

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: P894831

Luminaire Tested: 8TMB-18HL-RND-UNV-L840

Issue Date: 11/11/2024

**Test Information**

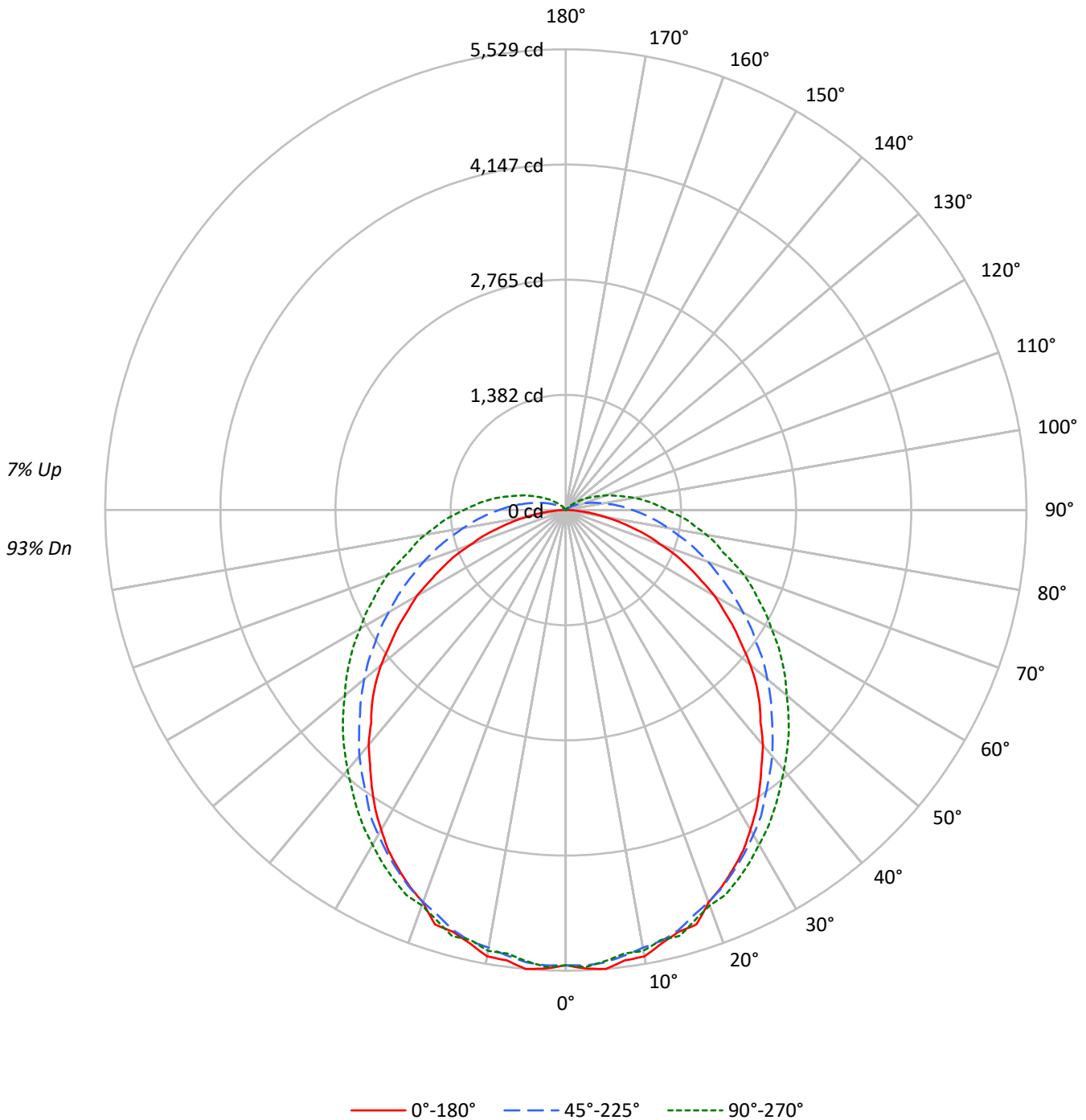
Test Method: LM-79-2019  
Report Number: P894831  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-18HL-RND-UNV-L840  
Description: 18000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17997.0 lumens  
Efficiency: N/A  
Efficacy: 133.5 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): 134.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 8.62  
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°	19386	19386	19386
5°	19692	19407	19353
10°	19595	19217	19352
15°	19244	19179	19437
20°	18922	18903	19063
25°	18611	18690	19150
30°	18156	18443	19006
35°	17582	18090	18935
40°	17052	17851	18870
45°	16517	17533	18988
50°	15976	17425	19108
55°	15245	17302	19605
60°	14650	17417	20219
65°	13681	17878	21446
70°	12575	18877	23622
75°	11410	20901	26760
80°	9806	25535	35085
85°	7939	41313	60035

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 108975 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	518.0	2.9
10°-20°	1474.7	8.2
20°-30°	2209.9	12.3
30°-40°	2626.1	14.6
40°-50°	2718.7	15.1
50°-60°	2519.5	14.0
60°-70°	2097.5	11.7
70°-80°	1556.8	8.7
80°-90°	1029.7	5.7
90°-100°	626.6	3.5
100°-110°	351.3	2.0
110°-120°	173.0	1.0
120°-130°	70.4	0.4
130°-140°	20.4	0.1
140°-150°	2.9	0.0
150°-160°	0.7	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	4202.5	23.4
0°-40°	6828.6	37.9
0°-60°	12066.8	67.0
0°-90°	16750.9	93.1
90°-120°	1150.8	6.4
90°-150°	1244.6	6.9
90°-180°	1246.0	6.9
0°-180°	17997.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5464	5464	5464	5464	5464	
5°	5529	5469	5449	5476	5434	523
15°	5239	5219	5221	5229	5291	1484
25°	4754	4749	4774	4866	4891	2188
35°	4059	4089	4176	4309	4372	2540
45°	3292	3339	3494	3712	3784	2536
55°	2464	2569	2797	3077	3169	2204
65°	1630	1782	2130	2442	2554	1619
75°	832	1085	1525	1852	1952	890
85°	195	547	1015	1375	1475	219
90°	10	355	802	1122	1222	15
95°	2	220	622	927	1030	2
105°	2	72	337	572	652	3
115°	2	18	158	315	377	2
125°	2	5	58	145	185	2
135°	5	2	15	48	65	3
145°	5	2	0	5	8	3
155°	5	5	0	0	0	2
165°	8	5	0	0	0	2
175°	8	5	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°	5463.7	5463.7	5463.7	5463.7	5463.7
2.5°	5508.7	5481.2	5471.2	5458.7	5488.7
5°	5528.7	5468.7	5448.7	5476.2	5433.7
7.5°	5451.2	5436.2	5393.8	5408.8	5368.8
10°	5438.7	5356.3	5333.8	5383.8	5371.3
12.5°	5326.3	5256.3	5296.3	5331.3	5283.8
15°	5238.8	5218.8	5221.3	5228.8	5291.3
17.5°	5216.3	5126.3	5101.3	5163.8	5158.8
20°	5011.3	4993.8	5006.3	5088.8	5048.8
22.5°	4891.4	4836.4	4903.9	4983.8	5001.3
25°	4753.9	4748.9	4773.9	4866.4	4891.4
27.5°	4608.9	4576.4	4643.9	4751.4	4771.4
30°	4431.5	4419.0	4501.5	4593.9	4638.9
32.5°	4256.5	4264.0	4359.0	4436.5	4514.0
35°	4059.1	4089.1	4176.5	4309.0	4371.5
37.5°	3859.1	3896.6	4014.1	4166.5	4219.0
40°	3681.6	3689.1	3854.1	4009.1	4074.1
42.5°	3459.2	3534.2	3674.2	3879.1	3929.1
45°	3291.7	3339.2	3494.2	3711.6	3784.1
47.5°	3101.8	3156.8	3334.2	3546.7	3624.2
50°	2894.3	2944.3	3156.8	3399.2	3461.7
52.5°	2664.4	2766.9	2989.3	3239.3	3321.7
55°	2464.4	2569.4	2796.9	3076.8	3169.3
57.5°	2249.5	2354.5	2639.4	2899.3	3019.3
60°	2064.5	2164.5	2454.4	2776.9	2849.3
62.5°	1834.6	1977.0	2292.0	2609.4	2711.9
65°	1629.6	1782.1	2129.5	2441.9	2554.4
67.5°	1442.2	1599.6	1962.0	2297.0	2419.4
70°	1212.2	1419.7	1819.6	2149.5	2277.0
72.5°	1042.3	1249.7	1667.1	1994.5	2109.5
75°	832.3	1084.7	1524.6	1852.1	1952.0
77.5°	657.3	929.8	1377.2	1744.6	1844.6
80°	479.9	789.8	1249.7	1602.1	1717.1
82.5°	327.4	659.8	1132.2	1469.7	1579.6
85°	195.0	547.4	1014.8	1374.7	1474.7
87.5°	85.0	447.4	907.3	1237.2	1339.7
90°	10.0	354.9	802.3	1122.2	1222.2
92.5°	2.5	284.9	709.8	1019.8	1117.2
95°	2.5	219.9	622.4	927.3	1029.8
97.5°	2.5	170.0	534.9	832.3	929.8
100°	2.5	130.0	462.4	732.3	837.3
102.5°	2.5	97.5	392.4	649.8	739.8
105°	2.5	72.5	337.4	572.4	652.3
107.5°	2.5	52.5	282.4	499.9	579.9
110°	2.5	37.5	237.4	432.4	512.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	27.5	192.5	372.4	439.9
115°	2.5	17.5	157.5	314.9	377.4
117.5°	2.5	12.5	125.0	264.9	324.9
120°	2.5	10.0	100.0	219.9	272.4
122.5°	2.5	7.5	77.5	180.0	229.9
125°	2.5	5.0	57.5	145.0	185.0
127.5°	2.5	5.0	42.5	115.0	150.0
130°	2.5	2.5	30.0	87.5	117.5
132.5°	2.5	2.5	20.0	65.0	87.5
135°	5.0	2.5	15.0	47.5	65.0
137.5°	5.0	2.5	10.0	32.5	45.0
140°	5.0	2.5	5.0	20.0	27.5
142.5°	5.0	2.5	2.5	10.0	15.0
145°	5.0	2.5	0.0	5.0	7.5
147.5°	5.0	2.5	0.0	2.5	2.5
150°	5.0	2.5	0.0	0.0	0.0
152.5°	5.0	2.5	0.0	0.0	0.0
155°	5.0	5.0	0.0	0.0	0.0
157.5°	5.0	5.0	0.0	0.0	0.0
160°	5.0	5.0	0.0	0.0	0.0
162.5°	5.0	5.0	0.0	0.0	0.0
165°	7.5	5.0	0.0	0.0	0.0
167.5°	7.5	5.0	0.0	0.0	0.0
170°	7.5	5.0	0.0	0.0	0.0
172.5°	7.5	5.0	0.0	0.0	0.0
175°	7.5	5.0	0.0	0.0	0.0
177.5°	7.5	5.0	0.0	0.0	0.0
180°	2.5	2.5	2.5	2.5	2.5



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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	20.53	22.07	21.00	22.52	23.00	22.10	23.64	22.57	24.09	24.58
	3H	22.29	23.70	22.77	24.16	24.68	24.69	26.09	25.17	26.56	27.08
	4H	22.95	24.28	23.45	24.76	25.30	25.95	27.28	26.45	27.76	28.30
	6H	23.43	24.67	23.94	25.16	25.72	27.33	28.57	27.84	29.06	29.62
	8H	23.58	24.77	24.10	25.28	25.84	28.06	29.25	28.59	29.77	30.33
	12H	23.68	24.82	24.21	25.33	25.92	28.90	30.04	29.43	30.55	31.14
4H	2H	21.48	22.82	21.99	23.30	23.83	22.67	24.01	23.18	24.49	25.02
	3H	23.53	24.66	24.04	25.19	25.75	25.54	26.68	26.06	27.20	27.76
	4H	24.34	25.38	24.87	25.91	26.51	27.02	28.06	27.56	28.60	29.19
	6H	24.99	25.91	25.54	26.47	27.08	28.64	29.56	29.19	30.12	30.73
	8H	25.21	26.08	25.77	26.64	27.26	29.50	30.36	30.06	30.92	31.54
	12H	25.38	26.17	25.97	26.76	27.39	30.49	31.28	31.07	31.87	32.49
8H	4H	25.19	26.05	25.75	26.61	27.23	27.39	28.26	27.95	28.82	29.44
	6H	26.11	26.85	26.70	27.45	28.07	29.27	30.01	29.86	30.61	31.23
	8H	26.49	27.16	27.10	27.77	28.41	30.33	31.00	30.93	31.61	32.25
	12H	26.81	27.41	27.42	28.01	28.71	31.59	32.18	32.19	32.78	33.49
12H	4H	25.45	26.24	26.03	26.83	27.45	27.43	28.22	28.02	28.81	29.44
	6H	26.53	27.20	27.14	27.81	28.45	29.38	30.05	29.98	30.66	31.30
	8H	27.07	27.67	27.68	28.27	28.97	30.55	31.15	31.16	31.75	32.46