

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: P892781

Luminaire Tested: 2MB-4HL-RNDU-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892781
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-L830
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 5
Light Source: -
Ballast/Driver: -

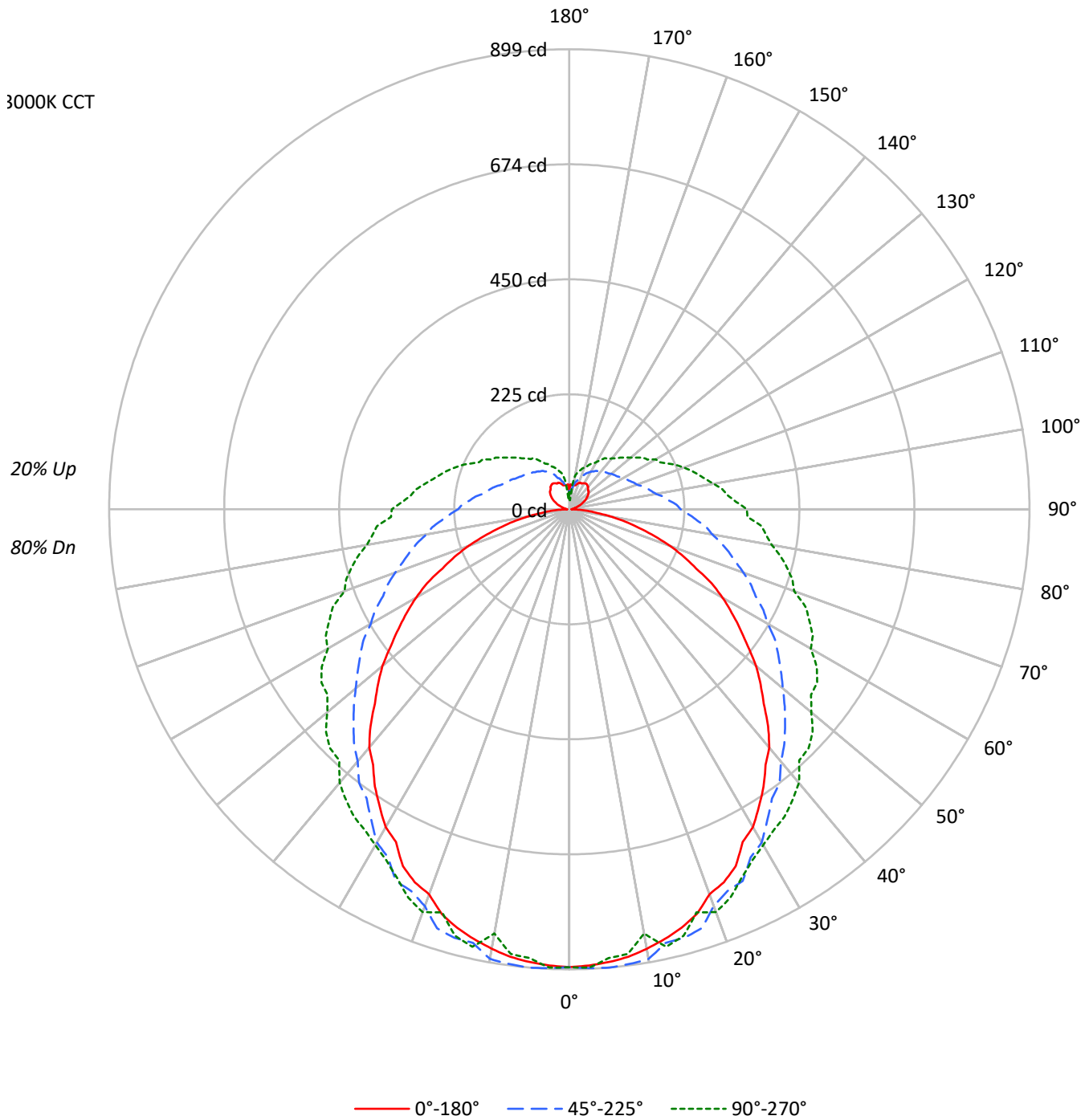
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3771.0 lumens
Efficiency: N/A
Efficacy: 136.6 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°	12802	12802	12802
5°	12637	12410	12066
10°	12437	11986	11151
15°	12199	11428	11144
20°	11738	10752	10631
25°	11576	10408	10001
30°	11168	9803	9507
35°	10762	9109	9254
40°	10429	8655	8928
45°	9831	8248	8636
50°	9423	7819	8308
55°	8833	7490	8269
60°	8373	7118	7996
65°	7556	6828	8057
70°	6800	6673	7800
75°	5611	6542	7992
80°	4214	6457	8053
85°	2637	6558	8522

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9831 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	2.3
10°-20°	242.8	6.4
20°-30°	363.7	9.6
30°-40°	436.6	11.6
40°-50°	460.4	12.2
50°-60°	444.2	11.8
60°-70°	393.8	10.4
70°-80°	324.5	8.6
80°-90°	252.3	6.7
90°-100°	196.6	5.2
100°-110°	156.9	4.2
110°-120°	125.6	3.3
120°-130°	99.7	2.6
130°-140°	76.6	2.0
140°-150°	55.7	1.5
150°-160°	35.2	0.9
160°-170°	17.2	0.5
170°-180°	4.0	0.1
0°-30°	691.6	18.3
0°-40°	1128.1	29.9
0°-60°	2032.7	53.9
0°-90°	3003.3	79.6
90°-120°	479.2	12.7
90°-150°	711.2	18.9
90°-180°	768.0	20.4
0°-180°	3771.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	888	901	899	892	880	84
15°	847	858	867	871	863	238
25°	769	781	801	801	796	352
35°	662	673	690	726	733	414
45°	537	550	596	636	661	417
55°	407	432	498	562	591	365
65°	274	306	402	475	518	274
75°	141	205	322	410	440	152
85°	35	125	251	341	377	38
90°	5	98	217	314	347	4
95°	6	82	195	280	311	6
105°	14	67	157	232	261	15
115°	28	65	130	191	212	28
125°	43	65	113	156	176	38
135°	52	66	102	130	143	41
145°	60	64	92	110	122	37
155°	56	59	77	90	98	26
165°	49	50	57	66	77	14
175°	48	45	37	34	18	5
180°	34	34	34	34	34	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	894.9	894.9	894.9	894.9	894.9
2.5°	892.3	898.2	897.4	908.3	896.5
5°	888.1	900.7	899.1	891.5	880.5
7.5°	882.2	899.9	896.5	894.9	876.3
10°	872.1	886.4	892.3	894.0	841.8
12.5°	860.3	873.8	867.9	875.5	875.5
15°	846.9	857.8	867.1	871.3	862.9
17.5°	829.2	846.9	858.7	856.1	825.8
20°	800.6	825.0	825.0	840.1	837.6
22.5°	788.8	809.0	807.3	817.4	821.6
25°	769.4	781.2	801.4	800.6	795.5
27.5°	733.2	765.2	766.9	772.8	773.6
30°	717.2	738.3	751.7	761.0	757.6
32.5°	689.4	700.4	719.8	739.1	743.3
35°	661.7	672.6	690.3	726.5	733.2
37.5°	629.7	653.3	674.3	697.0	716.4
40°	607.8	616.2	643.1	676.8	697.9
42.5°	575.0	589.3	622.1	650.7	665.0
45°	537.1	549.7	596.0	636.4	660.8
47.5°	506.8	526.1	570.8	617.9	644.8
50°	476.5	492.5	544.7	588.4	617.1
52.5°	439.4	461.3	521.1	586.7	595.2
55°	407.4	431.9	498.4	561.5	591.0
57.5°	376.3	398.2	477.3	533.7	573.3
60°	346.0	369.6	447.8	515.2	544.7
62.5°	313.2	335.9	427.6	499.2	536.2
65°	273.6	306.4	401.5	474.8	517.7
67.5°	242.4	282.9	383.9	468.9	500.0
70°	209.6	251.7	362.0	439.4	467.2
72.5°	175.1	227.3	340.1	431.0	457.1
75°	141.4	204.6	322.4	410.0	440.3
77.5°	112.8	181.8	303.9	393.1	422.6
80°	81.7	159.9	283.7	372.1	401.5
82.5°	55.6	140.6	270.2	360.3	388.1
85°	35.4	124.6	250.9	340.9	377.1
87.5°	16.8	110.3	234.0	326.6	348.5
90°	5.1	98.5	217.2	314.0	346.8
92.5°	4.2	89.2	209.6	295.5	326.6
95°	5.9	81.7	195.3	279.5	310.6
97.5°	8.4	75.8	186.0	266.0	301.4
100°	9.3	70.7	172.6	255.1	286.2
102.5°	10.9	68.2	164.2	244.1	272.7
105°	13.5	67.3	157.4	232.3	261.0
107.5°	16.8	64.0	149.8	216.3	250.0
110°	20.2	64.8	140.6	209.6	238.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	24.4	64.0	136.4	197.0	226.4
115°	27.8	64.8	130.5	191.1	212.1
117.5°	32.0	64.0	126.3	178.5	198.7
120°	36.2	64.8	120.4	174.3	195.3
122.5°	39.6	65.7	117.0	164.2	181.0
125°	42.9	64.8	112.8	155.7	175.9
127.5°	46.3	65.7	110.3	148.2	165.8
130°	48.8	64.8	107.8	142.3	157.4
132.5°	51.4	64.8	103.5	135.5	149.8
135°	52.2	65.7	101.9	129.6	143.1
137.5°	53.9	66.5	98.5	123.7	134.7
140°	57.2	66.5	96.8	120.4	129.6
142.5°	58.1	64.8	93.4	113.6	123.7
145°	59.8	64.0	91.8	110.3	122.1
147.5°	59.8	64.0	87.5	103.5	114.5
150°	58.9	61.5	85.0	99.3	106.9
152.5°	57.2	61.5	80.8	95.1	100.2
155°	55.6	58.9	77.4	90.1	97.7
157.5°	56.4	58.1	71.6	87.5	90.9
160°	54.7	55.6	64.8	82.5	87.5
162.5°	52.2	53.0	63.1	75.8	83.3
165°	48.8	50.5	57.2	66.5	77.4
167.5°	48.0	47.1	53.9	59.8	73.2
170°	48.0	46.3	48.0	50.5	67.3
172.5°	47.1	44.6	42.9	40.4	49.7
175°	48.0	44.6	37.0	33.7	17.7
177.5°	48.8	45.5	36.2	25.3	18.5
180°	34.5	34.5	34.5	34.5	34.5



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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	15.83	17.14	16.47	17.81	18.58	18.98	20.30	19.63	20.96	21.73
	3H	17.30	18.50	17.96	19.18	19.98	21.81	23.01	22.47	23.69	24.49
	4H	17.78	18.92	18.45	19.60	20.42	23.23	24.37	23.90	25.06	25.87
	6H	18.07	19.13	18.75	19.82	20.66	24.71	25.77	25.39	26.47	27.30
	8H	18.13	19.14	18.82	19.86	20.69	25.46	26.48	26.16	27.20	28.03
	12H	18.15	19.12	18.85	19.83	20.70	26.28	27.25	26.98	27.96	28.83
4H	2H	16.93	18.07	17.61	18.76	19.57	19.35	20.49	20.02	21.17	21.99
	3H	18.65	19.63	19.34	20.35	21.18	22.41	23.39	23.10	24.11	24.94
	4H	19.26	20.16	19.96	20.88	21.74	24.02	24.92	24.72	25.65	26.51
	6H	19.68	20.48	20.40	21.23	22.10	25.70	26.50	26.42	27.25	28.11
	8H	19.79	20.54	20.52	21.29	22.17	26.57	27.32	27.30	28.07	28.95
	12H	19.85	20.54	20.60	21.31	22.20	27.52	28.20	28.26	28.97	29.86
8H	4H	20.26	21.01	20.99	21.76	22.64	24.21	24.97	24.94	25.71	26.60
	6H	20.92	21.56	21.67	22.35	23.23	26.08	26.72	26.84	27.51	28.40
	8H	21.14	21.72	21.91	22.51	23.41	27.11	27.69	27.88	28.48	29.38
	12H	21.30	21.81	22.07	22.59	23.55	28.25	28.77	29.02	29.55	30.51
12H	4H	20.57	21.26	21.32	22.03	22.92	24.21	24.90	24.96	25.67	26.56
	6H	21.39	21.97	22.16	22.76	23.66	26.12	26.70	26.89	27.49	28.39
	8H	21.74	22.26	22.51	23.04	23.99	27.22	27.74	27.99	28.51	29.47