

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: P894934

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894934
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-L835
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, CCT
Light Source: -
Ballast/Driver: -

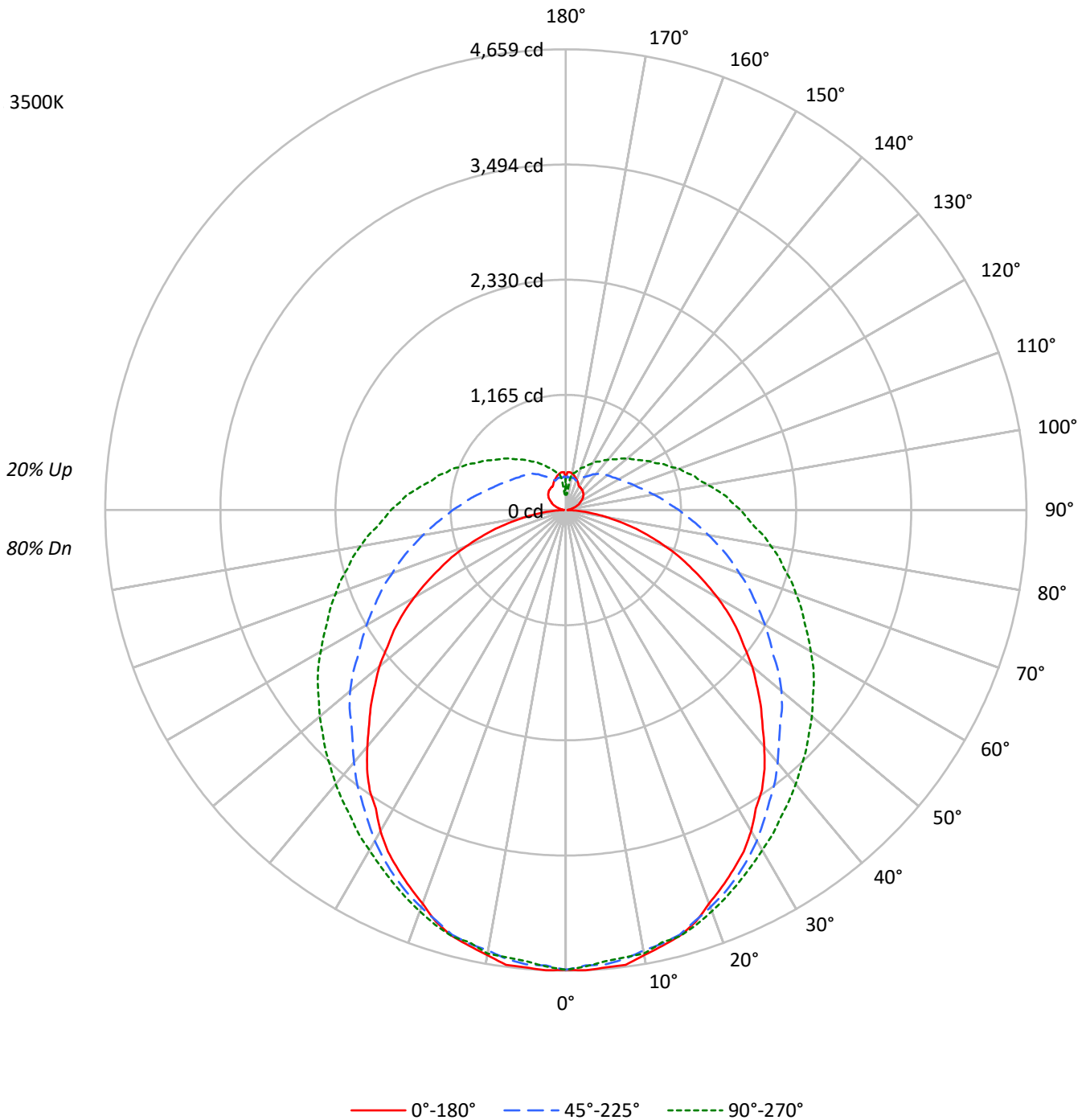
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19542.9 lumens
Efficiency: N/A
Efficacy: 134.8 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°	16495	16495	16495
5°	16501	15865	15570
10°	16393	15211	14966
15°	16265	14729	14291
20°	15842	14062	13595
25°	15517	13472	12939
30°	15132	12824	12365
35°	14709	12119	11867
40°	14153	11516	11483
45°	13630	10941	11142
50°	13181	10592	10853
55°	12652	10039	10629
60°	12021	9696	10422
65°	11224	9394	10267
70°	10344	9156	10260
75°	9191	9085	10289
80°	7496	9074	10489
85°	5380	9328	10726

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13630 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	440.1	2.3
10°-20°	1257.5	6.4
20°-30°	1888.3	9.7
30°-40°	2267.5	11.6
40°-50°	2398.4	12.3
50°-60°	2311.4	11.8
60°-70°	2050.6	10.5
70°-80°	1681.7	8.6
80°-90°	1301.6	6.7
90°-100°	1015.5	5.2
100°-110°	808.4	4.1
110°-120°	646.1	3.3
120°-130°	509.6	2.6
130°-140°	388.9	2.0
140°-150°	273.4	1.4
150°-160°	174.8	0.9
160°-170°	98.0	0.5
170°-180°	31.0	0.2
0°-30°	3585.9	18.3
0°-40°	5853.5	30.0
0°-60°	10563.3	54.1
0°-90°	15597.3	79.8
90°-120°	2470.0	12.6
90°-150°	3641.8	18.6
90°-180°	3946.0	20.2
0°-180°	19542.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4649	4649	4649	4649	4649	
5°	4644	4657	4612	4646	4581	442
15°	4459	4462	4446	4475	4462	1253
25°	4012	4077	4092	4163	4150	1848
35°	3458	3510	3593	3741	3791	2156
45°	2787	2870	3065	3357	3437	2150
55°	2122	2228	2564	2912	3063	1893
65°	1412	1607	2093	2527	2660	1403
75°	736	1058	1667	2116	2285	778
85°	172	645	1292	1758	1914	194
90°	18	512	1144	1591	1768	18
95°	23	424	1011	1453	1625	23
105°	78	343	809	1188	1342	83
115°	151	335	671	970	1095	146
125°	211	341	577	796	881	185
135°	247	330	517	673	725	191
145°	268	304	426	564	598	168
155°	296	312	351	442	494	136
165°	351	343	330	322	400	98
175°	385	372	330	270	172	36
180°	315	315	315	315	315	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4648.8	4648.8	4648.8	4648.8	4648.8
2.5°	4659.2	4674.8	4609.8	4648.8	4620.2
5°	4643.6	4656.6	4612.4	4646.2	4581.2
7.5°	4638.4	4633.2	4578.6	4622.8	4563.0
10°	4570.8	4589.0	4524.0	4583.8	4555.2
12.5°	4513.6	4550.0	4492.8	4539.6	4479.8
15°	4459.0	4461.6	4446.0	4474.6	4461.6
17.5°	4368.0	4391.4	4355.0	4420.0	4396.6
20°	4235.4	4308.2	4274.4	4334.2	4318.6
22.5°	4126.2	4162.6	4191.2	4258.8	4238.0
25°	4011.8	4076.8	4092.4	4162.6	4149.6
27.5°	3894.8	3923.4	3983.2	4058.6	4061.2
30°	3749.2	3780.4	3863.6	3949.4	3972.8
32.5°	3577.6	3676.4	3725.8	3855.8	3892.2
35°	3458.0	3510.0	3593.2	3741.4	3790.8
37.5°	3302.0	3361.8	3473.6	3647.8	3707.6
40°	3122.6	3211.0	3333.2	3549.0	3619.2
42.5°	2943.2	3047.2	3190.2	3442.4	3523.0
45°	2787.2	2870.4	3065.4	3356.6	3437.2
47.5°	2618.2	2719.6	2966.6	3244.8	3335.8
50°	2462.2	2566.2	2847.0	3140.8	3250.0
52.5°	2275.0	2394.6	2717.0	3021.2	3148.6
55°	2121.6	2228.2	2563.6	2912.0	3062.8
57.5°	1952.6	2072.2	2444.0	2831.4	2969.2
60°	1770.6	1921.4	2327.0	2730.0	2862.6
62.5°	1591.2	1770.6	2207.4	2631.2	2761.2
65°	1411.8	1606.8	2093.0	2527.2	2659.8
67.5°	1250.6	1461.2	1989.0	2412.8	2576.6
70°	1068.6	1320.8	1866.8	2306.2	2477.8
72.5°	897.0	1193.4	1768.0	2220.4	2392.0
75°	735.8	1058.2	1666.6	2116.4	2285.4
77.5°	574.6	930.8	1560.0	2022.8	2207.4
80°	421.2	826.8	1466.4	1931.8	2108.6
82.5°	291.2	735.8	1375.4	1856.4	2022.8
85°	171.6	644.8	1292.2	1757.6	1913.6
87.5°	78.0	572.0	1206.4	1682.2	1835.6
90°	18.2	512.2	1144.0	1591.2	1768.0
92.5°	18.2	465.4	1068.6	1523.6	1684.8
95°	23.4	423.8	1011.4	1453.4	1625.0
97.5°	31.2	392.6	959.4	1388.4	1539.2
100°	44.2	371.8	902.2	1313.0	1461.2
102.5°	59.8	356.2	850.2	1245.4	1383.2
105°	78.0	343.2	808.6	1188.2	1341.6
107.5°	96.2	338.0	767.0	1133.6	1263.6
110°	114.4	335.4	735.8	1076.4	1222.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	132.6	332.8	702.0	1024.4	1141.4
115°	150.8	335.4	670.8	969.8	1094.6
117.5°	161.2	335.4	642.2	923.0	1027.0
120°	176.8	338.0	621.4	873.6	982.8
122.5°	192.4	338.0	600.6	837.2	933.4
125°	210.6	340.6	577.2	795.6	881.4
127.5°	221.0	340.6	564.2	767.0	845.0
130°	231.4	338.0	546.0	730.6	811.2
132.5°	241.8	332.8	535.6	696.8	772.2
135°	247.0	330.2	517.4	673.4	725.4
137.5°	254.8	322.4	499.2	639.6	696.8
140°	262.6	319.8	473.2	613.6	663.0
142.5°	262.6	312.0	455.0	590.2	634.4
145°	267.8	304.2	426.4	564.2	598.0
147.5°	273.0	301.6	405.6	538.2	579.8
150°	273.0	299.0	387.4	509.6	548.6
152.5°	278.2	301.6	369.2	483.6	520.0
155°	296.4	312.0	351.0	442.0	494.0
157.5°	312.0	322.4	332.8	410.8	465.4
160°	325.0	330.2	317.2	379.6	452.4
162.5°	335.4	338.0	319.8	351.0	423.8
165°	351.0	343.2	330.2	322.4	400.4
167.5°	364.0	348.4	335.4	314.6	382.2
170°	374.4	358.8	330.2	296.4	374.4
172.5°	382.2	361.4	332.8	278.2	314.6
175°	384.8	371.8	330.2	270.4	171.6
177.5°	382.2	374.4	340.6	267.8	153.4
180°	314.6	314.6	314.6	314.6	314.6



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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	16.81	18.12	17.45	18.78	19.55	20.29	21.61	20.93	22.27	23.04
	3H	18.26	19.46	18.91	20.13	20.93	23.17	24.37	23.82	25.04	25.84
	4H	18.73	19.87	19.40	20.55	21.36	24.65	25.79	25.32	26.47	27.28
	6H	19.00	20.07	19.69	20.76	21.59	26.26	27.32	26.94	28.02	28.84
	8H	19.06	20.08	19.76	20.80	21.63	27.12	28.14	27.81	28.85	29.68
	12H	19.08	20.06	19.78	20.77	21.63	28.06	29.04	28.77	29.75	30.61
4H	2H	17.96	19.10	18.63	19.79	20.60	20.63	21.77	21.30	22.45	23.26
	3H	19.66	20.64	20.35	21.36	22.19	23.73	24.71	24.42	25.43	26.26
	4H	20.26	21.16	20.96	21.88	22.74	25.40	26.30	26.10	27.02	27.88
	6H	20.67	21.47	21.39	22.21	23.08	27.20	28.00	27.92	28.75	29.62
	8H	20.78	21.53	21.50	22.28	23.16	28.18	28.93	28.90	29.67	30.55
	12H	20.84	21.52	21.58	22.29	23.18	29.25	29.94	29.99	30.70	31.59
8H	4H	21.31	22.06	22.03	22.81	23.69	25.57	26.33	26.30	27.07	27.95
	6H	21.95	22.60	22.71	23.38	24.26	27.56	28.20	28.31	28.98	29.87
	8H	22.18	22.76	22.94	23.55	24.44	28.68	29.26	29.44	30.04	30.94
	12H	22.33	22.85	23.10	23.62	24.58	29.94	30.46	30.70	31.23	32.19
12H	4H	21.65	22.34	22.40	23.10	23.99	25.57	26.25	26.31	27.02	27.91
	6H	22.46	23.04	23.22	23.82	24.72	27.59	28.17	28.35	28.95	29.85
	8H	22.80	23.32	23.57	24.10	25.05	28.77	29.29	29.54	30.07	31.02