

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: P894932

Luminaire Tested: 8TMB-20HL-RND-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894932
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-L950
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

Summary

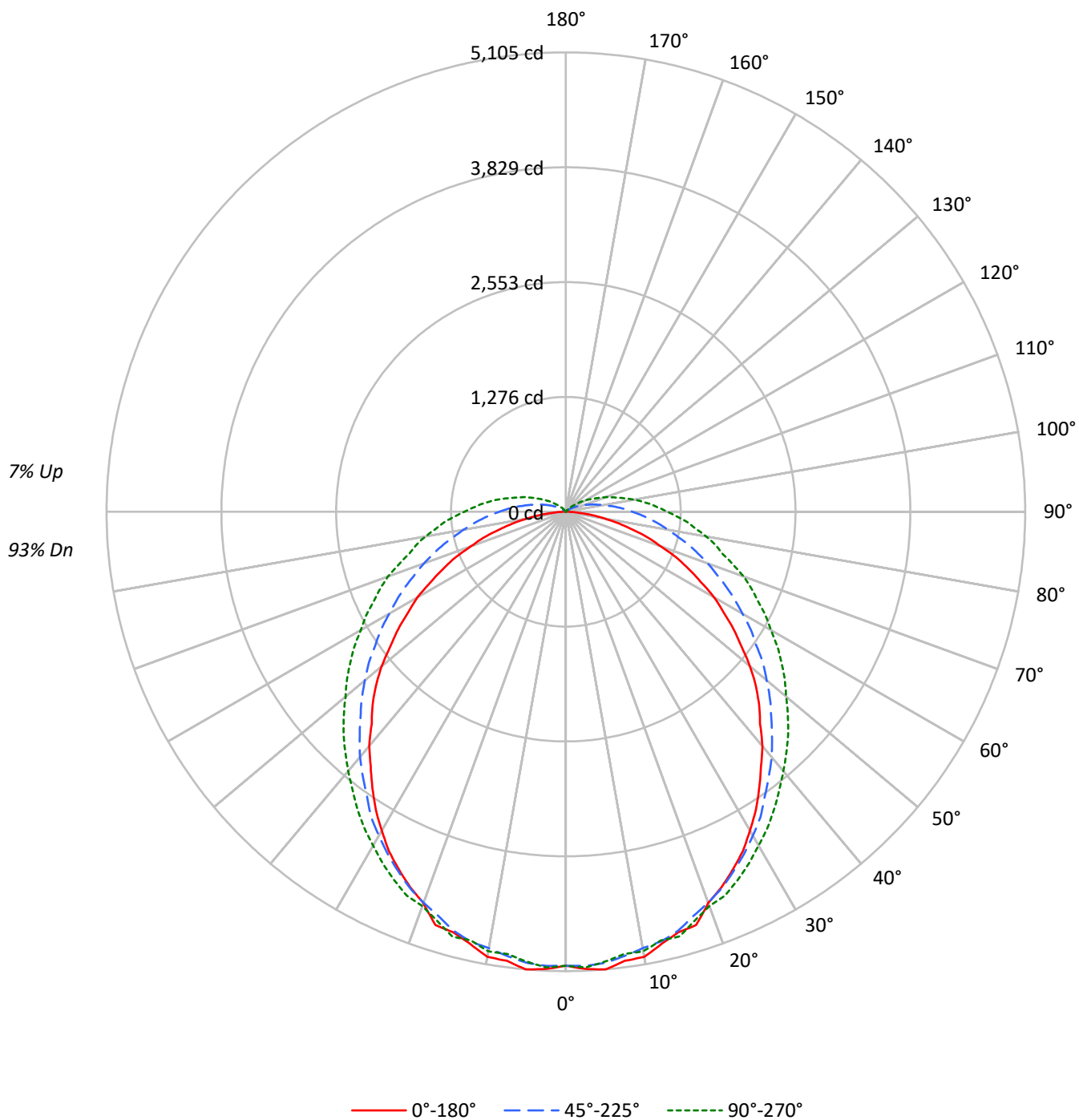
Lumens per Lamp: N/A
Luminaire Lumens: 16617.0 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	117	117	117	117	114	114	114	114	107	107	107		101	101	101		96
1	105	100	95	90	102	97	92	88	91	87	84		86	83	80		81
2	95	86	79	72	92	84	77	71	79	73	68		74	70	66		70
3	86	75	66	60	83	73	65	59	69	62	57		65	60	55		62
4	79	66	57	50	76	65	56	49	61	54	48		58	52	47		55
5	73	59	50	43	70	58	49	42	55	47	41		52	45	40		49
6	67	53	44	37	65	52	43	37	49	42	36		47	40	35		45
7	62	48	39	33	60	47	39	33	45	37	32		43	36	31		41
8	58	44	35	29	56	43	35	29	41	34	28		39	33	28		38
9	54	40	32	26	52	39	32	26	38	31	26		36	30	25		35
10	51	37	29	24	49	36	29	24	35	28	23		34	27	23		32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17900	17900	17900
5°	18182	17918	17869
10°	18093	17743	17868
15°	17768	17709	17946
20°	17471	17454	17602
25°	17184	17256	17681
30°	16764	17029	17548
35°	16233	16703	17483
40°	15745	16483	17423
45°	15251	16189	17532
50°	14751	16089	17643
55°	14076	15975	18102
60°	13527	16082	18670
65°	12633	16507	19801
70°	11612	17429	21810
75°	10535	19298	24709
80°	9054	23578	32394
85°	7328	38146	55431

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 100621 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	478.3	2.9
10°-20°	1361.6	8.2
20°-30°	2040.4	12.3
30°-40°	2424.7	14.6
40°-50°	2510.3	15.1
50°-60°	2326.3	14.0
60°-70°	1936.7	11.7
70°-80°	1437.4	8.7
80°-90°	950.8	5.7
90°-100°	578.6	3.5
100°-110°	324.3	2.0
110°-120°	159.7	1.0
120°-130°	65.0	0.4
130°-140°	18.8	0.1
140°-150°	2.7	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3880.3	23.4
0°-40°	6305.0	37.9
0°-60°	11141.6	67.0
0°-90°	15466.4	93.1
90°-120°	1062.6	6.4
90°-150°	1149.1	6.9
90°-180°	1151.0	6.9
0°-180°	16617.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5045	5045	5045	5045	5045	
5°	5105	5049	5031	5056	5017	483
15°	4837	4819	4821	4828	4886	1370
25°	4389	4385	4408	4493	4516	2020
35°	3748	3776	3856	3979	4036	2345
45°	3039	3083	3226	3427	3494	2342
55°	2276	2372	2582	2841	2926	2035
65°	1505	1645	1966	2255	2358	1495
75°	768	1002	1408	1710	1802	822
85°	180	505	937	1269	1362	202
90°	9	328	741	1036	1128	14
95°	2	203	575	856	951	2
105°	2	67	312	528	602	2
115°	2	16	145	291	348	2
125°	2	5	53	134	171	2
135°	5	2	14	44	60	3
145°	5	2	0	5	7	3
155°	5	5	0	0	0	2
165°	7	5	0	0	0	2
175°	7	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°	5044.8	5044.8	5044.8	5044.8	5044.8
2.5°	5086.3	5060.9	5051.7	5040.2	5067.9
5°	5104.8	5049.4	5030.9	5056.3	5017.1
7.5°	5033.2	5019.4	4980.2	4994.0	4957.1
10°	5021.7	4945.5	4924.8	4970.9	4959.4
12.5°	4917.9	4853.2	4890.2	4922.5	4878.6
15°	4837.1	4818.6	4820.9	4827.9	4885.5
17.5°	4816.3	4733.2	4710.2	4767.8	4763.2
20°	4627.1	4610.9	4622.5	4698.6	4661.7
22.5°	4516.3	4465.5	4527.8	4601.7	4617.8
25°	4389.4	4384.8	4407.8	4493.2	4516.3
27.5°	4255.5	4225.5	4287.8	4387.1	4405.5
30°	4091.7	4080.1	4156.3	4241.7	4283.2
32.5°	3930.1	3937.1	4024.7	4096.3	4167.8
35°	3747.8	3775.5	3856.3	3978.6	4036.3
37.5°	3563.2	3597.8	3706.3	3847.0	3895.5
40°	3399.3	3406.3	3558.6	3701.7	3761.7
42.5°	3194.0	3263.2	3392.4	3581.7	3627.8
45°	3039.3	3083.2	3226.3	3427.0	3494.0
47.5°	2863.9	2914.7	3078.6	3274.7	3346.3
50°	2672.4	2718.6	2914.7	3138.6	3196.3
52.5°	2460.1	2554.7	2760.1	2990.9	3067.0
55°	2275.5	2372.4	2582.4	2840.9	2926.3
57.5°	2077.0	2173.9	2437.0	2677.0	2787.8
60°	1906.2	1998.5	2266.2	2563.9	2630.9
62.5°	1693.9	1825.4	2116.2	2409.3	2503.9
65°	1504.7	1645.4	1966.2	2254.7	2358.5
67.5°	1331.6	1477.0	1811.6	2120.8	2233.9
70°	1119.3	1310.8	1680.1	1984.7	2102.4
72.5°	962.3	1153.9	1539.3	1841.6	1947.8
75°	768.5	1001.6	1407.7	1710.1	1802.4
77.5°	606.9	858.5	1271.6	1610.8	1703.1
80°	443.1	729.3	1153.9	1479.3	1585.4
82.5°	302.3	609.3	1045.4	1357.0	1458.5
85°	180.0	505.4	937.0	1269.3	1361.6
87.5°	78.5	413.1	837.7	1142.3	1237.0
90°	9.2	327.7	740.8	1036.2	1128.5
92.5°	2.3	263.1	655.4	941.6	1031.6
95°	2.3	203.1	574.6	856.2	950.8
97.5°	2.3	156.9	493.9	768.5	858.5
100°	2.3	120.0	426.9	676.2	773.1
102.5°	2.3	90.0	362.3	600.0	683.1
105°	2.3	66.9	311.5	528.5	602.3
107.5°	2.3	48.5	260.8	461.6	535.4
110°	2.3	34.6	219.2	399.2	473.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	25.4	177.7	343.9	406.2
115°	2.3	16.2	145.4	290.8	348.5
117.5°	2.3	11.5	115.4	244.6	300.0
120°	2.3	9.2	92.3	203.1	251.5
122.5°	2.3	6.9	71.5	166.2	212.3
125°	2.3	4.6	53.1	133.9	170.8
127.5°	2.3	4.6	39.2	106.2	138.5
130°	2.3	2.3	27.7	80.8	108.5
132.5°	2.3	2.3	18.5	60.0	80.8
135°	4.6	2.3	13.8	43.8	60.0
137.5°	4.6	2.3	9.2	30.0	41.5
140°	4.6	2.3	4.6	18.5	25.4
142.5°	4.6	2.3	2.3	9.2	13.8
145°	4.6	2.3	0.0	4.6	6.9
147.5°	4.6	2.3	0.0	2.3	2.3
150°	4.6	2.3	0.0	0.0	0.0
152.5°	4.6	2.3	0.0	0.0	0.0
155°	4.6	4.6	0.0	0.0	0.0
157.5°	4.6	4.6	0.0	0.0	0.0
160°	4.6	4.6	0.0	0.0	0.0
162.5°	4.6	4.6	0.0	0.0	0.0
165°	6.9	4.6	0.0	0.0	0.0
167.5°	6.9	4.6	0.0	0.0	0.0
170°	6.9	4.6	0.0	0.0	0.0
172.5°	6.9	4.6	0.0	0.0	0.0
175°	6.9	4.6	0.0	0.0	0.0
177.5°	6.9	4.6	0.0	0.0	0.0
180°	2.3	2.3	2.3	2.3	2.3

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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	20.25	21.79	20.72	22.24	22.73	21.82	23.36	22.29	23.82	24.30
	3H	22.02	23.42	22.50	23.88	24.41	24.41	25.82	24.89	26.28	26.80
	4H	22.67	24.00	23.17	24.49	25.02	25.67	27.00	26.17	27.48	28.02
	6H	23.15	24.39	23.67	24.89	25.44	27.05	28.29	27.57	28.79	29.34
	8H	23.30	24.49	23.83	25.01	25.57	27.78	28.97	28.31	29.49	30.05
	12H	23.40	24.54	23.93	25.05	25.64	28.62	29.76	29.16	30.28	30.87
4H	2H	21.21	22.54	21.71	23.02	23.56	22.40	23.73	22.90	24.21	24.75
	3H	23.25	24.38	23.76	24.91	25.47	25.27	26.40	25.78	26.93	27.49
	4H	24.06	25.10	24.60	25.64	26.23	26.74	27.78	27.28	28.32	28.91
	6H	24.71	25.63	25.27	26.19	26.80	28.36	29.28	28.92	29.85	30.45
	8H	24.94	25.80	25.50	26.37	26.98	29.22	30.09	29.78	30.65	31.27
	12H	25.11	25.89	25.69	26.48	27.11	30.21	31.00	30.79	31.59	32.21
8H	4H	24.91	25.78	25.47	26.34	26.96	27.11	27.98	27.67	28.54	29.16
	6H	25.83	26.57	26.42	27.17	27.80	28.99	29.73	29.58	30.33	30.96
	8H	26.22	26.88	26.82	27.49	28.13	30.05	30.72	30.66	31.33	31.97
	12H	26.54	27.13	27.14	27.73	28.44	31.31	31.90	31.92	32.51	33.21
12H	4H	25.17	25.96	25.75	26.55	27.17	27.16	27.95	27.74	28.53	29.16
	6H	26.26	26.92	26.86	27.54	28.17	29.10	29.77	29.71	30.38	31.02
	8H	26.80	27.39	27.40	27.99	28.70	30.28	30.87	30.88	31.47	32.18