

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: P894891

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894891
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-20HL-FLTU-UNV-L940
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 90CRI, 40
Light Source: -
Ballast/Driver: -

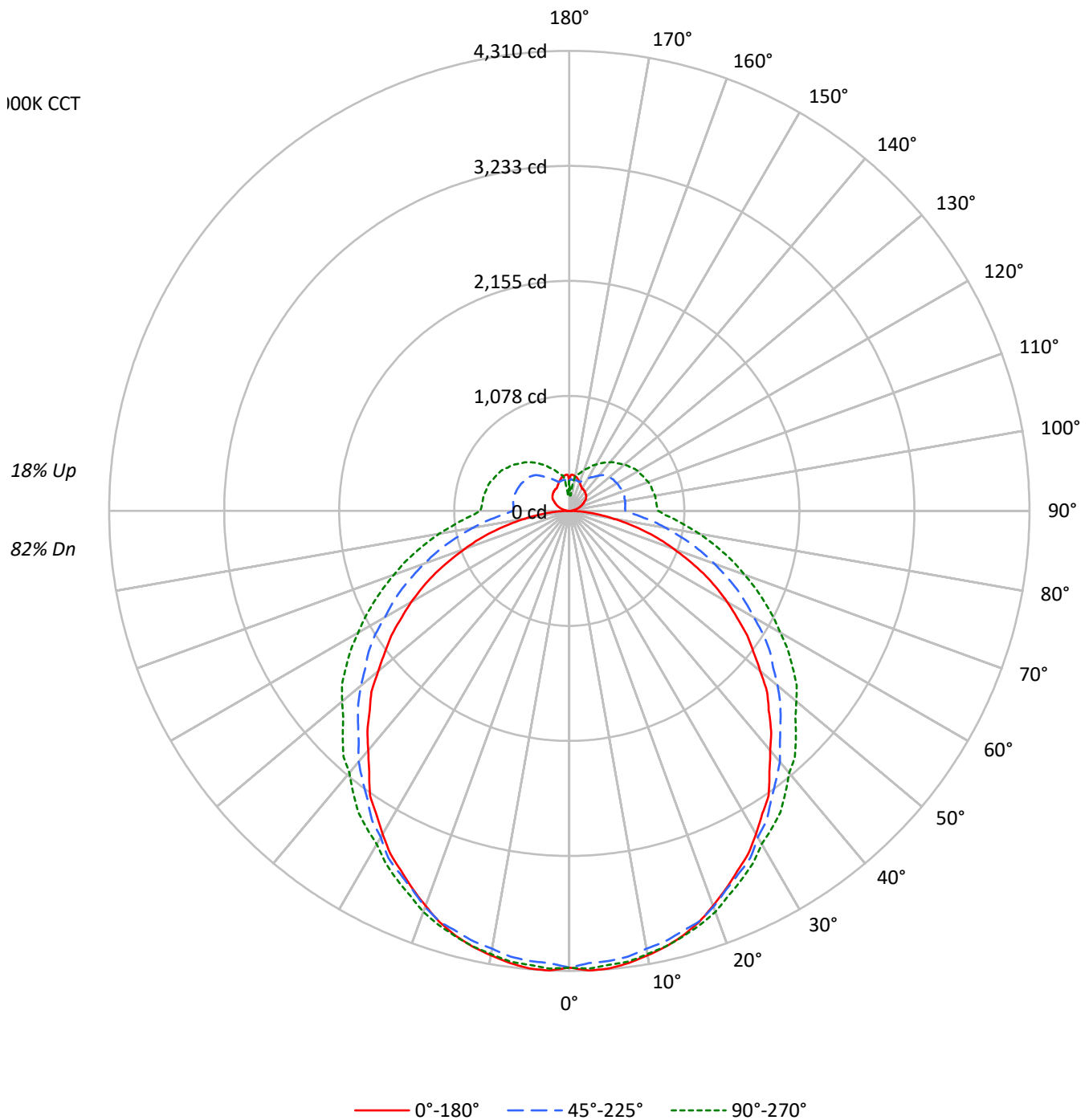
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16085.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 7.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 145
Input Voltage (V): 120
Input Current (A_{in}): 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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	69	69	66
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	57	57	54
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	48	48	45
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	41	41	38
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	35	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	31	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	27	27	25
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	24	24	22
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	22	22	20
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	20	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15181	15181	15181
5°	15293	14560	14511
10°	15165	14003	13847
15°	15026	13512	13216
20°	14727	12991	12588
25°	14403	12348	11895
30°	14112	11718	11222
35°	13848	11118	10789
40°	13271	10603	10164
45°	12918	9988	9727
50°	12498	9473	9269
55°	12134	8982	8860
60°	11607	8307	8310
65°	11007	7765	7792
70°	10078	7091	7229
75°	9115	6419	6694
80°	7486	5683	6152
85°	5631	4972	5645

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12918 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.3	2.5
10°-20°	1157.3	7.2
20°-30°	1738.4	10.8
30°-40°	2083.5	13.0
40°-50°	2184.4	13.6
50°-60°	2049.1	12.7
60°-70°	1702.0	10.6
70°-80°	1216.9	7.6
80°-90°	721.7	4.5
90°-100°	529.4	3.3
100°-110°	521.6	3.2
110°-120°	486.6	3.0
120°-130°	427.0	2.7
130°-140°	343.8	2.1
140°-150°	246.8	1.5
150°-160°	156.8	1.0
160°-170°	86.9	0.5
170°-180°	27.4	0.2
0°-30°	3301.0	20.5
0°-40°	5384.5	33.5
0°-60°	9618.0	59.8
0°-90°	13258.7	82.4
90°-120°	1537.6	9.6
90°-150°	2555.2	15.9
90°-180°	2826.0	17.6
0°-180°	16085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4278	4278	4278	4278	4278	
5°	4304	4294	4233	4254	4269	408
15°	4119	4094	4078	4108	4126	1160
25°	3724	3758	3751	3794	3815	1718
35°	3256	3267	3296	3392	3446	2021
45°	2642	2717	2798	2983	3001	2043
55°	2035	2101	2294	2480	2553	1810
65°	1384	1489	1730	1962	2019	1364
75°	730	898	1178	1421	1487	771
85°	180	393	689	921	1007	197
90°	7	239	525	750	832	15
95°	20	250	525	741	818	21
105°	73	275	534	732	800	77
115°	132	298	523	696	764	130
125°	189	307	507	646	705	165
135°	218	296	471	584	632	169
145°	236	273	386	514	550	149
155°	259	273	316	398	450	120
165°	309	300	291	289	362	87
175°	341	327	293	243	148	32
180°	282	282	282	282	282	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4278.5	4278.5	4278.5	4278.5	4278.5
2.5°	4310.3	4276.2	4239.8	4294.4	4292.1
5°	4303.5	4294.4	4233.0	4253.5	4269.4
7.5°	4271.6	4248.9	4212.5	4262.6	4258.0
10°	4228.5	4201.2	4164.8	4194.4	4214.8
12.5°	4180.7	4158.0	4133.0	4164.8	4178.4
15°	4119.3	4094.3	4078.4	4108.0	4126.2
17.5°	4039.8	4032.9	4035.2	4037.5	4067.0
20°	3937.5	3942.0	3948.8	3989.8	3998.8
22.5°	3832.9	3857.9	3839.7	3903.4	3898.8
25°	3723.8	3757.9	3751.0	3794.2	3814.7
27.5°	3626.0	3628.3	3669.2	3730.6	3723.8
30°	3496.4	3535.1	3530.5	3605.6	3605.6
32.5°	3364.6	3421.4	3439.6	3505.5	3528.3
35°	3255.5	3266.8	3296.4	3391.9	3446.4
37.5°	3078.1	3132.7	3180.4	3305.5	3325.9
40°	2928.1	2982.7	3069.0	3214.5	3203.2
42.5°	2798.5	2855.3	2919.0	3087.2	3128.1
45°	2641.6	2716.7	2798.5	2982.7	3000.8
47.5°	2514.3	2573.4	2680.3	2848.5	2871.3
50°	2334.7	2430.2	2546.2	2741.7	2775.8
52.5°	2175.6	2257.4	2405.2	2607.5	2684.8
55°	2034.7	2100.6	2293.8	2480.2	2553.0
57.5°	1861.9	1952.8	2155.1	2362.0	2428.0
60°	1709.6	1798.2	1993.7	2230.2	2282.5
62.5°	1548.2	1652.7	1864.2	2093.8	2152.9
65°	1384.5	1489.1	1730.0	1961.9	2018.7
67.5°	1207.2	1336.7	1582.3	1823.2	1882.3
70°	1041.2	1182.1	1445.9	1686.8	1745.9
72.5°	891.2	1043.5	1311.7	1559.5	1623.2
75°	729.7	898.0	1177.6	1420.9	1486.8
77.5°	572.9	754.8	1038.9	1284.4	1361.7
80°	420.6	620.6	918.4	1154.9	1236.7
82.5°	295.5	500.1	807.0	1038.9	1113.9
85°	179.6	393.3	688.8	920.7	1007.1
87.5°	79.6	304.6	595.6	825.2	902.5
90°	6.8	238.7	525.1	750.2	832.1
92.5°	13.6	243.2	522.9	741.1	823.0
95°	20.5	250.1	525.1	741.1	818.4
97.5°	29.6	259.2	529.7	741.1	816.1
100°	43.2	263.7	532.0	741.1	816.1
102.5°	56.8	270.5	529.7	729.7	807.0
105°	72.7	275.1	534.2	732.0	800.2
107.5°	88.7	279.6	534.2	720.7	798.0
110°	104.6	286.4	529.7	713.8	788.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	118.2	293.3	527.4	700.2	772.9
115°	131.9	297.8	522.9	695.6	763.8
117.5°	145.5	300.1	520.6	684.3	750.2
120°	156.9	304.6	516.1	670.6	743.4
122.5°	170.5	306.9	509.2	657.0	729.7
125°	188.7	306.9	507.0	645.6	704.7
127.5°	197.8	309.2	497.9	632.0	693.4
130°	206.9	302.4	493.3	616.1	675.2
132.5°	213.7	300.1	482.0	600.2	652.5
135°	218.2	295.5	470.6	584.3	632.0
137.5°	225.1	288.7	454.7	572.9	618.4
140°	229.6	284.2	431.9	550.2	595.6
142.5°	234.2	277.4	409.2	529.7	572.9
145°	236.4	272.8	386.5	513.8	550.2
147.5°	243.2	266.0	372.8	493.3	525.1
150°	241.0	261.4	352.4	468.3	500.1
152.5°	247.8	268.3	334.2	434.2	479.7
155°	259.2	272.8	316.0	397.8	450.1
157.5°	270.5	281.9	302.4	366.0	427.4
160°	286.4	286.4	286.4	341.0	409.2
162.5°	295.5	295.5	288.7	311.5	384.2
165°	309.2	300.1	291.0	288.7	361.5
167.5°	322.8	304.6	295.5	279.6	345.6
170°	325.1	311.5	293.3	263.7	334.2
172.5°	334.2	318.3	291.0	250.1	259.2
175°	341.0	327.4	293.3	243.2	147.8
177.5°	338.7	327.4	300.1	243.2	143.2
180°	281.9	281.9	281.9	281.9	281.9



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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	17.20	18.52	17.81	19.15	19.87	19.79	21.11	20.40	21.74	22.46
	3H	18.63	19.83	19.25	20.47	21.22	22.19	23.39	22.81	24.03	24.78
	4H	19.09	20.24	19.74	20.89	21.65	23.33	24.47	23.97	25.12	25.88
	6H	19.36	20.42	20.02	21.08	21.86	24.49	25.55	25.14	26.21	26.99
	8H	19.41	20.43	20.08	21.11	21.89	25.07	26.08	25.74	26.77	27.55
	12H	19.43	20.40	20.10	21.08	21.89	25.70	26.67	26.38	27.35	28.16
4H	2H	18.08	19.23	18.73	19.88	20.64	20.13	21.27	20.78	21.92	22.68
	3H	19.74	20.71	20.40	21.39	22.18	22.74	23.71	23.40	24.40	25.18
	4H	20.32	21.21	20.99	21.90	22.71	24.04	24.93	24.72	25.62	26.43
	6H	20.69	21.47	21.39	22.19	23.01	25.37	26.15	26.06	26.87	27.69
	8H	20.78	21.52	21.48	22.23	23.07	26.05	26.78	26.75	27.49	28.33
	12H	20.82	21.49	21.55	22.23	23.07	26.79	27.45	27.51	28.19	29.03
8H	4H	20.96	21.69	21.66	22.41	23.24	24.19	24.93	24.89	25.64	26.47
	6H	21.49	22.11	22.22	22.87	23.70	25.66	26.28	26.39	27.04	27.88
	8H	21.66	22.22	22.40	22.97	23.83	26.46	27.02	27.20	27.78	28.63
	12H	21.76	22.26	22.51	23.01	23.92	27.36	27.86	28.10	28.61	29.52
12H	4H	21.12	21.79	21.84	22.52	23.36	24.18	24.85	24.90	25.59	26.43
	6H	21.74	22.30	22.49	23.06	23.91	25.68	26.24	26.42	27.00	27.85
	8H	21.99	22.49	22.73	23.24	24.15	26.53	27.03	27.28	27.78	28.69