

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: P893202

Luminaire Tested: 4MB-10HL-LVRF-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893202
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-L835
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 3500K (C)
Light Source: -
Ballast/Driver: -

Summary

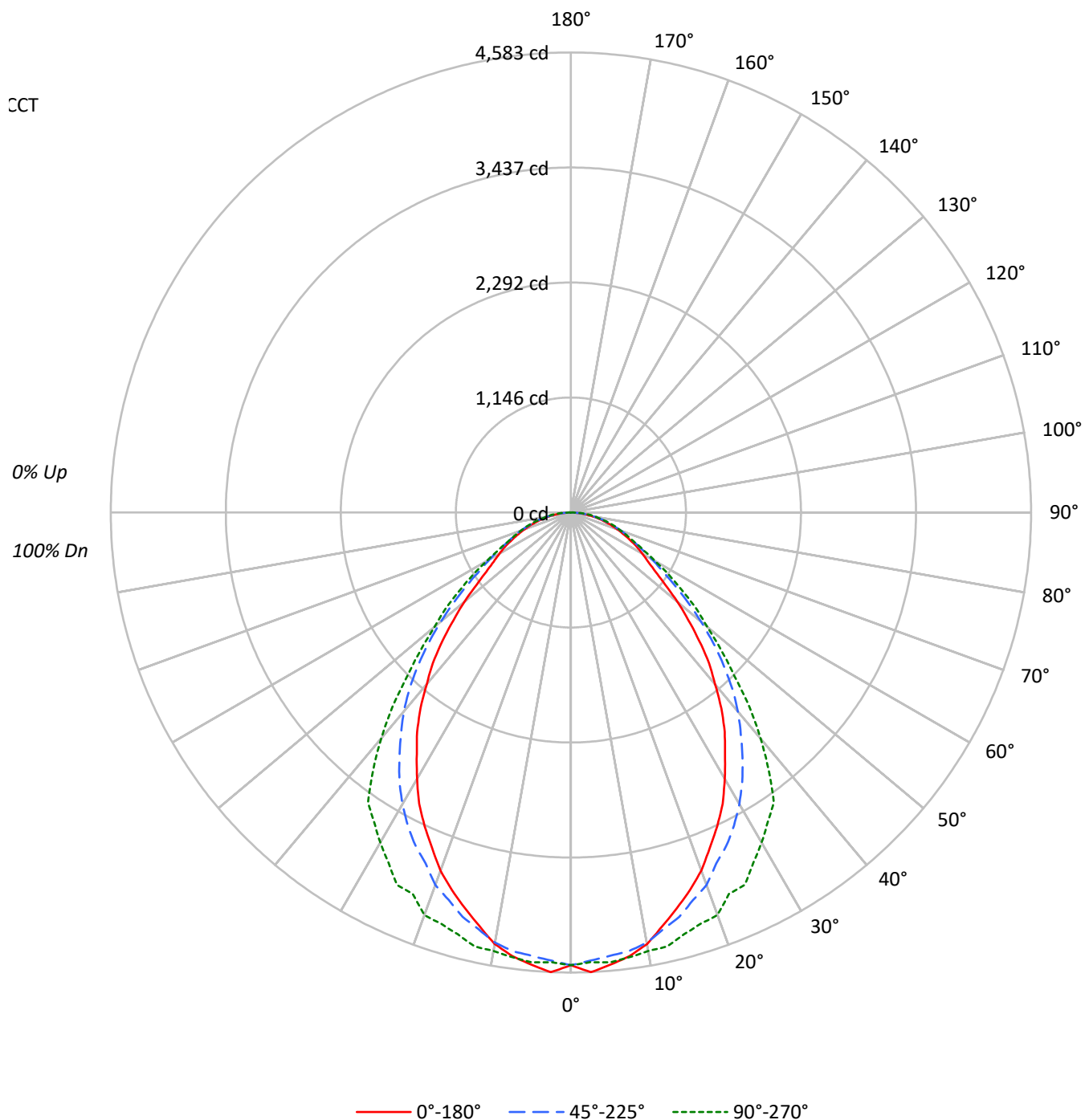
Lumens per Lamp: N/A
Luminaire Lumens: 9143.0 lumens
Efficiency: N/A
Efficacy: 121.1 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.25 / 1.21
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

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°	32084	32084	32084
5°	32293	31667	32120
10°	31537	31439	32043
15°	30048	30713	32044
20°	28743	29897	32305
25°	27061	28754	32141
30°	25175	27555	31199
35°	23184	25865	30596
40°	20734	24040	27321
45°	18176	21621	23168
50°	15339	18682	19608
55°	12726	15635	16723
60°	11701	13294	13793
65°	10962	11689	11778
70°	10208	11078	10992
75°	9525	10339	10710
80°	8891	9612	10272
85°	7486	8147	11339

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 23168 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.6	4.7
10°-20°	1187.2	13.0
20°-30°	1709.8	18.7
30°-40°	1887.7	20.6
40°-50°	1619.7	17.7
50°-60°	1103.4	12.1
60°-70°	694.2	7.6
70°-80°	395.2	4.3
80°-90°	120.1	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°	3322.7	36.3
0°-40°	5210.4	57.0
0°-60°	7933.5	86.8
0°-90°	9143.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9143.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4509	4509	4509	4509	4509	
5°	4521	4504	4434	4527	4497	427
15°	4079	4122	4170	4358	4350	1149
25°	3447	3516	3663	3958	4094	1583
35°	2669	2773	2978	3303	3522	1660
45°	1806	1926	2149	2278	2302	1392
55°	1026	1089	1260	1321	1348	943
65°	651	662	694	728	700	647
75°	346	349	376	392	390	369
85°	92	94	100	119	139	105
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4509.3	4509.3	4509.3	4509.3	4509.3
2.5°	4583.4	4536.3	4468.9	4533.6	4483.7
5°	4521.4	4503.9	4433.8	4526.8	4497.2
7.5°	4458.1	4420.3	4408.2	4508.0	4468.9
10°	4365.1	4343.5	4351.6	4479.6	4435.2
12.5°	4218.1	4232.9	4251.8	4414.9	4428.4
15°	4079.3	4122.4	4169.6	4358.3	4350.2
17.5°	3943.1	4002.4	4046.9	4289.6	4296.3
20°	3796.2	3829.9	3948.5	4183.1	4266.6
22.5°	3614.2	3680.2	3782.7	4075.2	4113.0
25°	3447.0	3515.8	3662.7	3957.9	4094.1
27.5°	3271.8	3335.1	3517.1	3819.1	3935.0
30°	3064.2	3149.1	3354.0	3661.4	3797.5
32.5°	2856.6	2980.6	3177.4	3492.9	3650.6
35°	2669.2	2773.0	2977.9	3302.8	3522.5
37.5°	2461.6	2570.8	2778.4	3095.2	3235.4
40°	2232.4	2349.7	2588.3	2844.4	2941.5
42.5°	2035.6	2136.7	2376.7	2557.3	2634.1
45°	1806.4	1926.4	2148.8	2278.2	2302.5
47.5°	1585.3	1722.8	1922.3	1983.0	2030.2
50°	1385.8	1493.7	1687.8	1725.5	1771.4
52.5°	1182.3	1296.8	1466.7	1504.4	1571.9
55°	1025.9	1089.2	1260.4	1321.1	1348.1
57.5°	911.3	951.7	1073.1	1149.9	1158.0
60°	822.3	842.5	934.2	992.2	969.3
62.5°	740.1	756.3	802.1	846.6	816.9
65°	651.1	661.9	694.3	728.0	699.6
67.5°	567.5	579.7	609.3	633.6	609.3
70°	490.7	500.1	532.5	543.3	528.4
72.5°	419.3	423.3	450.3	469.1	459.7
75°	346.5	349.2	376.1	392.3	389.6
77.5°	280.4	284.4	307.4	322.2	314.1
80°	217.0	219.7	234.6	256.1	250.7
82.5°	152.3	157.7	167.2	186.0	200.9
85°	91.7	94.4	99.8	118.6	138.9
87.5°	35.0	37.7	40.4	49.9	66.1
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	19.50	20.98	19.87	21.30	21.61	20.87	22.34	21.23	22.66	22.97
	3H	21.08	22.41	21.46	22.74	23.10	22.15	23.48	22.53	23.80	24.17
	4H	21.69	22.93	22.09	23.28	23.66	22.70	23.95	23.11	24.30	24.68
	6H	22.16	23.31	22.57	23.67	24.07	23.16	24.30	23.57	24.67	25.06
	8H	22.32	23.41	22.74	23.80	24.20	23.34	24.43	23.77	24.82	25.23
	12H	22.41	23.46	22.85	23.84	24.27	23.50	24.54	23.93	24.93	25.35
4H	2H	20.12	21.36	20.52	21.71	22.09	21.23	22.47	21.63	22.82	23.20
	3H	21.92	22.95	22.33	23.35	23.75	22.79	23.82	23.20	24.22	24.62
	4H	22.65	23.57	23.08	23.99	24.43	23.49	24.42	23.93	24.83	25.27
	6H	23.24	24.05	23.70	24.49	24.95	24.10	24.91	24.56	25.35	25.81
	8H	23.44	24.20	23.91	24.64	25.11	24.35	25.10	24.81	25.55	26.01
	12H	23.58	24.26	24.07	24.73	25.21	24.56	25.23	25.05	25.71	26.18
8H	4H	22.97	23.72	23.44	24.17	24.64	23.73	24.48	24.19	24.92	25.39
	6H	23.70	24.32	24.19	24.81	25.29	24.47	25.09	24.97	25.58	26.06
	8H	23.97	24.53	24.49	25.04	25.53	24.80	25.36	25.32	25.87	26.36
	12H	24.18	24.68	24.70	25.17	25.74	25.11	25.60	25.62	26.10	26.66
12H	4H	23.01	23.68	23.49	24.16	24.63	23.74	24.41	24.22	24.89	25.36
	6H	23.76	24.32	24.28	24.83	25.32	24.51	25.07	25.02	25.58	26.07
	8H	24.10	24.60	24.61	25.09	25.65	24.90	25.39	25.41	25.88	26.45