

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: P894018

Luminaire Tested: 4MB-9HL-FLT-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894018
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-FLT-UNV-L835
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

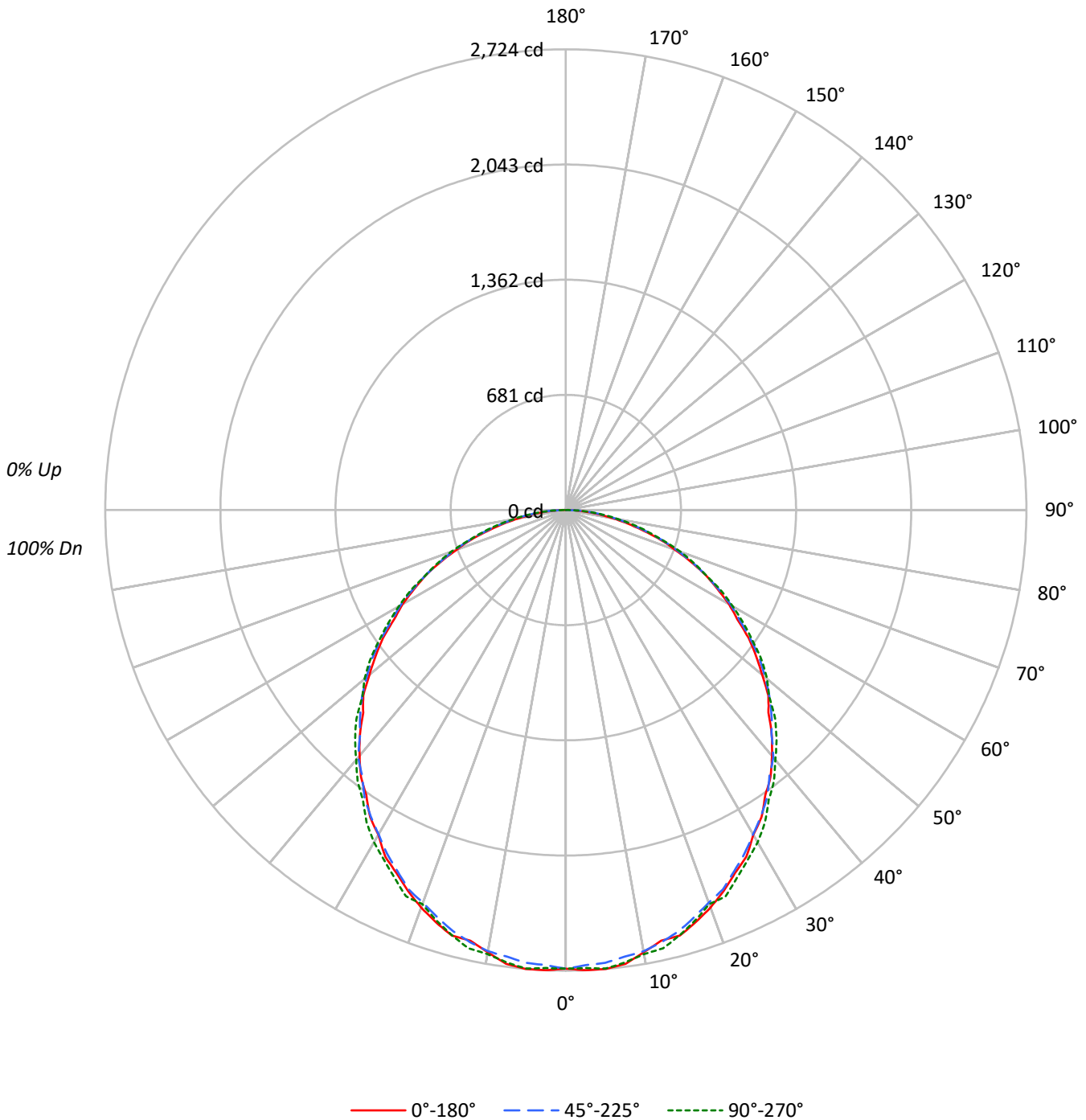
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7514.0 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34
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 (A_{in}): 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

TEST NUMBER: P894018
CATALOG NUMBER: 4MB-9HL-FLT-UNV-L835

Luminous Intensity Polar Plot





TEST NUMBER: P894018

CATALOG NUMBER: 4MB-9HL-FLT-UNV-L835

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	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	69	65	61	61	61	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	45	45	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	40	40	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	35	35	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	32	32	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19294	19294	19294
5°	19452	19192	19435
10°	19186	19135	19262
15°	19190	18992	19173
20°	18937	18706	18777
25°	18595	18493	18825
30°	18218	18190	18641
35°	17867	18020	18172
40°	17626	17734	17909
45°	17055	17315	17633
50°	16778	17025	17193
55°	16362	16565	16740
60°	15852	16086	16236
65°	15383	15442	15442
70°	14304	14645	15011
75°	13171	13687	13976
80°	11616	12624	13054
85°	10425	11666	12531

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 17633 cd/sqm



TEST NUMBER: P894018
 CATALOG NUMBER: 4MB-9HL-FLT-UNV-L835

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.7	3.4
10°-20°	731.5	9.7
20°-30°	1097.2	14.6
30°-40°	1303.1	17.3
40°-50°	1334.2	17.8
50°-60°	1195.4	15.9
60°-70°	908.1	12.1
70°-80°	528.9	7.0
80°-90°	158.8	2.1
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°	2085.4	27.8
0°-40°	3388.5	45.1
0°-60°	5918.1	78.8
0°-90°	7514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2712	2712	2712	2712	2712	
5°	2724	2713	2687	2704	2721	258
15°	2605	2623	2578	2589	2603	731
25°	2369	2390	2356	2386	2398	1093
35°	2057	2103	2075	2083	2092	1293
45°	1695	1737	1721	1735	1752	1318
55°	1319	1339	1335	1351	1350	1175
65°	914	914	917	929	917	897
75°	479	487	498	513	508	510
85°	128	130	143	152	154	143
90°	0	0	0	0	0	



TEST NUMBER: P894018

CATALOG NUMBER: 4MB-9HL-FLT-UNV-L835

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2711.8	2711.8	2711.8	2711.8	2711.8
2.5°	2723.5	2710.7	2693.1	2698.9	2710.7
5°	2723.5	2713.0	2687.2	2703.6	2721.2
7.5°	2706.0	2720.0	2663.8	2663.8	2696.6
10°	2655.6	2682.5	2648.6	2645.1	2666.1
12.5°	2607.6	2656.8	2616.9	2628.7	2654.4
15°	2605.2	2622.8	2578.3	2588.8	2602.9
17.5°	2554.9	2572.4	2524.4	2544.3	2544.3
20°	2501.0	2504.5	2470.5	2513.9	2479.9
22.5°	2438.9	2475.2	2428.3	2442.4	2471.7
25°	2368.6	2389.7	2355.7	2386.2	2397.9
27.5°	2311.2	2337.0	2290.1	2326.4	2330.0
30°	2217.5	2245.6	2214.0	2237.4	2269.0
32.5°	2154.2	2163.6	2147.2	2182.4	2191.7
35°	2057.0	2102.7	2074.6	2082.8	2092.2
37.5°	1989.1	2003.1	1978.5	2006.6	2021.9
40°	1897.7	1918.8	1909.4	1914.1	1928.2
42.5°	1802.8	1825.1	1800.5	1834.4	1845.0
45°	1695.0	1737.2	1720.8	1734.9	1752.4
47.5°	1624.8	1638.8	1634.1	1642.3	1630.6
50°	1515.8	1529.9	1538.1	1548.6	1553.3
52.5°	1418.6	1429.1	1444.4	1450.2	1460.8
55°	1319.0	1338.9	1335.4	1350.6	1349.5
57.5°	1203.0	1232.3	1223.0	1245.2	1245.2
60°	1114.0	1118.7	1130.4	1141.0	1141.0
62.5°	1010.9	1016.8	1022.6	1032.0	1039.0
65°	913.7	913.7	917.2	928.9	917.2
67.5°	801.2	796.6	808.3	822.3	821.2
70°	687.6	693.5	704.0	721.6	721.6
72.5°	590.4	590.4	602.1	611.5	610.3
75°	479.1	487.3	497.9	513.1	508.4
77.5°	379.5	385.4	403.0	417.0	418.2
80°	283.5	289.3	308.1	322.1	318.6
82.5°	198.0	206.2	223.7	234.3	233.1
85°	127.7	130.0	142.9	152.3	153.5
87.5°	58.6	63.3	72.6	76.1	76.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P894018
 CATALOG NUMBER: 4MB-9HL-FLT-UNV-L835

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	21.81	23.45	22.18	23.76	24.08	21.92	23.56	22.28	23.87	24.18
	3H	23.59	25.08	23.97	25.40	25.76	23.76	25.24	24.13	25.56	25.92
	4H	24.26	25.65	24.65	26.00	26.38	24.45	25.85	24.85	26.20	26.57
	6H	24.73	26.03	25.14	26.39	26.78	25.00	26.30	25.41	26.66	27.05
	8H	24.88	26.12	25.30	26.51	26.91	25.19	26.43	25.62	26.82	27.22
	12H	24.99	26.17	25.42	26.56	26.98	25.34	26.52	25.76	26.90	27.33
4H	2H	22.46	23.85	22.86	24.20	24.58	22.54	23.94	22.94	24.28	24.66
	3H	24.46	25.63	24.87	26.03	26.43	24.60	25.78	25.01	26.17	26.57
	4H	25.25	26.31	25.68	26.73	27.16	25.44	26.50	25.87	26.92	27.35
	6H	25.85	26.78	26.30	27.22	27.68	26.13	27.06	26.58	27.50	27.96
	8H	26.05	26.92	26.51	27.36	27.83	26.38	27.25	26.84	27.69	28.15
	12H	26.20	26.98	26.68	27.46	27.93	26.57	27.36	27.05	27.83	28.30
8H	4H	25.59	26.46	26.05	26.90	27.36	25.76	26.63	26.21	27.07	27.53
	6H	26.31	27.04	26.80	27.52	28.00	26.58	27.30	27.07	27.79	28.27
	8H	26.58	27.23	27.09	27.74	28.22	26.91	27.56	27.42	28.07	28.55
	12H	26.81	27.39	27.32	27.88	28.44	27.20	27.78	27.71	28.27	28.83
12H	4H	25.63	26.41	26.11	26.89	27.36	25.79	26.57	26.27	27.05	27.52
	6H	26.38	27.04	26.89	27.54	28.03	26.64	27.29	27.14	27.79	28.28
	8H	26.72	27.29	27.22	27.78	28.34	27.03	27.61	27.54	28.10	28.66