

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: P894183

Luminaire Tested: 4MB-SC3-ASYMR-UNV-CC93-LOW-3500K

Issue Date: 11/11/2024

**Test Information**

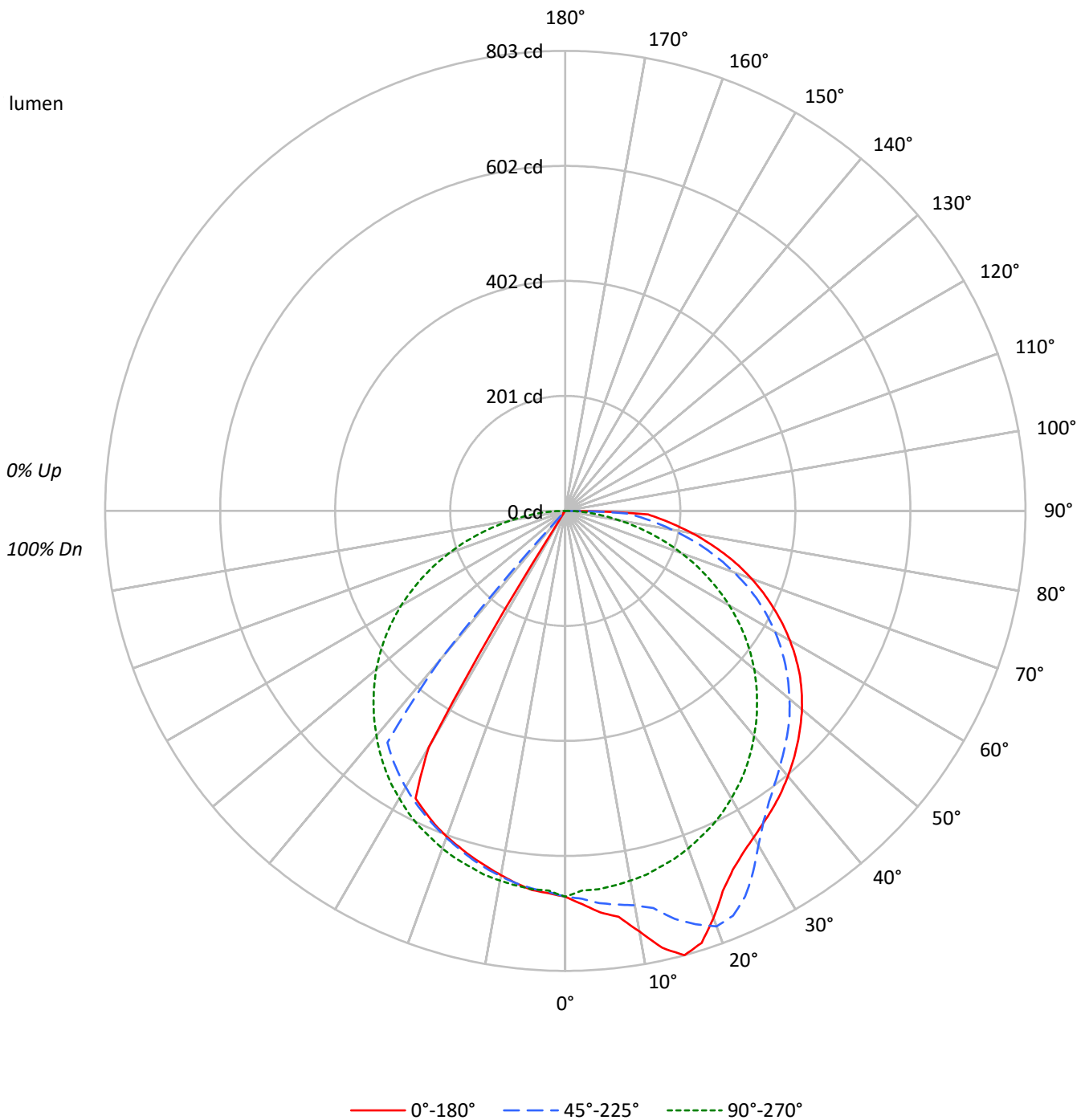
Test Method: LM-79-2019  
Report Number: P894183  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2410-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASYMR-UNV-CC93-LOW-3500K  
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMERIC REFLECTOR, 90CRI, 3500K CCT, LOW setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1822.0 lumens  
Efficiency: N/A  
Efficacy: 109.1 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				
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°	8744	8744	8744	8744	8744
5°	9170	8959	8642	8626	8658
10°	9826	9215	8640	8539	8512
15°	10795	9913	8643	8457	8415
20°	10451	10665	8666	8389	8362
25°	9903	10642	8687	8360	8300
30°	9860	10103	8686	8350	7148
35°	10026	9825	8699	8352	98
40°	10245	9872	8689	5760	66
45°	10524	10072	8690	107	42
50°	10892	10323	8695	79	16
55°	11308	10618	8671	52	9
60°	11759	10978	8594	21	10
65°	12312	11411	8437	25	25
70°	13136	11891	8170	30	30
75°	14379	12653	7817	75	40
80°	16870	14163	7239	112	60
85°	25104	19875	6779	179	119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 87.5°  
 Luminance: 43046 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.5	3.5
10°-20°	192.7	10.6
20°-30°	296.2	16.3
30°-40°	317.4	17.4
40°-50°	288.3	15.8
50°-60°	262.9	14.4
60°-70°	195.6	10.7
70°-80°	137.7	7.6
80°-90°	66.7	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°	553.4	30.4
0°-40°	870.8	47.8
0°-60°	1422.0	78.0
0°-90°	1822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1822.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	673	673	673	673	673	
5°	704	687	663	662	664	68
15°	803	737	643	629	626	222
25°	691	743	606	584	579	321
35°	632	620	549	527	6	396
45°	573	548	473	6	2	443
55°	500	469	383	2	0	446
65°	401	371	275	1	1	397
75°	287	252	156	2	1	302
85°	168	133	46	1	1	169
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°	673.4	673.4	673.4	673.4	673.4	673.4	673.4	673.4	673.4
2.5°	687.3	679.6	677.7	683.1	663.4	676.5	665.7	668.0	668.0
5°	703.5	692.7	687.3	685.8	663.0	671.9	661.8	661.8	664.2
7.5°	714.7	702.7	693.1	689.2	659.5	667.2	655.7	655.7	655.7
10°	745.2	722.8	698.9	691.9	655.3	661.1	647.6	648.3	645.6
12.5°	781.0	761.0	710.1	690.8	650.7	653.4	639.1	638.7	635.6
15°	803.0	788.0	737.4	689.2	642.9	645.3	629.1	627.9	626.0
17.5°	790.7	788.4	756.3	688.1	636.0	634.1	617.9	616.7	615.2
20°	756.3	762.1	771.8	685.8	627.1	623.3	607.1	606.3	605.1
22.5°	718.2	723.9	764.8	689.6	616.3	611.7	595.5	594.7	593.2
25°	691.2	691.2	742.8	698.9	606.3	597.8	583.5	582.4	579.3
27.5°	672.3	668.8	710.1	709.3	593.6	583.9	570.8	569.7	565.8
30°	657.6	651.8	673.8	714.3	579.3	568.9	556.9	555.8	476.7
32.5°	644.5	638.3	643.3	718.5	565.0	552.7	542.3	386.8	17.0
35°	632.5	625.6	619.8	715.5	548.8	536.5	526.9	11.2	6.2
37.5°	619.0	613.6	600.5	699.3	531.5	519.1	509.9	6.2	5.4
40°	604.4	599.4	582.4	675.3	512.6	502.2	339.8	5.4	3.9
42.5°	589.3	585.5	565.4	640.6	493.7	483.3	10.8	4.2	3.1
45°	573.1	569.7	548.5	598.6	473.2	463.6	5.8	3.1	2.3
47.5°	556.6	551.5	530.7	553.5	452.4	442.8	5.0	2.3	1.5
50°	539.2	533.8	511.0	513.7	430.4	420.8	3.9	1.5	0.8
52.5°	519.9	513.4	490.2	477.9	407.3	398.4	3.1	0.8	0.4
55°	499.5	492.1	469.0	446.6	383.0	373.0	2.3	0.8	0.4
57.5°	476.7	468.6	446.6	416.9	357.1	252.2	1.5	0.8	0.4
60°	452.8	444.7	422.7	389.2	330.9	17.4	0.8	0.8	0.4
62.5°	427.3	418.9	397.6	361.0	302.8	14.3	0.8	0.8	0.8
65°	400.7	390.7	371.4	332.1	274.6	12.0	0.8	0.8	0.8
67.5°	374.1	361.4	343.3	302.4	245.7	10.0	0.8	0.8	0.8
70°	346.0	332.1	313.2	272.3	215.2	8.1	0.8	0.8	0.8
72.5°	317.0	303.5	283.1	241.8	186.7	6.2	0.8	0.8	0.8
75°	286.6	274.2	252.2	211.4	155.8	4.6	1.5	0.8	0.8
77.5°	254.9	245.3	220.6	180.1	125.7	3.1	1.5	0.8	0.8
80°	225.6	214.8	189.4	148.5	96.8	2.3	1.5	1.2	0.8
82.5°	195.5	185.9	160.4	119.6	69.4	1.9	1.5	1.2	0.8
85°	168.5	159.3	133.4	93.3	45.5	1.5	1.2	1.2	0.8
87.5°	144.6	136.1	110.7	68.3	25.8	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	22.07	23.68	22.43	23.99	24.31	17.50	19.11	17.86	19.43	19.74
	3H	24.51	25.98	24.89	26.30	26.66	18.14	19.60	18.52	19.93	20.29
	4H	25.64	27.02	26.03	27.37	27.74	18.28	19.67	18.68	20.01	20.39
	6H	26.73	28.01	27.14	28.38	28.77	18.32	19.61	18.74	19.97	20.36
	8H	27.26	28.49	27.68	28.88	29.27	18.31	19.54	18.74	19.93	20.33
	12H	27.83	29.00	28.26	29.39	29.82	18.29	19.47	18.72	19.85	20.28
4H	2H	22.72	24.10	23.12	24.45	24.83	18.62	20.01	19.02	20.35	20.73
	3H	25.41	26.58	25.82	26.98	27.38	19.97	21.14	20.38	21.53	21.93
	4H	26.71	27.77	27.14	28.18	28.62	20.50	21.56	20.93	21.98	22.41
	6H	27.99	28.92	28.44	29.36	29.82	20.78	21.71	21.23	22.15	22.61
	8H	28.61	29.49	29.07	29.93	30.40	20.81	21.69	21.27	22.13	22.60
	12H	29.30	30.09	29.78	30.57	31.04	20.83	21.62	21.31	22.09	22.56
8H	4H	27.07	27.95	27.53	28.39	28.85	21.45	22.33	21.91	22.77	23.23
	6H	28.55	29.29	29.05	29.78	30.25	22.04	22.78	22.53	23.26	23.74
	8H	29.34	30.00	29.84	30.51	30.99	22.22	22.88	22.72	23.39	23.87
	12H	30.23	30.82	30.73	31.31	31.87	22.32	22.91	22.82	23.40	23.96
12H	4H	27.11	27.90	27.59	28.38	28.85	21.67	22.46	22.15	22.93	23.40
	6H	28.64	29.31	29.15	29.81	30.30	22.39	23.06	22.90	23.56	24.05
	8H	29.52	30.11	30.03	30.60	31.16	22.70	23.29	23.21	23.78	24.34