

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: P894939

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894939
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-20HL-RNDU-UNV-L940
Description: 20000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, CCT
Light Source: -
Ballast/Driver: -

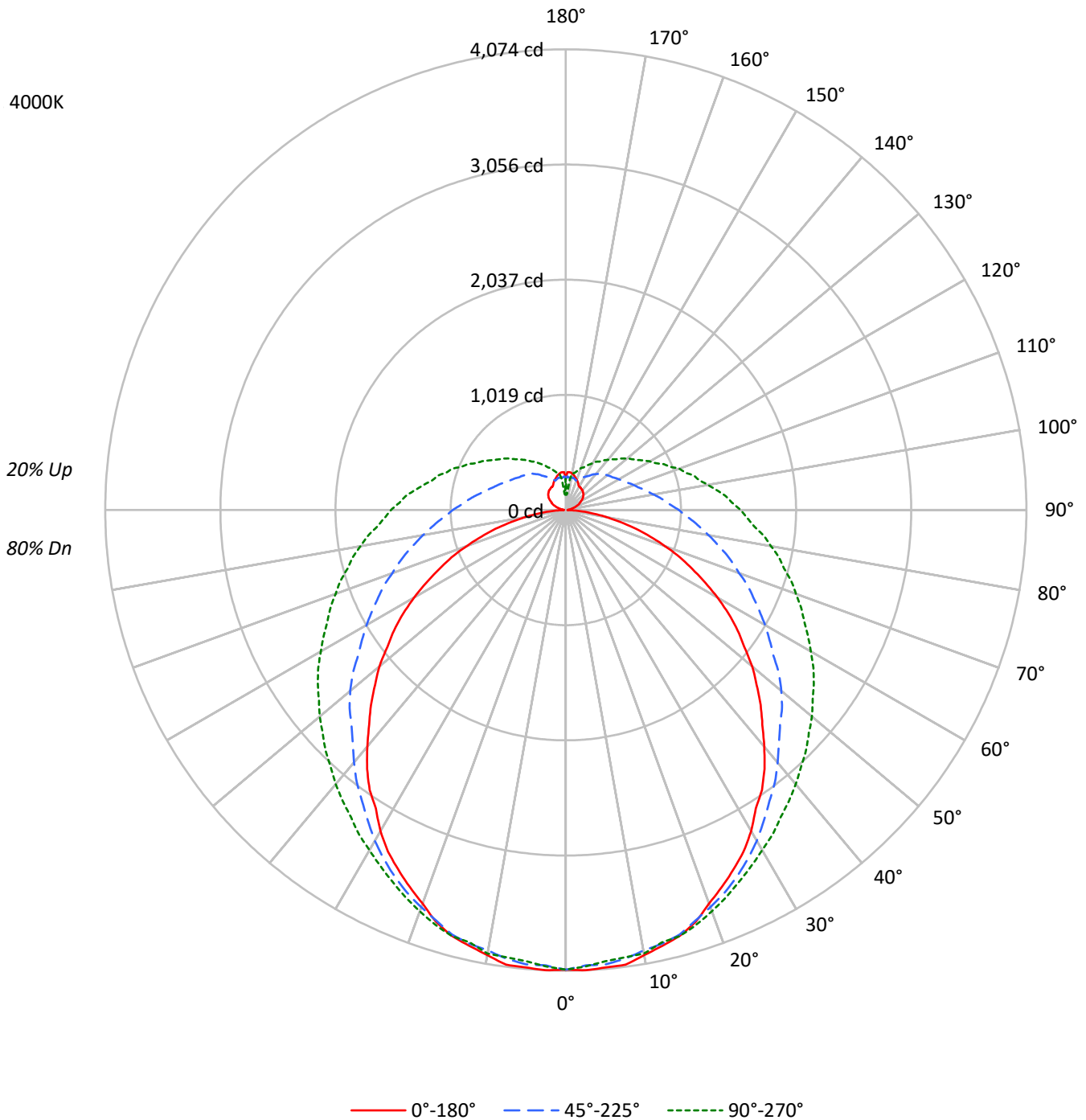
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17087.0 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
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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CATALOG NUMBER: 8TMB-20HL-RNDU-UNV-L940

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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14422	14422	14422
5°	14428	13871	13614
10°	14333	13299	13085
15°	14222	12879	12495
20°	13851	12295	11887
25°	13567	11779	11313
30°	13231	11213	10811
35°	12861	10596	10375
40°	12375	10069	10040
45°	11917	9566	9742
50°	11525	9260	9489
55°	11062	8777	9293
60°	10510	8478	9113
65°	9814	8214	8977
70°	9044	8005	8970
75°	8036	7943	8996
80°	6555	7934	9171
85°	4703	8156	9378

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11917 cd/sqm



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 CATALOG NUMBER: 8TMB-20HL-RNDU-UNV-L940

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	384.8	2.3
10°-20°	1099.5	6.4
20°-30°	1651.0	9.7
30°-40°	1982.6	11.6
40°-50°	2097.0	12.3
50°-60°	2020.9	11.8
60°-70°	1792.9	10.5
70°-80°	1470.4	8.6
80°-90°	1138.0	6.7
90°-100°	887.8	5.2
100°-110°	706.8	4.1
110°-120°	564.9	3.3
120°-130°	445.5	2.6
130°-140°	340.0	2.0
140°-150°	239.1	1.4
150°-160°	152.8	0.9
160°-170°	85.6	0.5
170°-180°	27.1	0.2
0°-30°	3135.3	18.3
0°-40°	5117.9	30.0
0°-60°	9235.8	54.1
0°-90°	13637.2	79.8
90°-120°	2159.6	12.6
90°-150°	3184.1	18.6
90°-180°	3450.0	20.2
0°-180°	17087.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4065	4065	4065	4065	4065	
5°	4060	4071	4033	4062	4006	386
15°	3899	3901	3887	3912	3901	1095
25°	3508	3564	3578	3640	3628	1616
35°	3023	3069	3142	3271	3314	1885
45°	2437	2510	2680	2935	3005	1880
55°	1855	1948	2241	2546	2678	1655
65°	1234	1405	1830	2210	2326	1227
75°	643	925	1457	1850	1998	681
85°	150	564	1130	1537	1673	169
90°	16	448	1000	1391	1546	16
95°	20	370	884	1271	1421	20
105°	68	300	707	1039	1173	72
115°	132	293	586	848	957	128
125°	184	298	505	696	771	162
135°	216	289	452	589	634	167
145°	234	266	373	493	523	147
155°	259	273	307	386	432	119
165°	307	300	289	282	350	86
175°	336	325	289	236	150	32
180°	275	275	275	275	275	



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CATALOG NUMBER: 8TMB-20HL-RNDU-UNV-L940

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4064.6	4064.6	4064.6	4064.6	4064.6
2.5°	4073.7	4087.3	4030.5	4064.6	4039.6
5°	4060.1	4071.4	4032.8	4062.3	4005.5
7.5°	4055.5	4051.0	4003.2	4041.9	3989.6
10°	3996.4	4012.3	3955.5	4007.8	3982.8
12.5°	3946.4	3978.2	3928.2	3969.1	3916.8
15°	3898.7	3900.9	3887.3	3912.3	3900.9
17.5°	3819.1	3839.5	3807.7	3864.6	3844.1
20°	3703.2	3766.8	3737.2	3789.5	3775.9
22.5°	3607.7	3639.5	3664.5	3723.6	3705.4
25°	3507.6	3564.5	3578.1	3639.5	3628.1
27.5°	3405.4	3430.4	3482.6	3548.6	3550.8
30°	3278.0	3305.3	3378.1	3453.1	3473.6
32.5°	3128.0	3214.4	3257.6	3371.3	3403.1
35°	3023.4	3068.9	3141.7	3271.2	3314.4
37.5°	2887.0	2939.3	3037.1	3189.4	3241.7
40°	2730.2	2807.5	2914.3	3103.0	3164.4
42.5°	2573.3	2664.3	2789.3	3009.8	3080.3
45°	2436.9	2509.7	2680.2	2934.8	3005.3
47.5°	2289.2	2377.8	2593.8	2837.0	2916.6
50°	2152.8	2243.7	2489.2	2746.1	2841.6
52.5°	1989.1	2093.7	2375.6	2641.5	2752.9
55°	1855.0	1948.2	2241.4	2546.1	2677.9
57.5°	1707.2	1811.8	2136.9	2475.6	2596.1
60°	1548.1	1679.9	2034.6	2386.9	2502.9
62.5°	1391.2	1548.1	1930.0	2300.5	2414.2
65°	1234.4	1404.9	1830.0	2209.6	2325.6
67.5°	1093.4	1277.6	1739.0	2109.6	2252.8
70°	934.3	1154.8	1632.2	2016.4	2166.4
72.5°	784.3	1043.4	1545.8	1941.4	2091.4
75°	643.3	925.2	1457.2	1850.4	1998.2
77.5°	502.4	813.8	1364.0	1768.6	1930.0
80°	368.3	722.9	1282.1	1689.0	1843.6
82.5°	254.6	643.3	1202.6	1623.1	1768.6
85°	150.0	563.8	1129.8	1536.7	1673.1
87.5°	68.2	500.1	1054.8	1470.8	1604.9
90°	15.9	447.8	1000.2	1391.2	1545.8
92.5°	15.9	406.9	934.3	1332.1	1473.1
95°	20.5	370.5	884.3	1270.8	1420.8
97.5°	27.3	343.3	838.8	1213.9	1345.8
100°	38.6	325.1	788.8	1148.0	1277.6
102.5°	52.3	311.4	743.4	1088.9	1209.4
105°	68.2	300.1	707.0	1038.9	1173.0
107.5°	84.1	295.5	670.6	991.1	1104.8
110°	100.0	293.3	643.3	941.1	1068.4



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 CATALOG NUMBER: 8TMB-20HL-RNDU-UNV-L940

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	115.9	291.0	613.8	895.7	998.0
115°	131.8	293.3	586.5	847.9	957.0
117.5°	140.9	293.3	561.5	807.0	897.9
120°	154.6	295.5	543.3	763.8	859.3
122.5°	168.2	295.5	525.1	732.0	816.1
125°	184.1	297.8	504.7	695.6	770.6
127.5°	193.2	297.8	493.3	670.6	738.8
130°	202.3	295.5	477.4	638.8	709.3
132.5°	211.4	291.0	468.3	609.2	675.2
135°	216.0	288.7	452.4	588.8	634.2
137.5°	222.8	281.9	436.5	559.2	609.2
140°	229.6	279.6	413.7	536.5	579.7
142.5°	229.6	272.8	397.8	516.0	554.7
145°	234.1	266.0	372.8	493.3	522.9
147.5°	238.7	263.7	354.6	470.6	506.9
150°	238.7	261.4	338.7	445.6	479.7
152.5°	243.2	263.7	322.8	422.8	454.7
155°	259.2	272.8	306.9	386.5	431.9
157.5°	272.8	281.9	291.0	359.2	406.9
160°	284.2	288.7	277.3	331.9	395.5
162.5°	293.3	295.5	279.6	306.9	370.5
165°	306.9	300.1	288.7	281.9	350.1
167.5°	318.3	304.6	293.3	275.1	334.2
170°	327.4	313.7	288.7	259.2	327.4
172.5°	334.2	316.0	291.0	243.2	275.1
175°	336.4	325.1	288.7	236.4	150.0
177.5°	334.2	327.4	297.8	234.1	134.1
180°	275.1	275.1	275.1	275.1	275.1



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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	16.34	17.65	16.98	18.32	19.08	19.83	21.14	20.47	21.80	22.57
	3H	17.79	18.99	18.44	19.66	20.46	22.70	23.90	23.35	24.57	25.37
	4H	18.26	19.40	18.93	20.09	20.90	24.18	25.32	24.85	26.01	26.82
	6H	18.54	19.60	19.22	20.30	21.12	25.79	26.86	26.48	27.55	28.38
	8H	18.60	19.62	19.29	20.33	21.16	26.65	27.67	27.35	28.39	29.22
	12H	18.62	19.59	19.32	20.30	21.16	27.60	28.58	28.30	29.29	30.15
4H	2H	17.49	18.63	18.17	19.32	20.13	20.16	21.30	20.83	21.99	22.80
	3H	19.19	20.17	19.88	20.89	21.73	23.26	24.24	23.95	24.96	25.79
	4H	19.79	20.70	20.49	21.42	22.28	24.93	25.83	25.63	26.56	27.41
	6H	20.20	21.00	20.92	21.75	22.61	26.74	27.54	27.46	28.28	29.15
	8H	20.31	21.06	21.04	21.81	22.69	27.71	28.46	28.43	29.21	30.09
	12H	20.37	21.06	21.11	21.82	22.71	28.78	29.47	29.53	30.24	31.12
8H	4H	20.84	21.60	21.57	22.34	23.22	25.11	25.86	25.83	26.60	27.48
	6H	21.49	22.13	22.24	22.91	23.80	27.09	27.73	27.84	28.52	29.40
	8H	21.71	22.29	22.48	23.08	23.98	28.21	28.79	28.97	29.57	30.47
	12H	21.86	22.38	22.63	23.16	24.11	29.47	29.99	30.24	30.77	31.72
12H	4H	21.18	21.87	21.93	22.64	23.52	25.10	25.79	25.85	26.56	27.44
	6H	21.99	22.57	22.75	23.36	24.25	27.12	27.70	27.89	28.49	29.38
	8H	22.34	22.86	23.11	23.63	24.59	28.30	28.82	29.07	29.60	30.55