

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: P894930

Luminaire Tested: 8TMB-20HL-RND-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894930
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-L935
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

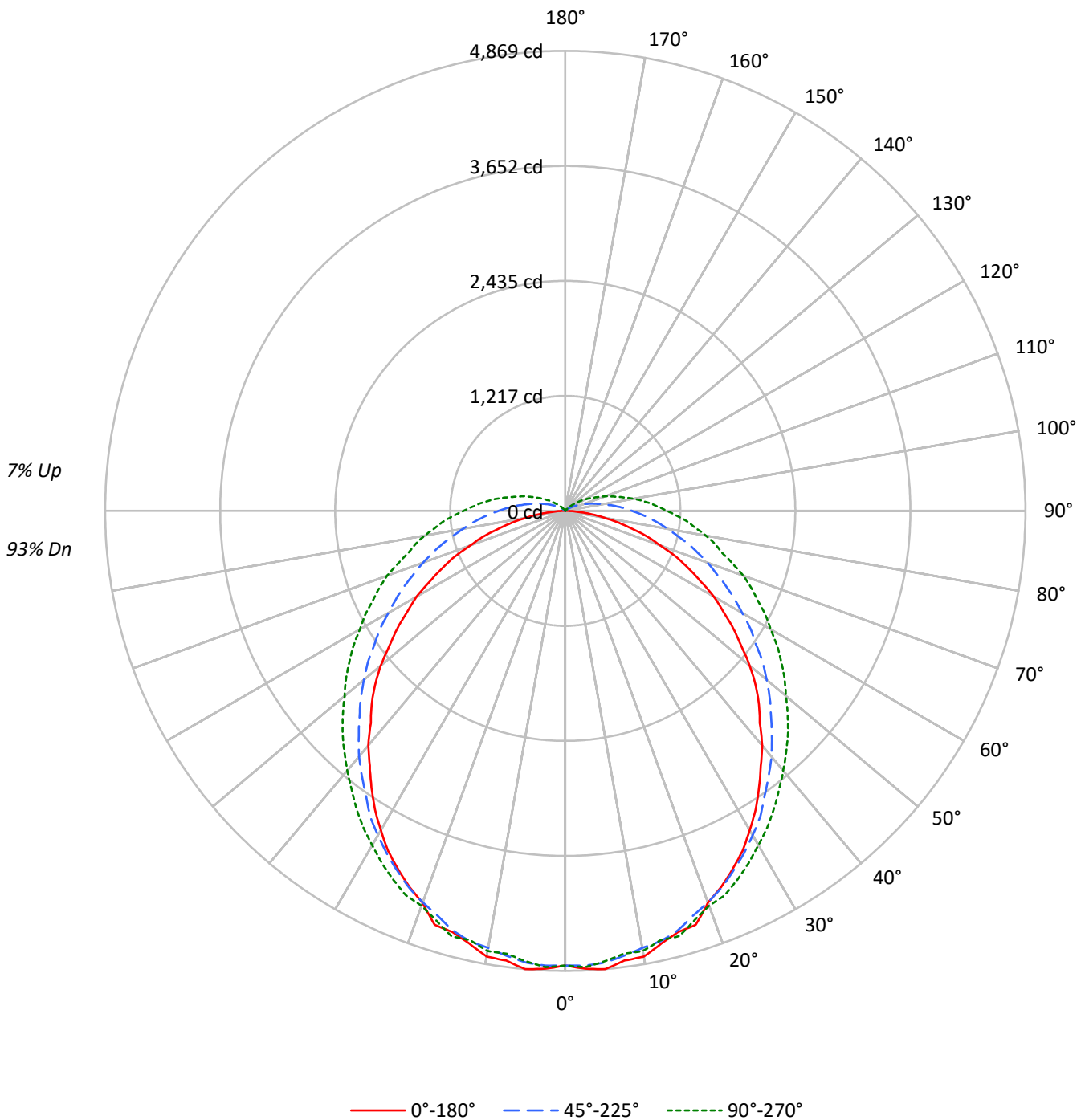
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15849.0 lumens
Efficiency: N/A
Efficacy: 109.3 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°	17072	17072	17072
5°	17342	17090	17043
10°	17256	16923	17042
15°	16947	16890	17116
20°	16664	16647	16788
25°	16390	16459	16864
30°	15989	16241	16738
35°	15483	15932	16675
40°	15017	15721	16618
45°	14546	15440	16722
50°	14070	15345	16827
55°	13425	15236	17265
60°	12902	15339	17807
65°	12049	15744	18886
70°	11074	16623	20802
75°	10049	18407	23567
80°	8635	22488	30899
85°	6990	36383	52870

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 95969 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	456.2	2.9
10°-20°	1298.6	8.2
20°-30°	1946.1	12.3
30°-40°	2312.7	14.6
40°-50°	2394.3	15.1
50°-60°	2218.7	14.0
60°-70°	1847.2	11.7
70°-80°	1371.0	8.7
80°-90°	906.8	5.7
90°-100°	551.8	3.5
100°-110°	309.3	2.0
110°-120°	152.3	1.0
120°-130°	62.0	0.4
130°-140°	18.0	0.1
140°-150°	2.6	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3700.9	23.4
0°-40°	6013.6	37.9
0°-60°	10626.6	67.0
0°-90°	14751.6	93.1
90°-120°	1013.5	6.4
90°-150°	1096.0	6.9
90°-180°	1097.0	6.9
0°-180°	15849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4812	4812	4812	4812	4812	
5°	4869	4816	4798	4823	4785	460
15°	4614	4596	4598	4605	4660	1307
25°	4186	4182	4204	4286	4308	1927
35°	3575	3601	3678	3795	3850	2237
45°	2899	2941	3077	3269	3332	2233
55°	2170	2263	2463	2710	2791	1941
65°	1435	1569	1875	2150	2250	1426
75°	733	955	1343	1631	1719	784
85°	172	482	894	1211	1299	193
90°	9	313	707	988	1076	13
95°	2	194	548	817	907	2
105°	2	64	297	504	574	2
115°	2	15	139	277	332	2
125°	2	4	51	128	163	2
135°	4	2	13	42	57	3
145°	4	2	0	4	7	3
155°	4	4	0	0	0	2
165°	7	4	0	0	0	2
175°	7	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°	4811.6	4811.6	4811.6	4811.6	4811.6
2.5°	4851.2	4827.0	4818.2	4807.2	4833.6
5°	4868.9	4816.0	4798.4	4822.6	4785.2
7.5°	4800.6	4787.4	4750.0	4763.2	4728.0
10°	4789.6	4717.0	4697.2	4741.2	4730.2
12.5°	4690.6	4628.9	4664.1	4695.0	4653.1
15°	4613.5	4595.9	4598.1	4604.7	4659.7
17.5°	4593.7	4514.5	4492.5	4547.5	4543.1
20°	4413.2	4397.8	4408.8	4481.5	4446.2
22.5°	4307.6	4259.1	4318.6	4389.0	4404.4
25°	4186.5	4182.1	4204.1	4285.6	4307.6
27.5°	4058.8	4030.2	4089.7	4184.3	4201.9
30°	3902.6	3891.6	3964.2	4045.6	4085.3
32.5°	3748.5	3755.1	3838.7	3907.0	3975.2
35°	3574.6	3601.0	3678.1	3794.7	3849.7
37.5°	3398.5	3431.5	3535.0	3669.2	3715.5
40°	3242.2	3248.8	3394.1	3530.6	3587.8
42.5°	3046.3	3112.4	3235.6	3416.1	3460.1
45°	2898.9	2940.7	3077.1	3268.6	3332.5
47.5°	2731.6	2780.0	2936.3	3123.4	3191.6
50°	2548.9	2592.9	2780.0	2993.5	3048.5
52.5°	2346.4	2436.6	2632.5	2852.6	2925.3
55°	2170.3	2262.7	2463.0	2709.6	2791.0
57.5°	1981.0	2073.4	2324.4	2553.3	2658.9
60°	1818.1	1906.2	2161.5	2445.4	2509.3
62.5°	1615.6	1741.1	2018.4	2298.0	2388.2
65°	1435.1	1569.4	1875.3	2150.5	2249.5
67.5°	1270.0	1408.7	1727.9	2022.8	2130.7
70°	1067.5	1250.2	1602.4	1893.0	2005.2
72.5°	917.9	1100.6	1468.1	1756.5	1857.7
75°	733.0	955.3	1342.7	1631.0	1719.1
77.5°	578.9	818.8	1212.8	1536.4	1624.4
80°	422.6	695.6	1100.6	1410.9	1512.2
82.5°	288.3	581.1	997.1	1294.3	1391.1
85°	171.7	482.0	893.7	1210.6	1298.7
87.5°	74.8	394.0	799.0	1089.5	1179.8
90°	8.8	312.6	706.6	988.3	1076.3
92.5°	2.2	250.9	625.1	898.1	983.9
95°	2.2	193.7	548.1	816.6	906.9
97.5°	2.2	149.7	471.0	733.0	818.8
100°	2.2	114.5	407.2	644.9	737.4
102.5°	2.2	85.8	345.6	572.3	651.5
105°	2.2	63.8	297.1	504.1	574.5
107.5°	2.2	46.2	248.7	440.2	510.7
110°	2.2	33.0	209.1	380.8	451.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.2	24.2	169.5	328.0	387.4
115°	2.2	15.4	138.7	277.3	332.4
117.5°	2.2	11.0	110.1	233.3	286.1
120°	2.2	8.8	88.0	193.7	239.9
122.5°	2.2	6.6	68.2	158.5	202.5
125°	2.2	4.4	50.6	127.7	162.9
127.5°	2.2	4.4	37.4	101.3	132.1
130°	2.2	2.2	26.4	77.0	103.5
132.5°	2.2	2.2	17.6	57.2	77.0
135°	4.4	2.2	13.2	41.8	57.2
137.5°	4.4	2.2	8.8	28.6	39.6
140°	4.4	2.2	4.4	17.6	24.2
142.5°	4.4	2.2	2.2	8.8	13.2
145°	4.4	2.2	0.0	4.4	6.6
147.5°	4.4	2.2	0.0	2.2	2.2
150°	4.4	2.2	0.0	0.0	0.0
152.5°	4.4	2.2	0.0	0.0	0.0
155°	4.4	4.4	0.0	0.0	0.0
157.5°	4.4	4.4	0.0	0.0	0.0
160°	4.4	4.4	0.0	0.0	0.0
162.5°	4.4	4.4	0.0	0.0	0.0
165°	6.6	4.4	0.0	0.0	0.0
167.5°	6.6	4.4	0.0	0.0	0.0
170°	6.6	4.4	0.0	0.0	0.0
172.5°	6.6	4.4	0.0	0.0	0.0
175°	6.6	4.4	0.0	0.0	0.0
177.5°	6.6	4.4	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	20.09	21.62	20.56	22.08	22.56	21.66	23.20	22.13	23.65	24.14
	3H	21.85	23.25	22.33	23.72	24.24	24.25	25.65	24.73	26.12	26.64
	4H	22.51	23.84	23.01	24.32	24.86	25.50	26.84	26.01	27.32	27.86
	6H	22.99	24.23	23.50	24.72	25.28	26.89	28.13	27.40	28.62	29.18
	8H	23.13	24.32	23.66	24.84	25.40	27.62	28.81	28.14	29.32	29.88
	12H	23.23	24.37	23.77	24.89	25.48	28.46	29.60	28.99	30.11	30.70
4H	2H	21.04	22.37	21.55	22.86	23.39	22.23	23.56	22.74	24.05	24.58
	3H	23.08	24.22	23.60	24.74	25.30	25.10	26.24	25.62	26.76	27.32
	4H	23.90	24.94	24.43	25.47	26.07	26.58	27.62	27.11	28.16	28.75
	6H	24.55	25.47	25.10	26.03	26.63	28.20	29.12	28.75	29.68	30.29
	8H	24.77	25.64	25.33	26.20	26.82	29.05	29.92	29.61	30.48	31.10
	12H	24.94	25.73	25.52	26.32	26.94	30.05	30.83	30.63	31.42	32.05
8H	4H	24.74	25.61	25.30	26.17	26.79	26.95	27.82	27.51	28.38	29.00
	6H	25.67	26.40	26.26	27.01	27.63	28.83	29.56	29.42	30.17	30.79
	8H	26.05	26.72	26.65	27.33	27.97	29.89	30.55	30.49	31.17	31.80
	12H	26.37	26.97	26.98	27.57	28.27	31.15	31.74	31.75	32.34	33.05
12H	4H	25.01	25.79	25.59	26.38	27.01	26.99	27.78	27.57	28.37	28.99
	6H	26.09	26.76	26.70	27.37	28.01	28.94	29.61	29.54	30.22	30.86
	8H	26.63	27.23	27.24	27.83	28.53	30.11	30.71	30.72	31.31	32.01