

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: P894899

Luminaire Tested: 8TMB-20HL-LVR-UNV-L940

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P894899  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-20HL-LVR-UNV-L940  
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with LOUVER, 90CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

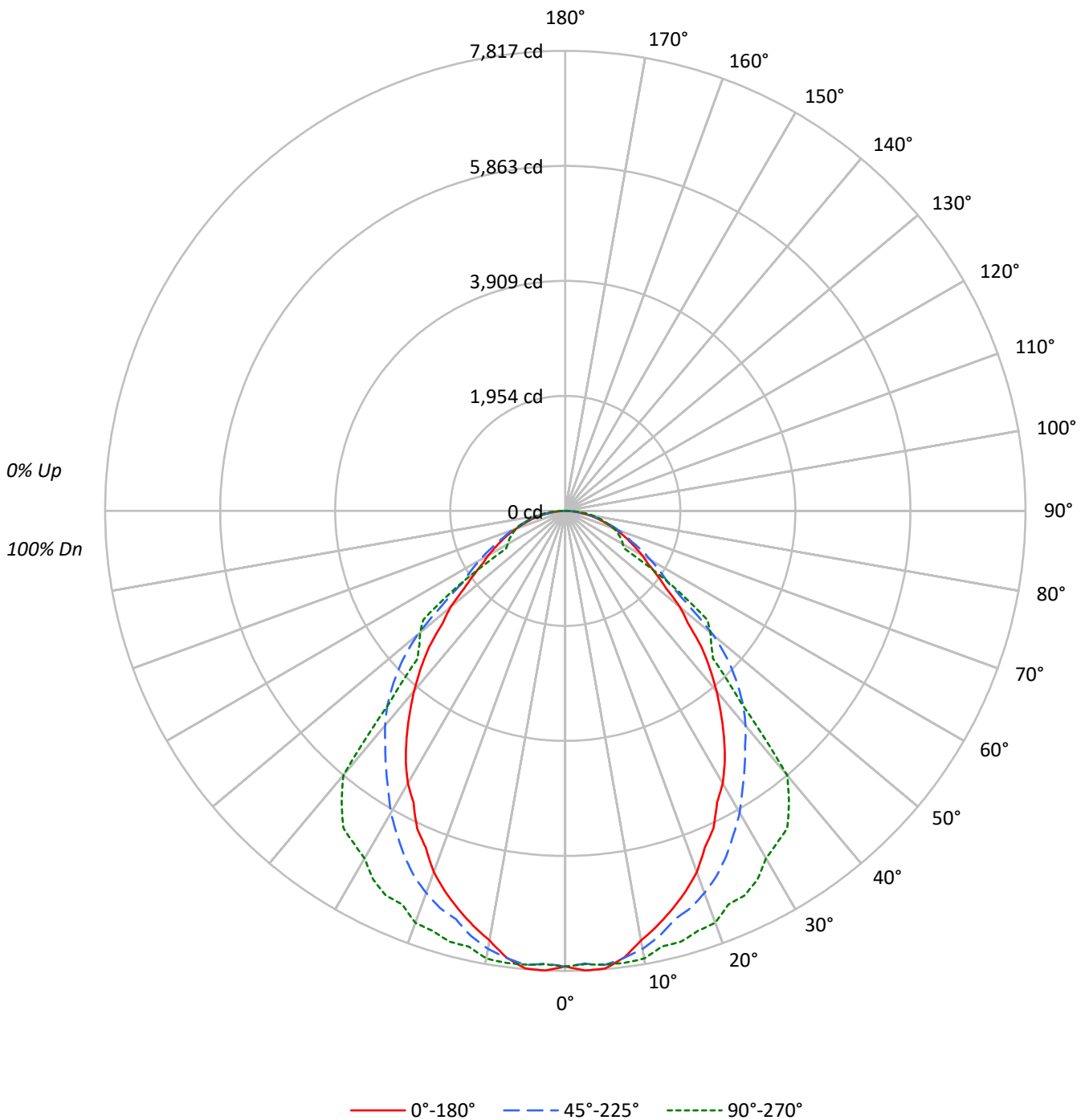
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16205.0 lumens  
Efficiency: N/A  
Efficacy: 111.8 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.32 / 1.26  
Luminous Opening: Rectangular (W 0.38' x L: 7.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 145  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 7.79  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65	65	
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57	57	
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52	50	50	
6	74	62	54	48	73	61	54	48	60	53	48	58	52	47	56	51	47	45	45	
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40	40	
8	65	52	44	39	63	52	44	39	50	43	39	49	43	38	48	42	38	36	36	
9	61	48	41	35	59	48	40	35	47	40	35	46	39	35	45	39	35	33	33	
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30	30	

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

	0°	45°	90°
0°	27469	27469	27469
5°	27800	27581	27565
10°	26704	27229	27827
15°	25748	26383	27844
20°	24664	26089	28124
25°	23303	25323	28225
30°	21900	24266	27936
35°	20366	23015	28481
40°	18502	22062	27159
45°	16394	20707	17809
50°	14031	18097	17771
55°	11758	13206	13826
60°	10697	11923	8002
65°	10021	10556	8552
70°	9223	10001	9152
75°	8665	9382	9319
80°	8083	8874	9988
85°	6941	7405	10646

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 20707 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	735.7	4.5
10°-20°	2058.3	12.7
20°-30°	2999.9	18.5
30°-40°	3431.8	21.2
40°-50°	2935.8	18.1
50°-60°	1936.0	11.9
60°-70°	1170.4	7.2
70°-80°	716.0	4.4
80°-90°	221.2	1.4
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°	5793.8	35.8
0°-40°	9225.7	56.9
0°-60°	14097.4	87.0
0°-90°	16205.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16205.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7742	7742	7742	7742	7742	
5°	7805	7798	7744	7728	7739	731
15°	7010	7091	7182	7642	7580	1971
25°	5952	6043	6468	7021	7210	2723
35°	4702	4938	5313	6148	6575	2929
45°	3267	3520	4127	3856	3549	2501
55°	1901	2008	2135	2530	2235	1729
65°	1194	1223	1257	1123	1019	1180
75°	632	648	684	716	680	667
85°	170	168	182	216	262	194
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7741.7	7741.7	7741.7	7741.7	7741.7
2.5°	7816.7	7793.9	7700.7	7789.4	7709.8
5°	7805.3	7798.5	7743.9	7728.0	7739.4
7.5°	7655.3	7671.2	7662.1	7832.6	7746.2
10°	7412.0	7443.8	7557.5	7796.2	7723.5
12.5°	7221.0	7246.0	7398.3	7753.0	7582.5
15°	7009.5	7091.4	7182.3	7641.6	7580.2
17.5°	6782.2	6859.5	7075.5	7491.6	7484.7
20°	6532.1	6675.3	6909.5	7296.0	7448.4
22.5°	6193.3	6386.6	6716.3	7207.4	7236.9
25°	5952.3	6043.3	6468.4	7020.9	7209.6
27.5°	5586.3	5759.1	6193.3	6752.6	7064.1
30°	5345.3	5488.5	5922.8	6595.8	6818.6
32.5°	5042.9	5213.4	5602.2	6425.2	6693.5
35°	4701.8	4938.3	5313.4	6147.8	6575.3
37.5°	4342.6	4576.8	5020.1	5918.2	6241.1
40°	3994.7	4194.8	4763.2	5643.1	5863.6
42.5°	3637.8	3853.8	4469.9	5099.7	4410.8
45°	3267.2	3519.6	4126.6	3856.0	3549.1
47.5°	2828.4	3137.6	3746.9	3098.9	3362.7
50°	2541.9	2710.1	3278.5	2921.6	3219.4
52.5°	2162.2	2389.6	2632.8	2728.3	3042.1
55°	1900.7	2007.6	2134.9	2530.5	2235.0
57.5°	1659.7	1755.2	1903.0	1784.8	1191.4
60°	1507.4	1550.6	1680.2	1275.5	1127.7
62.5°	1334.6	1377.8	1473.3	1191.4	1082.2
65°	1193.6	1223.2	1257.3	1123.2	1018.6
67.5°	1043.6	1059.5	1095.9	1036.8	957.2
70°	889.0	911.7	964.0	948.1	882.2
72.5°	752.6	773.0	818.5	841.2	779.8
75°	632.1	648.0	684.4	716.2	679.8
77.5°	502.5	518.4	566.1	600.2	584.3
80°	395.6	397.9	434.3	468.4	488.8
82.5°	277.4	281.9	309.2	345.6	386.5
85°	170.5	168.2	181.9	216.0	261.5
87.5°	65.9	63.7	75.0	90.9	134.1
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	19.34	20.82	19.70	21.13	21.44	19.01	20.49	19.38	20.81	21.12
	3H	20.90	22.22	21.27	22.55	22.91	20.63	21.96	21.01	22.28	22.65
	4H	21.50	22.74	21.90	23.09	23.47	21.38	22.62	21.78	22.97	23.35
	6H	21.95	23.10	22.37	23.47	23.86	22.05	23.19	22.46	23.56	23.95
	8H	22.11	23.20	22.53	23.59	23.99	22.33	23.42	22.75	23.81	24.21
	12H	22.20	23.25	22.64	23.63	24.06	22.55	23.59	22.98	23.97	24.40
4H	2H	19.93	21.17	20.33	21.52	21.90	19.68	20.92	20.08	21.27	21.64
	3H	21.72	22.75	22.13	23.15	23.55	21.56	22.59	21.97	22.99	23.39
	4H	22.45	23.37	22.88	23.79	24.23	22.46	23.38	22.89	23.80	24.24
	6H	23.03	23.83	23.49	24.28	24.74	23.26	24.07	23.72	24.51	24.97
	8H	23.23	23.98	23.69	24.42	24.89	23.59	24.34	24.06	24.79	25.26
	12H	23.36	24.04	23.85	24.52	24.99	23.86	24.54	24.35	25.02	25.49
8H	4H	22.77	23.52	23.23	23.96	24.43	22.78	23.53	23.24	23.97	24.44
	6H	23.48	24.10	23.98	24.59	25.07	23.73	24.35	24.22	24.84	25.32
	8H	23.75	24.31	24.26	24.82	25.31	24.14	24.70	24.66	25.22	25.70
	12H	23.96	24.45	24.47	24.95	25.51	24.51	25.01	25.02	25.50	26.07
12H	4H	22.81	23.48	23.29	23.96	24.43	22.80	23.47	23.29	23.95	24.43
	6H	23.55	24.11	24.06	24.62	25.11	23.78	24.34	24.29	24.85	25.34
	8H	23.88	24.37	24.39	24.87	25.43	24.26	24.75	24.77	25.25	25.81