

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: METALUX

Report Number: P381713

Luminaire Tested: **BMK-50-MCL-UNV-L750-CD-U**

Issue Date: 2/4/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P381713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-6)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/4/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: BMK-50-MCL-UNV-L750-CD-U
Description: BENCHMARK HIGHBAY LED FIXTURE WITH MEDIUM CLEAR LENS

Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 53900.5 lumens
Efficiency: N/A
Efficacy: 162.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.41 / 1.39
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')
CIE Type: Direct

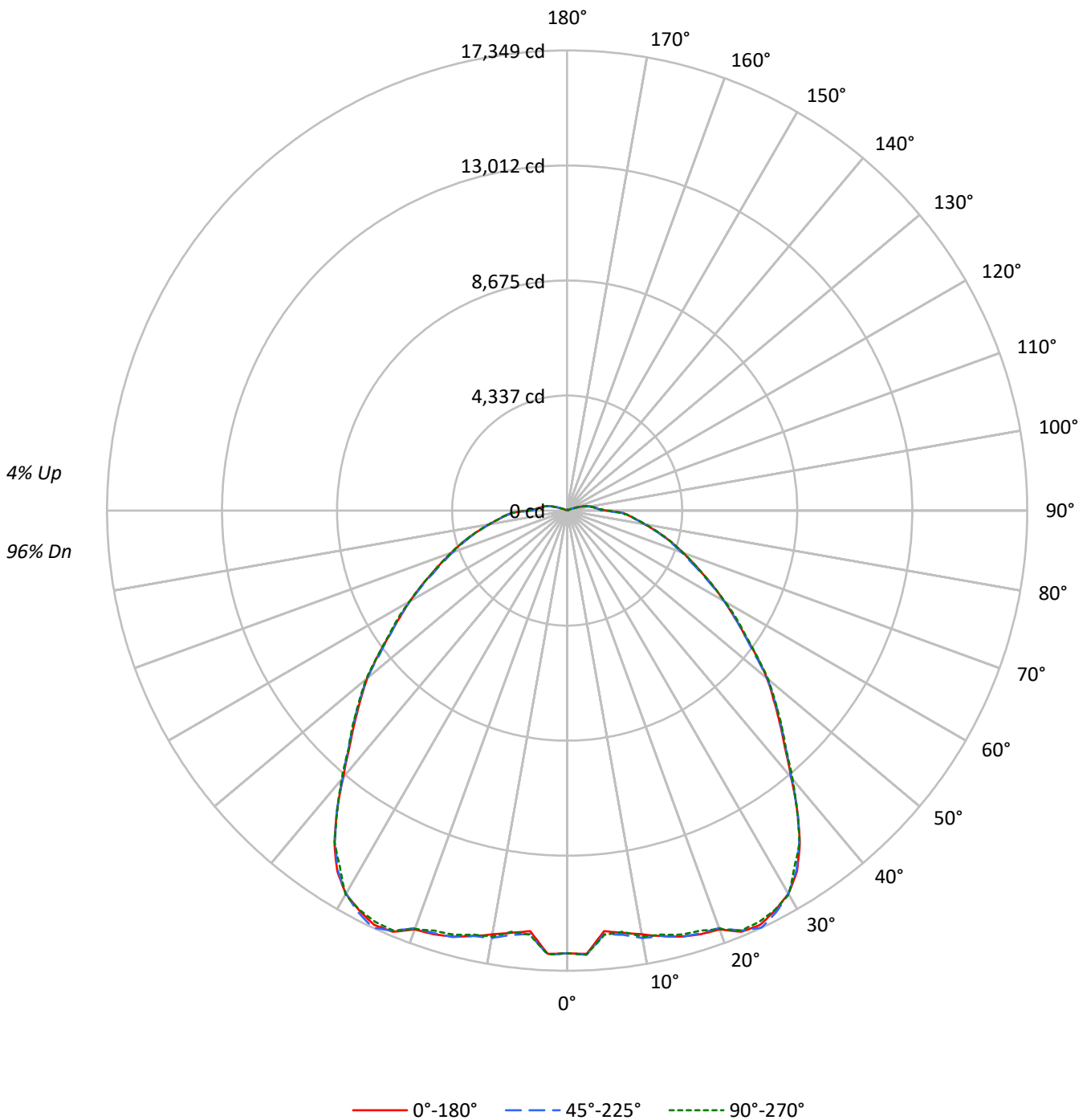
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	90	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	80	74	82	77	72	78	74	70	75	71	68	65
3	89	78	69	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	53	79	67	59	53	64	57	52	62	55	50	59	54	49	47
5	75	62	53	46	72	60	52	45	58	50	45	55	49	44	53	48	43	41
6	69	56	47	40	67	54	46	40	52	45	39	50	44	38	48	42	38	36
7	64	50	42	35	62	49	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	37	32	58	45	37	31	43	36	31	42	35	31	41	35	30	28
9	56	42	34	28	54	41	34	28	40	33	28	39	32	28	37	32	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	128713	128713	128713
5°	121937	122769	123041
10°	124439	125519	125069
15°	128633	128797	128059
20°	132141	131784	132037
25°	138910	139858	137945
30°	138985	138920	139272
35°	132892	132563	132756
40°	120198	120361	121061
45°	110440	110981	111338
50°	103338	103513	103933
55°	93863	93570	94296
60°	87495	87409	87764
65°	81922	80890	81986
70°	78825	77826	78957
75°	78225	77149	78155
80°	78435	78668	79669
85°	88709	88335	89911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1547.9	2.9
10°-20°	4704.3	8.7
20°-30°	7887.1	14.6
30°-40°	9459.8	17.6
40°-50°	8817.7	16.4
50°-60°	7354.7	13.6
60°-70°	5587.5	10.4
70°-80°	3985.6	7.4
80°-90°	2525.5	4.7
90°-100°	1213.0	2.3
100°-110°	631.5	1.2
110°-120°	85.7	0.2
120°-130°	25.6	0.0
130°-140°	28.4	0.1
140°-150°	23.8	0.0
150°-160°	12.8	0.0
160°-170°	7.3	0.0
170°-180°	2.4	0.0
0°-30°	14139.3	26.2
0°-40°	23599.1	43.8
0°-60°	39771.4	73.8
0°-90°	51870.1	96.2
90°-120°	1930.2	3.6
90°-150°	2008.0	3.7
90°-180°	2030.0	3.8
0°-180°	53900.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16688	16688	16688	16688	16688	
5°	15914	15982	16022	16034	16058	###
15°	16625	16579	16646	16682	16550	4708
25°	17231	17267	17349	17223	17112	7883
35°	15294	15252	15256	15305	15278	9471
45°	11334	11364	11389	11403	11426	8784
55°	8170	8149	8145	8124	8208	7371
65°	5638	5540	5567	5577	5642	5628
75°	3795	3767	3742	3751	3791	4002
85°	2370	2370	2360	2350	2402	2058
90°	1465	1409	1290	1393	1488	856
95°	1075	1117	1119	1086	1079	847
105°	608	614	609	603	616	635
115°	49	52	53	51	52	84
125°	29	29	28	29	30	25
135°	37	37	37	37	38	28
145°	40	39	39	39	38	24
155°	27	27	26	26	27	13
165°	27	26	26	26	26	8
175°	24	26	24	26	27	2
180°	26	26	26	26	26	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16687.9	16687.9	16687.9	16687.9	16687.9
2.5°	16729.0	16685.7	16764.5	16792.2	16748.9
5°	15913.7	15982.5	16022.4	16033.5	16057.9
7.5°	16052.4	15982.5	16130.0	16130.0	16015.8
10°	16223.2	16385.1	16364.0	16337.4	16305.3
12.5°	16432.8	16426.2	16423.9	16400.6	16374.0
15°	16624.7	16579.2	16645.8	16682.4	16550.4
17.5°	16746.7	16619.2	16707.9	16770.0	16609.2
20°	16798.8	16666.9	16753.4	16857.6	16785.5
22.5°	17189.3	17106.1	17140.5	17218.1	17137.2
25°	17231.4	17266.9	17349.0	17222.6	17111.6
27.5°	16987.4	17038.4	17070.6	17052.9	16966.3
30°	16681.3	16669.1	16673.5	16735.6	16715.7
32.5°	16128.9	16059.0	16084.5	16014.6	15942.5
35°	15293.7	15251.5	15255.9	15304.8	15278.1
37.5°	14255.4	14191.1	14259.9	14295.4	14235.5
40°	13134.0	13229.4	13151.8	13177.3	13228.3
42.5°	12163.5	12250.0	12210.1	12245.6	12204.5
45°	11333.8	11363.8	11389.3	11402.6	11425.9
47.5°	10562.9	10595.1	10615.1	10629.5	10630.6
50°	9837.5	9825.3	9854.1	9779.8	9894.1
52.5°	8993.4	8913.5	8910.2	8885.8	9014.5
55°	8170.4	8149.3	8144.9	8123.8	8208.1
57.5°	7474.9	7477.1	7488.2	7494.9	7565.9
60°	6844.9	6786.1	6838.2	6822.7	6866.0
62.5°	6230.4	6160.5	6186.0	6184.9	6242.6
65°	5638.1	5540.5	5567.1	5577.1	5642.5
67.5°	5123.4	5071.3	5041.3	5083.5	5131.2
70°	4642.0	4606.5	4583.2	4610.9	4649.8
72.5°	4206.1	4156.2	4157.3	4151.7	4220.5
75°	3794.6	3766.8	3742.4	3751.3	3791.2
77.5°	3354.2	3389.7	3342.0	3359.8	3377.5
80°	2961.6	3001.5	2970.4	2967.1	3008.2
82.5°	2651.0	2654.3	2653.2	2634.4	2647.7
85°	2370.4	2370.4	2360.4	2350.4	2402.5
87.5°	2111.9	2057.6	2046.5	2054.2	2085.3
90°	1465.3	1408.7	1290.0	1393.2	1488.5
92.5°	1206.8	1227.9	1196.8	1196.8	1210.1
95°	1074.8	1117.0	1119.2	1085.9	1079.3
97.5°	988.3	1014.9	1004.9	987.2	997.2
100°	882.9	891.8	882.9	876.3	879.6
102.5°	787.5	786.4	782.0	774.2	795.3
105°	607.8	614.5	609.0	603.4	615.6
107.5°	425.9	420.4	411.5	412.6	418.2
110°	258.4	259.6	244.0	248.5	264.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	117.6	124.2	128.7	122.0	125.3
115°	48.8	52.1	53.2	51.0	52.1
117.5°	25.5	25.5	24.4	25.5	27.7
120°	23.3	24.4	22.2	23.3	25.5
122.5°	25.5	26.6	25.5	26.6	27.7
125°	28.8	28.8	27.7	28.8	29.9
127.5°	31.1	31.1	29.9	31.1	32.2
130°	32.2	33.3	33.3	33.3	33.3
132.5°	34.4	35.5	34.4	35.5	35.5
135°	36.6	36.6	36.6	36.6	37.7
137.5°	38.8	38.8	38.8	38.8	38.8
140°	39.9	39.9	39.9	39.9	39.9
142.5°	41.0	39.9	39.9	39.9	38.8
145°	39.9	38.8	38.8	38.8	37.7
147.5°	36.6	36.6	35.5	36.6	35.5
150°	33.3	32.2	32.2	32.2	32.2
152.5°	28.8	28.8	27.7	28.8	28.8
155°	26.6	26.6	25.5	25.5	26.6
157.5°	26.6	26.6	25.5	25.5	26.6
160°	26.6	26.6	25.5	25.5	25.5
162.5°	26.6	26.6	25.5	25.5	25.5
165°	26.6	25.5	25.5	25.5	25.5
167.5°	26.6	25.5	25.5	25.5	25.5
170°	26.6	25.5	25.5	25.5	25.5
172.5°	25.5	25.5	25.5	25.5	25.5
175°	24.4	25.5	24.4	25.5	26.6
177.5°	24.4	24.4	24.4	25.5	26.6
180°	25.5	25.5	25.5	25.5	25.5

(END OF REPORT)