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: METALUX

Report Number: P1433317

Luminaire Tested: EHBR1-54-UNV-TASM-L930-UPL24

Issue Date: 3/20/2026

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:	P1433317
	REPORT IS A COMBINATION OF REPORTS P1431871 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-54-UNV-TASM-L930-UPL24
Description:	Elevate Round Highbay at, 54000 lumens, 3000K 90CRI LEDs with TASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	50058.9 lumens
Efficiency:	N/A
Efficacy:	160.2 lumens/watt
Spacing Criteria (0/90/45):	0.99 / 0.84 / 0.9
Luminous Opening:	Vertical Cylinder (Dia: 1.71' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	312.5
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

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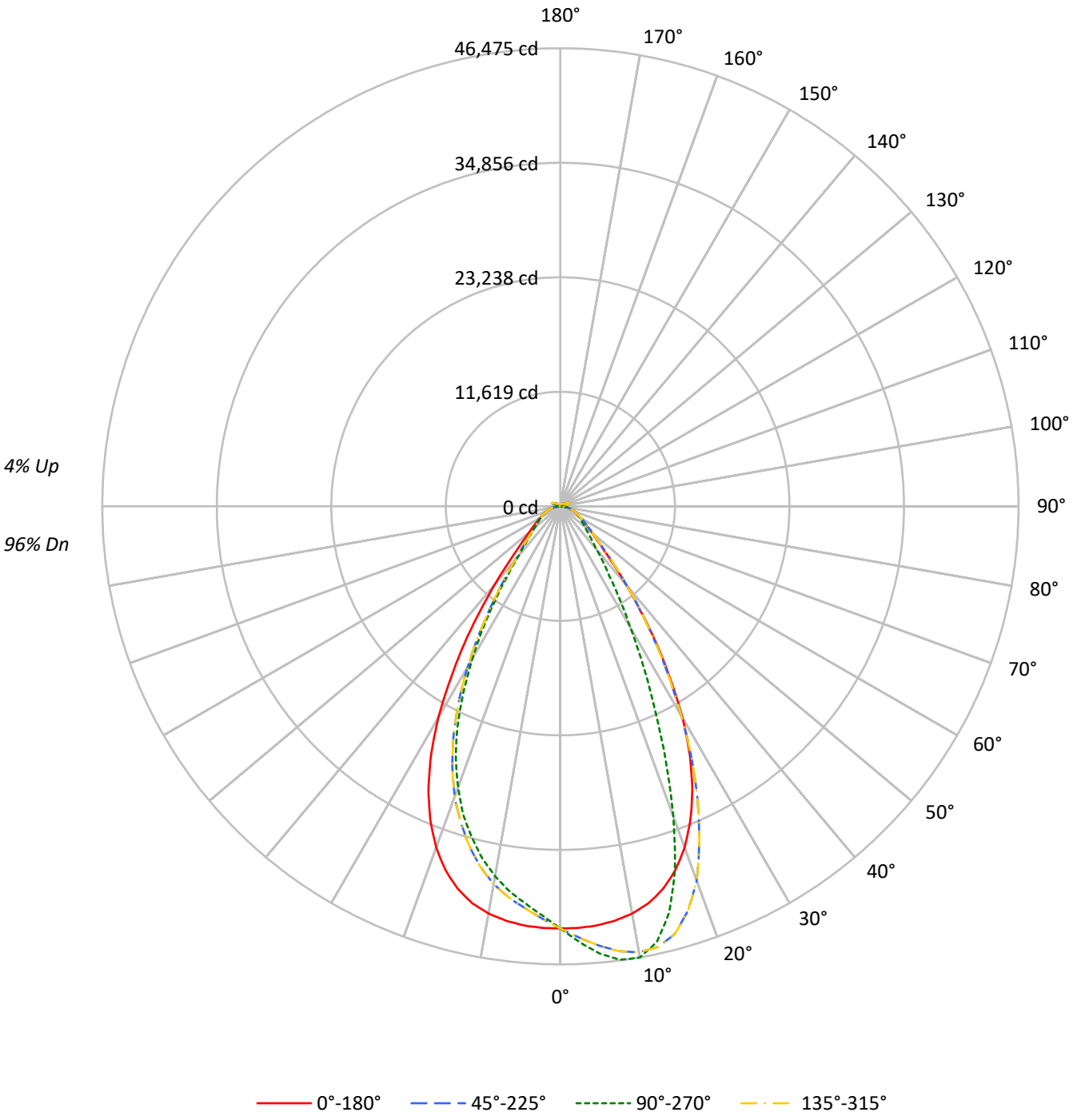
Luminous Intensity Polar Plot



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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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	111	107	104	101	108	105	102	99	100	98	96	95	94	92	91	90	88	86
2	104	98	93	89	101	96	91	87	92	88	85	88	85	82	85	82	80	78
3	97	90	84	79	95	88	82	78	85	80	76	81	78	74	79	75	73	71
4	92	83	76	71	89	81	75	70	78	73	69	76	71	68	73	70	66	65
5	86	76	70	65	84	75	69	64	73	67	63	71	66	62	68	64	61	59
6	81	71	64	59	79	70	63	59	68	62	58	66	61	57	64	60	56	55
7	77	66	59	54	75	65	59	54	63	58	54	62	57	53	60	56	52	51
8	73	62	55	50	71	61	55	50	59	54	50	58	53	49	57	52	49	47
9	69	58	51	47	67	57	51	47	56	50	46	55	50	46	54	49	46	44
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	51	46	43	41

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	201135	201135	201135	201135
5°	199911	213268	199911	189537
10°	197453	218743	197453	179380
15°	191623	203280	191623	165699
20°	179216	163003	179216	147591
25°	158621	112938	158621	123688
30°	128794	73475	128794	92543
35°	92375	47584	92375	61608
40°	59724	32797	59724	38854
45°	37894	25405	37894	27683
50°	28141	21588	28141	23059
55°	22975	19666	22975	20355
60°	19895	18733	19895	18846
65°	18136	18066	18136	17990
70°	17190	17703	17190	17473
75°	16077	17124	16077	16612
80°	14122	16167	14122	15114
85°	9136	11542	9136	11007

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
Vertical Angle: 45°
Luminance: 53277 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4072.5	8.1
10°-20°	11079.5	22.1
20°-30°	12994.0	26.0
30°-40°	9036.5	18.1
40°-50°	4490.7	9.0
50°-60°	2685.9	5.4
60°-70°	1890.5	3.8
70°-80°	1217.8	2.4
80°-90°	390.6	0.8
90°-100°	59.3	0.1
100°-110°	380.6	0.8
110°-120°	701.9	1.4
120°-130°	418.2	0.8
130°-140°	254.4	0.5
140°-150°	177.3	0.4
150°-160°	117.2	0.2
160°-170°	68.7	0.1
170°-180°	23.2	0.0
0°-30°	28146.0	56.2
0°-40°	37182.5	74.3
0°-60°	44359.1	88.6
0°-90°	47858.0	95.6
90°-120°	1141.9	2.3
90°-150°	1991.7	4.0
90°-180°	2201.0	4.4
0°-180°	50058.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	42830	42830	42830	42830	42830	
5°	42684	45536	42684	40469	42684	4051
15°	40202	42647	40202	34763	40202	11235
25°	31676	22554	31676	24700	31676	14341
35°	16954	8733	16954	11307	16954	10584
45°	6131	4110	6131	4479	6131	5017
55°	3105	2658	3105	2751	3105	2839
65°	1893	1886	1893	1878	1893	1901
75°	1132	1206	1132	1170	1132	1189
85°	314	397	314	378	314	349
90°	16	22	16	16	16	23
95°	32	33	32	27	32	33
105°	175	93	175	133	175	236
115°	747	641	747	606	747	681
125°	479	504	479	438	479	441
135°	305	353	305	321	305	242
145°	278	291	278	270	278	174
155°	250	261	250	244	250	117
165°	241	250	241	237	241	68
175°	244	251	244	239	244	23
180°	244	244	244	244	244	

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TEST NUMBER: P1433317
CATALOG NUMBER: EHBR1-54-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	42830.2	42830.2	42830.2	42830.2	*42830.2*	42830.2	42830.2	42830.2	42830.2	42830.2	42830.2
2.5°	42805.4	43358.7	43806.8	44102.4	*44248.6*	44102.4	43806.8	43358.7	42805.4	42255.2	41876.9
5°	42684.1	43792.4	44731.3	45345.7	*45536.0*	45345.7	44731.3	43792.4	42684.1	41636.8	40942.1
7.5°	42394.1	44120.9	45516.0	46233.1	*46408.3*	46233.1	45516.0	44120.9	42394.1	40911.6	40033.8
10°	*41951.7*	*44328.1*	*45940.0*	*46454.0*	*46474.9*	*46454.0*	*45940.0*	*44328.1*	*41951.7*	*39954.3*	*38919.0*
12.5°	41245.7	44254.2	45797.8	45629.2	*45246.1*	45629.2	45797.8	44254.2	41245.7	38784.9	37478.9
15°	40201.6	43816.5	44897.5	43525.0	*42647.1*	43525.0	44897.5	43816.5	40201.6	37205.9	35691.2
17.5°	38730.3	42997.3	43018.2	40302.8	*38646.8*	40302.8	43018.2	42997.3	38730.3	35275.2	33607.1
20°	36834.1	41683.3	40430.5	35463.9	*33501.9*	35463.9	40430.5	41683.3	36834.1	32992.7	31355.9
22.5°	34456.8	39911.7	36826.8	30596.1	*27919.3*	30596.1	36826.8	39911.7	34456.8	30338.3	28634.9
25°	31676.4	37740.8	32950.1	25292.2	*22553.6*	25292.2	32950.1	37740.8	31676.4	27175.6	25635.2
27.5°	28406.0	34989.3	28822.1	20667.9	*18141.1*	20667.9	28822.1	34989.3	28406.0	23910.1	22336.7
30°	24773.4	31461.9	24526.0	16459.4	*14132.8*	16459.4	24526.0	31461.9	24773.4	20241.4	18832.6
32.5°	20706.4	28004.4	20400.3	13188.2	*11217.3*	13188.2	20400.3	28004.4	20706.4	16740.5	15268.3
35°	16954.1	23678.7	16680.3	10362.8	*8733.3*	10362.8	16680.3	23678.7	16954.1	13435.6	11989.9
37.5°	13305.5	19591.6	13296.7	8344.5	*7083.7*	8344.5	13296.7	19591.6	13305.5	10445.6	9272.1
40°	10351.6	15319.0	10418.2	6661.2	*5684.6*	6661.2	10418.2	15319.0	10351.6	7947.8	7196.8
42.5°	7843.4	11713.7	8188.8	5467.0	*4828.5*	5467.0	8188.8	11713.7	7843.4	6262.0	5699.8
45°	6131.1	8620.0	6394.6	4612.4	*4110.5*	4612.4	6394.6	8620.0	6131.1	5042.9	4665.4
47.5°	4993.1	6662.0	5182.6	3956.2	*3604.5*	3956.2	5182.6	6662.0	4993.1	4265.4	3982.8
50°	4194.0	5111.9	4303.2	3453.4	*3217.4*	3453.4	4303.2	5111.9	4194.0	3652.6	3464.0
52.5°	3602.9	4169.0	3664.7	3077.6	*2918.6*	3077.6	3664.7	4169.0	3602.9	3195.6	3078.4
55°	3104.9	3504.9	3186.8	2767.6	*2657.6*	2767.6	3186.8	3504.9	3104.9	2843.9	2757.2
57.5°	2726.6	2973.2	2767.6	2503.4	*2430.3*	2503.4	2767.6	2973.2	2726.6	2530.7	2484.1
60°	2391.7	2574.9	2442.3	2272.9	*2252.0*	2272.9	2442.3	2574.9	2391.7	2276.9	2246.4
62.5°	2133.9	2249.6	2159.6	2065.7	*2047.2*	2065.7	2159.6	2249.6	2133.9	2045.6	2051.2
65°	1893.0	2000.6	1929.9	1879.3	*1885.7*	1879.3	1929.9	2000.6	1893.0	1852.1	1860.9
67.5°	1706.6	1762.9	1732.4	1703.4	*1710.6*	1703.4	1732.4	1762.9	1706.6	1666.5	1680.2
70°	1508.3	1568.5	1537.2	1541.2	*1553.3*	1541.2	1537.2	1568.5	1508.3	1496.2	1506.7
72.5°	1318.7	1365.3	1354.9	1364.5	*1377.3*	1364.5	1354.9	1365.3	1318.7	1317.1	1317.9
75°	1132.5	1167.7	1172.6	1186.2	*1206.3*	1186.2	1172.6	1167.7	1132.5	1120.3	1134.9
77.5°	929.2	969.4	984.6	1003.2	*1032.8*	1003.2	984.6	969.4	929.2	937.2	944.5
80°	742.9	761.4	795.1	808.8	*850.5*	808.8	795.1	761.4	742.9	729.2	739.6
82.5°	543.7	560.6	589.5	615.2	*639.3*	615.2	589.5	560.6	543.7	537.3	538.1
85°	314.0	339.7	359.0	389.5	*396.7*	389.5	359.0	339.7	314.0	321.3	314.0
87.5°	110.1	118.1	134.9	146.9	*147.8*	146.9	134.9	118.1	110.1	112.5	102.0
90°	16.5	28.1	48.2	28.9	*22.1*	28.9	48.2	28.1	16.5	28.5	44.2
92.5°	21.3	37.7	67.5	37.3	*28.1*	37.3	67.5	37.7	21.3	36.9	70.7
95°	31.7	46.2	85.5	40.9	*32.9*	40.9	85.5	46.2	31.7	49.0	98.4
97.5°	48.6	57.0	96.3	43.4	*38.9*	43.4	96.3	57.0	48.6	59.8	112.8
100°	64.3	64.3	174.7	49.4	*43.8*	49.4	174.7	64.3	64.3	73.9	175.5
102.5°	96.8	125.3	403.1	96.0	*52.2*	96.0	403.1	125.3	96.8	137.7	371.8
105°	175.0	284.3	707.8	241.7	*92.8*	241.7	707.8	284.3	175.0	287.0	662.0
107.5°	330.4	528.7	911.4	472.9	*209.6*	472.9	911.4	528.7	330.4	507.5	873.6
110°	527.9	738.3	994.4	646.3	*419.1*	646.3	994.4	738.3	527.9	696.6	915.7

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	686.9	822.6	971.6	716.2	*578.1*	716.2	971.6	822.6	686.9	768.8	877.2
115°	746.8	810.6	868.0	713.8	*640.7*	713.8	868.0	810.6	746.8	750.8	783.3
117.5°	721.5	742.0	750.0	670.5	*644.4*	670.5	750.0	742.0	721.5	675.7	665.2
120°	651.6	643.1	632.7	606.6	*608.2*	606.6	632.7	643.1	651.6	590.2	555.6
122.5°	564.4	546.4	535.1	542.3	*558.8*	542.3	535.1	546.4	564.4	503.0	476.9
125°	479.0	460.9	467.3	487.0	*504.2*	487.0	467.3	460.9	479.0	428.0	421.2
127.5°	407.5	399.1	417.9	440.0	*454.8*	440.0	417.9	399.1	407.5	375.0	381.4
130°	356.5	358.1	383.0	402.3	*411.5*	402.3	383.0	358.1	356.5	340.9	356.9
132.5°	324.8	333.6	357.3	374.2	*379.8*	374.2	357.3	333.6	324.8	320.8	340.4
135°	305.1	318.0	340.1	350.5	*353.2*	350.5	340.1	318.0	305.1	307.1	324.8
137.5°	293.9	306.7	323.2	332.0	*330.4*	332.0	323.2	306.7	293.9	298.3	311.9
140°	287.5	300.3	307.5	317.6	*316.7*	317.6	307.5	300.3	287.5	289.9	300.7
142.5°	281.1	292.7	296.3	303.9	*302.3*	303.9	296.3	292.7	281.1	283.5	290.7
145°	278.2	287.0	283.8	293.1	*291.0*	293.1	283.8	287.0	278.2	278.7	283.0
147.5°	272.2	278.7	275.0	283.0	*281.1*	283.0	275.0	278.7	272.2	272.2	274.2
150°	265.7	270.6	264.9	274.2	*274.6*	274.2	264.9	270.6	265.7	264.6	266.5
152.5°	256.9	261.7	256.9	267.3	*267.0*	267.3	256.9	261.7	256.9	255.8	257.7
155°	250.1	252.5	250.1	260.6	*261.4*	260.6	250.1	252.5	250.1	249.3	250.9
157.5°	245.7	247.7	246.5	255.8	*256.6*	255.8	246.5	247.7	245.7	245.7	246.5
160°	242.8	245.2	244.9	252.9	*253.7*	252.9	244.9	245.2	242.8	243.3	244.1
162.5°	242.0	242.0	242.5	250.5	*252.1*	250.5	242.5	242.0	242.0	242.0	243.3
165°	240.9	242.0	241.2	247.6	*250.5*	247.6	241.2	242.0	240.9	241.2	241.2
167.5°	241.2	240.1	241.7	247.6	*250.5*	247.6	241.7	240.1	241.2	241.7	241.7
170°	239.6	240.4	240.9	246.8	*249.7*	246.8	240.9	240.4	239.6	240.9	241.2
172.5°	242.0	242.0	242.0	246.8	*250.9*	246.8	242.0	242.0	242.0	242.5	243.6
175°	243.6	243.3	243.6	247.4	*251.4*	247.4	243.6	243.3	243.6	242.8	242.8
177.5°	242.5	244.1	245.7	249.3	*254.6*	249.3	245.7	244.1	242.5	242.8	242.8
180°	244.1	244.1	244.1	244.1	*244.1*	244.1	244.1	244.1	244.1	244.1	244.1

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	42830.2	42830.2	42830.2	42830.2	42830.2	42830.2
2.5°	41586.2	41558.9	41586.2	41876.9	42255.2	42805.4
5°	40620.0	40469.1	40620.0	40942.1	41636.8	42684.1
7.5°	39494.9	39407.3	39494.9	40033.8	40911.6	42394.1
10°	*38310.2*	*38111.8*	*38310.2*	*38919.0*	*39954.3*	*41951.7*
12.5°	36850.2	36587.5	36850.2	37478.9	38784.9	41245.7
15°	34993.3	34762.7	34993.3	35691.2	37205.9	40201.6
17.5°	33000.7	32791.9	33000.7	33607.1	35275.2	38730.3
20°	30498.2	30334.3	30498.2	31355.9	32992.7	36834.1
22.5°	27872.7	27719.4	27872.7	28634.9	30338.3	34456.8
25°	24783.9	24700.4	24783.9	25635.2	27175.6	31676.4
27.5°	21446.1	21303.9	21446.1	22336.7	23910.1	28406.0
30°	18036.0	17800.6	18036.0	18832.6	20241.4	24773.4
32.5°	14700.5	14531.1	14700.5	15268.3	16740.5	20706.4
35°	11476.7	11307.3	11476.7	11989.9	13435.6	16954.1
37.5°	8942.9	8643.3	8942.9	9272.1	10445.6	13305.5
40°	6782.5	6734.3	6782.5	7196.8	7947.8	10351.6
42.5°	5521.5	5390.6	5521.5	5699.8	6262.0	7843.4
45°	4530.5	4479.0	4530.5	4665.4	5042.9	6131.1
47.5°	3896.0	3918.5	3896.0	3982.8	4265.4	4993.1
50°	3423.0	3436.6	3423.0	3464.0	3652.6	4194.0
52.5°	3074.4	3062.3	3074.4	3078.4	3195.6	3602.9
55°	2766.0	2750.8	2766.0	2757.2	2843.9	3104.9
57.5°	2496.2	2507.4	2496.2	2484.1	2530.7	2726.6
60°	2255.2	2265.6	2255.2	2246.4	2276.9	2391.7
62.5°	2052.0	2058.4	2052.0	2051.2	2045.6	2133.9
65°	1870.5	1877.7	1870.5	1860.9	1852.1	1893.0
67.5°	1697.0	1697.0	1697.0	1680.2	1666.5	1706.6
70°	1534.0	1533.2	1534.0	1506.7	1496.2	1508.3
72.5°	1338.0	1357.3	1338.0	1317.9	1317.1	1318.7
75°	1147.7	1170.2	1147.7	1134.9	1120.3	1132.5
77.5°	954.9	989.4	954.9	944.5	937.2	929.2
80°	757.4	795.1	757.4	739.6	729.2	742.9
82.5°	559.8	587.9	559.8	538.1	537.3	543.7
85°	333.3	378.3	333.3	314.0	321.3	314.0
87.5°	106.8	136.5	106.8	102.0	112.5	110.1
90°	26.1	16.5	26.1	44.2	28.5	16.5
92.5°	39.4	23.7	39.4	70.7	36.9	21.3
95°	45.4	27.3	45.4	98.4	49.0	31.7
97.5°	50.2	35.3	50.2	112.8	59.8	48.6
100°	58.6	46.2	58.6	175.5	73.9	64.3
102.5°	123.7	77.4	123.7	371.8	137.7	96.8
105°	259.8	132.9	259.8	662.0	287.0	175.0
107.5°	464.6	229.2	464.6	873.6	507.5	330.4
110°	616.2	426.8	616.2	915.7	696.6	527.9

TEST NUMBER: P1433317
CATALOG NUMBER: EHBR1-54-UNV-TASM-L930-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	662.0	576.1	662.0	877.2	768.8	686.9
115°	636.7	606.2	636.7	783.3	750.8	746.8
117.5°	581.4	585.7	581.4	665.2	675.7	721.5
120°	517.5	542.4	517.5	555.6	590.2	651.6
122.5°	459.3	488.2	459.3	476.9	503.0	564.4
125°	408.7	438.4	408.7	421.2	428.0	479.0
127.5°	373.7	393.9	373.7	381.4	375.0	407.5
130°	346.8	363.8	346.8	356.9	340.9	356.5
132.5°	328.4	339.3	328.4	340.4	320.8	324.8
135°	312.3	321.2	312.3	324.8	307.1	305.1
137.5°	298.7	306.3	298.7	311.9	298.3	293.9
140°	287.0	293.5	287.0	300.7	289.9	287.5
142.5°	274.6	279.5	274.6	290.7	283.5	281.1
145°	266.5	270.2	266.5	283.0	278.7	278.2
147.5°	259.8	262.2	259.8	274.2	272.2	272.2
150°	252.9	255.3	252.9	266.5	264.6	265.7
152.5°	245.3	248.5	245.3	257.7	255.8	256.9
155°	240.9	244.1	240.9	250.9	249.3	250.1
157.5°	238.8	241.7	238.8	246.5	245.7	245.7
160°	237.7	239.6	237.7	244.1	243.3	242.8
162.5°	235.6	237.7	235.6	243.3	242.0	242.0
165°	236.1	236.9	236.1	241.2	241.2	240.9
167.5°	235.6	236.9	235.6	241.7	241.7	241.2
170°	236.4	237.2	236.4	241.2	240.9	239.6
172.5°	238.0	238.8	238.0	243.6	242.5	242.0
175°	238.5	239.3	238.5	242.8	242.8	243.6
177.5°	240.4	241.2	240.4	242.8	242.8	242.5
180°	244.1	244.1	244.1	244.1	244.1	244.1

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

Scaled Data Report

TEST NUMBER: P1433317
CATALOG NUMBER: EHBR1-54-UNV-TASM-L930-UPL24

CIE UGR TABLE:

Reflectances:											
	Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
	Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
	Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	19.25	20.39	19.69	20.79	21.22	18.57	19.71	19.01	20.11	20.54
	3H	20.80	21.81	21.26	22.23	22.71	20.42	21.43	20.88	21.85	22.33
	4H	21.43	22.38	21.92	22.82	23.32	21.20	22.14	21.68	22.59	23.08
	6H	21.92	22.78	22.41	23.24	23.75	21.84	22.71	22.34	23.17	23.67
	8H	22.07	22.89	22.58	23.37	23.88	22.06	22.89	22.57	23.37	23.88
	12H	22.14	22.93	22.65	23.40	23.93	22.19	22.98	22.70	23.45	23.99
4H	2H	19.67	20.61	20.15	21.05	21.55	19.14	20.09	19.63	20.53	21.03
	3H	21.46	22.24	21.96	22.74	23.25	21.20	21.98	21.70	22.47	22.99
	4H	22.24	22.94	22.75	23.44	23.99	22.11	22.81	22.62	23.32	23.86
	6H	22.85	23.46	23.39	23.99	24.56	22.88	23.49	23.42	24.02	24.59
	8H	23.05	23.61	23.60	24.14	24.72	23.15	23.72	23.70	24.25	24.82
	12H	23.16	23.65	23.72	24.22	24.79	23.32	23.82	23.89	24.38	24.96
8H	4H	22.49	23.05	23.03	23.58	24.16	22.39	22.96	22.94	23.48	24.06
	6H	23.23	23.69	23.81	24.27	24.85	23.30	23.75	23.87	24.33	24.91
	8H	23.50	23.91	24.10	24.50	25.10	23.65	24.06	24.25	24.65	25.24
	12H	23.67	24.03	24.26	24.60	25.28	23.90	24.26	24.49	24.83	25.50
12H	4H	22.50	23.00	23.06	23.56	24.14	22.40	22.90	22.97	23.46	24.04
	6H	23.27	23.68	23.87	24.27	24.87	23.34	23.75	23.94	24.34	24.94
	8H	23.59	23.95	24.18	24.52	25.19	23.75	24.10	24.34	24.68	25.35

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: SP1-2506-472-5

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L930-N

Data in this report applies to families of products including EHBR-60-L930-N

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

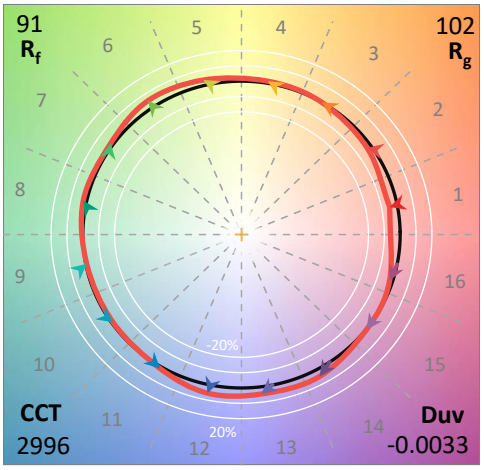
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-5
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/05/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**EHBR-60-L930-N**
Description:	Elevate Round Highbay at, 60000 lumens, 3000K 90CRI LEDs with N lens

Spectral Parameters

CCT (K):	2996
CIE u':	0.2519
CIE v':	0.5169
Duv:	-0.0033
CIE x:	0.4325
CIE y:	0.3945
CIE z:	0.1730
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	584
Purity:	48.21818
Rf:	91.3
Rg:	102

CRI (Ra):	94.4
R1:	96.8
R2:	98.1
R3:	97.8
R4:	95.6
R5:	96.9
R6:	95.7
R7:	90.9
R8:	83.0
R9:	61.4
R10:	94.4
R11:	95.7
R12:	88.5
R13:	97.3
R14:	97.8
R15:	92.3



Test Conditions

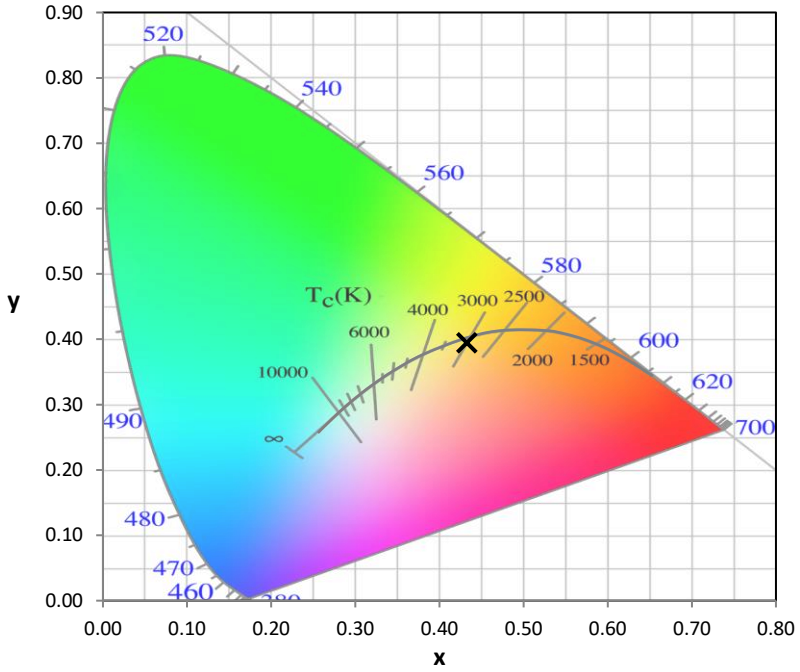
Stabilization Time:	40M
Operation Time:	1H 40M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-5

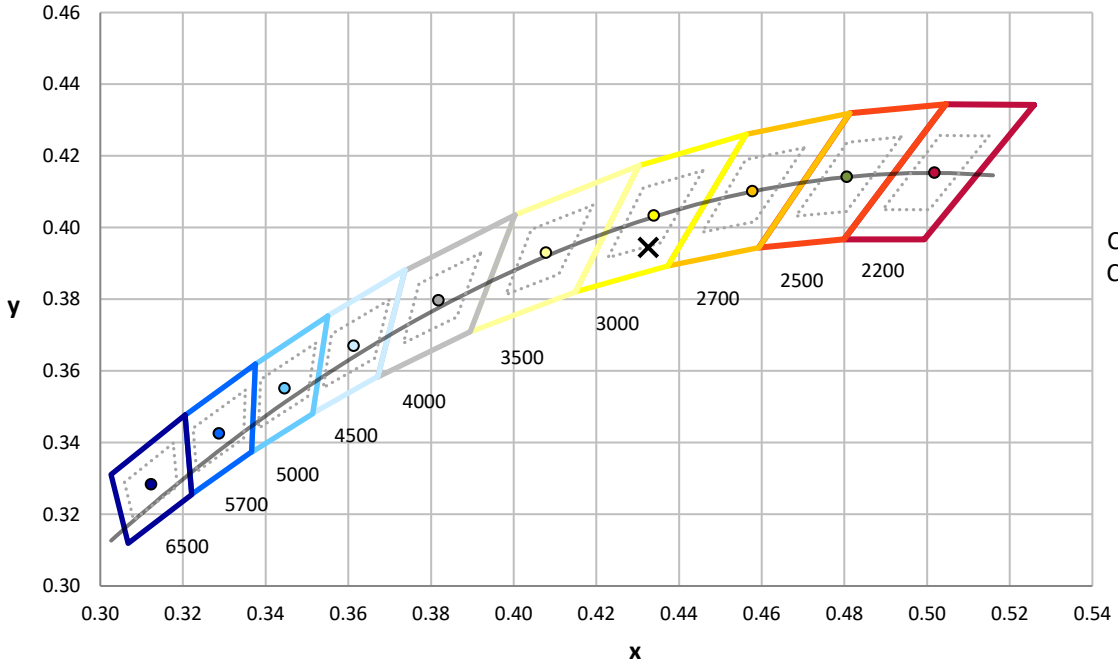
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2506-472-5

CIE 1931 Chromaticity Diagram



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

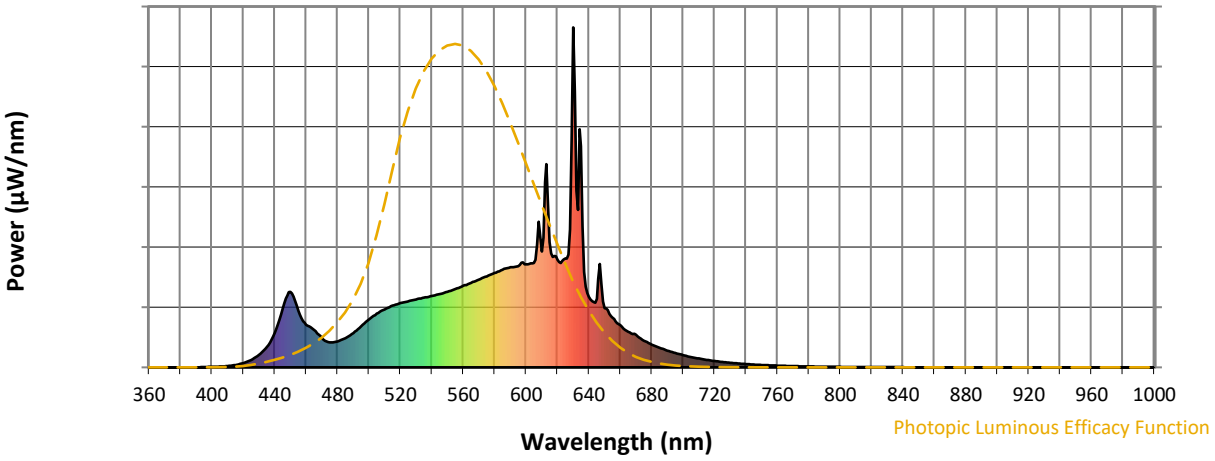


CCT = 2996K
CIE x = 0.4325
CIE y = 0.3945
Duv = -0.0033

Point lies inside the ANSI 3000K 7-step quadrangle

REPORT NUMBER: SP1-2506-472-5

Photopic Flux vs. Wavelength

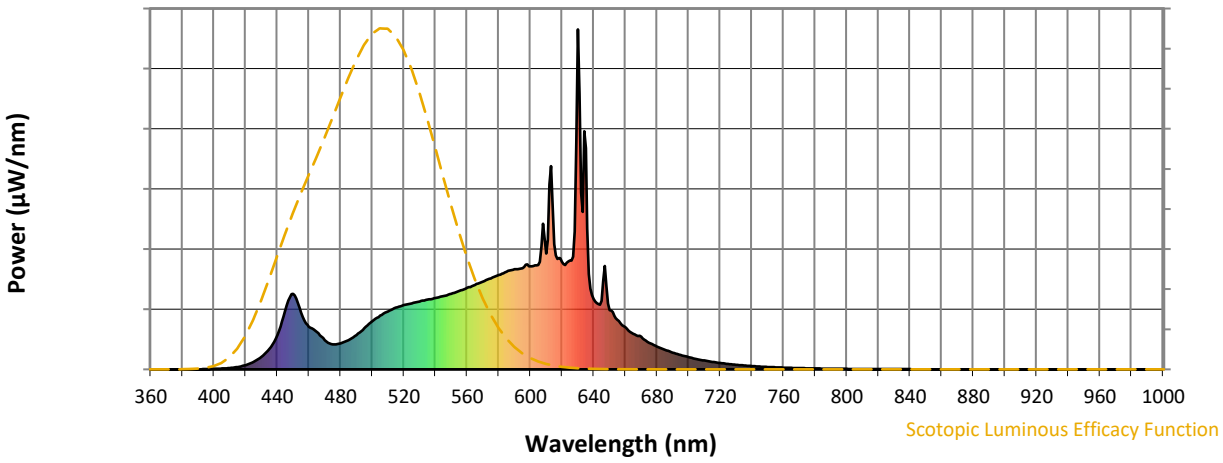


Photopic Lumens: NR

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-5

Scotopic Flux vs. Wavelength

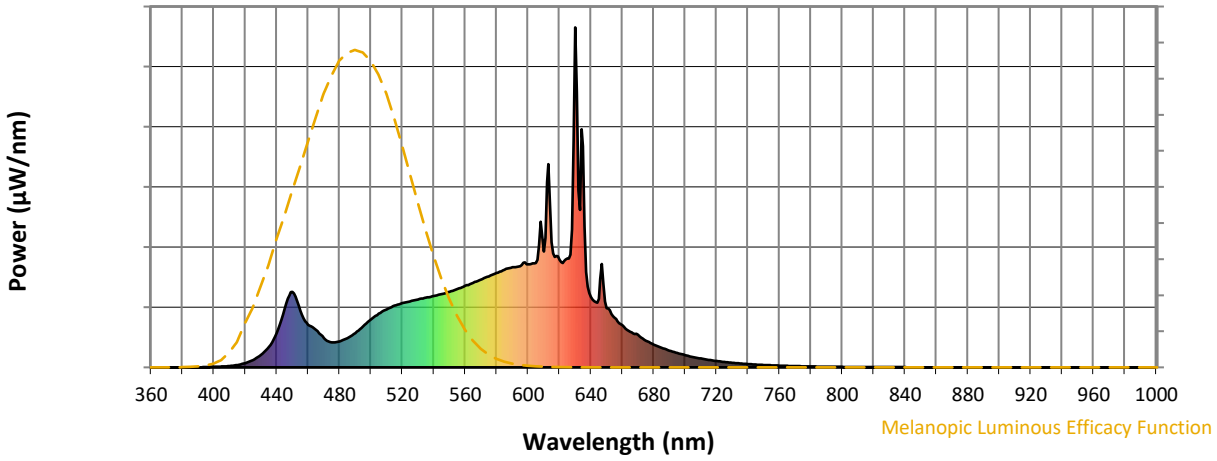


Scotopic Lumens: NR **S/P: 1.44**

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.85**

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	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	141	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	158	NR	635	651	NR	765	4	NR	895	0	NR
380	0	NR	510	171	NR	640	207	NR	770	4	NR	900	0	NR
385	0	NR	515	182	NR	645	201	NR	775	3	NR	905	0	NR
390	0	NR	520	189	NR	650	174	NR	780	3	NR	910	0	NR
395	1	NR	525	194	NR	655	146	NR	785	2	NR	915	0	NR
400	1	NR	530	199	NR	660	124	NR	790	2	NR	920	0	NR
405	3	NR	535	205	NR	665	105	NR	795	2	NR	925	0	NR
410	4	NR	540	210	NR	670	96	NR	800	1	NR	930	0	NR
415	7	NR	545	216	NR	675	79	NR	805	1	NR	935	0	NR
420	13	NR	550	222	NR	680	67	NR	810	1	NR	940	0	NR
425	22	NR	555	230	NR	685	58	NR	815	1	NR	945	0	NR
430	37	NR	560	240	NR	690	49	NR	820	1	NR	950	0	NR
435	60	NR	565	248	NR	695	42	NR	825	1	NR	955	0	NR
440	101	NR	570	258	NR	700	36	NR	830	1	NR	960	0	NR
445	172	NR	575	268	NR	705	30	NR	835	1	NR	965	0	NR
450	223	NR	580	278	NR	710	26	NR	840	1	NR	970	0	NR
455	167	NR	585	287	NR	715	22	NR	845	0	NR	975	0	NR
460	126	NR	590	295	NR	720	19	NR	850	0	NR	980	0	NR
465	111	NR	595	298	NR	725	16	NR	855	0	NR	985	0	NR
470	86	NR	600	303	NR	730	14	NR	860	0	NR	990	0	NR
475	74	NR	605	307	NR	735	12	NR	865	0	NR	995	0	NR
480	77	NR	610	341	NR	740	10	NR	870	0	NR	1000	0	NR
485	86	NR	615	368	NR	745	8	NR	875	0	NR			

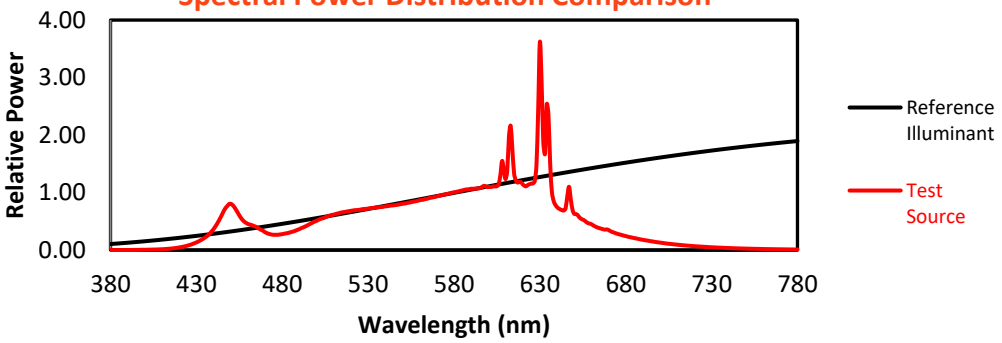
REPORT NUMBER: SP1-2506-472-5

TM-30-18

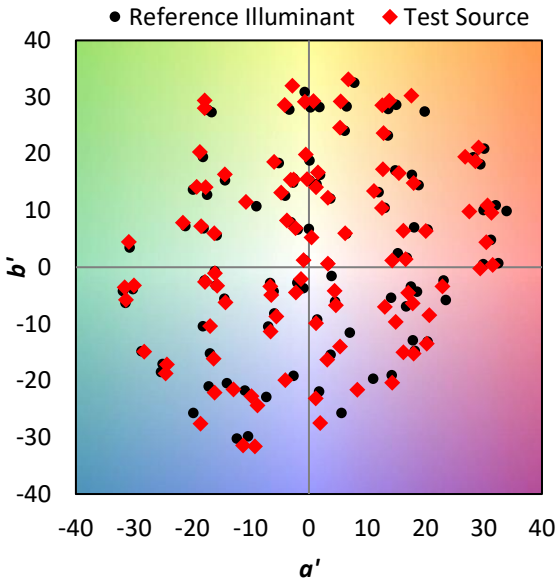
Summary

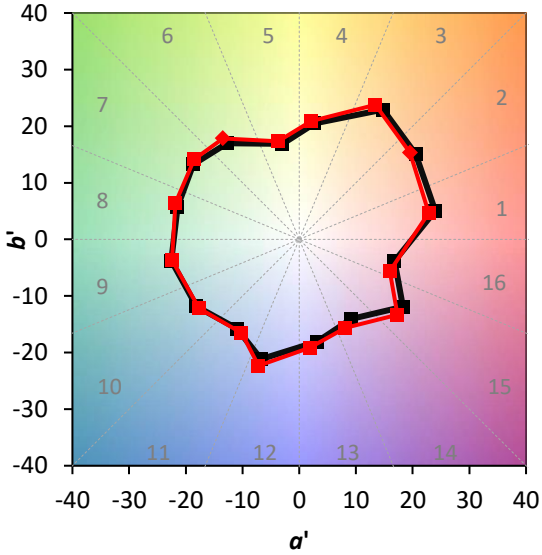
R_f = 91.3
R_g = 102
CIE R_a = 94.4
R_9 = 61.4

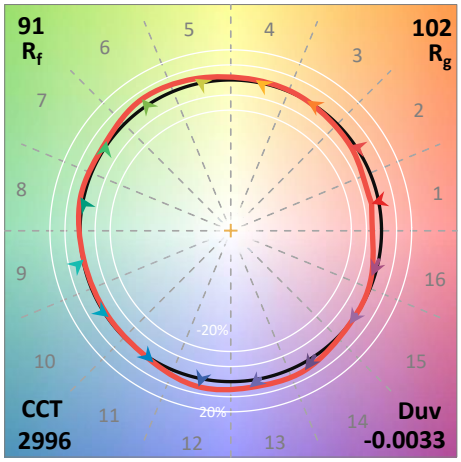
Spectral Power Distribution Comparison

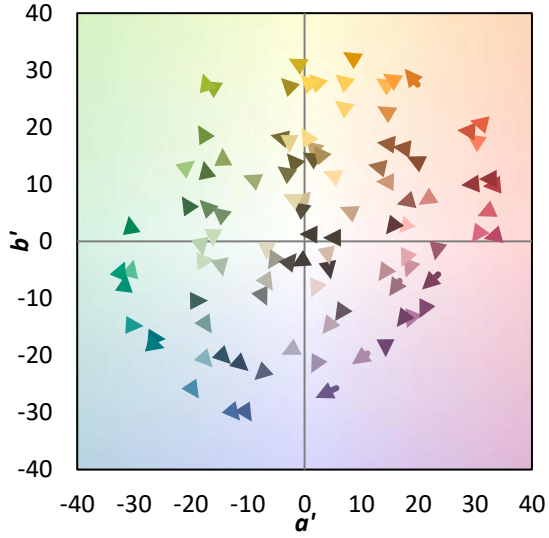


Color Vector Graphics







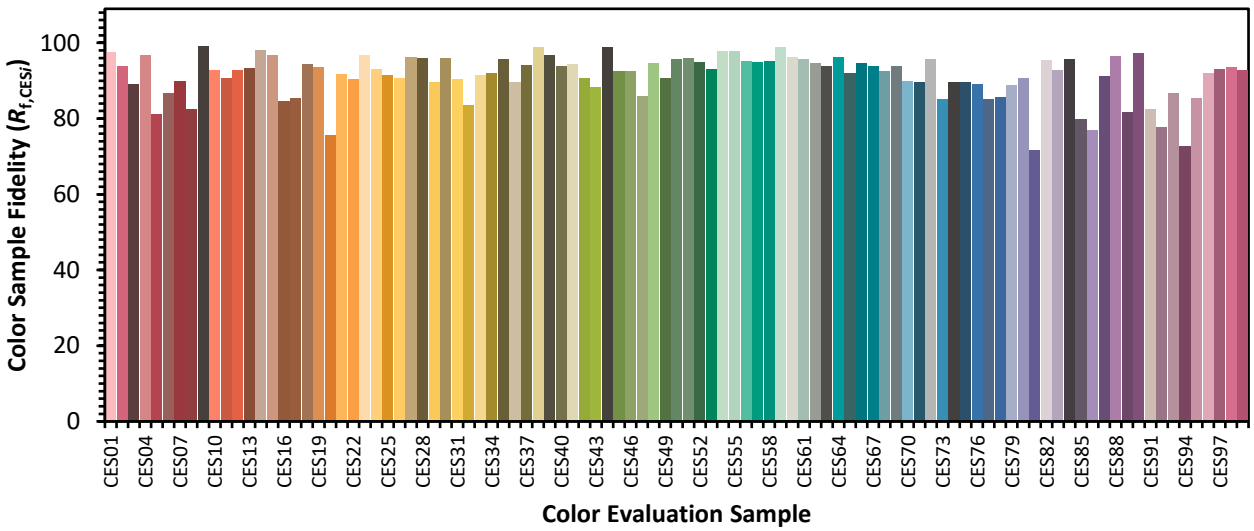


REPORT NUMBER: SP1-2506-472-5

TM-30-18

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

CES01 = 86	CES26 = 91	CES51 = 96	CES76 = 89
CES02 = 63	CES27 = 96	CES52 = 95	CES77 = 85
CES03 = 32	CES28 = 96	CES53 = 93	CES78 = 86
CES04 = 70	CES29 = 90	CES54 = 98	CES79 = 89
CES05 = 51	CES30 = 96	CES55 = 98	CES80 = 91
CES06 = 51	CES31 = 90	CES56 = 95	CES81 = 72
CES07 = 44	CES32 = 84	CES57 = 95	CES82 = 95
CES08 = 42	CES33 = 91	CES58 = 95	CES83 = 93
CES09 = 29	CES34 = 92	CES59 = 99	CES84 = 96
CES10 = 76	CES35 = 96	CES60 = 96	CES85 = 80
CES11 = 59	CES36 = 90	CES61 = 96	CES86 = 77
CES12 = 65	CES37 = 94	CES62 = 95	CES87 = 91
CES13 = 44	CES38 = 99	CES63 = 94	CES88 = 96
CES14 = 74	CES39 = 97	CES64 = 96	CES89 = 82
CES15 = 72	CES40 = 94	CES65 = 92	CES90 = 97
CES16 = 48	CES41 = 94	CES66 = 95	CES91 = 82
CES17 = 50	CES42 = 91	CES67 = 94	CES92 = 78
CES18 = 57	CES43 = 88	CES68 = 93	CES93 = 87
CES19 = 72	CES44 = 99	CES69 = 94	CES94 = 73
CES20 = 67	CES45 = 93	CES70 = 90	CES95 = 85
CES21 = 86	CES46 = 93	CES71 = 90	CES96 = 92
CES22 = 79	CES47 = 86	CES72 = 96	CES97 = 93
CES23 = 92	CES48 = 95	CES73 = 85	CES98 = 94
CES24 = 91	CES49 = 91	CES74 = 90	CES99 = 93
CES25 = 72	CES50 = 96	CES75 = 90	



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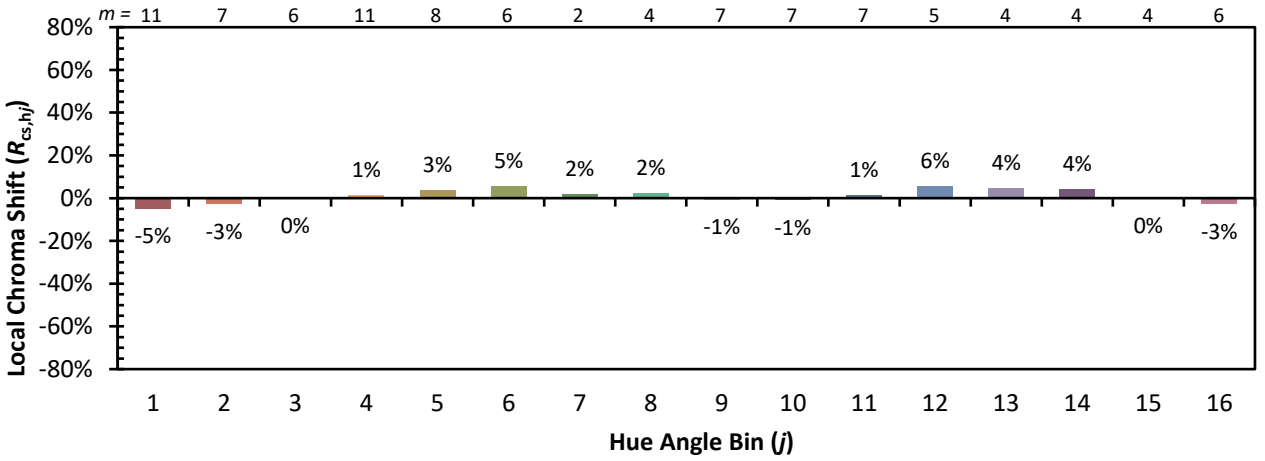
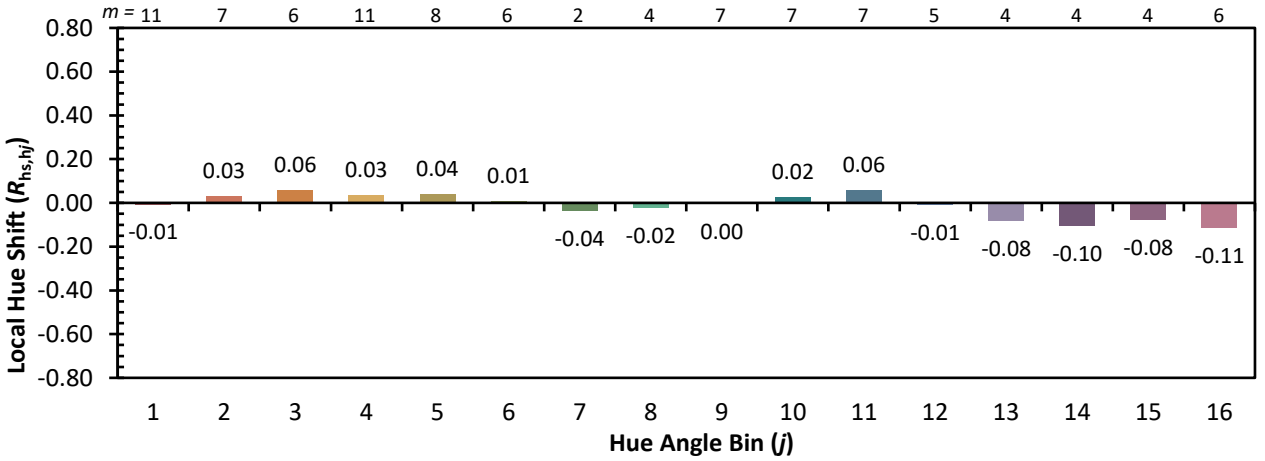
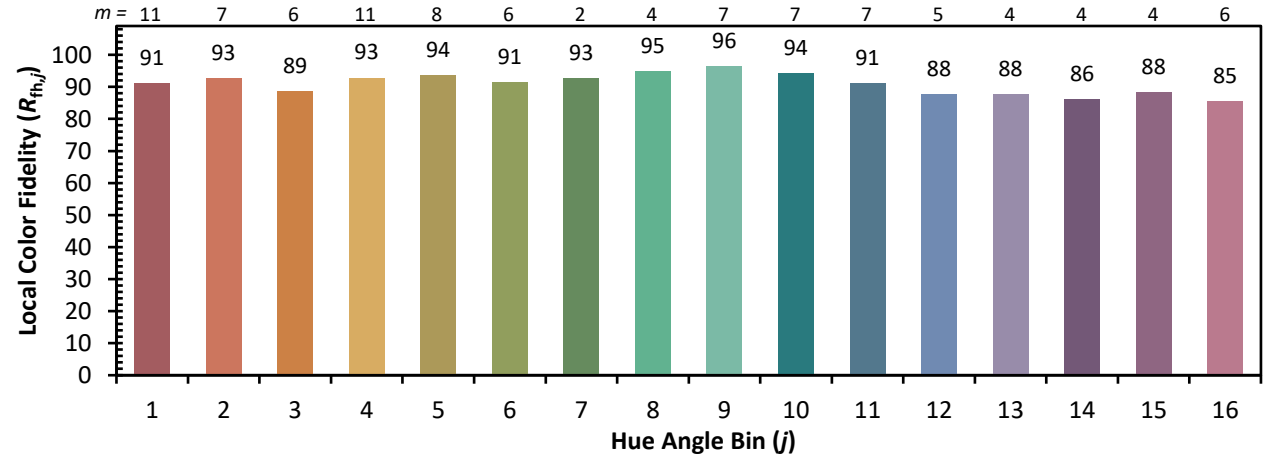
Color Rendition by Hue-Angle Bin







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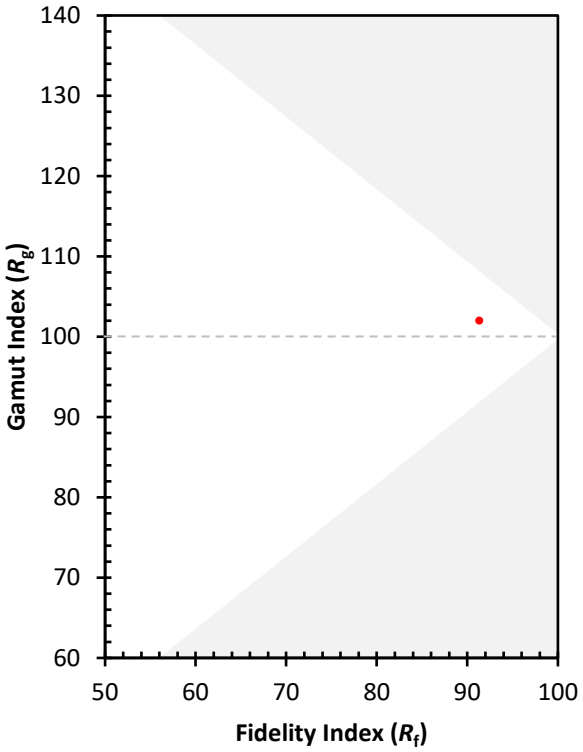
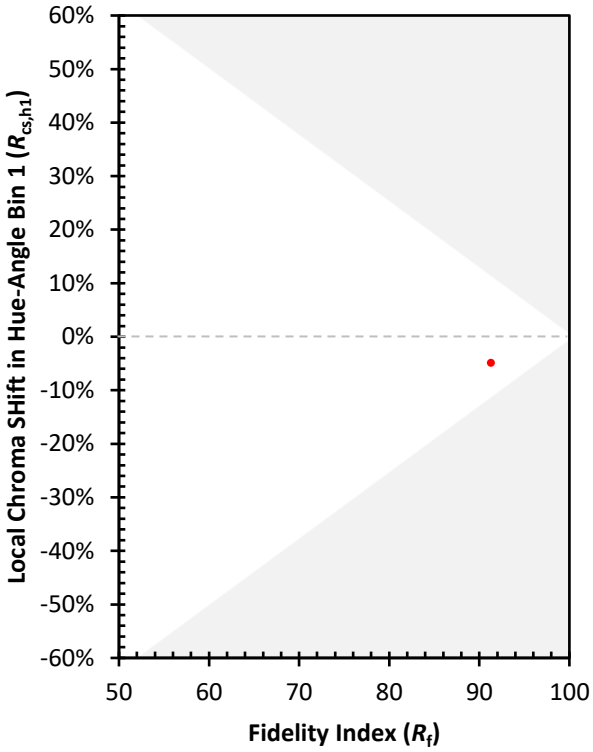
Measure Comparisons





(END OF REPORT)