

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: P1432366

Luminaire Tested: EHBR1-30-UNV-TASM-L830-UPL24

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1432366
REPORT IS A COMBINATION OF REPORTS P1431743 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-30-UNV-TASM-L830-UPL24
Description: Elevate Round Highbay at, 30000 lumens, 3000K 80CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

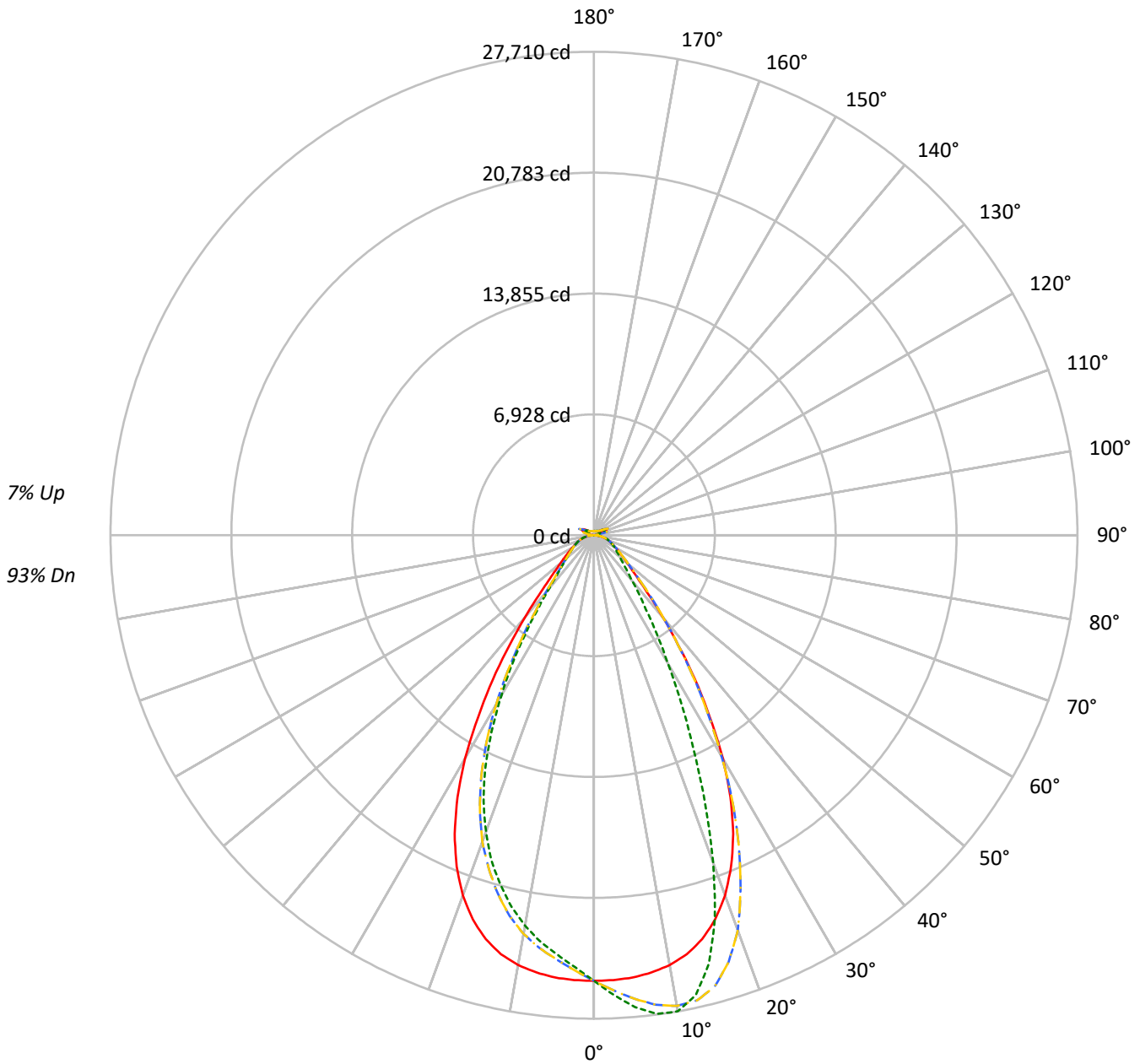
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30832.7 lumens
Efficiency: N/A
Efficacy: 174.9 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): 176.3
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

TEST NUMBER: P1432366
CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - · 90°-270° - · - · 135°-315°



TEST NUMBER: P1432366

CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

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	50	30	10	0
RCR																					
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	95	95	95	93
1	110	107	103	101	107	104	101	98	98	96	94	93	91	90	89	87	86	86	86	86	84
2	103	97	92	88	100	95	90	86	90	86	83	86	83	80	82	80	78	82	80	78	75
3	97	89	83	78	94	87	81	77	83	78	75	80	76	73	76	73	71	76	73	71	68
4	91	82	75	70	88	80	74	69	77	72	68	74	70	66	71	67	64	71	67	64	63
5	85	76	69	64	83	74	68	63	71	66	62	69	64	60	66	62	59	66	62	59	57
6	80	70	63	58	78	69	62	58	66	61	57	64	59	56	62	58	55	62	58	55	53
7	76	65	58	54	74	64	58	53	62	56	52	60	55	52	58	54	51	58	54	51	49
8	72	61	54	50	70	60	54	49	58	53	49	57	52	48	55	51	47	55	51	47	46
9	68	57	51	46	66	56	50	46	55	49	45	53	48	45	52	47	44	52	47	44	43
10	64	54	47	43	63	53	47	43	52	46	42	50	45	42	49	45	41	49	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	119922	119922	119922	119922
5°	119192	127156	119192	113007
10°	117727	130420	117727	106951
15°	114251	121201	114251	98794
20°	106853	97187	106853	87998
25°	94574	67336	94574	73745
30°	76790	43807	76790	55177
35°	55076	28370	55076	36732
40°	35609	19555	35609	23165
45°	22593	15147	22593	16506
50°	16778	12871	16778	13748
55°	13698	11725	13698	12136
60°	11862	11169	11862	11236
65°	10813	10771	10813	10726
70°	10248	10555	10248	10418
75°	9585	10210	9585	9904
80°	8421	9639	8421	9012
85°	5447	6881	5447	6564

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 31765 cd/sqm



TEST NUMBER: P1432366
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2428.1	7.9
10°-20°	6605.9	21.4
20°-30°	7747.4	25.1
30°-40°	5387.8	17.5
40°-50°	2677.5	8.7
50°-60°	1601.4	5.2
60°-70°	1127.1	3.7
70°-80°	726.1	2.4
80°-90°	234.7	0.8
90°-100°	61.3	0.2
100°-110°	398.9	1.3
110°-120°	736.6	2.4
120°-130°	438.0	1.4
130°-140°	265.2	0.9
140°-150°	183.8	0.6
150°-160°	120.3	0.4
160°-170°	69.5	0.2
170°-180°	23.2	0.1
0°-30°	16781.4	54.4
0°-40°	22169.2	71.9
0°-60°	26448.1	85.8
0°-90°	28535.9	92.6
90°-120°	1196.7	3.9
90°-150°	2083.8	6.8
90°-180°	2297.0	7.4
0°-180°	30832.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	25536	25536	25536	25536	25536	
5°	25449	27150	25449	24129	25449	2415
15°	23969	25427	23969	20726	23969	6699
25°	18886	13447	18886	14727	18886	8550
35°	10108	5207	10108	6742	10108	6310
45°	3656	2451	3656	2671	3656	2991
55°	1851	1584	1851	1640	1851	1693
65°	1129	1124	1129	1120	1129	1134
75°	675	719	675	698	675	709
85°	187	236	187	226	187	208
90°	17	20	17	17	17	17
95°	33	32	33	28	33	35
105°	183	94	183	139	183	247
115°	784	670	784	636	784	714
125°	502	526	502	460	502	462
135°	318	367	318	336	318	252
145°	288	301	288	280	288	181
155°	257	268	257	250	257	120
165°	243	251	243	239	243	69
175°	243	248	243	239	243	23
180°	243	243	243	243	243	



TEST NUMBER: P1432366
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5
2.5°	25521.7	25851.6	26118.8	26295.0	26382.1	26295.0	26118.8	25851.6	25521.7	25193.6	24968.1
5°	25449.4	26110.2	26670.0	27036.2	27149.8	27036.2	26670.0	26110.2	25449.4	24824.9	24410.7
7.5°	25276.5	26306.0	27137.8	27565.4	27669.7	27565.4	27137.8	26306.0	25276.5	24392.6	23869.1
10°	25012.7	26429.5	27390.6	27697.1	27709.5	27697.1	27390.6	26429.5	25012.7	23821.7	23204.5
12.5°	24591.7	26385.5	27305.8	27205.3	26976.8	27205.3	27305.8	26385.5	24591.7	23124.5	22345.9
15°	23969.3	26124.5	26769.1	25950.7	25427.3	25950.7	26769.1	26124.5	23969.3	22183.1	21280.1
17.5°	23091.9	25636.1	25648.6	24029.6	23042.2	24029.6	25648.6	25636.1	23091.9	21032.0	20037.4
20°	21961.4	24852.7	24105.7	21144.5	19974.7	21144.5	24105.7	24852.7	21961.4	19671.1	18695.2
22.5°	20544.0	23796.3	21957.1	18242.2	16646.2	18242.2	21957.1	23796.3	20544.0	18088.5	17072.8
25°	18886.3	22502.0	19645.7	15079.9	13447.0	15079.9	19645.7	22502.0	18886.3	16202.8	15284.4
27.5°	16936.4	20861.5	17184.4	12322.7	10816.3	12322.7	17184.4	20861.5	16936.4	14255.8	13317.8
30°	14770.6	18758.4	14623.1	9813.5	8426.3	9813.5	14623.1	18758.4	14770.6	12068.4	11228.5
32.5°	12345.6	16696.9	12163.3	7863.2	6688.1	7863.2	12163.3	16696.9	12345.6	9981.1	9103.4
35°	10108.5	14117.9	9945.2	6178.6	5207.0	6178.6	9945.2	14117.9	10108.5	8010.6	7148.7
37.5°	7933.1	11681.0	7927.8	4975.2	4223.4	4975.2	7927.8	11681.0	7933.1	6227.9	5528.3
40°	6171.9	9133.6	6211.6	3971.6	3389.3	3971.6	6211.6	9133.6	6171.9	4738.7	4291.0
42.5°	4676.4	6984.0	4882.3	3259.6	2878.9	3259.6	4882.3	6984.0	4676.4	3733.5	3398.4
45°	3655.5	5139.4	3812.6	2750.0	2450.7	2750.0	3812.6	5139.4	3655.5	3006.6	2781.7
47.5°	2977.0	3972.0	3090.0	2358.8	2149.1	2358.8	3090.0	3972.0	2977.0	2543.2	2374.7
50°	2500.5	3047.9	2565.6	2059.1	1918.3	2059.1	2565.6	3047.9	2500.5	2177.8	2065.3
52.5°	2148.2	2485.7	2185.0	1834.9	1740.1	1834.9	2185.0	2485.7	2148.2	1905.4	1835.4
55°	1851.2	2089.7	1900.1	1650.1	1584.5	1650.1	1900.1	2089.7	1851.2	1695.6	1643.9
57.5°	1625.7	1772.7	1650.1	1492.6	1449.0	1492.6	1650.1	1772.7	1625.7	1508.9	1481.1
60°	1426.0	1535.2	1456.2	1355.1	1342.7	1355.1	1456.2	1535.2	1426.0	1357.6	1339.3
62.5°	1272.3	1341.3	1287.6	1231.6	1220.6	1231.6	1287.6	1341.3	1272.3	1219.6	1223.0
65°	1128.6	1192.8	1150.7	1120.5	1124.3	1120.5	1150.7	1192.8	1128.6	1104.2	1109.5
67.5°	1017.5	1051.1	1032.9	1015.7	1020.0	1015.7	1032.9	1051.1	1017.5	993.6	1001.7
70°	899.2	935.2	916.5	918.9	926.1	918.9	916.5	935.2	899.2	892.1	898.3
72.5°	786.3	814.0	807.8	813.5	821.2	813.5	807.8	814.0	786.3	785.3	785.8
75°	675.2	696.3	699.2	707.2	719.2	707.2	699.2	696.3	675.2	668.0	676.6
77.5°	554.1	577.9	587.0	598.1	615.8	598.1	587.0	577.9	554.1	558.8	563.1
80°	443.0	453.9	474.1	482.2	507.1	482.2	474.1	453.9	443.0	434.8	441.0
82.5°	324.2	334.2	351.5	366.8	381.1	366.8	351.5	334.2	324.2	320.4	320.8
85°	187.2	202.5	214.0	232.2	236.5	232.2	214.0	202.5	187.2	191.6	187.2
87.5°	65.6	70.3	80.5	87.7	88.1	87.7	80.5	70.3	65.6	67.1	60.8
90°	17.0	28.8	49.6	28.2	20.3	28.2	49.6	28.8	17.0	29.6	46.1
92.5°	22.0	38.9	69.8	37.1	26.6	37.1	69.8	38.9	22.0	38.4	73.9
95°	32.6	47.8	88.8	40.8	31.7	40.8	88.8	47.8	32.6	51.1	103.0
97.5°	50.3	59.2	100.1	43.5	38.0	43.5	100.1	59.2	50.3	62.5	118.2
100°	66.8	66.8	182.5	49.7	43.1	49.7	182.5	66.8	66.8	76.9	184.1
102.5°	101.0	130.6	422.2	98.4	52.0	98.4	422.2	130.6	101.0	144.0	390.4
105°	183.2	297.7	742.5	251.5	94.2	251.5	742.5	297.7	183.2	301.0	695.5
107.5°	346.6	554.6	956.5	494.6	217.0	494.6	956.5	554.6	346.6	532.7	917.5
110°	554.2	774.9	1043.8	676.9	437.3	676.9	1043.8	774.9	554.2	731.5	961.8



TEST NUMBER: P1432366
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	721.3	863.6	1019.8	750.3	604.4	750.3	1019.8	863.6	721.3	807.3	921.3
115°	783.8	850.9	910.9	747.8	670.2	747.8	910.9	850.9	783.8	788.4	822.6
117.5°	757.2	778.8	786.8	702.3	674.1	702.3	786.8	778.8	757.2	709.1	698.5
120°	683.8	674.9	663.3	635.1	636.0	635.1	663.3	674.9	683.8	619.3	583.3
122.5°	591.8	572.9	560.7	567.2	584.1	567.2	560.7	572.9	591.8	527.3	500.2
125°	502.0	483.0	489.1	509.0	526.3	509.0	489.1	483.0	502.0	448.1	441.2
127.5°	426.6	417.7	437.2	459.6	474.4	459.6	437.2	417.7	426.6	392.4	399.4
130°	372.6	374.7	400.4	419.6	428.9	419.6	400.4	374.7	372.6	356.1	373.4
132.5°	338.9	348.5	373.1	389.7	395.2	389.7	373.1	348.5	338.9	334.3	355.3
135°	317.8	332.1	354.5	365.1	367.3	365.1	354.5	332.1	317.8	319.5	338.9
137.5°	305.6	319.9	336.8	345.4	343.3	345.4	336.8	319.9	305.6	309.9	324.6
140°	298.5	312.8	320.4	330.2	328.5	330.2	320.4	312.8	298.5	301.1	312.4
142.5°	291.4	304.3	308.2	315.4	313.3	315.4	308.2	304.3	291.4	293.9	301.5
145°	288.0	297.7	294.7	304.1	301.2	304.1	294.7	297.7	288.0	288.9	293.1
147.5°	281.7	288.9	285.0	293.1	290.4	293.1	285.0	288.9	281.7	281.7	283.4
150°	274.5	279.6	274.1	283.4	283.2	283.4	274.1	279.6	274.5	273.3	275.1
152.5°	265.0	270.1	265.0	275.6	274.8	275.6	265.0	270.1	265.0	263.8	265.5
155°	257.1	259.7	257.1	267.7	268.2	267.7	257.1	259.7	257.1	256.7	257.6
157.5°	251.7	253.5	252.2	261.5	262.0	261.5	252.2	253.5	251.7	251.7	252.2
160°	247.2	249.7	249.1	257.1	257.6	257.1	249.1	249.7	247.2	248.0	248.5
162.5°	245.7	245.7	245.4	253.5	254.4	253.5	245.4	245.7	245.7	245.7	247.0
165°	243.4	244.6	243.0	249.0	251.3	249.0	243.0	244.6	243.4	244.1	244.1
167.5°	243.0	241.8	242.7	247.9	250.2	247.9	242.7	241.8	243.0	243.8	243.8
170°	240.9	241.4	241.2	246.4	248.6	246.4	241.2	241.4	240.9	242.2	243.0
172.5°	242.4	242.4	241.3	245.2	248.8	245.2	241.3	242.4	242.4	243.3	244.5
175°	243.4	242.6	242.2	245.0	248.5	245.0	242.2	242.6	243.4	242.9	242.9
177.5°	242.1	243.1	244.0	246.7	251.5	246.7	244.0	243.1	242.1	242.9	242.9
180°	243.1	243.1	243.1	243.1	243.1	243.1	243.1	243.1	243.1	243.1	243.1



TEST NUMBER: P1432366

CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	25536.5	25536.5	25536.5	25536.5	25536.5	25536.5
2.5°	24794.8	24778.5	24794.8	24968.1	25193.6	25521.7
5°	24218.7	24128.7	24218.7	24410.7	24824.9	25449.4
7.5°	23547.8	23495.7	23547.8	23869.1	24392.6	25276.5
10°	22841.6	22723.2	22841.6	23204.5	23821.7	25012.7
12.5°	21971.0	21814.5	21971.0	22345.9	23124.5	24591.7
15°	20863.9	20726.5	20863.9	21280.1	22183.1	23969.3
17.5°	19675.9	19551.4	19675.9	20037.4	21032.0	23091.9
20°	18183.8	18086.1	18183.8	18695.2	19671.1	21961.4
22.5°	16618.4	16527.0	16618.4	17072.8	18088.5	20544.0
25°	14776.8	14726.9	14776.8	15284.4	16202.8	18886.3
27.5°	12786.7	12702.0	12786.7	13317.8	14255.8	16936.4
30°	10753.5	10613.2	10753.5	11228.5	12068.4	14770.6
32.5°	8764.9	8663.8	8764.9	9103.4	9981.1	12345.6
35°	6842.8	6741.7	6842.8	7148.7	8010.6	10108.5
37.5°	5331.9	5153.4	5331.9	5528.3	6227.9	7933.1
40°	4043.9	4015.1	4043.9	4291.0	4738.7	6171.9
42.5°	3292.1	3214.0	3292.1	3398.4	3733.5	4676.4
45°	2701.2	2670.6	2701.2	2781.7	3006.6	3655.5
47.5°	2322.9	2336.3	2322.9	2374.7	2543.2	2977.0
50°	2040.8	2049.0	2040.8	2065.3	2177.8	2500.5
52.5°	1833.0	1825.8	1833.0	1835.4	1905.4	2148.2
55°	1649.2	1640.1	1649.2	1643.9	1695.6	1851.2
57.5°	1488.2	1495.0	1488.2	1481.1	1508.9	1625.7
60°	1344.6	1350.8	1344.6	1339.3	1357.6	1426.0
62.5°	1223.4	1227.3	1223.4	1223.0	1219.6	1272.3
65°	1115.2	1119.6	1115.2	1109.5	1104.2	1128.6
67.5°	1011.8	1011.8	1011.8	1001.7	993.6	1017.5
70°	914.6	914.1	914.6	898.3	892.1	899.2
72.5°	797.8	809.2	797.8	785.8	785.3	786.3
75°	684.3	697.7	684.3	676.6	668.0	675.2
77.5°	569.3	589.9	569.3	563.1	558.8	554.1
80°	451.6	474.1	451.6	441.0	434.8	443.0
82.5°	333.7	350.5	333.7	320.8	320.4	324.2
85°	198.7	225.6	198.7	187.2	191.6	187.2
87.5°	63.7	81.4	63.7	60.8	67.1	65.6
90°	27.1	17.0	27.1	46.1	29.6	17.0
92.5°	41.0	24.5	41.0	73.9	38.4	22.0
95°	47.3	28.3	47.3	103.0	51.1	32.6
97.5°	52.4	36.3	52.4	118.2	62.5	50.3
100°	61.3	47.8	61.3	184.1	76.9	66.8
102.5°	129.6	80.7	129.6	390.4	144.0	101.0
105°	272.7	138.9	272.7	695.5	301.0	183.2
107.5°	487.9	240.2	487.9	917.5	532.7	346.6
110°	647.4	447.8	647.4	961.8	731.5	554.2



TEST NUMBER: P1432366

CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-UPL24

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	695.5	604.8	695.5	921.3	807.3	721.3
115°	668.9	636.5	668.9	822.6	788.4	783.8
117.5°	610.7	614.9	610.7	698.5	709.1	757.2
120°	543.6	569.4	543.6	583.3	619.3	683.8
122.5°	482.0	512.4	482.0	500.2	527.3	591.8
125°	428.8	459.7	428.8	441.2	448.1	502.0
127.5°	392.1	412.9	392.1	399.4	392.4	426.6
130°	363.4	381.2	363.4	373.4	356.1	372.6
132.5°	343.7	355.1	343.7	355.3	334.3	338.9
135°	326.5	336.1	326.5	338.9	319.5	317.8
137.5°	311.8	320.2	311.8	324.6	309.9	305.6
140°	298.8	305.9	298.8	312.4	301.1	298.5
142.5°	285.3	290.5	285.3	301.5	293.9	291.4
145°	276.1	280.0	276.1	293.1	288.9	288.0
147.5°	268.3	270.8	268.3	283.4	281.7	281.7
150°	260.4	262.9	260.4	275.1	273.3	274.5
152.5°	252.1	255.1	252.1	265.5	263.8	265.0
155°	246.6	249.6	246.6	257.6	256.7	257.1
157.5°	243.7	246.0	243.7	252.2	251.7	251.7
160°	241.5	243.2	241.5	248.5	248.0	247.2
162.5°	238.6	240.4	238.6	247.0	245.7	245.7
165°	238.3	238.8	238.3	244.1	244.1	243.4
167.5°	237.5	238.8	237.5	243.8	243.8	243.0
170°	237.9	238.4	237.9	243.0	242.2	240.9
172.5°	238.9	239.4	238.9	244.5	243.3	242.4
175°	238.7	239.1	238.7	242.9	242.9	243.4
177.5°	240.4	240.8	240.4	242.9	242.9	242.1
180°	243.1	243.1	243.1	243.1	243.1	243.1



TEST NUMBER: P1432366
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L830-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	17.21	18.30	17.71	18.77	19.27	16.53	17.62	17.02	18.09	18.59
	3H	18.76	19.73	19.27	20.21	20.76	18.37	19.35	18.89	19.83	20.38
	4H	19.39	20.30	19.92	20.80	21.37	19.16	20.07	19.69	20.56	21.13
	6H	19.87	20.71	20.42	21.22	21.80	19.80	20.63	20.34	21.15	21.72
	8H	20.02	20.81	20.58	21.35	21.93	20.02	20.81	20.58	21.34	21.93
	12H	20.09	20.85	20.66	21.38	21.98	20.15	20.90	20.71	21.43	22.03
4H	2H	17.62	18.53	18.16	19.03	19.60	17.10	18.01	17.64	18.51	19.07
	3H	19.42	20.17	19.96	20.72	21.30	19.16	19.91	19.70	20.46	21.04
	4H	20.19	20.87	20.76	21.42	22.04	20.07	20.74	20.63	21.30	21.92
	6H	20.81	21.39	21.40	21.97	22.61	20.84	21.42	21.42	22.00	22.64
	8H	21.00	21.55	21.60	22.13	22.77	21.11	21.65	21.70	22.23	22.87
	12H	21.11	21.59	21.72	22.20	22.84	21.27	21.75	21.88	22.36	23.01
8H	4H	20.44	20.99	21.04	21.57	22.21	20.34	20.89	20.94	21.47	22.11
	6H	21.18	21.63	21.81	22.25	22.90	21.25	21.69	21.87	22.32	22.97
	8H	21.45	21.85	22.10	22.49	23.15	21.60	22.00	22.24	22.63	23.30
	12H	21.63	21.97	22.26	22.59	23.33	21.85	22.19	22.49	22.81	23.55
12H	4H	20.45	20.93	21.06	21.54	22.19	20.35	20.83	20.96	21.45	22.09
	6H	21.23	21.62	21.87	22.26	22.92	21.29	21.69	21.94	22.33	22.99
	8H	21.54	21.89	22.18	22.51	23.24	21.70	22.04	22.33	22.66	23.40

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: SP1-2506-472-2

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L830-N

Data in this report applies to families of products including EHBR-60-L830-N

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-2
 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-L830-N**
 Description: Elevate Round Highbay at, 60000 lumens, 3000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K): 2983
 CIE u': 0.2516
 CIE v': 0.5201
 Duv: -0.0012
 CIE x: 0.4364
 CIE y: 0.4010
 CIE z: 0.1626
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 583
 Purity: 51.34918
 Rf: 81.2
 Rg: 101.5

CRI (Ra):	83.4		
R1:	84.0	R9:	29.4
R2:	87.5	R10:	68.6
R3:	88.9	R11:	82.2
R4:	83.8	R12:	61.6
R5:	81.9	R13:	83.9
R6:	83.1	R14:	92.5
R7:	87.1	R15:	79.8
R8:	70.9		



Test Conditions

Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-2

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: SP1-2506-472-2

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-2

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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-2

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

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	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2506-472-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.34

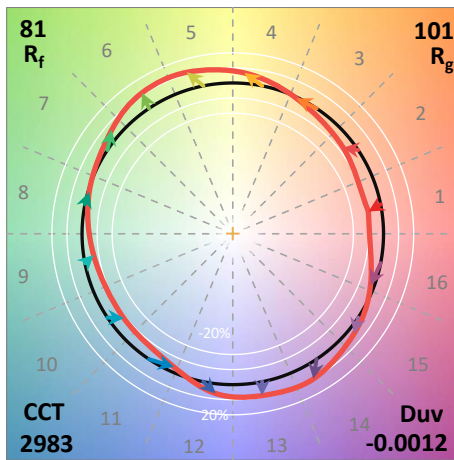
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	43	NR	620	294	NR	750	6	NR	880	0	NR
365	0	NR	495	59	NR	625	294	NR	755	5	NR	885	0	NR
370	0	NR	500	81	NR	630	1000	NR	760	4	NR	890	0	NR
375	0	NR	505	109	NR	635	637	NR	765	4	NR	895	0	NR
380	0	NR	510	135	NR	640	175	NR	770	3	NR	900	0	NR
385	0	NR	515	160	NR	645	171	NR	775	3	NR	905	0	NR
390	1	NR	520	180	NR	650	146	NR	780	2	NR	910	0	NR
395	1	NR	525	195	NR	655	119	NR	785	2	NR	915	0	NR
400	2	NR	530	207	NR	660	99	NR	790	2	NR	920	0	NR
405	3	NR	535	218	NR	665	82	NR	795	2	NR	925	0	NR
410	5	NR	540	227	NR	670	76	NR	800	1	NR	930	0	NR
415	10	NR	545	237	NR	675	61	NR	805	1	NR	935	0	NR
420	20	NR	550	247	NR	680	52	NR	810	1	NR	940	0	NR
425	35	NR	555	259	NR	685	44	NR	815	1	NR	945	0	NR
430	58	NR	560	271	NR	690	38	NR	820	1	NR	950	0	NR
435	90	NR	565	283	NR	695	33	NR	825	1	NR	955	0	NR
440	135	NR	570	293	NR	700	27	NR	830	1	NR	960	0	NR
445	204	NR	575	303	NR	705	24	NR	835	1	NR	965	0	NR
450	233	NR	580	310	NR	710	20	NR	840	0	NR	970	0	NR
455	153	NR	585	313	NR	715	17	NR	845	0	NR	975	0	NR
460	98	NR	590	314	NR	720	15	NR	850	0	NR	980	0	NR
465	76	NR	595	310	NR	725	13	NR	855	0	NR	985	0	NR
470	53	NR	600	307	NR	730	11	NR	860	0	NR	990	0	NR
475	39	NR	605	303	NR	735	9	NR	865	0	NR	995	0	NR
480	35	NR	610	331	NR	740	8	NR	870	0	NR	1000	0	NR
485	36	NR	615	353	NR	745	7	NR	875	0	NR			

Summary

$R_f = 81.2$
 $R_g = 101.5$
 CIE $R_a = 83.4$
 $R_9 = 29.4$



Color Vector Graphics

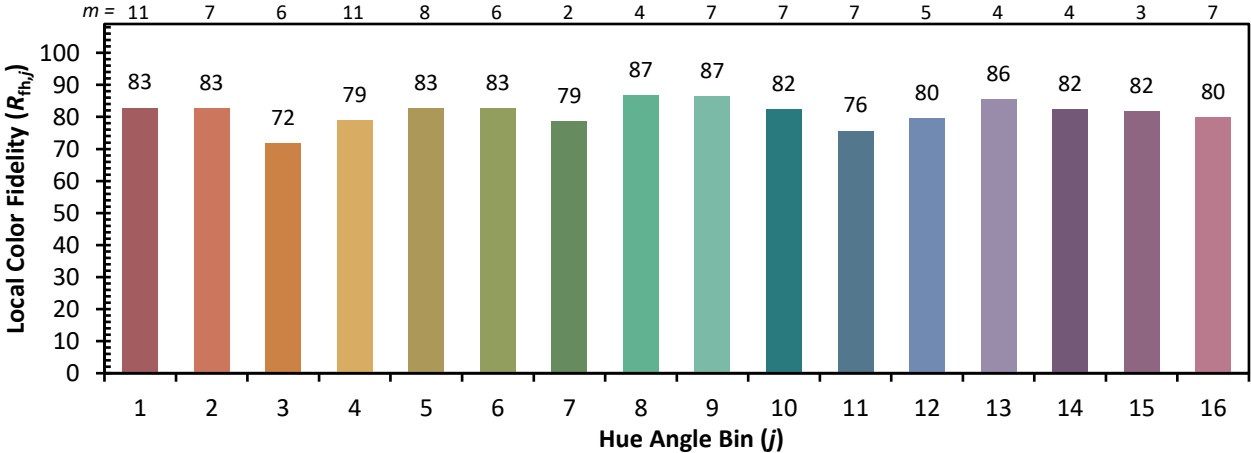
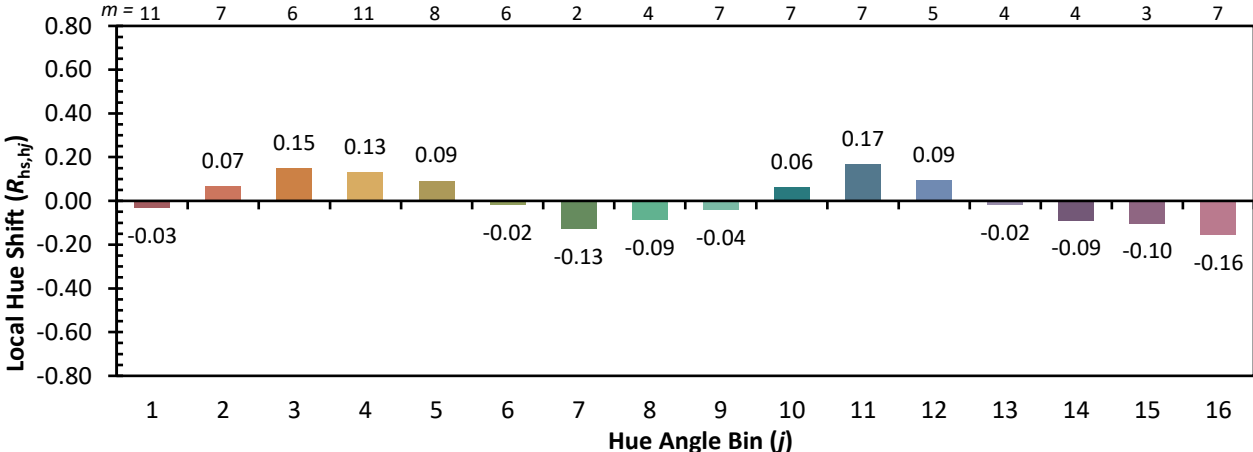
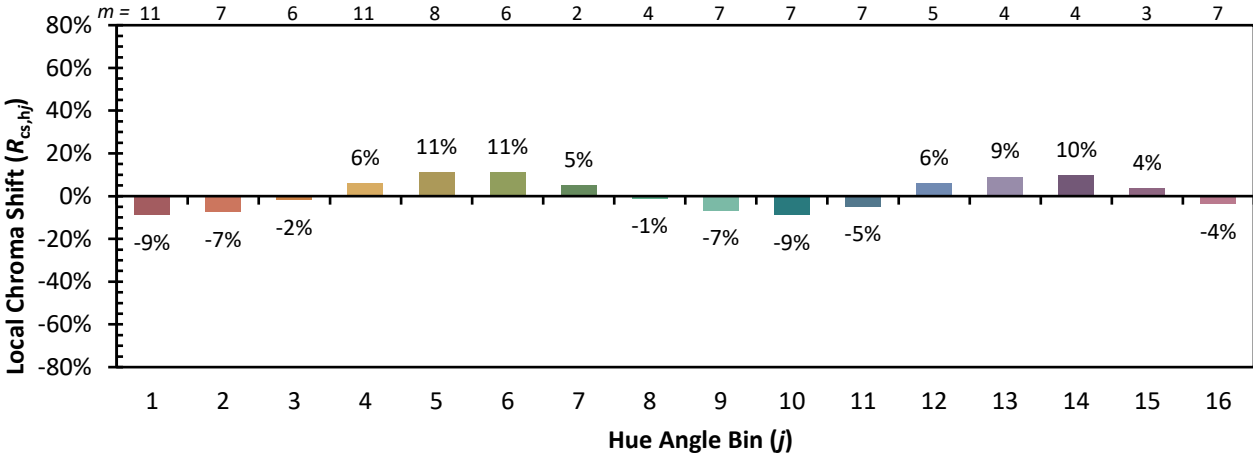


Individual Sample Fidelity Index ($R_{f,i}$)

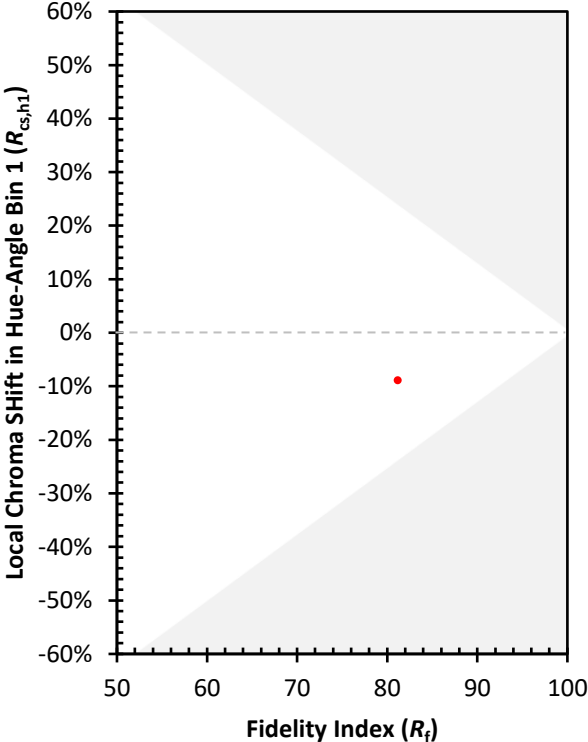
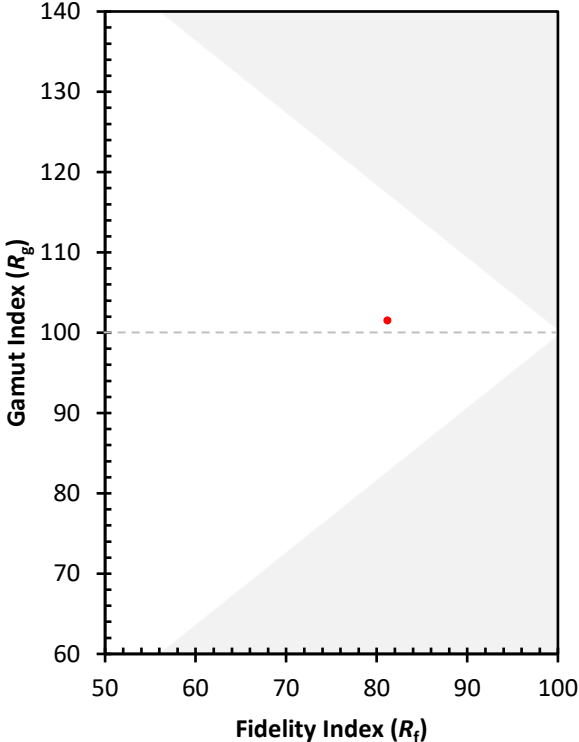
CES01 = 86	CES26 = 71	CES51 = 89	CES76 = 65
CES02 = 63	CES27 = 89	CES52 = 89	CES77 = 82
CES03 = 31	CES28 = 86	CES53 = 80	CES78 = 67
CES04 = 70	CES29 = 68	CES54 = 92	CES79 = 89
CES05 = 50	CES30 = 77	CES55 = 90	CES80 = 85
CES06 = 51	CES31 = 70	CES56 = 81	CES81 = 75
CES07 = 43	CES32 = 64	CES57 = 79	CES82 = 93
CES08 = 41	CES33 = 74	CES58 = 81	CES83 = 89
CES09 = 29	CES34 = 76	CES59 = 92	CES84 = 91
CES10 = 76	CES35 = 87	CES60 = 96	CES85 = 81
CES11 = 59	CES36 = 99	CES61 = 91	CES86 = 74
CES12 = 65	CES37 = 81	CES62 = 93	CES87 = 83
CES13 = 44	CES38 = 83	CES63 = 79	CES88 = 86
CES14 = 74	CES39 = 94	CES64 = 81	CES89 = 74
CES15 = 72	CES40 = 89	CES65 = 78	CES90 = 85
CES16 = 48	CES41 = 88	CES66 = 76	CES91 = 87
CES17 = 50	CES42 = 80	CES67 = 74	CES92 = 73
CES18 = 57	CES43 = 75	CES68 = 79	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 83	CES94 = 64
CES20 = 67	CES45 = 83	CES70 = 72	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 70	CES96 = 86
CES22 = 79	CES47 = 79	CES72 = 90	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 65	CES98 = 83
CES24 = 91	CES49 = 79	CES74 = 94	CES99 = 82
CES25 = 72	CES50 = 88	CES75 = 70	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)