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

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P636786

Luminaire Tested: GWS-SA4B-740-U-T2-W

Issue Date: 1/10/2023

Report Generated By 670246102 / DESKTOP-G35701P

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

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P636786
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-19)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA4B-740-U-T2-W
Description:	GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source:	(64) 4000K CCT, 70 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	14360.7 lumens
Efficiency:	N/A
Efficacy:	152.1 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type II - Medium
BUG Rating:	B2 - U0 - G2

Input Watts (W):	94.4
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	0
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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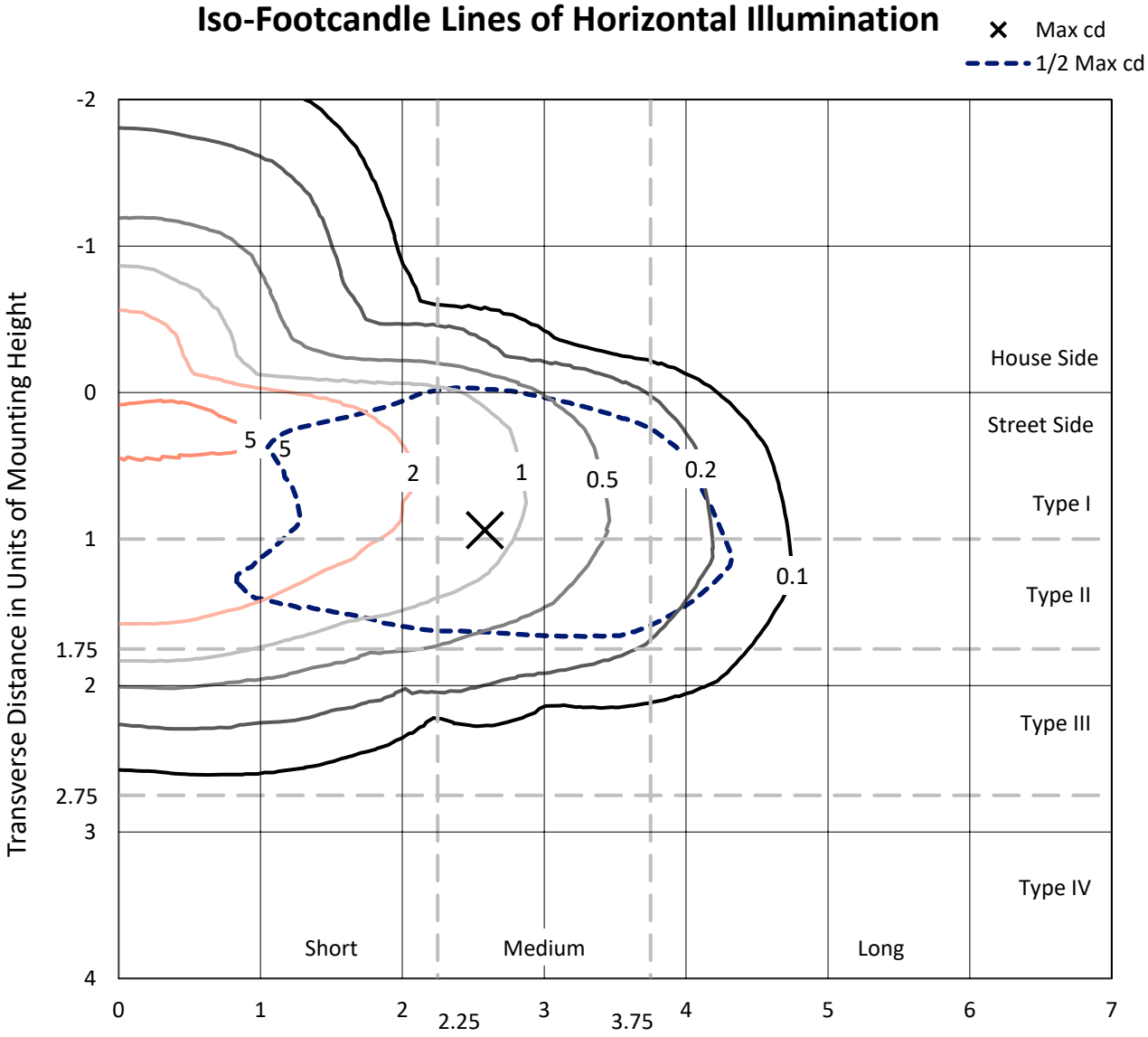
REPORT NUMBER: P636786
CATALOG NUMBER: GWS-SA4B-740-U-T2-W

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 6 fc
Type II - Medium - N/A

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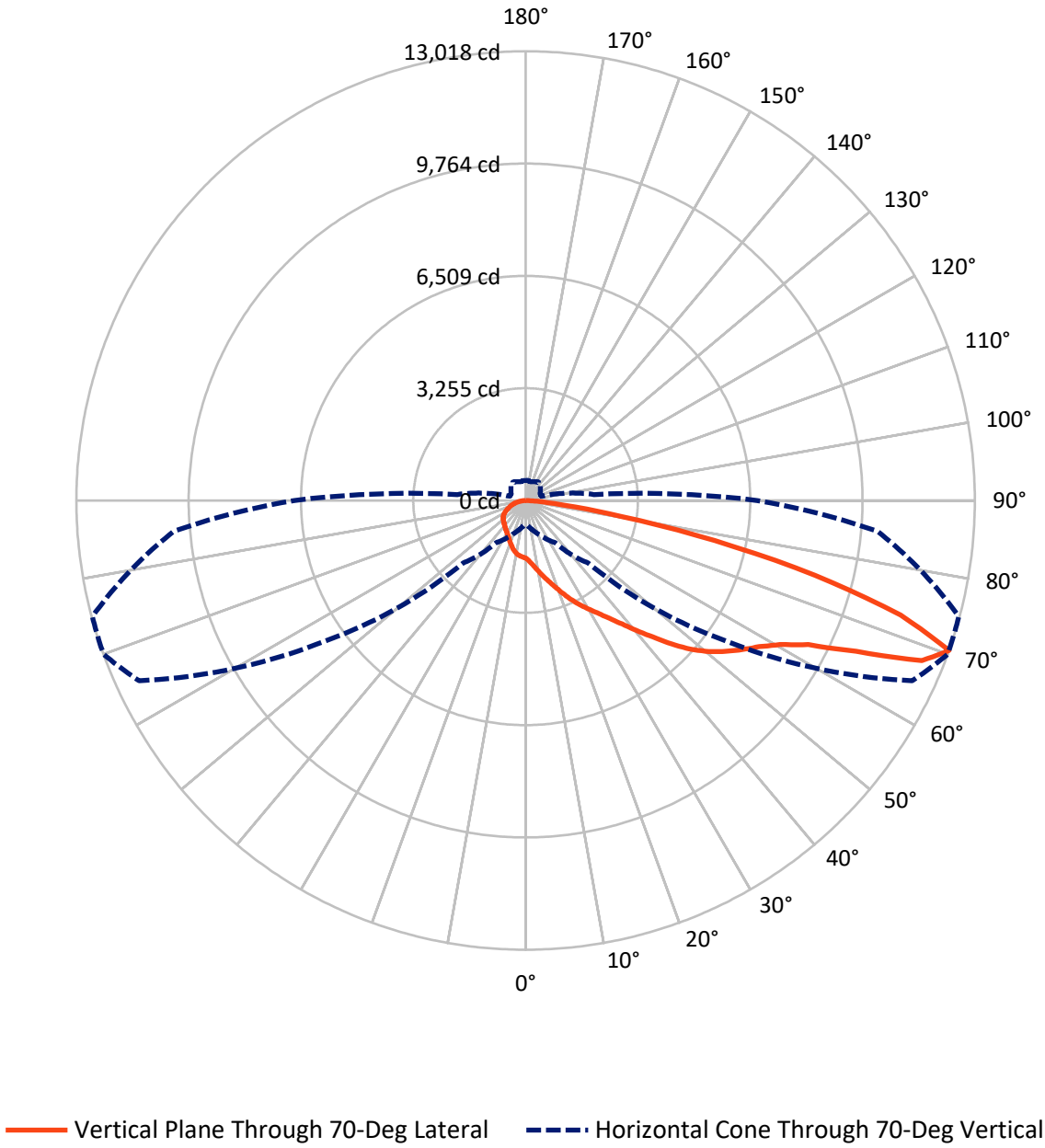
Luminous Intensity Polar Plot



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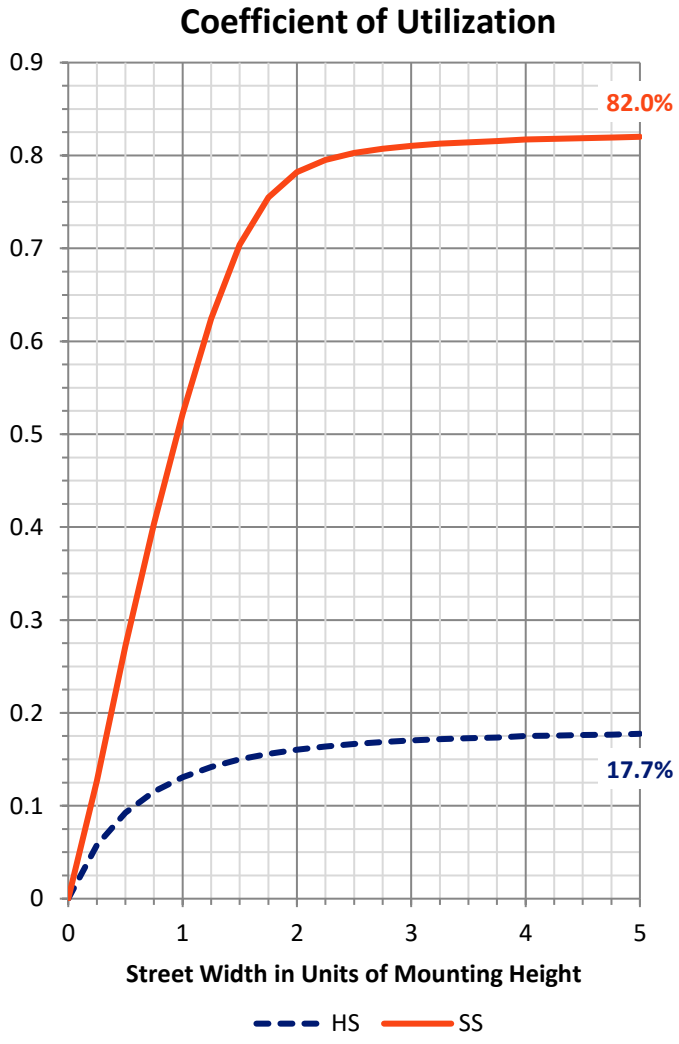
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2573.5	0.0	2573.5
	% Fixture	17.9	0.0	17.9
Street Side	Lumens	11787.2	0.0	11787.2
	% Fixture	82.1	0.0	82.1
Total	Lumens	14360.7	0.0	14360.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.2	1.2
10°-20°	553.7	3.9
20°-30°	980.9	6.8
30°-40°	1476.3	10.3
40°-50°	2233.5	15.6
50°-60°	3199.6	22.3
60°-70°	3536.9	24.6
70°-80°	1995.9	13.9
80°-90°	213.5	1.5
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°	14360.7	100.0
0°-180°	14360.7	100.0



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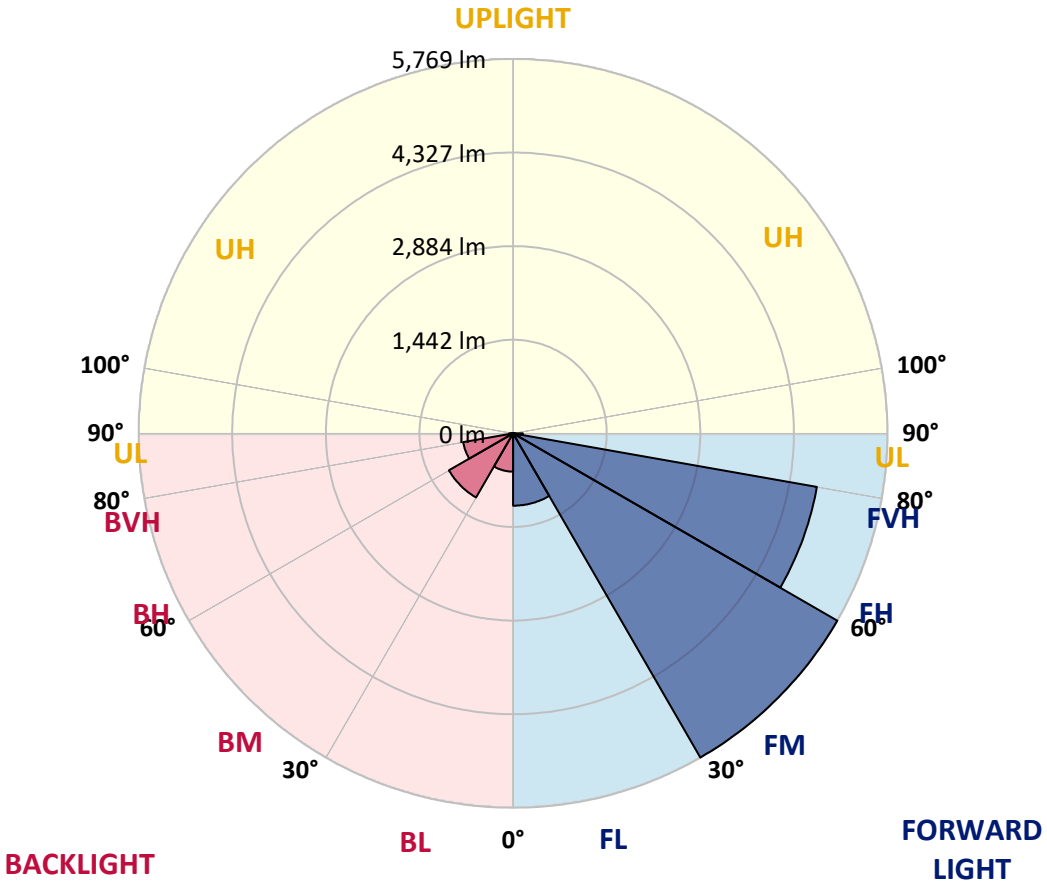
REPORT NUMBER: P636786
CATALOG NUMBER: GWS-SA4B-740-U-T2-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1114.8	7.8			
FM	(30°-60°)	5768.7	40.2			
FH	(60°-80°)	4752.8	33.1			G2/5000
FVH	(80°-90°)	150.9	1.1			G2/225
BL	(0°-30°)	590.1	4.1	B2/1000		
BM	(30°-60°)	1140.8	7.9	B2/2500		
BH	(60°-80°)	780.0	5.4	B2/1000		G2/1000
BVH	(80°-90°)	62.6	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2
Type II Medium



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REPORT NUMBER: P636786
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	*1674.8*	1674.8	1674.8
2.5°	1855.3	1852.2	1854.3	1852.2	1840.8	1812.8	1789.9	1760.9	*1741.2*	1729.8	1702.8
5°	2073.2	2070.1	2062.8	2052.5	2031.7	1993.3	1936.2	1872.9	*1834.6*	1805.5	1748.4
7.5°	2229.9	2229.9	2228.9	2216.4	2201.9	2161.4	2094.0	2011.0	*1954.9*	1905.1	1811.7
10°	2309.8	2315.0	2322.2	2339.9	2336.8	2315.0	2251.7	2162.4	*2091.9*	2033.8	1894.7
12.5°	2353.4	2356.5	2368.9	2405.3	2442.6	2447.8	2410.4	2317.1	*2240.3*	2162.4	1987.1
15°	2409.4	2410.4	2427.0	2470.6	2525.6	2580.6	2571.3	2477.9	*2399.0*	2312.9	2089.8
17.5°	2453.0	2460.3	2490.3	2541.2	2609.7	2685.4	2731.1	2673.0	*2575.4*	2476.9	2201.9
20°	2468.6	2473.7	2513.2	2591.0	2684.4	2791.3	2892.9	2877.4	*2778.8*	2662.6	2328.5
22.5°	2524.6	2524.6	2553.6	2619.0	2729.0	2884.6	3049.6	3090.1	*3002.9*	2867.0	2464.4
25°	2648.1	2643.9	2657.4	2684.4	2767.4	2959.4	3204.2	3325.6	*3228.1*	3075.6	2600.3
27.5°	2817.2	2815.1	2814.1	2818.2	2846.3	3024.7	3335.0	3545.6	*3448.1*	3275.8	2721.7
30°	3000.9	2994.6	3008.1	2995.7	2989.4	3102.6	3446.0	3742.8	*3667.0*	3474.0	2822.4
32.5°	3250.9	3239.5	3236.4	3195.9	3171.0	3224.0	3535.2	3966.9	*3906.7*	3687.8	2935.5
35°	3580.9	3570.5	3517.6	3453.3	3379.6	3404.5	3646.3	4185.8	*4190.0*	3955.5	3083.9
37.5°	3914.0	3916.1	3874.6	3723.1	3647.3	3632.8	3815.4	4452.5	*4541.8*	4275.1	3275.8
40°	4191.0	4203.5	4203.5	4043.7	3930.6	3917.1	4053.0	4769.0	*4946.4*	4667.3	3518.6
42.5°	4401.7	4413.1	4449.4	4334.2	4214.9	4261.6	4341.5	5086.5	*5405.1*	5151.9	3825.8
45°	4633.1	4642.4	4662.1	4595.7	4526.2	4650.7	4668.4	5466.3	*5930.1*	5695.6	4182.7
47.5°	4940.2	4931.9	4934.0	4885.2	4831.3	5032.6	5028.4	5785.9	*6437.5*	6291.2	4569.8
50°	5322.1	5337.6	5323.1	5226.6	5163.3	5347.0	5370.8	6139.7	*6883.7*	6880.6	4959.9
52.5°	5689.4	5695.6	5772.4	5776.6	5646.9	5608.5	5670.7	6496.7	*7260.4*	7420.2	5334.5
55°	5708.1	5731.9	5962.3	6128.3	6337.9	6029.7	5973.7	6837.0	*7624.6*	7948.3	5723.6
57.5°	5310.7	5349.0	5740.2	6098.2	6681.4	6753.0	6492.5	7277.0	*7988.8*	8468.2	6174.0
60°	4461.9	4541.8	5073.0	5620.9	6526.8	7272.8	7554.0	7874.7	*8467.2*	8999.5	6720.8
62.5°	2849.4	2880.5	3625.5	4542.8	5830.5	7222.0	8710.0	8927.9	*9195.6*	9691.6	7563.4
65°	1426.8	1526.4	1963.2	2711.4	4204.5	6363.9	9294.2	10856.9	*10529.0*	10876.6	8928.9
67.5°	968.1	1000.3	1221.3	1629.1	2465.4	4508.6	8932.0	12481.8	*12385.3*	12442.4	10384.7
70°	*713.9*	*734.7*	*909.0*	*1153.9*	*1491.1*	*2559.9*	*7111.0*	*12359.4*	*13018.3*	*12997.5*	*10232.2*
72.5°	520.9	531.3	663.1	881.0	1105.1	1324.0	4342.5	9984.2	*11364.3*	11963.0	8948.6
75°	378.7	391.2	460.7	658.9	859.2	826.0	2143.8	7211.6	*8666.4*	9818.2	7290.5
77.5°	282.2	297.8	330.0	413.0	601.8	591.5	926.6	4682.9	*5605.3*	6412.6	4428.7
80°	203.4	206.5	225.2	264.6	381.9	346.6	441.0	2441.6	*2799.6*	3067.3	1736.0
82.5°	123.5	126.6	150.5	162.9	236.6	217.9	229.3	790.7	*1133.1*	1202.6	648.5
85°	36.3	38.4	68.5	74.7	98.6	93.4	92.4	321.7	*383.9*	490.8	255.3
87.5°	0.0	0.0	0.0	0.0	1.0	6.2	11.4	57.1	*86.1*	119.3	62.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0

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REPORT NUMBER: P636786
CATALOG NUMBER: GWS-SA4B-740-U-T2-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8	1674.8
2.5°	1692.4	1668.5	1656.1	1634.3	1618.7	1603.2	1587.6	1573.1	1566.8	1557.5	1559.6
5°	1722.5	1685.1	1647.8	1605.2	1568.9	1538.8	1511.8	1488.0	1477.6	1468.3	1472.4
7.5°	1768.1	1712.1	1640.5	1562.7	1505.6	1464.1	1436.1	1419.5	1414.3	1407.0	1407.0
10°	1826.3	1742.2	1616.6	1505.6	1437.1	1403.9	1391.5	1390.4	1395.6	1396.7	1394.6
12.5°	1890.6	1771.3	1581.4	1438.2	1380.1	1369.7	1379.0	1396.7	1414.3	1423.6	1421.6
15°	1957.0	1789.9	1521.2	1373.8	1338.6	1352.0	1382.1	1417.4	1451.7	1469.3	1468.3
17.5°	2019.3	1794.1	1443.4	1311.6	1302.2	1336.5	1388.4	1443.4	1490.1	1515.0	1516.0
20°	2088.8	1786.8	1363.5	1255.5	1265.9	1322.0	1390.4	1456.9	1511.8	1536.7	1543.0
22.5°	2152.1	1761.9	1285.6	1202.6	1234.8	1304.3	1373.8	1436.1	1484.9	1508.7	1517.0
25°	2209.1	1714.2	1200.6	1158.0	1210.9	1279.4	1332.3	1375.9	1410.2	1424.7	1436.1
27.5°	2240.3	1642.6	1136.2	1122.7	1188.1	1244.1	1273.2	1286.7	1298.1	1293.9	1302.2
30°	2246.5	1553.4	1080.2	1094.7	1153.9	1195.4	1201.6	1188.1	1168.4	1136.2	1143.5
32.5°	2240.3	1450.6	1033.5	1064.6	1115.5	1140.4	1132.1	1096.8	1049.1	999.2	1002.4
35°	2242.3	1346.9	995.1	1031.4	1070.8	1084.3	1063.6	1014.8	964.0	918.3	916.2
37.5°	2265.2	1259.7	962.9	999.2	1027.3	1029.3	1006.5	955.7	929.7	895.5	891.3
40°	2328.5	1195.4	933.9	967.1	984.7	983.7	957.7	921.4	939.1	927.7	924.5
42.5°	2432.2	1155.9	910.0	932.8	945.3	947.4	926.6	903.8	942.2	927.7	922.5
45°	2599.3	1153.9	893.4	898.6	918.3	932.8	918.3	892.4	906.9	836.3	822.9
47.5°	2797.5	1189.1	881.0	868.5	902.7	928.7	905.9	864.4	834.3	769.9	760.6
50°	3036.1	1260.7	869.5	836.3	879.9	913.1	890.3	833.2	787.6	753.3	748.1
52.5°	3319.4	1355.2	855.0	800.0	845.7	904.8	890.3	830.1	769.9	738.8	733.6
55°	3616.2	1464.1	838.4	756.4	807.3	906.9	897.6	808.3	756.4	739.8	735.7
57.5°	3984.5	1594.9	808.3	705.6	773.0	888.2	868.5	795.9	747.1	733.6	729.5
60°	4462.9	1788.9	751.3	653.7	733.6	855.0	842.6	775.1	722.2	710.8	707.7
62.5°	5220.4	2117.8	681.7	603.9	686.9	785.5	804.2	735.7	691.1	690.0	689.0
65°	6455.2	2513.2	599.8	559.3	638.2	728.4	753.3	695.2	658.9	670.3	669.3
67.5°	7320.6	2547.4	532.3	512.6	581.1	666.2	702.5	653.7	614.3	636.1	635.0
70°	*6705.2*	*1987.1*	*474.2*	*463.8*	*519.9*	*598.7*	*647.5*	*601.8*	*562.4*	*583.2*	*579.0*
72.5°	5655.2	1523.3	419.2	413.0	457.6	528.2	576.9	550.0	508.4	508.4	499.1
75°	4544.9	1256.6	361.1	358.0	388.1	456.6	511.6	465.9	427.5	425.4	419.2
77.5°	2606.6	823.9	303.0	300.9	310.3	381.9	397.4	388.1	359.0	345.5	341.4
80°	1038.7	428.5	238.7	225.2	234.5	280.2	313.4	297.8	272.9	256.3	247.0
82.5°	402.6	214.8	168.1	147.3	160.8	202.3	227.2	222.1	205.5	168.1	157.7
85°	163.9	104.8	100.7	85.1	93.4	109.0	130.7	113.1	93.4	66.4	63.3
87.5°	43.6	38.4	37.4	22.8	17.6	5.2	1.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW, INVUE, LUMARK AND STREETWORKS

DATA VALID FOR LUMINIAIRES UTIZLIZING SA LIGHT ENGINES

Report Number: SP1-2101-121-2

Luminaire Tested: IFLD-S-SA2A-740-U-T3R-HSS

Test Date: 03/05/2021

Report Generated By controller / USPTCWHP6086842

Test Information

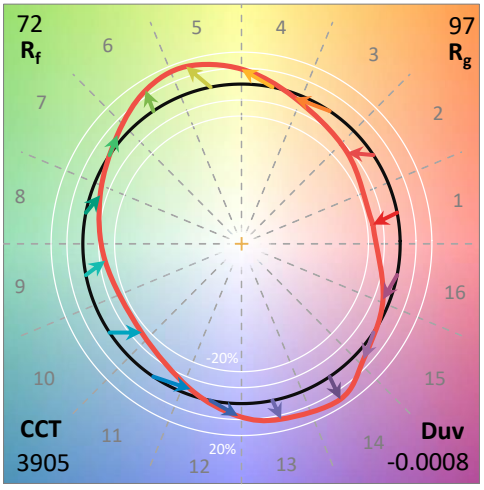
Test Method:	LM-79-08
Report Number:	SP1-2101-121-2
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1
Measurement Geometry:	4π
Issue Date:	03/05/2021
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	**IFLD-S-SA2A-740-U-T3R-HSS**
Description:	STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

Spectral Parameters

CCT (K):	3905	CRI (Ra):	71.2		
CIE u':	0.2273	R1:	68.9	R9:	-29.7
CIE v':	0.5024	R2:	77.0	R10:	46.2
Duv:	-0.0008	R3:	84.0	R11:	68.8
CIE x:	0.3841	R4:	71.6	R12:	45.6
CIE y:	0.3774	R5:	68.9	R13:	69.5
CIE z:	0.2385	R6:	68.3	R14:	90.7
Peak Wavelength (nm):	443	R7:	78.7		
Dominant Wavelength (nm):	579	R8:	52.2		
Purity:	28.7				

Rf:	71.7
Rg:	96.9



Test Conditions

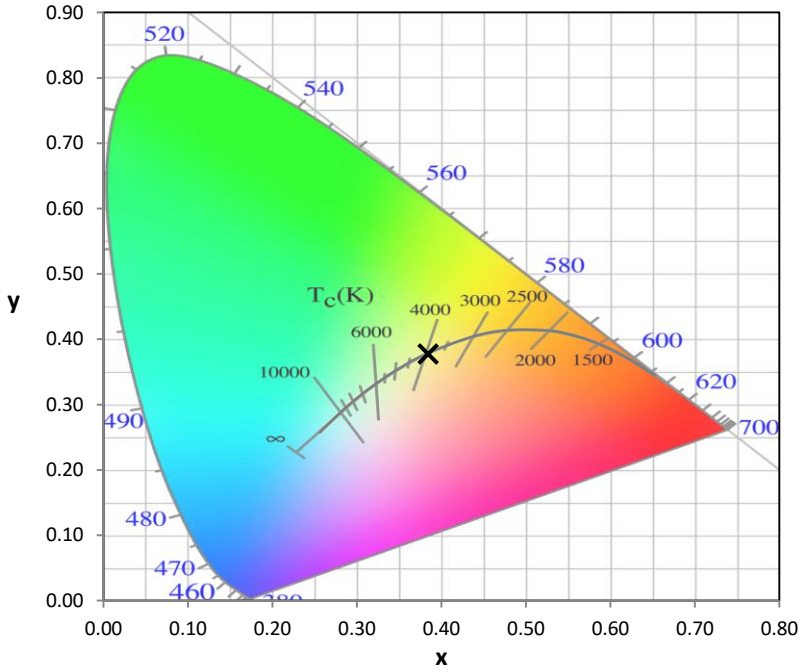
Stabilization Time:	211M
Operation Time:	12H
Room Temperature (°C) / RH%:	24.8/312%
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2101-121-2

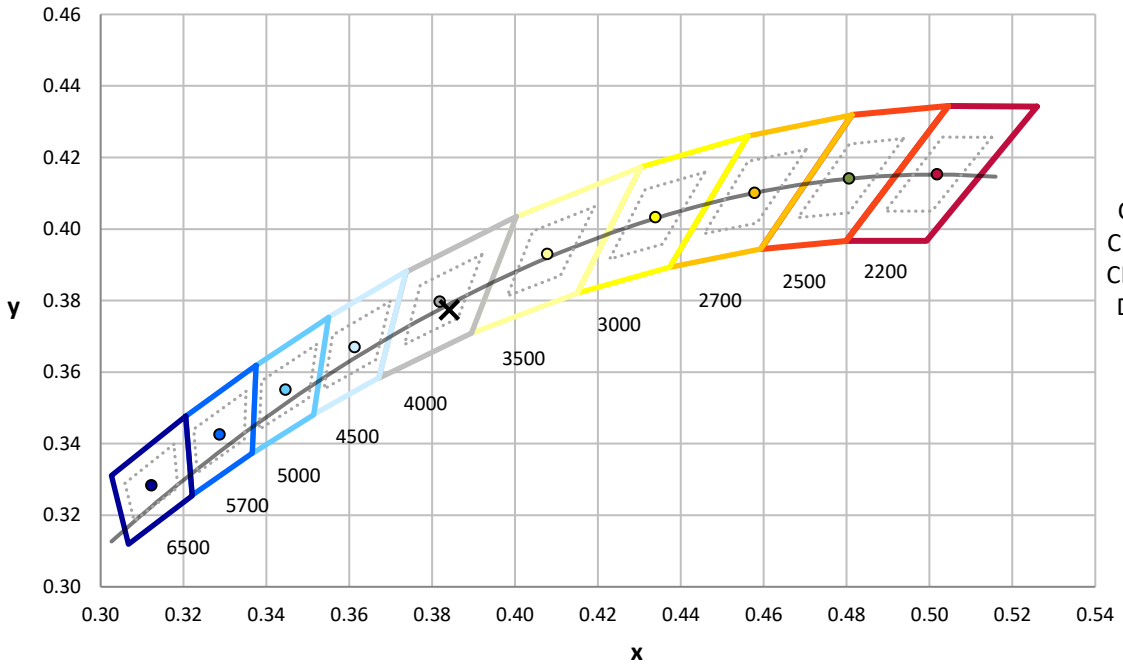
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	1/31/2021	7/31/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020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

REPORT NUMBER: SP1-2101-121-2

CIE 1931 Chromaticity Diagram



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

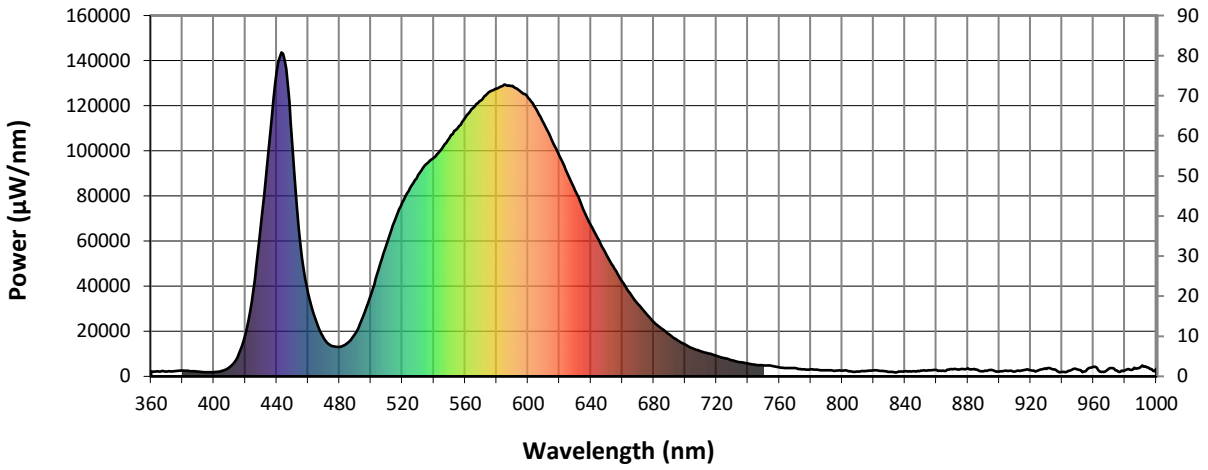


CCT = 3905K
CIE x = 0.3841
CIE y = 0.3774
Duv = -0.0008

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

Photopic Flux vs. Wavelength

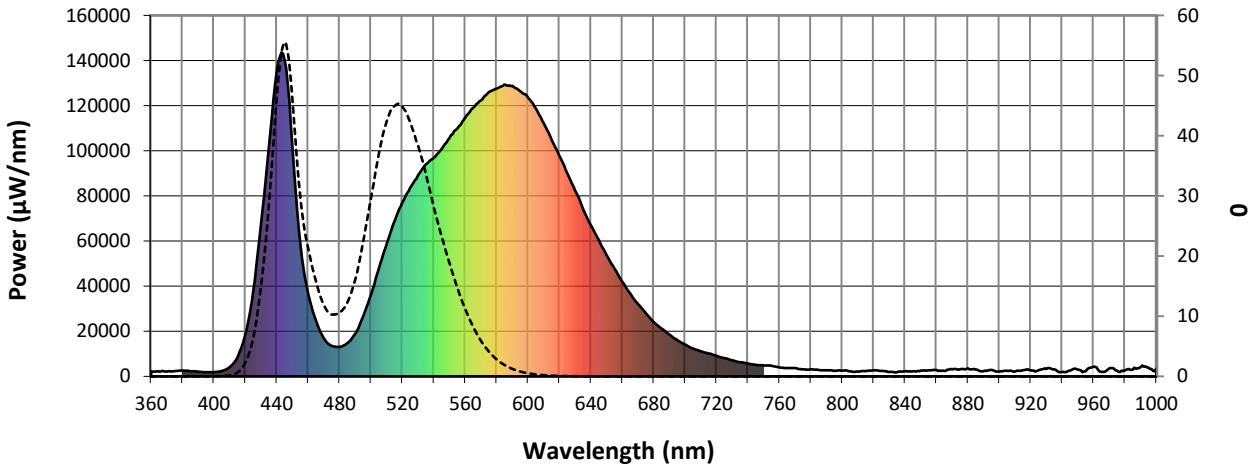


######

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	2304	0.0	490	19043	2.7	620	97577	25.4	750	4830	0.0	880	3505	0.0
365	2150	0.0	495	26606	4.8	625	90158	19.9	755	4664	0.0	885	2991	0.0
370	2146	0.0	500	36376	8.0	630	82240	14.9	760	4006	0.0	890	2327	0.0
375	2332	0.0	505	47714	13.3	635	74361	11.2	765	3715	0.0	895	2775	0.0
380	2527	0.0	510	58741	20.2	640	66994	8.0	770	3696	0.0	900	2141	0.0
385	2304	0.0	515	68716	28.5	645	60405	5.8	775	3117	0.0	905	2421	0.0
390	2064	0.0	520	77136	37.4	650	53806	3.9	780	3062	0.0	910	2200	0.0
395	1856	0.0	525	83567	44.9	655	47610	2.7	785	2907	0.0	915	2716	0.0
400	1856	0.0	530	89283	52.6	660	42018	1.8	790	2655	0.0	920	2656	0.0
405	2374	0.0	535	94097	58.4	665	36742	1.2	795	2467	0.0	925	2671	0.0
410	4084	0.0	540	96845	63.1	670	32105	0.7	800	2609	0.0	930	3292	0.0
415	8543	0.0	545	100829	67.1	675	27946	0.5	805	2293	0.0	935	3188	0.0
420	18394	0.1	550	105648	71.8	680	24146	0.3	810	2188	0.0	940	1997	0.0
425	37987	0.2	555	110017	75.1	685	21191	0.2	815	2386	0.0	945	2623	0.0
430	67605	0.5	560	114586	77.9	690	18544	0.1	820	2712	0.0	950	2969	0.0
435	102160	1.2	565	118987	79.1	695	16058	0.1	825	2473	0.0	955	2277	0.0
440	135103	2.1	570	122326	79.5	700	14133	0.0	830	1969	0.0	960	4267	0.0
445	140126	2.9	575	125968	78.4	705	12309	0.0	835	1917	0.0	965	2034	0.0
450	102339	2.7	580	127613	75.8	710	11142	0.0	840	2248	0.0	970	3586	0.0
455	58751	2.0	585	129466	71.9	715	10143	0.0	845	2266	0.0	975	2505	0.0
460	36892	1.5	590	128813	66.6	720	9072	0.0	850	2558	0.0	980	2666	0.0
465	24637	1.3	595	126387	59.9	725	8130	0.0	855	2767	0.0	985	2934	0.0
470	16738	1.0	600	123477	53.2	730	7149	0.0	860	2826	0.0	990	4120	0.0
475	13456	1.1	605	118718	46.0	735	6311	0.0	865	2385	0.0	995	3858	0.0
480	13081	1.2	610	112091	38.5	740	5711	0.0	870	3194	0.0	1000	3405	0.0
485	14734	1.7	615	105039	31.7	745	5111	0.0	875	3189	0.0			

REPORT NUMBER: SP1-2101-121-2

Scotopic Flux vs. Wavelength

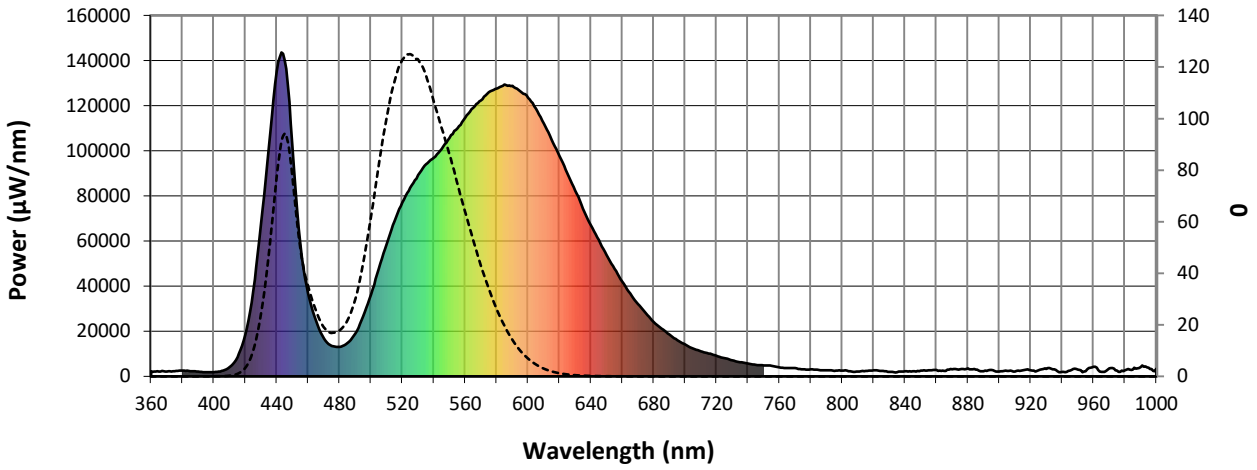


Scotopic Lumens: 10425.8 **S/P: 1.47**

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	2304	0.0	490	19043	29.3	620	97577	1.2	750	4830	0.0	880	3505	0.0
365	2150	0.0	495	26606	43.0	625	90158	0.8	755	4664	0.0	885	2991	0.0
370	2146	0.0	500	36376	60.8	630	82240	0.5	760	4006	0.0	890	2327	0.0
375	2332	0.0	505	47714	81.1	635	74361	0.3	765	3715	0.0	895	2775	0.0
380	2527	0.0	510	58741	99.6	640	66994	0.2	770	3696	0.0	900	2141	0.0
385	2304	0.0	515	68716	113.9	645	60405	0.1	775	3117	0.0	905	2421	0.0
390	2064	0.0	520	77136	122.6	650	53806	0.1	780	3062	0.0	910	2200	0.0
395	1856	0.0	525	83567	125.0	655	47610	0.0	785	2907	0.0	915	2716	0.0
400	1856	0.0	530	89283	123.1	660	42018	0.0	790	2655	0.0	920	2656	0.0
405	2374	0.1	535	94097	117.3	665	36742	0.0	795	2467	0.0	925	2671	0.0
410	4084	0.2	540	96845	107.0	670	32105	0.0	800	2609	0.0	930	3292	0.0
415	8543	0.9	545	100829	96.7	675	27946	0.0	805	2293	0.0	935	3188	0.0
420	18394	3.0	550	105648	86.4	680	24146	0.0	810	2188	0.0	940	1997	0.0
425	37987	9.3	555	110017	75.2	685	21191	0.0	815	2386	0.0	945	2623	0.0
430	67605	23.0	560	114586	64.0	690	18544	0.0	820	2712	0.0	950	2969	0.0
435	102160	45.7	565	118987	53.4	695	16058	0.0	825	2473	0.0	955	2277	0.0
440	135103	75.5	570	122326	43.2	700	14133	0.0	830	1969	0.0	960	4267	0.0
445	140126	93.8	575	125968	34.3	705	12309	0.0	835	1917	0.0	965	2034	0.0
450	102339	79.3	580	127613	26.3	710	11142	0.0	840	2248	0.0	970	3586	0.0
455	58751	51.3	585	129466	19.8	715	10143	0.0	845	2266	0.0	975	2505	0.0
460	36892	35.6	590	128813	14.3	720	9072	0.0	850	2558	0.0	980	2666	0.0
465	24637	26.0	595	126387	10.1	725	8130	0.0	855	2767	0.0	985	2934	0.0
470	16738	19.3	600	123477	7.0	730	7149	0.0	860	2826	0.0	990	4120	0.0
475	13456	16.8	605	118718	4.7	735	6311	0.0	865	2385	0.0	995	3858	0.0
480	13081	17.7	610	112091	3.0	740	5711	0.0	870	3194	0.0	1000	3405	0.0
485	14734	21.4	615	105039	1.9	745	5111	0.0	875	3189	0.0			

REPORT NUMBER: SP1-2101-121-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3927.2 **M/P: 0.55**

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	2304	0.0	490	19043	15.8	620	97577	0.1	750	4830	0.0	880	3505	0.0
365	2150	0.0	495	26606	22.0	625	90158	0.0	755	4664	0.0	885	2991	0.0
370	2146	0.0	500	36376	29.2	630	82240	0.0	760	4006	0.0	890	2327	0.0
375	2332	0.0	505	47714	36.6	635	74361	0.0	765	3715	0.0	895	2775	0.0
380	2527	0.0	510	58741	42.2	640	66994	0.0	770	3696	0.0	900	2141	0.0
385	2304	0.0	515	68716	44.9	645	60405	0.0	775	3117	0.0	905	2421	0.0
390	2064	0.0	520	77136	44.9	650	53806	0.0	780	3062	0.0	910	2200	0.0
395	1856	0.0	525	83567	42.4	655	47610	0.0	785	2907	0.0	915	2716	0.0
400	1856	0.0	530	89283	38.6	660	42018	0.0	790	2655	0.0	920	2656	0.0
405	2374	0.0	535	94097	33.9	665	36742	0.0	795	2467	0.0	925	2671	0.0
410	4084	0.2	540	96845	28.3	670	32105	0.0	800	2609	0.0	930	3292	0.0
415	8543	0.6	545	100829	23.4	675	27946	0.0	805	2293	0.0	935	3188	0.0
420	18394	2.1	550	105648	19.0	680	24146	0.0	810	2188	0.0	940	1997	0.0
425	37987	5.9	555	110017	14.8	685	21191	0.0	815	2386	0.0	945	2623	0.0
430	67605	14.3	560	114586	11.3	690	18544	0.0	820	2712	0.0	950	2969	0.0
435	102160	27.3	565	118987	8.4	695	16058	0.0	825	2473	0.0	955	2277	0.0
440	135103	45.1	570	122326	6.0	700	14133	0.0	830	1969	0.0	960	4267	0.0
445	140126	55.3	575	125968	4.2	705	12309	0.0	835	1917	0.0	965	2034	0.0
450	102339	47.2	580	127613	2.9	710	11142	0.0	840	2248	0.0	970	3586	0.0
455	58751	30.8	585	129466	1.9	715	10143	0.0	845	2266	0.0	975	2505	0.0
460	36892	21.7	590	128813	1.3	720	9072	0.0	850	2558	0.0	980	2666	0.0
465	24637	16.1	595	126387	0.8	725	8130	0.0	855	2767	0.0	985	2934	0.0
470	16738	12.0	600	123477	0.5	730	7149	0.0	860	2826	0.0	990	4120	0.0
475	13456	10.3	605	118718	0.3	735	6311	0.0	865	2385	0.0	995	3858	0.0
480	13081	10.5	610	112091	0.2	740	5711	0.0	870	3194	0.0	1000	3405	0.0
485	14734	12.1	615	105039	0.1	745	5111	0.0	875	3189	0.0			

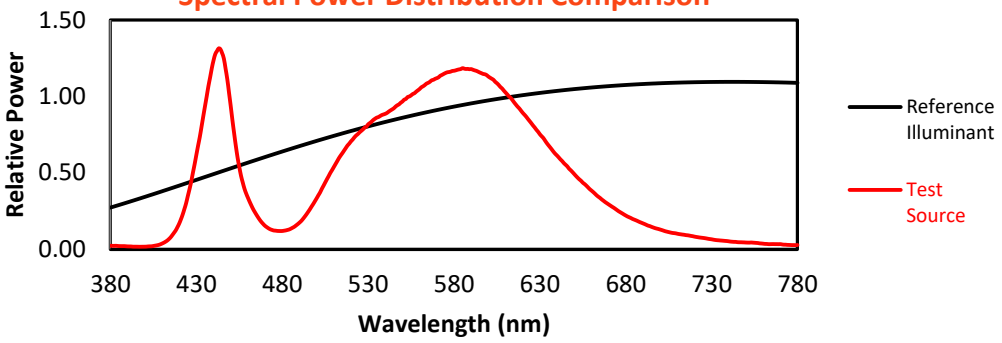
REPORT NUMBER: SP1-2101-121-2

TM-30-18

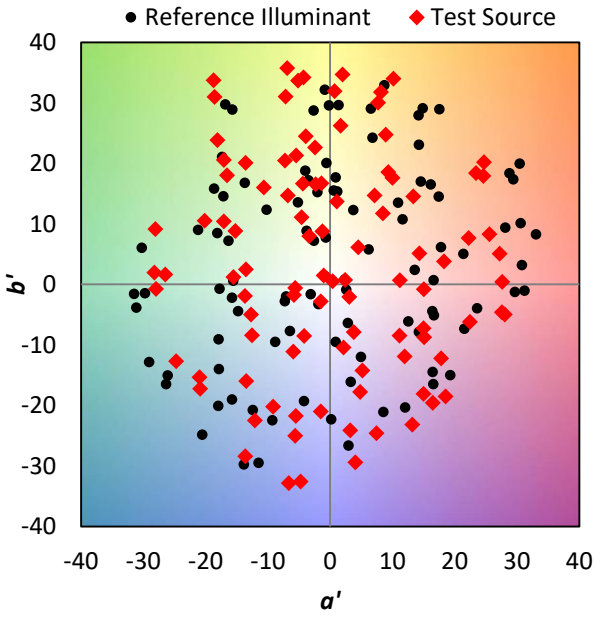
Summary

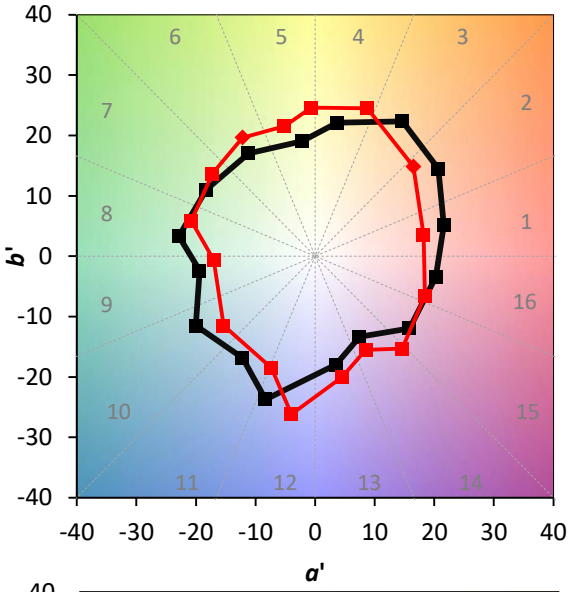
R_f = 71.7
R_g = 96.9
CIE R_a = 71.2
R_9 = -29.7

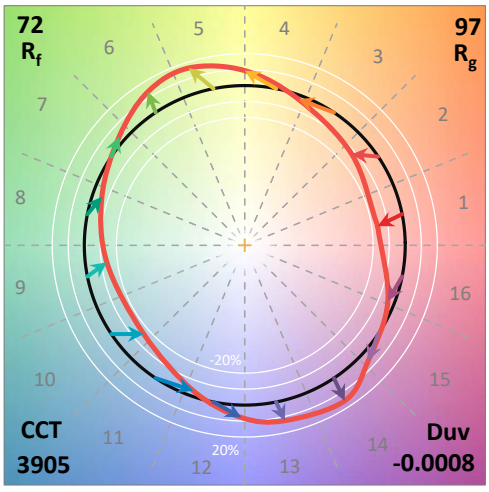
Spectral Power Distribution Comparison

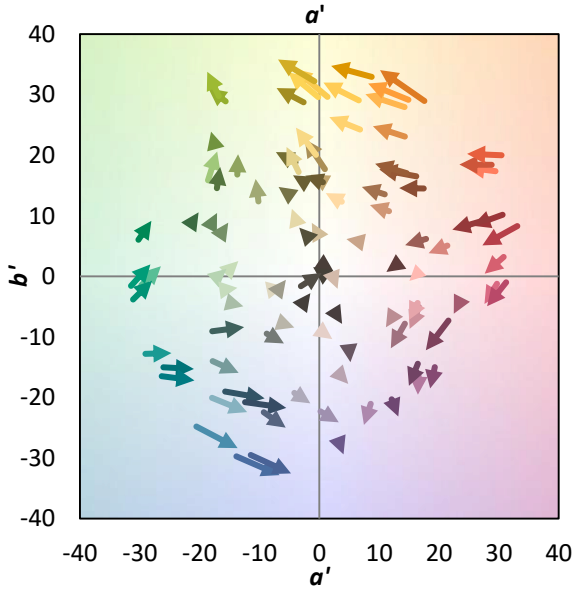


Color Vector Graphics







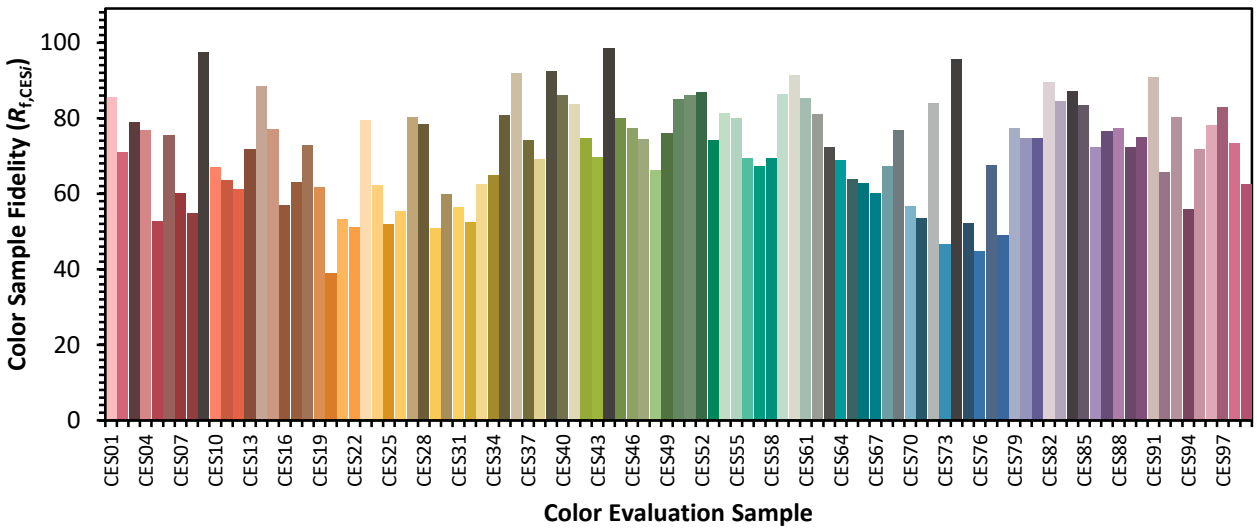


REPORT NUMBER: SP1-2101-121-2

TM-30-18

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

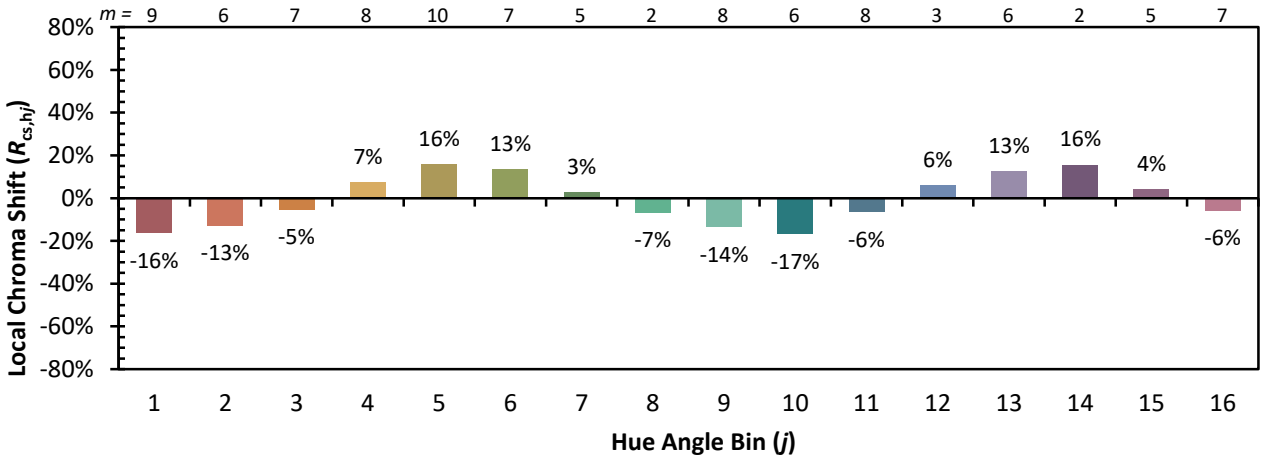
CES01 = 85	CES26 = 55	CES51 = 86	CES76 = 45
CES02 = 61	CES27 = 80	CES52 = 87	CES77 = 68
CES03 = 30	CES28 = 79	CES53 = 74	CES78 = 49
CES04 = 70	CES29 = 51	CES54 = 81	CES79 = 77
CES05 = 47	CES30 = 60	CES55 = 80	CES80 = 75
CES06 = 50	CES31 = 56	CES56 = 69	CES81 = 75
CES07 = 40	CES32 = 52	CES57 = 67	CES82 = 90
CES08 = 39	CES33 = 62	CES58 = 69	CES83 = 85
CES09 = 29	CES34 = 65	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 81	CES60 = 91	CES85 = 83
CES11 = 57	CES36 = 92	CES61 = 85	CES86 = 72
CES12 = 63	CES37 = 74	CES62 = 81	CES87 = 77
CES13 = 42	CES38 = 69	CES63 = 72	CES88 = 77
CES14 = 74	CES39 = 92	CES64 = 69	CES89 = 72
CES15 = 71	CES40 = 86	CES65 = 64	CES90 = 75
CES16 = 46	CES41 = 84	CES66 = 63	CES91 = 91
CES17 = 49	CES42 = 75	CES67 = 60	CES92 = 66
CES18 = 56	CES43 = 70	CES68 = 67	CES93 = 80
CES19 = 72	CES44 = 98	CES69 = 77	CES94 = 56
CES20 = 65	CES45 = 80	CES70 = 57	CES95 = 72
CES21 = 86	CES46 = 77	CES71 = 53	CES96 = 78
CES22 = 78	CES47 = 74	CES72 = 84	CES97 = 83
CES23 = 92	CES48 = 66	CES73 = 47	CES98 = 73
CES24 = 91	CES49 = 76	CES74 = 96	CES99 = 63
CES25 = 72	CES50 = 85	CES75 = 52	

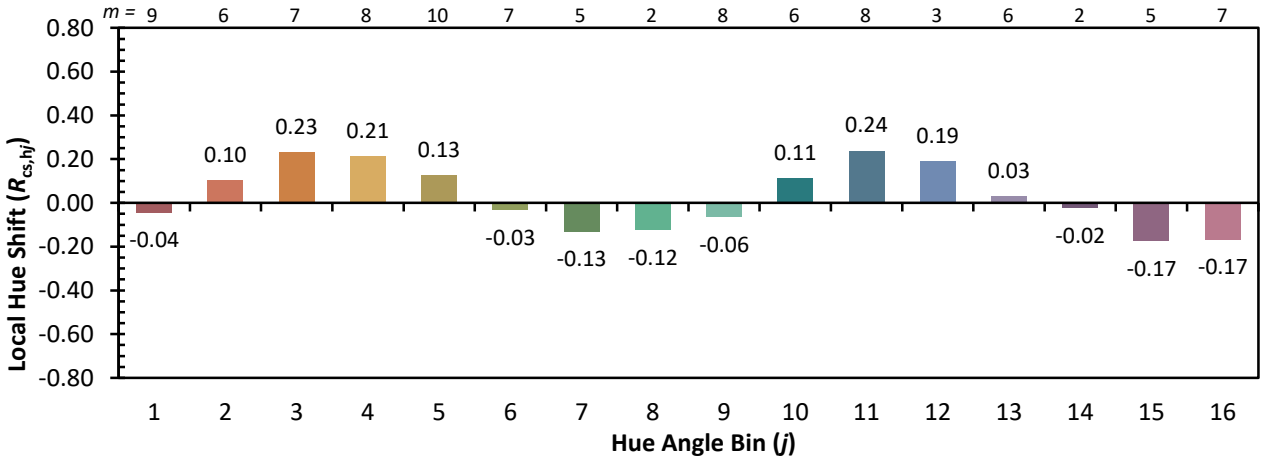


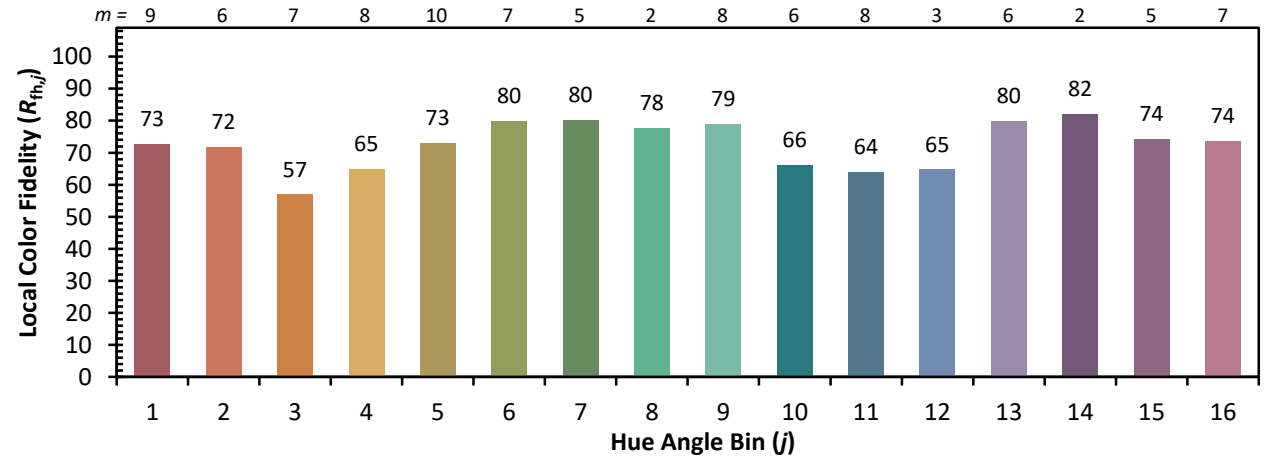
REPORT NUMBER: SP1-2101-121-2

TM-30-18

Color Rendition by Hue-Angle Bin



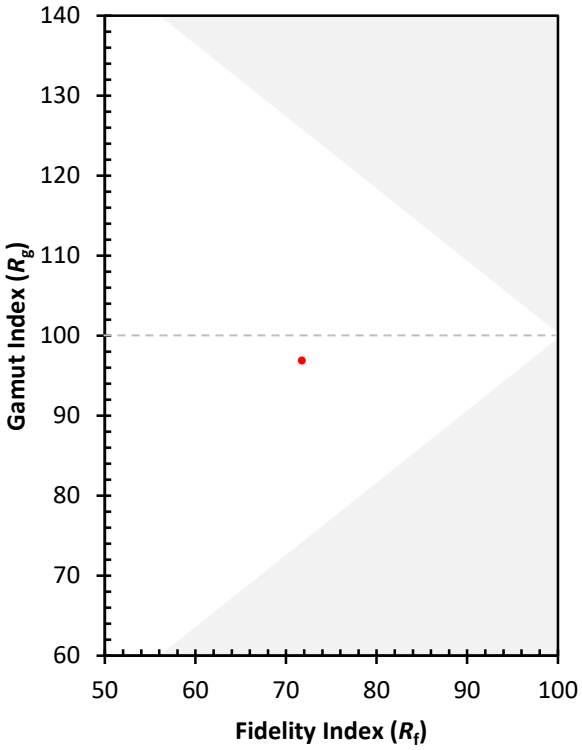


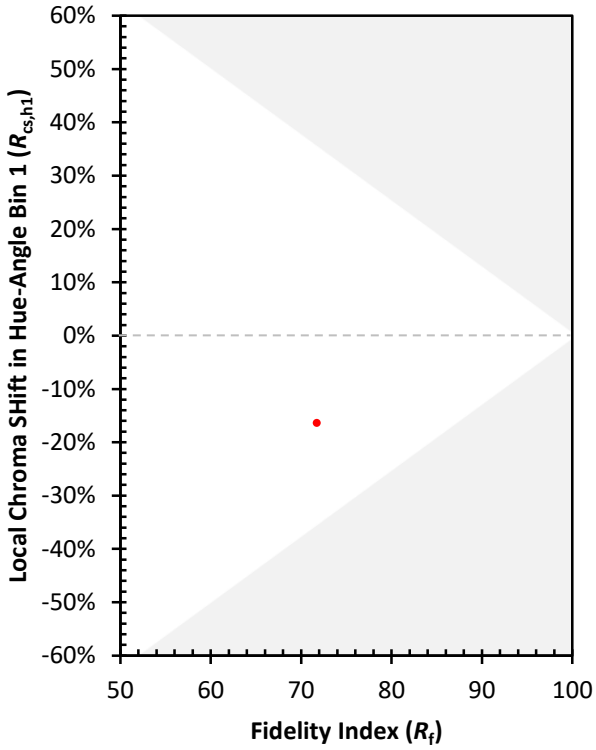


REPORT NUMBER: SP1-2101-121-2

TM-30-18

Measure Comparisons





(END OF REPORT)