

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: P894727

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

Issue Date: 11/11/2024

**Test Information**

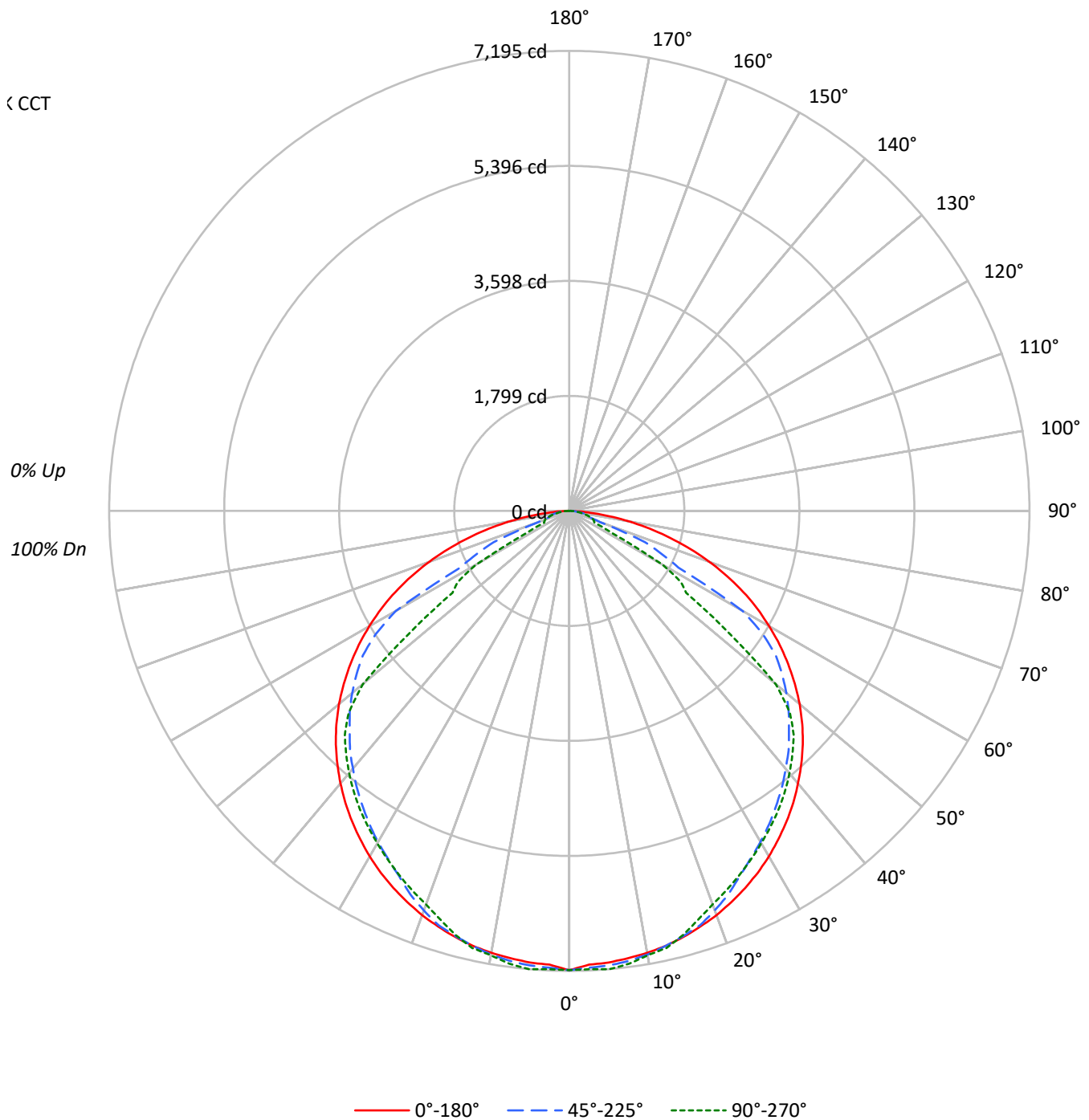
Test Method: LM-79-2019  
Report Number: P894727  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-16HL-RFLW-UNV-L840  
Description: 16000 Lumen 8FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 4000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18723.0 lumens  
Efficiency: N/A  
Efficacy: 161.7 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.25 / 1.38  
Luminous Opening: Rectangular (W 0.21' x L: 7.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 115.8  
Input Voltage (V): 120  
Input Current (Ain): 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

TEST NUMBER: P894727  
CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L840

### Luminous Intensity Polar Plot





TEST NUMBER: P894727

CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L840

**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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	93	87	82	98	91	85	81	88	83	79	85	81	77	82	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	56	56	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	49	49	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	43	43	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	38	38	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	34	34	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	31	31	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	28	28	28	26

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

	0°	45°	90°
0°	46506	46506	46506
5°	46079	46381	46770
10°	46146	46321	46408
15°	46247	46143	46040
20°	46364	45830	45129
25°	46490	45020	44925
30°	46667	44714	44896
35°	46836	44543	45086
40°	47033	44489	45275
45°	47285	44468	45461
50°	47357	44636	42474
55°	47149	44500	25186
60°	46749	40558	21842
65°	45984	24519	6613
70°	44165	9722	7585
75°	40921	7974	7751
80°	35407	8416	7264
85°	25157	7890	6910

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 47357 cd/sqm



TEST NUMBER: P894727  
 CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L840

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	680.3	3.6
10°-20°	1948.2	10.4
20°-30°	2944.0	15.7
30°-40°	3592.0	19.2
40°-50°	3799.7	20.3
50°-60°	3147.1	16.8
60°-70°	1749.5	9.3
70°-80°	709.2	3.8
80°-90°	152.9	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	5572.5	29.8
0°-40°	9164.5	48.9
0°-60°	16111.4	86.1
0°-90°	18723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18723.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7182	7182	7182	7182	7182	
5°	7089	7215	7135	7146	7195	674
15°	6899	7005	6883	6879	6868	1949
25°	6507	6553	6301	6261	6288	3001
35°	5925	5852	5635	5657	5703	3709
45°	5163	4898	4856	4916	4964	3980
55°	4176	3893	3942	2704	2231	3731
65°	3001	2751	1600	538	432	2960
75°	1636	912	319	314	310	1727
85°	339	113	106	97	93	425
90°	0	0	0	0	0	



TEST NUMBER: P894727

CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L840

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7181.9	7181.9	7181.9	7181.9	7181.9
2.5°	7104.4	7228.3	7150.9	7166.4	7173.0
5°	7088.9	7215.1	7135.4	7146.5	7195.2
7.5°	7055.7	7184.1	7100.0	7106.6	7144.2
10°	7018.1	7135.4	7044.7	7033.6	7057.9
12.5°	6967.2	7073.4	6967.2	6971.6	7002.6
15°	6898.6	7004.8	6883.1	6878.7	6867.6
17.5°	6816.7	6916.3	6796.8	6725.9	6701.6
20°	6728.2	6805.6	6650.7	6542.3	6548.9
22.5°	6621.9	6688.3	6493.6	6394.0	6422.7
25°	6506.8	6553.3	6301.0	6261.2	6287.7
27.5°	6380.7	6416.1	6135.0	6126.2	6148.3
30°	6241.3	6254.5	5980.1	5975.7	6004.4
32.5°	6086.3	6064.2	5814.1	5818.5	5856.2
35°	5924.8	5851.7	5634.8	5657.0	5703.4
37.5°	5754.3	5623.8	5457.8	5486.6	5537.5
40°	5564.0	5387.0	5263.0	5307.3	5356.0
42.5°	5369.3	5139.1	5074.9	5116.9	5163.4
45°	5163.4	4897.8	4855.8	4915.5	4964.2
47.5°	4939.9	4661.0	4654.4	4700.9	4678.7
50°	4700.9	4415.4	4430.8	4368.9	4216.2
52.5°	4444.1	4160.8	4191.8	3924.0	3171.5
55°	4176.3	3893.0	3941.7	2704.5	2230.9
57.5°	3901.9	3618.6	3587.6	2069.4	2067.1
60°	3609.7	3339.7	3131.7	1828.1	1686.5
62.5°	3315.4	3049.8	1923.3	1376.6	774.6
65°	3001.1	2751.0	1600.2	537.8	431.6
67.5°	2671.3	2447.8	1281.4	405.0	420.5
70°	2332.7	2133.5	513.5	391.7	400.6
72.5°	1987.5	1646.6	340.8	363.0	363.0
75°	1635.6	911.8	318.7	314.3	309.8
77.5°	1285.9	610.8	278.9	258.9	252.3
80°	949.5	219.1	225.7	201.4	194.8
82.5°	628.6	170.4	161.6	146.1	141.6
85°	338.6	112.9	106.2	97.4	93.0
87.5°	121.7	57.5	57.5	46.5	42.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P894727  
 CATALOG NUMBER: 8TMB-16HL-RFLW-UNV-L840

**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	26.02	27.59	26.38	27.90	28.22	22.01	23.58	22.37	23.89	24.21
	3H	28.02	29.43	28.40	29.76	30.12	22.14	23.55	22.52	23.87	24.24
	4H	28.64	29.96	29.04	30.30	30.68	22.26	23.58	22.66	23.93	24.30
	6H	29.04	30.25	29.45	30.62	31.01	22.37	23.58	22.78	23.95	24.34
	8H	29.16	30.32	29.58	30.70	31.10	22.40	23.56	22.83	23.95	24.35
	12H	29.23	30.34	29.66	30.72	31.15	22.42	23.53	22.85	23.92	24.34
4H	2H	26.15	27.47	26.55	27.81	28.19	22.73	24.05	23.13	24.40	24.78
	3H	28.31	29.40	28.72	29.80	30.20	22.93	24.02	23.34	24.42	24.82
	4H	28.96	29.94	29.39	30.35	30.79	23.09	24.06	23.52	24.48	24.92
	6H	29.41	30.26	29.86	30.70	31.16	23.25	24.10	23.71	24.54	25.00
	8H	29.55	30.34	30.01	30.78	31.25	23.30	24.10	23.77	24.54	25.01
	12H	29.65	30.36	30.13	30.84	31.31	23.35	24.06	23.83	24.54	25.01
8H	4H	28.90	29.69	29.36	30.13	30.60	23.36	24.15	23.82	24.59	25.06
	6H	29.34	30.00	29.84	30.49	30.96	23.56	24.22	24.06	24.71	25.19
	8H	29.49	30.08	30.00	30.59	31.07	23.65	24.24	24.16	24.75	25.23
	12H	29.62	30.14	30.13	30.63	31.20	23.73	24.26	24.24	24.75	25.31
12H	4H	28.87	29.58	29.35	30.06	30.53	23.37	24.08	23.85	24.56	25.03
	6H	29.30	29.89	29.81	30.40	30.89	23.58	24.17	24.09	24.68	25.17
	8H	29.47	29.99	29.98	30.49	31.05	23.71	24.23	24.21	24.72	25.28