

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: P894739

Luminaire Tested: 8TMB-16HL-RND-UNV-L940

Issue Date: 11/11/2024

**Test Information**

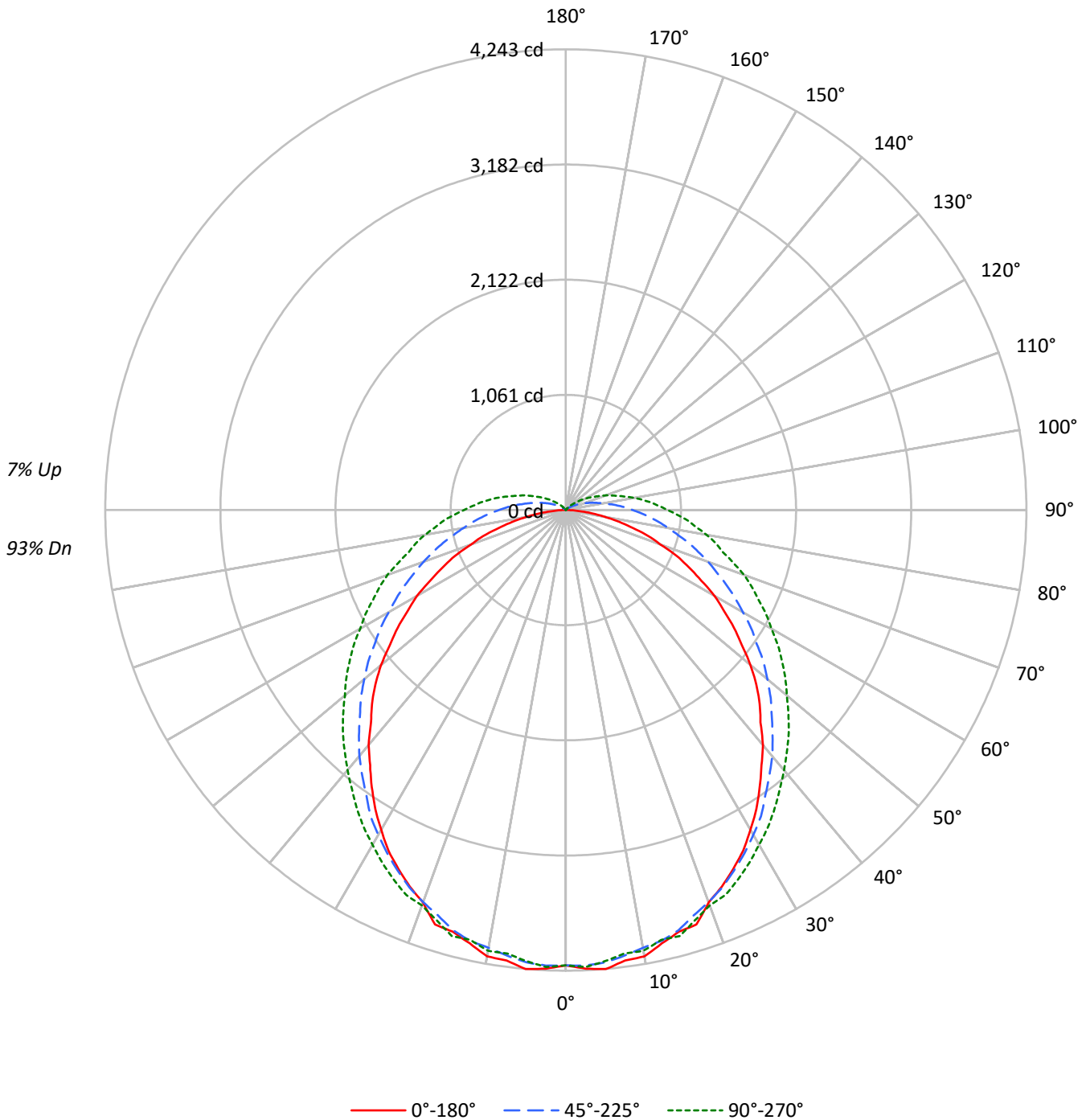
Test Method: LM-79-2019  
Report Number: P894739  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-RND-UNV-L940  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 90CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13813.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 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<sub>in</sub>): 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	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	96	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	77	77	77	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	63	63	63	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	53	53	53	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	45	45	45	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	39	39	39	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	34	34	34	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	30	30	30	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	27	27	27	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	25	25	25	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	22	22	22	22	22	22	22	21				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14879	14879	14879
5°	15114	14895	14854
10°	15039	14749	14853
15°	14770	14720	14918
20°	14523	14509	14632
25°	14284	14344	14697
30°	13935	14155	14587
35°	13494	13885	14533
40°	13088	13701	14483
45°	12678	13457	14574
50°	12262	13374	14666
55°	11701	13279	15047
60°	11245	13368	15519
65°	10501	13722	16460
70°	9652	14488	18130
75°	8757	16042	20539
80°	7525	19599	26929
85°	6090	31705	46076

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 87.5°  
 Luminance: 83637 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	397.6	2.9
10°-20°	1131.8	8.2
20°-30°	1696.1	12.3
30°-40°	2015.6	14.6
40°-50°	2086.7	15.1
50°-60°	1933.7	14.0
60°-70°	1609.9	11.7
70°-80°	1194.9	8.7
80°-90°	790.3	5.7
90°-100°	480.9	3.5
100°-110°	269.6	2.0
110°-120°	132.8	1.0
120°-130°	54.0	0.4
130°-140°	15.6	0.1
140°-150°	2.2	0.0
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	3225.5	23.4
0°-40°	5241.1	37.9
0°-60°	9261.5	67.0
0°-90°	12856.6	93.1
90°-120°	883.3	6.4
90°-150°	955.2	6.9
90°-180°	956.0	6.9
0°-180°	13813.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4194	4194	4194	4194	4194	
5°	4243	4197	4182	4203	4170	401
15°	4021	4006	4007	4013	4061	1139
25°	3649	3645	3664	3735	3754	1679
35°	3115	3138	3206	3307	3355	1949
45°	2526	2563	2682	2849	2904	1947
55°	1892	1972	2147	2362	2432	1692
65°	1251	1368	1634	1874	1961	1243
75°	639	833	1170	1422	1498	683
85°	150	420	779	1055	1132	168
90°	8	272	616	861	938	11
95°	2	169	478	712	790	2
105°	2	56	259	439	501	2
115°	2	13	121	242	290	2
125°	2	4	44	111	142	2
135°	4	2	12	36	50	2
145°	4	2	0	4	6	2
155°	4	4	0	0	0	2
165°	6	4	0	0	0	1
175°	6	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°	4193.5	4193.5	4193.5	4193.5	4193.5
2.5°	4228.0	4206.9	4199.3	4189.7	4212.7
5°	4243.4	4197.3	4182.0	4203.1	4170.5
7.5°	4183.9	4172.4	4139.8	4151.3	4120.6
10°	4174.3	4111.0	4093.8	4132.1	4122.5
12.5°	4088.0	4034.3	4065.0	4091.8	4055.4
15°	4020.9	4005.5	4007.4	4013.2	4061.1
17.5°	4003.6	3934.5	3915.4	3963.3	3959.5
20°	3846.3	3832.9	3842.5	3905.8	3875.1
22.5°	3754.2	3712.0	3763.8	3825.2	3838.6
25°	3648.7	3644.9	3664.0	3735.0	3754.2
27.5°	3537.4	3512.5	3564.3	3646.8	3662.1
30°	3401.2	3391.6	3454.9	3525.9	3560.5
32.5°	3266.9	3272.7	3345.6	3405.1	3464.5
35°	3115.4	3138.4	3205.6	3307.2	3355.2
37.5°	2961.9	2990.7	3080.9	3197.9	3238.2
40°	2825.7	2831.5	2958.1	3077.0	3126.9
42.5°	2655.0	2712.5	2820.0	2977.3	3015.6
45°	2526.5	2562.9	2681.9	2848.7	2904.4
47.5°	2380.7	2422.9	2559.1	2722.1	2781.6
50°	2221.4	2259.8	2422.9	2609.0	2656.9
52.5°	2045.0	2123.6	2294.3	2486.2	2549.5
55°	1891.5	1972.1	2146.6	2361.5	2432.5
57.5°	1726.5	1807.1	2025.8	2225.3	2317.4
60°	1584.6	1661.3	1883.8	2131.3	2186.9
62.5°	1408.1	1517.4	1759.1	2002.8	2081.4
65°	1250.8	1367.8	1634.4	1874.2	1960.6
67.5°	1106.9	1227.7	1505.9	1763.0	1857.0
70°	930.4	1089.6	1396.6	1649.8	1747.6
72.5°	800.0	959.2	1279.5	1530.8	1619.1
75°	638.8	832.6	1170.2	1421.5	1498.2
77.5°	504.5	713.6	1057.0	1339.0	1415.7
80°	368.3	606.2	959.2	1229.7	1317.9
82.5°	251.3	506.4	869.0	1128.0	1212.4
85°	149.6	420.1	778.8	1055.1	1131.8
87.5°	65.2	343.4	696.4	949.6	1028.2
90°	7.7	272.4	615.8	861.3	938.1
92.5°	1.9	218.7	544.8	782.7	857.5
95°	1.9	168.8	477.7	711.7	790.4
97.5°	1.9	130.4	410.5	638.8	713.6
100°	1.9	99.8	354.9	562.1	642.6
102.5°	1.9	74.8	301.2	498.8	567.8
105°	1.9	55.6	259.0	439.3	500.7
107.5°	1.9	40.3	216.8	383.7	445.1
110°	1.9	28.8	182.2	331.9	393.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	21.1	147.7	285.8	337.6
115°	1.9	13.4	120.9	241.7	289.7
117.5°	1.9	9.6	95.9	203.3	249.4
120°	1.9	7.7	76.7	168.8	209.1
122.5°	1.9	5.8	59.5	138.1	176.5
125°	1.9	3.8	44.1	111.3	142.0
127.5°	1.9	3.8	32.6	88.2	115.1
130°	1.9	1.9	23.0	67.1	90.2
132.5°	1.9	1.9	15.3	49.9	67.1
135°	3.8	1.9	11.5	36.4	49.9
137.5°	3.8	1.9	7.7	24.9	34.5
140°	3.8	1.9	3.8	15.3	21.1
142.5°	3.8	1.9	1.9	7.7	11.5
145°	3.8	1.9	0.0	3.8	5.8
147.5°	3.8	1.9	0.0	1.9	1.9
150°	3.8	1.9	0.0	0.0	0.0
152.5°	3.8	1.9	0.0	0.0	0.0
155°	3.8	3.8	0.0	0.0	0.0
157.5°	3.8	3.8	0.0	0.0	0.0
160°	3.8	3.8	0.0	0.0	0.0
162.5°	3.8	3.8	0.0	0.0	0.0
165°	5.8	3.8	0.0	0.0	0.0
167.5°	5.8	3.8	0.0	0.0	0.0
170°	5.8	3.8	0.0	0.0	0.0
172.5°	5.8	3.8	0.0	0.0	0.0
175°	5.8	3.8	0.0	0.0	0.0
177.5°	5.8	3.8	0.0	0.0	0.0
180°	1.9	1.9	1.9	1.9	1.9



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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	19.61	21.15	20.08	21.60	22.08	21.18	22.72	21.65	23.18	23.66
	3H	21.37	22.78	21.85	23.24	23.77	23.77	25.17	24.25	25.64	26.16
	4H	22.03	23.36	22.53	23.84	24.38	25.03	26.36	25.53	26.84	27.38
	6H	22.51	23.75	23.02	24.24	24.80	26.41	27.65	26.92	28.14	28.70
	8H	22.66	23.85	23.18	24.37	24.92	27.14	28.33	27.67	28.85	29.41
	12H	22.76	23.90	23.29	24.41	25.00	27.98	29.12	28.52	29.64	30.22
4H	2H	20.57	21.90	21.07	22.38	22.92	21.76	23.09	22.26	23.57	24.11
	3H	22.61	23.74	23.12	24.27	24.83	24.62	25.76	25.14	26.28	26.84
	4H	23.42	24.46	23.95	25.00	25.59	26.10	27.14	26.64	27.68	28.27
	6H	24.07	24.99	24.62	25.55	26.16	27.72	28.64	28.28	29.20	29.81
	8H	24.30	25.16	24.86	25.72	26.34	28.58	29.44	29.14	30.01	30.62
	12H	24.46	25.25	25.05	25.84	26.47	29.57	30.36	30.15	30.95	31.57
8H	4H	24.27	25.13	24.83	25.69	26.31	26.47	27.34	27.03	27.90	28.52
	6H	25.19	25.93	25.78	26.53	27.16	28.35	29.09	28.94	29.69	30.31
	8H	25.57	26.24	26.18	26.85	27.49	29.41	30.08	30.02	30.69	31.33
	12H	25.89	26.49	26.50	27.09	27.79	30.67	31.26	31.27	31.86	32.57
12H	4H	24.53	25.32	25.11	25.91	26.53	26.52	27.30	27.10	27.89	28.52
	6H	25.61	26.28	26.22	26.89	27.53	28.46	29.13	29.07	29.74	30.38
	8H	26.15	26.75	26.76	27.35	28.05	29.64	30.23	30.24	30.83	31.54