

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: P894696

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

Issue Date: 11/11/2024

**Test Information**

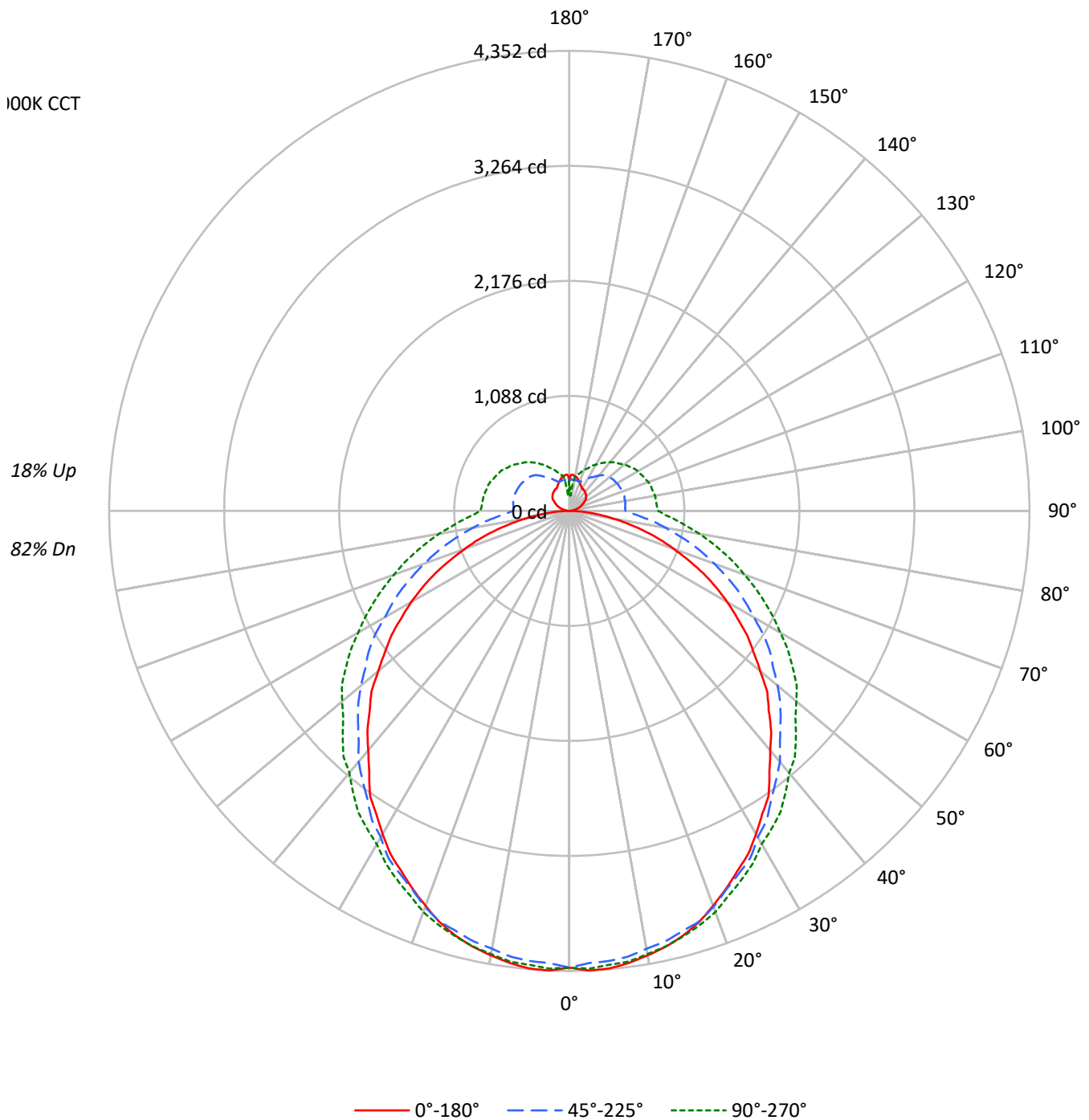
Test Method: LM-79-2019  
Report Number: P894696  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-FLTU-UNV-L850  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 50  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16242.0 lumens  
Efficiency: N/A  
Efficacy: 140.3 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 (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	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°	15329	15329	15329
5°	15442	14702	14652
10°	15313	14140	13983
15°	15173	13643	13345
20°	14871	13118	12711
25°	14543	12469	12011
30°	14250	11833	11331
35°	13983	11227	10894
40°	13401	10707	10263
45°	13044	10086	9822
50°	12621	9565	9360
55°	12252	9070	8946
60°	11720	8389	8391
65°	11115	7841	7869
70°	10177	7160	7300
75°	9205	6482	6759
80°	7559	5739	6212
85°	5684	5021	5700

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13044 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	409.2	2.5
10°-20°	1168.6	7.2
20°-30°	1755.4	10.8
30°-40°	2103.9	13.0
40°-50°	2205.7	13.6
50°-60°	2069.2	12.7
60°-70°	1718.6	10.6
70°-80°	1228.8	7.6
80°-90°	728.8	4.5
90°-100°	534.6	3.3
100°-110°	526.7	3.2
110°-120°	491.3	3.0
120°-130°	431.1	2.7
130°-140°	347.2	2.1
140°-150°	249.2	1.5
150°-160°	158.4	1.0
160°-170°	87.8	0.5
170°-180°	27.6	0.2
0°-30°	3333.2	20.5
0°-40°	5437.0	33.5
0°-60°	9711.9	59.8
0°-90°	13388.1	82.4
90°-120°	1552.6	9.6
90°-150°	2580.2	15.9
90°-180°	2854.0	17.6
0°-180°	16242.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4320	4320	4320	4320	4320	
5°	4346	4336	4274	4295	4311	412
15°	4160	4134	4118	4148	4166	1171
25°	3760	3794	3788	3831	3852	1735
35°	3287	3299	3329	3425	3480	2040
45°	2667	2743	2826	3012	3030	2063
55°	2054	2121	2316	2504	2578	1828
65°	1398	1504	1747	1981	2038	1378
75°	737	907	1189	1435	1501	779
85°	181	397	696	930	1017	199
90°	7	241	530	758	840	15
95°	21	252	530	748	826	22
105°	74	278	540	739	808	78
115°	133	301	528	702	771	132
125°	190	310	512	652	712	167
135°	220	298	475	590	638	171
145°	239	276	390	519	556	150
155°	262	276	319	402	454	121
165°	312	303	294	292	365	88
175°	344	331	296	246	149	32
180°	285	285	285	285	285	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4320.2	4320.2	4320.2	4320.2	4320.2
2.5°	4352.4	4317.9	4281.2	4336.3	4334.0
5°	4345.5	4336.3	4274.3	4295.0	4311.0
7.5°	4313.3	4290.4	4253.7	4304.2	4299.6
10°	4269.7	4242.2	4205.5	4235.3	4256.0
12.5°	4221.5	4198.6	4173.3	4205.5	4219.2
15°	4159.5	4134.3	4118.2	4148.1	4166.4
17.5°	4079.2	4072.3	4074.6	4076.9	4106.7
20°	3975.9	3980.5	3987.4	4028.7	4037.9
22.5°	3870.3	3895.6	3877.2	3941.5	3936.9
25°	3760.1	3794.5	3787.7	3831.3	3851.9
27.5°	3661.4	3663.7	3705.0	3767.0	3760.1
30°	3530.6	3569.6	3565.0	3640.7	3640.7
32.5°	3397.4	3454.8	3473.2	3539.7	3562.7
35°	3287.2	3298.7	3328.6	3425.0	3480.1
37.5°	3108.2	3163.3	3211.5	3337.7	3358.4
40°	2956.7	3011.8	3099.0	3245.9	3234.4
42.5°	2825.8	2883.2	2947.5	3117.4	3158.7
45°	2667.4	2743.2	2825.8	3011.8	3030.1
47.5°	2538.9	2598.6	2706.5	2876.3	2899.3
50°	2357.5	2453.9	2571.0	2768.4	2802.9
52.5°	2196.8	2279.5	2428.7	2633.0	2711.0
55°	2054.5	2121.1	2316.2	2504.4	2577.9
57.5°	1880.1	1971.9	2176.2	2385.1	2451.6
60°	1726.3	1815.8	2013.2	2251.9	2304.7
62.5°	1563.3	1668.9	1882.4	2114.2	2173.9
65°	1398.0	1503.6	1746.9	1981.1	2038.5
67.5°	1218.9	1349.8	1597.7	1841.0	1900.7
70°	1051.4	1193.7	1460.0	1703.3	1763.0
72.5°	899.9	1053.7	1324.5	1574.7	1639.0
75°	736.9	906.7	1189.1	1434.7	1501.3
77.5°	578.5	762.1	1049.1	1297.0	1375.0
80°	424.7	626.7	927.4	1166.1	1248.8
82.5°	298.4	505.0	814.9	1049.1	1124.8
85°	181.3	397.1	695.6	929.7	1016.9
87.5°	80.3	307.6	601.4	833.3	911.3
90°	6.9	241.0	530.3	757.5	840.2
92.5°	13.8	245.6	528.0	748.3	831.0
95°	20.7	252.5	530.3	748.3	826.4
97.5°	29.8	261.7	534.9	748.3	824.1
100°	43.6	266.3	537.2	748.3	824.1
102.5°	57.4	273.2	534.9	736.9	814.9
105°	73.5	277.8	539.5	739.2	808.0
107.5°	89.5	282.4	539.5	727.7	805.7
110°	105.6	289.2	534.9	720.8	796.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	119.4	296.1	532.6	707.0	780.5
115°	133.1	300.7	528.0	702.4	771.3
117.5°	146.9	303.0	525.7	691.0	757.5
120°	158.4	307.6	521.1	677.2	750.6
122.5°	172.2	309.9	514.2	663.4	736.9
125°	190.5	309.9	511.9	651.9	711.6
127.5°	199.7	312.2	502.7	638.2	700.1
130°	208.9	305.3	498.1	622.1	681.8
132.5°	215.8	303.0	486.7	606.0	658.8
135°	220.4	298.4	475.2	590.0	638.2
137.5°	227.3	291.5	459.1	578.5	624.4
140°	231.9	286.9	436.2	555.5	601.4
142.5°	236.4	280.1	413.2	534.9	578.5
145°	238.7	275.5	390.2	518.8	555.5
147.5°	245.6	268.6	376.5	498.1	530.3
150°	243.3	264.0	355.8	472.9	505.0
152.5°	250.2	270.9	337.4	438.5	484.4
155°	261.7	275.5	319.1	401.7	454.5
157.5°	273.2	284.6	305.3	369.6	431.6
160°	289.2	289.2	289.2	344.3	413.2
162.5°	298.4	298.4	291.5	314.5	387.9
165°	312.2	303.0	293.8	291.5	365.0
167.5°	326.0	307.6	298.4	282.4	348.9
170°	328.3	314.5	296.1	266.3	337.4
172.5°	337.4	321.4	293.8	252.5	261.7
175°	344.3	330.6	296.1	245.6	149.2
177.5°	342.0	330.6	303.0	245.6	144.6
180°	284.6	284.6	284.6	284.6	284.6



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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	17.23	18.56	17.84	19.19	19.90	19.82	21.15	20.43	21.78	22.49
	3H	18.66	19.87	19.29	20.50	21.25	22.22	23.43	22.85	24.06	24.81
	4H	19.13	20.27	19.77	20.92	21.68	23.36	24.51	24.01	25.16	25.92
	6H	19.39	20.45	20.05	21.12	21.89	24.52	25.58	25.18	26.24	27.02
	8H	19.45	20.46	20.11	21.14	21.93	25.10	26.12	25.77	26.80	27.58
	12H	19.46	20.43	20.14	21.11	21.92	25.74	26.71	26.41	27.38	28.20
4H	2H	18.12	19.26	18.76	19.91	20.67	20.16	21.31	20.81	21.96	22.72
	3H	19.77	20.74	20.43	21.43	22.21	22.77	23.74	23.43	24.43	25.21
	4H	20.35	21.24	21.03	21.93	22.74	24.08	24.96	24.75	25.66	26.47
	6H	20.73	21.51	21.42	22.22	23.04	25.40	26.18	26.10	26.90	27.72
	8H	20.82	21.55	21.52	22.27	23.10	26.08	26.81	26.78	27.53	28.36
	12H	20.86	21.52	21.58	22.26	23.10	26.82	27.49	27.54	28.23	29.07
8H	4H	20.99	21.72	21.69	22.44	23.27	24.23	24.96	24.92	25.67	26.51
	6H	21.52	22.14	22.25	22.90	23.74	25.70	26.32	26.43	27.07	27.91
	8H	21.69	22.25	22.43	23.01	23.86	26.50	27.05	27.24	27.81	28.66
	12H	21.80	22.29	22.54	23.04	23.95	27.39	27.89	28.14	28.64	29.55
12H	4H	21.15	21.82	21.87	22.56	23.40	24.22	24.88	24.94	25.62	26.46
	6H	21.78	22.34	22.52	23.09	23.95	25.72	26.27	26.46	27.03	27.88
	8H	22.02	22.52	22.77	23.27	24.18	26.56	27.06	27.31	27.81	28.72