

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: P893172

Luminaire Tested: 4MB-10HL-FLT-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893172
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-FLT-UNV-L850
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

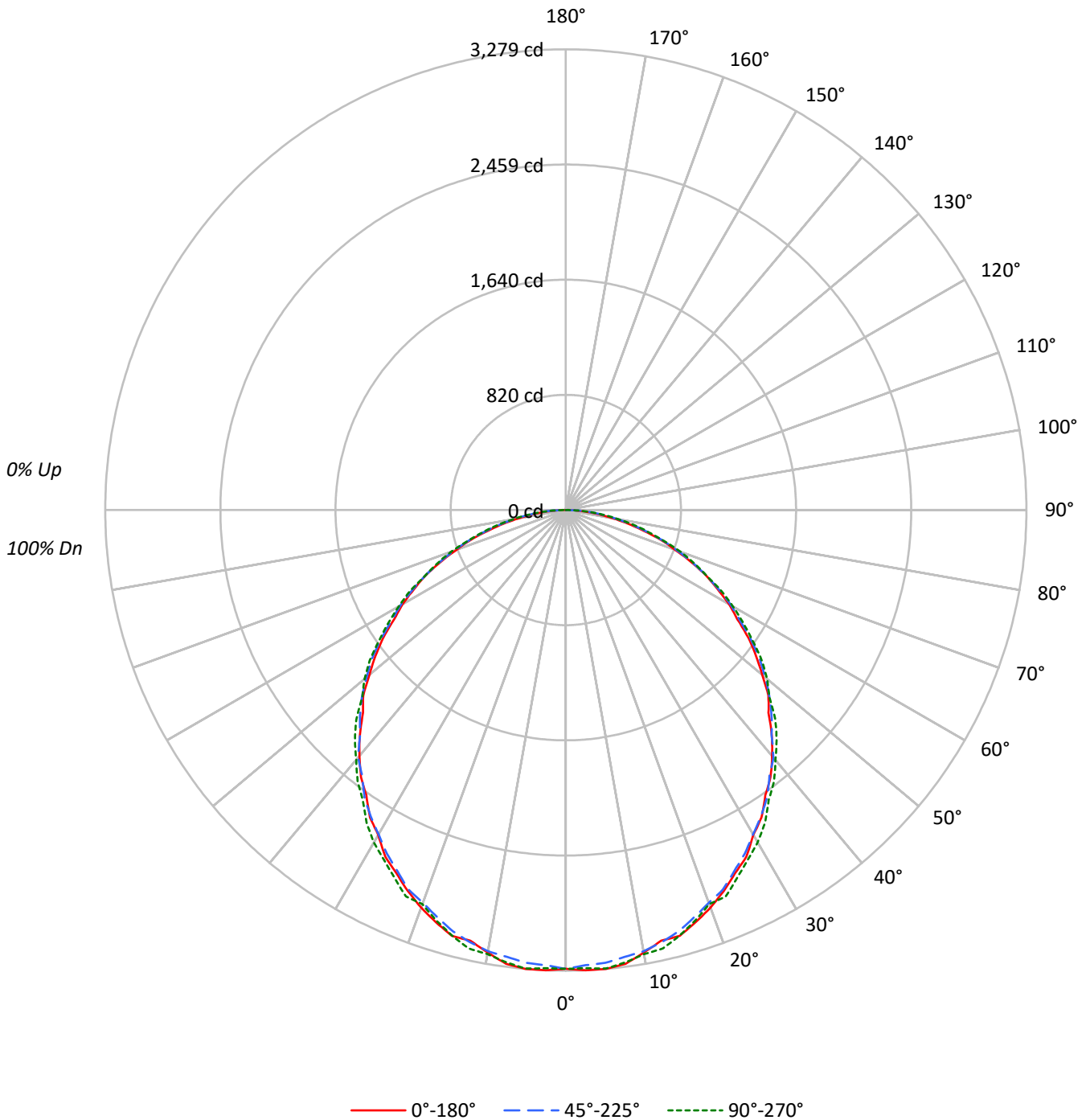
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9047.0 lumens
Efficiency: N/A
Efficacy: 119.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34
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

TEST NUMBER: P893172
CATALOG NUMBER: 4MB-10HL-FLT-UNV-L850

Luminous Intensity Polar Plot





TEST NUMBER: P893172

CATALOG NUMBER: 4MB-10HL-FLT-UNV-L850

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	69	65	61	61	61	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	45	45	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	40	40	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	35	35	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	32	32	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23231	23231	23231
5°	23421	23109	23401
10°	23100	23039	23192
15°	23106	22866	23084
20°	22800	22523	22607
25°	22388	22266	22665
30°	21935	21901	22445
35°	21512	21695	21880
40°	21222	21353	21562
45°	20536	20848	21231
50°	20202	20499	20701
55°	19700	19945	20155
60°	19087	19367	19548
65°	18521	18593	18593
70°	17223	17635	18074
75°	15859	16478	16827
80°	13984	15197	15717
85°	12547	14049	15086

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 21231 cd/sqm



TEST NUMBER: P893172
 CATALOG NUMBER: 4MB-10HL-FLT-UNV-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	309.0	3.4
10°-20°	880.8	9.7
20°-30°	1321.1	14.6
30°-40°	1569.0	17.3
40°-50°	1606.4	17.8
50°-60°	1439.3	15.9
60°-70°	1093.4	12.1
70°-80°	636.8	7.0
80°-90°	191.3	2.1
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°	2510.9	27.8
0°-40°	4079.9	45.1
0°-60°	7125.6	78.8
0°-90°	9047.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9047.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3265	3265	3265	3265	3265	
5°	3279	3266	3236	3255	3276	311
15°	3137	3158	3104	3117	3134	880
25°	2852	2877	2836	2873	2887	1316
35°	2477	2532	2498	2508	2519	1557
45°	2041	2092	2072	2089	2110	1587
55°	1588	1612	1608	1626	1625	1415
65°	1100	1100	1104	1118	1104	1080
75°	577	587	599	618	612	614
85°	154	157	172	183	185	172
90°	0	0	0	0	0	



TEST NUMBER: P893172

CATALOG NUMBER: 4MB-10HL-FLT-UNV-L850

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3265.1	3265.1	3265.1	3265.1	3265.1
2.5°	3279.2	3263.7	3242.5	3249.6	3263.7
5°	3279.2	3266.5	3235.5	3255.2	3276.4
7.5°	3258.0	3275.0	3207.3	3207.3	3246.8
10°	3197.4	3229.8	3188.9	3184.7	3210.1
12.5°	3139.6	3198.8	3150.9	3165.0	3196.0
15°	3136.8	3157.9	3104.3	3117.0	3133.9
17.5°	3076.1	3097.3	3039.4	3063.4	3063.4
20°	3011.2	3015.5	2974.6	3026.7	2985.8
22.5°	2936.5	2980.2	2923.8	2940.7	2976.0
25°	2851.8	2877.2	2836.3	2873.0	2887.1
27.5°	2782.7	2813.8	2757.4	2801.1	2805.3
30°	2669.9	2703.8	2665.7	2693.9	2732.0
32.5°	2593.7	2605.0	2585.3	2627.6	2638.9
35°	2476.7	2531.7	2497.8	2507.7	2519.0
37.5°	2394.9	2411.8	2382.2	2416.0	2434.4
40°	2284.9	2310.3	2299.0	2304.6	2321.5
42.5°	2170.6	2197.4	2167.8	2208.7	2221.4
45°	2040.9	2091.6	2071.9	2088.8	2110.0
47.5°	1956.2	1973.2	1967.5	1977.4	1963.3
50°	1825.1	1842.0	1851.9	1864.6	1870.2
52.5°	1708.0	1720.7	1739.0	1746.1	1758.8
55°	1588.1	1612.1	1607.9	1626.2	1624.8
57.5°	1448.5	1483.8	1472.5	1499.3	1499.3
60°	1341.3	1346.9	1361.0	1373.7	1373.7
62.5°	1217.2	1224.2	1231.3	1242.6	1251.0
65°	1100.1	1100.1	1104.4	1118.5	1104.4
67.5°	964.7	959.1	973.2	990.1	988.7
70°	827.9	835.0	847.7	868.8	868.8
72.5°	710.8	710.8	725.0	736.2	734.8
75°	576.9	586.7	599.4	617.8	612.1
77.5°	457.0	464.0	485.2	502.1	503.5
80°	341.3	348.4	370.9	387.9	383.6
82.5°	238.4	248.2	269.4	282.1	280.7
85°	153.7	156.6	172.1	183.4	184.8
87.5°	70.5	76.2	87.4	91.7	91.7
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P893172
 CATALOG NUMBER: 4MB-10HL-FLT-UNV-L850

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	22.46	24.10	22.82	24.41	24.72	22.56	24.20	22.93	24.52	24.83
	3H	24.24	25.72	24.61	26.05	26.41	24.40	25.88	24.78	26.21	26.57
	4H	24.90	26.30	25.30	26.65	27.02	25.10	26.50	25.50	26.84	27.22
	6H	25.38	26.67	25.79	27.04	27.43	25.65	26.94	26.06	27.31	27.70
	8H	25.53	26.76	25.95	27.15	27.55	25.84	27.08	26.26	27.46	27.86
	12H	25.63	26.82	26.06	27.20	27.63	25.98	27.17	26.41	27.55	27.98
4H	2H	23.10	24.50	23.50	24.85	25.22	23.19	24.58	23.58	24.93	25.31
	3H	25.10	26.28	25.51	26.68	27.08	25.25	26.42	25.66	26.82	27.22
	4H	25.90	26.96	26.33	27.37	27.81	26.09	27.15	26.52	27.56	28.00
	6H	26.50	27.43	26.95	27.87	28.32	26.78	27.71	27.23	28.15	28.60
	8H	26.69	27.56	27.15	28.01	28.47	27.02	27.89	27.48	28.33	28.80
	12H	26.85	27.63	27.32	28.10	28.57	27.22	28.00	27.70	28.48	28.95
8H	4H	26.23	27.10	26.69	27.54	28.01	26.40	27.27	26.86	27.71	28.18
	6H	26.96	27.68	27.45	28.17	28.64	27.22	27.95	27.72	28.44	28.91
	8H	27.23	27.88	27.74	28.38	28.87	27.56	28.21	28.06	28.71	29.20
	12H	27.46	28.03	27.96	28.52	29.08	27.85	28.42	28.35	28.91	29.47
12H	4H	26.28	27.06	26.76	27.53	28.00	26.43	27.22	26.91	27.69	28.16
	6H	27.03	27.68	27.54	28.19	28.67	27.28	27.93	27.79	28.44	28.93
	8H	27.36	27.94	27.87	28.43	28.99	27.68	28.25	28.18	28.74	29.30