

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: P893970

Luminaire Tested: 4MB-8HL-RND-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893970
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-RND-UNV-L835
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

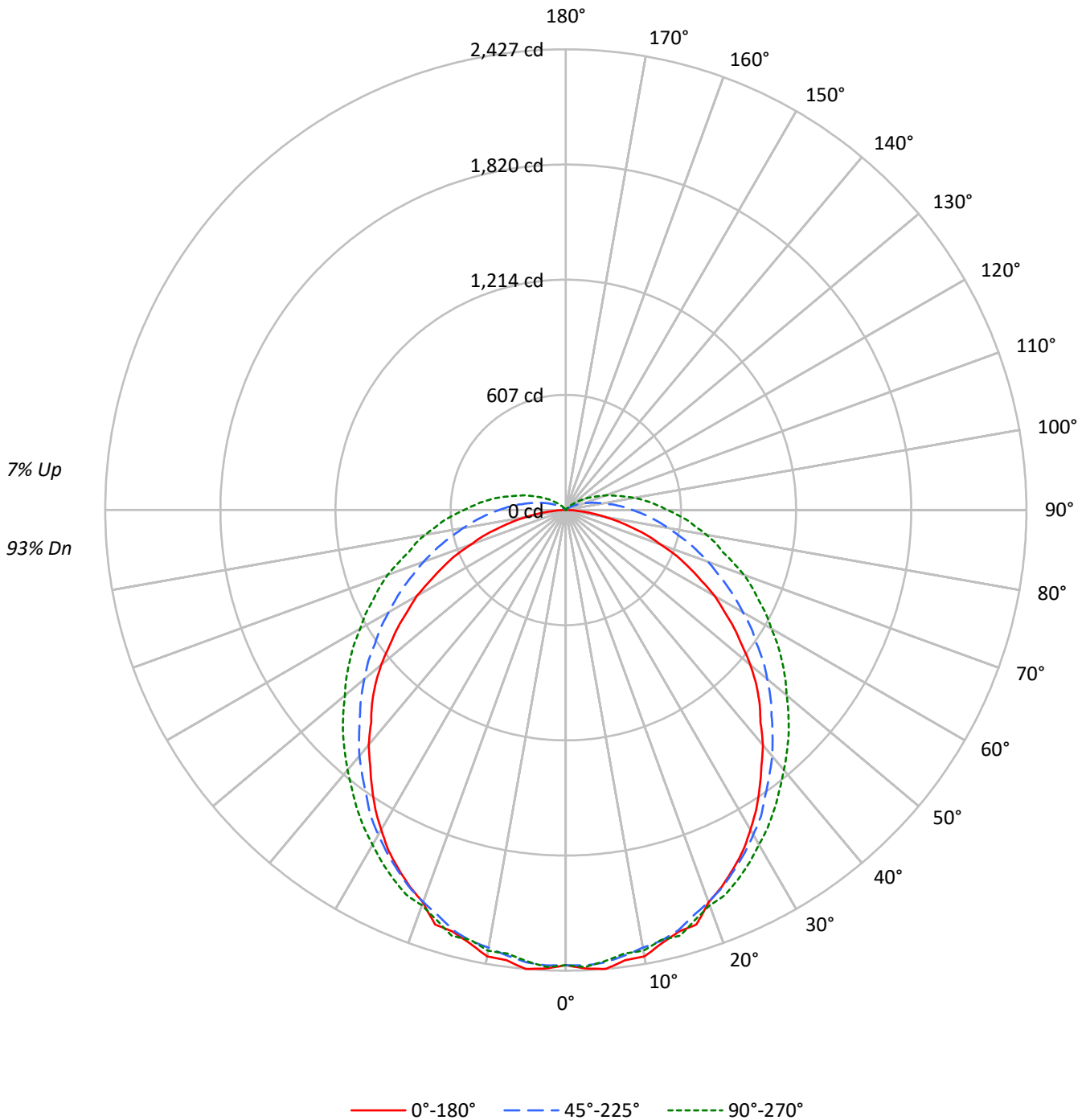
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7899.0 lumens
Efficiency: N/A
Efficacy: 136.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 57.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893970
CATALOG NUMBER: 4MB-8HL-RND-UNV-L835

Luminous Intensity Polar Plot





TEST NUMBER: P893970

CATALOG NUMBER: 4MB-8HL-RND-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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	63	60
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17062	17062	17062
5°	17331	17081	17033
10°	17246	16913	17032
15°	16937	16881	17107
20°	16654	16637	16779
25°	16380	16449	16854
30°	15980	16232	16728
35°	15474	15922	16665
40°	15008	15712	16608
45°	14538	15431	16712
50°	14061	15336	16818
55°	13418	15228	17255
60°	12894	15330	17796
65°	12042	15736	18874
70°	11069	16613	20790
75°	10042	18396	23554
80°	8629	22474	30878
85°	6988	36360	52834

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 95912 cd/sqm



TEST NUMBER: P893970
 CATALOG NUMBER: 4MB-8HL-RND-UNV-L835

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.4	2.9
10°-20°	647.2	8.2
20°-30°	969.9	12.3
30°-40°	1152.6	14.6
40°-50°	1193.3	15.1
50°-60°	1105.8	14.0
60°-70°	920.6	11.7
70°-80°	683.3	8.7
80°-90°	451.9	5.7
90°-100°	275.0	3.5
100°-110°	154.2	2.0
110°-120°	75.9	1.0
120°-130°	30.9	0.4
130°-140°	9.0	0.1
140°-150°	1.3	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1844.5	23.4
0°-40°	2997.1	37.9
0°-60°	5296.2	67.0
0°-90°	7352.1	93.1
90°-120°	505.1	6.4
90°-150°	546.3	6.9
90°-180°	547.0	6.9
0°-180°	7899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2398	2398	2398	2398	2398	
5°	2427	2400	2392	2404	2385	229
15°	2299	2291	2292	2295	2322	651
25°	2086	2084	2095	2136	2147	960
35°	1782	1795	1833	1891	1919	1115
45°	1445	1466	1534	1629	1661	1113
55°	1082	1128	1228	1350	1391	967
65°	715	782	935	1072	1121	711
75°	365	476	669	813	857	391
85°	86	240	445	603	647	96
90°	4	156	352	493	536	6
95°	1	96	273	407	452	1
105°	1	32	148	251	286	1
115°	1	8	69	138	166	1
125°	1	2	25	64	81	1
135°	2	1	7	21	28	1
145°	2	1	0	2	3	1
155°	2	2	0	0	0	1
165°	3	2	0	0	0	1
175°	3	2	0	0	0	0
180°	1	1	1	1	1	



TEST NUMBER: P893970

CATALOG NUMBER: 4MB-8HL-RND-UNV-L835

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2398.1	2398.1	2398.1	2398.1	2398.1
2.5°	2417.8	2405.7	2401.4	2395.9	2409.0
5°	2426.6	2400.3	2391.5	2403.6	2384.9
7.5°	2392.6	2386.0	2367.4	2373.9	2356.4
10°	2387.1	2350.9	2341.0	2363.0	2357.5
12.5°	2337.7	2307.0	2324.6	2339.9	2319.1
15°	2299.3	2290.6	2291.7	2295.0	2322.4
17.5°	2289.5	2250.0	2239.0	2266.4	2264.2
20°	2199.5	2191.8	2197.3	2233.5	2216.0
22.5°	2146.9	2122.7	2152.3	2187.4	2195.1
25°	2086.5	2084.3	2095.3	2135.9	2146.9
27.5°	2022.9	2008.6	2038.2	2085.4	2094.2
30°	1945.0	1939.5	1975.7	2016.3	2036.1
32.5°	1868.2	1871.5	1913.2	1947.2	1981.2
35°	1781.5	1794.7	1833.1	1891.3	1918.7
37.5°	1693.8	1710.2	1761.8	1828.7	1851.8
40°	1615.9	1619.2	1691.6	1759.6	1788.1
42.5°	1518.3	1551.2	1612.6	1702.6	1724.5
45°	1444.8	1465.6	1533.6	1629.1	1660.9
47.5°	1361.4	1385.5	1463.4	1556.7	1590.7
50°	1270.3	1292.3	1385.5	1491.9	1519.4
52.5°	1169.4	1214.4	1312.0	1421.7	1457.9
55°	1081.7	1127.7	1227.6	1350.4	1391.0
57.5°	987.3	1033.4	1158.4	1272.5	1325.2
60°	906.1	950.0	1077.3	1218.8	1250.6
62.5°	805.2	867.7	1006.0	1145.3	1190.3
65°	715.3	782.2	934.7	1071.8	1121.1
67.5°	633.0	702.1	861.2	1008.2	1061.9
70°	532.1	623.1	798.6	943.4	999.4
72.5°	457.5	548.5	731.7	875.4	925.9
75°	365.3	476.1	669.2	812.9	856.8
77.5°	288.5	408.1	604.5	765.7	809.6
80°	210.6	346.7	548.5	703.2	753.6
82.5°	143.7	289.6	496.9	645.0	693.3
85°	85.6	240.2	445.4	603.4	647.2
87.5°	37.3	196.4	398.2	543.0	588.0
90°	4.4	155.8	352.1	492.6	536.4
92.5°	1.1	125.1	311.6	447.6	490.4
95°	1.1	96.5	273.2	407.0	452.0
97.5°	1.1	74.6	234.8	365.3	408.1
100°	1.1	57.0	202.9	321.4	367.5
102.5°	1.1	42.8	172.2	285.2	324.7
105°	1.1	31.8	148.1	251.2	286.3
107.5°	1.1	23.0	124.0	219.4	254.5
110°	1.1	16.5	104.2	189.8	224.9



TEST NUMBER: P893970

CATALOG NUMBER: 4MB-8HL-RND-UNV-L835

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	12.1	84.5	163.5	193.1
115°	1.1	7.7	69.1	138.2	165.6
117.5°	1.1	5.5	54.9	116.3	142.6
120°	1.1	4.4	43.9	96.5	119.6
122.5°	1.1	3.3	34.0	79.0	100.9
125°	1.1	2.2	25.2	63.6	81.2
127.5°	1.1	2.2	18.6	50.5	65.8
130°	1.1	1.1	13.2	38.4	51.6
132.5°	1.1	1.1	8.8	28.5	38.4
135°	2.2	1.1	6.6	20.8	28.5
137.5°	2.2	1.1	4.4	14.3	19.7
140°	2.2	1.1	2.2	8.8	12.1
142.5°	2.2	1.1	1.1	4.4	6.6
145°	2.2	1.1	0.0	2.2	3.3
147.5°	2.2	1.1	0.0	1.1	1.1
150°	2.2	1.1	0.0	0.0	0.0
152.5°	2.2	1.1	0.0	0.0	0.0
155°	2.2	2.2	0.0	0.0	0.0
157.5°	2.2	2.2	0.0	0.0	0.0
160°	2.2	2.2	0.0	0.0	0.0
162.5°	2.2	2.2	0.0	0.0	0.0
165°	3.3	2.2	0.0	0.0	0.0
167.5°	3.3	2.2	0.0	0.0	0.0
170°	3.3	2.2	0.0	0.0	0.0
172.5°	3.3	2.2	0.0	0.0	0.0
175°	3.3	2.2	0.0	0.0	0.0
177.5°	3.3	2.2	0.0	0.0	0.0
180°	1.1	1.1	1.1	1.1	1.1



TEST NUMBER: P893970
 CATALOG NUMBER: 4MB-8HL-RND-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	20.08	21.62	20.55	22.08	22.56	21.66	23.20	22.13	23.65	24.13
	3H	21.85	23.25	22.33	23.72	24.24	24.24	25.65	24.73	26.11	26.64
	4H	22.51	23.84	23.01	24.32	24.86	25.50	26.83	26.00	27.32	27.85
	6H	22.98	24.22	23.50	24.72	25.27	26.88	28.13	27.40	28.62	29.17
	8H	23.13	24.32	23.66	24.84	25.40	27.61	28.80	28.14	29.32	29.88
	12H	23.23	24.37	23.76	24.88	25.47	28.46	29.60	28.99	30.11	30.70
4H	2H	21.04	22.37	21.54	22.85	23.39	22.23	23.56	22.73	24.04	24.58
	3H	23.08	24.22	23.60	24.74	25.30	25.10	26.23	25.61	26.76	27.32
	4H	23.89	24.94	24.43	25.47	26.06	26.58	27.62	27.11	28.15	28.75
	6H	24.54	25.47	25.10	26.03	26.63	28.20	29.12	28.75	29.68	30.28
	8H	24.77	25.64	25.33	26.20	26.82	29.05	29.92	29.61	30.48	31.10
	12H	24.94	25.73	25.52	26.32	26.94	30.04	30.83	30.63	31.42	32.05
8H	4H	24.74	25.61	25.30	26.17	26.79	26.95	27.81	27.51	28.38	28.99
	6H	25.67	26.40	26.26	27.01	27.63	28.83	29.56	29.42	30.17	30.79
	8H	26.05	26.71	26.65	27.33	27.96	29.89	30.55	30.49	31.17	31.80
	12H	26.37	26.96	26.98	27.57	28.27	31.14	31.74	31.75	32.34	33.04
12H	4H	25.01	25.79	25.59	26.38	27.01	26.99	27.78	27.57	28.37	28.99
	6H	26.09	26.76	26.69	27.37	28.01	28.94	29.60	29.54	30.22	30.85
	8H	26.63	27.22	27.24	27.83	28.53	30.11	30.71	30.72	31.31	32.01