

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: P894888

Luminaire Tested: 8TMB-20HL-FLTU-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894888
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-L850
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 80CRI, 50
Light Source: -
Ballast/Driver: -

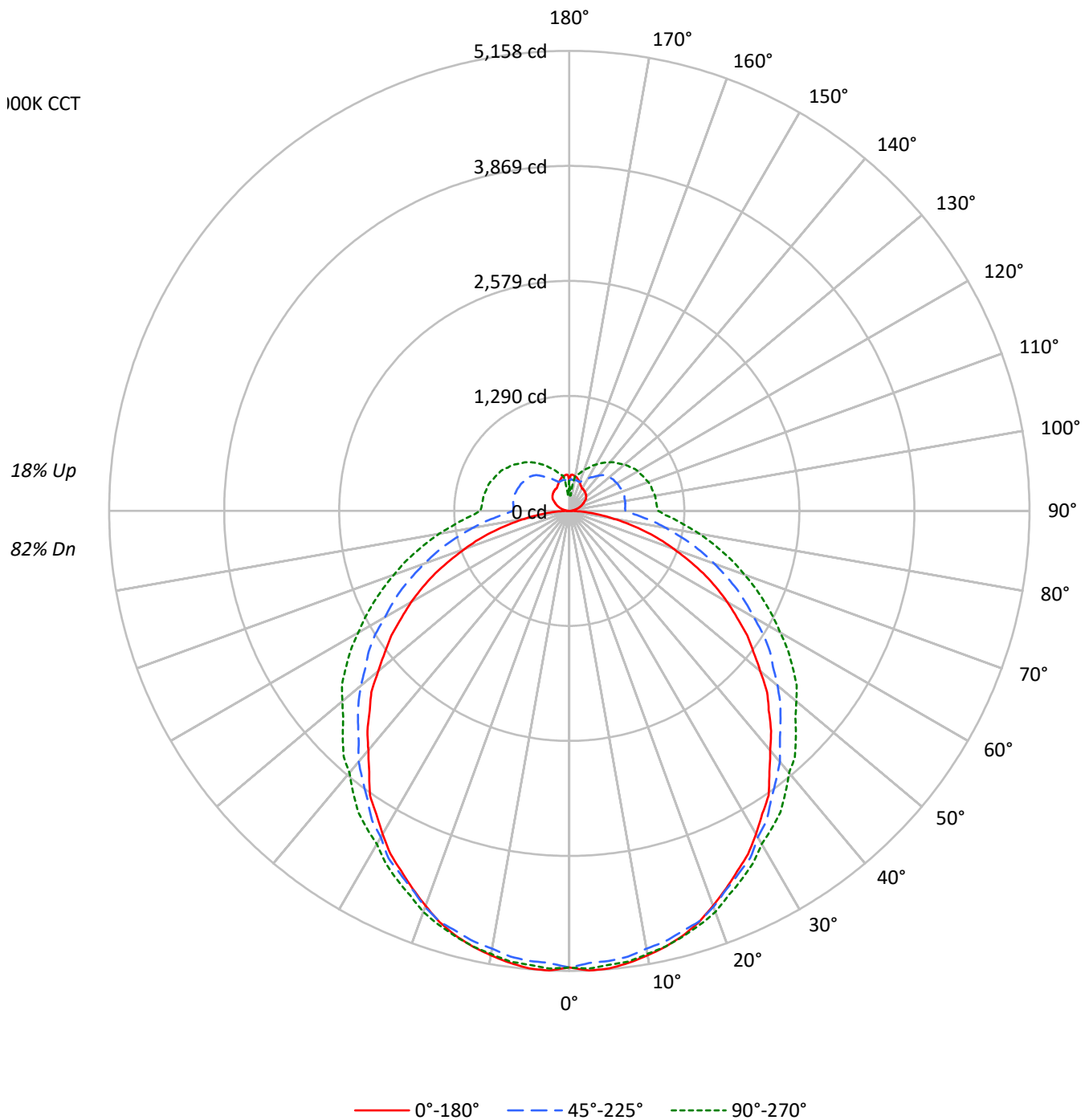
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19248.0 lumens
Efficiency: N/A
Efficacy: 132.7 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°	18166	18166	18166
5°	18300	17423	17364
10°	18147	16757	16570
15°	17981	16169	15815
20°	17623	15545	15064
25°	17235	14776	14234
30°	16887	14023	13429
35°	16571	13304	12910
40°	15881	12688	12162
45°	15458	11952	11640
50°	14957	11335	11092
55°	14520	10749	10602
60°	13889	9941	9944
65°	13171	9292	9324
70°	12060	8486	8651
75°	10908	7682	8010
80°	8957	6801	7362
85°	6738	5950	6755

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15458 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	485.0	2.5
10°-20°	1384.9	7.2
20°-30°	2080.2	10.8
30°-40°	2493.2	13.0
40°-50°	2613.9	13.6
50°-60°	2452.1	12.7
60°-70°	2036.7	10.6
70°-80°	1456.3	7.6
80°-90°	863.6	4.5
90°-100°	633.5	3.3
100°-110°	624.2	3.2
110°-120°	582.3	3.0
120°-130°	510.9	2.7
130°-140°	411.5	2.1
140°-150°	295.3	1.5
150°-160°	187.7	1.0
160°-170°	104.0	0.5
170°-180°	32.7	0.2
0°-30°	3950.1	20.5
0°-40°	6443.3	33.5
0°-60°	11509.3	59.8
0°-90°	15865.9	82.4
90°-120°	1840.0	9.6
90°-150°	3057.7	15.9
90°-180°	3382.0	17.6
0°-180°	19248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5120	5120	5120	5120	5120	
5°	5150	5139	5065	5090	5109	488
15°	4929	4899	4880	4916	4938	1388
25°	4456	4497	4489	4540	4565	2056
35°	3896	3909	3945	4059	4124	2418
45°	3161	3251	3349	3569	3591	2445
55°	2435	2514	2745	2968	3055	2166
65°	1657	1782	2070	2348	2416	1633
75°	873	1075	1409	1700	1779	923
85°	215	471	824	1102	1205	236
90°	8	286	628	898	996	18
95°	24	299	628	887	979	26
105°	87	329	639	876	958	92
115°	158	356	626	832	914	156
125°	226	367	607	773	843	198
135°	261	354	563	699	756	203
145°	283	326	462	615	658	178
155°	310	326	378	476	539	143
165°	370	359	348	346	432	104
175°	408	392	351	291	177	38
180°	337	337	337	337	337	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5119.8	5119.8	5119.8	5119.8	5119.8
2.5°	5157.9	5117.1	5073.6	5138.8	5136.1
5°	5149.7	5138.8	5065.4	5089.9	5108.9
7.5°	5111.6	5084.4	5040.9	5100.8	5095.3
10°	5059.9	5027.3	4983.8	5019.1	5043.6
12.5°	5002.8	4975.6	4945.7	4983.8	5000.1
15°	4929.4	4899.4	4880.4	4915.8	4937.5
17.5°	4834.2	4826.0	4828.7	4831.4	4866.8
20°	4711.7	4717.2	4725.3	4774.3	4785.2
22.5°	4586.6	4616.5	4594.8	4670.9	4665.5
25°	4456.0	4496.8	4488.7	4540.4	4564.8
27.5°	4339.0	4341.8	4390.7	4464.2	4456.0
30°	4184.0	4230.2	4224.8	4314.6	4314.6
32.5°	4026.2	4094.2	4116.0	4194.9	4222.1
35°	3895.6	3909.2	3944.6	4058.8	4124.1
37.5°	3683.4	3748.7	3805.8	3955.5	3979.9
40°	3503.9	3569.2	3672.5	3846.6	3833.0
42.5°	3348.8	3416.8	3493.0	3694.3	3743.3
45°	3161.1	3250.9	3348.8	3569.2	3590.9
47.5°	3008.8	3079.5	3207.4	3408.7	3435.9
50°	2793.9	2908.1	3046.9	3280.8	3321.6
52.5°	2603.4	2701.4	2878.2	3120.3	3212.8
55°	2434.8	2513.7	2744.9	2968.0	3055.0
57.5°	2228.0	2336.8	2578.9	2826.5	2905.4
60°	2045.7	2151.8	2385.8	2668.7	2731.3
62.5°	1852.6	1977.7	2230.7	2505.5	2576.2
65°	1656.7	1781.9	2070.2	2347.7	2415.7
67.5°	1444.5	1599.6	1893.4	2181.8	2252.5
70°	1245.9	1414.6	1730.2	2018.5	2089.3
72.5°	1066.4	1248.7	1569.7	1866.2	1942.4
75°	873.2	1074.6	1409.2	1700.3	1779.1
77.5°	685.5	903.2	1243.2	1537.0	1629.5
80°	503.3	742.7	1099.0	1382.0	1479.9
82.5°	353.7	598.5	965.7	1243.2	1333.0
85°	214.9	470.6	824.3	1101.8	1205.1
87.5°	95.2	364.5	712.7	987.5	1080.0
90°	8.2	285.6	628.4	897.7	995.7
92.5°	16.3	291.1	625.7	886.9	984.8
95°	24.5	299.2	628.4	886.9	979.3
97.5°	35.4	310.1	633.9	886.9	976.6
100°	51.7	315.6	636.6	886.9	976.6
102.5°	68.0	323.7	633.9	873.2	965.7
105°	87.1	329.2	639.3	876.0	957.6
107.5°	106.1	334.6	639.3	862.4	954.9
110°	125.1	342.8	633.9	854.2	944.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	141.5	350.9	631.1	837.9	924.9
115°	157.8	356.4	625.7	832.4	914.1
117.5°	174.1	359.1	623.0	818.8	897.7
120°	187.7	364.5	617.5	802.5	889.6
122.5°	204.0	367.3	609.4	786.2	873.2
125°	225.8	367.3	606.6	772.6	843.3
127.5°	236.7	370.0	595.8	756.3	829.7
130°	247.6	361.8	590.3	737.2	808.0
132.5°	255.7	359.1	576.7	718.2	780.8
135°	261.2	353.7	563.1	699.1	756.3
137.5°	269.3	345.5	544.1	685.5	739.9
140°	274.8	340.1	516.9	658.3	712.7
142.5°	280.2	331.9	489.7	633.9	685.5
145°	282.9	326.4	462.5	614.8	658.3
147.5°	291.1	318.3	446.1	590.3	628.4
150°	288.4	312.8	421.7	560.4	598.5
152.5°	296.5	321.0	399.9	519.6	574.0
155°	310.1	326.4	378.1	476.1	538.6
157.5°	323.7	337.3	361.8	438.0	511.4
160°	342.8	342.8	342.8	408.1	489.7
162.5°	353.7	353.7	345.5	372.7	459.7
165°	370.0	359.1	348.2	345.5	432.5
167.5°	386.3	364.5	353.7	334.6	413.5
170°	389.0	372.7	350.9	315.6	399.9
172.5°	399.9	380.9	348.2	299.2	310.1
175°	408.1	391.7	350.9	291.1	176.8
177.5°	405.3	391.7	359.1	291.1	171.4
180°	337.3	337.3	337.3	337.3	337.3



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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	17.82	19.15	18.43	19.78	20.49	20.41	21.74	21.02	22.37	23.08
	3H	19.25	20.46	19.88	21.09	21.84	22.81	24.02	23.44	24.65	25.40
	4H	19.72	20.86	20.36	21.51	22.27	23.95	25.10	24.60	25.75	26.51
	6H	19.98	21.04	20.64	21.70	22.48	25.11	26.17	25.77	26.83	27.61
	8H	20.04	21.05	20.70	21.73	22.51	25.69	26.71	26.36	27.39	28.17
	12H	20.05	21.02	20.73	21.70	22.51	26.33	27.30	27.00	27.97	28.79
4H	2H	18.71	19.85	19.35	20.50	21.26	20.75	21.90	21.40	22.55	23.31
	3H	20.36	21.33	21.02	22.02	22.80	23.36	24.33	24.02	25.02	25.80
	4H	20.94	21.83	21.62	22.52	23.33	24.67	25.55	25.34	26.25	27.06
	6H	21.32	22.10	22.01	22.81	23.63	25.99	26.77	26.69	27.49	28.31
	8H	21.41	22.14	22.11	22.86	23.69	26.67	27.40	27.37	28.12	28.95
	12H	21.45	22.11	22.17	22.85	23.69	27.41	28.08	28.13	28.82	29.66
8H	4H	21.58	22.31	22.28	23.03	23.86	24.82	25.55	25.51	26.26	27.10
	6H	22.11	22.73	22.84	23.49	24.33	26.29	26.91	27.02	27.66	28.50
	8H	22.28	22.84	23.02	23.60	24.45	27.09	27.64	27.83	28.40	29.25
	12H	22.39	22.88	23.13	23.63	24.54	27.98	28.48	28.73	29.23	30.14
12H	4H	21.74	22.41	22.46	23.15	23.99	24.81	25.47	25.53	26.21	27.05
	6H	22.37	22.93	23.11	23.68	24.54	26.31	26.86	27.05	27.62	28.47
	8H	22.61	23.11	23.36	23.86	24.77	27.15	27.65	27.90	28.40	29.31