

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: P894744

Luminaire Tested: 8TMB-16HL-RNDU-UNV-L850

Issue Date: 11/11/2024

**Test Information**

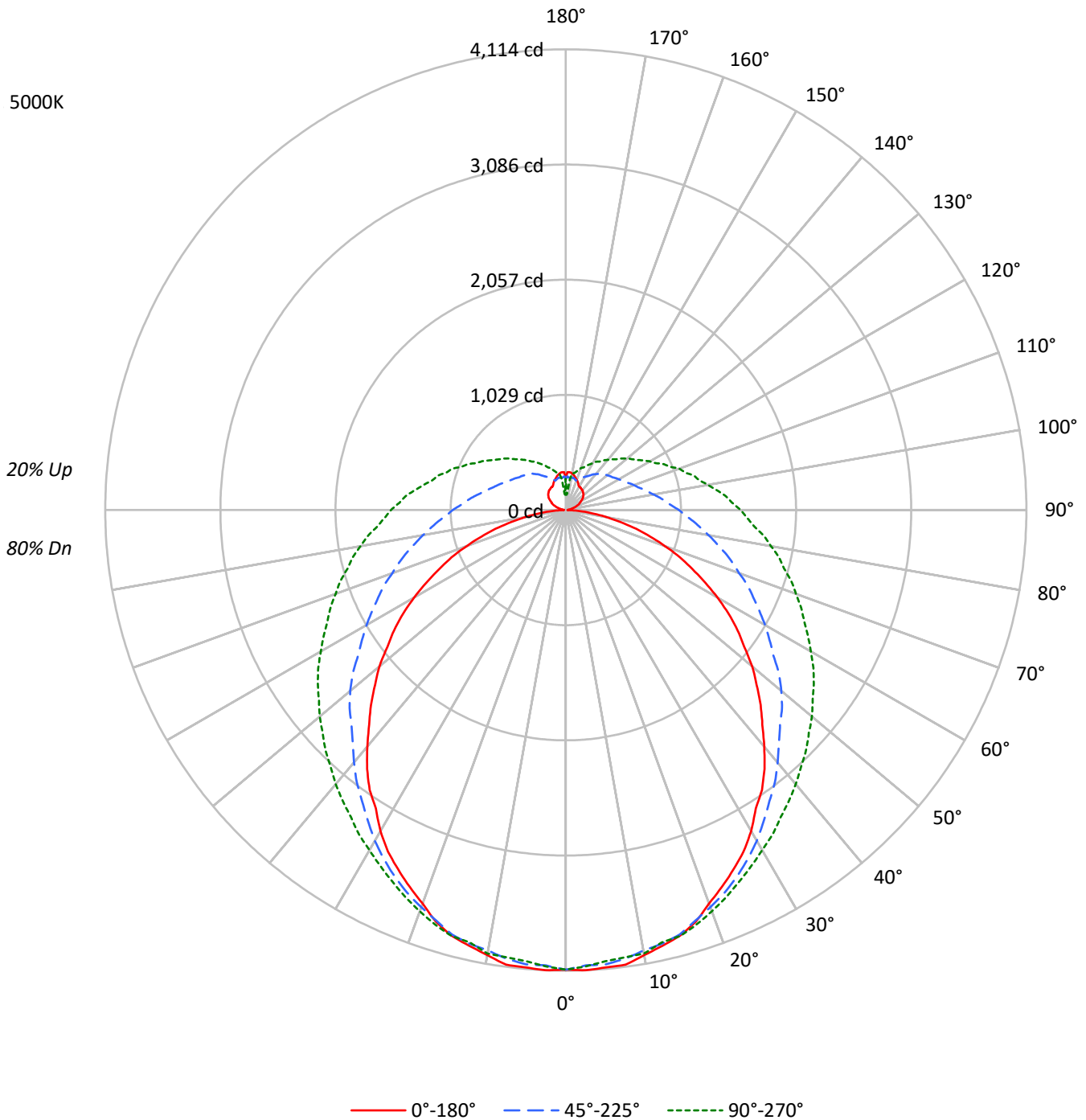
Test Method: LM-79-2019  
Report Number: P894744  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-RNDU-UNV-L850  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17255.0 lumens  
Efficiency: N/A  
Efficacy: 149.0 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): 115.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 4.23  
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
RCR																				
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80		
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	61		
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	49		
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	41		
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	34		
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	29		
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	26		
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	23		
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	20		
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	18		
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	16		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14564	14564	14564
5°	14570	14007	13748
10°	14473	13430	13214
15°	14361	13005	12618
20°	13987	12416	12003
25°	13700	11894	11424
30°	13361	11323	10917
35°	12987	10700	10478
40°	12496	10168	10139
45°	12034	9660	9838
50°	11638	9352	9582
55°	11171	8864	9384
60°	10614	8561	9202
65°	9910	8295	9065
70°	9133	8084	9058
75°	8116	8021	9085
80°	6619	8012	9261
85°	4750	8236	9471

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12034 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	388.6	2.3
10°-20°	1110.3	6.4
20°-30°	1667.2	9.7
30°-40°	2002.1	11.6
40°-50°	2117.6	12.3
50°-60°	2040.8	11.8
60°-70°	1810.6	10.5
70°-80°	1484.9	8.6
80°-90°	1149.2	6.7
90°-100°	896.6	5.2
100°-110°	713.8	4.1
110°-120°	570.4	3.3
120°-130°	449.9	2.6
130°-140°	343.3	2.0
140°-150°	241.4	1.4
150°-160°	154.3	0.9
160°-170°	86.5	0.5
170°-180°	27.4	0.2
0°-30°	3166.1	18.3
0°-40°	5168.2	30.0
0°-60°	9326.6	54.1
0°-90°	13771.3	79.8
90°-120°	2180.8	12.6
90°-150°	3215.5	18.6
90°-180°	3484.0	20.2
0°-180°	17255.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4105	4105	4105	4105	4105	
5°	4100	4111	4072	4102	4045	390
15°	3937	3939	3926	3951	3939	1106
25°	3542	3600	3613	3675	3664	1632
35°	3053	3099	3172	3303	3347	1903
45°	2461	2534	2706	2964	3035	1898
55°	1873	1967	2264	2571	2704	1671
65°	1246	1419	1848	2231	2348	1239
75°	650	934	1472	1869	2018	687
85°	152	569	1141	1552	1690	171
90°	16	452	1010	1405	1561	16
95°	21	374	893	1283	1435	21
105°	69	303	714	1049	1184	73
115°	133	296	592	856	966	129
125°	186	301	510	702	778	164
135°	218	292	457	595	640	169
145°	236	269	376	498	528	148
155°	262	276	310	390	436	120
165°	310	303	292	285	354	87
175°	340	328	292	239	152	32
180°	278	278	278	278	278	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4104.6	4104.6	4104.6	4104.6	4104.6
2.5°	4113.7	4127.5	4070.1	4104.6	4079.3
5°	4100.0	4111.4	4072.4	4102.3	4044.9
7.5°	4095.4	4090.8	4042.6	4081.6	4028.8
10°	4035.7	4051.8	3994.4	4047.2	4021.9
12.5°	3985.2	4017.3	3966.8	4008.1	3955.3
15°	3937.0	3939.3	3925.5	3950.8	3939.3
17.5°	3856.6	3877.3	3845.2	3902.5	3881.9
20°	3739.6	3803.8	3774.0	3826.8	3813.0
22.5°	3643.1	3675.3	3700.5	3760.2	3741.9
25°	3542.1	3599.5	3613.3	3675.3	3663.8
27.5°	3438.8	3464.1	3516.9	3583.5	3585.8
30°	3310.3	3337.8	3411.3	3487.0	3507.7
32.5°	3158.8	3246.0	3289.6	3404.4	3436.5
35°	3053.2	3099.1	3172.5	3303.4	3347.0
37.5°	2915.4	2968.2	3066.9	3220.8	3273.5
40°	2757.0	2835.1	2943.0	3133.5	3195.5
42.5°	2598.6	2690.5	2816.7	3039.4	3110.6
45°	2460.9	2534.4	2706.5	2963.6	3034.8
47.5°	2311.7	2401.2	2619.3	2864.9	2945.3
50°	2173.9	2265.8	2513.7	2773.1	2869.5
52.5°	2008.7	2114.3	2398.9	2667.5	2780.0
55°	1873.2	1967.3	2263.5	2571.1	2704.2
57.5°	1724.0	1829.6	2157.9	2499.9	2621.6
60°	1563.3	1696.5	2054.6	2410.4	2527.5
62.5°	1404.9	1563.3	1949.0	2323.2	2437.9
65°	1246.5	1418.7	1848.0	2231.3	2348.4
67.5°	1104.2	1290.1	1756.1	2130.3	2275.0
70°	943.5	1166.2	1648.3	2036.2	2187.7
72.5°	792.0	1053.7	1561.0	1960.5	2112.0
75°	649.7	934.3	1471.5	1868.6	2017.8
77.5°	507.3	821.8	1377.4	1786.0	1949.0
80°	371.9	730.0	1294.7	1705.6	1861.7
82.5°	257.1	649.7	1214.4	1639.1	1786.0
85°	151.5	569.3	1140.9	1551.8	1689.6
87.5°	68.9	505.0	1065.2	1485.3	1620.7
90°	16.1	452.2	1010.1	1404.9	1561.0
92.5°	16.1	410.9	943.5	1345.2	1487.6
95°	20.7	374.2	893.0	1283.2	1434.8
97.5°	27.5	346.6	847.1	1225.9	1359.0
100°	39.0	328.3	796.6	1159.3	1290.1
102.5°	52.8	314.5	750.7	1099.6	1221.3
105°	68.9	303.0	713.9	1049.1	1184.5
107.5°	84.9	298.4	677.2	1000.9	1115.7
110°	101.0	296.1	649.7	950.4	1078.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	117.1	293.8	619.8	904.5	1007.8
115°	133.1	296.1	592.3	856.3	966.5
117.5°	142.3	296.1	567.0	814.9	906.8
120°	156.1	298.4	548.7	771.3	867.7
122.5°	169.9	298.4	530.3	739.2	824.1
125°	185.9	300.7	509.6	702.5	778.2
127.5°	195.1	300.7	498.1	677.2	746.1
130°	204.3	298.4	482.1	645.1	716.2
132.5°	213.5	293.8	472.9	615.2	681.8
135°	218.1	291.5	456.8	594.6	640.5
137.5°	225.0	284.7	440.8	564.7	615.2
140°	231.9	282.4	417.8	541.8	585.4
142.5°	231.9	275.5	401.7	521.1	560.1
145°	236.4	268.6	376.5	498.1	528.0
147.5°	241.0	266.3	358.1	475.2	511.9
150°	241.0	264.0	342.0	449.9	484.4
152.5°	245.6	266.3	326.0	427.0	459.1
155°	261.7	275.5	309.9	390.3	436.2
157.5°	275.5	284.7	293.8	362.7	410.9
160°	287.0	291.5	280.1	335.2	399.4
162.5°	296.1	298.4	282.4	309.9	374.2
165°	309.9	303.0	291.5	284.7	353.5
167.5°	321.4	307.6	296.1	277.8	337.5
170°	330.6	316.8	291.5	261.7	330.6
172.5°	337.5	319.1	293.8	245.6	277.8
175°	339.8	328.3	291.5	238.7	151.5
177.5°	337.5	330.6	300.7	236.4	135.4
180°	277.8	277.8	277.8	277.8	277.8



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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	16.37	17.69	17.01	18.35	19.12	19.86	21.17	20.50	21.84	22.60
	3H	17.82	19.02	18.48	19.70	20.50	22.73	23.93	23.39	24.61	25.41
	4H	18.29	19.44	18.97	20.12	20.93	24.21	25.36	24.88	26.04	26.85
	6H	18.57	19.64	19.26	20.33	21.16	25.83	26.89	26.51	27.58	28.41
	8H	18.63	19.65	19.33	20.37	21.20	26.69	27.71	27.38	28.42	29.25
	12H	18.65	19.63	19.35	20.34	21.20	27.63	28.61	28.33	29.32	30.18
4H	2H	17.53	18.67	18.20	19.35	20.16	20.20	21.34	20.87	22.02	22.83
	3H	19.23	20.21	19.91	20.93	21.76	23.30	24.28	23.98	25.00	25.83
	4H	19.83	20.73	20.53	21.45	22.31	24.96	25.87	25.67	26.59	27.45
	6H	20.23	21.03	20.95	21.78	22.65	26.77	27.57	27.49	28.32	29.18
	8H	20.35	21.10	21.07	21.84	22.72	27.74	28.50	28.47	29.24	30.12
	12H	20.40	21.09	21.15	21.86	22.74	28.82	29.50	29.56	30.27	31.16
8H	4H	20.88	21.63	21.60	22.37	23.25	25.14	25.89	25.86	26.64	27.52
	6H	21.52	22.16	22.27	22.95	23.83	27.12	27.77	27.88	28.55	29.43
	8H	21.75	22.33	22.51	23.11	24.01	28.24	28.82	29.01	29.61	30.50
	12H	21.90	22.41	22.66	23.19	24.14	29.50	30.02	30.27	30.80	31.75
12H	4H	21.22	21.90	21.96	22.67	23.56	25.13	25.82	25.88	26.59	27.48
	6H	22.02	22.60	22.79	23.39	24.29	27.16	27.74	27.92	28.52	29.42
	8H	22.37	22.89	23.14	23.67	24.62	28.34	28.86	29.10	29.63	30.59