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: P823347

Luminaire Tested: **TTN-D1-830-U-DL**

Issue Date: 4/16/2024

Report Generated By 670246001

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P823347
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2312-254-11)
Test Lab:	INNOVATION CENTER
Issue Date:	4/16/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TTN-D1-830-U-DL
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE
	3000K, 80 CRI LEDS AND DRIVE LANE DISTRIBUTION
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	2855 lumens
Efficiency:	N/A
Efficacy:	108.1 lumens/watt
Luminous Opening:	Circular (Dia: 0.71' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U0 - G1

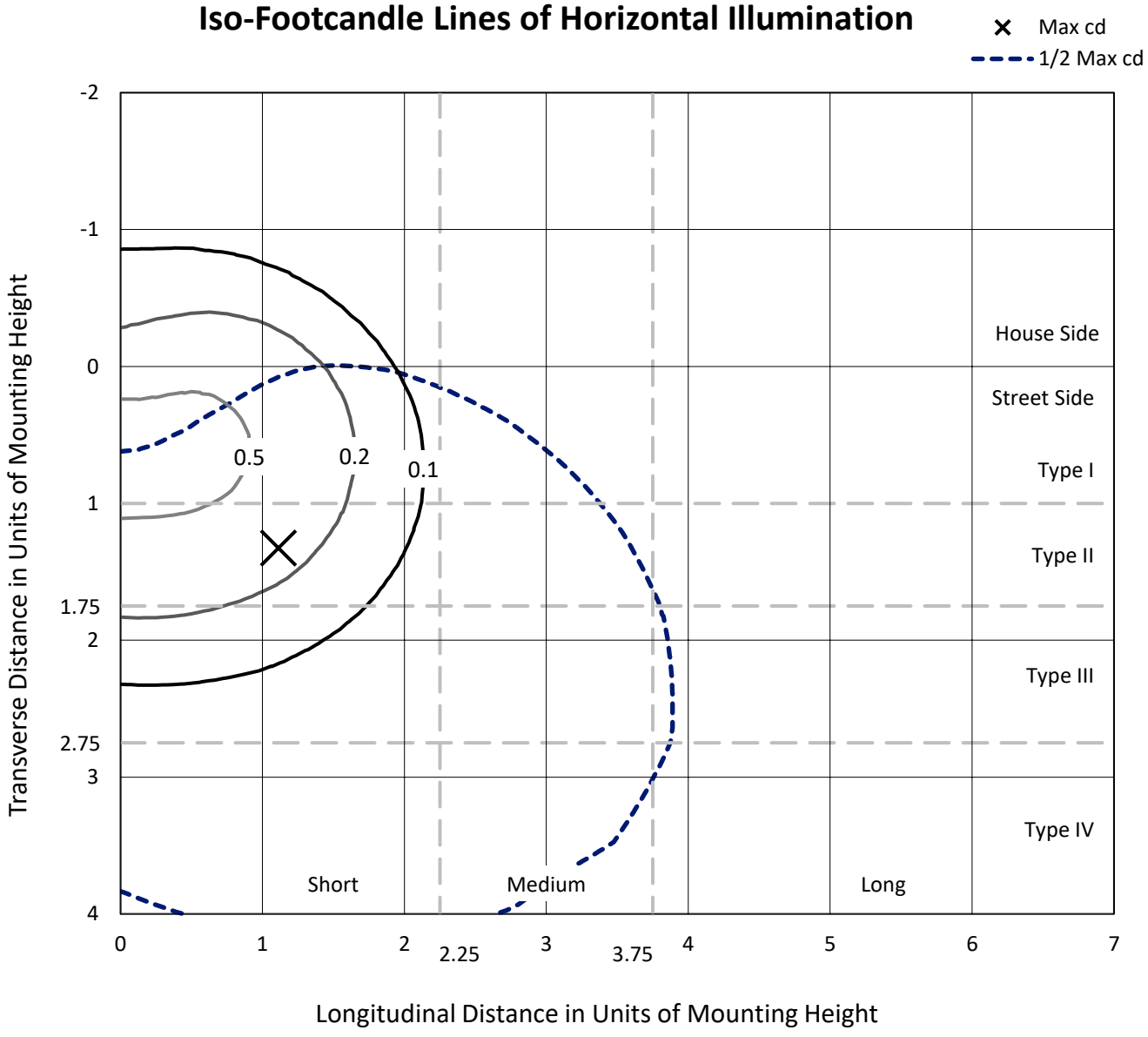
Input Watts (W):	26.4
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P823347
CATALOG NUMBER: TTN-D1-830-U-DL

Iso-Footcandle Lines of Horizontal Illumination



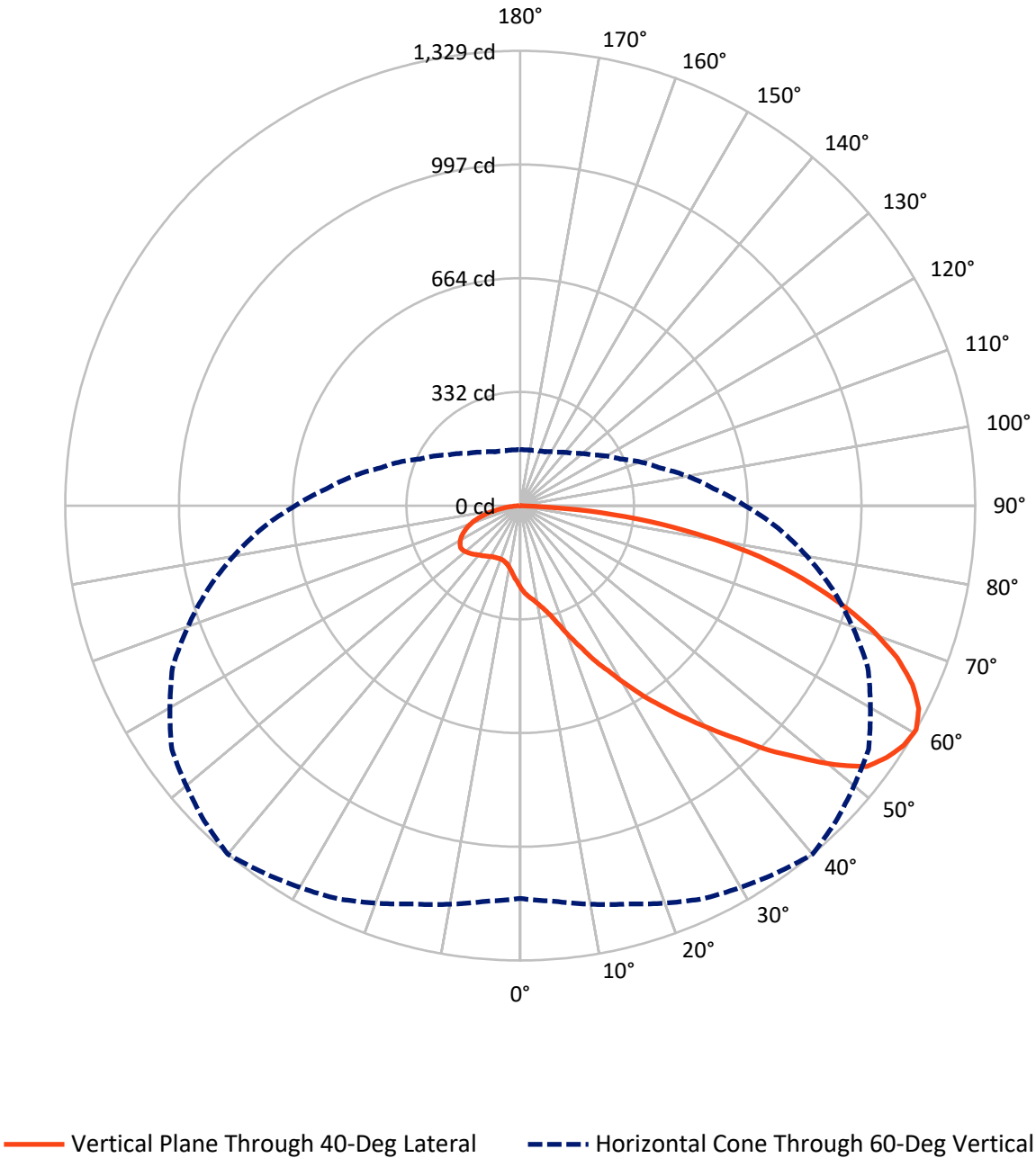
Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
Type IV - Short - N/A

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P823347
CATALOG NUMBER: TTN-D1-830-U-DL

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

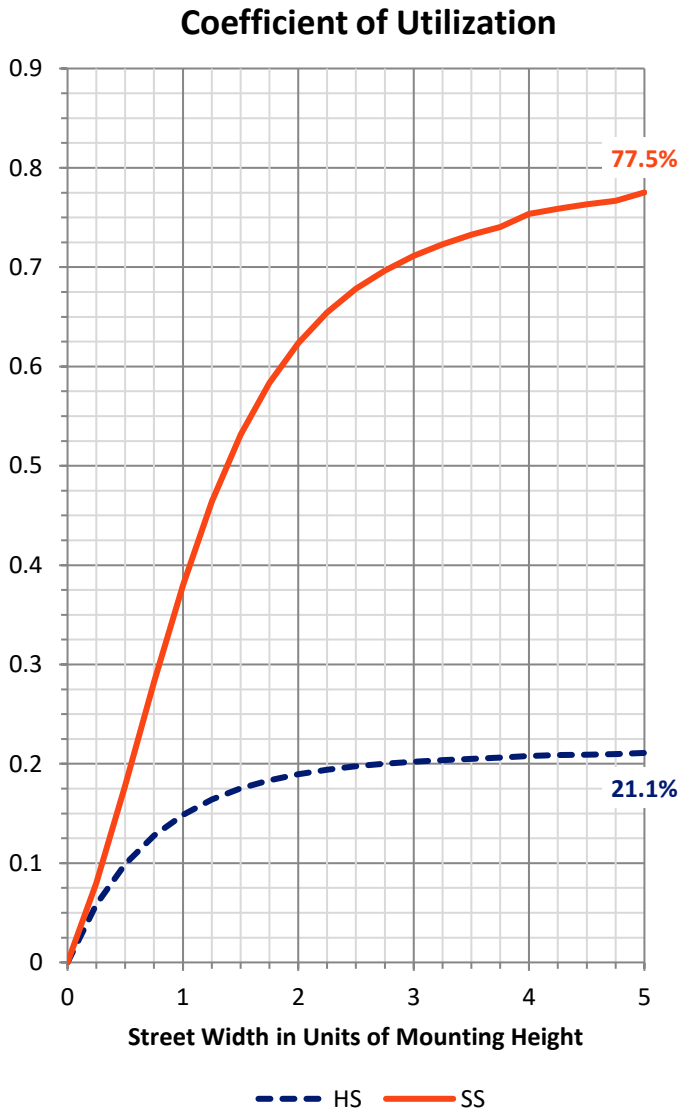
REPORT NUMBER: P823347
CATALOG NUMBER: TTN-D1-830-U-DL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	608.0	0.0	608.0
	% Fixture	21.3	0.0	21.3
Street Side	Lumens	2247.0	0.0	2247.0
	% Fixture	78.7	0.0	78.7
Total	Lumens	2855.0	0.0	2855.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.7	0.8
10°-20°	72.4	2.5
20°-30°	152.9	5.4
30°-40°	279.4	9.8
40°-50°	454.0	15.9
50°-60°	631.1	22.1
60°-70°	654.2	22.9
70°-80°	468.8	16.4
80°-90°	119.5	4.2
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°	2855.0	100.0
0°-180°	2855.0	100.0



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

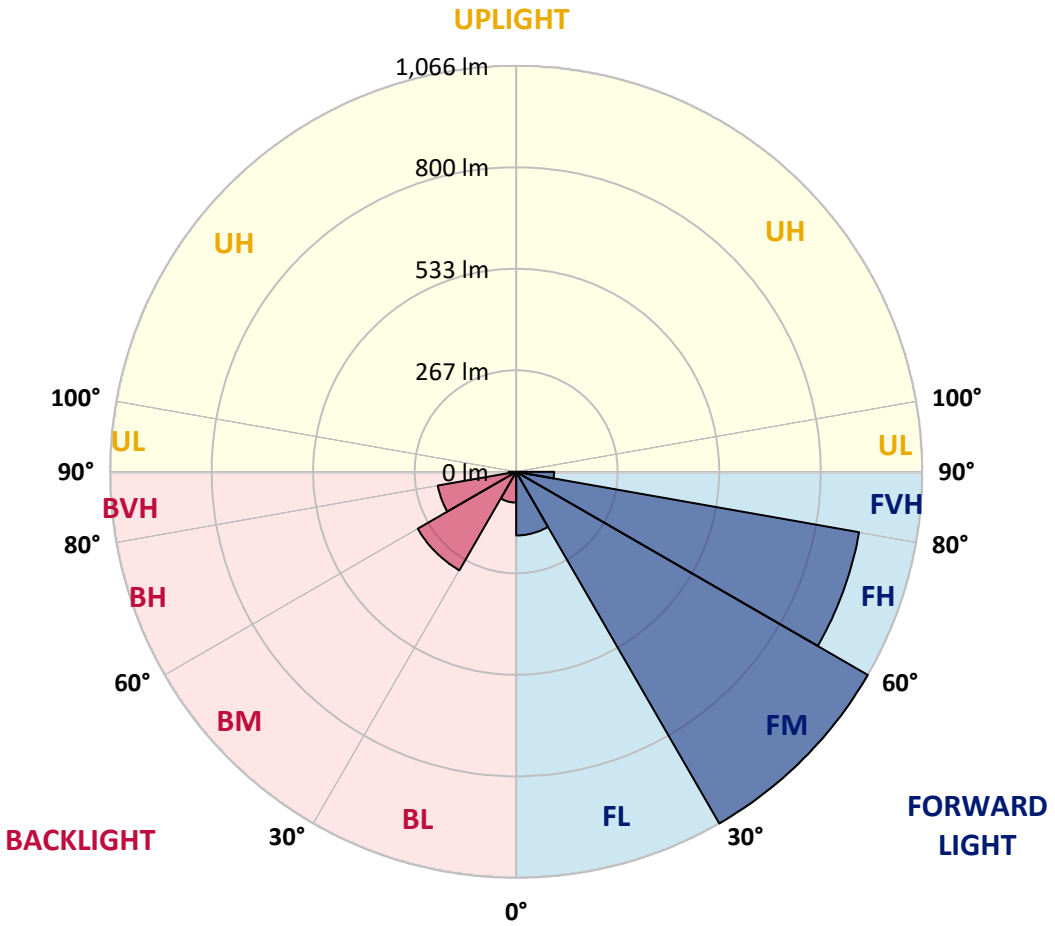
Scaled Data Report

REPORT NUMBER: P823347
CATALOG NUMBER: TTN-D1-830-U-DL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	167.1	5.9			
FM	(30°-60°)	1066.1	37.3			
FH	(60°-80°)	914.3	32.0			G1/1800
FVH	(80°-90°)	99.6	3.5			G1/100
BL	(0°-30°)	80.9	2.8	B0/110		
BM	(30°-60°)	298.5	10.5	B1/1000		
BH	(60°-80°)	208.7	7.3	B1/500		G1/500
BVH	(80°-90°)	20.0	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
Type IV Short



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P823347
CATALOG NUMBER: TTN-D1-830-U-DL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	240.5	240.5	240.5	240.5	240.5	*240.5*	240.5	240.5	240.5	240.5	240.5
2.5°	257.8	257.8	257.8	257.8	255.3	*255.3*	252.8	250.4	247.9	245.4	240.5
5°	280.1	280.1	277.6	275.2	270.2	*267.7*	265.2	260.3	255.3	250.4	242.9
7.5°	290.0	290.0	290.0	287.6	280.1	*277.6*	272.7	265.2	257.8	250.4	240.5
10°	307.4	307.4	304.9	302.4	295.0	*292.5*	287.6	277.6	265.2	252.8	240.5
12.5°	329.7	327.2	324.7	322.3	314.8	*309.9*	302.4	292.5	277.6	262.8	247.9
15°	357.0	352.0	352.0	347.0	339.6	*332.2*	327.2	312.3	297.5	277.6	257.8
17.5°	386.7	384.2	381.8	376.8	369.4	*364.4*	357.0	339.6	319.8	295.0	272.7
20°	423.9	418.9	421.4	414.0	406.5	*404.1*	391.7	371.8	347.0	319.8	292.5
22.5°	468.5	463.6	463.6	456.1	451.2	*446.2*	433.8	411.5	379.3	349.5	314.8
25°	518.1	513.1	513.1	508.2	503.2	*498.3*	483.4	458.6	421.4	384.2	344.6
27.5°	572.6	567.7	567.7	565.2	552.8	*545.4*	533.0	505.7	468.5	421.4	374.3
30°	629.6	624.7	629.6	624.7	617.2	*602.4*	587.5	557.8	515.6	463.6	406.5
32.5°	674.3	674.3	676.7	681.7	676.7	*664.3*	647.0	622.2	565.2	500.7	436.3
35°	726.3	726.3	731.3	738.7	736.2	*723.8*	706.5	679.2	619.7	542.9	468.5
37.5°	783.3	783.3	788.3	800.7	795.7	*788.3*	775.9	741.2	674.3	585.0	503.2
40°	845.3	842.8	847.8	865.1	867.6	*857.7*	842.8	808.1	731.3	639.6	540.4
42.5°	907.3	904.8	914.7	932.1	934.5	*932.1*	917.2	877.5	790.8	694.1	577.6
45°	969.3	969.3	984.1	1011.4	1023.8	*1018.8*	1006.4	956.9	865.1	751.1	627.2
47.5°	1033.7	1033.7	1053.5	1088.2	1103.1	*1100.6*	1095.7	1036.2	937.0	810.6	669.3
50°	1083.3	1083.3	1115.5	1155.2	1180.0	*1189.9*	1165.1	1110.6	999.0	862.7	704.0
52.5°	1132.9	1132.9	1165.1	1227.1	1251.8	*1266.7*	1234.5	1177.5	1068.4	909.8	736.2
55°	1157.6	1162.6	1207.2	1266.7	1306.4	*1298.9*	1311.3	1234.5	1113.0	944.5	756.1
57.5°	1160.1	1167.6	1217.1	1279.1	1323.7	*1321.3*	1323.7	1254.3	1130.4	951.9	758.5
60°	*1147.7*	*1160.1*	*1204.7*	*1266.7*	*1308.9*	*1328.7*	*1303.9*	*1241.9*	*1120.5*	*944.5*	*756.1*
62.5°	1118.0	1142.8	1189.9	1237.0	1298.9	*1306.4*	1286.6	1234.5	1093.2	937.0	743.7
65°	1051.1	1078.3	1145.3	1199.8	1249.4	*1259.3*	1237.0	1192.4	1065.9	902.3	704.0
67.5°	984.1	1001.5	1058.5	1142.8	1177.5	*1187.4*	1180.0	1127.9	1018.8	832.9	656.9
70°	907.3	929.6	974.2	1061.0	1095.7	*1093.2*	1115.5	1056.0	946.9	773.4	607.3
72.5°	803.2	835.4	880.0	951.9	994.0	*979.2*	1013.9	964.3	852.7	699.1	540.4
75°	681.7	709.0	766.0	823.0	870.1	*852.7*	880.0	845.3	743.7	609.8	463.6
77.5°	545.4	577.6	629.6	681.7	713.9	*713.9*	726.3	696.6	617.2	500.7	379.3
80°	404.1	433.8	480.9	518.1	547.8	*550.3*	562.7	547.8	476.0	389.2	290.0
82.5°	267.7	282.6	324.7	354.5	384.2	*381.8*	401.6	391.7	332.2	267.7	193.4
85°	114.0	123.9	158.7	183.4	210.7	*200.8*	228.1	225.6	178.5	128.9	86.8
87.5°	5.0	7.4	7.4	5.0	7.4	*2.5*	7.4	9.9	7.4	5.0	5.0
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

Scaled Data Report

REPORT NUMBER: P823347
CATALOG NUMBER: TTN-D1-830-U-DL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5
2.5°	240.5	238.0	233.0	230.5	228.1	223.1	223.1	220.6	220.6	220.6	218.1
5°	240.5	235.5	230.5	223.1	218.1	213.2	208.2	203.3	200.8	200.8	198.3
7.5°	235.5	230.5	223.1	215.7	208.2	198.3	193.4	183.4	181.0	178.5	178.5
10°	235.5	230.5	218.1	208.2	198.3	188.4	181.0	171.0	163.6	161.1	161.1
12.5°	238.0	230.5	218.1	205.7	193.4	181.0	171.0	161.1	153.7	148.7	148.7
15°	247.9	238.0	223.1	205.7	190.9	176.0	166.1	153.7	146.3	141.3	141.3
17.5°	260.3	250.4	228.1	208.2	190.9	173.5	161.1	148.7	141.3	136.3	133.9
20°	277.6	262.8	238.0	210.7	190.9	173.5	158.7	146.3	136.3	131.4	131.4
22.5°	297.5	280.1	247.9	215.7	193.4	173.5	158.7	143.8	133.9	128.9	128.9
25°	322.3	299.9	262.8	225.6	198.3	176.0	158.7	143.8	133.9	128.9	128.9
27.5°	349.5	324.7	277.6	235.5	203.3	178.5	158.7	143.8	133.9	128.9	128.9
30°	374.3	347.0	292.5	245.4	210.7	181.0	161.1	146.3	136.3	131.4	128.9
32.5°	401.6	366.9	307.4	255.3	215.7	185.9	163.6	148.7	136.3	131.4	131.4
35°	428.9	391.7	322.3	267.7	223.1	190.9	166.1	151.2	138.8	133.9	133.9
37.5°	458.6	418.9	339.6	277.6	230.5	195.8	171.0	153.7	141.3	136.3	136.3
40°	493.3	446.2	357.0	290.0	238.0	200.8	173.5	158.7	146.3	141.3	141.3
42.5°	525.5	471.0	374.3	299.9	245.4	205.7	178.5	161.1	151.2	146.3	146.3
45°	557.8	500.7	391.7	312.3	252.8	213.2	183.4	168.6	156.2	151.2	151.2
47.5°	594.9	528.0	411.5	322.3	260.3	218.1	188.4	173.5	161.1	158.7	156.2
50°	624.7	547.8	423.9	332.2	265.2	223.1	193.4	176.0	166.1	161.1	161.1
52.5°	652.0	567.7	433.8	337.1	267.7	225.6	198.3	181.0	171.0	166.1	166.1
55°	666.8	575.1	441.2	337.1	270.2	228.1	198.3	181.0	171.0	168.6	166.1
57.5°	666.8	575.1	436.3	332.2	265.2	223.1	195.8	178.5	171.0	166.1	166.1
60°	*656.9*	*567.7*	*423.9*	*322.3*	*257.8*	*215.7*	*190.9*	*173.5*	*166.1*	*163.6*	*163.6*
62.5°	642.0	555.3	414.0	309.9	247.9	205.7	183.4	166.1	161.1	161.1	158.7
65°	602.4	518.1	391.7	292.5	233.0	193.4	173.5	158.7	153.7	151.2	148.7
67.5°	560.2	483.4	357.0	272.7	213.2	181.0	161.1	148.7	141.3	141.3	138.8
70°	518.1	446.2	324.7	245.4	190.9	166.1	146.3	133.9	128.9	128.9	128.9
72.5°	461.1	399.1	287.6	215.7	168.6	146.3	131.4	119.0	116.5	116.5	114.0
75°	394.1	339.6	242.9	183.4	141.3	123.9	111.6	99.2	99.2	99.2	99.2
77.5°	322.3	275.2	193.4	146.3	111.6	99.2	91.7	81.8	81.8	81.8	81.8
80°	242.9	203.3	141.3	106.6	81.8	71.9	66.9	62.0	64.5	64.5	62.0
82.5°	158.7	133.9	89.2	66.9	52.1	47.1	47.1	42.1	44.6	44.6	44.6
85°	69.4	59.5	37.2	29.7	24.8	24.8	24.8	22.3	24.8	24.8	24.8
87.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	2.5	5.0	2.5
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: SP1-2411-284-4

Test Date: 11/22/2024

Luminaire Tested: TTN-D0-830-U-WQ

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

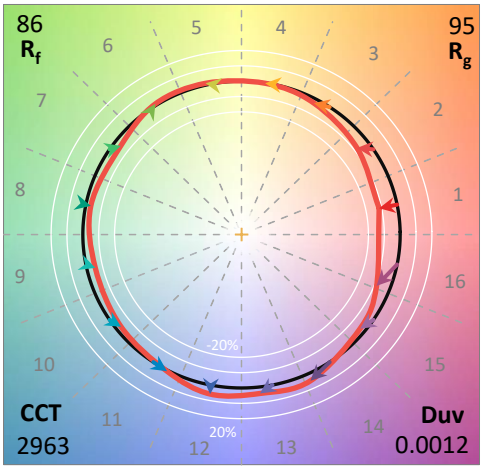
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2411-284-4
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	11/22/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	MCGRAW EDISON
Catalog Number:	**TTN-D0-830-U-WQ**
Description:	TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3000K, 80 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	2963
CIE u':	0.2515
CIE v':	0.5238
Duv:	0.0012
CIE x:	0.4414
CIE y:	0.4086
CIE z:	0.1501
Peak Wavelength (nm):	603
Dominant Wavelength (nm):	582
Purity:	55.12798
Rf:	86.1
Rg:	94.9

CRI (Ra):	82.9
R1:	81.4
R2:	91.9
R3:	95.2
R4:	81.6
R5:	82.3
R6:	91.4
R7:	82.0
R8:	57.2
R9:	3.9
R10:	82.5
R11:	82.3
R12:	76.5
R13:	83.9
R14:	97.8
R15:	72.6



Test Conditions

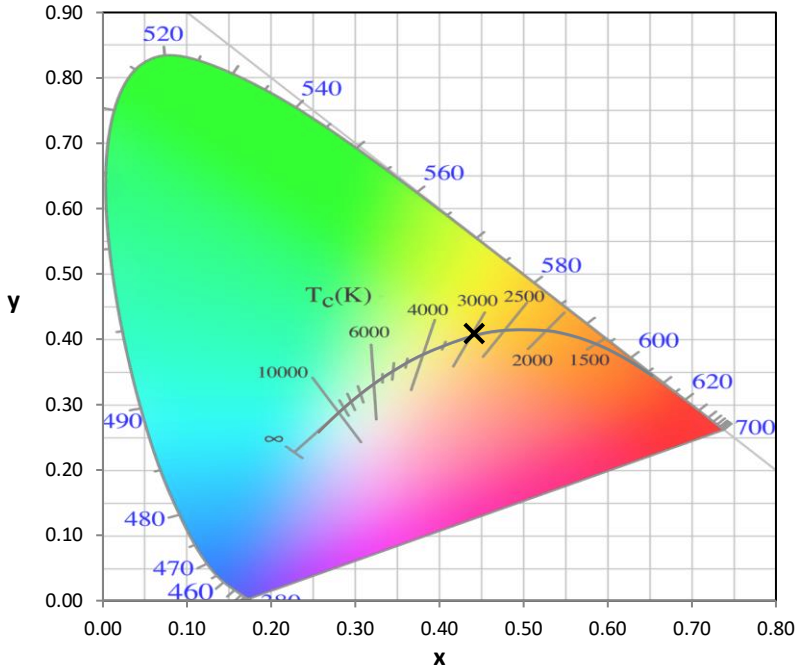
Stabilization Time:	37M
Operation Time:	1H 37M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2411-284-4

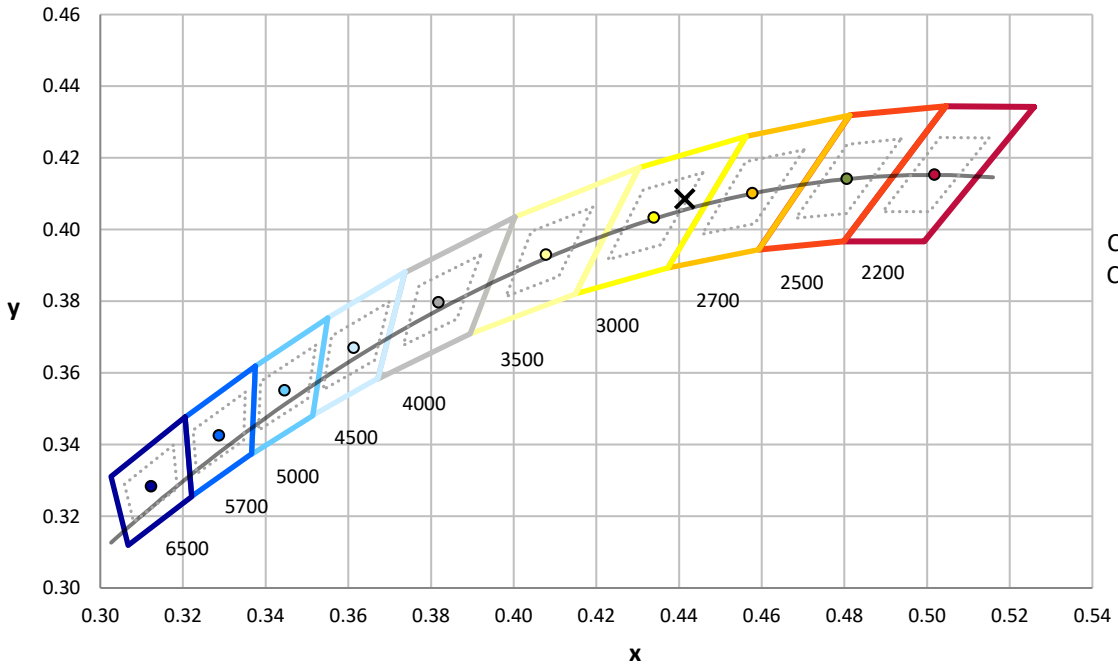
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2411-284-4

CIE 1931 Chromaticity Diagram



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

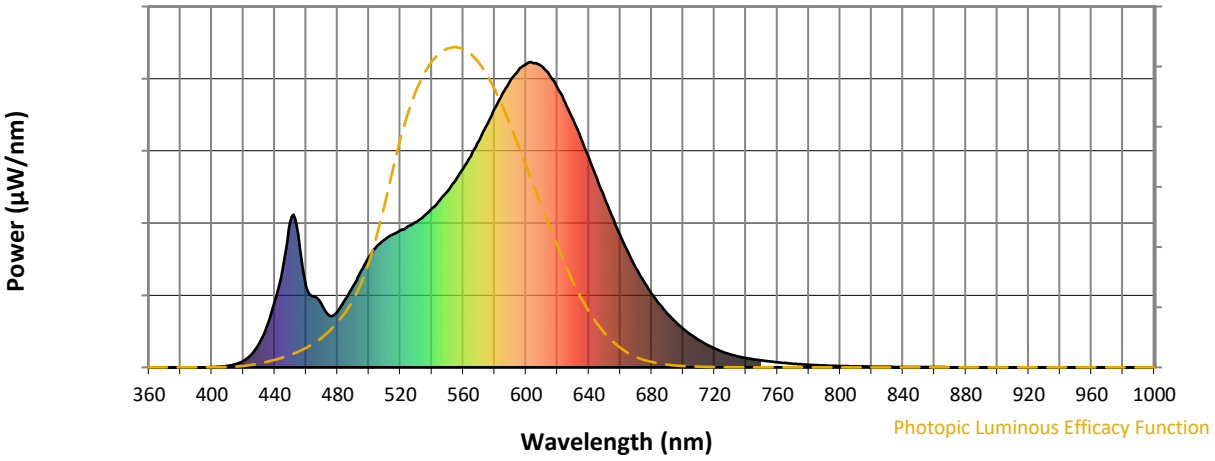


CCT = 2963K
CIE x = 0.4414
CIE y = 0.4086
Duv = 0.0012

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2411-284-4

Photopic Flux vs. Wavelength

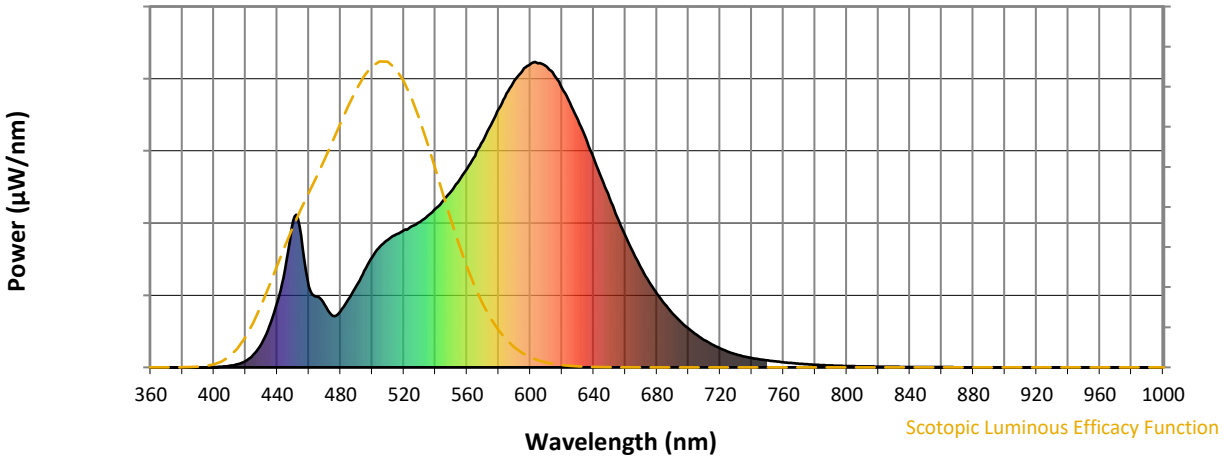


Photopic Lumens: NR

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-4

Scotopic Flux vs. Wavelength

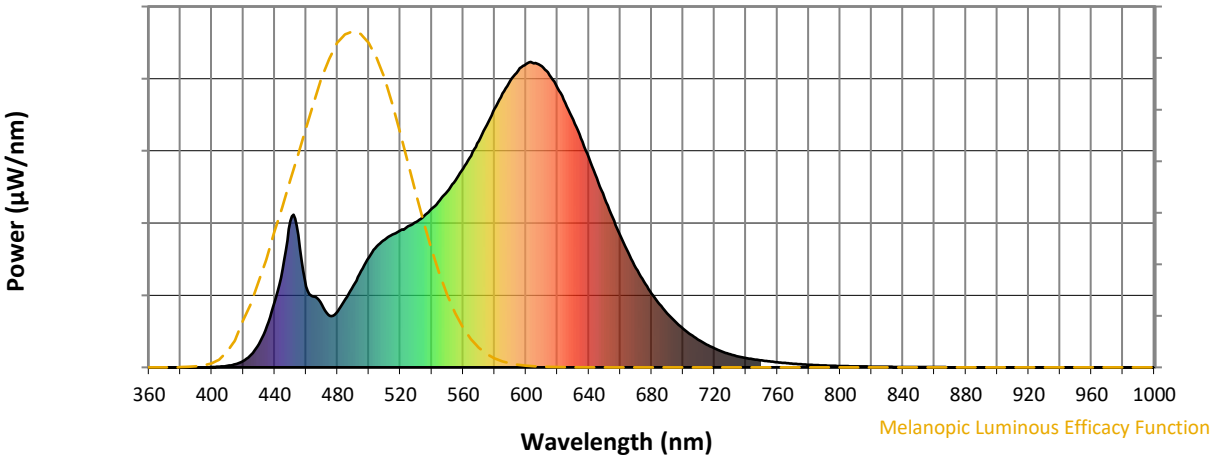


Scotopic Lumens: NR **S/P: 1.34**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

REPORT NUMBER: SP1-2411-284-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.58**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	267	NR	620	915	NR	750	23	NR	880	0	NR
365	0	NR	495	315	NR	625	866	NR	755	20	NR	885	0	NR
370	0	NR	500	360	NR	630	811	NR	760	17	NR	890	0	NR
375	0	NR	505	396	NR	635	750	NR	765	14	NR	895	0	NR
380	0	NR	510	418	NR	640	686	NR	770	12	NR	900	0	NR
385	0	NR	515	435	NR	645	619	NR	775	10	NR	905	0	NR
390	0	NR	520	448	NR	650	554	NR	780	9	NR	910	0	NR
395	0	NR	525	462	NR	655	491	NR	785	7	NR	915	0	NR
400	1	NR	530	476	NR	660	431	NR	790	6	NR	920	0	NR
405	2	NR	535	495	NR	665	376	NR	795	5	NR	925	0	NR
410	5	NR	540	520	NR	670	325	NR	800	4	NR	930	0	NR
415	10	NR	545	547	NR	675	280	NR	805	4	NR	935	0	NR
420	21	NR	550	576	NR	680	241	NR	810	3	NR	940	0	NR
425	42	NR	555	612	NR	685	207	NR	815	3	NR	945	0	NR
430	77	NR	560	651	NR	690	176	NR	820	2	NR	950	0	NR
435	135	NR	565	693	NR	695	149	NR	825	2	NR	955	0	NR
440	215	NR	570	741	NR	700	127	NR	830	2	NR	960	0	NR
445	321	NR	575	793	NR	705	107	NR	835	2	NR	965	0	NR
450	479	NR	580	847	NR	710	89	NR	840	1	NR	970	0	NR
455	432	NR	585	897	NR	715	75	NR	845	1	NR	975	0	NR
460	265	NR	590	940	NR	720	62	NR	850	1	NR	980	0	NR
465	231	NR	595	971	NR	725	51	NR	855	1	NR	985	0	NR
470	204	NR	600	993	NR	730	43	NR	860	1	NR	990	0	NR
475	168	NR	605	996	NR	735	36	NR	865	1	NR	995	0	NR
480	183	NR	610	986	NR	740	31	NR	870	1	NR	1000	0	NR
485	223	NR	615	957	NR	745	26	NR	875	0	NR			

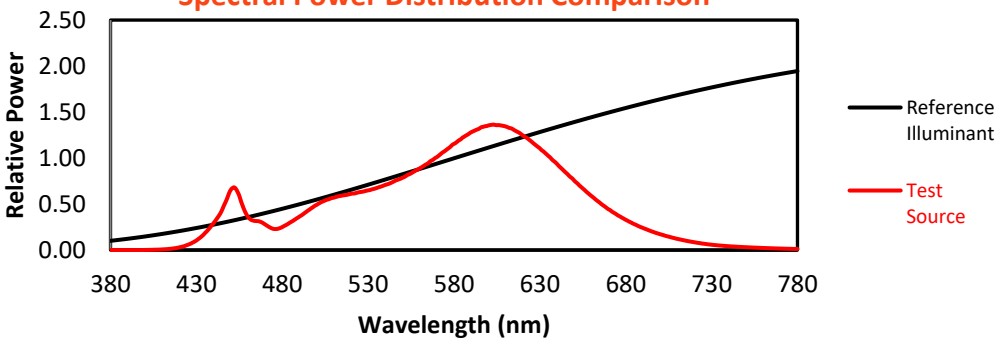
REPORT NUMBER: SP1-2411-284-4

TM-30-18

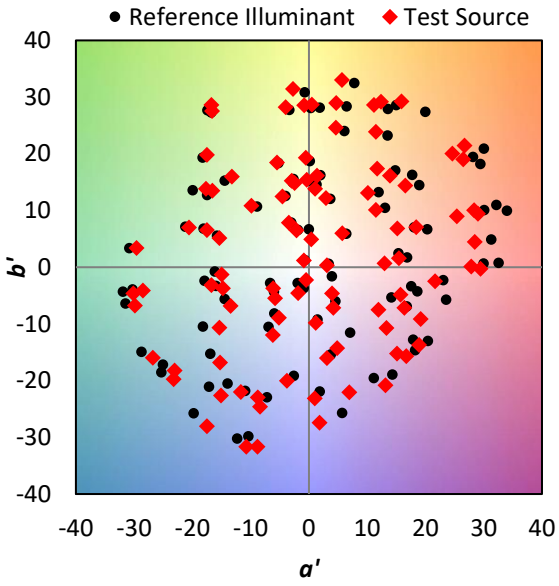
Summary

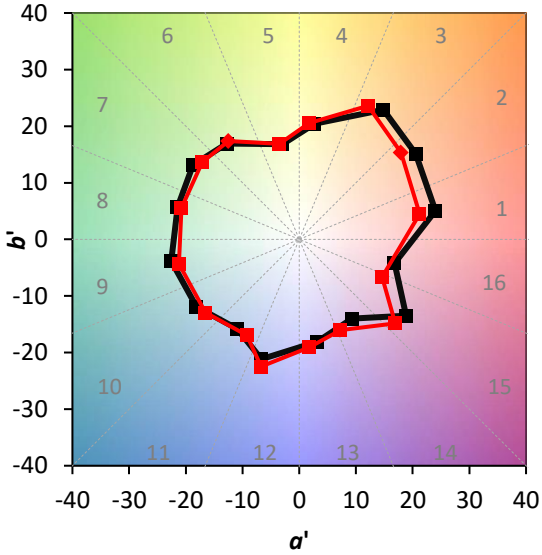
R_f = 86.1
R_g = 94.9
CIE R_a = 82.9
R_9 = 3.9

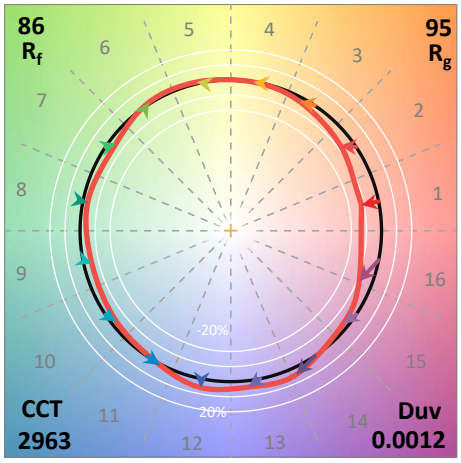
Spectral Power Distribution Comparison

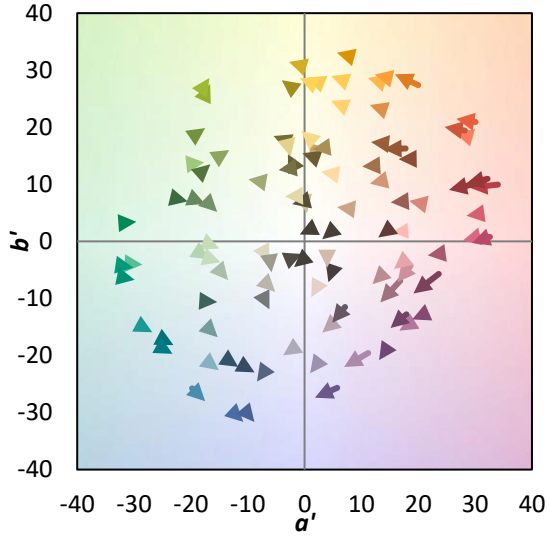


Color Vector Graphics







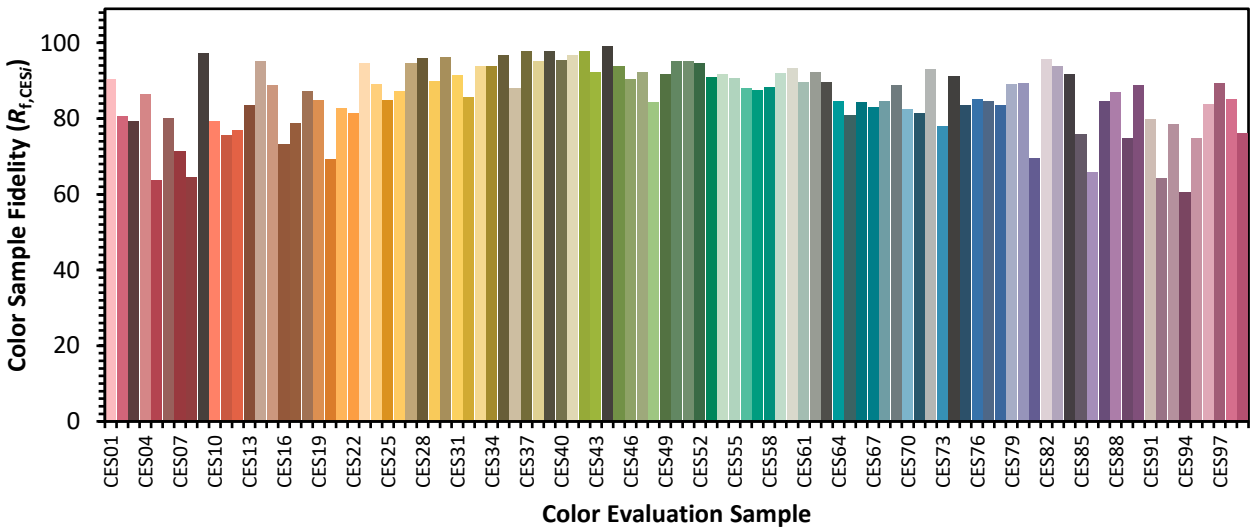


REPORT NUMBER: SP1-2411-284-4

TM-30-18

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

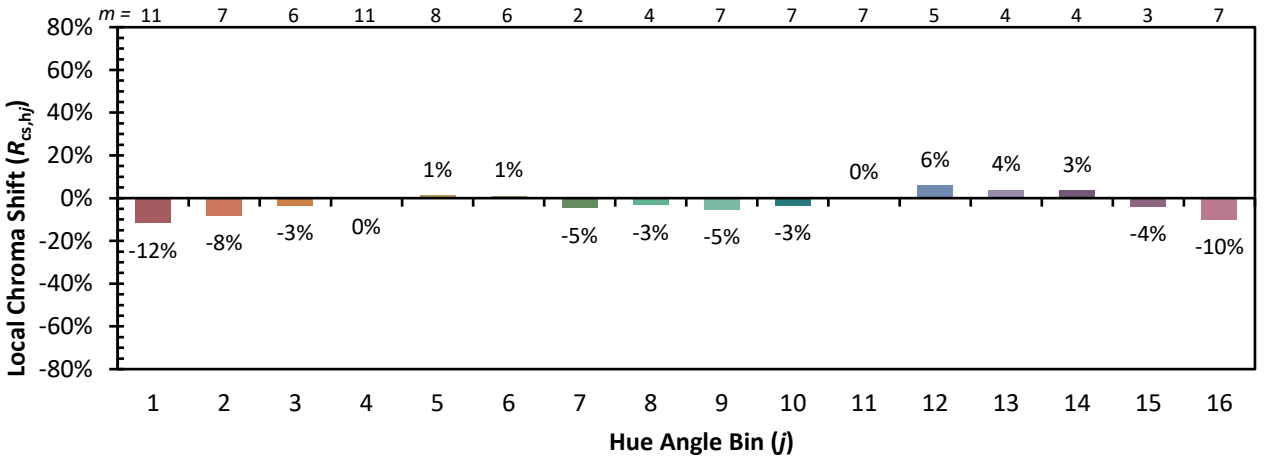
CES01 = 86	CES26 = 87	CES51 = 95	CES76 = 85
CES02 = 63	CES27 = 95	CES52 = 95	CES77 = 85
CES03 = 31	CES28 = 96	CES53 = 91	CES78 = 83
CES04 = 70	CES29 = 90	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 96	CES55 = 91	CES80 = 89
CES06 = 51	CES31 = 92	CES56 = 88	CES81 = 70
CES07 = 42	CES32 = 86	CES57 = 87	CES82 = 96
CES08 = 41	CES33 = 94	CES58 = 88	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 97	CES60 = 93	CES85 = 76
CES11 = 59	CES36 = 88	CES61 = 90	CES86 = 66
CES12 = 65	CES37 = 98	CES62 = 92	CES87 = 85
CES13 = 44	CES38 = 95	CES63 = 90	CES88 = 87
CES14 = 74	CES39 = 98	CES64 = 85	CES89 = 75
CES15 = 72	CES40 = 96	CES65 = 81	CES90 = 89
CES16 = 48	CES41 = 97	CES66 = 84	CES91 = 80
CES17 = 50	CES42 = 98	CES67 = 83	CES92 = 64
CES18 = 57	CES43 = 92	CES68 = 85	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 61
CES20 = 67	CES45 = 94	CES70 = 83	CES95 = 75
CES21 = 87	CES46 = 91	CES71 = 81	CES96 = 84
CES22 = 79	CES47 = 92	CES72 = 93	CES97 = 89
CES23 = 92	CES48 = 84	CES73 = 78	CES98 = 85
CES24 = 91	CES49 = 92	CES74 = 91	CES99 = 76
CES25 = 72	CES50 = 95	CES75 = 84	

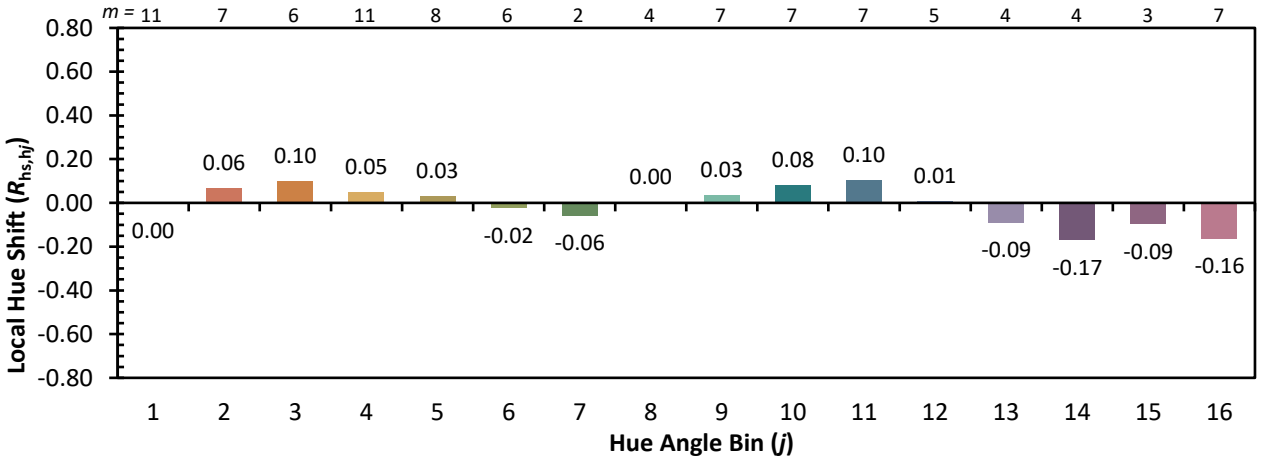


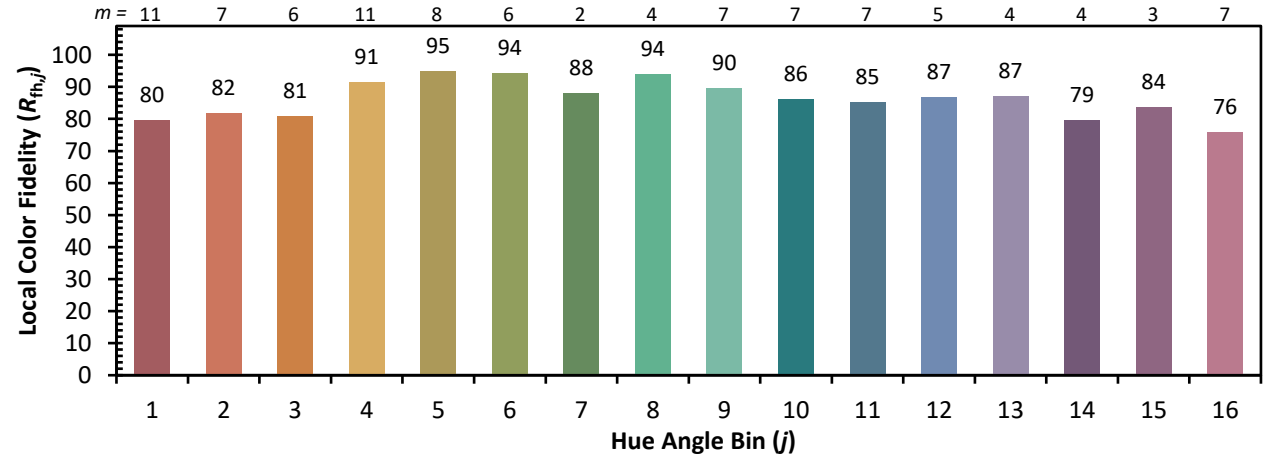
REPORT NUMBER: SP1-2411-284-4

TM-30-18

Color Rendition by Hue-Angle Bin



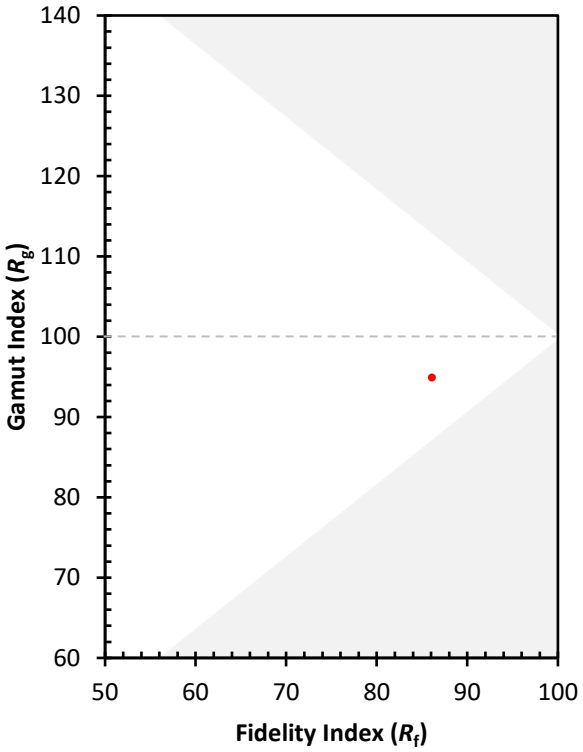


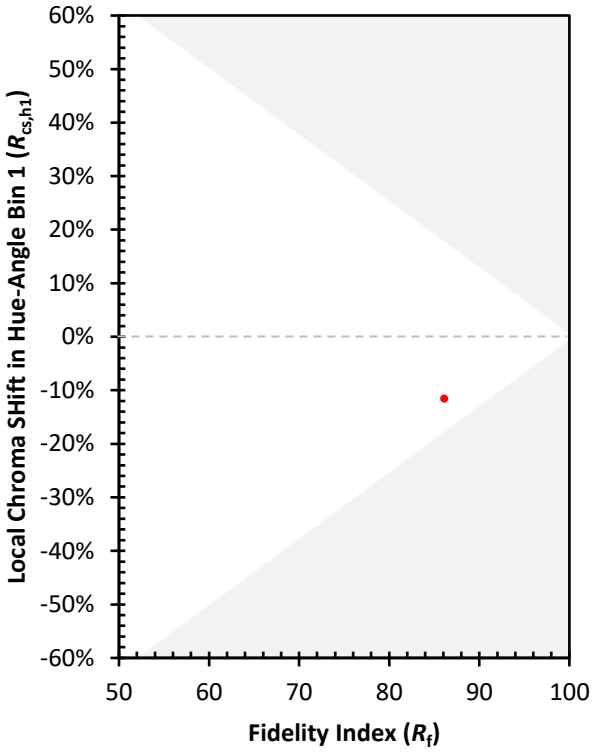


REPORT NUMBER: SP1-2411-284-4

TM-30-18

Measure Comparisons





(END OF REPORT)