

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: P894925

Luminaire Tested: 8TMB-20HL-RND-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894925
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-20HL-RND-UNV-L830
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

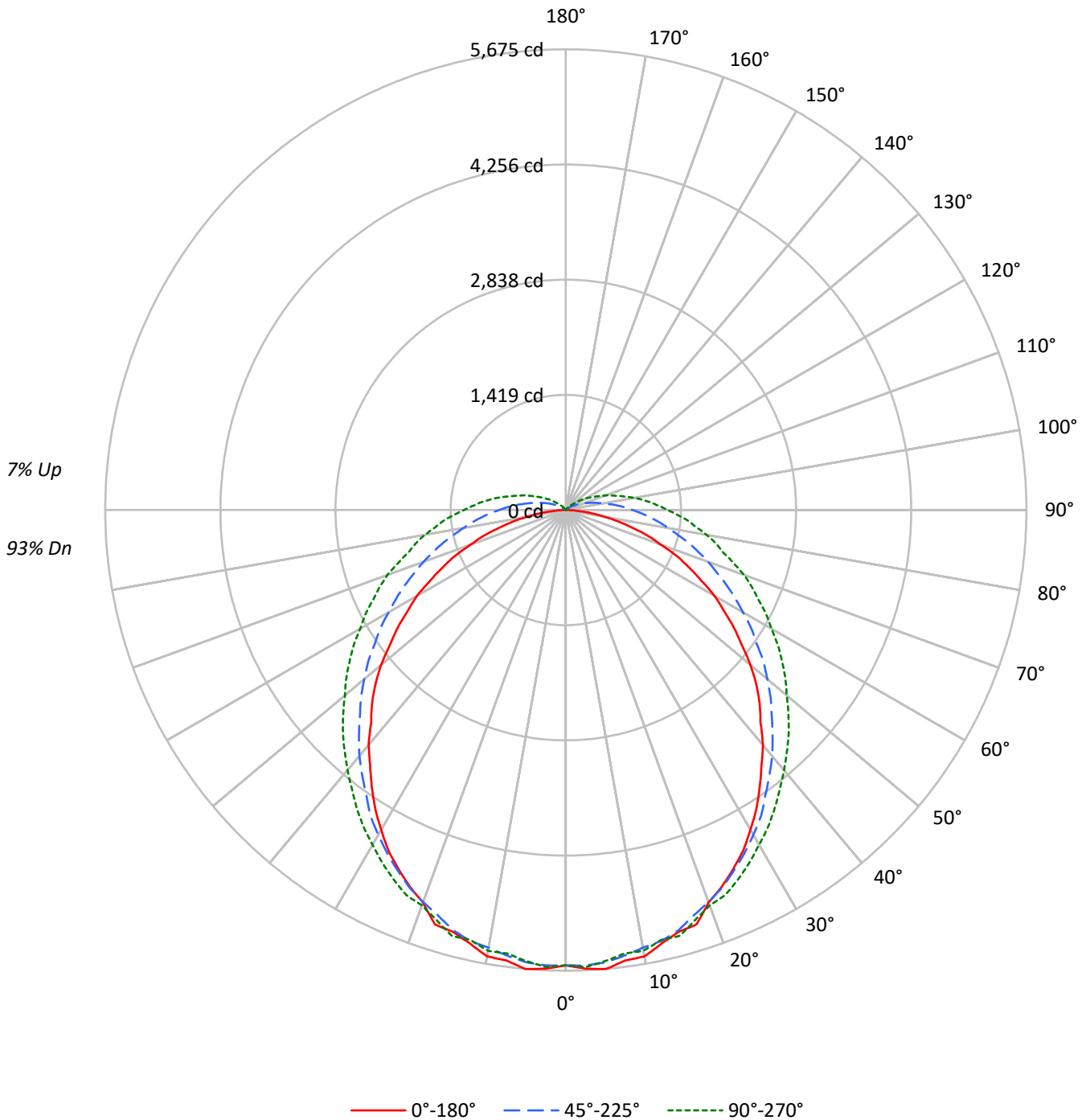
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18474.0 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
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 (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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93	
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74	
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	63	60	
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50	
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43	
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37	
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32	
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	30	28	
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25	
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23	
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19900	19900	19900
5°	20214	19921	19866
10°	20114	19726	19865
15°	19754	19688	19952
20°	19424	19404	19569
25°	19104	19185	19657
30°	18637	18932	19510
35°	18048	18570	19437
40°	17504	18325	19370
45°	16955	17998	19491
50°	16400	17887	19615
55°	15649	17760	20125
60°	15038	17879	20756
65°	14044	18352	22014
70°	12908	19377	24247
75°	11713	21456	27470
80°	10065	26211	36015
85°	8146	42408	61623

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 111863 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.8	2.9
10°-20°	1513.7	8.2
20°-30°	2268.4	12.3
30°-40°	2695.7	14.6
40°-50°	2790.8	15.1
50°-60°	2586.2	14.0
60°-70°	2153.1	11.7
70°-80°	1598.1	8.7
80°-90°	1057.0	5.7
90°-100°	643.2	3.5
100°-110°	360.6	2.0
110°-120°	177.6	1.0
120°-130°	72.3	0.4
130°-140°	20.9	0.1
140°-150°	3.0	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	4313.9	23.4
0°-40°	7009.6	37.9
0°-60°	12386.6	67.0
0°-90°	17194.8	93.1
90°-120°	1181.4	6.4
90°-150°	1277.6	6.9
90°-180°	1279.0	6.9
0°-180°	18474.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5609	5609	5609	5609	5609	
5°	5675	5614	5593	5621	5578	537
15°	5378	5357	5360	5367	5432	1523
25°	4880	4875	4900	4995	5021	2246
35°	4167	4197	4287	4423	4487	2607
45°	3379	3428	3587	3810	3884	2603
55°	2530	2638	2871	3158	3253	2262
65°	1673	1829	2186	2507	2622	1662
75°	854	1114	1565	1901	2004	914
85°	200	562	1042	1411	1514	225
90°	10	364	824	1152	1255	15
95°	3	226	639	952	1057	2
105°	3	74	346	588	670	3
115°	3	18	162	323	387	3
125°	3	5	59	149	190	2
135°	5	3	15	49	67	3
145°	5	3	0	5	8	3
155°	5	5	0	0	0	2
165°	8	5	0	0	0	2
175°	8	5	0	0	0	1
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5608.6	5608.6	5608.6	5608.6	5608.6
2.5°	5654.7	5626.5	5616.2	5603.4	5634.2
5°	5675.3	5613.7	5593.2	5621.4	5577.8
7.5°	5595.7	5580.3	5536.7	5552.1	5511.1
10°	5582.9	5498.2	5475.1	5526.4	5513.6
12.5°	5467.4	5395.6	5436.7	5472.6	5423.8
15°	5377.6	5357.1	5359.7	5367.4	5431.5
17.5°	5354.6	5262.2	5236.5	5300.7	5295.5
20°	5144.2	5126.2	5139.0	5223.7	5182.7
22.5°	5021.0	4964.6	5033.8	5115.9	5133.9
25°	4879.9	4874.8	4900.4	4995.4	5021.0
27.5°	4731.1	4697.7	4767.0	4877.3	4897.9
30°	4548.9	4536.1	4620.8	4715.7	4761.9
32.5°	4369.3	4377.0	4474.5	4554.1	4633.6
35°	4166.6	4197.4	4287.2	4423.2	4487.4
37.5°	3961.4	3999.9	4120.5	4277.0	4330.8
40°	3779.2	3786.9	3956.3	4115.3	4182.0
42.5°	3550.9	3627.9	3771.5	3981.9	4033.2
45°	3379.0	3427.7	3586.8	3810.0	3884.4
47.5°	3184.0	3240.4	3422.6	3640.7	3720.2
50°	2971.0	3022.4	3240.4	3489.3	3553.5
52.5°	2735.0	2840.2	3068.5	3325.1	3409.8
55°	2529.7	2637.5	2871.0	3158.3	3253.3
57.5°	2309.1	2416.9	2709.3	2976.2	3099.3
60°	2119.2	2221.9	2519.5	2850.5	2924.9
62.5°	1883.2	2029.4	2352.7	2678.6	2783.8
65°	1672.8	1829.3	2185.9	2506.7	2622.1
67.5°	1480.4	1642.0	2014.0	2357.8	2483.6
70°	1244.3	1457.3	1867.8	2206.5	2337.3
72.5°	1069.9	1282.8	1711.3	2047.4	2165.4
75°	854.4	1113.5	1565.1	1901.2	2003.8
77.5°	674.8	954.4	1413.7	1790.8	1893.5
80°	492.6	810.8	1282.8	1644.6	1762.6
82.5°	336.1	677.3	1162.2	1508.6	1621.5
85°	200.1	561.9	1041.7	1411.1	1513.7
87.5°	87.2	459.3	931.3	1270.0	1375.2
90°	10.3	364.3	823.6	1152.0	1254.6
92.5°	2.6	292.5	728.6	1046.8	1146.9
95°	2.6	225.8	638.9	951.9	1057.1
97.5°	2.6	174.5	549.1	854.4	954.4
100°	2.6	133.4	474.6	751.7	859.5
102.5°	2.6	100.1	402.8	667.1	759.4
105°	2.6	74.4	346.4	587.5	669.6
107.5°	2.6	53.9	289.9	513.1	595.2
110°	2.6	38.5	243.7	443.9	526.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	28.2	197.6	382.3	451.6
115°	2.6	18.0	161.6	323.3	387.4
117.5°	2.6	12.8	128.3	272.0	333.5
120°	2.6	10.3	102.6	225.8	279.7
122.5°	2.6	7.7	79.5	184.7	236.0
125°	2.6	5.1	59.0	148.8	189.9
127.5°	2.6	5.1	43.6	118.0	153.9
130°	2.6	2.6	30.8	89.8	120.6
132.5°	2.6	2.6	20.5	66.7	89.8
135°	5.1	2.6	15.4	48.7	66.7
137.5°	5.1	2.6	10.3	33.4	46.2
140°	5.1	2.6	5.1	20.5	28.2
142.5°	5.1	2.6	2.6	10.3	15.4
145°	5.1	2.6	0.0	5.1	7.7
147.5°	5.1	2.6	0.0	2.6	2.6
150°	5.1	2.6	0.0	0.0	0.0
152.5°	5.1	2.6	0.0	0.0	0.0
155°	5.1	5.1	0.0	0.0	0.0
157.5°	5.1	5.1	0.0	0.0	0.0
160°	5.1	5.1	0.0	0.0	0.0
162.5°	5.1	5.1	0.0	0.0	0.0
165°	7.7	5.1	0.0	0.0	0.0
167.5°	7.7	5.1	0.0	0.0	0.0
170°	7.7	5.1	0.0	0.0	0.0
172.5°	7.7	5.1	0.0	0.0	0.0
175°	7.7	5.1	0.0	0.0	0.0
177.5°	7.7	5.1	0.0	0.0	0.0
180°	2.6	2.6	2.6	2.6	2.6



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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	20.62	22.16	21.09	22.61	23.10	22.19	23.73	22.66	24.19	24.67
	3H	22.38	23.79	22.86	24.25	24.78	24.78	26.18	25.26	26.65	27.17
	4H	23.04	24.37	23.54	24.85	25.39	26.04	27.37	26.54	27.85	28.39
	6H	23.52	24.76	24.03	25.25	25.81	27.42	28.66	27.93	29.15	29.71
	8H	23.67	24.86	24.19	25.38	25.93	28.15	29.34	28.68	29.86	30.42
	12H	23.77	24.91	24.30	25.42	26.01	28.99	30.13	29.53	30.65	31.24
4H	2H	21.58	22.91	22.08	23.39	23.93	22.77	24.10	23.27	24.58	25.12
	3H	23.62	24.75	24.13	25.28	25.84	25.63	26.77	26.15	27.29	27.85
	4H	24.43	25.47	24.96	26.01	26.60	27.11	28.15	27.65	28.69	29.28
	6H	25.08	26.00	25.63	26.56	27.17	28.73	29.65	29.29	30.21	30.82
	8H	25.31	26.17	25.87	26.73	27.35	29.59	30.45	30.15	31.02	31.63
	12H	25.47	26.26	26.06	26.85	27.48	30.58	31.37	31.16	31.96	32.58
8H	4H	25.28	26.14	25.84	26.70	27.32	27.48	28.35	28.04	28.91	29.53
	6H	26.20	26.94	26.79	27.54	28.17	29.36	30.10	29.95	30.70	31.32
	8H	26.58	27.25	27.19	27.86	28.50	30.42	31.09	31.03	31.70	32.34
	12H	26.90	27.50	27.51	28.10	28.80	31.68	32.27	32.28	32.87	33.58
12H	4H	25.54	26.33	26.12	26.92	27.54	27.53	28.31	28.11	28.90	29.53
	6H	26.62	27.29	27.23	27.91	28.54	29.47	30.14	30.08	30.75	31.39
	8H	27.16	27.76	27.77	28.36	29.06	30.65	31.24	31.25	31.84	32.55