Classified

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: METALUX

Report Number: P981630

Luminaire Tested: **4WNLED-LD4-32SL-F-UNV-L835-CD1-U**

Issue Date: 04/17/2025

Report Generated By 670245763 / DESKTOP-DVLU35A

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:	P981630
Test Lab:	INNOVATION CENTER(P3)
Issue Date:	04/17/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	METALUX
Catalog Number:	4WNLED-LD4-32SL-F-UNV-L835-CD1-U
Description:	METALUX 4FT WNLED WRAPAROUND 3200LM PACKAGE 80CRI 3500K TROFFER
Light Source:	3500K CCT, 80+ CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3529.9 lumens
Efficiency:	N/A
Efficacy:	127.0 lumens/watt
Spacing Criteria (0/90/45):	1.22 / 1.27 / 1.38
Luminous Opening:	Rectangular w/ Sides (W: 0.75' x L: 4' x H: 0.17')
CIE Type:	Direct

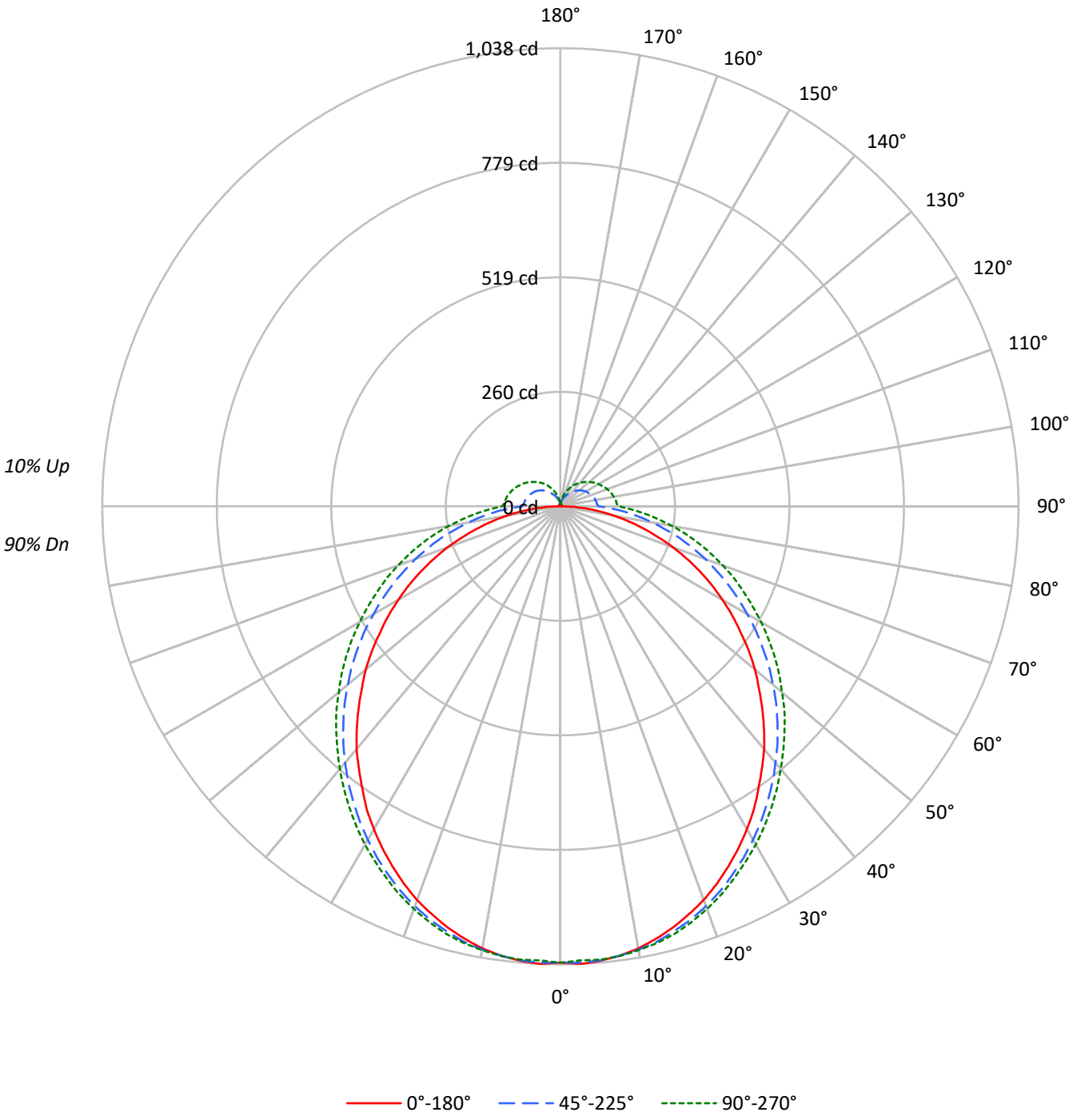
Input Watts (W):	27.8
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

Luminous Intensity Polar Plot



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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	105	100	95	91	101	97	92	88	91	87	84	85	82	79	80	78	75	73
2	95	86	79	73	91	84	77	71	78	73	68	74	69	65	69	66	62	59
3	86	75	67	60	83	73	65	59	69	62	57	65	59	54	61	56	52	50
4	79	67	57	51	76	65	56	50	61	54	48	57	51	46	54	49	45	42
5	72	59	50	43	70	58	49	43	54	47	41	51	45	40	48	43	39	36
6	67	53	44	38	64	52	43	37	49	42	36	46	40	35	44	38	34	32
7	62	48	39	33	60	47	39	33	44	37	32	42	36	31	40	34	30	28
8	58	44	35	29	55	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3710	3710	3710
5°	3711	3661	3643
10°	3679	3598	3580
15°	3629	3526	3515
20°	3571	3447	3430
25°	3496	3357	3339
30°	3419	3264	3251
35°	3329	3167	3158
40°	3250	3072	3068
45°	3149	2974	2982
50°	3060	2871	2891
55°	2945	2765	2812
60°	2838	2652	2722
65°	2714	2541	2630
70°	2556	2422	2551
75°	2349	2291	2460
80°	2087	2123	2347
85°	1645	1939	2230

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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.1	2.8
10°-20°	280.7	8.0
20°-30°	423.1	12.0
30°-40°	508.5	14.4
40°-50°	531.9	15.1
50°-60°	495.0	14.0
60°-70°	408.3	11.6
70°-80°	286.9	8.1
80°-90°	151.5	4.3
90°-100°	82.0	2.3
100°-110°	74.4	2.1
110°-120°	63.7	1.8
120°-130°	50.5	1.4
130°-140°	36.0	1.0
140°-150°	22.5	0.6
150°-160°	11.7	0.3
160°-170°	4.3	0.1
170°-180°	0.8	0.0
0°-30°	801.9	22.7
0°-40°	1310.3	37.1
0°-60°	2337.3	66.2
0°-90°	3183.9	90.2
90°-120°	220.2	6.2
90°-150°	329.1	9.3
90°-180°	346.0	9.8
0°-180°	3529.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1034	1034	1034	1034	1034	
5°	1034	1028	1033	1033	1031	98
15°	988	986	997	1002	1002	278
25°	900	905	922	930	931	415
35°	782	794	818	830	833	490
45°	646	667	696	712	718	499
55°	499	525	560	582	592	447
65°	348	379	419	447	458	345
75°	196	233	280	313	325	207
85°	59	99	148	179	192	62
90°	2	40	87	120	132	4
95°	0	37	83	115	127	0
105°	1	35	78	107	118	1
115°	2	34	71	97	107	2
125°	3	28	62	86	94	3
135°	4	23	50	72	78	3
145°	4	18	36	54	61	3
155°	5	14	26	36	42	2
165°	6	10	15	20	24	2
175°	6	6	7	7	8	1
180°	5	5	5	5	5	

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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0
2.5°	1037.9	1037.0	1035.0	1033.0	1032.0	1032.0	1031.1	1031.1	1031.1	1034.0	1035.0
5°	1034.0	1033.0	1031.1	1030.1	1029.1	1028.1	1028.1	1028.1	1029.1	1032.0	1033.0
7.5°	1027.1	1026.1	1024.2	1023.2	1022.2	1022.2	1022.2	1022.2	1023.2	1026.1	1027.1
10°	1017.3	1016.3	1014.3	1013.4	1013.4	1013.4	1013.4	1013.4	1015.3	1018.3	1020.2
12.5°	1003.5	1002.5	1001.5	1001.5	1000.6	1000.6	1001.5	1001.5	1003.5	1007.4	1010.4
15°	987.8	986.8	985.8	985.8	985.8	985.8	986.8	987.8	990.7	994.7	996.6
17.5°	969.1	969.1	968.1	969.1	969.1	969.1	970.1	972.0	974.0	978.9	981.9
20°	949.4	948.4	947.4	949.4	949.4	949.4	950.4	953.3	956.3	961.2	964.2
22.5°	925.8	925.8	925.8	926.8	927.8	928.7	929.7	932.7	936.6	940.5	944.5
25°	900.2	900.2	900.2	902.2	904.1	905.1	906.1	909.1	914.0	917.9	921.9
27.5°	873.6	873.6	873.6	874.6	877.6	878.6	880.5	884.5	889.4	893.3	898.2
30°	845.1	845.1	846.1	848.1	851.0	852.0	854.0	857.9	863.8	867.7	872.7
32.5°	815.6	814.6	815.6	818.6	821.5	824.5	825.4	830.4	836.3	841.2	846.1
35°	782.1	783.1	785.1	788.1	791.0	794.0	795.9	800.8	807.7	812.6	817.6
37.5°	749.7	750.7	752.6	756.6	760.5	763.5	766.4	770.3	778.2	783.1	789.0
40°	718.2	716.2	720.2	724.1	729.0	732.0	734.9	739.8	747.7	752.6	758.5
42.5°	682.8	682.8	685.7	691.6	696.6	699.5	702.5	708.4	716.2	722.1	728.0
45°	646.4	647.4	651.3	657.2	663.1	667.0	669.0	675.9	683.8	689.7	695.6
47.5°	610.0	611.9	615.9	622.8	628.7	632.6	634.6	642.4	650.3	657.2	663.1
50°	575.5	575.5	580.5	586.4	593.3	597.2	600.1	608.0	615.9	622.8	628.7
52.5°	538.2	538.2	543.1	550.9	556.9	561.8	564.7	573.6	581.4	588.3	595.2
55°	498.8	500.8	505.7	514.5	521.4	525.4	529.3	538.2	546.0	553.9	559.8
57.5°	462.4	463.4	469.3	477.2	485.0	489.0	493.9	501.8	510.6	519.5	525.4
60°	424.0	426.0	430.9	440.8	448.6	452.6	456.5	466.3	475.2	483.1	489.0
62.5°	386.6	387.6	394.5	403.4	411.2	416.2	421.1	429.9	438.8	446.7	454.5
65°	348.3	350.2	356.1	366.0	373.9	378.8	382.7	394.5	402.4	411.2	419.1
67.5°	309.9	311.9	318.8	328.6	337.5	342.4	346.3	357.1	367.0	375.8	383.7
70°	271.5	273.5	281.4	291.2	300.1	305.0	310.9	320.7	331.6	340.4	349.3
72.5°	232.2	235.1	242.0	252.8	264.7	269.6	274.5	286.3	296.1	306.0	313.8
75°	195.8	198.7	206.6	216.4	226.3	233.2	237.1	248.9	261.7	271.5	280.4
77.5°	159.4	162.3	170.2	181.0	191.8	197.8	203.7	214.5	225.3	235.1	245.0
80°	124.9	127.9	136.8	146.6	157.4	164.3	170.2	182.0	192.8	202.7	211.5
82.5°	91.5	94.4	103.3	114.1	125.9	131.8	137.7	148.6	160.4	170.2	180.0
85°	59.0	63.9	71.8	81.7	93.5	99.4	105.3	117.1	127.9	137.7	147.6
87.5°	28.5	32.5	41.3	52.1	63.0	69.9	74.8	85.6	97.4	106.3	116.1
90°	2.0	5.9	13.8	23.6	34.4	40.3	46.2	57.1	67.9	77.7	86.6
92.5°	0.0	3.9	11.8	21.6	32.5	38.4	43.3	54.1	64.9	74.8	83.6
95°	0.0	3.9	11.8	21.6	32.5	37.4	43.3	54.1	63.9	73.8	82.6
97.5°	1.0	3.9	11.8	21.6	31.5	37.4	42.3	53.1	63.0	72.8	81.7
100°	1.0	3.9	11.8	20.7	31.5	36.4	42.3	52.1	62.0	71.8	80.7
102.5°	1.0	3.9	11.8	20.7	31.5	36.4	41.3	51.2	61.0	70.8	79.7
105°	1.0	4.9	11.8	20.7	30.5	35.4	40.3	51.2	60.0	68.9	77.7
107.5°	1.0	4.9	11.8	20.7	30.5	35.4	40.3	50.2	59.0	67.9	75.8
110°	2.0	4.9	11.8	20.7	29.5	34.4	39.4	49.2	58.0	66.9	74.8

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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.0	4.9	11.8	19.7	29.5	33.5	38.4	48.2	57.1	64.9	72.8
115°	2.0	4.9	11.8	19.7	28.5	33.5	37.4	47.2	55.1	63.9	70.8
117.5°	2.0	5.9	11.8	18.7	27.5	32.5	36.4	45.3	54.1	62.0	68.9
120°	3.0	5.9	10.8	18.7	26.6	31.5	35.4	44.3	52.1	60.0	66.9
122.5°	3.0	5.9	10.8	17.7	25.6	29.5	34.4	42.3	50.2	58.0	64.9
125°	3.0	5.9	10.8	16.7	24.6	28.5	32.5	40.3	48.2	55.1	62.0
127.5°	3.0	5.9	10.8	16.7	23.6	26.6	30.5	38.4	45.3	52.1	59.0
130°	3.0	5.9	9.8	15.7	21.6	25.6	28.5	36.4	42.3	49.2	56.1
132.5°	3.0	5.9	9.8	14.8	20.7	24.6	27.5	34.4	40.3	46.2	53.1
135°	3.9	5.9	9.8	14.8	19.7	22.6	25.6	31.5	37.4	43.3	50.2
137.5°	3.9	5.9	8.9	13.8	18.7	21.6	24.6	29.5	35.4	41.3	46.2
140°	3.9	5.9	8.9	12.8	17.7	20.7	22.6	27.5	33.5	38.4	43.3
142.5°	3.9	5.9	8.9	12.8	16.7	18.7	21.6	25.6	30.5	35.4	40.3
145°	3.9	5.9	8.9	11.8	15.7	17.7	19.7	24.6	28.5	32.5	36.4
147.5°	4.9	5.9	8.9	11.8	14.8	16.7	18.7	22.6	26.6	29.5	33.5
150°	4.9	5.9	7.9	10.8	13.8	15.7	17.7	20.7	24.6	27.5	30.5
152.5°	4.9	5.9	7.9	10.8	13.8	14.8	15.7	19.7	22.6	25.6	27.5
155°	4.9	5.9	7.9	9.8	12.8	13.8	14.8	17.7	20.7	22.6	25.6
157.5°	4.9	5.9	7.9	9.8	11.8	12.8	13.8	15.7	18.7	20.7	22.6
160°	4.9	5.9	7.9	8.9	10.8	11.8	12.8	14.8	16.7	18.7	19.7
162.5°	5.9	5.9	6.9	8.9	9.8	10.8	11.8	12.8	14.8	15.7	17.7
165°	5.9	5.9	6.9	7.9	8.9	9.8	9.8	11.8	12.8	13.8	14.8
167.5°	5.9	5.9	6.9	7.9	7.9	8.9	8.9	9.8	10.8	11.8	12.8
170°	5.9	5.9	5.9	6.9	7.9	7.9	7.9	8.9	9.8	9.8	10.8
172.5°	5.9	5.9	5.9	5.9	6.9	6.9	6.9	7.9	7.9	8.9	8.9
175°	5.9	5.9	5.9	5.9	5.9	5.9	6.9	6.9	6.9	6.9	6.9
177.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
180°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9

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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0
2.5°	*1036.0*	*1037.9*	*1037.0*	*1035.0*	*1035.0*	*1035.0*	*1034.0*	*1032.0*	*1031.1*	*1030.1*
5°	1034.0	1036.0	1034.0	1033.0	1033.0	1033.0	1033.0	1032.0	1031.1	1031.1
7.5°	1029.1	1031.1	1030.1	1029.1	1029.1	1029.1	1029.1	1028.1	1028.1	1028.1
10°	1022.2	1025.2	1024.2	1023.2	1022.2	1023.2	1022.2	1022.2	1021.2	1021.2
12.5°	1011.4	1014.3	1014.3	1013.4	1013.4	1013.4	1013.4	1013.4	1012.4	1013.4
15°	999.6	1002.5	1002.5	1002.5	1002.5	1002.5	1002.5	1002.5	1001.5	1002.5
17.5°	984.8	987.8	988.8	987.8	988.8	988.8	988.8	987.8	987.8	987.8
20°	967.1	970.1	971.0	970.1	970.1	970.1	971.0	971.0	971.0	971.0
22.5°	947.4	950.4	950.4	950.4	951.4	951.4	951.4	952.4	952.4	952.4
25°	924.8	927.8	927.8	928.7	929.7	929.7	930.7	930.7	930.7	930.7
27.5°	903.2	905.1	905.1	906.1	907.1	907.1	907.1	907.1	909.1	908.1
30°	877.6	879.5	880.5	882.5	882.5	883.5	883.5	884.5	885.5	885.5
32.5°	851.0	853.0	854.0	855.9	856.9	857.9	857.9	859.9	860.9	859.9
35°	822.5	824.5	827.4	828.4	830.4	830.4	832.3	832.3	834.3	833.3
37.5°	794.0	795.9	797.9	799.9	801.8	802.8	803.8	805.8	807.7	805.8
40°	763.5	766.4	769.4	771.3	772.3	774.3	774.3	777.2	779.2	777.2
42.5°	733.0	735.9	738.9	742.8	742.8	743.8	745.7	748.7	748.7	747.7
45°	701.5	703.4	708.4	711.3	712.3	713.3	715.2	716.2	718.2	718.2
47.5°	668.0	672.0	676.9	679.8	680.8	681.8	683.8	685.7	688.7	688.7
50°	634.6	639.5	641.5	646.4	648.3	649.3	652.3	654.3	656.2	655.2
52.5°	600.1	604.1	610.0	613.9	615.9	616.9	619.8	622.8	623.8	624.7
55°	565.7	570.6	576.5	580.5	582.4	584.4	586.4	588.3	591.3	592.3
57.5°	531.3	536.2	543.1	547.0	549.0	550.0	553.9	556.9	557.8	558.8
60°	495.9	501.8	508.6	512.6	514.5	517.5	518.5	523.4	524.4	525.4
62.5°	461.4	467.3	474.2	479.1	481.1	483.1	487.0	489.9	491.9	490.9
65°	427.0	432.9	439.8	444.7	446.7	449.6	452.6	455.5	457.5	457.5
67.5°	391.6	398.5	406.3	411.2	413.2	416.2	419.1	421.1	424.0	426.0
70°	357.1	365.0	371.9	376.8	378.8	381.7	384.7	389.6	389.6	391.6
72.5°	322.7	330.6	337.5	344.3	346.3	348.3	352.2	355.2	356.1	358.1
75°	289.2	297.1	304.0	308.9	312.9	314.8	318.8	320.7	322.7	324.7
77.5°	253.8	263.7	270.6	276.5	279.4	281.4	285.3	288.3	290.2	291.2
80°	220.4	228.2	235.1	241.0	244.0	246.9	250.9	252.8	255.8	256.8
82.5°	187.9	195.8	202.7	207.6	211.5	213.5	217.4	221.4	221.4	223.3
85°	155.4	163.3	170.2	176.1	179.1	182.0	185.0	188.9	189.9	191.8
87.5°	124.0	132.8	138.7	145.6	147.6	150.5	155.4	158.4	160.4	160.4
90°	95.4	103.3	110.2	117.1	120.0	122.0	126.9	129.9	131.8	131.8
92.5°	92.5	100.4	107.2	114.1	116.1	119.0	123.0	125.9	127.9	127.9
95°	91.5	99.4	106.3	112.2	115.1	117.1	122.0	124.0	125.9	126.9
97.5°	90.5	98.4	105.3	111.2	113.1	116.1	120.0	123.0	124.9	124.9
100°	88.5	96.4	103.3	109.2	112.2	114.1	118.1	121.0	122.0	123.0
102.5°	87.6	94.4	101.3	107.2	110.2	112.2	116.1	119.0	120.0	121.0
105°	85.6	93.5	99.4	105.3	107.2	110.2	113.1	116.1	118.1	118.1
107.5°	83.6	91.5	97.4	103.3	105.3	107.2	111.2	114.1	115.1	116.1
110°	81.7	89.5	95.4	100.4	103.3	105.3	108.2	111.2	112.2	113.1

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

Scaled Data Report

TEST NUMBER: P981630
CATALOG NUMBER: 4WNLED-LD4-32SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	79.7	86.6	92.5	98.4	100.4	102.3	105.3	108.2	109.2	110.2
115°	77.7	84.6	90.5	95.4	97.4	99.4	102.3	105.3	106.3	107.2
117.5°	75.8	82.6	87.6	92.5	94.4	96.4	99.4	102.3	103.3	103.3
120°	73.8	79.7	85.6	89.5	91.5	93.5	96.4	98.4	100.4	100.4
122.5°	70.8	76.7	82.6	86.6	88.5	90.5	93.5	95.4	96.4	97.4
125°	68.9	74.8	79.7	83.6	85.6	87.6	89.5	91.5	92.5	93.5
127.5°	65.9	70.8	76.7	80.7	82.6	84.6	86.6	88.5	89.5	89.5
130°	62.0	67.9	72.8	77.7	79.7	80.7	83.6	84.6	85.6	85.6
132.5°	59.0	63.9	68.9	73.8	75.8	77.7	79.7	80.7	81.7	81.7
135°	55.1	60.0	64.9	69.9	71.8	73.8	75.8	76.7	77.7	77.7
137.5°	52.1	57.1	61.0	65.9	67.9	69.9	71.8	72.8	73.8	73.8
140°	48.2	52.1	57.1	62.0	63.9	64.9	67.9	68.9	69.9	69.9
142.5°	44.3	49.2	53.1	57.1	59.0	61.0	63.9	64.9	65.9	65.9
145°	41.3	45.3	48.2	52.1	54.1	56.1	59.0	61.0	61.0	61.0
147.5°	37.4	41.3	44.3	48.2	50.2	51.2	55.1	56.1	57.1	57.1
150°	34.4	37.4	40.3	43.3	45.3	47.2	50.2	52.1	52.1	52.1
152.5°	31.5	33.5	36.4	39.4	40.3	42.3	45.3	47.2	47.2	47.2
155°	27.5	30.5	32.5	34.4	36.4	37.4	40.3	42.3	42.3	42.3
157.5°	24.6	26.6	28.5	30.5	31.5	32.5	35.4	37.4	38.4	38.4
160°	21.6	23.6	24.6	26.6	27.5	28.5	29.5	32.5	33.5	33.5
162.5°	18.7	19.7	21.6	22.6	23.6	23.6	25.6	26.6	28.5	28.5
165°	15.7	16.7	17.7	18.7	19.7	19.7	20.7	22.6	23.6	23.6
167.5°	13.8	13.8	14.8	15.7	15.7	15.7	16.7	17.7	19.7	19.7
170°	10.8	11.8	11.8	11.8	12.8	12.8	12.8	13.8	14.8	15.7
172.5°	8.9	8.9	9.8	9.8	9.8	9.8	9.8	9.8	10.8	11.8
175°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.9
177.5°	5.9	5.9	5.9	4.9	4.9	4.9	4.9	4.9	4.9	3.9
180°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9

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

Metalux

Report Number: SP3-2508-516-10

Test Date: 09/05/2025

Luminaire Tested: 4WNLED-LD4-50SL-F-UNVL935-CD1-U

Data in this report applies to families of products including 4WNLED-LD4-50SL-F-UNVL935-CD1-U

Report Generated By FNC07603 / LDUCLS01DT01661
Version: v7.05

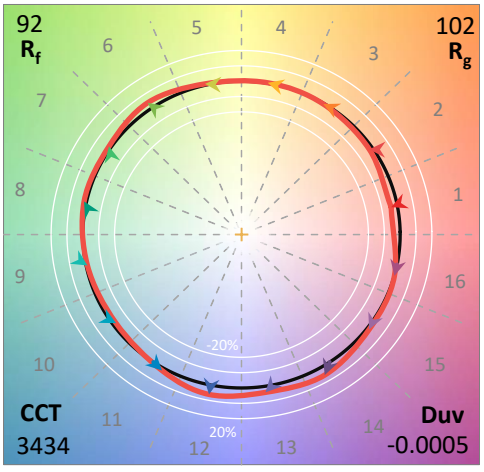
Test Information

Test Method:	LM-79-2019
Report Number:	SP3-2508-516-10
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP3 - 3M SPHERE
Measurement Geometry:	4π
Issue Date:	09/05/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**4WNLED-LD4-50SL-F-UNVL935-CD1-U**
Description:	4FT WNLED 5000LM 935

Spectral Parameters

CCT (K):	3434	CRI (Ra):	95.1		
CIE u':	0.2376	R1:	97.5	R9:	72.8
CIE v':	0.5120	R2:	96.4	R10:	89.6
Duv:	-0.0005	R3:	93.7	R11:	94.9
CIE x:	0.4085	R4:	96.0	R12:	80.4
CIE y:	0.3912	R5:	96.5	R13:	97.1
CIE z:	0.2002	R6:	95.5	R14:	95.3
Peak Wavelength (nm):	630	R7:	95.1	R15:	94.5
Dominant Wavelength (nm):	581	R8:	90.0		
Purity:	40.03883				

Rf:	92.1
Rg:	101.8



Test Conditions

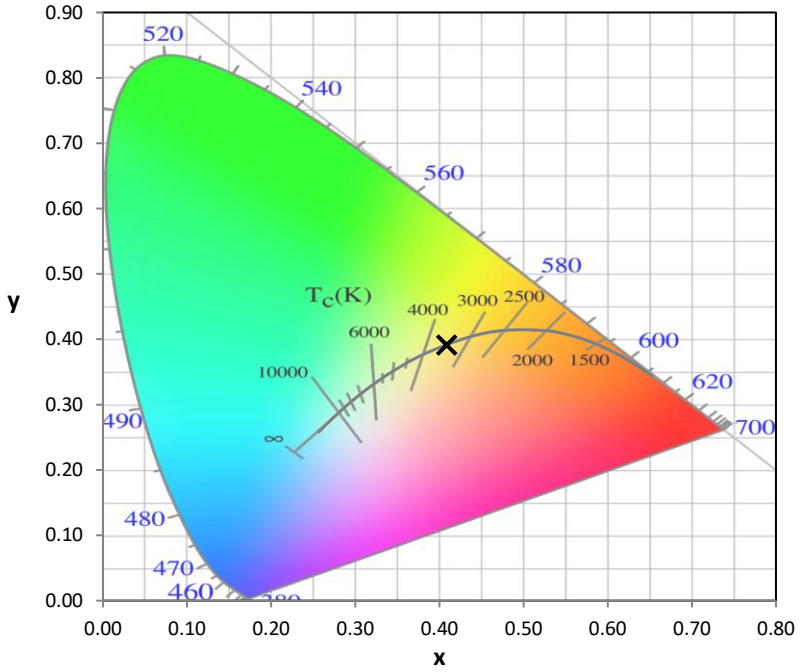
Stabilization Time:	24M
Operation Time:	1H 24M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP3-2508-516-10

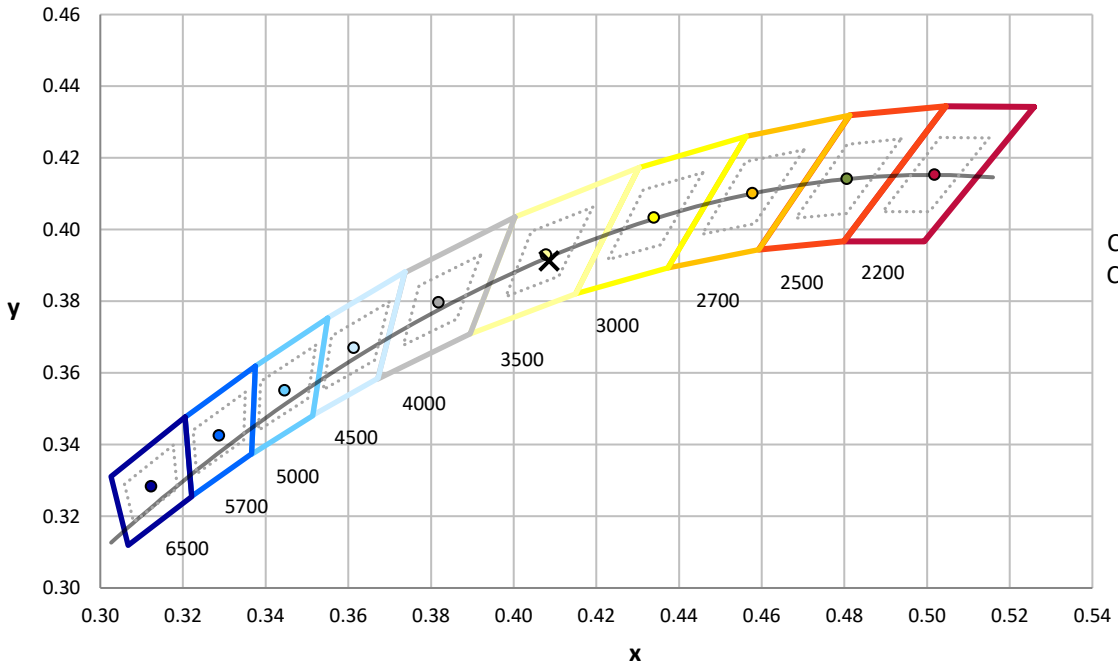
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	3M SPHERE IN02505	7/1/2025	1/1/2026
Power Meter	XITRON INXT2011006	1/20/2025	1/20/2026
AC Power Source	CHROMA 61604 IN6064A	10/22/2024	10/22/2025
DC Power Source	EYSIGHT N5770A IN0534	10/22/2024	10/22/2025
Sphere Thermometer	TANDD IN4036E	10/22/2024	10/22/2025

REPORT NUMBER: SP3-2508-516-10

CIE 1931 Chromaticity Diagram



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

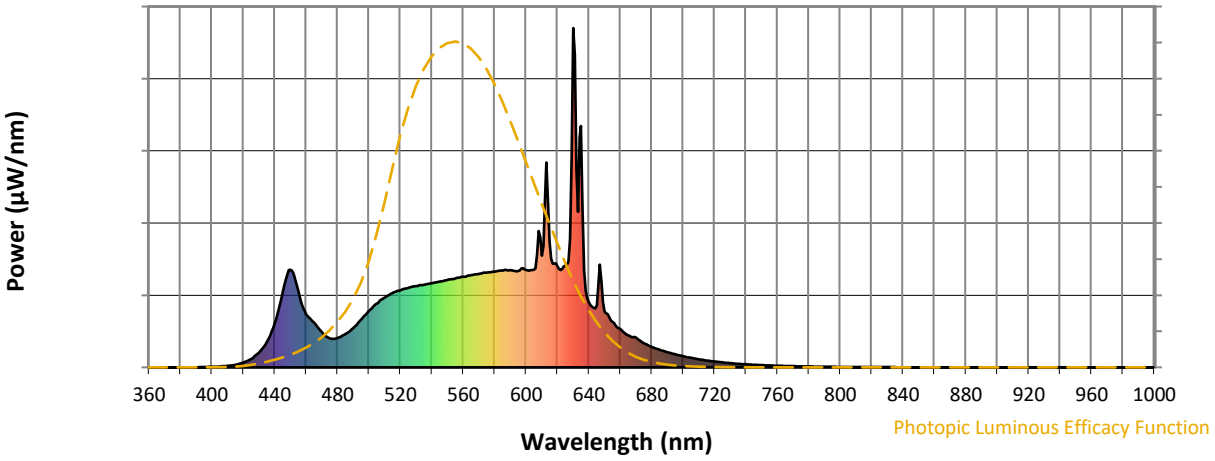


CCT = 3434K
CIE x = 0.4085
CIE y = 0.3912
Duv = -0.0005

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP3-2508-516-10

Photopic Flux vs. Wavelength

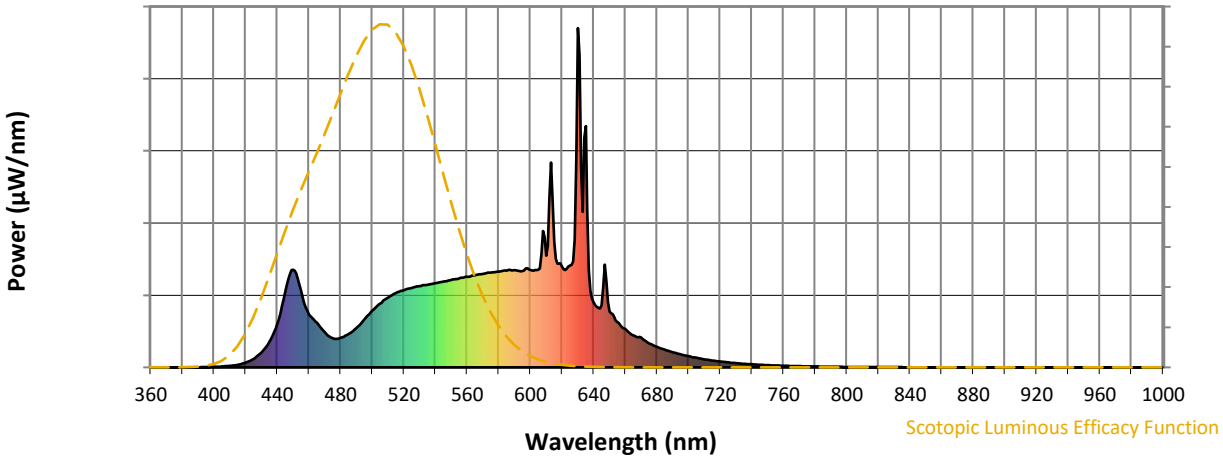


Photopic Lumens: NR

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	116	NR	620	297	NR	750	7	NR	880	0	NR
365	0	NR	495	140	NR	625	300	NR	755	6	NR	885	0	NR
370	0	NR	500	167	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	188	NR	635	711	NR	765	4	NR	895	0	NR
380	0	NR	510	205	NR	640	191	NR	770	3	NR	900	0	NR
385	0	NR	515	219	NR	645	183	NR	775	3	NR	905	0	NR
390	0	NR	520	227	NR	650	164	NR	780	3	NR	910	0	NR
395	1	NR	525	234	NR	655	134	NR	785	2	NR	915	0	NR
400	2	NR	530	239	NR	660	113	NR	790	2	NR	920	0	NR
405	3	NR	535	243	NR	665	94	NR	795	2	NR	925	0	NR
410	4	NR	540	248	NR	670	88	NR	800	1	NR	930	0	NR
415	8	NR	545	253	NR	675	71	NR	805	1	NR	935	0	NR
420	14	NR	550	258	NR	680	61	NR	810	1	NR	940	0	NR
425	25	NR	555	262	NR	685	52	NR	815	1	NR	945	0	NR
430	44	NR	560	267	NR	690	45	NR	820	1	NR	950	0	NR
435	75	NR	565	272	NR	695	38	NR	825	1	NR	955	0	NR
440	129	NR	570	276	NR	700	33	NR	830	1	NR	960	0	NR
445	221	NR	575	279	NR	705	28	NR	835	1	NR	965	0	NR
450	288	NR	580	282	NR	710	24	NR	840	0	NR	970	0	NR
455	225	NR	585	285	NR	715	20	NR	845	0	NR	975	0	NR
460	157	NR	590	286	NR	720	17	NR	850	0	NR	980	0	NR
465	132	NR	595	284	NR	725	15	NR	855	0	NR	985	0	NR
470	104	NR	600	286	NR	730	12	NR	860	0	NR	990	0	NR
475	85	NR	605	287	NR	735	11	NR	865	0	NR	995	0	NR
480	86	NR	610	329	NR	740	9	NR	870	0	NR	1000	0	NR
485	98	NR	615	371	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP3-2508-516-10

Scotopic Flux vs. Wavelength

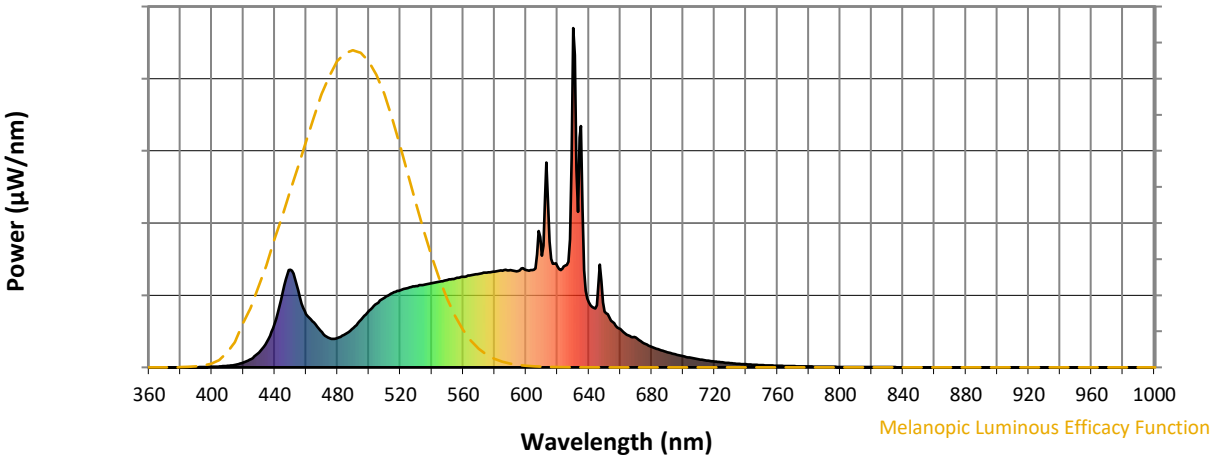


Scotopic Lumens: NR **S/P: 1.59**

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	116	NR	620	297	NR	750	7	NR	880	0	NR
365	0	NR	495	140	NR	625	300	NR	755	6	NR	885	0	NR
370	0	NR	500	167	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	188	NR	635	711	NR	765	4	NR	895	0	NR
380	0	NR	510	205	NR	640	191	NR	770	3	NR	900	0	NR
385	0	NR	515	219	NR	645	183	NR	775	3	NR	905	0	NR
390	0	NR	520	227	NR	650	164	NR	780	3	NR	910	0	NR
395	1	NR	525	234	NR	655	134	NR	785	2	NR	915	0	NR
400	2	NR	530	239	NR	660	113	NR	790	2	NR	920	0	NR
405	3	NR	535	243	NR	665	94	NR	795	2	NR	925	0	NR
410	4	NR	540	248	NR	670	88	NR	800	1	NR	930	0	NR
415	8	NR	545	253	NR	675	71	NR	805	1	NR	935	0	NR
420	14	NR	550	258	NR	680	61	NR	810	1	NR	940	0	NR
425	25	NR	555	262	NR	685	52	NR	815	1	NR	945	0	NR
430	44	NR	560	267	NR	690	45	NR	820	1	NR	950	0	NR
435	75	NR	565	272	NR	695	38	NR	825	1	NR	955	0	NR
440	129	NR	570	276	NR	700	33	NR	830	1	NR	960	0	NR
445	221	NR	575	279	NR	705	28	NR	835	1	NR	965	0	NR
450	288	NR	580	282	NR	710	24	NR	840	0	NR	970	0	NR
455	225	NR	585	285	NR	715	20	NR	845	0	NR	975	0	NR
460	157	NR	590	286	NR	720	17	NR	850	0	NR	980	0	NR
465	132	NR	595	284	NR	725	15	NR	855	0	NR	985	0	NR
470	104	NR	600	286	NR	730	12	NR	860	0	NR	990	0	NR
475	85	NR	605	287	NR	735	11	NR	865	0	NR	995	0	NR
480	86	NR	610	329	NR	740	9	NR	870	0	NR	1000	0	NR
485	98	NR	615	371	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP3-2508-516-10

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.19**

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	116	NR	620	297	NR	750	7	NR	880	0	NR
365	0	NR	495	140	NR	625	300	NR	755	6	NR	885	0	NR
370	0	NR	500	167	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	188	NR	635	711	NR	765	4	NR	895	0	NR
380	0	NR	510	205	NR	640	191	NR	770	3	NR	900	0	NR
385	0	NR	515	219	NR	645	183	NR	775	3	NR	905	0	NR
390	0	NR	520	227	NR	650	164	NR	780	3	NR	910	0	NR
395	1	NR	525	234	NR	655	134	NR	785	2	NR	915	0	NR
400	2	NR	530	239	NR	660	113	NR	790	2	NR	920	0	NR
405	3	NR	535	243	NR	665	94	NR	795	2	NR	925	0	NR
410	4	NR	540	248	NR	670	88	NR	800	1	NR	930	0	NR
415	8	NR	545	253	NR	675	71	NR	805	1	NR	935	0	NR
420	14	NR	550	258	NR	680	61	NR	810	1	NR	940	0	NR
425	25	NR	555	262	NR	685	52	NR	815	1	NR	945	0	NR
430	44	NR	560	267	NR	690	45	NR	820	1	NR	950	0	NR
435	75	NR	565	272	NR	695	38	NR	825	1	NR	955	0	NR
440	129	NR	570	276	NR	700	33	NR	830	1	NR	960	0	NR
445	221	NR	575	279	NR	705	28	NR	835	1	NR	965	0	NR
450	288	NR	580	282	NR	710	24	NR	840	0	NR	970	0	NR
455	225	NR	585	285	NR	715	20	NR	845	0	NR	975	0	NR
460	157	NR	590	286	NR	720	17	NR	850	0	NR	980	0	NR
465	132	NR	595	284	NR	725	15	NR	855	0	NR	985	0	NR
470	104	NR	600	286	NR	730	12	NR	860	0	NR	990	0	NR
475	85	NR	605	287	NR	735	11	NR	865	0	NR	995	0	NR
480	86	NR	610	329	NR	740	9	NR	870	0	NR	1000	0	NR
485	98	NR	615	371	NR	745	8	NR	875	0	NR			

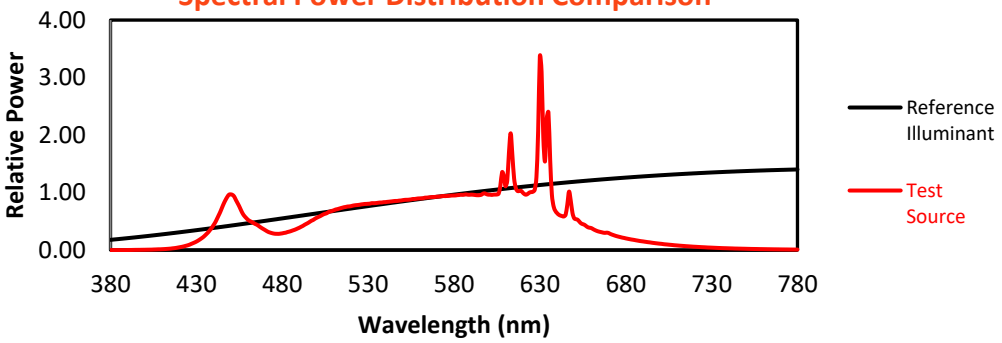
REPORT NUMBER: SP3-2508-516-10

TM-30-18

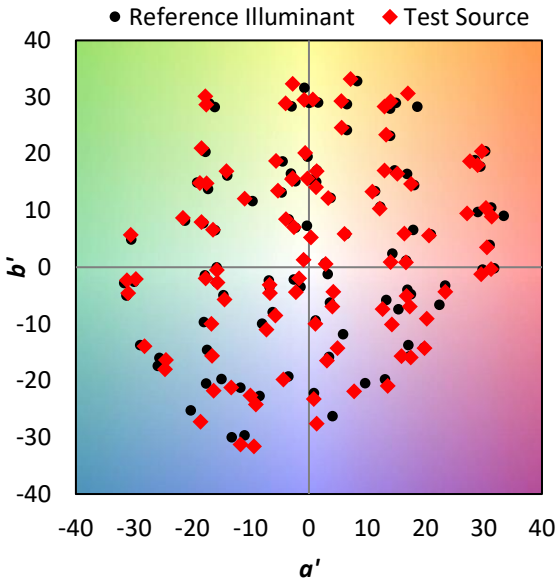
Summary

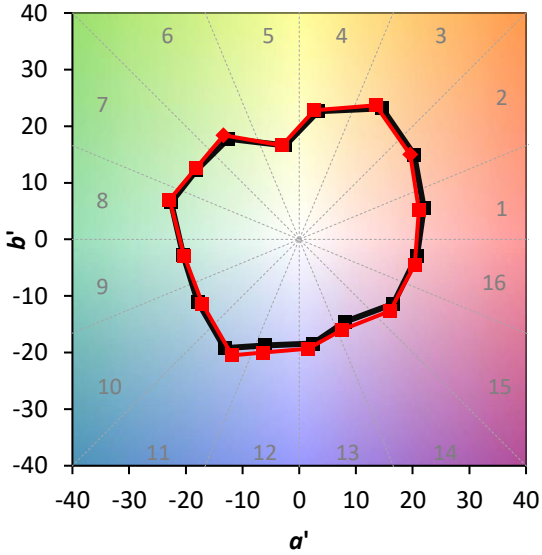
R_f = 92.1
R_g = 101.8
CIE R_a = 95.1
R_9 = 72.8

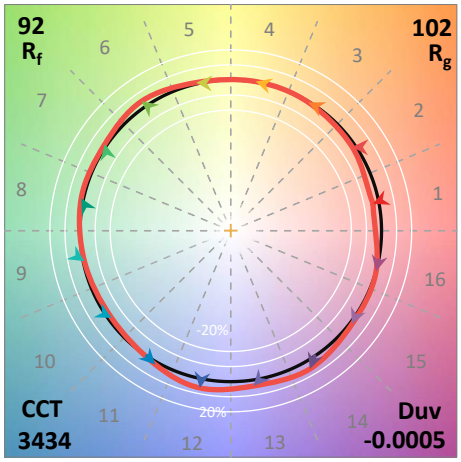
Spectral Power Distribution Comparison

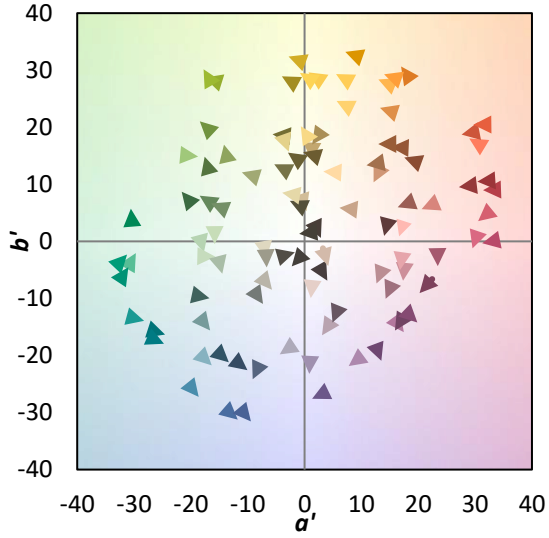


Color Vector Graphics







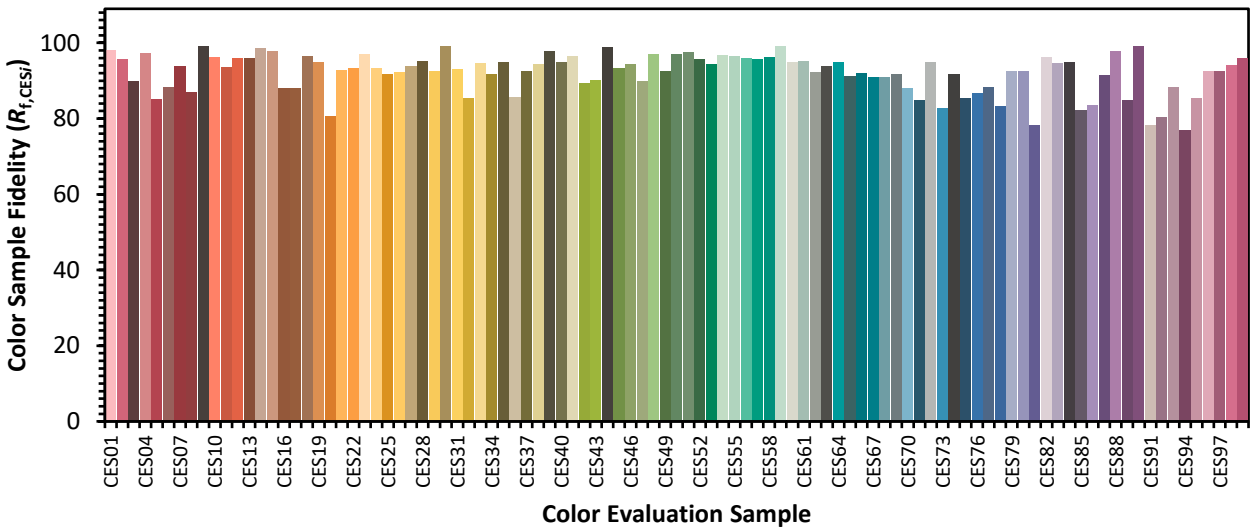


REPORT NUMBER: SP3-2508-516-10

TM-30-18

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

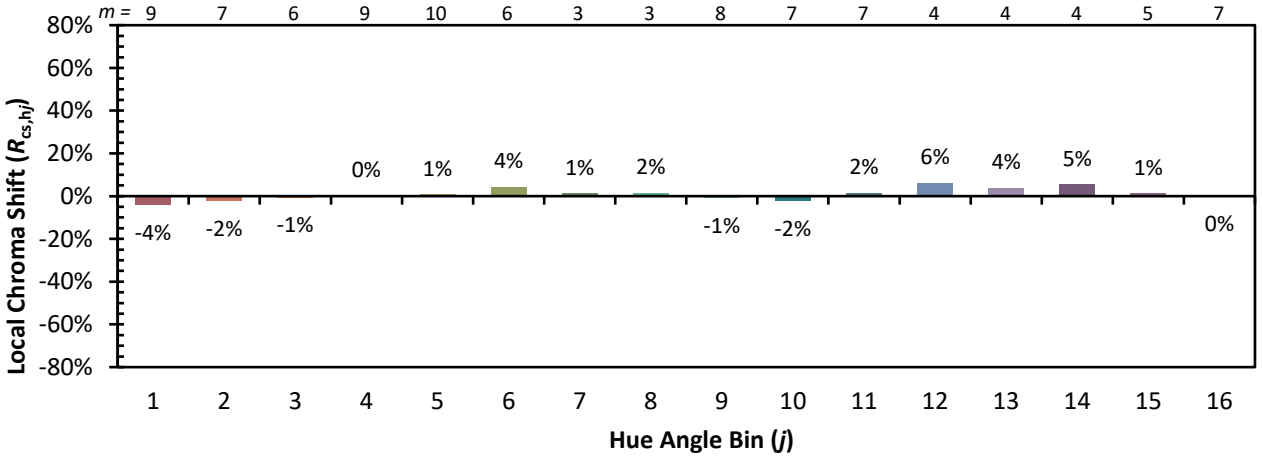
CES01 = 86	CES26 = 92	CES51 = 98	CES76 = 87
CES02 = 62	CES27 = 94	CES52 = 96	CES77 = 88
CES03 = 31	CES28 = 95	CES53 = 94	CES78 = 83
CES04 = 70	CES29 = 93	CES54 = 97	CES79 = 93
CES05 = 50	CES30 = 99	CES55 = 97	CES80 = 92
CES06 = 51	CES31 = 93	CES56 = 96	CES81 = 78
CES07 = 43	CES32 = 85	CES57 = 96	CES82 = 96
CES08 = 42	CES33 = 95	CES58 = 96	CES83 = 95
CES09 = 29	CES34 = 92	CES59 = 99	CES84 = 95
CES10 = 75	CES35 = 95	CES60 = 95	CES85 = 82
CES11 = 58	CES36 = 86	CES61 = 95	CES86 = 84
CES12 = 64	CES37 = 92	CES62 = 92	CES87 = 92
CES13 = 44	CES38 = 95	CES63 = 94	CES88 = 98
CES14 = 74	CES39 = 98	CES64 = 95	CES89 = 85
CES15 = 72	CES40 = 95	CES65 = 91	CES90 = 99
CES16 = 48	CES41 = 97	CES66 = 92	CES91 = 78
CES17 = 49	CES42 = 89	CES67 = 91	CES92 = 80
CES18 = 56	CES43 = 90	CES68 = 91	CES93 = 88
CES19 = 71	CES44 = 99	CES69 = 92	CES94 = 77
CES20 = 67	CES45 = 93	CES70 = 88	CES95 = 85
CES21 = 86	CES46 = 94	CES71 = 85	CES96 = 93
CES22 = 78	CES47 = 90	CES72 = 95	CES97 = 92
CES23 = 91	CES48 = 97	CES73 = 83	CES98 = 94
CES24 = 90	CES49 = 93	CES74 = 92	CES99 = 96
CES25 = 71	CES50 = 97	CES75 = 85	

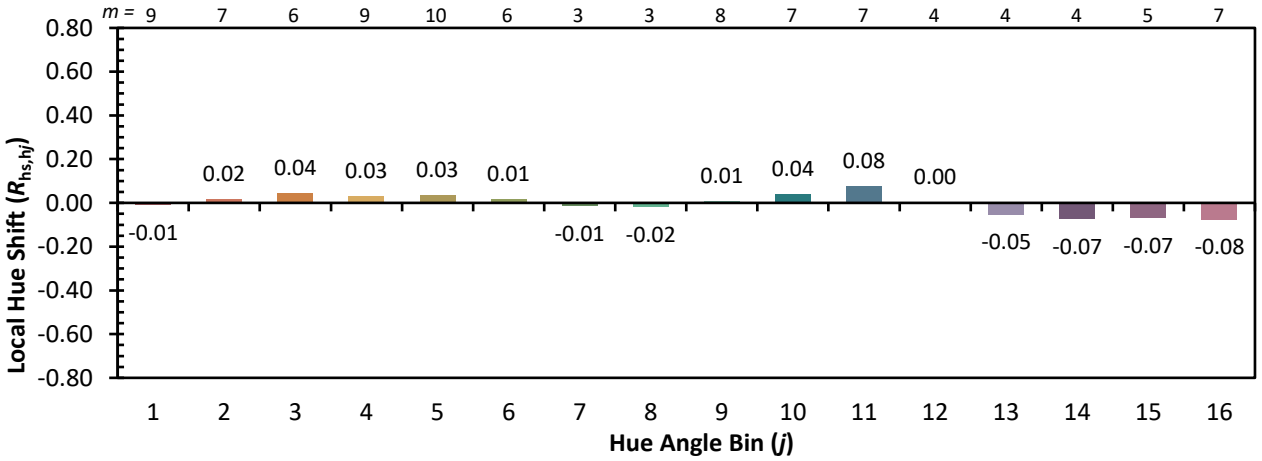


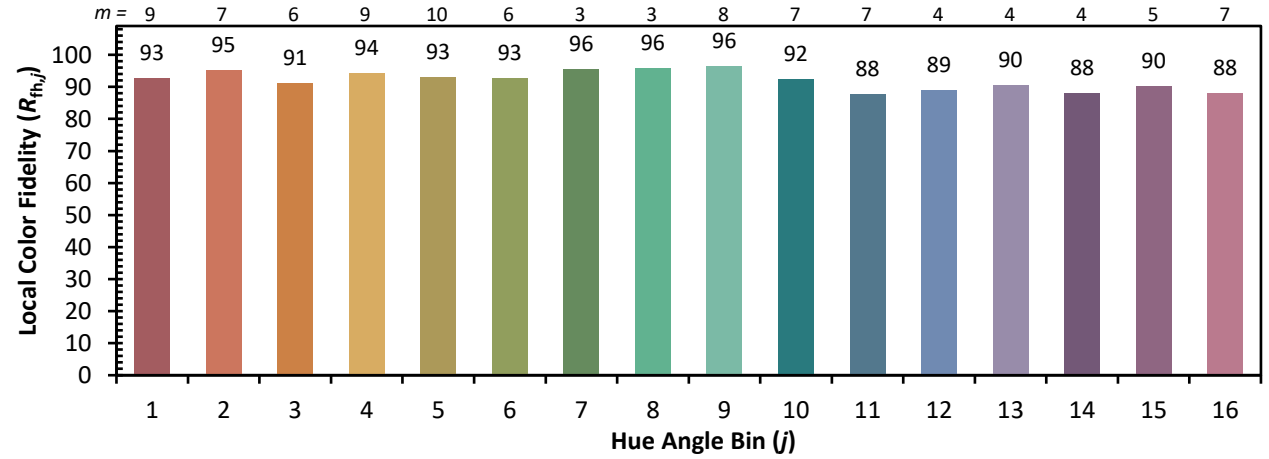
REPORT NUMBER: SP3-2508-516-10

TM-30-18

Color Rendition by Hue-Angle Bin



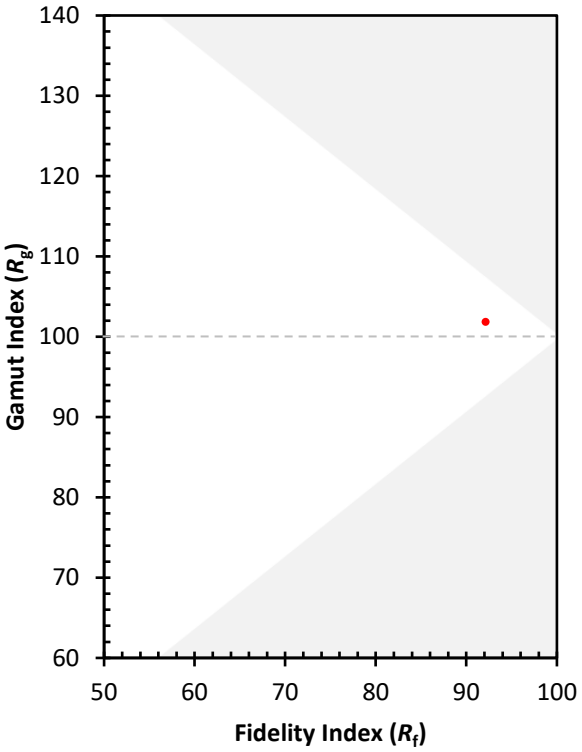


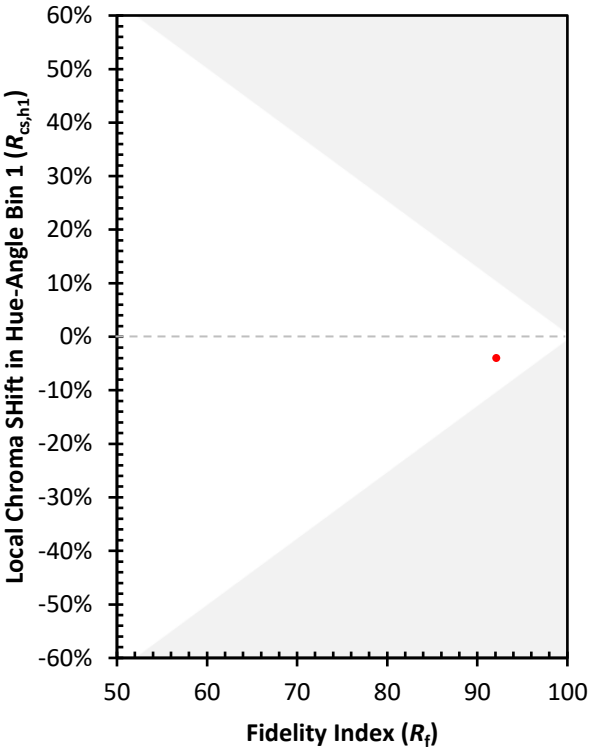


REPORT NUMBER: SP3-2508-516-10

TM-30-18

Measure Comparisons





(END OF REPORT)