

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: P894933

Luminaire Tested: 8TMB-20HL-RNDU-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894933
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-20HL-RNDU-UNV-L830
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, CCT
Light Source: -
Ballast/Driver: -

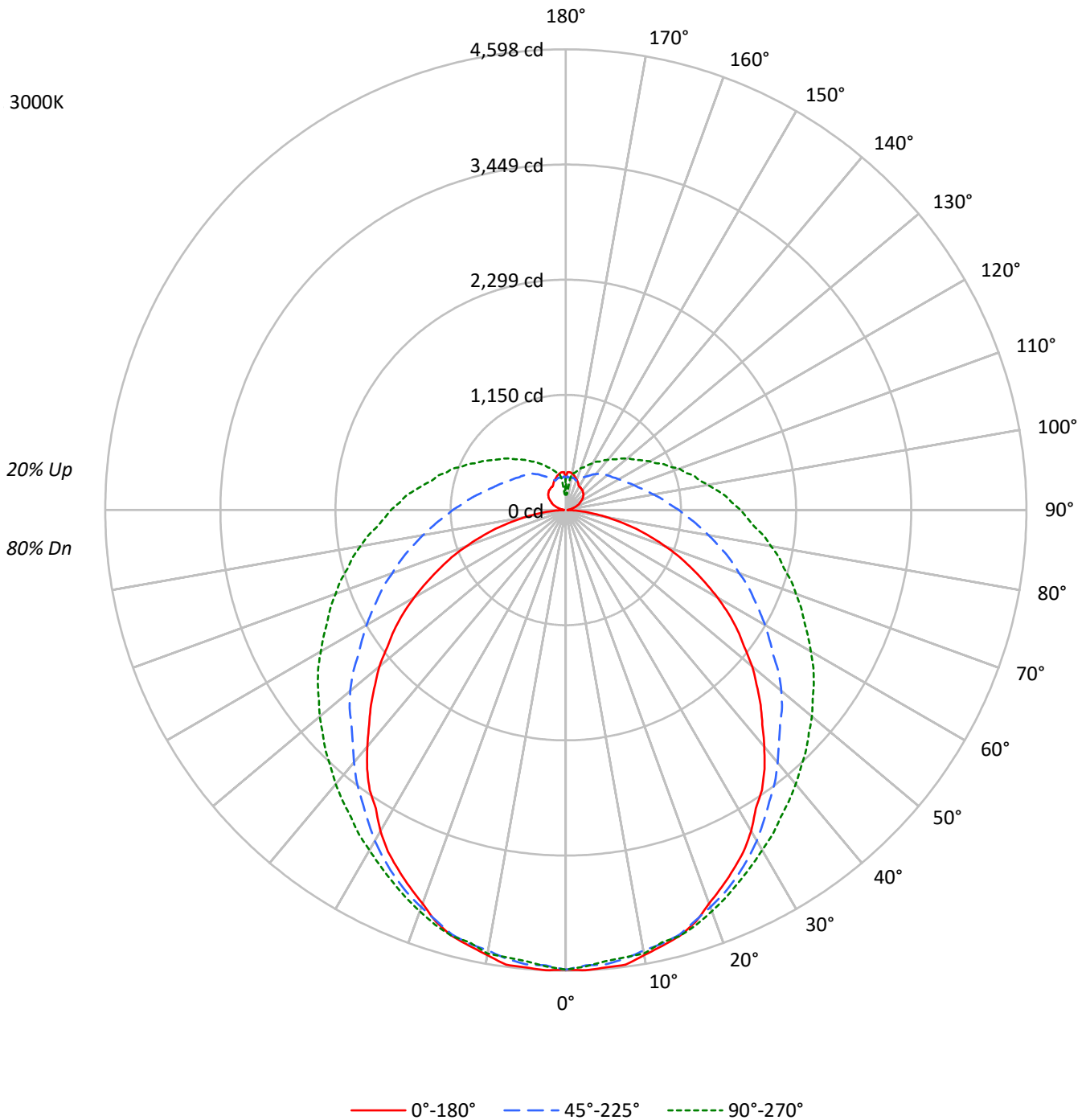
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19285.0 lumens
Efficiency: N/A
Efficacy: 133.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 7.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 145
Input Voltage (V): 120
Input Current (A_{in}): 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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16277	16277	16277
5°	16284	15655	15365
10°	16176	15010	14768
15°	16051	14535	14102
20°	15633	13876	13416
25°	15312	13294	12768
30°	14933	12655	12202
35°	14515	11959	11710
40°	13966	11364	11332
45°	13450	10796	10995
50°	13007	10452	10710
55°	12485	9906	10489
60°	11862	9568	10285
65°	11077	9270	10131
70°	10207	9035	10124
75°	9070	8965	10153
80°	7397	8954	10351
85°	5308	9205	10584

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13450 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	434.3	2.3
10°-20°	1240.9	6.4
20°-30°	1863.4	9.7
30°-40°	2237.6	11.6
40°-50°	2366.8	12.3
50°-60°	2280.9	11.8
60°-70°	2023.6	10.5
70°-80°	1659.5	8.6
80°-90°	1284.4	6.7
90°-100°	1002.1	5.2
100°-110°	797.8	4.1
110°-120°	637.6	3.3
120°-130°	502.9	2.6
130°-140°	383.7	2.0
140°-150°	269.8	1.4
150°-160°	172.5	0.9
160°-170°	96.7	0.5
170°-180°	30.6	0.2
0°-30°	3538.6	18.3
0°-40°	5776.2	30.0
0°-60°	10423.9	54.1
0°-90°	15391.5	79.8
90°-120°	2437.4	12.6
90°-150°	3593.8	18.6
90°-180°	3894.0	20.2
0°-180°	19285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4588	4588	4588	4588	4588	
5°	4582	4595	4552	4585	4521	436
15°	4400	4403	4387	4416	4403	1236
25°	3959	4023	4038	4108	4095	1824
35°	3412	3464	3546	3692	3741	2127
45°	2750	2832	3025	3312	3392	2122
55°	2094	2199	2530	2874	3022	1868
65°	1393	1586	2065	2494	2625	1385
75°	726	1044	1645	2088	2255	768
85°	169	636	1275	1734	1888	191
90°	18	505	1129	1570	1745	18
95°	23	418	998	1434	1604	23
105°	77	339	798	1172	1324	81
115°	149	331	662	957	1080	144
125°	208	336	570	785	870	183
135°	244	326	511	664	716	189
145°	264	300	421	557	590	166
155°	292	308	346	436	488	135
165°	346	339	326	318	395	97
175°	380	367	326	267	169	36
180°	310	310	310	310	310	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4587.5	4587.5	4587.5	4587.5	4587.5
2.5°	4597.7	4613.1	4549.0	4587.5	4559.2
5°	4582.3	4595.1	4551.5	4584.9	4520.7
7.5°	4577.2	4572.1	4518.2	4561.8	4502.8
10°	4510.5	4528.4	4464.3	4523.3	4495.1
12.5°	4454.0	4490.0	4433.5	4479.7	4420.7
15°	4400.2	4402.7	4387.3	4415.6	4402.7
17.5°	4310.4	4333.4	4297.5	4361.7	4338.6
20°	4179.5	4251.3	4218.0	4277.0	4261.6
22.5°	4071.7	4107.7	4135.9	4202.6	4182.1
25°	3958.9	4023.0	4038.4	4107.7	4094.8
27.5°	3843.4	3871.6	3930.6	4005.0	4007.6
30°	3699.7	3730.5	3812.6	3897.3	3920.4
32.5°	3530.4	3627.9	3676.6	3804.9	3840.8
35°	3412.4	3463.7	3545.8	3692.0	3740.8
37.5°	3258.4	3317.4	3427.8	3599.7	3658.7
40°	3081.4	3168.6	3289.2	3502.2	3571.4
42.5°	2904.4	3007.0	3148.1	3397.0	3476.5
45°	2750.4	2832.5	3024.9	3312.3	3391.8
47.5°	2583.6	2683.7	2927.5	3202.0	3291.8
50°	2429.7	2532.3	2809.4	3099.4	3207.1
52.5°	2245.0	2363.0	2681.1	2981.3	3107.0
55°	2093.6	2198.8	2529.8	2873.6	3022.4
57.5°	1926.8	2044.9	2411.7	2794.0	2930.0
60°	1747.2	1896.0	2296.3	2694.0	2824.8
62.5°	1570.2	1747.2	2178.3	2596.5	2724.8
65°	1393.2	1585.6	2065.4	2493.8	2624.7
67.5°	1234.1	1441.9	1962.8	2381.0	2542.6
70°	1054.5	1303.4	1842.2	2275.8	2445.1
72.5°	885.2	1177.7	1744.7	2191.1	2360.4
75°	726.1	1044.2	1644.6	2088.5	2255.2
77.5°	567.0	918.5	1539.4	1996.1	2178.3
80°	415.6	815.9	1447.0	1906.3	2080.8
82.5°	287.4	726.1	1357.2	1831.9	1996.1
85°	169.3	636.3	1275.1	1734.4	1888.3
87.5°	77.0	564.5	1190.5	1660.0	1811.4
90°	18.0	505.4	1128.9	1570.2	1744.7
92.5°	18.0	459.3	1054.5	1503.5	1662.6
95°	23.1	418.2	998.1	1434.2	1603.6
97.5°	30.8	387.4	946.7	1370.1	1518.9
100°	43.6	366.9	890.3	1295.7	1441.9
102.5°	59.0	351.5	839.0	1229.0	1364.9
105°	77.0	338.7	797.9	1172.5	1323.9
107.5°	94.9	333.5	756.9	1118.6	1246.9
110°	112.9	331.0	726.1	1062.2	1205.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	130.9	328.4	692.7	1010.9	1126.3
115°	148.8	331.0	661.9	957.0	1080.2
117.5°	159.1	331.0	633.7	910.8	1013.4
120°	174.5	333.5	613.2	862.1	969.8
122.5°	189.9	333.5	592.7	826.2	921.1
125°	207.8	336.1	569.6	785.1	869.8
127.5°	218.1	336.1	556.8	756.9	833.8
130°	228.3	333.5	538.8	721.0	800.5
132.5°	238.6	328.4	528.5	687.6	762.0
135°	243.7	325.8	510.6	664.5	715.8
137.5°	251.4	318.1	492.6	631.2	687.6
140°	259.1	315.6	467.0	605.5	654.3
142.5°	259.1	307.9	449.0	582.4	626.0
145°	264.3	300.2	420.8	556.8	590.1
147.5°	269.4	297.6	400.2	531.1	572.1
150°	269.4	295.1	382.3	502.9	541.4
152.5°	274.5	297.6	364.3	477.2	513.1
155°	292.5	307.9	346.4	436.2	487.5
157.5°	307.9	318.1	328.4	405.4	459.3
160°	320.7	325.8	313.0	374.6	446.4
162.5°	331.0	333.5	315.6	346.4	418.2
165°	346.4	338.7	325.8	318.1	395.1
167.5°	359.2	343.8	331.0	310.4	377.2
170°	369.5	354.1	325.8	292.5	369.5
172.5°	377.2	356.6	328.4	274.5	310.4
175°	379.7	366.9	325.8	266.8	169.3
177.5°	377.2	369.5	336.1	264.3	151.4
180°	310.4	310.4	310.4	310.4	310.4



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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	16.76	18.07	17.40	18.74	19.50	20.25	21.56	20.89	22.22	22.99
	3H	18.21	19.41	18.86	20.08	20.88	23.12	24.32	23.77	24.99	25.79
	4H	18.68	19.82	19.35	20.51	21.32	24.60	25.74	25.27	26.43	27.24
	6H	18.96	20.02	19.64	20.72	21.54	26.21	27.28	26.90	27.97	28.80
	8H	19.02	20.04	19.71	20.75	21.58	27.07	28.09	27.77	28.81	29.64
	12H	19.04	20.01	19.74	20.72	21.58	28.02	29.00	28.72	29.71	30.57
4H	2H	17.91	19.05	18.59	19.74	20.55	20.58	21.72	21.26	22.41	23.22
	3H	19.62	20.59	20.30	21.32	22.15	23.69	24.66	24.37	25.38	26.22
	4H	20.21	21.12	20.92	21.84	22.70	25.35	26.25	26.05	26.98	27.83
	6H	20.62	21.42	21.34	22.17	23.03	27.16	27.96	27.88	28.70	29.57
	8H	20.73	21.49	21.46	22.23	23.11	28.13	28.88	28.85	29.63	30.51
	12H	20.79	21.48	21.54	22.24	23.13	29.20	29.89	29.95	30.66	31.54
8H	4H	21.26	22.02	21.99	22.76	23.64	25.53	26.28	26.25	27.02	27.90
	6H	21.91	22.55	22.66	23.34	24.22	27.51	28.15	28.26	28.94	29.82
	8H	22.13	22.71	22.90	23.50	24.40	28.63	29.21	29.39	30.00	30.89
	12H	22.28	22.80	23.05	23.58	24.53	29.89	30.41	30.66	31.19	32.14
12H	4H	21.60	22.29	22.35	23.06	23.94	25.52	26.21	26.27	26.98	27.86
	6H	22.41	22.99	23.17	23.78	24.67	27.54	28.12	28.31	28.91	29.80
	8H	22.76	23.28	23.53	24.05	25.01	28.72	29.24	29.49	30.02	30.97