

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: P893151

Luminaire Tested: 4MB-10HL-ACL-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893151
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-ACL-UNV-L940
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K
Light Source: -
Ballast/Driver: -

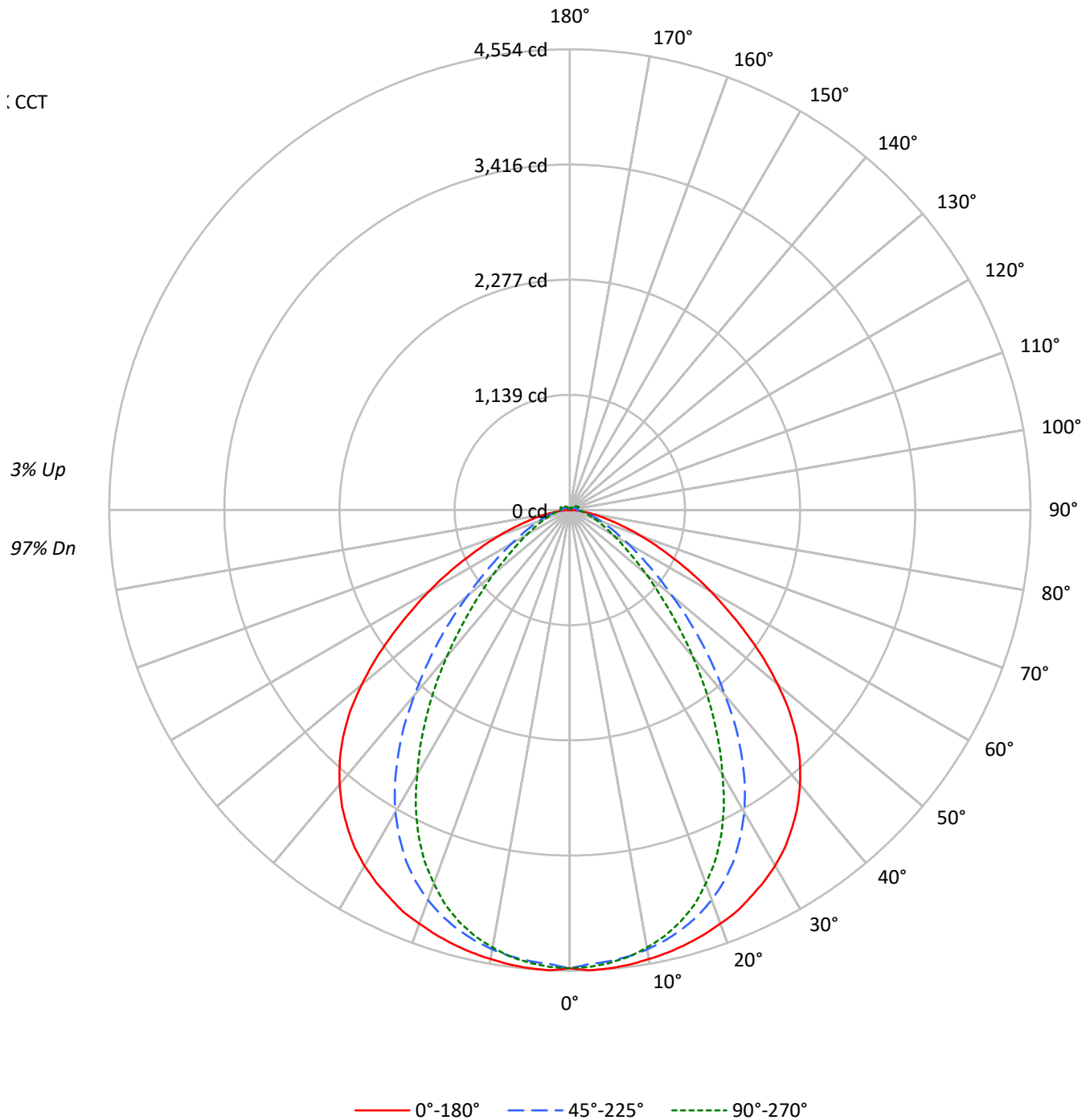
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9187.0 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 75.5
Input Voltage (V): 120
Input Current (A_{in}): 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	50	30	10	0
RCR																					
0	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	87	87	87	85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	76	76	76	74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	67	67	67	65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	59	59	59	57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	52	52	52	50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	47	47	47	45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	42	42	42	41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	39	39	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	35	35	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	32	32	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	46124	46124	46124
5°	46402	44842	44720
10°	46439	43785	43043
15°	46597	42530	41011
20°	46793	40931	38216
25°	47005	38766	34720
30°	47173	35701	30076
35°	46956	31566	25071
40°	46259	26474	19932
45°	44733	21325	15071
50°	41482	16302	11367
55°	36827	12489	8468
60°	31600	9608	6552
65°	26070	7529	5184
70°	21059	6033	4240
75°	16026	4930	3617
80°	11984	4038	3192
85°	8156	3420	2903

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 44733 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.4	4.7
10°-20°	1216.5	13.2
20°-30°	1770.8	19.3
30°-40°	1900.3	20.7
40°-50°	1572.4	17.1
50°-60°	1042.2	11.3
60°-70°	593.8	6.5
70°-80°	294.4	3.2
80°-90°	119.1	1.3
90°-100°	70.0	0.8
100°-110°	62.2	0.7
110°-120°	47.0	0.5
120°-130°	31.2	0.3
130°-140°	19.2	0.2
140°-150°	10.9	0.1
150°-160°	5.6	0.1
160°-170°	2.4	0.0
170°-180°	0.6	0.0
0°-30°	3415.8	37.2
0°-40°	5316.1	57.9
0°-60°	7930.7	86.3
0°-90°	8938.0	97.3
90°-120°	179.2	2.0
90°-150°	240.5	2.6
90°-180°	249.0	2.7
0°-180°	9187.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4529	4529	4529	4529	4529	
5°	4547	4535	4477	4511	4494	433
15°	4444	4409	4290	4250	4217	1256
25°	4224	4114	3830	3622	3542	1949
35°	3832	3528	2960	2572	2459	2395
45°	3171	2575	1831	1475	1375	2430
55°	2136	1510	941	744	690	1911
65°	1130	758	471	380	360	1135
75°	439	327	236	206	200	485
85°	86	93	108	115	114	100
90°	12	38	74	90	93	11
95°	14	40	75	90	93	11
105°	11	30	67	86	91	11
115°	6	20	52	74	80	6
125°	4	14	37	55	61	3
135°	3	11	26	38	43	2
145°	4	8	17	26	30	2
155°	4	7	12	16	21	2
165°	5	6	8	10	13	1
175°	5	6	6	6	6	0
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4529.0	4529.0	4529.0	4529.0	4529.0
2.5°	4554.5	4544.5	4492.6	4531.8	4519.9
5°	4547.2	4535.4	4477.1	4510.8	4494.4
7.5°	4531.8	4517.2	4451.6	4474.4	4454.3
10°	4507.2	4488.9	4410.6	4415.2	4392.4
12.5°	4480.7	4452.5	4356.9	4344.1	4315.9
15°	4444.3	4408.8	4289.5	4250.3	4216.6
17.5°	4402.4	4353.2	4205.7	4136.4	4092.7
20°	4350.5	4284.9	4101.8	3996.1	3928.7
22.5°	4300.4	4203.8	3977.9	3826.7	3755.7
25°	4223.9	4113.7	3830.4	3621.8	3541.6
27.5°	4148.3	3999.8	3649.1	3393.1	3300.2
30°	4059.9	3865.0	3450.5	3135.3	3020.6
32.5°	3957.9	3717.4	3220.1	2867.5	2745.5
35°	3832.2	3527.9	2959.5	2572.4	2459.4
37.5°	3697.4	3319.3	2690.8	2291.8	2175.2
40°	3540.7	3098.0	2386.6	2000.4	1893.8
42.5°	3366.7	2844.8	2104.2	1726.2	1619.6
45°	3170.9	2575.1	1830.9	1474.8	1374.6
47.5°	2945.9	2299.1	1566.8	1247.9	1164.1
50°	2683.5	2023.1	1319.0	1047.5	985.6
52.5°	2419.4	1763.5	1119.5	888.1	821.6
55°	2136.1	1510.3	941.0	744.2	690.5
57.5°	1861.9	1286.2	786.1	624.0	586.6
60°	1607.7	1085.8	665.0	526.5	496.4
62.5°	1363.6	915.5	556.6	445.4	419.0
65°	1130.4	757.9	470.9	379.8	359.8
67.5°	925.5	633.1	397.2	324.3	308.8
70°	747.9	511.9	334.3	277.8	265.1
72.5°	582.1	410.8	280.6	240.5	229.5
75°	439.1	327.0	235.9	205.9	199.5
77.5°	330.7	254.1	194.9	177.6	173.1
80°	228.6	189.5	161.2	153.9	151.2
82.5°	145.7	135.7	132.1	132.1	132.1
85°	86.5	92.9	108.4	114.8	113.9
87.5°	41.0	61.0	87.4	99.3	101.1
90°	11.8	38.3	73.8	90.2	92.9
92.5°	13.7	39.2	73.8	90.2	92.9
95°	13.7	40.1	74.7	90.2	92.9
97.5°	13.7	38.3	73.8	91.1	93.8
100°	13.7	37.3	72.9	90.2	93.8
102.5°	11.8	34.6	70.1	89.3	92.9
105°	10.9	30.1	67.4	86.5	91.1
107.5°	9.1	27.3	64.7	83.8	89.3
110°	8.2	24.6	61.0	81.1	87.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	7.3	21.9	56.5	78.3	83.8
115°	6.4	20.0	51.9	73.8	80.2
117.5°	5.5	18.2	47.4	69.2	76.5
120°	4.6	16.4	43.7	64.7	71.1
122.5°	4.6	15.5	40.1	59.2	66.5
125°	3.6	13.7	37.3	54.7	61.0
127.5°	3.6	12.8	33.7	50.1	55.6
130°	2.7	12.8	31.0	46.5	51.9
132.5°	2.7	11.8	27.3	41.9	47.4
135°	2.7	10.9	25.5	38.3	42.8
137.5°	2.7	10.9	22.8	35.5	40.1
140°	3.6	10.0	20.0	31.9	36.4
142.5°	3.6	9.1	19.1	29.1	32.8
145°	3.6	8.2	17.3	26.4	30.1
147.5°	3.6	8.2	15.5	23.7	27.3
150°	3.6	7.3	14.6	21.0	24.6
152.5°	3.6	7.3	13.7	18.2	22.8
155°	3.6	7.3	11.8	16.4	21.0
157.5°	3.6	6.4	10.9	14.6	18.2
160°	4.6	6.4	10.0	12.8	16.4
162.5°	4.6	6.4	9.1	11.8	14.6
165°	4.6	5.5	8.2	10.0	12.8
167.5°	4.6	5.5	8.2	9.1	10.9
170°	4.6	5.5	7.3	7.3	8.2
172.5°	4.6	5.5	6.4	7.3	5.5
175°	4.6	5.5	6.4	6.4	5.5
177.5°	4.6	5.5	5.5	6.4	5.5
180°	5.5	5.5	5.5	5.5	5.5



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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	21.98	23.36	22.39	23.74	24.12	17.10	18.48	17.51	18.86	19.24
	3H	23.07	24.31	23.50	24.70	25.13	18.24	19.48	18.67	19.86	20.30
	4H	23.37	24.52	23.81	24.93	25.38	18.74	19.90	19.19	20.31	20.76
	6H	23.51	24.58	23.97	25.00	25.46	19.25	20.32	19.71	20.74	21.20
	8H	23.53	24.54	24.00	24.99	25.45	19.52	20.53	19.99	20.98	21.44
	12H	23.52	24.49	23.99	24.92	25.42	19.81	20.78	20.29	21.22	21.71
4H	2H	21.95	23.11	22.40	23.51	23.96	17.60	18.76	18.05	19.16	19.61
	3H	23.19	24.14	23.64	24.60	25.07	18.92	19.87	19.38	20.33	20.80
	4H	23.56	24.42	24.04	24.89	25.39	19.51	20.37	19.99	20.84	21.35
	6H	23.79	24.53	24.29	25.03	25.55	20.14	20.89	20.65	21.38	21.91
	8H	23.82	24.52	24.33	25.01	25.55	20.47	21.16	20.98	21.66	22.19
	12H	23.83	24.45	24.36	24.98	25.52	20.84	21.46	21.37	21.99	22.53
8H	4H	23.54	24.24	24.05	24.73	25.27	19.76	20.46	20.27	20.95	21.48
	6H	23.81	24.39	24.36	24.93	25.47	20.49	21.07	21.03	21.61	22.15
	8H	23.88	24.40	24.44	24.95	25.51	20.90	21.42	21.46	21.98	22.53
	12H	23.92	24.38	24.47	24.92	25.54	21.39	21.85	21.95	22.39	23.02
12H	4H	23.52	24.14	24.05	24.67	25.20	19.77	20.40	20.30	20.92	21.46
	6H	23.79	24.31	24.35	24.87	25.42	20.53	21.05	21.09	21.60	22.16
	8H	23.89	24.35	24.44	24.89	25.52	20.99	21.45	21.55	21.99	22.62