

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: P894700

Luminaire Tested: 8TMB-16HL-FLTU-UNV-L950

Issue Date: 11/11/2024

**Test Information**

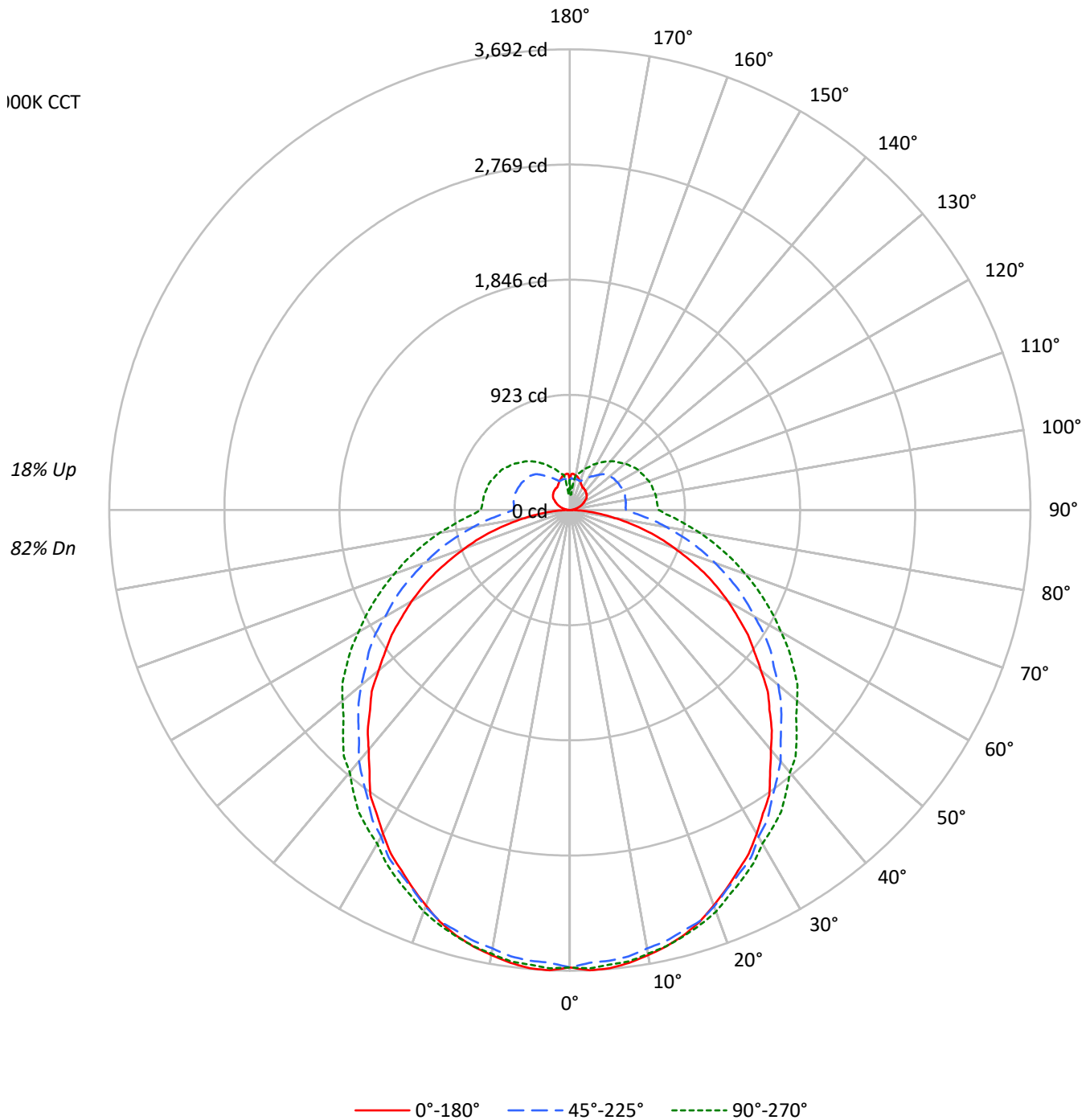
Test Method: LM-79-2019  
Report Number: P894700  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-FLTU-UNV-L950  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 90CRI, 50  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13778.0 lumens  
Efficiency: N/A  
Efficacy: 119.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36  
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 (Ain): 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	0
RCR																					
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	69	69	66
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	57	57	54
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	48	48	45
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	41	41	38
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	35	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	31	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	27	27	25
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	24	24	22
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	22	22	20
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	20	20	18

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

	0°	45°	90°
0°	13003	13003	13003
5°	13099	12471	12429
10°	12990	11995	11861
15°	12871	11574	11321
20°	12615	11128	10783
25°	12337	10577	10189
30°	12088	10038	9612
35°	11861	9524	9241
40°	11368	9083	8706
45°	11065	8555	8332
50°	10706	8114	7940
55°	10393	7694	7589
60°	9942	7116	7118
65°	9428	6651	6675
70°	8633	6074	6192
75°	7809	5499	5734
80°	6412	4868	5270
85°	4822	4259	4836

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11065 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	347.1	2.5
10°-20°	991.3	7.2
20°-30°	1489.1	10.8
30°-40°	1784.7	13.0
40°-50°	1871.1	13.6
50°-60°	1755.2	12.7
60°-70°	1457.9	10.6
70°-80°	1042.4	7.6
80°-90°	618.2	4.5
90°-100°	453.5	3.3
100°-110°	446.8	3.2
110°-120°	416.8	3.0
120°-130°	365.7	2.7
130°-140°	294.5	2.1
140°-150°	211.4	1.5
150°-160°	134.3	1.0
160°-170°	74.4	0.5
170°-180°	23.4	0.2
0°-30°	2827.5	20.5
0°-40°	4612.2	33.5
0°-60°	8238.5	59.8
0°-90°	11357.0	82.4
90°-120°	1317.1	9.6
90°-150°	2188.7	15.9
90°-180°	2421.0	17.6
0°-180°	13778.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3665	3665	3665	3665	3665	
5°	3686	3678	3626	3643	3657	350
15°	3528	3507	3494	3519	3534	993
25°	3190	3219	3213	3250	3268	1472
35°	2788	2798	2824	2905	2952	1731
45°	2263	2327	2397	2555	2570	1750
55°	1743	1799	1965	2124	2187	1550
65°	1186	1276	1482	1680	1729	1169
75°	625	769	1009	1217	1274	660
85°	154	337	590	789	863	169
90°	6	204	450	643	713	13
95°	18	214	450	635	701	18
105°	62	236	458	627	686	66
115°	113	255	448	596	654	112
125°	162	263	434	553	604	142
135°	187	253	403	500	541	145
145°	202	234	331	440	471	128
155°	222	234	271	341	386	103
165°	265	257	249	247	310	74
175°	292	280	251	208	127	27
180°	242	242	242	242	242	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3664.8	3664.8	3664.8	3664.8	3664.8
2.5°	3692.1	3662.9	3631.7	3678.5	3676.5
5°	3686.2	3678.5	3625.9	3643.4	3657.0
7.5°	3659.0	3639.5	3608.4	3651.2	3647.3
10°	3622.0	3598.6	3567.5	3592.8	3610.3
12.5°	3581.1	3561.6	3540.2	3567.5	3579.1
15°	3528.5	3507.1	3493.5	3518.8	3534.4
17.5°	3460.4	3454.5	3456.5	3458.4	3483.7
20°	3372.7	3376.6	3382.5	3417.5	3425.3
22.5°	3283.2	3304.6	3289.0	3343.5	3339.6
25°	3189.7	3218.9	3213.1	3250.1	3267.6
27.5°	3106.0	3107.9	3142.9	3195.5	3189.7
30°	2995.0	3028.1	3024.2	3088.4	3088.4
32.5°	2882.0	2930.7	2946.3	3002.7	3022.2
35°	2788.5	2798.3	2823.6	2905.4	2952.1
37.5°	2636.6	2683.4	2724.3	2831.4	2848.9
40°	2508.1	2554.9	2628.9	2753.5	2743.8
42.5°	2397.1	2445.8	2500.3	2644.4	2679.5
45°	2262.8	2327.0	2397.1	2554.9	2570.4
47.5°	2153.7	2204.3	2295.9	2440.0	2459.4
50°	1999.9	2081.7	2181.0	2348.4	2377.7
52.5°	1863.6	1933.7	2060.2	2233.6	2299.8
55°	1742.8	1799.3	1964.8	2124.5	2186.8
57.5°	1594.8	1672.7	1846.0	2023.2	2079.7
60°	1464.4	1540.3	1707.8	1910.3	1955.1
62.5°	1326.1	1415.7	1596.8	1793.5	1844.1
65°	1185.9	1275.5	1481.9	1680.5	1729.2
67.5°	1034.0	1145.0	1355.3	1561.7	1612.4
70°	891.9	1012.6	1238.5	1444.9	1495.5
72.5°	763.3	893.8	1123.6	1335.9	1390.4
75°	625.1	769.2	1008.7	1217.1	1273.5
77.5°	490.7	646.5	889.9	1100.2	1166.4
80°	360.3	531.6	786.7	989.2	1059.3
82.5°	253.1	428.4	691.3	889.9	954.2
85°	153.8	336.9	590.0	788.7	862.7
87.5°	68.2	260.9	510.2	706.9	773.1
90°	5.8	204.5	449.8	642.6	712.7
92.5°	11.7	208.4	447.9	634.8	704.9
95°	17.5	214.2	449.8	634.8	701.0
97.5°	25.3	222.0	453.7	634.8	699.1
100°	37.0	225.9	455.7	634.8	699.1
102.5°	48.7	231.7	453.7	625.1	691.3
105°	62.3	235.6	457.6	627.0	685.5
107.5°	75.9	239.5	457.6	617.3	683.5
110°	89.6	245.4	453.7	611.5	675.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	101.3	251.2	451.8	599.8	662.1
115°	112.9	255.1	447.9	595.9	654.3
117.5°	124.6	257.0	445.9	586.1	642.6
120°	134.4	260.9	442.0	574.5	636.8
122.5°	146.0	262.9	436.2	562.8	625.1
125°	161.6	262.9	434.2	553.0	603.7
127.5°	169.4	264.8	426.5	541.4	593.9
130°	177.2	259.0	422.6	527.7	578.3
132.5°	183.0	257.0	412.8	514.1	558.9
135°	186.9	253.1	403.1	500.5	541.4
137.5°	192.8	247.3	389.5	490.7	529.7
140°	196.7	243.4	370.0	471.2	510.2
142.5°	200.6	237.6	350.5	453.7	490.7
145°	202.5	233.7	331.0	440.1	471.2
147.5°	208.4	227.8	319.4	422.6	449.8
150°	206.4	223.9	301.8	401.1	428.4
152.5°	212.3	229.8	286.3	371.9	410.9
155°	222.0	233.7	270.7	340.8	385.6
157.5°	231.7	241.5	259.0	313.5	366.1
160°	245.4	245.4	245.4	292.1	350.5
162.5°	253.1	253.1	247.3	266.8	329.1
165°	264.8	257.0	249.3	247.3	309.6
167.5°	276.5	260.9	253.1	239.5	296.0
170°	278.5	266.8	251.2	225.9	286.3
172.5°	286.3	272.6	249.3	214.2	222.0
175°	292.1	280.4	251.2	208.4	126.6
177.5°	290.1	280.4	257.0	208.4	122.7
180°	241.5	241.5	241.5	241.5	241.5



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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	16.66	17.99	17.27	18.61	19.33	19.25	20.58	19.86	21.20	21.92
	3H	18.09	19.30	18.72	19.93	20.68	21.65	22.85	22.27	23.49	24.24
	4H	18.56	19.70	19.20	20.35	21.11	22.79	23.93	23.44	24.58	25.35
	6H	18.82	19.88	19.48	20.54	21.32	23.95	25.01	24.61	25.67	26.45
	8H	18.87	19.89	19.54	20.57	21.35	24.53	25.55	25.20	26.23	27.01
	12H	18.89	19.86	19.56	20.54	21.35	25.16	26.14	25.84	26.81	27.62
4H	2H	17.55	18.69	18.19	19.34	20.10	19.59	20.73	20.24	21.38	22.15
	3H	19.20	20.17	19.86	20.86	21.64	22.20	23.17	22.86	23.86	24.64
	4H	19.78	20.67	20.46	21.36	22.17	23.50	24.39	24.18	25.08	25.90
	6H	20.15	20.94	20.85	21.65	22.47	24.83	25.61	25.53	26.33	27.15
	8H	20.25	20.98	20.94	21.69	22.53	25.51	26.24	26.21	26.96	27.79
	12H	20.29	20.95	21.01	21.69	22.53	26.25	26.92	26.97	27.65	28.49
8H	4H	20.42	21.15	21.12	21.87	22.70	23.65	24.39	24.35	25.10	25.94
	6H	20.95	21.57	21.68	22.33	23.16	25.13	25.75	25.86	26.50	27.34
	8H	21.12	21.68	21.86	22.44	23.29	25.92	26.48	26.66	27.24	28.09
	12H	21.23	21.72	21.97	22.47	23.38	26.82	27.32	27.57	28.07	28.98
12H	4H	20.58	21.25	21.30	21.99	22.83	23.64	24.31	24.37	25.05	25.89
	6H	21.21	21.77	21.95	22.52	23.37	25.14	25.70	25.88	26.46	27.31
	8H	21.45	21.95	22.20	22.70	23.61	25.99	26.49	26.74	27.24	28.15