

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: P1433090

Luminaire Tested: EHBR1-12-UNV-TASM-L930-UPL12

Issue Date: 3/20/2026

Test Information

Test Method: LM-79-2019
Report Number: P1433090
REPORT IS A COMBINATION OF REPORTS P1431644 AND P1431635
Test Lab: INNOVATION CENTER
Issue Date: 3/20/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-12-UNV-TASM-L930-UPL12
Description: Elevate Round Highbay at, 12000 lumens, 3000K 90CRI LEDs with TASM lens
Light Source: -
Ballast/Driver: -

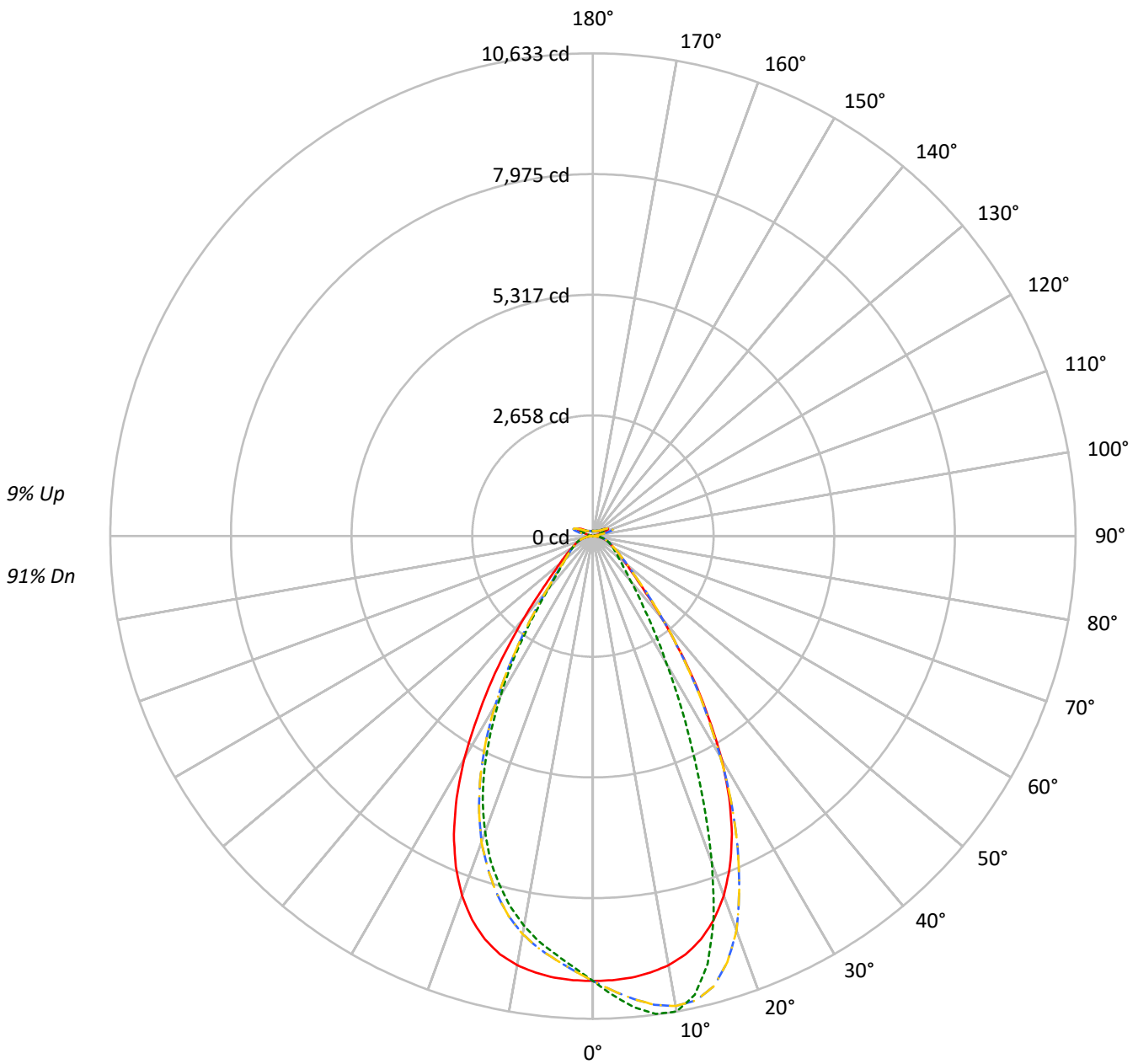
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12033.9 lumens
Efficiency: N/A
Efficacy: 166.9 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): 72.1
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



— 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	0
RCR																					
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	94	91
1	110	106	103	100	106	103	100	98	97	95	93	92	90	89	87	86	85	85	85	85	82
2	103	97	92	87	99	94	90	86	89	86	83	85	82	79	81	79	76	76	76	76	74
3	96	88	82	78	93	86	81	76	82	78	74	79	75	72	75	72	69	69	69	69	67
4	90	81	75	70	88	79	73	69	76	71	67	73	69	65	70	66	63	63	63	63	61
5	85	75	68	63	82	74	67	62	71	65	61	68	63	60	65	61	58	58	58	58	56
6	80	70	63	58	78	68	62	57	66	60	56	63	59	55	61	57	54	54	54	54	52
7	75	65	58	53	73	64	57	53	61	56	52	59	55	51	58	53	50	50	50	50	48
8	71	61	54	49	69	60	53	49	58	52	48	56	51	47	54	50	47	47	47	47	45
9	68	57	50	46	66	56	50	45	54	49	45	53	48	44	51	47	43	43	43	43	42
10	64	53	47	43	63	53	46	42	51	46	42	50	45	41	48	44	41	41	41	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	46016	46016	46016	46016
5°	45736	48792	45736	43363
10°	45174	50044	45174	41039
15°	43840	46507	43840	37909
20°	41002	37292	41002	33766
25°	36290	25838	36290	28298
30°	29466	16810	29466	21172
35°	21134	10886	21134	14095
40°	13664	7503	13664	8889
45°	8670	5812	8670	6333
50°	6438	4939	6438	5276
55°	5256	4499	5256	4657
60°	4552	4286	4552	4312
65°	4149	4133	4149	4116
70°	3932	4050	3932	3998
75°	3678	3918	3678	3800
80°	3230	3699	3230	3458
85°	2089	2642	2089	2517

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12189 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	931.7	7.7
10°-20°	2534.8	21.1
20°-30°	2972.8	24.7
30°-40°	2067.4	17.2
40°-50°	1027.4	8.5
50°-60°	614.5	5.1
60°-70°	432.5	3.6
70°-80°	278.6	2.3
80°-90°	90.4	0.8
90°-100°	28.9	0.2
100°-110°	188.4	1.6
110°-120°	348.1	2.9
120°-130°	206.9	1.7
130°-140°	125.1	1.0
140°-150°	86.6	0.7
150°-160°	56.6	0.5
160°-170°	32.5	0.3
170°-180°	10.8	0.1
0°-30°	6439.3	53.5
0°-40°	8506.7	70.7
0°-60°	10148.6	84.3
0°-90°	10950.1	91.0
90°-120°	565.3	4.7
90°-150°	983.9	8.2
90°-180°	1084.0	9.0
0°-180°	12033.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	9799	9799	9799	9799	9799	
5°	9765	10418	9765	9259	9765	927
15°	9198	9757	9198	7953	9198	2570
25°	7247	5160	7247	5651	7247	3281
35°	3879	1998	3879	2587	3879	2421
45°	1403	940	1403	1025	1403	1148
55°	710	608	710	629	710	650
65°	433	431	433	430	433	435
75°	259	276	259	268	259	272
85°	72	91	72	86	72	80
90°	8	9	8	8	8	7
95°	15	15	15	13	15	16
105°	86	44	86	66	86	117
115°	370	316	370	301	370	338
125°	237	248	237	217	237	218
135°	150	173	150	159	150	119
145°	136	142	136	132	136	85
155°	121	126	121	117	121	56
165°	114	117	114	112	114	32
175°	114	116	114	112	114	11
180°	113	113	113	113	113	



TEST NUMBER: P1433090
 CATALOG NUMBER: EHBR1-12-UNV-TASM-L930-UPL12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8
2.5°	9793.1	9919.7	10022.2	10089.8	10123.3	10089.8	10022.2	9919.7	9793.1	9667.3	9580.7
5°	9765.4	10018.9	10233.8	10374.3	10417.9	10374.3	10233.8	10018.9	9765.4	9525.8	9366.9
7.5°	9699.1	10094.1	10413.2	10577.3	10617.4	10577.3	10413.2	10094.1	9699.1	9359.8	9159.0
10°	9597.8	10141.5	10510.3	10627.8	10632.6	10627.8	10510.3	10141.5	9597.8	9140.9	8904.0
12.5°	9436.3	10124.6	10477.8	10439.2	10351.5	10439.2	10477.8	10124.6	9436.3	8873.3	8574.5
15°	9197.5	10024.4	10271.7	9957.8	9756.9	9957.8	10271.7	10024.4	9197.5	8512.1	8165.5
17.5°	8860.8	9837.0	9841.8	9220.5	8841.7	9220.5	9841.8	9837.0	8860.8	8070.3	7688.8
20°	8427.0	9536.4	9249.8	8113.6	7664.6	8113.6	9249.8	9536.4	8427.0	7548.1	7173.7
22.5°	7883.1	9131.1	8425.4	6999.9	6387.4	6999.9	8425.4	9131.1	7883.1	6940.9	6551.1
25°	7247.0	8634.4	7538.4	5786.4	5159.9	5786.4	7538.4	8634.4	7247.0	6217.3	5864.9
27.5°	6498.8	8004.9	6594.0	4728.5	4150.4	4728.5	6594.0	8004.9	6498.8	5470.2	5110.2
30°	5667.7	7197.9	5611.2	3765.6	3233.3	3765.6	5611.2	7197.9	5667.7	4630.9	4308.6
32.5°	4737.2	6406.9	4667.3	3017.2	2566.3	3017.2	4667.3	6406.9	4737.2	3829.9	3493.1
35°	3878.8	5417.3	3816.1	2370.8	1998.0	2370.8	3816.1	5417.3	3878.8	3073.8	2743.1
37.5°	3044.0	4482.3	3042.1	1909.1	1620.6	1909.1	3042.1	4482.3	3044.0	2389.8	2121.3
40°	2368.3	3504.7	2383.5	1523.9	1300.5	1523.9	2383.5	3504.7	2368.3	1818.3	1646.6
42.5°	1794.4	2679.9	1873.4	1250.7	1104.7	1250.7	1873.4	2679.9	1794.4	1432.7	1304.0
45°	1402.7	1972.1	1463.0	1055.2	940.4	1055.2	1463.0	1972.1	1402.7	1153.8	1067.3
47.5°	1142.4	1524.1	1185.7	905.1	824.7	905.1	1185.7	1524.1	1142.4	975.9	911.2
50°	959.5	1169.5	984.5	790.1	736.1	790.1	984.5	1169.5	959.5	835.6	792.5
52.5°	824.3	953.8	838.4	704.1	667.7	704.1	838.4	953.8	824.3	731.1	704.3
55°	710.3	801.8	729.1	633.2	608.0	633.2	729.1	801.8	710.3	650.6	630.7
57.5°	623.8	680.2	633.2	572.7	556.0	572.7	633.2	680.2	623.8	579.0	568.3
60°	547.2	589.0	558.7	520.0	515.3	520.0	558.7	589.0	547.2	520.9	513.9
62.5°	488.2	514.6	494.0	472.6	468.4	472.6	494.0	514.6	488.2	468.0	469.3
65°	433.1	457.7	441.6	430.0	431.4	430.0	441.6	457.7	433.1	423.7	425.7
67.5°	390.5	403.3	396.3	389.7	391.4	389.7	396.3	403.3	390.5	381.2	384.3
70°	345.0	358.9	351.6	352.6	355.4	352.6	351.6	358.9	345.0	342.3	344.7
72.5°	301.7	312.3	309.9	312.2	315.1	312.2	309.9	312.3	301.7	301.3	301.6
75°	259.1	267.2	268.2	271.4	276.0	271.4	268.2	267.2	259.1	256.3	259.6
77.5°	212.6	221.8	225.3	229.5	236.3	229.5	225.3	221.8	212.6	214.4	216.1
80°	169.9	174.2	181.9	185.0	194.6	185.0	181.9	174.2	169.9	166.8	169.2
82.5°	124.4	128.2	134.8	140.7	146.2	140.7	134.8	128.2	124.4	122.9	123.1
85°	71.8	77.7	82.2	89.1	90.8	89.1	82.2	77.7	71.8	73.5	71.8
87.5°	25.1	27.0	30.8	33.6	33.8	33.6	30.8	27.0	25.1	25.8	23.3
90°	7.9	13.5	23.3	13.0	9.2	13.0	23.3	13.5	7.9	13.9	21.7
92.5°	10.3	18.3	32.9	17.2	12.2	17.2	32.9	18.3	10.3	18.1	34.9
95°	15.3	22.5	41.8	19.0	14.6	19.0	41.8	22.5	15.3	24.1	48.7
97.5°	23.7	27.9	47.2	20.2	17.6	20.2	47.2	27.9	23.7	29.5	55.9
100°	31.5	31.5	86.1	23.2	20.0	23.2	86.1	31.5	31.5	36.3	87.0
102.5°	47.7	61.6	199.4	46.2	24.1	46.2	199.4	61.6	47.7	68.0	184.6
105°	86.5	140.6	350.8	118.5	44.2	118.5	350.8	140.6	86.5	142.2	328.7
107.5°	163.8	262.1	452.0	233.5	102.2	233.5	452.0	262.1	163.8	251.7	433.6
110°	261.9	366.3	493.2	319.7	206.4	319.7	493.2	366.3	261.9	345.7	454.7



TEST NUMBER: P1433090

CATALOG NUMBER: EHBR1-12-UNV-TASM-L930-UPL12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	340.9	408.1	481.9	354.4	285.3	354.4	481.9	408.1	340.9	381.6	435.5
115°	370.4	402.2	430.4	353.2	316.5	353.2	430.4	402.2	370.4	372.6	388.8
117.5°	357.9	368.0	371.8	331.6	318.3	331.6	371.8	368.0	357.9	335.1	330.2
120°	323.1	318.9	313.3	299.9	300.3	299.9	313.3	318.9	323.1	292.6	275.6
122.5°	279.6	270.6	264.8	267.8	275.8	267.8	264.8	270.6	279.6	249.1	236.3
125°	237.1	228.1	230.9	240.3	248.4	240.3	230.9	228.1	237.1	211.6	208.4
127.5°	201.4	197.2	206.4	216.9	223.9	216.9	206.4	197.2	201.4	185.3	188.7
130°	175.8	176.9	189.0	198.0	202.4	198.0	189.0	176.9	175.8	168.1	176.3
132.5°	159.9	164.5	176.0	183.8	186.4	183.8	176.0	164.5	159.9	157.6	167.6
135°	149.9	156.7	167.2	172.3	173.2	172.3	167.2	156.7	149.9	150.7	159.9
137.5°	144.1	150.9	158.8	162.9	161.8	162.9	158.8	150.9	144.1	146.1	153.1
140°	140.7	147.5	151.0	155.7	154.9	155.7	151.0	147.5	140.7	142.0	147.3
142.5°	137.3	143.6	145.3	148.6	147.7	148.6	145.3	143.6	137.3	138.5	142.1
145°	135.7	140.3	138.9	143.3	141.9	143.3	138.9	140.3	135.7	136.1	138.1
147.5°	132.7	136.1	134.3	138.1	136.6	138.1	134.3	136.1	132.7	132.7	133.5
150°	129.3	131.7	129.1	133.5	133.2	133.5	129.1	131.7	129.3	128.7	129.5
152.5°	124.7	127.1	124.7	129.7	129.2	129.7	124.7	127.1	124.7	124.0	124.8
155°	120.8	122.1	120.8	125.8	126.0	125.8	120.8	122.1	120.8	120.7	121.0
157.5°	118.3	119.0	118.4	122.8	123.0	122.8	118.4	119.0	118.3	118.3	118.4
160°	115.9	117.1	116.7	120.5	120.7	120.5	116.7	117.1	115.9	116.4	116.6
162.5°	115.0	115.0	115.0	118.7	119.1	118.7	115.0	115.0	115.0	115.0	115.7
165°	113.9	114.5	113.7	116.4	117.4	116.4	113.7	114.5	113.9	114.3	114.3
167.5°	113.7	113.1	113.4	115.8	116.7	115.8	113.4	113.1	113.7	114.1	114.1
170°	112.6	112.8	112.6	115.0	115.8	115.0	112.6	112.8	112.6	113.3	113.7
172.5°	113.2	113.2	112.6	114.2	115.9	114.2	112.6	113.2	113.2	113.6	114.2
175°	113.5	113.1	112.9	114.1	115.7	114.1	112.9	113.1	113.5	113.4	113.4
177.5°	112.9	113.3	113.6	114.9	117.0	114.9	113.6	113.3	112.9	113.4	113.4
180°	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3	113.3



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CATALOG NUMBER: EHBR1-12-UNV-TASM-L930-UPL12

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	9798.8	9798.8	9798.8	9798.8	9798.8	9798.8
2.5°	9514.2	9507.9	9514.2	9580.7	9667.3	9793.1
5°	9293.2	9258.6	9293.2	9366.9	9525.8	9765.4
7.5°	9035.7	9015.7	9035.7	9159.0	9359.8	9699.1
10°	8764.7	8719.4	8764.7	8904.0	9140.9	9597.8
12.5°	8430.6	8370.6	8430.6	8574.5	8873.3	9436.3
15°	8005.8	7953.2	8005.8	8165.5	8512.1	9197.5
17.5°	7550.0	7502.2	7550.0	7688.8	8070.3	8860.8
20°	6977.4	6939.9	6977.4	7173.7	7548.1	8427.0
22.5°	6376.8	6341.7	6376.8	6551.1	6940.9	7883.1
25°	5670.1	5651.0	5670.1	5864.9	6217.3	7247.0
27.5°	4906.4	4874.0	4906.4	5110.2	5470.2	6498.8
30°	4126.3	4072.5	4126.3	4308.6	4630.9	5667.7
32.5°	3363.3	3324.5	3363.3	3493.1	3829.9	4737.2
35°	2625.7	2586.9	2625.7	2743.1	3073.8	3878.8
37.5°	2046.0	1977.4	2046.0	2121.3	2389.8	3044.0
40°	1551.7	1540.7	1551.7	1646.6	1818.3	2368.3
42.5°	1263.2	1233.2	1263.2	1304.0	1432.7	1794.4
45°	1036.5	1024.7	1036.5	1067.3	1153.8	1402.7
47.5°	891.3	896.5	891.3	911.2	975.9	1142.4
50°	783.1	786.3	783.1	792.5	835.6	959.5
52.5°	703.4	700.6	703.4	704.3	731.1	824.3
55°	632.8	629.3	632.8	630.7	650.6	710.3
57.5°	571.0	573.6	571.0	568.3	579.0	623.8
60°	516.0	518.4	516.0	513.9	520.9	547.2
62.5°	469.5	471.0	469.5	469.3	468.0	488.2
65°	427.9	429.6	427.9	425.7	423.7	433.1
67.5°	388.3	388.3	388.3	384.3	381.2	390.5
70°	350.9	350.8	350.9	344.7	342.3	345.0
72.5°	306.1	310.6	306.1	301.6	301.3	301.7
75°	262.5	267.7	262.5	259.6	256.3	259.1
77.5°	218.5	226.3	218.5	216.1	214.4	212.6
80°	173.2	181.9	173.2	169.2	166.8	169.9
82.5°	128.1	134.5	128.1	123.1	122.9	124.4
85°	76.3	86.5	76.3	71.8	73.5	71.8
87.5°	24.4	31.3	24.4	23.3	25.8	25.1
90°	12.7	7.9	12.7	21.7	13.9	7.9
92.5°	19.3	11.6	19.3	34.9	18.1	10.3
95°	22.3	13.4	22.3	48.7	24.1	15.3
97.5°	24.7	17.1	24.7	55.9	29.5	23.7
100°	28.9	22.5	28.9	87.0	36.3	31.5
102.5°	61.2	38.1	61.2	184.6	68.0	47.7
105°	128.9	65.6	128.9	328.7	142.2	86.5
107.5°	230.6	113.4	230.6	433.6	251.7	163.8
110°	306.0	211.6	306.0	454.7	345.7	261.9



TEST NUMBER: P1433090
 CATALOG NUMBER: EHBR1-12-UNV-TASM-L930-UPL12

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	328.7	285.9	328.7	435.5	381.6	340.9
115°	316.2	300.8	316.2	388.8	372.6	370.4
117.5°	288.6	290.6	288.6	330.2	335.1	357.9
120°	256.9	269.1	256.9	275.6	292.6	323.1
122.5°	227.8	242.1	227.8	236.3	249.1	279.6
125°	202.6	217.2	202.6	208.4	211.6	237.1
127.5°	185.3	195.1	185.3	188.7	185.3	201.4
130°	171.7	180.1	171.7	176.3	168.1	175.8
132.5°	162.3	167.7	162.3	167.6	157.6	159.9
135°	154.1	158.7	154.1	159.9	150.7	149.9
137.5°	147.1	151.1	147.1	153.1	146.1	144.1
140°	140.9	144.3	140.9	147.3	142.0	140.7
142.5°	134.6	137.0	134.6	142.1	138.5	137.3
145°	130.1	131.9	130.1	138.1	136.1	135.7
147.5°	126.3	127.5	126.3	133.5	132.7	132.7
150°	122.4	123.7	122.4	129.5	128.7	129.3
152.5°	118.4	119.9	118.4	124.8	124.0	124.7
155°	115.8	117.2	115.8	121.0	120.7	120.8
157.5°	114.3	115.3	114.3	118.4	118.3	118.3
160°	113.1	113.9	113.1	116.6	116.4	115.9
162.5°	111.7	112.6	111.7	115.7	115.0	115.0
165°	111.5	111.7	111.5	114.3	114.3	113.9
167.5°	111.1	111.7	111.1	114.1	114.1	113.7
170°	111.3	111.5	111.3	113.7	113.3	112.6
172.5°	111.7	111.8	111.7	114.2	113.6	113.2
175°	111.4	111.6	111.4	113.4	113.4	113.5
177.5°	112.2	112.4	112.2	113.4	113.4	112.9
180°	113.3	113.3	113.3	113.3	113.3	113.3



TEST NUMBER: P1433090
 CATALOG NUMBER: EHBR1-12-UNV-TASM-L930-UPL12

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	13.76	14.83	14.28	15.33	15.87	13.08	14.15	13.60	14.64	15.18
	3H	15.30	16.26	15.84	16.77	17.35	14.92	15.88	15.46	16.39	16.97
	4H	15.94	16.83	16.50	17.36	17.96	15.70	16.59	16.26	17.12	17.72
	6H	16.42	17.24	16.99	17.78	18.39	16.34	17.16	16.91	17.71	18.32
	8H	16.57	17.34	17.15	17.91	18.52	16.56	17.34	17.15	17.90	18.52
	12H	16.64	17.38	17.22	17.93	18.57	16.69	17.43	17.28	17.99	18.63
4H	2H	14.17	15.06	14.73	15.59	16.19	13.65	14.54	14.21	15.07	15.67
	3H	15.96	16.70	16.53	17.27	17.89	15.70	16.44	16.27	17.01	17.63
	4H	16.74	17.40	17.33	17.98	18.64	16.61	17.27	17.20	17.86	18.51
	6H	17.35	17.92	17.96	18.53	19.20	17.38	17.95	17.99	18.56	19.23
	8H	17.55	18.08	18.16	18.69	19.36	17.65	18.18	18.27	18.79	19.46
	12H	17.65	18.12	18.29	18.76	19.44	17.82	18.29	18.45	18.92	19.60
8H	4H	16.99	17.52	17.60	18.12	18.80	16.89	17.42	17.51	18.03	18.70
	6H	17.73	18.16	18.37	18.81	19.49	17.79	18.23	18.44	18.88	19.56
	8H	18.00	18.38	18.66	19.05	19.74	18.15	18.53	18.81	19.19	19.89
	12H	18.17	18.51	18.83	19.15	19.92	18.39	18.73	19.05	19.37	20.14
12H	4H	16.99	17.47	17.63	18.10	18.78	16.90	17.37	17.53	18.00	18.68
	6H	17.77	18.16	18.44	18.82	19.51	17.84	18.23	18.50	18.89	19.58
	8H	18.09	18.43	18.75	19.07	19.84	18.24	18.58	18.90	19.22	19.99

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

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



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



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

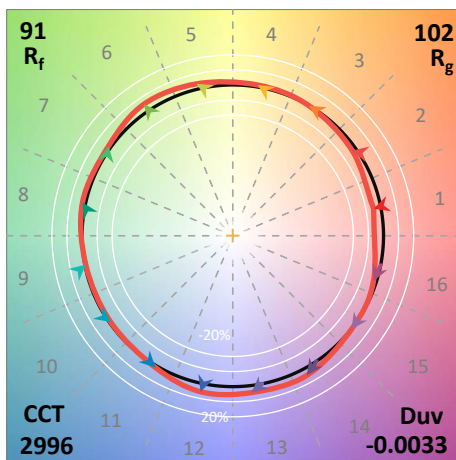
λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	101	NR	620	317	NR	750	7	NR	880	0	NR
365	0	NR	495	121	NR	625	320	NR	755	6	NR	885	0	NR
370	0	NR	500	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			

Summary

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



Color Vector Graphics



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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)