

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: P894648

Luminaire Tested: 8TMB-14HL-RNDU-UNV-L850

Issue Date: 11/11/2024

**Test Information**

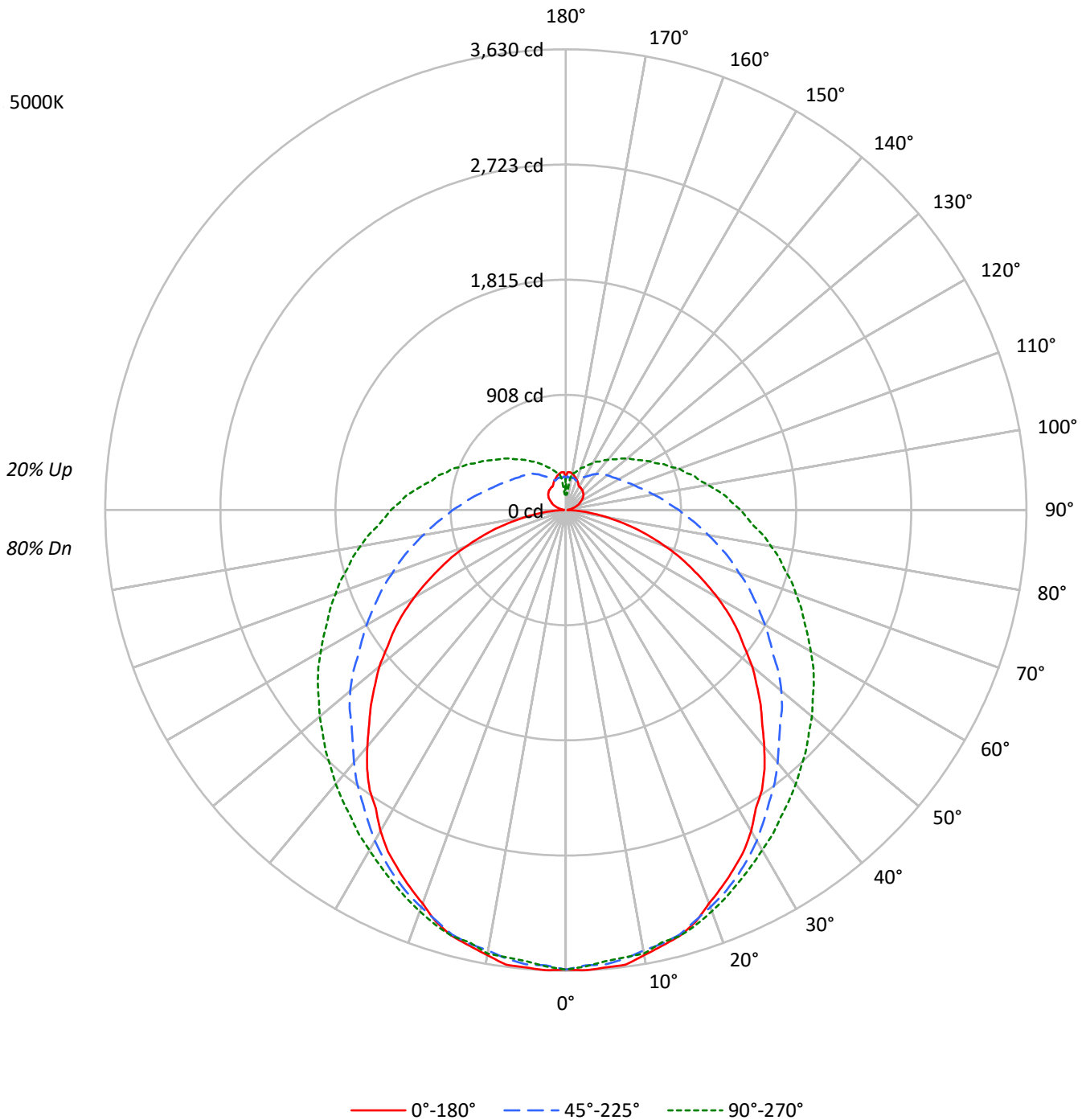
Test Method: LM-79-2019  
Report Number: P894648  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-14HL-RNDU-UNV-L850  
Description: 14000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15224.0 lumens  
Efficiency: N/A  
Efficacy: 146.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 7.98' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 103.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 5.03  
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	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	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	38	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°	12849	12849	12849
5°	12855	12359	12129
10°	12770	11849	11658
15°	12671	11474	11132
20°	12341	10954	10591
25°	12088	10494	10080
30°	11788	9990	9632
35°	11459	9441	9244
40°	11025	8971	8946
45°	10617	8523	8680
50°	10268	8251	8454
55°	9856	7820	8280
60°	9364	7553	8119
65°	8744	7318	7998
70°	8057	7132	7992
75°	7160	7077	8015
80°	5839	7069	8171
85°	4192	7266	8356

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10617 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	342.8	2.3
10°-20°	979.6	6.4
20°-30°	1471.0	9.7
30°-40°	1766.4	11.6
40°-50°	1868.4	12.3
50°-60°	1800.6	11.8
60°-70°	1597.5	10.5
70°-80°	1310.1	8.6
80°-90°	1014.0	6.7
90°-100°	791.0	5.2
100°-110°	629.8	4.1
110°-120°	503.3	3.3
120°-130°	397.0	2.6
130°-140°	302.9	2.0
140°-150°	213.0	1.4
150°-160°	136.2	0.9
160°-170°	76.3	0.5
170°-180°	24.2	0.2
0°-30°	2793.5	18.3
0°-40°	4559.9	30.0
0°-60°	8228.9	54.1
0°-90°	12150.4	79.8
90°-120°	1924.1	12.6
90°-150°	2837.0	18.6
90°-180°	3074.0	20.2
0°-180°	15224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3621	3621	3621	3621	3621	
5°	3617	3628	3593	3619	3569	344
15°	3474	3476	3464	3486	3476	976
25°	3125	3176	3188	3243	3233	1440
35°	2694	2734	2799	2915	2953	1679
45°	2171	2236	2388	2615	2678	1675
55°	1653	1736	1997	2268	2386	1475
65°	1100	1252	1630	1969	2072	1093
75°	573	824	1298	1649	1780	606
85°	134	502	1007	1369	1491	151
90°	14	399	891	1240	1377	14
95°	18	330	788	1132	1266	18
105°	61	267	630	926	1045	64
115°	118	261	523	756	853	114
125°	164	265	450	620	687	144
135°	192	257	403	525	565	149
145°	209	237	332	440	466	131
155°	231	243	273	344	385	106
165°	273	267	257	251	312	77
175°	300	290	257	211	134	28
180°	245	245	245	245	245	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3621.4	3621.4	3621.4	3621.4	3621.4
2.5°	3629.5	3641.7	3591.1	3621.4	3599.2
5°	3617.4	3627.5	3593.1	3619.4	3568.8
7.5°	3613.3	3609.3	3566.7	3601.2	3554.6
10°	3560.7	3574.9	3524.2	3570.8	3548.5
12.5°	3516.1	3544.5	3499.9	3536.4	3489.8
15°	3473.6	3475.6	3463.5	3485.7	3475.6
17.5°	3402.7	3420.9	3392.6	3443.2	3425.0
20°	3299.4	3356.1	3329.8	3376.4	3364.2
22.5°	3214.3	3242.7	3265.0	3317.6	3301.4
25°	3125.2	3175.8	3188.0	3242.7	3232.6
27.5°	3034.1	3056.3	3102.9	3161.7	3163.7
30°	2920.6	2944.9	3009.8	3076.6	3094.8
32.5°	2787.0	2863.9	2902.4	3003.7	3032.0
35°	2693.8	2734.3	2799.1	2914.6	2953.0
37.5°	2572.3	2618.9	2705.9	2841.7	2888.2
40°	2432.5	2501.4	2596.6	2764.7	2819.4
42.5°	2292.8	2373.8	2485.2	2681.6	2744.4
45°	2171.2	2236.1	2388.0	2614.8	2677.6
47.5°	2039.6	2118.6	2311.0	2527.7	2598.6
50°	1918.1	1999.1	2217.8	2446.7	2531.8
52.5°	1772.2	1865.4	2116.6	2353.5	2452.8
55°	1652.7	1735.8	1997.1	2268.5	2385.9
57.5°	1521.1	1614.3	1903.9	2205.7	2313.0
60°	1379.3	1496.8	1812.7	2126.7	2230.0
62.5°	1239.6	1379.3	1719.6	2049.7	2151.0
65°	1099.8	1251.7	1630.5	1968.7	2072.0
67.5°	974.2	1138.3	1549.4	1879.6	2007.2
70°	832.4	1028.9	1454.2	1796.5	1930.2
72.5°	698.8	929.7	1377.3	1729.7	1863.4
75°	573.2	824.3	1298.3	1648.7	1780.3
77.5°	447.6	725.1	1215.2	1575.8	1719.6
80°	328.1	644.1	1142.3	1504.9	1642.6
82.5°	226.8	573.2	1071.4	1446.1	1575.8
85°	133.7	502.3	1006.6	1369.2	1490.7
87.5°	60.8	445.6	939.8	1310.4	1429.9
90°	14.2	399.0	891.2	1239.6	1377.3
92.5°	14.2	362.5	832.4	1186.9	1312.5
95°	18.2	330.1	787.9	1132.2	1265.9
97.5°	24.3	305.8	747.4	1081.6	1199.0
100°	34.4	289.6	702.8	1022.8	1138.3
102.5°	46.6	277.5	662.3	970.2	1077.5
105°	60.8	267.4	629.9	925.6	1045.1
107.5°	74.9	263.3	597.5	883.1	984.3
110°	89.1	261.3	573.2	838.5	951.9



TEST NUMBER: P894648  
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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	103.3	259.3	546.9	798.0	889.2
115°	117.5	261.3	522.6	755.5	852.7
117.5°	125.6	261.3	500.3	719.0	800.0
120°	137.7	263.3	484.1	680.5	765.6
122.5°	149.9	263.3	467.9	652.2	727.1
125°	164.1	265.3	449.6	619.8	686.6
127.5°	172.2	265.3	439.5	597.5	658.3
130°	180.3	263.3	425.3	569.1	631.9
132.5°	188.4	259.3	417.2	542.8	601.5
135°	192.4	257.2	403.1	524.6	565.1
137.5°	198.5	251.2	388.9	498.3	542.8
140°	204.6	249.1	368.6	478.0	516.5
142.5°	204.6	243.0	354.4	459.8	494.2
145°	208.6	237.0	332.2	439.5	465.8
147.5°	212.7	234.9	316.0	419.3	451.7
150°	212.7	232.9	301.8	397.0	427.4
152.5°	216.7	234.9	287.6	376.7	405.1
155°	230.9	243.0	273.4	344.3	384.8
157.5°	243.0	251.2	259.3	320.0	362.5
160°	253.2	257.2	247.1	295.7	352.4
162.5°	261.3	263.3	249.1	273.4	330.1
165°	273.4	267.4	257.2	251.2	311.9
167.5°	283.6	271.4	261.3	245.1	297.7
170°	291.7	279.5	257.2	230.9	291.7
172.5°	297.7	281.5	259.3	216.7	245.1
175°	299.8	289.6	257.2	210.6	133.7
177.5°	297.7	291.7	265.3	208.6	119.5
180°	245.1	245.1	245.1	245.1	245.1



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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	15.94	17.25	16.58	17.92	18.68	19.43	20.74	20.07	21.40	22.17
	3H	17.39	18.59	18.04	19.26	20.06	22.30	23.50	22.95	24.17	24.97
	4H	17.86	19.00	18.53	19.69	20.50	23.78	24.92	24.45	25.60	26.42
	6H	18.14	19.20	18.82	19.90	20.72	25.39	26.46	26.08	27.15	27.98
	8H	18.20	19.22	18.89	19.93	20.76	26.25	27.27	26.95	27.99	28.82
	12H	18.21	19.19	18.92	19.90	20.76	27.20	28.18	27.90	28.88	29.74
4H	2H	17.09	18.23	17.77	18.92	19.73	19.76	20.90	20.43	21.59	22.40
	3H	18.79	19.77	19.48	20.49	21.32	22.86	23.84	23.55	24.56	25.39
	4H	19.39	20.29	20.09	21.02	21.88	24.53	25.43	25.23	26.15	27.01
	6H	19.80	20.60	20.52	21.35	22.21	26.34	27.14	27.06	27.88	28.75
	8H	19.91	20.66	20.63	21.41	22.29	27.31	28.06	28.03	28.81	29.69
	12H	19.97	20.65	20.71	21.42	22.31	28.38	29.07	29.13	29.84	30.72
8H	4H	20.44	21.19	21.16	21.94	22.82	24.71	25.46	25.43	26.20	27.08
	6H	21.09	21.73	21.84	22.51	23.40	26.69	27.33	27.44	28.12	29.00
	8H	21.31	21.89	22.08	22.68	23.57	27.81	28.39	28.57	29.17	30.07
	12H	21.46	21.98	22.23	22.76	23.71	29.07	29.59	29.84	30.37	31.32
12H	4H	20.78	21.47	21.53	22.24	23.12	24.70	25.39	25.45	26.15	27.04
	6H	21.59	22.17	22.35	22.95	23.85	26.72	27.30	27.48	28.09	28.98
	8H	21.94	22.46	22.70	23.23	24.19	27.90	28.42	28.67	29.20	30.15