

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: P893143

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893143
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-A-UNV-L940
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

Summary

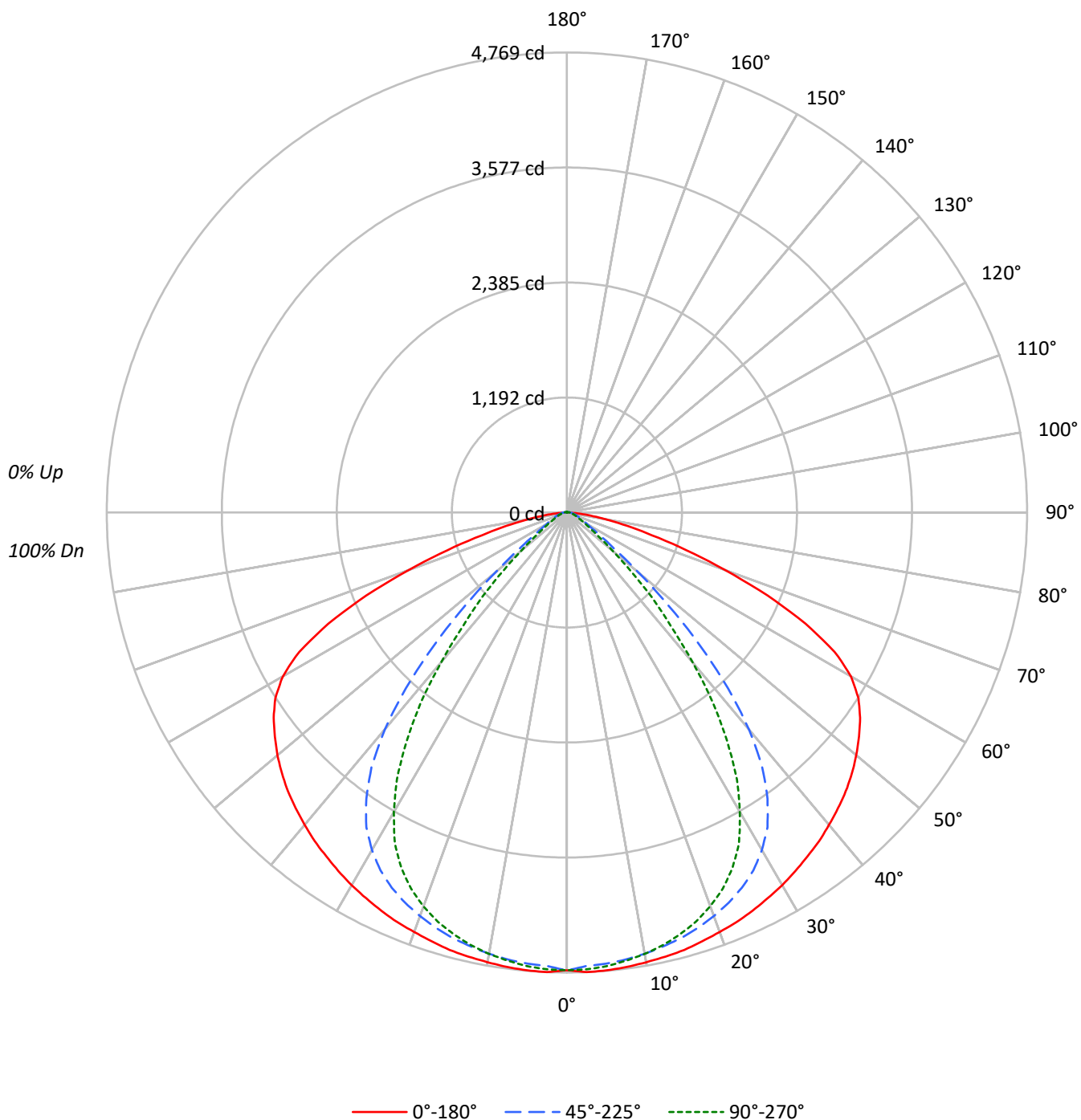
Lumens per Lamp: N/A
Luminaire Lumens: 9608.1 lumens
Efficiency: N/A
Efficacy: 127.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	111	107	104	101	108	105	102	99	101	98	96		97	95	93		93
2	103	96	90	86	100	94	89	85	91	86	83		88	84	81		85
3	95	86	80	74	93	85	79	74	82	77	72		79	75	71		77
4	88	78	71	65	86	77	70	64	74	68	64		72	67	63		70
5	82	71	63	57	80	70	63	57	68	61	56		66	60	56		64
6	76	65	57	51	75	64	56	51	62	55	50		60	55	50		59
7	71	59	51	46	70	58	51	46	57	50	45		56	50	45		54
8	67	55	47	42	65	54	47	41	53	46	41		51	45	41		50
9	63	50	43	38	61	50	43	38	49	42	38		48	42	37		47
10	59	47	39	35	58	46	39	35	45	39	34		44	38	34		43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	48322	48322	48322
5°	48699	48002	48277
10°	48956	48037	48047
15°	49496	48154	47738
20°	50150	48245	47087
25°	51170	48227	45637
30°	52464	47507	42159
35°	54072	45062	35985
40°	56187	39029	26913
45°	58868	28084	17917
50°	62030	15391	9820
55°	65868	7564	5653
60°	69277	4988	3909
65°	65751	4085	3092
70°	51761	3713	2859
75°	35894	3671	2719
80°	23618	3683	3366
85°	13520	5656	5761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 60°

Luminance: 69277 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.0	4.7
10°-20°	1298.7	13.5
20°-30°	1978.6	20.6
30°-40°	2247.0	23.4
40°-50°	1804.3	18.8
50°-60°	967.8	10.1
60°-70°	511.9	5.3
70°-80°	232.1	2.4
80°-90°	73.9	0.8
90°-100°	22.9	0.2
100°-110°	8.2	0.1
110°-120°	2.5	0.0
120°-130°	1.9	0.0
130°-140°	2.0	0.0
140°-150°	2.1	0.0
150°-160°	2.0	0.0
160°-170°	1.5	0.0
170°-180°	0.6	0.0
0°-30°	3727.3	38.8
0°-40°	5974.3	62.2
0°-60°	8746.5	91.0
0°-90°	9564.4	99.5
90°-120°	33.6	0.4
90°-150°	39.7	0.4
90°-180°	44.0	0.5
0°-180°	9608.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4745	4745	4745	4745	4745	
5°	4764	4754	4695	4735	4722	454
15°	4694	4665	4567	4555	4528	1327
25°	4554	4481	4292	4142	4061	2104
35°	4349	4164	3624	3099	2894	2729
45°	4087	3459	1950	1356	1244	3157
55°	3710	1384	426	333	318	3308
65°	2728	322	170	137	128	2639
75°	912	184	93	74	69	1032
85°	116	69	48	48	49	158
90°	4	31	35	40	39	7
95°	4	13	28	24	23	4
105°	3	2	5	13	15	3
115°	2	2	2	4	4	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	4	4	4	2
155°	4	4	4	5	4	1
165°	4	4	5	6	5	1
175°	4	4	6	7	6	0
180°	6	6	6	6	6	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4744.8	4744.8	4744.8	4744.8	4744.8
2.5°	4769.0	4760.0	4706.2	4751.1	4739.4
5°	4763.6	4753.7	4695.4	4734.9	4722.3
7.5°	4751.9	4739.4	4673.9	4706.2	4686.5
10°	4734.0	4721.5	4645.2	4667.6	4646.1
12.5°	4716.1	4694.5	4607.5	4614.7	4594.1
15°	4694.5	4664.9	4567.2	4554.6	4527.7
17.5°	4661.4	4628.2	4514.3	4484.7	4447.0
20°	4627.3	4582.4	4451.5	4391.4	4344.7
22.5°	4595.9	4534.0	4379.7	4283.7	4221.0
25°	4553.7	4481.1	4291.8	4142.0	4061.3
27.5°	4508.0	4419.2	4183.3	3959.1	3863.1
30°	4461.3	4344.7	4039.8	3729.4	3585.0
32.5°	4406.6	4263.1	3867.6	3451.4	3281.0
35°	4349.2	4164.5	3624.5	3098.9	2894.4
37.5°	4294.5	4050.5	3324.9	2671.1	2489.9
40°	4226.3	3917.8	2935.7	2211.8	2024.4
42.5°	4159.1	3713.3	2469.3	1771.4	1592.1
45°	4087.3	3458.6	1949.9	1356.2	1244.0
47.5°	4005.7	3109.7	1427.0	987.5	890.7
50°	3915.1	2607.4	971.4	672.7	619.8
52.5°	3815.6	2019.9	631.4	463.7	433.2
55°	3709.7	1384.0	426.0	332.8	318.4
57.5°	3582.3	867.3	315.7	250.2	242.2
60°	3401.2	562.4	244.9	201.8	191.9
62.5°	3128.5	402.7	205.4	165.0	157.0
65°	2728.5	322.0	169.5	137.2	128.3
67.5°	2249.5	275.4	145.3	117.5	111.2
70°	1738.3	242.2	124.7	102.3	96.0
72.5°	1297.0	211.7	107.6	88.8	80.7
75°	912.2	183.9	93.3	73.5	69.1
77.5°	641.3	158.8	77.1	62.8	61.9
80°	402.7	131.8	62.8	58.3	57.4
82.5°	244.9	104.0	54.7	53.8	52.9
85°	115.7	69.1	48.4	48.4	49.3
87.5°	37.7	45.7	41.3	43.1	43.1
90°	4.5	31.4	35.0	40.4	38.6
92.5°	4.5	22.4	32.3	32.3	26.0
95°	4.5	12.6	27.8	24.2	23.3
97.5°	4.5	6.3	20.6	23.3	22.4
100°	4.5	3.6	15.2	20.6	22.4
102.5°	3.6	2.7	9.9	17.0	18.8
105°	2.7	1.8	5.4	12.6	15.2
107.5°	1.8	1.8	3.6	9.0	10.8
110°	1.8	0.9	2.7	6.3	7.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	0.9	2.7	4.5	4.5
115°	1.8	1.8	1.8	3.6	3.6
117.5°	1.8	1.8	1.8	2.7	2.7
120°	1.8	1.8	1.8	2.7	1.8
122.5°	1.8	1.8	1.8	2.7	1.8
125°	1.8	1.8	1.8	2.7	1.8
127.5°	1.8	1.8	2.7	2.7	1.8
130°	1.8	1.8	2.7	2.7	1.8
132.5°	1.8	1.8	2.7	2.7	2.7
135°	2.7	1.8	2.7	2.7	2.7
137.5°	2.7	2.7	2.7	3.6	2.7
140°	2.7	2.7	3.6	3.6	2.7
142.5°	2.7	2.7	3.6	3.6	3.6
145°	2.7	2.7	3.6	3.6	3.6
147.5°	2.7	2.7	3.6	4.5	3.6
150°	2.7	3.6	4.5	4.5	3.6
152.5°	2.7	3.6	4.5	4.5	4.5
155°	3.6	3.6	4.5	5.4	4.5
157.5°	3.6	3.6	4.5	5.4	4.5
160°	3.6	3.6	5.4	5.4	5.4
162.5°	3.6	4.5	5.4	6.3	5.4
165°	3.6	4.5	5.4	6.3	5.4
167.5°	3.6	4.5	5.4	6.3	6.3
170°	3.6	4.5	6.3	6.3	6.3
172.5°	4.5	4.5	6.3	7.2	6.3
175°	4.5	4.5	6.3	7.2	6.3
177.5°	4.5	4.5	6.3	7.2	6.3
180°	6.3	6.3	6.3	6.3	6.3

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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	23.14	24.53	23.51	24.85	25.18	11.35	12.74	11.72	13.06	13.39
	3H	26.04	27.27	26.42	27.61	27.99	12.31	13.54	12.69	13.88	14.26
	4H	26.82	27.97	27.23	28.33	28.72	12.73	13.88	13.14	14.24	14.63
	6H	27.26	28.32	27.68	28.70	29.10	13.21	14.27	13.63	14.64	15.05
	8H	27.36	28.36	27.79	28.76	29.18	13.52	14.52	13.95	14.92	15.34
	12H	27.40	28.36	27.84	28.75	29.19	13.92	14.88	14.36	15.27	15.71
4H	2H	22.95	24.10	23.36	24.46	24.86	11.87	13.02	12.28	13.38	13.77
	3H	25.87	26.81	26.29	27.22	27.64	13.08	14.02	13.50	14.43	14.85
	4H	26.66	27.51	27.11	27.93	28.39	13.61	14.46	14.06	14.89	15.34
	6H	27.19	27.92	27.66	28.37	28.85	14.25	14.98	14.72	15.43	15.91
	8H	27.33	28.02	27.81	28.47	28.95	14.65	15.33	15.13	15.79	16.27
	12H	27.41	28.02	27.91	28.51	28.99	15.18	15.79	15.67	16.28	16.76
8H	4H	26.55	27.23	27.03	27.69	28.17	14.18	14.86	14.65	15.31	15.79
	6H	27.08	27.64	27.59	28.15	28.64	14.95	15.51	15.46	16.01	16.50
	8H	27.25	27.75	27.77	28.27	28.77	15.47	15.98	16.00	16.50	17.00
	12H	27.37	27.81	27.89	28.32	28.89	16.17	16.62	16.69	17.12	17.70
12H	4H	26.51	27.12	27.00	27.61	28.09	14.42	15.03	14.92	15.52	16.00
	6H	27.03	27.53	27.55	28.05	28.55	15.22	15.73	15.75	16.25	16.75
	8H	27.22	27.66	27.74	28.17	28.75	15.82	16.27	16.34	16.77	17.35