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: P383139

Luminaire Tested: **GLEON-SA4D-735-U-SL3**

Issue Date: 3/3/2020

Report Generated By E0585644

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:	P383139
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-22)
Test Lab:	INNOVATION CENTER
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	GLEON-SA4D-735-U-SL3
Description:	GALLEON AREA AND ROADWAY LUMINAIRE
	(4) 70 CRI, 3500K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	29159.3 lumens
Efficiency:	N/A
Efficacy:	113.0 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type III - Medium
BUG Rating:	B3 - U0 - G5

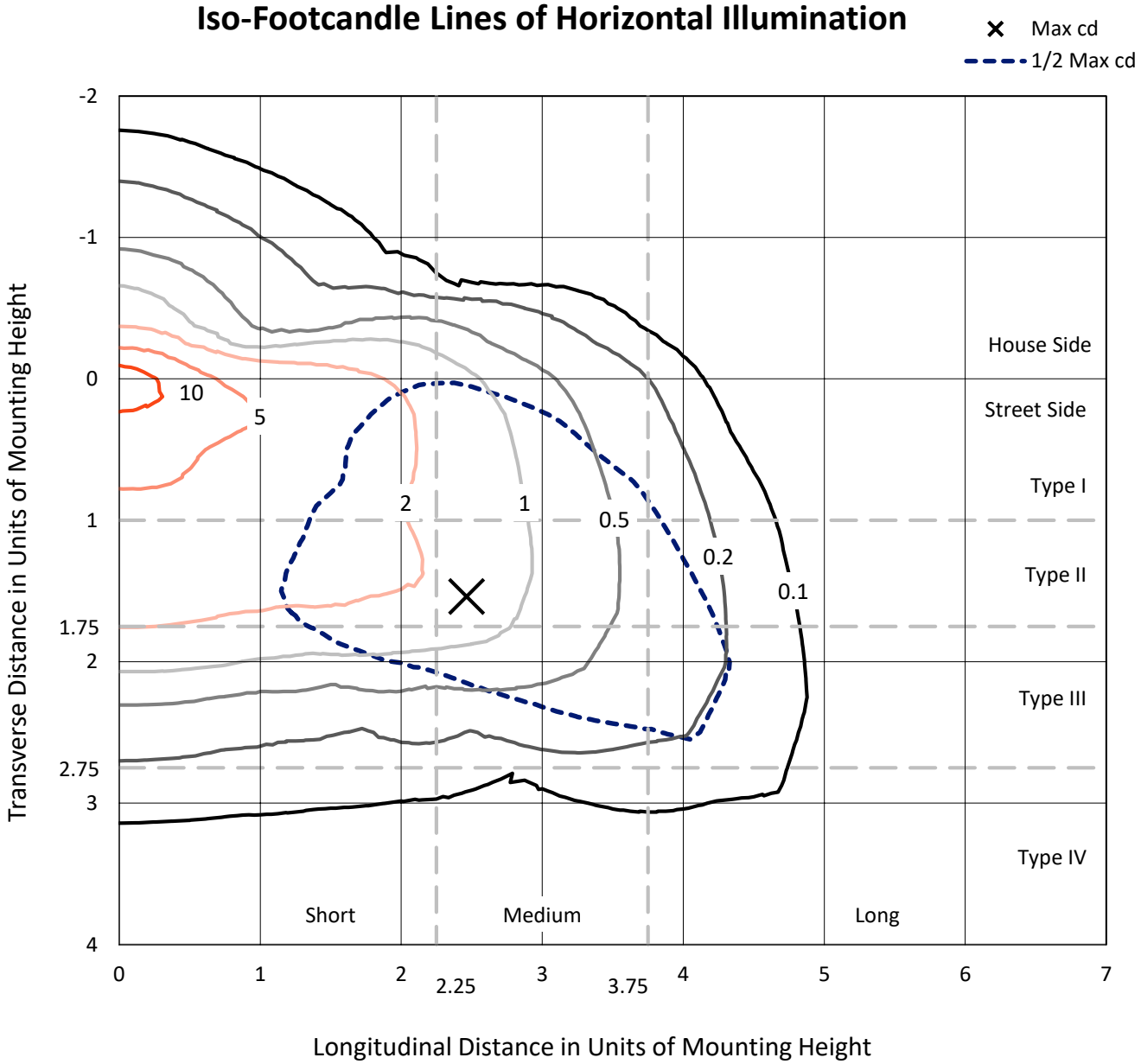
Input Watts (W):	258
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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

Scaled Data Report

REPORT NUMBER: P383139
CATALOG NUMBER: GLEON-SA4D-735-U-SL3

Iso-Footcandle Lines of Horizontal Illumination



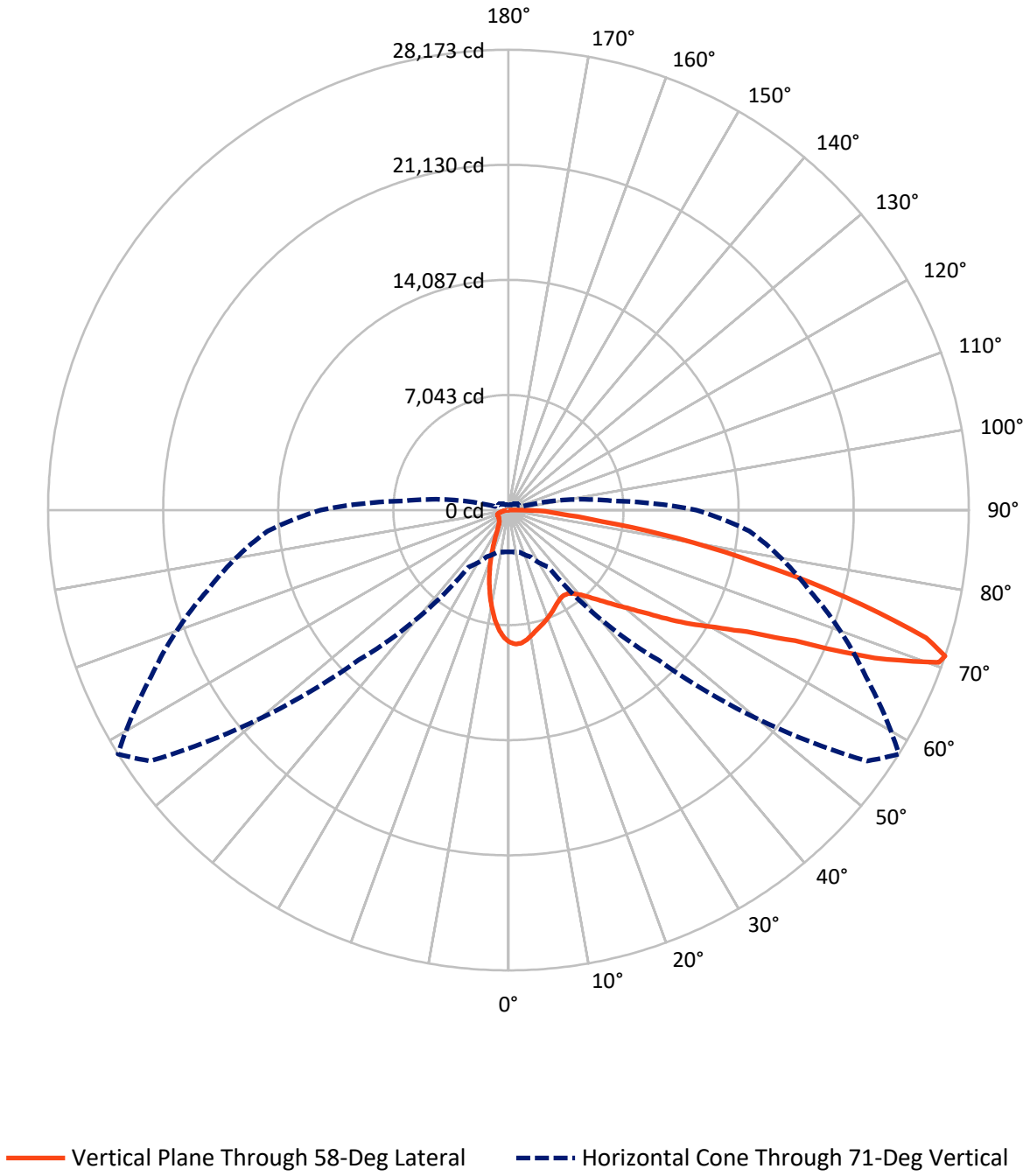
Based on 25 foot mounting height. Maximum calculated value = 12.9 fc
Type III - Medium - N/A

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

Scaled Data Report

REPORT NUMBER: P383139
CATALOG NUMBER: GLEON-SA4D-735-U-SL3

Luminous Intensity Polar Plot



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

Scaled Data Report

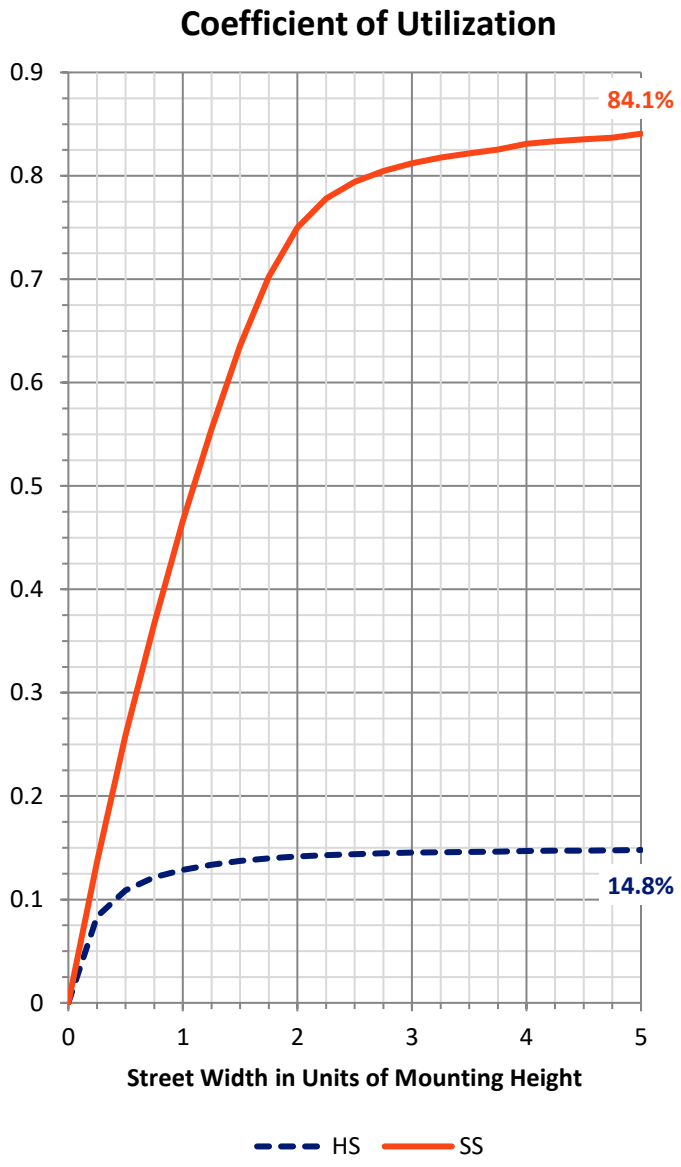
REPORT NUMBER: P383139
CATALOG NUMBER: GLEON-SA4D-735-U-SL3

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4359.5	0.0	4359.5
	% Fixture	15.0	0.0	15.0
Street Side	Lumens	24799.8	0.0	24799.8
	% Fixture	85.0	0.0	85.0
Total	Lumens	29159.3	0.0	29159.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	697.0	2.4
10°-20°	1549.8	5.3
20°-30°	1969.7	6.8
30°-40°	2509.0	8.6
40°-50°	3557.8	12.2
50°-60°	5505.9	18.9
60°-70°	7495.5	25.7
70°-80°	5000.4	17.1
80°-90°	874.3	3.0
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°	29159.3	100.0
0°-180°	29159.3	100.0



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

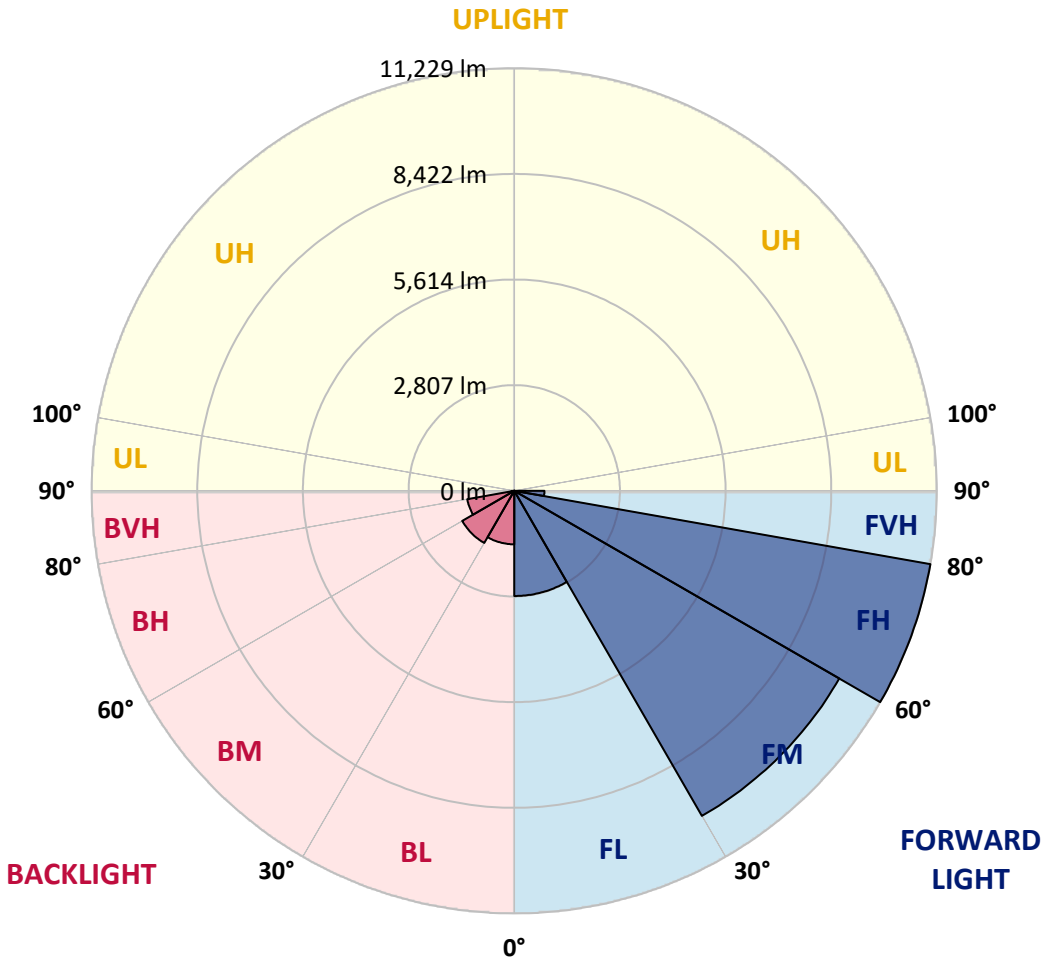
Scaled Data Report

REPORT NUMBER: P383139
CATALOG NUMBER: GLEON-SA4D-735-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2795.4	9.6			
FM	(30°-60°)	9973.9	34.2			
FH	(60°-80°)	11228.9	38.5			G4/12000
FVH	(80°-90°)	801.6	2.7			G5
BL	(0°-30°)	1421.1	4.9	B3/2500		
BM	(30°-60°)	1598.8	5.5	B2/2500		
BH	(60°-80°)	1267.1	4.3	B3/2500		G3/2500
BVH	(80°-90°)	72.6	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5
Type III Medium



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

Scaled Data Report

REPORT NUMBER: P383139
CATALOG NUMBER: GLEON-SA4D-735-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	*8079.0*	8079.0	8079.0	8079.0
2.5°	8293.4	8282.2	8286.3	8278.2	8258.8	8239.5	8211.1	*8216.2*	8176.6	8117.7	8044.6
5°	8137.0	8132.9	8163.3	8180.7	8194.8	8183.7	8175.5	*8185.7*	8127.8	8046.6	7919.6
7.5°	7808.9	7764.2	7802.8	7860.7	7915.5	7957.2	8012.1	*8019.1*	7982.6	7897.3	7730.7
10°	7342.6	7300.0	7356.9	7447.3	7557.0	7656.6	7767.2	*7787.6*	7794.6	7717.5	7515.4
12.5°	6859.2	6826.7	6883.6	7010.5	7192.4	7345.7	7522.4	*7552.9*	7615.9	7564.1	7316.3
15°	6426.5	6414.3	6483.4	6608.3	6817.5	7052.2	7307.2	*7363.0*	7469.6	7452.4	7160.9
17.5°	6052.7	6049.7	6102.5	6233.5	6465.1	6761.6	7092.8	*7187.3*	7345.7	7366.0	7032.9
20°	5774.4	5768.3	5804.8	5901.4	6140.0	6476.3	6861.2	*6991.3*	7219.8	7290.9	6900.8
22.5°	5625.1	5624.0	5625.1	5670.8	5865.8	6178.7	6635.7	*6794.1*	7096.9	7231.0	6754.6
25°	5599.7	5596.6	5574.3	5569.3	5679.9	5929.8	6412.3	*6587.0*	6980.1	7189.3	6615.4
27.5°	5665.7	5669.8	5640.3	5592.5	5614.9	5766.3	6218.3	*6405.1*	6886.7	7181.2	6518.9
30°	5802.8	5800.8	5775.4	5725.7	5682.0	5705.4	6080.1	*6267.0*	6823.7	7216.7	6452.9
32.5°	5954.2	5965.4	5960.2	5932.8	5867.8	5774.4	6038.5	*6221.3*	6805.3	7302.0	6424.4
35°	6136.0	6148.2	6184.7	6206.1	6129.9	5979.6	6127.9	*6286.4*	6858.1	7462.5	6470.2
37.5°	6308.6	6340.1	6442.8	6533.1	6468.1	6300.5	6365.5	*6478.3*	7021.7	7715.4	6593.0
40°	6507.8	6535.2	6702.8	6894.8	6884.6	6710.9	6748.5	*6823.7*	7310.1	8078.1	6815.5
42.5°	6703.8	6758.7	7001.4	7273.6	7351.8	7198.4	7258.3	*7298.0*	7716.5	8558.5	7203.6
45°	6964.8	7023.8	7361.0	7689.0	7871.9	7785.5	7881.0	*7896.3*	8227.3	9212.6	7767.2
47.5°	7360.0	7426.9	7820.1	8164.4	8443.7	8452.9	8610.3	*8604.2*	8865.3	9961.2	8477.3
50°	7975.4	8072.0	8394.0	8715.9	9055.2	9244.1	9454.4	*9424.9*	9630.1	10758.5	9294.9
52.5°	8782.0	8826.7	9065.4	9303.0	9724.5	10148.1	10449.8	*10423.4*	10497.5	11578.2	10223.3
55°	9617.9	9651.4	9749.9	9880.0	10446.7	11137.4	11775.3	*11733.7*	11545.8	12429.5	11140.5
57.5°	10369.5	10437.6	10505.6	10559.5	11174.0	12171.4	13131.3	*13134.4*	12683.4	13347.7	12088.1
60°	10486.3	10546.2	10996.3	11420.8	12418.3	13550.8	14582.7	*14552.3*	13860.6	14344.1	13144.5
62.5°	9269.6	9404.6	10156.2	11285.7	13616.8	16073.9	16434.5	*16396.8*	15268.3	15572.1	14374.5
65°	6642.9	6796.2	7703.2	9400.5	13035.8	18853.9	19776.2	*19270.4*	17188.1	17082.4	15814.9
67.5°	3832.3	3868.9	4262.0	5625.1	9925.6	18999.1	24874.1	*24166.1*	20169.2	18796.0	16519.8
70°	2833.9	2832.8	2926.3	3461.6	5371.1	15506.1	27298.6	*27933.5*	23307.9	19359.7	15523.3
71°	*2562.7*	*2565.8*	*2670.4*	*3150.8*	*4253.8*	*12979.0*	*26783.7*	*28173.2*	*24134.6*	*19081.4*	*14802.2*
72.5°	2191.9	2202.1	2347.3	2825.8	3578.4	8950.6	24565.3	*26734.9*	24526.7	18394.8	13673.7
75°	1662.7	1686.1	1887.2	2381.9	3270.7	4539.2	18029.1	*21348.5*	21788.3	16231.3	10160.3
77.5°	1186.3	1212.8	1440.3	2003.0	3109.1	3420.9	12073.9	*15572.1*	16034.3	10402.0	4582.9
80°	749.6	781.1	952.8	1593.7	2921.2	3248.3	7587.5	*10467.1*	8743.3	3328.5	1166.0
82.5°	439.8	464.2	591.2	1041.1	2386.0	3128.4	4464.1	*5801.9*	3402.7	1005.6	530.2
85°	255.0	266.1	368.7	663.3	1732.9	2952.7	3279.8	*3243.2*	1476.9	491.6	250.9
87.5°	118.9	132.0	218.4	346.3	961.9	2140.1	2592.1	*2239.7*	918.2	230.6	117.8
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: P383139
CATALOG NUMBER: GLEON-SA4D-735-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0	8079.0
2.5°	8009.0	7991.7	7919.6	7855.6	7788.6	7701.2	7604.7	7592.6	7533.6	7544.8	7524.5
5°	7850.5	7806.8	7633.2	7475.8	7289.8	7123.3	6942.5	6859.2	6739.4	6731.2	6700.7
7.5°	7624.1	7542.7	7273.6	6975.0	6676.4	6392.0	6110.6	5925.8	5736.8	5656.5	5649.5
10°	7369.1	7231.0	6834.9	6392.9	5962.3	5546.9	5144.7	4847.0	4578.9	4452.0	4446.8
12.5°	7127.4	6923.2	6379.8	5778.5	5189.4	4651.0	4099.5	3708.4	3372.2	3259.5	3211.7
15°	6922.1	6634.8	5936.9	5168.0	4453.0	3705.3	3077.6	2666.3	2355.5	2247.8	2227.5
17.5°	6723.1	6353.3	5482.9	4551.4	3687.1	2865.3	2236.6	1930.9	1765.4	1721.7	1720.7
20°	6525.0	6063.9	5008.6	3920.7	2946.6	2143.2	1719.6	1582.5	1526.6	1521.6	1513.4
22.5°	6300.5	5757.2	4509.8	3287.9	2299.6	1685.1	1461.6	1406.8	1399.7	1417.9	1417.9
25°	6090.3	5452.4	4004.0	2668.3	1788.7	1405.8	1305.2	1294.0	1313.3	1345.8	1348.9
27.5°	5894.3	5158.9	3510.4	2117.8	1433.2	1238.2	1196.5	1209.7	1244.3	1281.8	1282.8
30°	5732.7	4881.6	3030.9	1668.9	1210.7	1113.2	1106.1	1132.6	1170.1	1199.6	1206.7
32.5°	5607.8	4644.9	2567.7	1341.8	1065.5	1019.8	1025.9	1048.3	1071.6	1087.9	1099.0
35°	5549.9	4441.8	2140.1	1131.6	973.1	947.7	955.8	968.0	978.1	990.3	999.5
37.5°	5560.0	4284.4	1758.2	1000.5	911.1	897.9	897.9	897.9	897.9	904.0	905.0
40°	5654.6	4193.9	1447.4	917.2	869.5	855.3	844.1	833.9	825.8	829.8	827.8
42.5°	5896.3	4185.8	1219.9	864.4	836.0	812.6	790.2	776.0	765.8	769.9	772.0
45°	6306.7	4287.4	1066.5	826.8	804.5	768.9	740.5	725.2	718.1	731.4	733.3
47.5°	6837.8	4508.8	973.1	799.4	775.0	728.3	697.8	683.6	685.6	704.9	710.0
50°	7522.4	4868.4	928.4	782.1	754.6	693.7	662.2	650.0	656.2	683.6	689.7
52.5°	8274.1	5386.4	933.4	777.0	741.5	668.4	634.8	620.6	630.8	656.2	661.2
55°	9141.6	6009.0	1017.7	784.2	722.1	652.1	612.5	588.1	596.2	619.6	623.7
57.5°	10105.4	6722.0	1187.4	782.1	697.8	636.9	589.1	552.6	558.6	572.9	576.9
60°	11109.0	7583.4	1450.4	788.2	686.6	618.5	557.6	511.9	509.9	522.0	524.1
62.5°	12313.7	8579.8	1751.1	792.3	693.7	595.3	516.0	471.3	465.2	468.3	470.2
65°	13554.9	9301.0	1638.4	776.0	716.1	575.9	479.5	431.7	420.5	418.5	419.5
67.5°	13593.4	8528.0	1148.8	743.5	725.2	565.7	452.0	398.1	379.9	372.8	371.8
70°	12190.7	6928.3	894.8	709.0	688.7	549.5	426.6	370.8	343.3	332.1	331.2
71°	*11506.1*	*6377.7*	*848.2*	*691.7*	*661.2*	*533.2*	*415.5*	*358.6*	*330.1*	*317.9*	*315.9*
72.5°	10432.5	5717.6	791.3	664.3	608.4	491.6	394.1	341.3	311.8	297.6	294.6
75°	7486.9	3738.9	679.6	592.2	503.8	392.1	345.3	306.8	281.3	264.1	262.0
77.5°	2884.6	1488.1	513.9	492.6	385.9	306.8	284.4	265.1	246.9	229.5	228.5
80°	891.8	665.3	374.8	370.8	279.3	228.5	221.4	216.3	209.2	191.0	186.9
82.5°	476.4	381.9	258.0	239.7	182.9	152.4	160.5	162.6	163.5	144.2	142.2
85°	227.5	202.1	145.2	136.1	106.7	85.3	98.6	106.7	107.7	88.4	82.3
87.5°	108.7	105.6	68.1	51.8	39.6	28.4	34.6	42.7	46.8	33.5	29.4
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-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

All Brands

Data applicable to all product families using SA light engines

Report Number: SP1-2101-121-7

Luminaire Tested: IFLD-S-SA2A-735-U-T2

Test Date: 03/04/2021

Report Generated By controller / USPTCWHP6086842

Test Information

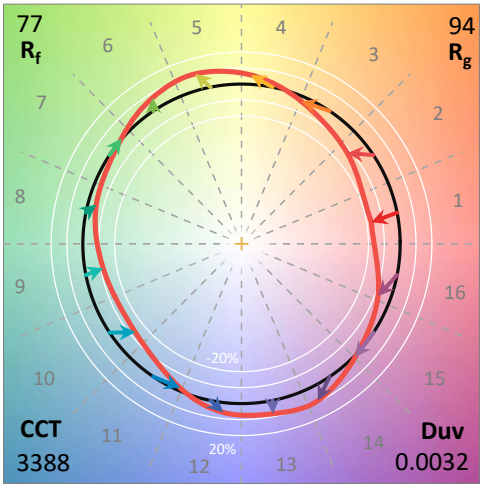
Test Method:	LM-79-08
Report Number:	SP1-2101-121-7
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1
Measurement Geometry:	4π
Issue Date:	03/04/2021
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	**IFLD-S-SA2A-735-U-T2**
Description:	STREETWORKS INF FLOOD

PROGRAMMED @ 615mA.

Spectral Parameters

CCT (K):	3388	CRI (Ra):	73.1		
CIE u':	0.2371	R1:	68.9	R9:	-34.6
CIE v':	0.5177	R2:	81.1	R10:	57.8
Duv:	0.0032	R3:	93.1	R11:	68.6
CIE x:	0.4153	R4:	71.6	R12:	53.9
CIE y:	0.4030	R5:	69.4	R13:	70.9
CIE z:	0.1817	R6:	75.0	R14:	96.2
Peak Wavelength (nm):	590	R7:	79.5		
Dominant Wavelength (nm):	580	R8:	46.4		
Purity:	45.7				

Rf:	76.9
Rg:	94.4



Test Conditions

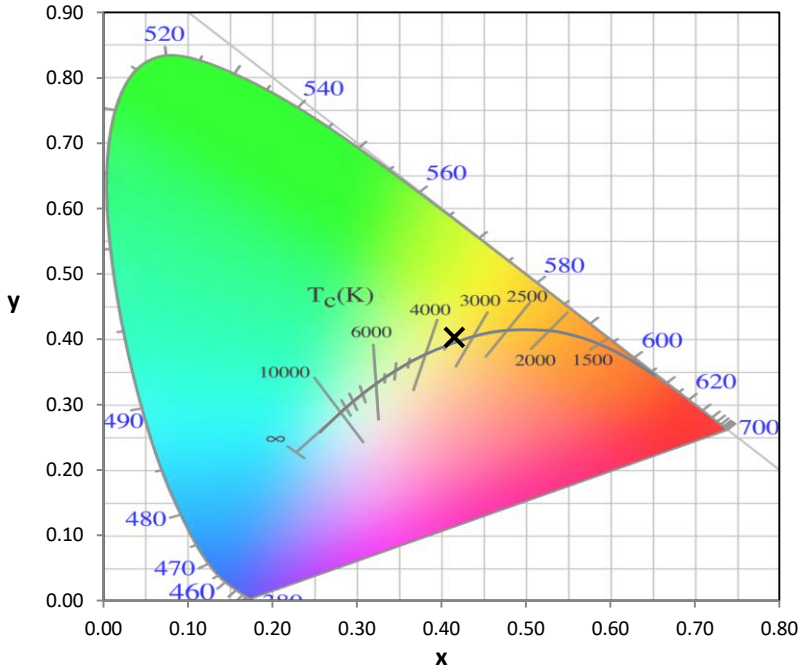
Stabilization Time:	81M
Operation Time:	12H
Room Temperature (°C) / RH%:	25.0/30%
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2101-121-7

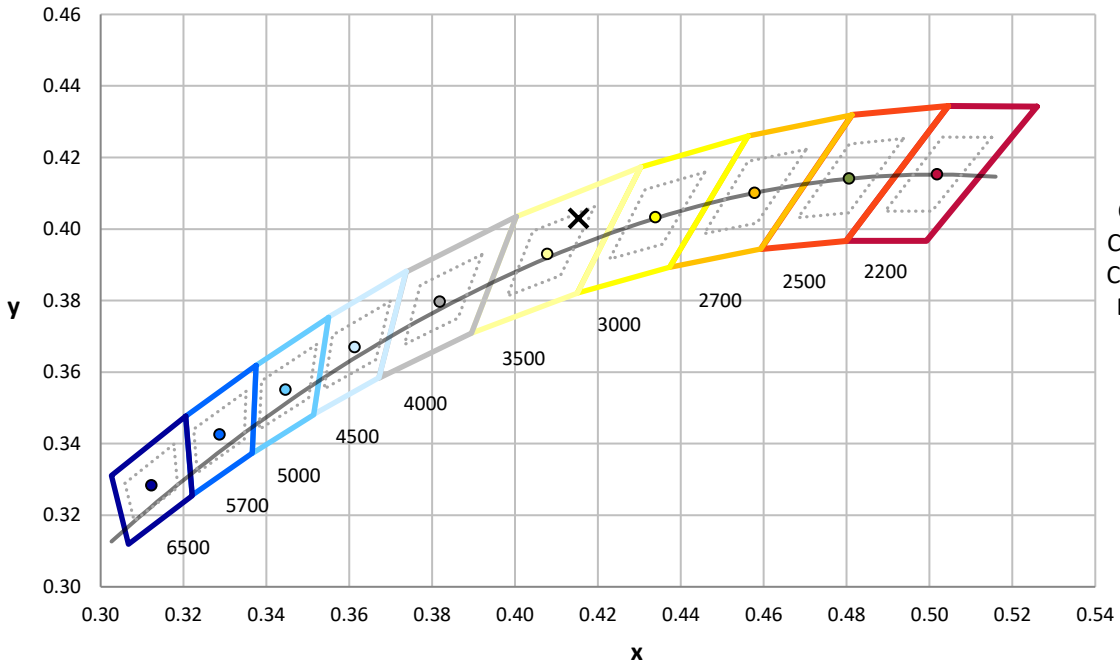
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	1/31/2021	7/31/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020	12/1/2021
Room Thermometer	IN0046	12/1/2020	12/1/2021

REPORT NUMBER: SP1-2101-121-7

CIE 1931 Chromaticity Diagram



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

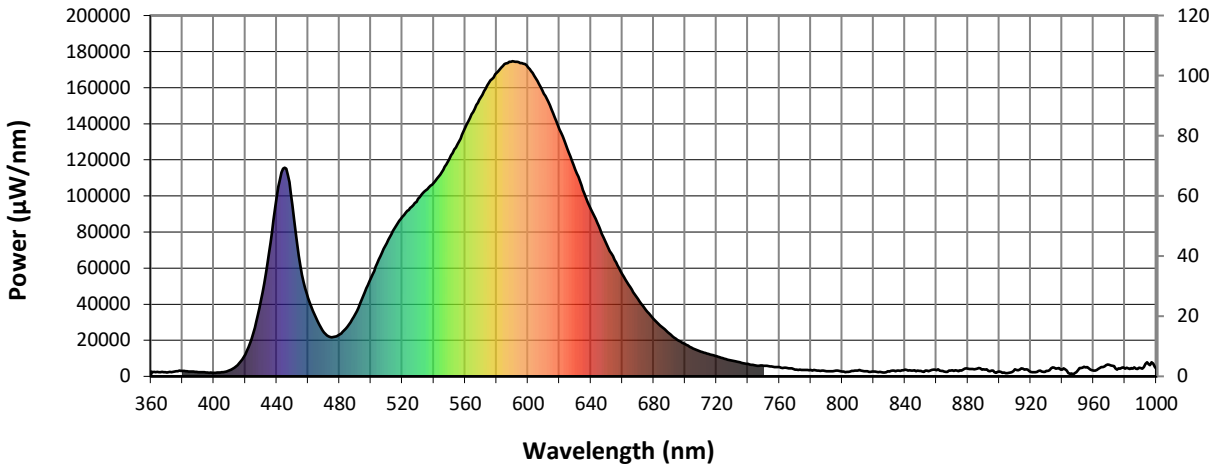


CCT = 3388K
CIE x = 0.4153
CIE y = 0.4030
Duv = 0.0032

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-7

Photopic Flux vs. Wavelength

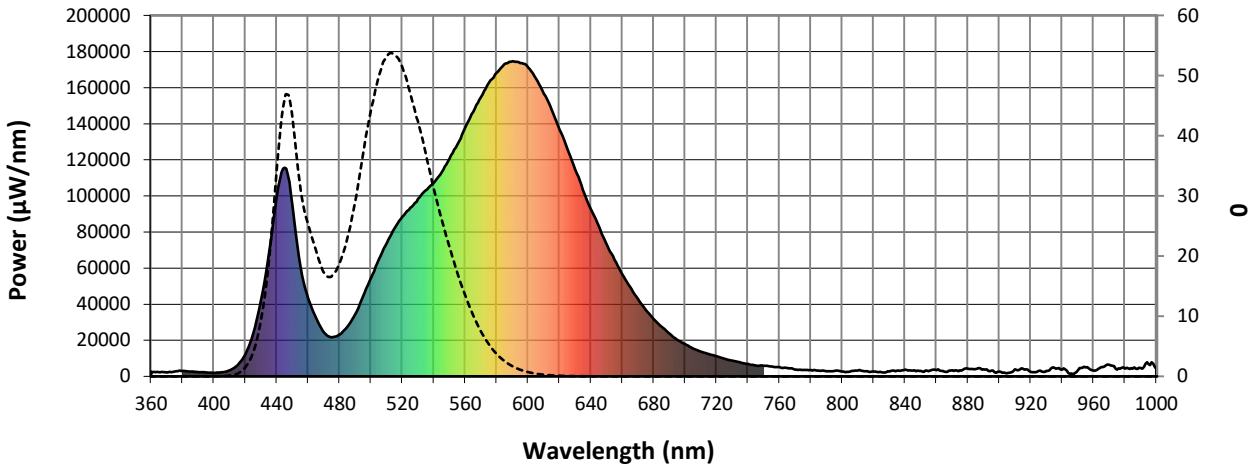


######

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	2672	0.0	490	34553	4.9	620	136720	35.6	750	5870	0.0	880	4216	0.0
365	2252	0.0	495	44336	8.0	625	126308	27.9	755	5421	0.0	885	4132	0.0
370	2217	0.0	500	54643	12.1	630	114625	20.7	760	5097	0.0	890	3992	0.0
375	2697	0.0	505	64676	18.1	635	103216	15.5	765	4626	0.0	895	3214	0.0
380	3039	0.0	510	73825	25.4	640	92605	11.1	770	3782	0.0	900	2580	0.0
385	2655	0.0	515	81872	33.9	645	83234	8.0	775	3506	0.0	905	1776	0.0
390	2357	0.0	520	88574	43.0	650	73263	5.4	780	3507	0.0	910	3995	0.0
395	2186	0.0	525	93289	50.1	655	64627	3.7	785	3267	0.0	915	4288	0.0
400	2015	0.0	530	98393	57.9	660	56614	2.4	790	2849	0.0	920	2446	0.0
405	2234	0.0	535	103269	64.0	665	49537	1.6	795	3037	0.0	925	3009	0.0
410	3412	0.0	540	107316	69.9	670	42866	0.9	800	2716	0.0	930	3026	0.0
415	6135	0.0	545	113101	75.3	675	36708	0.6	805	2648	0.0	935	4734	0.0
420	12146	0.0	550	120690	82.0	680	31814	0.4	810	3187	0.0	940	3719	0.0
425	23983	0.1	555	128583	87.8	685	27485	0.2	815	2931	0.0	945	1480	0.0
430	42142	0.3	560	137796	93.6	690	23698	0.1	820	2717	0.0	950	3450	0.0
435	68228	0.8	565	146577	97.5	695	20309	0.1	825	2236	0.0	955	5051	0.0
440	99323	1.6	570	154581	100.5	700	17890	0.1	830	2628	0.0	960	3176	0.0
445	115584	2.4	575	162633	101.2	705	15500	0.0	835	3140	0.0	965	5178	0.0
450	94997	2.5	580	168101	99.9	710	13699	0.0	840	3675	0.0	970	6385	0.0
455	61433	2.1	585	173145	96.2	715	12398	0.0	845	3283	0.0	975	3810	0.0
460	43373	1.8	590	174675	90.3	720	11147	0.0	850	3055	0.0	980	4322	0.0
465	32472	1.7	595	173724	82.3	725	9761	0.0	855	2932	0.0	985	4200	0.0
470	24257	1.5	600	171241	73.8	730	8651	0.0	860	3382	0.0	990	4661	0.0
475	21690	1.7	605	165134	64.0	735	7730	0.0	865	2605	0.0	995	6746	0.0
480	23173	2.2	610	156652	53.8	740	6847	0.0	870	3325	0.0	1000	4150	0.0
485	27564	3.3	615	147879	44.6	745	6124	0.0	875	3325	0.0			

REPORT NUMBER: SP1-2101-121-7

Scotopic Flux vs. Wavelength

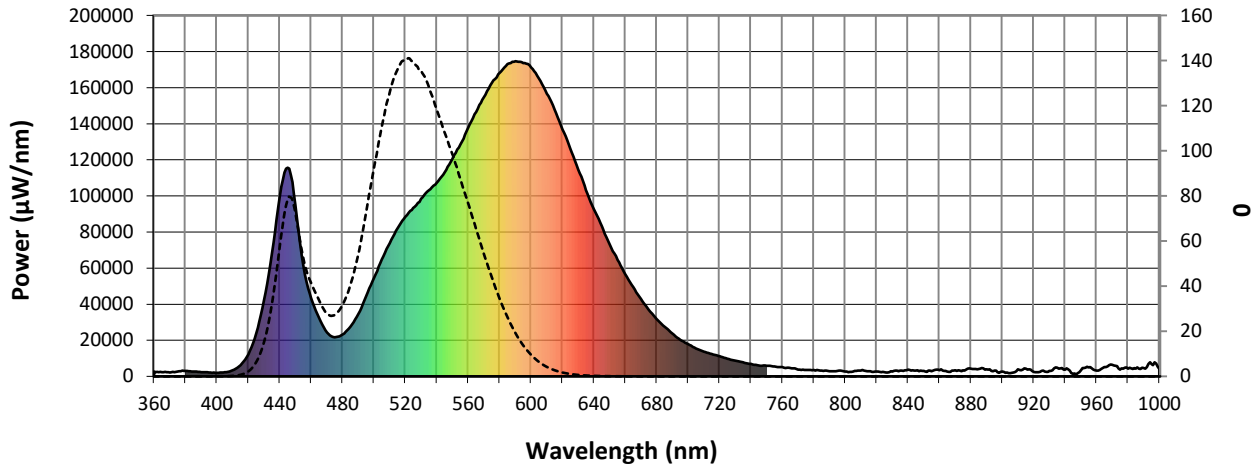


Scotopic Lumens: 12126 **S/P: 1.36**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	2672	0.0	490	34553	53.2	620	136720	1.7	750	5870	0.0	880	4216	0.0
365	2252	0.0	495	44336	71.7	625	126308	1.1	755	5421	0.0	885	4132	0.0
370	2217	0.0	500	54643	91.4	630	114625	0.6	760	5097	0.0	890	3992	0.0
375	2697	0.0	505	64676	110.0	635	103216	0.4	765	4626	0.0	895	3214	0.0
380	3039	0.0	510	73825	125.1	640	92605	0.2	770	3782	0.0	900	2580	0.0
385	2655	0.0	515	81872	135.7	645	83234	0.1	775	3506	0.0	905	1776	0.0
390	2357	0.0	520	88574	140.8	650	73263	0.1	780	3507	0.0	910	3995	0.0
395	2186	0.0	525	93289	139.6	655	64627	0.1	785	3267	0.0	915	4288	0.0
400	2015	0.0	530	98393	135.7	660	56614	0.0	790	2849	0.0	920	2446	0.0
405	2234	0.1	535	103269	128.7	665	49537	0.0	795	3037	0.0	925	3009	0.0
410	3412	0.2	540	107316	118.6	670	42866	0.0	800	2716	0.0	930	3026	0.0
415	6135	0.6	545	113101	108.4	675	36708	0.0	805	2648	0.0	935	4734	0.0
420	12146	2.0	550	120690	98.7	680	31814	0.0	810	3187	0.0	940	3719	0.0
425	23983	5.9	555	128583	87.9	685	27485	0.0	815	2931	0.0	945	1480	0.0
430	42142	14.3	560	137796	77.0	690	23698	0.0	820	2717	0.0	950	3450	0.0
435	68228	30.5	565	146577	65.8	695	20309	0.0	825	2236	0.0	955	5051	0.0
440	99323	55.5	570	154581	54.6	700	17890	0.0	830	2628	0.0	960	3176	0.0
445	115584	77.4	575	162633	44.3	705	15500	0.0	835	3140	0.0	965	5178	0.0
450	94997	73.6	580	168101	34.6	710	13699	0.0	840	3675	0.0	970	6385	0.0
455	61433	53.7	585	173145	26.5	715	12398	0.0	845	3283	0.0	975	3810	0.0
460	43373	41.9	590	174675	19.5	720	11147	0.0	850	3055	0.0	980	4322	0.0
465	32472	34.3	595	173724	13.9	725	9761	0.0	855	2932	0.0	985	4200	0.0
470	24257	27.9	600	171241	9.7	730	8651	0.0	860	3382	0.0	990	4661	0.0
475	21690	27.1	605	165134	6.5	735	7730	0.0	865	2605	0.0	995	6746	0.0
480	23173	31.3	610	156652	4.2	740	6847	0.0	870	3325	0.0	1000	4150	0.0
485	27564	40.0	615	147879	2.7	745	6124	0.0	875	3325	0.0			

REPORT NUMBER: SP1-2101-121-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: 4490.7 **M/P: 0.5**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	2672	0.0	490	34553	28.8	620	136720	0.1	750	5870	0.0	880	4216	0.0
365	2252	0.0	495	44336	36.6	625	126308	0.1	755	5421	0.0	885	4132	0.0
370	2217	0.0	500	54643	43.9	630	114625	0.0	760	5097	0.0	890	3992	0.0
375	2697	0.0	505	64676	49.6	635	103216	0.0	765	4626	0.0	895	3214	0.0
380	3039	0.0	510	73825	53.0	640	92605	0.0	770	3782	0.0	900	2580	0.0
385	2655	0.0	515	81872	53.5	645	83234	0.0	775	3506	0.0	905	1776	0.0
390	2357	0.0	520	88574	51.6	650	73263	0.0	780	3507	0.0	910	3995	0.0
395	2186	0.0	525	93289	47.3	655	64627	0.0	785	3267	0.0	915	4288	0.0
400	2015	0.0	530	98393	42.5	660	56614	0.0	790	2849	0.0	920	2446	0.0
405	2234	0.0	535	103269	37.2	665	49537	0.0	795	3037	0.0	925	3009	0.0
410	3412	0.1	540	107316	31.4	670	42866	0.0	800	2716	0.0	930	3026	0.0
415	6135	0.4	545	113101	26.3	675	36708	0.0	805	2648	0.0	935	4734	0.0
420	12146	1.4	550	120690	21.7	680	31814	0.0	810	3187	0.0	940	3719	0.0
425	23983	3.7	555	128583	17.3	685	27485	0.0	815	2931	0.0	945	1480	0.0
430	42142	8.9	560	137796	13.6	690	23698	0.0	820	2717	0.0	950	3450	0.0
435	68228	18.2	565	146577	10.3	695	20309	0.0	825	2236	0.0	955	5051	0.0
440	99323	33.2	570	154581	7.6	700	17890	0.0	830	2628	0.0	960	3176	0.0
445	115584	45.6	575	162633	5.4	705	15500	0.0	835	3140	0.0	965	5178	0.0
450	94997	43.8	580	168101	3.8	710	13699	0.0	840	3675	0.0	970	6385	0.0
455	61433	32.2	585	173145	2.6	715	12398	0.0	845	3283	0.0	975	3810	0.0
460	43373	25.6	590	174675	1.7	720	11147	0.0	850	3055	0.0	980	4322	0.0
465	32472	21.2	595	173724	1.1	725	9761	0.0	855	2932	0.0	985	4200	0.0
470	24257	17.4	600	171241	0.7	730	8651	0.0	860	3382	0.0	990	4661	0.0
475	21690	16.6	605	165134	0.5	735	7730	0.0	865	2605	0.0	995	6746	0.0
480	23173	18.6	610	156652	0.3	740	6847	0.0	870	3325	0.0	1000	4150	0.0
485	27564	22.7	615	147879	0.2	745	6124	0.0	875	3325	0.0			

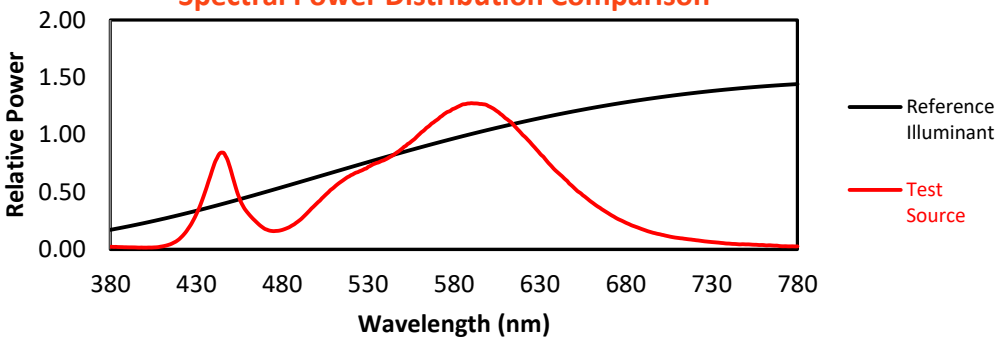
REPORT NUMBER: SP1-2101-121-7

TM-30-18

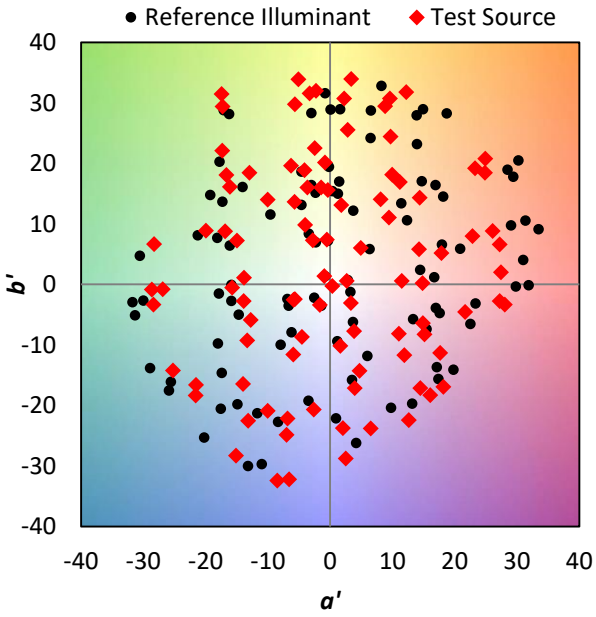
Summary

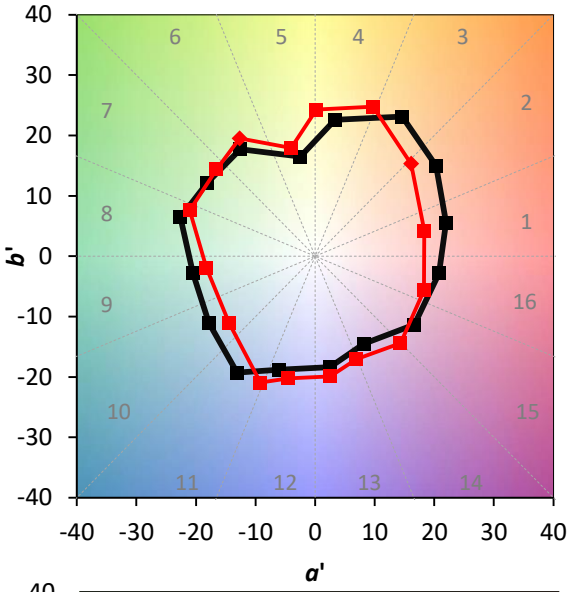
R_f = 76.9
R_g = 94.4
CIE R_a = 73.1
R_9 = -34.6

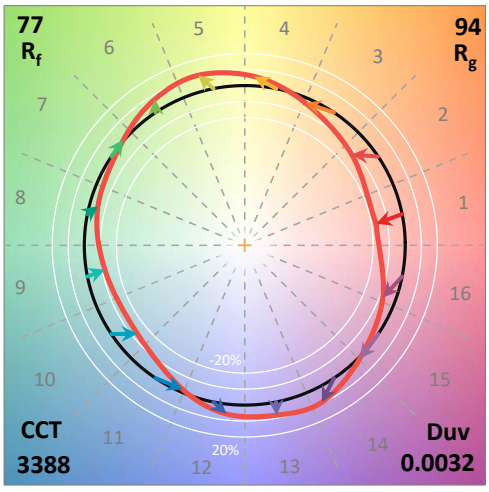
Spectral Power Distribution Comparison

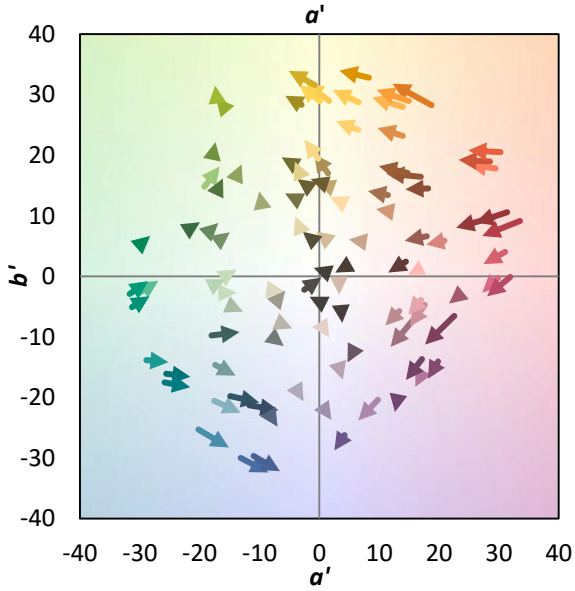


Color Vector Graphics







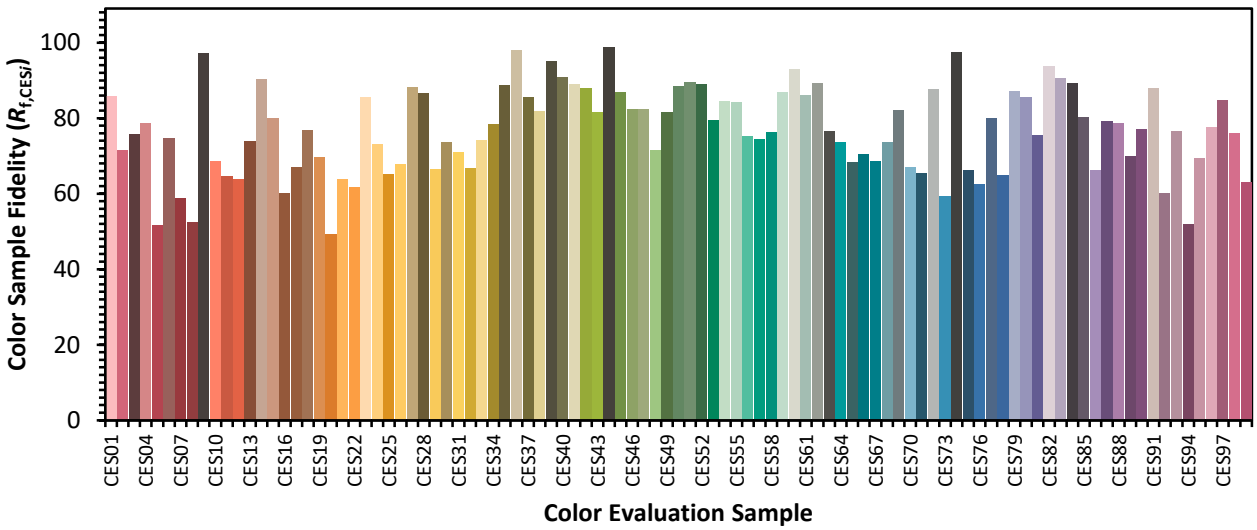


REPORT NUMBER: SP1-2101-121-7

TM-30-18

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

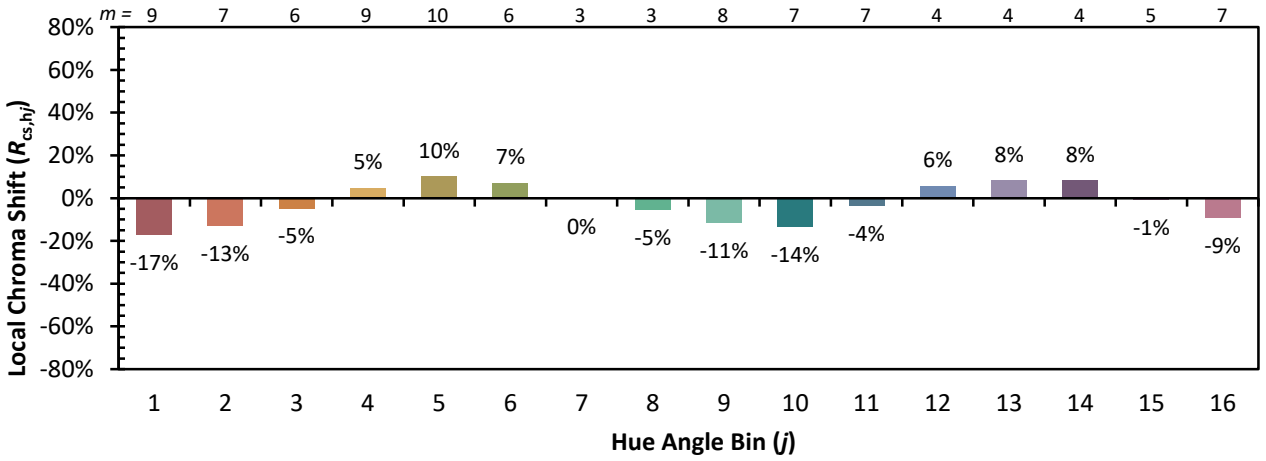
CES01 = 86	CES26 = 68	CES51 = 90	CES76 = 63
CES02 = 62	CES27 = 88	CES52 = 89	CES77 = 80
CES03 = 31	CES28 = 87	CES53 = 80	CES78 = 65
CES04 = 70	CES29 = 67	CES54 = 84	CES79 = 87
CES05 = 48	CES30 = 74	CES55 = 84	CES80 = 86
CES06 = 51	CES31 = 71	CES56 = 75	CES81 = 75
CES07 = 40	CES32 = 67	CES57 = 74	CES82 = 94
CES08 = 39	CES33 = 74	CES58 = 76	CES83 = 91
CES09 = 29	CES34 = 78	CES59 = 87	CES84 = 89
CES10 = 75	CES35 = 89	CES60 = 93	CES85 = 80
CES11 = 58	CES36 = 98	CES61 = 86	CES86 = 66
CES12 = 64	CES37 = 86	CES62 = 89	CES87 = 79
CES13 = 43	CES38 = 82	CES63 = 77	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 74	CES89 = 70
CES15 = 71	CES40 = 91	CES65 = 68	CES90 = 77
CES16 = 47	CES41 = 89	CES66 = 71	CES91 = 88
CES17 = 50	CES42 = 88	CES67 = 69	CES92 = 60
CES18 = 56	CES43 = 82	CES68 = 74	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 82	CES94 = 52
CES20 = 65	CES45 = 87	CES70 = 67	CES95 = 69
CES21 = 86	CES46 = 82	CES71 = 66	CES96 = 78
CES22 = 79	CES47 = 82	CES72 = 88	CES97 = 85
CES23 = 92	CES48 = 72	CES73 = 59	CES98 = 76
CES24 = 91	CES49 = 82	CES74 = 97	CES99 = 63
CES25 = 72	CES50 = 88	CES75 = 66	

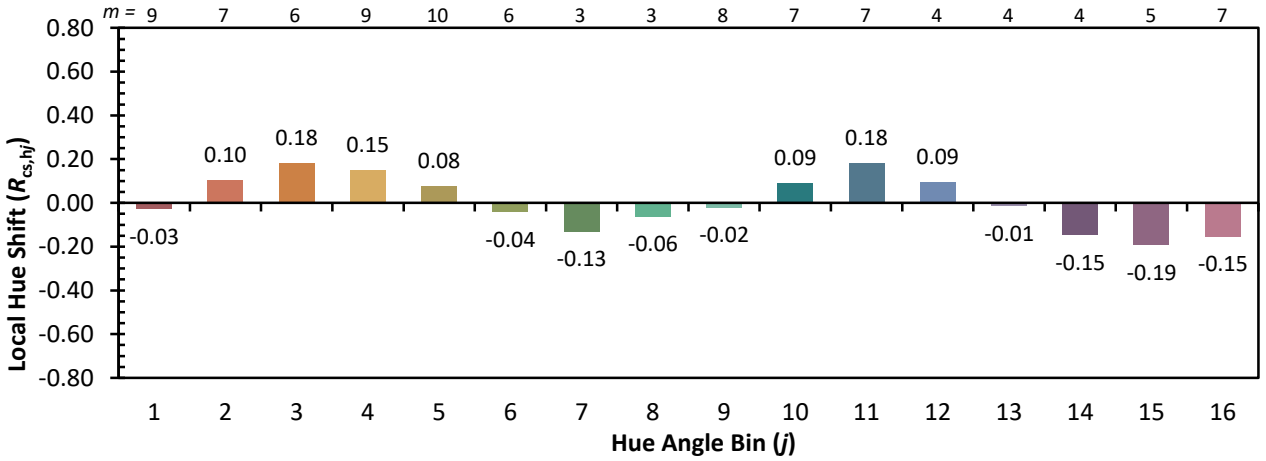


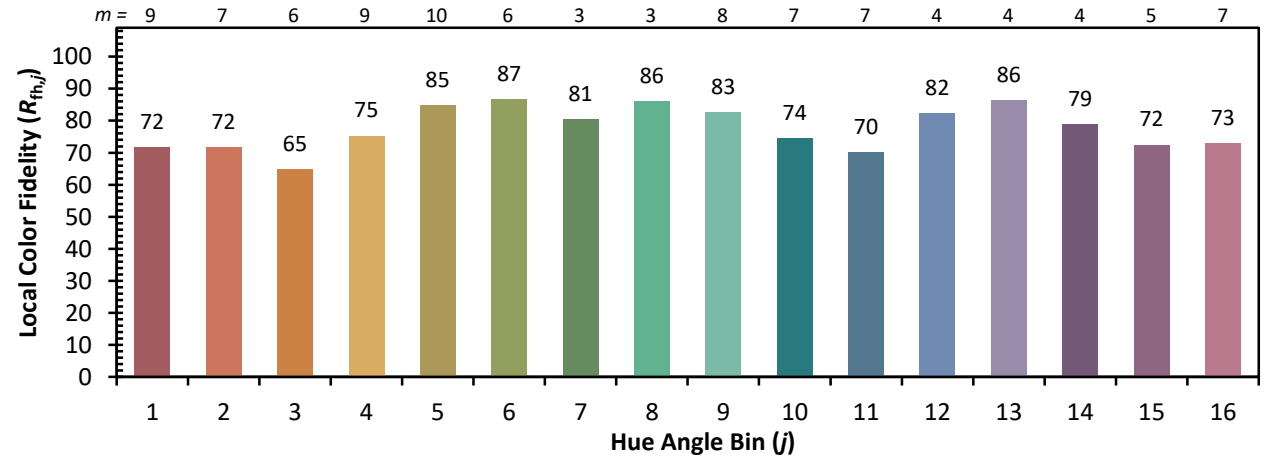
REPORT NUMBER: SP1-2101-121-7

TM-30-18

Color Rendition by Hue-Angle Bin



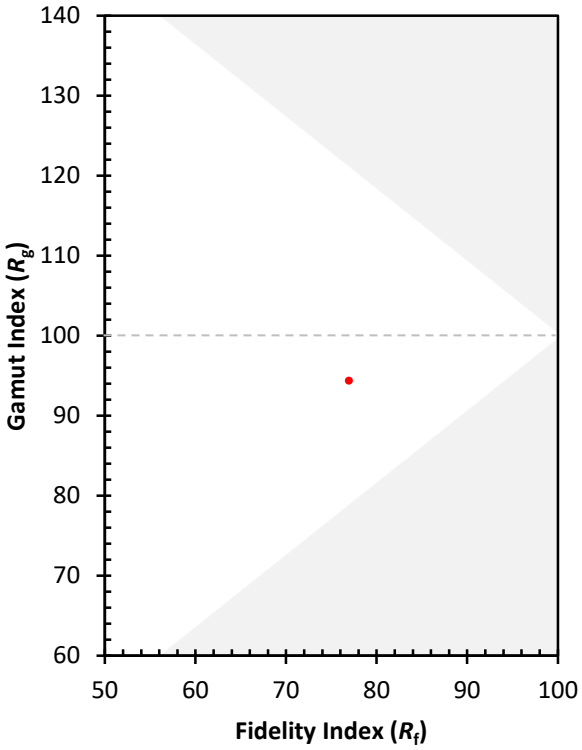


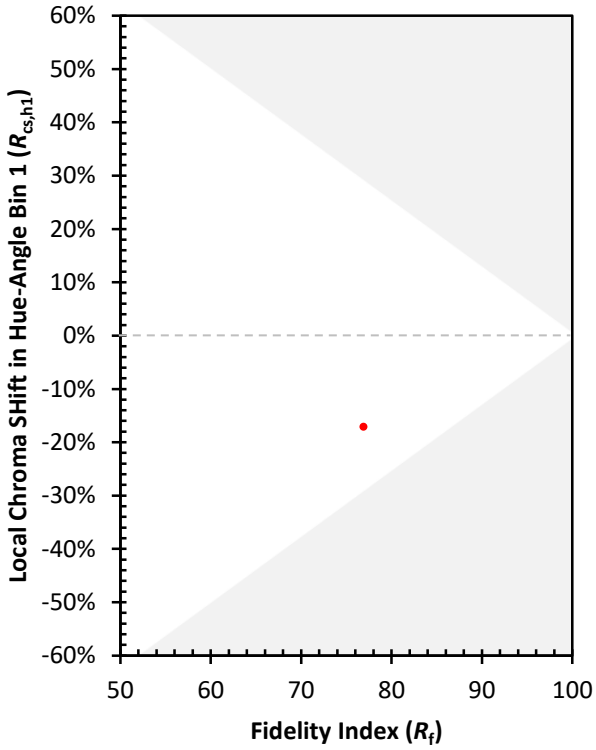


REPORT NUMBER: SP1-2101-121-7

TM-30-18

Measure Comparisons





(END OF REPORT)