

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: P893959

Luminaire Tested: 4MB-8HL-LVRF-UNV-L940

Issue Date: 11/11/2024

**Test Information**

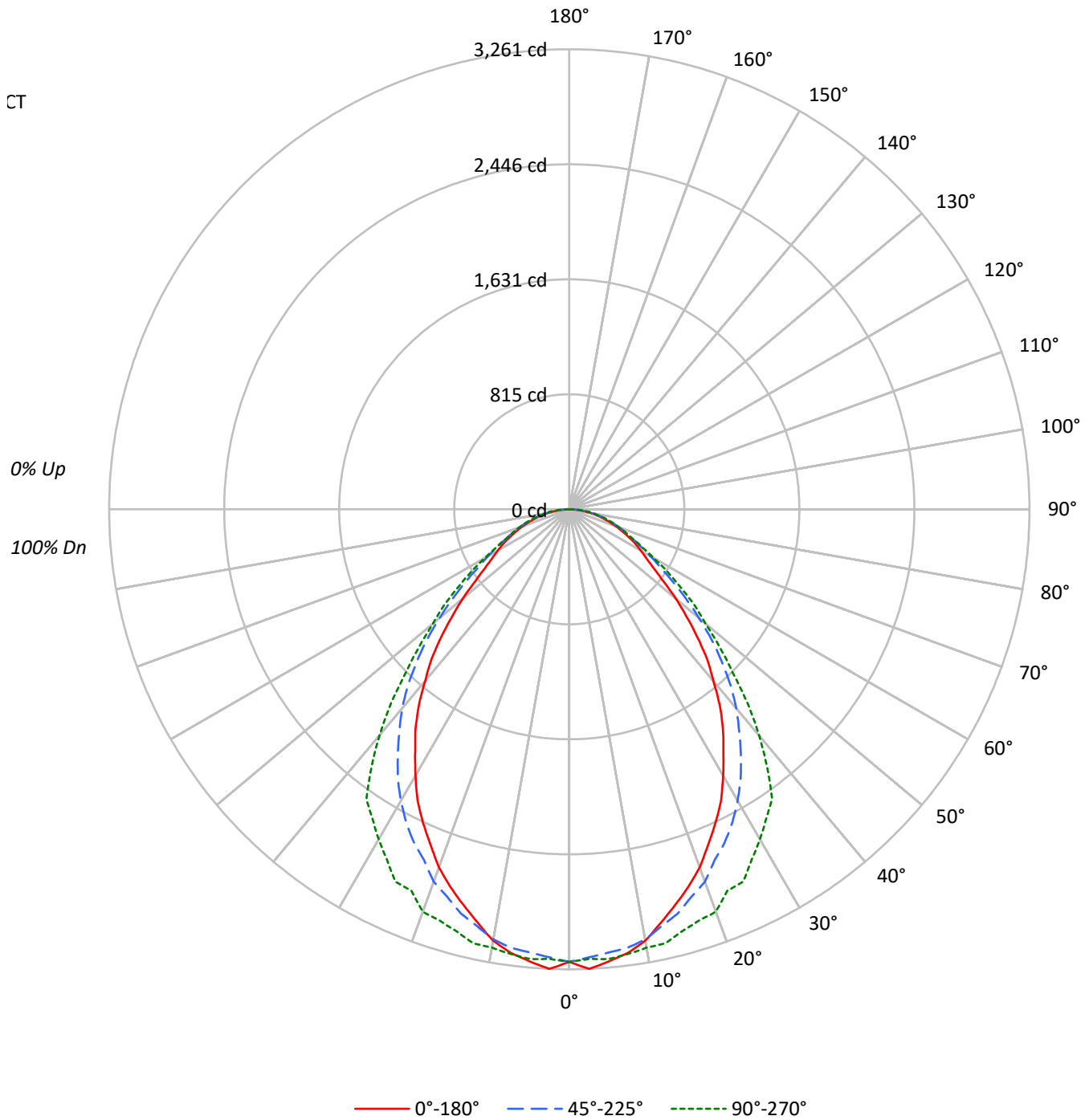
Test Method: LM-79-2019  
Report Number: P893959  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-LVRF-UNV-L940  
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 4000K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6505.0 lumens  
Efficiency: N/A  
Efficacy: 112.3 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): 57.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 4.23  
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	100	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65	65	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	57	52	50	50	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45	45	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	40	40	40
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	37	37	37
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	33	33	33
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	30	30	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	22826	22826	22826
5°	22976	22530	22852
10°	22437	22368	22798
15°	21378	21851	22798
20°	20450	21271	22984
25°	19253	20458	22867
30°	17911	19605	22197
35°	16495	18403	21768
40°	14752	17104	19438
45°	12932	15383	16484
50°	10914	13292	13950
55°	9054	11124	11897
60°	8326	9459	9813
65°	7800	8315	8381
70°	7262	7882	7822
75°	6776	7356	7620
80°	6326	6838	7310
85°	5323	5796	8066

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 16484 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	302.8	4.7
10°-20°	844.7	13.0
20°-30°	1216.5	18.7
30°-40°	1343.0	20.6
40°-50°	1152.4	17.7
50°-60°	785.1	12.1
60°-70°	493.9	7.6
70°-80°	281.2	4.3
80°-90°	85.5	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°	2364.0	36.3
0°-40°	3707.0	57.0
0°-60°	5644.5	86.8
0°-90°	6505.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6505.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3208	3208	3208	3208	3208	
5°	3217	3204	3154	3221	3200	304
15°	2902	2933	2966	3101	3095	817
25°	2452	2501	2606	2816	2913	1126
35°	1899	1973	2119	2350	2506	1181
45°	1285	1371	1529	1621	1638	990
55°	730	775	897	940	959	671
65°	463	471	494	518	498	460
75°	246	248	268	279	277	263
85°	65	67	71	84	99	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3208.2	3208.2	3208.2	3208.2	3208.2
2.5°	3261.0	3227.4	3179.5	3225.5	3190.0
5°	3216.9	3204.4	3154.5	3220.7	3199.6
7.5°	3171.8	3144.9	3136.3	3207.3	3179.5
10°	3105.6	3090.3	3096.0	3187.1	3155.5
12.5°	3001.1	3011.6	3025.1	3141.1	3150.7
15°	2902.3	2933.0	2966.5	3100.8	3095.1
17.5°	2805.4	2847.6	2879.3	3051.9	3056.7
20°	2700.9	2724.9	2809.3	2976.1	3035.6
22.5°	2571.4	2618.4	2691.3	2899.4	2926.3
25°	2452.5	2501.4	2605.9	2816.0	2912.8
27.5°	2327.8	2372.9	2502.3	2717.2	2799.7
30°	2180.1	2240.5	2386.3	2605.0	2701.8
32.5°	2032.4	2120.6	2260.6	2485.1	2597.3
35°	1899.1	1972.9	2118.7	2349.8	2506.2
37.5°	1751.3	1829.0	1976.7	2202.1	2301.9
40°	1588.3	1671.7	1841.5	2023.7	2092.8
42.5°	1448.3	1520.2	1690.9	1819.4	1874.1
45°	1285.2	1370.6	1528.8	1620.9	1638.2
47.5°	1127.9	1225.8	1367.7	1410.9	1444.4
50°	986.0	1062.7	1200.8	1227.7	1260.3
52.5°	841.1	922.7	1043.5	1070.4	1118.3
55°	729.9	775.0	896.8	939.9	959.1
57.5°	648.4	677.1	763.5	818.1	823.9
60°	585.1	599.4	664.7	705.9	689.6
62.5°	526.6	538.1	570.7	602.3	581.2
65°	463.3	470.9	493.9	517.9	497.8
67.5°	403.8	412.4	433.5	450.8	433.5
70°	349.1	355.8	378.9	386.5	376.0
72.5°	298.3	301.2	320.3	333.8	327.1
75°	246.5	248.4	267.6	279.1	277.2
77.5°	199.5	202.4	218.7	229.2	223.5
80°	154.4	156.3	166.9	182.2	178.4
82.5°	108.4	112.2	118.9	132.4	142.9
85°	65.2	67.1	71.0	84.4	98.8
87.5°	24.9	26.9	28.8	35.5	47.0
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	18.32	19.80	18.69	20.11	20.43	19.68	21.16	20.05	21.48	21.79
	3H	19.90	21.23	20.28	21.55	21.92	20.97	22.29	21.35	22.62	22.98
	4H	20.51	21.75	20.91	22.10	22.48	21.52	22.76	21.92	23.11	23.49
	6H	20.98	22.12	21.39	22.49	22.88	21.97	23.12	22.39	23.49	23.88
	8H	21.13	22.22	21.56	22.61	23.02	22.16	23.25	22.59	23.64	24.04
	12H	21.23	22.28	21.66	22.66	23.09	22.32	23.36	22.75	23.74	24.17
4H	2H	18.93	20.18	19.34	20.53	20.90	20.05	21.29	20.45	21.64	22.02
	3H	20.74	21.77	21.15	22.17	22.57	21.61	22.63	22.02	23.03	23.44
	4H	21.46	22.39	21.90	22.81	23.24	22.31	23.24	22.74	23.65	24.09
	6H	22.06	22.87	22.52	23.31	23.77	22.92	23.72	23.38	24.17	24.63
	8H	22.26	23.01	22.73	23.46	23.93	23.16	23.92	23.63	24.36	24.83
	12H	22.40	23.07	22.88	23.55	24.02	23.38	24.05	23.86	24.53	25.00
8H	4H	21.79	22.54	22.25	22.99	23.45	22.54	23.30	23.01	23.74	24.21
	6H	22.51	23.14	23.01	23.63	24.11	23.29	23.91	23.78	24.40	24.88
	8H	22.79	23.35	23.30	23.86	24.35	23.62	24.18	24.13	24.69	25.18
	12H	23.00	23.50	23.51	23.99	24.56	23.92	24.42	24.44	24.91	25.48
12H	4H	21.83	22.50	22.31	22.98	23.45	22.56	23.23	23.04	23.71	24.18
	6H	22.58	23.14	23.10	23.65	24.14	23.32	23.88	23.84	24.40	24.88
	8H	22.92	23.41	23.43	23.91	24.47	23.71	24.21	24.22	24.70	25.27