

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: P892787

Luminaire Tested: 2MB-4HL-RNDU-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892787
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-9)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-RNDU-UNV-L940
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, 4
Light Source: -
Ballast/Driver: -

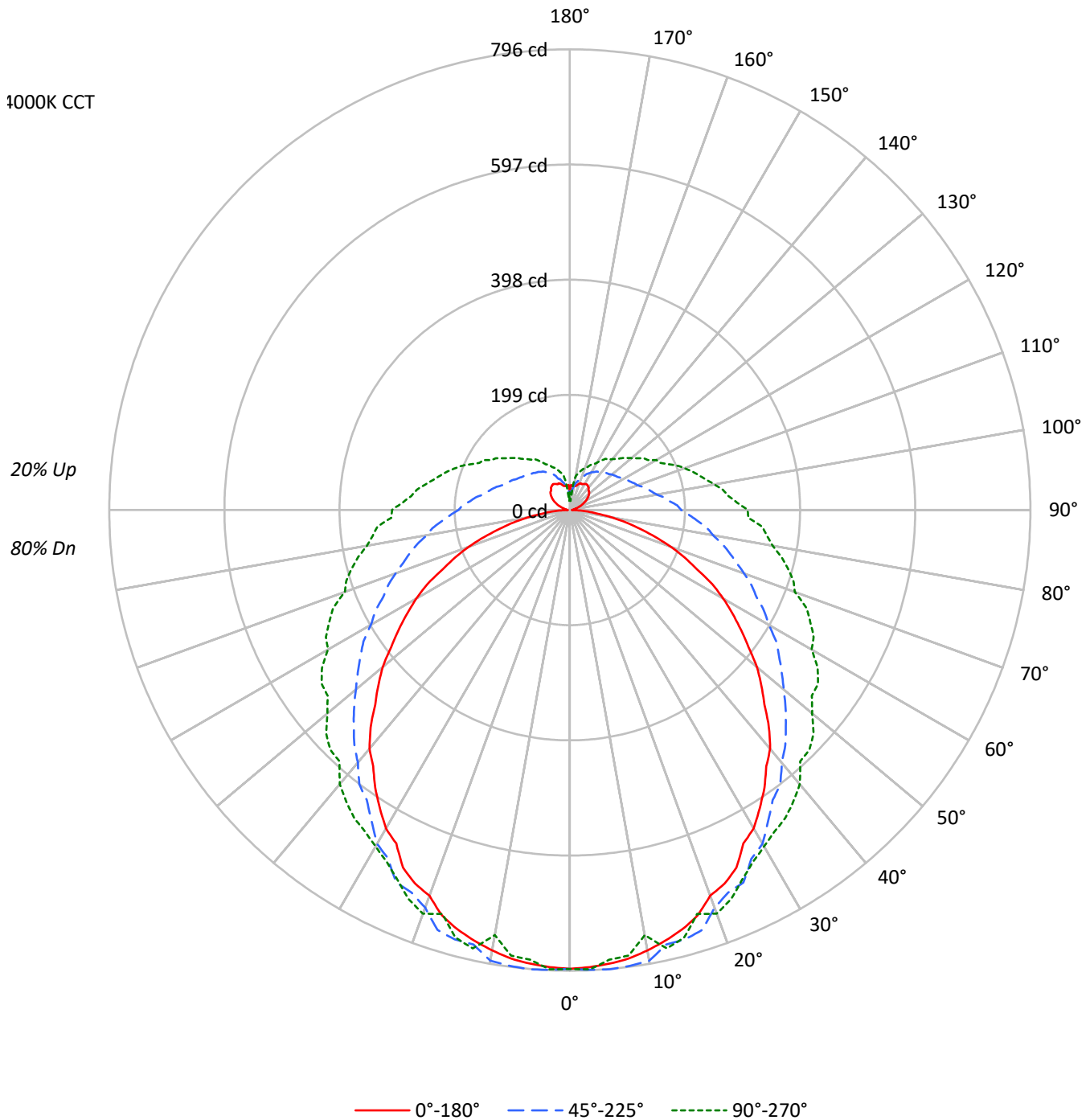
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3341.0 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 1.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	76	76	73	70	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	65	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	37	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11341	11341	11341
5°	11195	10994	10690
10°	11020	10620	9879
15°	10807	10124	9873
20°	10400	9526	9419
25°	10257	9221	8861
30°	9895	8685	8423
35°	9534	8071	8199
40°	9240	7669	7910
45°	8709	7307	7652
50°	8347	6927	7361
55°	7827	6635	7326
60°	7417	6307	7084
65°	6694	6051	7139
70°	6025	5912	6910
75°	4972	5798	7081
80°	3730	5720	7136
85°	2332	5811	7550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8709 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.4	2.3
10°-20°	215.1	6.4
20°-30°	322.2	9.6
30°-40°	386.8	11.6
40°-50°	407.9	12.2
50°-60°	393.5	11.8
60°-70°	348.9	10.4
70°-80°	287.5	8.6
80°-90°	223.5	6.7
90°-100°	174.2	5.2
100°-110°	139.0	4.2
110°-120°	111.3	3.3
120°-130°	88.4	2.6
130°-140°	67.8	2.0
140°-150°	49.3	1.5
150°-160°	31.2	0.9
160°-170°	15.2	0.5
170°-180°	3.6	0.1
0°-30°	612.7	18.3
0°-40°	999.5	29.9
0°-60°	1800.9	53.9
0°-90°	2660.9	79.6
90°-120°	424.5	12.7
90°-150°	630.1	18.9
90°-180°	680.0	20.4
0°-180°	3341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	793	793	793	793	793	
5°	787	798	796	790	780	75
15°	750	760	768	772	764	211
25°	682	692	710	709	705	312
35°	586	596	612	644	650	367
45°	476	487	528	564	586	369
55°	361	383	442	498	524	324
65°	242	272	356	421	459	243
75°	125	181	286	363	390	134
85°	31	110	222	302	334	34
90°	4	87	192	278	307	4
95°	5	72	173	248	275	5
105°	12	60	140	206	231	13
115°	25	57	116	169	188	25
125°	38	57	100	138	156	34
135°	46	58	90	115	127	36
145°	53	57	81	98	108	33
155°	49	52	69	80	86	23
165°	43	45	51	59	69	13
175°	42	40	33	30	16	4
180°	31	31	31	31	31	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	792.8	792.8	792.8	792.8	792.8
2.5°	790.6	795.8	795.1	804.7	794.3
5°	786.8	798.0	796.5	789.8	780.1
7.5°	781.6	797.3	794.3	792.8	776.4
10°	772.7	785.4	790.6	792.1	745.8
12.5°	762.2	774.2	768.9	775.7	775.7
15°	750.3	760.0	768.2	771.9	764.5
17.5°	734.6	750.3	760.7	758.5	731.7
20°	709.3	730.9	730.9	744.3	742.1
22.5°	698.8	716.7	715.2	724.2	727.9
25°	681.7	692.1	710.0	709.3	704.8
27.5°	649.6	678.0	679.4	684.7	685.4
30°	635.4	654.1	666.0	674.2	671.2
32.5°	610.8	620.5	637.7	654.8	658.6
35°	586.2	595.9	611.6	643.6	649.6
37.5°	557.9	578.8	597.4	617.5	634.7
40°	538.5	545.9	569.8	599.6	618.3
42.5°	509.4	522.1	551.2	576.5	589.2
45°	475.8	487.0	528.0	563.8	585.5
47.5°	449.0	466.1	505.7	547.4	571.3
50°	422.1	436.3	482.6	521.3	546.7
52.5°	389.3	408.7	461.7	519.8	527.3
55°	361.0	382.6	441.5	497.5	523.6
57.5°	333.4	352.8	422.9	472.9	507.9
60°	306.5	327.4	396.8	456.4	482.6
62.5°	277.4	297.6	378.9	442.3	475.1
65°	242.4	271.5	355.8	420.6	458.7
67.5°	214.8	250.6	340.1	415.4	443.0
70°	185.7	223.0	320.7	389.3	413.9
72.5°	155.1	201.4	301.3	381.9	405.0
75°	125.3	181.2	285.7	363.2	390.1
77.5°	99.9	161.1	269.2	348.3	374.4
80°	72.3	141.7	251.3	329.7	355.8
82.5°	49.2	124.6	239.4	319.2	343.8
85°	31.3	110.4	222.3	302.1	334.1
87.5°	14.9	97.7	207.3	289.4	308.8
90°	4.5	87.3	192.4	278.2	307.3
92.5°	3.7	79.1	185.7	261.8	289.4
95°	5.2	72.3	173.0	247.6	275.2
97.5°	7.5	67.1	164.8	235.7	267.0
100°	8.2	62.6	152.9	226.0	253.6
102.5°	9.7	60.4	145.4	216.3	241.6
105°	11.9	59.7	139.5	205.8	231.2
107.5°	14.9	56.7	132.8	191.7	221.5
110°	17.9	57.4	124.6	185.7	211.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	21.6	56.7	120.8	174.5	200.6
115°	24.6	57.4	115.6	169.3	187.9
117.5°	28.3	56.7	111.9	158.1	176.0
120°	32.1	57.4	106.7	154.4	173.0
122.5°	35.1	58.2	103.7	145.4	160.4
125°	38.0	57.4	99.9	138.0	155.9
127.5°	41.0	58.2	97.7	131.3	146.9
130°	43.3	57.4	95.5	126.0	139.5
132.5°	45.5	57.4	91.7	120.1	132.8
135°	46.2	58.2	90.2	114.9	126.8
137.5°	47.7	58.9	87.3	109.6	119.3
140°	50.7	58.9	85.8	106.7	114.9
142.5°	51.5	57.4	82.8	100.7	109.6
145°	53.0	56.7	81.3	97.7	108.1
147.5°	53.0	56.7	77.6	91.7	101.4
150°	52.2	54.4	75.3	88.0	94.7
152.5°	50.7	54.4	71.6	84.3	88.8
155°	49.2	52.2	68.6	79.8	86.5
157.5°	50.0	51.5	63.4	77.6	80.5
160°	48.5	49.2	57.4	73.1	77.6
162.5°	46.2	47.0	55.9	67.1	73.8
165°	43.3	44.7	50.7	58.9	68.6
167.5°	42.5	41.8	47.7	53.0	64.9
170°	42.5	41.0	42.5	44.7	59.7
172.5°	41.8	39.5	38.0	35.8	44.0
175°	42.5	39.5	32.8	29.8	15.7
177.5°	43.3	40.3	32.1	22.4	16.4
180°	30.6	30.6	30.6	30.6	30.6



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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	15.41	16.72	16.05	17.39	18.16	18.56	19.87	19.21	20.54	21.31
	3H	16.88	18.08	17.54	18.76	19.56	21.39	22.59	22.05	23.27	24.07
	4H	17.36	18.50	18.03	19.18	20.00	22.81	23.95	23.48	24.64	25.45
	6H	17.65	18.71	18.33	19.40	20.23	24.29	25.35	24.97	26.05	26.88
	8H	17.70	18.72	18.40	19.44	20.27	25.04	26.06	25.74	26.78	27.61
	12H	17.73	18.70	18.43	19.41	20.28	25.86	26.83	26.56	27.54	28.41
4H	2H	16.51	17.65	17.19	18.34	19.15	18.93	20.07	19.60	20.75	21.57
	3H	18.23	19.21	18.92	19.93	20.76	21.99	22.97	22.68	23.69	24.52
	4H	18.84	19.74	19.54	20.46	21.32	23.60	24.50	24.30	25.23	26.09
	6H	19.26	20.06	19.98	20.81	21.67	25.28	26.08	26.00	26.83	27.69
	8H	19.37	20.12	20.10	20.87	21.75	26.15	26.90	26.88	27.65	28.53
	12H	19.43	20.12	20.18	20.89	21.78	27.10	27.78	27.84	28.55	29.44
8H	4H	19.84	20.59	20.57	21.34	22.22	23.79	24.55	24.52	25.29	26.18
	6H	20.50	21.14	21.25	21.93	22.81	25.66	26.30	26.42	27.09	27.97
	8H	20.72	21.30	21.49	22.09	22.99	26.69	27.27	27.46	28.06	28.96
	12H	20.88	21.39	21.65	22.17	23.13	27.83	28.35	28.60	29.13	30.09
12H	4H	20.15	20.84	20.90	21.61	22.50	23.79	24.48	24.54	25.25	26.14
	6H	20.97	21.55	21.74	22.34	23.24	25.70	26.28	26.47	27.07	27.97
	8H	21.32	21.84	22.09	22.62	23.57	26.80	27.31	27.57	28.09	29.05