

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: P894926

Luminaire Tested: 8TMB-20HL-RND-UNV-L835

Issue Date: 11/11/2024

**Test Information**

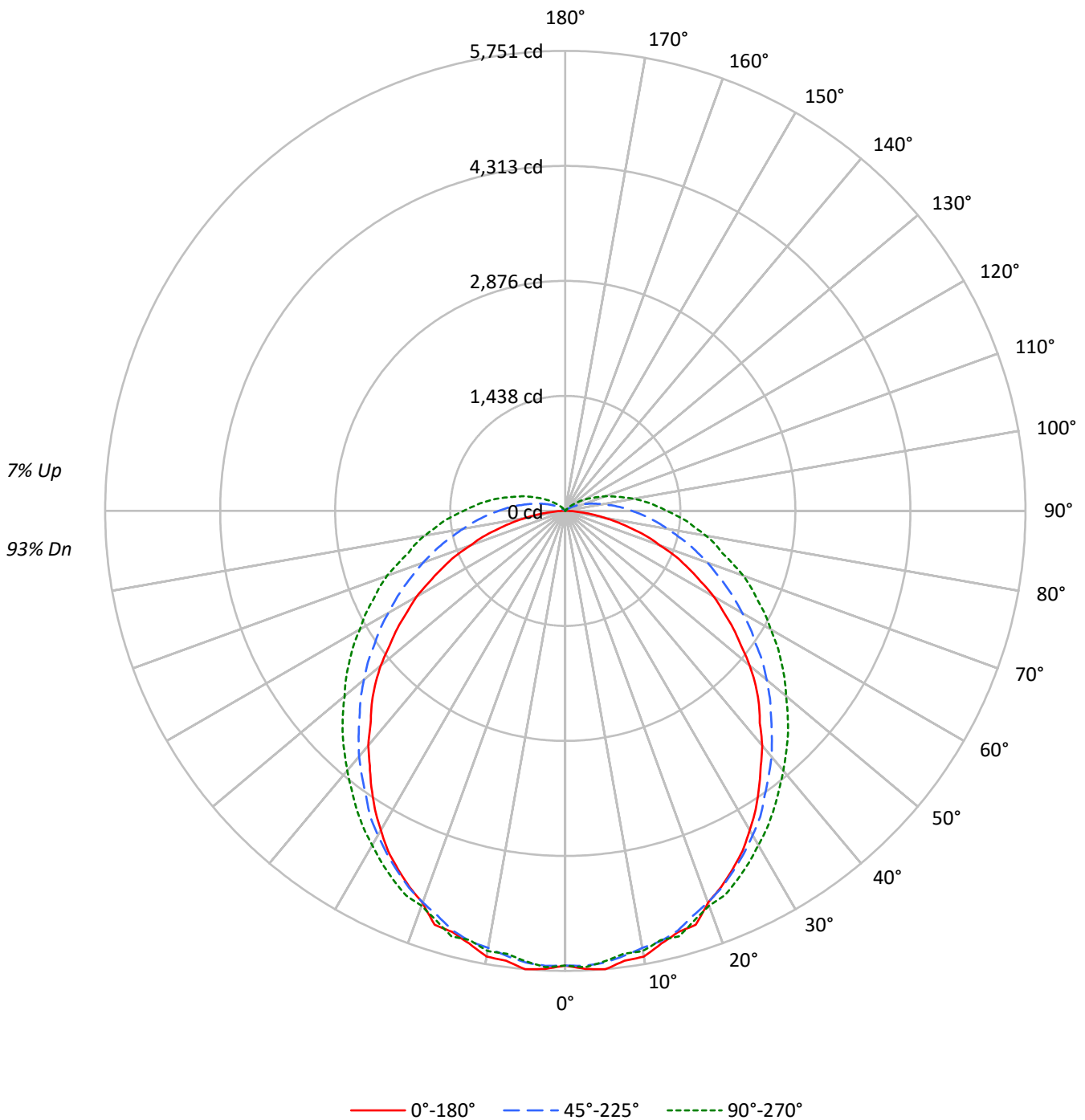
Test Method: LM-79-2019  
Report Number: P894926  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-20HL-RND-UNV-L835  
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18721.9 lumens  
Efficiency: N/A  
Efficacy: 129.1 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): 145  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 7.79  
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				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°	20167	20167	20167
5°	20485	20188	20133
10°	20384	19991	20131
15°	20019	19952	20219
20°	19684	19665	19832
25°	19361	19442	19921
30°	18887	19186	19771
35°	18290	18819	19698
40°	17740	18571	19630
45°	17183	18240	19753
50°	16620	18127	19878
55°	15859	17998	20395
60°	15241	18119	21034
65°	14233	18599	22310
70°	13083	19637	24573
75°	11869	21744	27839
80°	10200	26565	36499
85°	8256	42974	62454

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 113368 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	538.9	2.9
10°-20°	1534.0	8.2
20°-30°	2298.9	12.3
30°-40°	2731.9	14.6
40°-50°	2828.3	15.1
50°-60°	2620.9	14.0
60°-70°	2182.1	11.7
70°-80°	1619.5	8.7
80°-90°	1071.2	5.7
90°-100°	651.8	3.5
100°-110°	365.4	2.0
110°-120°	179.9	1.0
120°-130°	73.2	0.4
130°-140°	21.2	0.1
140°-150°	3.0	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	4371.8	23.4
0°-40°	7103.7	37.9
0°-60°	12552.9	67.0
0°-90°	17425.7	93.1
90°-120°	1197.2	6.4
90°-150°	1294.7	6.9
90°-180°	1296.0	6.9
0°-180°	18721.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5684	5684	5684	5684	5684	
5°	5751	5689	5668	5697	5653	544
15°	5450	5429	5432	5439	5504	1543
25°	4945	4940	4966	5062	5088	2276
35°	4223	4254	4345	4483	4548	2642
45°	3424	3474	3635	3861	3937	2638
55°	2564	2673	2910	3201	3297	2293
65°	1695	1854	2215	2540	2657	1684
75°	866	1128	1586	1927	2031	926
85°	203	569	1056	1430	1534	228
90°	10	369	835	1167	1272	15
95°	3	229	647	965	1071	2
105°	3	75	351	595	679	3
115°	3	18	164	328	393	3
125°	3	5	60	151	192	2
135°	5	3	16	49	68	3
145°	5	3	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°	3	3	3	3	3	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5683.8	5683.8	5683.8	5683.8	5683.8
2.5°	5730.6	5702.0	5691.6	5678.6	5709.8
5°	5751.4	5689.0	5668.2	5696.8	5652.6
7.5°	5670.8	5655.2	5611.0	5626.6	5585.0
10°	5657.8	5572.0	5548.6	5600.6	5587.6
12.5°	5540.8	5468.0	5509.6	5546.0	5496.6
15°	5449.8	5429.0	5431.6	5439.4	5504.4
17.5°	5426.4	5332.8	5306.8	5371.8	5366.6
20°	5213.2	5195.0	5208.0	5293.8	5252.2
22.5°	5088.4	5031.2	5101.4	5184.6	5202.8
25°	4945.4	4940.2	4966.2	5062.4	5088.4
27.5°	4794.6	4760.8	4831.0	4942.8	4963.6
30°	4610.0	4597.0	4682.8	4779.0	4825.8
32.5°	4428.0	4435.8	4534.6	4615.2	4695.8
35°	4222.6	4253.8	4344.8	4482.6	4547.6
37.5°	4014.6	4053.6	4175.8	4334.4	4389.0
40°	3830.0	3837.8	4009.4	4170.6	4238.2
42.5°	3598.6	3676.6	3822.2	4035.4	4087.4
45°	3424.3	3473.7	3635.0	3861.2	3936.6
47.5°	3226.7	3283.9	3468.5	3689.6	3770.2
50°	3010.9	3062.9	3283.9	3536.2	3601.2
52.5°	2771.7	2878.3	3109.7	3369.7	3455.5
55°	2563.7	2672.9	2909.5	3200.7	3296.9
57.5°	2340.1	2449.3	2745.7	3016.1	3140.9
60°	2147.7	2251.7	2553.3	2888.7	2964.1
62.5°	1908.5	2056.7	2384.3	2714.5	2821.1
65°	1695.3	1853.9	2215.3	2540.3	2657.3
67.5°	1500.3	1664.1	2041.1	2389.5	2516.9
70°	1261.1	1476.9	1892.9	2236.1	2368.7
72.5°	1084.2	1300.1	1734.3	2074.9	2194.5
75°	865.8	1128.4	1586.1	1926.7	2030.7
77.5°	683.8	967.2	1432.7	1814.9	1918.9
80°	499.2	821.6	1300.1	1666.7	1786.3
82.5°	340.6	686.4	1177.9	1528.9	1643.3
85°	202.8	569.4	1055.6	1430.1	1534.1
87.5°	88.4	465.4	943.8	1287.1	1393.7
90°	10.4	369.2	834.6	1167.4	1271.5
92.5°	2.6	296.4	738.4	1060.8	1162.2
95°	2.6	228.8	647.4	964.6	1071.2
97.5°	2.6	176.8	556.4	865.8	967.2
100°	2.6	135.2	481.0	761.8	871.0
102.5°	2.6	101.4	408.2	676.0	769.6
105°	2.6	75.4	351.0	595.4	678.6
107.5°	2.6	54.6	293.8	520.0	603.2
110°	2.6	39.0	247.0	449.8	533.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	28.6	200.2	387.4	457.6
115°	2.6	18.2	163.8	327.6	392.6
117.5°	2.6	13.0	130.0	275.6	338.0
120°	2.6	10.4	104.0	228.8	283.4
122.5°	2.6	7.8	80.6	187.2	239.2
125°	2.6	5.2	59.8	150.8	192.4
127.5°	2.6	5.2	44.2	119.6	156.0
130°	2.6	2.6	31.2	91.0	122.2
132.5°	2.6	2.6	20.8	67.6	91.0
135°	5.2	2.6	15.6	49.4	67.6
137.5°	5.2	2.6	10.4	33.8	46.8
140°	5.2	2.6	5.2	20.8	28.6
142.5°	5.2	2.6	2.6	10.4	15.6
145°	5.2	2.6	0.0	5.2	7.8
147.5°	5.2	2.6	0.0	2.6	2.6
150°	5.2	2.6	0.0	0.0	0.0
152.5°	5.2	2.6	0.0	0.0	0.0
155°	5.2	5.2	0.0	0.0	0.0
157.5°	5.2	5.2	0.0	0.0	0.0
160°	5.2	5.2	0.0	0.0	0.0
162.5°	5.2	5.2	0.0	0.0	0.0
165°	7.8	5.2	0.0	0.0	0.0
167.5°	7.8	5.2	0.0	0.0	0.0
170°	7.8	5.2	0.0	0.0	0.0
172.5°	7.8	5.2	0.0	0.0	0.0
175°	7.8	5.2	0.0	0.0	0.0
177.5°	7.8	5.2	0.0	0.0	0.0
180°	2.6	2.6	2.6	2.6	2.6



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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	20.67	22.20	21.13	22.66	23.14	22.24	23.78	22.71	24.23	24.72
	3H	22.43	23.83	22.91	24.30	24.82	24.83	26.23	25.31	26.69	27.22
	4H	23.09	24.42	23.59	24.90	25.44	26.08	27.41	26.59	27.90	28.43
	6H	23.56	24.81	24.08	25.30	25.85	27.47	28.71	27.98	29.20	29.75
	8H	23.71	24.90	24.24	25.42	25.98	28.20	29.38	28.72	29.90	30.46
	12H	23.81	24.95	24.35	25.47	26.06	29.04	30.18	29.57	30.69	31.28
4H	2H	21.62	22.95	22.12	23.43	23.97	22.81	24.14	23.31	24.62	25.16
	3H	23.66	24.80	24.18	25.32	25.88	25.68	26.82	26.19	27.34	27.90
	4H	24.48	25.52	25.01	26.05	26.64	27.16	28.20	27.69	28.73	29.33
	6H	25.13	26.05	25.68	26.61	27.21	28.78	29.70	29.33	30.26	30.87
	8H	25.35	26.22	25.91	26.78	27.40	29.63	30.50	30.19	31.06	31.68
	12H	25.52	26.31	26.10	26.90	27.52	30.63	31.41	31.21	32.00	32.63
8H	4H	25.32	26.19	25.88	26.75	27.37	27.53	28.40	28.09	28.96	29.58
	6H	26.25	26.98	26.84	27.59	28.21	29.41	30.14	30.00	30.75	31.37
	8H	26.63	27.29	27.23	27.91	28.55	30.47	31.13	31.07	31.75	32.38
	12H	26.95	27.55	27.56	28.15	28.85	31.72	32.32	32.33	32.92	33.62
12H	4H	25.59	26.37	26.17	26.96	27.59	27.57	28.36	28.15	28.95	29.57
	6H	26.67	27.34	27.28	27.95	28.59	29.52	30.18	30.12	30.80	31.43
	8H	27.21	27.81	27.82	28.41	29.11	30.69	31.29	31.30	31.89	32.59