

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: P894735

Luminaire Tested: 8TMB-16HL-RND-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894735
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-16HL-RND-UNV-L840
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

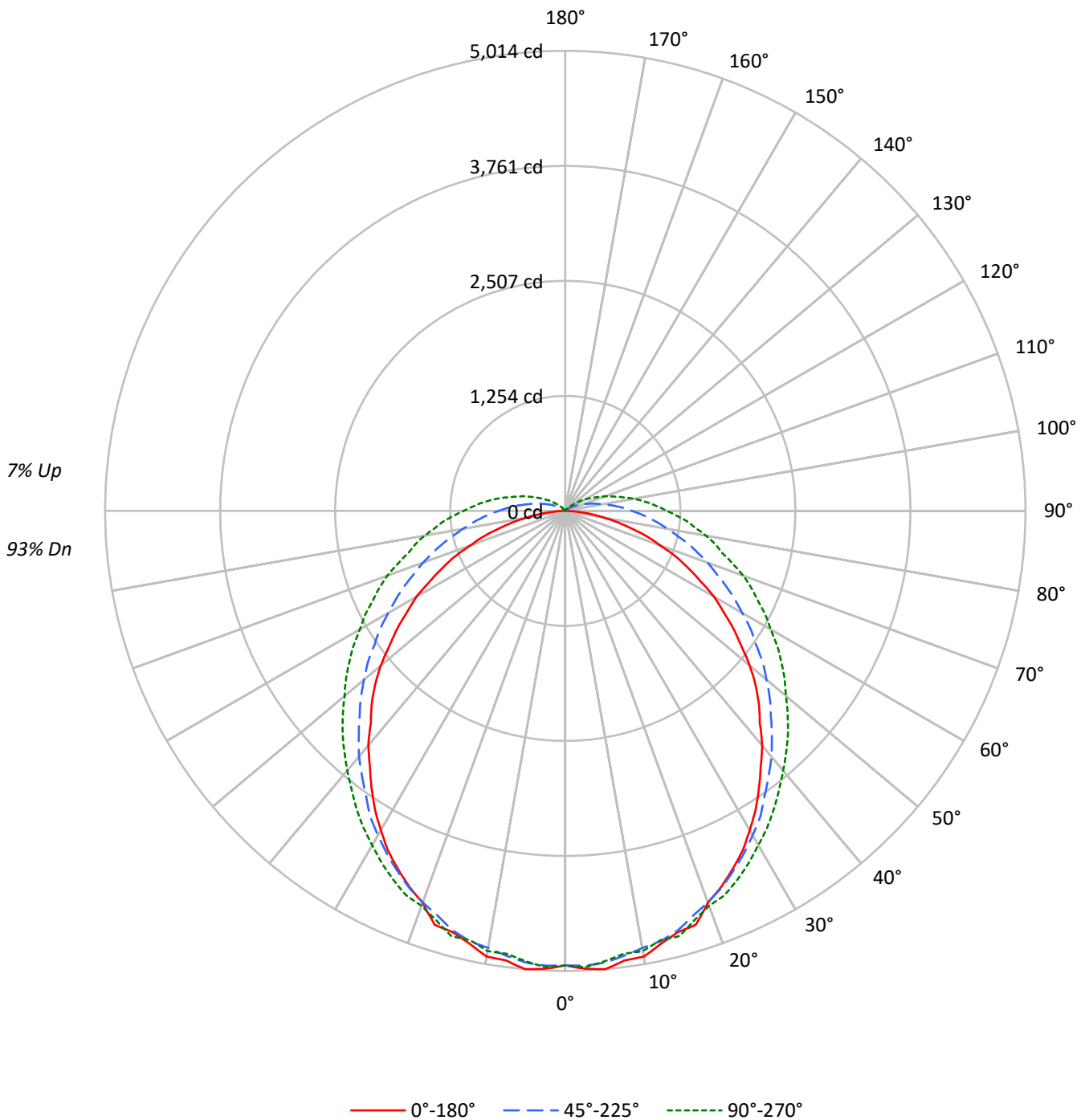
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16320.0 lumens
Efficiency: N/A
Efficacy: 140.9 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): 115.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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°	17580	17580	17580
5°	17857	17598	17550
10°	17769	17426	17549
15°	17450	17392	17625
20°	17159	17142	17287
25°	16877	16948	17365
30°	16464	16724	17235
35°	15943	16405	17170
40°	15464	16188	17112
45°	14978	15899	17219
50°	14488	15801	17328
55°	13824	15689	17778
60°	13285	15794	18335
65°	12407	16213	19448
70°	11404	17117	21420
75°	10348	18954	24268
80°	8892	23157	31816
85°	7198	37462	54438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 98824 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	469.8	2.9
10°-20°	1337.2	8.2
20°-30°	2003.9	12.3
30°-40°	2381.4	14.6
40°-50°	2465.4	15.1
50°-60°	2284.7	14.0
60°-70°	1902.1	11.7
70°-80°	1411.7	8.7
80°-90°	933.8	5.7
90°-100°	568.2	3.5
100°-110°	318.5	2.0
110°-120°	156.9	1.0
120°-130°	63.9	0.4
130°-140°	18.5	0.1
140°-150°	2.7	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3810.9	23.4
0°-40°	6192.3	37.9
0°-60°	10942.4	67.0
0°-90°	15190.0	93.1
90°-120°	1043.6	6.4
90°-150°	1128.6	6.9
90°-180°	1130.0	6.9
0°-180°	16320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4955	4955	4955	4955	4955	
5°	5014	4959	4941	4966	4927	474
15°	4751	4732	4735	4742	4798	1345
25°	4311	4306	4329	4413	4436	1984
35°	3681	3708	3787	3908	3964	2303
45°	2985	3028	3169	3366	3432	2300
55°	2235	2330	2536	2790	2874	1999
65°	1478	1616	1931	2214	2316	1468
75°	755	984	1383	1680	1770	808
85°	177	496	920	1247	1337	198
90°	9	322	728	1018	1108	13
95°	2	200	564	841	934	2
105°	2	66	306	519	592	2
115°	2	16	143	286	342	2
125°	2	4	52	132	168	2
135°	4	2	14	43	59	3
145°	4	2	0	4	7	3
155°	4	4	0	0	0	2
165°	7	4	0	0	0	2
175°	7	4	0	0	0	1
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4954.6	4954.6	4954.6	4954.6	4954.6
2.5°	4995.4	4970.5	4961.4	4950.1	4977.3
5°	5013.5	4959.1	4941.0	4965.9	4927.4
7.5°	4943.3	4929.7	4891.2	4904.8	4868.5
10°	4931.9	4857.2	4836.8	4882.1	4870.8
12.5°	4830.0	4766.5	4802.8	4834.5	4791.4
15°	4750.6	4732.5	4734.8	4741.6	4798.2
17.5°	4730.2	4648.6	4626.0	4682.6	4678.1
20°	4544.4	4528.5	4539.8	4614.6	4578.4
22.5°	4435.6	4385.7	4446.9	4519.4	4535.3
25°	4310.9	4306.4	4329.1	4412.9	4435.6
27.5°	4179.5	4150.0	4211.2	4308.7	4326.8
30°	4018.5	4007.2	4082.0	4165.9	4206.7
32.5°	3859.9	3866.7	3952.8	4023.1	4093.3
35°	3680.8	3708.0	3787.4	3907.5	3964.1
37.5°	3499.5	3533.5	3640.0	3778.3	3825.9
40°	3338.6	3345.4	3495.0	3635.5	3694.4
42.5°	3136.9	3204.9	3331.8	3517.6	3563.0
45°	2985.0	3028.1	3168.6	3365.8	3431.5
47.5°	2812.8	2862.6	3023.5	3216.2	3286.5
50°	2624.6	2670.0	2862.6	3082.5	3139.1
52.5°	2416.1	2509.0	2710.8	2937.4	3012.2
55°	2234.8	2330.0	2536.2	2790.1	2873.9
57.5°	2039.9	2135.1	2393.4	2629.2	2738.0
60°	1872.1	1962.8	2225.7	2518.1	2583.8
62.5°	1663.6	1792.8	2078.4	2366.2	2459.2
65°	1477.8	1616.0	1931.1	2214.4	2316.4
67.5°	1307.8	1450.6	1779.2	2082.9	2194.0
70°	1099.3	1287.4	1650.0	1949.2	2064.8
72.5°	945.1	1133.3	1511.8	1808.7	1912.9
75°	754.8	983.7	1382.6	1679.5	1770.2
77.5°	596.1	843.1	1248.9	1582.0	1672.7
80°	435.2	716.2	1133.3	1452.8	1557.1
82.5°	296.9	598.4	1026.7	1332.7	1432.4
85°	176.8	496.4	920.2	1246.6	1337.2
87.5°	77.1	405.7	822.7	1121.9	1214.9
90°	9.1	321.8	727.6	1017.7	1108.3
92.5°	2.3	258.4	643.7	924.7	1013.1
95°	2.3	199.5	564.4	840.9	933.8
97.5°	2.3	154.1	485.0	754.8	843.1
100°	2.3	117.9	419.3	664.1	759.3
102.5°	2.3	88.4	355.8	589.3	670.9
105°	2.3	65.7	306.0	519.0	591.6
107.5°	2.3	47.6	256.1	453.3	525.8
110°	2.3	34.0	215.3	392.1	464.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.3	24.9	174.5	337.7	398.9
115°	2.3	15.9	142.8	285.6	342.2
117.5°	2.3	11.3	113.3	240.3	294.6
120°	2.3	9.1	90.7	199.5	247.1
122.5°	2.3	6.8	70.3	163.2	208.5
125°	2.3	4.5	52.1	131.5	167.7
127.5°	2.3	4.5	38.5	104.3	136.0
130°	2.3	2.3	27.2	79.3	106.5
132.5°	2.3	2.3	18.1	58.9	79.3
135°	4.5	2.3	13.6	43.1	58.9
137.5°	4.5	2.3	9.1	29.5	40.8
140°	4.5	2.3	4.5	18.1	24.9
142.5°	4.5	2.3	2.3	9.1	13.6
145°	4.5	2.3	0.0	4.5	6.8
147.5°	4.5	2.3	0.0	2.3	2.3
150°	4.5	2.3	0.0	0.0	0.0
152.5°	4.5	2.3	0.0	0.0	0.0
155°	4.5	4.5	0.0	0.0	0.0
157.5°	4.5	4.5	0.0	0.0	0.0
160°	4.5	4.5	0.0	0.0	0.0
162.5°	4.5	4.5	0.0	0.0	0.0
165°	6.8	4.5	0.0	0.0	0.0
167.5°	6.8	4.5	0.0	0.0	0.0
170°	6.8	4.5	0.0	0.0	0.0
172.5°	6.8	4.5	0.0	0.0	0.0
175°	6.8	4.5	0.0	0.0	0.0
177.5°	6.8	4.5	0.0	0.0	0.0
180°	2.3	2.3	2.3	2.3	2.3



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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	20.19	21.73	20.66	22.18	22.66	21.76	23.30	22.23	23.76	24.24
	3H	21.95	23.36	22.43	23.82	24.34	24.35	25.75	24.83	26.22	26.74
	4H	22.61	23.94	23.11	24.42	24.96	25.61	26.94	26.11	27.42	27.96
	6H	23.09	24.33	23.60	24.82	25.38	26.99	28.23	27.50	28.72	29.28
	8H	23.24	24.43	23.76	24.94	25.50	27.72	28.91	28.25	29.43	29.99
	12H	23.34	24.48	23.87	24.99	25.58	28.56	29.70	29.09	30.21	30.80
4H	2H	21.14	22.48	21.65	22.96	23.50	22.33	23.67	22.84	24.15	24.69
	3H	23.19	24.32	23.70	24.85	25.41	25.20	26.34	25.72	26.86	27.42
	4H	24.00	25.04	24.53	25.57	26.17	26.68	27.72	27.22	28.26	28.85
	6H	24.65	25.57	25.20	26.13	26.74	28.30	29.22	28.85	29.78	30.39
	8H	24.88	25.74	25.43	26.30	26.92	29.16	30.02	29.72	30.58	31.20
	12H	25.04	25.83	25.63	26.42	27.05	30.15	30.94	30.73	31.53	32.15
8H	4H	24.85	25.71	25.41	26.27	26.89	27.05	27.92	27.61	28.48	29.10
	6H	25.77	26.51	26.36	27.11	27.73	28.93	29.67	29.52	30.27	30.89
	8H	26.15	26.82	26.76	27.43	28.07	29.99	30.66	30.59	31.27	31.91
	12H	26.47	27.07	27.08	27.67	28.37	31.25	31.84	31.85	32.44	33.15
12H	4H	25.11	25.90	25.69	26.49	27.11	27.09	27.88	27.68	28.47	29.10
	6H	26.19	26.86	26.80	27.47	28.11	29.04	29.71	29.64	30.32	30.96
	8H	26.73	27.33	27.34	27.93	28.63	30.21	30.81	30.82	31.41	32.12