

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: P894184

Luminaire Tested: 4MB-SC3-ASYMR-UNV-CC93-LOW-4000K

Issue Date: 11/11/2024

**Test Information**

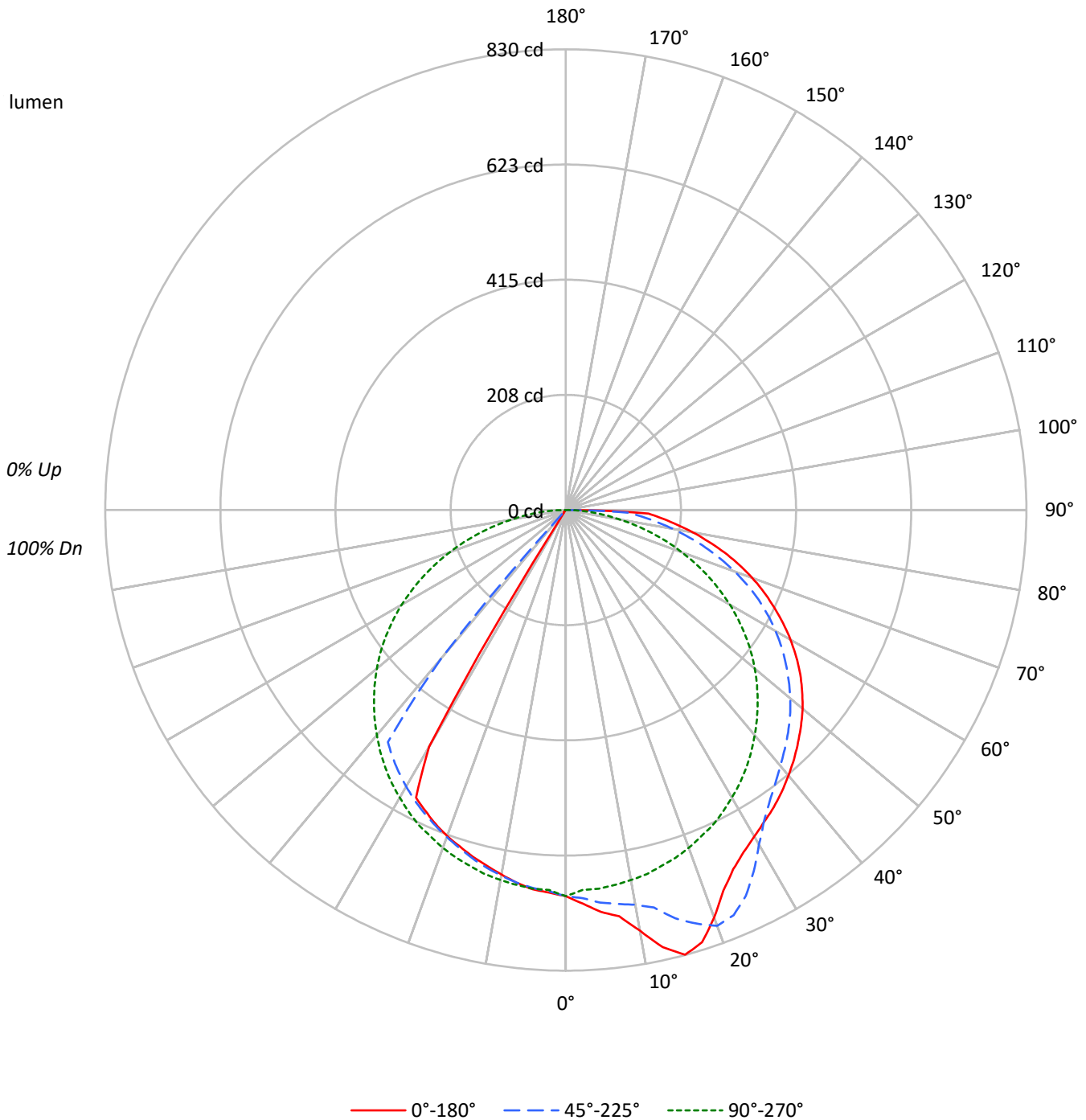
Test Method: LM-79-2019  
Report Number: P894184  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASYMR-UNV-CC93-LOW-4000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 4000K CCT, LOW setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1882.0 lumens  
Efficiency: N/A  
Efficacy: 112.7 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.28 / 1.25  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9915  
Total Harmonic Distortion (THDi): 6.67573310469889  
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				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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	85	85	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	71	71	71	69
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	61	61	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	53	53	53	50
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	41	41	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

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

	0°	45°	90°	135°	180°
0°	9032	9032	9032	9032	9032
5°	9472	9253	8926	8911	8942
10°	10149	9519	8925	8820	8793
15°	11151	10240	8928	8735	8692
20°	10795	11016	8952	8666	8638
25°	10228	10993	8973	8637	8574
30°	10185	10436	8972	8626	7383
35°	10358	10148	8986	8627	101
40°	10582	10198	8975	5950	68
45°	10871	10403	8976	110	44
50°	11252	10664	8981	81	16
55°	11679	10966	8956	54	9
60°	12146	11339	8877	21	10
65°	12717	11789	8717	25	25
70°	13569	12282	8440	30	30
75°	14850	13069	8077	80	40
80°	17431	14627	7478	120	60
85°	25939	20530	7002	179	119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 44475 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.7	3.5
10°-20°	199.0	10.6
20°-30°	305.9	16.3
30°-40°	327.9	17.4
40°-50°	297.8	15.8
50°-60°	271.6	14.4
60°-70°	202.1	10.7
70°-80°	142.2	7.6
80°-90°	68.9	3.7
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°	571.6	30.4
0°-40°	899.5	47.8
0°-60°	1468.8	78.0
0°-90°	1882.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1882.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	696	696	696	696	696	
5°	727	710	685	684	686	70
15°	830	762	664	650	647	229
25°	714	767	626	603	598	332
35°	653	640	567	544	6	409
45°	592	566	489	6	2	457
55°	516	484	396	2	0	461
65°	414	384	284	1	1	410
75°	296	260	161	2	1	312
85°	174	138	47	1	1	175
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6	695.6
2.5°	709.9	702.0	700.0	705.6	685.2	698.8	687.6	690.0	690.0
5°	726.7	715.5	709.9	708.3	684.8	694.0	683.6	683.6	686.0
7.5°	738.2	725.9	715.9	711.9	681.2	689.2	677.3	677.3	677.3
10°	769.7	746.6	721.9	714.7	676.9	682.8	668.9	669.7	666.9
12.5°	806.7	786.0	733.4	713.5	672.1	674.9	660.1	659.7	656.5
15°	829.5	813.9	761.7	711.9	664.1	666.5	649.8	648.6	646.6
17.5°	816.7	814.3	781.2	710.7	656.9	655.0	638.2	637.0	635.4
20°	781.2	787.2	797.2	708.3	647.8	643.8	627.1	626.3	625.1
22.5°	741.8	747.8	790.0	712.3	636.6	631.8	615.1	614.3	612.7
25°	713.9	713.9	767.3	721.9	626.3	617.5	602.8	601.6	598.4
27.5°	694.4	690.8	733.4	732.6	613.1	603.2	589.6	588.4	584.4
30°	679.3	673.3	696.0	737.8	598.4	587.6	575.3	574.1	492.4
32.5°	665.7	659.3	664.5	742.2	583.6	570.9	560.1	399.6	17.5
35°	653.4	646.2	640.2	739.0	566.9	554.2	544.2	11.6	6.4
37.5°	639.4	633.8	620.3	722.3	549.0	536.2	526.7	6.4	5.6
40°	624.3	619.1	601.6	697.6	529.5	518.7	351.0	5.6	4.0
42.5°	608.7	604.8	584.0	661.7	509.9	499.2	11.2	4.4	3.2
45°	592.0	588.4	566.5	618.3	488.8	478.9	6.0	3.2	2.4
47.5°	574.9	569.7	548.2	571.7	467.3	457.4	5.2	2.4	1.6
50°	557.0	551.4	527.9	530.7	444.6	434.6	4.0	1.6	0.8
52.5°	537.0	530.3	506.4	493.6	420.7	411.5	3.2	0.8	0.4
55°	515.9	508.3	484.4	461.3	395.6	385.2	2.4	0.8	0.4
57.5°	492.4	484.0	461.3	430.7	368.9	260.5	1.6	0.8	0.4
60°	467.7	459.3	436.6	402.0	341.8	17.9	0.8	0.8	0.4
62.5°	441.4	432.7	410.7	372.9	312.7	14.7	0.8	0.8	0.8
65°	413.9	403.6	383.7	343.0	283.7	12.4	0.8	0.8	0.8
67.5°	386.4	373.3	354.6	312.3	253.8	10.4	0.8	0.8	0.8
70°	357.4	343.0	323.5	281.3	222.3	8.4	0.8	0.8	0.8
72.5°	327.5	313.5	292.4	249.8	192.8	6.4	0.8	0.8	0.8
75°	296.0	283.3	260.5	218.3	161.0	4.8	1.6	0.8	0.8
77.5°	263.3	253.4	227.9	186.0	129.9	3.2	1.6	0.8	0.8
80°	233.1	221.9	195.6	153.4	100.0	2.4	1.6	1.2	0.8
82.5°	202.0	192.0	165.7	123.5	71.7	2.0	1.6	1.2	0.8
85°	174.1	164.5	137.8	96.4	47.0	1.6	1.2	1.2	0.8
87.5°	149.4	140.6	114.3	70.5	26.7	1.2	1.2	1.2	0.8
90°	0.0	0.0	0.0	0.0	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	22.18	23.79	22.54	24.11	24.42	17.61	19.22	17.98	19.54	19.85
	3H	24.62	26.09	25.00	26.42	26.78	18.25	19.72	18.63	20.04	20.40
	4H	25.75	27.13	26.15	27.48	27.85	18.40	19.78	18.80	20.13	20.50
	6H	26.84	28.13	27.25	28.49	28.88	18.44	19.72	18.85	20.09	20.48
	8H	27.37	28.60	27.80	28.99	29.39	18.43	19.65	18.85	20.04	20.44
	12H	27.94	29.12	28.37	29.50	29.93	18.41	19.59	18.84	19.97	20.40
4H	2H	22.84	24.22	23.23	24.57	24.94	18.74	20.12	19.14	20.47	20.84
	3H	25.52	26.69	25.93	27.09	27.49	20.08	21.25	20.49	21.65	22.05
	4H	26.82	27.88	27.25	28.29	28.73	20.62	21.68	21.05	22.09	22.53
	6H	28.10	29.03	28.55	29.47	29.93	20.89	21.83	21.34	22.27	22.72
	8H	28.73	29.61	29.19	30.05	30.51	20.93	21.81	21.39	22.25	22.71
	12H	29.41	30.21	29.89	30.68	31.15	20.94	21.73	21.42	22.21	22.67
8H	4H	27.18	28.06	27.64	28.50	28.97	21.56	22.44	22.02	22.88	23.35
	6H	28.67	29.40	29.16	29.89	30.36	22.15	22.89	22.65	23.38	23.85
	8H	29.45	30.11	29.96	30.62	31.10	22.33	23.00	22.84	23.50	23.99
	12H	30.34	30.93	30.84	31.42	31.98	22.43	23.02	22.94	23.51	24.07
12H	4H	27.22	28.02	27.70	28.49	28.96	21.78	22.57	22.26	23.05	23.51
	6H	28.75	29.42	29.26	29.92	30.41	22.50	23.17	23.01	23.67	24.16
	8H	29.63	30.23	30.14	30.71	31.27	22.82	23.41	23.32	23.90	24.45