

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: P893194

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893194
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-L835
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

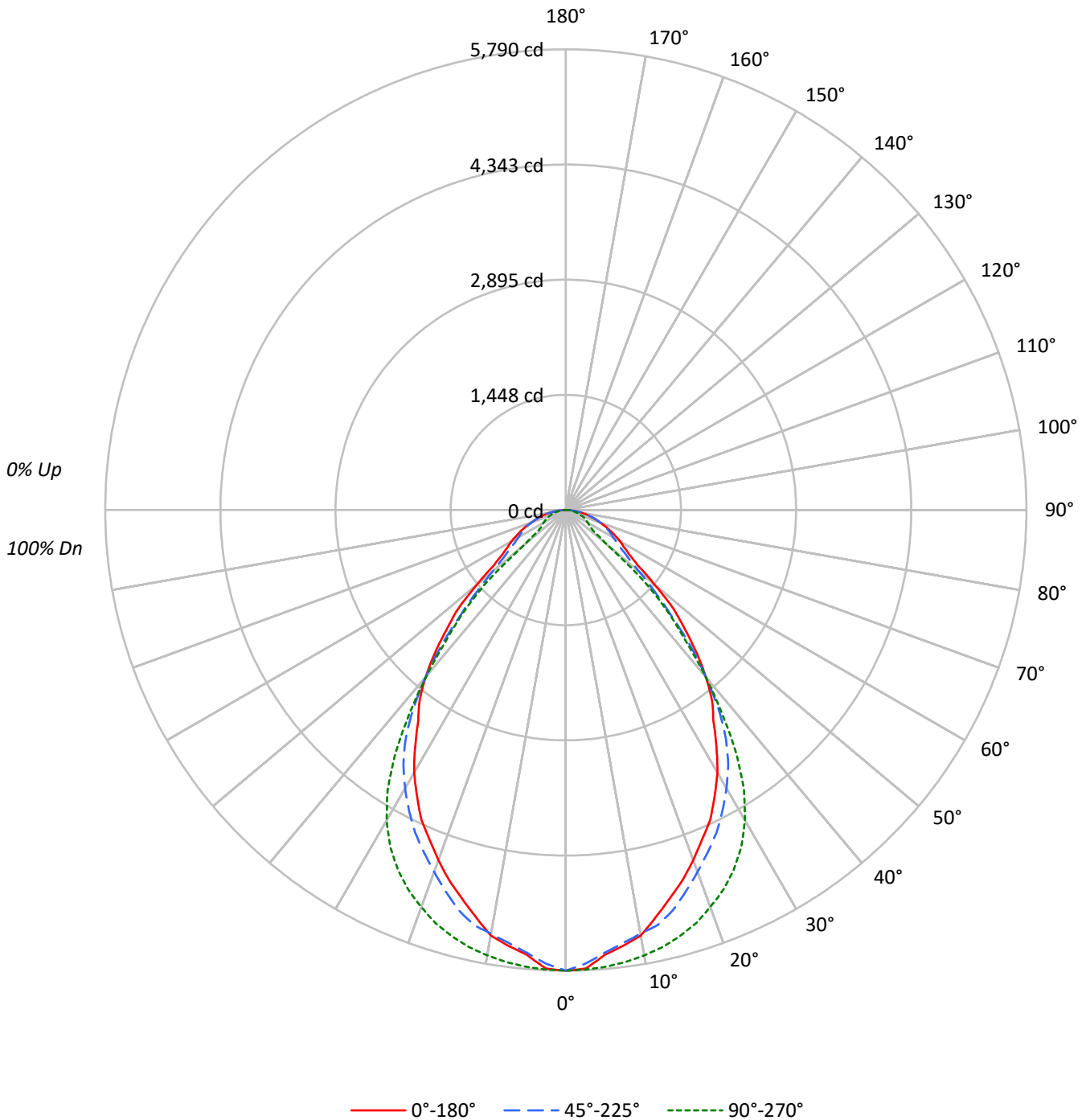
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9397.0 lumens
Efficiency: N/A
Efficacy: 124.5 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_{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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	37	35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	41196	41196	41196
5°	40085	39904	41151
10°	39233	39061	41055
15°	37209	38352	40825
20°	35445	36643	40202
25°	33716	35157	39176
30°	31325	33188	36989
35°	28088	30498	32443
40°	25447	25503	25365
45°	21277	18844	18378
50°	16072	13264	7516
55°	12088	10607	4739
60°	11233	9767	4565
65°	10451	9748	4573
70°	9561	9561	4502
75°	9066	9311	4349
80°	8375	8805	4462
85°	7306	7674	4874

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 21772 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	534.8	5.7
10°-20°	1473.7	15.7
20°-30°	2089.7	22.2
30°-40°	2152.9	22.9
40°-50°	1503.7	16.0
50°-60°	721.5	7.7
60°-70°	506.2	5.4
70°-80°	316.5	3.4
80°-90°	97.9	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°	4098.3	43.6
0°-40°	6251.1	66.5
0°-60°	8476.4	90.2
0°-90°	9397.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9397.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5790	5790	5790	5790	5790	
5°	5612	5605	5587	5733	5762	531
15°	5051	5089	5207	5356	5542	1422
25°	4295	4338	4478	4781	4990	1964
35°	3234	3322	3511	3584	3735	2038
45°	2115	2164	1873	1777	1826	1629
55°	974	927	855	548	382	913
65°	621	580	579	440	272	615
75°	330	325	339	292	158	347
85°	90	90	94	92	60	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5790.0	5790.0	5790.0	5790.0	5790.0
2.5°	5767.6	5749.7	5706.5	5785.6	5779.6
5°	5612.5	5605.0	5587.1	5733.3	5761.7
7.5°	5524.4	5509.5	5488.6	5649.8	5728.8
10°	5430.4	5448.3	5406.5	5554.3	5682.6
12.5°	5236.4	5284.2	5340.9	5455.8	5625.9
15°	5051.4	5088.7	5206.6	5355.8	5542.3
17.5°	4878.3	4921.5	5023.0	5246.8	5445.3
20°	4681.3	4741.0	4839.5	5126.0	5309.5
22.5°	4478.3	4533.5	4657.4	4964.8	5169.2
25°	4294.8	4338.0	4478.3	4781.3	4990.2
27.5°	4051.5	4132.1	4264.9	4557.4	4776.8
30°	3812.8	3881.4	4039.6	4285.8	4502.2
32.5°	3524.8	3624.7	3799.3	3987.4	4167.9
35°	3233.8	3321.8	3511.3	3584.4	3735.2
37.5°	3021.9	3045.7	3153.2	3144.2	3229.3
40°	2739.8	2787.6	2745.8	2633.9	2730.9
42.5°	2435.4	2492.1	2323.5	2193.6	2228.0
45°	2114.6	2163.8	1872.8	1777.3	1826.5
47.5°	1837.0	1832.5	1510.2	1446.0	1377.4
50°	1452.0	1499.7	1198.3	1078.9	679.0
52.5°	1134.1	1152.0	987.9	689.4	446.2
55°	974.5	926.7	855.1	547.7	382.0
57.5°	865.5	805.8	758.1	508.9	349.2
60°	789.4	722.3	686.4	483.5	320.8
62.5°	702.9	650.6	637.2	461.1	295.5
65°	620.8	580.5	579.0	440.2	271.6
67.5°	538.7	516.3	522.3	414.9	244.7
70°	459.6	455.1	459.6	382.0	216.4
72.5°	392.5	388.0	399.9	340.2	185.0
75°	329.8	325.3	338.7	292.5	158.2
77.5°	262.6	265.6	274.6	243.2	132.8
80°	204.4	204.4	214.9	191.0	108.9
82.5°	146.2	147.7	153.7	140.3	85.1
85°	89.5	89.5	94.0	92.5	59.7
87.5°	29.8	34.3	40.3	43.3	29.8
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	18.57	19.92	18.93	20.23	20.55	14.90	16.25	15.26	16.56	16.88
	3H	20.30	21.51	20.68	21.84	22.20	16.87	18.08	17.25	18.41	18.77
	4H	20.98	22.10	21.38	22.45	22.84	17.58	18.71	17.98	19.06	19.44
	6H	21.48	22.52	21.90	22.89	23.28	18.10	19.14	18.52	19.51	19.90
	8H	21.65	22.64	22.08	23.03	23.43	18.29	19.27	18.72	19.66	20.07
	12H	21.76	22.71	22.19	23.09	23.52	18.43	19.37	18.86	19.75	20.18
4H	2H	19.10	20.22	19.50	20.57	20.96	16.52	17.65	16.92	18.00	18.38
	3H	21.07	22.00	21.49	22.41	22.81	18.70	19.63	19.11	20.03	20.43
	4H	21.88	22.71	22.31	23.13	23.57	19.58	20.41	20.01	20.83	21.27
	6H	22.52	23.24	22.98	23.69	24.15	20.22	20.94	20.68	21.39	21.85
	8H	22.74	23.41	23.21	23.86	24.33	20.43	21.11	20.90	21.55	22.02
	12H	22.89	23.49	23.38	23.97	24.45	20.59	21.19	21.07	21.67	22.14
8H	4H	22.16	22.84	22.63	23.28	23.75	20.23	20.90	20.69	21.35	21.82
	6H	22.94	23.50	23.44	23.99	24.47	21.09	21.64	21.59	22.14	22.62
	8H	23.24	23.74	23.76	24.26	24.75	21.42	21.91	21.94	22.43	22.92
	12H	23.48	23.92	23.99	24.41	24.98	21.68	22.12	22.19	22.61	23.18
12H	4H	22.18	22.78	22.66	23.26	23.73	20.30	20.90	20.78	21.38	21.85
	6H	22.99	23.49	23.51	24.01	24.50	21.22	21.72	21.74	22.24	22.73
	8H	23.36	23.80	23.87	24.29	24.86	21.64	22.08	22.15	22.57	23.14