

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: P894887

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894887
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-L840
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 40
Light Source: -
Ballast/Driver: -

Summary

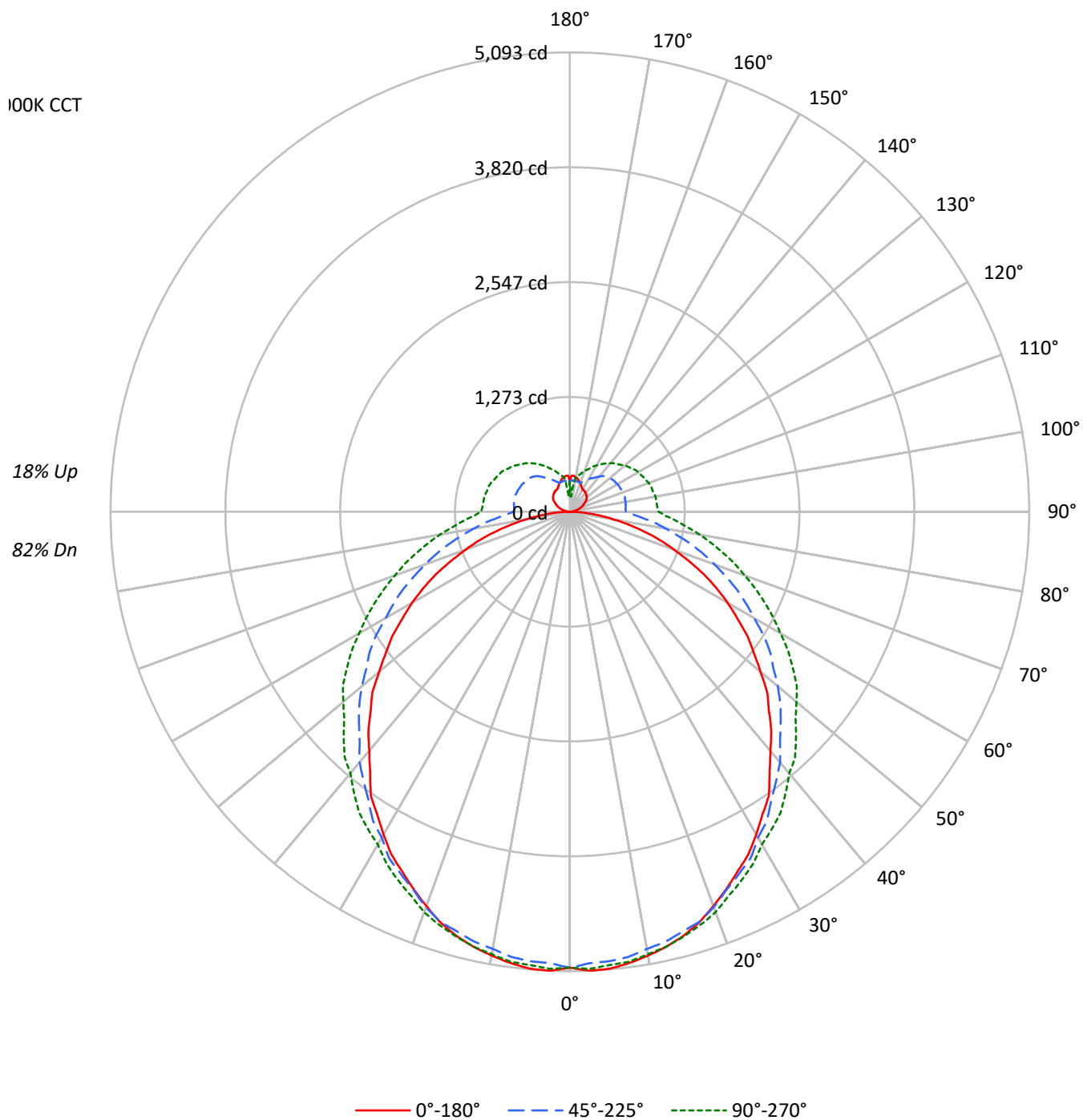
Lumens per Lamp: N/A
Luminaire Lumens: 19005.0 lumens
Efficiency: N/A
Efficacy: 131.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 7.98' x H: 0.21')
CIE Type: Semi-Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	115	115	115	115	110	110	110	110	101	101	101		93	93	93		86
1	103	98	93	89	99	94	90	86	87	83	80		80	77	74		73
2	93	85	77	71	89	81	75	69	75	70	65		69	65	61		63
3	85	74	66	59	81	71	63	57	66	59	54		60	55	51		56
4	78	65	56	49	74	63	55	48	58	51	46		54	48	43		50
5	71	58	49	42	68	56	48	41	52	45	39		48	42	37		44
6	66	52	43	37	63	50	42	36	47	40	34		43	37	33		40
7	61	47	38	32	58	46	37	32	42	35	30		39	33	29		37
8	56	43	34	29	54	42	34	28	39	32	27		36	30	26		34
9	53	39	31	26	50	38	30	25	36	29	24		33	27	23		31
10	49	36	28	23	47	35	28	23	33	26	22		31	25	21		29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17937	17937	17937
5°	18069	17203	17145
10°	17918	16545	16362
15°	17754	15965	15615
20°	17401	15349	14874
25°	17018	14589	14054
30°	16674	13846	13259
35°	16361	13137	12747
40°	15681	12528	12009
45°	15263	11801	11493
50°	14768	11192	10952
55°	14337	10613	10468
60°	13714	9816	9819
65°	13005	9175	9207
70°	11908	8378	8542
75°	10770	7585	7909
80°	8844	6715	7269
85°	6653	5875	6670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 15263 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	478.8	2.5
10°-20°	1367.4	7.2
20°-30°	2054.0	10.8
30°-40°	2461.7	13.0
40°-50°	2580.9	13.6
50°-60°	2421.2	12.7
60°-70°	2011.0	10.6
70°-80°	1437.9	7.6
80°-90°	852.7	4.5
90°-100°	625.6	3.3
100°-110°	616.3	3.2
110°-120°	574.9	3.0
120°-130°	504.5	2.7
130°-140°	406.3	2.1
140°-150°	291.6	1.5
150°-160°	185.3	1.0
160°-170°	102.7	0.5
170°-180°	32.3	0.2
0°-30°	3900.2	20.5
0°-40°	6361.9	33.5
0°-60°	11364.0	59.8
0°-90°	15665.6	82.4
90°-120°	1816.8	9.6
90°-150°	3019.1	15.9
90°-180°	3339.0	17.6
0°-180°	19005.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5055	5055	5055	5055	5055	
5°	5085	5074	5001	5026	5044	482
15°	4867	4838	4819	4854	4875	1370
25°	4400	4440	4432	4483	4507	2030
35°	3846	3860	3895	4008	4072	2387
45°	3121	3210	3306	3524	3546	2414
55°	2404	2482	2710	2930	3016	2139
65°	1636	1759	2044	2318	2385	1612
75°	862	1061	1391	1679	1757	911
85°	212	465	814	1088	1190	233
90°	8	282	620	886	983	17
95°	24	296	620	876	967	25
105°	86	325	631	865	946	91
115°	156	352	618	822	902	154
125°	223	363	599	763	833	195
135°	258	349	556	690	747	200
145°	279	322	457	607	650	176
155°	306	322	373	470	532	142
165°	365	355	344	341	427	102
175°	403	387	346	287	175	38
180°	333	333	333	333	333	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5055.2	5055.2	5055.2	5055.2	5055.2
2.5°	5092.8	5052.5	5009.5	5074.0	5071.3
5°	5084.7	5074.0	5001.4	5025.6	5044.4
7.5°	5047.1	5020.2	4977.3	5036.4	5031.0
10°	4996.1	4963.8	4920.9	4955.8	4980.0
12.5°	4939.7	4912.8	4883.3	4920.9	4937.0
15°	4867.1	4837.6	4818.8	4853.7	4875.2
17.5°	4773.1	4765.1	4767.8	4770.4	4805.4
20°	4652.3	4657.6	4665.7	4714.0	4724.8
22.5°	4528.7	4558.2	4536.8	4612.0	4606.6
25°	4399.8	4440.1	4432.0	4483.0	4507.2
27.5°	4284.3	4286.9	4335.3	4407.8	4399.8
30°	4131.2	4176.8	4171.4	4260.1	4260.1
32.5°	3975.4	4042.5	4064.0	4141.9	4168.8
35°	3846.4	3859.9	3894.8	4007.6	4072.1
37.5°	3636.9	3701.4	3757.8	3905.5	3929.7
40°	3459.6	3524.1	3626.2	3798.1	3784.7
42.5°	3306.5	3373.7	3448.9	3647.7	3696.0
45°	3121.2	3209.8	3306.5	3524.1	3545.6
47.5°	2970.8	3040.6	3166.9	3365.6	3392.5
50°	2758.6	2871.4	3008.4	3239.4	3279.7
52.5°	2570.6	2667.3	2841.9	3080.9	3172.2
55°	2404.0	2481.9	2710.2	2930.5	3016.4
57.5°	2199.9	2307.3	2546.4	2790.8	2868.7
60°	2019.9	2124.7	2355.7	2635.0	2696.8
62.5°	1829.2	1952.8	2202.6	2473.9	2543.7
65°	1635.8	1759.4	2044.1	2318.1	2385.2
67.5°	1426.3	1579.4	1869.5	2154.2	2224.1
70°	1230.2	1396.8	1708.3	1993.1	2062.9
72.5°	1052.9	1232.9	1549.9	1842.6	1917.8
75°	862.2	1061.0	1391.4	1678.8	1756.7
77.5°	676.9	891.8	1227.5	1517.6	1608.9
80°	496.9	733.3	1085.2	1364.5	1461.2
82.5°	349.2	590.9	953.6	1227.5	1316.2
85°	212.2	464.7	813.9	1087.9	1189.9
87.5°	94.0	359.9	703.7	975.0	1066.4
90°	8.1	282.0	620.5	886.4	983.1
92.5°	16.1	287.4	617.8	875.7	972.4
95°	24.2	295.5	620.5	875.7	967.0
97.5°	34.9	306.2	625.9	875.7	964.3
100°	51.0	311.6	628.5	875.7	964.3
102.5°	67.2	319.6	625.9	862.2	953.6
105°	86.0	325.0	631.2	864.9	945.5
107.5°	104.8	330.4	631.2	851.5	942.8
110°	123.6	338.4	625.9	843.4	932.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	139.7	346.5	623.2	827.3	913.3
115°	155.8	351.9	617.8	821.9	902.5
117.5°	171.9	354.6	615.1	808.5	886.4
120°	185.3	359.9	609.7	792.4	878.3
122.5°	201.5	362.6	601.7	776.3	862.2
125°	222.9	362.6	599.0	762.8	832.7
127.5°	233.7	365.3	588.2	746.7	819.2
130°	244.4	357.2	582.9	727.9	797.8
132.5°	252.5	354.6	569.4	709.1	770.9
135°	257.9	349.2	556.0	690.3	746.7
137.5°	265.9	341.1	537.2	676.9	730.6
140°	271.3	335.8	510.4	650.0	703.7
142.5°	276.7	327.7	483.5	625.9	676.9
145°	279.4	322.3	456.6	607.0	650.0
147.5°	287.4	314.3	440.5	582.9	620.5
150°	284.7	308.9	416.3	553.3	590.9
152.5°	292.8	317.0	394.9	513.0	566.8
155°	306.2	322.3	373.4	470.1	531.8
157.5°	319.6	333.1	357.2	432.5	505.0
160°	338.4	338.4	338.4	402.9	483.5
162.5°	349.2	349.2	341.1	368.0	453.9
165°	365.3	354.6	343.8	341.1	427.1
167.5°	381.4	359.9	349.2	330.4	408.3
170°	384.1	368.0	346.5	311.6	394.9
172.5°	394.9	376.0	343.8	295.5	306.2
175°	402.9	386.8	346.5	287.4	174.6
177.5°	400.2	386.8	354.6	287.4	169.2
180°	333.1	333.1	333.1	333.1	333.1

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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	17.78	19.10	18.39	19.73	20.45	20.37	21.69	20.98	22.32	23.04
	3H	19.21	20.41	19.83	21.05	21.80	22.77	23.97	23.39	24.61	25.36
	4H	19.67	20.82	20.32	21.47	22.23	23.91	25.05	24.55	25.70	26.46
	6H	19.94	21.00	20.60	21.66	22.44	25.07	26.13	25.72	26.79	27.57
	8H	19.99	21.01	20.66	21.69	22.47	25.65	26.66	26.32	27.35	28.13
	12H	20.01	20.98	20.68	21.66	22.47	26.28	27.25	26.96	27.93	28.74
4H	2H	18.66	19.81	19.31	20.46	21.22	20.71	21.85	21.36	22.50	23.26
	3H	20.32	21.29	20.98	21.97	22.76	23.32	24.29	23.98	24.98	25.76
	4H	20.90	21.79	21.57	22.48	23.29	24.62	25.51	25.30	26.20	27.01
	6H	21.27	22.05	21.97	22.77	23.59	25.95	26.73	26.64	27.45	28.27
	8H	21.36	22.10	22.06	22.81	23.65	26.63	27.36	27.32	28.07	28.91
	12H	21.40	22.07	22.12	22.81	23.65	27.37	28.03	28.09	28.77	29.61
8H	4H	21.54	22.27	22.24	22.98	23.82	24.77	25.51	25.47	26.22	27.05
	6H	22.07	22.69	22.80	23.45	24.28	26.24	26.86	26.97	27.62	28.46
	8H	22.24	22.80	22.98	23.55	24.41	27.04	27.60	27.78	28.36	29.21
	12H	22.34	22.84	23.09	23.59	24.50	27.94	28.44	28.68	29.18	30.10
12H	4H	21.70	22.37	22.42	23.10	23.94	24.76	25.43	25.48	26.17	27.01
	6H	22.32	22.88	23.06	23.64	24.49	26.26	26.82	27.00	27.58	28.43
	8H	22.57	23.07	23.31	23.82	24.73	27.11	27.61	27.85	28.36	29.27