

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: P381626

Luminaire Tested: **BMK-50-WFL-UNV-L850-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: P381626  
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-L850-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: 51275.6 lumens  
Efficiency: N/A  
Efficacy: 154.2 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

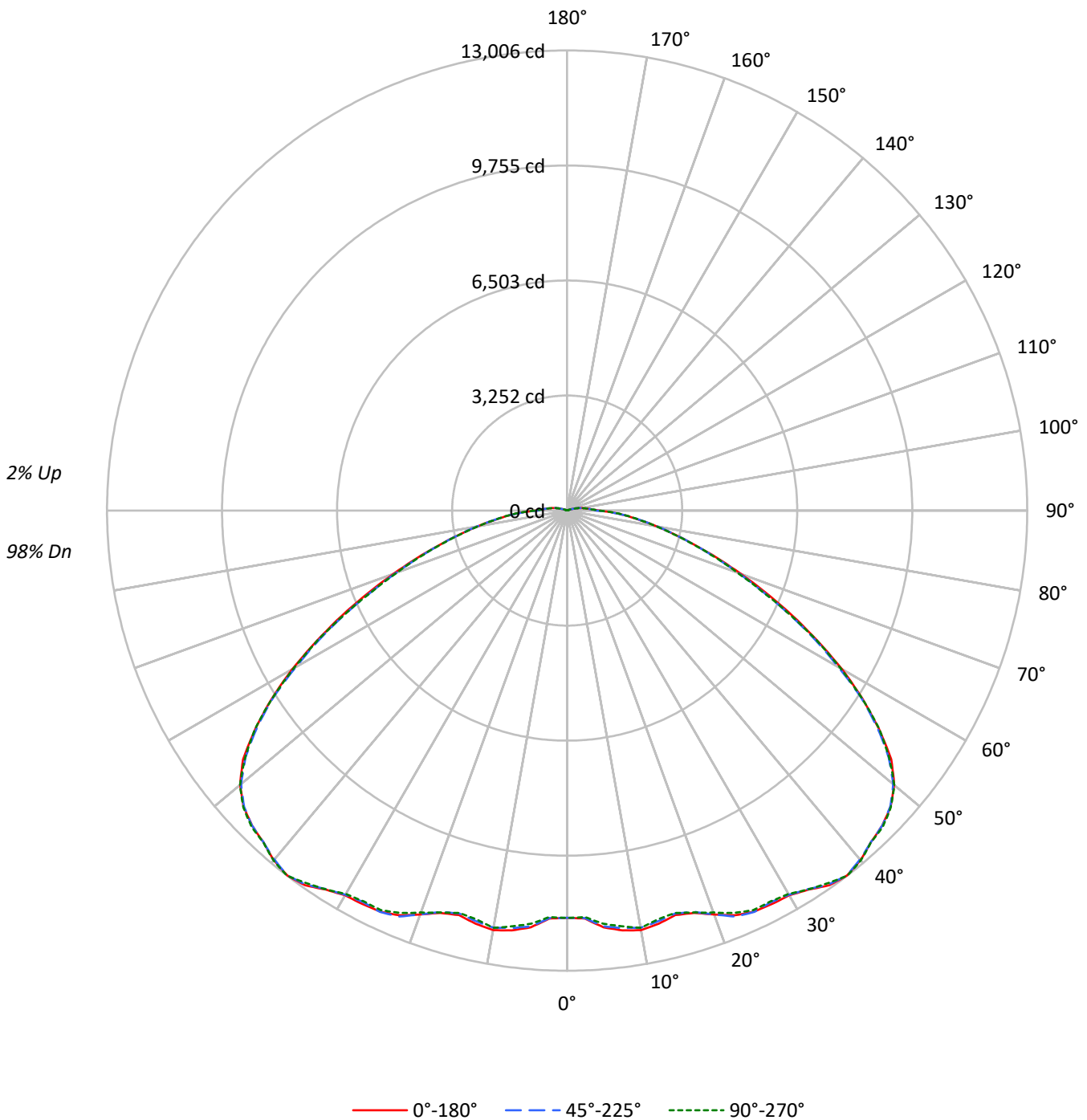
Input Watts (W): 332.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	88779	88779	88779
5°	90593	90388	89834
10°	92351	91813	91853
15°	91577	91202	91098
20°	95543	95535	95097
25°	100804	100887	100429
30°	104614	104433	104227
35°	112305	112072	111668
40°	118025	117828	118167
45°	122692	122732	123034
50°	126744	126354	126809
55°	123541	123008	123743
60°	114738	113248	114078
65°	102004	100369	100804
70°	88482	87273	86799
75°	76456	76328	76073
80°	67934	68398	67714
85°	63044	63198	63624



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1129.3	2.2
10°-20°	3377.3	6.6
20°-30°	5754.6	11.2
30°-40°	8064.5	15.7
40°-50°	9708.3	18.9
50°-60°	9507.6	18.5
60°-70°	6891.8	13.4
70°-80°	3970.1	7.7
80°-90°	1859.9	3.6
90°-100°	667.1	1.3
100°-110°	253.6	0.5
110°-120°	36.3	0.1
120°-130°	13.7	0.0
130°-140°	15.1	0.0
140°-150°	13.1	0.0
150°-160°	7.5	0.0
160°-170°	4.4	0.0
170°-180°	1.5	0.0
0°-30°	10261.2	20.0
0°-40°	18325.7	35.7
0°-60°	37541.6	73.2
0°-90°	50263.4	98.0
90°-120°	956.9	1.9
90°-150°	998.8	1.9
90°-180°	1012.0	2.0
0°-180°	51275.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11510	11510	11510	11510	11510	
5°	11823	11767	11796	11786	11724	###
15°	11836	11775	11787	11802	11774	3388
25°	12504	12481	12515	12485	12458	5764
35°	12924	12905	12898	12916	12851	8070
45°	12591	12636	12595	12589	12626	9708
55°	10754	10730	10707	10669	10771	9555
65°	7020	6954	6908	6895	6938	6967
75°	3709	3703	3703	3679	3690	3990
85°	1685	1709	1689	1688	1700	1553
90°	896	888	828	875	897	521
95°	597	600	598	592	594	450
105°	226	229	233	231	228	252
115°	26	25	25	26	25	37
125°	16	16	16	16	16	13
135°	20	20	20	20	20	15
145°	22	21	22	22	21	13
155°	16	16	16	16	16	8
165°	16	16	16	16	16	4
175°	16	16	16	16	16	1
180°	16	16	16	16	16	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	11510.4	11510.4	11510.4	11510.4	11510.4
2.5°	11539.3	11506.2	11528.9	11542.4	11499.0
5°	11823.1	11767.4	11796.3	11786.0	11724.0
7.5°	11965.6	11894.3	11899.5	11904.7	11850.0
10°	12039.9	11979.0	11969.7	12001.7	11974.9
12.5°	11958.3	11878.9	11889.2	11909.8	11831.4
15°	11835.5	11774.6	11787.0	11802.5	11773.6
17.5°	11920.2	11876.8	11889.2	11908.8	11908.8
20°	12146.2	12108.0	12145.2	12127.6	12089.4
22.5°	12381.6	12356.8	12419.8	12364.0	12311.4
25°	12504.4	12480.7	12514.7	12484.8	12457.9
27.5°	12535.4	12506.5	12476.5	12492.0	12454.8
30°	12556.0	12560.1	12534.3	12550.8	12509.6
32.5°	12701.5	12723.2	12683.0	12736.6	12695.4
35°	12924.5	12904.9	12897.7	12916.3	12851.2
37.5°	12999.9	12969.9	12996.8	12997.8	13006.1
40°	12896.6	12862.6	12875.0	12882.2	12912.1
42.5°	12710.8	12729.4	12710.8	12701.5	12715.0
45°	12591.1	12636.5	12595.2	12589.0	12626.2
47.5°	12400.1	12429.0	12388.8	12385.7	12410.5
50°	12065.7	12025.4	12028.5	12040.9	12071.9
52.5°	11546.5	11481.5	11459.8	11444.3	11473.2
55°	10753.7	10730.0	10707.3	10669.1	10771.3
57.5°	9899.1	9823.7	9861.9	9829.9	9888.7
60°	8976.2	8898.8	8859.6	8868.9	8924.6
62.5°	7976.0	7955.4	7899.6	7905.8	7950.2
65°	7020.2	6954.1	6907.7	6895.3	6937.6
67.5°	6081.9	5997.2	5978.7	5943.6	5950.8
70°	5210.7	5162.2	5139.5	5122.9	5111.6
72.5°	4427.2	4400.4	4382.8	4372.5	4373.5
75°	3708.8	3702.6	3702.6	3678.9	3690.2
77.5°	3099.8	3127.6	3104.9	3086.4	3081.2
80°	2565.1	2597.1	2582.6	2565.1	2556.8
82.5°	2089.2	2124.3	2106.8	2099.5	2092.3
85°	1684.6	1709.4	1688.7	1687.7	1700.1
87.5°	1302.7	1312.0	1283.1	1299.6	1329.5
90°	896.0	887.7	827.8	875.3	897.0
92.5°	710.2	716.4	705.0	702.9	708.1
95°	596.6	599.7	597.7	591.5	593.5
97.5°	497.5	503.7	500.6	497.5	497.5
100°	404.6	407.7	409.8	405.7	404.6
102.5°	316.9	319.0	317.9	319.0	317.9
105°	226.1	229.2	233.3	231.2	228.1
107.5°	153.8	154.8	153.8	155.9	156.9
110°	96.0	93.9	91.9	95.0	97.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	51.6	50.6	52.6	51.6	49.5
115°	25.8	24.8	24.8	25.8	24.8
117.5°	14.5	14.5	13.4	14.5	14.5
120°	12.4	12.4	12.4	12.4	13.4
122.5°	13.4	14.5	13.4	14.5	14.5
125°	15.5	15.5	15.5	15.5	15.5
127.5°	16.5	16.5	16.5	16.5	16.5
130°	17.5	17.5	17.5	17.5	17.5
132.5°	18.6	18.6	18.6	18.6	18.6
135°	19.6	19.6	19.6	19.6	19.6
137.5°	20.6	20.6	20.6	20.6	20.6
140°	21.7	21.7	21.7	21.7	20.6
142.5°	21.7	21.7	21.7	21.7	20.6
145°	21.7	20.6	21.7	21.7	20.6
147.5°	20.6	19.6	19.6	20.6	19.6
150°	18.6	18.6	18.6	18.6	18.6
152.5°	16.5	16.5	16.5	16.5	16.5
155°	15.5	15.5	15.5	15.5	15.5
157.5°	15.5	15.5	15.5	15.5	15.5
160°	15.5	15.5	15.5	15.5	15.5
162.5°	15.5	15.5	15.5	15.5	15.5
165°	15.5	15.5	15.5	15.5	15.5
167.5°	15.5	15.5	15.5	15.5	15.5
170°	15.5	15.5	15.5	15.5	15.5
172.5°	15.5	15.5	15.5	15.5	15.5
175°	15.5	15.5	15.5	15.5	15.5
177.5°	14.5	15.5	15.5	15.5	15.5
180°	15.5	15.5	15.5	15.5	15.5

(END OF REPORT)