

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: P894929

Luminaire Tested: 8TMB-20HL-RND-UNV-L930

Issue Date: 11/11/2024

**Test Information**

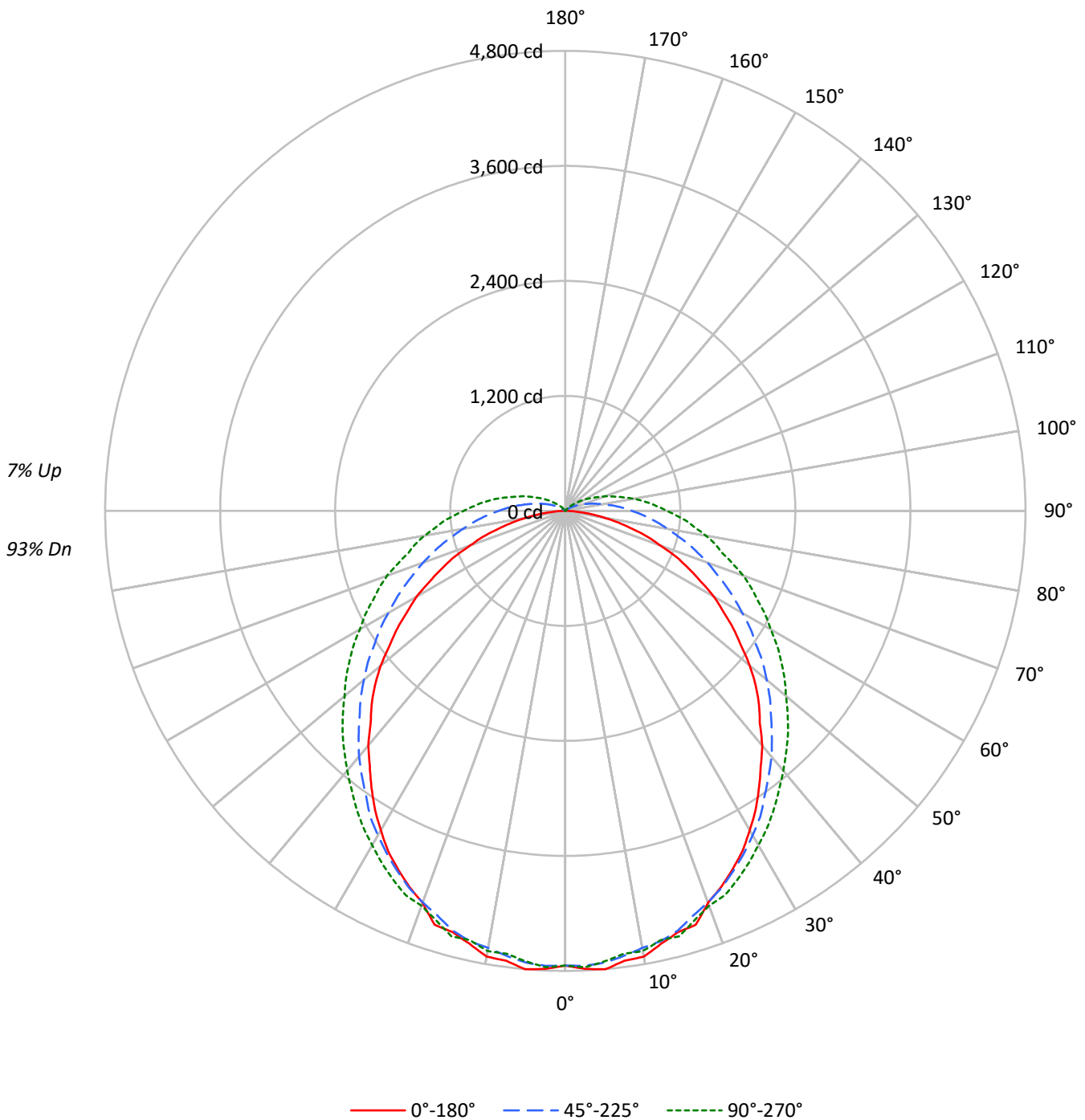
Test Method: LM-79-2019  
Report Number: P894929  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-20HL-RND-UNV-L930  
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15626.1 lumens  
Efficiency: N/A  
Efficacy: 107.8 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): 145  
Input Voltage (V): 120  
Input Current (Ain): 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				
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°	16832	16832	16832
5°	17097	16850	16804
10°	17013	16685	16802
15°	16708	16653	16876
20°	16429	16413	16552
25°	16159	16227	16627
30°	15764	16013	16502
35°	15265	15707	16441
40°	14806	15500	16384
45°	14341	15224	16487
50°	13872	15130	16591
55°	13237	15022	17022
60°	12720	15123	17556
65°	11879	15523	18621
70°	10919	16390	20510
75°	9907	18148	23235
80°	8514	22172	30463
85°	6892	35870	52125

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 94618 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	449.8	2.9
10°-20°	1280.4	8.2
20°-30°	1918.7	12.3
30°-40°	2280.1	14.6
40°-50°	2360.6	15.1
50°-60°	2187.5	14.0
60°-70°	1821.2	11.7
70°-80°	1351.7	8.7
80°-90°	894.1	5.7
90°-100°	544.1	3.5
100°-110°	305.0	2.0
110°-120°	150.2	1.0
120°-130°	61.1	0.4
130°-140°	17.7	0.1
140°-150°	2.5	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3648.9	23.4
0°-40°	5929.0	37.9
0°-60°	10477.1	67.0
0°-90°	14544.1	93.1
90°-120°	999.3	6.4
90°-150°	1080.7	6.9
90°-180°	1082.0	6.9
0°-180°	15626.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4744	4744	4744	4744	4744	
5°	4800	4748	4731	4755	4718	454
15°	4549	4531	4533	4540	4594	1288
25°	4128	4123	4145	4225	4247	1900
35°	3524	3550	3626	3741	3796	2205
45°	2858	2899	3034	3223	3286	2202
55°	2140	2231	2428	2671	2752	1914
65°	1415	1547	1849	2120	2218	1406
75°	723	942	1324	1608	1695	773
85°	169	475	881	1194	1280	190
90°	9	308	697	974	1061	13
95°	2	191	540	805	894	2
105°	2	63	293	497	566	2
115°	2	15	137	273	328	2
125°	2	4	50	126	161	2
135°	4	2	13	41	56	3
145°	4	2	0	4	6	3
155°	4	4	0	0	0	2
165°	6	4	0	0	0	2
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°	4743.9	4743.9	4743.9	4743.9	4743.9
2.5°	4783.0	4759.1	4750.4	4739.6	4765.6
5°	4800.3	4748.3	4730.9	4754.8	4717.9
7.5°	4733.1	4720.1	4683.2	4696.2	4661.5
10°	4722.2	4650.6	4631.1	4674.5	4663.6
12.5°	4624.6	4563.8	4598.5	4628.9	4587.7
15°	4548.6	4531.2	4533.4	4539.9	4594.2
17.5°	4529.1	4451.0	4429.3	4483.5	4479.2
20°	4351.1	4335.9	4346.8	4418.4	4383.7
22.5°	4247.0	4199.2	4257.8	4327.3	4342.4
25°	4127.6	4123.3	4145.0	4225.3	4247.0
27.5°	4001.7	3973.5	4032.1	4125.4	4142.8
30°	3847.7	3836.8	3908.4	3988.7	4027.8
32.5°	3695.7	3702.3	3784.7	3852.0	3919.3
35°	3524.3	3550.3	3626.3	3741.3	3795.6
37.5°	3350.7	3383.2	3485.2	3617.6	3663.2
40°	3196.6	3203.1	3346.4	3480.9	3537.3
42.5°	3003.5	3068.6	3190.1	3368.1	3411.5
45°	2858.1	2899.3	3033.9	3222.7	3285.6
47.5°	2693.1	2740.9	2895.0	3079.4	3146.7
50°	2513.0	2556.4	2740.9	2951.4	3005.6
52.5°	2313.4	2402.3	2595.5	2812.5	2884.1
55°	2139.8	2230.9	2428.4	2671.4	2751.7
57.5°	1953.1	2044.3	2291.7	2517.4	2621.5
60°	1792.5	1879.3	2131.1	2411.0	2474.0
62.5°	1592.9	1716.6	1990.0	2265.6	2354.6
65°	1414.9	1547.3	1849.0	2120.2	2217.9
67.5°	1252.2	1388.9	1703.6	1994.4	2100.7
70°	1052.5	1232.6	1579.9	1866.3	1977.0
72.5°	904.9	1085.1	1447.5	1731.8	1831.6
75°	722.7	941.8	1323.8	1608.1	1694.9
77.5°	570.7	807.3	1195.7	1514.8	1601.6
80°	416.7	685.8	1085.1	1391.1	1490.9
82.5°	284.3	572.9	983.1	1276.0	1371.5
85°	169.3	475.3	881.1	1193.6	1280.4
87.5°	73.8	388.5	787.8	1074.2	1163.2
90°	8.7	308.2	696.6	974.4	1061.2
92.5°	2.2	247.4	616.3	885.4	970.1
95°	2.2	191.0	540.4	805.1	894.1
97.5°	2.2	147.6	464.4	722.7	807.3
100°	2.2	112.8	401.5	635.9	727.0
102.5°	2.2	84.6	340.7	564.2	642.4
105°	2.2	62.9	293.0	497.0	566.4
107.5°	2.2	45.6	245.2	434.0	503.5
110°	2.2	32.6	206.2	375.4	444.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.2	23.9	167.1	323.4	381.9
115°	2.2	15.2	136.7	273.4	327.7
117.5°	2.2	10.9	108.5	230.0	282.1
120°	2.2	8.7	86.8	191.0	236.5
122.5°	2.2	6.5	67.3	156.2	199.7
125°	2.2	4.3	49.9	125.9	160.6
127.5°	2.2	4.3	36.9	99.8	130.2
130°	2.2	2.2	26.0	76.0	102.0
132.5°	2.2	2.2	17.4	56.4	76.0
135°	4.3	2.2	13.0	41.2	56.4
137.5°	4.3	2.2	8.7	28.2	39.1
140°	4.3	2.2	4.3	17.4	23.9
142.5°	4.3	2.2	2.2	8.7	13.0
145°	4.3	2.2	0.0	4.3	6.5
147.5°	4.3	2.2	0.0	2.2	2.2
150°	4.3	2.2	0.0	0.0	0.0
152.5°	4.3	2.2	0.0	0.0	0.0
155°	4.3	4.3	0.0	0.0	0.0
157.5°	4.3	4.3	0.0	0.0	0.0
160°	4.3	4.3	0.0	0.0	0.0
162.5°	4.3	4.3	0.0	0.0	0.0
165°	6.5	4.3	0.0	0.0	0.0
167.5°	6.5	4.3	0.0	0.0	0.0
170°	6.5	4.3	0.0	0.0	0.0
172.5°	6.5	4.3	0.0	0.0	0.0
175°	6.5	4.3	0.0	0.0	0.0
177.5°	6.5	4.3	0.0	0.0	0.0
180°	2.2	2.2	2.2	2.2	2.2



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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	20.04	21.58	20.51	22.03	22.51	21.61	23.15	22.08	23.60	24.09
	3H	21.80	23.21	22.28	23.67	24.19	24.20	25.60	24.68	26.07	26.59
	4H	22.46	23.79	22.96	24.27	24.81	25.46	26.79	25.96	27.27	27.81
	6H	22.94	24.18	23.45	24.67	25.23	26.84	28.08	27.35	28.57	29.13
	8H	23.09	24.27	23.61	24.79	25.35	27.57	28.76	28.09	29.28	29.83
	12H	23.18	24.32	23.72	24.84	25.43	28.41	29.55	28.94	30.06	30.65
4H	2H	20.99	22.32	21.50	22.81	23.34	22.18	23.51	22.69	24.00	24.53
	3H	23.03	24.17	23.55	24.70	25.26	25.05	26.19	25.57	26.71	27.27
	4H	23.85	24.89	24.38	25.42	26.02	26.53	27.57	27.06	28.11	28.70
	6H	24.50	25.42	25.05	25.98	26.59	28.15	29.07	28.70	29.63	30.24
	8H	24.72	25.59	25.28	26.15	26.77	29.01	29.87	29.57	30.43	31.05
	12H	24.89	25.68	25.47	26.27	26.89	30.00	30.78	30.58	31.37	32.00
8H	4H	24.70	25.56	25.25	26.12	26.74	26.90	27.77	27.46	28.33	28.95
	6H	25.62	26.36	26.21	26.96	27.58	28.78	29.51	29.37	30.12	30.74
	8H	26.00	26.67	26.61	27.28	27.92	29.84	30.50	30.44	31.12	31.76
	12H	26.32	26.92	26.93	27.52	28.22	31.10	31.69	31.70	32.29	33.00
12H	4H	24.96	25.75	25.54	26.34	26.96	26.94	27.73	27.53	28.32	28.95
	6H	26.04	26.71	26.65	27.32	27.96	28.89	29.56	29.49	30.17	30.81
	8H	26.58	27.18	27.19	27.78	28.48	30.06	30.66	30.67	31.26	31.96