

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: P894055

Luminaire Tested: 4MB-9HL-LVRF-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894055
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-9HL-LVRF-UNV-L940
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 4000K C
Light Source: -
Ballast/Driver: -

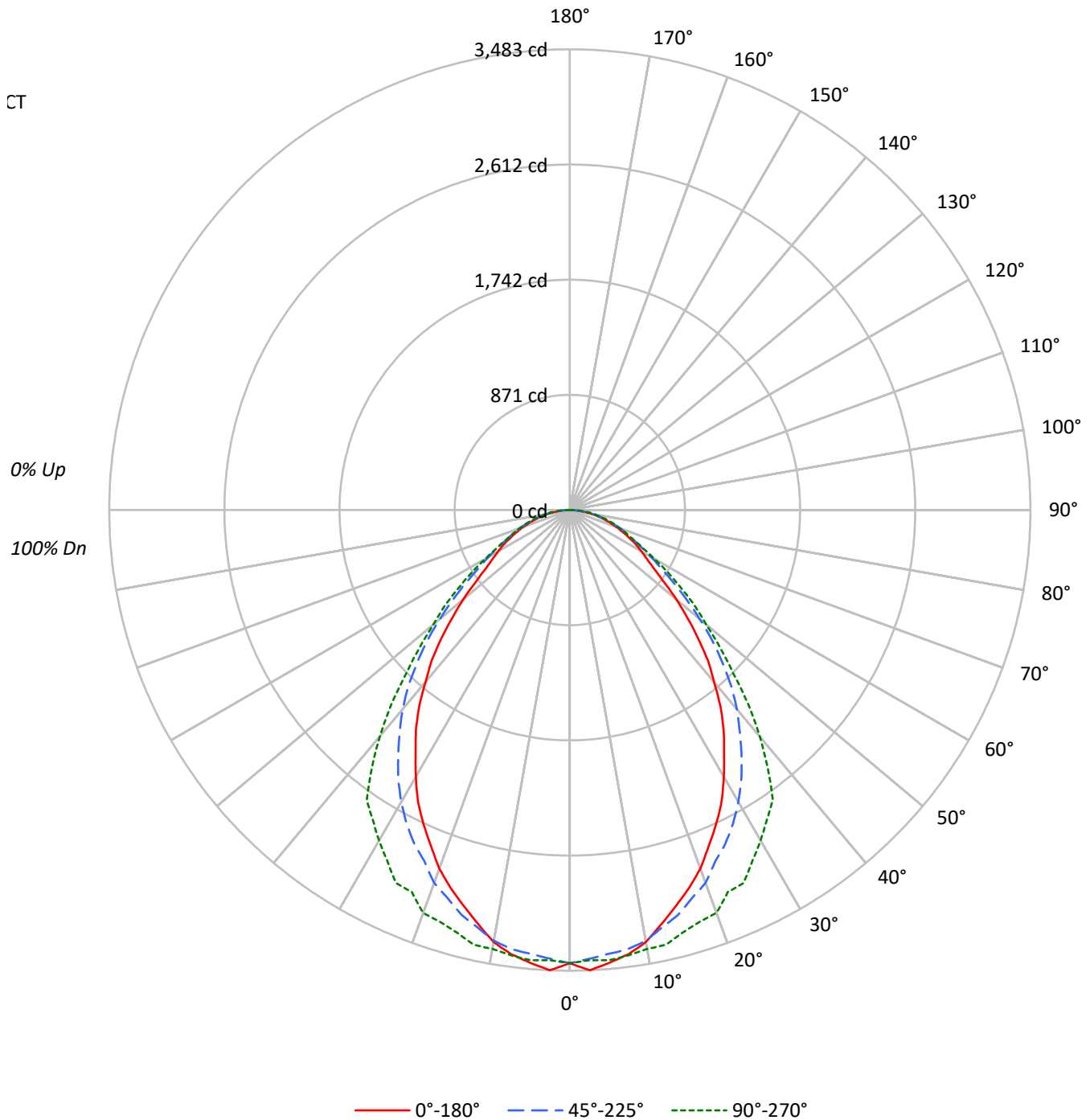
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6947.0 lumens
Efficiency: N/A
Efficacy: 107.9 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): 64.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	89	89	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	77	77	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	67	67	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	59	59	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	57	52	52	52	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	38	38	38	37
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	35	35	35	33
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	32	32	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24377	24377	24377
5°	24537	24061	24405
10°	23962	23888	24347
15°	22831	23336	24348
20°	21840	22716	24546
25°	20561	21848	24421
30°	19128	20937	23706
35°	17616	19653	23248
40°	15754	18266	20759
45°	13810	16428	17604
50°	11656	14195	14898
55°	9669	11880	12706
60°	8891	10100	10480
65°	8329	8881	8950
70°	7755	8417	8352
75°	7235	7857	8137
80°	6757	7302	7805
85°	5690	6188	8613

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 17604 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.4	4.7
10°-20°	902.1	13.0
20°-30°	1299.1	18.7
30°-40°	1434.3	20.6
40°-50°	1230.7	17.7
50°-60°	838.4	12.1
60°-70°	527.4	7.6
70°-80°	300.3	4.3
80°-90°	91.3	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°	2524.6	36.3
0°-40°	3958.9	57.0
0°-60°	6028.0	86.8
0°-90°	6947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3426	3426	3426	3426	3426	
5°	3436	3422	3369	3440	3417	324
15°	3100	3132	3168	3312	3305	873
25°	2619	2671	2783	3007	3111	1203
35°	2028	2107	2263	2510	2676	1262
45°	1372	1464	1633	1731	1750	1058
55°	780	828	958	1004	1024	716
65°	495	503	528	553	532	491
75°	263	265	286	298	296	281
85°	70	72	76	90	106	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3426.2	3426.2	3426.2	3426.2	3426.2
2.5°	3482.6	3446.7	3395.5	3444.7	3406.8
5°	3435.5	3422.1	3368.9	3439.6	3417.0
7.5°	3387.3	3358.6	3349.4	3425.2	3395.5
10°	3316.6	3300.3	3306.4	3403.7	3369.9
12.5°	3205.0	3216.3	3230.6	3354.5	3364.8
15°	3099.5	3132.3	3168.1	3311.5	3305.4
17.5°	2996.0	3041.1	3074.9	3259.3	3264.4
20°	2884.4	2910.0	3000.1	3178.4	3241.9
22.5°	2746.1	2796.3	2874.1	3096.4	3125.1
25°	2619.1	2671.3	2783.0	3007.3	3110.8
27.5°	2485.9	2534.1	2672.4	2901.8	2989.9
30°	2328.2	2392.7	2548.4	2782.0	2885.4
32.5°	2170.5	2264.7	2414.2	2653.9	2773.8
35°	2028.1	2107.0	2262.6	2509.5	2676.5
37.5°	1870.3	1953.3	2111.1	2351.8	2458.3
40°	1696.2	1785.3	1966.6	2161.2	2235.0
42.5°	1546.7	1623.5	1805.8	1943.1	2001.5
45°	1372.5	1463.7	1632.7	1731.0	1749.5
47.5°	1204.6	1309.0	1460.6	1506.7	1542.6
50°	1053.0	1134.9	1282.4	1311.1	1345.9
52.5°	898.3	985.4	1114.4	1143.1	1194.3
55°	779.5	827.6	957.7	1003.8	1024.3
57.5°	692.4	723.1	815.3	873.7	879.9
60°	624.8	640.2	709.8	753.9	736.5
62.5°	562.3	574.6	609.5	643.3	620.7
65°	494.7	502.9	527.5	553.1	531.6
67.5°	431.2	440.4	463.0	481.4	463.0
70°	372.8	380.0	404.6	412.8	401.5
72.5°	318.6	321.6	342.1	356.5	349.3
75°	263.2	265.3	285.8	298.1	296.0
77.5°	213.1	216.1	233.5	244.8	238.7
80°	164.9	167.0	178.2	194.6	190.5
82.5°	115.7	119.8	127.0	141.4	152.6
85°	69.7	71.7	75.8	90.1	105.5
87.5°	26.6	28.7	30.7	37.9	50.2
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	18.55	20.03	18.92	20.34	20.66	19.91	21.39	20.28	21.70	22.02
	3H	20.13	21.45	20.51	21.78	22.14	21.20	22.52	21.58	22.85	23.21
	4H	20.74	21.98	21.14	22.33	22.71	21.75	22.99	22.15	23.34	23.72
	6H	21.21	22.35	21.62	22.72	23.11	22.20	23.35	22.62	23.72	24.11
	8H	21.36	22.45	21.79	22.84	23.24	22.39	23.48	22.82	23.87	24.27
	12H	21.46	22.50	21.89	22.89	23.32	22.54	23.59	22.98	23.97	24.40
4H	2H	19.16	20.40	19.56	20.75	21.13	20.28	21.52	20.68	21.87	22.25
	3H	20.97	22.00	21.38	22.40	22.80	21.83	22.86	22.24	23.26	23.66
	4H	21.69	22.62	22.12	23.03	23.47	22.54	23.46	22.97	23.88	24.32
	6H	22.29	23.09	22.75	23.54	24.00	23.15	23.95	23.61	24.40	24.86
	8H	22.49	23.24	22.95	23.69	24.16	23.39	24.15	23.86	24.59	25.06
	12H	22.63	23.30	23.11	23.78	24.25	23.61	24.28	24.09	24.76	25.23
8H	4H	22.02	22.77	22.48	23.21	23.68	22.77	23.52	23.24	23.97	24.44
	6H	22.74	23.36	23.24	23.86	24.33	23.52	24.14	24.01	24.63	25.11
	8H	23.02	23.58	23.53	24.09	24.58	23.85	24.41	24.36	24.92	25.41
	12H	23.23	23.73	23.74	24.22	24.78	24.15	24.65	24.66	25.14	25.71
12H	4H	22.06	22.73	22.54	23.21	23.68	22.79	23.46	23.27	23.94	24.41
	6H	22.81	23.37	23.32	23.88	24.37	23.55	24.11	24.07	24.62	25.11
	8H	23.15	23.64	23.66	24.13	24.70	23.94	24.44	24.45	24.93	25.50