

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: P894829

Luminaire Tested: 8TMB-18HL-RND-UNV-L830

Issue Date: 11/11/2024

**Test Information**

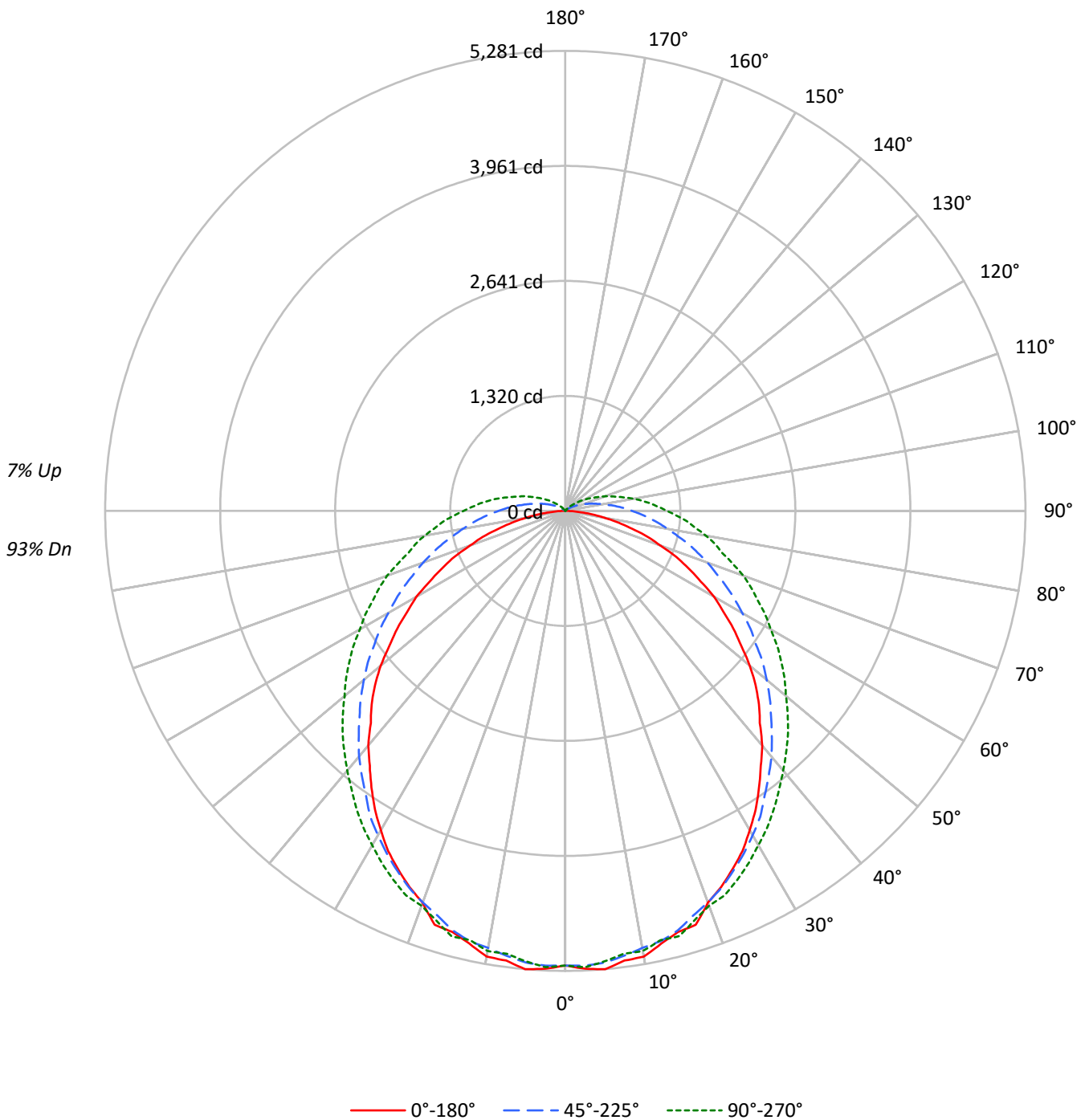
Test Method: LM-79-2019  
Report Number: P894829  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-18HL-RND-UNV-L830  
Description: 18000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17190.0 lumens  
Efficiency: N/A  
Efficacy: 127.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 134.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 8.62  
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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	60
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	21

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

	0°	45°	90°
0°	18517	18517	18517
5°	18809	18536	18486
10°	18717	18355	18484
15°	18381	18319	18565
20°	18073	18056	18209
25°	17777	17851	18291
30°	17342	17616	18154
35°	16794	17280	18086
40°	16288	17051	18024
45°	15777	16747	18136
50°	15260	16644	18252
55°	14561	16525	18726
60°	13993	16636	19313
65°	13069	17077	20484
70°	12012	18030	22563
75°	10899	19964	25560
80°	9366	24391	33512
85°	7580	39460	57340

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 104087 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	494.8	2.9
10°-20°	1408.5	8.2
20°-30°	2110.8	12.3
30°-40°	2508.3	14.6
40°-50°	2596.8	15.1
50°-60°	2406.5	14.0
60°-70°	2003.5	11.7
70°-80°	1487.0	8.7
80°-90°	983.5	5.7
90°-100°	598.5	3.5
100°-110°	335.5	2.0
110°-120°	165.2	1.0
120°-130°	67.3	0.4
130°-140°	19.5	0.1
140°-150°	2.8	0.0
150°-160°	0.7	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	4014.1	23.4
0°-40°	6522.4	37.9
0°-60°	11525.7	67.0
0°-90°	15999.7	93.1
90°-120°	1099.2	6.4
90°-150°	1188.8	6.9
90°-180°	1190.0	6.9
0°-180°	17190.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5219	5219	5219	5219	5219	
5°	5281	5224	5204	5231	5190	499
15°	5004	4985	4987	4994	5054	1417
25°	4541	4536	4560	4648	4672	2090
35°	3877	3906	3989	4116	4176	2426
45°	3144	3190	3338	3545	3614	2422
55°	2354	2454	2671	2939	3027	2105
65°	1557	1702	2034	2332	2440	1546
75°	795	1036	1456	1769	1864	851
85°	186	523	969	1313	1408	209
90°	10	339	766	1072	1167	14
95°	2	210	594	886	984	2
105°	2	69	322	547	623	3
115°	2	17	150	301	360	2
125°	2	5	55	138	177	2
135°	5	2	14	45	62	3
145°	5	2	0	5	7	3
155°	5	5	0	0	0	2
165°	7	5	0	0	0	2
175°	7	5	0	0	0	1
180°	2	2	2	2	2	



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CATALOG NUMBER: 8TMB-18HL-RND-UNV-L830

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5218.7	5218.7	5218.7	5218.7	5218.7
2.5°	5261.7	5235.5	5225.9	5214.0	5242.6
5°	5280.8	5223.5	5204.4	5230.7	5190.1
7.5°	5206.8	5192.5	5151.9	5166.2	5128.0
10°	5194.9	5116.1	5094.6	5142.3	5130.4
12.5°	5087.4	5020.6	5058.8	5092.2	5046.9
15°	5003.9	4984.8	4987.2	4994.3	5054.0
17.5°	4982.4	4896.4	4872.6	4932.3	4927.5
20°	4786.6	4769.9	4781.9	4860.6	4822.4
22.5°	4672.0	4619.5	4684.0	4760.4	4777.1
25°	4540.7	4536.0	4559.8	4648.2	4672.0
27.5°	4402.3	4371.2	4435.7	4538.3	4557.4
30°	4232.8	4220.8	4299.6	4387.9	4430.9
32.5°	4065.7	4072.8	4163.5	4237.5	4311.5
35°	3877.1	3905.7	3989.3	4115.8	4175.5
37.5°	3686.1	3721.9	3834.1	3979.7	4029.8
40°	3516.6	3523.7	3681.3	3829.3	3891.4
42.5°	3304.1	3375.7	3509.4	3705.2	3752.9
45°	3144.1	3189.5	3337.5	3545.2	3614.4
47.5°	2962.7	3015.2	3184.7	3387.6	3461.7
50°	2764.5	2812.3	3015.2	3246.8	3306.5
52.5°	2544.9	2642.8	2855.3	3094.0	3172.8
55°	2353.9	2454.2	2671.4	2938.8	3027.2
57.5°	2148.6	2248.9	2521.0	2769.3	2883.9
60°	1971.9	2067.4	2344.4	2652.3	2721.6
62.5°	1752.3	1888.4	2189.2	2492.4	2590.3
65°	1556.6	1702.2	2034.0	2332.4	2439.9
67.5°	1377.5	1527.9	1874.1	2194.0	2311.0
70°	1157.9	1356.0	1738.0	2053.1	2174.9
72.5°	995.5	1193.7	1592.4	1905.1	2014.9
75°	795.0	1036.1	1456.3	1769.0	1864.5
77.5°	627.9	888.1	1315.4	1666.4	1761.9
80°	458.4	754.4	1193.7	1530.3	1640.1
82.5°	312.7	630.3	1081.5	1403.8	1508.8
85°	186.2	522.8	969.3	1313.0	1408.5
87.5°	81.2	427.3	866.6	1181.7	1279.6
90°	9.5	339.0	766.3	1071.9	1167.4
92.5°	2.4	272.2	678.0	974.0	1067.1
95°	2.4	210.1	594.4	885.7	983.6
97.5°	2.4	162.3	510.9	795.0	888.1
100°	2.4	124.1	441.7	699.5	799.8
102.5°	2.4	93.1	374.8	620.7	706.7
105°	2.4	69.2	322.3	546.7	623.1
107.5°	2.4	50.1	269.8	477.5	553.9
110°	2.4	35.8	226.8	413.0	489.4



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CATALOG NUMBER: 8TMB-18HL-RND-UNV-L830

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.4	26.3	183.8	355.7	420.2
115°	2.4	16.7	150.4	300.8	360.5
117.5°	2.4	11.9	119.4	253.1	310.4
120°	2.4	9.5	95.5	210.1	260.2
122.5°	2.4	7.2	74.0	171.9	219.6
125°	2.4	4.8	54.9	138.5	176.7
127.5°	2.4	4.8	40.6	109.8	143.2
130°	2.4	2.4	28.6	83.6	112.2
132.5°	2.4	2.4	19.1	62.1	83.6
135°	4.8	2.4	14.3	45.4	62.1
137.5°	4.8	2.4	9.5	31.0	43.0
140°	4.8	2.4	4.8	19.1	26.3
142.5°	4.8	2.4	2.4	9.5	14.3
145°	4.8	2.4	0.0	4.8	7.2
147.5°	4.8	2.4	0.0	2.4	2.4
150°	4.8	2.4	0.0	0.0	0.0
152.5°	4.8	2.4	0.0	0.0	0.0
155°	4.8	4.8	0.0	0.0	0.0
157.5°	4.8	4.8	0.0	0.0	0.0
160°	4.8	4.8	0.0	0.0	0.0
162.5°	4.8	4.8	0.0	0.0	0.0
165°	7.2	4.8	0.0	0.0	0.0
167.5°	7.2	4.8	0.0	0.0	0.0
170°	7.2	4.8	0.0	0.0	0.0
172.5°	7.2	4.8	0.0	0.0	0.0
175°	7.2	4.8	0.0	0.0	0.0
177.5°	7.2	4.8	0.0	0.0	0.0
180°	2.4	2.4	2.4	2.4	2.4



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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	20.37	21.91	20.84	22.36	22.84	21.94	23.48	22.41	23.94	24.42
	3H	22.13	23.54	22.61	24.00	24.53	24.53	25.93	25.01	26.40	26.92
	4H	22.79	24.12	23.29	24.60	25.14	25.79	27.12	26.29	27.60	28.14
	6H	23.27	24.51	23.78	25.00	25.56	27.17	28.41	27.68	28.90	29.46
	8H	23.42	24.61	23.94	25.13	25.68	27.90	29.09	28.43	29.61	30.17
	12H	23.52	24.66	24.05	25.17	25.76	28.74	29.88	29.28	30.40	30.98
4H	2H	21.33	22.66	21.83	23.14	23.68	22.52	23.85	23.02	24.33	24.87
	3H	23.37	24.50	23.88	25.03	25.59	25.38	26.52	25.90	27.04	27.60
	4H	24.18	25.22	24.71	25.76	26.35	26.86	27.90	27.40	28.44	29.03
	6H	24.83	25.75	25.38	26.31	26.92	28.48	29.40	29.03	29.96	30.57
	8H	25.06	25.92	25.62	26.48	27.10	29.34	30.20	29.90	30.77	31.38
	12H	25.22	26.01	25.81	26.60	27.23	30.33	31.12	30.91	31.71	32.33
8H	4H	25.03	25.89	25.59	26.45	27.07	27.23	28.10	27.79	28.66	29.28
	6H	25.95	26.69	26.54	27.29	27.92	29.11	29.85	29.70	30.45	31.07
	8H	26.33	27.00	26.94	27.61	28.25	30.17	30.84	30.77	31.45	32.09
	12H	26.65	27.25	27.26	27.85	28.55	31.43	32.02	32.03	32.62	33.33
12H	4H	25.29	26.08	25.87	26.67	27.29	27.28	28.06	27.86	28.65	29.28
	6H	26.37	27.04	26.98	27.65	28.29	29.22	29.89	29.82	30.50	31.14
	8H	26.91	27.51	27.52	28.11	28.81	30.40	30.99	31.00	31.59	32.30