

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: P894747

Luminaire Tested: 8TMB-16HL-RNDU-UNV-L940

Issue Date: 11/11/2024

**Test Information**

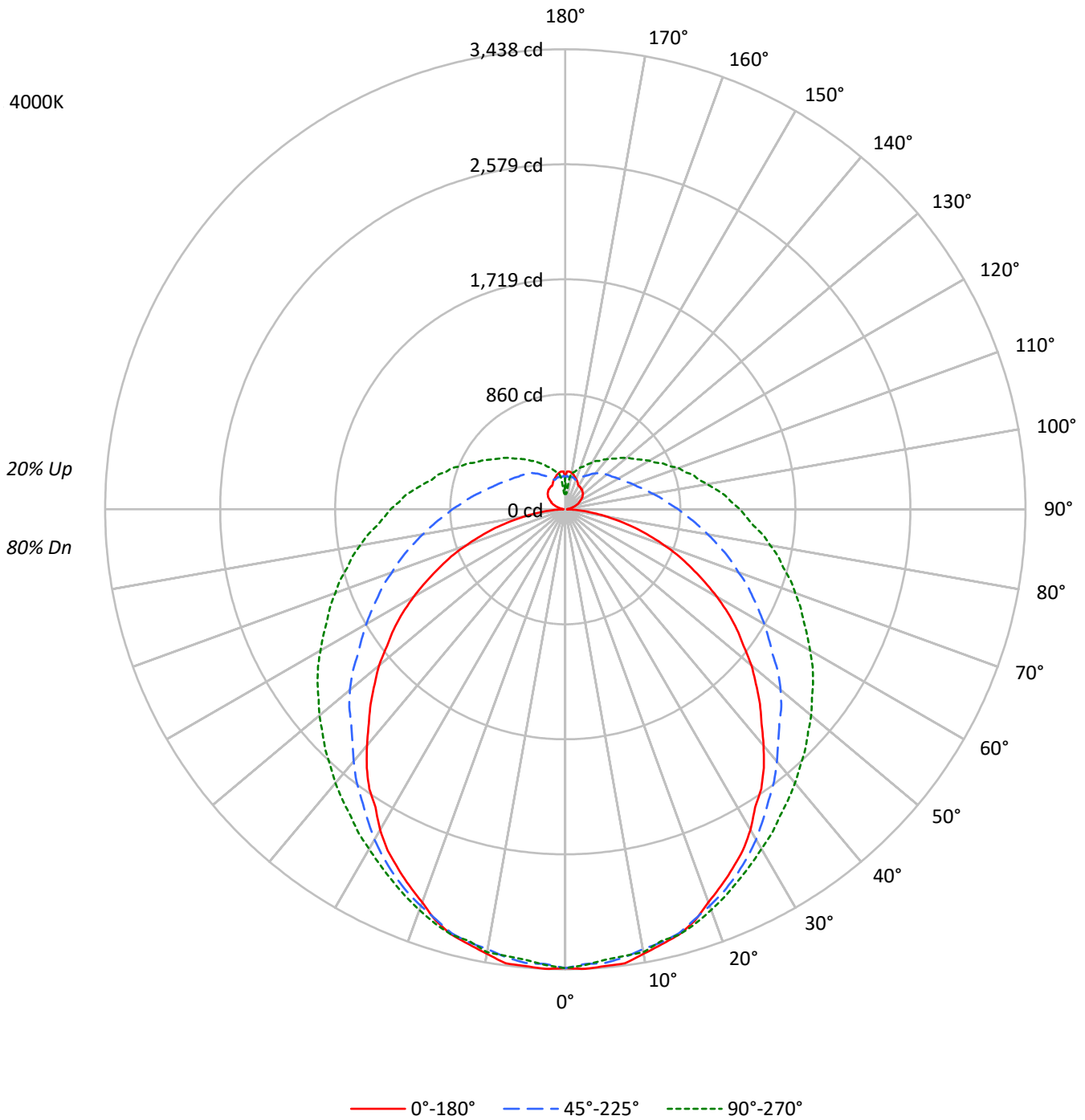
Test Method: LM-79-2019  
Report Number: P894747  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-RNDU-UNV-L940  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14419.0 lumens  
Efficiency: N/A  
Efficacy: 124.5 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	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°	12170	12170	12170
5°	12175	11705	11488
10°	12095	11223	11042
15°	12001	10868	10544
20°	11688	10375	10031
25°	11449	9939	9547
30°	11165	9462	9123
35°	10853	8942	8755
40°	10442	8497	8473
45°	10056	8072	8221
50°	9725	7815	8007
55°	9335	7407	7842
60°	8869	7154	7690
65°	8281	6931	7575
70°	7631	6755	7570
75°	6782	6703	7592
80°	5531	6695	7739
85°	3969	6882	7914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10056 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	324.7	2.3
10°-20°	927.8	6.4
20°-30°	1393.2	9.7
30°-40°	1673.0	11.6
40°-50°	1769.6	12.3
50°-60°	1705.4	11.8
60°-70°	1513.0	10.5
70°-80°	1240.8	8.6
80°-90°	960.3	6.7
90°-100°	749.2	5.2
100°-110°	596.5	4.1
110°-120°	476.7	3.3
120°-130°	376.0	2.6
130°-140°	286.9	2.0
140°-150°	201.7	1.4
150°-160°	129.0	0.9
160°-170°	72.3	0.5
170°-180°	22.9	0.2
0°-30°	2645.7	18.3
0°-40°	4318.8	30.0
0°-60°	7793.7	54.1
0°-90°	11507.8	79.8
90°-120°	1822.4	12.6
90°-150°	2687.0	18.6
90°-180°	2911.0	20.2
0°-180°	14419.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3430	3430	3430	3430	3430	
5°	3426	3436	3403	3428	3380	326
15°	3290	3292	3280	3301	3292	924
25°	2960	3008	3019	3071	3062	1363
35°	2551	2590	2651	2760	2797	1591
45°	2056	2118	2262	2476	2536	1586
55°	1565	1644	1892	2148	2260	1397
65°	1042	1186	1544	1865	1962	1035
75°	543	781	1230	1562	1686	574
85°	127	476	953	1297	1412	143
90°	13	378	844	1174	1304	13
95°	17	313	746	1072	1199	17
105°	58	253	597	877	990	61
115°	111	248	495	716	808	108
125°	155	251	426	587	650	137
135°	182	244	382	497	535	141
145°	198	224	315	416	441	124
155°	219	230	259	326	364	101
165°	259	253	244	238	295	73
175°	284	274	244	200	127	27
180°	232	232	232	232	232	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3429.9	3429.9	3429.9	3429.9	3429.9
2.5°	3437.6	3449.1	3401.2	3429.9	3408.8
5°	3426.1	3435.7	3403.1	3428.0	3380.1
7.5°	3422.3	3418.4	3378.1	3410.8	3366.6
10°	3372.4	3385.8	3337.9	3382.0	3360.9
12.5°	3330.2	3357.0	3314.8	3349.4	3305.3
15°	3289.9	3291.8	3280.3	3301.4	3291.8
17.5°	3222.8	3240.0	3213.2	3261.1	3243.9
20°	3124.9	3178.6	3153.7	3197.8	3186.3
22.5°	3044.4	3071.2	3092.3	3142.2	3126.9
25°	2960.0	3007.9	3019.4	3071.2	3061.6
27.5°	2873.6	2894.7	2938.9	2994.5	2996.4
30°	2766.2	2789.2	2850.6	2913.9	2931.2
32.5°	2639.6	2712.5	2748.9	2844.9	2871.7
35°	2551.4	2589.7	2651.1	2760.5	2796.9
37.5°	2436.3	2480.4	2562.9	2691.4	2735.5
40°	2303.9	2369.1	2459.3	2618.5	2670.3
42.5°	2171.5	2248.3	2353.8	2539.8	2599.3
45°	2056.4	2117.8	2261.7	2476.5	2536.0
47.5°	1931.7	2006.6	2188.8	2394.1	2461.2
50°	1816.6	1893.4	2100.6	2317.3	2397.9
52.5°	1678.5	1766.8	2004.6	2229.1	2323.1
55°	1565.3	1644.0	1891.5	2148.5	2259.8
57.5°	1440.7	1528.9	1803.2	2089.0	2190.7
60°	1306.4	1417.6	1716.9	2014.2	2112.1
62.5°	1174.0	1306.4	1628.6	1941.3	2037.2
65°	1041.6	1185.5	1544.2	1864.6	1962.4
67.5°	922.7	1078.1	1467.5	1780.2	1901.0
70°	788.4	974.5	1377.3	1701.5	1828.2
72.5°	661.8	880.5	1304.5	1638.2	1764.8
75°	542.9	780.8	1229.6	1561.5	1686.2
77.5°	423.9	686.8	1151.0	1492.4	1628.6
80°	310.8	610.0	1081.9	1425.3	1555.8
82.5°	214.9	542.9	1014.8	1369.7	1492.4
85°	126.6	475.7	953.4	1296.8	1411.9
87.5°	57.5	422.0	890.1	1241.1	1354.3
90°	13.4	377.9	844.1	1174.0	1304.5
92.5°	13.4	343.4	788.4	1124.1	1243.1
95°	17.3	312.7	746.2	1072.3	1198.9
97.5°	23.0	289.7	707.9	1024.4	1135.6
100°	32.6	274.3	665.7	968.7	1078.1
102.5°	44.1	262.8	627.3	918.9	1020.5
105°	57.5	253.2	596.6	876.7	989.8
107.5°	71.0	249.4	565.9	836.4	932.3
110°	84.4	247.5	542.9	794.2	901.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	97.8	245.5	517.9	755.8	842.1
115°	111.3	247.5	494.9	715.5	807.6
117.5°	118.9	247.5	473.8	681.0	757.7
120°	130.4	249.4	458.5	644.6	725.1
122.5°	142.0	249.4	443.1	617.7	688.7
125°	155.4	251.3	425.9	587.0	650.3
127.5°	163.1	251.3	416.3	565.9	623.5
130°	170.7	249.4	402.8	539.0	598.5
132.5°	178.4	245.5	395.2	514.1	569.7
135°	182.2	243.6	381.7	496.8	535.2
137.5°	188.0	237.9	368.3	471.9	514.1
140°	193.7	236.0	349.1	452.7	489.2
142.5°	193.7	230.2	335.7	435.5	468.1
145°	197.6	224.4	314.6	416.3	441.2
147.5°	201.4	222.5	299.3	397.1	427.8
150°	201.4	220.6	285.8	376.0	404.8
152.5°	205.3	222.5	272.4	356.8	383.7
155°	218.7	230.2	259.0	326.1	364.5
157.5°	230.2	237.9	245.5	303.1	343.4
160°	239.8	243.6	234.0	280.1	333.8
162.5°	247.5	249.4	236.0	259.0	312.7
165°	259.0	253.2	243.6	237.9	295.4
167.5°	268.6	257.1	247.5	232.1	282.0
170°	276.2	264.7	243.6	218.7	276.2
172.5°	282.0	266.6	245.5	205.3	232.1
175°	283.9	274.3	243.6	199.5	126.6
177.5°	282.0	276.2	251.3	197.6	113.2
180°	232.1	232.1	232.1	232.1	232.1



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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	15.75	17.06	16.39	17.73	18.49	19.24	20.55	19.88	21.21	21.98
	3H	17.20	18.40	17.85	19.07	19.87	22.11	23.31	22.76	23.98	24.78
	4H	17.67	18.81	18.34	19.50	20.31	23.59	24.73	24.26	25.42	26.23
	6H	17.95	19.01	18.63	19.71	20.53	25.20	26.27	25.89	26.96	27.79
	8H	18.01	19.03	18.70	19.74	20.57	26.06	27.08	26.76	27.80	28.63
	12H	18.03	19.00	18.73	19.71	20.57	27.01	27.99	27.71	28.70	29.56
4H	2H	16.90	18.04	17.58	18.73	19.54	19.57	20.71	20.24	21.40	22.21
	3H	18.61	19.58	19.29	20.30	21.14	22.67	23.65	23.36	24.37	25.20
	4H	19.20	20.11	19.90	20.83	21.69	24.34	25.24	25.04	25.97	26.82
	6H	19.61	20.41	20.33	21.16	22.02	26.15	26.95	26.87	27.69	28.56
	8H	19.72	20.48	20.45	21.22	22.10	27.12	27.87	27.84	28.62	29.50
	12H	19.78	20.47	20.52	21.23	22.12	28.19	28.88	28.94	29.65	30.53
8H	4H	20.25	21.01	20.98	21.75	22.63	24.52	25.27	25.24	26.01	26.89
	6H	20.90	21.54	21.65	22.33	23.21	26.50	27.14	27.25	27.93	28.81
	8H	21.12	21.70	21.89	22.49	23.39	27.62	28.20	28.38	28.99	29.88
	12H	21.27	21.79	22.04	22.57	23.52	28.88	29.40	29.65	30.18	31.13
12H	4H	20.59	21.28	21.34	22.05	22.93	24.51	25.20	25.26	25.97	26.85
	6H	21.40	21.98	22.16	22.77	23.66	26.53	27.11	27.30	27.90	28.79
	8H	21.75	22.27	22.52	23.04	24.00	27.71	28.23	28.48	29.01	29.96