

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: P381622

Luminaire Tested: **BMK-50-WFL-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: P381622  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1908-468-1)  
Test Lab: INNOVATIONS CENTER(G2)  
Issue Date: 2/4/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BMK-50-WFL-UNV-L740-CD-U  
Description: BENCHMARK HIGHBAY LED FIXTURE WITH WIDE FROSTED LENS

Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 54795.7 lumens  
Efficiency: N/A  
Efficacy: 164.8 lumens/watt  
Spacing Criteria (0/90/45): 1.69 / 1.69 / 1.76  
Luminous Opening: Vertical Cylinder (Dia: 1.33' x H: 0.12')  
CIE Type: Direct

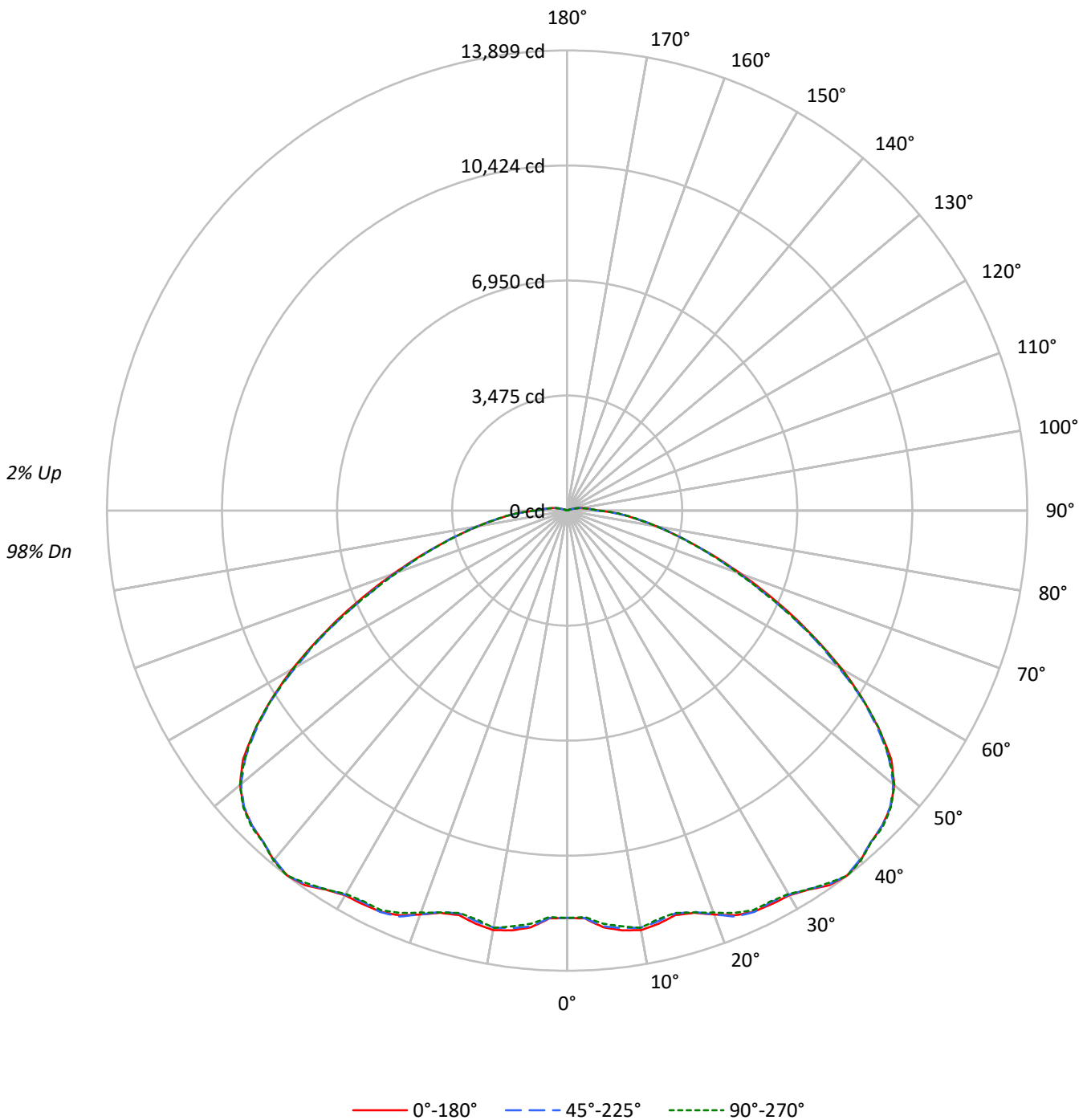
Input Watts (W): 332.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	107	102	97	93	104	99	95	91	95	91	88	90	87	85	86	84	82	79
2	96	88	80	74	94	85	79	73	81	76	71	78	73	69	74	70	67	65
3	87	76	67	60	85	74	66	59	71	64	58	68	62	57	65	60	56	53
4	79	66	57	50	77	65	56	49	62	55	48	60	53	48	57	51	47	44
5	73	59	49	42	70	58	49	42	55	47	41	53	46	40	51	45	40	38
6	67	52	43	36	64	51	42	36	49	41	35	47	40	35	46	39	34	32
7	61	47	38	31	59	46	37	31	44	37	31	43	36	30	41	35	30	28
8	57	43	34	28	55	42	33	27	40	33	27	39	32	27	38	31	26	24
9	53	39	30	24	51	38	30	24	37	29	24	36	29	24	34	28	24	22
10	49	36	27	22	48	35	27	22	34	27	22	33	26	21	32	26	21	19

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

	0°	45°	90°
0°	94874	94874	94874
5°	96812	96593	96001
10°	98691	98116	98159
15°	97864	97463	97352
20°	102103	102094	101625
25°	107724	107813	107324
30°	111796	111603	111383
35°	120015	119766	119335
40°	126128	125916	126280
45°	131115	131158	131480
50°	135445	135028	135515
55°	132022	131452	132238
60°	122616	121022	121910
65°	109006	107259	107724
70°	94556	93264	92758
75°	81704	81568	81294
80°	72598	73093	72365
85°	67370	67539	67991



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1206.9	2.2
10°-20°	3609.1	6.6
20°-30°	6149.6	11.2
30°-40°	8618.2	15.7
40°-50°	10374.8	18.9
50°-60°	10160.3	18.5
60°-70°	7365.0	13.4
70°-80°	4242.6	7.7
80°-90°	1987.6	3.6
90°-100°	712.9	1.3
100°-110°	271.0	0.5
110°-120°	38.7	0.1
120°-130°	14.6	0.0
130°-140°	16.2	0.0
140°-150°	14.0	0.0
150°-160°	8.0	0.0
160°-170°	4.7	0.0
170°-180°	1.6	0.0
0°-30°	10965.6	20.0
0°-40°	19583.8	35.7
0°-60°	40118.9	73.2
0°-90°	53714.1	98.0
90°-120°	1022.6	1.9
90°-150°	1067.4	1.9
90°-180°	1082.0	2.0
0°-180°	54795.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12301	12301	12301	12301	12301	
5°	12635	12575	12606	12595	12529	###
15°	12648	12583	12596	12613	12582	3621
25°	13363	13338	13374	13342	13313	6160
35°	13812	13791	13783	13803	13734	8624
45°	13456	13504	13460	13453	13493	10375
55°	11492	11467	11442	11402	11511	10211
65°	7502	7432	7382	7369	7414	7445
75°	3963	3957	3957	3931	3944	4263
85°	1800	1827	1805	1804	1817	1660
90°	958	949	885	935	959	557
95°	638	641	639	632	634	481
105°	242	245	249	247	244	269
115°	28	26	26	28	26	39
125°	16	16	16	16	16	14
135°	21	21	21	21	21	16
145°	23	22	23	23	22	14
155°	16	16	16	16	16	8
165°	16	16	16	16	16	5
175°	16	16	16	16	16	2
180°	16	16	16	16	16	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12300.6	12300.6	12300.6	12300.6	12300.6
2.5°	12331.4	12296.2	12320.4	12334.8	12288.4
5°	12634.8	12575.2	12606.1	12595.1	12528.9
7.5°	12787.0	12710.9	12716.4	12721.9	12663.5
10°	12866.4	12801.4	12791.4	12825.6	12797.0
12.5°	12779.3	12694.4	12705.4	12727.5	12643.6
15°	12648.0	12583.0	12596.2	12612.7	12581.9
17.5°	12738.5	12692.2	12705.4	12726.4	12726.4
20°	12980.1	12939.3	12979.0	12960.2	12919.4
22.5°	13231.6	13205.1	13272.4	13212.8	13156.6
25°	13362.8	13337.5	13373.9	13341.9	13313.2
27.5°	13395.9	13365.0	13333.1	13349.6	13309.9
30°	13418.0	13422.4	13394.8	13412.5	13368.4
32.5°	13573.5	13596.7	13553.7	13611.0	13566.9
35°	13811.8	13790.8	13783.1	13803.0	13733.5
37.5°	13892.3	13860.3	13889.0	13890.1	13898.9
40°	13782.0	13745.6	13758.8	13766.6	13798.6
42.5°	13583.5	13603.3	13583.5	13573.5	13587.9
45°	13455.5	13504.0	13459.9	13453.3	13493.0
47.5°	13251.4	13282.3	13239.3	13236.0	13262.5
50°	12894.0	12851.0	12854.3	12867.6	12900.6
52.5°	12339.2	12269.7	12246.5	12230.0	12260.9
55°	11492.0	11466.6	11442.4	11401.5	11510.8
57.5°	10578.6	10498.1	10538.9	10504.7	10567.6
60°	9592.5	9509.7	9467.8	9477.8	9537.3
62.5°	8523.6	8501.5	8442.0	8448.6	8496.0
65°	7502.1	7431.5	7381.9	7368.6	7413.9
67.5°	6499.4	6409.0	6389.1	6351.6	6359.3
70°	5568.4	5516.6	5492.3	5474.6	5462.5
72.5°	4731.2	4702.5	4683.7	4672.7	4673.8
75°	3963.4	3956.8	3956.8	3931.4	3943.5
77.5°	3312.6	3342.4	3318.1	3298.2	3292.7
80°	2741.2	2775.4	2759.9	2741.2	2732.4
82.5°	2232.7	2270.2	2251.4	2243.7	2236.0
85°	1800.2	1826.7	1804.7	1803.6	1816.8
87.5°	1392.1	1402.0	1371.1	1388.8	1420.8
90°	957.5	948.7	884.7	935.4	958.6
92.5°	758.9	765.5	753.4	751.2	756.7
95°	637.6	640.9	638.7	632.1	634.3
97.5°	531.7	538.3	535.0	531.7	531.7
100°	432.4	435.7	437.9	433.5	432.4
102.5°	338.6	340.9	339.8	340.9	339.8
105°	241.6	244.9	249.3	247.1	243.8
107.5°	164.4	165.5	164.4	166.6	167.7
110°	102.6	100.4	98.2	101.5	103.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	55.2	54.1	56.3	55.2	52.9
115°	27.6	26.5	26.5	27.6	26.5
117.5°	15.4	15.4	14.3	15.4	15.4
120°	13.2	13.2	13.2	13.2	14.3
122.5°	14.3	15.4	14.3	15.4	15.4
125°	16.5	16.5	16.5	16.5	16.5
127.5°	17.6	17.6	17.6	17.6	17.6
130°	18.8	18.8	18.8	18.8	18.8
132.5°	19.9	19.9	19.9	19.9	19.9
135°	21.0	21.0	21.0	21.0	21.0
137.5°	22.1	22.1	22.1	22.1	22.1
140°	23.2	23.2	23.2	23.2	22.1
142.5°	23.2	23.2	23.2	23.2	22.1
145°	23.2	22.1	23.2	23.2	22.1
147.5°	22.1	21.0	21.0	22.1	21.0
150°	19.9	19.9	19.9	19.9	19.9
152.5°	17.6	17.6	17.6	17.6	17.6
155°	16.5	16.5	16.5	16.5	16.5
157.5°	16.5	16.5	16.5	16.5	16.5
160°	16.5	16.5	16.5	16.5	16.5
162.5°	16.5	16.5	16.5	16.5	16.5
165°	16.5	16.5	16.5	16.5	16.5
167.5°	16.5	16.5	16.5	16.5	16.5
170°	16.5	16.5	16.5	16.5	16.5
172.5°	16.5	16.5	16.5	16.5	16.5
175°	16.5	16.5	16.5	16.5	16.5
177.5°	15.4	16.5	16.5	16.5	16.5
180°	16.5	16.5	16.5	16.5	16.5

(END OF REPORT)