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: P1433613

Luminaire Tested: EHBR1-48-UNV-TASM-L935-UPL18

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:	P1433613
	REPORT IS A COMBINATION OF REPORTS P1431838 AND P1431635
Test Lab:	INNOVATION CENTER
Issue Date:	3/20/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	EHBR1-48-UNV-TASM-L935-UPL18
Description:	Elevate Round Highbay at, 48000 lumens, 3500K 90CRI LEDs with TASM lens
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	44698.5 lumens
Efficiency:	N/A
Efficacy:	165.2 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):	270.5
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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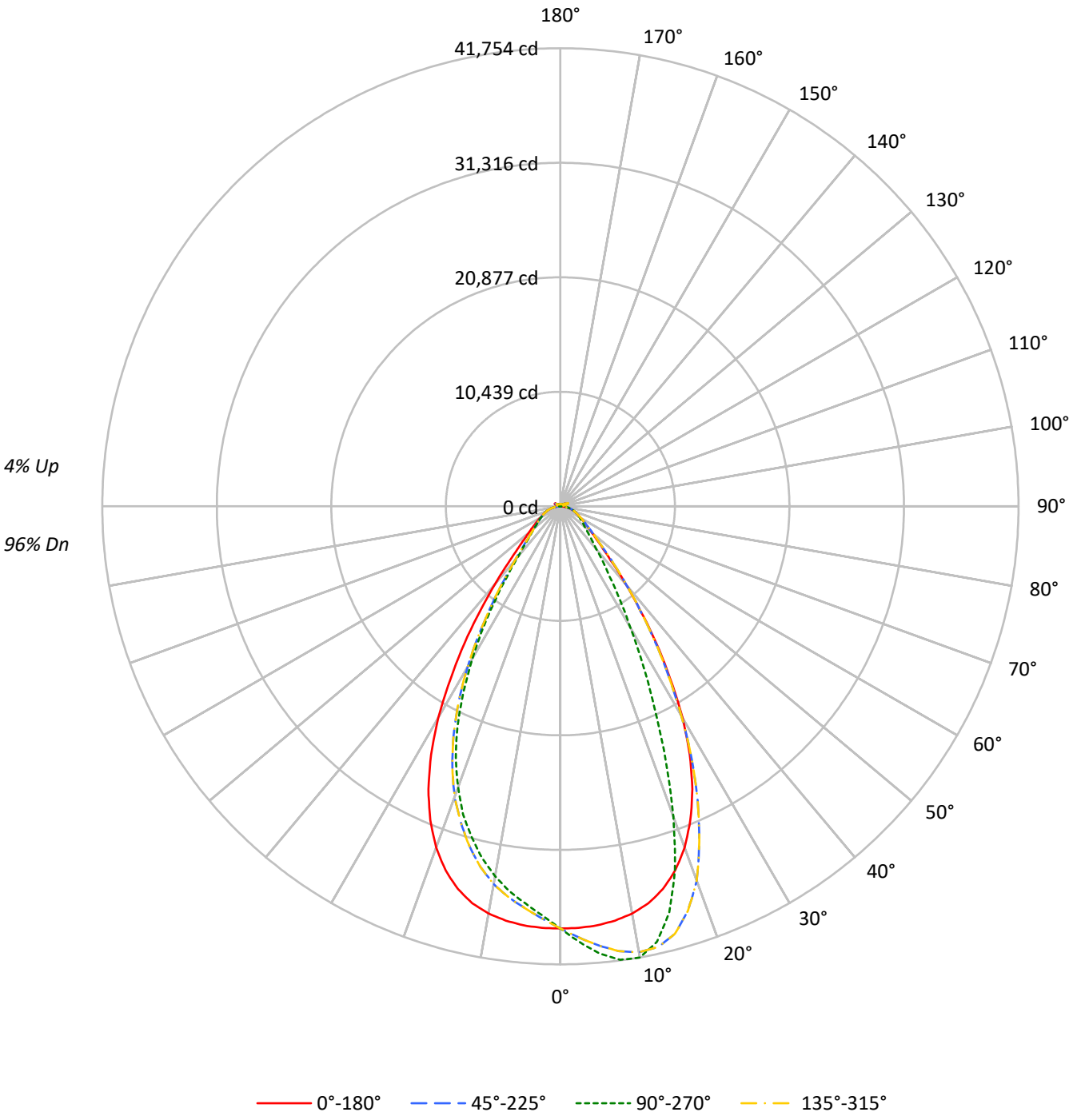
Luminous Intensity Polar Plot



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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	104	104	104	99	99	99	96
1	111	108	104	102	108	105	102	100	100	98	96	96	94	92	92	90	89	87
2	104	98	93	89	101	96	91	88	92	88	85	88	85	83	85	83	80	78
3	98	90	84	79	95	88	83	78	85	80	76	82	78	75	79	76	73	71
4	92	83	76	71	89	81	75	71	79	73	69	76	72	68	74	70	67	65
5	86	77	70	65	84	75	69	64	73	67	63	71	66	62	69	65	61	60
6	81	71	64	59	80	70	64	59	68	62	58	66	61	57	64	60	57	55
7	77	66	59	55	75	65	59	54	64	58	54	62	57	53	61	56	53	51
8	73	62	55	51	71	61	55	50	60	54	50	58	53	49	57	52	49	47
9	69	58	52	47	68	57	51	47	56	51	47	55	50	46	54	49	46	44
10	65	55	48	44	64	54	48	44	53	47	44	52	47	43	51	46	43	41

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	180704	180704	180704	180704
5°	179605	191605	179605	170284
10°	177397	196524	177397	161160
15°	172159	182632	172159	148868
20°	161012	146446	161012	132600
25°	142508	101466	142508	111124
30°	115711	66011	115711	83143
35°	82992	42750	82992	55351
40°	53657	29466	53657	34907
45°	34045	22824	34045	24871
50°	25283	19395	25283	20717
55°	20642	17668	20642	18287
60°	17874	16830	17874	16932
65°	16294	16231	16294	16162
70°	15444	15904	15444	15698
75°	14443	15385	14443	14924
80°	12687	14525	12687	13580
85°	8208	10373	8208	9890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
Vertical Angle: 45°
Luminance: 47865 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3658.8	8.2
10°-20°	9954.1	22.3
20°-30°	11674.1	26.1
30°-40°	8118.6	18.2
40°-50°	4034.6	9.0
50°-60°	2413.1	5.4
60°-70°	1698.4	3.8
70°-80°	1094.1	2.4
80°-90°	350.5	0.8
90°-100°	46.0	0.1
100°-110°	293.9	0.7
110°-120°	541.7	1.2
120°-130°	323.0	0.7
130°-140°	196.8	0.4
140°-150°	137.5	0.3
150°-160°	91.2	0.2
160°-170°	53.8	0.1
170°-180°	18.2	0.0
0°-30°	25287.0	56.6
0°-40°	33405.7	74.7
0°-60°	39853.3	89.2
0°-90°	42996.3	96.2
90°-120°	881.7	2.0
90°-150°	1539.0	3.4
90°-180°	1702.0	3.8
0°-180°	44698.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	38480	38480	38480	38480	38480	
5°	38348	40911	38348	36358	38348	3639
15°	36118	38315	36118	31232	36118	10094
25°	28459	20263	28459	22191	28459	12884
35°	15232	7846	15232	10159	15232	9509
45°	5508	3693	5508	4024	5508	4507
55°	2790	2388	2790	2471	2790	2551
65°	1701	1694	1701	1687	1701	1708
75°	1017	1084	1017	1051	1017	1068
85°	282	356	282	340	282	314
90°	13	18	13	13	13	19
95°	25	26	25	21	25	26
105°	135	72	135	103	135	182
115°	576	495	576	468	576	525
125°	370	390	370	338	370	341
135°	236	274	236	248	236	187
145°	216	226	216	210	216	135
155°	194	203	194	190	194	91
165°	188	197	188	186	188	54
175°	192	198	192	188	192	18
180°	192	192	192	192	192	

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TEST NUMBER: P1433613
CATALOG NUMBER: EHBR1-48-UNV-TASM-L935-UPL18

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	38479.7	38479.7	38479.7	38479.7	*38479.7*	38479.7	38479.7	38479.7	38479.7	38479.7	38479.7
2.5°	38457.4	38954.5	39357.1	39622.7	*39754.0*	39622.7	39357.1	38954.5	38457.4	37963.1	37623.2
5°	38348.5	39344.1	40187.7	40739.6	*40910.6*	40739.6	40187.7	39344.1	38348.5	37407.5	36783.4
7.5°	38087.9	39639.2	40892.6	41536.9	*41694.3*	41536.9	40892.6	39639.2	38087.9	36755.9	35967.3
10°	*37690.4*	*39825.4*	*41273.5*	*41735.4*	*41754.2*	*41735.4*	*41273.5*	*39825.4*	*37690.4*	*35895.8*	*34965.8*
12.5°	37056.1	39759.1	41145.8	40994.3	*40650.2*	40994.3	41145.8	39759.1	37056.1	34845.3	33672.1
15°	36118.1	39365.8	40337.0	39103.9	*38315.2*	39103.9	40337.0	39365.8	36118.1	33426.7	32065.9
17.5°	34796.2	38629.8	38648.5	36209.0	*34721.1*	36209.0	38648.5	38629.8	34796.2	31692.1	30193.4
20°	33092.6	37449.4	36323.7	31861.7	*30098.9*	31861.7	36323.7	37449.4	33092.6	29641.4	28170.9
22.5°	30956.8	35857.6	33086.1	27488.3	*25083.4*	27488.3	33086.1	35857.6	30956.8	27256.7	25726.3
25°	28458.8	33907.3	29603.2	22723.1	*20262.6*	22723.1	29603.2	33907.3	28458.8	24415.2	23031.3
27.5°	25520.6	31435.2	25894.4	18568.4	*16298.4*	18568.4	25894.4	31435.2	25520.6	21481.4	20067.9
30°	22257.0	28266.2	22034.8	14787.5	*12697.1*	14787.5	22034.8	28266.2	22257.0	18185.3	16919.7
32.5°	18603.1	25159.8	18328.2	11848.6	*10077.9*	11848.6	18328.2	25159.8	18603.1	15040.1	13717.5
35°	15232.0	21273.6	14986.0	9310.2	*7846.2*	9310.2	14986.0	21273.6	15232.0	12070.9	10772.1
37.5°	11953.9	17601.6	11946.1	7497.0	*6364.1*	7497.0	11946.1	17601.6	11953.9	9384.5	8330.4
40°	9300.1	13762.9	9360.0	5984.6	*5107.2*	5984.6	9360.0	13762.9	9300.1	7140.5	6465.8
42.5°	7046.7	10523.9	7357.0	4911.6	*4338.0*	4911.6	7357.0	10523.9	7046.7	5626.0	5120.9
45°	5508.3	7744.4	5745.0	4143.9	*3692.9*	4143.9	5745.0	7744.4	5508.3	4530.7	4191.5
47.5°	4485.9	5985.3	4656.2	3554.4	*3238.3*	3554.4	4656.2	5985.3	4485.9	3832.1	3578.2
50°	3768.0	4592.6	3866.0	3102.6	*2890.6*	3102.6	3866.0	4592.6	3768.0	3281.6	3112.1
52.5°	3236.9	3745.6	3292.4	2765.0	*2622.1*	2765.0	3292.4	3745.6	3236.9	2871.1	2765.8
55°	2789.5	3148.9	2863.1	2486.5	*2387.6*	2486.5	2863.1	3148.9	2789.5	2555.0	2477.1
57.5°	2449.7	2671.2	2486.5	2249.1	*2183.4*	2249.1	2486.5	2671.2	2449.7	2273.6	2231.7
60°	2148.8	2313.3	2194.2	2042.0	*2023.2*	2042.0	2194.2	2313.3	2148.8	2045.6	2018.2
62.5°	1917.2	2021.1	1940.3	1855.8	*1839.2*	1855.8	1940.3	2021.1	1917.2	1837.8	1842.8
65°	1700.7	1797.4	1733.9	1688.4	*1694.2*	1688.4	1733.9	1797.4	1700.7	1663.9	1671.8
67.5°	1533.3	1583.8	1556.3	1530.4	*1537.0*	1530.4	1556.3	1583.8	1533.3	1497.3	1509.5
70°	1355.1	1409.2	1381.1	1384.7	*1395.5*	1384.7	1381.1	1409.2	1355.1	1344.3	1353.6
72.5°	1184.8	1226.6	1217.3	1225.9	*1237.5*	1225.9	1217.3	1226.6	1184.8	1183.3	1184.0
75°	1017.4	1049.2	1053.4	1065.8	*1083.8*	1065.8	1053.4	1049.2	1017.4	1006.6	1019.5
77.5°	834.8	870.9	884.7	901.3	*927.9*	901.3	884.7	870.9	834.8	842.1	848.5
80°	667.4	684.0	714.4	726.6	*764.1*	726.6	714.4	684.0	667.4	655.2	664.5
82.5°	488.5	503.6	529.7	552.7	*574.3*	552.7	529.7	503.6	488.5	482.7	483.4
85°	282.1	305.3	322.6	349.9	*356.5*	349.9	322.6	305.3	282.1	288.7	282.1
87.5°	98.9	106.0	121.2	132.1	*132.8*	132.1	121.2	106.0	98.9	101.1	91.6
90°	12.8	21.8	37.4	22.9	*17.9*	22.9	37.4	21.8	12.8	22.1	34.2
92.5°	16.5	29.3	52.3	29.5	*22.5*	29.5	52.3	29.3	16.5	28.5	54.6
95°	24.7	35.8	66.3	32.2	*26.2*	32.2	66.3	35.8	24.7	37.9	76.0
97.5°	37.7	44.1	74.6	34.1	*30.9*	34.1	74.6	44.1	37.7	46.2	87.1
100°	49.8	49.8	135.0	38.7	*34.6*	38.7	135.0	49.8	49.8	57.2	135.4
102.5°	74.9	96.9	311.3	74.8	*41.1*	74.8	311.3	96.9	74.9	106.4	286.9
105°	135.2	219.5	546.3	187.2	*72.5*	187.2	546.3	219.5	135.2	221.6	510.7
107.5°	255.0	408.1	703.3	365.5	*162.6*	365.5	703.3	408.1	255.0	391.6	673.9
110°	407.4	569.7	767.4	499.3	*324.2*	499.3	767.4	569.7	407.4	537.5	706.5

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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°	530.0	634.8	749.7	553.1	*446.8*	553.1	749.7	634.8	530.0	593.2	676.8
115°	576.2	625.5	669.9	551.3	*495.1*	551.3	669.9	625.5	576.2	579.2	604.3
117.5°	556.8	572.5	578.9	517.9	*497.9*	517.9	578.9	572.5	556.8	521.4	513.3
120°	502.8	496.4	488.5	468.6	*470.0*	468.6	488.5	496.4	502.8	455.5	428.8
122.5°	435.8	421.8	413.3	419.2	*432.0*	419.2	413.3	421.8	435.8	388.4	368.2
125°	369.8	355.9	361.1	376.4	*390.0*	376.4	361.1	355.9	369.8	330.6	325.2
127.5°	314.8	308.3	322.9	340.2	*351.8*	340.2	322.9	308.3	314.8	289.8	294.6
130°	275.6	276.7	296.0	311.2	*318.4*	311.2	296.0	276.7	275.6	263.6	275.8
132.5°	251.2	257.9	276.3	289.7	*294.1*	289.7	276.3	257.9	251.2	248.2	263.3
135°	236.2	245.9	263.1	271.3	*273.6*	271.3	263.1	245.9	236.2	237.8	251.2
137.5°	227.6	237.3	250.1	257.1	*256.0*	257.1	250.1	237.3	227.6	231.1	241.5
140°	222.8	232.5	238.0	246.0	*245.6*	246.0	238.0	232.5	222.8	224.6	233.0
142.5°	217.9	226.7	229.5	235.6	*234.5*	235.6	229.5	226.7	217.9	219.8	225.3
145°	215.9	222.6	220.0	227.2	*225.8*	227.2	220.0	222.6	215.9	216.1	219.6
147.5°	211.2	216.1	213.3	219.6	*218.2*	219.6	213.3	216.1	211.2	211.2	212.8
150°	206.3	210.0	205.6	212.8	*213.3*	212.8	205.6	210.0	206.3	205.4	207.0
152.5°	199.6	203.3	199.6	207.7	*207.5*	207.7	199.6	203.3	199.6	198.7	200.3
155°	194.5	196.4	194.5	202.7	*203.4*	202.7	194.5	196.4	194.5	193.8	195.2
157.5°	191.3	193.0	192.1	199.3	*200.0*	199.3	192.1	193.0	191.3	191.3	192.1
160°	189.6	191.4	191.2	197.5	*198.2*	197.5	191.2	191.4	189.6	189.8	190.5
162.5°	189.2	189.2	189.7	195.9	*197.4*	195.9	189.7	189.2	189.2	189.2	190.1
165°	188.5	189.5	189.1	194.2	*196.6*	194.2	189.1	189.5	188.5	188.8	188.8
167.5°	189.1	188.2	189.6	194.6	*196.9*	194.6	189.6	188.2	189.1	189.2	189.2
170°	188.0	188.7	189.2	194.1	*196.5*	194.1	189.2	188.7	188.0	188.9	189.1
172.5°	190.1	190.1	190.4	194.4	*197.7*	194.4	190.4	190.1	190.1	190.3	191.2
175°	191.6	191.3	191.9	194.9	*198.2*	194.9	191.9	191.3	191.6	190.9	190.9
177.5°	190.6	192.1	193.4	196.6	*200.8*	196.6	193.4	192.1	190.6	190.9	190.9
180°	192.1	192.1	192.1	192.1	*192.1*	192.1	192.1	192.1	192.1	192.1	192.1

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	38479.7	38479.7	38479.7	38479.7	38479.7	38479.7
2.5°	37362.0	37337.5	37362.0	37623.2	37963.1	38457.4
5°	36494.0	36358.3	36494.0	36783.4	37407.5	38348.5
7.5°	35483.1	35404.5	35483.1	35967.3	36755.9	38087.9
10°	*34418.8*	*34240.6*	*34418.8*	*34965.8*	*35895.8*	*37690.4*
12.5°	33107.1	32871.1	33107.1	33672.1	34845.3	37056.1
15°	31438.8	31231.8	31438.8	32065.9	33426.7	36118.1
17.5°	29648.7	29461.1	29648.7	30193.4	31692.1	34796.2
20°	27400.3	27253.1	27400.3	28170.9	29641.4	33092.6
22.5°	25041.5	24903.7	25041.5	25726.3	27256.7	30956.8
25°	22266.4	22191.4	22266.4	23031.3	24415.2	28458.8
27.5°	19267.7	19140.0	19267.7	20067.9	21481.4	25520.6
30°	16203.9	15992.6	16203.9	16919.7	18185.3	22257.0
32.5°	13207.3	13055.0	13207.3	13717.5	15040.1	18603.1
35°	10311.0	10158.8	10311.0	10772.1	12070.9	15232.0
37.5°	8034.5	7765.3	8034.5	8330.4	9384.5	11953.9
40°	6093.5	6050.2	6093.5	6465.8	7140.5	9300.1
42.5°	4960.7	4843.1	4960.7	5120.9	5626.0	7046.7
45°	4070.3	4024.1	4070.3	4191.5	4530.7	5508.3
47.5°	3500.2	3520.5	3500.2	3578.2	3832.1	4485.9
50°	3075.3	3087.5	3075.3	3112.1	3281.6	3768.0
52.5°	2762.1	2751.3	2762.1	2765.8	2871.1	3236.9
55°	2485.1	2471.3	2485.1	2477.1	2555.0	2789.5
57.5°	2242.6	2252.7	2242.6	2231.7	2273.6	2449.7
60°	2026.1	2035.5	2026.1	2018.2	2045.6	2148.8
62.5°	1843.6	1849.4	1843.6	1842.8	1837.8	1917.2
65°	1680.5	1687.0	1680.5	1671.8	1663.9	1700.7
67.5°	1524.6	1524.6	1524.6	1509.5	1497.3	1533.3
70°	1378.2	1377.4	1378.2	1353.6	1344.3	1355.1
72.5°	1202.1	1219.5	1202.1	1184.0	1183.3	1184.8
75°	1031.1	1051.3	1031.1	1019.5	1006.6	1017.4
77.5°	857.9	888.9	857.9	848.5	842.1	834.8
80°	680.4	714.4	680.4	664.5	655.2	667.4
82.5°	502.9	528.2	502.9	483.4	482.7	488.5
85°	299.5	339.9	299.5	282.1	288.7	282.1
87.5°	96.0	122.6	96.0	91.6	101.1	98.9
90°	20.2	12.8	20.2	34.2	22.1	12.8
92.5°	30.5	18.4	30.5	54.6	28.5	16.5
95°	35.1	21.1	35.1	76.0	37.9	24.7
97.5°	38.8	27.5	38.8	87.1	46.2	37.7
100°	45.3	35.8	45.3	135.4	57.2	49.8
102.5°	95.4	60.0	95.4	286.9	106.4	74.9
105°	200.5	102.7	200.5	510.7	221.6	135.2
107.5°	358.4	177.0	358.4	673.9	391.6	255.0
110°	475.4	329.4	475.4	706.5	537.5	407.4

TEST NUMBER: P1433613
CATALOG NUMBER: EHBR1-48-UNV-TASM-L935-UPL18

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	510.7	444.6	510.7	676.8	593.2	530.0
115°	491.2	467.8	491.2	604.3	579.2	576.2
117.5°	448.5	452.0	448.5	513.3	521.4	556.8
120°	399.2	418.5	399.2	428.8	455.5	502.8
122.5°	354.5	376.8	354.5	368.2	388.4	435.8
125°	315.4	338.4	315.4	325.2	330.6	369.8
127.5°	288.5	304.1	288.5	294.6	289.8	314.8
130°	267.8	280.9	267.8	275.8	263.6	275.6
132.5°	253.7	262.1	253.7	263.3	248.2	251.2
135°	241.4	248.2	241.4	251.2	237.8	236.2
137.5°	231.0	236.8	231.0	241.5	231.1	227.6
140°	222.2	227.1	222.2	233.0	224.6	222.8
142.5°	212.7	216.4	212.7	225.3	219.8	217.9
145°	206.7	209.5	206.7	219.6	216.1	215.9
147.5°	201.7	203.5	201.7	212.8	211.2	211.2
150°	196.6	198.4	196.6	207.0	205.4	206.3
152.5°	190.8	193.4	190.8	200.3	198.7	199.6
155°	187.6	190.1	187.6	195.2	193.8	194.5
157.5°	186.3	188.6	186.3	192.1	191.3	191.3
160°	185.6	187.3	185.6	190.5	189.8	189.6
162.5°	184.3	186.0	184.3	190.1	189.2	189.2
165°	184.8	185.5	184.8	188.8	188.8	188.5
167.5°	184.6	185.5	184.6	189.2	189.2	189.1
170°	185.3	186.1	185.3	189.1	188.9	188.0
172.5°	186.8	187.5	186.8	191.2	190.3	190.1
175°	187.3	188.1	187.3	190.9	190.9	191.6
177.5°	189.0	189.7	189.0	190.9	190.9	190.6
180°	192.1	192.1	192.1	192.1	192.1	192.1

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

Scaled Data Report

TEST NUMBER: P1433613
CATALOG NUMBER: EHBR1-48-UNV-TASM-L935-UPL18

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	18.92	20.07	19.36	20.47	20.88	18.24	19.39	18.68	19.78	20.20
	3H	20.47	21.49	20.92	21.91	22.37	20.09	21.11	20.54	21.52	21.99
	4H	21.11	22.06	21.58	22.49	22.97	20.87	21.83	21.35	22.26	22.74
	6H	21.59	22.47	22.08	22.92	23.41	21.52	22.39	22.00	22.84	23.33
	8H	21.74	22.57	22.24	23.04	23.54	21.74	22.57	22.24	23.04	23.54
	12H	21.82	22.61	22.32	23.07	23.59	21.87	22.66	22.37	23.12	23.64
4H	2H	19.34	20.29	19.81	20.72	21.20	18.82	19.77	19.29	20.20	20.68
	3H	21.14	21.93	21.62	22.41	22.90	20.88	21.66	21.36	22.15	22.64
	4H	21.92	22.62	22.42	23.11	23.65	21.79	22.49	22.29	22.99	23.52
	6H	22.53	23.14	23.06	23.66	24.22	22.56	23.17	23.09	23.69	24.24
	8H	22.73	23.30	23.26	23.81	24.37	22.83	23.40	23.37	23.92	24.48
	12H	22.83	23.33	23.39	23.89	24.45	23.00	23.50	23.55	24.05	24.62
8H	4H	22.17	22.73	22.70	23.25	23.81	22.07	22.64	22.60	23.15	23.72
	6H	22.91	23.37	23.48	23.94	24.51	22.97	23.43	23.54	24.00	24.57
	8H	23.18	23.59	23.76	24.17	24.75	23.33	23.74	23.91	24.32	24.90
	12H	23.35	23.71	23.93	24.27	24.93	23.58	23.94	24.16	24.50	25.16
12H	4H	22.18	22.68	22.73	23.23	23.79	22.08	22.58	22.63	23.13	23.70
	6H	22.95	23.36	23.54	23.94	24.53	23.02	23.43	23.60	24.01	24.59
	8H	23.27	23.63	23.85	24.19	24.85	23.42	23.78	24.00	24.35	25.00

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: SP1-2506-472-6

Test Date: 08/01/2025

Luminaire Tested: EHBR-60-L935-N

Data in this report applies to families of products including EHBR-60-L935-N

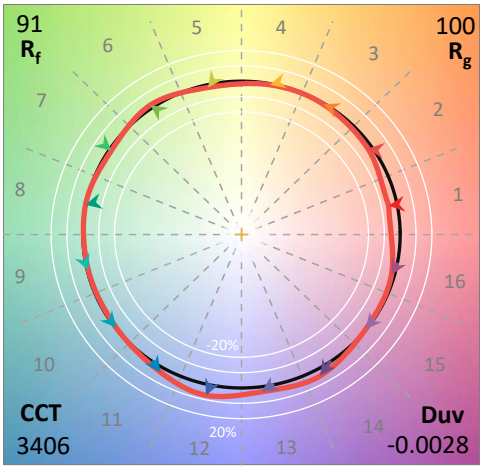
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2506-472-6
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-L935-N**
Description:	Elevate Round Highbay at, 60000 lumens, 3500K 90CRI LEDs with N lens

Spectral Parameters

CCT (K):	3406	CRI (Ra):	94.6		
CIE u':	0.2394	R1:	96.6	R9:	63.8
CIE v':	0.5094	R2:	98.4	R10:	94.7
Duv:	-0.0028	R3:	98.1	R11:	96.6
CIE x:	0.4076	R4:	95.8	R12:	80.9
CIE y:	0.3856	R5:	96.2	R13:	97.4
CIE z:	0.2068	R6:	95.4	R14:	98.3
Peak Wavelength (nm):	630	R7:	91.8	R15:	93.1
Dominant Wavelength (nm):	582	R8:	84.4		
Purity:	38.0517				
Rf:	91.3				
Rg:	100				



Test Conditions

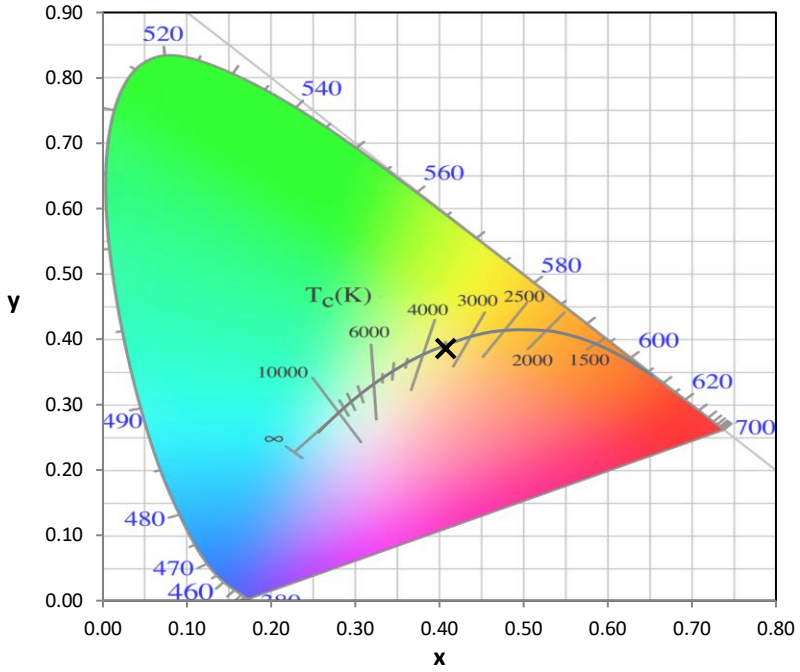
Stabilization Time:	35M
Operation Time:	1H 35M
Sphere Temperature (°C):	25.0

REPORT NUMBER: SP1-2506-472-6

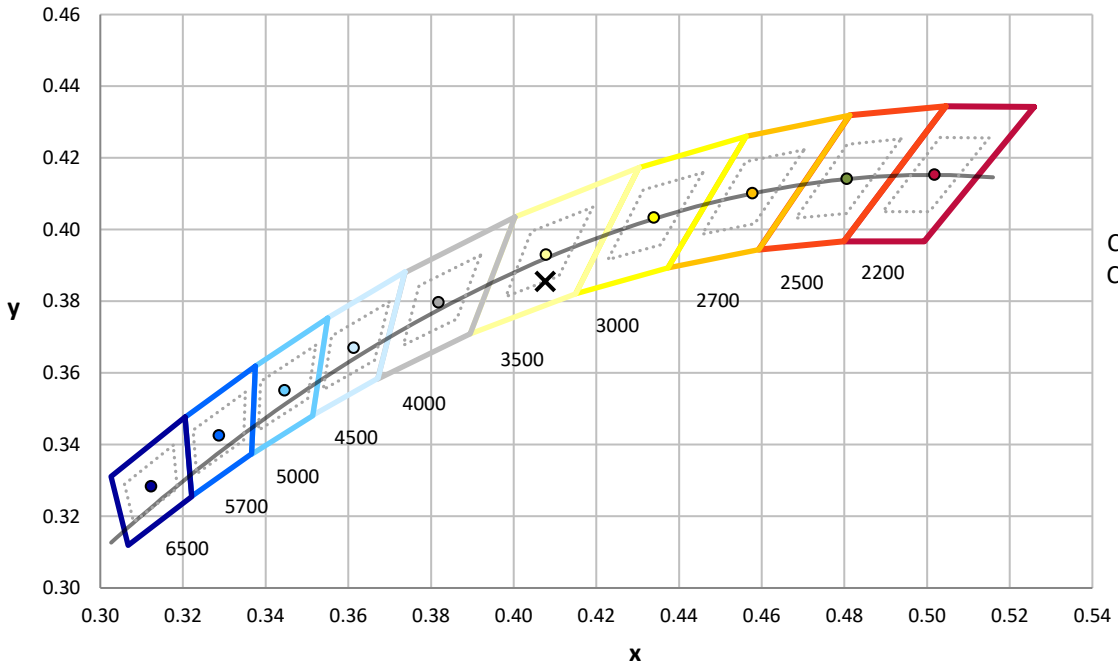
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	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: SP1-2506-472-6

CIE 1931 Chromaticity Diagram



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

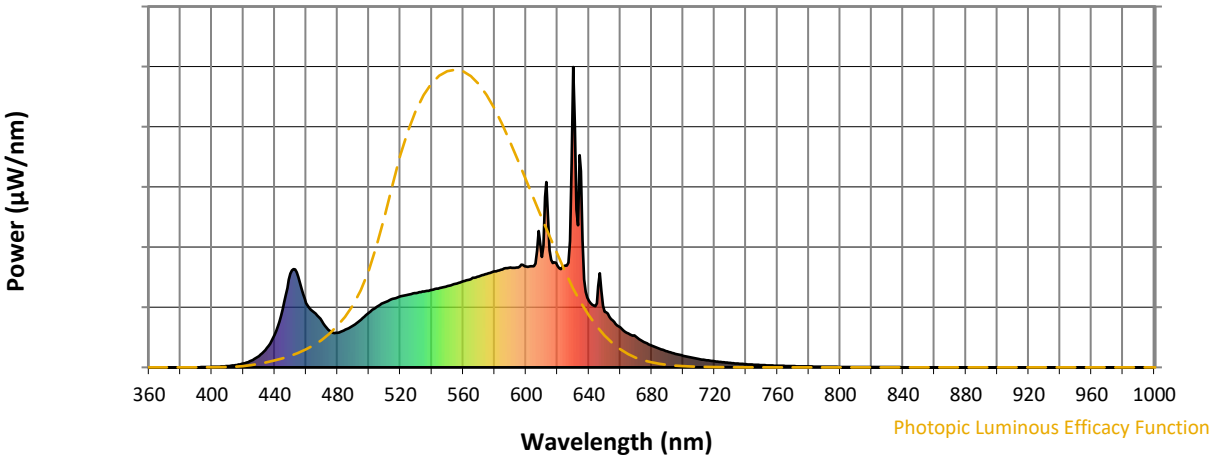


CCT = 3406K
CIE x = 0.4076
CIE y = 0.3856
Duv = -0.0028

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-6

Photopic Flux vs. Wavelength

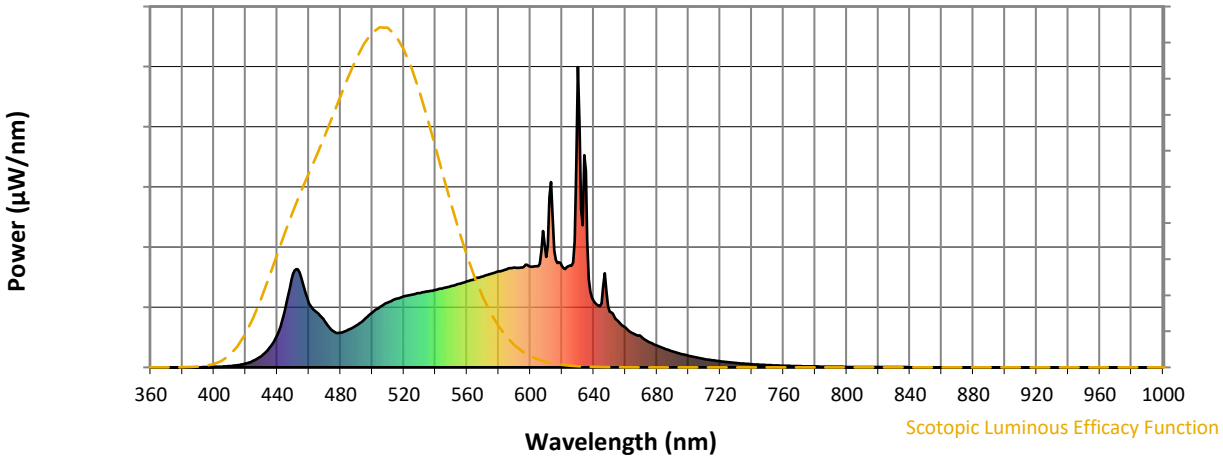


Photopic Lumens: NR

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-6

Scotopic Flux vs. Wavelength

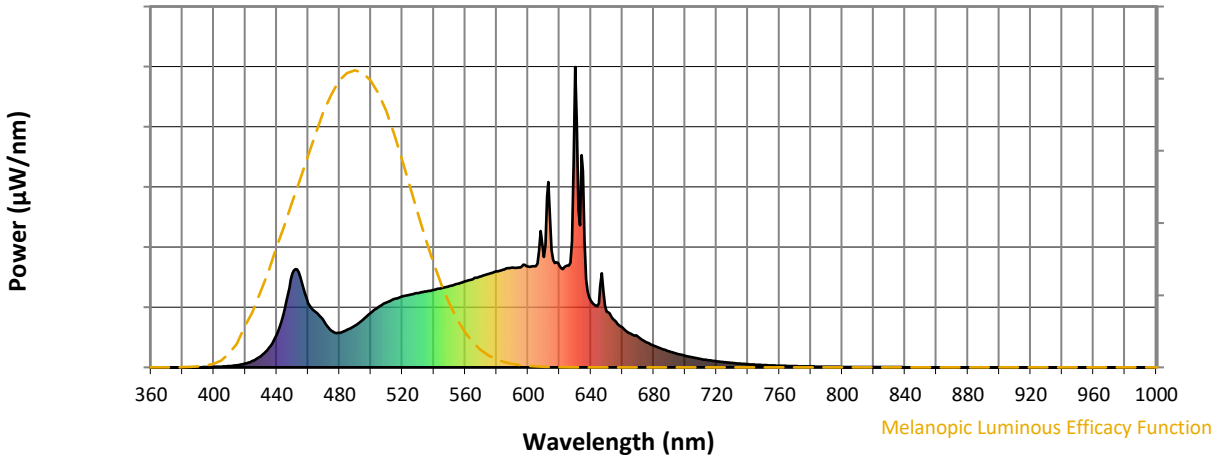


Scotopic Lumens: NR **S/P: 1.62**

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.3**

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	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	182	NR	630	1000	NR	760	5	NR	890	0	NR
375	0	NR	505	202	NR	635	653	NR	765	5	NR	895	0	NR
380	0	NR	510	216	NR	640	222	NR	770	4	NR	900	0	NR
385	0	NR	515	228	NR	645	214	NR	775	3	NR	905	0	NR
390	0	NR	520	236	NR	650	185	NR	780	3	NR	910	0	NR
395	1	NR	525	242	NR	655	157	NR	785	3	NR	915	0	NR
400	2	NR	530	248	NR	660	133	NR	790	2	NR	920	0	NR
405	3	NR	535	253	NR	665	113	NR	795	2	NR	925	0	NR
410	4	NR	540	258	NR	670	103	NR	800	2	NR	930	0	NR
415	7	NR	545	264	NR	675	85	NR	805	1	NR	935	0	NR
420	13	NR	550	270	NR	680	72	NR	810	1	NR	940	0	NR
425	22	NR	555	278	NR	685	62	NR	815	1	NR	945	0	NR
430	38	NR	560	286	NR	690	53	NR	820	1	NR	950	0	NR
435	65	NR	565	295	NR	695	45	NR	825	1	NR	955	0	NR
440	108	NR	570	303	NR	700	39	NR	830	1	NR	960	0	NR
445	193	NR	575	311	NR	705	33	NR	835	1	NR	965	0	NR
450	312	NR	580	319	NR	710	28	NR	840	1	NR	970	0	NR
455	300	NR	585	326	NR	715	24	NR	845	0	NR	975	0	NR
460	214	NR	590	332	NR	720	20	NR	850	0	NR	980	0	NR
465	184	NR	595	333	NR	725	17	NR	855	0	NR	985	0	NR
470	153	NR	600	336	NR	730	15	NR	860	0	NR	990	0	NR
475	122	NR	605	337	NR	735	12	NR	865	0	NR	995	0	NR
480	115	NR	610	367	NR	740	10	NR	870	0	NR	1000	0	NR
485	125	NR	615	390	NR	745	9	NR	875	0	NR			

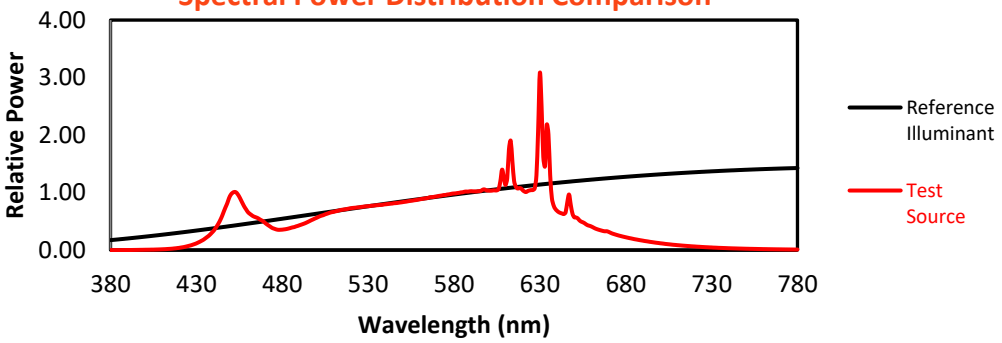
REPORT NUMBER: SP1-2506-472-6

TM-30-18

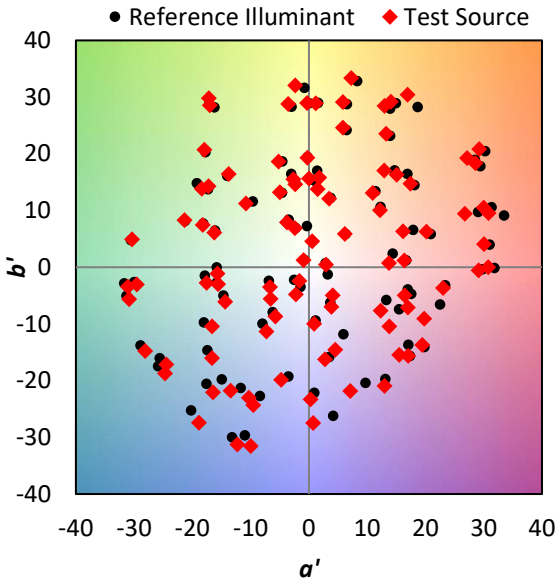
Summary

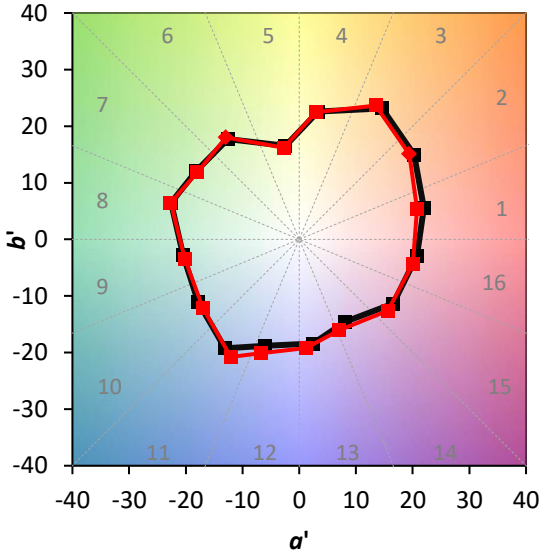
R_f = 91.3
R_g = 100
CIE R_a = 94.6
R_9 = 63.8

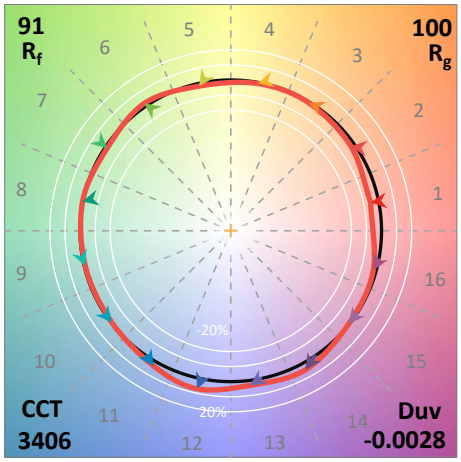
Spectral Power Distribution Comparison

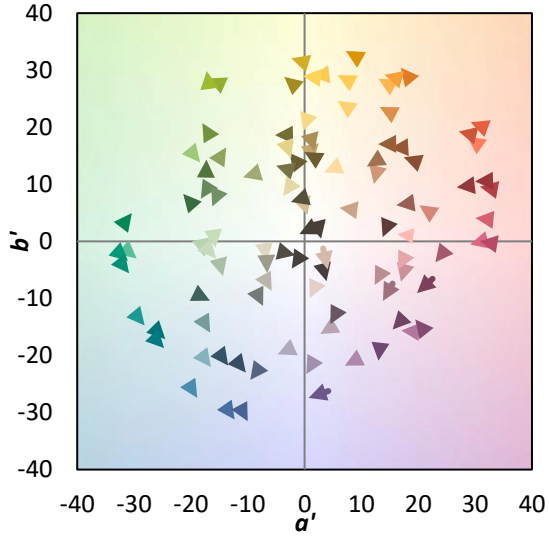


Color Vector Graphics







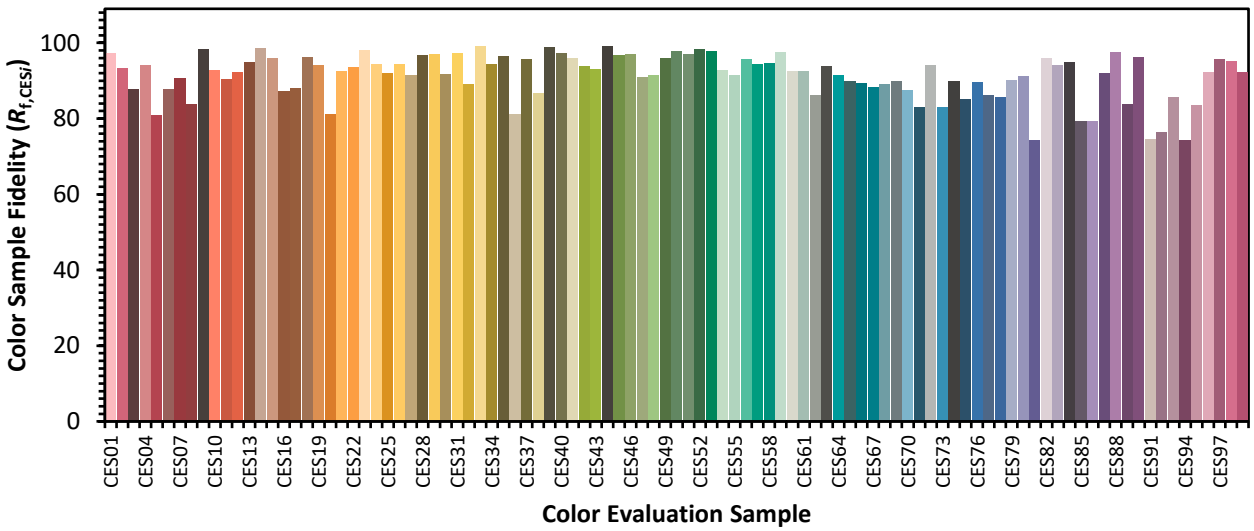


REPORT NUMBER: SP1-2506-472-6

TM-30-18

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

CES01 = 86	CES26 = 94	CES51 = 97	CES76 = 90
CES02 = 63	CES27 = 92	CES52 = 98	CES77 = 86
CES03 = 31	CES28 = 97	CES53 = 98	CES78 = 86
CES04 = 70	CES29 = 97	CES54 = 93	CES79 = 90
CES05 = 50	CES30 = 92	CES55 = 92	CES80 = 91
CES06 = 51	CES31 = 97	CES56 = 96	CES81 = 74
CES07 = 43	CES32 = 89	CES57 = 94	CES82 = 96
CES08 = 41	CES33 = 99	CES58 = 95	CES83 = 94
CES09 = 29	CES34 = 94	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 97	CES60 = 92	CES85 = 79
CES11 = 58	CES36 = 81	CES61 = 93	CES86 = 79
CES12 = 64	CES37 = 96	CES62 = 86	CES87 = 92
CES13 = 44	CES38 = 87	CES63 = 94	CES88 = 98
CES14 = 74	CES39 = 99	CES64 = 91	CES89 = 84
CES15 = 72	CES40 = 97	CES65 = 90	CES90 = 96
CES16 = 48	CES41 = 96	CES66 = 89	CES91 = 75
CES17 = 49	CES42 = 94	CES67 = 88	CES92 = 76
CES18 = 56	CES43 = 93	CES68 = 89	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 90	CES94 = 74
CES20 = 67	CES45 = 97	CES70 = 88	CES95 = 83
CES21 = 86	CES46 = 97	CES71 = 83	CES96 = 92
CES22 = 78	CES47 = 91	CES72 = 94	CES97 = 96
CES23 = 91	CES48 = 91	CES73 = 83	CES98 = 95
CES24 = 90	CES49 = 96	CES74 = 90	CES99 = 92
CES25 = 71	CES50 = 98	CES75 = 85	



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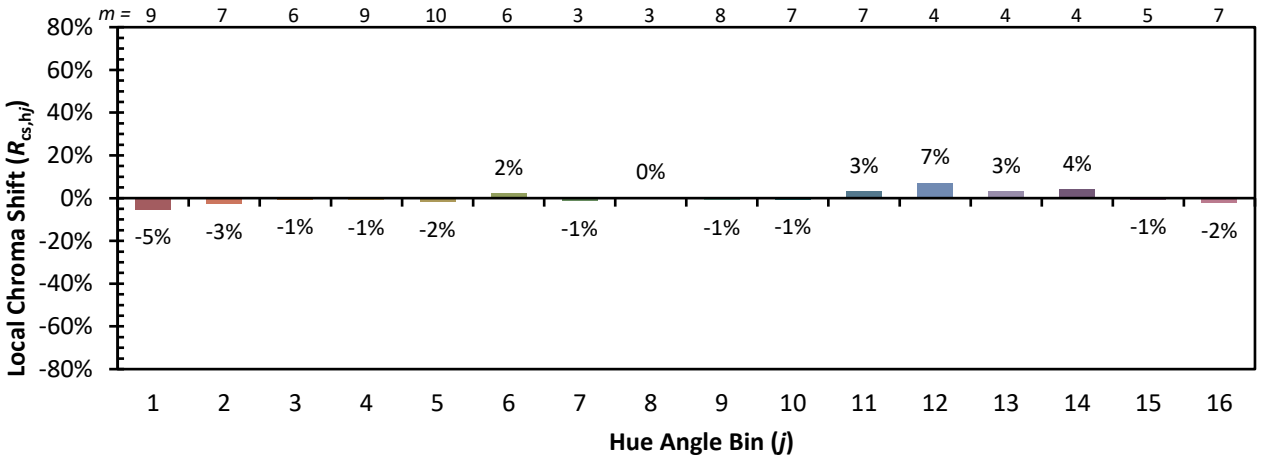
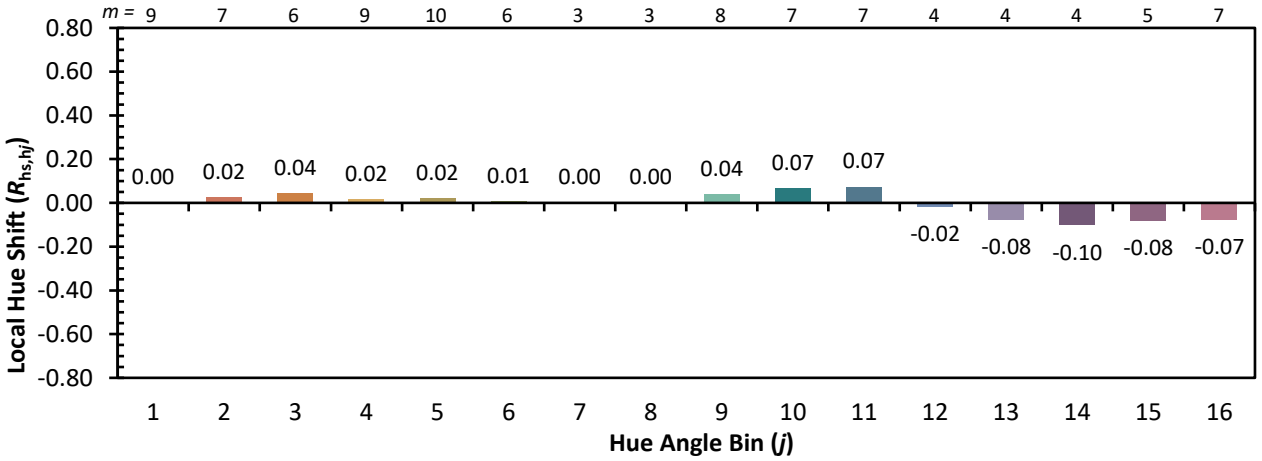
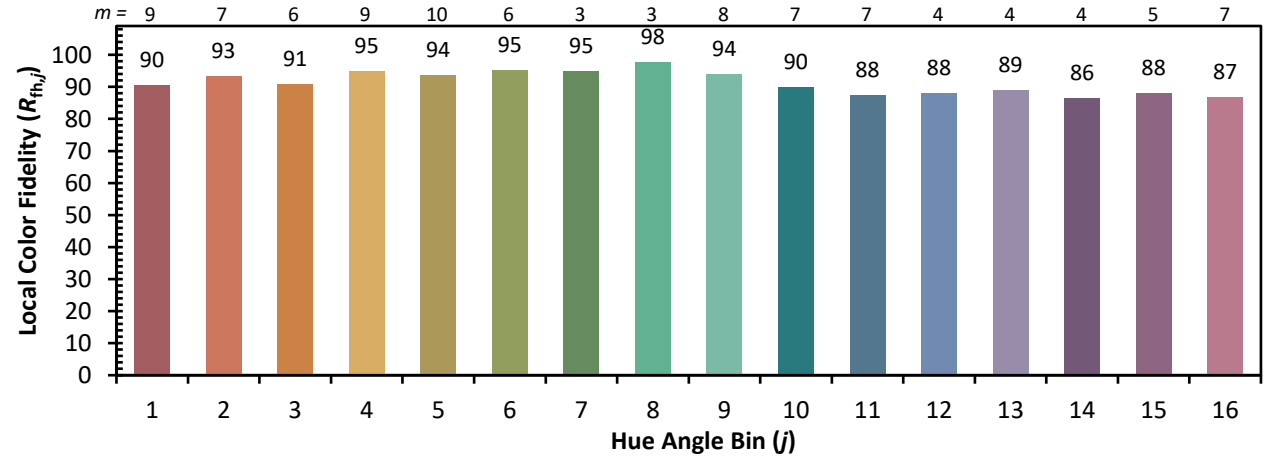
Color Rendition by Hue-Angle Bin







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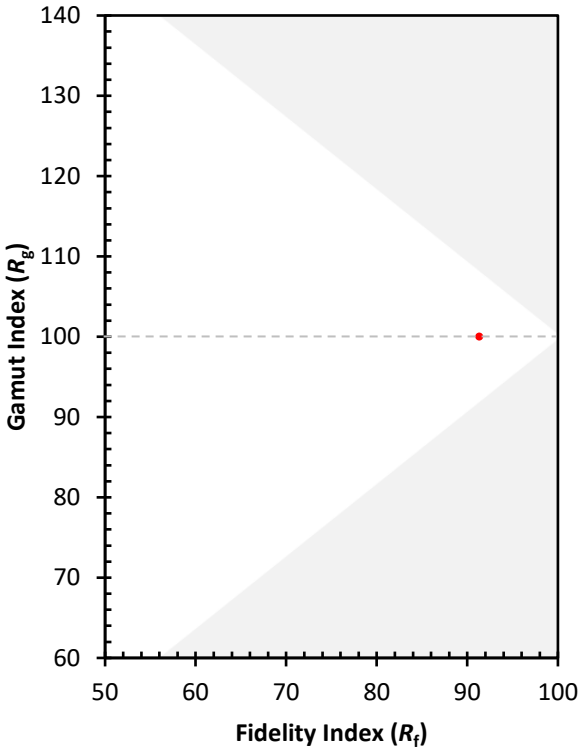
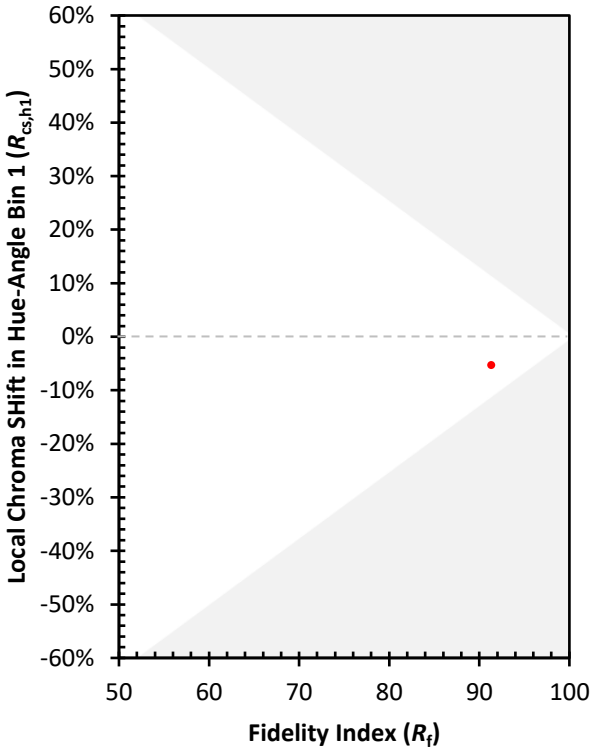
Measure Comparisons





(END OF REPORT)