

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: P894919

Luminaire Tested: 8TMB-20HL-RFLW-UNV-L840

Issue Date: 11/11/2024

**Test Information**

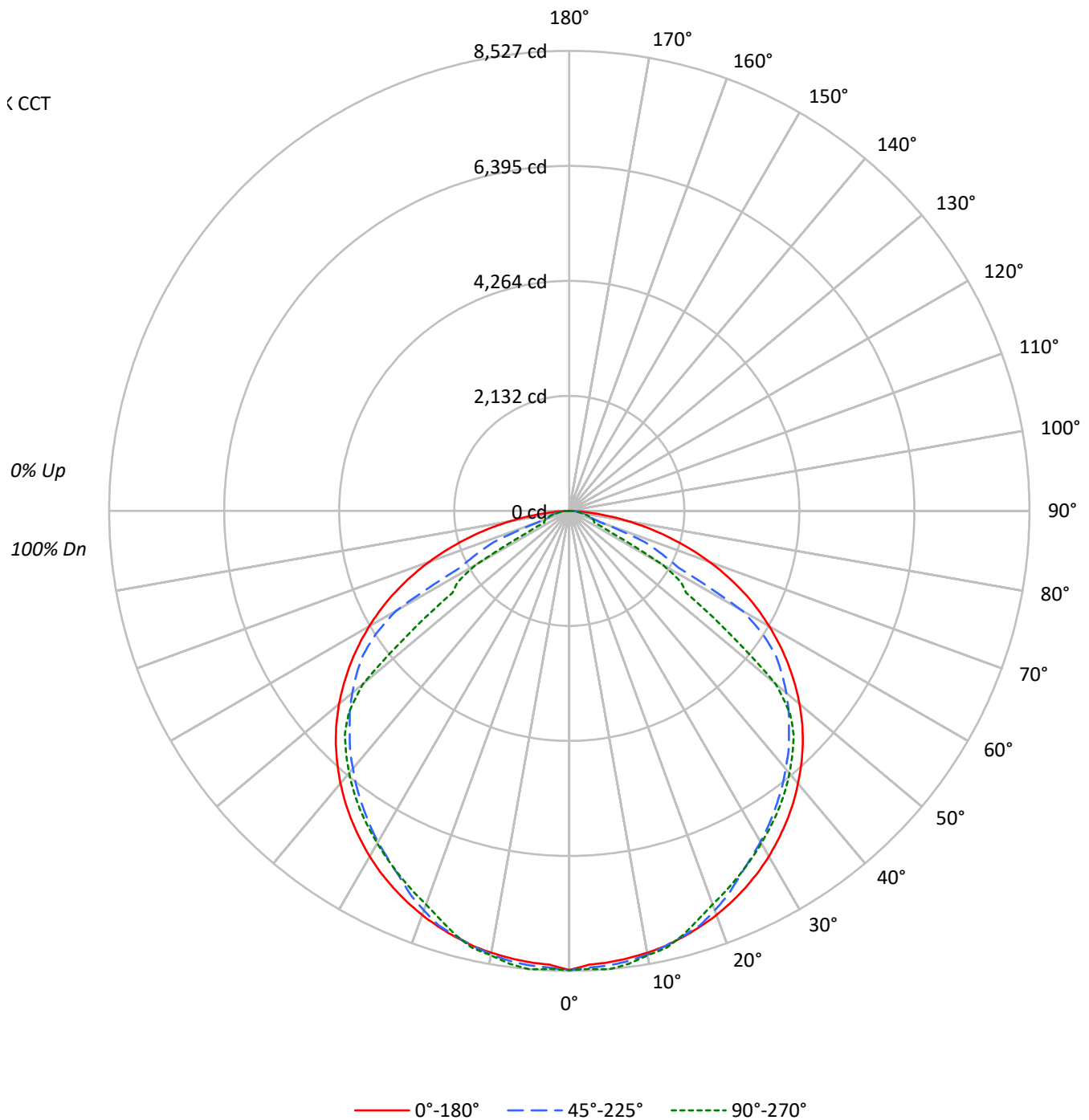
Test Method: LM-79-2019  
Report Number: P894919  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-20HL-RFLW-UNV-L840  
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 4000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22188.0 lumens  
Efficiency: N/A  
Efficacy: 153.0 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.25 / 1.38  
Luminous Opening: Rectangular (W 0.21' 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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	93	87	82	98	91	85	81	88	83	79	85	81	77	82	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	56	56	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	49	49	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	43	43	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	38	38	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	34	34	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	31	31	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	28	28	28	26

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

	0°	45°	90°
0°	55113	55113	55113
5°	54607	54965	55425
10°	54686	54894	54997
15°	54806	54683	54560
20°	54944	54312	53481
25°	55094	53351	53239
30°	55304	52989	53206
35°	55503	52788	53430
40°	55737	52722	53654
45°	56036	52697	53874
50°	56120	52898	50334
55°	55875	52736	29847
60°	55401	48065	25884
65°	54493	29056	7836
70°	52338	11521	8987
75°	48495	9450	9187
80°	41959	9975	8607
85°	29816	9354	8188

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 56120 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	806.2	3.6
10°-20°	2308.7	10.4
20°-30°	3488.9	15.7
30°-40°	4256.8	19.2
40°-50°	4502.9	20.3
50°-60°	3729.6	16.8
60°-70°	2073.3	9.3
70°-80°	840.4	3.8
80°-90°	181.2	0.8
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°	6603.8	29.8
0°-40°	10860.6	48.9
0°-60°	19093.1	86.1
0°-90°	22188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	22188.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8511	8511	8511	8511	8511	
5°	8401	8550	8456	8469	8527	799
15°	8175	8301	8157	8152	8139	2309
25°	7711	7766	7467	7420	7451	3557
35°	7021	6935	6678	6704	6759	4395
45°	6119	5804	5754	5825	5883	4717
55°	4949	4614	4671	3205	2644	4422
65°	3556	3260	1896	637	511	3507
75°	1938	1081	378	372	367	2047
85°	401	134	126	115	110	504
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8511.0	8511.0	8511.0	8511.0	8511.0
2.5°	8419.2	8566.1	8474.3	8492.6	8500.5
5°	8400.8	8550.3	8455.9	8469.0	8526.7
7.5°	8361.5	8513.6	8414.0	8421.8	8466.4
10°	8316.9	8455.9	8348.4	8335.3	8364.1
12.5°	8256.6	8382.5	8256.6	8261.8	8298.5
15°	8175.3	8301.2	8156.9	8151.7	8138.6
17.5°	8078.2	8196.3	8054.6	7970.7	7941.8
20°	7973.3	8065.1	7881.5	7753.0	7760.9
22.5°	7847.4	7926.1	7695.3	7577.3	7611.4
25°	7711.0	7766.1	7467.1	7419.9	7451.4
27.5°	7561.5	7603.5	7270.4	7259.9	7286.1
30°	7396.3	7412.0	7086.8	7081.6	7115.7
32.5°	7212.7	7186.5	6890.1	6895.3	6939.9
35°	7021.2	6934.7	6677.7	6703.9	6759.0
37.5°	6819.3	6664.5	6467.8	6501.9	6562.3
40°	6593.7	6383.9	6237.0	6289.5	6347.2
42.5°	6362.9	6090.1	6014.1	6063.9	6119.0
45°	6119.0	5804.3	5754.4	5825.2	5882.9
47.5°	5854.1	5523.6	5515.8	5570.8	5544.6
50°	5570.8	5232.5	5250.9	5177.4	4996.4
52.5°	5266.6	4930.9	4967.6	4650.2	3758.5
55°	4949.2	4613.5	4671.2	3205.1	2643.8
57.5°	4624.0	4288.3	4251.6	2452.3	2449.7
60°	4277.8	3957.8	3711.3	2166.4	1998.6
62.5°	3929.0	3614.2	2279.2	1631.4	918.0
65°	3556.5	3260.1	1896.3	637.3	511.4
67.5°	3165.7	2900.8	1518.6	480.0	498.3
70°	2764.4	2528.4	608.5	464.2	474.7
72.5°	2355.3	1951.4	403.9	430.1	430.1
75°	1938.3	1080.6	377.7	372.4	367.2
77.5°	1523.8	723.9	330.5	306.9	299.0
80°	1125.2	259.7	267.5	238.7	230.8
82.5°	744.9	202.0	191.5	173.1	167.9
85°	401.3	133.8	125.9	115.4	110.2
87.5°	144.3	68.2	68.2	55.1	49.8
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	26.61	28.18	26.97	28.49	28.81	22.60	24.17	22.96	24.48	24.80
	3H	28.61	30.02	28.99	30.35	30.71	22.73	24.14	23.11	24.46	24.83
	4H	29.23	30.55	29.63	30.89	31.27	22.85	24.17	23.25	24.52	24.89
	6H	29.63	30.84	30.04	31.21	31.60	22.96	24.17	23.37	24.54	24.93
	8H	29.75	30.91	30.17	31.29	31.69	22.99	24.15	23.42	24.54	24.94
	12H	29.82	30.93	30.25	31.31	31.74	23.01	24.12	23.44	24.51	24.93
4H	2H	26.74	28.06	27.14	28.40	28.78	23.32	24.64	23.72	24.99	25.37
	3H	28.90	29.99	29.31	30.39	30.79	23.52	24.61	23.93	25.01	25.41
	4H	29.55	30.53	29.98	30.94	31.38	23.68	24.65	24.11	25.07	25.51
	6H	30.00	30.85	30.45	31.29	31.75	23.84	24.69	24.30	25.13	25.59
	8H	30.14	30.93	30.60	31.37	31.84	23.89	24.69	24.36	25.13	25.60
	12H	30.24	30.95	30.72	31.43	31.90	23.94	24.65	24.42	25.13	25.60
8H	4H	29.49	30.28	29.95	30.72	31.19	23.95	24.74	24.41	25.18	25.65
	6H	29.93	30.59	30.43	31.08	31.55	24.15	24.81	24.65	25.30	25.78
	8H	30.08	30.67	30.59	31.18	31.66	24.24	24.83	24.75	25.34	25.82
	12H	30.21	30.73	30.72	31.22	31.79	24.32	24.85	24.83	25.34	25.90
12H	4H	29.46	30.17	29.94	30.65	31.12	23.96	24.67	24.44	25.15	25.62
	6H	29.89	30.48	30.40	30.99	31.48	24.17	24.76	24.68	25.27	25.76
	8H	30.06	30.58	30.57	31.07	31.64	24.30	24.82	24.80	25.31	25.87