

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: P381712

Luminaire Tested: **BMK-50-MCL-UNV-L740-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: P381712
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-L740-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: 53604.4 lumens
Efficiency: N/A
Efficacy: 161.2 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

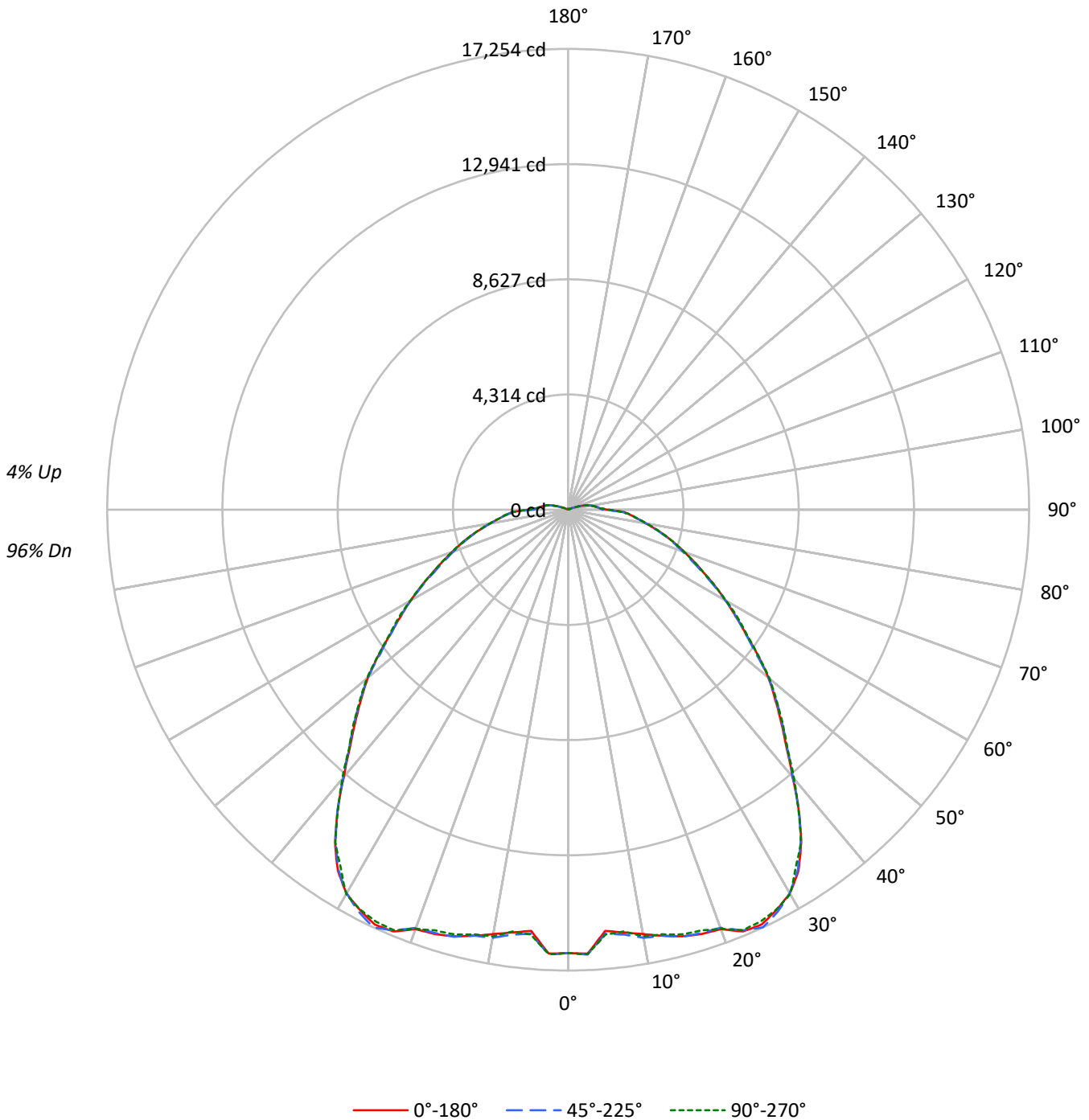
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P381712

CATALOG NUMBER: BMK-50-MCL-UNV-L740-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P381712

CATALOG NUMBER: BMK-50-MCL-UNV-L740-CD-U

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°	128006	128006	128006
5°	121266	122095	122366
10°	123755	124830	124381
15°	127926	128089	127354
20°	131415	131060	131311
25°	138147	139090	137187
30°	138221	138157	138506
35°	132161	131835	132027
40°	119538	119699	120396
45°	109833	110371	110726
50°	102770	102944	103361
55°	93347	93056	93778
60°	87014	86928	87281
65°	81471	80445	81535
70°	78392	77398	78523
75°	77794	76726	77726
80°	78003	78236	79230
85°	88219	87849	89417



TEST NUMBER: P381712

CATALOG NUMBER: BMK-50-MCL-UNV-L740-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1539.4	2.9
10°-20°	4678.4	8.7
20°-30°	7843.7	14.6
30°-40°	9407.8	17.6
40°-50°	8769.2	16.4
50°-60°	7314.3	13.6
60°-70°	5556.7	10.4
70°-80°	3963.7	7.4
80°-90°	2511.6	4.7
90°-100°	1206.3	2.3
100°-110°	628.1	1.2
110°-120°	85.2	0.2
120°-130°	25.4	0.0
130°-140°	28.3	0.1
140°-150°	23.7	0.0
150°-160°	12.7	0.0
160°-170°	7.3	0.0
170°-180°	2.4	0.0
0°-30°	14061.6	26.2
0°-40°	23469.4	43.8
0°-60°	39552.8	73.8
0°-90°	51585.0	96.2
90°-120°	1919.6	3.6
90°-150°	1997.0	3.7
90°-180°	2019.0	3.8
0°-180°	53604.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	16596	16596	16596	16596	16596	
5°	15826	15895	15934	15945	15970	###
15°	16533	16488	16554	16591	16459	4682
25°	17137	17172	17254	17128	17018	7839
35°	15210	15168	15172	15221	15194	9419
45°	11272	11301	11327	11340	11363	8735
55°	8126	8104	8100	8079	8163	7331
65°	5607	5510	5536	5546	5612	5597
75°	3774	3746	3722	3731	3770	3980
85°	2357	2357	2347	2338	2389	2046
90°	1457	1401	1283	1386	1480	852
95°	1069	1111	1113	1080	1073	842
105°	604	611	606	600	612	632
115°	48	52	53	51	52	83
125°	29	29	28	29	30	25
135°	36	36	36	36	38	28
145°	40	39	39	39	38	24
155°	26	26	25	25	26	13
165°	26	25	25	25	25	8
175°	24	25	24	25	26	2
180°	25	25	25	25	25	



TEST NUMBER: P381712

CATALOG NUMBER: BMK-50-MCL-UNV-L740-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	16596.2	16596.2	16596.2	16596.2	16596.2
2.5°	16637.0	16594.0	16672.3	16699.9	16656.9
5°	15826.2	15894.6	15934.4	15945.4	15969.7
7.5°	15964.1	15894.6	16041.4	16041.4	15927.7
10°	16134.0	16295.1	16274.1	16247.6	16215.6
12.5°	16342.5	16335.9	16333.7	16310.5	16284.0
15°	16533.3	16488.1	16554.3	16590.7	16459.4
17.5°	16654.7	16527.8	16616.1	16677.8	16517.9
20°	16706.5	16575.3	16661.3	16765.0	16693.3
22.5°	17094.8	17012.1	17046.3	17123.5	17043.0
25°	17136.7	17172.0	17253.7	17127.9	17017.6
27.5°	16894.1	16944.8	16976.8	16959.1	16873.1
30°	16589.6	16577.5	16581.9	16643.6	16623.8
32.5°	16040.2	15970.8	15996.1	15926.6	15854.9
35°	15209.6	15167.7	15172.1	15220.6	15194.2
37.5°	14177.1	14113.1	14181.5	14216.8	14157.2
40°	13061.9	13156.7	13079.5	13104.9	13155.6
42.5°	12096.6	12182.7	12143.0	12178.3	12137.5
45°	11271.5	11301.3	11326.7	11339.9	11363.1
47.5°	10504.9	10536.9	10556.7	10571.1	10572.2
50°	9783.4	9771.3	9800.0	9726.1	9839.7
52.5°	8944.0	8864.6	8861.2	8837.0	8964.9
55°	8125.5	8104.5	8100.1	8079.1	8163.0
57.5°	7433.8	7436.0	7447.1	7453.7	7524.3
60°	6807.3	6748.8	6800.6	6785.2	6828.2
62.5°	6196.1	6126.6	6152.0	6150.9	6208.3
65°	5607.1	5510.0	5536.5	5546.4	5611.5
67.5°	5095.2	5043.4	5013.6	5055.5	5103.0
70°	4616.5	4581.2	4558.0	4585.6	4624.2
72.5°	4183.0	4133.3	4134.4	4128.9	4197.3
75°	3773.7	3746.1	3721.9	3730.7	3770.4
77.5°	3335.8	3371.1	3323.7	3341.3	3359.0
80°	2945.3	2985.0	2954.1	2950.8	2991.6
82.5°	2636.4	2639.7	2638.6	2619.9	2633.1
85°	2357.3	2357.3	2347.4	2337.5	2389.3
87.5°	2100.3	2046.3	2035.2	2043.0	2073.8
90°	1457.2	1400.9	1282.9	1385.5	1480.4
92.5°	1200.2	1221.1	1190.3	1190.3	1203.5
95°	1068.9	1110.8	1113.0	1079.9	1073.3
97.5°	982.9	1009.3	999.4	981.8	991.7
100°	878.1	886.9	878.1	871.5	874.8
102.5°	783.2	782.1	777.7	770.0	790.9
105°	604.5	611.1	605.6	600.1	612.2
107.5°	423.6	418.1	409.3	410.4	415.9
110°	257.0	258.1	242.7	247.1	262.5



TEST NUMBER: P381712

CATALOG NUMBER: BMK-50-MCL-UNV-L740-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	116.9	123.5	128.0	121.3	124.7
115°	48.5	51.8	52.9	50.7	51.8
117.5°	25.4	25.4	24.3	25.4	27.6
120°	23.2	24.3	22.1	23.2	25.4
122.5°	25.4	26.5	25.4	26.5	27.6
125°	28.7	28.7	27.6	28.7	29.8
127.5°	30.9	30.9	29.8	30.9	32.0
130°	32.0	33.1	33.1	33.1	33.1
132.5°	34.2	35.3	34.2	35.3	35.3
135°	36.4	36.4	36.4	36.4	37.5
137.5°	38.6	38.6	38.6	38.6	38.6
140°	39.7	39.7	39.7	39.7	39.7
142.5°	40.8	39.7	39.7	39.7	38.6
145°	39.7	38.6	38.6	38.6	37.5
147.5°	36.4	36.4	35.3	36.4	35.3
150°	33.1	32.0	32.0	32.0	32.0
152.5°	28.7	28.7	27.6	28.7	28.7
155°	26.5	26.5	25.4	25.4	26.5
157.5°	26.5	26.5	25.4	25.4	26.5
160°	26.5	26.5	25.4	25.4	25.4
162.5°	26.5	26.5	25.4	25.4	25.4
165°	26.5	25.4	25.4	25.4	25.4
167.5°	26.5	25.4	25.4	25.4	25.4
170°	26.5	25.4	25.4	25.4	25.4
172.5°	25.4	25.4	25.4	25.4	25.4
175°	24.3	25.4	24.3	25.4	26.5
177.5°	24.3	24.3	24.3	25.4	26.5
180°	25.4	25.4	25.4	25.4	25.4

(END OF REPORT)