

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: P1433522

Luminaire Tested: EHBR1-30-UNV-TASM-L935

Issue Date: 3/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433522
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-654-4)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-30-UNV-TASM-L935
Description: Elevate Round Highbay at, 30000 lumens, 3500K 90CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

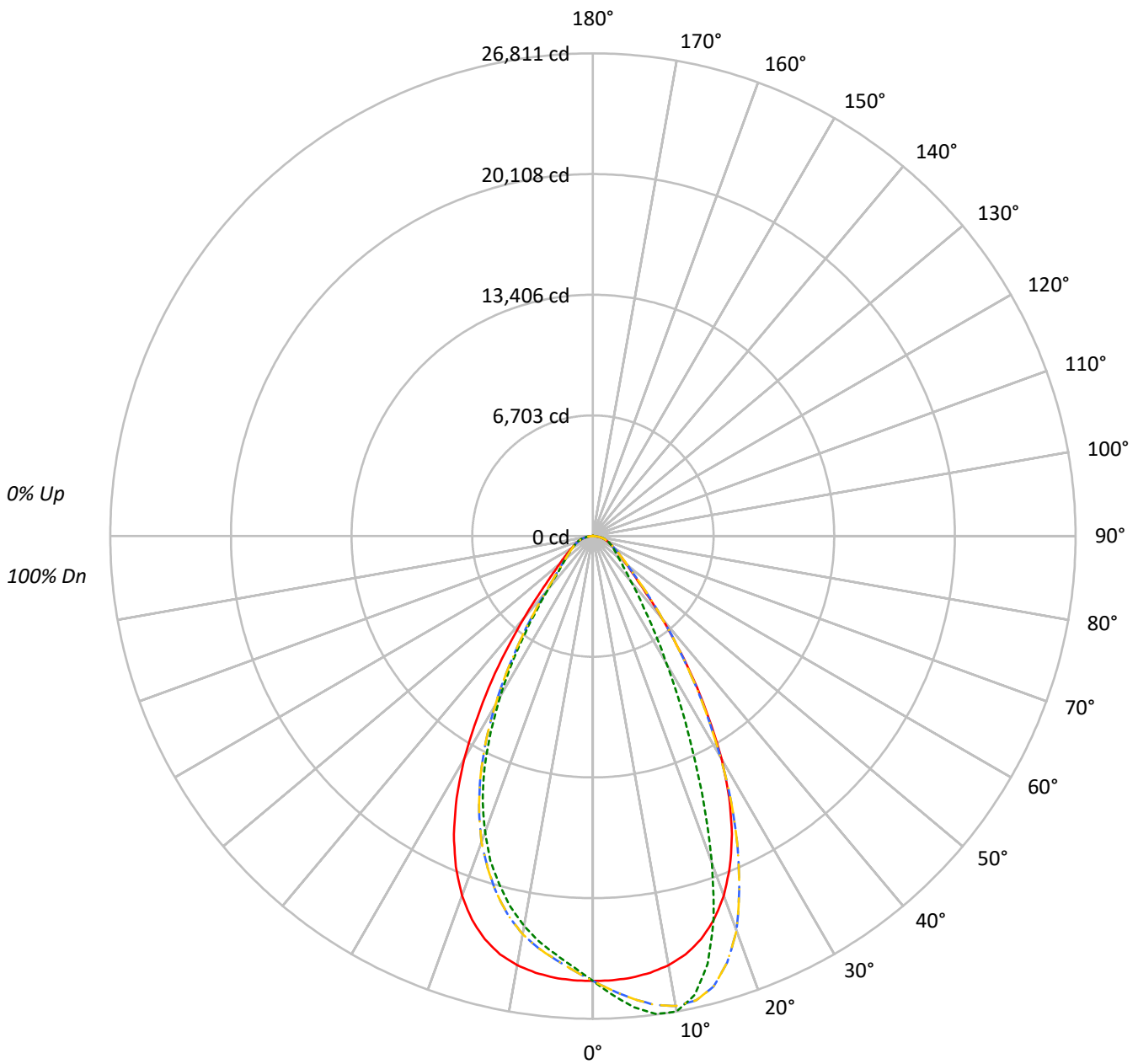
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27627.7 lumens
Efficiency: N/A
Efficacy: 172.9 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 0.84 / 0.9
Luminous Opening: Circular (Dia: 1.71' x H: 0')
CIE Type: Direct

Input Watts (W): 159.8
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: P1433522
CATALOG NUMBER: EHBR1-30-UNV-TASM-L935

Luminous Intensity Polar Plot



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



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90	90	90
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81	81	81
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74	74	74
4	93	84	77	72	91	83	77	72	80	75	71	78	74	70	76	72	69	67	67	67
5	87	78	71	66	86	77	70	65	75	69	65	73	68	64	71	67	64	62	62	62
6	82	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	57	57	57
7	78	67	60	56	76	67	60	56	65	59	55	64	59	55	63	58	55	53	53	53
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	49	49	49
9	70	59	53	48	69	59	52	48	58	52	48	57	51	48	56	51	47	46	46	46
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43	43	43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	116033	116033	116033	116033
5°	116078	123834	116078	110055
10°	115406	127849	115406	104843
15°	112753	119612	112753	97499
20°	106192	96586	106192	87453
25°	94687	67417	94687	73834
30°	77497	44210	77497	55685
35°	56072	28883	56072	37396
40°	36608	20104	36608	23816
45°	23490	15748	23490	17160
50°	17676	13560	17676	14484
55°	14665	12552	14665	12993
60°	12959	12201	12959	12276
65°	12134	12089	12134	12036
70°	11947	12304	11947	12145
75°	11854	12627	11854	12247
80°	11591	13270	11591	12405
85°	9763	12328	9763	11757

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 33026 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2349.4	8.5
10°-20°	6391.6	23.1
20°-30°	7496.1	27.1
30°-40°	5213.1	18.9
40°-50°	2590.6	9.4
50°-60°	1549.5	5.6
60°-70°	1090.6	3.9
70°-80°	702.5	2.5
80°-90°	223.1	0.8
90°-100°	1.3	0.0
100°-110°	1.6	0.0
110°-120°	1.6	0.0
120°-130°	2.0	0.0
130°-140°	2.7	0.0
140°-150°	3.2	0.0
150°-160°	3.6	0.0
160°-170°	3.6	0.0
170°-180°	1.5	0.0
0°-30°	16237.1	58.8
0°-40°	21450.2	77.6
0°-60°	25590.3	92.6
0°-90°	27606.5	99.9
90°-120°	4.4	0.0
90°-150°	12.4	0.0
90°-180°	21.0	0.1
0°-180°	27627.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	24708	24708	24708	24708	24708	
5°	24624	26269	24624	23346	24624	2337
15°	23192	24603	23192	20054	23192	6481
25°	18274	13011	18274	14249	18274	8273
35°	9781	5038	9781	6523	9781	6106
45°	3537	2371	3537	2584	3537	2894
55°	1791	1533	1791	1587	1791	1638
65°	1092	1088	1092	1083	1092	1097
75°	653	696	653	675	653	686
85°	181	229	181	218	181	201
90°	0	4	0	0	0	9
95°	1	4	1	0	1	1
105°	1	4	1	1	1	1
115°	1	4	1	1	1	1
125°	2	5	2	1	2	2
135°	4	5	4	2	4	3
145°	6	6	6	5	6	3
155°	7	8	7	9	7	3
165°	12	15	12	13	12	3
175°	16	20	16	16	16	1
180°	17	17	17	17	17	



TEST NUMBER: P1433522
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L935

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3
2.5°	24694.0	25013.2	25271.7	25442.2	25526.5	25442.2	25271.7	25013.2	24694.0	24376.6	24158.3
5°	24624.0	25263.4	25805.0	26159.4	26269.2	26159.4	25805.0	25263.4	24624.0	24019.8	23619.1
7.5°	24456.8	25452.8	26257.6	26671.4	26772.4	26671.4	26257.6	25452.8	24456.8	23601.5	23095.0
10°	24201.5	25572.4	26502.3	26798.8	26810.9	26798.8	26502.3	25572.4	24201.5	23049.2	22452.0
12.5°	23794.2	25529.8	26420.2	26323.0	26101.9	26323.0	26420.2	25529.8	23794.2	22374.6	21621.2
15°	23191.9	25277.3	25900.9	25109.1	24602.7	25109.1	25900.9	25277.3	23191.9	21463.7	20589.9
17.5°	22343.0	24804.7	24816.8	23250.3	22294.9	23250.3	24816.8	24804.7	22343.0	20349.9	19387.6
20°	21249.2	24046.7	23323.9	20458.8	19326.9	20458.8	23323.9	24046.7	21249.2	19033.1	18088.9
22.5°	19877.7	23024.6	21245.0	17650.6	16106.3	17650.6	21245.0	23024.6	19877.7	17501.9	16519.1
25°	18273.8	21772.2	19008.5	14590.8	13010.9	14590.8	19008.5	21772.2	18273.8	15677.3	14788.7
27.5°	16387.1	20185.0	16627.1	11923.0	10465.5	11923.0	16627.1	20185.0	16387.1	13793.4	12885.8
30°	14291.6	18150.1	14148.8	9495.3	8153.0	9495.3	14148.8	18150.1	14291.6	11677.0	10864.4
32.5°	11945.2	16155.4	11768.8	7608.2	6471.2	7608.2	11768.8	16155.4	11945.2	9657.4	8808.2
35°	9780.7	13660.0	9622.7	5978.2	5038.1	5978.2	9622.7	13660.0	9780.7	7750.8	6916.8
37.5°	7675.8	11302.2	7670.7	4813.9	4086.5	4813.9	7670.7	11302.2	7675.8	6025.9	5349.0
40°	5971.7	8837.4	6010.1	3842.7	3279.4	3842.7	6010.1	8837.4	5971.7	4585.0	4151.8
42.5°	4524.8	6757.5	4724.0	3153.8	2785.5	3153.8	4724.0	6757.5	4524.8	3612.5	3288.2
45°	3537.0	4972.8	3688.9	2660.8	2371.2	2660.8	3688.9	4972.8	3537.0	2909.1	2691.4
47.5°	2880.4	3843.2	2989.8	2282.3	2079.4	2282.3	2989.8	3843.2	2880.4	2460.7	2297.6
50°	2419.4	2949.0	2482.4	1992.3	1856.1	1992.3	2482.4	2949.0	2419.4	2107.2	1998.3
52.5°	2078.5	2405.1	2114.1	1775.4	1683.7	1775.4	2114.1	2405.1	2078.5	1843.6	1775.9
55°	1791.2	2021.9	1838.5	1596.6	1533.1	1596.6	1838.5	2021.9	1791.2	1640.6	1590.6
57.5°	1572.9	1715.2	1596.6	1444.1	1402.0	1444.1	1596.6	1715.2	1572.9	1459.9	1433.1
60°	1379.8	1485.4	1409.0	1311.2	1299.1	1311.2	1409.0	1485.4	1379.8	1313.5	1295.9
62.5°	1231.1	1297.8	1245.8	1191.6	1181.0	1191.6	1245.8	1297.8	1231.1	1180.0	1183.3
65°	1092.0	1154.1	1113.3	1084.2	1087.9	1084.2	1113.3	1154.1	1092.0	1068.4	1073.5
67.5°	984.5	1017.0	999.4	982.7	986.9	982.7	999.4	1017.0	984.5	961.3	969.2
70°	870.1	904.9	886.8	889.1	896.1	889.1	886.8	904.9	870.1	863.2	869.2
72.5°	760.8	787.6	781.6	787.1	794.6	787.1	781.6	787.6	760.8	759.9	760.3
75°	653.3	673.7	676.5	684.3	695.9	684.3	676.5	673.7	653.3	646.3	654.6
77.5°	536.1	559.2	568.0	578.7	595.8	578.7	568.0	559.2	536.1	540.7	544.9
80°	428.6	439.2	458.7	466.6	490.7	466.6	458.7	439.2	428.6	420.7	426.7
82.5°	313.7	323.4	340.1	354.9	368.8	354.9	340.1	323.4	313.7	310.0	310.4
85°	181.2	195.9	207.1	224.7	228.8	224.7	207.1	195.9	181.2	185.3	181.2
87.5°	63.4	68.1	77.9	84.8	85.3	84.8	77.9	68.1	63.4	64.9	58.8
90°	0.5	0.9	1.4	2.8	3.7	2.8	1.4	0.9	0.5	0.5	0.5
92.5°	0.5	0.9	1.4	2.8	3.7	2.8	1.4	0.9	0.5	0.5	0.5
95°	0.9	0.9	1.4	2.8	3.7	2.8	1.4	0.9	0.9	0.5	0.5
97.5°	0.9	0.9	1.4	2.8	3.7	2.8	1.4	0.9	0.9	0.5	0.5
100°	0.9	0.9	1.4	2.8	3.7	2.8	1.4	0.9	0.9	0.9	0.5
102.5°	0.9	1.4	1.8	3.3	3.7	3.3	1.8	1.4	0.9	0.9	0.5
105°	0.9	1.4	1.8	3.3	4.2	3.3	1.8	1.4	0.9	0.9	0.5
107.5°	0.9	1.4	1.8	3.3	4.2	3.3	1.8	1.4	0.9	0.9	0.9
110°	0.9	1.4	1.8	3.3	4.2	3.3	1.8	1.4	0.9	0.9	0.9



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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°	0.9	1.4	1.8	3.3	4.2	3.3	1.8	1.4	0.9	0.9	0.9
115°	1.4	1.4	1.8	3.3	4.2	3.3	1.8	1.4	1.4	0.9	0.9
117.5°	1.4	1.4	1.8	3.3	4.2	3.3	1.8	1.4	1.4	1.4	0.9
120°	1.4	1.4	2.4	3.3	4.2	3.3	2.4	1.4	1.4	1.4	0.9
122.5°	1.8	1.8	2.4	3.7	4.2	3.7	2.4	1.8	1.8	1.8	1.4
125°	1.8	1.8	2.8	3.7	4.6	3.7	2.8	1.8	1.8	2.4	1.8
127.5°	2.4	2.4	2.8	3.7	4.6	3.7	2.8	2.4	2.4	2.4	1.8
130°	2.8	2.4	2.8	4.2	4.6	4.2	2.8	2.4	2.8	2.8	2.4
132.5°	3.3	2.8	3.3	4.6	5.1	4.6	3.3	2.8	3.3	3.7	3.3
135°	3.7	2.8	3.7	4.2	5.1	4.2	3.7	2.8	3.7	4.2	3.3
137.5°	4.2	3.3	3.7	4.6	5.1	4.6	3.7	3.3	4.2	4.6	4.2
140°	4.6	3.7	3.7	4.6	5.5	4.6	3.7	3.7	4.6	4.6	4.6
142.5°	5.1	4.2	4.2	5.1	5.5	5.1	4.2	4.2	5.1	5.1	5.1
145°	5.5	5.1	4.6	5.1	6.0	5.1	4.6	5.1	5.5	5.1	5.5
147.5°	5.5	5.1	5.1	5.5	6.5	5.5	5.1	5.1	5.5	5.5	6.0
150°	6.0	6.0	5.5	6.0	7.0	6.0	5.5	6.0	6.0	6.0	6.5
152.5°	6.5	6.5	6.5	7.0	7.4	7.0	6.5	6.5	6.5	6.5	7.0
155°	7.4	7.4	7.4	7.9	8.3	7.9	7.4	7.4	7.4	7.0	7.9
157.5°	8.3	8.8	8.8	9.2	9.7	9.2	8.8	8.8	8.3	8.3	8.8
160°	10.2	10.2	10.7	11.1	11.6	11.1	10.7	10.2	10.2	9.7	10.2
162.5°	11.1	11.1	12.1	12.5	13.4	12.5	12.1	11.1	11.1	11.1	11.1
165°	12.5	12.5	13.4	14.3	15.3	14.3	13.4	12.5	12.5	12.1	12.1
167.5°	13.4	13.4	14.3	15.8	16.7	15.8	14.3	13.4	13.4	13.0	13.0
170°	13.9	14.3	15.3	16.7	17.6	16.7	15.3	14.3	13.9	13.9	13.4
172.5°	15.3	15.3	16.7	18.0	19.0	18.0	16.7	15.3	15.3	14.9	14.9
175°	16.2	16.7	17.6	19.0	19.9	19.0	17.6	16.7	16.2	15.8	15.8
177.5°	16.2	17.1	18.0	19.5	20.4	19.5	18.0	17.1	16.2	15.8	15.8
180°	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	24708.3	24708.3	24708.3	24708.3	24708.3	24708.3
2.5°	23990.6	23974.9	23990.6	24158.3	24376.6	24694.0
5°	23433.3	23346.2	23433.3	23619.1	24019.8	24624.0
7.5°	22784.1	22733.7	22784.1	23095.0	23601.5	24456.8
10°	22100.8	21986.3	22100.8	22452.0	23049.2	24201.5
12.5°	21258.4	21107.0	21258.4	21621.2	22374.6	23794.2
15°	20187.2	20054.3	20187.2	20589.9	21463.7	23191.9
17.5°	19037.7	18917.3	19037.7	19387.6	20349.9	22343.0
20°	17594.0	17499.5	17594.0	18088.9	19033.1	21249.2
22.5°	16079.5	15991.0	16079.5	16519.1	17501.9	19877.7
25°	14297.5	14249.3	14297.5	14788.7	15677.3	18273.8
27.5°	12372.0	12290.0	12372.0	12885.8	13793.4	16387.1
30°	10404.8	10269.0	10404.8	10864.4	11677.0	14291.6
32.5°	8480.6	8382.8	8480.6	8808.2	9657.4	11945.2
35°	6620.8	6523.0	6620.8	6916.8	7750.8	9780.7
37.5°	5159.0	4986.3	5159.0	5349.0	6025.9	7675.8
40°	3912.7	3884.9	3912.7	4151.8	4585.0	5971.7
42.5°	3185.3	3109.8	3185.3	3288.2	3612.5	4524.8
45°	2613.6	2583.9	2613.6	2691.4	2909.1	3537.0
47.5°	2247.5	2260.6	2247.5	2297.6	2460.7	2880.4
50°	1974.6	1982.5	1974.6	1998.3	2107.2	2419.4
52.5°	1773.6	1766.6	1773.6	1775.9	1843.6	2078.5
55°	1595.7	1586.9	1595.7	1590.6	1640.6	1791.2
57.5°	1440.0	1446.5	1440.0	1433.1	1459.9	1572.9
60°	1301.0	1307.0	1301.0	1295.9	1313.5	1379.8
62.5°	1183.8	1187.5	1183.8	1183.3	1180.0	1231.1
65°	1079.1	1083.2	1079.1	1073.5	1068.4	1092.0
67.5°	979.0	979.0	979.0	969.2	961.3	984.5
70°	884.9	884.5	884.9	869.2	863.2	870.1
72.5°	771.9	783.0	771.9	760.3	759.9	760.8
75°	662.1	675.0	662.1	654.6	646.3	653.3
77.5°	550.9	570.8	550.9	544.9	540.7	536.1
80°	436.9	458.7	436.9	426.7	420.7	428.6
82.5°	322.9	339.1	322.9	310.4	310.0	313.7
85°	192.2	218.2	192.2	181.2	185.3	181.2
87.5°	61.6	78.8	61.6	58.8	64.9	63.4
90°	0.5	0.5	0.5	0.5	0.5	0.5
92.5°	0.5	0.5	0.5	0.5	0.5	0.5
95°	0.5	0.5	0.5	0.5	0.5	0.9
97.5°	0.5	0.9	0.5	0.5	0.5	0.9
100°	0.5	0.9	0.5	0.5	0.9	0.9
102.5°	0.5	0.9	0.5	0.5	0.9	0.9
105°	0.5	0.9	0.5	0.5	0.9	0.9
107.5°	0.5	0.9	0.5	0.9	0.9	0.9
110°	0.5	0.9	0.5	0.9	0.9	0.9



TEST NUMBER: P1433522
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L935

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	0.5	0.9	0.5	0.9	0.9	0.9
115°	0.5	0.9	0.5	0.9	0.9	1.4
117.5°	0.5	0.9	0.5	0.9	1.4	1.4
120°	0.5	0.9	0.5	0.9	1.4	1.4
122.5°	0.9	0.9	0.9	1.4	1.8	1.8
125°	0.9	1.4	0.9	1.8	2.4	1.8
127.5°	0.9	1.4	0.9	1.8	2.4	2.4
130°	1.4	1.4	1.4	2.4	2.8	2.8
132.5°	1.8	1.8	1.8	3.3	3.7	3.3
135°	2.4	1.8	2.4	3.3	4.2	3.7
137.5°	2.8	2.4	2.8	4.2	4.6	4.2
140°	3.7	3.3	3.7	4.6	4.6	4.6
142.5°	4.2	4.2	4.2	5.1	5.1	5.1
145°	5.1	5.1	5.1	5.5	5.1	5.5
147.5°	6.0	6.0	6.0	6.0	5.5	5.5
150°	7.0	7.0	7.0	6.5	6.0	6.0
152.5°	7.4	7.9	7.4	7.0	6.5	6.5
155°	8.3	8.8	8.3	7.9	7.0	7.4
157.5°	9.2	10.2	9.2	8.8	8.3	8.3
160°	10.7	11.1	10.7	10.2	9.7	10.2
162.5°	11.6	12.1	11.6	11.1	11.1	11.1
165°	12.5	13.0	12.5	12.1	12.1	12.5
167.5°	13.0	13.0	13.0	13.0	13.0	13.4
170°	13.4	13.9	13.4	13.4	13.9	13.9
172.5°	14.3	14.9	14.3	14.9	14.9	15.3
175°	15.3	15.8	15.3	15.8	15.8	16.2
177.5°	15.8	16.2	15.8	15.8	15.8	16.2
180°	17.1	17.1	17.1	17.1	17.1	17.1



TEST NUMBER: P1433522
 CATALOG NUMBER: EHBR1-30-UNV-TASM-L935

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	18.17	19.37	18.53	19.69	20.01	17.49	18.69	17.85	19.01	19.32
	3H	19.81	20.88	20.19	21.21	21.58	19.44	20.51	19.82	20.84	21.21
	4H	20.51	21.51	20.92	21.87	22.25	20.30	21.30	20.70	21.65	22.04
	6H	21.08	22.00	21.50	22.38	22.77	21.05	21.97	21.46	22.34	22.74
	8H	21.29	22.16	21.72	22.55	22.96	21.33	22.20	21.77	22.60	23.01
	12H	21.41	22.24	21.84	22.63	23.06	21.53	22.36	21.96	22.75	23.18
4H	2H	18.63	19.63	19.03	19.98	20.37	18.12	19.12	18.52	19.47	19.86
	3H	20.54	21.36	20.95	21.77	22.18	20.29	21.12	20.71	21.52	21.93
	4H	21.40	22.14	21.83	22.56	23.01	21.29	22.03	21.73	22.45	22.90
	6H	22.12	22.76	22.59	23.21	23.68	22.18	22.82	22.65	23.27	23.74
	8H	22.38	22.97	22.85	23.42	23.90	22.53	23.13	23.00	23.58	24.05
	12H	22.55	23.07	23.04	23.56	24.03	22.78	23.30	23.27	23.79	24.27
8H	4H	21.71	22.30	22.18	22.75	23.22	21.63	22.23	22.10	22.68	23.15
	6H	22.58	23.07	23.09	23.57	24.05	22.68	23.17	23.19	23.67	24.15
	8H	22.93	23.37	23.46	23.88	24.38	23.13	23.56	23.66	24.08	24.58
	12H	23.19	23.57	23.71	24.07	24.64	23.49	23.87	24.01	24.36	24.94
12H	4H	21.74	22.26	22.22	22.74	23.22	21.66	22.18	22.15	22.67	23.15
	6H	22.65	23.09	23.18	23.60	24.10	22.76	23.19	23.28	23.71	24.20
	8H	23.07	23.45	23.59	23.94	24.52	23.27	23.65	23.79	24.15	24.72

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

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
 CIE u': 0.2394
 CIE v': 0.5094
 Duv: -0.0028
 CIE x: 0.4076
 CIE y: 0.3856
 CIE z: 0.2068
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 582
 Purity: 38.0517
 Rf: 91.3
 Rg: 100

CRI (Ra):	94.6		
R1:	96.6	R9:	63.8
R2:	98.4	R10:	94.7
R3:	98.1	R11:	96.6
R4:	95.8	R12:	80.9
R5:	96.2	R13:	97.4
R6:	95.4	R14:	98.3
R7:	91.8	R15:	93.1
R8:	84.4		



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



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-472-6

Photopic Flux vs. Wavelength

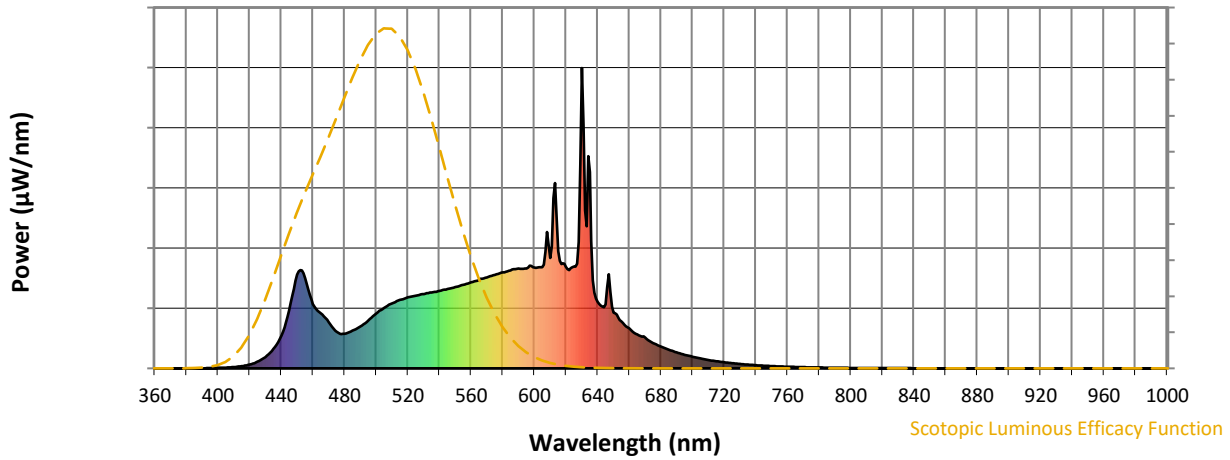


Photopic Lumens: NR

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



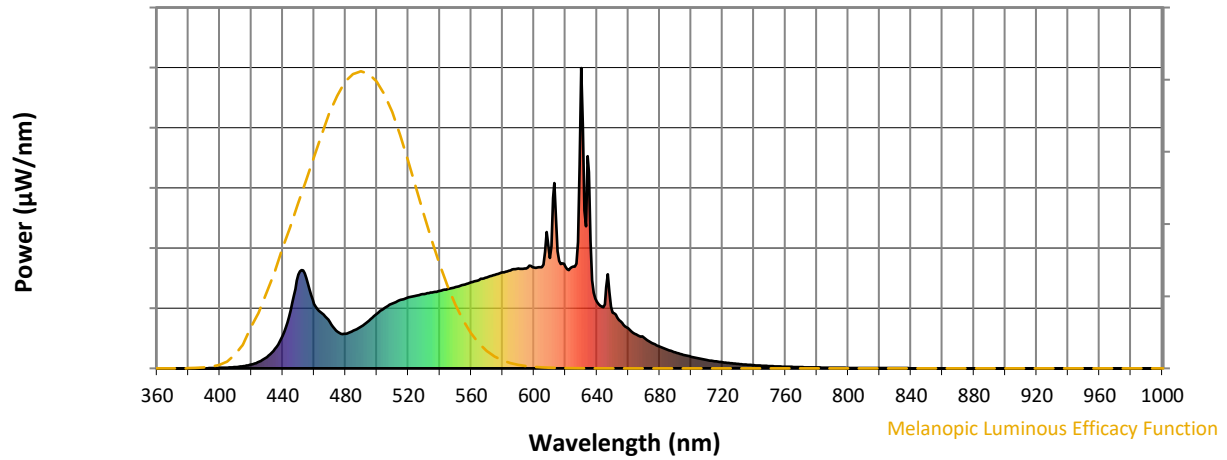
Scotopic Lumens: NR

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

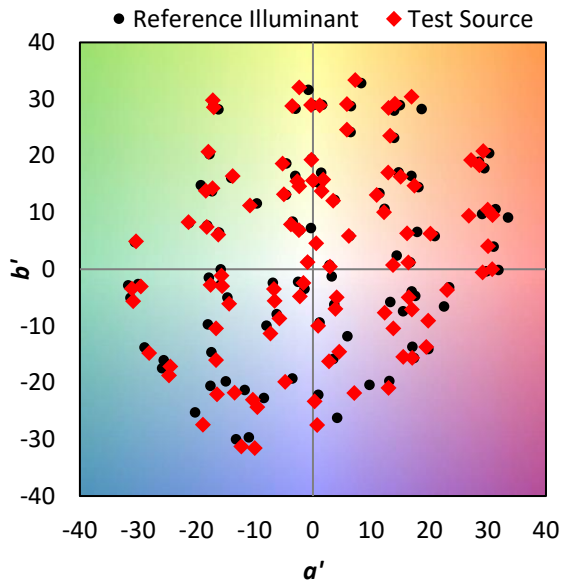
λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	140	NR	620	338	NR	750	8	NR	880	0	NR
365	0	NR	495	159	NR	625	339	NR	755	7	NR	885	0	NR
370	0	NR	500	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			

Summary

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

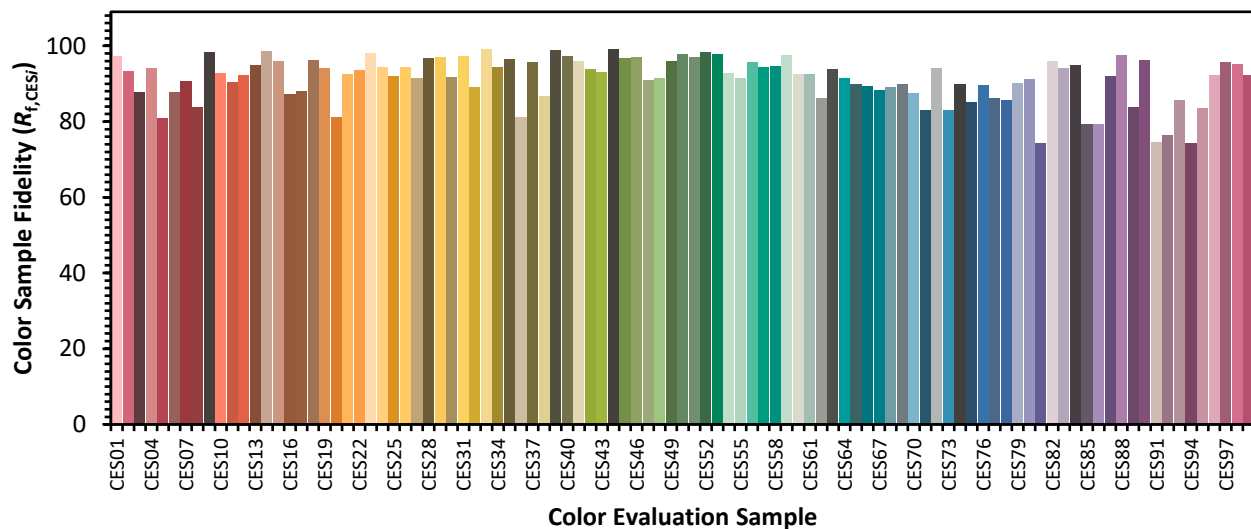


Color Vector Graphics



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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)