

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: P543165

Luminaire Tested: **TT-D8-735-U-MQ-UPL**

Issue Date: 5/10/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P543165  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND  
Test Lab: INNOVATION CENTER  
Issue Date: 5/10/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: TT-D8-735-U-MQ-UPL  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

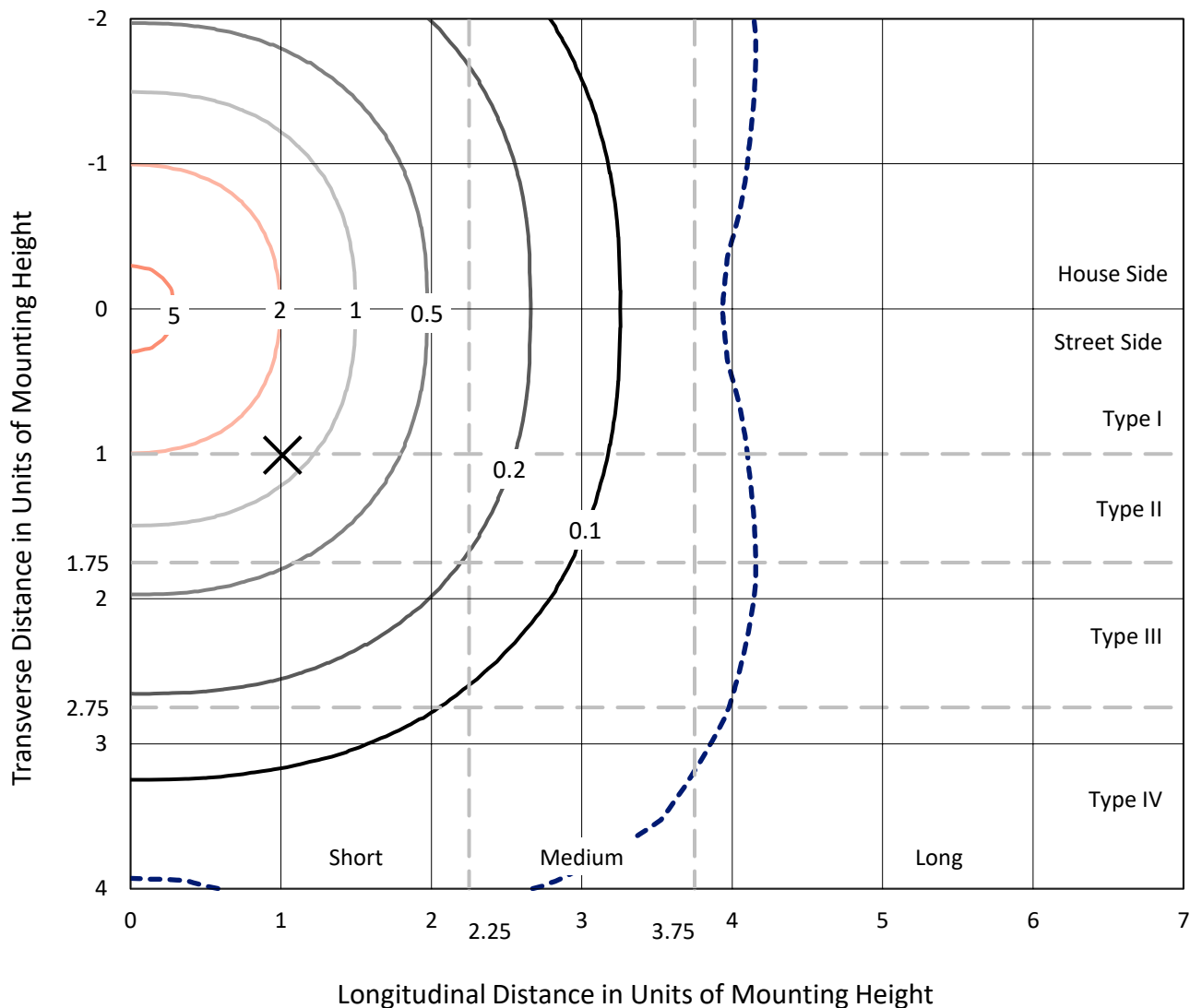
Lumens per Lamp: N/A  
Luminaire Lumens: 19114.8 lumens  
Efficiency: N/A  
Efficacy: 122.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')  
IES Classification: Type V - Short  
BUG Rating: B4 - U4 - G3  
  
Input Watts (W): 156.7  
Input Voltage (V): NR  
Input Current (Ain): 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: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

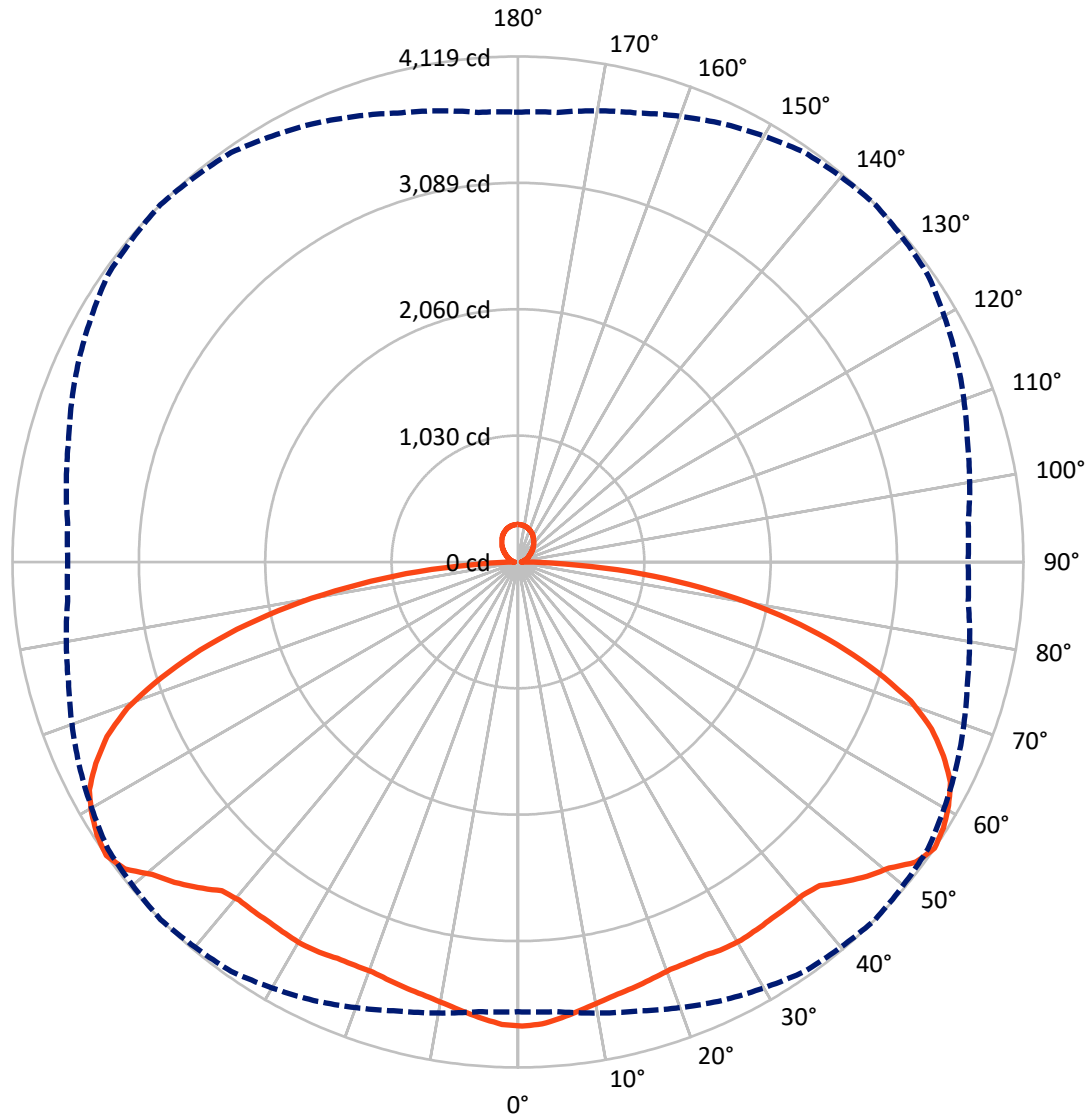
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 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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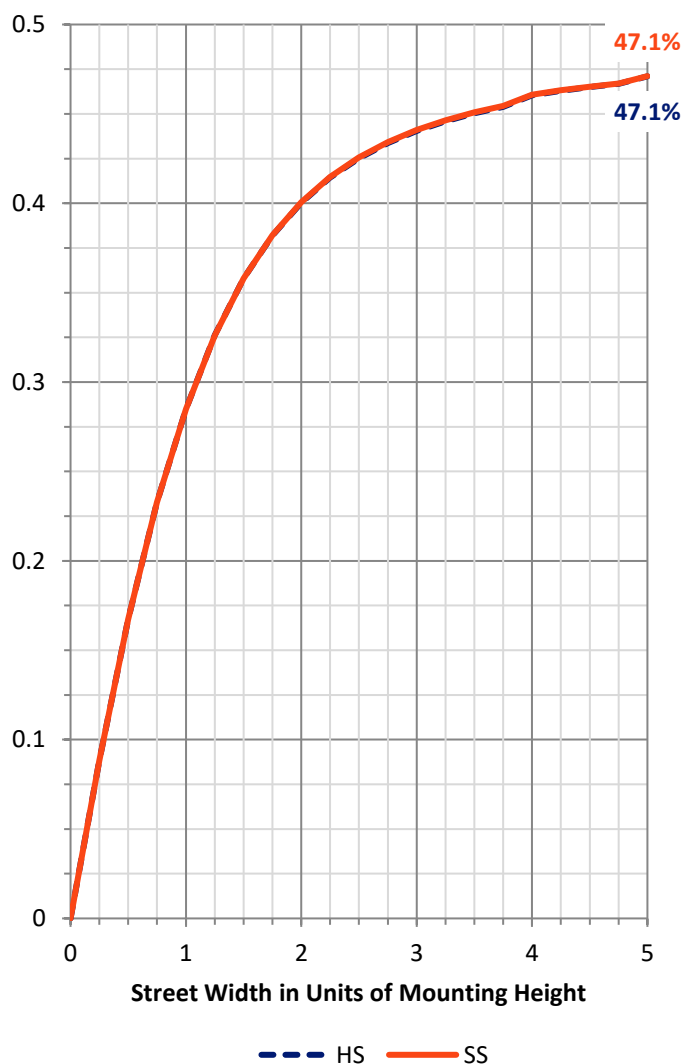
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9141.5	415.9	9557.4
	% Fixture	47.8	2.2	50.0
<b>Street Side</b>	Lumens	9141.5	415.9	9557.4
	% Fixture	47.8	2.2	50.0
<b>Total</b>	Lumens	18283.0	831.7	19114.8
	% Fixture	95.6	4.4	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	353.1	1.8
10°-20°	1014.1	5.3
20°-30°	1634.2	8.5
30°-40°	2214.6	11.6
40°-50°	2807.3	14.7
50°-60°	3453.7	18.1
60°-70°	3478.7	18.2
70°-80°	2546.0	13.3
80°-90°	781.2	4.1
90°-100°	42.6	0.2
100°-110°	66.0	0.3
110°-120°	91.9	0.5
120°-130°	119.0	0.6
130°-140°	138.7	0.7
140°-150°	140.5	0.7
150°-160°	121.9	0.6
160°-170°	82.2	0.4
170°-180°	28.9	0.2
0°-90°	18283.0	95.6
0°-180°	19114.8	100.0

**Coefficient of Utilization**

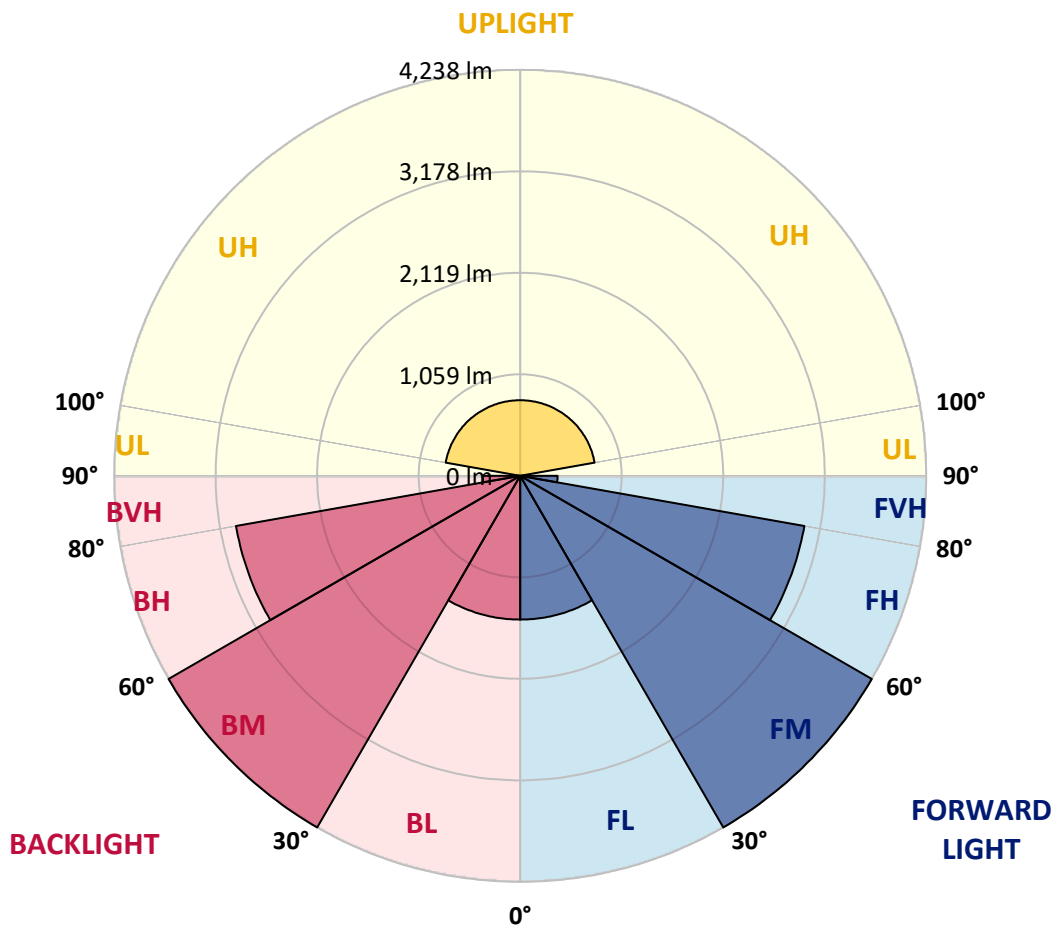


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1500.7	7.9			
FM (30°-60°)	4237.8	22.2			
FH (60°-80°)	3012.3	15.8			G2/5000
FVH (80°-90°)	390.6	2.0			G3/500
BL (0°-30°)	1500.7	7.9	B3/2500		
BM (30°-60°)	4237.8	22.2	B3/5000		
BH (60°-80°)	3012.3	15.8	B4/5000		G2/5000
BVH (80°-90°)	390.6	2.0			G3/500
UL (90°-100°)	42.6	0.2		U2/50	
UH (100°-180°)	789.1	4.1		U4/1000	

**BUG Rating: B4-U4-G3**  
 Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3782.1	3782.1	3782.1	3782.1	3782.1	3782.1	3782.1	3782.1	3782.1	3782.1	3782.1
2.5°	3765.3	3767.7	3766.9	3768.5	3768.5	3770.1	3768.5	3770.1	3767.7	3768.5	3768.5
5°	3724.4	3727.6	3725.2	3729.2	3730.0	3730.8	3728.4	3728.4	3726.0	3726.0	3726.8
7.5°	3680.4	3682.0	3682.0	3686.0	3688.4	3688.4	3686.0	3682.8	3681.2	3678.8	3678.8
10°	3638.0	3640.4	3639.6	3643.6	3646.8	3647.6	3644.4	3638.8	3636.4	3634.8	3634.8
12.5°	3601.1	3603.5	3605.1	3609.9	3614.8	3614.8	3613.2	3606.7	3602.7	3600.3	3599.5
15°	3573.9	3576.3	3577.1	3584.3	3589.1	3591.5	3588.3	3581.9	3577.1	3573.9	3572.3
17.5°	3546.7	3548.3	3552.3	3558.7	3563.5	3566.7	3563.5	3557.1	3550.7	3545.1	3543.5
20°	3520.3	3521.1	3526.7	3535.5	3541.9	3545.1	3541.9	3532.3	3522.7	3517.9	3517.1
22.5°	3508.3	3509.9	3517.1	3529.9	3538.7	3545.1	3537.1	3525.1	3513.9	3505.9	3505.1
25°	3500.3	3501.1	3510.7	3528.3	3544.3	3549.1	3543.5	3526.7	3509.1	3498.7	3497.9
27.5°	3507.5	3510.7	3523.5	3541.1	3561.9	3569.9	3564.3	3540.3	3521.1	3509.1	3506.7
30°	3505.9	3508.3	3522.7	3542.7	3561.9	3577.9	3566.7	3541.1	3518.7	3506.7	3505.1
32.5°	3501.1	3504.3	3517.1	3533.9	3561.1	3572.3	3561.9	3532.3	3513.1	3504.3	3501.1
35°	3481.0	3486.7	3505.1	3529.9	3554.7	3565.9	3553.9	3529.1	3502.7	3488.3	3486.7
37.5°	3473.0	3477.0	3495.5	3524.3	3557.1	3569.1	3553.1	3523.5	3493.9	3477.8	3473.8
40°	3460.2	3466.6	3489.1	3522.7	3560.3	3571.5	3558.7	3524.3	3490.7	3464.2	3457.0
42.5°	3460.2	3465.8	3497.1	3543.5	3585.1	3605.1	3585.1	3545.9	3498.7	3461.8	3456.2
45°	3515.5	3522.7	3561.9	3630.8	3695.6	3719.6	3694.8	3634.8	3563.5	3521.1	3509.9
47.5°	3562.7	3573.1	3632.4	3719.6	3800.5	3827.7	3798.1	3721.2	3633.2	3573.1	3562.7
50°	3597.9	3609.9	3686.8	3797.3	3883.8	3920.6	3887.0	3799.7	3688.4	3611.5	3599.5
52.5°	3661.2	3679.6	3770.9	3895.8	4016.7	4063.1	4016.7	3899.8	3770.9	3682.0	3661.2
55°	3666.0	3678.0	3787.7	3942.2	4073.5	4119.1	4079.1	3943.0	3791.7	3683.6	3668.4
57.5°	3610.7	3624.4	3740.4	3918.2	4048.7	4088.7	4049.5	3920.6	3750.9	3632.4	3618.8
60°	3511.5	3525.1	3646.0	3830.9	3971.0	4031.9	3974.2	3834.9	3658.0	3534.7	3519.5
62.5°	3403.4	3429.0	3568.3	3752.5	3891.8	3955.8	3898.2	3755.7	3576.3	3438.6	3415.4
65°	3232.9	3244.1	3393.8	3593.1	3764.5	3810.9	3765.3	3598.7	3419.4	3253.7	3244.9
67.5°	3059.9	3080.7	3204.8	3427.4	3593.1	3637.2	3592.3	3426.6	3220.9	3087.1	3071.9
70°	2772.5	2796.5	2971.1	3162.4	3319.3	3396.2	3324.1	3164.8	2998.3	2806.1	2793.3
72.5°	2506.7	2531.5	2651.6	2867.0	3026.3	3059.1	3036.7	2871.0	2676.4	2549.1	2531.5
75°	2159.2	2168.1	2322.6	2505.1	2652.4	2687.6	2659.6	2502.7	2351.4	2188.1	2162.4
77.5°	1798.2	1815.8	1924.7	2080.8	2208.1	2271.3	2206.5	2089.6	1935.9	1816.6	1799.0
80°	1385.1	1404.3	1517.2	1658.9	1757.3	1807.8	1759.7	1654.9	1527.6	1405.9	1397.1
82.5°	976.7	977.5	1089.6	1182.5	1281.0	1309.8	1282.6	1201.7	1097.6	986.4	988.0
85°	553.2	558.8	635.7	720.5	777.4	815.8	785.4	725.4	643.7	566.0	558.8
87.5°	125.7	124.9	164.9	213.8	277.0	276.2	270.6	221.0	169.7	123.3	121.7
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1



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 CATALOG NUMBER: TT-D8-735-U-MQ-UPL

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	84.0
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	92.0
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	101.4
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	110.8
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	121.6
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	132.4
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	144.2
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	155.9
132.5°	167.2	167.2	167.6	167.6	167.6	167.6	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3
137.5°	191.2	190.6	191.2	190.6	191.2	191.2	191.6	191.6	191.6	191.6	191.6
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	202.9
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	235.8
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	247.0
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	256.0
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	264.9
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	272.4
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	279.9
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	286.0
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	292.1
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	295.8
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	299.6
172.5°	302.0	302.0	302.8	302.0	302.4	302.4	302.8	302.0	302.0	302.0	302.0
175°	304.3	304.3	305.2	304.3	305.2	305.2	305.2	304.3	304.3	304.3	304.3
177.5°	305.2	305.2	305.7	305.2	305.7	305.7	305.7	305.2	305.2	305.2	305.2
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2



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 families of products including TT-xx-735 and TTN-xx-735

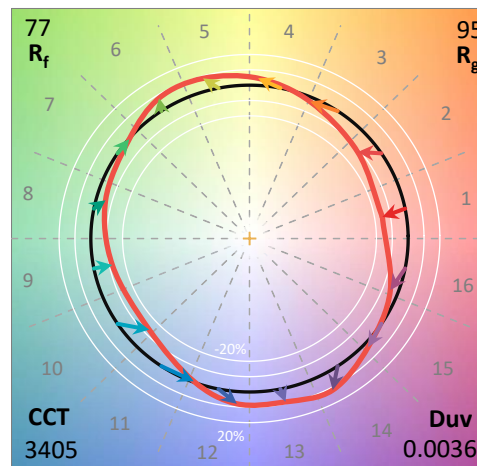
**Test Information**

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

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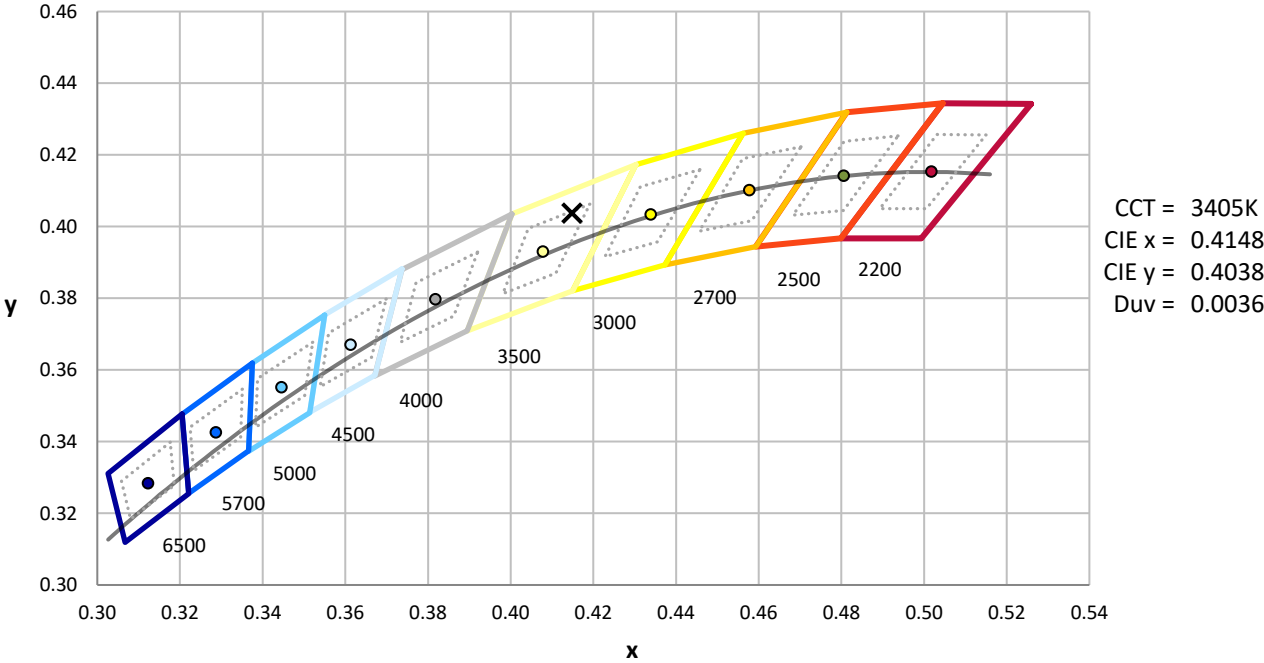
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



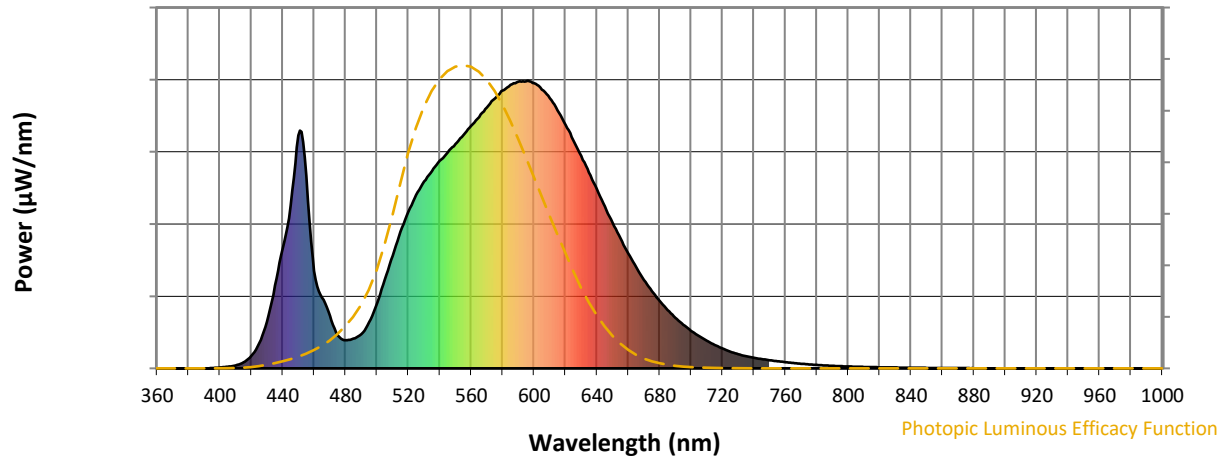
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-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	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			

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Melanopic Flux vs. Wavelength



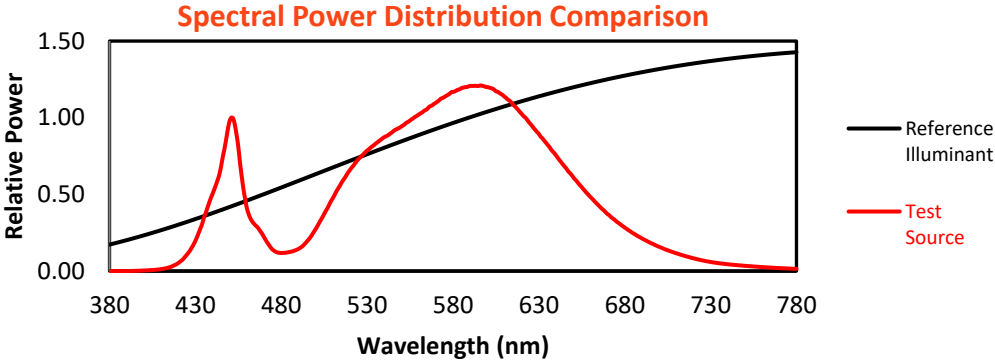
Melanopic Lumens: NR

M/P: 2.47

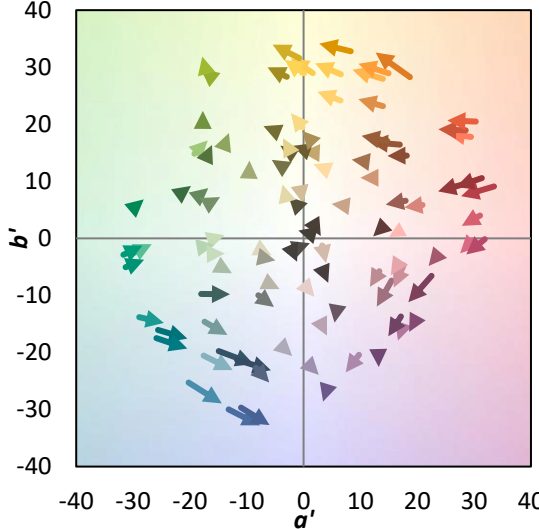
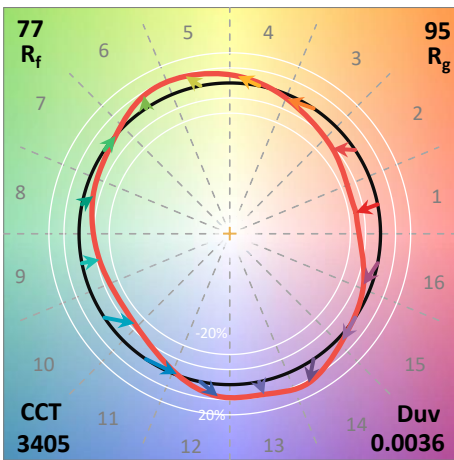
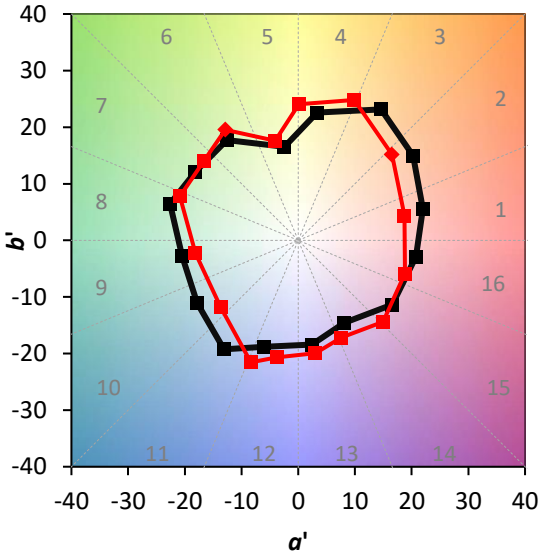
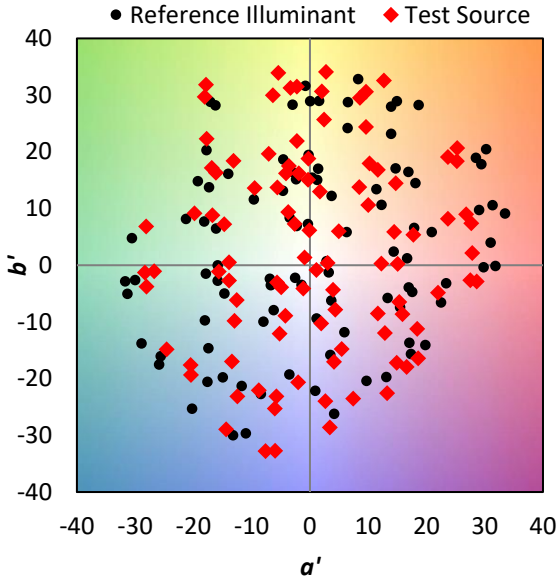
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	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			

**Summary**

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



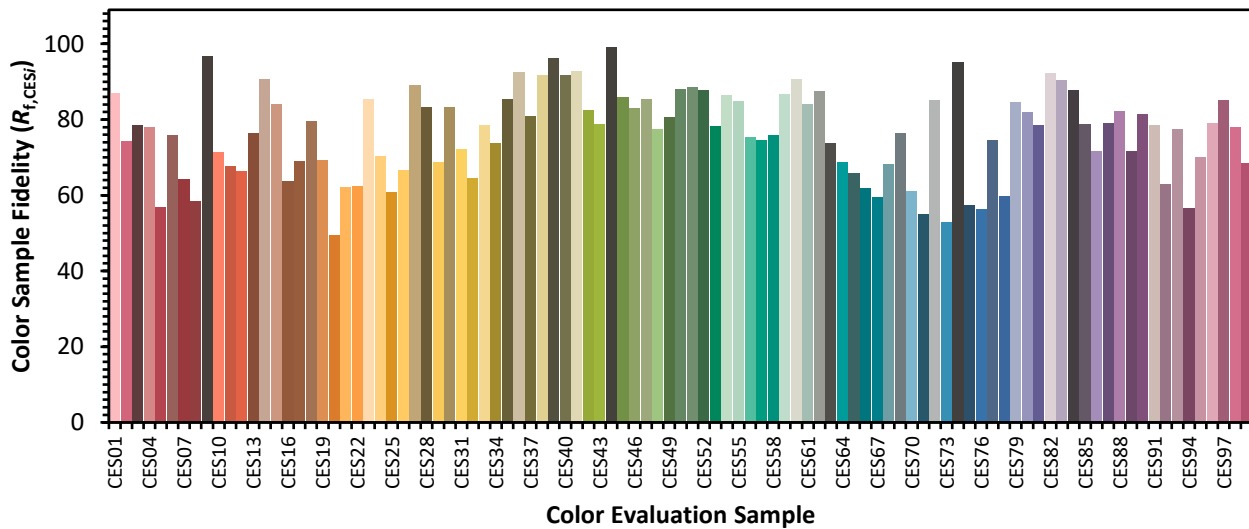
**Color Vector Graphics**



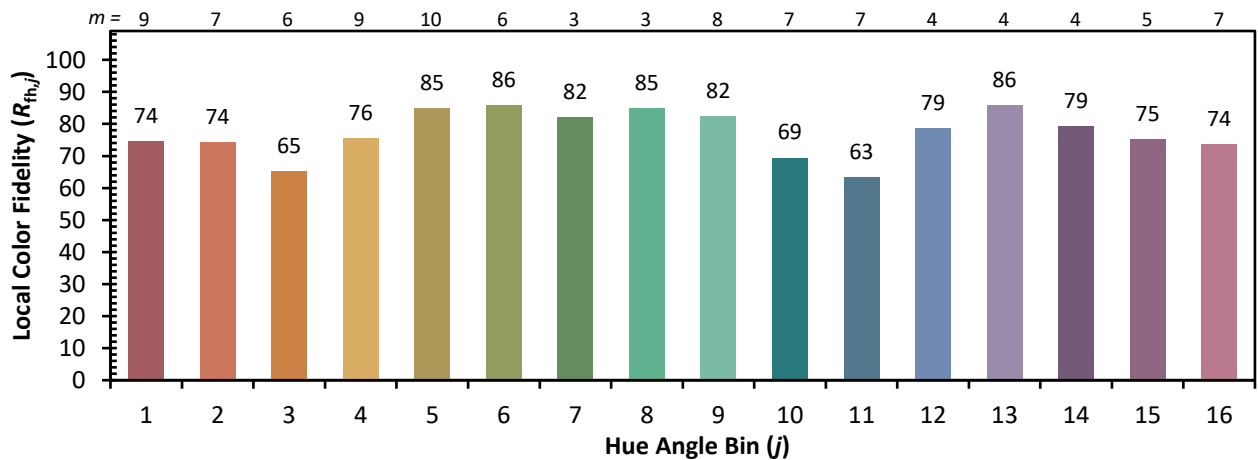


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

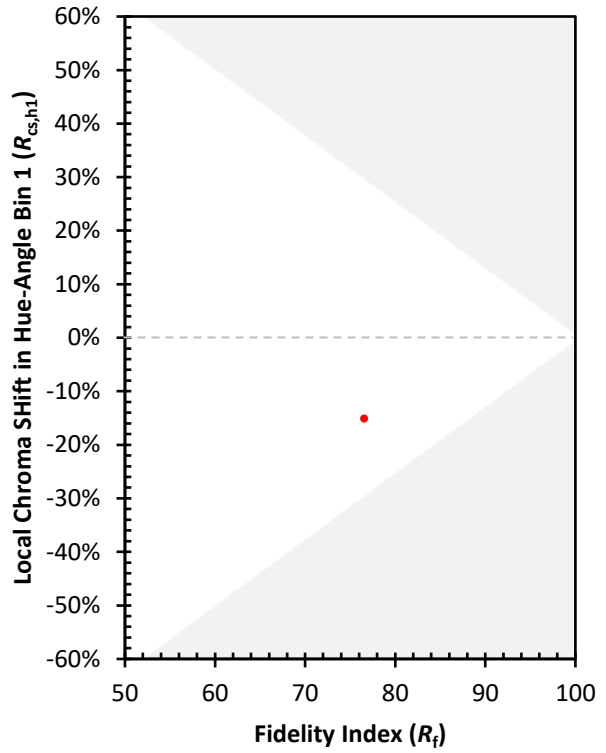
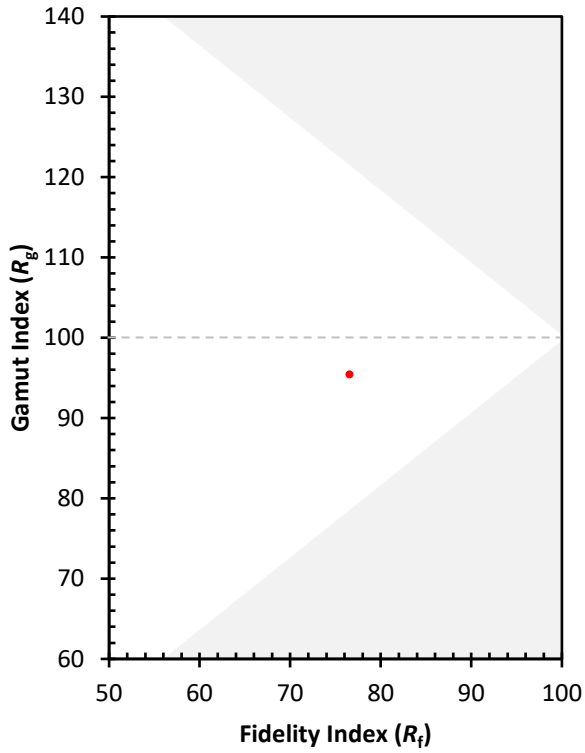
CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82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