

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: P894712

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

Issue Date: 11/11/2024

**Test Information**

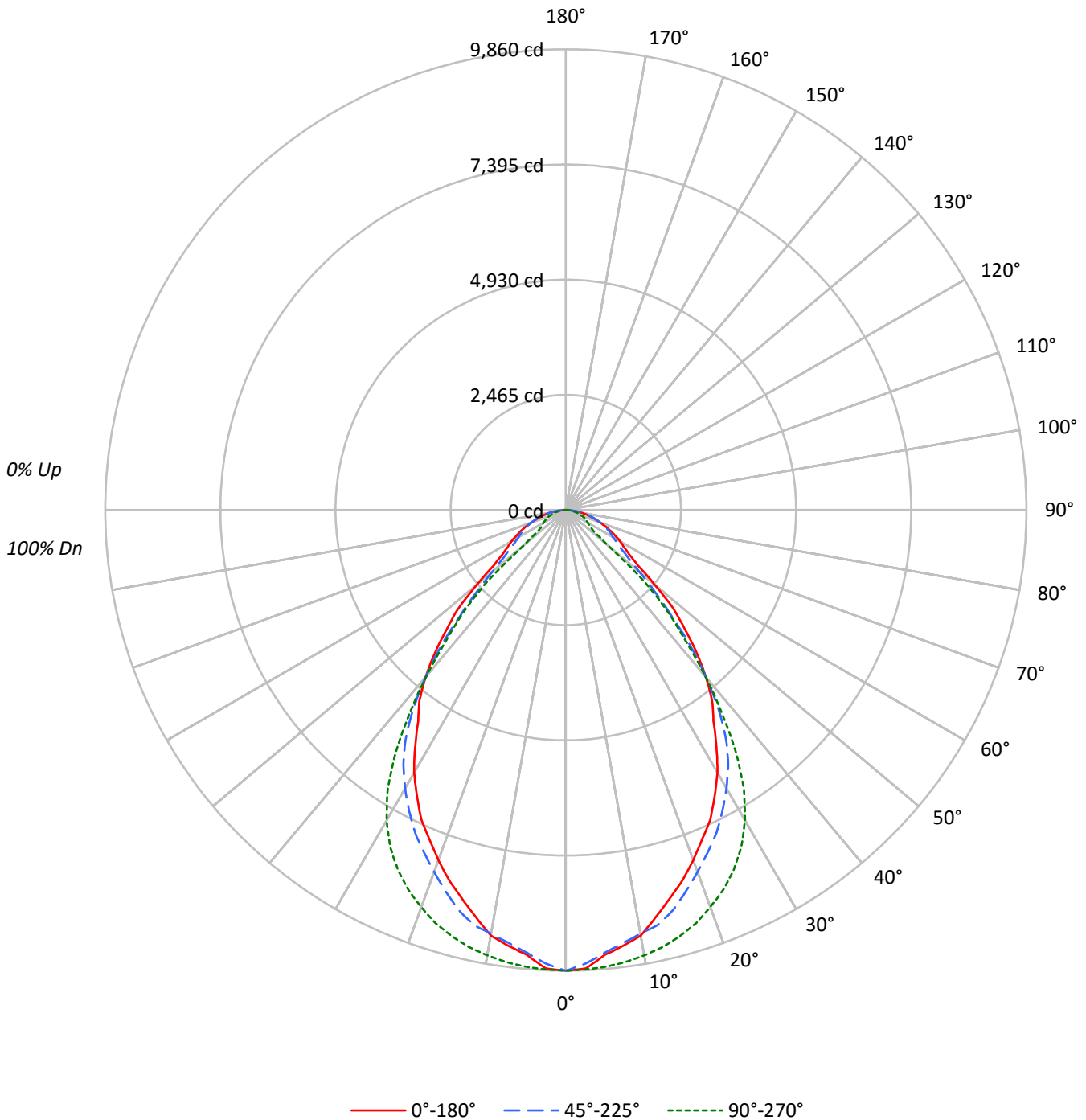
Test Method: LM-79-2019  
Report Number: P894712  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-LVRA-UNV-L850  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16003.0 lumens  
Efficiency: N/A  
Efficacy: 138.2 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12  
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')  
CIE Type: 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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CATALOG NUMBER: 8TMB-16HL-LVRA-UNV-L850

### 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	37	35

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

	0°	45°	90°
0°	34986	34986	34986
5°	34042	33888	34948
10°	33319	33172	34866
15°	31599	32570	34670
20°	30102	31119	34142
25°	28634	29857	33270
30°	26602	28185	31413
35°	23854	25901	27553
40°	21611	21659	21540
45°	18070	16004	15608
50°	13649	11264	6383
55°	10266	9008	4025
60°	9540	8296	3877
65°	8876	8278	3883
70°	8120	8120	3823
75°	7699	7909	3693
80°	7115	7478	3790
85°	6208	6518	4140

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 18490 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	910.8	5.7
10°-20°	2509.7	15.7
20°-30°	3558.8	22.2
30°-40°	3666.3	22.9
40°-50°	2560.8	16.0
50°-60°	1228.8	7.7
60°-70°	862.1	5.4
70°-80°	539.0	3.4
80°-90°	166.7	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	6979.3	43.6
0°-40°	10645.6	66.5
0°-60°	14435.2	90.2
0°-90°	16003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16003.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9860	9860	9860	9860	9860	
5°	9558	9545	9515	9764	9812	905
15°	8602	8666	8867	9121	9438	2422
25°	7314	7388	7626	8142	8498	3344
35°	5507	5657	5980	6104	6361	3470
45°	3601	3685	3189	3027	3111	2774
55°	1660	1578	1456	933	651	1555
65°	1057	989	986	750	462	1047
75°	562	554	577	498	269	591
85°	152	152	160	158	102	170
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	9860.4	9860.4	9860.4	9860.4	9860.4
2.5°	9822.2	9791.8	9718.1	9852.7	9842.6
5°	9557.9	9545.2	9514.7	9763.8	9812.1
7.5°	9408.0	9382.6	9347.0	9621.5	9756.2
10°	9247.9	9278.4	9207.2	9458.8	9677.4
12.5°	8917.5	8998.9	9095.4	9291.1	9580.8
15°	8602.4	8665.9	8866.7	9120.8	9438.5
17.5°	8307.6	8381.3	8554.1	8935.3	9273.3
20°	7972.2	8073.8	8241.5	8729.5	9042.1
22.5°	7626.5	7720.6	7931.5	8455.0	8803.2
25°	7314.0	7387.7	7626.5	8142.4	8498.2
27.5°	6899.7	7036.9	7263.1	7761.2	8134.8
30°	6493.1	6610.0	6879.4	7298.7	7667.2
32.5°	6002.6	6172.9	6470.2	6790.4	7097.9
35°	5507.1	5657.0	5979.8	6104.3	6361.0
37.5°	5146.2	5186.9	5369.8	5354.6	5499.4
40°	4665.9	4747.2	4676.1	4485.5	4650.6
42.5°	4147.5	4244.0	3956.9	3735.8	3794.2
45°	3601.1	3684.9	3189.4	3026.7	3110.6
47.5°	3128.4	3120.8	2571.8	2462.6	2345.6
50°	2472.7	2554.0	2040.7	1837.4	1156.3
52.5°	1931.4	1961.9	1682.4	1174.1	759.9
55°	1659.5	1578.2	1456.2	932.7	650.6
57.5°	1474.0	1372.3	1291.0	866.6	594.7
60°	1344.4	1230.0	1169.0	823.4	546.4
62.5°	1197.0	1108.0	1085.1	785.3	503.2
65°	1057.2	988.6	986.0	749.7	462.5
67.5°	917.4	879.3	889.5	706.5	416.8
70°	782.7	775.1	782.7	650.6	368.5
72.5°	668.4	660.7	681.1	579.4	315.1
75°	561.6	554.0	576.9	498.1	269.4
77.5°	447.3	452.4	467.6	414.2	226.2
80°	348.2	348.2	366.0	325.3	185.5
82.5°	249.1	251.6	261.8	238.9	144.9
85°	152.5	152.5	160.1	157.6	101.7
87.5°	50.8	58.5	68.6	73.7	50.8
90°	0.0	0.0	0.0	0.0	0.0



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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	18.00	19.35	18.36	19.66	19.98	14.33	15.68	14.70	16.00	16.31
	3H	19.74	20.94	20.12	21.27	21.64	16.31	17.51	16.69	17.84	18.21
	4H	20.41	21.54	20.81	21.89	22.27	17.01	18.14	17.41	18.49	18.87
	6H	20.91	21.95	21.33	22.32	22.72	17.53	18.57	17.95	18.94	19.34
	8H	21.09	22.07	21.52	22.46	22.87	17.72	18.70	18.15	19.09	19.50
	12H	21.20	22.14	21.63	22.52	22.95	17.86	18.80	18.29	19.18	19.61
4H	2H	18.53	19.66	18.93	20.01	20.39	15.95	17.08	16.35	17.43	17.81
	3H	20.51	21.44	20.92	21.84	22.24	18.13	19.06	18.54	19.46	19.87
	4H	21.31	22.14	21.74	22.56	23.00	19.01	19.85	19.44	20.26	20.71
	6H	21.95	22.68	22.41	23.12	23.59	19.65	20.38	20.11	20.82	21.29
	8H	22.17	22.85	22.64	23.29	23.76	19.86	20.54	20.33	20.98	21.45
	12H	22.32	22.92	22.81	23.41	23.88	20.02	20.62	20.51	21.10	21.58
8H	4H	21.59	22.27	22.06	22.71	23.18	19.66	20.34	20.13	20.78	21.25
	6H	22.38	22.93	22.88	23.43	23.91	20.52	21.08	21.02	21.57	22.05
	8H	22.68	23.18	23.20	23.69	24.18	20.85	21.35	21.37	21.86	22.35
	12H	22.91	23.35	23.43	23.85	24.42	21.11	21.55	21.63	22.05	22.62
12H	4H	21.61	22.21	22.09	22.69	23.16	19.73	20.33	20.22	20.81	21.29
	6H	22.43	22.93	22.95	23.44	23.93	20.66	21.16	21.18	21.67	22.16
	8H	22.79	23.23	23.31	23.73	24.30	21.07	21.51	21.58	22.01	22.58