

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: P893201

Luminaire Tested: 4MB-10HL-LVRF-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893201
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-5)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-LVRF-UNV-L830
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 3000K (C
Light Source: -
Ballast/Driver: -

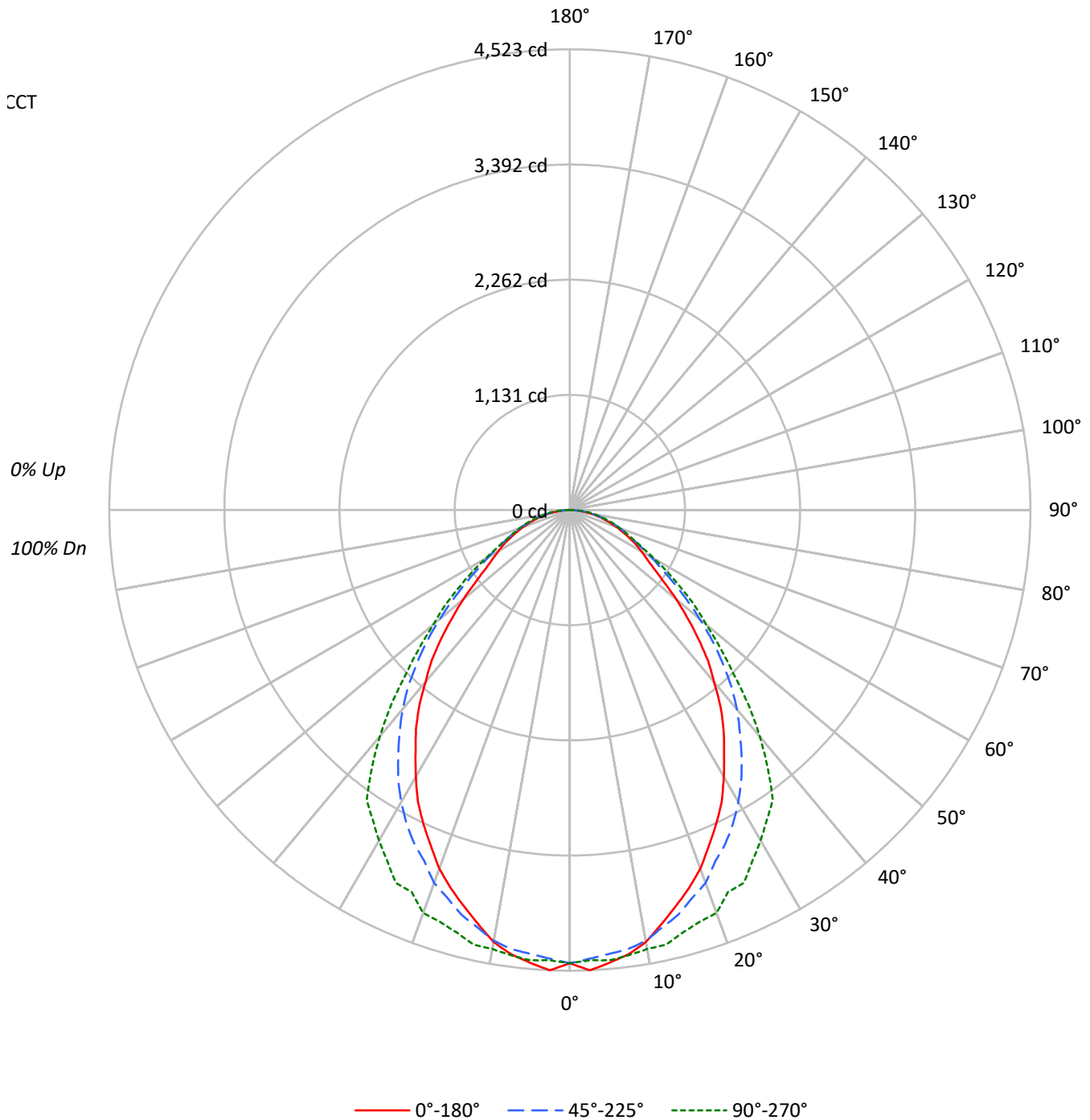
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9022.0 lumens
Efficiency: N/A
Efficacy: 119.5 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.25 / 1.21
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 75.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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	
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	57	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	40
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	37
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	33
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	31659	31659	31659
5°	31866	31248	31695
10°	31119	31023	31619
15°	29650	30307	31620
20°	28363	29501	31878
25°	26703	28373	31715
30°	24841	27191	30787
35°	22878	25523	30191
40°	20460	23721	26959
45°	17936	21336	22861
50°	15137	18434	19347
55°	12557	15429	16501
60°	11546	13119	13610
65°	10817	11534	11623
70°	10073	10930	10849
75°	9399	10202	10567
80°	8777	9485	10137
85°	7388	8033	11184

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 22861 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	420.0	4.7
10°-20°	1171.5	13.0
20°-30°	1687.2	18.7
30°-40°	1862.7	20.6
40°-50°	1598.3	17.7
50°-60°	1088.8	12.1
60°-70°	685.0	7.6
70°-80°	390.0	4.3
80°-90°	118.5	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3278.7	36.3
0°-40°	5141.4	57.0
0°-60°	7828.5	86.8
0°-90°	9022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4450	4450	4450	4450	4450	
5°	4462	4444	4375	4467	4438	421
15°	4025	4068	4114	4301	4293	1133
25°	3401	3469	3614	3906	4040	1562
35°	2634	2736	2938	3259	3476	1638
45°	1782	1901	2120	2248	2272	1373
55°	1012	1075	1244	1304	1330	930
65°	642	653	685	718	690	638
75°	342	344	371	387	384	364
85°	90	93	98	117	137	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4449.6	4449.6	4449.6	4449.6	4449.6
2.5°	4522.8	4476.2	4409.7	4473.6	4424.3
5°	4461.6	4444.3	4375.1	4466.9	4437.7
7.5°	4399.1	4361.8	4349.9	4448.3	4409.7
10°	4307.3	4286.0	4294.0	4420.4	4376.5
12.5°	4162.3	4176.9	4195.5	4356.5	4369.8
15°	4025.3	4067.8	4114.4	4300.6	4292.7
17.5°	3890.9	3949.5	3993.4	4232.8	4239.4
20°	3745.9	3779.2	3896.2	4127.7	4210.2
22.5°	3566.3	3631.5	3732.6	4021.3	4058.5
25°	3401.4	3469.2	3614.2	3905.6	4039.9
27.5°	3228.5	3291.0	3470.6	3768.5	3882.9
30°	3023.6	3107.4	3309.6	3612.9	3747.3
32.5°	2818.8	2941.1	3135.4	3446.6	3602.3
35°	2633.9	2736.3	2938.5	3259.1	3475.9
37.5°	2429.0	2536.8	2741.6	3054.2	3192.6
40°	2202.9	2318.6	2554.0	2806.8	2902.6
42.5°	2008.6	2108.4	2345.2	2523.4	2599.3
45°	1782.5	1900.9	2120.4	2248.1	2272.0
47.5°	1564.4	1700.0	1896.9	1956.8	2003.3
50°	1367.5	1473.9	1665.4	1702.7	1747.9
52.5°	1166.6	1279.7	1447.3	1484.5	1551.0
55°	1012.3	1074.8	1243.8	1303.6	1330.2
57.5°	899.2	939.1	1058.9	1134.7	1142.7
60°	811.4	831.4	921.9	979.0	956.4
62.5°	730.3	746.3	791.5	835.4	806.1
65°	642.5	653.1	685.1	718.3	690.4
67.5°	560.0	572.0	601.3	625.2	601.3
70°	484.2	493.5	525.4	536.1	521.5
72.5°	413.7	417.7	444.3	462.9	453.6
75°	341.9	344.5	371.1	387.1	384.4
77.5°	276.7	280.7	303.3	317.9	309.9
80°	214.2	216.8	231.5	252.7	247.4
82.5°	150.3	155.6	164.9	183.6	198.2
85°	90.5	93.1	98.4	117.1	137.0
87.5°	34.6	37.2	39.9	49.2	65.2
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	19.46	20.94	19.82	21.25	21.57	20.82	22.30	21.18	22.61	22.93
	3H	21.04	22.36	21.42	22.69	23.05	22.11	23.43	22.48	23.76	24.12
	4H	21.64	22.88	22.04	23.23	23.61	22.66	23.90	23.06	24.25	24.63
	6H	22.11	23.26	22.53	23.63	24.02	23.11	24.26	23.52	24.62	25.02
	8H	22.27	23.36	22.70	23.75	24.15	23.30	24.39	23.72	24.78	25.18
	12H	22.37	23.41	22.80	23.79	24.22	23.45	24.50	23.88	24.88	25.31
4H	2H	20.07	21.31	20.47	21.66	22.04	21.19	22.43	21.59	22.78	23.16
	3H	21.88	22.91	22.29	23.31	23.71	22.74	23.77	23.15	24.17	24.57
	4H	22.60	23.53	23.03	23.94	24.38	23.45	24.37	23.88	24.79	25.23
	6H	23.20	24.00	23.65	24.45	24.91	24.06	24.86	24.51	25.30	25.76
	8H	23.40	24.15	23.86	24.60	25.06	24.30	25.05	24.77	25.50	25.97
	12H	23.54	24.21	24.02	24.69	25.16	24.52	25.19	25.00	25.67	26.14
8H	4H	22.93	23.68	23.39	24.12	24.59	23.68	24.43	24.14	24.88	25.34
	6H	23.65	24.27	24.15	24.76	25.24	24.42	25.05	24.92	25.54	26.02
	8H	23.93	24.49	24.44	25.00	25.49	24.76	25.31	25.27	25.83	26.31
	12H	24.14	24.63	24.65	25.13	25.69	25.06	25.56	25.57	26.05	26.61
12H	4H	22.96	23.64	23.45	24.12	24.59	23.69	24.37	24.18	24.84	25.32
	6H	23.72	24.28	24.23	24.79	25.28	24.46	25.02	24.98	25.53	26.02
	8H	24.05	24.55	24.56	25.04	25.61	24.85	25.35	25.36	25.84	26.40