

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: P893195

Luminaire Tested: 4MB-10HL-LVRA-UNV-L840

Issue Date: 11/11/2024

**Test Information**

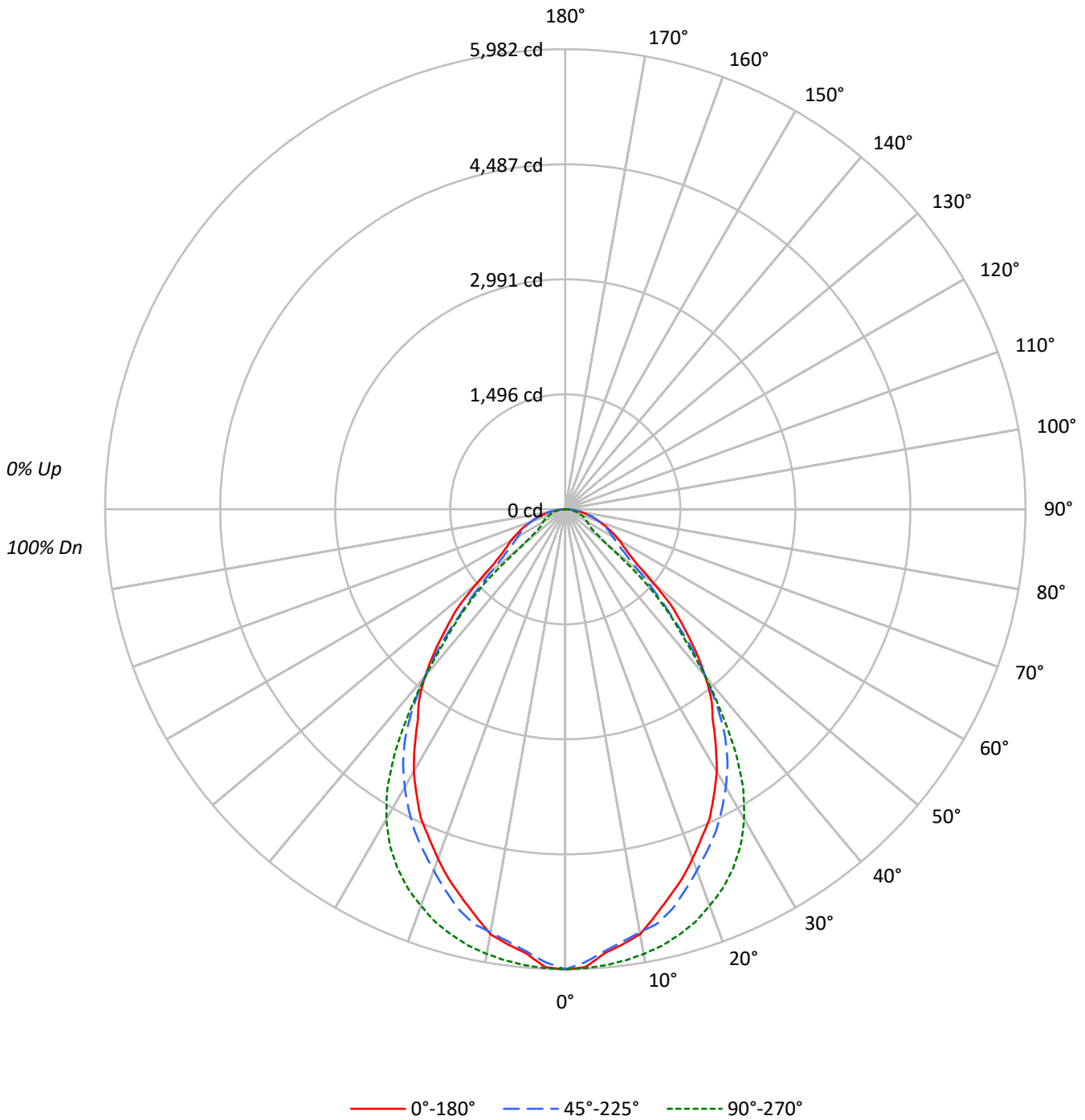
Test Method: LM-79-2019  
Report Number: P893195  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-LVRA-UNV-L840  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9708.0 lumens  
Efficiency: N/A  
Efficacy: 128.6 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12  
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 (A<sub>in</sub>): 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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	88	
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	78	
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	69	
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	62	
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	55	
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	50	
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	45	
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	41	
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	38	
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	35	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	42560	42560	42560
5°	41412	41225	42513
10°	40532	40353	42414
15°	38439	39621	42175
20°	36618	37855	41532
25°	34832	36320	40472
30°	32362	34287	38213
35°	29018	31508	33517
40°	26290	26347	26203
45°	21981	19468	18987
50°	16603	13703	7765
55°	12488	10958	4896
60°	11605	10092	4717
65°	10797	10071	4724
70°	9877	9877	4649
75°	9366	9622	4492
80°	8654	9096	4610
85°	7551	7927	5037

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 22493 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	552.5	5.7
10°-20°	1522.5	15.7
20°-30°	2158.9	22.2
30°-40°	2224.1	22.9
40°-50°	1553.5	16.0
50°-60°	745.4	7.7
60°-70°	523.0	5.4
70°-80°	327.0	3.4
80°-90°	101.1	1.0
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°	4233.9	43.6
0°-40°	6458.0	66.5
0°-60°	8756.9	90.2
0°-90°	9708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9708.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5982	5982	5982	5982	5982	
5°	5798	5790	5772	5923	5952	549
15°	5218	5257	5379	5533	5726	1470
25°	4437	4482	4626	4940	5155	2029
35°	3341	3432	3628	3703	3859	2105
45°	2184	2235	1935	1836	1887	1683
55°	1007	957	883	566	395	943
65°	641	600	598	455	281	635
75°	341	336	350	302	163	359
85°	92	92	97	96	62	103
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5981.7	5981.7	5981.7	5981.7	5981.7
2.5°	5958.5	5940.0	5895.3	5977.0	5970.9
5°	5798.2	5790.5	5772.0	5923.1	5952.4
7.5°	5707.2	5691.8	5670.2	5836.7	5918.4
10°	5610.1	5628.6	5585.4	5738.1	5870.7
12.5°	5409.7	5459.0	5517.6	5636.3	5812.1
15°	5218.5	5257.1	5378.9	5533.0	5725.7
17.5°	5039.7	5084.4	5189.2	5420.5	5625.5
20°	4836.2	4897.9	4999.6	5295.6	5485.2
22.5°	4626.5	4683.6	4811.5	5129.1	5340.3
25°	4436.9	4481.6	4626.5	4939.5	5155.3
27.5°	4185.6	4268.9	4406.1	4708.2	4934.9
30°	3939.0	4009.9	4173.3	4427.7	4651.2
32.5°	3641.4	3744.7	3925.1	4119.3	4305.9
35°	3340.8	3431.7	3627.5	3703.1	3858.8
37.5°	3121.9	3146.5	3257.5	3248.3	3336.2
40°	2830.5	2879.8	2836.7	2721.0	2821.2
42.5°	2516.0	2574.6	2400.4	2266.2	2301.7
45°	2184.5	2235.4	1934.8	1836.1	1887.0
47.5°	1897.8	1893.2	1560.2	1493.9	1423.0
50°	1500.0	1549.4	1238.0	1114.6	701.5
52.5°	1171.7	1190.2	1020.6	712.2	461.0
55°	1006.7	957.4	883.4	565.8	394.7
57.5°	894.2	832.5	783.2	525.7	360.7
60°	815.5	746.2	709.2	499.5	331.5
62.5°	726.1	672.2	658.3	476.4	305.2
65°	641.3	599.7	598.2	454.8	280.6
67.5°	556.5	533.4	539.6	428.6	252.8
70°	474.8	470.2	474.8	394.7	223.5
72.5°	405.5	400.8	413.2	351.5	191.2
75°	340.7	336.1	350.0	302.2	163.4
77.5°	271.3	274.4	283.7	251.3	137.2
80°	211.2	211.2	222.0	197.3	112.5
82.5°	151.1	152.6	158.8	144.9	87.9
85°	92.5	92.5	97.1	95.6	61.7
87.5°	30.8	35.5	41.6	44.7	30.8
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	18.68	20.03	19.04	20.35	20.66	15.01	16.36	15.38	16.68	16.99
	3H	20.42	21.62	20.80	21.95	22.32	16.99	18.19	17.37	18.52	18.89
	4H	21.09	22.22	21.49	22.57	22.95	17.69	18.82	18.09	19.17	19.55
	6H	21.60	22.63	22.01	23.00	23.40	18.21	19.25	18.63	19.62	20.02
	8H	21.77	22.75	22.20	23.14	23.55	18.40	19.38	18.83	19.78	20.18
	12H	21.88	22.82	22.31	23.20	23.63	18.54	19.48	18.97	19.86	20.29
4H	2H	19.21	20.34	19.61	20.69	21.07	16.63	17.76	17.04	18.11	18.49
	3H	21.19	22.12	21.60	22.52	22.92	18.81	19.74	19.22	20.14	20.55
	4H	21.99	22.82	22.42	23.24	23.68	19.69	20.53	20.13	20.94	21.39
	6H	22.63	23.36	23.09	23.80	24.27	20.33	21.06	20.80	21.50	21.97
	8H	22.85	23.53	23.32	23.97	24.44	20.54	21.22	21.01	21.67	22.14
	12H	23.01	23.61	23.49	24.09	24.56	20.70	21.30	21.19	21.78	22.26
8H	4H	22.27	22.95	22.74	23.40	23.87	20.34	21.02	20.81	21.46	21.93
	6H	23.06	23.61	23.56	24.11	24.59	21.20	21.76	21.70	22.25	22.73
	8H	23.36	23.86	23.88	24.37	24.86	21.53	22.03	22.05	22.54	23.03
	12H	23.59	24.03	24.11	24.53	25.10	21.79	22.23	22.31	22.73	23.30
12H	4H	22.29	22.89	22.77	23.37	23.84	20.41	21.01	20.90	21.49	21.97
	6H	23.11	23.61	23.63	24.12	24.61	21.34	21.84	21.86	22.35	22.84
	8H	23.47	23.91	23.99	24.41	24.98	21.75	22.19	22.27	22.69	23.26