

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: P894832

Luminaire Tested: 8TMB-18HL-RND-UNV-L850

Issue Date: 11/11/2024

**Test Information**

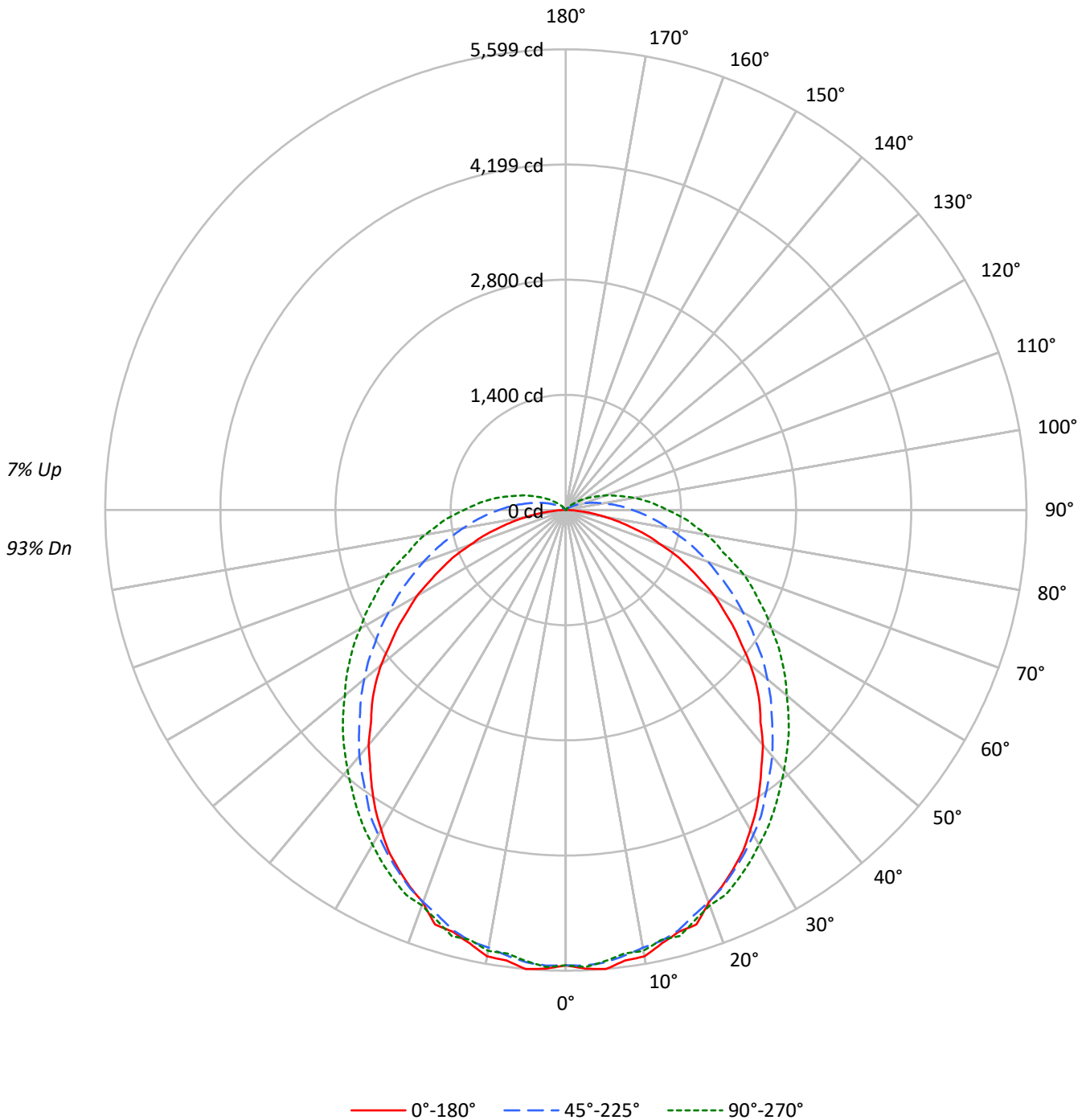
Test Method: LM-79-2019  
Report Number: P894832  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-18HL-RND-UNV-L850  
Description: 18000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18227.0 lumens  
Efficiency: N/A  
Efficacy: 135.2 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 (Ain): 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

TEST NUMBER: P894832  
CATALOG NUMBER: 8TMB-18HL-RND-UNV-L850

### Luminous Intensity Polar Plot



TEST NUMBER: P894832  
 CATALOG NUMBER: 8TMB-18HL-RND-UNV-L850

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	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	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	63	60
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

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

	0°	45°	90°
0°	19634	19634	19634
5°	19943	19655	19601
10°	19846	19462	19599
15°	19489	19424	19685
20°	19164	19145	19307
25°	18849	18928	19394
30°	18388	18678	19249
35°	17806	18322	19177
40°	17270	18080	19111
45°	16728	17757	19231
50°	16181	17648	19352
55°	15440	17522	19856
60°	14838	17640	20478
65°	13857	18107	21720
70°	12736	19117	23924
75°	11555	21168	27103
80°	9930	25862	35533
85°	8036	41838	60801

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 110366 cd/sqm



TEST NUMBER: P894832  
 CATALOG NUMBER: 8TMB-18HL-RND-UNV-L850

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	524.6	2.9
10°-20°	1493.5	8.2
20°-30°	2238.1	12.3
30°-40°	2659.6	14.6
40°-50°	2753.5	15.1
50°-60°	2551.6	14.0
60°-70°	2124.4	11.7
70°-80°	1576.7	8.7
80°-90°	1042.9	5.7
90°-100°	634.6	3.5
100°-110°	355.8	2.0
110°-120°	175.2	1.0
120°-130°	71.3	0.4
130°-140°	20.7	0.1
140°-150°	3.0	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	4256.2	23.4
0°-40°	6915.9	37.9
0°-60°	12221.0	67.0
0°-90°	16964.9	93.1
90°-120°	1165.5	6.4
90°-150°	1260.5	6.9
90°-180°	1262.0	6.9
0°-180°	18227.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5534	5534	5534	5534	5534	
5°	5599	5539	5518	5546	5503	529
15°	5306	5286	5288	5296	5359	1503
25°	4815	4810	4835	4929	4954	2216
35°	4111	4141	4230	4364	4427	2572
45°	3334	3382	3539	3759	3832	2569
55°	2496	2602	2833	3116	3210	2232
65°	1650	1805	2157	2473	2587	1640
75°	843	1099	1544	1876	1977	902
85°	197	554	1028	1392	1494	222
90°	10	360	813	1137	1238	15
95°	2	223	630	939	1043	2
105°	2	73	342	580	661	3
115°	2	18	160	319	382	2
125°	2	5	58	147	187	2
135°	5	2	15	48	66	3
145°	5	2	0	5	8	3
155°	5	5	0	0	0	2
165°	8	5	0	0	0	2
175°	8	5	0	0	0	1
180°	2	2	2	2	2	



TEST NUMBER: P894832

CATALOG NUMBER: 8TMB-18HL-RND-UNV-L850

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5533.6	5533.6	5533.6	5533.6	5533.6
2.5°	5579.1	5551.3	5541.2	5528.5	5558.9
5°	5599.4	5538.6	5518.4	5546.2	5503.2
7.5°	5520.9	5505.7	5462.7	5477.9	5437.4
10°	5508.3	5424.7	5401.9	5452.6	5439.9
12.5°	5394.3	5323.5	5364.0	5399.4	5351.3
15°	5305.7	5285.5	5288.0	5295.6	5358.9
17.5°	5283.0	5191.8	5166.5	5229.8	5224.7
20°	5075.4	5057.7	5070.3	5153.9	5113.4
22.5°	4953.9	4898.2	4966.5	5047.5	5065.3
25°	4814.7	4809.6	4834.9	4928.6	4953.9
27.5°	4667.8	4634.9	4703.3	4812.1	4832.4
30°	4488.1	4475.5	4559.0	4652.6	4698.2
32.5°	4310.9	4318.5	4414.7	4493.2	4571.6
35°	4110.9	4141.3	4229.9	4364.1	4427.4
37.5°	3908.4	3946.4	4065.4	4219.8	4272.9
40°	3728.7	3736.3	3903.4	4060.3	4126.1
42.5°	3503.4	3579.4	3721.1	3928.7	3979.3
45°	3333.8	3381.9	3538.8	3759.1	3832.5
47.5°	3141.4	3197.1	3376.8	3592.0	3670.5
50°	2931.3	2981.9	3197.1	3442.7	3505.9
52.5°	2698.4	2802.2	3027.5	3280.6	3364.2
55°	2495.9	2602.2	2832.6	3116.1	3209.8
57.5°	2278.2	2384.5	2673.1	2936.4	3057.9
60°	2090.9	2192.2	2485.8	2812.3	2885.8
62.5°	1858.0	2002.3	2321.3	2642.7	2746.5
65°	1650.5	1804.9	2156.7	2473.1	2587.1
67.5°	1460.6	1620.1	1987.1	2326.3	2450.4
70°	1227.7	1437.8	1842.8	2177.0	2306.1
72.5°	1055.6	1265.7	1688.4	2020.0	2136.5
75°	842.9	1098.6	1544.1	1875.7	1977.0
77.5°	665.7	941.7	1394.8	1766.9	1868.1
80°	486.0	799.9	1265.7	1622.6	1739.0
82.5°	331.6	668.3	1146.7	1488.4	1599.8
85°	197.4	554.4	1027.7	1392.3	1493.5
87.5°	86.1	453.1	918.9	1253.0	1356.8
90°	10.1	359.5	812.6	1136.6	1237.8
92.5°	2.5	288.6	718.9	1032.8	1131.5
95°	2.5	222.8	630.3	939.1	1042.9
97.5°	2.5	172.1	541.7	842.9	941.7
100°	2.5	131.6	468.3	741.7	848.0
102.5°	2.5	98.7	397.4	658.2	749.3
105°	2.5	73.4	341.7	579.7	660.7
107.5°	2.5	53.2	286.0	506.3	587.3
110°	2.5	38.0	240.5	437.9	518.9



TEST NUMBER: P894832  
 CATALOG NUMBER: 8TMB-18HL-RND-UNV-L850

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	27.8	194.9	377.2	445.5
115°	2.5	17.7	159.5	319.0	382.2
117.5°	2.5	12.7	126.6	268.3	329.1
120°	2.5	10.1	101.3	222.8	275.9
122.5°	2.5	7.6	78.5	182.3	232.9
125°	2.5	5.1	58.2	146.8	187.3
127.5°	2.5	5.1	43.0	116.4	151.9
130°	2.5	2.5	30.4	88.6	119.0
132.5°	2.5	2.5	20.3	65.8	88.6
135°	5.1	2.5	15.2	48.1	65.8
137.5°	5.1	2.5	10.1	32.9	45.6
140°	5.1	2.5	5.1	20.3	27.8
142.5°	5.1	2.5	2.5	10.1	15.2
145°	5.1	2.5	0.0	5.1	7.6
147.5°	5.1	2.5	0.0	2.5	2.5
150°	5.1	2.5	0.0	0.0	0.0
152.5°	5.1	2.5	0.0	0.0	0.0
155°	5.1	5.1	0.0	0.0	0.0
157.5°	5.1	5.1	0.0	0.0	0.0
160°	5.1	5.1	0.0	0.0	0.0
162.5°	5.1	5.1	0.0	0.0	0.0
165°	7.6	5.1	0.0	0.0	0.0
167.5°	7.6	5.1	0.0	0.0	0.0
170°	7.6	5.1	0.0	0.0	0.0
172.5°	7.6	5.1	0.0	0.0	0.0
175°	7.6	5.1	0.0	0.0	0.0
177.5°	7.6	5.1	0.0	0.0	0.0
180°	2.5	2.5	2.5	2.5	2.5



TEST NUMBER: P894832  
 CATALOG NUMBER: 8TMB-18HL-RND-UNV-L850

**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	20.57	22.11	21.04	22.57	23.05	22.15	23.68	22.62	24.14	24.62
	3H	22.34	23.74	22.82	24.20	24.73	24.73	26.14	25.21	26.60	27.12
	4H	22.99	24.32	23.49	24.81	25.34	25.99	27.32	26.49	27.80	28.34
	6H	23.47	24.71	23.99	25.21	25.76	27.37	28.61	27.89	29.11	29.66
	8H	23.62	24.81	24.15	25.33	25.89	28.10	29.29	28.63	29.81	30.37
	12H	23.72	24.86	24.25	25.37	25.96	28.95	30.09	29.48	30.60	31.19
4H	2H	21.53	22.86	22.03	23.34	23.88	22.72	24.05	23.22	24.53	25.07
	3H	23.57	24.71	24.08	25.23	25.79	25.59	26.72	26.10	27.25	27.81
	4H	24.38	25.42	24.92	25.96	26.55	27.06	28.11	27.60	28.64	29.23
	6H	25.03	25.95	25.59	26.51	27.12	28.68	29.60	29.24	30.17	30.77
	8H	25.26	26.13	25.82	26.69	27.31	29.54	30.41	30.10	30.97	31.59
	12H	25.43	26.22	26.01	26.81	27.43	30.53	31.32	31.11	31.91	32.53
8H	4H	25.23	26.10	25.79	26.66	27.28	27.44	28.30	28.00	28.86	29.48
	6H	26.15	26.89	26.75	27.49	28.12	29.31	30.05	29.91	30.65	31.28
	8H	26.54	27.20	27.14	27.82	28.45	30.37	31.04	30.98	31.65	32.29
	12H	26.86	27.45	27.46	28.05	28.76	31.63	32.23	32.24	32.83	33.53
12H	4H	25.49	26.28	26.07	26.87	27.49	27.48	28.27	28.06	28.86	29.48
	6H	26.58	27.24	27.18	27.86	28.50	29.42	30.09	30.03	30.70	31.34
	8H	27.12	27.71	27.72	28.31	29.02	30.60	31.19	31.20	31.80	32.50