

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: P894060

Luminaire Tested: 4MB-9HL-RFLW-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894060
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-RFLW-UNV-L850
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 5000K
Light Source: -
Ballast/Driver: -

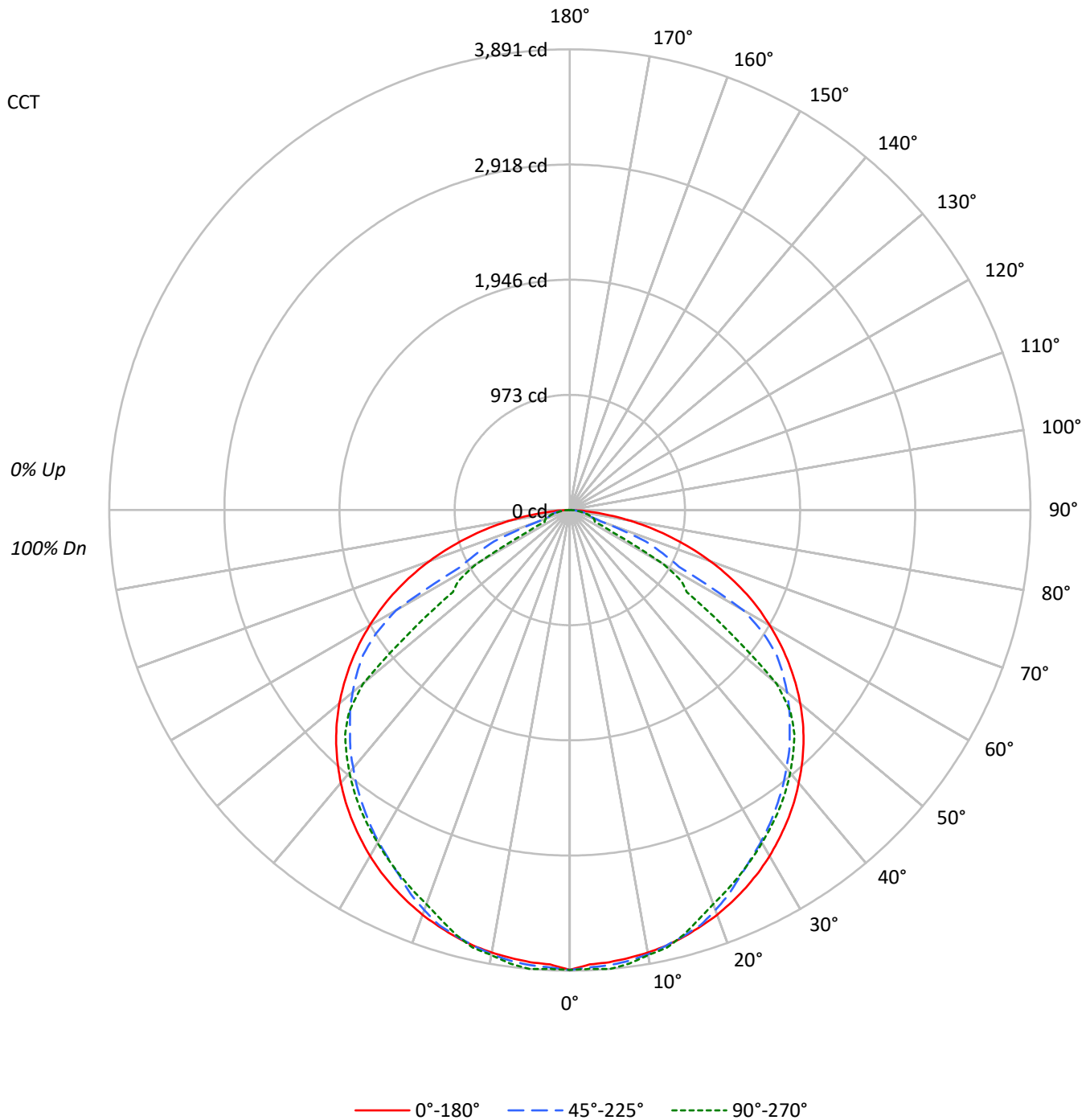
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10125.0 lumens
Efficiency: N/A
Efficacy: 157.2 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.25 / 1.38
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
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	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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	93	87	82	98	91	85	81	88	83	79	85	81	77	82	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	56	56	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	49	49	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	43	43	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	38	38	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	34	34	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	31	31	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	28	28	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	50431	50431	50431
5°	49968	50297	50718
10°	50041	50231	50326
15°	50151	50038	49925
20°	50277	49699	48938
25°	50415	48821	48718
30°	50606	48489	48687
35°	50789	48304	48892
40°	51003	48244	49096
45°	51277	48221	49299
50°	51353	48404	46059
55°	51130	48257	27311
60°	50696	43983	23685
65°	49864	26587	7171
70°	47894	10543	8223
75°	44376	8644	8409
80°	38399	9130	7874
85°	27280	8552	7494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 51353 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.9	3.6
10°-20°	1053.5	10.4
20°-30°	1592.1	15.7
30°-40°	1942.5	19.2
40°-50°	2054.8	20.3
50°-60°	1701.9	16.8
60°-70°	946.1	9.3
70°-80°	383.5	3.8
80°-90°	82.7	0.8
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°	3013.5	29.8
0°-40°	4956.0	48.9
0°-60°	8712.7	86.1
0°-90°	10125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10125.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3884	3884	3884	3884	3884	
5°	3834	3902	3859	3865	3891	365
15°	3731	3788	3722	3720	3714	1054
25°	3519	3544	3408	3386	3400	1623
35°	3204	3164	3047	3059	3084	2006
45°	2792	2649	2626	2658	2685	2152
55°	2258	2105	2132	1463	1206	2018
65°	1623	1488	865	291	233	1600
75°	884	493	172	170	168	934
85°	183	61	57	53	50	230
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3883.8	3883.8	3883.8	3883.8	3883.8
2.5°	3841.9	3908.9	3867.0	3875.4	3879.0
5°	3833.5	3901.8	3858.7	3864.7	3891.0
7.5°	3815.6	3885.0	3839.5	3843.1	3863.5
10°	3795.2	3858.7	3809.6	3803.6	3816.8
12.5°	3767.7	3825.2	3767.7	3770.1	3786.9
15°	3730.6	3788.1	3722.2	3719.8	3713.8
17.5°	3686.3	3740.2	3675.5	3637.3	3624.1
20°	3638.4	3680.3	3596.6	3537.9	3541.5
22.5°	3581.0	3616.9	3511.6	3457.7	3473.3
25°	3518.8	3543.9	3407.5	3385.9	3400.3
27.5°	3450.5	3469.7	3317.7	3312.9	3324.9
30°	3375.1	3382.3	3233.9	3231.5	3247.1
32.5°	3291.4	3279.4	3144.1	3146.5	3166.9
35°	3204.0	3164.5	3047.2	3059.2	3084.3
37.5°	3111.8	3041.2	2951.5	2967.0	2994.5
40°	3008.9	2913.2	2846.1	2870.1	2896.4
42.5°	2903.6	2779.1	2744.4	2767.1	2792.3
45°	2792.3	2648.6	2625.9	2658.2	2684.6
47.5°	2671.4	2520.6	2517.0	2542.1	2530.2
50°	2542.1	2387.7	2396.1	2362.6	2280.0
52.5°	2403.3	2250.1	2266.8	2122.0	1715.1
55°	2258.5	2105.3	2131.6	1462.6	1206.4
57.5°	2110.1	1956.9	1940.1	1119.1	1117.9
60°	1952.1	1806.1	1693.6	988.6	912.0
62.5°	1792.9	1649.3	1040.1	744.4	418.9
65°	1622.9	1487.7	865.3	290.8	233.4
67.5°	1444.6	1323.7	693.0	219.0	227.4
70°	1261.5	1153.8	277.7	211.8	216.6
72.5°	1074.8	890.5	184.3	196.3	196.3
75°	884.5	493.1	172.3	170.0	167.6
77.5°	695.4	330.3	150.8	140.0	136.4
80°	513.5	118.5	122.1	108.9	105.3
82.5°	339.9	92.2	87.4	79.0	76.6
85°	183.1	61.0	57.4	52.7	50.3
87.5°	65.8	31.1	31.1	25.1	22.7
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	26.30	27.87	26.66	28.19	28.50	22.29	23.86	22.65	24.18	24.49
	3H	28.31	29.71	28.68	30.04	30.40	22.42	23.83	22.80	24.16	24.52
	4H	28.92	30.24	29.32	30.59	30.96	22.54	23.86	22.94	24.21	24.58
	6H	29.32	30.54	29.73	30.90	31.29	22.65	23.87	23.06	24.23	24.62
	8H	29.44	30.60	29.86	30.99	31.39	22.68	23.84	23.11	24.23	24.63
	12H	29.51	30.62	29.94	31.00	31.43	22.71	23.82	23.14	24.20	24.63
4H	2H	26.43	27.75	26.83	28.10	28.47	23.01	24.33	23.41	24.68	25.06
	3H	28.59	29.68	29.00	30.08	30.48	23.21	24.30	23.62	24.70	25.10
	4H	29.24	30.22	29.68	30.64	31.07	23.37	24.34	23.80	24.76	25.20
	6H	29.69	30.54	30.15	30.98	31.44	23.53	24.38	23.99	24.82	25.28
	8H	29.83	30.62	30.29	31.07	31.53	23.58	24.38	24.05	24.82	25.29
	12H	29.93	30.64	30.42	31.12	31.59	23.63	24.34	24.11	24.82	25.29
8H	4H	29.18	29.97	29.64	30.42	30.88	23.64	24.43	24.10	24.88	25.34
	6H	29.62	30.28	30.12	30.77	31.25	23.85	24.50	24.34	24.99	25.47
	8H	29.77	30.36	30.28	30.87	31.36	23.93	24.52	24.44	25.03	25.52
	12H	29.90	30.42	30.41	30.92	31.48	24.02	24.54	24.52	25.03	25.59
12H	4H	29.15	29.86	29.63	30.34	30.81	23.65	24.36	24.13	24.84	25.31
	6H	29.58	30.17	30.09	30.68	31.17	23.86	24.45	24.38	24.96	25.45
	8H	29.75	30.27	30.26	30.77	31.33	23.99	24.51	24.50	25.00	25.56