

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: P892777

Luminaire Tested: 2MB-4HL-RND-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-RND-UNV-L930
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

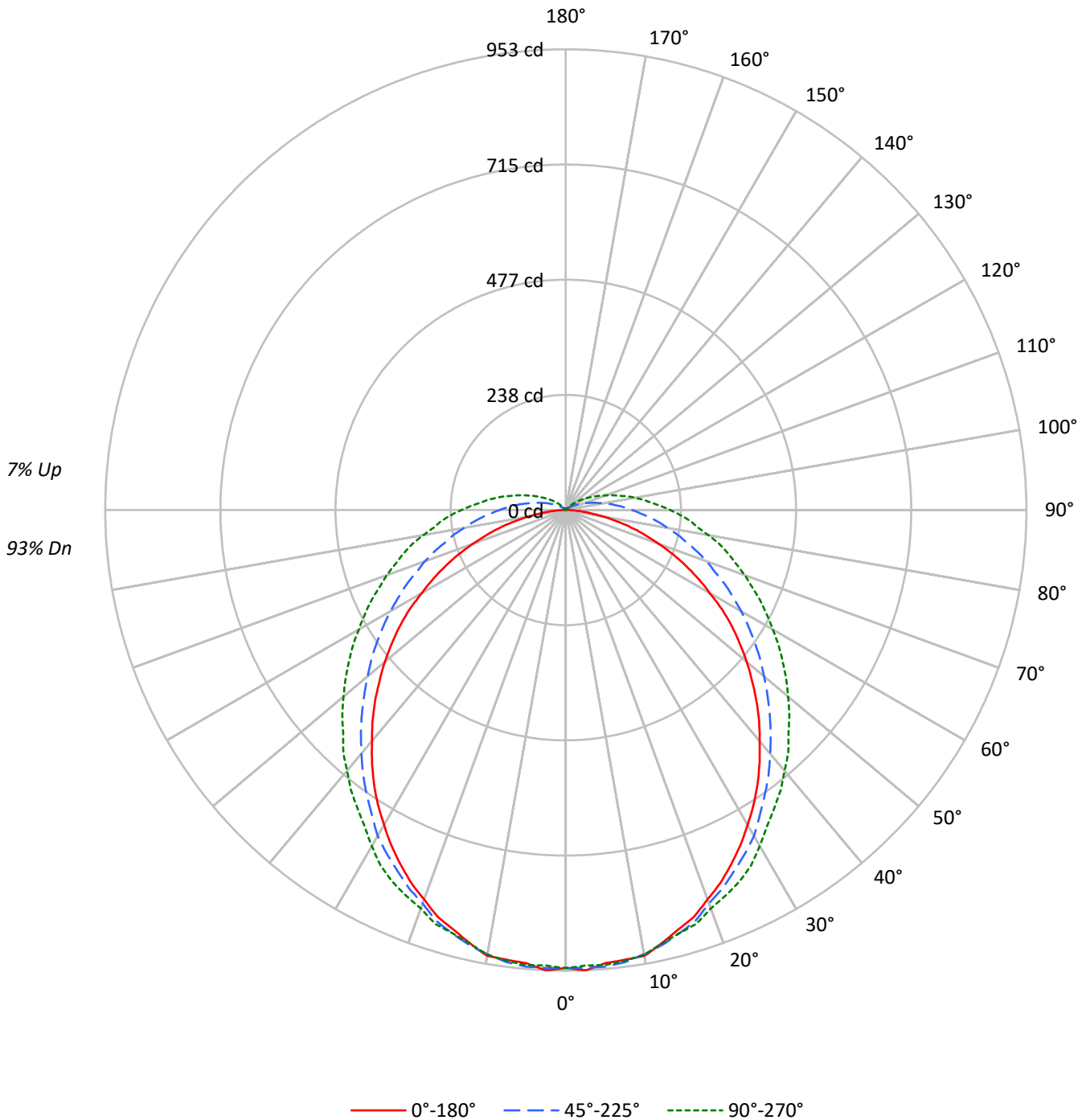
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3088.0 lumens
Efficiency: N/A
Efficacy: 111.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34
Luminous Opening: Rectangular (W 0.38' x L: 1.98' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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	50	30	10	0
RCR																					
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	66	63	63	63	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	43	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	38	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	31	31	31	31	28
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	40	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	37	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13553	13553	13553
5°	13513	13615	13563
10°	13607	13556	13566
15°	13305	13431	13421
20°	13050	13181	13353
25°	12770	13005	13396
30°	12425	12860	13258
35°	12083	12541	13136
40°	11649	12284	13147
45°	11285	12074	13178
50°	10881	11909	13360
55°	10460	11894	13663
60°	9848	11979	14151
65°	9319	12298	15036
70°	8579	12970	16471
75°	7766	14277	19218
80°	6549	17597	24673
85°	5236	28543	42397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 77727 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	2.9
10°-20°	255.3	8.3
20°-30°	380.7	12.3
30°-40°	450.7	14.6
40°-50°	464.4	15.0
50°-60°	429.4	13.9
60°-70°	356.9	11.6
70°-80°	267.0	8.6
80°-90°	176.9	5.7
90°-100°	108.3	3.5
100°-110°	61.2	2.0
110°-120°	30.5	1.0
120°-130°	12.6	0.4
130°-140°	3.7	0.1
140°-150°	0.6	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	725.8	23.5
0°-40°	1176.5	38.1
0°-60°	2070.2	67.0
0°-90°	2871.0	93.0
90°-120°	199.9	6.5
90°-150°	216.8	7.0
90°-180°	217.0	7.0
0°-180°	3088.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	941	936	948	945	944	90
15°	898	898	907	915	906	254
25°	809	812	824	840	849	372
35°	692	699	718	748	752	432
45°	558	563	597	639	651	430
55°	419	429	477	529	548	374
65°	275	297	363	420	444	272
75°	140	181	258	322	348	149
85°	32	93	174	234	258	36
90°	3	60	137	193	216	3
95°	1	38	106	160	177	1
105°	1	13	58	99	114	1
115°	1	4	28	55	67	1
125°	1	1	11	26	33	1
135°	1	1	3	8	12	1
145°	1	1	0	1	1	0
155°	1	1	0	0	0	0
165°	1	1	0	0	0	0
175°	1	1	0	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	947.4	947.4	947.4	947.4	947.4
2.5°	953.0	941.7	948.1	946.6	943.1
5°	941.0	936.0	948.1	945.2	944.5
7.5°	938.1	936.0	943.1	940.3	940.3
10°	936.7	922.5	933.2	940.3	933.9
12.5°	917.6	914.0	921.8	922.5	918.3
15°	898.4	898.4	906.9	915.4	906.2
17.5°	882.1	880.7	891.3	897.7	897.7
20°	857.2	859.4	865.8	877.8	877.1
22.5°	835.2	840.9	847.3	861.5	863.6
25°	809.0	811.8	823.9	839.5	848.7
27.5°	782.0	786.3	801.9	818.9	829.6
30°	752.2	752.2	778.5	798.3	802.6
32.5°	723.1	723.8	747.2	769.2	774.9
35°	691.9	699.0	718.1	748.0	752.2
37.5°	658.5	662.8	689.1	716.0	730.2
40°	623.8	630.9	657.8	695.4	704.0
42.5°	591.8	597.5	627.3	666.3	681.2
45°	557.8	563.4	596.8	638.7	651.4
47.5°	522.3	529.4	565.6	615.3	627.3
50°	488.9	494.6	535.1	585.4	600.3
52.5°	453.5	462.7	506.7	555.6	574.8
55°	419.4	429.3	476.9	528.7	547.8
57.5°	383.9	397.4	447.8	501.7	522.3
60°	344.2	361.9	418.7	476.2	494.6
62.5°	310.1	329.3	389.6	446.4	469.1
65°	275.3	296.6	363.3	420.1	444.2
67.5°	240.6	266.1	333.5	393.8	417.3
70°	205.1	237.7	310.1	370.4	393.8
72.5°	171.7	208.6	284.6	347.7	369.0
75°	140.5	181.0	258.3	321.5	347.7
77.5°	109.3	156.1	237.7	301.6	325.0
80°	79.5	132.0	213.6	277.5	299.5
82.5°	54.6	111.4	194.4	256.2	274.6
85°	31.9	93.0	173.9	233.5	258.3
87.5°	14.9	75.2	154.0	212.9	237.0
90°	2.8	60.3	137.0	193.0	215.7
92.5°	0.7	48.3	122.1	177.4	195.9
95°	0.7	37.6	106.4	159.7	176.7
97.5°	0.7	29.1	93.0	143.3	161.8
100°	0.7	22.0	80.2	128.4	145.5
102.5°	0.7	17.0	68.1	112.8	130.6
105°	0.7	12.8	58.2	98.6	113.5
107.5°	0.7	9.2	49.0	87.3	101.5
110°	0.7	7.1	41.2	76.6	88.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	5.0	33.4	65.3	77.3
115°	0.7	3.5	27.7	55.4	66.7
117.5°	0.7	2.1	22.0	46.8	56.8
120°	0.7	1.4	17.7	39.0	48.3
122.5°	0.7	1.4	13.5	31.9	40.4
125°	0.7	0.7	10.6	26.3	33.4
127.5°	0.7	0.7	7.8	20.6	26.3
130°	0.7	0.7	5.7	15.6	20.6
132.5°	0.7	0.7	3.5	12.1	15.6
135°	0.7	0.7	2.8	8.5	12.1
137.5°	0.7	0.7	1.4	5.7	7.8
140°	0.7	0.7	0.7	3.5	5.0
142.5°	0.7	0.7	0.7	2.1	2.8
145°	0.7	0.7	0.0	0.7	1.4
147.5°	0.7	0.7	0.0	0.7	0.7
150°	0.7	0.7	0.0	0.0	0.0
152.5°	0.7	0.7	0.0	0.0	0.0
155°	0.7	0.7	0.0	0.0	0.0
157.5°	0.7	0.7	0.0	0.0	0.0
160°	0.7	0.7	0.0	0.0	0.0
162.5°	0.7	0.7	0.0	0.0	0.0
165°	0.7	0.7	0.0	0.0	0.0
167.5°	0.7	0.7	0.0	0.0	0.0
170°	0.7	0.7	0.0	0.0	0.0
172.5°	1.4	0.7	0.0	0.0	0.0
175°	1.4	0.7	0.0	0.0	0.0
177.5°	1.4	0.7	0.0	0.0	0.0
180°	0.7	0.7	0.7	0.7	0.7



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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	19.14	20.67	19.61	21.13	21.62	20.88	22.41	21.35	22.87	23.35
	3H	20.88	22.27	21.36	22.74	23.27	23.45	24.85	23.93	25.31	25.84
	4H	21.52	22.85	22.03	23.33	23.87	24.75	26.08	25.25	26.56	27.10
	6H	21.99	23.23	22.51	23.73	24.28	26.15	27.38	26.66	27.88	28.44
	8H	22.14	23.32	22.67	23.85	24.41	26.88	28.06	27.40	28.58	29.14
	12H	22.24	23.37	22.77	23.89	24.48	27.72	28.86	28.26	29.37	29.96
4H	2H	20.12	21.44	20.62	21.93	22.47	21.43	22.76	21.93	23.24	23.78
	3H	22.12	23.26	22.64	23.78	24.35	24.29	25.42	24.81	25.95	26.51
	4H	22.92	23.96	23.46	24.50	25.09	25.81	26.85	26.34	27.38	27.98
	6H	23.56	24.48	24.12	25.04	25.65	27.44	28.36	28.00	28.92	29.53
	8H	23.79	24.65	24.35	25.21	25.83	28.30	29.16	28.86	29.73	30.35
	12H	23.95	24.74	24.54	25.33	25.96	29.29	30.08	29.88	30.67	31.30
8H	4H	23.80	24.66	24.36	25.23	25.85	26.17	27.03	26.73	27.59	28.21
	6H	24.71	25.45	25.31	26.05	26.68	28.06	28.79	28.65	29.40	30.02
	8H	25.09	25.76	25.70	26.37	27.01	29.13	29.79	29.73	30.40	31.04
	12H	25.41	26.01	26.02	26.61	27.32	30.38	30.97	30.98	31.57	32.28
12H	4H	24.07	24.86	24.66	25.45	26.08	26.21	26.99	26.79	27.58	28.21
	6H	25.15	25.82	25.76	26.43	27.07	28.17	28.83	28.77	29.45	30.08
	8H	25.69	26.29	26.30	26.89	27.60	29.34	29.94	29.95	30.54	31.25