

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: P894640

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

Issue Date: 11/11/2024

**Test Information**

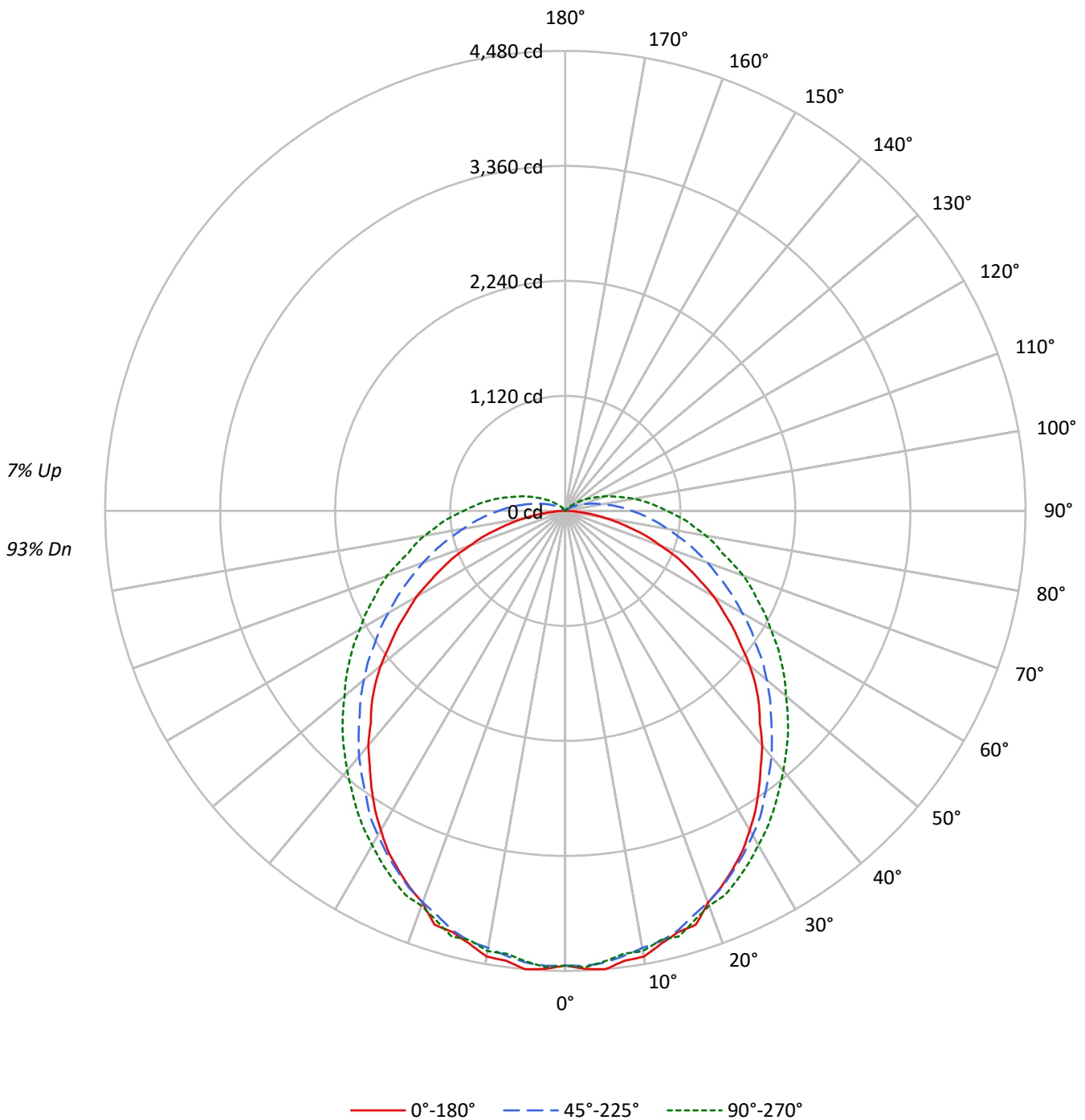
Test Method: LM-79-2019  
Report Number: P894640  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-14HL-RND-UNV-L850  
Description: 14000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14584.0 lumens  
Efficiency: N/A  
Efficacy: 140.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 103.6  
Input Voltage (V): 120  
Input Current (Ain): 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	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°	15710	15710	15710
5°	15957	15726	15683
10°	15879	15573	15682
15°	15594	15542	15750
20°	15334	15318	15448
25°	15082	15145	15518
30°	14713	14945	15402
35°	14248	14660	15344
40°	13819	14466	15291
45°	13385	14208	15387
50°	12946	14121	15484
55°	12354	14021	15887
60°	11872	14114	16385
65°	11087	14488	17379
70°	10190	15297	19142
75°	9247	16937	21686
80°	7946	20692	28432
85°	6432	33476	48649

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 88306 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	419.8	2.9
10°-20°	1195.0	8.2
20°-30°	1790.8	12.3
30°-40°	2128.1	14.6
40°-50°	2203.2	15.1
50°-60°	2041.7	14.0
60°-70°	1699.8	11.7
70°-80°	1261.6	8.7
80°-90°	834.4	5.7
90°-100°	507.8	3.5
100°-110°	284.6	2.0
110°-120°	140.2	1.0
120°-130°	57.1	0.4
130°-140°	16.5	0.1
140°-150°	2.4	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3405.6	23.4
0°-40°	5533.6	37.9
0°-60°	9778.4	67.0
0°-90°	13574.2	93.1
90°-120°	932.6	6.4
90°-150°	1008.5	6.9
90°-180°	1010.0	6.9
0°-180°	14584.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4428	4428	4428	4428	4428	
5°	4480	4432	4415	4438	4403	424
15°	4245	4229	4231	4237	4288	1202
25°	3852	3848	3869	3944	3964	1773
35°	3289	3314	3384	3492	3542	2058
45°	2668	2706	2832	3008	3066	2055
55°	1997	2082	2266	2493	2568	1786
65°	1321	1444	1726	1979	2070	1312
75°	674	879	1236	1501	1582	722
85°	158	444	822	1114	1195	177
90°	8	288	650	909	990	12
95°	2	178	504	751	834	2
105°	2	59	273	464	529	2
115°	2	14	128	255	306	2
125°	2	4	47	118	150	2
135°	4	2	12	38	53	3
145°	4	2	0	4	6	3
155°	4	4	0	0	0	2
165°	6	4	0	0	0	1
175°	6	4	0	0	0	1
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4427.6	4427.6	4427.6	4427.6	4427.6
2.5°	4464.0	4441.8	4433.7	4423.5	4447.8
5°	4480.2	4431.6	4415.4	4437.7	4403.3
7.5°	4417.5	4405.3	4370.9	4383.0	4350.6
10°	4407.3	4340.5	4322.3	4362.8	4352.6
12.5°	4316.2	4259.5	4291.9	4320.2	4281.7
15°	4245.3	4229.1	4231.1	4237.2	4287.8
17.5°	4227.1	4154.1	4133.9	4184.5	4180.5
20°	4061.0	4046.8	4056.9	4123.8	4091.4
22.5°	3963.8	3919.2	3973.9	4038.7	4052.9
25°	3852.4	3848.3	3868.6	3943.5	3963.8
27.5°	3734.9	3708.6	3763.2	3850.3	3866.5
30°	3591.1	3581.0	3647.8	3722.7	3759.2
32.5°	3449.3	3455.4	3532.3	3595.1	3657.9
35°	3289.3	3313.6	3384.5	3491.8	3542.5
37.5°	3127.3	3157.6	3252.8	3376.4	3418.9
40°	2983.5	2989.5	3123.2	3248.8	3301.4
42.5°	2803.2	2864.0	2977.4	3143.5	3184.0
45°	2667.5	2706.0	2831.5	3007.8	3066.5
47.5°	2513.6	2558.1	2701.9	2874.1	2936.9
50°	2345.4	2386.0	2558.1	2754.6	2805.2
52.5°	2159.1	2242.1	2422.4	2625.0	2691.8
55°	1997.1	2082.1	2266.5	2493.3	2568.2
57.5°	1822.9	1908.0	2138.8	2349.5	2446.7
60°	1673.0	1754.0	1989.0	2250.2	2309.0
62.5°	1486.7	1602.1	1857.3	2114.5	2197.6
65°	1320.6	1444.1	1725.7	1978.8	2070.0
67.5°	1168.7	1296.3	1590.0	1861.4	1960.6
70°	982.3	1150.4	1474.5	1741.9	1845.2
72.5°	844.6	1012.7	1351.0	1616.3	1709.5
75°	674.5	879.0	1235.5	1500.8	1581.9
77.5°	532.7	753.5	1116.0	1413.7	1494.8
80°	388.9	640.0	1012.7	1298.3	1391.5
82.5°	265.3	534.7	917.5	1191.0	1280.1
85°	158.0	443.6	822.3	1114.0	1195.0
87.5°	68.9	362.6	735.2	1002.6	1085.6
90°	8.1	287.6	650.2	909.4	990.4
92.5°	2.0	230.9	575.2	826.4	905.4
95°	2.0	178.2	504.3	751.4	834.5
97.5°	2.0	137.7	433.4	674.5	753.5
100°	2.0	105.3	374.7	593.4	678.5
102.5°	2.0	79.0	318.0	526.6	599.5
105°	2.0	58.7	273.4	463.8	528.6
107.5°	2.0	42.5	228.9	405.1	469.9
110°	2.0	30.4	192.4	350.4	415.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.0	22.3	156.0	301.8	356.5
115°	2.0	14.2	127.6	255.2	305.8
117.5°	2.0	10.1	101.3	214.7	263.3
120°	2.0	8.1	81.0	178.2	220.8
122.5°	2.0	6.1	62.8	145.8	186.3
125°	2.0	4.1	46.6	117.5	149.9
127.5°	2.0	4.1	34.4	93.2	121.5
130°	2.0	2.0	24.3	70.9	95.2
132.5°	2.0	2.0	16.2	52.7	70.9
135°	4.1	2.0	12.2	38.5	52.7
137.5°	4.1	2.0	8.1	26.3	36.5
140°	4.1	2.0	4.1	16.2	22.3
142.5°	4.1	2.0	2.0	8.1	12.2
145°	4.1	2.0	0.0	4.1	6.1
147.5°	4.1	2.0	0.0	2.0	2.0
150°	4.1	2.0	0.0	0.0	0.0
152.5°	4.1	2.0	0.0	0.0	0.0
155°	4.1	4.1	0.0	0.0	0.0
157.5°	4.1	4.1	0.0	0.0	0.0
160°	4.1	4.1	0.0	0.0	0.0
162.5°	4.1	4.1	0.0	0.0	0.0
165°	6.1	4.1	0.0	0.0	0.0
167.5°	6.1	4.1	0.0	0.0	0.0
170°	6.1	4.1	0.0	0.0	0.0
172.5°	6.1	4.1	0.0	0.0	0.0
175°	6.1	4.1	0.0	0.0	0.0
177.5°	6.1	4.1	0.0	0.0	0.0
180°	2.0	2.0	2.0	2.0	2.0



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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	19.80	21.34	20.27	21.79	22.27	21.37	22.91	21.84	23.36	23.85
	3H	21.56	22.97	22.04	23.43	23.95	23.96	25.36	24.44	25.83	26.35
	4H	22.22	23.55	22.72	24.03	24.57	25.22	26.55	25.72	27.03	27.57
	6H	22.70	23.94	23.21	24.43	24.99	26.60	27.84	27.11	28.33	28.89
	8H	22.85	24.03	23.37	24.55	25.11	27.33	28.52	27.85	29.04	29.59
	12H	22.94	24.09	23.48	24.60	25.19	28.17	29.31	28.70	29.82	30.41
4H	2H	20.75	22.09	21.26	22.57	23.10	21.94	23.27	22.45	23.76	24.29
	3H	22.79	23.93	23.31	24.46	25.02	24.81	25.95	25.33	26.47	27.03
	4H	23.61	24.65	24.14	25.18	25.78	26.29	27.33	26.82	27.87	28.46
	6H	24.26	25.18	24.81	25.74	26.35	27.91	28.83	28.46	29.39	30.00
	8H	24.48	25.35	25.04	25.91	26.53	28.77	29.63	29.33	30.19	30.81
	12H	24.65	25.44	25.23	26.03	26.65	29.76	30.55	30.34	31.13	31.76
8H	4H	24.46	25.32	25.02	25.88	26.50	26.66	27.53	27.22	28.09	28.71
	6H	25.38	26.12	25.97	26.72	27.34	28.54	29.28	29.13	29.88	30.50
	8H	25.76	26.43	26.37	27.04	27.68	29.60	30.26	30.20	30.88	31.52
	12H	26.08	26.68	26.69	27.28	27.98	30.86	31.45	31.46	32.05	32.76
12H	4H	24.72	25.51	25.30	26.10	26.72	26.70	27.49	27.29	28.08	28.71
	6H	25.80	26.47	26.41	27.08	27.72	28.65	29.32	29.25	29.93	30.57
	8H	26.34	26.94	26.95	27.54	28.24	29.82	30.42	30.43	31.02	31.72