

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: P381625

Luminaire Tested: **BMK-50-WFL-UNV-L840-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: P381625
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-L840-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: 51018.9 lumens
Efficiency: N/A
Efficacy: 153.4 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

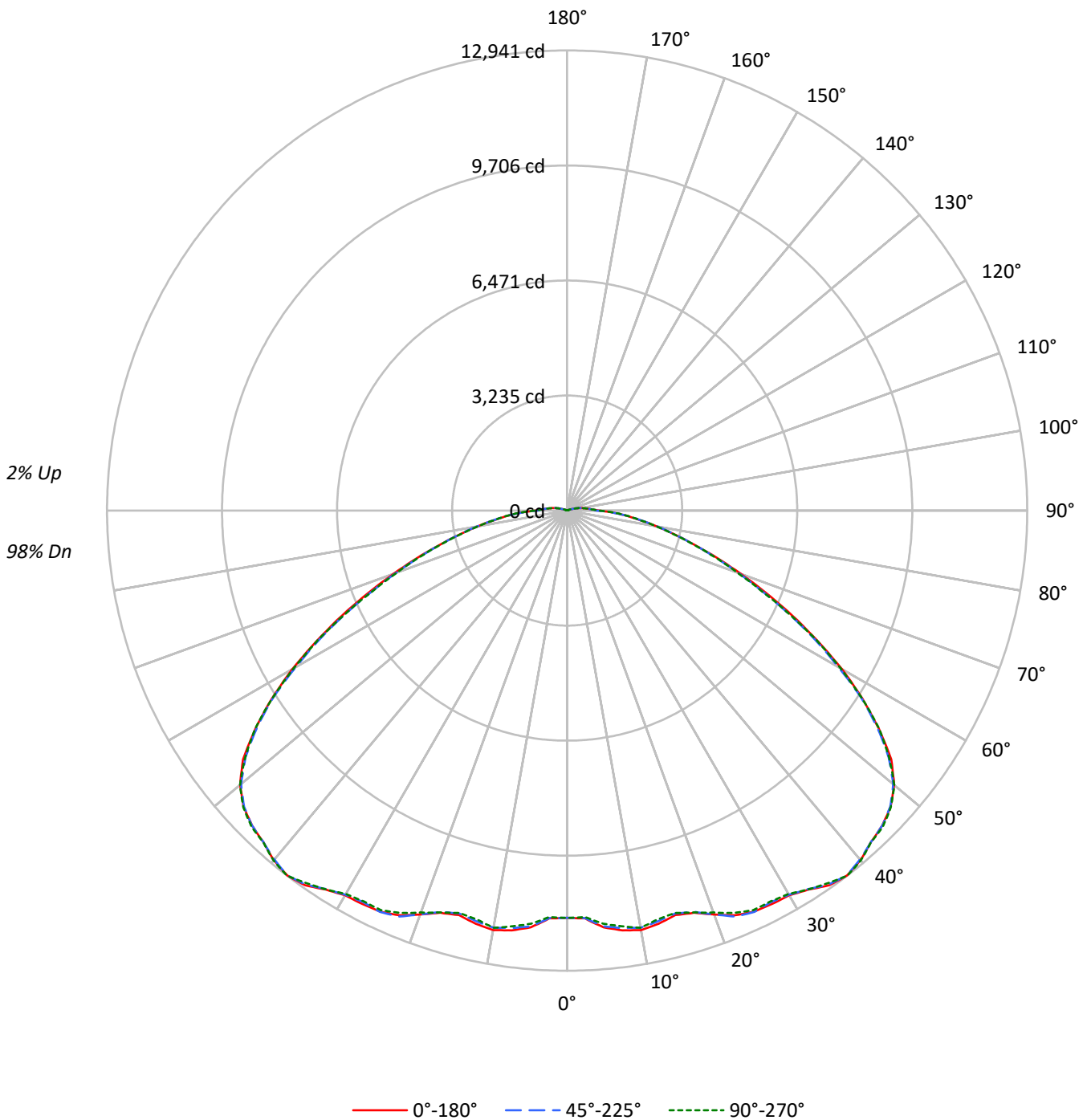
Input Watts (W): 332.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	88335	88335	88335
5°	90140	89935	89385
10°	91890	91353	91393
15°	91119	90745	90642
20°	95065	95057	94621
25°	100299	100382	99927
30°	104091	103911	103706
35°	111743	111511	111109
40°	117435	117237	117576
45°	122078	122118	122418
50°	126110	125722	126175
55°	122923	122392	123124
60°	114164	112681	113508
65°	101492	99866	100299
70°	88039	86835	86364
75°	76073	75947	75691
80°	67592	68056	67375
85°	62730	62883	63306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1123.7	2.2
10°-20°	3360.4	6.6
20°-30°	5725.8	11.2
30°-40°	8024.2	15.7
40°-50°	9659.7	18.9
50°-60°	9460.0	18.5
60°-70°	6857.3	13.4
70°-80°	3950.2	7.7
80°-90°	1850.6	3.6
90°-100°	663.8	1.3
100°-110°	252.3	0.5
110°-120°	36.1	0.1
120°-130°	13.6	0.0
130°-140°	15.1	0.0
140°-150°	13.0	0.0
150°-160°	7.5	0.0
160°-170°	4.4	0.0
170°-180°	1.5	0.0
0°-30°	10209.8	20.0
0°-40°	18234.0	35.7
0°-60°	37353.7	73.2
0°-90°	50011.9	98.0
90°-120°	952.1	1.9
90°-150°	993.8	1.9
90°-180°	1007.0	2.0
0°-180°	51018.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11453	11453	11453	11453	11453	
5°	11764	11708	11737	11727	11665	###
15°	11776	11716	11728	11743	11715	3371
25°	12442	12418	12452	12422	12396	5736
35°	12860	12840	12833	12852	12787	8030
45°	12528	12573	12532	12526	12563	9660
55°	10700	10676	10654	10616	10717	9507
65°	6985	6919	6873	6861	6903	6932
75°	3690	3684	3684	3660	3672	3970
85°	1676	1701	1680	1679	1692	1546
90°	892	883	824	871	892	519
95°	594	597	595	588	591	448
105°	225	228	232	230	227	250
115°	26	25	25	26	25	37
125°	15	15	15	15	15	13
135°	20	20	20	20	20	15
145°	22	20	22	22	20	13
155°	15	15	15	15	15	7
165°	15	15	15	15	15	4
175°	15	15	15	15	15	1
180°	15	15	15	15	15	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11452.8	11452.8	11452.8	11452.8	11452.8
2.5°	11481.5	11448.7	11471.3	11484.6	11441.5
5°	11764.0	11708.5	11737.3	11727.0	11665.4
7.5°	11905.7	11834.8	11840.0	11845.1	11790.7
10°	11979.7	11919.1	11909.8	11941.7	11914.9
12.5°	11898.5	11819.4	11829.7	11850.2	11772.2
15°	11776.3	11715.7	11728.0	11743.4	11714.7
17.5°	11860.5	11817.4	11829.7	11849.2	11849.2
20°	12085.4	12047.4	12084.4	12067.0	12029.0
22.5°	12319.6	12295.0	12357.6	12302.1	12249.8
25°	12441.8	12418.2	12452.1	12422.3	12395.6
27.5°	12472.6	12443.9	12414.1	12429.5	12392.5
30°	12493.2	12497.3	12471.6	12488.0	12447.0
32.5°	12638.0	12659.6	12619.5	12672.9	12631.8
35°	12859.8	12840.3	12833.1	12851.6	12786.9
37.5°	12934.8	12905.0	12931.7	12932.8	12941.0
40°	12832.1	12798.2	12810.5	12817.7	12847.5
42.5°	12647.2	12665.7	12647.2	12638.0	12651.4
45°	12528.1	12573.3	12532.2	12526.0	12563.0
47.5°	12338.1	12366.9	12326.8	12323.7	12348.4
50°	12005.3	11965.3	11968.4	11980.7	12011.5
52.5°	11488.7	11424.0	11402.4	11387.0	11415.8
55°	10699.9	10676.3	10653.7	10615.7	10717.4
57.5°	9849.5	9774.5	9812.6	9780.7	9839.3
60°	8931.3	8854.3	8815.3	8824.5	8880.0
62.5°	7936.1	7915.6	7860.1	7866.3	7910.4
65°	6985.0	6919.3	6873.1	6860.8	6902.9
67.5°	6051.4	5967.2	5948.7	5913.8	5921.0
70°	5184.6	5136.3	5113.7	5097.3	5086.0
72.5°	4405.1	4378.4	4360.9	4350.6	4351.7
75°	3690.2	3684.1	3684.1	3660.4	3671.7
77.5°	3084.3	3112.0	3089.4	3070.9	3065.8
80°	2552.2	2584.1	2569.7	2552.2	2544.0
82.5°	2078.8	2113.7	2096.2	2089.0	2081.9
85°	1676.2	1700.8	1680.3	1679.2	1691.6
87.5°	1296.2	1305.4	1276.6	1293.1	1322.9
90°	891.5	883.3	823.7	870.9	892.5
92.5°	706.6	712.8	701.5	699.4	704.6
95°	593.6	596.7	594.7	588.5	590.6
97.5°	495.0	501.2	498.1	495.0	495.0
100°	402.6	405.7	407.7	403.6	402.6
102.5°	315.3	317.4	316.3	317.4	316.3
105°	224.9	228.0	232.1	230.1	227.0
107.5°	153.0	154.1	153.0	155.1	156.1
110°	95.5	93.5	91.4	94.5	96.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	51.4	50.3	52.4	51.4	49.3
115°	25.7	24.6	24.6	25.7	24.6
117.5°	14.4	14.4	13.4	14.4	14.4
120°	12.3	12.3	12.3	12.3	13.4
122.5°	13.4	14.4	13.4	14.4	14.4
125°	15.4	15.4	15.4	15.4	15.4
127.5°	16.4	16.4	16.4	16.4	16.4
130°	17.5	17.5	17.5	17.5	17.5
132.5°	18.5	18.5	18.5	18.5	18.5
135°	19.5	19.5	19.5	19.5	19.5
137.5°	20.5	20.5	20.5	20.5	20.5
140°	21.6	21.6	21.6	21.6	20.5
142.5°	21.6	21.6	21.6	21.6	20.5
145°	21.6	20.5	21.6	21.6	20.5
147.5°	20.5	19.5	19.5	20.5	19.5
150°	18.5	18.5	18.5	18.5	18.5
152.5°	16.4	16.4	16.4	16.4	16.4
155°	15.4	15.4	15.4	15.4	15.4
157.5°	15.4	15.4	15.4	15.4	15.4
160°	15.4	15.4	15.4	15.4	15.4
162.5°	15.4	15.4	15.4	15.4	15.4
165°	15.4	15.4	15.4	15.4	15.4
167.5°	15.4	15.4	15.4	15.4	15.4
170°	15.4	15.4	15.4	15.4	15.4
172.5°	15.4	15.4	15.4	15.4	15.4
175°	15.4	15.4	15.4	15.4	15.4
177.5°	14.4	15.4	15.4	15.4	15.4
180°	15.4	15.4	15.4	15.4	15.4

(END OF REPORT)