

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: P894741

Luminaire Tested: 8TMB-16HL-RNDU-UNV-L830

Issue Date: 11/11/2024

**Test Information**

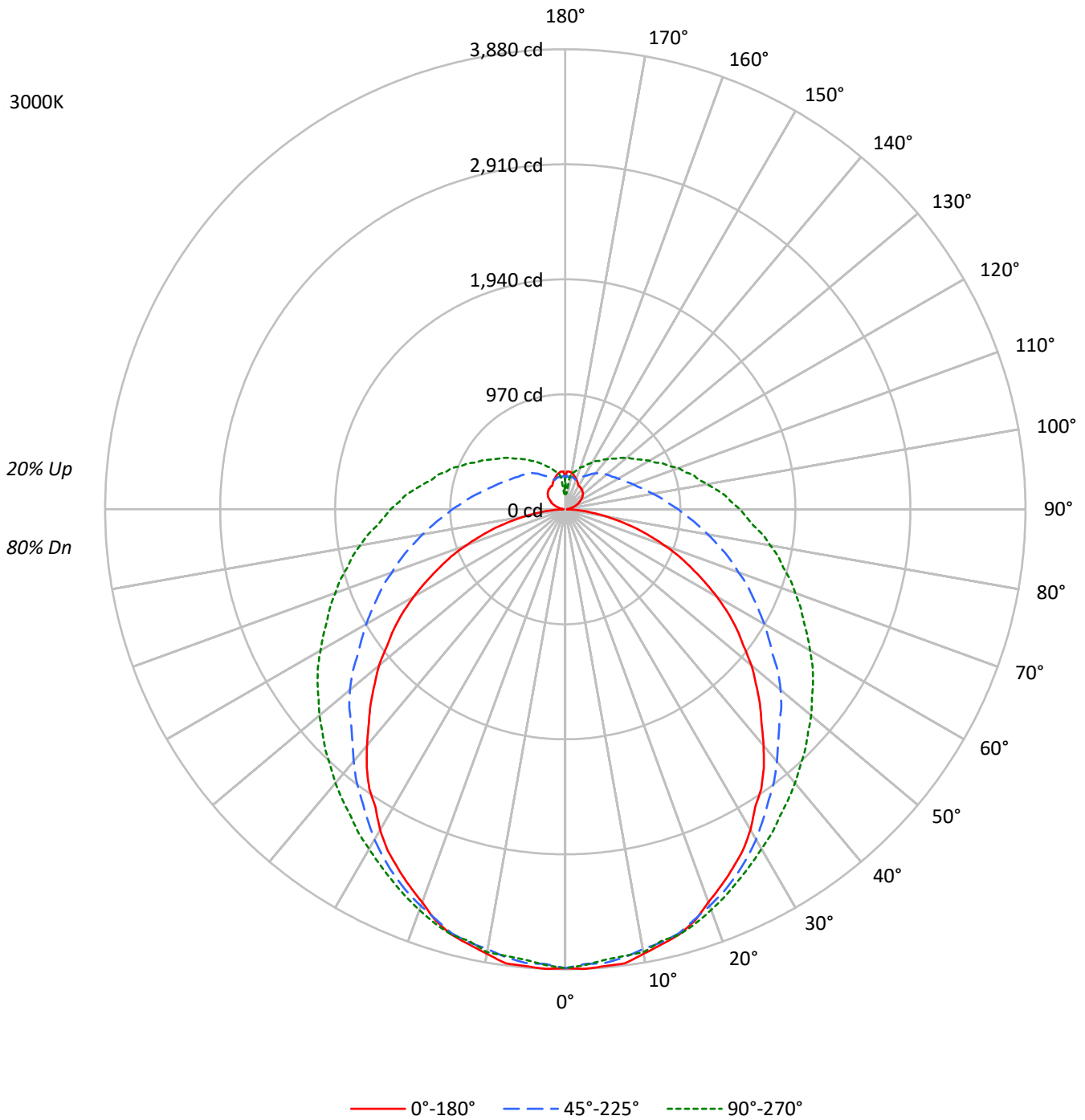
Test Method: LM-79-2019  
Report Number: P894741  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-RNDU-UNV-L830  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16273.0 lumens  
Efficiency: N/A  
Efficacy: 140.5 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 (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
RCR																				
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	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	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	16

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

	0°	45°	90°
0°	13735	13735	13735
5°	13740	13210	12965
10°	13650	12666	12462
15°	13544	12265	11900
20°	13191	11709	11320
25°	12921	11218	10774
30°	12601	10678	10296
35°	12248	10092	9881
40°	11785	9589	9562
45°	11349	9110	9278
50°	10975	8819	9037
55°	10535	8359	8850
60°	10009	8074	8678
65°	9347	7823	8549
70°	8613	7623	8543
75°	7654	7565	8568
80°	6242	7555	8734
85°	4480	7767	8931

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11349 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	366.5	2.3
10°-20°	1047.1	6.4
20°-30°	1572.3	9.7
30°-40°	1888.1	11.6
40°-50°	1997.1	12.3
50°-60°	1924.7	11.8
60°-70°	1707.5	10.5
70°-80°	1400.3	8.6
80°-90°	1083.8	6.7
90°-100°	845.6	5.2
100°-110°	673.2	4.1
110°-120°	538.0	3.3
120°-130°	424.3	2.6
130°-140°	323.8	2.0
140°-150°	227.7	1.4
150°-160°	145.6	0.9
160°-170°	81.6	0.5
170°-180°	25.9	0.2
0°-30°	2985.9	18.3
0°-40°	4874.1	30.0
0°-60°	8795.8	54.1
0°-90°	12987.6	79.8
90°-120°	2056.7	12.6
90°-150°	3032.5	18.6
90°-180°	3285.0	20.2
0°-180°	16273.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3871	3871	3871	3871	3871	
5°	3867	3878	3841	3869	3815	368
15°	3713	3715	3702	3726	3715	1043
25°	3340	3395	3408	3466	3455	1539
35°	2879	2923	2992	3115	3156	1795
45°	2321	2390	2552	2795	2862	1790
55°	1767	1855	2135	2425	2550	1576
65°	1176	1338	1743	2104	2215	1169
75°	613	881	1388	1762	1903	648
85°	143	537	1076	1464	1593	161
90°	15	426	953	1325	1472	15
95°	20	353	842	1210	1353	19
105°	65	286	673	989	1117	69
115°	126	279	559	808	912	122
125°	175	284	481	662	734	154
135°	206	275	431	561	604	159
145°	223	253	355	470	498	140
155°	247	260	292	368	411	114
165°	292	286	275	268	333	82
175°	320	310	275	225	143	30
180°	262	262	262	262	262	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3871.0	3871.0	3871.0	3871.0	3871.0
2.5°	3879.6	3892.6	3838.5	3871.0	3847.2
5°	3866.6	3877.5	3840.7	3868.8	3814.7
7.5°	3862.3	3858.0	3812.5	3849.3	3799.5
10°	3806.0	3821.2	3767.0	3816.8	3793.0
12.5°	3758.4	3788.7	3741.1	3780.0	3730.2
15°	3712.9	3715.1	3702.1	3725.9	3715.1
17.5°	3637.2	3656.6	3626.3	3680.5	3661.0
20°	3526.7	3587.4	3559.2	3609.0	3596.0
22.5°	3435.8	3466.1	3489.9	3546.2	3528.9
25°	3340.5	3394.7	3407.7	3466.1	3455.3
27.5°	3243.1	3266.9	3316.7	3379.5	3381.7
30°	3121.9	3147.9	3217.1	3288.6	3308.1
32.5°	2979.0	3061.3	3102.4	3210.7	3241.0
35°	2879.4	2922.7	2992.0	3115.4	3156.5
37.5°	2749.5	2799.3	2892.4	3037.5	3087.2
40°	2600.1	2673.7	2775.5	2955.2	3013.6
42.5°	2450.7	2537.3	2656.4	2866.4	2933.5
45°	2320.8	2390.1	2552.5	2795.0	2862.1
47.5°	2180.1	2264.6	2470.2	2701.9	2777.7
50°	2050.2	2136.8	2370.6	2615.3	2706.2
52.5°	1894.3	1993.9	2262.4	2515.7	2621.8
55°	1766.6	1855.4	2134.7	2424.8	2550.3
57.5°	1625.9	1725.5	2035.1	2357.7	2472.4
60°	1474.3	1599.9	1937.6	2273.2	2383.6
62.5°	1325.0	1474.3	1838.1	2191.0	2299.2
65°	1175.6	1338.0	1742.8	2104.4	2214.8
67.5°	1041.4	1216.7	1656.2	2009.1	2145.5
70°	889.8	1099.8	1554.4	1920.3	2063.2
72.5°	746.9	993.7	1472.2	1848.9	1991.8
75°	612.7	881.1	1387.7	1762.3	1903.0
77.5°	478.5	775.1	1299.0	1684.3	1838.1
80°	350.7	688.5	1221.0	1608.6	1755.8
82.5°	242.5	612.7	1145.3	1545.8	1684.3
85°	142.9	536.9	1076.0	1463.5	1593.4
87.5°	64.9	476.3	1004.5	1400.7	1528.5
90°	15.2	426.5	952.6	1325.0	1472.2
92.5°	15.2	387.5	889.8	1268.7	1402.9
95°	19.5	352.9	842.2	1210.2	1353.1
97.5°	26.0	326.9	798.9	1156.1	1281.7
100°	36.8	309.6	751.2	1093.3	1216.7
102.5°	49.8	296.6	707.9	1037.0	1151.8
105°	64.9	285.8	673.3	989.4	1117.1
107.5°	80.1	281.4	638.7	943.9	1052.2
110°	95.3	279.3	612.7	896.3	1017.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	110.4	277.1	584.5	853.0	950.4
115°	125.6	279.3	558.6	807.5	911.5
117.5°	134.2	279.3	534.7	768.6	855.2
120°	147.2	281.4	517.4	727.4	818.4
122.5°	160.2	281.4	500.1	697.1	777.2
125°	175.4	283.6	480.6	662.5	733.9
127.5°	184.0	283.6	469.8	638.7	703.6
130°	192.7	281.4	454.6	608.4	675.5
132.5°	201.3	277.1	446.0	580.2	643.0
135°	205.7	275.0	430.8	560.7	604.0
137.5°	212.2	268.5	415.7	532.6	580.2
140°	218.7	266.3	394.0	510.9	552.1
142.5°	218.7	259.8	378.9	491.4	528.3
145°	223.0	253.3	355.1	469.8	497.9
147.5°	227.3	251.1	337.7	448.1	482.8
150°	227.3	249.0	322.6	424.3	456.8
152.5°	231.7	251.1	307.4	402.7	433.0
155°	246.8	259.8	292.3	368.0	411.3
157.5°	259.8	268.5	277.1	342.1	387.5
160°	270.6	275.0	264.1	316.1	376.7
162.5°	279.3	281.4	266.3	292.3	352.9
165°	292.3	285.8	275.0	268.5	333.4
167.5°	303.1	290.1	279.3	262.0	318.3
170°	311.8	298.8	275.0	246.8	311.8
172.5°	318.3	300.9	277.1	231.7	262.0
175°	320.4	309.6	275.0	225.2	142.9
177.5°	318.3	311.8	283.6	223.0	127.7
180°	262.0	262.0	262.0	262.0	262.0



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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	16.17	17.48	16.81	18.15	18.91	19.66	20.97	20.30	21.64	22.40
	3H	17.62	18.82	18.27	19.49	20.29	22.53	23.73	23.18	24.40	25.20
	4H	18.09	19.23	18.76	19.92	20.73	24.01	25.15	24.68	25.84	26.65
	6H	18.37	19.43	19.05	20.13	20.95	25.62	26.69	26.31	27.38	28.21
	8H	18.43	19.45	19.12	20.16	20.99	26.48	27.50	27.18	28.22	29.05
	12H	18.45	19.42	19.15	20.13	20.99	27.43	28.41	28.13	29.12	29.98
4H	2H	17.32	18.46	18.00	19.15	19.96	19.99	21.13	20.67	21.82	22.63
	3H	19.03	20.00	19.71	20.72	21.56	23.10	24.07	23.78	24.79	25.63
	4H	19.62	20.53	20.33	21.25	22.11	24.76	25.66	25.46	26.39	27.24
	6H	20.03	20.83	20.75	21.58	22.44	26.57	27.37	27.29	28.11	28.98
	8H	20.14	20.90	20.87	21.64	22.52	27.54	28.29	28.26	29.04	29.92
	12H	20.20	20.89	20.95	21.65	22.54	28.61	29.30	29.36	30.07	30.95
8H	4H	20.67	21.43	21.40	22.17	23.05	24.94	25.69	25.66	26.43	27.31
	6H	21.32	21.96	22.07	22.75	23.63	26.92	27.56	27.67	28.35	29.23
	8H	21.54	22.12	22.31	22.91	23.81	28.04	28.62	28.80	29.41	30.30
	12H	21.69	22.21	22.46	22.99	23.94	29.30	29.82	30.07	30.60	31.55
12H	4H	21.01	21.70	21.76	22.47	23.35	24.93	25.62	25.68	26.39	27.27
	6H	21.82	22.40	22.58	23.19	24.08	26.95	27.53	27.72	28.32	29.21
	8H	22.17	22.69	22.94	23.46	24.42	28.13	28.65	28.90	29.43	30.38