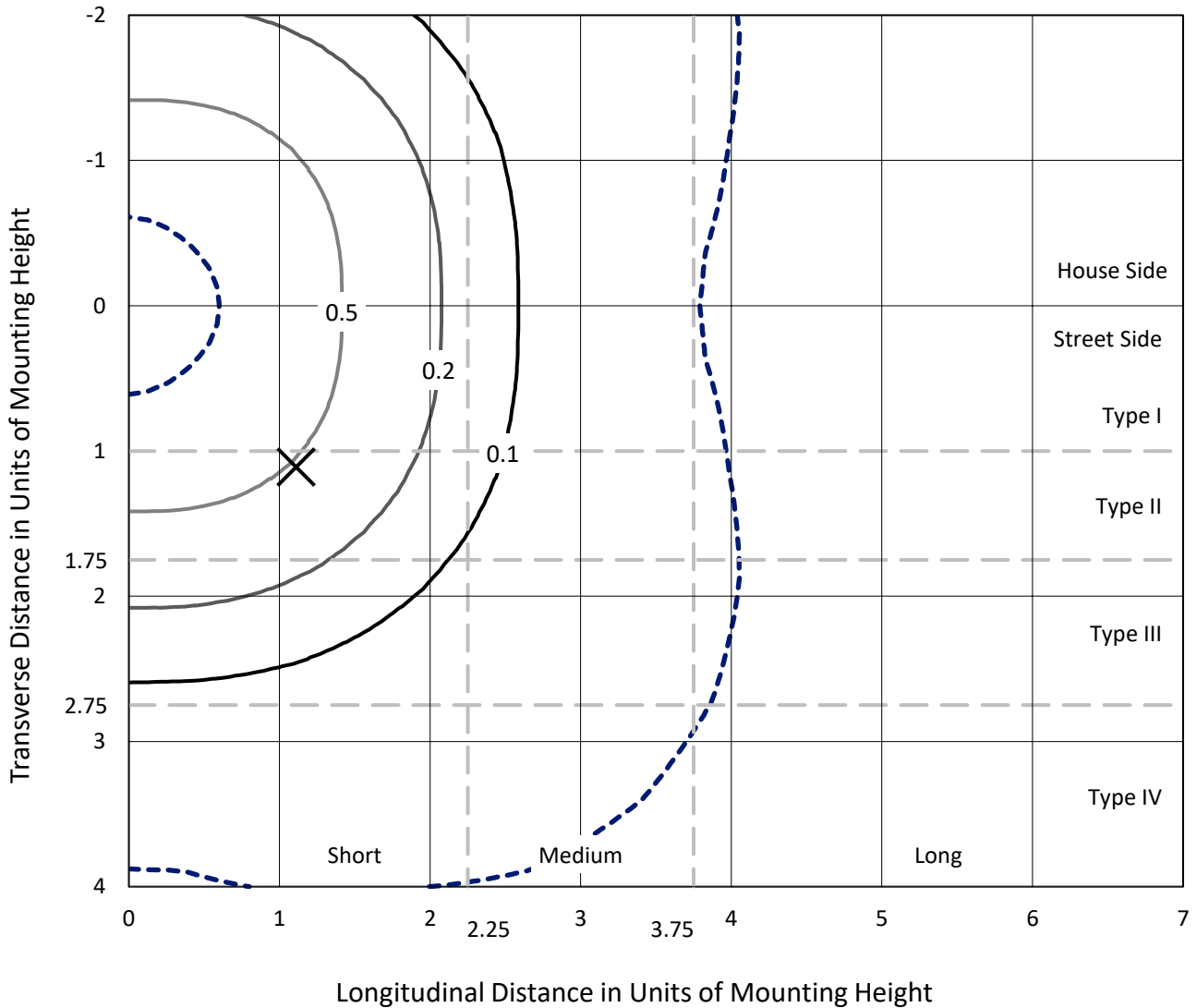
Lumens per Lamp: N/A  
Luminaire Lumens: 7620.7 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')  
IES Classification: Type V - Short  
BUG Rating: B3 - U4 - G2  
  
Input Watts (W): 63.7  
Input Voltage (V): NR  
Input Current (Ain): 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

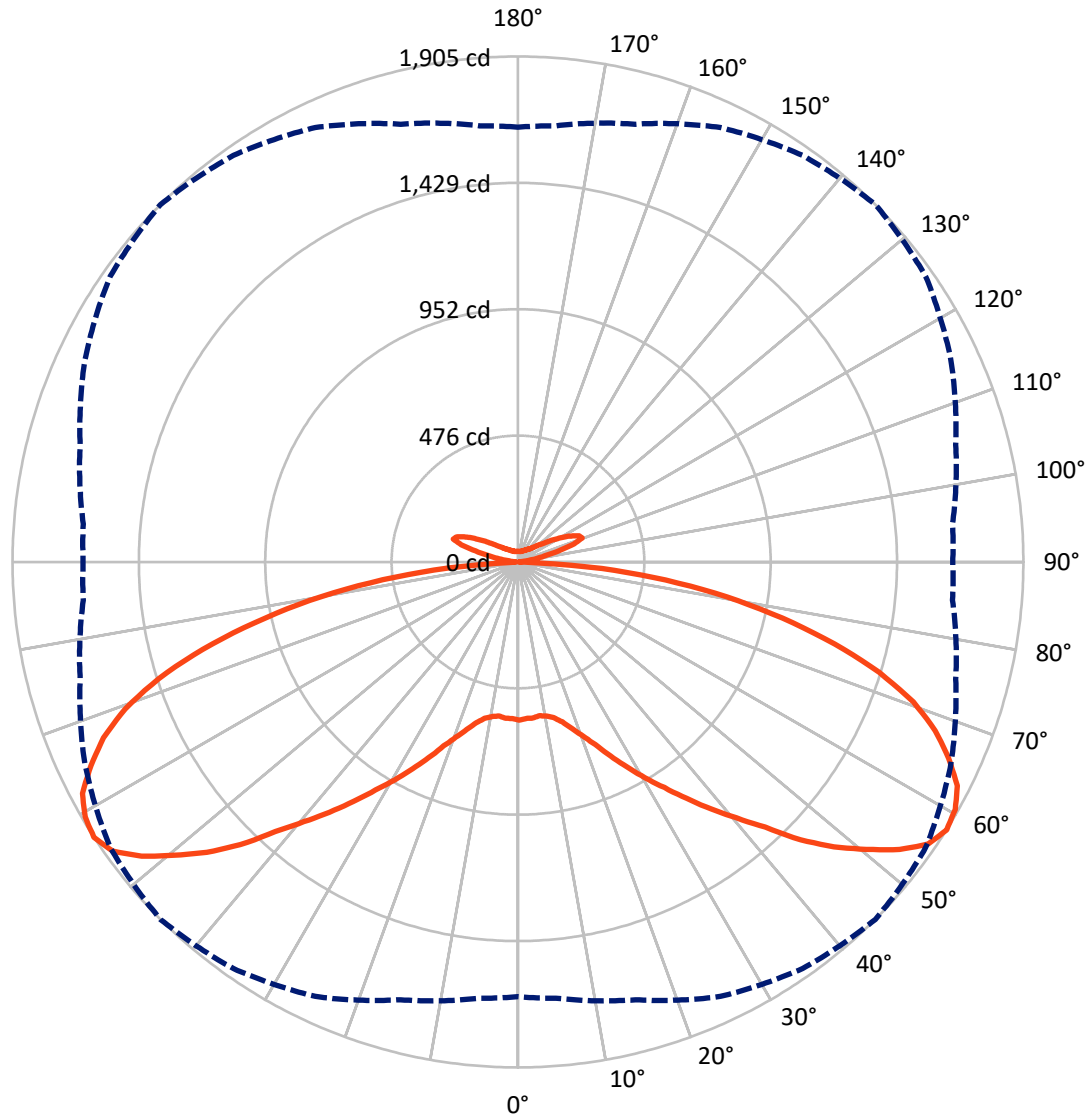
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc  
 Type V - Short - N/A

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CATALOG NUMBER: TTN-D3-750-U-WQ-UPL2

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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 CATALOG NUMBER: TTN-D3-750-U-WQ-UPL2

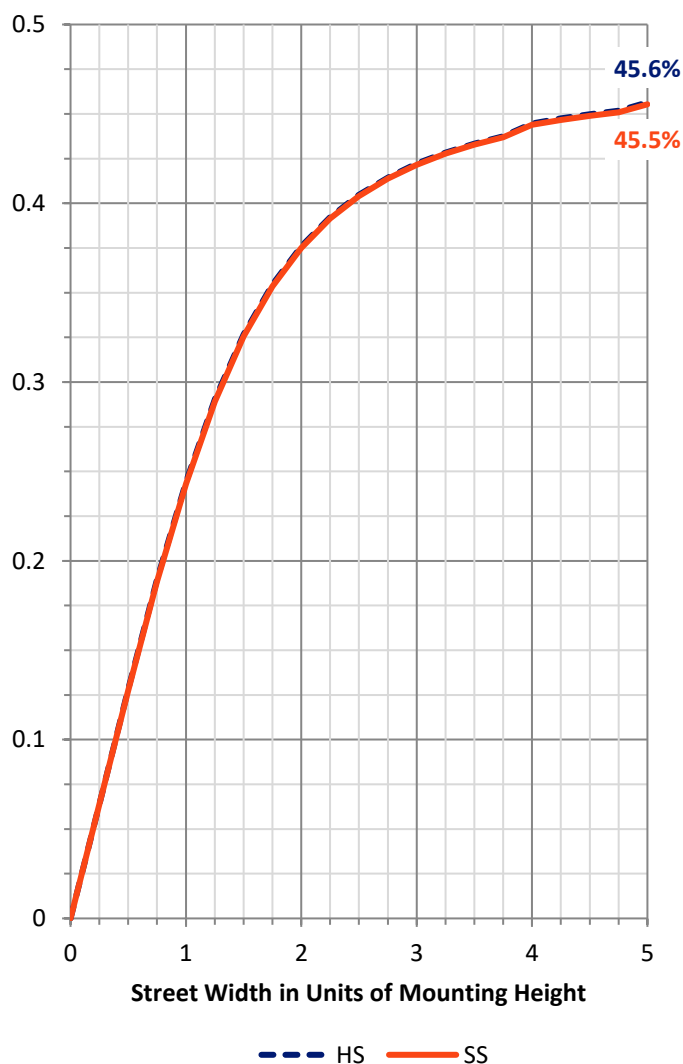
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3517.9	292.5	3810.4
	% Fixture	46.2	3.8	50.0
<b>Street Side</b>	Lumens	3517.9	292.5	3810.4
	% Fixture	46.2	3.8	50.0
<b>Total</b>	Lumens	7035.8	584.9	7620.7
	% Fixture	92.3	7.7	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.0	0.7
10°-20°	178.9	2.3
20°-30°	375.3	4.9
30°-40°	680.9	8.9
40°-50°	1109.9	14.6
50°-60°	1553.6	20.4
60°-70°	1621.9	21.3
70°-80°	1158.8	15.2
80°-90°	300.6	3.9
90°-100°	13.1	0.2
100°-110°	132.7	1.7
110°-120°	194.0	2.5
120°-130°	112.6	1.5
130°-140°	59.7	0.8
140°-150°	35.4	0.5
150°-160°	21.8	0.3
160°-170°	11.9	0.2
170°-180°	3.9	0.1
0°-90°	7035.8	92.3
0°-180°	7620.7	100.0

**Coefficient of Utilization**



REPORT NUMBER: P833969

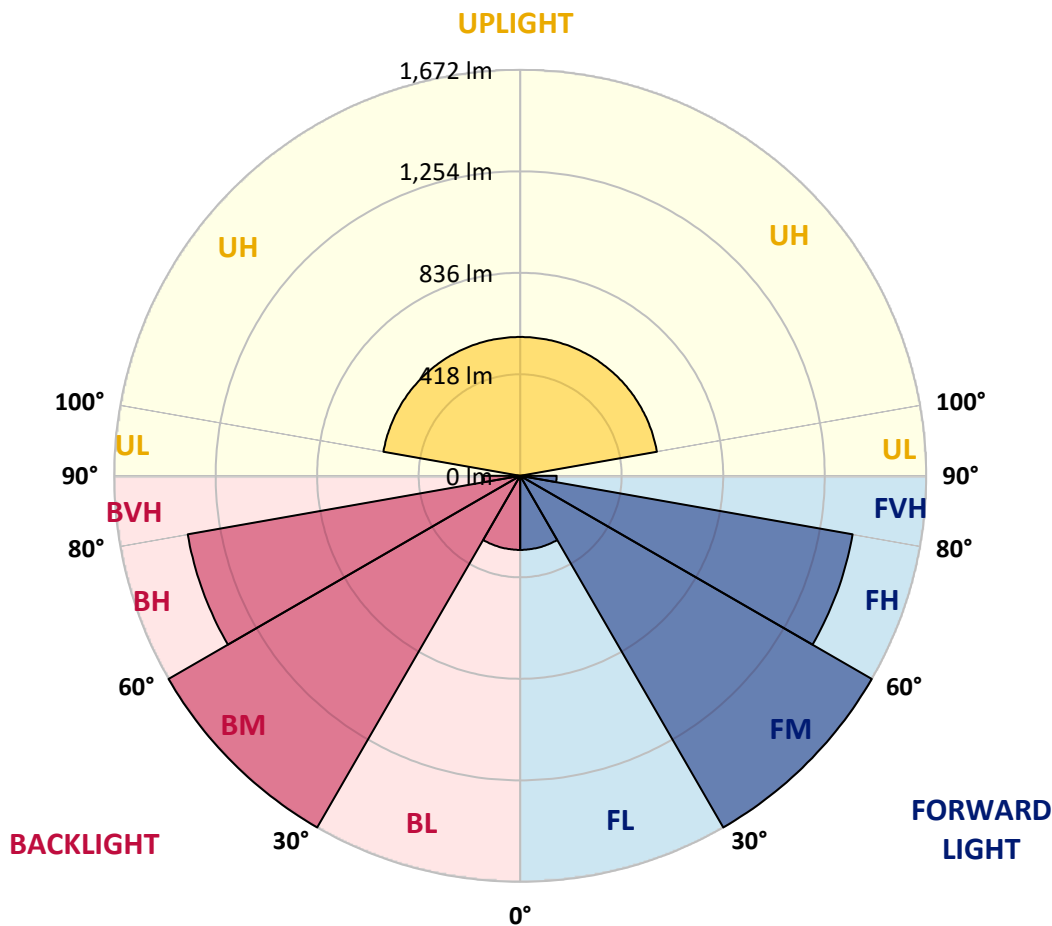
CATALOG NUMBER: TTN-D3-750-U-WQ-UPL2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	305.1	4.0			
FM (30°-60°)	1672.2	21.9			
FH (60°-80°)	1390.3	18.2			G1/1800
FVH (80°-90°)	150.3	2.0			G2/225
BL (0°-30°)	305.1	4.0	B1/500		
BM (30°-60°)	1672.2	21.9	B2/2500		
BH (60°-80°)	1390.3	18.2	B3/2500		G1/1800
BVH (80°-90°)	150.3	2.0			G2/225
UL (90°-100°)	13.1	0.2		U2/50	
UH (100°-180°)	571.8	7.5		U4/1000	

**BUG Rating: B3-U4-G2**

Type V Short





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CATALOG NUMBER: TTN-D3-750-U-WQ-UPL2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	596.3	596.3	596.3	596.3	596.3	596.3	596.3	596.3	596.3	596.3	596.3
2.5°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5
5°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5
7.5°	578.9	578.9	584.7	584.7	584.7	584.7	584.7	584.7	584.7	584.7	584.7
10°	578.9	578.9	584.7	584.7	590.5	590.5	590.5	584.7	584.7	578.9	578.9
12.5°	590.5	590.5	590.5	596.3	602.1	602.1	602.1	596.3	596.3	590.5	590.5
15°	607.9	613.7	613.7	619.5	625.3	625.3	625.3	619.5	619.5	613.7	613.7
17.5°	642.6	642.6	642.6	648.4	654.2	660.0	660.0	648.4	648.4	642.6	648.4
20°	677.4	683.2	683.2	688.9	694.7	700.5	694.7	688.9	683.2	683.2	683.2
22.5°	729.5	729.5	735.3	735.3	746.8	746.8	746.8	735.3	735.3	735.3	735.3
25°	787.4	787.4	793.2	798.9	810.5	810.5	804.7	793.2	793.2	793.2	798.9
27.5°	856.8	856.8	862.6	862.6	874.2	874.2	868.4	862.6	862.6	862.6	868.4
30°	920.5	920.5	932.1	937.9	943.7	943.7	943.7	932.1	932.1	926.3	926.3
32.5°	978.4	984.2	990.0	1007.4	1018.9	1013.2	1018.9	1007.4	995.8	990.0	990.0
35°	1042.1	1047.9	1059.5	1076.8	1094.2	1094.2	1094.2	1076.8	1065.3	1053.7	1059.5
37.5°	1117.4	1117.4	1134.7	1152.1	1175.3	1181.0	1175.3	1157.9	1140.5	1128.9	1128.9
40°	1198.4	1198.4	1215.8	1233.2	1262.1	1267.9	1262.1	1238.9	1215.8	1210.0	1210.0
42.5°	1279.5	1279.5	1302.6	1320.0	1354.7	1366.3	1354.7	1325.8	1302.6	1285.3	1291.0
45°	1366.3	1372.1	1401.0	1435.8	1476.3	1493.7	1476.3	1441.6	1406.8	1372.1	1372.1
47.5°	1464.7	1464.7	1499.5	1540.0	1586.3	1603.7	1580.5	1545.8	1499.5	1470.5	1470.5
50°	1528.4	1534.2	1580.5	1632.6	1690.5	1702.1	1684.7	1632.6	1580.5	1540.0	1534.2
52.5°	1592.1	1597.9	1650.0	1725.3	1783.1	1800.5	1777.4	1725.3	1650.0	1597.9	1597.9
55°	1632.6	1644.2	1702.1	1783.1	1846.8	1875.8	1841.0	1783.1	1696.3	1638.4	1632.6
57.5°	1638.4	1650.0	1707.9	1806.3	1870.0	1904.7	1875.8	1800.5	1707.9	1644.2	1638.4
60°	1626.8	1632.6	1690.5	1794.7	1870.0	1893.1	1870.0	1788.9	1684.7	1632.6	1621.0
62.5°	1597.9	1609.5	1667.4	1754.2	1841.0	1858.4	1835.3	1748.4	1661.6	1597.9	1586.3
65°	1505.3	1516.8	1603.7	1690.5	1765.8	1783.1	1765.8	1690.5	1597.9	1505.3	1493.7
67.5°	1401.0	1406.8	1493.7	1597.9	1667.4	1696.3	1667.4	1603.7	1487.9	1401.0	1389.5
70°	1291.0	1296.8	1366.3	1476.3	1545.8	1580.5	1551.6	1482.1	1360.5	1285.3	1279.5
72.5°	1163.7	1163.7	1233.2	1320.0	1389.5	1424.2	1401.0	1314.2	1221.6	1146.3	1134.7
75°	990.0	995.8	1071.0	1134.7	1210.0	1233.2	1210.0	1140.5	1053.7	978.4	966.8
77.5°	810.5	816.3	880.0	932.1	1001.6	1018.9	1001.6	943.7	862.6	798.9	793.2
80°	613.7	619.5	671.6	717.9	775.8	798.9	781.6	723.7	660.0	602.1	584.7
82.5°	399.5	405.3	457.4	492.1	544.2	561.6	550.0	497.9	445.8	387.9	382.1
85°	179.5	185.3	231.6	260.5	301.1	318.4	306.8	260.5	220.0	167.9	156.3
87.5°	17.4	17.4	17.4	17.4	17.4	23.2	23.2	17.4	17.4	17.4	17.4
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



REPORT NUMBER: P833969  
 CATALOG NUMBER: TTN-D3-750-U-WQ-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: SP1-2411-284-3

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

REPORT NUMBER: SP1-2411-284-3

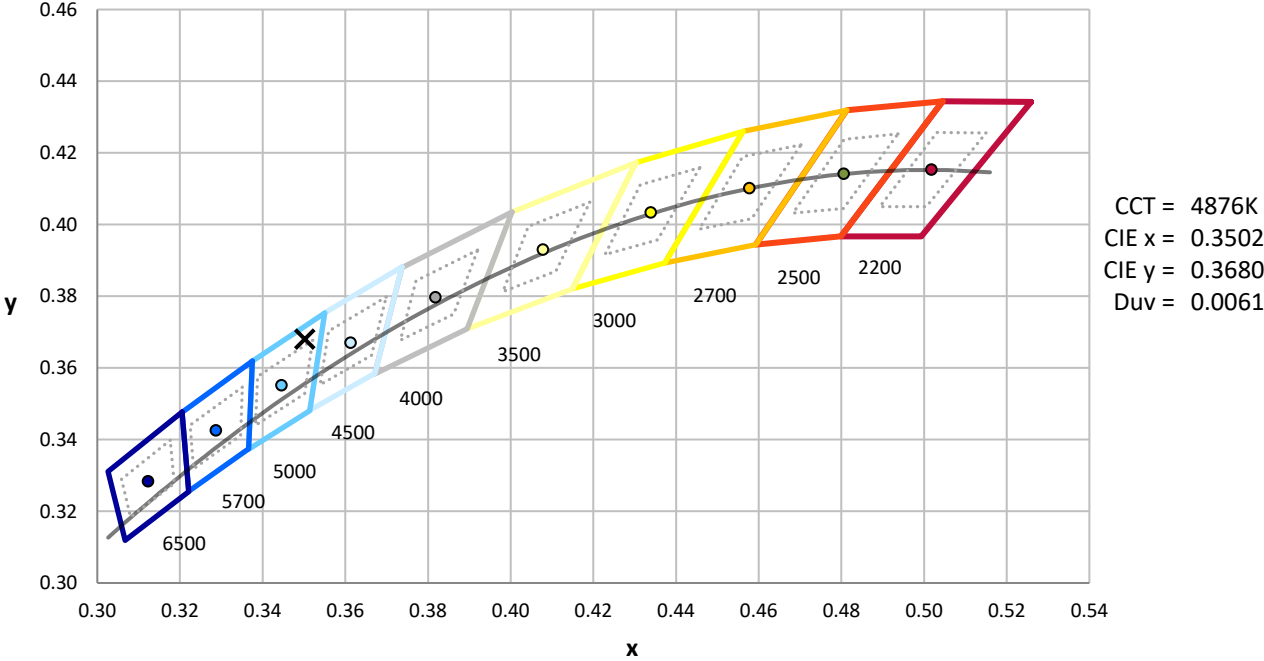
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-3

CIE 1931 Chromaticity Diagram



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



CCT = 4876K  
 CIE x = 0.3502  
 CIE y = 0.3680  
 Duv = 0.0061

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2411-284-3

**Photopic Flux vs. Wavelength**

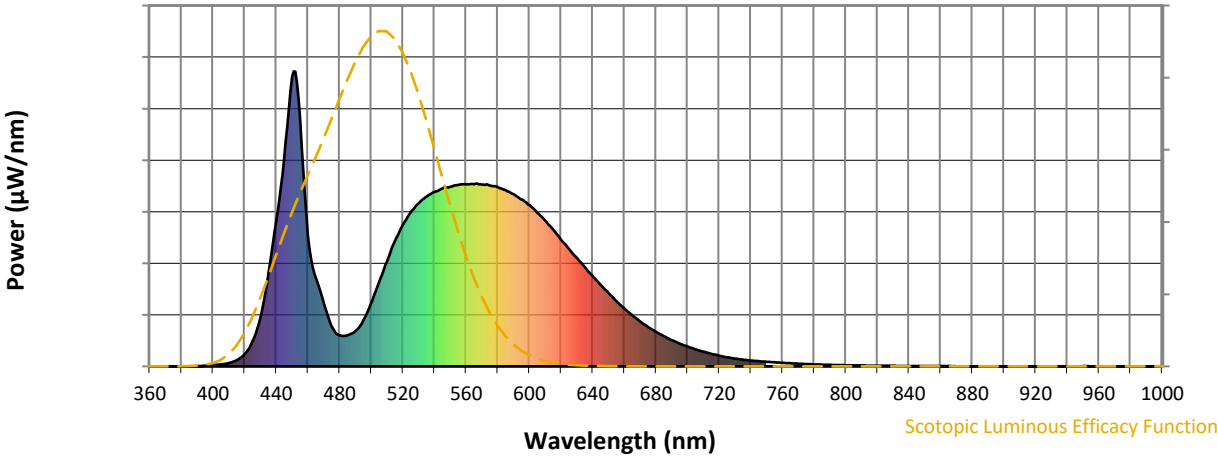


**Photopic Lumens: NR**

$\lambda$ (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	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

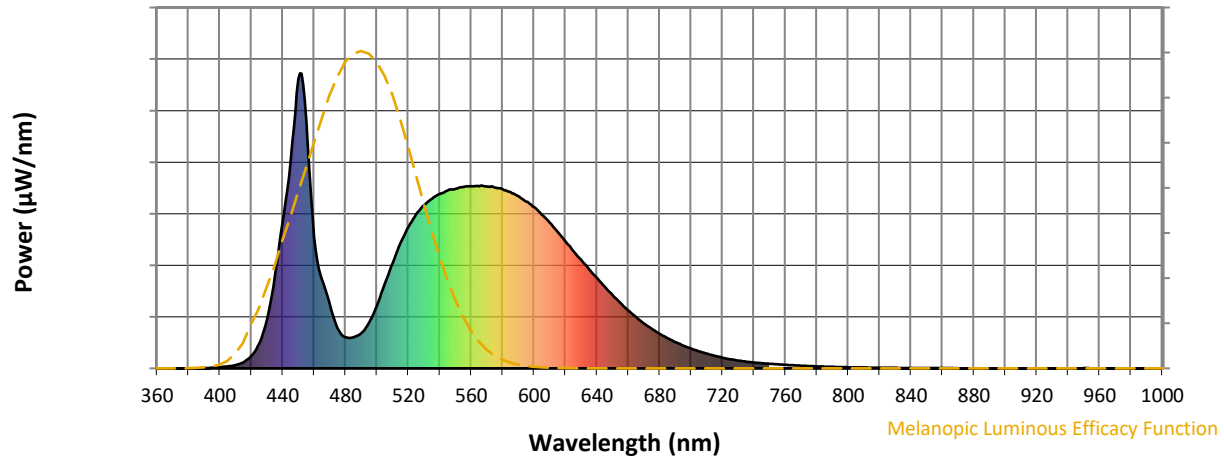


Scotopic Lumens: NR S/P: 1.74

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			

REPORT NUMBER: SP1-2411-284-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.51

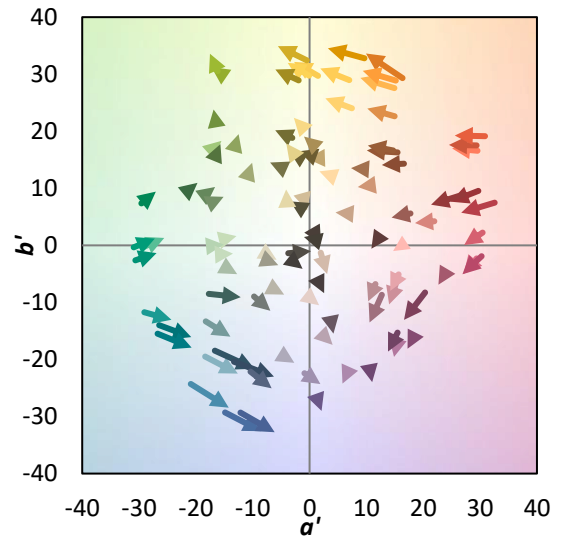
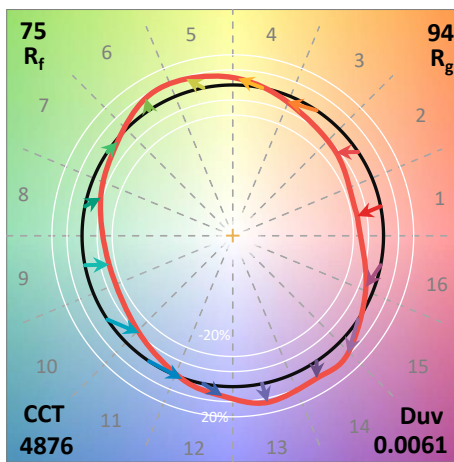
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	430	NR	750	16	NR	880	0	NR
365	0	NR	495	156	NR	625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

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



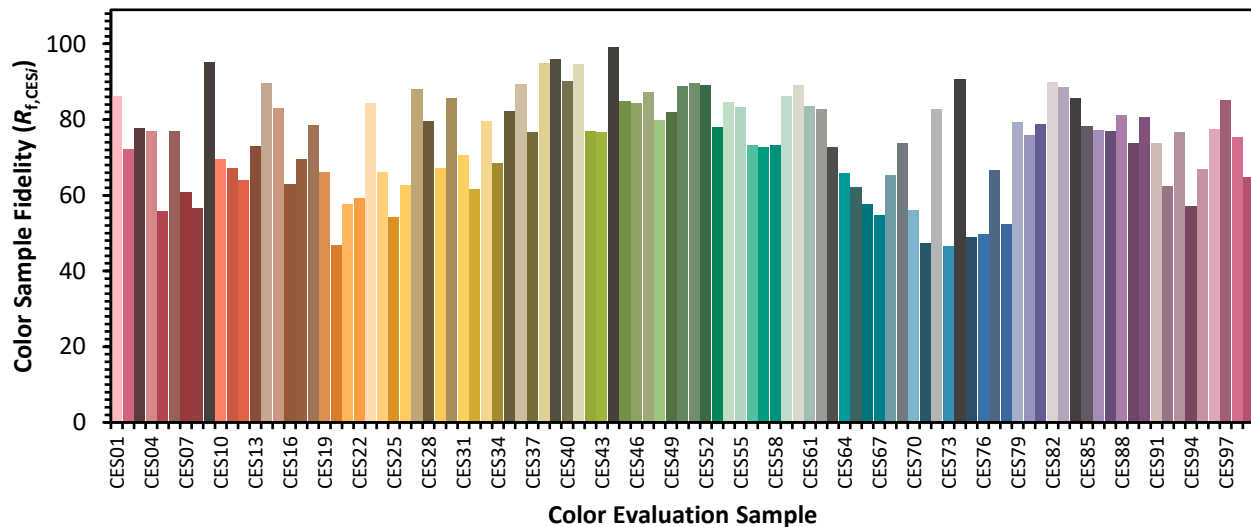
**Color Vector Graphics**



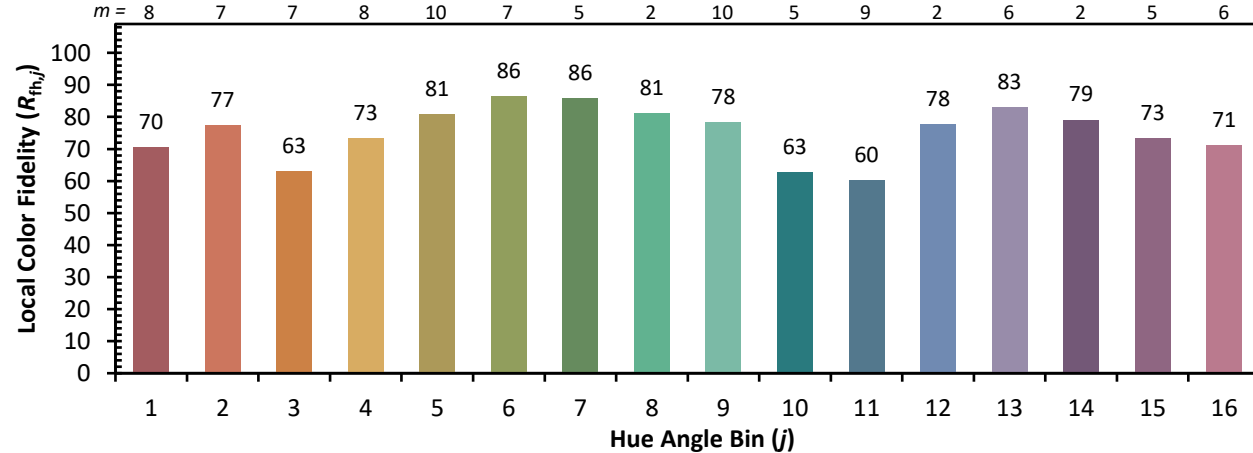


Individual Sample Fidelity Index ( $R_{f,i}$ )

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)